

E-0754-014  
February 16, 2018  
Revised March 8, 2018

Ms. Shauna Little  
United States Environmental Protection Agency- Region 1  
5 Post Office Square, Suite 100/OEP06-1  
Boston, Massachusetts 02109-3912

Re: **Submittal of Notice of Intent (NOI) for coverage under the Remediation General Permit (RGP)**

Mystic to East Eagle to Chelsea Transmission Line Project  
Construction Dewatering  
Discharge of Treated Groundwater to Mystic River  
Charlestown, Everett, and Chelsea, Massachusetts

Dear Ms. Little:

On behalf of NSTAR Electric Company d/b/a Eversource Energy (Eversource), Tighe & Bond, Inc. (Tighe & Bond) is pleased to submit the attached National Pollutant Discharge Elimination System (NPDES) Notice of Intent (NOI) (Appendix A) for coverage under the Remediation General Permit (RGP) for the Mystic to East Eagle to Chelsea Transmission Line Project (the Project) in Charlestown, Everett and Chelsea, Massachusetts. This application addresses dewatering requirements associated with excavations to facilitate the construction of a new below grade electric transmission line and associated manholes along Alford Street in Boston, Mystic Substation 250 in Charlestown, Dexter Street, Robin Street, and Beacham Street in Everett, and Beacham Street and Williams Street in Chelsea Massachusetts (the Project Route). A copy of the NOI is included in Appendix A. The limits of the Project Route are shown on the Aerial Dewatering Site Plan (Figure 1), and a Massachusetts Geographic Information Systems (MassGIS) Priority Resource Map is included as Figure 2 (Appendix B).

This submittal is a request to discharge treated groundwater to the Mystic River in Charlestown, Everett, and Chelsea, Massachusetts. Additional NOIs will be submitted for other sections of the Project Route where treated groundwater is proposed to be discharged to other surface water bodies.

As there is a need to treat and discharge water generated from the construction dewatering activities, the enclosed NOI form provides required information on general Project Route conditions, proposed treatment systems, discharge locations, receiving water, and laboratory analytical results from pre-discharge sampling and surface water sampling. The proposed treatment system is shown on Figure 3 (Process Flow Diagram) in Appendix B. The excavation dewatering and discharge of treated groundwater are scheduled to begin in March 2018 and end in December of 2019.

Dewatered groundwater along the Project Route will be treated by a mobile treatment system before being discharged to nearby catch basins and into stormwater drainage systems managed by the Boston Water and Sewer Commission (BWSC), the City of Everett, or the City of Chelsea. All stormwater drainage systems specified in this RGP eventually discharge to the Mystic River. Post treatment discharge rates will range from 25 gallons per minute (GPM) to 350 GPM.

## **Project Background**

The overall project involves the installation of approximately 3.9 miles of new electric transmission and distribution lines and 24 manholes between the existing Mystic Substation



250 in Charlestown, Massachusetts to the proposed East Eagle Substation 131 in East Boston, Massachusetts. The proposed electrical transmission line trench will measure three feet wide and will be installed to an approximate depth of five to 10 feet below ground surface (BGS). The manholes will be approximately 10 feet wide by 25 feet long, and 10 to 20 feet deep. Initial pre-characterization efforts have indicated that the depth to groundwater along the Project Route ranges from six to 10 feet BGS. Property uses along the project route consist of mixed residential, commercial and industrial.

This RGP Permit Application is for the discharge of treated groundwater to the BWSC, City of Everett, and City of Chelsea stormwater drainage systems, with the ultimate discharge to the Mystic River. Permission will be obtained from the stormwater drainage system owner prior to discharge activities.

## MCP History

During pre-construction soil assessment activities, concentrations of total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), arsenic, lead, zinc and polychlorinated biphenyls (PCBs) were detected in soil samples from within the Project Route above the respective Massachusetts Department of Environmental Protection (MassDEP) Reportable Concentrations (RCS-1/RCS-2) values.

Prior to initiating the construction activities, Tighe & Bond, on behalf of Eversource, will notify MassDEP of Eversource's intent to manage the soil and groundwater under a Utility-related Abatement Measure (URAM) Plan. The URAM Plan will detail the measures implemented to manage excess soils and groundwater generated during construction activities along the Project Route. Boundaries of the URAM are shown on Figure 1 in Appendix B.

## Groundwater Characterization

To characterize groundwater along the proposed route of construction, groundwater samples were collected in July and September 2017. The groundwater samples were submitted for laboratory analysis of Environmental Protection Agency (EPA) RGP parameters. Laboratory analytical results are summarized in Table 1 (Appendix E). Copies of the laboratory analytical reports are included in Appendix F. Laboratory analytical results were compared to the RGP Technology Based Effluent Limitations (TBEL) and Water Quality Based Effluent Limitations (WQBEL).

Contaminants of concern (COCs) are analytes that exceeded the applicable effluent limitation. COCs detected in monitoring wells along the Project Route include ammonia, chloride, total suspended solids (TSS), copper, iron, nickel, zinc, benzene, acetone, group I PAHs and total PCBs. Since these monitoring wells are installed either adjacent to or within a roadway or within a roadway, the chloride detected in groundwater samples collected from B-3, B-17, MW-204, and MW-206 is attributed to road salting during the winter months. The locations of the monitoring wells are shown on Figure 1 (Aerial Dewatering Site Plan) in Appendix B.

## Receiving Water Classification

Mystic River, including Island End River (waterbody identification MA71-03) is classified as a Class SB (CSO) impaired water body and is listed in the 303(d) Impaired Waterbodies document. This portion of the Mystic River is saltwater, as MassDEP classifies it as an estuary. During critical low flow conditions, it is assumed that there is no flow in saltwater environments; therefore, a 7-day 10-year low flow (7Q10) value was not calculated for this RGP. Additionally, dilution factors for sites discharging to saltwater receiving waters is assumed to be zero (1:1) in accordance with *Appendix V: Dilution Factor and Effluent Limitation Calculations for Massachusetts* of the NPDES RGP.

As required by the NPDES RGP, surface water samples were collected within a quarter mile of the potential outfall locations prior to discharging. The surface water samples were collected in November and December of 2017 and sent for laboratory analysis of RGP metals including hexavalent chromium, ammonia, and salinity. Temperature and pH of the surface water was recorded in the field at the time of sample collection. The surface water sampling location is shown on Figure 1 (Aerial Dewatering Site Plan) in Appendix B.

## Treatment Systems

Dewatered groundwater along the Project Route will be treated by a mobile treatment system before being discharged to nearby catch basins and into stormwater drainage systems managed by BWSC, the City of Everett, or the City of Chelsea, ultimately discharging to the Mystic River (including Island End River). Outfall locations are shown on Figure 1 (Aerial Dewatering Site Plan) in Appendix B.

**Mobile Treatment System** – Depending on the level of treatment required and discharge flow rate, the mobile treatment system will consist of portable silt socks or bag filter, or be mounted on either a 24 or 48-foot mobile trailer. The mounted treatment system will consist of a weir tank, particulate filter units, bag filters and/or granular activated carbon (GAC)/clay filter. Based on effluent monitoring results, the treatment system or flow rate will be modified to comply with the effluent limits.

| Flow Rate (GPM) | Proposed Treatment System                                                               |
|-----------------|-----------------------------------------------------------------------------------------|
| 0-50            | TSS treatment via a silt/pipe sock or bag filter                                        |
| 50-150          | 24-foot trailer with particulate filter units, bag filters and/or GAC/clay filter       |
| 150-350         | 48-foot trailer weir tank, particulate filter units, bag filters and/or GAC/clay filter |

**Best Management Practices Plan** – Tighe & Bond will develop a Best Management Practices Plan (BMPP) for the groundwater extraction and treatment systems for the Project Route. The BMPP will be developed in accordance with the requirements of the RGP and implemented upon initiation of the discharge.

## Owner and Operator

The site owner and site operator will be co-permittees for this NPDES RGP permit application. The site operator will be selected but is not known at the time of submittal.

### Owner

NSTAR Electric Company  
d/b/a Eversource Energy  
Michael Zylich  
247 Station Drive  
Westwood, MA 02090

### Operator

To be Determined

## Notice of Intent

Preparation of this NOI has included a review of literature pertaining to Areas of Critical Environmental Concern (ACEC), Endangered Species Act (ESA), and the National Historic Preservation Act (NHPA), as documented below:

- Review of a MassGIS Priority Resource Map, Figure 2, shows the Project Route is not within an ACEC and no NHESP Priority Habitats for Rare Species or

Estimated Habitats for Rare Wildlife are present within a half mile downstream of the discharge location;

- Review of the “Federally Listed Endangered and Threatened Species in Massachusetts” (Appendix C) found that there are two listed species in Middlesex County (small whorled pogonia and northern long-eared bat) and three species listed in Suffolk County (piping plover, red knot, and northern long-eared bat). The small whorled pogonia is found in Groton and the piping plover is found in Revere and Winthrop. As the Project Route is not in Groton, Revere, or Winthrop these two species will not be affected by construction activities or its proposed discharges. The red knot prefers coastal beaches, rocky shores, sand and mud flats. The northern long-eared bat prefers mines and caves in the winter and forested habitats in the summer. The project area consists of an asphalt roadway that borders residential and industrial properties. Additionally, no vegetation will be disturbed during construction activities. The discharge will go through a treatment system prior being discharged, which will remove solids. The discharge will also be through an existing drainage network. As a result, it is the opinion of Tighe & Bond that the habitats for red knot and northern long-eared bat will not be disturbed during construction activities.
- According to the United States Fish and Wildlife Services (USFWS) Information, Planning and Conservation (IPaC) tool there is one federally threatened (red knot) and one endangered species (roseate tern) within the Project Route. Construction will be taking place underneath existing roadways and will be backfilled and re-paved. No tree clearing will result from this project and treated groundwater will be discharged through an existing stormwater drainage system. The treatment system will not contain chemicals and will have no toxic effects on prey in the Mystic River. Therefore, the proposed discharges and discharge related activities are not expected to affect any federally threatened or endangered listed species in this area. There are also no critical habitats for any federally threatened or endangered species in the action area. The permit eligibility meets “Criterion C.”
- Tighe & Bond has done a review of federally threatened or endangered listed species and critical habitat under the jurisdiction of National Marine Fisheries Services (NMFS). There are no threatened or endangered species or critical habitat in the Chelsea River or Boston Harbor. A review of the 10 X 10 latitude and longitude squares, Summary of Essential Fish Habitat (EFH) Designations for Boston Harbor, provided by the National Oceanic and Atmospheric Administration (NOAA) confirmed there are no EFH for the threatened or endangered species under NMFS jurisdiction. Therefore, Tighe & Bond affirms the determination made by EPA that the proposed discharges and discharge related activities are not likely to adversely affect any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS.
- An electronic review of the Massachusetts Cultural Resource Information System database (Appendix D), made available through the Massachusetts Historical Commission, found several historical areas along the Project Route. It is the opinion of Tighe & Bond that discharges and discharge related activities will not affect historic properties as groundwater will be pumped into fractionation tanks, treated and discharged to an existing drainage network. Therefore, permit eligibility meets “Criterion B.”
- Groundwater samples were collected from groundwater monitoring wells B-3, B-17, MW-204 and MW-206 in July and September 2017. The groundwater samples were submitted for laboratory analysis for RGP parameters. The

laboratory analytical results are summarized in Table 1 included in Appendix E. Copies of the laboratory analytical reports are included in Appendix F. Laboratory analytical results were compared to the RGP TBEL and WQBEL to determine the applicable effluent limitations for the Project Route.

- The surface water samples (Mystic at Islands End River and Mystic at Boston Inner) were collected from the Mystic River within a quarter mile of the potential outfall locations in November and December 2017. Surface water samples were submitted for laboratory analysis of RGP parameters that were detected in the effluent samples. The laboratory analytical results are summarized in Table 2 included in Appendix E. A copy of the laboratory analytical report is included in Appendix F.

The proposed treatment system has been designed to reduce the levels of associated COCs to below the applicable effluent limits. Treated effluent will be sampled at start up and in accordance with permit requirements and submitted for laboratory analysis of ammonia, chloride, TSS, copper, iron, nickel, zinc, benzene, acetone, group I PAHs, and PCBs to confirm the treatment systems is operating as designed. Additionally, the flow, pH and turbidity levels will be monitored within the field and recorded in accordance with RGP requirements.

If you need any additional information or assistance on this project, please do not hesitate to contact Michael E. Martin at (508) 564-7285 at your convenience.

Very truly yours,

**TIGHE & BOND, INC.**

  
Michael E. Martin  
Project Manager

  
Gary W.T. Hedman, LSP  
Project Manager

Enclosures

Copy: Michael Zylich, Eversource  
MassDEP, Division of Watershed Management  
MassDEP, Boston

### **List of Appendices**

- Appendix A Notice of Intent
- Appendix B Figures
- Appendix C Federally Listed Endangered Species in Massachusetts  
Summary of Essential Fish Habitat (EFH) Designations (NOAA)
- Appendix D Massachusetts Cultural Resources Information System Report
- Appendix E Groundwater Summary (Table 1)  
Surface Water Summary (Table 2)  
WQBEL Calculations
- Appendix F Laboratory Analytical Results

### **List of Figures**

- Figure 1 Aerial Dewatering Site Plan
- Figure 2 MassDEP Priority Resource Map
- Figure 3 Process Flow Diagrams



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

### A. General site information:

|                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------|--------|--------------------------------------------|---------------------------------|------------------------------------------|--|-------|--------|------|
| 1. Name of site:                                                                                                                                                                                                                                                                                                    | Site address:<br><br>Street:<br><br><table border="1" data-bbox="888 475 1950 557"> <tr> <td data-bbox="888 475 1591 557">City:</td><td data-bbox="1591 475 1724 557">State:</td><td data-bbox="1724 475 1950 557">Zip:</td></tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | City:                                                 | State:                          | Zip:                                                                                               |                                      |        |                                            |                                 |                                          |  |       |        |      |
| City:                                                                                                                                                                                                                                                                                                               | State:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Zip:                                                  |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| 2. Site owner<br><br><br><br><br><br><br>Owner is (check one): <input type="checkbox"/> Federal <input type="checkbox"/> State/Tribal <input type="checkbox"/> Private<br><input type="checkbox"/> Other; if so, specify:                                                                                           | <table border="1"> <tr> <td colspan="3" data-bbox="888 557 1950 630">Contact Person:</td></tr> <tr> <td data-bbox="888 630 1461 699">Telephone:</td><td colspan="2" data-bbox="1461 630 1950 699">Email:</td></tr> <tr> <td colspan="3" data-bbox="888 699 1950 800">Mailing address:<br/><br/>Street:</td></tr> <tr> <td data-bbox="888 800 1591 878">City:</td><td data-bbox="1591 800 1724 878">State:</td><td data-bbox="1724 800 1950 878">Zip:</td></tr> </table>                                                                                                                                                                                                                                                                        | Contact Person:                                       |                                 |                                                                                                    | Telephone:                           | Email: |                                            | Mailing address:<br><br>Street: |                                          |  | City: | State: | Zip: |
| Contact Person:                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| Telephone:                                                                                                                                                                                                                                                                                                          | Email:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| Mailing address:<br><br>Street:                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| City:                                                                                                                                                                                                                                                                                                               | State:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Zip:                                                  |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| 3. Site operator, if different than owner                                                                                                                                                                                                                                                                           | <table border="1"> <tr> <td colspan="3" data-bbox="888 878 1950 938">Contact Person:</td></tr> <tr> <td data-bbox="888 938 1461 998">Telephone:</td><td colspan="2" data-bbox="1461 938 1950 998">Email:</td></tr> <tr> <td colspan="3" data-bbox="888 998 1950 1099">Mailing address:<br/><br/>Street:</td></tr> <tr> <td data-bbox="888 1099 1591 1154">City:</td><td data-bbox="1591 1099 1724 1154">State:</td><td data-bbox="1724 1099 1950 1154">Zip:</td></tr> </table>                                                                                                                                                                                                                                                                 | Contact Person:                                       |                                 |                                                                                                    | Telephone:                           | Email: |                                            | Mailing address:<br><br>Street: |                                          |  | City: | State: | Zip: |
| Contact Person:                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| Telephone:                                                                                                                                                                                                                                                                                                          | Email:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| Mailing address:<br><br>Street:                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| City:                                                                                                                                                                                                                                                                                                               | State:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Zip:                                                  |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| 4. NPDES permit number assigned by EPA:<br><br><br>NPDES permit is (check all that apply): <input type="checkbox"/> RGP <input type="checkbox"/> DGP <input type="checkbox"/> CGP<br><input type="checkbox"/> MSGP <input type="checkbox"/> Individual NPDES permit <input type="checkbox"/> Other; if so, specify: | 5. Other regulatory program(s) that apply to the site (check all that apply):<br><br><table border="0"> <tr> <td data-bbox="888 1214 1461 1284"><input type="checkbox"/> MA Chapter 21e; list RTN(s):</td><td data-bbox="1461 1214 1950 1284"><input type="checkbox"/> CERCLA</td></tr> <tr> <td data-bbox="888 1284 1461 1354"><input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit:</td><td data-bbox="1461 1284 1950 1354"><input type="checkbox"/> UIC Program</td></tr> <tr> <td></td><td data-bbox="1461 1354 1950 1398"><input type="checkbox"/> POTW Pretreatment</td></tr> <tr> <td></td><td data-bbox="1461 1398 1950 1458"><input type="checkbox"/> CWA Section 404</td></tr> </table> | <input type="checkbox"/> MA Chapter 21e; list RTN(s): | <input type="checkbox"/> CERCLA | <input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit: | <input type="checkbox"/> UIC Program |        | <input type="checkbox"/> POTW Pretreatment |                                 | <input type="checkbox"/> CWA Section 404 |  |       |        |      |
| <input type="checkbox"/> MA Chapter 21e; list RTN(s):                                                                                                                                                                                                                                                               | <input type="checkbox"/> CERCLA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
| <input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit:                                                                                                                                                                                                                  | <input type="checkbox"/> UIC Program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
|                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> POTW Pretreatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |
|                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> CWA Section 404                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                       |                                 |                                                                                                    |                                      |        |                                            |                                 |                                          |  |       |        |      |

**B. Receiving water information:**

|                                                                                                                                                                                                                                                                                                                                                                      |                                                 |                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------|
| 1. Name of receiving water(s):                                                                                                                                                                                                                                                                                                                                       | Waterbody identification of receiving water(s): | Classification of receiving water(s): |
| Receiving water is (check any that apply): <input type="checkbox"/> Outstanding Resource Water <input type="checkbox"/> Ocean Sanctuary <input type="checkbox"/> territorial sea <input type="checkbox"/> Wild and Scenic River                                                                                                                                      |                                                 |                                       |
| 2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Are sensitive receptors present near the site? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If yes, specify:                                                       |                                                 |                                       |
| 3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. |                                                 |                                       |
| 4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.                                                                                                                                        |                                                 |                                       |
| 5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.                                                                                                               |                                                 |                                       |
| 6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If yes, indicate date confirmation received:                                                                                                                               |                                                 |                                       |
| 7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                                             |                                                 |                                       |

**C. Source water information:**

|                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                              |                                                                                                     |                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1. Source water(s) is (check any that apply):                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                              |                                                                                                     |                                                                                                                                        |
| <input type="checkbox"/> Contaminated groundwater<br><br>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):<br><input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Contaminated surface water<br><br>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):<br><input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> The receiving water                                                        | <input type="checkbox"/> Potable water; if so, indicate municipality or origin:<br><br><input type="checkbox"/> Other; if so, specify: |
|                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> A surface water other than the receiving water; if so, indicate waterbody: |                                                                                                                                        |



|                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. Source water contaminants:                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                  |
| a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> 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): <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                  |

#### **D. Discharge information**

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 2. Activity Category: (check all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3. Contamination Type Category: (check all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |
| <input type="checkbox"/> I – Petroleum-Related Site Remediation<br><input type="checkbox"/> II – Non-Petroleum-Related Site Remediation<br><input type="checkbox"/> III – Contaminated Site Dewatering<br><input type="checkbox"/> IV – Dewatering of Pipelines and Tanks<br><input type="checkbox"/> V – Aquifer Pump Testing<br><input type="checkbox"/> VI – Well Development/Rehabilitation<br><input type="checkbox"/> VII – Collection Structure Dewatering/Remediation<br><input type="checkbox"/> VIII – Dredge-Related Dewatering                                                                                                                                                                                                              | <p>a. If Activity Category I or II: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>                        |                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <table border="1"> <tr> <td data-bbox="970 799 1419 873"><input type="checkbox"/> G. Sites with Known Contamination</td><td data-bbox="1419 799 2003 873"><input type="checkbox"/> H. Sites with Unknown Contamination</td></tr> </table>                                                                                                                                                                                                                                                                         | <input type="checkbox"/> G. Sites with Known Contamination                                                    |
| <input type="checkbox"/> G. Sites with Known Contamination                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> H. Sites with Unknown Contamination                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                               |
| <table border="1"> <tr> <td data-bbox="970 873 1419 1409"> <p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p> </td><td data-bbox="1419 873 2003 1409"> <p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p> </td></tr> </table> | <p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p> | <p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p> |
| <p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>                                                                                                                                                                                                                                       | <p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p>                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |

#### 4. Influent and Effluent Characteristics

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

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

[illegible]

### E. Treatment system information

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

### F. Chemical and additive information

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>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)</p> <p><input type="checkbox"/> Algaecides/biocides <input type="checkbox"/> Antifoams <input type="checkbox"/> Coagulants <input type="checkbox"/> Corrosion/scale inhibitors <input type="checkbox"/> Disinfectants <input type="checkbox"/> Flocculants <input type="checkbox"/> Neutralizing agents <input type="checkbox"/> Oxidants <input type="checkbox"/> Oxygen <input type="checkbox"/> scavengers <input type="checkbox"/> pH conditioners <input type="checkbox"/> Bioremedial agents, including microbes <input type="checkbox"/> Chlorine or chemicals containing chlorine <input type="checkbox"/> Other; if so, specify:</p> |
| <p>2. Provide the following information for each chemical/additive, using attachments, if necessary:</p> <p>a. Product name, chemical formula, and manufacturer of the chemical/additive;<br/>b. Purpose or use of the chemical/additive or remedial agent;<br/>c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;<br/>d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;<br/>e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and<br/>f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).</p>                             |
| <p>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): <input type="checkbox"/> Yes <input type="checkbox"/> 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): <input type="checkbox"/> Yes <input type="checkbox"/> No</p>                                                                                                                                                                                                                                    |

### G. Endangered Species Act eligibility determination

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:</p> <p><input type="checkbox"/> <b>FWS Criterion A:</b> 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”.</p> <p><input type="checkbox"/> <b>FWS Criterion B:</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): <input type="checkbox"/> Yes <input type="checkbox"/> No; if no, is consultation underway? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> <b>FWS Criterion C:</b> 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) <input type="checkbox"/> the operator <input type="checkbox"/> EPA <input type="checkbox"/> Other; if so, specify:</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

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

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

#### **H. National Historic Preservation Act eligibility determination**

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

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

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

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

#### **I. Supplemental information**

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

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

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



## J. Certification requirement

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

BMPP certification statement:

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

Check one: Yes ☐ No ☐

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

Check one: Yes ☐ No ☐

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

Check one: Yes ☐ No ☐ NA ☐

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

Check one: Yes ☐ No ☐ NA ☐

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

Check one: Yes ☐ No ☐ NA ☐

Signature:



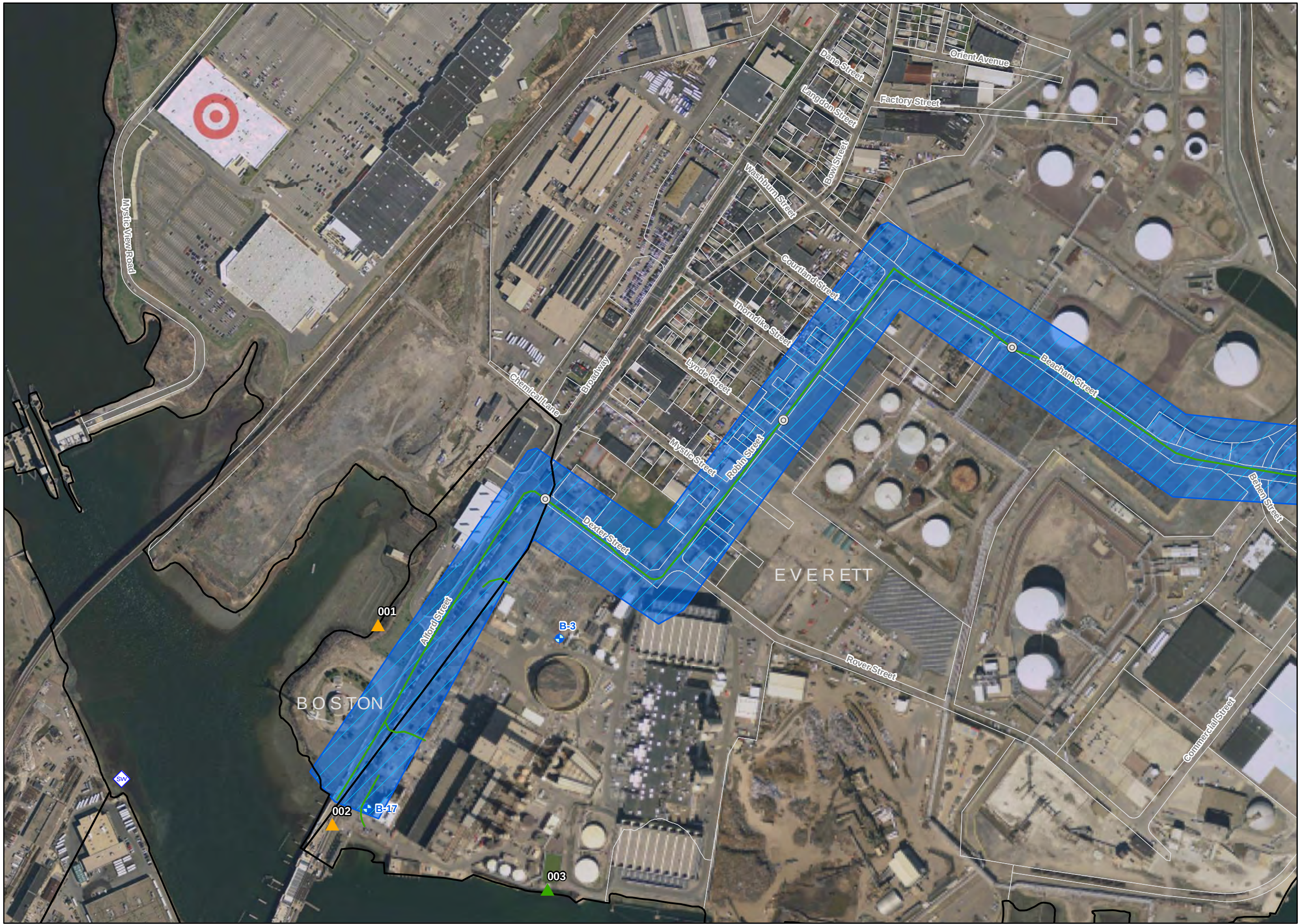
Date:

Print Name and Title:

| Outfall ID | Jurisdiction           | Latitude  | Longitude  | Municipal ID |
|------------|------------------------|-----------|------------|--------------|
| 001        | Boston Water and Sewer | 42.392496 | -71.070163 | 30J006       |
| 002        | Boston Water and Sewer | 42.390066 | -71.070747 | 30J019       |
| 003        | City of Everett        | 42.389321 | -71.067143 | NA           |
| 004        | City of Chelsea        | 42.394370 | -71.049694 | NA           |
| 005        | City of Everett        | 42.391733 | -71.051333 | NA           |
| 006        | City of Chelsea        | 42.391662 | -71.049459 | NA           |

## **APPENDIX B**





### Figure 1 RGP Limits

LEGEND

- Monitoring Well Location
- Transmission Manhole
- Distribution Manhole
- Surface Water Sample

**Discharging Outfalls**

- BWSC
- Chelsea
- Everett

URAM Boundary

RGP Boundary Mysis River

RGP Boundary Chelsea River

LOCUS MAP

0 100 200 400  
Feet  
1:4,800

NOTES

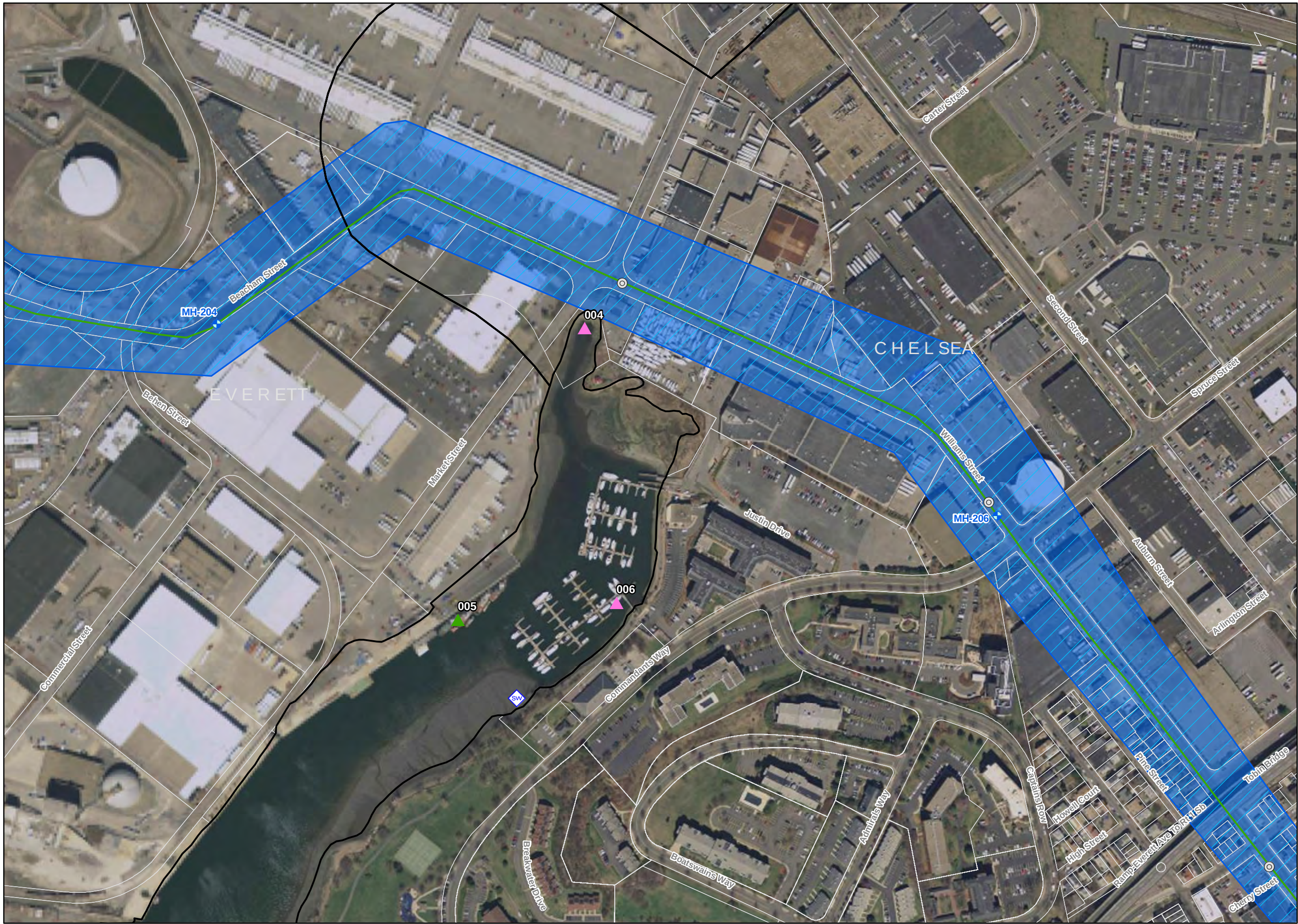
1. Based on MassGIS Color Orthophotography (2013-2014)

