W. L. FRENCH EXCAVATING CORPORATION
COMMERCIAL SITE DEVELOPMENT • CONTRACT TRUCKING • ENVIRONMENTAL MANAGEMENT

U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP RGP Applications Coordinator
5 Post Office Square, Suite 100 (OEP06-01)
Boston, MA 02109-3912

December 19 2018
File No. 3175.10

Re: Notice of Intent for the Remediation General Permit
Temporary Construction Dewatering for Site Redevelopment
Assembly Row Block 8
99 Foley Street, Somerville, Massachusetts

Dear Sir/Madam:

On behalf of Street Retail, Inc., W.L. French Excavating Corporation (WLF) has submitted this Notice of Intent (NOI) to the U.S. Environmental Protection Agency (U.S. EPA) for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) MAG910000 for the Assembly Row Block 8 property located at 99 Foley Street in Somerville, Massachusetts (the Site). This letter and supporting documentation were prepared in accordance with the U.S. EPA guidance for construction dewatering under the RGP program. WLF is the earthwork contractor for the project and will have direct responsibility of the subcontractors performing the dewatering activities at the Site. Subcontractors working for WLF on the project will be required to meet the requirements of this NOI and the RGP. The location of the Site and the discharge location via a storm drain outfall are shown on Figure 1 and the extent of the Site area is shown on Figure 2.

The Site is located at 99 Foley Street in the eastern portion of Somerville, Massachusetts, in the Assembly Square area south of the Mystic River as shown on Figure 1. Redevelopment activities at the Site include construction of a multi-story mixed use building, and installation of new utility systems. These activities will require temporary construction dewatering. The Site consists of portions of four former properties that were known as 99 Foley Street, 100 Foley Street, 130 Foley Street, and a parcel of land known as Yard 21. A subdivision plan was recorded on December 28, 2011 (Plan 880 of 2011), which created several parcels. Block 8 of the Assembly Row project is identified as Parcel 32 based on the subdivision plan and has been given the address of 99 Foley Street. Massachusetts Contingency Plan (MCP) sites associated with Release Tracking Numbers (RTNs) 3-19163 and 3-4082 are located at Block 8 as shown on Figure 2. The temporary construction dewatering will discharge via a 72-inch storm drain outfall which was installed as part of the Assembly Row development. The 72-inch storm drain outfall discharges to the Mystic River below the Amelia Earhart DAM (Figure 2).

The earthwork to prepare the Site for redevelopment will require excavation of soil to approximately 5 to 20 feet below ground surface (bgs) depending on the location. Groundwater is anticipated to be encountered between 10 and 15 feet bgs. The excavations will be supported and groundwater that flows into the excavations during construction activities will be treated prior to discharge to an existing storm drain such that the discharged effluent meets the effluent limitations established by NPDES Part 2.1 and Appendix V of the RGP Application. Figure 3 includes a schematic of the proposed dewatering treatment system. The completed NOI for the Remediation General Permit form is included as Appendix A.

The receiving waterbody for the treatment system will be the Mystic River. Information regarding the receiving water was collected from the Massachusetts Year 2014 Integrated List of Waters which is included in Appendix B. Dilution calculation information including correspondence with DEP is included in Appendix C. Analytical laboratory data for on-Site and surface water sampling is summarized in Tables 1 and 2, respectively, and analytical data reports are included in Appendix D. Prior to discharge, WLF will obtain the necessary City of Somerville permits, including but not limited to dewatering and discharge permits, if applicable. The approximate locations of drainage structures and infrastructure proposed to convey the discharge to the outfall along the Mystic River are highlighted on plans included in Appendix E.

According to the Information for Planning and Conservation (IPaC), the excavation activities will not impact Areas of Critical Environmental Concern (ACEC) or Habitats of Rare Wetland Wildlife. A review of the information on the U.S. Fish and Wildlife Service website led to the conclusion that the project will not impact federally-listed threatened or endangered species. A letter from that agency is included in Appendix F. An email requesting information regarding Oceanic Fisheries was sent to the National Oceanic and Atmospheric Administration (NOAA), and their response, included in Appendix F, states that no listed species are known to occur in the Mystic River in the area of discharge. Additional supplemental information required by the RGP is included in Appendix G, and is referenced within the completed NOI (Appendix A).

Thank you for your consideration of this NOI/Permit. Please feel free to contact us if you wish to discuss the information contained in this application, or if any additional information is needed.

W. L. FRENCH EXCAVATING CORPORATION
COMMERCIAL SITE DEVELOPMENT • CONTRACT TRUCKING • ENVIRONMENTAL MANAGEMENT

Very truly yours,

W. L. FRENCH EXCAVATING CORPORATION

Andre Gugliotta
Senior Project Manager

Encl. Table 1 – Summary of Groundwater Quality Data
Table 2 – Summary of Surface Water Quality
Figure 1 – Locus Plan
Figure 2 – Site Plan with Target Discharge Point
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Appendix A – Notice of Intent Form
Appendix B – Massachusetts Category 5 Waters "Waters requiring a TDML"
Appendix C – Mystic River Dilution Calculations
Appendix D – Analytical Data Reports
Appendix E – Maps of Relevant Infrastructure
Appendix F – pH Condition Material Safety Data Sheet
Appendix G – Federal Correspondence
Appendix H – National Register of Historic Places, Somerville, Massachusetts

cc: City of Somerville Board of Health
DEP Bureau of Water Resources
Mr. Brad Dutton ~ Street Retail, Inc.

File – Job #C18-017

TABLES

Table 1
Summary of Groundwater Quality Data
Assembly Row - Block 8
Somerville, MA

LOCATION SAMPLING DATE	Units	NPDES RGP-1 8/16/2018	NPDES RGP-2 8/16/2018	Maximum Detection	Average Detection
Anions by Ion Chromatography					
Chloride	ug/l	**476,000**	**286,000**	476,000	381,000
Sulfate	ug/l	**256,000**	**333,000**	333,000	294,500
Dissolved Metals					
Antimony, Dissolved	ug/l	<4	**7.9**	7.9	4.95
Arsenic, Dissolved	ug/l	**2.6**	**2.3**	2.6	2.45
Cadmium, Dissolved	ug/l	<0.2	<0.2	BDL	BDL
Chromium, Dissolved	ug/l	<1	**2.4**	2.4	1.45
Copper, Dissolved	ug/l	<1	**11.3**	11.3	5.9
Iron, Dissolved	ug/l	**18,800**	<50	18,800	9,413
Lead, Dissolved	ug/l	<1	<1	BDL	BDL
Mercury, Dissolved	ug/l	<0.2	<0.2	BDL	BDL
Nickel, Dissolved	ug/l	<2	**2.5**	2.5	1.75
Selenium, Dissolved	ug/l	<5	<5	BDL	BDL
Silver, Dissolved	ug/l	<0.4	<0.4	BDL	BDL
Zinc, Dissolved	ug/l	<10	<10	BDL	BDL
General Chemistry					
Chromium, Trivalent	ug/l	**32**	<10	32	18.5
Solids, Total Suspended	ug/l	**510,000**	**41,000**	510,000	275,500
Cyanide, Total	ug/l	<5	<5	BDL	BDL
Chlorine, Total Residual	ug/l	<20	<20	BDL	BDL
pH (H)	SU	**6.8**	**11**	11	8.9
Nitrogen, Ammonia	ug/l	**1,650**	**5,690**	5,690	3,670
TPH, SGT-HEM	ug/l	<4400	<4000	BDL	BDL
Phenolics, Total	ug/l	<30	<30	BDL	BDL
Chromium, Hexavalent	ug/l	<10	<10	BDL	BDL
Microextractables by GC					
1,2-Dibromoethane	ug/l	<0.01	<0.01	BDL	BDL
Polychlorinated Biphenyls by GC					
Aroclor 1016	ug/l	<0.25	<0.25	BDL	BDL
Aroclor 1221	ug/l	<0.25	<0.25	BDL	BDL
Aroclor 1232	ug/l	<0.25	<0.25	BDL	BDL
Aroclor 1242	ug/l	<0.25	<0.25	BDL	BDL
Aroclor 1248	ug/l	<0.25	<0.25	BDL	BDL
Aroclor 1254	ug/l	<0.25	<0.25	BDL	BDL
Aroclor 1260	ug/l	<0.2	<0.2	BDL	BDL
Semivolatile Organics by GC/MS					
Bis(2-ethylhexyl)phthalate	ug/l	<2.2	<2.2	BDL	BDL
Butyl benzyl phthalate	ug/l	<5	<5	BDL	BDL
Di-n-butylphthalate	ug/l	<5	<5	BDL	BDL
Di-n-octylphthalate	ug/l	<5	<5	BDL	BDL
Diethyl phthalate	ug/l	<5	<5	BDL	BDL
Dimethyl phthalate	ug/l	<5	<5	BDL	BDL
Semivolatile Organics by GC/MS-SIM					
Acenaphthene	ug/l	<0.1	<0.1	BDL	BDL
Fluoranthene	ug/l	<0.1	**0.14**	0.14	0.095
Naphthalene	ug/l	<0.1	**0.11**	0.11	0.08
Benzo(a)anthracene	ug/l	<0.1	<0.1	BDL	BDL
Benzo(a)pyrene	ug/l	<0.1	<0.1	BDL	BDL
Benzo(b)fluoranthene	ug/l	<0.1	<0.1	BDL	BDL
Benzo(k)fluoranthene	ug/l	<0.1	<0.1	BDL	BDL
Chrysene	ug/l	<0.1	<0.1	BDL	BDL
Acenaphthylene	ug/l	<0.1	<0.1	BDL	BDL
Anthracene	ug/l	<0.1	**0.13**	0.13	0.09
Benzo(ghi)perylene	ug/l	<0.1	<0.1	BDL	BDL
Fluorene	ug/l	<0.1	<0.1	BDL	BDL
Phenanthrene	ug/l	<0.1	<0.1	BDL	BDL
Dibenzo(a,h)anthracene	ug/l	<0.1	<0.1	BDL	BDL
Indeno(1,2,3-cd)pyrene	ug/l	<0.1	<0.1	BDL	BDL
Pyrene	ug/l	<0.1	**0.21**	0.21	0.13
Pentachlorophenol	ug/l	<1	<1	BDL	BDL
Total Hardness by SM 2340B					
Hardness	ug/l	**410,000**	**267,000**	410,000	338,500
Total Metals					
Antimony, Total	ug/l	<4	**6.29**	6.29	4.145
Arsenic, Total	ug/l	**9.16**	**2.44**	9.16	5.8
Cadmium, Total	ug/l	<0.2	<0.2	BDL	BDL
Chromium, Total	ug/l	**32.55**	**3.37**	32.55	17.96
Copper, Total	ug/l	**30.84**	**15.99**	30.84	23.415
Iron, Total	ug/l	**39,300**	**74**	39,300	19,687
Lead, Total	ug/l	**22.42**	**1.74**	22.42	12.08
Mercury, Total	ug/l	<0.2	<0.2	BDL	BDL
Nickel, Total	ug/l	**20.74**	**2.69**	20.74	11.715
Selenium, Total	ug/l	<5	<5	BDL	BDL
Silver, Total	ug/l	<0.4	<0.4	BDL	BDL
Zinc, Total	ug/l	**54.28**	**14.14**	54.28	34.21

Table 1
Summary of Groundwater Quality Data
Assembly Row - Block 8
Somerville, MA

LOCATION SAMPLING DATE	Units	NPDES RGP-1 8/16/2018	NPDES RGP-2 8/16/2018	Maximum Detection	Average Detection
Volatile Organics by GC/MS					
Methylene chloride	ug/l	<1	<1	BDL	BDL
1,1-Dichloroethane	ug/l	<1.5	<1.5	BDL	BDL
Carbon tetrachloride	ug/l	<1	<1	BDL	BDL
1,1,2-Trichloroethane	ug/l	<1.5	<1.5	BDL	BDL
Tetrachloroethene	ug/l	<1	<1	BDL	BDL
1,2-Dichloroethane	ug/l	<1.5	<1.5	BDL	BDL
1,1,1-Trichloroethane	ug/l	<2	<2	BDL	BDL
Benzene	ug/l	<1	<1	BDL	BDL
Toluene	ug/l	<1	<1	BDL	BDL
Ethylbenzene	ug/l	<1	<1	BDL	BDL
Vinyl chloride	ug/l	<1	<1	BDL	BDL
1,1-Dichloroethene	ug/l	<1	<1	BDL	BDL
cis-1,2-Dichloroethene	ug/l	<1	<1	BDL	BDL
Trichloroethene	ug/l	<1	<1	BDL	BDL
1,2-Dichlorobenzene	ug/l	<5	<5	BDL	BDL
1,3-Dichlorobenzene	ug/l	<5	<5	BDL	BDL
1,4-Dichlorobenzene	ug/l	<5	<5	BDL	BDL
p/m-Xylene	ug/l	<2	<2	BDL	BDL
o-xylene	ug/l	<1	<1	BDL	BDL
Xylenes, Total	ug/l	<1	<1	BDL	BDL
Acetone	ug/l	<10	<10	BDL	BDL
Methyl tert butyl ether	ug/l	<10	<10	BDL	BDL
Tert-Butyl Alcohol	ug/l	<100	<100	BDL	BDL
Tertiary-Amyl Methyl Ether	ug/l	<20	<20	BDL	BDL
Ethanol	ug/l	<2000	<2000	BDL	BDL
Volatile Organics by GC/MS-SIM					
1,4-Dioxane	ug/l	<50	<50	BDL	BDL

Notes.
1. The samples were collected on by Sanborn, Head & Associates, Inc. on the indicated date and analyzed by Alpha Analytical Laboratories, Inc. of Westborough, MA.
2. Average concentrations for each analyte were calculated as an average of detected concentrations where half of the detection limit was used where analytes were not detected.
3. Bolded values indicate detections of that analyte above laboratory reporting limits.
4. Abbreviations:
">" indicates the analyte was not dectected above the laboratory reporting limit shown
BDL = below detection limit
ug/l = micrograms per liter
mg/l = milligrams per liter

Table 2
Summary of Surface Water Quality
Assembly Row, Block 8
Somerville, MA

LOCATION	Units	MYSTIC RIVER, SOMERVILLE, MA
SAMPLING DATE		**8/16/2018**
SAMPLE TYPE		**Surface Water**
WATER BODY		**Mystic River**
SAMPLE LOCATION (LAT, LONG)		**42.393624 N, 71.07566 W**
General Chemistry		
SALINITY	SU	25
pH (H)	SU	7.6
Nitrogen, Ammonia	mg/l	0.217
Total Metals		
Antimony, Total	mg/l	<0.004
Arsenic, Total	mg/l	0.00151
Cadmium, Total	mg/l	<0.0002
Chromium, Total	mg/l	<0.001
Copper, Total	mg/l	0.00133
Iron, Total	mg/l	0.155
Lead, Total	mg/l	<0.01
Mercury, Total	mg/l	<0.0002
Nickel, Total	mg/l	<0.002
Selenium, Total	mg/l	<0.005
Silver, Total	mg/l	<0.0004
Zinc, Total	mg/l	<0.01

Notes:
1. The sample was collected by Sanborn, Head & Associates, Inc. on the date indicated and analyzed by Alpha Analytical Laboratories, Inc. of Westborough, Massachuestts.
2. Abbreviations
mg/l = milligrams per liter
"<" indicates the analyte was not detected above the laboratory reporting limit shown

FIGURES

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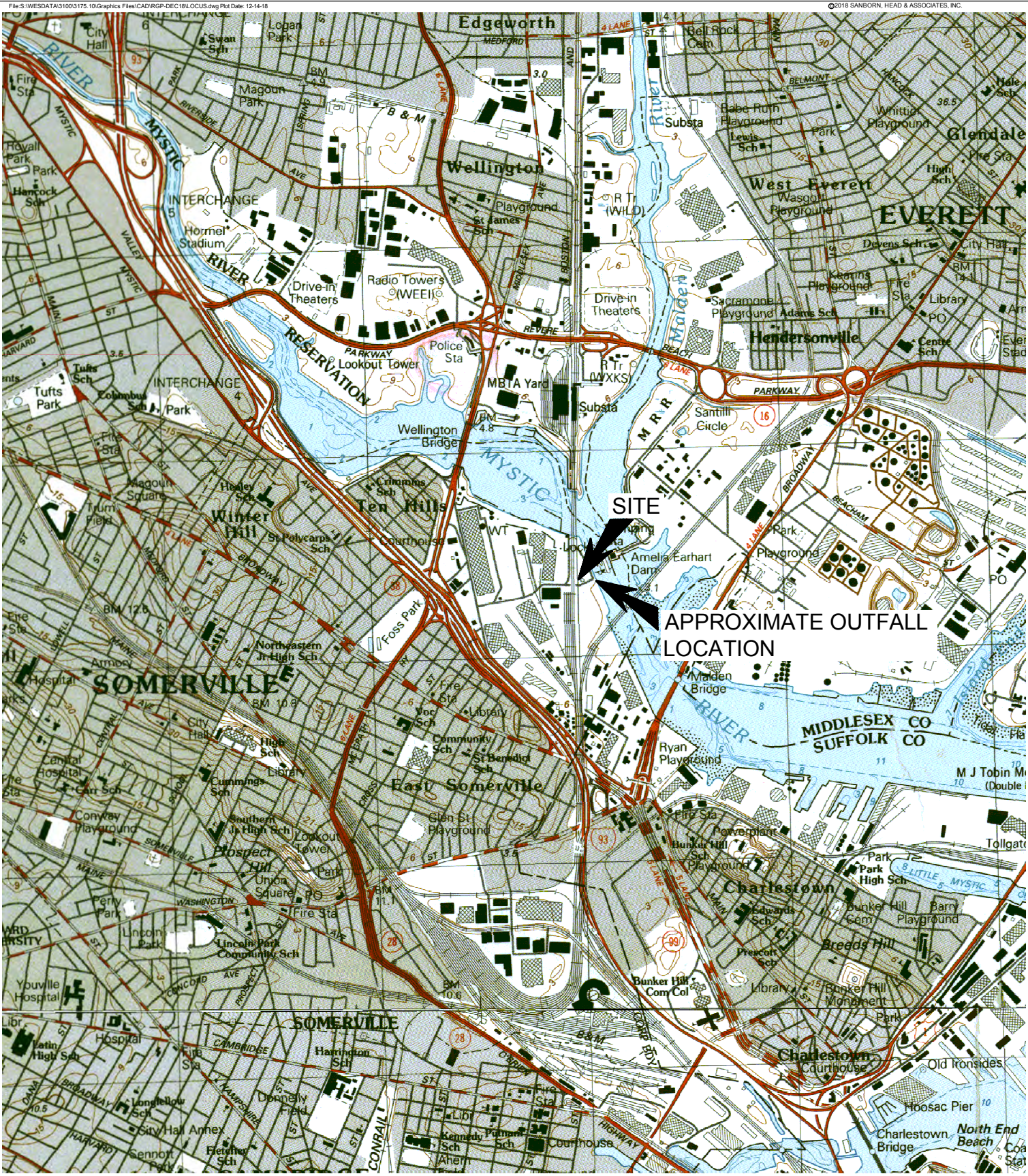

NOTES:
Base map taken from "Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs"
7.5 minute USGS Quadrangle Maps: Boston North, MA,Revised 1985

Drawn By: C. Murphy
Designed By: D. DeWolfe
Reviewed By: K. Walker
Project No: 3175.10
Date: December 2018

SCALE: 1:25,000

SANBORN HEAD

FIGURE 1

Locus Plan

Notice of Intent for Remediation General Permit

Assembly Row Block 8
Somerville, Massachusetts

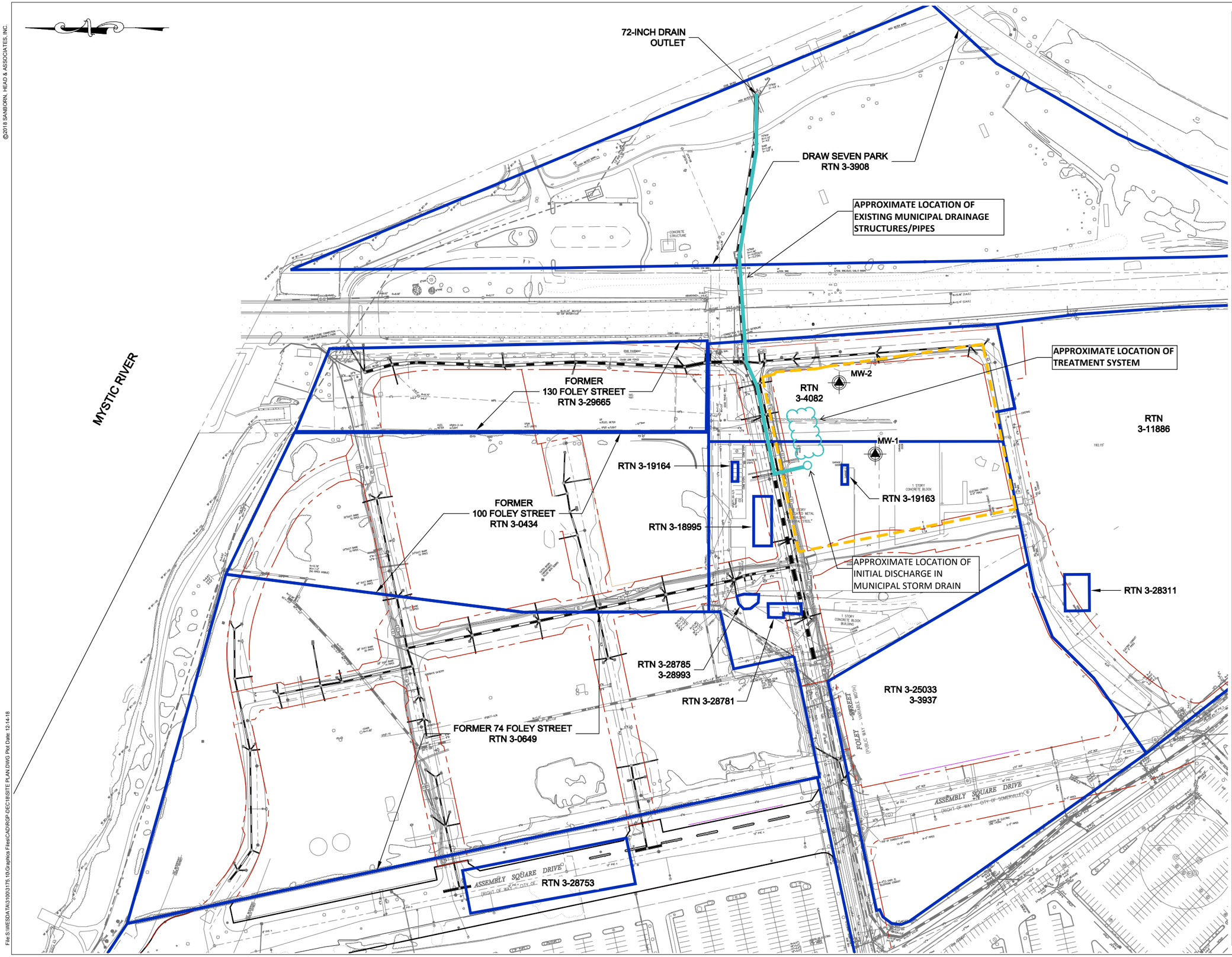

Figure No. 2

Site Plan with Target Discharge Point

Notice of Intent for Remediation General Permit

Assembly Row Block 6
Somerville, Massachusetts

Drawn By: C.Green
Designed By: D. DeWolfe
Reviewed By: K.Walker
Project No: 3175.10
Date: December 2018

Figure Narrative

The base map was drawn from a plan entitled, "Existing Conditions Plan, Super Stop & Shop, Somerville, Massachusetts", prepared by Vanasse, Hangen & Brustlin, Inc (VHB) of Watertown, MA, dated February 3, 1995, with an original scale of 1" = 40'.