Page 1 of 4

Mystic to East Eagle  
UG T&D Lines  
Charlestown, Everett,  
Chelsea, East Boston,  
Massachusetts  
March 2018

**Tighe&Bond**  
Engineers | Environmental Specialists





### Figure 1 RGP Limits

LEGEND

- Monitoring Well Location
- Transmission Manhole
- Distribution Manhole
- Surface Water Sample

Discharging Outfalls

- BWSC
- Chelsea
- Everett

URAM Boundary

RGP Boundary Mystic River

RGP Boundary Chelsea River

LOCUS MAP

0 75 150 300  
Feet  
1:3,600

NOTES

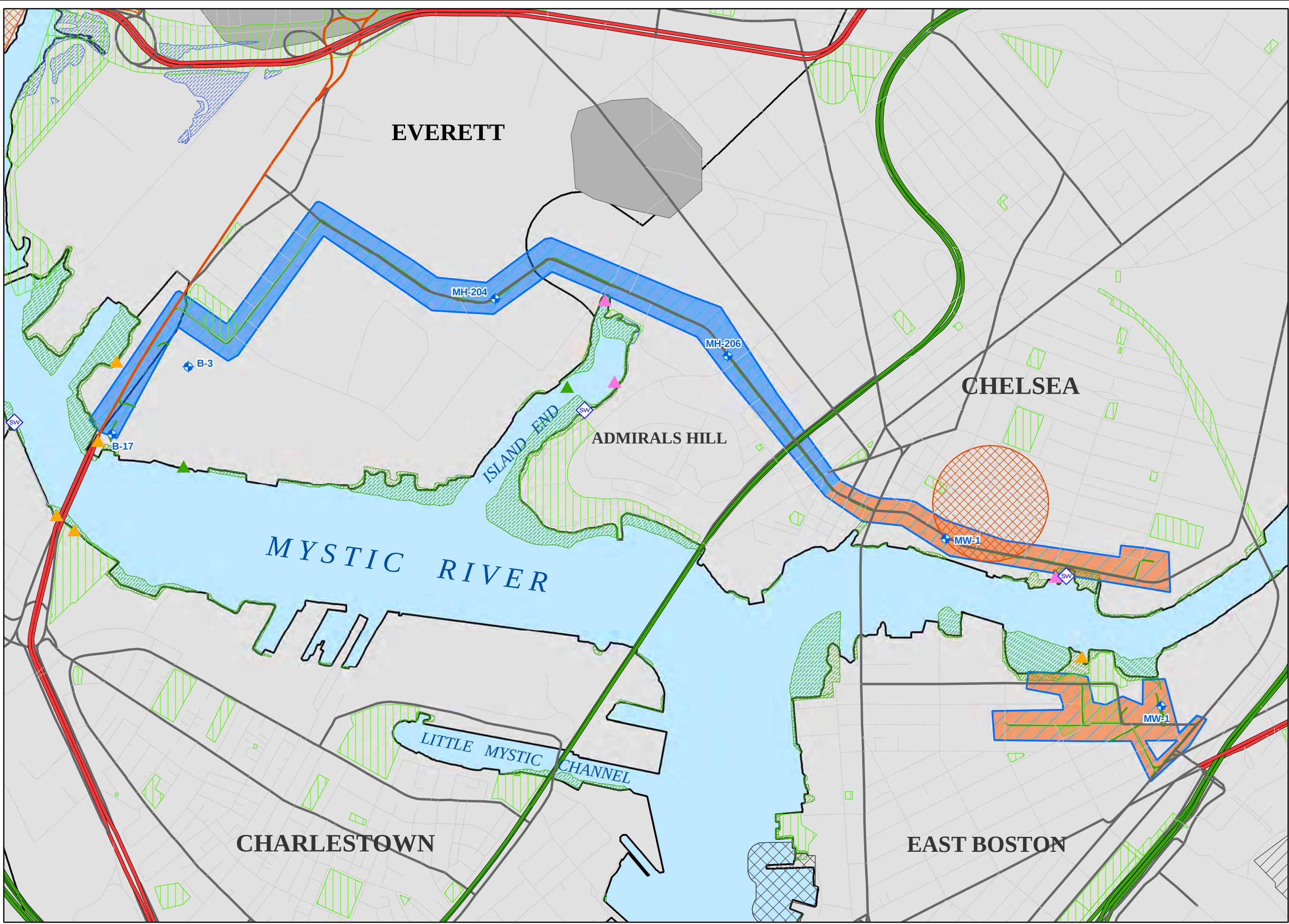
1. Based on MassGIS Color Orthophotography (2013-2014)

Page 2 of 4

Mystic to East Eagle  
UG T&D Lines  
Charlestown, Everett,  
Chelsea, East Boston,  
Massachusetts  
March 2018

**Tighe&Bond**  
Engineers | Environmental Specialists





**Figure 2**  
**RGP Limits**  
**& Priority Resources**

LEGEND

- Monitoring Well Location
- Surface Water Sample
- Discharging Outfalls**
  - BWSC
  - Chelsea
  - Everett
- Solid Waste Landfill
- Protected and Recreational Open Space
- NHESP Estimated Habitats for Rare Wildlife
- NHESP Priority Habitats for Rare Species
- MassDEP Inland Wetlands
- MassDEP Coastal Wetlands
- Non- Potential Drinking Water Source Area - Medium Yield
- Potentially Productive Medium Yield Aquifer
- URAM Boundary
- RGP Boundary Mysic River
- RGP Boundary Chelsea River

LOCUS MAP

0 250 500 1,000  
Feet  
1:12,000

NOTES

Data source: Office of Geographic and Environmental Information(MassGIS), Commonwealth of Massachusetts  
Executive Office of Environmental Affairs.  
Circles indicate 500-foot and half-mile radii.  
Data valid as of December 2017.

Mystic to East Eagle  
UG T&D Lines  
Charlestown, Everett,  
Chelsea, East Boston,  
Massachusetts  
December 2017

**Tighe&Bond**  
Engineers | Environmental Specialists









**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES  
IN MASSACHUSETTS**

| COUNTY    | SPECIES                 | FEDERAL STATUS             | GENERAL LOCATION/HABITAT                                                        | TOWNS                                                                          |
|-----------|-------------------------|----------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Essex     | Small whorled Pogonia   | Threatened                 | Forests with somewhat poorly drained soils and/or a seasonally high water table | Gloucester, Essex and Manchester                                               |
|           | Piping Plover           | Threatened                 | Coastal Beaches                                                                 | Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury |
|           | Red Knot <sup>1</sup>   | Threatened                 | Coastal Beaches and Rocky Shores, sand and mud flats                            | Coastal Towns                                                                  |
|           | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                      |
| Franklin  | Northeastern bulrush    | Endangered                 | Wetlands                                                                        | Montague, Warwick                                                              |
|           | Dwarf wedgemussel       | Endangered                 | Mill River                                                                      | Whately                                                                        |
|           | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                      |
| Hampshire | Small whorled Pogonia   | Threatened                 | Forests with somewhat poorly drained soils and/or a seasonally high water table | Hadley                                                                         |
|           | Puritan tiger beetle    | Threatened                 | Sandy beaches along the Connecticut River                                       | Northampton and Hadley                                                         |
|           | Dwarf wedgemussel       | Endangered                 | Rivers and Streams.                                                             | Hatfield, Amherst and Northampton                                              |
|           | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                      |
| Hampden   | Small whorled Pogonia   | Threatened                 | Forests with somewhat poorly drained soils and/or a seasonally high water table | Southwick                                                                      |
|           | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                      |
| Middlesex | Small whorled Pogonia   | Threatened                 | Forests with somewhat poorly drained soils and/or a seasonally high water table | Groton                                                                         |
|           | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                      |
| Nantucket | Piping Plover           | Threatened                 | Coastal Beaches                                                                 | Nantucket                                                                      |
|           | Roseate Tern            | Endangered                 | Coastal beaches and the Atlantic Ocean                                          | Nantucket                                                                      |
|           | American burying beetle | Endangered                 | Upland grassy meadows                                                           | Nantucket                                                                      |
|           | Red Knot <sup>1</sup>   | Threatened                 | Coastal Beaches and Rocky Shores, sand and mud flats                            | Coastal Towns                                                                  |
|           | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                      |

# FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

| COUNTY    | SPECIES                     | FEDERAL STATUS             | GENERAL LOCATION/HABITAT                                                        | TOWNS                                                                             |
|-----------|-----------------------------|----------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Plymouth  | Piping Plover               | Threatened                 | Coastal Beaches                                                                 | Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett                 |
|           | Northern Red-bellied Cooter | Endangered                 | Inland Ponds and Rivers                                                         | Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke |
|           | Roseate Tern                | Endangered                 | Coastal beaches and the Atlantic Ocean                                          | Plymouth, Marion, Wareham, and Mattapoisett.                                      |
|           | Red Knot <sup>1</sup>       | Threatened                 | Coastal Beaches and Rocky Shores, sand and mud flats                            | Coastal Towns                                                                     |
|           | Northern Long-eared Bat     | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                         |
| Suffolk   | Piping Plover               | Threatened                 | Coastal Beaches                                                                 | Revere, Winthrop                                                                  |
|           | Red Knot <sup>1</sup>       | Threatened                 | Coastal Beaches and Rocky Shores, sand and mud flats                            | Coastal Towns                                                                     |
|           | Northern Long-eared Bat     | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                         |
| Worcester | Small whorled Pogonia       | Threatened                 | Forests with somewhat poorly drained soils and/or a seasonally high water table | Leominster                                                                        |
|           | Northern Long-eared Bat     | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats             | Statewide                                                                         |

<sup>1</sup>Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.

-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.

-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.



## 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:

November 27, 2017

Consultation Code: 05E1NE00-2018-SLI-0433

Event Code: 05E1NE00-2018-E-00987

Project Name: Mystic to East Eagle 1

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](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-0433

Event Code: 05E1NE00-2018-E-00987

Project Name: Mystic to East Eagle 1

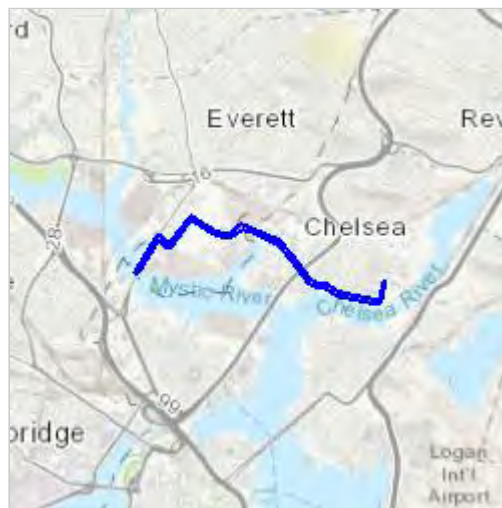
Project Type: Other

Project Description: This project includes the management of excavated groundwater during the installation of new underground electrical transmission line and manholes.

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/42.391292902718774N71.043214562999W>



Counties: Middlesex, MA | Suffolk, MA

## Endangered Species Act Species

There is a total of 2 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. 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.

### Birds

| NAME                                                                                                                                                                                                                                                                 | STATUS     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Red Knot <i>Calidris canutus rufa</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>                                                     | Threatened |
| Roseate Tern <i>Sterna dougallii dougallii</i><br>Population: northeast U.S. nesting pop.<br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/2083">https://ecos.fws.gov/ecp/species/2083</a> | Endangered |

### Critical habitats

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

---



## Summary of Essential Fish Habitat (EFH) Designations

### Name of Estuary/ Bay/ River: Boston Harbor, Massachusetts

**10° x 10° latitude and longitude squares included in this bay or estuary or river (southeast corner boundaries):**

4220/7100; 4210/7050; 4210/7100

| Species                                                  | Eggs | Larvae | Juveniles | Adults | Spawning Adults |
|----------------------------------------------------------|------|--------|-----------|--------|-----------------|
| Atlantic salmon ( <i>Salmo salar</i> )                   |      |        |           |        |                 |
| Atlantic cod ( <i>Gadus morhua</i> )                     | S    | S      | M,S       | M,S    | S               |
| haddock ( <i>Melanogrammus aeglefinus</i> )              | S    | S      |           |        |                 |
| pollock ( <i>Pollachius virens</i> )                     | S    | S      | M,S       |        |                 |
| whiting ( <i>Merluccius bilinearis</i> )                 | S    | S      | M,S       | M,S    |                 |
| offshore hake ( <i>Merluccius albidus</i> )              |      |        |           |        |                 |
| red hake ( <i>Urophycis chuss</i> )                      |      | S      | S         | S      |                 |
| white hake ( <i>Urophycis tenuis</i> )                   | S    | S      | S         | S      |                 |
| redfish ( <i>Sebastes fasciatus</i> )                    | n/a  |        |           |        |                 |
| witch flounder ( <i>Glyptocephalus cynoglossus</i> )     |      |        |           |        |                 |
| winter flounder ( <i>Pleuronectes americanus</i> )       | M,S  | M,S    | M,S       | M,S    | M,S             |
| yellowtail flounder ( <i>Pleuronectes ferruginea</i> )   | S    | S      | S         | S      | S               |
| windowpane flounder ( <i>Scophthalmus aquosus</i> )      | M,S  | M,S    | M,S       | M,S    | M,S             |
| American plaice ( <i>Hippoglossoides platessoides</i> )  | S    | S      | S         | S      | S               |
| ocean pout ( <i>Macrozoarces americanus</i> )            |      |        | S         | S      |                 |
| Atlantic halibut ( <i>Hippoglossus hippoglossus</i> )    | S    | S      | S         | S      | S               |
| Atlantic sea scallop ( <i>Placopecten magellanicus</i> ) |      |        |           |        |                 |
| Atlantic sea herring ( <i>Clupea harengus</i> )          |      | S      | M,S       | M,S    |                 |
| monkfish ( <i>Lophius americanus</i> )                   |      |        |           |        |                 |
| bluefish ( <i>Pomatomus saltatrix</i> )                  |      |        | M,S       | M,S    |                 |
| long finned squid ( <i>Loligo pealei</i> )               | n/a  | n/a    |           |        |                 |

|                                                     |     |     |     |     |  |
|-----------------------------------------------------|-----|-----|-----|-----|--|
| short finned squid ( <i>Illex illecebrosus</i> )    | n/a | n/a |     |     |  |
| Atlantic butterfish ( <i>Peprilus triacanthus</i> ) | S   | S   |     |     |  |
| Atlantic mackerel ( <i>Scomber scombrus</i> )       | M,S | M,S | M,S | M,S |  |
| summer flounder ( <i>Paralichthys dentatus</i> )    |     |     |     |     |  |
| scup ( <i>Stenotomus chrysops</i> )                 |     |     |     |     |  |
| black sea bass ( <i>Centropristus striata</i> )     |     |     |     |     |  |
| surf clam ( <i>Spisula solidissima</i> )            | n/a | n/a |     |     |  |
| ocean quahog ( <i>Artica islandica</i> )            | n/a | n/a |     |     |  |
| spiny dogfish ( <i>Squalus acanthias</i> )          | n/a | n/a |     |     |  |
| tilefish ( <i>Lopholatilus chamaeleonticeps</i> )   |     |     |     |     |  |



# Massachusetts Cultural Resource Information System

## MACRIS

### MACRIS Search Results

Search Criteria: Town(s): Boston; Street Name: alford; Resource Type(s): Area, Building, Burial Ground, Structure, Object;

| Inv. No.  | Property Name                          | Street        | Town   | Year   |
|-----------|----------------------------------------|---------------|--------|--------|
| BOS.9052  | Alford Street Bridge - Malden Bridge   | Alford St     | Boston | 1966   |
| BOS.13985 | Sullivan Square T Station              | Alford St     | Boston |        |
| BOS.13984 |                                        | 32 Alford St  | Boston | c 1950 |
| BOS.4226  | Burbank, Silas and Son Varnish Factory | 62 Alford St  | Boston | c 1880 |
| BOS.4227  | Charlestown Sewerage Pumping Station   | 171 Alford St | Boston | 1895   |



# Massachusetts Cultural Resource Information System

## MACRIS

### MACRIS Search Results

Search Criteria: Town(s): Everett; Street Name: dexter St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

| Inv. No. | Property Name | Street | Town | Year |
|----------|---------------|--------|------|------|
|----------|---------------|--------|------|------|

# Massachusetts Cultural Resource Information System

## MACRIS

### MACRIS Search Results

Search Criteria: Town(s): Everett; Street Name: robin St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

| Inv. No. | Property Name | Street | Town | Year |
|----------|---------------|--------|------|------|
|----------|---------------|--------|------|------|

# Massachusetts Cultural Resource Information System

## MACRIS

### MACRIS Search Results

Search Criteria: Town(s): Everett; Street Name: beacham St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

| Inv. No. | Property Name                                | Street        | Town    | Year |
|----------|----------------------------------------------|---------------|---------|------|
| EVR.190  | Colonial Beacon Oil Refinery Business Office | 30 Beacham St | Everett | 1926 |

# Massachusetts Cultural Resource Information System

## MACRIS

### MACRIS Search Results

Search Criteria: Town(s): Chelsea; Street Name: beacham st; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

| Inv. No. | Property Name | Street | Town | Year |
|----------|---------------|--------|------|------|
|----------|---------------|--------|------|------|

# Massachusetts Cultural Resource Information System

## MACRIS

### MACRIS Search Results

Search Criteria: Town(s): Chelsea; Street Name: williams St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

| Inv. No. | Property Name                                   | Street            | Town    | Year   |
|----------|-------------------------------------------------|-------------------|---------|--------|
| CLS.294  | Bennett Houses                                  | 1 Park St         | Chelsea |        |
| CLS.295  |                                                 | 1 Park St         | Chelsea |        |
| CLS.296  |                                                 | 1 Park St         | Chelsea |        |
| CLS.425  |                                                 | 9-11 Williams St  | Chelsea | r 1860 |
| CLS.292  |                                                 | 35 Williams St    | Chelsea |        |
| CLS.289  |                                                 | 38 Williams St    | Chelsea |        |
| CLS.290  |                                                 | 40-42 Williams St | Chelsea |        |
| CLS.293  | Locke, Edwin House                              | 43 Williams St    | Chelsea |        |
| CLS.291  |                                                 | 88-90 Williams St | Chelsea |        |
| CLS.711  |                                                 | 120 Williams St   | Chelsea | r 1845 |
| CLS.611  |                                                 | 201 Williams St   | Chelsea | 1916   |
|          | Southwest Cone Company - Eastern Baking Company |                   |         |        |





**TABLE 1**  
**Groundwater Analytical Results**  
 Eversource Mystic- East Eagle

| Sample ID<br>Sample Date |                                            | Effluent<br>Limitation      | Mystic River     |                   |                     |                      |                     |                      |
|--------------------------|--------------------------------------------|-----------------------------|------------------|-------------------|---------------------|----------------------|---------------------|----------------------|
|                          |                                            |                             | B-3<br>7/13/2017 | B-17<br>7/13/2017 | MW-204<br>9/27/2017 | MW-204F<br>9/27/2017 | MW-206<br>9/15/2017 | MW-206F<br>9/15/2017 |
| Inorganics               | Ammonia (mg/L)                             | Report                      | 1.96             | 0.77              | 7.8                 | 6.69                 | 15.7                | 14.5                 |
|                          | Chloride (mg/L)                            | Report                      | 1,040            | 399               | 2,890               | 2,860                | 1,170               | 1,030                |
|                          | Total Residual Chlorine (TRC) (mg/L)       | 7.5/50 <sup>(1)</sup>       | ND (20.0)        | ND (20.0)         | 0.028               | ND (0.020)           | 0.36                | 0.86                 |
|                          | Total Suspended Solids (TSS) (mg/L)        | 30                          | 27,600,000       | 474,000           | 74                  | 47                   | 2,800               | 32                   |
|                          | Antimony (µg/L)                            | 206                         | ND (10.0)        | ND (10.0)         | ND (5.0)            | ND (10)              | ND (1.0)            | ND (1.0)             |
|                          | Arsenic (µg/L)                             | 104                         | 3.5              | 1.9               | 17                  | 19                   | 1.3                 | ND (1.0)             |
|                          | Cadmium (µg/L)                             | 10.2                        | 0.99             | 0.42              | ND (1.0)            | ND (2.0)             | ND (0.20)           | ND (0.20)            |
|                          | Chromium III (µg/L)                        | 323                         | 11.6             | 16.7              | ND (50)             | ND (100)             | ND (10)             | ND (10)              |
|                          | Chromium VI (mg/L)                         | 323                         | ND (10.0)        | ND (10.0)         | ND (0.0040)         | ND (0.0040)          | ND (0.0040)         | ND (0.0040)          |
|                          | Copper (µg/L)                              | 3.7                         | 62.8             | 27.0              | 18                  | 18                   | 8.7                 | 5.6                  |
|                          | Iron (mg/L)                                | 5,000                       | 7,430            | 9,260             | 15                  | 20                   | 8.1                 | 8.5                  |
|                          | Lead (µg/L)                                | 160                         | 7.6              | 4.6               | ND (2.5)            | ND (5.0)             | 1.6                 | ND (2.5)             |
|                          | Mercury (mg/L)                             | 0.739                       | ND (0.200)       | ND (0.200)        | ND (0.00010)        | ND (0.00010)         | ND (0.00010)        | ND (0.00010)         |
|                          | Nickel (µg/L)                              | 8.3                         | 23.2             | 11.1              | ND (25)             | ND (50)              | 5.3                 | 5.9                  |
|                          | Selenium (µg/L)                            | 235.8                       | ND (2.0)         | ND (2.0)          | 11                  | ND (50)              | ND (5.0)            | ND (5.0)             |
|                          | Silver (µg/L)                              | 35.1                        | ND (1.0)         | ND (2.0)          | ND (1.0)            | ND (2.0)             | ND (0.20)           | ND (0.20)            |
|                          | Zinc (µg/L)                                | 86                          | 771              | 174               | ND (100)            | ND (100)             | ND (20)             | ND (20)              |
|                          | Cyanide (mg/L)                             | 178                         | ND (5.00)        | ND (5.00)         | 0.006               | 0.006                | 0.023               | 0.016                |
| Non-Halogenated VOCs     | BTEX                                       |                             |                  |                   |                     |                      |                     |                      |
|                          | Benzene (µg/L)                             | 5                           | ND (0.5)         | ND (0.5)          | ND (1.0)            | ND (1.0)             | 5.2                 | 3                    |
|                          | Toluene (µg/L)                             | NE                          | ND (0.5)         | ND (0.5)          | ND (1.0)            | ND (1.0)             | ND (2.0)            | ND (1.0)             |
|                          | Ethylbenzene (µg/L)                        | NE                          | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | 0.42                | 0.18                 |
|                          | Total Xylenes (µg/L)                       | NE                          | ND (0.5)         | 2.0               | ND (2.0)            | ND (2.0)             | 1.46                | 0.71                 |
|                          | Total BTEX                                 | 100                         | ND               | 2.0               | ND                  | ND                   | 7.08                | 3.89                 |
|                          | 1,4 Dioxane (µg/L)                         | 200                         | 0.263            | 0.950             | ND (50)             | ND (50)              | ND (100)            | ND (50)              |
| Halogenated VOCs         | Acetone (µg/L)                             | 7.97                        | 18.1             | 24.6              | 5.4                 | 12                   | ND (100)            | ND (50)              |
|                          | Total Phenol (mg/L)                        | 1,080                       | ND (100)         | ND (100)          | 0.068               | 0.06                 | 0.12                | 0.06                 |
|                          | Carbon Tetrachloride (µg/L)                | 4.4                         | ND (0.3)         | ND (0.3)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | 1,2-Dichlorobenzene (1,2-DCB) (µg/L)       | 600                         | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | 1,3-Dichlorobenzene (1,3-DCB) (µg/L)       | 320                         | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | 1,4-Dichlorobenzene (1,4-DCB) (µg/L)       | 5                           | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | Total Dichlorobenzene                      | NE                          | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | 1,1-Dichloroethane (1,1-DCA) (µg/L)        | 70                          | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | 1,2-Dichloroethane (1,2-DCA) (µg/L)        | 5                           | ND (0.5)         | ND (0.5)          | ND (2.0)            | 0.35                 | ND (4.0)            | ND (2.0)             |
|                          | 1,1-Dichloroethylene (1,1-DCE) (µg/L)      | 3.2                         | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | Methylene Chloride (µg/L)                  | 4.6                         | ND (0.5)         | ND (0.5)          | ND (5.0)            | ND (5.0)             | ND (10)             | ND (5.0)             |
|                          | 1,1,1-Trichloroethane (1,1,1-TCA) (µg/L)   | 200                         | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | 1,1,1,2-Trichloroethane (1,1,2-TCA) (µg/L) | 5                           | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | Tetrachloroethylene (PCE) (µg/L)           | 5                           | ND (0.5)         | 1.4               | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
| Non-Halogenated SVOCs    | Trichloroethylene (TCE) (µg/L)             | 5                           | ND (0.5)         | ND (0.5)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | cis-1,2-Dichloroethylene (DCE) (µg/L)      | 70                          | ND (0.5)         | ND (0.5)          | ND (1.0)            | ND (1.0)             | ND (2.0)            | ND (1.0)             |
|                          | Vinyl Chloride (µg/L)                      | 2                           | ND (0.2)         | ND (0.2)          | ND (2.0)            | ND (2.0)             | ND (4.0)            | ND (2.0)             |
|                          | Ethylene Dibromide (EDB) (µg/L)            | 0.05                        | ND (0.015)       | ND (0.015)        | ND(0.0100)          | ND(0.0100)           | ND (0.020)          | ND (0.020)           |
|                          | Diethylhexyl Phthalate (DEHP) (µg/L)       | 101                         | 9.48             | 8.31              | ND (5.3)            | ND (5.3)             | 0.28                | 0.24                 |
|                          | Benzyl Butyl Phthalate (µg/L)              | NE                          | ND (2.34)        | ND (2.34)         | ND (11)             | ND (11)              | ND (10)             | ND (10)              |
|                          | Di-n-butyl phthalate (µg/L)                | NE                          | ND (2.34)        | ND (2.34)         | ND (11)             | ND (11)              | ND (10)             | ND (10)              |
|                          | Diethyl Phthalate (µg/L)                   | NE                          | ND (2.34)        | ND (2.34)         | ND (11)             | ND (11)              | ND (10)             | ND (10)              |
|                          | Dimethyl Phthalate (µg/L)                  | NE                          | ND(2.34)         | ND(2.34)          | ND (11)             | ND (11)              | ND (10)             | ND (10)              |
|                          | Di-n-octyl Phthalate (µg/L)                | NE                          | ND (2.34)        | ND (2.34)         | ND (11)             | ND (11)              | ND (10)             | ND (10)              |
|                          | Total Phthalates (µg/L)                    | 190                         | 9.48             | 8.31              | ND                  | ND                   | ND                  | ND                   |
|                          | Benzo(a)anthracene (µg/L)                  | 0.0038/0.1 <sup>(1)</sup>   | 0.25             | 0.10              | ND (0.053)          | ND (0.053)           | 0.052               | ND (0.050)           |
|                          | Benzo(a)pyrene (µg/L)                      | 0.0038/0.1 <sup>(1)</sup>   | 0.26             | 0.09              | ND (0.11)           | ND (0.11)            | ND (0.10)           | ND (0.10)            |
|                          | Benzo(b)fluoranthene (µg/L)                | 0.0038/0.1 <sup>(1)</sup>   | 0.33             | 0.11              | ND (0.053)          | ND (0.053)           | ND (0.050)          | ND (0.050)           |
|                          | Benzo(k)fluoranthene (µg/L)                | 0.0038/0.1 <sup>(1)</sup>   | 0.12             | ND (0.05)         | ND (0.21)           | ND (0.21)            | ND (0.20)           | ND (0.20)            |
|                          | Chrysene (µg/L)                            | 0.0038/0.1 <sup>(1)</sup>   | 0.24             | 0.12              | ND (0.21)           | ND (0.21)            | ND (0.20)           | ND (0.20)            |
|                          | Dibenzo(a,h)anthracene (µg/L)              | 1                           | ND (0.05)        | ND (0.05)         | ND (0.21)           | ND (0.21)            | ND (0.20)           | ND (0.20)            |
|                          | Indeno(1,2,3-cd)pyrene (µg/L)              | 0.0038/0.1 <sup>(1)</sup>   | 0.18             | 0.06              | ND (0.21)           | ND (0.21)            | ND (0.20)           | ND (0.20)            |
|                          | Total Group I PAHs (µg/L)                  | 1                           | 1.38             | 0.48              | ND                  | ND                   | 0.052               | ND                   |
|                          | Acenaphthene (µg/L)                        | NE                          | 0.35             | 0.26              | ND (5.3)            | ND (5.3)             | 14                  | 12                   |
|                          | Acenaphthylene (µg/L)                      | NE                          | ND (0.19)        | ND (0.19)         | ND (5.3)            | ND (5.3)             | ND (5.0)            | ND (5.0)             |
|                          | Anthracene (µg/L)                          | NE                          | ND (0.19)        | ND (0.19)         | ND (5.3)            | ND (5.3)             | ND (5.0)            | ND (5.0)             |
|                          | Benzo(g,h,i)perylene (µg/L)                | NE                          | 0.19             | ND (0.19)         | ND (5.3)            | ND (5.3)             | ND (5.0)            | ND (5.0)             |
|                          | Fluoranthene (µg/L)                        | NE                          | 0.41             | 0.31              | ND (5.3)            | ND (5.3)             | ND (5.0)            | ND (5.0)             |
|                          | Fluorene (µg/L)                            | NE                          | 0.19             | ND (0.19)         | ND (5.3)            | ND (5.3)             | 6.0                 | ND (5.0)             |
|                          | Phenanthrene (µg/L)                        | NE                          | ND (0.19)        | 0.48              | ND (5.3)            | ND (5.3)             | 5.6                 | ND (5.0)             |
|                          | Pyrene (µg/L)                              | NE                          | ND (0.19)        | 0.39              | ND (5.3)            | ND (5.3)             | ND (5.0)            | ND (5.0)             |
|                          | Total Group II PAHs                        | 100                         | 1.14             | 1.81              | ND                  | ND                   | 25.6                | 12                   |
|                          | Napthalene (µg/L)                          | 20                          | ND (0.19)        | 0.37              | ND (5.3)            | ND (5.3)             | 8.7                 | 6.2                  |
| Halogenated SVOCs        | 1016 (µg/L)                                | NE                          | ND (0.09)        | ND (0.09)         | ND (0.10)           | ND (0.10)            | ND (0.10)           | ND (0.10)            |
|                          | 1221 (µg/L)                                | NE                          | ND (0.09)        | ND (0.09)         | ND (0.10)           | ND (0.10)            | ND (0.10)           | ND (0.10)            |
|                          | 1232 (µg/L)                                | NE                          | ND (0.09)        | ND (0.09)         | ND (0.10)           | ND (0.10)            | ND (0.10)           | ND (0.10)            |
|                          | 1242 (µg/L)                                | NE                          | ND (0.09)        | ND (0.09)         | ND (0.10)           | ND (0.10)            | ND (0.10)           | ND (0.10)            |
|                          | 1248 (µg/L)                                | NE                          | ND (0.09)        | ND (0.09)         | ND (0.10)           | ND (0.10)            | ND (0.10)           | ND (0.10)            |
|                          | 1254 (µg/L)                                | NE                          | ND (0.09)        | ND (0.09)         | ND (0.10)           | ND (0.10)            | ND (0.10)           | ND (0.10)            |
|                          | 1260 (µg/L)                                | NE                          | ND (0.09)        | 0.10              | ND (0.10)           | ND (0.10)            | ND (0.10)           | ND (0.10)            |
| Fuel Parameters          | Total PCBs                                 | 0.000064/0.5 <sup>(1)</sup> | ND               | 0.10              | ND                  | ND                   | ND                  | ND                   |
|                          | Pentachlorophenol (PCP) (µg/L)             | 1                           | ND (0.84)        | ND (0.84)         | ND (1.1)            | ND (1.1)             | ND (1.0)            | ND (1.0)             |
|                          | Total Petroleum Hydrocarbons (TPH) (mg/L)  | 5                           | ND (5,000)       | ND (5,000)        | ND (1.4)            | ND (1.5)             | ND (1.4)            | ND (1.4)             |
|                          | Ethanol (EtOH) (mg/L)                      | Report                      | ND (10)          | ND (10)           | ND (2000)           | ND (2000)            | ND (2000)           | ND (2000)            |
|                          | Methyl tert-Butyl Ether (MtBE) (µg/L)      | 70                          | ND (0.5)         | ND (0.5)          | ND (2.0)            | 0.15                 | 1.0                 | 0.94                 |
|                          | tert-Amyl Methyl Ether (tAME) (µg/L)       | 90                          | ND (1.0)         | ND (1.0)          | ND (1.0)            | ND (1.0)             | ND (1.0)            | ND (0.50)            |
|                          | tert-Butyl Alcohol (tBA) (µg/L)            | 120                         | ND (25)          | ND (25)           | ND (20)             | 10                   | ND (40)             | ND (20)              |

**Notes:**

1: The second standard is the compliance level

VOCs= Volatile Organic Compounds

SVOCs= Semi-Volatile Organic Compounds

TPH= Total Petroleum Hydrocarbons

PCBs= Polychlorinated Biphenyls

mg/L= milligrams per Liter

ug/L= micrograms per Liter

<xx = not detected above the indicated laboratory method detection limit

c/s= compound specific

NE= Not Established

NA= Not Analyzed

ND= Not Detected

\*. Effluent Limits Calculated Using the EPA's Dilution Factor and Effluent Limitation Calculations for Massachusetts from (Appendix V)

Red Text- Exceeds RGP Effluent Limit

TABLE 2

## Surface Water Analytical Results

Eversource Mystic- East Eagle

| Sample ID<br>Sample Date   | Effluent<br>Limitation | Island End at Mystic River<br>12/1/2017 | Mystic at Boston Inner<br>11/15/2017 |
|----------------------------|------------------------|-----------------------------------------|--------------------------------------|
| Antimony (µg/L)            | 206                    | ND (5.0)                                | NT                                   |
| Arsenic (µg/L)             | 104                    | 43                                      | ND(5)                                |
| Cadmium (µg/L)             | 10.2                   | ND (1.0)                                | ND(10)                               |
| Chromium III (µg/L)        | 323                    | ND (50)                                 | ND(20)                               |
| Hexavalent Chromium (mg/L) | 323                    | ND (0.0040)                             | ND(10)                               |
| Copper (µg/L)              | <b>3.7</b>             | <b>93</b>                               | ND(10)                               |
| Iron (mg/L)                | 5,000                  | 0.12                                    | ND(100)                              |
| Lead (µg/L)                | 160                    | ND (5.0)                                | ND(2)                                |
| Mercury (mg/L)             | 0.739                  | ND (0.00010)                            | NT                                   |
| Nickel (µg/L)              | 8.3                    | ND (25)                                 | ND(20)                               |
| Selenium (µg/L)            | 235.8                  | 140                                     | NT                                   |
| Silver (µg/L)              | 35.1                   | ND (1.0)                                | NT                                   |
| Zinc (µg/L)                | 86                     | ND (100)                                | ND(50)                               |
| Ammonia (mg/L)             | <b>Report</b>          | <b>0.108</b>                            | <b>0.43</b>                          |
| Salinity (ppt)             | NE                     | 26.1                                    | 14.9                                 |
| pH                         | NE                     | 7.81                                    | 7.75                                 |
| Temperature °C             | NE                     | 7.30                                    | 19.9                                 |

ug/L = micrograms per liter

mg/L = milligram per liter

ND = not detected

NT= not tested

NE = not established

*Effluent limitations calculated in accordance with Appendix V of the RGP***Red Bolded text exceeds effluent limitation**

**Enter number values in green boxes below**

Enter values in the units specified

|       |                                                     |
|-------|-----------------------------------------------------|
| ↓     |                                                     |
| 0     | Q <sub>R</sub> = Enter upstream flow in <b>MGD</b>  |
| 0.504 | Q <sub>p</sub> = Enter discharge flow in <b>MGD</b> |
| 0     | Downstream 7Q10                                     |

Enter a dilution factor, if other than zero

|   |  |
|---|--|
| ↓ |  |
| 0 |  |

Enter values in the units specified

|   |                                                                                 |
|---|---------------------------------------------------------------------------------|
| ↓ |                                                                                 |
|   | C <sub>d</sub> = Enter influent hardness in <b>mg/L CaCO<sub>3</sub></b>        |
|   | C <sub>s</sub> = Enter receiving water hardness in <b>mg/L CaCO<sub>3</sub></b> |

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

|      |                                          |
|------|------------------------------------------|
| ↓    |                                          |
| 7.81 | pH in <b>Standard Units</b>              |
| 7.3  | Temperature in <b>°C</b>                 |
| 0.43 | Ammonia in <b>mg/L</b>                   |
| 0    | Hardness in <b>mg/L CaCO<sub>3</sub></b> |
| 26.1 | Salinity in <b>ppt</b>                   |
| 0    | Antimony in <b>µg/L</b>                  |
| 43   | Arsenic in <b>µg/L</b>                   |
| 0    | Cadmium in <b>µg/L</b>                   |
| 0    | Chromium III in <b>µg/L</b>              |
| 0    | Chromium VI in <b>µg/L</b>               |
| 93   | Copper in <b>µg/L</b>                    |
| 0.12 | Iron in <b>µg/L</b>                      |
| 0    | Lead in <b>µg/L</b>                      |
| 0    | Mercury in <b>µg/L</b>                   |
| 0    | Nickel in <b>µg/L</b>                    |
| 140  | Selenium in <b>µg/L</b>                  |
| 0    | Silver in <b>µg/L</b>                    |
| 0    | Zinc in <b>µg/L</b>                      |

Enter **influent** concentrations in the units specified

|       |                                        |
|-------|----------------------------------------|
| ↓     |                                        |
| 0.86  | TRC in <b>µg/L</b>                     |
| 15.7  | Ammonia in <b>mg/L</b>                 |
| 0     | Antimony in <b>µg/L</b>                |
| 19    | Arsenic in <b>µg/L</b>                 |
| 0.99  | Cadmium in <b>µg/L</b>                 |
| 16.7  | Chromium III in <b>µg/L</b>            |
| 0     | Chromium VI in <b>µg/L</b>             |
| 62.8  | Copper in <b>µg/L</b>                  |
| 9.26  | Iron in <b>µg/L</b>                    |
| 7.6   | Lead in <b>µg/L</b>                    |
| 0     | Mercury in <b>µg/L</b>                 |
| 23.2  | Nickel in <b>µg/L</b>                  |
| 11    | Selenium in <b>µg/L</b>                |
| 0     | Silver in <b>µg/L</b>                  |
| 771   | Zinc in <b>µg/L</b>                    |
| 0.02  | Cyanide in <b>µg/L</b>                 |
| 0.12  | Phenol in <b>µg/L</b>                  |
| 0     | Carbon Tetrachloride in <b>µg/L</b>    |
| 1.4   | Tetrachloroethylene in <b>µg/L</b>     |
| 0     | Total Phthalates in <b>µg/L</b>        |
| 0.28  | Diethylhexylphthalate in <b>µg/L</b>   |
| 0.025 | Benzo(a)anthracene in <b>µg/L</b>      |
| 0.26  | Benzo(a)pyrene in <b>µg/L</b>          |
| 0.33  | Benzo(b)fluoranthene in <b>µg/L</b>    |
| 0.12  | Benzo(k)fluoranthene in <b>µg/L</b>    |
| 0.24  | Chrysene in <b>µg/L</b>                |
| 0     | Dibenzo(a,h)anthracene in <b>µg/L</b>  |
| 0.18  | Indeno(1,2,3-cd)pyrene in <b>µg/L</b>  |
| 1     | Methyl-tert butyl ether in <b>µg/L</b> |

**Notes:**

Freshwater: Q<sub>R</sub> equal to the 7Q10; enter alternate Q<sub>R</sub> if approved by the State; enter 0 if no dilution factor approved

Saltwater (estuarine and marine): enter Q<sub>R</sub> if approved by the State; enter 0 if no entry

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

Only if approved by State as the entry for Q<sub>R</sub>; leave 0 if no entry

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

Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges

Hardness required for freshwater

Salinity required for saltwater (estuarine and marine)

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

Enter 0 if non-detect or testing not required

if >1 sample, enter maximum

if >10 samples, may enter 95th percentile

Enter 0 if non-detect or testing not required

## **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:

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

### **B. Calculate QBEL:**

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

$$C_d = \frac{Q_r C_r - Q_u C_u}{Q_d}$$

$C_r$  = Water quality criterion in  $\mu\text{g/L}$

$Q_d$  = Discharge flow in MGD

$C_d$  = QBEL in  $\mu\text{g/L}$

$Q_u$  = Upstream flow (7Q10) in MGD

$C_u$  = Ustream (receiving water) concentration in  $\mu\text{g/L}$

$Q_r$  = Downstream receiving water flow in MGD

Step 2. QBEL 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  $\mu\text{g/L}$

$Q_d$  = Discharge flow in MGD

$Q_r$  = Downstream receiving water flow in MGD

### **C. Determine if a QBEL applies:**

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

$$C_r = \frac{Q_d C_d + Q_u C_u}{Q_r}$$

$C_r$  = Downstream concentration in  $\mu\text{g/L}$

$Q_d$  = Discharge flow in MGD

$C_d$  = Influent concentration in  $\mu\text{g/L}$

$Q_u$  = Upstream flow (7Q10) in MGD

$C_u$  = Upstream (receiving water) concentration in  $\mu\text{g/L}$

$Q_r$  = Downstream receiving water flow in MGD

The QBEL 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 QBEL 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 QBEL applies if:

- 1) the discharge concentration of a parameter is greater than the QBEL determined for that parameter in accordance with II.A or II.B, above;  
**AND**
- 2) the QBEL 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                                 | 0.0                    |      |                         |      |                                   |      |
|-------------------------------------------------|------------------------|------|-------------------------|------|-----------------------------------|------|
| A. Inorganics                                   | TBEL applies if bolded |      | WQBEL applies if bolded |      | Compliance Level applies if shown |      |
| Ammonia                                         | <b>Report</b>          | mg/L | ---                     |      |                                   |      |
| Chloride                                        | <b>Report</b>          | µg/L | ---                     |      |                                   |      |
| Total Residual Chlorine                         | 0.2                    | mg/L | <b>7.5</b>              | µg/L | 50                                | µg/L |
| Total Suspended Solids                          | <b>30</b>              | mg/L | ---                     |      |                                   |      |
| Antimony                                        | <b>206</b>             | µg/L | 640                     | µg/L |                                   |      |
| Arsenic                                         | <b>104</b>             | µg/L | 36                      | µg/L |                                   |      |
| Cadmium                                         | <b>10.2</b>            | µg/L | 8.9                     | µg/L |                                   |      |
| Chromium III                                    | <b>323</b>             | µg/L | 100.0                   | µg/L |                                   |      |
| Chromium VI                                     | <b>323</b>             | µg/L | 50                      | µg/L |                                   |      |
| Copper                                          | 242                    | µg/L | <b>3.7</b>              | µg/L |                                   |      |
| Iron                                            | <b>5000</b>            | µg/L | ---                     | µg/L |                                   |      |
| Lead                                            | <b>160</b>             | µg/L | 8.5                     | µg/L |                                   |      |
| Mercury                                         | <b>0.739</b>           | µg/L | 1.11                    | µg/L |                                   |      |
| Nickel                                          | 1450                   | µg/L | <b>8.3</b>              | µg/L |                                   |      |
| Selenium                                        | <b>235.8</b>           | µg/L | 71                      | µg/L |                                   |      |
| Silver                                          | <b>35.1</b>            | µg/L | 2.2                     | µg/L |                                   |      |
| Zinc                                            | 420                    | µg/L | <b>86</b>               | µg/L |                                   |      |
| Cyanide                                         | <b>178</b>             | mg/L | 1.0                     | µg/L | ---                               | µg/L |
| <b>B. Non-Halogenated VOCs</b>                  |                        |      |                         |      |                                   |      |
| Total BTEX                                      | <b>100</b>             | µg/L | ---                     |      |                                   |      |
| Benzene                                         | <b>5.0</b>             | µg/L | ---                     |      |                                   |      |
| 1,4 Dioxane                                     | <b>200</b>             | µg/L | ---                     |      |                                   |      |
| Acetone                                         | <b>7.97</b>            | mg/L | ---                     |      |                                   |      |
| Phenol                                          | <b>1,080</b>           | µg/L | 300                     | µg/L |                                   |      |
| <b>C. Halogenated VOCs</b>                      |                        |      |                         |      |                                   |      |
| Carbon Tetrachloride                            | <b>4.4</b>             |      | 1.6                     | µg/L |                                   |      |
| 1,2 Dichlorobenzene                             | <b>600</b>             | µg/L | ---                     |      |                                   |      |
| 1,3 Dichlorobenzene                             | <b>320</b>             | µg/L | ---                     |      |                                   |      |
| 1,4 Dichlorobenzene                             | <b>5.0</b>             | µg/L | ---                     |      |                                   |      |
| Total dichlorobenzene                           | ---                    | µg/L | ---                     |      |                                   |      |
| 1,1 Dichloroethane                              | <b>70</b>              | µg/L | ---                     |      |                                   |      |
| 1,2 Dichloroethane                              | <b>5.0</b>             | µg/L | ---                     |      |                                   |      |
| 1,1 Dichloroethylene                            | <b>3.2</b>             | µg/L | ---                     |      |                                   |      |
| Ethylene Dibromide                              | <b>0.05</b>            | µg/L | ---                     |      |                                   |      |
| Methylene Chloride                              | <b>4.6</b>             | µg/L | ---                     |      |                                   |      |
| 1,1,1 Trichloroethane                           | <b>200</b>             | µg/L | ---                     |      |                                   |      |
| 1,1,2 Trichloroethane                           | <b>5.0</b>             | µg/L | ---                     |      |                                   |      |
| Trichloroethylene                               | <b>5.0</b>             | µg/L | ---                     |      |                                   |      |
| Tetrachloroethylene                             | <b>5.0</b>             | µg/L | 3.3                     | µg/L |                                   |      |
| cis-1,2 Dichloroethylene                        | <b>70</b>              | µg/L | ---                     |      |                                   |      |
| Vinyl Chloride                                  | <b>2.0</b>             | µg/L | ---                     |      |                                   |      |
| <b>D. Non-Halogenated SVOCs</b>                 |                        |      |                         |      |                                   |      |
| Total Phthalates                                | <b>190</b>             | µg/L | ---                     | µg/L |                                   |      |
| Diethylhexyl phthalate                          | <b>101</b>             | µg/L | 2.2                     | µg/L |                                   |      |
| Total Group I Polycyclic Aromatic Hydrocarbons  | <b>1.0</b>             | µg/L | ---                     |      |                                   |      |
| Benzo(a)anthracene                              | 1.0                    | µg/L | <b>0.0038</b>           | µg/L | 0.1                               | µg/L |
| Benzo(a)pyrene                                  | 1.0                    | µg/L | <b>0.0038</b>           | µg/L | 0.1                               | µg/L |
| Benzo(b)fluoranthene                            | 1.0                    | µg/L | <b>0.0038</b>           | µg/L | 0.1                               | µg/L |
| Benzo(k)fluoranthene                            | 1.0                    | µg/L | <b>0.0038</b>           | µg/L | 0.1                               | µg/L |
| Chrysene                                        | 1.0                    | µg/L | <b>0.0038</b>           | µg/L | 0.1                               | µg/L |
| Dibenzo(a,h)anthracene                          | <b>1.0</b>             | µg/L | 0.0038                  | µg/L | ---                               | µg/L |
| Indeno(1,2,3-cd)pyrene                          | 1.0                    | µg/L | <b>0.0038</b>           | µg/L | 0.1                               | µg/L |
| Total Group II Polycyclic Aromatic Hydrocarbons | <b>100</b>             | µg/L | ---                     |      |                                   |      |
| Naphthalene                                     | <b>20</b>              | µg/L | ---                     |      |                                   |      |
| <b>E. Halogenated SVOCs</b>                     |                        |      |                         |      |                                   |      |
| Total Polychlorinated Biphenyls                 | <b>0.000064</b>        | µg/L | ---                     |      | 0.5                               | µg/L |
| Pentachlorophenol                               | <b>1.0</b>             | µg/L | ---                     |      |                                   |      |
| <b>F. Fuels Parameters</b>                      |                        |      |                         |      |                                   |      |
| Total Petroleum Hydrocarbons                    | <b>5.0</b>             | mg/L | ---                     |      |                                   |      |
| Ethanol                                         | <b>Report</b>          | mg/L | ---                     |      |                                   |      |
| Methyl-tert-Butyl Ether                         | <b>70</b>              | µg/L | 20                      | µg/L |                                   |      |
| tert-Butyl Alcohol                              | <b>120</b>             | µg/L | ---                     |      |                                   |      |
| tert-Amyl Methyl Ether                          | <b>90</b>              | µg/L | ---                     |      |                                   |      |





*CERTIFICATE OF ANALYSIS*

Michael Martin  
Tighe & Bond  
4 Barlows Landing Road, Unit 15  
Pocasset, MA 02559

**RE: Station 250/Mystic Charlestown Eversource RGP (N/A)**  
**ESS Laboratory Work Order Number: 1707259**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard  
Laboratory Director

**REVIEWED**

**By ESS Laboratory at 3:36 pm, Jul 20, 2017**

**Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**SAMPLE RECEIPT**

The following samples were received on July 13, 2017 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the 2017 Remediation General Permit under the National Pollutant Discharge Elimination System (NPDES).

ESS Laboratory is unable to achieve the required detection limit of 0.4 mg/L for Ethanol for the RGP permit. We have also been unable to procure a subcontract laboatroy that is able to achieve this limit. The data for Ethanol has been reported using our current method reporting limit.

| Lab Number | Sample Name | Matrix       | Analysis                                                                                                                                       |
|------------|-------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1707259-01 | B-3         | Ground Water | 1664A, 200.7, 245.1, 2540D, 300.0, 3113B, 350.1, 3500Cr B-2009, 420.1, 4500 CN CE, 4500Cl D, 504.1, 524.2, 608, 625 SIM, 8270D SIM, ASTM D3695 |
| 1707259-02 | B-17        | Ground Water | 1664A, 200.7, 245.1, 2540D, 300.0, 3113B, 350.1, 3500Cr B-2009, 420.1, 4500 CN CE, 4500Cl D, 504.1, 524.2, 608, 625 SIM, 8270D SIM, ASTM D3695 |

*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**PROJECT NARRATIVE**

**524.2 Volatile Organic Compounds**

1707259-01 Due to high sediment content vials were composited  
 1707259-02 Due to high sediment content vials were composited  
 C7G0199-CCV1 Continuing Calibration %Diff/Drift is above control limit (CD+).  
 1,1-Dichloroethene (86% @ 30%), Tertiary-butyl Alcohol (63% @ 30%)  
 CG71431-BSD1 Blank Spike recovery is above upper control limit (B+).  
 1,1-Dichloroethene (201% @ 70-130%), Tertiary-butyl Alcohol (163% @ 70-130%)  
 CG71431-BSD1 Relative percent difference for duplicate is outside of criteria (D+).  
 1,1-Dichloroethene (59% @ 20%), Tertiary-butyl Alcohol (33% @ 25%)

**625(SIM) Semi-Volatile Organic Compounds**

1707259-01 Present in Method Blank (B).  
 bis(2-Ethylhexyl)phthalate  
 1707259-01 Surrogate recovery(ies) below lower control limit (S-).  
 1,2-Dichlorobenzene-d4 (29% @ 30-130%)  
 1707259-02 Present in Method Blank (B).  
 bis(2-Ethylhexyl)phthalate  
 C7G0249-CCV1 Continuing Calibration %Diff/Drift is above control limit (CD+).  
 Di-n-octylphthalate (24% @ 20%)  
 CG71808-BS2 Blank Spike recovery is above upper control limit (B+).  
 Benzo(k)fluoranthene (142% @ 40-140%), bis(2-Ethylhexyl)phthalate (268% @ 40-140%),  
 Di-n-octylphthalate (151% @ 40-140%), Pyrene (144% @ 40-140%)  
 CG71808-BSD2 Blank Spike recovery is above upper control limit (B+).  
 Benzo(a)pyrene (150% @ 40-140%), Benzo(b)fluoranthene (148% @ 40-140%), Benzo(k)fluoranthene  
 (154% @ 40-140%), bis(2-Ethylhexyl)phthalate (244% @ 40-140%), Butylbenzylphthalate (142% @  
 40-140%), Di-n-butylphthalate (153% @ 40-140%), Di-n-octylphthalate (159% @ 40-140%), Pyrene  
 (146% @ 40-140%)

**8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution**

C7G0195-TUN1 DDT breakdown > 20%

**Classical Chemistry**

1707259-01 The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.  
 1707259-02 The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.

No other observations noted.

End of Project Narrative.



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**DATA USABILITY LINKS**

*To ensure you are viewing the most current version of the documents below, please clear your internet cookies for [www.ESSLaboratory.com](http://www.ESSLaboratory.com). Consult your IT Support personnel for information on how to clear your internet cookies.*

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)

**CURRENT SW-846 METHODOLOGY VERSIONS**

**Analytical Methods**

1010A - Flashpoint  
6010C - ICP  
6020A - ICP MS  
7010 - Graphite Furnace  
7196A - Hexavalent Chromium  
7470A - Aqueous Mercury  
7471B - Solid Mercury  
8011 - EDB/DBCP/TCP  
8015C - GRO/DRO  
8081B - Pesticides  
8082A - PCB  
8100M - TPH  
8151A - Herbicides  
8260B - VOA  
8270D - SVOA  
8270D SIM - SVOA Low Level  
9014 - Cyanide  
9038 - Sulfate  
9040C - Aqueous pH  
9045D - Solid pH (Corrosivity)  
9050A - Specific Conductance  
9056A - Anions (IC)  
9060A - TOC  
9095B - Paint Filter  
MADEP 04-1.1 - EPH / VPH

**Prep Methods**

3005A - Aqueous ICP Digestion  
3020A - Aqueous Graphite Furnace / ICP MS Digestion  
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion  
3060A - Solid Hexavalent Chromium Digestion  
3510C - Separatory Funnel Extraction  
3520C - Liquid / Liquid Extraction  
3540C - Manual Soxhlet Extraction  
3541 - Automated Soxhlet Extraction  
3546 - Microwave Extraction  
3580A - Waste Dilution  
5030B - Aqueous Purge and Trap  
5030C - Aqueous Purge and Trap  
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.





*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-3  
Date Sampled: 07/13/17 11:40  
Percent Solids: N/A

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-01  
Sample Matrix: Ground Water  
Units: ug/L

Extraction Method: 3005A

**Total Metals**

| <u>Analyte</u> | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyst</u> | <u>Analyzed</u> | <u>I/V</u> | <u>F/V</u> | <u>Batch</u> |
|----------------|----------------------|------------|---------------|--------------|-----------|----------------|-----------------|------------|------------|--------------|
| Antimony       | ND (10.0)            |            | 200.7         |              | 1         | KJK            | 07/15/17 15:59  | 100        | 20         | CG71436      |
| Arsenic        | 3.5 (1.0)            |            | 3113B         |              | 1         | KJK            | 07/19/17 5:32   | 100        | 20         | CG71436      |
| Cadmium        | 0.99 (0.25)          |            | 3113B         |              | 5         | KJK            | 07/18/17 18:35  | 100        | 20         | CG71436      |
| Chromium       | 11.6 (4.0)           |            | 200.7         |              | 1         | KJK            | 07/15/17 15:59  | 100        | 20         | CG71436      |
| Chromium III   | 11.6 (10.0)          |            | 200.7         |              | 1         | JLK            | 07/15/17 15:59  | 1          | 1          | [CALC]       |
| Copper         | 62.8 (4.0)           |            | 200.7         |              | 1         | KJK            | 07/15/17 15:59  | 100        | 20         | CG71436      |
| Hardness       | 239000 (165)         |            | 200.7         |              | 1         | KJK            | 07/15/17 15:59  | 1          | 1          | [CALC]       |
| Iron           | 7430 (20.0)          |            | 200.7         |              | 1         | KJK            | 07/15/17 15:59  | 100        | 20         | CG71436      |
| Lead           | 7.6 (1.0)            |            | 3113B         |              | 1         | KJK            | 07/18/17 23:07  | 100        | 20         | CG71436      |
| Mercury        | ND (0.200)           |            | 245.1         |              | 1         | MJV            | 07/17/17 20:03  | 20         | 40         | CG71438      |
| Nickel         | 23.2 (10.0)          |            | 200.7         |              | 1         | KJK            | 07/15/17 15:59  | 100        | 20         | CG71436      |
| Selenium       | ND (2.0)             |            | 3113B         |              | 1         | KJK            | 07/19/17 8:20   | 100        | 20         | CG71436      |
| Silver         | ND (1.0)             |            | 200.7         |              | 1         | KJK            | 07/15/17 15:59  | 100        | 20         | CG71436      |
| Zinc           | 771 (10.0)           |            | 200.7         |              | 1         | KJK            | 07/15/17 15:59  | 100        | 20         | CG71436      |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-3  
Date Sampled: 07/13/17 11:40  
Percent Solids: N/A  
Initial Volume: 25  
Final Volume: 25  
Extraction Method: 524.2

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-01  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: GEM

**524.2 Volatile Organic Compounds**

| <u>Analyte</u>             | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|----------------------------|----------------------|------------|---------------|--------------|-----------|-----------------|-----------------|--------------|
| 1,1,1-Trichloroethane      | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| 1,1,2-Trichloroethane      | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| 1,1-Dichloroethane         | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| 1,1-Dichloroethene         | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| 1,2-Dichlorobenzene        | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| 1,2-Dichloroethane         | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| 1,3-Dichlorobenzene        | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| 1,4-Dichlorobenzene        | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| <b>Acetone</b>             | <b>18.1</b> (5.0)    |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Benzene                    | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Carbon Tetrachloride       | ND (0.3)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| cis-1,2-Dichloroethene     | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Ethylbenzene               | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Methyl tert-Butyl Ether    | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Methylene Chloride         | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| <b>Naphthalene</b>         | <b>0.6</b> (0.5)     |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Tertiary-amyl methyl ether | ND (1.0)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Tertiary-butyl Alcohol     | ND (25.0)            |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Tetrachloroethene          | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Toluene                    | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Trichloroethene            | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Vinyl Chloride             | ND (0.2)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Xylene O                   | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |
| Xylene P,M                 | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 12:53  | C7G0199         | CG71431      |

|                                   | <u>%Recovery</u> | <u>Qualifier</u> | <u>Limits</u> |
|-----------------------------------|------------------|------------------|---------------|
| Surrogate: 1,2-Dichlorobenzene-d4 | 111 %            |                  | 80-120        |
| Surrogate: 4-Bromofluorobenzene   | 104 %            |                  | 80-120        |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-3  
Date Sampled: 07/13/17 11:40  
Percent Solids: N/A  
Initial Volume: 1070  
Final Volume: 1  
Extraction Method: 3510C

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-01  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: SMR  
Prepared: 7/14/17 11:05