Legend

- Approximate Block 8 boundary and limits of proposed excavation and dewatering activities
- Current property line
- MCP RTN boundary areas
- MW-1: Approximate location and designation of groundwater monitoring well installed by others

80 40 0 80 160 Feet

SANBORN HEAD

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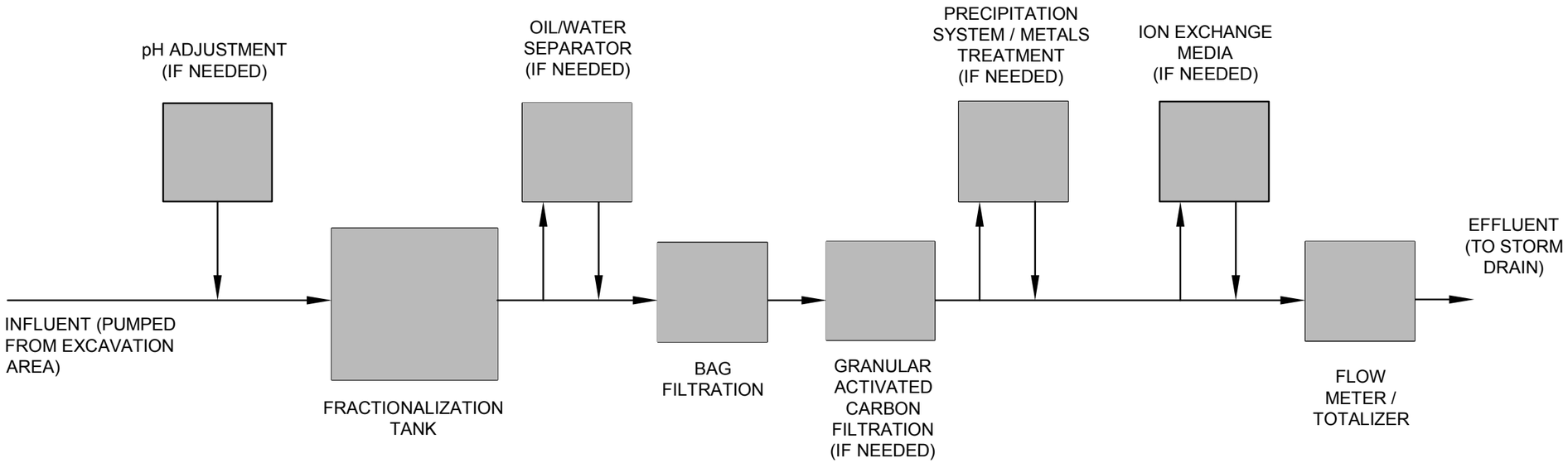

NOTES:
1. SYSTEM ASSUMES A MAXIMUM FLOW OF 100 GALLONS PER MINUTE (GPM).
2. SAMPLING PORTS TO BE LOCATED ON ALL TREATMENT SYSTEM COMPONENTS.

NOT TO SCALE

Figure No. 3

Proposed Groundwater Treatment Schematic

Notice of Intent for
Remediation General Permit

Assembly Row Block 8
Somerville, Massachusetts

Drawn By: C.Green
Designed By: D. DeWolfe
Reviewed By: K.Walker
Project No: 3175.10
Date: December 2018

Figure Narrative

Details of Treatment System may vary from the system indicated on left. Specific means and methods of treatment are to be selected by the subcontractor. Water discharged at the effluent point shall meet required effluent standards as specified in Appendix III and IV of the RGP.

SANBORN HEAD

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APPENDIX A

NOTICE OF INTENT 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:
Assembly Row - Block 8</td><td colspan="3">Site address: 99 Foley Street
Street:</td></tr>
<tr><td>City: Somerville</td><td>State: MA</td><td>Zip: 02145</td></tr>
<tr><td rowspan="4">2. Site owner
Street Retail, Inc.

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Brad Dutton</td></tr>
<tr><td colspan="2">Telephone: (617) 684-1510</td><td>Email: bdutton@federalrealty.com</td></tr>
<tr><td colspan="3">Mailing address: Federal Realty Investment Trust, 450 Artisan Way, Suite 320
Street:</td></tr>
<tr><td>City: Somerville</td><td>State: MA</td><td>Zip: 02145</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
W.L. French Excavating Corporation</td><td colspan="3">Contact Person: Andre' Gugliotta, Nick Engel, Marurice Gallagher</td></tr>
<tr><td colspan="2">Telephone: 978-663-2623</td><td>Email: agugliotta@wlfrench.com, nengel@wlfrench.com, mgallagher@wlfrench.com,</td></tr>
<tr><td colspan="3">Mailing address:
Street: 3 Survey Circle</td></tr>
<tr><td>City: N. Billeria</td><td>State: MA</td><td>Zip: 01862</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
NA

NPDES permit is (check all that apply: ☐ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 3-4082, 3-19163
☐ 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):
Mystic River	MA71-03	SB(CSO)

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 See Figure 1

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. See Appendix B

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.	1.89 MGD See Appendix C
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	1

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: August 30, 2018

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 See Table 1 and Appendix D

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: Chloride, Sulfate, Antimony, Arsenic, Chromium, Copper, Iron, Lead, Nickel, Zinc, TSS, Ammonia, Fluoranthene, Naphthalene, Anthracene, Pyrene	
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): City of Somerville 72-inch drain outlet to Mystic River (MA71-03)	Outfall location(s): (Latitude, Longitude) 42.3935, -71.0756
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Effluent will enter an existing storm water drainage system that discharges directly into the Mystic River at the approximate Lat/Long specified. ☐ 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: Prior to discharge, the operator will obtain the necessary City of Somerville permits 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): Start 12/2018 End: 12/2019 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 See Figure 2	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	2	4500NH3-	75	5690	3670	Report mg/L	---
Chloride		✔	2	300.0	12500	476000	381000	Report µg/l	---
Total Residual Chlorine	✔		2	4500CL-D	20	ND		0.2 mg/L	7.5
Total Suspended Solids		✔	2	2540D	34000	510000	275500	30 mg/L	--
Antimony		✔	2	200.8	4	6.29	4.145	206 µg/L	
Arsenic		✔	2	200.8	1	9.16	5.8	104 µg/L	
Cadmium	✔		2	200.8	0.2	ND		10.2 µg/L	
Chromium III		✔	2	200.8	10	32.55	17.96	323 µg/L	
Chromium VI		✔	2	200.8	10	32.55	17.96	323 µg/L	
Copper		✔	2	200.8	1	30.84	23.415	242 µg/L	3.7
Iron		✔	2	200.7	50	39300	19687	5,000 µg/L	
Lead		✔	2	200.8	1	22.45	12.08	160 µg/L	8.5
Mercury	✔		2	245.1	0.2	ND		0.739 µg/L	
Nickel		✔	2	200.8	2	20.74	11.715	1,450 µg/L	8.3
Selenium	✔		2	200.8	5	ND		235.8 µg/L	
Silver	✔		2	200.8	0.4	ND		35.1 µg/L	
Zinc		✔	2	200.8	10	54.28	34.21	420 µg/L	
Cyanide	✔		2	4500CN-C	30	ND		178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		2	624.1	1	ND		100 µg/L	---
Benzene	✔		2	624.1	1	ND		5.0 µg/L	---
1,4 Dioxane	✔		2	624.1	50	ND		200 µg/L	---
Acetone	✔		2	624.1	10	ND		7.97 mg/L	---
Phenol	✔		2	420.1	30	ND		1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		2	624.1	1	ND		4.4 µg/L	
1,2 Dichlorobenzene	✔		2	624.1	5	ND		600 µg/L	---
1,3 Dichlorobenzene	✔		2	624.1	5	ND		320 µg/L	---
1,4 Dichlorobenzene	✔		2	624.1	5	ND		5.0 µg/L	---
Total dichlorobenzene	✔		2	624.1	5	ND		763 µg/L in NH	---
1,1 Dichloroethane	✔		2	624.1	1.5	ND		70 µg/L	---
1,2 Dichloroethane	✔		2	624.1	1.5	ND		5.0 µg/L	---
1,1 Dichloroethylene	✔		2	624.1	1	ND		3.2 µg/L	---
Ethylene Dibromide	✔		2	504.1	0.01	ND		0.05 µg/L	---
Methylene Chloride	✔		2	624.1	1	ND		4.6 µg/L	---
1,1,1 Trichloroethane	✔		2	624.1	2	ND		200 µg/L	---
1,1,2 Trichloroethane	✔		2	624.1	1.5	ND		5.0 µg/L	---
Trichloroethylene	✔		2	624.1	1	ND		5.0 µg/L	---
Tetrachloroethylene	✔		2	624.1	1	ND		5.0 µg/L	
cis-1,2 Dichloroethylene	✔		2	1624.1	1	ND		70 µg/L	---
Vinyl Chloride	✔		2	624.1	1	ND		2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		2	625.1	5	ND		190 µg/L	
Diethylhexyl phthalate	✔		2	625.1	2.2	ND		101 µg/L	
Total Group I PAHs	✔		2	625.1	0.1	ND		1.0 µg/L	---
Benzo(a)anthracene	✔		2	625.1	0.1	ND		As Total PAHs	
Benzo(a)pyrene	✔		2	625.1	0.1	ND			
Benzo(b)fluoranthene	✔		2	625.1	0.1	ND			
Benzo(k)fluoranthene	✔		2	625.1	0.1	ND			
Chrysene	✔		2	625.1	0.1	ND			
Dibenzo(a,h)anthracene	✔		2	625.1	0.1	ND			
Indeno(1,2,3-cd)pyrene	✔		2	625.1	0.1	ND			

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✔	2	625.1	0.1	0.59	0.395	100 µg/L	---
Naphthalene		✔	2	625.1	0.1	0.11	0.08	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		2	608.3	0.25	ND		0.000064 µg/L	---
Pentachlorophenol	✔		2	625.1	1	ND		1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		2	1664A	4400	ND		5.0 mg/L	---
Ethanol	✔		2	1671A	2000	ND		Report mg/L	---
Methyl-tert-Butyl Ether	✔		2	624.1	10	ND		70 µg/L	
tert-Butyl Alcohol	✔		2	624.1	100	ND		120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		2	624.1	20	ND		90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH (s.u.)		✔	2	4500H+-B	--	11.0	8.9		
Hardness (ug/L)		✔	2	200.7	660	410000	338500		

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:

pH adjustment (if needed)

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

The first element of the treatment system will be pH adjustment (if needed) following by a fractionalization tank where solids will settle out. The effluent will then pass through the following as necessary: a bag filter, a granular activated carbon vessel, and a cation resin vessel. The effluent will be discharged to an existing catch basin on-site which discharges to the existing storm drain system.

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: Cation resin vessel, carbon vessels, and/or pH adjustment (if needed)

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

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ■ Yes ☐ No See Figure 3

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:
Sulfuric Acid (See Appendix F)
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. See Appendix G

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
See Appendix H

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.
Appendix B includes the Massachusetts Category 5 Waters "Waters requiring a TMDL" and lists pollutants for the Mystic River
Appendix C includes calculations for the dilution factor
Appendix D includes the analytical data collected by Sanborn, Head & Associates, Inc.
Appendix E includes maps of relevant infrastructure
Appendix F includes the proposed pH conditioner material safety data sheet
Appendix G includes correspondence from the National Oceanic and Atmospheric Administration and the US Fish and Wildlife Service
Appendix H includes a list of Historic Places in Somerville, Massachusetts.
Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ■ Yes ☐ No

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

J. Certification requirement

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

BMPP certification statement:	A BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☐ No ☐ NA ■
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ■
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: [signature]	Date: 12/19/18
Print Name and Title: Andrea Cuglietta Senior Project Manager	

APPENDIX B

MASSACHUSETTS CATEGORY 5 WATERS
"WATERS REQUIRING A TMDL"

APPENDIX B

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

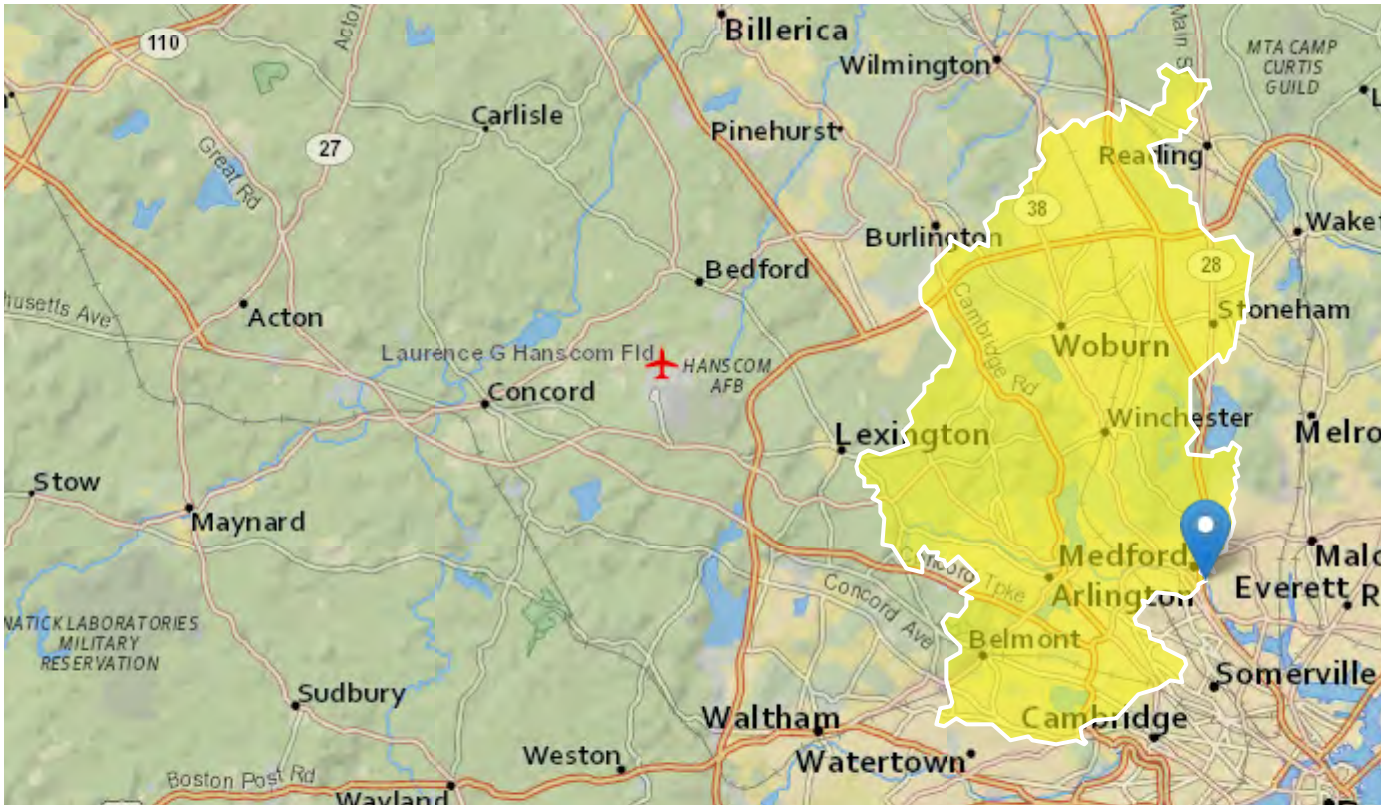
NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Mystic River	MA71-03	Amelia Earhart Dam, Somerville/Everett to confluence with Boston Inner Harbor, Chelsea/Charlestown (Includes Island End River).	0.49	SQUARE MILES	Ammonia (Un-ionized)	
					Fecal Coliform	
					Foam/Flocs/Scum/Oil Slicks	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Petroleum Hydrocarbons	
					Sediment Screening Value (Exceedence)	
					Taste and Odor	
Spy Pond	MA71040	Arlington	98	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Chlordane	
					DDT	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Unnamed Tributary	MA71-13	Unnamed tributary locally known as 'Meetinghouse Brook', from emergence south of Route 16/east of Winthrop Street, Medford to confluence with the Mystic River, Medford. (brook not apparent on 1985 Boston North USGS quad - 2005 orthophotos used todelineate stream)	0.1	MILES	Escherichia coli	
Upper Mystic Lake	MA71043	Winchester/Arlington/Medford	176	ACRES	(Non-Native Aquatic Plants*)	
					Dissolved oxygen saturation	
					Oxygen, Dissolved	
Wedge Pond	MA71045	Winchester	23	ACRES	Oxygen, Dissolved	
					Phosphorus (Total)	
Winn Brook	MA71-09	Headwaters near Juniper Road and the Belmont Hill School, Belmont to confluence with Little Pond, Belmont (portions culverted underground).	1.4	MILES	(Physical substrate habitat alterations*)	
					Escherichia coli	
Winter Pond	MA71047	Winchester	18	ACRES	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
Boston Harbor: Neponset						
Beaver Brook	MA73-19	Headwaters near Moose Hill Street, Sharon through Sawmill Pond to confluence with Massapoag Brook, Sharon.	3.5	MILES	Aquatic Macroinvertebrate Bioassessments	
					Oxygen, Dissolved	
Beaver Meadow Brook	MA73-20	Outlet of Glenn Echo Pond, Stoughton, to the inlet of Bolivar Pond, Canton.	3.3	MILES	Oxygen, Dissolved	

APPENDIX C

MYSTIC RIVER DILUTION CALCULATIONS

StreamStats Report

Region ID: MA
Workspace ID: MA20180829184632495000
Clicked Point (Latitude, Longitude): 42.41457, -71.10287
Time: 2018-08-29 14:46:47 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	48.2	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.429	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.26	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	48.2	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.429	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.26	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

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

Statistic	Value	Unit	PII	PIu	SE	SEp
7 Day 2 Year Low Flow	7.31	ft^3/s	2.2	23.4	49.5	49.5
7 Day 10 Year Low Flow	3.52	ft^3/s	0.867	13.3	70.8	70.8

Low-Flow Statistics Citations

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

Application Version: 4.2.1

Americo Santamaria

To: Vakalopoulos, Catherine (DEP)
Subject: RE: Somerville, MA RGP

From: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@state.ma.us>
Sent: Thursday, August 30, 2018 10:54 AM
To: Americo Santamaria <asantamaria@sanbornhead.com>
Subject: RE: Somerville, MA RGP

Hi Americo,
You are correct. The discharge is just downstream of the Amelia Earhart dam on the Mystic River. We consider it marine water with no dilution (DF = 1). To help you with the NOI, this part of the Mystic has a waterbody identification (segment ID) of MA71-03, is classified as Class SB(CSO), and is not an Outstanding Resource Water. The impairments are listed here: https://www.mass.gov/files/documents/2016/08/sa/14list2_0.pdf (just do a search for MA71-03) and there are no TMDLs for this segment. There is a draft pathogen TMDL for Boston Harbor, including Mystic, which hasn't been finalized yet.

Also, if this site is not *currently* covered under the Massachusetts Contingency Plan, in addition to submitting the NOI to EPA, you will have to submit it me at MassDEP, along with a transmittal form and $500 fee (unless fee exempt, e.g. municipalities). The instructions are located here: https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent.

Please let me know if you have any additional questions.

Cathy

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

From: Americo Santamaria [mailto:asantamaria@sanbornhead.com]
Sent: Wednesday, August 29, 2018 4:17 PM
To: Vakalopoulos, Catherine (DEP)
Subject: Somerville, MA RGP

Good afternoon, Catherine.