**608 Polychlorinated Biphenyls (PCB)**

| <u>Analyte</u> | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|----------------|----------------------|------------|---------------|--------------|-----------|-----------------|-----------------|--------------|
| Aroclor 1016   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |
| Aroclor 1221   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |
| Aroclor 1232   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |
| Aroclor 1242   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |
| Aroclor 1248   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |
| Aroclor 1254   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |
| Aroclor 1260   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |
| Aroclor 1262   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |
| Aroclor 1268   | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:07  |                 | CG71414      |

|                                      | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |
|--------------------------------------|------------------|------------------|---------------|
| Surrogate: Decachlorobiphenyl        | 43 %             |                  | 30-150        |
| Surrogate: Decachlorobiphenyl [2C]   | 47 %             |                  | 30-150        |
| Surrogate: Tetrachloro-m-xylene      | 66 %             |                  | 30-150        |
| Surrogate: Tetrachloro-m-xylene [2C] | 73 %             |                  | 30-150        |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-3  
Date Sampled: 07/13/17 11:40  
Percent Solids: N/A  
Initial Volume: 1070  
Final Volume: 0.25  
Extraction Method: 3510C

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-01  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: IBM  
Prepared: 7/18/17 13:45

**625(SIM) Semi-Volatile Organic Compounds**

| <u>Analyte</u>             | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|----------------------------|----------------------|------------|---------------|--------------|-----------|-----------------|-----------------|--------------|
| Acenaphthene               | 0.35 (0.19)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Acenaphthylene             | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Anthracene                 | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Benzo(a)anthracene         | 0.25 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Benzo(a)pyrene             | 0.26 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Benzo(b)fluoranthene       | 0.33 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Benzo(g,h,i)perylene       | 0.19 (0.19)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Benzo(k)fluoranthene       | 0.12 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| bis(2-Ethylhexyl)phthalate | B 9.48 (2.34)        |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Butylbenzylphthalate       | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Chrysene                   | 0.24 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Dibenzo(a,h)Anthracene     | ND (0.05)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Diethylphthalate           | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Dimethylphthalate          | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Di-n-butylphthalate        | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Di-n-octylphthalate        | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Fluoranthene               | 0.41 (0.19)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Fluorene                   | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Indeno(1,2,3-cd)Pyrene     | 0.18 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Naphthalene                | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Pentachlorophenol          | ND (0.84)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Phenanthrene               | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |
| Pyrene                     | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 19:41  | C7G0249         | CG71808      |

|                                   | <u>%Recovery</u> | <u>Qualifier</u> | <u>Limits</u> |
|-----------------------------------|------------------|------------------|---------------|
| Surrogate: 1,2-Dichlorobenzene-d4 | 29 %             | S-               | 30-130        |
| Surrogate: 2,4,6-Tribromophenol   | 76 %             |                  | 15-110        |
| Surrogate: 2-Fluorobiphenyl       | 45 %             |                  | 30-130        |
| Surrogate: Nitrobenzene-d5        | 47 %             |                  | 30-130        |
| Surrogate: p-Terphenyl-d14        | 59 %             |                  | 30-130        |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-3  
Date Sampled: 07/13/17 11:40  
Percent Solids: N/A  
Initial Volume: 500  
Final Volume: 0.5  
Extraction Method: 3535A

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-01  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: VSC  
Prepared: 7/14/17 16:30

**8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution**

| <u>Analyte</u> | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|----------------|----------------------|------------|---------------|--------------|-----------|-----------------|-----------------|--------------|
| 1,4-Dioxane    | 0.263 (0.250)        |            | 8270D SIM     |              | 1         | 07/17/17 16:45  | C7G0223         | CG71356      |

|                           | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |
|---------------------------|------------------|------------------|---------------|
| Surrogate: 1,4-Dioxane-d8 | 36 %             |                  | 15-115        |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-3  
Date Sampled: 07/13/17 11:40  
Percent Solids: N/A

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-01  
Sample Matrix: Ground Water

**Classical Chemistry**

| <u>Analyte</u>              | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyst</u> | <u>Analyzed</u> | <u>Units</u> | <u>Batch</u> |
|-----------------------------|----------------------|------------|---------------|--------------|-----------|----------------|-----------------|--------------|--------------|
| Ammonia as N                | 1.96 (0.10)          |            | 350.1         |              | 1         | EEM            | 07/18/17 14:46  | mg/L         | CG71705      |
| Chloride                    | 1040 (250)           |            | 300.0         |              | 500       | JLK            | 07/17/17 23:04  | mg/L         | CG71735      |
| Hexavalent Chromium         | ND (10.0)            |            | 3500Cr B-2009 |              | 1         | JLK            | 07/13/17 22:16  | ug/L         | CG71352      |
| Phenols                     | ND (100)             |            | 420.1         |              | 1         | EEM            | 07/19/17 14:45  | ug/L         | CG71920      |
| Total Cyanide (LL)          | ND (5.00)            |            | 4500 CN CE    |              | 1         | EEM            | 07/18/17 11:05  | ug/L         | CG71817      |
| Total Petroleum Hydrocarbon | ND (5)               |            | 1664A         |              | 1         | CRR            | 07/19/17 15:05  | mg/L         | CG71740      |
| Total Residual Chlorine     | ND (20.0)            |            | 4500Cl D      |              | 1         | JLK            | 07/13/17 21:46  | ug/L         | CG71353      |
| Total Suspended Solids      | 27600 (100)          |            | 2540D         |              | 1         | EEM            | 07/14/17 14:30  | mg/L         | CG71317      |





*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-3  
Date Sampled: 07/13/17 11:40  
Percent Solids: N/A  
Initial Volume: 35  
Final Volume: 2  
Extraction Method: 504/8011

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-01  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: IBM  
Prepared: 7/14/17 11:30

**504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane**

| <u>Analyte</u>                           | <u>Results (MRL)</u> | <u>MDL</u>       | <u>Method</u>    | <u>Limit</u>  | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|------------------------------------------|----------------------|------------------|------------------|---------------|-----------|-----------------|-----------------|--------------|
| 1,2-Dibromoethane                        | ND (0.015)           |                  | 504.1            |               | 1         | 07/14/17 15:08  |                 | CG71426      |
| <hr/>                                    |                      |                  |                  |               |           |                 |                 |              |
|                                          |                      | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |           |                 |                 |              |
| <i>Surrogate: Pentachloroethane</i>      |                      | 125 %            |                  | 30-150        |           |                 |                 |              |
| <i>Surrogate: Pentachloroethane [2C]</i> |                      | 116 %            |                  | 30-150        |           |                 |                 |              |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-3  
Date Sampled: 07/13/17 11:40  
Percent Solids: N/A  
Initial Volume: 1  
Final Volume: 1  
Extraction Method: No Prep

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-01  
Sample Matrix: Ground Water  
Units: mg/L  
Analyst: ZLC  
Prepared: 7/19/17 10:04

**Alcohol Scan by GC/FID**

| <u>Analyte</u> | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyst</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|----------------|----------------------|------------|---------------|--------------|-----------|----------------|-----------------|-----------------|--------------|
| Ethanol        | ND (10)              |            | ASTM D3695    |              | 1         | ZLC            | 07/19/17 11:58  |                 | CG71915      |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-17  
Date Sampled: 07/13/17 13:50  
Percent Solids: N/A

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-02  
Sample Matrix: Ground Water  
Units: ug/L

Extraction Method: 3005A

**Total Metals**

| <u>Analyte</u> | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyst</u> | <u>Analyzed</u> | <u>I/V</u> | <u>F/V</u> | <u>Batch</u> |
|----------------|----------------------|------------|---------------|--------------|-----------|----------------|-----------------|------------|------------|--------------|
| Antimony       | ND (10.0)            |            | 200.7         |              | 1         | KJK            | 07/15/17 16:04  | 100        | 20         | CG71436      |
| Arsenic        | 1.9 (1.0)            |            | 3113B         |              | 1         | KJK            | 07/19/17 5:43   | 100        | 20         | CG71436      |
| Cadmium        | 0.42 (0.15)          |            | 3113B         |              | 3         | KJK            | 07/18/17 17:26  | 100        | 20         | CG71436      |
| Chromium       | 16.7 (4.0)           |            | 200.7         |              | 1         | KJK            | 07/15/17 16:04  | 100        | 20         | CG71436      |
| Chromium III   | 16.7 (10.0)          |            | 200.7         |              | 1         | JLK            | 07/15/17 16:04  | 1          | 1          | [CALC]       |
| Copper         | 27.0 (4.0)           |            | 200.7         |              | 1         | KJK            | 07/15/17 16:04  | 100        | 20         | CG71436      |
| Hardness       | 259000 (165)         |            | 200.7         |              | 1         | KJK            | 07/15/17 16:04  | 1          | 1          | [CALC]       |
| Iron           | 9260 (20.0)          |            | 200.7         |              | 1         | KJK            | 07/15/17 16:04  | 100        | 20         | CG71436      |
| Lead           | 4.6 (1.0)            |            | 3113B         |              | 1         | KJK            | 07/19/17 0:44   | 100        | 20         | CG71436      |
| Mercury        | ND (0.200)           |            | 245.1         |              | 1         | MJV            | 07/17/17 20:05  | 20         | 40         | CG71438      |
| Nickel         | 11.1 (10.0)          |            | 200.7         |              | 1         | KJK            | 07/15/17 16:04  | 100        | 20         | CG71436      |
| Selenium       | ND (2.0)             |            | 3113B         |              | 1         | KJK            | 07/19/17 9:00   | 100        | 20         | CG71436      |
| Silver         | ND (1.0)             |            | 200.7         |              | 1         | KJK            | 07/15/17 16:04  | 100        | 20         | CG71436      |
| Zinc           | 174 (10.0)           |            | 200.7         |              | 1         | KJK            | 07/15/17 16:04  | 100        | 20         | CG71436      |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-17  
Date Sampled: 07/13/17 13:50  
Percent Solids: N/A  
Initial Volume: 25  
Final Volume: 25  
Extraction Method: 524.2

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-02  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: GEM

**524.2 Volatile Organic Compounds**

| <u>Analyte</u>             | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|----------------------------|----------------------|------------|---------------|--------------|-----------|-----------------|-----------------|--------------|
| 1,1,1-Trichloroethane      | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| 1,1,2-Trichloroethane      | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| 1,1-Dichloroethane         | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| 1,1-Dichloroethene         | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| 1,2-Dichlorobenzene        | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| 1,2-Dichloroethane         | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| 1,3-Dichlorobenzene        | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| 1,4-Dichlorobenzene        | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| <b>Acetone</b>             | <b>24.6</b> (5.0)    |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Benzene                    | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Carbon Tetrachloride       | ND (0.3)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| cis-1,2-Dichloroethene     | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Ethylbenzene               | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Methyl tert-Butyl Ether    | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Methylene Chloride         | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| <b>Naphthalene</b>         | <b>1.1</b> (0.5)     |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Tertiary-amyl methyl ether | ND (1.0)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Tertiary-butyl Alcohol     | ND (25.0)            |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| <b>Tetrachloroethene</b>   | <b>1.4</b> (0.5)     |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Toluene                    | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Trichloroethene            | ND (0.5)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| Vinyl Chloride             | ND (0.2)             |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| <b>Xylene O</b>            | <b>0.7</b> (0.5)     |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |
| <b>Xylene P,M</b>          | <b>1.3</b> (0.5)     |            | 524.2         |              | 1         | 07/14/17 13:27  | C7G0199         | CG71431      |

|                                          | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |
|------------------------------------------|------------------|------------------|---------------|
| <i>Surrogate: 1,2-Dichlorobenzene-d4</i> | 106 %            |                  | 80-120        |
| <i>Surrogate: 4-Bromofluorobenzene</i>   | 101 %            |                  | 80-120        |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-17  
Date Sampled: 07/13/17 13:50  
Percent Solids: N/A  
Initial Volume: 1070  
Final Volume: 1  
Extraction Method: 3510C

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-02  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: SMR  
Prepared: 7/14/17 11:05

**608 Polychlorinated Biphenyls (PCB)**

| <u>Analyte</u>      | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|---------------------|----------------------|------------|---------------|--------------|-----------|-----------------|-----------------|--------------|
| Aroclor 1016        | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |
| Aroclor 1221        | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |
| Aroclor 1232        | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |
| Aroclor 1242        | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |
| Aroclor 1248        | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |
| Aroclor 1254        | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |
| <b>Aroclor 1260</b> | <b>0.10</b> (0.09)   |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |
| Aroclor 1262        | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |
| Aroclor 1268        | ND (0.09)            |            | 608           |              | 1         | 07/14/17 19:25  |                 | CG71414      |

|                                      | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |
|--------------------------------------|------------------|------------------|---------------|
| Surrogate: Decachlorobiphenyl        | 51 %             |                  | 30-150        |
| Surrogate: Decachlorobiphenyl [2C]   | 54 %             |                  | 30-150        |
| Surrogate: Tetrachloro-m-xylene      | 85 %             |                  | 30-150        |
| Surrogate: Tetrachloro-m-xylene [2C] | 95 %             |                  | 30-150        |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-17  
Date Sampled: 07/13/17 13:50  
Percent Solids: N/A  
Initial Volume: 1070  
Final Volume: 0.25  
Extraction Method: 3510C

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-02  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: IBM  
Prepared: 7/18/17 13:45

**625(SIM) Semi-Volatile Organic Compounds**

| <u>Analyte</u>             | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|----------------------------|----------------------|------------|---------------|--------------|-----------|-----------------|-----------------|--------------|
| Acenaphthene               | 0.26 (0.19)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Acenaphthylene             | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Anthracene                 | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Benzo(a)anthracene         | 0.10 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Benzo(a)pyrene             | 0.09 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Benzo(b)fluoranthene       | 0.11 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Benzo(g,h,i)perylene       | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Benzo(k)fluoranthene       | ND (0.05)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| bis(2-Ethylhexyl)phthalate | B 8.31 (2.34)        |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Butylbenzylphthalate       | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Chrysene                   | 0.12 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Dibenzo(a,h)Anthracene     | ND (0.05)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Diethylphthalate           | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Dimethylphthalate          | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Di-n-butylphthalate        | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Di-n-octylphthalate        | ND (2.34)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Fluoranthene               | 0.31 (0.19)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Fluorene                   | ND (0.19)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Indeno(1,2,3-cd)Pyrene     | 0.06 (0.05)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Naphthalene                | 0.37 (0.19)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Pentachlorophenol          | ND (0.84)            |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Phenanthrene               | 0.48 (0.19)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |
| Pyrene                     | 0.39 (0.19)          |            | 625 SIM       |              | 1         | 07/18/17 20:28  | C7G0249         | CG71808      |

|                                   | <u>%Recovery</u> | <u>Qualifier</u> | <u>Limits</u> |
|-----------------------------------|------------------|------------------|---------------|
| Surrogate: 1,2-Dichlorobenzene-d4 | 30 %             |                  | 30-130        |
| Surrogate: 2,4,6-Tribromophenol   | 61 %             |                  | 15-110        |
| Surrogate: 2-Fluorobiphenyl       | 46 %             |                  | 30-130        |
| Surrogate: Nitrobenzene-d5        | 51 %             |                  | 30-130        |
| Surrogate: p-Terphenyl-d14        | 58 %             |                  | 30-130        |





*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-17  
Date Sampled: 07/13/17 13:50  
Percent Solids: N/A  
Initial Volume: 500  
Final Volume: 0.5  
Extraction Method: 3535A

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-02  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: VSC  
Prepared: 7/14/17 16:30

**8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution**

| <u>Analyte</u>            | <u>Results (MRL)</u> | <u>MDL</u>       | <u>Method</u>    | <u>Limit</u>  | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|---------------------------|----------------------|------------------|------------------|---------------|-----------|-----------------|-----------------|--------------|
| 1,4-Dioxane               | 0.950 (0.250)        |                  | 8270D SIM        |               | 1         | 07/17/17 17:17  | C7G0223         | CG71356      |
| <hr/>                     |                      |                  |                  |               |           |                 |                 |              |
|                           |                      | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |           |                 |                 |              |
| Surrogate: 1,4-Dioxane-d8 |                      | 36 %             |                  | 15-115        |           |                 |                 |              |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-17  
Date Sampled: 07/13/17 13:50  
Percent Solids: N/A

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-02  
Sample Matrix: Ground Water

**Classical Chemistry**

| <u>Analyte</u>              | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyst</u> | <u>Analyzed</u> | <u>Units</u> | <u>Batch</u> |
|-----------------------------|----------------------|------------|---------------|--------------|-----------|----------------|-----------------|--------------|--------------|
| Ammonia as N                | 0.77 (0.10)          |            | 350.1         |              | 1         | EEM            | 07/18/17 14:47  | mg/L         | CG71705      |
| Chloride                    | 399 (50.0)           |            | 300.0         |              | 100       | JLK            | 07/17/17 20:38  | mg/L         | CG71735      |
| Hexavalent Chromium         | ND (10.0)            |            | 3500Cr B-2009 |              | 1         | JLK            | 07/13/17 22:16  | ug/L         | CG71352      |
| Phenols                     | ND (100)             |            | 420.1         |              | 1         | EEM            | 07/19/17 14:45  | ug/L         | CG71920      |
| Total Cyanide (LL)          | ND (5.00)            |            | 4500 CN CE    |              | 1         | EEM            | 07/18/17 11:05  | ug/L         | CG71817      |
| Total Petroleum Hydrocarbon | ND (5)               |            | 1664A         |              | 1         | CRR            | 07/19/17 15:05  | mg/L         | CG71740      |
| Total Residual Chlorine     | ND (20.0)            |            | 4500Cl D      |              | 1         | JLK            | 07/13/17 21:46  | ug/L         | CG71353      |
| Total Suspended Solids      | 474 (10)             |            | 2540D         |              | 1         | EEM            | 07/14/17 14:30  | mg/L         | CG71317      |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-17  
Date Sampled: 07/13/17 13:50  
Percent Solids: N/A  
Initial Volume: 35  
Final Volume: 2  
Extraction Method: 504/8011

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-02  
Sample Matrix: Ground Water  
Units: ug/L  
Analyst: IBM  
Prepared: 7/14/17 11:30

**504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane**

| <u>Analyte</u>                           | <u>Results (MRL)</u> | <u>MDL</u>       | <u>Method</u>    | <u>Limit</u>  | <u>DF</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|------------------------------------------|----------------------|------------------|------------------|---------------|-----------|-----------------|-----------------|--------------|
| 1,2-Dibromoethane                        | ND (0.015)           |                  | 504.1            |               | 1         | 07/14/17 16:08  |                 | CG71426      |
| <hr/>                                    |                      |                  |                  |               |           |                 |                 |              |
|                                          |                      | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |           |                 |                 |              |
| <i>Surrogate: Pentachloroethane</i>      |                      | 75 %             |                  | 30-150        |           |                 |                 |              |
| <i>Surrogate: Pentachloroethane [2C]</i> |                      | 72 %             |                  | 30-150        |           |                 |                 |              |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Station 250/Mystic Charlestown Eversource RGP  
Client Sample ID: B-17  
Date Sampled: 07/13/17 13:50  
Percent Solids: N/A  
Initial Volume: 1  
Final Volume: 1  
Extraction Method: No Prep

ESS Laboratory Work Order: 1707259  
ESS Laboratory Sample ID: 1707259-02  
Sample Matrix: Ground Water  
Units: mg/L  
Analyst: ZLC  
Prepared: 7/19/17 10:04

**Alcohol Scan by GC/FID**

| <u>Analyte</u> | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyst</u> | <u>Analyzed</u> | <u>Sequence</u> | <u>Batch</u> |
|----------------|----------------------|------------|---------------|--------------|-----------|----------------|-----------------|-----------------|--------------|
| Ethanol        | ND (10)              |            | ASTM D3695    |              | 1         | ZLC            | 07/19/17 12:44  |                 | CG71915      |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte                       | Result | MRL  | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|-------------------------------|--------|------|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
| Total Metals                  |        |      |       |             |               |      |             |     |           |           |
| <b>Batch CG71352 - [CALC]</b> |        |      |       |             |               |      |             |     |           |           |
| <b>Blank</b>                  |        |      |       |             |               |      |             |     |           |           |
| Chromium III                  | ND     | 10.0 | ug/L  |             |               |      |             |     |           |           |
| <b>LCS</b>                    |        |      |       |             |               |      |             |     |           |           |
| Chromium III                  | ND     |      | ug/L  |             |               |      |             |     |           |           |
| <b>LCS Dup</b>                |        |      |       |             |               |      |             |     |           |           |
| Chromium III                  | ND     |      | ug/L  |             |               |      |             |     |           |           |
| <b>Batch CG71436 - 3005A</b>  |        |      |       |             |               |      |             |     |           |           |
| <b>Blank</b>                  |        |      |       |             |               |      |             |     |           |           |
| Antimony                      | ND     | 10.0 | ug/L  |             |               |      |             |     |           |           |
| Arsenic                       | ND     | 1.0  | ug/L  |             |               |      |             |     |           |           |
| Cadmium                       | ND     | 0.05 | ug/L  |             |               |      |             |     |           |           |
| Chromium                      | ND     | 4.0  | ug/L  |             |               |      |             |     |           |           |
| Chromium III                  | ND     | 4.00 | ug/L  |             |               |      |             |     |           |           |
| Copper                        | ND     | 4.0  | ug/L  |             |               |      |             |     |           |           |
| Hardness                      | ND     | 165  | ug/L  |             |               |      |             |     |           |           |
| Iron                          | ND     | 20.0 | ug/L  |             |               |      |             |     |           |           |
| Lead                          | ND     | 1.0  | ug/L  |             |               |      |             |     |           |           |
| Nickel                        | ND     | 10.0 | ug/L  |             |               |      |             |     |           |           |
| Selenium                      | ND     | 2.0  | ug/L  |             |               |      |             |     |           |           |
| Silver                        | ND     | 1.0  | ug/L  |             |               |      |             |     |           |           |
| Zinc                          | ND     | 10.0 | ug/L  |             |               |      |             |     |           |           |
| <b>LCS</b>                    |        |      |       |             |               |      |             |     |           |           |
| Antimony                      | 99.1   | 10.0 | ug/L  | 100.0       |               | 99   | 85-115      |     |           |           |
| Arsenic                       | 98.8   | 25.0 | ug/L  | 100.0       |               | 99   | 85-115      |     |           |           |
| Cadmium                       | 49.8   | 25.0 | ug/L  | 50.00       |               | 100  | 85-115      |     |           |           |
| Chromium                      | 100    | 4.0  | ug/L  | 100.0       |               | 100  | 85-115      |     |           |           |
| Chromium III                  | 100    | 4.00 | ug/L  |             |               |      |             |     |           |           |
| Copper                        | 106    | 4.0  | ug/L  | 100.0       |               | 106  | 85-115      |     |           |           |
| Hardness                      | 6520   | 165  | ug/L  |             |               |      |             |     |           |           |
| Iron                          | 475    | 20.0 | ug/L  | 500.0       |               | 95   | 85-115      |     |           |           |
| Lead                          | 111    | 25.0 | ug/L  | 100.0       |               | 111  | 85-115      |     |           |           |
| Nickel                        | 102    | 10.0 | ug/L  | 100.0       |               | 102  | 85-115      |     |           |           |
| Selenium                      | 217    | 50.0 | ug/L  | 200.0       |               | 109  | 85-115      |     |           |           |
| Silver                        | 46.6   | 1.0  | ug/L  | 50.00       |               | 93   | 85-115      |     |           |           |
| Zinc                          | 103    | 10.0 | ug/L  | 100.0       |               | 103  | 85-115      |     |           |           |
| <b>LCS Dup</b>                |        |      |       |             |               |      |             |     |           |           |
| Antimony                      | 107    | 10.0 | ug/L  | 100.0       |               | 107  | 85-115      | 7   | 20        |           |
| Arsenic                       | 96.2   | 25.0 | ug/L  | 100.0       |               | 96   | 85-115      | 3   | 20        |           |
| Cadmium                       | 55.3   | 25.0 | ug/L  | 50.00       |               | 111  | 85-115      | 10  | 20        |           |
| Chromium                      | 108    | 4.0  | ug/L  | 100.0       |               | 108  | 85-115      | 7   | 20        |           |
| Chromium III                  | 108    | 4.00 | ug/L  |             |               |      |             |     |           |           |
| Copper                        | 114    | 4.0  | ug/L  | 100.0       |               | 114  | 85-115      | 7   | 20        |           |
| Hardness                      | 6960   | 165  | ug/L  |             |               |      |             |     |           |           |
| Iron                          | 513    | 20.0 | ug/L  | 500.0       |               | 103  | 85-115      | 8   | 20        |           |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

**Total Metals**

**Batch CG71436 - 3005A**

|          |      |      |      |       |  |     |        |   |    |  |
|----------|------|------|------|-------|--|-----|--------|---|----|--|
| Lead     | 107  | 25.0 | ug/L | 100.0 |  | 107 | 85-115 | 4 | 20 |  |
| Nickel   | 109  | 10.0 | ug/L | 100.0 |  | 109 | 85-115 | 7 | 20 |  |
| Selenium | 226  | 50.0 | ug/L | 200.0 |  | 113 | 85-115 | 4 | 20 |  |
| Silver   | 48.2 | 1.0  | ug/L | 50.00 |  | 96  | 85-115 | 3 | 20 |  |
| Zinc     | 105  | 10.0 | ug/L | 100.0 |  | 105 | 85-115 | 2 | 20 |  |

**Batch CG71438 - 245.1/7470A**

**Blank**

|         |    |       |      |  |  |  |  |  |  |  |
|---------|----|-------|------|--|--|--|--|--|--|--|
| Mercury | ND | 0.200 | ug/L |  |  |  |  |  |  |  |
|---------|----|-------|------|--|--|--|--|--|--|--|

**LCS**

|         |      |       |      |       |  |     |        |  |  |  |
|---------|------|-------|------|-------|--|-----|--------|--|--|--|
| Mercury | 6.42 | 0.200 | ug/L | 6.000 |  | 107 | 85-115 |  |  |  |
|---------|------|-------|------|-------|--|-----|--------|--|--|--|

**LCS Dup**

|         |      |       |      |       |  |     |        |   |    |  |
|---------|------|-------|------|-------|--|-----|--------|---|----|--|
| Mercury | 6.30 | 0.200 | ug/L | 6.000 |  | 105 | 85-115 | 2 | 20 |  |
|---------|------|-------|------|-------|--|-----|--------|---|----|--|

**524.2 Volatile Organic Compounds**

**Batch CG71431 - 524.2**

**Blank**

|                                   |      |      |      |       |  |     |        |  |  |  |
|-----------------------------------|------|------|------|-------|--|-----|--------|--|--|--|
| 1,1,1-Trichloroethane             | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| 1,1,2-Trichloroethane             | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| 1,1-Dichloroethane                | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| 1,1-Dichloroethene                | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| 1,2-Dichlorobenzene               | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| 1,2-Dichloroethane                | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| 1,3-Dichlorobenzene               | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| 1,4-Dichlorobenzene               | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Acetone                           | ND   | 5.0  | ug/L |       |  |     |        |  |  |  |
| Benzene                           | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Carbon Tetrachloride              | ND   | 0.3  | ug/L |       |  |     |        |  |  |  |
| cis-1,2-Dichloroethene            | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Ethylbenzene                      | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Methyl tert-Butyl Ether           | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Methylene Chloride                | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Naphthalene                       | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Tertiary-amyl methyl ether        | ND   | 1.0  | ug/L |       |  |     |        |  |  |  |
| Tertiary-butyl Alcohol            | ND   | 25.0 | ug/L |       |  |     |        |  |  |  |
| Tetrachloroethene                 | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Toluene                           | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Trichloroethene                   | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Vinyl Chloride                    | ND   | 0.2  | ug/L |       |  |     |        |  |  |  |
| Xylene O                          | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Xylene P,M                        | ND   | 0.5  | ug/L |       |  |     |        |  |  |  |
| Surrogate: 1,2-Dichlorobenzene-d4 | 5.10 |      | ug/L | 5.000 |  | 102 | 80-120 |  |  |  |
| Surrogate: 4-Bromofluorobenzene   | 5.02 |      | ug/L | 5.000 |  | 100 | 80-120 |  |  |  |

**LCS**

|                       |      |  |      |       |  |     |        |  |  |  |
|-----------------------|------|--|------|-------|--|-----|--------|--|--|--|
| 1,1,1-Trichloroethane | 10.6 |  | ug/L | 10.00 |  | 106 | 70-130 |  |  |  |
|-----------------------|------|--|------|-------|--|-----|--------|--|--|--|





*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

**524.2 Volatile Organic Compounds**

**Batch CG71431 - 524.2**

|                                   |      |  |      |       |  |     |        |  |  |  |
|-----------------------------------|------|--|------|-------|--|-----|--------|--|--|--|
| 1,1,2-Trichloroethane             | 10.2 |  | ug/L | 10.00 |  | 102 | 70-130 |  |  |  |
| 1,1-Dichloroethane                | 10.0 |  | ug/L | 10.00 |  | 100 | 70-130 |  |  |  |
| 1,1-Dichloroethene                | 11.0 |  | ug/L | 10.00 |  | 110 | 70-130 |  |  |  |
| 1,2-Dichlorobenzene               | 10.3 |  | ug/L | 10.00 |  | 103 | 70-130 |  |  |  |
| 1,2-Dichloroethane                | 10.4 |  | ug/L | 10.00 |  | 104 | 70-130 |  |  |  |
| 1,3-Dichlorobenzene               | 10.3 |  | ug/L | 10.00 |  | 103 | 70-130 |  |  |  |
| 1,4-Dichlorobenzene               | 10.5 |  | ug/L | 10.00 |  | 105 | 70-130 |  |  |  |
| Acetone                           | 48.1 |  | ug/L | 50.00 |  | 96  | 70-130 |  |  |  |
| Benzene                           | 10.3 |  | ug/L | 10.00 |  | 103 | 70-130 |  |  |  |
| Carbon Tetrachloride              | 10.9 |  | ug/L | 10.00 |  | 109 | 70-130 |  |  |  |
| cis-1,2-Dichloroethene            | 10.5 |  | ug/L | 10.00 |  | 105 | 70-130 |  |  |  |
| Ethylbenzene                      | 10.3 |  | ug/L | 10.00 |  | 103 | 70-130 |  |  |  |
| Methyl tert-Butyl Ether           | 10.3 |  | ug/L | 10.00 |  | 103 | 70-130 |  |  |  |
| Methylene Chloride                | 9.1  |  | ug/L | 10.00 |  | 91  | 70-130 |  |  |  |
| Naphthalene                       | 10.5 |  | ug/L | 10.00 |  | 105 | 70-130 |  |  |  |
| Tertiary-amyl methyl ether        | 9.9  |  | ug/L | 10.00 |  | 99  | 70-130 |  |  |  |
| Tertiary-butyl Alcohol            | 58.8 |  | ug/L | 50.00 |  | 118 | 70-130 |  |  |  |
| Tetrachloroethene                 | 10.6 |  | ug/L | 10.00 |  | 106 | 70-130 |  |  |  |
| Toluene                           | 10.5 |  | ug/L | 10.00 |  | 105 | 70-130 |  |  |  |
| Trichloroethene                   | 10.6 |  | ug/L | 10.00 |  | 106 | 70-130 |  |  |  |
| Vinyl Chloride                    | 10.3 |  | ug/L | 10.00 |  | 103 | 70-130 |  |  |  |
| Xylene O                          | 10.1 |  | ug/L | 10.00 |  | 101 | 70-130 |  |  |  |
| Xylene P,M                        | 20.4 |  | ug/L | 20.00 |  | 102 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichlorobenzene-d4 | 5.05 |  | ug/L | 5.000 |  | 101 | 80-120 |  |  |  |
| Surrogate: 4-Bromofluorobenzene   | 4.84 |  | ug/L | 5.000 |  | 97  | 80-120 |  |  |  |