I would like to confirm the following 7Q10 value for a RGP project located in Somerville, MA. Using StremStats, I was forced to select a delineation point outside of the "ExlcudePolys" area indicated by a black grid hatch. I chose the nearest point upstream within the Mystic River. I believe the hatch indicates an area of transition between the Mystic River and Boston Harbor, likely influenced by tidal effects. We are treating this area as a saltwater receiving water.

Site Address: 185 Foley Street, Somerville, MA
Type of Discharge: Via drain to outlet in the Mystic River with approximate discharge lat/long indicated below.

Approximate Discharge Lat/Long
Lat: 42.393485 Long: -71.075629
Approximate Basin Delineation Point Selected:
Lat: 42.41457 Long: -71.10287
Design Discharge Flow: 50 gpm = 0.072 MGD < 1MGD
Upstream Streamstats generated 7Q10: 3.52 cfs = 1.89 MGD
Dilution Factor: DF=0 (We are not requesting a dilution factor)

Please let me know if you require any further information, and either confirm these assumptions or provide guidance to a different approach.

Thank you.

-Americo

--
Americo J. Santamaria
Senior Project Engineer

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Enter number values in green boxes below

Enter values in the units specified

↓

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

Enter a dilution factor, if other than zero

↓

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

↓

7.6	pH in **Standard Units**
16.5	Temperature in **°C**
0.217	Ammonia in **mg/L**
0	Hardness in **mg/L** $CaCO_3$
25	Salinity in **ppt**
0	Antimony in **µg/L**
1.51	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
1.33	Copper in **µg/L**
155	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
0	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓

0	TRC in **µg/L**
5.69	Ammonia in **mg/L**
6.29	Antimony in **µg/L**
9.16	Arsenic in **µg/L**
0	Cadmium in **µg/L**
32	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
30.84	Copper in **µg/L**
39300	Iron in **µg/L**
22.42	Lead in **µg/L**
0	Mercury in **µg/L**
20.74	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
54.28	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Notes:

Freshwater: critical low flow equal to the 7Q10; enter alternate low flow if approved by the State
Saltwater (estuarine and marine): enter critical low flow if approved by the State; enter 0 if no entry
Discharge flow is equal to the design flow or 1 MGD, whichever is less
Optional entry for Q_r; leave 0 if no entry

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

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

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

I. Dilution Factor Calculation Method

A. 7Q10

No flow assumed at critical low flow for saltwater unless otherwise approved by the State

B. Dilution Factor

No dilution assumed for saltwater, unless otherwise approved by the State

II. Effluent Limitation Calculation Method

A. Calculate Water Quality Criterion:

Step 1. Not applicable to saltwater

Step 2. Not applicable to saltwater

Step 3. Total recoverable water quality criteria for dissolved metals, calculated as follows:

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

B. Calculate WQBEL:

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

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

C_r = Water quality criterion in µg/L

Q_d = Discharge flow in MGD

C_d = WQBEL in µg/L

Q_s = Upstream flow (7Q10) in MGD

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

Q_r = Downstream receiving water flow in MGD

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

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

C_r = Water quality criterion in µg/L

Q_d = Discharge flow in MGD

Q_r = Downstream receiving water flow in MGD

C. Determine if a WQBEL applies:

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

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

C_r = Downstream concentration in µg/L

Q_d = Discharge flow in MGD

C_d = Influent concentration in µg/L

Q_s = Upstream flow (7Q10) in MGD

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

Q_r = Downstream receiving water flow in MGD

The WQBEL applies if:

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

AND

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

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

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

AND

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

Dilution Factor	1.0					
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	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.0038	µg/L	---	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	---			

APPENDIX D

ANALYTICAL DATA REPORTS

ANALYTICAL REPORT

Lab Number:	L1832288
Client:	Sanborn, Head & Associates, Inc. 1 Technology Park Drive Westford, MA 01886
ATTN:	Kent Walker
Phone:	(978) 577-1003
Project Name:	FOLEY BLOCK 8
Project Number:	3175.10
Report Date:	08/27/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1832288-01	NPDES RGP-1	WATER	SOMERVILLE, MA	08/16/18 12:40	08/16/18
L1832288-02	NPDES RGP-2	WATER	SOMERVILLE, MA	08/16/18 15:00	08/16/18
L1832288-03	MYSTIC RIVER, SOMERVILLE, MA	WATER	SOMERVILLE, MA	08/16/18 06:05	08/16/18
L1832288-04	TRIP BLANK	WATER	SOMERVILLE, MA	08/16/18 00:00	08/16/18

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288
Project Number: 3175.10 **Report Date:** 08/27/18

Case Narrative

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

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

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

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

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

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

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288
Project Number: 3175.10 **Report Date:** 08/27/18

Case Narrative (continued)

Report Submission
August 27, 2018: This final report includes the results of all requested analyses.
August 27, 2018: This is a preliminary report.

The analysis of Ethanol was subcontracted. A copy of the laboratory report is included as an addendum.
Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt
L1832288-04: A sample identified as "TRIP BLANK" was received but not listed on the Chain of Custody. This sample was not analyzed.

Volatile Organics
The WG1148915-3 LCS recovery, associated with L1832288-01 and -02, is above the acceptance criteria for vinyl acetate (142%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

Semivolatile Organics by SIM
The WG1148142-1 Method Blank, associated with L1832288-01, has a concentration above the reporting limit for Naphthalene, Acenaphthylene, Acenapthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo[a]anthracene, Chrysene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[a]pyrene, Indeno[1,2,3-cd]pyrene, Dibenzo[a,h]anthracene, Benzo[g,h,i]perylene. Since the sample was non-detect for these target analytes, no further actions were taken. The results of the original analysis are reported.
The WG1148142-1 Method Blank, associated with L1832288-02, has concentrations above the reporting limits for Naphthalene, Acenaphthylene, Acenapthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo[a]anthracene, Chrysene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[a]pyrene, Indeno[1,2,3-cd]pyrene, Dibenzo[a,h]anthracene, Benzo[g,h,i]perylene. The sample was re-extracted with the method required holding time exceeded the method blank was non-detect for these target compounds. The results of both extractions are reported, along with the re-extract QC. The original sample result is reported

Project Name:	FOLEY BLOCK 8	**Lab Number:**	L1832288
Project Number:	3175.10	**Report Date:**	08/27/18

Case Narrative (continued)

with B qualifier.

Total Metals

L1832288-03: The sample has an elevated detection limit for lead due to the dilution required by the high concentrations of target and non-target elements.

The WG1148521-3 MS recovery for iron (0%), performed on L1832288-01, does not apply because the sample concentration is greater than four times the spike amount added.

Dissolved Metals

The WG1148338-2 LCS recovery, associated with L1832288-01 and -02, is above the acceptance criteria for silver (116%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

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

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 08/27/18

ORGANICS

VOLATILES

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01 Date Collected: 08/16/18 12:40
Client ID: NPDES RGP-1 Date Received: 08/16/18
Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 08/20/18 18:07
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01 Date Collected: 08/16/18 12:40

Client ID: NPDES RGP-1 Date Received: 08/16/18

Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	98		60-140
Fluorobenzene	100		60-140
4-Bromofluorobenzene	97		60-140

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01 Date Collected: 08/16/18 12:40
Client ID: NPDES RGP-1 Date Received: 08/16/18
Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 08/20/18 18:07
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	107		60-140
4-Bromofluorobenzene	96		60-140

Project Name: FOLEY BLOCK 8
Project Number: 3175.10
Lab Number: L1832288
Report Date: 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01
Client ID: NPDES RGP-1
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 12:40
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 08/21/18 13:42
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 08/21/18 10:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02 Date Collected: 08/16/18 15:00
Client ID: NPDES RGP-2 Date Received: 08/16/18
Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 08/20/18 18:44
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02 Date Collected: 08/16/18 15:00

Client ID: NPDES RGP-2 Date Received: 08/16/18

Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	99		60-140
Fluorobenzene	108		60-140
4-Bromofluorobenzene	94		60-140

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02 Date Collected: 08/16/18 15:00
Client ID: NPDES RGP-2 Date Received: 08/16/18
Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 08/20/18 18:44
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	116		60-140
4-Bromofluorobenzene	97		60-140

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02
Client ID: NPDES RGP-2
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 15:00
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 08/21/18 13:59
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 08/21/18 10:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 08/21/18 11:44
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 08/21/18 10:01

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01-02 Batch: WG1148771-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 08/20/18 15:42
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1148908-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	121		60-140
4-Bromofluorobenzene	95		60-140

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 08/20/18 15:42
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1148915-4					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 08/20/18 15:42
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1148915-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	99		60-140
Fluorobenzene	112		60-140
4-Bromofluorobenzene	92		60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01-02 Batch: WG1148771-2								
1,2-Dibromoethane	103		-		80-120	-			A

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1148908-3								
1,4-Dioxane	110		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	122				60-140
4-Bromofluorobenzene	92				60-140

Lab Control Sample Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1148915-3								
Methylene chloride	100		-		60-140	-		28
1,1-Dichloroethane	95		-		50-150	-		49
Carbon tetrachloride	110		-		70-130	-		41
1,1,2-Trichloroethane	85		-		70-130	-		45
Tetrachloroethene	95		-		70-130	-		39
1,2-Dichloroethane	110		-		70-130	-		49
1,1,1-Trichloroethane	110		-		70-130	-		36
Benzene	110		-		65-135	-		61
Toluene	100		-		70-130	-		41
Ethylbenzene	100		-		60-140	-		63
Vinyl chloride	105		-		5-195	-		66
1,1-Dichloroethene	90		-		50-150	-		32
cis-1,2-Dichloroethene	95		-		60-140	-		30
Trichloroethene	95		-		65-135	-		48
1,2-Dichlorobenzene	85		-		65-135	-		57
1,3-Dichlorobenzene	85		-		70-130	-		43
1,4-Dichlorobenzene	85		-		65-135	-		57
p/m-Xylene	100		-		60-140	-		30
o-xylene	95		-		60-140	-		30
Acetone	92		-		40-160	-		30
Methyl tert butyl ether	85		-		60-140	-		30
Tert-Butyl Alcohol	78		-		60-140	-		30
Tertiary-Amyl Methyl Ether	100		-		60-140	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1148915-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	99				60-140
Fluorobenzene	113				60-140
4-Bromofluorobenzene	94				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Microextractables by GC - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1148771-3 QC Sample: L1831972-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.253	0.263	104		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.253	0.252	100		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01
Client ID: NPDES RGP-1
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 12:40
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 08/20/18 20:15
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 08/19/18 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	90		42-122
2-Fluorobiphenyl	88		46-121
4-Terphenyl-d14	93		47-138

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01
Client ID: NPDES RGP-1
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 12:40
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 08/24/18 02:56
Analyst: CB

Extraction Method: EPA 625.1
Extraction Date: 08/19/18 15:04

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	--	1
Fluoranthene	ND		ug/l	0.10	--	1
Naphthalene	ND		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.10	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.10	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	ND		ug/l	0.10	--	1
Anthracene	ND		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	ND		ug/l	0.10	--	1
Phenanthrene	ND		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	ND		ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	1.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		25-87
Phenol-d6	35		16-65
Nitrobenzene-d5	90		42-122
2-Fluorobiphenyl	82		46-121
2,4,6-Tribromophenol	113		45-128
4-Terphenyl-d14	92		47-138

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02
Client ID: NPDES RGP-2
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 15:00
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 08/20/18 20:42
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 08/19/18 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	85		42-122
2-Fluorobiphenyl	83		46-121
4-Terphenyl-d14	99		47-138

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02
Client ID: NPDES RGP-2
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 15:00
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 08/24/18 03:22
Analyst: CB

Extraction Method: EPA 625.1
Extraction Date: 08/19/18 15:04

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	--	1
Fluoranthene	ND		ug/l	0.10	--	1
Naphthalene	ND		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.10	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.10	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	ND		ug/l	0.10	--	1
Anthracene	0.13	B	ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	ND		ug/l	0.10	--	1
Phenanthrene	ND		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	0.14	B	ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	1.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		25-87
Phenol-d6	33		16-65
Nitrobenzene-d5	82		42-122
2-Fluorobiphenyl	79		46-121
2,4,6-Tribromophenol	108		45-128
4-Terphenyl-d14	93		47-138

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02 RE
Client ID: NPDES RGP-2
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 15:00
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 08/25/18 19:44
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 08/24/18 14:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	--	1
Fluoranthene	0.14		ug/l	0.10	--	1
Naphthalene	0.11		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.10	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.10	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	ND		ug/l	0.10	--	1
Anthracene	0.12		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	ND		ug/l	0.10	--	1
Phenanthrene	ND		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	0.21		ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	1.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		25-87
Phenol-d6	28		16-65
Nitrobenzene-d5	70		42-122
2-Fluorobiphenyl	69		46-121
2,4,6-Tribromophenol	84		45-128
4-Terphenyl-d14	84		47-138

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 08/20/18 14:59
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 08/18/18 17:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1148140-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	80		42-122
2-Fluorobiphenyl	83		46-121
4-Terphenyl-d14	97		47-138

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 08/21/18 10:19
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 08/18/18 17:05

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1148142-1					
Acenaphthene	0.15		ug/l	0.10	--
Fluoranthene	0.16		ug/l	0.10	--
Naphthalene	0.12		ug/l	0.10	--
Benzo(a)anthracene	0.14		ug/l	0.10	--
Benzo(a)pyrene	0.13		ug/l	0.10	--
Benzo(b)fluoranthene	0.12		ug/l	0.10	--
Benzo(k)fluoranthene	0.17		ug/l	0.10	--
Chrysene	0.16		ug/l	0.10	--
Acenaphthylene	0.14		ug/l	0.10	--
Anthracene	0.16		ug/l	0.10	--
Benzo(ghi)perylene	0.14		ug/l	0.10	--
Fluorene	0.16		ug/l	0.10	--
Phenanthrene	0.16		ug/l	0.10	--
Dibenzo(a,h)anthracene	0.14		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	0.17		ug/l	0.10	--
Pyrene	0.16		ug/l	0.10	--
Pentachlorophenol	ND		ug/l	1.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		25-87
Phenol-d6	34		16-65
Nitrobenzene-d5	79		42-122
2-Fluorobiphenyl	73		46-121
2,4,6-Tribromophenol	95		45-128
4-Terphenyl-d14	87		47-138

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 08/25/18 08:46
Analyst: CB

Extraction Method: EPA 625.1
Extraction Date: 08/24/18 11:35

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 02 Batch: WG1150303-1					
Acenaphthene	ND		ug/l	0.10	--
Fluoranthene	ND		ug/l	0.10	--
Naphthalene	ND		ug/l	0.10	--
Benzo(a)anthracene	ND		ug/l	0.10	--
Benzo(a)pyrene	ND		ug/l	0.10	--
Benzo(b)fluoranthene	ND		ug/l	0.10	--
Benzo(k)fluoranthene	ND		ug/l	0.10	--
Chrysene	ND		ug/l	0.10	--
Acenaphthylene	ND		ug/l	0.10	--
Anthracene	ND		ug/l	0.10	--
Benzo(ghi)perylene	ND		ug/l	0.10	--
Fluorene	ND		ug/l	0.10	--
Phenanthrene	ND		ug/l	0.10	--
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--
Pyrene	ND		ug/l	0.10	--
Pentachlorophenol	ND		ug/l	1.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		25-87
Phenol-d6	30		16-65
Nitrobenzene-d5	75		42-122
2-Fluorobiphenyl	72		46-121
2,4,6-Tribromophenol	86		45-128
4-Terphenyl-d14	90		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1148140-2								
Bis(2-ethylhexyl)phthalate	98		-		29-137	-		30
Butyl benzyl phthalate	100		-		1-140	-		30
Di-n-butylphthalate	101		-		8-120	-		30
Di-n-octylphthalate	106		-		19-132	-		30
Diethyl phthalate	96		-		1-120	-		30
Dimethyl phthalate	93		-		1-120	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	87				42-122
2-Fluorobiphenyl	85				46-121
4-Terphenyl-d14	92				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1148142-2								
Acenaphthene	72		-		60-132	-		30
Fluoranthene	74		-		43-121	-		30
Naphthalene	62		-		36-120	-		30
Benzo(a)anthracene	66		-		42-133	-		30
Benzo(a)pyrene	70		-		32-148	-		30
Benzo(b)fluoranthene	68		-		42-140	-		30
Benzo(k)fluoranthene	80		-		25-146	-		30
Chrysene	72		-		44-140	-		30
Acenaphthylene	69		-		54-126	-		30
Anthracene	72		-		43-120	-		30
Benzo(ghi)perylene	67		-		1-195	-		30
Fluorene	75		-		70-120	-		30
Phenanthrene	68		-		65-120	-		30
Dibenzo(a,h)anthracene	71		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	67		-		1-151	-		30
Pyrene	73		-		70-120	-		30
Pentachlorophenol	74		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1148142-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	39				25-87
Phenol-d6	28				16-65
Nitrobenzene-d5	71				42-122
2-Fluorobiphenyl	61				46-121
2,4,6-Tribromophenol	75				45-128
4-Terphenyl-d14	77				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10
Lab Number: L1832288
Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 02 Batch: WG1150303-2 WG1150303-3								
Acenaphthene	93		87		60-132	7		30
Fluoranthene	92		84		43-121	9		30
Naphthalene	75		72		36-120	4		30
Benzo(a)anthracene	80		73		42-133	9		30
Benzo(a)pyrene	87		80		32-148	8		30
Benzo(b)fluoranthene	81		75		42-140	8		30
Benzo(k)fluoranthene	92		83		25-146	10		30
Chrysene	88		80		44-140	10		30
Acenaphthylene	86		81		54-126	6		30
Anthracene	92		85		43-120	8		30
Benzo(ghi)perylene	88		80		1-195	10		30
Fluorene	98		90		70-120	9		30
Phenanthrene	86		80		65-120	7		30
Dibenzo(a,h)anthracene	91		83		1-200	9		30
Indeno(1,2,3-cd)pyrene	86		78		1-151	10		30
Pyrene	90		83		70-120	8		30
Pentachlorophenol	94		86		38-152	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 02 Batch: WG1150303-2 WG1150303-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	46		47		25-87
Phenol-d6	32		32		16-65
Nitrobenzene-d5	86		84		42-122
2-Fluorobiphenyl	79		77		46-121
2,4,6-Tribromophenol	104		98		45-128
4-Terphenyl-d14	96		91		47-138

PCBS

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01
Client ID: NPDES RGP-1
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 12:40
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 08/22/18 10:34
Analyst: HT

Extraction Method: EPA 608.3
Extraction Date: 08/20/18 08:02
Cleanup Method: EPA 3665A
Cleanup Date: 08/21/18
Cleanup Method: EPA 3660B
Cleanup Date: 08/21/18

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		37-123	A
Decachlorobiphenyl	48		38-114	A
2,4,5,6-Tetrachloro-m-xylene	72		37-123	B
Decachlorobiphenyl	53		38-114	B

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02
Client ID: NPDES RGP-2
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 15:00
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 08/22/18 10:46
Analyst: HT

Extraction Method: EPA 608.3
Extraction Date: 08/20/18 08:02
Cleanup Method: EPA 3665A
Cleanup Date: 08/21/18
Cleanup Method: EPA 3660B
Cleanup Date: 08/21/18

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		37-123	A
Decachlorobiphenyl	62		38-114	A
2,4,5,6-Tetrachloro-m-xylene	78		37-123	B
Decachlorobiphenyl	68		38-114	B

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 08/21/18 09:14
Analyst: WR

Extraction Method: EPA 608.3
Extraction Date: 08/20/18 08:02
Cleanup Method: EPA 3665A
Cleanup Date: 08/21/18
Cleanup Method: EPA 3660B
Cleanup Date: 08/21/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1148336-1						
Aroclor 1016	ND		ug/l	0.250	--	A
Aroclor 1221	ND		ug/l	0.250	--	A
Aroclor 1232	ND		ug/l	0.250	--	A
Aroclor 1242	ND		ug/l	0.250	--	A
Aroclor 1248	ND		ug/l	0.250	--	A
Aroclor 1254	ND		ug/l	0.250	--	A
Aroclor 1260	ND		ug/l	0.200	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		37-123	A
Decachlorobiphenyl	65		38-114	A
2,4,5,6-Tetrachloro-m-xylene	67		37-123	B
Decachlorobiphenyl	70		38-114	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1148336-2									
Aroclor 1016	69		-		50-140	-		36	A
Aroclor 1260	63		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68				37-123	A
Decachlorobiphenyl	64				38-114	A
2,4,5,6-Tetrachloro-m-xylene	65				37-123	B
Decachlorobiphenyl	68				38-114	B

METALS

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01 Date Collected: 08/16/18 12:40

Client ID: NPDES RGP-1 Date Received: 08/16/18

Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00916		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Chromium, Total	0.03255		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Copper, Total	0.03084		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Iron, Total	39.3		mg/l	0.050	--	1	08/20/18 15:50	08/21/18 21:48	EPA 3005A	19,200.7	AB
Lead, Total	0.02242		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	08/21/18 12:22	08/21/18 17:12	EPA 245.1	3,245.1	MG
Nickel, Total	0.02074		mg/l	0.00200	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Zinc, Total	0.05428		mg/l	0.01000	--	1	08/20/18 15:50	08/21/18 13:00	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	410		mg/l	0.660	NA	1	08/20/18 15:50	08/21/18 21:48	EPA 3005A	19,200.7	AB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	0.032		mg/l	0.010	--	1		08/21/18 13:00	NA	107,-	
Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	ND		mg/l	0.0040	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Arsenic, Dissolved	0.0026		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Chromium, Dissolved	ND		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Copper, Dissolved	ND		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Iron, Dissolved	18.8		mg/l	0.050	--	1	08/20/18 09:00	08/20/18 21:10	EPA 3005A	19,200.7	LC
Lead, Dissolved	ND		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Mercury, Dissolved	ND		mg/l	0.00020	--	1	08/17/18 16:15	08/20/18 14:57	EPA 245.1	3,245.1	MG

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01 Date Collected: 08/16/18 12:40

Client ID: NPDES RGP-1 Date Received: 08/16/18

Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Nickel, Dissolved	ND		mg/l	0.0020	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Selenium, Dissolved	ND		mg/l	0.0050	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Silver, Dissolved	ND		mg/l	0.0004	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM
Zinc, Dissolved	ND		mg/l	0.0100	--	1	08/20/18 09:00	08/20/18 15:51	EPA 3005A	3,200.8	AM

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02 Date Collected: 08/16/18 15:00

Client ID: NPDES RGP-2 Date Received: 08/16/18

Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	0.00629		mg/l	0.00400	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00244		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Chromium, Total	0.00337		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Copper, Total	0.01599		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Iron, Total	0.074		mg/l	0.050	--	1	08/20/18 15:50	08/21/18 22:11	EPA 3005A	19,200.7	AB
Lead, Total	0.00174		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	08/21/18 12:22	08/21/18 17:14	EPA 245.1	3,245.1	MG
Nickel, Total	0.00269		mg/l	0.00200	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Zinc, Total	0.01414		mg/l	0.01000	--	1	08/20/18 15:50	08/21/18 13:13	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	267		mg/l	0.660	NA	1	08/20/18 15:50	08/21/18 22:11	EPA 3005A	19,200.7	AB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		08/21/18 13:13	NA	107,-	
Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	0.0079		mg/l	0.0040	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Arsenic, Dissolved	0.0023		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Chromium, Dissolved	0.0024		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Copper, Dissolved	0.0113		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Iron, Dissolved	ND		mg/l	0.050	--	1	08/20/18 09:00	08/20/18 22:15	EPA 3005A	19,200.7	LC
Lead, Dissolved	ND		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Mercury, Dissolved	ND		mg/l	0.00020	--	1	08/17/18 16:15	08/20/18 14:59	EPA 245.1	3,245.1	MG

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02 Date Collected: 08/16/18 15:00

Client ID: NPDES RGP-2 Date Received: 08/16/18

Sample Location: SOMERVILLE, MA Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Nickel, Dissolved	0.0025		mg/l	0.0020	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Selenium, Dissolved	ND		mg/l	0.0050	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Silver, Dissolved	ND		mg/l	0.0004	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM
Zinc, Dissolved	ND		mg/l	0.0100	--	1	08/20/18 09:00	08/20/18 16:27	EPA 3005A	3,200.8	AM

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-03 Date Collected: 08/16/18 06:05

Client ID: MYSTIC RIVER, SOMERVILLE, MA Date Received: 08/16/18

Sample Location: SOMERVILLE, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00151		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM
Copper, Total	0.00133		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM
Iron, Total	0.155		mg/l	0.050	--	1	08/20/18 15:50	08/21/18 18:43	EPA 3005A	19,200.7	LC
Lead, Total	ND		mg/l	0.01000	--	10	08/20/18 15:50	08/21/18 19:37	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	08/21/18 12:22	08/21/18 17:16	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	08/20/18 15:50	08/21/18 14:55	EPA 3005A	3,200.8	AM

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1147884-1										
Mercury, Dissolved	ND		mg/l	0.0002	--	1	08/17/18 16:15	08/20/18 14:47	3,245.1	MG

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1148338-1										
Antimony, Dissolved	ND		mg/l	0.0040	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Arsenic, Dissolved	ND		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Chromium, Dissolved	ND		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Copper, Dissolved	ND		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Lead, Dissolved	ND		mg/l	0.0010	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Nickel, Dissolved	ND		mg/l	0.0020	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Selenium, Dissolved	ND		mg/l	0.0050	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Silver, Dissolved	ND		mg/l	0.0004	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM
Zinc, Dissolved	ND		mg/l	0.0100	--	1	08/20/18 09:00	08/20/18 15:15	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1148339-1										
Iron, Dissolved	ND		mg/l	0.050	--	1	08/20/18 09:00	08/20/18 21:01	19,200.7	LC

Prep Information

Digestion Method: EPA 3005A

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1148521-1										
Iron, Total	ND		mg/l	0.050	--	1	08/20/18 15:50	08/21/18 21:39	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-03 Batch: WG1148521-1										
Hardness	ND		mg/l	0.660	NA	1	08/20/18 15:50	08/21/18 21:39	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1148522-1										
Antimony, Total	ND		mg/l	0.00400	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	08/20/18 15:50	08/21/18 11:59	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1148858-1										
Mercury, Total	ND		mg/l	0.0002	--	1	08/21/18 12:22	08/21/18 16:19	3,245.1	MG

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1147884-2								
Mercury, Dissolved	92		-		85-115	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1148338-2								
Antimony, Dissolved	99		-		85-115	-		
Arsenic, Dissolved	114		-		85-115	-		
Cadmium, Dissolved	111		-		85-115	-		
Chromium, Dissolved	107		-		85-115	-		
Copper, Dissolved	109		-		85-115	-		
Lead, Dissolved	111		-		85-115	-		
Nickel, Dissolved	107		-		85-115	-		
Selenium, Dissolved	111		-		85-115	-		
Silver, Dissolved	**116**	Q	-		85-115	-		
Zinc, Dissolved	113		-		85-115	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1148339-2								
Iron, Dissolved	106		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1148521-2								
Iron, Total	106		-		85-115	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 Batch: WG1148521-2					
Hardness	103	-	85-115	-	
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1148522-2					
Antimony, Total	106	-	85-115	-	
Arsenic, Total	107	-	85-115	-	
Cadmium, Total	109	-	85-115	-	
Chromium, Total	108	-	85-115	-	
Copper, Total	108	-	85-115	-	
Lead, Total	111	-	85-115	-	
Nickel, Total	112	-	85-115	-	
Selenium, Total	110	-	85-115	-	
Silver, Total	112	-	85-115	-	
Zinc, Total	115	-	85-115	-	
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1148858-2					
Mercury, Total	104	-	85-115	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1147884-3 QC Sample: L1831972-01 Client ID: MS Sample												
Mercury, Dissolved	ND	0.005	0.0049	99		-	-		75-125	-		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1148338-3 QC Sample: L1832288-01 Client ID: NPDES RGP-1												
Antimony, Dissolved	ND	0.5	0.5785	116		-	-		70-130	-		20
Arsenic, Dissolved	0.0026	0.12	0.1344	110		-	-		70-130	-		20
Cadmium, Dissolved	ND	0.051	0.0550	108		-	-		70-130	-		20
Chromium, Dissolved	ND	0.2	0.2015	101		-	-		70-130	-		20
Copper, Dissolved	ND	0.25	0.2769	111		-	-		70-130	-		20
Lead, Dissolved	ND	0.51	0.5537	108		-	-		70-130	-		20
Nickel, Dissolved	ND	0.5	0.5264	105		-	-		70-130	-		20
Selenium, Dissolved	ND	0.12	0.1319	110		-	-		70-130	-		20
Silver, Dissolved	ND	0.05	0.0575	115		-	-		70-130	-		20
Zinc, Dissolved	ND	0.5	0.5468	109		-	-		70-130	-		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1148339-3 QC Sample: L1832288-01 Client ID: NPDES RGP-1												
Iron, Dissolved	18.8	1	20.0	120		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148521-3 QC Sample: L1832288-01 Client ID: NPDES RGP-1												
Iron, Total	39.3	1	38.3	**0**	Q	-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148521-3 QC Sample: L1832288-01 Client ID: NPDES RGP-1												
Hardness	410	66.2	464	82		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148522-3 QC Sample: L1832288-01 Client ID: NPDES RGP-1									
Antimony, Total	ND	0.5	0.5083	102	-	-	70-130	-	20
Arsenic, Total	0.00916	0.12	0.1391	108	-	-	70-130	-	20
Cadmium, Total	ND	0.051	0.05909	116	-	-	70-130	-	20
Chromium, Total	0.03255	0.2	0.2398	104	-	-	70-130	-	20
Copper, Total	0.03084	0.25	0.2941	105	-	-	70-130	-	20
Lead, Total	0.02242	0.51	0.5733	108	-	-	70-130	-	20
Nickel, Total	0.02074	0.5	0.5358	103	-	-	70-130	-	20
Selenium, Total	ND	0.12	0.1322	110	-	-	70-130	-	20
Silver, Total	ND	0.05	0.05713	114	-	-	70-130	-	20
Zinc, Total	0.05428	0.5	0.6063	110	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148522-5 QC Sample: L1832288-02 Client ID: NPDES RGP-2									
Antimony, Total	0.00629	0.5	0.5625	111	-	-	70-130	-	20
Arsenic, Total	0.00244	0.12	0.1389	114	-	-	70-130	-	20
Cadmium, Total	ND	0.051	0.05726	112	-	-	70-130	-	20
Chromium, Total	0.00337	0.2	0.2207	109	-	-	70-130	-	20
Copper, Total	0.01599	0.25	0.2967	112	-	-	70-130	-	20
Lead, Total	0.00174	0.51	0.5941	116	-	-	70-130	-	20
Nickel, Total	0.00269	0.5	0.5640	112	-	-	70-130	-	20
Selenium, Total	ND	0.12	0.1402	117	-	-	70-130	-	20
Silver, Total	ND	0.05	0.05896	118	-	-	70-130	-	20
Zinc, Total	0.01414	0.5	0.5800	113	-	-	70-130	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148858-3 QC Sample: L1832464-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.0037	74	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148858-5 QC Sample: L1832464-02 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.0043	87	-	-	70-130	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1147884-4 QC Sample: L1831972-01 Client ID: DUP Sample						
Mercury, Dissolved	ND	ND	mg/l	NC		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1148338-4 QC Sample: L1832288-01 Client ID: NPDES RGP-1						
Antimony, Dissolved	ND	ND	mg/l	NC		20
Arsenic, Dissolved	0.0026	0.0024	mg/l	7		20
Cadmium, Dissolved	ND	ND	mg/l	NC		20
Chromium, Dissolved	ND	ND	mg/l	NC		20
Copper, Dissolved	ND	ND	mg/l	NC		20
Lead, Dissolved	ND	ND	mg/l	NC		20
Nickel, Dissolved	ND	ND	mg/l	NC		20
Selenium, Dissolved	ND	ND	mg/l	NC		20
Silver, Dissolved	ND	ND	mg/l	NC		20
Zinc, Dissolved	ND	ND	mg/l	NC		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1148339-4 QC Sample: L1832288-01 Client ID: NPDES RGP-1						
Iron, Dissolved	18.8	18.5	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148521-4 QC Sample: L1832288-01 Client ID: NPDES RGP-1						
Iron, Total	39.3	38.8	mg/l	1		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148521-4 QC Sample: L1832288-01 Client ID: NPDES RGP-1						
Hardness	410	421	mg/l	3		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148522-4 QC Sample: L1832288-01 Client ID: NPDES RGP-1					
Antimony, Total	ND	ND	mg/l	NC	20
Arsenic, Total	0.00916	0.00946	mg/l	3	20
Cadmium, Total	ND	ND	mg/l	NC	20
Chromium, Total	0.03255	0.03107	mg/l	5	20
Copper, Total	0.03084	0.03008	mg/l	2	20
Lead, Total	0.02242	0.02243	mg/l	0	20
Nickel, Total	0.02074	0.02194	mg/l	6	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.05428	0.05259	mg/l	3	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148522-6 QC Sample: L1832288-02 Client ID: NPDES RGP-2					
Antimony, Total	0.00629	0.00668	mg/l	6	20
Arsenic, Total	0.00244	0.00237	mg/l	3	20
Cadmium, Total	ND	ND	mg/l	NC	20
Chromium, Total	0.00337	0.00340	mg/l	1	20
Copper, Total	0.01599	0.01659	mg/l	4	20
Lead, Total	0.00174	0.00184	mg/l	6	20
Nickel, Total	0.00269	0.00302	mg/l	12	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.01414	0.01460	mg/l	3	20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148858-4 QC Sample: L1832464-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1148858-6 QC Sample: L1832464-02 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-01
Client ID: NPDES RGP-1
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 12:40
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	510		mg/l	34	NA	6.7	-	08/17/18 16:05	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	--	1	08/17/18 10:50	08/17/18 13:54	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	08/17/18 00:28	121,4500CL-D	AS
pH (H)	6.8		SU	-	NA	1	-	08/17/18 03:45	121,4500H+-B	UN
Nitrogen, Ammonia	1.65		mg/l	0.075	--	1	08/17/18 02:00	08/17/18 21:57	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.40	--	1.1	08/17/18 17:45	08/17/18 21:40	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	08/17/18 05:40	08/20/18 05:35	4,420.1	GD
Chromium, Hexavalent	ND		mg/l	0.010	--	1	08/17/18 01:00	08/17/18 02:53	1,7196A	MA
Anions by Ion Chromatography - Westborough Lab										
Chloride	476.		mg/l	12.5	--	25	-	08/17/18 21:12	44,300.0	AU
Sulfate	256.		mg/l	25.0	--	25	-	08/17/18 21:12	44,300.0	AU

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-02
Client ID: NPDES RGP-2
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 15:00
Date Received: 08/16/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	41.		mg/l	5.0	NA	1	-	08/17/18 16:05	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	--	1	08/17/18 10:50	08/17/18 13:55	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	08/17/18 00:28	121,4500CL-D	AS
pH (H)	11.0		SU	-	NA	1	-	08/17/18 03:45	121,4500H+-B	UN
Nitrogen, Ammonia	5.69		mg/l	0.075	--	1	08/17/18 02:00	08/17/18 21:58	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	08/17/18 17:45	08/17/18 21:40	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	08/17/18 05:40	08/20/18 05:35	4,420.1	GD
Chromium, Hexavalent	ND		mg/l	0.010	--	1	08/17/18 01:00	08/17/18 02:55	1,7196A	MA
Anions by Ion Chromatography - Westborough Lab										
Chloride	286.		mg/l	12.5	--	25	-	08/17/18 21:24	44,300.0	AU
Sulfate	333.		mg/l	25.0	--	25	-	08/17/18 21:24	44,300.0	AU

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

SAMPLE RESULTS

Lab ID: L1832288-03
Client ID: MYSTIC RIVER, SOMERVILLE, MA
Sample Location: SOMERVILLE, MA

Date Collected: 08/16/18 06:05
Date Received: 08/16/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
SALINITY	25		SU	2.0	--	1	-	08/17/18 03:47	121,2520B	MA
pH (H)	7.6		SU	-	NA	1	-	08/17/18 03:45	121,4500H+-B	UN
Nitrogen, Ammonia	0.217		mg/l	0.075	--	1	08/17/18 02:00	08/17/18 21:59	121,4500NH3-BH	AT

Project Name: FOLEY BLOCK 8 **Lab Number:** L1832288

Project Number: 3175.10 **Report Date:** 08/27/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1147529-4										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	08/17/18 00:28	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1147541-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	08/17/18 01:00	08/17/18 02:42	1,7196A	MA
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1147553-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	08/17/18 02:00	08/17/18 21:42	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1147618-1										
Phenolics, Total	ND		mg/l	0.030	--	1	08/17/18 05:40	08/20/18 05:24	4,420.1	GD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1147677-1										
Cyanide, Total	ND		mg/l	0.005	--	1	08/17/18 10:50	08/17/18 13:27	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1147809-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/17/18 16:05	121,2540D	DR
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1147929-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	08/17/18 17:45	08/17/18 21:40	74,1664A	ML
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1147987-1										
Chloride	ND		mg/l	0.500	--	1	-	08/17/18 17:36	44,300.0	AU
Sulfate	ND		mg/l	1.00	--	1	-	08/17/18 17:36	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1147529-1								
Chlorine, Total Residual	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1147541-2								
Chromium, Hexavalent	98		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1147553-2								
Nitrogen, Ammonia	92		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1147618-2								
Phenolics, Total	86		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG1147625-1								
SALINITY	99		-			-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1147626-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1147677-2								
Cyanide, Total	91		-		90-110	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOLEY BLOCK 8

Project Number: 3175.10

Lab Number: L1832288

Report Date: 08/27/18

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1147929-2					
TPH	97	-	64-132	-	34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1147987-2					
Chloride	100	-	90-110	-	
Sulfate	103	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147529-3 QC Sample: L1832209-02 Client ID: MS Sample												
Chlorine, Total Residual	ND	0.248	0.22	89		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147541-4 QC Sample: L1832288-02 Client ID: NPDES RGP-2												
Chromium, Hexavalent	ND	0.1	0.095	95		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1147553-4 QC Sample: L1831885-01 Client ID: MS Sample												
Nitrogen, Ammonia	0.338	4	4.06	93		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147618-4 QC Sample: L1831618-07 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.37	93		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147677-4 WG1147677-5 QC Sample: L1832059-04 Client ID: MS Sample												
Cyanide, Total	0.018	0.2	0.223	102		0.232	107		90-110	4		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147929-4 QC Sample: L1831981-04 Client ID: MS Sample												
TPH	ND	20	16.6	83		-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147987-3 WG1147987-4 QC Sample: L1831825-01 Client ID: MS Sample												
Chloride	581	200	786	102		780	99		90-110	1		18
Sulfate	45.2	400	476	108		470	106		90-110	1		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147529-2 QC Sample: L1832209-01 Client ID: DUP Sample						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147541-3 QC Sample: L1832288-01 Client ID: NPDES RGP-1						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1147553-3 QC Sample: L1831885-01 Client ID: DUP Sample						
Nitrogen, Ammonia	0.338	0.322	mg/l	5		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147618-3 QC Sample: L1831618-07 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG1147625-2 QC Sample: L1832131-01 Client ID: DUP Sample						
SALINITY	ND	ND	SU	NC		
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1147626-2 QC Sample: L1831926-01 Client ID: DUP Sample						
pH	7.4	7.4	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147677-3 QC Sample: L1832059-04 Client ID: DUP Sample						
Cyanide, Total	0.018	0.020	mg/l	9		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147809-2 QC Sample: L1832168-02 Client ID: DUP Sample						
Solids, Total Suspended	2600	6500	mg/l	**86**	Q	29
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1147929-3 QC Sample: L1831981-03 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1832288-01A	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1832288-01B	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1832288-01C	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1832288-01D	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1832288-01E	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		504(14)
L1832288-01F	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		504(14)
L1832288-01G	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		504(14)
L1832288-01H	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		504(14)
L1832288-01I	Vial HCl preserved	B	NA		4.3	Y	Absent		SUB-ETHANOL(14)
L1832288-01J	Vial HCl preserved	B	NA		4.3	Y	Absent		SUB-ETHANOL(14)
L1832288-01K	Vial HCl preserved	B	NA		4.3	Y	Absent		SUB-ETHANOL(14)
L1832288-01L	Plastic 250ml NaOH preserved	B	>12	>12	4.3	Y	Absent		TCN-4500(14)
L1832288-01M	Plastic 250ml HNO3 preserved	B	<2	<2	4.3	Y	Absent		AG-2008S(180),CR-2008S(180),FE-RI(180),AS-2008S(180),PB-2008S(180),ZN-2008S(180),NI-2008S(180),SE-2008S(180),CD-2008S(180),CU-2008S(180),SB-2008S(180),HG-R(28)
L1832288-01N	Plastic 250ml HNO3 preserved	B	<2	<2	4.3	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1832288-01O	Plastic 500ml H2SO4 preserved	B	<2	<2	4.3	Y	Absent		NH3-4500(28)
L1832288-01P	Amber 950ml H2SO4 preserved	B	<2	<2	4.3	Y	Absent		TPHENOL-420(28)
L1832288-01Q	Plastic 950ml unpreserved	B	7	7	4.3	Y	Absent		SO4-300(28),CL-300(28),HEXCR-7196(1),TRC-4500(1),PH-4500(.01)
L1832288-01R	Plastic 950ml unpreserved	B	7	7	4.3	Y	Absent		TSS-2540(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1832288-01S	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1832288-01T	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1832288-01U	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1832288-01V	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		PCB-608.3(7)
L1832288-01W	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		PCB-608.3(7)
L1832288-01X	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		PCB-608.3(7)
L1832288-01Y	Amber 1000ml HCl preserved	B	NA		4.3	Y	Absent		TPH-1664(28)
L1832288-01Z	Amber 1000ml HCl preserved	B	NA		4.3	Y	Absent		TPH-1664(28)
L1832288-02A	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1832288-02B	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1832288-02C	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1832288-02D	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1832288-02E	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		504(14)
L1832288-02F	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		504(14)
L1832288-02G	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		504(14)
L1832288-02H	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		504(14)
L1832288-02I	Vial HCl preserved	A	NA		4.0	Y	Absent		SUB-ETHANOL(14)
L1832288-02J	Vial HCl preserved	A	NA		4.0	Y	Absent		SUB-ETHANOL(14)
L1832288-02K	Vial HCl preserved	A	NA		4.0	Y	Absent		SUB-ETHANOL(14)
L1832288-02L	Plastic 250ml NaOH preserved	A	>12	>12	4.0	Y	Absent		TCN-4500(14)
L1832288-02M	Plastic 250ml HNO3 preserved	A	<2	<2	4.0	Y	Absent		AG-2008S(180),CR-2008S(180),FE-RI(180),AS-2008S(180),PB-2008S(180),ZN-2008S(180),NI-2008S(180),SE-2008S(180),CD-2008S(180),CU-2008S(180),SB-2008S(180),HG-R(28)
L1832288-02N	Plastic 250ml HNO3 preserved	A	<2	<2	4.0	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1832288-02O	Plastic 500ml H2SO4 preserved	A	<2	<2	4.0	Y	Absent		NH3-4500(28)
L1832288-02P	Amber 950ml H2SO4 preserved	A	<2	<2	4.0	Y	Absent		TPHENOL-420(28)

*Values in parentheses indicate holding time in days

Project Name: FOLEY BLOCK 8
Project Number: 3175.10

Lab Number: L1832288
Report Date: 08/27/18

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1832288-02Q	Plastic 950ml unpreserved	A	7	7	4.0	Y	Absent		SO4-300(28),CL-300(28),HEXCR-7196(1),TRC-4500(1),PH-4500(.01)
L1832288-02R	Plastic 950ml unpreserved	A	7	7	4.0	Y	Absent		TSS-2540(7)
L1832288-02S	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1832288-02T	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1832288-02U	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1832288-02V	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		PCB-608.3(7)
L1832288-02W	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		PCB-608.3(7)
L1832288-02X	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		PCB-608.3(7)
L1832288-02Y	Amber 1000ml HCl preserved	A	NA		4.0	Y	Absent		TPH-1664(28)
L1832288-02Z	Amber 1000ml HCl preserved	A	NA		4.0	Y	Absent		TPH-1664(28)
L1832288-03A	Plastic 120ml unpreserved	A	7	7	4.0	Y	Absent		PH-4500(.01)
L1832288-03B	Amber 250ml unpreserved	A	7	7	4.0	Y	Absent		SALINITY(28)
L1832288-03C	Plastic 250ml HNO3 preserved	A	<2	<2	4.0	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1832288-03D	Plastic 500ml H2SO4 preserved	A	<2	<2	4.0	Y	Absent		NH3-4500(28)
L1832288-04A	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		ARCHIVE()
L1832288-04B	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		ARCHIVE()

*Values in parentheses indicate holding time in days

Project Name:	FOLEY BLOCK 8	**Lab Number:**	L1832288
Project Number:	3175.10	**Report Date:**	08/27/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

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

Report Format: Data Usability Report

Project Name:	FOLEY BLOCK 8	**Lab Number:**	L1832288
Project Number:	3175.10	**Report Date:**	08/27/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	FOLEY BLOCK 8	**Lab Number:**	L1832288
Project Number:	3175.10	**Report Date:**	08/27/18

REFERENCES

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

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

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

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

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

74 Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

107 Alpha Analytical - In-house calculation method.

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

127 Method 608.3: Organochlorine Pesticides and PCBs by GC/HSD, EPA 821-R-16-009, December 2016.

128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.