**LCS Dup**

|                            |      |  |      |       |  |     |        |    |    |        |
|----------------------------|------|--|------|-------|--|-----|--------|----|----|--------|
| 1,1,1-Trichloroethane      | 9.5  |  | ug/L | 10.00 |  | 95  | 70-130 | 12 | 20 |        |
| 1,1,2-Trichloroethane      | 10.1 |  | ug/L | 10.00 |  | 101 | 70-130 | 1  | 20 |        |
| 1,1-Dichloroethane         | 10.2 |  | ug/L | 10.00 |  | 102 | 70-130 | 2  | 20 |        |
| 1,1-Dichloroethene         | 20.1 |  | ug/L | 10.00 |  | 201 | 70-130 | 59 | 20 | B+, D+ |
| 1,2-Dichlorobenzene        | 9.1  |  | ug/L | 10.00 |  | 91  | 70-130 | 12 | 20 |        |
| 1,2-Dichloroethane         | 9.8  |  | ug/L | 10.00 |  | 98  | 70-130 | 6  | 20 |        |
| 1,3-Dichlorobenzene        | 9.3  |  | ug/L | 10.00 |  | 93  | 70-130 | 10 | 20 |        |
| 1,4-Dichlorobenzene        | 9.5  |  | ug/L | 10.00 |  | 95  | 70-130 | 10 | 20 |        |
| Acetone                    | 49.0 |  | ug/L | 50.00 |  | 98  | 70-130 | 2  | 20 |        |
| Benzene                    | 10.4 |  | ug/L | 10.00 |  | 104 | 70-130 | 1  | 20 |        |
| Carbon Tetrachloride       | 9.3  |  | ug/L | 10.00 |  | 93  | 70-130 | 16 | 20 |        |
| cis-1,2-Dichloroethene     | 9.8  |  | ug/L | 10.00 |  | 98  | 70-130 | 7  | 20 |        |
| Ethylbenzene               | 9.9  |  | ug/L | 10.00 |  | 99  | 70-130 | 4  | 20 |        |
| Methyl tert-Butyl Ether    | 9.8  |  | ug/L | 10.00 |  | 98  | 70-130 | 5  | 20 |        |
| Methylene Chloride         | 10.5 |  | ug/L | 10.00 |  | 105 | 70-130 | 14 | 20 |        |
| Naphthalene                | 8.6  |  | ug/L | 10.00 |  | 86  | 70-130 | 20 | 20 |        |
| Tertiary-amyl methyl ether | 9.1  |  | ug/L | 10.00 |  | 91  | 70-130 | 8  | 20 |        |
| Tertiary-butyl Alcohol     | 81.7 |  | ug/L | 50.00 |  | 163 | 70-130 | 33 | 25 | B+, D+ |
| Tetrachloroethene          | 9.6  |  | ug/L | 10.00 |  | 96  | 70-130 | 10 | 20 |        |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

**524.2 Volatile Organic Compounds**

**Batch CG71431 - 524.2**

|                                   |      |  |      |       |  |     |        |   |    |  |
|-----------------------------------|------|--|------|-------|--|-----|--------|---|----|--|
| Toluene                           | 9.7  |  | ug/L | 10.00 |  | 97  | 70-130 | 8 | 20 |  |
| Trichloroethene                   | 10.3 |  | ug/L | 10.00 |  | 103 | 70-130 | 3 | 20 |  |
| Vinyl Chloride                    | 9.8  |  | ug/L | 10.00 |  | 98  | 70-130 | 5 | 20 |  |
| Xylene O                          | 9.4  |  | ug/L | 10.00 |  | 94  | 70-130 | 7 | 20 |  |
| Xylene P,M                        | 18.6 |  | ug/L | 20.00 |  | 93  | 70-130 | 9 | 20 |  |
| Surrogate: 1,2-Dichlorobenzene-d4 | 4.47 |  | ug/L | 5.000 |  | 89  | 80-120 |   |    |  |
| Surrogate: 4-Bromofluorobenzene   | 4.99 |  | ug/L | 5.000 |  | 100 | 80-120 |   |    |  |

**608 Polychlorinated Biphenyls (PCB)**

**Batch CG71414 - 3510C**

|                                      |        |      |      |         |  |    |        |  |  |  |
|--------------------------------------|--------|------|------|---------|--|----|--------|--|--|--|
| <b>Blank</b>                         |        |      |      |         |  |    |        |  |  |  |
| Aroclor 1016                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1016 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1221                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1221 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1232                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1232 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1242                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1242 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1248                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1248 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1254                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1254 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1260                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1260 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1262                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1262 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1268                         | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Aroclor 1268 [2C]                    | ND     | 0.10 | ug/L |         |  |    |        |  |  |  |
| Surrogate: Decachlorobiphenyl        | 0.0351 |      | ug/L | 0.05000 |  | 70 | 30-150 |  |  |  |
| Surrogate: Decachlorobiphenyl [2C]   | 0.0366 |      | ug/L | 0.05000 |  | 73 | 30-150 |  |  |  |
| Surrogate: Tetrachloro-m-xylene      | 0.0268 |      | ug/L | 0.05000 |  | 54 | 30-150 |  |  |  |
| Surrogate: Tetrachloro-m-xylene [2C] | 0.0310 |      | ug/L | 0.05000 |  | 62 | 30-150 |  |  |  |

|                                      |        |      |      |         |  |    |        |  |  |  |
|--------------------------------------|--------|------|------|---------|--|----|--------|--|--|--|
| <b>LCS</b>                           |        |      |      |         |  |    |        |  |  |  |
| Aroclor 1016                         | 0.86   | 0.10 | ug/L | 1.000   |  | 86 | 40-140 |  |  |  |
| Aroclor 1016 [2C]                    | 0.90   | 0.10 | ug/L | 1.000   |  | 90 | 40-140 |  |  |  |
| Aroclor 1260                         | 0.87   | 0.10 | ug/L | 1.000   |  | 87 | 40-140 |  |  |  |
| Aroclor 1260 [2C]                    | 0.83   | 0.10 | ug/L | 1.000   |  | 83 | 40-140 |  |  |  |
| Surrogate: Decachlorobiphenyl        | 0.0415 |      | ug/L | 0.05000 |  | 83 | 30-150 |  |  |  |
| Surrogate: Decachlorobiphenyl [2C]   | 0.0419 |      | ug/L | 0.05000 |  | 84 | 30-150 |  |  |  |
| Surrogate: Tetrachloro-m-xylene      | 0.0355 |      | ug/L | 0.05000 |  | 71 | 30-150 |  |  |  |
| Surrogate: Tetrachloro-m-xylene [2C] | 0.0359 |      | ug/L | 0.05000 |  | 72 | 30-150 |  |  |  |

|                |  |  |  |  |  |  |  |  |  |  |
|----------------|--|--|--|--|--|--|--|--|--|--|
| <b>LCS Dup</b> |  |  |  |  |  |  |  |  |  |  |
|----------------|--|--|--|--|--|--|--|--|--|--|



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

**608 Polychlorinated Biphenyls (PCB)**

**Batch CG71414 - 3510C**

|                   |      |      |      |       |  |     |        |    |    |  |
|-------------------|------|------|------|-------|--|-----|--------|----|----|--|
| Aroclor 1016      | 1.02 | 0.10 | ug/L | 1.000 |  | 102 | 40-140 | 16 | 20 |  |
| Aroclor 1016 [2C] | 1.05 | 0.10 | ug/L | 1.000 |  | 105 | 40-140 | 16 | 20 |  |
| Aroclor 1260      | 0.91 | 0.10 | ug/L | 1.000 |  | 91  | 40-140 | 4  | 20 |  |
| Aroclor 1260 [2C] | 0.88 | 0.10 | ug/L | 1.000 |  | 88  | 40-140 | 6  | 20 |  |

|                                      |        |  |      |         |  |    |        |  |  |  |
|--------------------------------------|--------|--|------|---------|--|----|--------|--|--|--|
| Surrogate: Decachlorobiphenyl        | 0.0449 |  | ug/L | 0.05000 |  | 90 | 30-150 |  |  |  |
| Surrogate: Decachlorobiphenyl [2C]   | 0.0465 |  | ug/L | 0.05000 |  | 93 | 30-150 |  |  |  |
| Surrogate: Tetrachloro-m-xylene      | 0.0355 |  | ug/L | 0.05000 |  | 71 | 30-150 |  |  |  |
| Surrogate: Tetrachloro-m-xylene [2C] | 0.0365 |  | ug/L | 0.05000 |  | 73 | 30-150 |  |  |  |

**625(SIM) Semi-Volatile Organic Compounds**

**Batch CG71808 - 3510C**

**Blank**

|                                   |      |      |      |       |  |    |        |  |  |  |
|-----------------------------------|------|------|------|-------|--|----|--------|--|--|--|
| Acenaphthene                      | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Acenaphthylene                    | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Anthracene                        | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Benzo(a)anthracene                | ND   | 0.05 | ug/L |       |  |    |        |  |  |  |
| Benzo(a)pyrene                    | ND   | 0.05 | ug/L |       |  |    |        |  |  |  |
| Benzo(b)fluoranthene              | ND   | 0.05 | ug/L |       |  |    |        |  |  |  |
| Benzo(g,h,i)perylene              | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Benzo(k)fluoranthene              | ND   | 0.05 | ug/L |       |  |    |        |  |  |  |
| bis(2-Ethylhexyl)phthalate        | 3.08 | 2.50 | ug/L |       |  |    |        |  |  |  |
| Butylbenzylphthalate              | ND   | 2.50 | ug/L |       |  |    |        |  |  |  |
| Chrysene                          | ND   | 0.05 | ug/L |       |  |    |        |  |  |  |
| Dibenzo(a,h)Anthracene            | ND   | 0.05 | ug/L |       |  |    |        |  |  |  |
| Diethylphthalate                  | ND   | 2.50 | ug/L |       |  |    |        |  |  |  |
| Dimethylphthalate                 | ND   | 2.50 | ug/L |       |  |    |        |  |  |  |
| Di-n-butylphthalate               | ND   | 2.50 | ug/L |       |  |    |        |  |  |  |
| Di-n-octylphthalate               | ND   | 2.50 | ug/L |       |  |    |        |  |  |  |
| Fluoranthene                      | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Fluorene                          | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Indeno(1,2,3-cd)Pyrene            | ND   | 0.05 | ug/L |       |  |    |        |  |  |  |
| Naphthalene                       | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Pentachlorophenol                 | ND   | 0.90 | ug/L |       |  |    |        |  |  |  |
| Phenanthrene                      | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Pyrene                            | ND   | 0.20 | ug/L |       |  |    |        |  |  |  |
| Surrogate: 1,2-Dichlorobenzene-d4 | 1.01 |      | ug/L | 2.500 |  | 40 | 30-130 |  |  |  |
| Surrogate: 2,4,6-Tribromophenol   | 3.41 |      | ug/L | 3.750 |  | 91 | 15-110 |  |  |  |
| Surrogate: 2-Fluorobiphenyl       | 1.47 |      | ug/L | 2.500 |  | 59 | 30-130 |  |  |  |
| Surrogate: Nitrobenzene-d5        | 1.72 |      | ug/L | 2.500 |  | 69 | 30-130 |  |  |  |
| Surrogate: p-Terphenyl-d14        | 1.76 |      | ug/L | 2.500 |  | 70 | 30-130 |  |  |  |

**LCS**

|                |      |      |      |       |  |     |        |  |  |  |
|----------------|------|------|------|-------|--|-----|--------|--|--|--|
| Acenaphthene   | 2.73 | 0.20 | ug/L | 2.500 |  | 109 | 40-140 |  |  |  |
| Acenaphthylene | 2.69 | 0.20 | ug/L | 2.500 |  | 108 | 40-140 |  |  |  |
| Anthracene     | 2.90 | 0.20 | ug/L | 2.500 |  | 116 | 40-140 |  |  |  |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

**625(SIM) Semi-Volatile Organic Compounds**

**Batch CG71808 - 3510C**

|                                   |       |      |      |       |  |     |        |  |  |    |
|-----------------------------------|-------|------|------|-------|--|-----|--------|--|--|----|
| Benzo(a)anthracene                | 3.02  | 0.05 | ug/L | 2.500 |  | 121 | 40-140 |  |  |    |
| Benzo(a)pyrene                    | 3.50  | 0.05 | ug/L | 2.500 |  | 140 | 40-140 |  |  |    |
| Benzo(b)fluoranthene              | 3.45  | 0.05 | ug/L | 2.500 |  | 138 | 40-140 |  |  |    |
| Benzo(g,h,i)perylene              | 2.98  | 0.20 | ug/L | 2.500 |  | 119 | 40-140 |  |  |    |
| Benzo(k)fluoranthene              | 3.54  | 0.05 | ug/L | 2.500 |  | 142 | 40-140 |  |  | B+ |
| bis(2-Ethylhexyl)phthalate        | 6.70  | 2.50 | ug/L | 2.500 |  | 268 | 40-140 |  |  | B+ |
| Butylbenzylphthalate              | 3.45  | 2.50 | ug/L | 2.500 |  | 138 | 40-140 |  |  |    |
| Chrysene                          | 3.14  | 0.05 | ug/L | 2.500 |  | 126 | 40-140 |  |  |    |
| Dibenzo(a,h)Anthracene            | 2.97  | 0.05 | ug/L | 2.500 |  | 119 | 40-140 |  |  |    |
| Diethylphthalate                  | 2.94  | 2.50 | ug/L | 2.500 |  | 118 | 40-140 |  |  |    |
| Dimethylphthalate                 | 3.28  | 2.50 | ug/L | 2.500 |  | 131 | 40-140 |  |  |    |
| Di-n-butylphthalate               | 3.40  | 2.50 | ug/L | 2.500 |  | 136 | 40-140 |  |  |    |
| Di-n-octylphthalate               | 3.77  | 2.50 | ug/L | 2.500 |  | 151 | 40-140 |  |  | B+ |
| Fluoranthene                      | 3.11  | 0.20 | ug/L | 2.500 |  | 125 | 40-140 |  |  |    |
| Fluorene                          | 3.05  | 0.20 | ug/L | 2.500 |  | 122 | 40-140 |  |  |    |
| Indeno(1,2,3-cd)Pyrene            | 3.09  | 0.05 | ug/L | 2.500 |  | 124 | 40-140 |  |  |    |
| Naphthalene                       | 2.24  | 0.20 | ug/L | 2.500 |  | 89  | 40-140 |  |  |    |
| Pentachlorophenol                 | 2.85  | 0.90 | ug/L | 2.500 |  | 114 | 30-130 |  |  |    |
| Phenanthrene                      | 2.81  | 0.20 | ug/L | 2.500 |  | 112 | 40-140 |  |  |    |
| Pyrene                            | 3.60  | 0.20 | ug/L | 2.500 |  | 144 | 40-140 |  |  | B+ |
| Surrogate: 1,2-Dichlorobenzene-d4 | 0.902 |      | ug/L | 2.500 |  | 36  | 30-130 |  |  |    |
| Surrogate: 2,4,6-Tribromophenol   | 3.26  |      | ug/L | 3.750 |  | 87  | 15-110 |  |  |    |
| Surrogate: 2-Fluorobiphenyl       | 1.39  |      | ug/L | 2.500 |  | 56  | 30-130 |  |  |    |
| Surrogate: Nitrobenzene-d5        | 1.45  |      | ug/L | 2.500 |  | 58  | 30-130 |  |  |    |
| Surrogate: p-Terphenyl-d14        | 1.61  |      | ug/L | 2.500 |  | 64  | 30-130 |  |  |    |

**LCS Dup**

|                            |      |      |      |       |  |     |        |     |    |    |
|----------------------------|------|------|------|-------|--|-----|--------|-----|----|----|
| Acenaphthene               | 2.81 | 0.20 | ug/L | 2.500 |  | 113 | 40-140 | 3   | 20 |    |
| Acenaphthylene             | 2.81 | 0.20 | ug/L | 2.500 |  | 112 | 40-140 | 4   | 20 |    |
| Anthracene                 | 3.15 | 0.20 | ug/L | 2.500 |  | 126 | 40-140 | 8   | 20 |    |
| Benzo(a)anthracene         | 3.12 | 0.05 | ug/L | 2.500 |  | 125 | 40-140 | 3   | 20 |    |
| Benzo(a)pyrene             | 3.74 | 0.05 | ug/L | 2.500 |  | 150 | 40-140 | 7   | 20 | B+ |
| Benzo(b)fluoranthene       | 3.69 | 0.05 | ug/L | 2.500 |  | 148 | 40-140 | 7   | 20 | B+ |
| Benzo(g,h,i)perylene       | 3.07 | 0.20 | ug/L | 2.500 |  | 123 | 40-140 | 3   | 20 |    |
| Benzo(k)fluoranthene       | 3.86 | 0.05 | ug/L | 2.500 |  | 154 | 40-140 | 8   | 20 | B+ |
| bis(2-Ethylhexyl)phthalate | 6.09 | 2.50 | ug/L | 2.500 |  | 244 | 40-140 | 10  | 20 | B+ |
| Butylbenzylphthalate       | 3.54 | 2.50 | ug/L | 2.500 |  | 142 | 40-140 | 3   | 20 | B+ |
| Chrysene                   | 3.29 | 0.05 | ug/L | 2.500 |  | 131 | 40-140 | 5   | 20 |    |
| Dibenzo(a,h)Anthracene     | 3.02 | 0.05 | ug/L | 2.500 |  | 121 | 40-140 | 2   | 20 |    |
| Diethylphthalate           | 3.04 | 2.50 | ug/L | 2.500 |  | 122 | 40-140 | 3   | 20 |    |
| Dimethylphthalate          | 3.39 | 2.50 | ug/L | 2.500 |  | 136 | 40-140 | 3   | 20 |    |
| Di-n-butylphthalate        | 3.81 | 2.50 | ug/L | 2.500 |  | 153 | 40-140 | 11  | 20 | B+ |
| Di-n-octylphthalate        | 3.97 | 2.50 | ug/L | 2.500 |  | 159 | 40-140 | 5   | 20 | B+ |
| Fluoranthene               | 3.39 | 0.20 | ug/L | 2.500 |  | 135 | 40-140 | 8   | 20 |    |
| Fluorene                   | 3.08 | 0.20 | ug/L | 2.500 |  | 123 | 40-140 | 0.9 | 20 |    |
| Indeno(1,2,3-cd)Pyrene     | 3.09 | 0.05 | ug/L | 2.500 |  | 123 | 40-140 | 0.1 | 20 |    |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

**625(SIM) Semi-Volatile Organic Compounds**

**Batch CG71808 - 3510C**

|                                   |      |      |      |       |  |     |        |   |    |    |
|-----------------------------------|------|------|------|-------|--|-----|--------|---|----|----|
| Naphthalene                       | 2.34 | 0.20 | ug/L | 2.500 |  | 94  | 40-140 | 5 | 20 |    |
| Pentachlorophenol                 | 3.11 | 0.90 | ug/L | 2.500 |  | 124 | 30-130 | 9 | 20 |    |
| Phenanthrene                      | 2.99 | 0.20 | ug/L | 2.500 |  | 120 | 40-140 | 6 | 20 |    |
| Pyrene                            | 3.64 | 0.20 | ug/L | 2.500 |  | 146 | 40-140 | 1 | 20 | B+ |
| Surrogate: 1,2-Dichlorobenzene-d4 | 1.10 |      | ug/L | 2.500 |  | 44  | 30-130 |   |    |    |
| Surrogate: 2,4,6-Tribromophenol   | 3.60 |      | ug/L | 3.750 |  | 96  | 15-110 |   |    |    |
| Surrogate: 2-Fluorobiphenyl       | 1.57 |      | ug/L | 2.500 |  | 63  | 30-130 |   |    |    |
| Surrogate: Nitrobenzene-d5        | 1.58 |      | ug/L | 2.500 |  | 63  | 30-130 |   |    |    |
| Surrogate: p-Terphenyl-d14        | 1.55 |      | ug/L | 2.500 |  | 62  | 30-130 |   |    |    |

**8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution**

**Batch CG71356 - 3535A**

|                           |      |       |      |       |  |     |        |    |    |  |
|---------------------------|------|-------|------|-------|--|-----|--------|----|----|--|
| <b>Blank</b>              |      |       |      |       |  |     |        |    |    |  |
| 1,4-Dioxane               | ND   | 0.250 | ug/L |       |  |     |        |    |    |  |
| Surrogate: 1,4-Dioxane-d8 | ND   |       | ug/L | 5.000 |  | 38  | 15-115 |    |    |  |
| <b>LCS</b>                |      |       |      |       |  |     |        |    |    |  |
| 1,4-Dioxane               | 12.0 | 0.250 | ug/L | 10.00 |  | 120 | 40-140 |    |    |  |
| Surrogate: 1,4-Dioxane-d8 | 1.85 |       | ug/L | 5.000 |  | 37  | 15-115 |    |    |  |
| <b>LCS Dup</b>            |      |       |      |       |  |     |        |    |    |  |
| 1,4-Dioxane               | 10.9 | 0.250 | ug/L | 10.00 |  | 109 | 40-140 | 10 | 20 |  |
| Surrogate: 1,4-Dioxane-d8 | 1.70 |       | ug/L | 5.000 |  | 34  | 15-115 |    |    |  |

**Classical Chemistry**

**Batch CG71317 - General Preparation**

|                        |    |   |      |       |  |     |        |  |  |  |
|------------------------|----|---|------|-------|--|-----|--------|--|--|--|
| <b>Blank</b>           |    |   |      |       |  |     |        |  |  |  |
| Total Suspended Solids | ND | 5 | mg/L |       |  |     |        |  |  |  |
| <b>LCS</b>             |    |   |      |       |  |     |        |  |  |  |
| Total Suspended Solids | 44 |   | mg/L | 43.50 |  | 101 | 80-120 |  |  |  |

**Batch CG71352 - General Preparation**

|                     |       |      |      |        |  |    |        |     |    |  |
|---------------------|-------|------|------|--------|--|----|--------|-----|----|--|
| <b>Blank</b>        |       |      |      |        |  |    |        |     |    |  |
| Hexavalent Chromium | ND    | 10.0 | ug/L |        |  |    |        |     |    |  |
| <b>LCS</b>          |       |      |      |        |  |    |        |     |    |  |
| Hexavalent Chromium | 0.494 |      | mg/L | 0.4998 |  | 99 | 90-110 |     |    |  |
| <b>LCS Dup</b>      |       |      |      |        |  |    |        |     |    |  |
| Hexavalent Chromium | 0.493 |      | mg/L | 0.4998 |  | 99 | 90-110 | 0.2 | 20 |  |

**Batch CG71353 - General Preparation**

|                         |      |      |      |       |  |     |        |  |  |  |
|-------------------------|------|------|------|-------|--|-----|--------|--|--|--|
| <b>Blank</b>            |      |      |      |       |  |     |        |  |  |  |
| Total Residual Chlorine | ND   | 20.0 | ug/L |       |  |     |        |  |  |  |
| <b>LCS</b>              |      |      |      |       |  |     |        |  |  |  |
| Total Residual Chlorine | 1.80 |      | mg/L | 1.800 |  | 100 | 85-115 |  |  |  |

**Batch CG71705 - NH4 Prep**



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

Classical Chemistry

**Batch CG71705 - NH4 Prep**

**Blank**

|              |    |      |      |  |  |  |  |  |  |  |
|--------------|----|------|------|--|--|--|--|--|--|--|
| Ammonia as N | ND | 0.10 | mg/L |  |  |  |  |  |  |  |
|--------------|----|------|------|--|--|--|--|--|--|--|

**LCS**

|              |      |      |      |         |  |     |        |  |  |  |
|--------------|------|------|------|---------|--|-----|--------|--|--|--|
| Ammonia as N | 0.11 | 0.10 | mg/L | 0.09994 |  | 112 | 80-120 |  |  |  |
|--------------|------|------|------|---------|--|-----|--------|--|--|--|

**LCS**

|              |      |      |      |        |  |    |        |  |  |  |
|--------------|------|------|------|--------|--|----|--------|--|--|--|
| Ammonia as N | 0.92 | 0.10 | mg/L | 0.9994 |  | 92 | 80-120 |  |  |  |
|--------------|------|------|------|--------|--|----|--------|--|--|--|

**Batch CG71735 - NH4 Prep**

**Blank**

|          |    |     |      |  |  |  |  |  |  |  |
|----------|----|-----|------|--|--|--|--|--|--|--|
| Chloride | ND | 0.5 | mg/L |  |  |  |  |  |  |  |
|----------|----|-----|------|--|--|--|--|--|--|--|

**LCS**

|          |     |  |      |       |  |     |        |  |  |  |
|----------|-----|--|------|-------|--|-----|--------|--|--|--|
| Chloride | 2.6 |  | mg/L | 2.500 |  | 103 | 90-110 |  |  |  |
|----------|-----|--|------|-------|--|-----|--------|--|--|--|

**Batch CG71740 - General Preparation**

**Blank**

|                             |    |   |      |  |  |  |  |  |  |  |
|-----------------------------|----|---|------|--|--|--|--|--|--|--|
| Total Petroleum Hydrocarbon | ND | 5 | mg/L |  |  |  |  |  |  |  |
|-----------------------------|----|---|------|--|--|--|--|--|--|--|

**LCS**

|                             |    |   |      |       |  |    |        |  |  |  |
|-----------------------------|----|---|------|-------|--|----|--------|--|--|--|
| Total Petroleum Hydrocarbon | 13 | 5 | mg/L | 19.38 |  | 69 | 66-114 |  |  |  |
|-----------------------------|----|---|------|-------|--|----|--------|--|--|--|

**Batch CG71817 - TCN Prep**

**Blank**

|                    |    |      |      |  |  |  |  |  |  |  |
|--------------------|----|------|------|--|--|--|--|--|--|--|
| Total Cyanide (LL) | ND | 5.00 | ug/L |  |  |  |  |  |  |  |
|--------------------|----|------|------|--|--|--|--|--|--|--|

**LCS**

|                    |      |      |      |       |  |     |        |  |  |  |
|--------------------|------|------|------|-------|--|-----|--------|--|--|--|
| Total Cyanide (LL) | 20.0 | 5.00 | ug/L | 20.06 |  | 100 | 90-110 |  |  |  |
|--------------------|------|------|------|-------|--|-----|--------|--|--|--|

**LCS**

|                    |     |      |      |       |  |    |        |  |  |  |
|--------------------|-----|------|------|-------|--|----|--------|--|--|--|
| Total Cyanide (LL) | 149 | 5.00 | ug/L | 150.4 |  | 99 | 90-110 |  |  |  |
|--------------------|-----|------|------|-------|--|----|--------|--|--|--|

**LCS Dup**

|                    |     |      |      |       |  |    |        |     |    |  |
|--------------------|-----|------|------|-------|--|----|--------|-----|----|--|
| Total Cyanide (LL) | 148 | 5.00 | ug/L | 150.4 |  | 98 | 90-110 | 0.6 | 20 |  |
|--------------------|-----|------|------|-------|--|----|--------|-----|----|--|

**Batch CG71920 - General Preparation**

**Blank**

|         |    |     |      |  |  |  |  |  |  |  |
|---------|----|-----|------|--|--|--|--|--|--|--|
| Phenols | ND | 100 | ug/L |  |  |  |  |  |  |  |
|---------|----|-----|------|--|--|--|--|--|--|--|

**LCS**

|         |     |     |      |       |  |     |        |  |  |  |
|---------|-----|-----|------|-------|--|-----|--------|--|--|--|
| Phenols | 102 | 100 | ug/L | 100.0 |  | 102 | 80-120 |  |  |  |
|---------|-----|-----|------|-------|--|-----|--------|--|--|--|

**LCS**

|         |     |     |      |      |  |    |        |  |  |  |
|---------|-----|-----|------|------|--|----|--------|--|--|--|
| Phenols | 958 | 100 | ug/L | 1000 |  | 96 | 80-120 |  |  |  |
|---------|-----|-----|------|------|--|----|--------|--|--|--|

504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

**Batch CG71426 - 504/8011**

**Blank**

|                   |    |       |      |  |  |  |  |  |  |  |
|-------------------|----|-------|------|--|--|--|--|--|--|--|
| 1,2-Dibromoethane | ND | 0.015 | ug/L |  |  |  |  |  |  |  |
|-------------------|----|-------|------|--|--|--|--|--|--|--|

|                        |    |       |      |  |  |  |  |  |  |  |
|------------------------|----|-------|------|--|--|--|--|--|--|--|
| 1,2-Dibromoethane [2C] | ND | 0.015 | ug/L |  |  |  |  |  |  |  |
|------------------------|----|-------|------|--|--|--|--|--|--|--|

|                              |       |  |      |        |  |     |        |  |  |  |
|------------------------------|-------|--|------|--------|--|-----|--------|--|--|--|
| Surrogate: Pentachloroethane | 0.298 |  | ug/L | 0.2000 |  | 149 | 30-150 |  |  |  |
|------------------------------|-------|--|------|--------|--|-----|--------|--|--|--|

|                                   |       |  |      |        |  |     |        |  |  |  |
|-----------------------------------|-------|--|------|--------|--|-----|--------|--|--|--|
| Surrogate: Pentachloroethane [2C] | 0.248 |  | ug/L | 0.2000 |  | 124 | 30-150 |  |  |  |
|-----------------------------------|-------|--|------|--------|--|-----|--------|--|--|--|