129 Method 625.1: Base/Neutrals and Acids by GC/MS, EPA 821-R-16-007, December 2016.

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 08-16-2018

ALPHA Job #: L1832288

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

Client Information

Client: Sanborn Head + Associates
Address: 1 Technology Park Dr
Welltford, MA
Phone: 978-392-0400
Email: kwalker@sanbornhead.com

Project Information

Project Name: Foley Block 8
Project Location: Somerville, MA
Project #: 3175.10
Project Manager: K. Walker
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

Additional Project Information:

* RGP metals include Ag, As, Cd, Cr, Cu, Ni, Pb, Sb, Se, Zn, Fe, Hg, HexCr, TriCr
*NPDES RGP minimum levels MUST be Met.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	NPDES RGP Pkg	Ethanol	pH, Sulfate, Hardness	Ammonia, pH, Salinity	Total Metals *	Total + Dissolved Metals *	Sample Comments	TOTAL # BOTTLES
372860	NPDES RGP-1	8/16/18	12:40	GW	PMD									X	X	X			X		
-02	NPDES RGP-2	↓	15:00	GW	↓									X	X	X			X		
-03	Mystic River, Somerville, MA	↓	6:05	SW	↓												X	X			4

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

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

Container Type																					
Preservative																					

Relinquished By:	Date/Time	Received By:	Date/Time
Dale Dunn 8/16/18	16:35	[signature]	8/16 1635
[signature] AAL	8/16 1810	[signature] 8/16/18	KMD

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

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

ALPHA ANALYTICAL

Subcontract Chain of Custody

Test America (Nashville)
2960 Foster Creighton Drive
Nashville, TN 37204

Alpha Job Number
L1832288

Client Information

Client: Alpha Analytical Labs
Address: Eight Walkup Drive
Westborough, MA 01581-1019

Phone: 508-439-5132
Email: akane@alphalab.com

Project Information

Project Location: MA
Project Manager: Ashaley Kane

Turnaround & Deliverables Information

Due Date: 08/31/18
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1832288

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	NPDES RGP-1	08-16-18 12:40	WATER	Ethanol by EPA 1671 Revision A	
	NPDES RGP-2	08-16-18 15:00	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
	Chris Gilman	8/17/18 1508		
Form No: AL_subcoc				

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-157733-1
Client Project/Site: L1832288

For:
Alpha Analytical Inc
145 Flanders Road
Westborough, Massachusetts 01581-1019

Attn: Reports Dept.

Authorized for release by:
8/27/2018 3:12:02 PM

Ken Hayes, Project Manager II
(615)301-5035
ken.hayes@testamericainc.com

Table of Contents

Sample Summary

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-157733-1	NPDES RGP-1	Water	08/16/18 12:40	08/18/18 09:55
490-157733-2	NPDES RGP-2	Water	08/16/18 15:00	08/18/18 09:55

Case Narrative

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Job ID: 490-157733-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-157733-1

Comments
No additional comments.

Receipt
The samples were received on 8/18/2018 9:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0º C.

GC Semi VOA
Method 1671A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-538473.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Client Sample ID: NPDES RGP-1
Date Collected: 08/16/18 12:40
Date Received: 08/18/18 09:55

Lab Sample ID: 490-157733-1
Matrix: Water

Method: 1671A - Ethanol (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			08/24/18 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*71*		*70 - 130*		*08/24/18 12:32*	*1*

Client Sample Results

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Client Sample ID: NPDES RGP-2
Date Collected: 08/16/18 15:00
Date Received: 08/18/18 09:55

Lab Sample ID: 490-157733-2
Matrix: Water

Method: 1671A - Ethanol (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			08/24/18 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*96*		*70 - 130*		*08/24/18 12:39*	*1*

QC Sample Results

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Method: 1671A - Ethanol (GC/FID)

Lab Sample ID: MB 490-538473/4
Matrix: Water
Analysis Batch: 538473

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			08/24/18 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*104*		*70 - 130*		*08/24/18 12:08*	*1*

Lab Sample ID: LCS 490-538473/5
Matrix: Water
Analysis Batch: 538473

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol			50200	62140		ug/L		124	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Isopropyl acetate (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 490-538473/6
Matrix: Water
Analysis Batch: 538473

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			50200	64770		ug/L		129	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Isopropyl acetate (Surr)	*102*		*70 - 130*

QC Association Summary

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

GC VOA

Analysis Batch: 538473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-157733-1	NPDES RGP-1	Total/NA	Water	1671A	
490-157733-2	NPDES RGP-2	Total/NA	Water	1671A	
MB 490-538473/4	Method Blank	Total/NA	Water	1671A	
LCS 490-538473/5	Lab Control Sample	Total/NA	Water	1671A	
LCSD 490-538473/6	Lab Control Sample Dup	Total/NA	Water	1671A	

Lab Chronicle

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Client Sample ID: NPDES RGP-1

Date Collected: 08/16/18 12:40
Date Received: 08/18/18 09:55

Lab Sample ID: 490-157733-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1671A		1			538473	08/24/18 12:32	AAB	TAL NSH

Client Sample ID: NPDES RGP-2

Date Collected: 08/16/18 15:00
Date Received: 08/18/18 09:55

Lab Sample ID: 490-157733-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1671A		1			538473	08/24/18 12:39	AAB	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Method	Method Description	Protocol	Laboratory
1671A	Ethanol (GC/FID)	EPA	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Alpha Analytical Inc
Project/Site: L1832288

TestAmerica Job ID: 490-157733-1

Laboratory: TestAmerica Nashville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2938	10-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

Maine	State Program	1	TN00032	11-03-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-157733 Chain of Custody

Cooler Received/Opened On 08-18-2018 @ 0955

Time Samples Removed From Cooler 1753 Time Samples Placed In Storage 1758 (2 Hour Window)

1. Tracking # 1Z8306544997883889 (last 4 digits, FedEx) Courier: UPS NDA

IR Gun ID 17960358 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 4.0 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO..(NA)

4. Were custody seals on outside of cooler? YES...(NO)..NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...(NA)

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) KD

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? (YES)...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...(NO)...NA KD 08-18-2018

● ⬅ Larger than this.

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (intial) KD

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) KD

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) KD

I certify that I attached a label with the unique LIMS number to each container (intial) KD

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

Subcontract Chain of Custody

Test America (Nashville)
2960 Foster Creighton Drive
Nashville, TN 37204

Alpha Job Number
L1832288

Client Information

Client: Alpha Analytical Labs
Address: Eight Walkup Drive
Westborough, MA 01581-1019

Phone: 508-439-5132
Email: akane@alphalab.com

Project Information

Project Location: MA
Project Manager: Ashaley Kane

Turnaround & Deliverables Information

Due Date: 08/31/18
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1832288

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	NPDES RGP-1	08-16-18 12:40	WATER	Ethanol by EPA 1671 Revision A	
	NPDES RGP-2	08-16-18 15:00	WATER	Ethanol by EPA 1671 Revision A	

Loc: 490
157733

Relinquished By:	Date/Time:	Received By:	Date/Time:
Chris Gilbean	8/17/18 1508	Keith Jaynes TA-NAS	08-18-2018 09:55

Form No: AL_subcoc

4.0

APPENDIX E

MAPS OF RELEVANT INFRASTRUCTURE

7-30-2018

Legal Description-PARCEL 32A

A CERTAIN PARCEL OF LAND LOCATED ON THE SOUTH EASTERLY END OF FOLEY STREET ON A PLAN HEREINAFTER MENTIONED, IN THE CITY OF SOMERVILLE, IN THE COUNTY OF MIDDLESEX AND THE COMMONWEALTH OF MASSACHUSETTS, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTH EASTERLY CORNER OF THE INTERSECTION OF ASSEMBLY ROW AND FOLEY STREET ROAD AND BEING A POINT ON THE NORTH WESTERLY CORNER OF THE HEREIN DESCRIBED PARCEL; THENCE

N 78°03'36" E	A DISTANCE OF TWO HUNDRED EIGHTY THREE AND EIGHTY NINE HUNDREDTHS FEET (283.89') TO A POINT; THENCE
S 11°56'10" E	A DISTANCE OF EIGHT AND FIFTY THREE HUNDREDTHS FEET (8.53') TO A POINT; THENCE
N 78°03'36" E	A DISTANCE OF THREE AND FIFTY NINE HUNDREDTHS FEET (3.59') TO A POINT; THENCE
S 04°27'59" E	A DISTANCE OF SEVENTY FOUR AND FORTY FOUR HUNDREDTHS FEET (74.44') TO A POINT; THENCE
S 11°56'24" E	A DISTANCE OF SEVENTEEN AND SIXTY FIVE HUNDREDTHS FEET (17.65') TO A POINT; THENCE
S 04°27'59" E	A DISTANCE OF TWO HUNDRED FIFTY THREE AND FOURTEEN HUNDREDTHS FEET (253.14') TO A POINT; THENCE
S 32°55'42" W	A DISTANCE OF THIRTY ONE AND FIFTY HUNDREDTHS FEET (31.50') TO A POINT; THENCE
S 78°03'36" W	A DISTANCE OF EIGHTY SIX AND FIFTY SEVEN HUNDREDTHS FEET (86.57') TO A POINT; THENCE
S 78°05'31" W	A DISTANCE OF ONE HUNDRED THIRTY SIX AND TEN HUNDREDTHS FEET (136.10') TO A POINT; THENCE
N 11°56'11" W	A DISTANCE OF THREE HUNDRED SEVENTY THREE AND TWENTY FOUR HUNDREDTHS FEET (373.24') TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 98,999 SQ. FT OR 2.273 ACRES OF LAND IN THE CITY OF SOMERVILLE, MASSACHUSETTS

MEANING AND INTENDING TO DESCRIBE THE SAME PARCELS AS LISTED IN FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. NCS-901969-DC72 WITH AN EFFECTIVE DATE OF APRIL 25, 2018.

Plan References

1. PLAN ENTITLED "SUBDIVISION PLAN OF LAND IN SOMERVILLE MA", SCALE 1"=80', NOVEMBER 17, 2008, PREPARED BY VANASSE HANGEN BRUSTLIN, INC., PLAN 447 OF 2009, SHEETS 1 THRU 5.
2. PLAN ENTITLED "PERMANENT HIGHWAY EASEMENT PLAN OF LAND IN SOMERVILLE MA", SCALE 1"=80', JULY 20, 2009 PREPARED BY VANASSE HANGEN BRUSTLIN, INC., PLAN 27 OF 2010.
3. PLAN ENTITLED "SUBDIVISION PLAN OF LAND IN SOMERVILLE MASSACHUSETTS" SCALE 1"=50', SEPTEMBER 24, 2010, REV. MARCH 16, 2011, PLAN 813 OF 2011.
4. PLAN ENTITLED "SUBDIVISION PLAN OF LAND IN SOMERVILLE MASSACHUSETTS" SCALE 1"=50', NOVEMBER 18, 2011, PLAN 880 OF 2011.
5. PLAN ENTITLED "SUBDIVISION PLAN OF LAND IN SOMERVILLE MASSACHUSETTS" SCALE 1"=40', JULY 31, 2014, PLAN 746 OF 2014.
6. PLAN ENTITLED "SUBDIVISION PLAN OF LAND IN SOMERVILLE MASSACHUSETTS" SCALE 1"=40', OCTOBER, 2014, PLAN 1142 OF 2016.

Certification

TO SRI ASSEMBLY ROW B8, LLC,, STREET RETAIL, FEDERAL REALTY INVESTMENT TRUST, FIRST AMERICAN TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2-4,6A,7,11(b), 13,14,16 AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JUNE OF 2018.

DATE PROFESSIONAL LAND SURVEYOR

General Notes

1) THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VANASSE HANGEN BRUSTLIN, INC. IN APRIL 2005 AND NOVEMBER OF 2006 AND FROM DEEDS AND PLANS OF RECORD.
2) THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE DEVELOPED FROM A COMBINED EFFORT OF AERIAL PHOTOGRAMMETRIC MAPPING BY COLE EAST, INC, BASED ON AERIAL PHOTOGRAPHS TAKEN ON MARCH 2006, AND AUGMENTED BY AN ON-THE-GROUND SURVEY PERFORMED BY VHB DURING APRIL 2006 AND JUNE OF 2018.
3) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND INFORMATION OF RECORD. THEY ARE NOT WARRANTED TO BE EXACTLY LOCATED NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN.
4) ELEVATIONS SHOWN ARE BASED UPON USCGS, NATIONAL GEODETIC VERTICAL DATUM OF 1929 AND WERE INITIATED AT BENCHMARK #11000, A MASSACHUSETTS GEODETIC SURVEY DISC.
5) THE LOCUS PROPERTY LIES WITHIN ZONE X "UNSHADED" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE OF FLOODING) AND ZONE "X" SHADED (AREAS OF 0.2% ANNUAL CHANCE OF FLOOD; AREA OF 1% ANNUAL CHANCE OF FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.), AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR THE CITY OF SOMERVILLE, MASSACHUSETTS COMMUNITY PANEL NUMBER 250214 0439 E, EFFECTIVE DATE JUNE 4, 2010. THESE ZONES ARE SHOWN ON THE PLAN GRAPHICALLY.
6) ENTIRE PREMISE IS CURRENTLY UNDER CONSTRUCTION AT THE TIME OF THE SURVEY, THE BUILDING EDGE SHOWN IS BASED ON FIELD LOCATIONS IN JUNE OF 2018.
7) THERE WERE NO WETLAND DELINEATIONS OBSERVED ON THE LOCUS.
8) THE LOCUS PROPERTY, PARCEL 32A IS CONTIGUOUS WITHIN ITS BOUNDARIES WITHOUT ANY GAPS, GORES, SLIVERS OR OVERLAPS.

Zoning

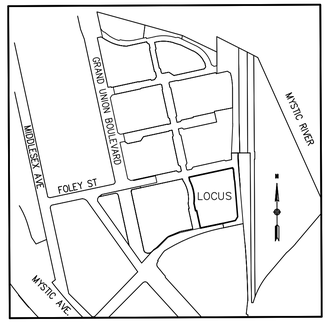
THE SITE LIES IN THE ZONING DISTRICTS ASSEMBLY SQUARE MIXED-USE DISTRICT AND ARE WITHIN THE WATER OVERLAY DISTRICT AND PUD-A OVERLAY DISTRICT AND WERE DETERMINED FROM INFORMATION OBTAINED FROM THE CITY OF SOMERVILLE PLANNING DEPARTMENT AND FROM THE ZONING MAP OF SOMERVILLE, MASSACHUSETTS, JUNE 6, 2007. DIMENSIONAL REQUIREMENTS AT THE TIME OF THE SURVEY FOR THE ZONING DISTRICT SHOWN ARE:

ASMD (PERMITTED AS OF RIGHT)	REQUIRED
MINIMUM LOT SIZE	5,000 S.F.
MAXIMUM FAR	1.0
TOTAL OPEN SPACE	25%
USABLE OPEN SPACE	10%
MAXIMUM BUILDING HEIGHT*	40 FEET
FRONT YARD SETBACK	NO MINIMUM
SIDE YARD SETBACK	NO MINIMUM
REAR YARD SETBACK	NO MINIMUM
*BUILDING WITHIN 150' OF MYSTIC RIVER BANK	30 FEET**
*BUILDING WITHIN 150'-250' OF MYSTIC RIVER BANK	40 FEET
*BUILDING WITHIN 250'-350' OF MYSTIC RIVER BANK	40 FEET
*WITHIN 1,000' OF MBTA ENTRANCE	40 FEET

**PARK BUILDING ONLY

PUD-A (USES WITHIN A PUD-A)	REQUIRED
MINIMUM LOT SIZE	20,000 S.F.
MAXIMUM FAR	10
TOTAL OPEN SPACE	25%
USABLE OPEN SPACE	12.5%
MAXIMUM BUILDING HEIGHT*	125 FEET
FRONT YARD SETBACK	NO MINIMUM
SIDE YARD SETBACK	NO MINIMUM
REAR YARD SETBACK	NO MINIMUM
*BUILDING WITHIN 150' OF MYSTIC RIVER BANK	NOT PERMITTED
*BUILDING WITHIN 150'-250' OF MYSTIC RIVER BANK	70 FEET
*BUILDING WITHIN 250'-350' OF MYSTIC RIVER BANK	90 FEET
*WITHIN 1,000' OF MBTA ENTRANCE	250 FEET

WATERFRONT OVERLAY DISTRICT	
NO BUILDINGS	0-150 FEET
NO SURFACE PARKING	0-200 FEET



LOCUS (NOT TO SCALE)

Owner of Record

SRI ASSEMBLY ROW B8, LLC, A DELAWARE LIMITED LIABILITY COMPANY

Possible Encroachments

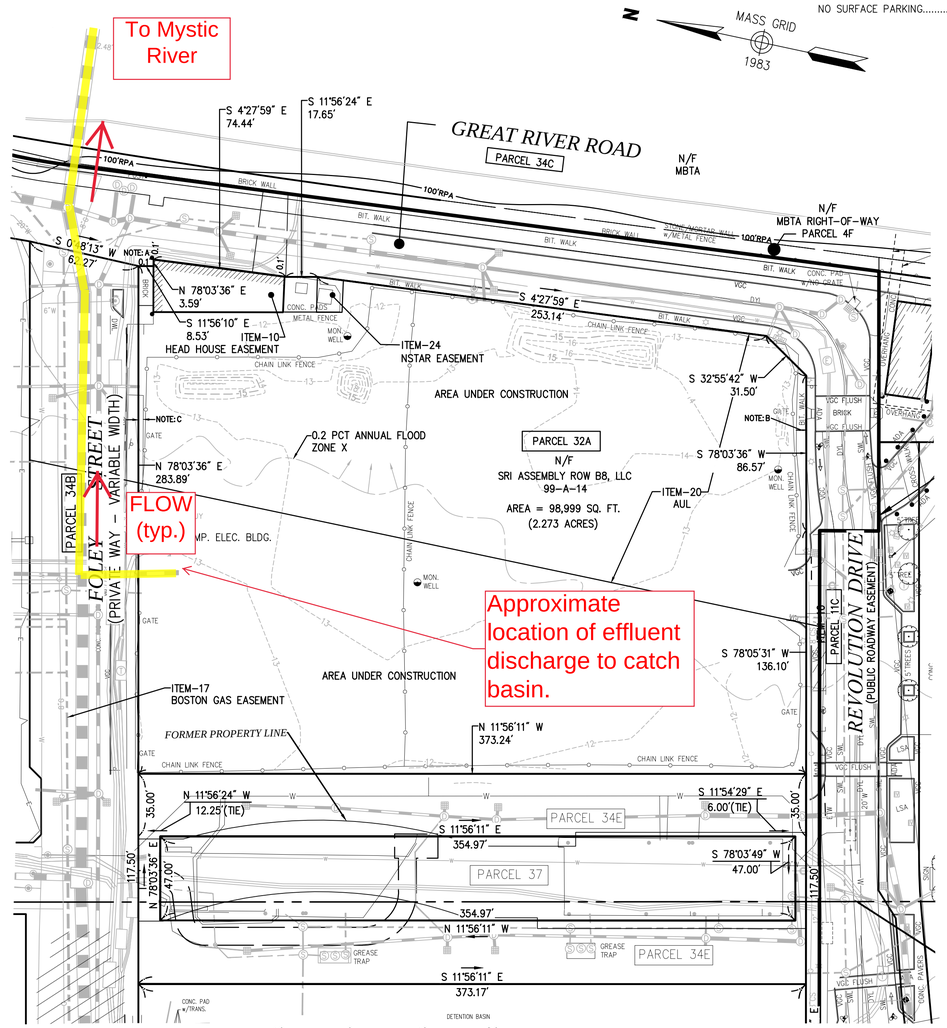
NOTE:

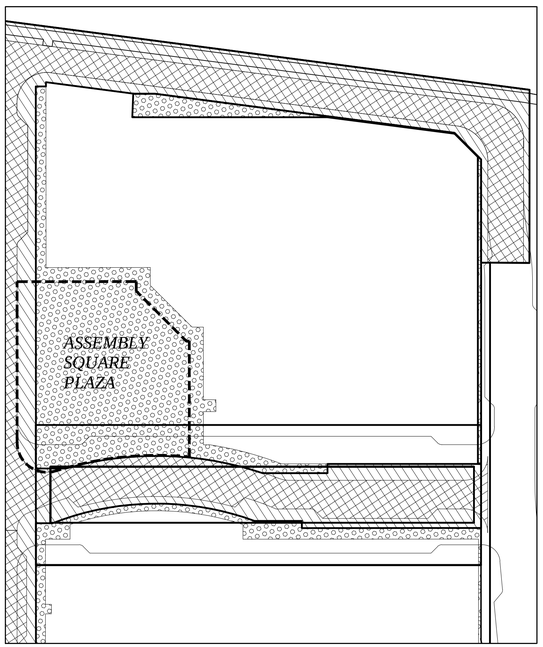
A. MBTA NORTH HEAD HOUSE APPEARS TO BE IN STREET LINE.
B. TEMPORARY PAVED WALK ALONG REVOLUTION DRIVE, IS ENCROACHING ON THE LOCUS.
C. PORTIONS OF SIDEWALK ALONG FOLEY STREET ARE ENCROACHING ON TO THE LOCUS.