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

**Batch CG71426 - 504/8011**

**LCS**

|                        |       |       |      |         |  |    |        |  |  |  |
|------------------------|-------|-------|------|---------|--|----|--------|--|--|--|
| 1,2-Dibromoethane      | 0.070 | 0.015 | ug/L | 0.08000 |  | 88 | 70-130 |  |  |  |
| 1,2-Dibromoethane [2C] | 0.064 | 0.015 | ug/L | 0.08000 |  | 80 | 70-130 |  |  |  |

|                                   |        |  |      |        |  |    |        |  |  |  |
|-----------------------------------|--------|--|------|--------|--|----|--------|--|--|--|
| Surrogate: Pentachloroethane      | 0.0877 |  | ug/L | 0.2000 |  | 44 | 30-150 |  |  |  |
| Surrogate: Pentachloroethane [2C] | 0.0783 |  | ug/L | 0.2000 |  | 39 | 30-150 |  |  |  |

**LCS**

|                        |       |       |      |        |  |     |        |  |  |  |
|------------------------|-------|-------|------|--------|--|-----|--------|--|--|--|
| 1,2-Dibromoethane      | 0.219 | 0.015 | ug/L | 0.2000 |  | 110 | 70-130 |  |  |  |
| 1,2-Dibromoethane [2C] | 0.212 | 0.015 | ug/L | 0.2000 |  | 106 | 70-130 |  |  |  |

|                                   |       |  |      |        |  |     |        |  |  |  |
|-----------------------------------|-------|--|------|--------|--|-----|--------|--|--|--|
| Surrogate: Pentachloroethane      | 0.290 |  | ug/L | 0.2000 |  | 145 | 30-150 |  |  |  |
| Surrogate: Pentachloroethane [2C] | 0.242 |  | ug/L | 0.2000 |  | 121 | 30-150 |  |  |  |

Alcohol Scan by GC/FID

**Batch CG71915 - No Prep**

**Blank**

|         |    |    |      |  |  |  |  |  |  |  |
|---------|----|----|------|--|--|--|--|--|--|--|
| Ethanol | ND | 10 | mg/L |  |  |  |  |  |  |  |
|---------|----|----|------|--|--|--|--|--|--|--|

**LCS**

|         |      |    |      |      |  |     |        |  |  |  |
|---------|------|----|------|------|--|-----|--------|--|--|--|
| Ethanol | 1270 | 10 | mg/L | 1000 |  | 127 | 60-140 |  |  |  |
|---------|------|----|------|------|--|-----|--------|--|--|--|

**LCS Dup**

|         |      |    |      |      |  |     |        |    |    |  |
|---------|------|----|------|------|--|-----|--------|----|----|--|
| Ethanol | 1060 | 10 | mg/L | 1000 |  | 106 | 60-140 | 18 | 30 |  |
|---------|------|----|------|------|--|-----|--------|----|----|--|





*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**Notes and Definitions**

|        |                                                                                                                                         |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------|
| X5     | Due to high sediment content vials were composited                                                                                      |
| U      | Analyte included in the analysis, but not detected                                                                                      |
| S-     | Surrogate recovery(ies) below lower control limit (S-).                                                                                 |
| HT     | The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes. |
| DDT    | DDT breakdown > 20%                                                                                                                     |
| D+     | Relative percent difference for duplicate is outside of criteria (D+).                                                                  |
| D      | Diluted.                                                                                                                                |
| CD+    | Continuing Calibration %Diff/Drift is above control limit (CD+).                                                                        |
| B+     | Blank Spike recovery is above upper control limit (B+).                                                                                 |
| B      | Present in Method Blank (B).                                                                                                            |
| ND     | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes                                         |
| dry    | Sample results reported on a dry weight basis                                                                                           |
| RPD    | Relative Percent Difference                                                                                                             |
| MDL    | Method Detection Limit                                                                                                                  |
| MRL    | Method Reporting Limit                                                                                                                  |
| LOD    | Limit of Detection                                                                                                                      |
| LOQ    | Limit of Quantitation                                                                                                                   |
| DL     | Detection Limit                                                                                                                         |
| I/V    | Initial Volume                                                                                                                          |
| F/V    | Final Volume                                                                                                                            |
| §      | Subcontracted analysis; see attached report                                                                                             |
| 1      | Range result excludes concentrations of surrogates and/or internal standards eluting in that range.                                     |
| 2      | Range result excludes concentrations of target analytes eluting in that range.                                                          |
| 3      | Range result excludes the concentration of the C9-C10 aromatic range.                                                                   |
| Avg    | Results reported as a mathematical average.                                                                                             |
| NR     | No Recovery                                                                                                                             |
| [CALC] | Calculated Analyte                                                                                                                      |
| SUB    | Subcontracted analysis; see attached report                                                                                             |
| RL     | Reporting Limit                                                                                                                         |
| EDL    | Estimated Detection Limit                                                                                                               |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Station 250/Mystic Charlestown Eversource RGP

ESS Laboratory Work Order: 1707259

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/OutofStateCommercialLaboratories.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf)

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

[http://datamine2.state.nj.us/DEP\\_OPRA/OpraMain/pi\\_main?mode=pi\\_by\\_site&sort\\_order=PI\\_NAMEA&Select+a+Site:=58715](http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715)

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: Tighe & Bond - KPB/TB/MM

ESS Project ID: 1707259

Shipped/Delivered Via: ESS Courier

Date Received: 7/13/2017

Project Due Date: 7/20/2017

Days for Project: 5 Day

1. Air bill manifest present? ☐ No

Air No.: NA

6. Does COC match bottles? ☐ Yes

2. Were custody seals present? ☐ No

7. Is COC complete and correct? ☐ Yes

3. Is radiation count <100 CPM? ☐ Yes

8. Were samples received intact? ☐ Yes

4. Is a Cooler Present? ☐ Yes

Temp: 2.8 Iced with: Ice

9. Were labs informed about **short holds & rushes**? ☐ Yes / No / NA

5. Was COC signed and dated by client? ☐ Yes

10. Were any analyses received outside of hold time? ☐ Yes / No

11. Any Subcontracting needed? ☒ Yes / ☐ No

ESS Sample IDs:

Analysis: \_\_\_\_\_

TAT: \_\_\_\_\_

12. Were VOAs received? ☒ Yes / ☐ No

a. Air bubbles in aqueous VOAs?

☒ Yes / ☐ No

b. Does methanol cover soil completely?

☐ Yes / ☐ No / NA

13. Are the samples properly preserved? ☒ Yes / ☐ No

a. If metals preserved upon receipt:

Date: \_\_\_\_\_

Time: \_\_\_\_\_

By: \_\_\_\_\_

b. Low Level VOA vials frozen:

Date: \_\_\_\_\_

Time: \_\_\_\_\_

By: \_\_\_\_\_

Sample Receiving Notes:

COC = B15 Label = B17 LHC 7/13/17

14. Was there a need to contact Project Manager? ☒ Yes / ☐ No

a. Was there a need to contact the client?

☒ Yes / ☐ No

Who was contacted? \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

By: \_\_\_\_\_

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type       | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---------------|--------------|------------------|---------------------|-------------------|----------------------|--------------|----------------------------------------|
| 01            | 148177       | Yes              | NA                  | Yes               | 1L Poly - Unpres     | NP           |                                        |
| 01            | 148179       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres | NP           |                                        |
| 01            | 148181       | Yes              | NA                  | Yes               | 250 mL Poly - NaOH   | NaOH         |                                        |
| 01            | 148183       | Yes              | NA                  | Yes               | 500 mL Poly - H2SO4  | H2SO4        |                                        |
| 01            | 148185       | Yes              | NA                  | Yes               | 1L Amber - H2SO4     | H2SO4        |                                        |
| 01            | 148187       | Yes              | NA                  | Yes               | 500 mL Poly - HNO3   | HNO3         |                                        |
| 01            | 148194       | Yes              | NA                  | Yes               | 1L Amber - Unpres    | NP           |                                        |
| 01            | 148195       | Yes              | NA                  | Yes               | 1L Amber - Unpres    | NP           |                                        |
| 01            | 148196       | Yes              | NA                  | Yes               | 1L Amber - Unpres    | NP           |                                        |
| 01            | 148197       | Yes              | NA                  | Yes               | 1L Amber - Unpres    | NP           |                                        |
| 01            | 148198       | Yes              | NA                  | Yes               | 1L Amber - Unpres    | NP           |                                        |
| 01            | 148199       | Yes              | NA                  | Yes               | 1L Amber - Unpres    | NP           |                                        |
| 01            | 148201       | Yes              | NA                  | Yes               | 500 mL Poly - HNO3   | HNO3         |                                        |
| 01            | 148203       | Yes              | NA                  | Yes               | 1L Amber - H2SO4     | H2SO4        |                                        |
| 01            | 148207       | Yes              | No                  | Yes               | VOA Vial - HCl       | HCl          |                                        |
| 01            | 148208       | Yes              | No                  | Yes               | VOA Vial - HCl       | HCl          |                                        |
| 01            | 148209       | Yes              | No                  | Yes               | VOA Vial - HCl       | HCl          |                                        |
| 01            | 148211       | Yes              | NA                  | Yes               | VOA Vial - Unpres    | NP           |                                        |
| 01            | 148215       | Yes              | No                  | Yes               | VOA Vial - HCl       | HCl          |                                        |
| 01            | 148216       | Yes              | No                  | Yes               | VOA Vial - HCl       | HCl          |                                        |
| 01            | 148217       | Yes              | No                  | Yes               | VOA Vial - HCl       | HCl          |                                        |
| 02            | 148176       | Yes              | NA                  | Yes               | 1L Poly - Unpres     | NP           |                                        |
| 02            | 148178       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres | NP           |                                        |
| 02            | 148180       | Yes              | NA                  | Yes               | 250 mL Poly - NaOH   | NaOH         |                                        |

pH > 12 w 7/13/17 1830

pH > 12 w 7/13/17 1830

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: Tighe & Bond - KPB/TB/MM

ESS Project ID: 1707259

Date Received: 7/13/2017

|    |        |     |    |     |                     |       |
|----|--------|-----|----|-----|---------------------|-------|
| 02 | 148182 | Yes | NA | Yes | 500 mL Poly - H2SO4 | H2SO4 |
| 02 | 148184 | Yes | NA | Yes | 1L Amber - H2SO4    | H2SO4 |
| 02 | 148186 | Yes | NA | Yes | 500 mL Poly - HNO3  | HNO3  |
| 02 | 148188 | Yes | NA | Yes | 1L Amber - Unpres   | NP    |
| 02 | 148189 | Yes | NA | Yes | 1L Amber - Unpres   | NP    |
| 02 | 148190 | Yes | NA | Yes | 1L Amber - Unpres   | NP    |
| 02 | 148191 | Yes | NA | Yes | 1L Amber - Unpres   | NP    |
| 02 | 148192 | Yes | NA | Yes | 1L Amber - Unpres   | NP    |
| 02 | 148193 | Yes | NA | Yes | 1L Amber - Unpres   | NP    |
| 02 | 148200 | Yes | NA | Yes | 500 mL Poly - HNO3  | HNO3  |
| 02 | 148202 | Yes | NA | Yes | 1L Amber - H2SO4    | H2SO4 |
| 02 | 148204 | Yes | No | Yes | VOA Vial - HCl      | HCl   |
| 02 | 148205 | Yes | No | Yes | VOA Vial - HCl      | HCl   |
| 02 | 148206 | Yes | No | Yes | VOA Vial - HCl      | HCl   |
| 02 | 148210 | Yes | NA | Yes | VOA Vial - Unpres   | NP    |
| 02 | 148212 | Yes | No | Yes | VOA Vial - HCl      | HCl   |
| 02 | 148213 | Yes | No | Yes | VOA Vial - HCl      | HCl   |
| 02 | 148214 | Yes | No | Yes | VOA Vial - HCl      | HCl   |

### 2nd Review

Are barcode labels on correct containers?

Yes / No

Completed

By:

Date & Time:

7/13/17

1830

Reviewed

By:

Date & Time:

7/13/17

1910

Delivered

By:

7/13/17

1913





September 25, 2017

Michael Zylich  
NSTAR Electric & Gas Corporation - Monthly Billing  
One NSTAR Way, SUM SE-250  
East Sandwich, MA 02090-9230

Project Location: Mystic - East Eagle  
Client Job Number:  
Project Number: [none]  
Laboratory Work Order Number: 17I0701

Enclosed are results of analyses for samples received by the laboratory on September 15, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas", with a long, sweeping horizontal line extending to the right.

James M. Georgantas  
Project Manager



## Table of Contents

|                                                                      |    |
|----------------------------------------------------------------------|----|
| Sample Summary                                                       | 3  |
| Case Narrative                                                       | 4  |
| Sample Results                                                       | 5  |
| 17I0701-01                                                           | 5  |
| 17I0701-02                                                           | 7  |
| 17I0701-03                                                           | 9  |
| 17I0701-04                                                           | 11 |
| 17I0701-05                                                           | 13 |
| 17I0701-06                                                           | 15 |
| Sample Preparation Information                                       | 17 |
| QC Data                                                              | 18 |
| Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) | 18 |
| B186370                                                              | 18 |
| B186372                                                              | 18 |
| B186410                                                              | 18 |
| Flag/Qualifier Summary                                               | 19 |
| Certifications                                                       | 20 |
| Chain of Custody/Sample Receipt                                      | 21 |

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

NSTAR Electric & Gas Corporation - Monthly Billi  
One NSTAR Way, SUM SE-250  
East Sandwich, MA 02090-9230  
ATTN: Michael Zylich

REPORT DATE: 9/25/2017

PURCHASE ORDER NUMBER: 64454 Release 1

PROJECT NUMBER: [none]

# ANALYTICAL SUMMARY

WORK ORDER NUMBER: 1710701

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

PROJECT LOCATION: Mystic - East Eagle

| FIELD SAMPLE # | LAB ID:    | MATRIX       | SAMPLE DESCRIPTION | TEST              | SUB LAB                      |
|----------------|------------|--------------|--------------------|-------------------|------------------------------|
| MW-1           | 1710701-01 | Ground Water |                    | EPA 300.0         | NY11393/MA-MAI138/M<br>A1110 |
|                |            |              |                    | SM21-22 2540D     |                              |
|                |            |              |                    | SM21-22 3500 Cr B |                              |
|                |            |              |                    | SM21-22 4500 CL G |                              |
| MW-1F          | 1710701-02 | Ground Water |                    | EPA 300.0         | NY11393/MA-MAI138/M<br>A1110 |
|                |            |              |                    | SM21-22 2540D     |                              |
|                |            |              |                    | SM21-22 3500 Cr B |                              |
|                |            |              |                    | SM21-22 4500 CL G |                              |
| MH-206         | 1710701-03 | Ground Water |                    | EPA 300.0         | NY11393/MA-MAI138/M<br>A1110 |
|                |            |              |                    | SM21-22 2540D     |                              |
|                |            |              |                    | SM21-22 3500 Cr B |                              |
|                |            |              |                    | SM21-22 4500 CL G |                              |
| MH-206F        | 1710701-04 | Ground Water |                    | EPA 300.0         | NY11393/MA-MAI138/M<br>A1110 |
|                |            |              |                    | SM21-22 2540D     |                              |
|                |            |              |                    | SM21-22 3500 Cr B |                              |
|                |            |              |                    | SM21-22 4500 CL G |                              |
| MH-204         | 1710701-05 | Ground Water |                    | EPA 300.0         | NY11393/MA-MAI138/M<br>A1110 |
|                |            |              |                    | SM21-22 2540D     |                              |
|                |            |              |                    | SM21-22 3500 Cr B |                              |
|                |            |              |                    | SM21-22 4500 CL G |                              |
| MH-204F        | 1710701-06 | Ground Water |                    | EPA 300.0         | NY11393/MA-MAI138/M<br>A1110 |
|                |            |              |                    | SM21-22 2540D     |                              |
|                |            |              |                    | SM21-22 3500 Cr B |                              |
|                |            |              |                    | SM21-22 4500 CL G |                              |

---

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

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

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

---

**R-02**  
Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.

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

1710701-02[MW-1F], B186410-DUP1

**SM21-22 4500 CL G****Qualifications:**

---

**W-06**  
Elevated method reporting limit due to intense color of sample

**Analyte & Samples(s) Qualified:****Chlorine, Residual**

1710701-01[MW-1]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopyscinski", with a stylized, cursive script.

Tod E. Kopyscinski  
Laboratory Director

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710701

Date Received: 9/15/2017

Field Sample #: MH-206

Sampled: 9/15/2017 12:00

Sample ID: 1710701-03

Sample Matrix: Ground Water

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

| Analyte                | Results | RL     | Units | Dilution | Flag/Qual | Method            | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------|---------|--------|-------|----------|-----------|-------------------|---------------|--------------------|---------|
| Chlorine, Residual     | 0.36    | 0.20   | mg/L  | 10       |           | SM21-22 4500 CL G | 9/15/17       | 9/15/17 23:15      | DJM     |
| Hexavalent Chromium    | ND      | 0.0040 | mg/L  | 1        |           | SM21-22 3500 Cr B | 9/15/17       | 9/15/17 23:45      | DJM     |
| Total Suspended Solids | 2800    | 33     | mg/L  | 1        |           | SM21-22 2540D     | 9/18/17       | 9/18/17 14:05      | LL      |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710701

Date Received: 9/15/2017

Field Sample #: MH-206

Sampled: 9/15/2017 12:00

Sample ID: 1710701-03

Sample Matrix: Ground Water

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

| Analyte  | Results | RL | Units | Dilution | Flag/Qual | Method    | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|----------|---------|----|-------|----------|-----------|-----------|------------------|-----------------------|---------|
| Chloride | 1170    | 40 | mg/L  | 40       |           | EPA 300.0 |                  | 9/20/17 0:00          | EURO    |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710701

Date Received: 9/15/2017

Field Sample #: MH-206F

Sampled: 9/15/2017 12:30

Sample ID: 1710701-04

Sample Matrix: Ground Water

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

| Analyte                | Results | RL     | Units | Dilution | Flag/Qual | Method            | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------|---------|--------|-------|----------|-----------|-------------------|---------------|--------------------|---------|
| Chlorine, Residual     | 0.86    | 0.20   | mg/L  | 10       |           | SM21-22 4500 CL G | 9/15/17       | 9/15/17 23:15      | DJM     |
| Hexavalent Chromium    | ND      | 0.0040 | mg/L  | 1        |           | SM21-22 3500 Cr B | 9/15/17       | 9/15/17 23:45      | DJM     |
| Total Suspended Solids | 28      | 5.0    | mg/L  | 1        |           | SM21-22 2540D     | 9/18/17       | 9/18/17 14:05      | LL      |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710701

Date Received: 9/15/2017

Field Sample #: MH-206F

Sampled: 9/15/2017 12:30

Sample ID: 1710701-04

Sample Matrix: Ground Water

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

| Analyte  | Results | RL | Units | Dilution | Flag/Qual | Method    | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|----------|---------|----|-------|----------|-----------|-----------|------------------|-----------------------|---------|
| Chloride | 1030    | 40 | mg/L  | 40       |           | EPA 300.0 |                  | 9/20/17 0:00          | EURO    |



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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710701

Date Received: 9/15/2017

Field Sample #: MH-204

Sampled: 9/15/2017 12:30

Sample ID: 1710701-05

Sample Matrix: Ground Water

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

| Analyte                | Results | RL     | Units | Dilution | Flag/Qual | Method            | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------|---------|--------|-------|----------|-----------|-------------------|---------------|--------------------|---------|
| Chlorine, Residual     | 0.028   | 0.020  | mg/L  | 1        |           | SM21-22 4500 CL G | 9/15/17       | 9/15/17 23:15      | DJM     |
| Hexavalent Chromium    | ND      | 0.0040 | mg/L  | 1        |           | SM21-22 3500 Cr B | 9/15/17       | 9/15/17 23:45      | DJM     |
| Total Suspended Solids | 45      | 5.0    | mg/L  | 1        |           | SM21-22 2540D     | 9/18/17       | 9/18/17 14:05      | LL      |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710701

Date Received: 9/15/2017

Sampled: 9/15/2017 12:30

Field Sample #: MH-204

Sample ID: 1710701-05

Sample Matrix: Ground Water

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

| Analyte  | Results | RL  | Units | Dilution | Flag/Qual | Method    | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|----------|---------|-----|-------|----------|-----------|-----------|------------------|-----------------------|---------|
| Chloride | 2890    | 100 | mg/L  | 100      |           | EPA 300.0 |                  | 9/20/17 0:00          | EURO    |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710701

Date Received: 9/15/2017

Field Sample #: MH-204F

Sampled: 9/15/2017 12:35

Sample ID: 1710701-06

Sample Matrix: Ground Water

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

| Analyte                | Results | RL     | Units | Dilution | Flag/Qual | Method            | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------|---------|--------|-------|----------|-----------|-------------------|---------------|--------------------|---------|
| Chlorine, Residual     | ND      | 0.020  | mg/L  | 1        |           | SM21-22 4500 CL G | 9/15/17       | 9/15/17 23:15      | DJM     |
| Hexavalent Chromium    | ND      | 0.0040 | mg/L  | 1        |           | SM21-22 3500 Cr B | 9/15/17       | 9/15/17 23:45      | DJM     |
| Total Suspended Solids | 13      | 5.0    | mg/L  | 1        |           | SM21-22 2540D     | 9/18/17       | 9/18/17 14:05      | LL      |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710701

Date Received: 9/15/2017

Field Sample #: MH-204F

Sampled: 9/15/2017 12:35

Sample ID: 1710701-06

Sample Matrix: Ground Water

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

| Analyte  | Results | RL  | Units | Dilution | Flag/Qual | Method    | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|----------|---------|-----|-------|----------|-----------|-----------|------------------|-----------------------|---------|
| Chloride | 2860    | 100 | mg/L  | 100      |           | EPA 300.0 |                  | 9/20/17 0:00          | EURO    |

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

**Sample Extraction Data****SM21-22 2540D**

| Lab Number [Field ID] | Batch   | Initial [mL] | Date     |
|-----------------------|---------|--------------|----------|
| 17I0701-01 [MW-1]     | B186410 | 45.0         | 09/18/17 |
| 17I0701-02 [MW-1F]    | B186410 | 100          | 09/18/17 |
| 17I0701-03 [MH-206]   | B186410 | 15.0         | 09/18/17 |
| 17I0701-04 [MH-206F]  | B186410 | 100          | 09/18/17 |
| 17I0701-05 [MH-204]   | B186410 | 100          | 09/18/17 |
| 17I0701-06 [MH-204F]  | B186410 | 100          | 09/18/17 |

**SM21-22 3500 Cr B**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0701-01 [MW-1]     | B186370 | 50.0         | 50.0       | 09/15/17 |
| 17I0701-02 [MW-1F]    | B186370 | 50.0         | 50.0       | 09/15/17 |
| 17I0701-03 [MH-206]   | B186370 | 50.0         | 50.0       | 09/15/17 |
| 17I0701-04 [MH-206F]  | B186370 | 50.0         | 50.0       | 09/15/17 |
| 17I0701-05 [MH-204]   | B186370 | 50.0         | 50.0       | 09/15/17 |
| 17I0701-06 [MH-204F]  | B186370 | 50.0         | 50.0       | 09/15/17 |

**SM21-22 4500 CL G**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0701-01 [MW-1]     | B186372 | 100          | 100        | 09/15/17 |
| 17I0701-02 [MW-1F]    | B186372 | 100          | 100        | 09/15/17 |
| 17I0701-03 [MH-206]   | B186372 | 100          | 100        | 09/15/17 |
| 17I0701-04 [MH-206F]  | B186372 | 100          | 100        | 09/15/17 |
| 17I0701-05 [MH-204]   | B186372 | 100          | 100        | 09/15/17 |
| 17I0701-06 [MH-204F]  | B186372 | 100          | 100        | 09/15/17 |

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

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

| Analyte                                  | Result | Reporting Limit | Units | Spike Level                   | Source Result | %REC | %REC Limits | RPD    | RPD Limit | Notes |
|------------------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------|--------|-----------|-------|
| <b>Batch B186370 - SM21-22 3500 Cr B</b> |        |                 |       |                               |               |      |             |        |           |       |
| <b>Blank (B186370-BLK1)</b>              |        |                 |       | Prepared & Analyzed: 09/15/17 |               |      |             |        |           |       |
| Hexavalent Chromium                      | ND     | 0.0040          | mg/L  |                               |               |      |             |        |           |       |
| <b>LCS (B186370-BS1)</b>                 |        |                 |       | Prepared & Analyzed: 09/15/17 |               |      |             |        |           |       |
| Hexavalent Chromium                      | 0.098  | 0.0040          | mg/L  | 0.100                         |               | 97.8 | 86.6-115    |        |           |       |
| <b>LCS Dup (B186370-BSD1)</b>            |        |                 |       | Prepared & Analyzed: 09/15/17 |               |      |             |        |           |       |
| Hexavalent Chromium                      | 0.10   | 0.0040          | mg/L  | 0.100                         |               | 100  | 86.6-115    | 2.47   | 6.61      |       |
| <b>Batch B186372 - SM21-22 4500 CL G</b> |        |                 |       |                               |               |      |             |        |           |       |
| <b>Blank (B186372-BLK1)</b>              |        |                 |       | Prepared & Analyzed: 09/15/17 |               |      |             |        |           |       |
| Chlorine, Residual                       | ND     | 0.020           | mg/L  |                               |               |      |             |        |           |       |
| <b>LCS (B186372-BS1)</b>                 |        |                 |       | Prepared & Analyzed: 09/15/17 |               |      |             |        |           |       |
| Chlorine, Residual                       | 1.4    | 0.020           | mg/L  | 1.30                          |               | 109  | 82.5-130    |        |           |       |
| <b>LCS Dup (B186372-BSD1)</b>            |        |                 |       | Prepared & Analyzed: 09/15/17 |               |      |             |        |           |       |
| Chlorine, Residual                       | 1.4    | 0.020           | mg/L  | 1.30                          |               | 108  | 82.5-130    | 1.17   | 6.2       |       |
| <b>Batch B186410 - SM21-22 2540D</b>     |        |                 |       |                               |               |      |             |        |           |       |
| <b>Blank (B186410-BLK1)</b>              |        |                 |       | Prepared & Analyzed: 09/18/17 |               |      |             |        |           |       |
| Total Suspended Solids                   | ND     | 2.5             | mg/L  |                               |               |      |             |        |           |       |
| <b>LCS (B186410-BS1)</b>                 |        |                 |       | Prepared & Analyzed: 09/18/17 |               |      |             |        |           |       |
| Total Suspended Solids                   | 202    | 10              | mg/L  | 200                           |               | 101  | 66.7-117    |        |           |       |
| <b>Duplicate (B186410-DUP1)</b>          |        |                 |       | Prepared & Analyzed: 09/18/17 |               |      |             |        |           |       |
| Total Suspended Solids                   | 30     | 5.0             | mg/L  |                               | 32            |      |             | 6.45 * | 5         | R-02  |

---

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

|      |                                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| *    | QC result is outside of established limits.                                                                                                            |
| †    | Wide recovery limits established for difficult compound.                                                                                               |
| ‡    | Wide RPD limits established for difficult compound.                                                                                                    |
| #    | Data exceeded client recommended or regulatory level                                                                                                   |
| ND   | Not Detected                                                                                                                                           |
| RL   | Reporting Limit                                                                                                                                        |
| DL   | Method Detection Limit                                                                                                                                 |
| MCL  | Maximum Contaminant Level                                                                                                                              |
|      | Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded. |
|      | No results have been blank subtracted unless specified in the case narrative section.                                                                  |
| R-02 | Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.                        |
| W-06 | Elevated method reporting limit due to intense color of sample                                                                                         |

# CERTIFICATIONS

## Certified Analyses included in this Report

| Analyte                                  | Certifications          |
|------------------------------------------|-------------------------|
| <b><i>EPA 300.0 in Water</i></b>         |                         |
| Chloride                                 | NC,NY,MA,VA,ME,NH,CT,RI |
| <b><i>SM21-22 2540D in Water</i></b>     |                         |
| Total Suspended Solids                   | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>SM21-22 3500 Cr B in Water</i></b> |                         |
| Hexavalent Chromium                      | NY,CT,NH,RI,ME,VA,NC    |
| <b><i>SM21-22 4500 CL G in Water</i></b> |                         |
| Chlorine, Residual                       | CT,MA,RI,ME             |

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

| Code  | Description                                  | Number        | Expires    |
|-------|----------------------------------------------|---------------|------------|
| AIHA  | AIHA-LAP, LLC - ISO17025:2005                | 100033        | 02/1/2018  |
| MA    | Massachusetts DEP                            | M-MA100       | 06/30/2018 |
| CT    | Connecticut Department of Public Health      | PH-0567       | 09/30/2017 |
| NY    | New York State Department of Health          | 10899 NELAP   | 04/1/2018  |
| NH-S  | New Hampshire Environmental Lab              | 2516 NELAP    | 02/5/2018  |
| RI    | Rhode Island Department of Health            | LAO00112      | 12/30/2017 |
| NC    | North Carolina Div. of Water Quality         | 652           | 12/31/2017 |
| NJ    | New Jersey DEP                               | MA007 NELAP   | 06/30/2018 |
| FL    | Florida Department of Health                 | E871027 NELAP | 06/30/2018 |
| VT    | Vermont Department of Health Lead Laboratory | LL015036      | 07/30/2018 |
| ME    | State of Maine                               | 2011028       | 06/9/2019  |
| VA    | Commonwealth of Virginia                     | 460217        | 12/14/2017 |
| NH-P  | New Hampshire Environmental Lab              | 2557 NELAP    | 09/6/2017  |
| VT-DW | Vermont Department of Health Drinking Water  | VT-255716     | 06/12/2018 |
| NC-DW | North Carolina Department of Health          | 25703         | 07/31/2018 |



## CHAIN OF CUSTODY RECORD

39 Spruce Street  
East Longmeadow, MA 01028

Page 1 of 1



Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com

NSTAR/Eversource - Monthly Billing  
One NSTAR Way, Westwood, MA 02090

Phone: (339) 987-7029

Project Name: Mystic - East Eagle

Project Location: E-0754

Project Manager: Mike Zyllich

Purchase Order Number: 64454-1

Invoice Recipient: NSTAR/Eversource - Monthly Billing

Sampled By:

Enhanced Data Package Required: ☐Email To: memartin@tighebond.com,  
Michael.Zyllich@eversource.com

|                        |                          |                                     |                          |
|------------------------|--------------------------|-------------------------------------|--------------------------|
| 7-Day                  | <input type="checkbox"/> | 10-Day                              | <input type="checkbox"/> |
| Other:                 | 5 days                   | X                                   |                          |
| Rush Approval Required |                          |                                     |                          |
| 1-Day                  | <input type="checkbox"/> | 3-Day                               | <input type="checkbox"/> |
| 2-Day                  | <input type="checkbox"/> | 4-Day                               | <input type="checkbox"/> |
| Data Delivery          |                          |                                     |                          |
| Format:                | PDF                      | <input checked="" type="checkbox"/> | EXCEL                    |
| Other:                 |                          |                                     |                          |

| Client Sample ID / Description | Beginning Date/Time | Ending Date/Time | Composite | Matrix | Conc | Code |
|--------------------------------|---------------------|------------------|-----------|--------|------|------|
| MW-1                           | 9/15/17             | 9:00             | G         | GW     |      | U    |
| MW-1 F                         | 9/15/17             | 10:30            | G         | GW     |      | U    |
| MH-206                         | 9/15/17             | 12:00            | G         | GW     |      | U    |
| MH-206 F                       | 9/15/17             | 12:30            | G         | GW     |      | U    |
| MH-204                         | 9/15/17             | 12:30            | G         | GW     |      | U    |
| MH-204 F                       | 9/15/17             | 12:35            | G         | GW     |      | U    |

## Notes:

2: VOCs include EDB, TBA, TAME and 1,4-dioxane  
RGP Metals (antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, zinc and iron)

3:

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

| Relinquished by: (signature) | Date/Time                | Detection Limit Requirement |
|------------------------------|--------------------------|-----------------------------|
| Received by: (signature)     | Date/Time: 9/15/17 12:35 | MA                          |
| Relinquished by: (signature) | Date/Time: 9/15/17 12:35 | CT                          |
| Received by: (signature)     | Date/Time: 9/15/17 20:30 | Other:                      |
| Relinquished by: (signature) | Date/Time:               |                             |
| Received by: (signature)     | Date/Time:               |                             |
| Relinquished by: (signature) | Date/Time:               |                             |

## Program Information

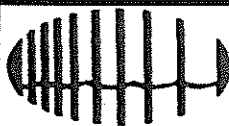
MCP Analytical Certification Form Required  
RCP Analysis Certification Form Required  
MA State DW Form Required  
PWSID #

NELAC and AIHA-LAP, LLC Accredited

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

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St.  
East Longmeadow, MA. 01028  
P: 413-525-2332  
F: 413-525-6405  
www.contestlabs.com



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client EVERSOURCE

Received By A.J.F Date 9/15/17 Time 2030

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

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 3.4  
By Blank #        Actual Temp -       

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

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

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

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

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

Are Sample labels filled out and legible? T

Are there Lab to Filters? N/A Who was notified? N/A

Are there Rushes? N/A Who was notified? N/A

Are there Short Holds? T Who was notified? David

Is there enough Volume? T

Is there Headspace where applicable? N/A

Proper Media/Containers Used? T MS/MSD? N/A

Were trip blanks received? N/A Is splitting samples required? N/A

Do all samples have the proper pH? N/A Acid        Base       

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

**Unused Media**

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

Comments:

September 28, 2017

Michael Zylich  
NSTAR Electric & Gas Corporation - Monthly Billing  
One NSTAR Way, SUM SE-250  
East Sandwich, MA 02090-9230

Project Location: Mystic - East Eagle  
Client Job Number:  
Project Number: [none]  
Laboratory Work Order Number: 17I0770

Enclosed are results of analyses for samples received by the laboratory on September 18, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas", with a long horizontal flourish extending to the right.