Title Notes

FIRST AMERICAN TITLE INSURANCE COMPANY
TITLE COMMITMENT NO. NCS-901969-DC72, EFFECTIVE DATE: APRIL 25, 2018.
SCHEDULE B SECTION 2

ITEM	COMMENTS
1-7,9,12-15,21 22,26	NOT SURVEY RELATED
8	NON-LOCUS
10	EASEMENT AGREEMENT FROM FR STURTEVANT STREET LLC, STREET RETAIL, INC., SRI ASSEMBLY ROW B2, LLC, SRI ASSEMBLY ROW B3, LLC, SRI ASSEMBLY ROW B5, LLC, SRI ASSEMBLY ROW B6, LLC, SRI ASSEMBLY ROW B7, LLC, SRI ASSEMBLY ROW B8, LLC, SRI ASSEMBLY ROW B9, LLC TO THE MASSACHUSETTS BAY TRANSPORTATION AUTHORITY DATED DECEMBER 9, 2011 RECORDED IN BOOK 58140, PAGE 425. SHOWN ON PLAN
11	DECLARATION OF COMMON EASEMENTS, CONDITIONS, COVENANTS,AND RESTRICTIONS DATED DECEMBER 27, 2011, RECORDED IN BOOK 58177, PAGE 331, AS AMENDED BY THAT CERTAIN UNRECORDED DEED COVENANTS BY AND BETWEEN THE MASTER DEVELOPER AND AVALONBAY ASSEMBLY ROW TRS, INC., AMENDED, NOTICE OF WHICH IS PROVIDED THAT CERTAIN NOTICE OF DEED COVENANT DATED DECEMBER 27, 2011, AND RECORDED DECEMBER 28, 2011, IN BOOK 58177, PAGE 413, AS AMENDED BY AMENDMENT TO NOTICE OF DEED COVENANT DATED MAY 26, 2015, RECORDED JUNE 3, 2015 IN BOOK 65478, PAGE 127, AS AMENDED BY AMENDMENT TO DECLARATION DATED JULY 21, 2017, RECORDED IN BOOK 69736,PAGE 277. SHOWN ON PLAN
17	EASEMENT FROM FR STURTEVANT STREET LLC, STREET RETAIL, INC., SRI ASSEMBLY ROW B2, LLC, SRI ASSEMBLY ROW B3, LLC, SRI ASSEMBLY ROW B5, LLC, SRI ASSEMBLY ROW B6, LLC, SRI ASSEMBLY ROW B7, LLC, SRI ASSEMBLY ROW B8, LLC, SRI ASSEMBLY ROW B9, LLC TO BOSTON GAS COMPANY DATED APRIL 12, 2011 RECORDED IN BOOK 58952, PAGE 342. SHOWN ON PLAN (IN ROADWAYS)
18	TERMS AND PROVISIONS IN EASEMENT FROM CITY OF SOMERVILLE TO STREET RETAIL, INC. DATED NOVEMBER 29, 2012, RECORDED IN BOOK 61428, PAGE 397..
19	USEABLE OPEN SPACE COVENANT BY AND BETWEEN FR STURTEVANT STREET, LLC, STREET RETAIL, INC., SRI ASSEMBLY ROW B2, LLC, SRI ASSEMBLY ROW B3, LLC, SRI ASSEMBLY ROW B5, LLC, SRI ASSEMBLY ROW B6, LLC, SRI ASSEMBLY ROW B7, LLC, SRI ASSEMBLY ROW B8, LLC, AND SRI ASSEMBLY ROW B9, LLC RECORDED IN BOOK 61428, PAGE 413. BLANKET COVENT, TO VAGUE TO PLOT.
20	NOTICE OF ACTIVITY AND USE LIMITATION DATED APRIL 29, 2013, RECORDED IN BOOK 61719, PAGE 474. SHOWN ON PLAN.
23	EASEMENT FROM FR STURTEVANT STREET LLC, STREET RETAIL, INC., SRI ASSEMBLY ROW B2, LLC, SRI ASSEMBLY ROW B3, LLC, SRI ASSEMBLY ROW B5, LLC, SRI ASSEMBLY ROW B6, LLC, SRI ASSEMBLY ROW B7, LLC, SRI ASSEMBLY ROW B8, LLC, SRI ASSEMBLY ROW B9, LLC TO VERIZON NEW ENGLAND, INC. DATED AUGUST 14, 2013 RECORDED IN BOOK 62817, PAGE 340. SHOWN ON PLAN (IN ROADWAY)
25	APPURTENANT RIGHTS AGREEMENT BY AND BETWEEN FEDERAL REALTY INVESTMENT TRUST, FR STURTEVANT STREET LLC, STREET RETAIL, INC., SRI ASSEMBLY ROW B2, LLC, SRI ASSEMBLY ROW B3, LLC, SRI ASSEMBLY ROW B5, LLC, SRI ASSEMBLY ROW B6, LLC, SRI ASSEMBLY ROW B7, LLC, SRI ASSEMBLY ROW B8, LLC, SRI ASSEMBLY ROW B9, LLC, AND PARTNERS HEALTHCARE SYSTEM, INC. DATED SEPTEMBER 5, 2014 RECORDED IN BOOK 64211, PAGE 449, AS AMENDED BY AMENDMENT TO APPURTENANT RIGHTS EASEMENT DATED JULY 21, 2017, RECORDED IN BOOK 69736, PAGE 282.





ITEM 11,18,25 DRAINAGE EASEMENT, COMMON AREA
ITEM 11 COMMON EASEMENT AREA
ITEM 11,18,25 COMMON ROADS

vhb.com
vhb
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Legend

- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- MANHOLE
- HH HAND HOLE
- WATER GATE
- FIRE HYDRANT
- GAS GATE
- STREET SIGN
- LIGHT POLE
- UTILITY POLE
- GUY POLE
- GUY WIRE
- MW MONITORING WELL
- FLOOD LIGHT
- W WELL
- CNO COULD NOT OPEN
- NPV NO PIPES VISIBLE
- F.F.E.=45.27' FINISHED FLOOR ELEVATION
- EOP EDGE OF PAVEMENT
- CC CONCRETE CURB
- VGC VERTICAL GRANITE CURB
- SGE SLOPED GRANITE EDGE
- BB BITUMINOUS BERM
- BC BITUMINOUS CURB
- GUARD RAIL
- CHAIN LINK FENCE
- DRAINAGE LINE
- SEWER LINE
- OHW OVERHEAD WIRE
- E UNDERGROUND ELECTRIC
- T TELEPHONE LINE
- G GAS LINE
- W WATER LINE
- STONE WALL
- TREE LINE
- 100'BZ 100-FT BUFFER ZONE
- 100'RA 100-FT RIVER FRONT AREA
- 200'RA 200-FT RIVER FRONT AREA
- FLOOD ZONE-X

No.	Revision	Date	Appvd.

Designed by | Drawn by | Checked by
CAD checked by | Approved by
Scale 1"=40' | Date: 7-15-2018

Project Title

SRI ASSEMBLY ROW B8
PARCEL 32A
BLOCK-8

Somerville, Massachusetts

Issued for

ALTA/NSPS
Land Title Survey

Drawing Title

Existing Conditions Plan of Land

Drawing Number

Sheet 1 of 1

Project Number

Progress Print
For Review Only
7/30/2018

\\vhb\proj\Wat-LD\08518\cad\sr\planset\ALTA's_Block 8\08518.00-BLOCK-ALTA-2018.dwg

APPENDIX F

PH CONDITIONER MATERIAL SAFETY DATA SHEET

Sulfuric Acid, 70-100%

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and

Regulations Revision Date: 05/15/15 Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Name: Sulfuric Acid, 70-100%

Formula: H_2-O_4-S

Intended Use of the Product

Use of the Substance/Mixture: Industrial use.

Name, Address, and Telephone of the Responsible Party

Manufacturer

Emergency Telephone Number

Emergency number : CHEMTREC 1-800-424-9300

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Acute Tox. 2 (Inhalation:dust,mist)	H330
Skin Corr. 1A	H314
Eye Dam. 1	H318
Carc. 1A	H350

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS05 GHS06 GHS08

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H330 - Fatal if inhaled
H350 - May cause cancer

Precautionary Statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe fume, mist, vapors, spray
P264 - Wash hands and forearms thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, face protection, protective gloves, protective clothing
P284 - Wear respiratory protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P308+P313 - If exposed or concerned: Get medical advice/attention
P310 - Immediately call a POISON CENTER or doctor/physician
P320 - Specific treatment is urgent (see Section 4)
P363 - Wash contaminated clothing before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container according to local, regional, national, and international regulations

Other Hazards

Other Hazards Not Contributing to the Classification: Not available

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name	Product identifier	% (w/w)	Classification (GHS-US)
Sulfuric acid	(CAS No) 7664-93-9	70 - 100	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Seek immediate medical advice. Symptoms may be delayed.

Skin Contact: Remove/Take off immediately all contaminated clothing. Rinse immediately with plenty of water (for at least 15 minutes). Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

Eye Contact: Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists.

Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Most Important Symptoms and Effects Both Acute and Delayed

General: Corrosive. Causes burns.

Inhalation: Causes severe respiratory irritation if inhaled. Symptoms may include burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.

Skin Contact: Contact may cause immediate severe irritation progressing quickly to chemical burns.

Eye Contact: Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.

Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable. Under conditions of fire this material may produce: Sulphur oxides.

Explosion Hazard: Product is not explosive.

Reactivity: Reacts with water.

Advice for Firefighters

Precautionary Measures Fire: Not available

Firefighting Instructions: Keep upwind. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.

Hazardous Combustion Products: Sulphur oxides.

Other information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe vapour or mist.

For Non-Emergency Personnel

Protective Equipment: Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area. Keep upwind.

For Emergency Personnel

Protective Equipment: Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area.

Environmental Precautions

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Ventilate area. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labeled container for proper disposal. Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry. Liquid spill: neutralize with powdered limestone or sodium bicarbonate.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash contaminated clothing before reuse.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Detached outside storage is preferable.

Incompatible Materials: Reducing agents. Organic materials. Alkalis. Moisture.

Storage Area: Store in dry, cool area. Store in a well-ventilated place. Keep away from combustible materials.

Specific End Use(s) Not available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Sulfuric acid (7664-93-9)		
Mexico	OEL TWA (mg/m³)	1 mg/m³
USA ACGIH	ACGIH TWA (mg/m³)	0.2 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	1 mg/m³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	1 mg/m³
USA IDLH	US IDLH (mg/m³)	15 mg/m³

Alberta	OEL STEL (mg/m³)	3 mg/m³
Alberta	OEL TWA (mg/m³)	1 mg/m³
British Columbia	OEL TWA (mg/m³)	0.2 mg/m³ (Thoracic, contained in strong inorganic acid mists)
Manitoba	OEL TWA (mg/m³)	0.2 mg/m³
New Brunswick	OEL STEL (mg/m³)	3 mg/m³
New Brunswick	OEL TWA (mg/m³)	1 mg/m³
Newfoundland & Labrador	OEL TWA (mg/m³)	0.2 mg/m³
Nova Scotia	OEL TWA (mg/m³)	0.2 mg/m³
Nunavut	OEL STEL (mg/m³)	3 mg/m³
Nunavut	OEL TWA (mg/m³)	1 mg/m³
Northwest Territories	OEL STEL (mg/m³)	3 mg/m³
Northwest Territories	OEL TWA (mg/m³)	1 mg/m³
Ontario	OEL TWA (mg/m³)	0.2 mg/m³
Prince Edward Island	OEL TWA (mg/m³)	0.2 mg/m³
Québec	VECD (mg/m³)	3 mg/m³
Québec	VEMP (mg/m³)	1 mg/m³
Saskatchewan	OEL STEL (mg/m³)	0.6 mg/m³
Saskatchewan	OEL TWA (mg/m³)	0.2 mg/m³
Yukon	OEL STEL (mg/m³)	1 mg/m³
Yukon	OEL TWA (mg/m³)	1 mg/m³

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Face shield. Gas mask at concentration in the air > > TLV. Corrosionproof clothing.

Materials for Protective Clothing: Acid-resistant clothing.

Hand Protection: Impermeable protective gloves.

Eye Protection: Face shield.

Skin and Body Protection: Wear suitable protective clothing. Chemical resistant suit. Rubber apron, boots.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	Clear,Colorless to Amber,Oily
Odor	:	Pungent.
Odor Threshold	:	Not available
pH	:	0.3
Relative Evaporation Rate (butylacetate=1)	:	Not available
Melting Point	:	10.56 °C (51.08 °F)
Freezing Point	:	Not available
Boiling Point	:	290 °C (554 °F)
Flash Point	:	Not available
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	0.00027 - 0.16 kPa at 25 °C (77 °F)

Relative Vapor Density at 20 °C	:	3.4
Relative Density	:	Not available
Specific Gravity	:	1.84 g/l
Solubility	:	Water: Miscible
Partition coefficient: n-octanol/water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Reacts with water.

Chemical Stability: Stable at standard temperature and pressure.

Possibility of Hazardous Reactions: Hazardous polymerization can occur in contact with certain incompatible materials.

Conditions to Avoid: Protect from moisture.

Incompatible Materials: Avoid contact with most metals, carbides, hydrogen sulfide, turpentine, organic acids, combustibles (wood, paper, cotton) and other organic and readily oxidized materials.

Hazardous Decomposition Products: Under conditions of fire this material may produce: Sulphur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Fatal if inhaled.

LD50 and LC50 Data:

Sulfuric Acid, 70-100%	
ATE US (dust, mist)	0.05000000 mg/l/4h

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

pH: 0.3

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 0.3

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: May cause cancer.

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Causes severe respiratory irritation if inhaled. Symptoms may include burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.

Symptoms/Injuries After Skin Contact: Contact may cause immediate severe irritation progressing quickly to chemical burns.

Symptoms/Injuries After Eye Contact: Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.

Symptoms/Injuries After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Sulfuric acid (7664-93-9)	
LD50 Oral Rat	2140 mg/kg
LC50 Inhalation Rat (mg/l)	510 mg/m³ (Exposure time: 2 h)

Sulfuric acid (7664-93-9)	
IARC Group	1

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Sulfuric acid (7664-93-9)	
LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])

Persistence and Degradability

Sulfuric Acid, 70-100%	
Persistence and Degradability	Product is biodegradable.

Bioaccumulative Potential

Sulfuric Acid, 70-100%	
Bioaccumulative Potential	Not expected to bioaccumulate.

Sulfuric acid (7664-93-9)	
BCF fish 1	(no bioaccumulation)

Mobility in Soil Not available

Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Sewage Disposal Recommendations: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : SULFURIC ACIDwith more than 51 percent acid

Hazard Class : 8

Identification Number : UN1830

Label Codes : 8

Packing Group : II

ERG Number : 157

14.2 In Accordance with IMDG

Proper Shipping Name : SULPHURIC ACID

Hazard Class : 8

Identification Number : UN1830

Packing Group : II

Label Codes : 8

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-B

14.3 In Accordance with IATA

Proper Shipping Name : SULPHURIC ACID

Packing Group : II

Identification Number : UN1830

Hazard Class : 8

Label Codes : 8

ERG Code (IATA) : 8L

14.4 In Accordance with TDG

Proper Shipping Name : SULPHURIC ACIDwith more than 51 per cent acid

Packing Group : II

Hazard Class : 8

Identification Number : UN1830

Label Codes : 8

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Sulfuric Acid, 70-100%	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Reactive hazard

Sulfuric acid (7664-93-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 302 (Specific toxic chemical listings) Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000
SARA Section 313 - Emission Reporting	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

US State Regulations

Sulfuric Acid, 70-100%()

Sulfuric acid (7664-93-9)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

Sulfuric acid (7664-93-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

Canadian Regulations

Sulfuric Acid, 70-100%	
WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material

Sulfuric acid (7664-93-9)	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class E - Corrosive Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1

Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H350	May cause cancer

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Mann Distribution assume no responsibility.

W. L. FRENCH EXCAVATING CORPORATION
COMMERCIAL SITE DEVELOPMENT • CONTRACT TRUCKING • ENVIRONMENTAL MANAGEMENT

U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP RGP Applications Coordinator
5 Post Office Square, Suite 100 (OEP06-01)
Boston, MA 02109-3912

January 30, 2019
File No. 3175.10

Re: Notice of Intent for the Remediation General Permit
Response to EPA Comments
Temporary Construction Dewatering for Site Redevelopment
Assembly Row Block 8
99 Foley Street, Somerville, Massachusetts

Dear Sir/Madam:

On behalf of Street Retail, Inc., W.L. French Excavating Corporation (WLF) submitted a Notice of Intent (NOI) to the U.S. Environmental Protection Agency (U.S. EPA) on January 2, 2019 for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) MAG910000 for the Assembly Row Block 8 property located at 99 Foley Street in Somerville, Massachusetts (the Site). On January 29, 2019, the U.S. EPA provided comments on the NOI. This letter and supporting documentation have been prepared in response to address those comments.

Based on a maximum pH concentration of 11 S.U. measured in the baseline RGP groundwater samples, the groundwater will likely require treatment for elevated pH. In addition, elevated pH may occur from planned site/construction activities (concrete work). Sulfuric Acid will be necessary to lower pH concentrations to meet the permit requirements.

A pH adjustment system that is capable of reducing an elevated pH will be implemented if necessary to meet the permit requirements. The pH adjustment system is designed to reduce an elevated pH with sulfuric acid and includes an automatic metered acid feed system with a mix tank, acid feed pumps and setpoint controls that maintain the pH approved by the permit, usually set between 6.5 and 8.0. The pH is continuously monitored, and the sulfuric acid will only be added if the setpoints are exceeded. Cutsheets of the pH adjustment system are included in Attachment A.

A schematic drawing of the pH adjustment system is included in Attachment A and shows material management control measures. The sulfuric acid will be stored in 55-gallon drums with secondary containment systems in place (overpack drum).

W. L. FRENCH EXCAVATING CORPORATION
COMMERCIAL SITE DEVELOPMENT • CONTRACT TRUCKING • ENVIRONMENTAL MANAGEMENT

The addition of sulfuric acid as a pH conditioner will not add pollutants in concentrations which exceed permit effluent limitations. The use of sulfuric acid as a pH conditioner will not result in the exceedance of applicable water quality standards. The addition of sulfuric acid as a pH conditioner will not add pollutants that would justify the application of permit conditions that are different from or absent in this permit. The addition of sulfuric acid to control and adjust pH is a standard treatment technique for temporary construction dewatering; it is not expected to exceed applicable permit limitations and water quality standards or alter conditions in the receiving water. No additional testing is considered necessary for use of this product or to demonstrate that use of this product will not adversely affect the receiving water.

Please feel free to contact us if you wish to discuss the information contained in this application, or if any additional information is needed.