James M. Georgantas  
Project Manager

## Table of Contents

|                                           |    |
|-------------------------------------------|----|
| Sample Summary                            | 4  |
| Case Narrative                            | 6  |
| Sample Results                            | 10 |
| 17I0770-01                                | 10 |
| 17I0770-02                                | 20 |
| 17I0770-03                                | 30 |
| 17I0770-04                                | 40 |
| Sample Preparation Information            | 50 |
| QC Data                                   | 53 |
| Volatile Organic Compounds by GC/MS       | 53 |
| B186621                                   | 53 |
| Semivolatile Organic Compounds by GC/MS   | 55 |
| B186837                                   | 55 |
| Semivolatile Organic Compounds by - GC/MS | 56 |
| B186688                                   | 56 |
| Polychlorinated Biphenyls By GC/ECD       | 60 |
| B186668                                   | 60 |
| Metals Analyses (Total)                   | 61 |
| B186577                                   | 61 |
| B186704                                   | 61 |
| B186706                                   | 61 |
| Metals Analyses (Dissolved)               | 63 |
| B186544                                   | 63 |
| B186556                                   | 64 |
| B186578                                   | 64 |

## Table of Contents (continued)

|                                                                      |    |
|----------------------------------------------------------------------|----|
| B186698                                                              | 64 |
| Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) | 66 |
| B186528                                                              | 66 |
| B186642                                                              | 66 |
| B186650                                                              | 66 |
| Drinking Water Organics EPA 504.1                                    | 67 |
| B186764                                                              | 67 |
| Semivolatile Organic Compounds by GC                                 | 68 |
| '[none]'                                                             | 68 |
| Dual Column RPD Report                                               | 69 |
| Flag/Qualifier Summary                                               | 73 |
| Certifications                                                       | 74 |
| Chain of Custody/Sample Receipt                                      | 79 |

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

NSTAR Electric &amp; Gas Corporation - Monthly Billir

One NSTAR Way, SUM SE-250

East Sandwich, MA 02090-9230

ATTN: Michael Zylich

REPORT DATE: 9/28/2017

PURCHASE ORDER NUMBER: 64454 Release 1

PROJECT NUMBER: [none]

# ANALYTICAL SUMMARY

WORK ORDER NUMBER: 1710770

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

PROJECT LOCATION: Mystic - East Eagle

| FIELD SAMPLE # | LAB ID:    | MATRIX       | SAMPLE DESCRIPTION | TEST                                               | SUB LAB |
|----------------|------------|--------------|--------------------|----------------------------------------------------|---------|
| MW-206         | 17I0770-03 | Ground Water |                    | EPA 1664B                                          |         |
|                |            |              |                    | EPA 200.7                                          |         |
|                |            |              |                    | EPA 200.8                                          |         |
|                |            |              |                    | EPA 245.1                                          |         |
|                |            |              |                    | EPA 420.1                                          |         |
|                |            |              |                    | EPA 504.1                                          |         |
|                |            |              |                    | EPA 608                                            |         |
|                |            |              |                    | EPA 624                                            |         |
|                |            |              |                    | EPA 625                                            |         |
|                |            |              |                    | SM19-22 4500 NH3 C                                 |         |
|                |            |              |                    | SM21-22 2540D                                      |         |
|                |            |              |                    | SM21-22 4500 CN E                                  |         |
|                |            |              |                    | SW-846 8015C                                       |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    | MA M-MA-086/CT<br>PH-0574/NY11148                  |         |
|                |            |              |                    | MA M-MA-086/CT<br>PH-0574/NY11148                  |         |
|                |            |              |                    | NH NELAC 2539/ MA<br>M-MA014/CT PH-0494<br>+others |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |
|                |            |              |                    |                                                    |         |

#### **CASE NARRATIVE SUMMARY**

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

For method 8270, only a select list of compounds was requested and reported.

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

**EPA 200.7****Qualifications:****MS-07**

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

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

B186556-MS1

**EPA 200.8****Qualifications:****DL-15**

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

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

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**Arsenic**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**Cadmium**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**Chromium**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**Copper**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**Lead**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F], 17I0770-04RE1[MW-206F]

**Nickel**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**Selenium**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**Silver**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**Zinc**

17I0770-01[MW-1], 17I0770-02RE1[MW-1F]

**EPA 624****Qualifications:****DL-01**

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

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

17I0770-03[MW-206]

**EPA 625****Qualifications:****L-04**

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

**Analyte & Samples(s) Qualified:****2-Chloronaphthalene**

17I0770-01[MW-1], 17I0770-02[MW-1F], 17I0770-03[MW-206], 17I0770-04[MW-206F], B186688-BLK1, B186688-BS1, B186688-BSD1

**L-07**

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

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

B186688-BSD1

**Pyrene**

B186688-BSD1



---

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

---

**V-04**

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

**Analyte & Samples(s) Qualified:****4,6-Dinitro-2-methylphenol**

17I0770-01[MW-1], 17I0770-02[MW-1F], 17I0770-03[MW-206], 17I0770-04[MW-206F], B186688-BLK1, B186688-BS1, B186688-BSD1

**Benzidine**

17I0770-01[MW-1], 17I0770-02[MW-1F], 17I0770-03[MW-206], 17I0770-04[MW-206F], B186688-BLK1, B186688-BS1, B186688-BSD1

---

**V-05**

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

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

17I0770-01[MW-1], 17I0770-02[MW-1F], 17I0770-03[MW-206], 17I0770-04[MW-206F]

---

**V-19**

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

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

17I0770-01[MW-1], 17I0770-02[MW-1F], 17I0770-03[MW-206], 17I0770-04[MW-206F], B186688-BLK1, B186688-BS1, B186688-BSD1

---

**V-20**

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

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

17I0770-01[MW-1], 17I0770-02[MW-1F], 17I0770-03[MW-206], 17I0770-04[MW-206F], B186688-BLK1, B186688-BS1, B186688-BSD1

**4,6-Dinitro-2-methylphenol**

17I0770-01[MW-1], 17I0770-02[MW-1F], 17I0770-03[MW-206], 17I0770-04[MW-206F], B186688-BLK1, B186688-BS1, B186688-BSD1

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

---

**R-02**

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

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

17I0770-04[MW-206F]

**SW-846 8270D****Qualifications:**

---

**B**

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

**Analyte & Samples(s) Qualified:****Bis(2-Ethylhexyl)phthalate**

17I0770-01[MW-1], 17I0770-02[MW-1F], 17I0770-03[MW-206], 17I0770-04[MW-206F], B186837-BLK1, B186837-BS1, B186837-BSD1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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

Lisa A. Worthington  
Project Manager

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

Sample Flags: DL-01

## Volatile Organic Compounds by GC/MS

| Analyte                        | Results | RL  | DL   | Units | Dilution | Flag/Qual | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|--------------------------------|---------|-----|------|-------|----------|-----------|---------|---------------|--------------------|---------|
| Acetone                        | ND      | 100 | 9.7  | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| tert-Amyl Methyl Ether (TAME)  | ND      | 1.0 | 0.21 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Benzene                        | 5.2     | 2.0 | 0.24 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| tert-Butyl Alcohol (TBA)       | ND      | 40  | 4.3  | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Carbon Tetrachloride           | ND      | 4.0 | 0.49 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,2-Dichlorobenzene            | ND      | 4.0 | 0.34 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,3-Dichlorobenzene            | ND      | 4.0 | 0.34 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,4-Dichlorobenzene            | ND      | 4.0 | 0.30 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,2-Dichloroethane             | ND      | 4.0 | 0.39 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| cis-1,2-Dichloroethylene       | ND      | 2.0 | 0.29 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,1-Dichloroethane             | ND      | 4.0 | 0.32 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,1-Dichloroethylene           | ND      | 4.0 | 0.42 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,4-Dioxane                    | ND      | 100 | 53   | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Ethylbenzene                   | 0.42    | 4.0 | 0.26 | µg/L  | 2        | J         | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Methyl tert-Butyl Ether (MTBE) | 1.0     | 4.0 | 0.18 | µg/L  | 2        | J         | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Methylene Chloride             | ND      | 10  | 6.4  | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Tetrachloroethylene            | ND      | 4.0 | 0.54 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Toluene                        | ND      | 2.0 | 0.34 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,1,1-Trichloroethane          | ND      | 4.0 | 0.26 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| 1,1,2-Trichloroethane          | ND      | 4.0 | 0.47 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Trichloroethylene              | ND      | 4.0 | 0.40 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| Vinyl Chloride                 | ND      | 4.0 | 0.27 | µg/L  | 2        |           | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| m+p Xylene                     | 0.80    | 4.0 | 0.51 | µg/L  | 2        | J         | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |
| o-Xylene                       | 0.66    | 4.0 | 0.26 | µg/L  | 2        | J         | EPA 624 | 9/20/17       | 9/20/17 22:56      | EEH     |

| Surrogates            | % Recovery | Recovery Limits | Flag/Qual |
|-----------------------|------------|-----------------|-----------|
| 1,2-Dichloroethane-d4 | 97.2       | 70-130          |           |
| Toluene-d8            | 102        | 70-130          |           |
| 4-Bromofluorobenzene  | 96.6       | 70-130          |           |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

| Analyte                    | Results    | RL    | DL              | Units | Dilution  | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|----------------------------|------------|-------|-----------------|-------|-----------|-----------|--------------|---------------|--------------------|---------|
| Benzo(a)anthracene         | 0.052      | 0.050 | 0.050           | µg/L  | 1         |           | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Benzo(a)pyrene             | ND         | 0.10  | 0.10            | µg/L  | 1         |           | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Benzo(b)fluoranthene       | ND         | 0.050 | 0.050           | µg/L  | 1         |           | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Benzo(k)fluoranthene       | ND         | 0.20  | 0.20            | µg/L  | 1         |           | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Bis(2-Ethylhexyl)phthalate | 0.28       | 1.0   | 0.10            | µg/L  | 1         | J, B      | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Chrysene                   | ND         | 0.20  | 0.20            | µg/L  | 1         |           | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Dibenz(a,h)anthracene      | ND         | 0.20  | 0.20            | µg/L  | 1         |           | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Indeno(1,2,3-cd)pyrene     | ND         | 0.20  | 0.20            | µg/L  | 1         |           | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Pentachlorophenol          | ND         | 1.0   | 0.34            | µg/L  | 1         |           | SW-846 8270D | 9/22/17       | 9/24/17 19:09      | CJM     |
| Surrogates                 | % Recovery |       | Recovery Limits |       | Flag/Qual |           |              |               |                    |         |
| 2-Fluorophenol             | 49.9       |       | 15-110          |       |           |           |              |               | 9/24/17 19:09      |         |
| Phenol-d6                  | 33.5       |       | 15-110          |       |           |           |              |               | 9/24/17 19:09      |         |
| Nitrobenzene-d5            | 79.4       |       | 30-130          |       |           |           |              |               | 9/24/17 19:09      |         |
| 2-Fluorobiphenyl           | 80.3       |       | 30-130          |       |           |           |              |               | 9/24/17 19:09      |         |
| 2,4,6-Tribromophenol       | 75.9       |       | 15-110          |       |           |           |              |               | 9/24/17 19:09      |         |
| p-Terphenyl-d14            | 69.7       |       | 30-130          |       |           |           |              |               | 9/24/17 19:09      |         |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - GC/MS

| Analyte                               | Results | RL  | Units | Dilution | Flag/Qual  | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------------------------|---------|-----|-------|----------|------------|---------|---------------|--------------------|---------|
| Acenaphthene                          | 14      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Acenaphthylene                        | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Anthracene                            | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Benzidine                             | ND      | 20  | µg/L  | 1        | V-04, V-05 | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Benzo(g,h,i)perylene                  | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 4-Bromophenylphenylether              | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Butylbenzylphthalate                  | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 4-Chloro-3-methylphenol               | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Bis(2-chloroethyl)ether               | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Bis(2-chloroisopropyl)ether           | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2-Chloronaphthalene                   | ND      | 10  | µg/L  | 1        | L-04       | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2-Chlorophenol                        | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 4-Chlorophenylphenylether             | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Di-n-butylphthalate                   | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 1,3-Dichlorobenzene                   | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 1,4-Dichlorobenzene                   | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 1,2-Dichlorobenzene                   | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 3,3-Dichlorobenzidine                 | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2,4-Dichlorophenol                    | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Diethylphthalate                      | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2,4-Dimethylphenol                    | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Dimethylphthalate                     | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 4,6-Dinitro-2-methylphenol            | ND      | 10  | µg/L  | 1        | V-04, V-20 | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2,4-Dinitrophenol                     | ND      | 10  | µg/L  | 1        | V-19, V-20 | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2,4-Dinitrotoluene                    | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2,6-Dinitrotoluene                    | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Di-n-octylphthalate                   | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 1,2-Diphenylhydrazine (as Azobenzene) | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Bis(2-Ethylhexyl)phthalate            | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Fluoranthene                          | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Fluorene                              | 6.0     | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Hexachlorobenzene                     | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Hexachlorobutadiene                   | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Hexachlorocyclopentadiene             | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Hexachloroethane                      | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Isophorone                            | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Naphthalene                           | 8.7     | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Nitrobenzene                          | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2-Nitrophenol                         | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 4-Nitrophenol                         | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| N-Nitrosodimethylamine                | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| N-Nitrosodiphenylamine                | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| N-Nitrosodi-n-propylamine             | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2-Methylnaphthalene                   | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - GC/MS

| Analyte                | Results    | RL              | Units     | Dilution | Flag/Qual | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------|------------|-----------------|-----------|----------|-----------|---------|---------------|--------------------|---------|
| Phenanthrene           | 5.6        | 5.0             | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2-Methylphenol         | ND         | 10              | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Phenol                 | ND         | 10              | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 3/4-Methylphenol       | ND         | 10              | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Pyrene                 | ND         | 5.0             | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 1,2,4-Trichlorobenzene | ND         | 5.0             | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| 2,4,6-Trichlorophenol  | ND         | 10              | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 14:41      | BGL     |
| Surrogates             | % Recovery | Recovery Limits | Flag/Qual |          |           |         |               |                    |         |
| 2-Fluorophenol         | 63.8       | 15-110          |           |          |           |         |               | 9/25/17 14:41      |         |
| Phenol-d6              | 52.7       | 15-110          |           |          |           |         |               | 9/25/17 14:41      |         |
| Nitrobenzene-d5        | 84.8       | 30-130          |           |          |           |         |               | 9/25/17 14:41      |         |
| 2-Fluorobiphenyl       | 69.9       | 30-130          |           |          |           |         |               | 9/25/17 14:41      |         |
| 2,4,6-Tribromophenol   | 68.9       | 15-110          |           |          |           |         |               | 9/25/17 14:41      |         |
| p-Terphenyl-d14        | 85.6       | 30-130          |           |          |           |         |               | 9/25/17 14:41      |         |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

### Polychlorinated Biphenyls By GC/ECD

| Analyte                  | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|--------------------------|------------|------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| Aroclor-1016 [1]         | ND         | 0.10 | 0.057           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:20      | TG      |
| Aroclor-1221 [1]         | ND         | 0.10 | 0.062           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:20      | TG      |
| Aroclor-1232 [1]         | ND         | 0.10 | 0.038           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:20      | TG      |
| Aroclor-1242 [1]         | ND         | 0.10 | 0.054           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:20      | TG      |
| Aroclor-1248 [1]         | ND         | 0.10 | 0.064           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:20      | TG      |
| Aroclor-1254 [1]         | ND         | 0.10 | 0.071           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:20      | TG      |
| Aroclor-1260 [1]         | ND         | 0.10 | 0.073           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:20      | TG      |
| Surrogates               | % Recovery |      | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| Decachlorobiphenyl [1]   | 81.1       |      | 30-150          |       |           |           | 9/26/17 14:20 |               |                    |         |
| Decachlorobiphenyl [2]   | 98.6       |      | 30-150          |       |           |           | 9/26/17 14:20 |               |                    |         |
| Tetrachloro-m-xylene [1] | 86.0       |      | 30-150          |       |           |           | 9/26/17 14:20 |               |                    |         |
| Tetrachloro-m-xylene [2] | 84.8       |      | 30-150          |       |           |           | 9/26/17 14:20 |               |                    |         |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

## Metals Analyses (Total)

| Analyte  | Results | RL      | DL  | Units | Dilution | Flag/Qual | Method    | Date Prepared | Date/Time Analyzed | Analyst |
|----------|---------|---------|-----|-------|----------|-----------|-----------|---------------|--------------------|---------|
| Antimony | ND      | 1.0     |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Arsenic  | 1.3     | 1.0     |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Cadmium  | ND      | 0.20    |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Chromium | ND      | 10      |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Copper   | 8.7     | 1.0     |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Iron     | 8.1     | 0.050   |     | mg/L  | 1        |           | EPA 200.7 | 9/20/17       | 9/21/17 15:43      | QNW     |
| Lead     | 1.6     | 0.50    |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Mercury  | ND      | 0.00010 |     | mg/L  | 1        |           | EPA 245.1 | 9/19/17       | 9/20/17 9:35       | TJK     |
| Nickel   | 5.3     | 5.0     |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Selenium | ND      | 5.0     | 2.1 | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Silver   | ND      | 0.20    |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |
| Zinc     | ND      | 20      |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/21/17 6:49       | MJH     |



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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

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

| Analyte                          | Results | RL    | Units | Dilution | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------------------------|---------|-------|-------|----------|-----------|---------------|---------------|--------------------|---------|
| Phenol                           | 0.12    | 0.050 | mg/L  | 1        |           | EPA 420.1     | 9/21/17       | 9/21/17 13:00      | LL      |
| Total Suspended Solids           | 100     | 5.0   | mg/L  | 1        |           | SM21-22 2540D | 9/19/17       | 9/19/17 12:35      | LL      |
| Silica Gel Treated HEM (SGT-HEM) | ND      | 1.4   | mg/L  | 1        |           | EPA 1664B     | 9/20/17       | 9/20/17 12:45      | LL      |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

### Drinking Water Organics EPA 504.1

| Analyte                     | Results    | RL              | Units     | Dilution | Flag/Qual | Method    | Date Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|------------|-----------------|-----------|----------|-----------|-----------|---------------|--------------------|---------|
| 1,2-Dibromoethane (EDB) (1) | ND         | 0.020           | µg/L      | 1        |           | EPA 504.1 | 9/21/17       | 9/21/17 18:09      | TG      |
| Surrogates                  | % Recovery | Recovery Limits | Flag/Qual |          |           |           |               |                    |         |
| 1,3-Dibromopropane (1)      | 70.3       | 70-130          |           |          |           |           |               | 9/21/17 18:09      |         |
| 1,3-Dibromopropane (2)      | 79.2       | 70-130          |           |          |           |           |               | 9/21/17 18:09      |         |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

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

| Analyte      | Results | RL    | Units | Dilution | Flag/Qual | Method             | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|--------------|---------|-------|-------|----------|-----------|--------------------|------------------|-----------------------|---------|
| Ammonia as N | 15.7    | 0.375 | mg/L  | 5        |           | SM19-22 4500 NH3 C |                  | 9/25/17 20:40         | AAL     |
| Cyanide      | 0.023   | 0.005 | mg/L  | 1        |           | SM21-22 4500 CN E  |                  | 9/21/17 11:11         | AAL     |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206

Sampled: 9/15/2017 12:00

Sample ID: 1710770-03

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC

| Analyte | Results | RL   | Units | Dilution | Flag/Qual | Method | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------|---------|------|-------|----------|-----------|--------|------------------|-----------------------|---------|
| Ethanol | ND      | 2000 | µg/L  | 1        |           | 1671A  |                  | 9/21/17 13:08         | TAL     |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

| Analyte                        | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|--------------------------------|------------|------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| Acetone                        | ND         | 50   | 4.9             | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| tert-Amyl Methyl Ether (TAME)  | ND         | 0.50 | 0.11            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Benzene                        | 3.0        | 1.0  | 0.12            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| tert-Butyl Alcohol (TBA)       | ND         | 20   | 2.2             | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Carbon Tetrachloride           | ND         | 2.0  | 0.25            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,2-Dichlorobenzene            | ND         | 2.0  | 0.17            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,3-Dichlorobenzene            | ND         | 2.0  | 0.17            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,4-Dichlorobenzene            | ND         | 2.0  | 0.15            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,2-Dichloroethane             | ND         | 2.0  | 0.19            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| cis-1,2-Dichloroethylene       | ND         | 1.0  | 0.15            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,1-Dichloroethane             | ND         | 2.0  | 0.16            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,1-Dichloroethylene           | ND         | 2.0  | 0.21            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,4-Dioxane                    | ND         | 50   | 26              | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Ethylbenzene                   | 0.18       | 2.0  | 0.13            | µg/L  | 1         | J         | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Methyl tert-Butyl Ether (MTBE) | 0.94       | 2.0  | 0.090           | µg/L  | 1         | J         | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Methylene Chloride             | ND         | 5.0  | 3.2             | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Tetrachloroethylene            | ND         | 2.0  | 0.27            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Toluene                        | ND         | 1.0  | 0.17            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,1,1-Trichloroethane          | ND         | 2.0  | 0.13            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| 1,1,2-Trichloroethane          | ND         | 2.0  | 0.24            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Trichloroethylene              | ND         | 2.0  | 0.20            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Vinyl Chloride                 | ND         | 2.0  | 0.13            | µg/L  | 1         |           | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| m+p Xylene                     | 0.36       | 2.0  | 0.26            | µg/L  | 1         | J         | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| o-Xylene                       | 0.35       | 2.0  | 0.13            | µg/L  | 1         | J         | EPA 624       | 9/20/17       | 9/20/17 22:29      | EEH     |
| Surrogates                     | % Recovery |      | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| 1,2-Dichloroethane-d4          | 98.4       |      | 70-130          |       |           |           | 9/20/17 22:29 |               |                    |         |
| Toluene-d8                     | 101        |      | 70-130          |       |           |           | 9/20/17 22:29 |               |                    |         |
| 4-Bromofluorobenzene           | 95.6       |      | 70-130          |       |           |           | 9/20/17 22:29 |               |                    |         |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

| Analyte                    | Results    | RL    | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------------------|------------|-------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| Benzo(a)anthracene         | ND         | 0.050 | 0.050           | µg/L  | 1         |           | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Benzo(a)pyrene             | ND         | 0.10  | 0.10            | µg/L  | 1         |           | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Benzo(b)fluoranthene       | ND         | 0.050 | 0.050           | µg/L  | 1         |           | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Benzo(k)fluoranthene       | ND         | 0.20  | 0.20            | µg/L  | 1         |           | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Bis(2-Ethylhexyl)phthalate | 0.24       | 1.0   | 0.10            | µg/L  | 1         | J, B      | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Chrysene                   | ND         | 0.20  | 0.20            | µg/L  | 1         |           | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Dibenz(a,h)anthracene      | ND         | 0.20  | 0.20            | µg/L  | 1         |           | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Indeno(1,2,3-cd)pyrene     | ND         | 0.20  | 0.20            | µg/L  | 1         |           | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Pentachlorophenol          | ND         | 1.0   | 0.34            | µg/L  | 1         |           | SW-846 8270D  | 9/22/17       | 9/24/17 19:37      | CJM     |
| Surrogates                 | % Recovery |       | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| 2-Fluorophenol             | 45.7       |       | 15-110          |       |           |           | 9/24/17 19:37 |               |                    |         |
| Phenol-d6                  | 34.5       |       | 15-110          |       |           |           | 9/24/17 19:37 |               |                    |         |
| Nitrobenzene-d5            | 82.6       |       | 30-130          |       |           |           | 9/24/17 19:37 |               |                    |         |
| 2-Fluorobiphenyl           | 80.3       |       | 30-130          |       |           |           | 9/24/17 19:37 |               |                    |         |
| 2,4,6-Tribromophenol       | 75.2       |       | 15-110          |       |           |           | 9/24/17 19:37 |               |                    |         |
| p-Terphenyl-d14            | 68.4       |       | 30-130          |       |           |           | 9/24/17 19:37 |               |                    |         |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - GC/MS

| Analyte                               | Results | RL  | Units | Dilution | Flag/Qual  | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------------------------|---------|-----|-------|----------|------------|---------|---------------|--------------------|---------|
| Acenaphthene                          | 12      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Acenaphthylene                        | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Anthracene                            | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Benzidine                             | ND      | 20  | µg/L  | 1        | V-04, V-05 | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Benzo(g,h,i)perylene                  | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 4-Bromophenylphenylether              | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Butylbenzylphthalate                  | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 4-Chloro-3-methylphenol               | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Bis(2-chloroethyl)ether               | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Bis(2-chloroisopropyl)ether           | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2-Chloronaphthalene                   | ND      | 10  | µg/L  | 1        | L-04       | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2-Chlorophenol                        | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 4-Chlorophenylphenylether             | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Di-n-butylphthalate                   | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 1,3-Dichlorobenzene                   | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 1,4-Dichlorobenzene                   | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 1,2-Dichlorobenzene                   | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 3,3-Dichlorobenzidine                 | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2,4-Dichlorophenol                    | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Diethylphthalate                      | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2,4-Dimethylphenol                    | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Dimethylphthalate                     | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 4,6-Dinitro-2-methylphenol            | ND      | 10  | µg/L  | 1        | V-04, V-20 | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2,4-Dinitrophenol                     | ND      | 10  | µg/L  | 1        | V-19, V-20 | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2,4-Dinitrotoluene                    | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2,6-Dinitrotoluene                    | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Di-n-octylphthalate                   | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 1,2-Diphenylhydrazine (as Azobenzene) | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Bis(2-Ethylhexyl)phthalate            | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Fluoranthene                          | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Fluorene                              | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Hexachlorobenzene                     | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Hexachlorobutadiene                   | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Hexachlorocyclopentadiene             | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Hexachloroethane                      | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Isophorone                            | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Naphthalene                           | 6.2     | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Nitrobenzene                          | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2-Nitrophenol                         | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 4-Nitrophenol                         | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| N-Nitrosodimethylamine                | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| N-Nitrosodiphenylamine                | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| N-Nitrosodi-n-propylamine             | ND      | 10  | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2-Methylnaphthalene                   | ND      | 5.0 | µg/L  | 1        |            | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - GC/MS

| Analyte                | Results    | RL              | Units     | Dilution | Flag/Qual | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------|------------|-----------------|-----------|----------|-----------|---------|---------------|--------------------|---------|
| Phenanthrene           | ND         | 5.0             | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2-Methylphenol         | ND         | 10              | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Phenol                 | ND         | 10              | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 3/4-Methylphenol       | ND         | 10              | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Pyrene                 | ND         | 5.0             | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 1,2,4-Trichlorobenzene | ND         | 5.0             | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| 2,4,6-Trichlorophenol  | ND         | 10              | µg/L      | 1        |           | EPA 625 | 9/20/17       | 9/25/17 15:09      | BGL     |
| Surrogates             | % Recovery | Recovery Limits | Flag/Qual |          |           |         |               |                    |         |
| 2-Fluorophenol         | 46.3       | 15-110          |           |          |           |         |               | 9/25/17 15:09      |         |
| Phenol-d6              | 36.4       | 15-110          |           |          |           |         |               | 9/25/17 15:09      |         |
| Nitrobenzene-d5        | 70.4       | 30-130          |           |          |           |         |               | 9/25/17 15:09      |         |
| 2-Fluorobiphenyl       | 61.2       | 30-130          |           |          |           |         |               | 9/25/17 15:09      |         |
| 2,4,6-Tribromophenol   | 63.5       | 15-110          |           |          |           |         |               | 9/25/17 15:09      |         |
| p-Terphenyl-d14        | 77.0       | 30-130          |           |          |           |         |               | 9/25/17 15:09      |         |