Very truly yours,

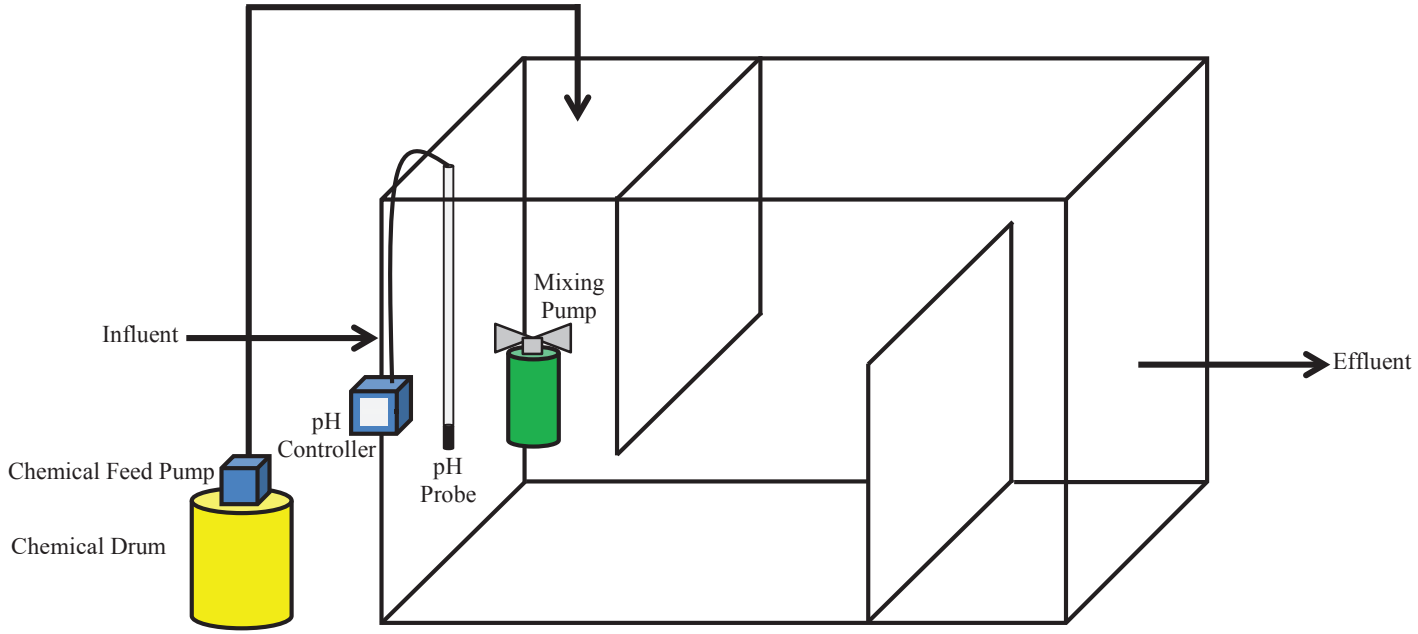
W. L. French Excavating Corporation

Andre' Gugliotta
Senior Project Manager

Encl. Attachment A – pH Adjustment System Schematic and Cut Sheets

cc: City of Somerville Board of Health
DEP Bureau of Water Resources
Mr. Brad Dutton ~ Street Retail, Inc.

3 Survey Circle, North Billerica, MA 01862 • Phone [617] 924.1234 • [978] 663.2623 • Main Fax [978] 663.5240 • Estimating Fax [978] 663.0229 www.wlfrench.com



Notes:

1.) Figure is not to scale.
2.) System layout can vary with site conditions.

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

Configuration of pH Adjustment System

Lockwood Remediation Technologies, LLC

One Controller for the Broadest Range of Sensors.

Choose from 30 digital and analog sensor families for up to 17 di:erent parameters.

Maximum Versatility

The sc200 controller allows the use of digital and analog sensors, either alone or in combination, to provide compatibility with Hach's broad range of sensors, eliminating the need for dedicated, parameter-specific controllers.

Ease of Use and Confidence in Results

Large, high-resolution, transreflective display provides optimal viewing resolution in any lighting condition. Guided calibration procedures in 19 languages minimize complexity and reduce operator error. Password-protected SD card reader o:ers a simple solution for data download and transfer. Visual warning system provides critical alerts.

Wide Variety of Communication Options

Utilize two to five analog outputs to transmit primary and secondary values for each sensor, or integrate Hach sensors and analyzers into MODBUS RS232/RS485, Profibus® DP, and HART networks.

Password protected SD card reader offers a simple solution for data download and transfer, and sc200 and digital sensor configuration file duplication and backup.

Controller Comparison

Features	Previous Models sc100™ Controller	Previous Models GLI53 Controller	sc200™ Controller	Benefits
Display	64 x 128 pixels 33 x 66 mm (1.3 x 2.6 in.)	64 x 128 pixels 33 x 66 mm (1.3 x 2.6 in.)	160 x 240 pixels 48 x 68 mm (1.89 x 2.67 in.) Transreflective	• Improved user interface—50% bigger • Easier to read in daylight and sunlight
Data Management	irDA Port/PDA Service Cable	N/A	SD Card Service Cable	• Simplifies data transfer • Standardized accessories/max compatibility
Sensor Inputs	2 Max Direct Digital Analog via External Gateway	2 Max Analog Depending on Parameter	2 Max Digital and/or Analog with Sensor Card	• Simplifies analog sensor connections • Works with analog and digital sensors
Analog Inputs	N/A	N/A	1 Analog Input Signal Analog 4-20mA Card	• Enables non-sc analyzer monitoring • Accepts mA signals from other analyzers for local display • Consolidates analog mA signals to a digital output
4-20 mA Outputs	2 Standard	2 Standard	2 Standard Optional 3 Additional	• Total of five (5) 4-20 mA outputs allows multiple mA outputs per sensor input
Digital Communication	MODBUS RS232/RS485 Profibus DP V1.0	HART	MODBUS RS232/RS485 Profibus DP V1.0 HART 7.2	• Unprecedented combination of sensor breadth and digital communication options

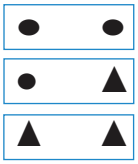
Choose from Hach's Broad Range of Digital and Analog Sensors

Parameter	Sensor	Digital or Analog
Ammonia	AMTAX™ sc, NH4D sc, AISE sc, AN-ISE sc	●
Chlorine	CLF10 sc, CLT10 sc, 9184 sc	●
Chlorine Dioxide	9185 sc	●
Conductivity	GLI 3400 Contacting, GLI 3700 Inductive	▲
Dissolved Oxygen	LDO® Model 2, 5740 sc	●
Dissolved Oxygen	5500	▲
Flow	U53, F53 Sensors	▲
Nitrate	NITRATAX™ sc, NO3D sc, NISE sc, AN-ISE sc	●
Oil in Water	FP360 sc	●
Organics	UVAS sc	●
Ozone	9187 sc	●
pH/ORP	pHD	●
pH/ORP	pHD, pH Combination, LCP	▲
Phosphate	PHOSPHAX™ sc	●
Sludge Level	SONATAX™ sc	●
Suspended Solids	SOLITAX™ sc, TSS sc	●
Turbidity	1720E, FT660 sc, SS7 sc, ULTRATURB sc, SOLITAX sc, TSS sc	●
Ultra Pure Conductivity	8310, 8311, 8312, 8315, 8316, 8317 Contacting	▲
Ultra Pure pH/ORP	8362	▲

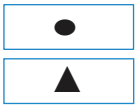
● = Digital ▲ = Analog

Connect up to two of any of the sensors listed above, in any combination, to meet your application needs. The diagrams below demonstrate the potential configurations. Operation of analog sensors requires the controller to be equipped with the appropriate sensor module. Contact Hach Technical Support for help with selecting the appropriate module.

2 Channel Configurations



1 Channel Configurations



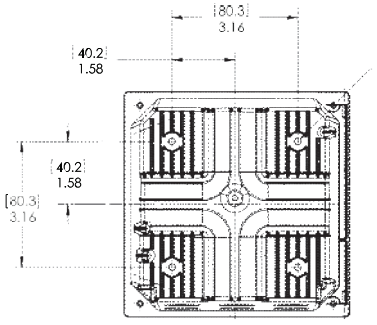
Specifications*

Dimensions (H x W x D)	5.7 in x 5.7 in x 7.1 in (144 mm x 144 mm x 181 mm)
Display	Graphic dot matrix LCD with LED backlighting, transreflective
Display Size	1.9 x 2.7 in. (48 mm x 68 mm)
Display Resolution	240 x 160 pixels
Weight	3.75 lbs. (1.70 kg)
Power Requirements (Voltage)	100 - 240 V AC, 24 V DC
Power Requirements (Hz)	50/60 Hz
Operating Temperature Range	-20 to 60 °C , 0 to 95% RH non-condensing
Analog Outputs	Two (Five with optional expansion module) to isolated current outputs, max 550 Ω , Accuracy: ± 0.1% of FS (20mA) at 25 °C, ± 0.5% of FS over -20 °C to 60 °C range Operational Mode: measurement or calculated value
Analog Output Functional Mode	Linear, Logarithmic, Bi-linear, PID
Security Levels	2 password-protected levels
Mounting Configurations	Wall, pole, and panel mounting
Enclosure Rating	NEMA 4X/IP66
Conduit Openings	1/2 in NPT Conduit
Relay: Operational Mode	Primary or secondary measurement, calculated value (dual channel only) or timer
Relay Functions	Scheduler (Timer), Alarm, Feeder Control, Event Control, Pulse Width Modulation, Frequency Control, and Warning
Relays	Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A
Communication	MODBUS RS232/RS485, PROFIBUS DPV1, or HART 7.2 optional
Memory Backup	Flash memory
Electrical Certifications	EMC CE compliant for conducted and radiated emissions: - CISPR 11 (Class A limits) - EMC Immunity EN 61326-1 (Industrial limits) Safety cETLus safety mark for: - General Locations per ANSI/UL 61010-1 & CAN/CSA C22.2. No. 61010-1 - Hazardous Location Class I, Division 2, Groups A,B,C & D (Zone 2, Group IIC) per FM 3600 / FM 3611 & CSA C22.2 No. 213 M1987 with approved options and appropriately rated Class I, Division 2 or Zone 2 sensors cULus safety mark - General Locations per UL 61010-1 & CAN/CSA C22.2. No. 61010-1

**Subject to change without notice.*

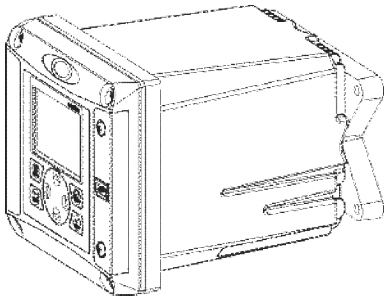
Dimensions

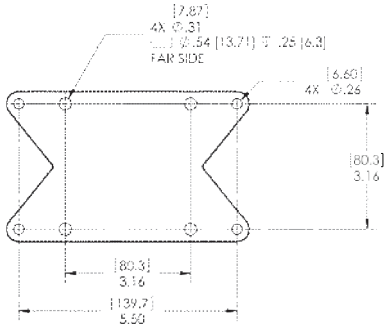
Surface Mounting Dimensions



Mounting Dimensions
(Rear View)

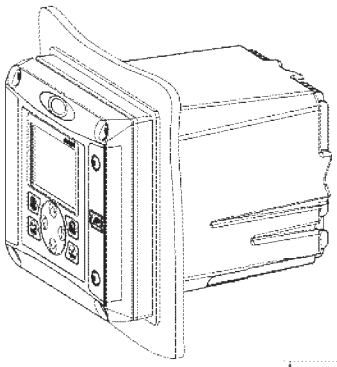
OR

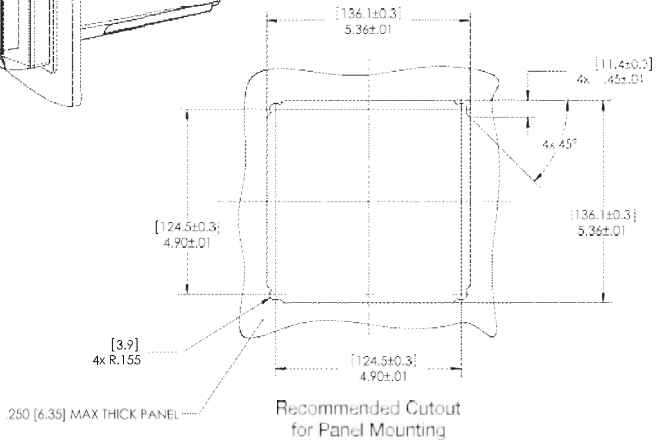




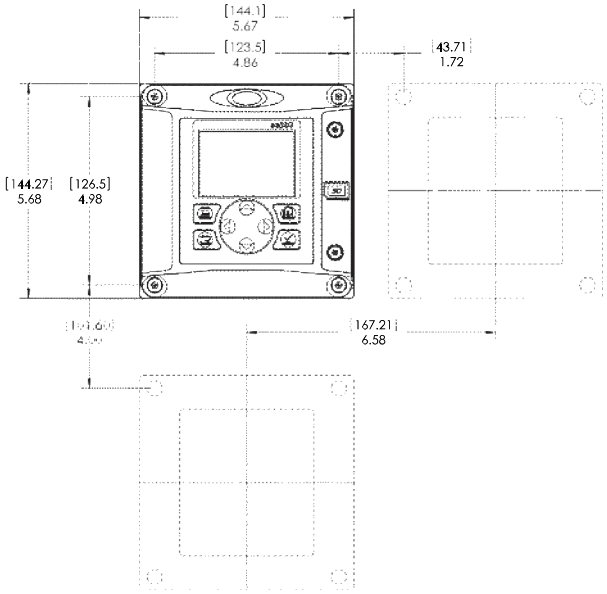
Bracket (supplied) for Surface Mounting
(Not compatible with Weather and Sun Shield
p/n 9220600 when surface mounting.)

Panel Mounting Dimensions



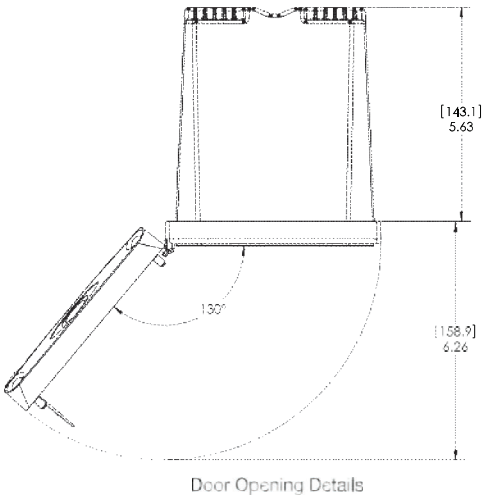


Recommended Cutout
for Panel Mounting

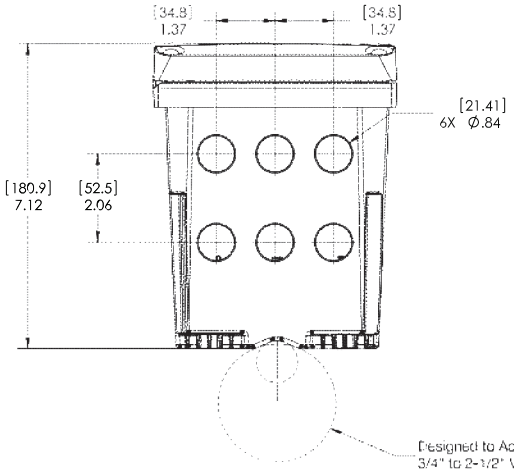


Minimum Spacing Dimensions
for Group Mounting

Top and Bottom Views

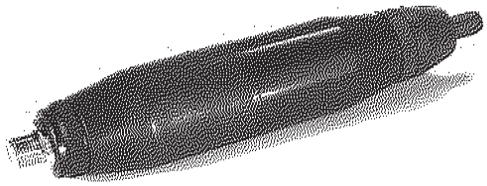


Door Opening Details

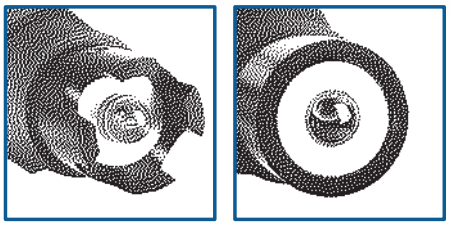


Designed to Accommodate
3/4" to 2-1/2" Vertical or Horizontal Pipe

3/4-inch Combination pH and ORP Sensor Kits



Use the Digital Gateway to make any Hach analog combination pH or ORP sensor compatible with the Hach sc1000 Controller.



Digital combination pH and ORP sensors are available in convertible, insertion, and sanitary mounting styles. Choose from rugged dome electrodes or "easy-to-clean" flat glass electrodes.

Features and Benefits

Low Price—High Performance

These combination sensors are designed for specialty applications for immersion or in-line mounting. The reference cell features a double-junction design for extended service life, and a built-in solution ground. The body is molded from chemically-resistant Ryton® or PVDF, and the reference junction is coaxial porous Teflon®. All sensors are rated 0 to 105ºC up to 100 psig, and have integral 4.5 m (15 ft.) cables with tinned leads. The PC-series (for pH) and RC-series (for ORP) combination sensors are ideal for measuring mild and aggressive media.

Special Electrode Configurations

Sensors with rugged dome electrodes, "easy-to-clean" flat glass electrodes, and even HF (hydrofluoric acid) resistant glass electrodes are available for a wide variety of process solutions.

Temperature Compensation Element Option

The PC-series combination pH sensors are available with or without a Pt 1000 ohm RTD temperature element. The RC-series combination ORP sensors are supplied without a temperature element.

Versatile Mounting Styles

Sensors are available in three mounting styles—convertible, insertion, and sanitary. Please turn to page 3 for more information.

Full-Featured "Plug and Play" Hach sc Digital Controllers

There are no complicated wiring or set up procedures with any Hach sc controller. Just plug in any combination of Hach digital sensors and it's ready to use—it's "plug and play."

One or multiple sensors—The sc controller family allows you to receive data from up to eight Hach digital sensors in any combination using a single controller.

Communications—Multiple alarm/control schemes are available using the relays and PID control outputs. Available communications include analog 4-20 mA, digital MODBUS® (RS485 and RS232) or Profibus DP protocols. (Other digital protocols are available. Contact your Hach representative for details.)

Data logger—A built-in data logger collects measurement data, calibration, verification points, and alarm history.

Specifications*

Most pH applications fall in the 2.5-12.5 pH range. General purpose pH glass electrodes perform well in this range. Some industrial applications require accurate measurements and control at pH values below 2 or above 12. Consult Hach Technical Support for details on these applications.

Combination pH Sensors

Measuring Range
0 to 14 pH

Accuracy
Less than 0.1 pH under reference conditions

Temperature Range
0 to 105ºC (32 to 221ºF)

Flow Rate
0 to 2 m/s (0 to 6.6 ft./s); non-abrasive

Pressure Range
0 to 6.9 bar at 100ºC (0 to 100 psig at 212ºF)

Signal Transmission Distance
100 m (328 ft.) when used with the Hach Digital Gateway and a Hach sc Digital Controller.

1000 m (3280 ft.) when used with the Hach Digital Gateway, Termination Box, and a Hach sc Digital Controller.

Sensor Cable
Integral coaxial cable (plus two conductors for temperature compensator option); 4.5 m (15 ft.) long

Wetted Materials

Convertible style: Ryton® body (glass filled)

Insertion style: PVDF body (Kynar®)

Sanitary style: 316 stainless steel sleeved PVDF body

Common materials for all sensor styles include PTFE Teflon double junction, glass process electrode, and Viton® O-rings

Warranty
90 days

Combination ORP Sensors

Measuring Range
-2000 to +2000 millivolts

Accuracy
Limited to calibration solution accuracy (± 20 mV)

Temperature Range
0 to 105ºC (32 to 221ºF)

Flow Rate
0 to 2 m/s (0 to 6.6 ft./s); non-abrasive

Pressure Range
0 to 6.9 bar at 100ºC (0 to 100 psig at 212ºF)

Signal Transmission Distance
100 m (328 ft.) when used with the Hach Digital Gateway and a Hach sc Digital Controller.

1000 m (3280 ft.) when used with the Hach Digital Gateway, Termination Box, and a Hach sc Digital Controller.

Sensor Cable
Integral coaxial cable; 4.5 m (15 ft.) long; terminated with stripped and tinned wires

Wetted Materials

Convertible style: Ryton® body (glass filled)

Insertion style: PVDF body (Kynar®)

Common materials for all sensor styles include PTFE Teflon double junction, glass with platinum process electrode, and Viton® O-rings

Warranty
90 days

**Specifications subject to change without notice.*

Engineering Specifications

1. The pH sensor shall be available in convertible, insertion or sanitary styles. The ORP sensor shall be available in only convertible or insertion styles.
2. The convertible style sensor shall have a Ryton® body. The insertion style sensor shall have a PVDF body. The sanitary style sensor shall have a 316 stainless steel sleeved PVDF body. Common materials for all sensor styles shall include a PTFE Teflon® double junction, and Viton® O-rings. The pH sensor shall have a glass pH electrode. The ORP sensor shall have a platinum ORP electrode.
3. The convertible style pH sensor shall be available with or without a built-in Pt 1000 ohm RTD temperature element. Insertion and sanitary style pH sensors shall have a built-in Pt 1000 ohm RTD temperature element. Convertible and insertion style ORP sensors shall not have a built-in temperature element.
4. The sensor shall communicate via MODBUS® RS-485 to a Hach sc Digital Controller.
5. The sensor shall be Hach Company Model PC sc or PC-series for pH measurement or Model PC sc or RC-series for ORP measurement.

Dimensions

Convertible Style Sensor

The convertible style sensor has a Ryton® body that features 3/4-inch NPT threads on both ends. The sensor can be directly mounted into a standard 3/4-inch pipe tee for flow-through mounting or fastened onto the end of a pipe for immersion mounting. The convertible style sensor enables inventory consolidation, thereby reducing associated costs. Mounting tees and immersion mounting hardware are offered in a variety of materials to suit application requirements.

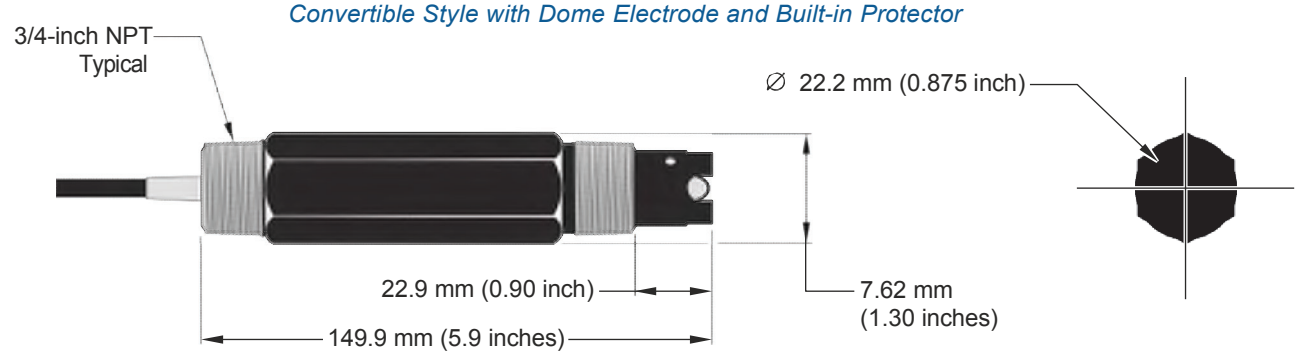
Insertion Style Sensor

Insertion style sensors feature a longer, non-threaded PVDF body with two Viton® O-rings, providing a seal when used with the optional Hach insertion mount hardware assembly. This ball valve hardware enables sensor insertion and retraction from a pipe or vessel without having to stop the process flow.

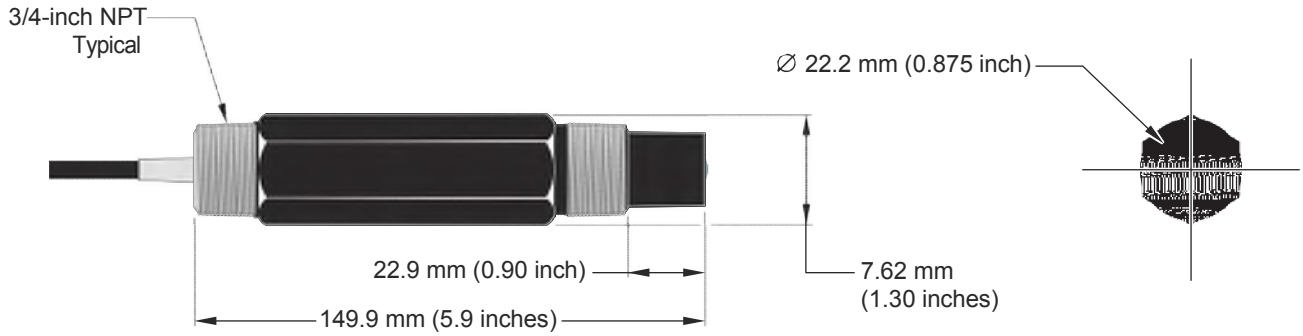
Sanitary Style Sensor

The sanitary style sensor, offered for pH measurement, has a 316 stainless steel-sleeved PVDF body with a 2-inch flange. The sensor mates to a standard 2-inch Tri-Clover fitting. The optional Hach sanitary mounting hardware includes a standard 2-inch sanitary tee, sanitary clamp, and Viton® sanitary gasket.

Convertible Style with Dome Electrode and Built-in Protector



Convertible Style with Flat Electrode



Lockwood Remediation Technologies, LLC

The Pulsatron Series A Plus offers manual function controls over stroke length and stroke rate as standard with the option to select external pace for automatic control.

Ten distinct models are available, having pressure capabilities to 250 PSIG (17 BAR) @ 12 GPO (1.9 lph), and flow capacities to 58 GPO (9.1 lph) @ 100 PSIG (7.0 BAR), with a standard turndown ratio of 100:1, and optional ratio of 1000:1. Metering performance is reproducible to within ± 3% of maximum capacity.

Features

- Manual Control by on-line adjustable stroke rate and stroke length.
- Highly Reliable timing circuit.
- Circuit Protection against voltage and current upsets.
- Solenoid Protection by thermal overload with auto-reset.
- Water Resistant, for outdoor and indoor applications.
- Internally Dampened To Reduce Noise.
- Guided Ball Check Valve Systems, to reduce back flow and enhance outstanding priming characteristics.
- Few Moving Parts and Wall Mountable.
- Safe & Easy Priming with durable leak-free bleed valve assembly (standard).
- Optional Control: External pace with auto/manual selection.

Controls

Manual Stroke Rate

Manual Stroke Length

External Pacing - Optional

External Pace With Stop - Optional (125 SPM only)

Controls Options		
Feature	Standard Configuration	Optional Configuration [1]
External Pacing	--	Auto / Manual Selection /
External Pace w/ Stop (125 SPM only)	--	Auto / Manual Selection [2]
Manual Stroke Rate	10:1 Ratio	100:1 Raio
Manual Stroke Length	10:1 Ratio	10:1 Ratio
Total Turndown Ratio	1001 Ratio	1000:1 Ratio

Note 1: On S2, S3 & S4 sizes only.

Note 2: Not available on 1000:1 turndown pumps.

Operating Benefits

- Reliable metering performance.
- Rated "hot" for continuous duty.
- High viscosity capability.
- Leak-free, sealless, liquid end.

Aftermarket

- KOPkits
- Gauges
- Dampeners
- Pressure Relief Valves
- Tanks
- Pre-Engineered Systems
- Process Controllers (PULSAblue, MicroVision)

Series A Plus
Electronic Metering Pumps

Lockwood Remediation Technologies, LLC

Series A Plus

Specifications and Model Selection

MODEL			LBC2	LB02	LBC3	LB03	LB04	LB64	LBC4	LBS2	LBS3	LBS4
Capacity nominal (max.)		GPH	0.25	0.25	0.42	0.50	1.00	1.25	2.00	0.50	1.38	2.42
		GPO	6	6	10	12	24	30	48	12	33	58
		LPH	0.9	0.9	1.6	1.9	3.8	4.7	7.6	1.9	5.2	9.14
Pressure[3] (max.)	GFPP, PVDF, 316SS or PVC <; N code) wITFE Seats)	PSIG (Bar)	250 (17)	150 (10)	250 (17)	150 (10)	100 (7)	100 (7)	50 (3.3)	250 (17)	150 (10)	100 (7)
	PVC (V code) Viton or CSPE Seats IDegas Liquid End		150 (10)							150 (10)		
Connections:		Tubina	1 14' ID X 3 8' OD						3 8' D X 1 2' OD	1 4' D X 3 8' OD		
		Pioina	1 4' FNPT									
Strokes/Minute		SPM	125							250		

Note 3: Pumps with rated pressure above 150 PSI will be de-rated to 150 PSI Max. when selecting certain valve options, see Price Book for details.

Engineering Data

Pump Head Materials Available:	GFPPL
	PVC
	PVDF
	316 SS
Diaphragm:	PTFE-faced CSPE-backed
Check Valves Materials Available:	
Seats/0-Rings:	PTFE
	CSPE
	Viton
Balls:	Ceramic
	PTFE
	316 SS
	Alloy C
Fittings Materials Available:	GFPPL
	PVC
	PVDF
Bleed Valve:	Same as fitting and check valve selected, except 316SS
Injection Valve & Foot Valve Assy:	Same as fitting and check valve selected
Tubing:	Clear PVC
	White PE

Important: Material Code - GFPPL=Glass-filled Polypropylene, PVC=Polyvinyl Chloride, PE=Polyethylene, PVDF=Polyvinylidene Fluoride, CSPE=Generic formulation of Hypalon, a registered trademark of E.I. DuPont Company. Viton is a registered trademark of E.I. DuPont Company. PVC wetted end recommended for sodium hypochlorite.

Engineering Data

Reproducibility:	+/- 3% at maximum capacity
Viscosity Max CPS:	1000 CPS
Stroke Frequency Max SPM:	125 / 250 by Model
Stroke Frequency Turn-Down Ratio:	10:1 / 100:1 by Model
Stroke Length Turn-Down Ratio:	10:1
Power Input:	115 VAC/50-60 HZ/1 ph
	230 VAC/50-60 HZ/1 ph
Average Current Draw:	
@ 115 VAC; Amps:	0.6 Amps
@ 230 VAC; Amps:	0.3 Amps
Peak hput Power:	130 Watts
Average Input Power @ Max SPM:	50 Watts

Custom Engineered Designs - Pre-Engineered Systems

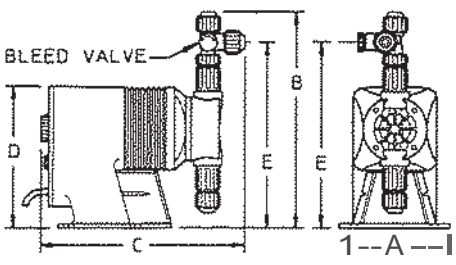
Pre-Engineered Systems

Pulsafeeder's Pre-Engineered Systems are designed to provide complete chemical feed solutions for all electronic metering applications. From stand alone simplex pH control applications to full-featured, redundant sodium hypochlorite disinfection metering, these rugged fabricated assemblies offer turn-key simplicity and industrial-grade durability. The UV-stabilized, high-grade HOPE frame offers maximum chemical compatibility and structural rigidity. Each system is factory assembled and hydrostatically tested prior to shipment.

Dimensions

Series A PLUS Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LB02 IS2	5.0	9.6	9.5	6.5	8.2	10
LBC2	5.0	9.9	9.5	6.5	8.5	10
LBC3	5.0	9.9	9.5	6.5	8.5	10
LB03 IS3	5.0	9.9	9.5	6.5	8.5	10
LB0[illegible]4	5.0	9.9	9.5	6.5	8.5	10
LB64	5.0	9.9	9.5	6.5	8.5	10
LBC4	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 cm



95-Gallon OverPack - 32" dia x 41.5", 1 each/package

Stock a SpillTech® OverPack with sorbents for emergency spill response, or use it as a salvage drum to ship damaged containers or hazardous waste.

- DOT-Approved for Salvage: All SpillTech® OverPacks are DOT-approved and X-rated for use as salvage drums. Helps companies conform to federal regulations when shipping damaged or leaking containers of hazardous materials, or absorbents contaminated with hazardous substances.
- Perfect for Spill Kits: Stores sorbent products (not included) for easy access as needed for spill control. Saves time when quick response is necessary.
- Sturdy Construction: 100% polyethylene OverPack resists chemicals, rust and corrosion for years of use. Integrated handles make them easy to lift, move or carry with standard material handling equipment. Twist-on, double-wall lid with closed-cell gasket provides sealed, secure closure to prevent leaks and protect contents from moisture, dirt and damage. Durable to withstand rough handling.
- Customized for You: We can customize a Spill Kit to your exact specifications, including the container, its contents and accessories, with no upcharge! Contact your local Distributor for details.

A95OVER Specifications

Dimensions:	ext. dia. 32" x 41.5" H
Shipping Dimensions:	31.75" W x 41.5" L x 31.75" H
Sold as:	1 per package
Color:	Yellow
Composition:	Polyethylene
# per Pallet:	3
Incinerable:	No
Ship Class:	250

Metric Equivalent Specifications

Dimensions:	ext. dia. 81.3cm x 105.4cm H
Shipping Dimensions:	80.6cm W x 105.4cm L x 80.6cm H

A95OVER Technical Information

Warnings & Restrictions:
There are no known warnings and restrictions for this product.

Regulations and Compliance:
49 CFR 173.3(c)(1) - If a container of hazardous waste is damaged or leaking, it can be placed in a compatible salvage drum that meets UN criteria for shipping

49 CFR 173.12(b)(2)(iv) - When labpacking, "Inner packagings…must be surrounded by a chemically compatible absorbent material in sufficient quantity to absorb the total liquid contents."

49 CFR 173.12(b) - A container used for labpacking must be "a UN 1A2 or UN 1B2 metal drum, a UN 1D plywood drum, a UN 1G fiber drum or a UN 1H2 plastic drum tested and marked at least for the Packing Group III performance level for liquids or solids."

Little, Shauna

From: Little, Shauna on behalf of NPDES, GeneralPermits
Sent: Monday, February 04, 2019 2:33 PM
To: Little, Shauna
Subject: FW: NOI RGP Block 8, Somerville, MA

From: Kent Walker <kwalker@sanbornhead.com>
Sent: Monday, February 04, 2019 2:12 PM
To: NPDES, GeneralPermits <Npdes.Generalpermits@epa.gov>
Subject: RE: NOI RGP Block 8, Somerville, MA

Hi Shauna,

Following up on our conversation last week, the contractor provided us with a maximum application concentration for sulfuric acid of 333 mg/L. Please let us know if you need anything else.

Thanks,
Kent

--
Kent B. Walker, P.E.
Senior Project Manager

SANBORN | HEAD & ASSOCIATES, INC.

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APPENDIX G

FEDERAL CORRESPONDENCE

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: August 31, 2018
Consultation Code: 05E1NE00-2018-SLI-2940
Event Code: 05E1NE00-2018-E-06931
Project Name: Foley Block 8

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: 05E1NE00-2018-SLI-2940

Event Code: 05E1NE00-2018-E-06931

Project Name: Foley Block 8

Project Type: DEVELOPMENT

Project Description: The Site is bounded by Foley Street, Assembly Row, Great River Road, and Revolution Drive

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.39288863261784N71.07686575568437W

Counties: Middlesex, MA

Endangered Species Act Species

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

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

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

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

---

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

Critical habitats

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

From: Christine Vaccaro - NOAA Federal
To: Americo Santamaria
Cc: zachary.jylkka@noaa.gov
Subject: Re: Somerville, MA RGP
Date: Thursday, September 6, 2018 12:41:56 PM

Sorry Americo--I haven't had a chance to respond yet.

No listed species will be exposed to any effects of this authorization under the RGP.

-Chris

Chris Vaccaro
Fisheries Biologist
Protected Resources Division
NOAA Fisheries, Greater Atlantic Region
Gloucester, MA
Phone: 978-281-9167
Email: christine.vaccaro@noaa.gov

For additional ESA Section 7 information and Critical Habitat guidance, please see:
www.greateratlantic.fisheries.noaa.gov/protected/section7

On Thu, Sep 6, 2018 at 12:38 PM, Americo Santamaria <asantamaria@sanbornhead.com> wrote:

> Zach,
>
> The previous contact I used for this request was Chris, who I have not heard from. Could you assist with looking into this? See below.
>
> Thankyou
>
> -Rico
>
> Get Outlook for Android
>
> From: Americo Santamaria
> Sent: Friday, August 31, 13:32
> Subject: Somerville, MA RGP
> To: Christine Vaccaro - NOAA Federal
>
> Good afternoon,
>
> I am requesting information to be included as part of a Notice of Intent (NOI) for a Remediation General Permit (RGP). The NOI is for construction dewatering during

excavation activities at 185 Foley Street in Somerville, Massachusetts. Effluent will be discharged to the Mystic River (segment MA71-03) via a storm drain outfall.

As part of the application to the USEPA for the RGP, we need to investigate whether this proposed temporary discharge has the potential to adversely affect any federally listed species in the reach of the Mystic River located downstream of the discharge point.

Approximate Discharge Lat/Long

Lat: 42.393485 Long: -71.075629

Thank you in advance for your assistance, and please let me know if you require further information.

-Americo Santamaria

--
Americo J. Santamaria
Senior Project Engineer
_____
SANBORN | HEAD & ASSOCIATES, INC.

1 Technology Park Drive, Westford, MA 01886
T 978.392.0900 D 978.577. 1040
www.sanbornhead.com

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APPENDIX H

NATIONAL REGISTER OF HISTORICAL PLACES, SOMERVILLE, MASSACHUSETTS

Appendix H
National Register of Historic Places
Research Documentation
Somerville, Massachusetts

Ref#	Historic Name	Multiple Name	Listing Date	City	County	State	Address
75000287	Powder House Park		4/21/1975	Somerville	Middlesex	MA	Powder House Circle
76000274	Bow Street Historic District		3/26/1976	Somerville	Middlesex	MA	Bow St.
84002530	Carr, Martin W., School		7/5/1984	Somerville	Middlesex	MA	25 Atherton St.
86001247	US Post Office--Somerville Main		5/30/1986	Somerville	Middlesex	MA	237 Washington St.
89001221	Westwood Road Historic District	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	Roughly bounded by Summer St., Benton Rd., Westwood Rd., and Central St.
89001222	Spring Hill Historic District	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	Roughly bounded by Summer, Central, Atherton, and Spring
89001223	Mt. Vernon Street Historic District	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	8--24 Mt. Vernon St.
89001224	Keyes, Amos, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	12 Adams St.
89001225	Downer Rowhouses (Adams Street)	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	55 Adams St.
89001226	Williams, F. G., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	37 Albion St.
89001227	Mystic Water Works	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	Alewife Brook Pkwy. and Capen St.
89001228	Williams, Charles, Jr., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	1 Arlington St.
89001230	House at 10 Arlington Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	10 Arlington St.
89001232	Houses at 28--36 Beacon Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	28--36 Beacon St.
89001233	Wyatt, George, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	33 Beacon St.
89001234	Snow, Lemuel, Jr., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	81 Benton Rd.
89001236	Crowell, C. C., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	85 Benton Rd.
89001237	Langmaid Terrace	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	359--365 Broadway
89001238	Broadway Winter Hill Congregational Church	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	404 Broadway
89001239	Adams--Magoun House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	438 Broadway
89001240	Adams, Charles--Woodbury Locke House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	178 Central St.
89001241	Downer Rowhouses (Central Street)	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	192--200 Central St.
89001244	Bacon, Clifton, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	27 Chester St.
89001245	House at 14 Chestnut Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	14 Chestnut St.
89001247	House at 25 Clyde Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	25 Clyde St.
89001248	West Somerville Branch Library	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	40 College Ave.
89001249	Lockhardt, Charles H., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	88 College Ave.
89001250	Cook, Thomas, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	21 College Hill Rd.
89001251	Brooks, James H., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	61 Columbus Ave.
89001252	Brackett, S. E., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	63 Columbus Ave.
89001253	Williams, Charles, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	108 Cross St.
89001254	House at 72R Dane Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	72R Dane St.
89001255	House at 21 Dartmouth Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	21 Dartmouth St.
89001256	Knight, R. A.--Eugene Lacount House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	34 Day St.
89001257	Cooper--Davenport Tavern Wing	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	81 Eustis St.
89001259	Langmaid Building	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	48--52 Highland Ave.
89001260	Highland, The	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	66 Highland St.
89001261	Somerville High School	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	93 Highland St.
89001262	First Universalist Church	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	125 Highland St.
89001263	Loring, George, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	76 Highland Ave.
89001264	First Unitarian Church	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	130 Highland Ave.
89001265	Gaut, Samuel, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	137 Highland Ave.
89001266	Barnes, Walter S. and Melissa E., House	Somerville MPS	3/8/1990	Somerville	Middlesex	MA	140 Highland Ave.
89001267	House at 343 Highland Avenue	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	343 Highland Ave.
89001269	House at 6 Kent Court	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	6 Kent Ct.
89001270	Foster, Alexander, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	45 Laurel St.
89001272	Worthen, Daniel, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	8 Mt. Pleasant St.
89001273	House at 197 Morrison Avenue	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	197 Morrison Ave.

89001274	Central Library	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	79 Highland Ave.
89001275	Grandview, The	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	82 Munroe St.
89001276	Niles, Louville V., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	97 Munroe St.
89001277	House at 81 Pearl Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	81 Pearl St.
89001278	Prescott, Gustavus G., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	65--67 Perkins St.
89001279	House at 16--18 Preston Road	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	16--18 Preston Rd.
89001280	Cliff, Z. E., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	29 Powderhouse Terr.
89001281	House at 5 Prospect Hill	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	5 Prospect Hill
89001282	Russell, Philemon, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	25 Russell St.
89001283	Warren, H., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	205 School St.
89001284	Hopkins, Elisha, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	237 School St.
89001285	Nichols, John F., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	17 Summit St.
89001286	Russell, Susan, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	58 Sycamore St.
89001287	Tufts, Peter and Oliver, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	78 Sycamore St.
89001288	House at 35 Temple Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	35 Temple St.
89001289	Otis--Wyman House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	67 Thurston St.
89001290	House at 42 Vinal Avenue	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	42 Vinal Ave.
89001291	Parker--Burnett House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	48 Vinal Ave.
89001292	House at 49 Vinal Avenue	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	49 Vinal Ave.
89001293	Wright House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	54 Vinal Ave.
89001294	Munroe, Robert, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	37 Walnut St.
89001295	Niles, Louville, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	45 Walnut St.
89001296	Hollander Blocks	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	Walnut St. and Pleasant Ave.
89001297	Lovejoy, A. L., House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	30 Warren Ave.
89001298	Schuebeler, Charles, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	384 Washington St.
89001299	Ireland, Samuel, House	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	117 Washington
89001300	Somerville Journal Building	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	8--10 Walnut St.
89001301	Old Cemetery	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	Somerville Ave. and School St.
89001302	House at 29 Mt. Vernon Street	Somerville MPS	9/18/1989	Somerville	Middlesex	MA	29 Mt. Vernon St.
89002255	Mystic Pumping Station	Water Supply System of Metropolitan Boston MPS	1/18/1990	Somerville	Middlesex	MA	Alewife Brook Pkwy.
89002330	Somerville Theatre	Somerville MPS	1/26/1990	Somerville	Middlesex	MA	55 Davis Sq.
98000095	James, Joseph K., House	Somerville MPS	2/11/1998	Somerville	Middlesex	MA	83 Belmont St.
99001125	Rosebud, The	Diners of Massachusetts MPS	9/22/1999	Somerville	Middlesex	MA	381 Summer St.

Notes:
Sanborn, Head & Associates, Inc. (Sanborn Head) conducted a review of the National Register of Historic Places within Somerville, Massachusetts. The search returned 81 results within Somerville. The Site is not listed on the National Register of Historical Places.