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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

### Polychlorinated Biphenyls By GC/ECD

| Analyte                  | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|--------------------------|------------|------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| Aroclor-1016 [1]         | ND         | 0.10 | 0.057           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:33      | TG      |
| Aroclor-1221 [1]         | ND         | 0.10 | 0.062           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:33      | TG      |
| Aroclor-1232 [1]         | ND         | 0.10 | 0.038           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:33      | TG      |
| Aroclor-1242 [1]         | ND         | 0.10 | 0.054           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:33      | TG      |
| Aroclor-1248 [1]         | ND         | 0.10 | 0.064           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:33      | TG      |
| Aroclor-1254 [1]         | ND         | 0.10 | 0.071           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:33      | TG      |
| Aroclor-1260 [1]         | ND         | 0.10 | 0.073           | µg/L  | 1         |           | EPA 608       | 9/20/17       | 9/26/17 14:33      | TG      |
| Surrogates               | % Recovery |      | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| Decachlorobiphenyl [1]   | 85.1       |      | 30-150          |       |           |           | 9/26/17 14:33 |               |                    |         |
| Decachlorobiphenyl [2]   | 103        |      | 30-150          |       |           |           | 9/26/17 14:33 |               |                    |         |
| Tetrachloro-m-xylene [1] | 80.1       |      | 30-150          |       |           |           | 9/26/17 14:33 |               |                    |         |
| Tetrachloro-m-xylene [2] | 79.3       |      | 30-150          |       |           |           | 9/26/17 14:33 |               |                    |         |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

## Metals Analyses (Dissolved)

| Analyte  | Results | RL      | DL  | Units | Dilution | Flag/Qual | Method    | Date Prepared | Date/Time Analyzed | Analyst |
|----------|---------|---------|-----|-------|----------|-----------|-----------|---------------|--------------------|---------|
| Antimony | ND      | 1.0     |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |
| Arsenic  | ND      | 1.0     |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |
| Cadmium  | ND      | 0.20    |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |
| Chromium | ND      | 10      |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |
| Copper   | 5.6     | 1.0     |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |
| Iron     | 8.5     | 0.050   |     | mg/L  | 1        |           | EPA 200.7 | 9/19/17       | 9/19/17 17:38      | QNW     |
| Lead     | ND      | 2.5     |     | µg/L  | 5        | DL-15     | EPA 200.8 | 9/20/17       | 9/21/17 12:14      | WSD     |
| Mercury  | ND      | 0.00010 |     | mg/L  | 1        |           | EPA 245.1 | 9/19/17       | 9/20/17 9:46       | TJK     |
| Nickel   | 5.9     | 5.0     |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |
| Selenium | ND      | 5.0     | 2.1 | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |
| Silver   | ND      | 0.20    |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |
| Zinc     | ND      | 20      |     | µg/L  | 1        |           | EPA 200.8 | 9/20/17       | 9/22/17 13:16      | WSD     |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

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

| Analyte                          | Results | RL    | Units | Dilution | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------------------------|---------|-------|-------|----------|-----------|---------------|---------------|--------------------|---------|
| Phenol                           | 0.060   | 0.050 | mg/L  | 1        |           | EPA 420.1     | 9/21/17       | 9/21/17 13:00      | LL      |
| Total Suspended Solids           | 32      | 5.0   | mg/L  | 1        | R-02      | SM21-22 2540D | 9/19/17       | 9/19/17 12:35      | LL      |
| Silica Gel Treated HEM (SGT-HEM) | ND      | 1.4   | mg/L  | 1        |           | EPA 1664B     | 9/20/17       | 9/20/17 12:45      | LL      |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

### Drinking Water Organics EPA 504.1

| Analyte                     | Results    | RL              | Units     | Dilution | Flag/Qual | Method    | Date Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|------------|-----------------|-----------|----------|-----------|-----------|---------------|--------------------|---------|
| 1,2-Dibromoethane (EDB) (1) | ND         | 0.020           | µg/L      | 1        |           | EPA 504.1 | 9/21/17       | 9/21/17 18:32      | TG      |
| Surrogates                  | % Recovery | Recovery Limits | Flag/Qual |          |           |           |               |                    |         |
| 1,3-Dibromopropane (1)      | 70.2       | 70-130          |           |          |           |           |               | 9/21/17 18:32      |         |
| 1,3-Dibromopropane (2)      | 78.8       | 70-130          |           |          |           |           |               | 9/21/17 18:32      |         |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

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

| Analyte      | Results | RL    | Units | Dilution | Flag/Qual | Method             | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|--------------|---------|-------|-------|----------|-----------|--------------------|------------------|-----------------------|---------|
| Ammonia as N | 14.5    | 0.375 | mg/L  | 5        |           | SM19-22 4500 NH3 C |                  | 9/25/17 20:41         | AAL     |
| Cyanide      | 0.016   | 0.005 | mg/L  | 1        |           | SM21-22 4500 CN E  |                  | 9/21/17 15:35         | AAL     |

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

Project Location: Mystic - East Eagle

Sample Description:

Work Order: 1710770

Date Received: 9/18/2017

Field Sample #: MW-206F

Sampled: 9/15/2017 13:00

Sample ID: 1710770-04

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC

| Analyte | Results | RL   | Units | Dilution | Flag/Qual | Method | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------|---------|------|-------|----------|-----------|--------|------------------|-----------------------|---------|
| Ethanol | ND      | 2000 | µg/L  | 1        |           | 1671A  |                  | 9/21/17 13:14         | TAL     |

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

**Sample Extraction Data****EPA 1664B**

| Lab Number [Field ID] | Batch   | Initial [mL] | Date     |  |
|-----------------------|---------|--------------|----------|--|
| 17I0770-01 [MW-1]     | B186642 | 1000         | 09/20/17 |  |
| 17I0770-02 [MW-1F]    | B186642 | 900          | 09/20/17 |  |
| 17I0770-03 [MW-206]   | B186642 | 1000         | 09/20/17 |  |
| 17I0770-04 [MW-206F]  | B186642 | 980          | 09/20/17 |  |

**Prep Method: EPA 200.7 Dissolved-EPA 200.7**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-02 [MW-1F]    | B186556 | 50.0         | 50.0       | 09/19/17 |
| 17I0770-04 [MW-206F]  | B186556 | 50.0         | 50.0       | 09/19/17 |

**Prep Method: EPA 200.7-EPA 200.7**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186704 | 50.0         | 50.0       | 09/20/17 |
| 17I0770-03 [MW-206]   | B186704 | 50.0         | 50.0       | 09/20/17 |

**Prep Method: EPA 200.8 Dissolved-EPA 200.8**

| Lab Number [Field ID]   | Batch   | Initial [mL] | Final [mL] | Date     |
|-------------------------|---------|--------------|------------|----------|
| 17I0770-02RE1 [MW-1F]   | B186698 | 50.0         | 50.0       | 09/20/17 |
| 17I0770-04RE1 [MW-206F] | B186698 | 50.0         | 50.0       | 09/20/17 |

**Prep Method: EPA 200.8-EPA 200.8**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186706 | 50.0         | 50.0       | 09/20/17 |
| 17I0770-03 [MW-206]   | B186706 | 50.0         | 50.0       | 09/20/17 |

**Prep Method: EPA 245.1-EPA 245.1**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186577 | 6.00         | 6.00       | 09/19/17 |
| 17I0770-03 [MW-206]   | B186577 | 6.00         | 6.00       | 09/19/17 |

**Prep Method: EPA 245.1-EPA 245.1**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-02 [MW-1F]    | B186578 | 6.00         | 6.00       | 09/19/17 |
| 17I0770-04 [MW-206F]  | B186578 | 6.00         | 6.00       | 09/19/17 |

**EPA 420.1**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186650 | 50.0         | 50.0       | 09/21/17 |
| 17I0770-02 [MW-1F]    | B186650 | 50.0         | 50.0       | 09/21/17 |

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

### Sample Extraction Data

#### EPA 420.1

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-03 [MW-206]   | B186650 | 50.0         | 50.0       | 09/21/17 |
| 17I0770-04 [MW-206F]  | B186650 | 50.0         | 50.0       | 09/21/17 |

#### Prep Method: EPA 504 water-EPA 504.1

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186764 | 34.8         | 35.0       | 09/21/17 |
| 17I0770-02 [MW-1F]    | B186764 | 36.3         | 35.0       | 09/21/17 |
| 17I0770-03 [MW-206]   | B186764 | 35.6         | 35.0       | 09/21/17 |
| 17I0770-04 [MW-206F]  | B186764 | 35.6         | 35.0       | 09/21/17 |

#### Prep Method: SW-846 3510C-EPA 608

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186668 | 1000         | 5.00       | 09/20/17 |
| 17I0770-02 [MW-1F]    | B186668 | 1000         | 5.00       | 09/20/17 |
| 17I0770-03 [MW-206]   | B186668 | 1000         | 5.00       | 09/20/17 |
| 17I0770-04 [MW-206F]  | B186668 | 1000         | 5.00       | 09/20/17 |

#### Prep Method: SW-846 5030B-EPA 624

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186621 | 5            | 5.00       | 09/20/17 |
| 17I0770-02 [MW-1F]    | B186621 | 5            | 5.00       | 09/20/17 |
| 17I0770-03 [MW-206]   | B186621 | 2.5          | 5.00       | 09/20/17 |
| 17I0770-04 [MW-206F]  | B186621 | 5            | 5.00       | 09/20/17 |

#### Prep Method: SW-846 3510C-EPA 625

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186688 | 1000         | 1.00       | 09/20/17 |
| 17I0770-02 [MW-1F]    | B186688 | 1000         | 1.00       | 09/20/17 |
| 17I0770-03 [MW-206]   | B186688 | 1000         | 1.00       | 09/20/17 |
| 17I0770-04 [MW-206F]  | B186688 | 1000         | 1.00       | 09/20/17 |

#### SM21-22 2540D

| Lab Number [Field ID] | Batch   | Initial [mL] | Date     |
|-----------------------|---------|--------------|----------|
| 17I0770-01 [MW-1]     | B186528 | 100          | 09/19/17 |
| 17I0770-02 [MW-1F]    | B186528 | 100          | 09/19/17 |
| 17I0770-03 [MW-206]   | B186528 | 100          | 09/19/17 |
| 17I0770-04 [MW-206F]  | B186528 | 100          | 09/19/17 |

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

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-01 [MW-1]     | B186837 | 1000         | 1.00       | 09/22/17 |



---

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

**Sample Extraction Data**

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

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I0770-02 [MW-1F]    | B186837 | 1000         | 1.00       | 09/22/17 |
| 17I0770-03 [MW-206]   | B186837 | 1000         | 1.00       | 09/22/17 |
| 17I0770-04 [MW-206F]  | B186837 | 1000         | 1.00       | 09/22/17 |

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

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B186621 - SW-846 5030B**
**Blank (B186621-BLK1)**

Prepared &amp; Analyzed: 09/20/17

|                                  |      |      |      |      |  |      |        |  |  |  |
|----------------------------------|------|------|------|------|--|------|--------|--|--|--|
| Acetone                          | ND   | 50   | µg/L |      |  |      |        |  |  |  |
| tert-Amyl Methyl Ether (TAME)    | ND   | 0.50 | µg/L |      |  |      |        |  |  |  |
| Benzene                          | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| tert-Butyl Alcohol (TBA)         | ND   | 20   | µg/L |      |  |      |        |  |  |  |
| Carbon Tetrachloride             | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,2-Dichlorobenzene              | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,3-Dichlorobenzene              | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,4-Dichlorobenzene              | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,2-Dichloroethane               | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| cis-1,2-Dichloroethylene         | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,1-Dichloroethane               | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,1-Dichloroethylene             | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,4-Dioxane                      | ND   | 50   | µg/L |      |  |      |        |  |  |  |
| Ethylbenzene                     | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Methyl tert-Butyl Ether (MTBE)   | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Methylene Chloride               | ND   | 5.0  | µg/L |      |  |      |        |  |  |  |
| Tetrachloroethylene              | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Toluene                          | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,1-Trichloroethane            | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,2-Trichloroethane            | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Trichloroethylene                | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Vinyl Chloride                   | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| m+p Xylene                       | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| o-Xylene                         | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 25.0 |      | µg/L | 25.0 |  | 99.8 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 25.2 |      | µg/L | 25.0 |  | 101  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 23.6 |      | µg/L | 25.0 |  | 94.2 | 70-130 |  |  |  |

**LCS (B186621-BS1)**

Prepared &amp; Analyzed: 09/20/17

|                                |      |      |      |      |  |      |        |  |  |   |
|--------------------------------|------|------|------|------|--|------|--------|--|--|---|
| Acetone                        | 61.8 | 50   | µg/L | 100  |  | 61.8 | 60-160 |  |  | † |
| tert-Amyl Methyl Ether (TAME)  | 9.53 | 0.50 | µg/L | 10.0 |  | 95.3 | 70-130 |  |  |   |
| Benzene                        | 11.5 | 1.0  | µg/L | 10.0 |  | 115  | 37-151 |  |  |   |
| tert-Butyl Alcohol (TBA)       | 68.5 | 20   | µg/L | 100  |  | 68.5 | 40-160 |  |  | † |
| Carbon Tetrachloride           | 10.8 | 2.0  | µg/L | 10.0 |  | 108  | 70-140 |  |  |   |
| 1,2-Dichlorobenzene            | 11.6 | 2.0  | µg/L | 10.0 |  | 116  | 18-190 |  |  |   |
| 1,3-Dichlorobenzene            | 11.4 | 2.0  | µg/L | 10.0 |  | 114  | 59-156 |  |  |   |
| 1,4-Dichlorobenzene            | 10.8 | 2.0  | µg/L | 10.0 |  | 108  | 18-190 |  |  |   |
| 1,2-Dichloroethane             | 9.40 | 2.0  | µg/L | 10.0 |  | 94.0 | 49-155 |  |  |   |
| cis-1,2-Dichloroethylene       | 11.0 | 1.0  | µg/L | 10.0 |  | 110  | 70-130 |  |  |   |
| 1,1-Dichloroethane             | 12.3 | 2.0  | µg/L | 10.0 |  | 123  | 59-155 |  |  |   |
| 1,1-Dichloroethylene           | 7.71 | 2.0  | µg/L | 10.0 |  | 77.1 | 20-234 |  |  |   |
| 1,4-Dioxane                    | 99.4 | 50   | µg/L | 100  |  | 99.4 | 40-130 |  |  | † |
| Ethylbenzene                   | 10.9 | 2.0  | µg/L | 10.0 |  | 109  | 37-162 |  |  |   |
| Methyl tert-Butyl Ether (MTBE) | 10.6 | 2.0  | µg/L | 10.0 |  | 106  | 70-130 |  |  |   |
| Methylene Chloride             | 7.28 | 5.0  | µg/L | 10.0 |  | 72.8 | 50-221 |  |  |   |
| Tetrachloroethylene            | 10.8 | 2.0  | µg/L | 10.0 |  | 108  | 64-148 |  |  |   |
| Toluene                        | 10.5 | 1.0  | µg/L | 10.0 |  | 105  | 47-150 |  |  |   |
| 1,1,1-Trichloroethane          | 10.9 | 2.0  | µg/L | 10.0 |  | 109  | 52-162 |  |  |   |
| 1,1,2-Trichloroethane          | 10.5 | 2.0  | µg/L | 10.0 |  | 105  | 52-150 |  |  |   |
| Trichloroethylene              | 10.2 | 2.0  | µg/L | 10.0 |  | 102  | 71-157 |  |  |   |
| Vinyl Chloride                 | 2.97 | 2.0  | µg/L | 10.0 |  | 29.7 | 20-251 |  |  |   |
| m+p Xylene                     | 21.8 | 2.0  | µg/L | 20.0 |  | 109  | 70-130 |  |  |   |

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

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch B186621 - SW-846 5030B**
**LCS (B186621-BS1)**

Prepared &amp; Analyzed: 09/20/17

|                                  |      |     |      |      |  |      |        |  |  |  |
|----------------------------------|------|-----|------|------|--|------|--------|--|--|--|
| o-Xylene                         | 10.6 | 2.0 | µg/L | 10.0 |  | 106  | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 24.6 |     | µg/L | 25.0 |  | 98.3 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 24.9 |     | µg/L | 25.0 |  | 99.6 | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 24.5 |     | µg/L | 25.0 |  | 98.0 | 70-130 |  |  |  |

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

## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

| Analyte                               | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD  | RPD Limit | Notes |
|---------------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|------|-----------|-------|
| <b>Batch B186837 - SW-846 3510C</b>   |        |                 |       |             |               |      |             |      |           |       |
| <b>Blank (B186837-BLK1)</b>           |        |                 |       |             |               |      |             |      |           |       |
| Prepared: 09/22/17 Analyzed: 09/24/17 |        |                 |       |             |               |      |             |      |           |       |
| Benzo(a)anthracene                    | ND     | 0.050           | µg/L  |             |               |      |             |      |           |       |
| Benzo(a)pyrene                        | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Benzo(b)fluoranthene                  | ND     | 0.050           | µg/L  |             |               |      |             |      |           |       |
| Benzo(k)fluoranthene                  | ND     | 0.20            | µg/L  |             |               |      |             |      |           |       |
| Bis(2-Ethylhexyl)phthalate            | 1.1    | 1.0             | µg/L  |             |               |      |             |      |           | B     |
| Chrysene                              | ND     | 0.20            | µg/L  |             |               |      |             |      |           |       |
| Dibenz(a,h)anthracene                 | ND     | 0.20            | µg/L  |             |               |      |             |      |           |       |
| Indeno(1,2,3-cd)pyrene                | ND     | 0.20            | µg/L  |             |               |      |             |      |           |       |
| Pentachlorophenol                     | ND     | 1.0             | µg/L  |             |               |      |             |      |           |       |
| Surrogate: 2-Fluorophenol             | 86.3   |                 | µg/L  | 200         |               | 43.1 | 15-110      |      |           |       |
| Surrogate: Phenol-d6                  | 51.9   |                 | µg/L  | 200         |               | 26.0 | 15-110      |      |           |       |
| Surrogate: Nitrobenzene-d5            | 75.8   |                 | µg/L  | 100         |               | 75.8 | 30-130      |      |           |       |
| Surrogate: 2-Fluorobiphenyl           | 76.4   |                 | µg/L  | 100         |               | 76.4 | 30-130      |      |           |       |
| Surrogate: 2,4,6-Tribromophenol       | 141    |                 | µg/L  | 200         |               | 70.6 | 15-110      |      |           |       |
| Surrogate: p-Terphenyl-d14            | 70.4   |                 | µg/L  | 100         |               | 70.4 | 30-130      |      |           |       |
| <b>LCS (B186837-BS1)</b>              |        |                 |       |             |               |      |             |      |           |       |
| Prepared: 09/22/17 Analyzed: 09/24/17 |        |                 |       |             |               |      |             |      |           |       |
| Benzo(a)anthracene                    | 41.2   | 1.2             | µg/L  | 50.0        |               | 82.5 | 40-140      |      |           |       |
| Benzo(a)pyrene                        | 41.2   | 2.5             | µg/L  | 50.0        |               | 82.5 | 40-140      |      |           |       |
| Benzo(b)fluoranthene                  | 43.4   | 1.2             | µg/L  | 50.0        |               | 86.8 | 40-140      |      |           |       |
| Benzo(k)fluoranthene                  | 41.3   | 5.0             | µg/L  | 50.0        |               | 82.6 | 40-140      |      |           |       |
| Bis(2-Ethylhexyl)phthalate            | 43.9   | 25              | µg/L  | 50.0        |               | 87.8 | 40-140      |      |           | B     |
| Chrysene                              | 42.0   | 5.0             | µg/L  | 50.0        |               | 84.0 | 40-140      |      |           |       |
| Dibenz(a,h)anthracene                 | 36.4   | 5.0             | µg/L  | 50.0        |               | 72.8 | 40-140      |      |           |       |
| Indeno(1,2,3-cd)pyrene                | 40.0   | 5.0             | µg/L  | 50.0        |               | 80.1 | 40-140      |      |           |       |
| Pentachlorophenol                     | 30.0   | 25              | µg/L  | 50.0        |               | 59.9 | 30-130      |      |           |       |
| Surrogate: 2-Fluorophenol             | 81.6   |                 | µg/L  | 200         |               | 40.8 | 15-110      |      |           |       |
| Surrogate: Phenol-d6                  | 50.4   |                 | µg/L  | 200         |               | 25.2 | 15-110      |      |           |       |
| Surrogate: Nitrobenzene-d5            | 82.1   |                 | µg/L  | 100         |               | 82.1 | 30-130      |      |           |       |
| Surrogate: 2-Fluorobiphenyl           | 88.8   |                 | µg/L  | 100         |               | 88.8 | 30-130      |      |           |       |
| Surrogate: 2,4,6-Tribromophenol       | 123    |                 | µg/L  | 200         |               | 61.4 | 15-110      |      |           |       |
| Surrogate: p-Terphenyl-d14            | 71.1   |                 | µg/L  | 100         |               | 71.1 | 30-130      |      |           |       |
| <b>LCS Dup (B186837-BSD1)</b>         |        |                 |       |             |               |      |             |      |           |       |
| Prepared: 09/22/17 Analyzed: 09/24/17 |        |                 |       |             |               |      |             |      |           |       |
| Benzo(a)anthracene                    | 45.8   | 1.2             | µg/L  | 50.0        |               | 91.5 | 40-140      | 10.3 | 20        |       |
| Benzo(a)pyrene                        | 46.2   | 2.5             | µg/L  | 50.0        |               | 92.4 | 40-140      | 11.4 | 20        |       |
| Benzo(b)fluoranthene                  | 48.5   | 1.2             | µg/L  | 50.0        |               | 97.0 | 40-140      | 11.0 | 20        |       |
| Benzo(k)fluoranthene                  | 46.2   | 5.0             | µg/L  | 50.0        |               | 92.4 | 40-140      | 11.3 | 20        |       |
| Bis(2-Ethylhexyl)phthalate            | 48.4   | 25              | µg/L  | 50.0        |               | 96.8 | 40-140      | 9.69 | 20        | B     |
| Chrysene                              | 46.4   | 5.0             | µg/L  | 50.0        |               | 92.8 | 40-140      | 9.90 | 20        |       |
| Dibenz(a,h)anthracene                 | 41.0   | 5.0             | µg/L  | 50.0        |               | 81.9 | 40-140      | 11.8 | 20        |       |
| Indeno(1,2,3-cd)pyrene                | 44.6   | 5.0             | µg/L  | 50.0        |               | 89.1 | 40-140      | 10.6 | 50        | ‡     |
| Pentachlorophenol                     | 35.5   | 25              | µg/L  | 50.0        |               | 71.0 | 30-130      | 17.0 | 50        | ‡     |
| Surrogate: 2-Fluorophenol             | 95.1   |                 | µg/L  | 200         |               | 47.6 | 15-110      |      |           |       |
| Surrogate: Phenol-d6                  | 61.7   |                 | µg/L  | 200         |               | 30.8 | 15-110      |      |           |       |
| Surrogate: Nitrobenzene-d5            | 91.8   |                 | µg/L  | 100         |               | 91.8 | 30-130      |      |           |       |
| Surrogate: 2-Fluorobiphenyl           | 97.4   |                 | µg/L  | 100         |               | 97.4 | 30-130      |      |           |       |
| Surrogate: 2,4,6-Tribromophenol       | 147    |                 | µg/L  | 200         |               | 73.3 | 15-110      |      |           |       |
| Surrogate: p-Terphenyl-d14            | 79.7   |                 | µg/L  | 100         |               | 79.7 | 30-130      |      |           |       |

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

**QUALITY CONTROL**
**Semivolatile Organic Compounds by - GC/MS - Quality Control**

| Analyte                               | Result | Reporting Limit | Units | Spike Level                           | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes      |
|---------------------------------------|--------|-----------------|-------|---------------------------------------|---------------|------|-------------|-----|-----------|------------|
| <b>Batch B186688 - SW-846 3510C</b>   |        |                 |       |                                       |               |      |             |     |           |            |
| <b>Blank (B186688-BLK1)</b>           |        |                 |       | Prepared: 09/20/17 Analyzed: 09/22/17 |               |      |             |     |           |            |
| Acenaphthene                          | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Acenaphthylene                        | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Anthracene                            | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Benzidine                             | ND     | 20              | µg/L  |                                       |               |      |             |     |           | V-04       |
| Benzo(g,h,i)perylene                  | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 4-Bromophenylphenylether              | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Butylbenzylphthalate                  | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 4-Chloro-3-methylphenol               | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Bis(2-chloroethyl)ether               | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Bis(2-chloroisopropyl)ether           | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2-Chloronaphthalene                   | ND     | 10              | µg/L  |                                       |               |      |             |     |           | L-04       |
| 2-Chlorophenol                        | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 4-Chlorophenylphenylether             | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Di-n-butylphthalate                   | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 1,3-Dichlorobenzene                   | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 1,4-Dichlorobenzene                   | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 1,2-Dichlorobenzene                   | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 3,3-Dichlorobenzidine                 | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2,4-Dichlorophenol                    | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Diethylphthalate                      | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2,4-Dimethylphenol                    | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Dimethylphthalate                     | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 4,6-Dinitro-2-methylphenol            | ND     | 10              | µg/L  |                                       |               |      |             |     |           | V-04, V-20 |
| 2,4-Dinitrophenol                     | ND     | 10              | µg/L  |                                       |               |      |             |     |           | V-19, V-20 |
| 2,4-Dinitrotoluene                    | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2,6-Dinitrotoluene                    | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Di-n-octylphthalate                   | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 1,2-Diphenylhydrazine (as Azobenzene) | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Bis(2-Ethylhexyl)phthalate            | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Fluoranthene                          | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Fluorene                              | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Hexachlorobenzene                     | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Hexachlorobutadiene                   | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Hexachlorocyclopentadiene             | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Hexachloroethane                      | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Isophorone                            | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Naphthalene                           | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Nitrobenzene                          | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2-Nitrophenol                         | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 4-Nitrophenol                         | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| N-Nitrosodimethylamine                | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| N-Nitrosodiphenylamine                | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| N-Nitrosodi-n-propylamine             | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2-Methylnaphthalene                   | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Phenanthrene                          | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 2-Methylphenol                        | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Phenol                                | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 3/4-Methylphenol                      | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Pyrene                                | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 1,2,4-Trichlorobenzene                | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 2,4,6-Trichlorophenol                 | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Surrogate: 2-Fluorophenol             | 84.2   |                 | µg/L  | 200                                   |               | 42.1 | 15-110      |     |           |            |

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

**QUALITY CONTROL**
**Semivolatile Organic Compounds by - GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B186688 - SW-846 3510C**
**Blank (B186688-BLK1)**

Prepared: 09/20/17 Analyzed: 09/22/17

|                                 |      |  |      |     |  |      |        |  |  |  |
|---------------------------------|------|--|------|-----|--|------|--------|--|--|--|
| Surrogate: Phenol-d6            | 63.2 |  | µg/L | 200 |  | 31.6 | 15-110 |  |  |  |
| Surrogate: Nitrobenzene-d5      | 71.3 |  | µg/L | 100 |  | 71.3 | 30-130 |  |  |  |
| Surrogate: 2-Fluorobiphenyl     | 66.6 |  | µg/L | 100 |  | 66.6 | 30-130 |  |  |  |
| Surrogate: 2,4,6-Tribromophenol | 132  |  | µg/L | 200 |  | 65.9 | 15-110 |  |  |  |
| Surrogate: p-Terphenyl-d14      | 83.0 |  | µg/L | 100 |  | 83.0 | 30-130 |  |  |  |

**LCS (B186688-BS1)**

Prepared: 09/20/17 Analyzed: 09/22/17

|                                       |      |     |      |     |  |               |        |  |  |            |
|---------------------------------------|------|-----|------|-----|--|---------------|--------|--|--|------------|
| Acenaphthene                          | 62.4 | 5.0 | µg/L | 100 |  | 62.4          | 47-145 |  |  |            |
| Acenaphthylene                        | 58.9 | 5.0 | µg/L | 100 |  | 58.9          | 33-145 |  |  |            |
| Anthracene                            | 62.1 | 5.0 | µg/L | 100 |  | 62.1          | 27-133 |  |  |            |
| Benztidine                            | 69.8 | 20  | µg/L | 100 |  | 69.8          | 40-140 |  |  | V-04       |
| Benzo(g,h,i)perylene                  | 57.6 | 5.0 | µg/L | 100 |  | 57.6          | 1-219  |  |  |            |
| 4-Bromophenylphenylether              | 64.8 | 10  | µg/L | 100 |  | 64.8          | 53-127 |  |  |            |
| Butylbenzylphthalate                  | 76.6 | 10  | µg/L | 100 |  | 76.6          | 1-152  |  |  |            |
| 4-Chloro-3-methylphenol               | 70.2 | 10  | µg/L | 100 |  | 70.2          | 22-147 |  |  |            |
| Bis(2-chloroethyl)ether               | 78.7 | 10  | µg/L | 100 |  | 78.7          | 12-158 |  |  |            |
| Bis(2-chloroisopropyl)ether           | 85.3 | 10  | µg/L | 100 |  | 85.3          | 36-166 |  |  |            |
| <b>2-Chloronaphthalene</b>            | 57.4 | 10  | µg/L | 100 |  | <b>57.4 *</b> | 60-118 |  |  | L-04       |
| 2-Chlorophenol                        | 69.6 | 10  | µg/L | 100 |  | 69.6          | 23-134 |  |  |            |
| 4-Chlorophenylphenylether             | 63.9 | 10  | µg/L | 100 |  | 63.9          | 25-158 |  |  |            |
| Di-n-butylphthalate                   | 70.6 | 10  | µg/L | 100 |  | 70.6          | 1-118  |  |  |            |
| 1,3-Dichlorobenzene                   | 66.3 | 5.0 | µg/L | 100 |  | 66.3          | 1-172  |  |  |            |
| 1,4-Dichlorobenzene                   | 67.3 | 5.0 | µg/L | 100 |  | 67.3          | 20-124 |  |  |            |
| 1,2-Dichlorobenzene                   | 67.9 | 5.0 | µg/L | 100 |  | 67.9          | 32-129 |  |  |            |
| 3,3-Dichlorobenzidine                 | 75.8 | 10  | µg/L | 100 |  | 75.8          | 1-262  |  |  |            |
| 2,4-Dichlorophenol                    | 68.6 | 10  | µg/L | 100 |  | 68.6          | 39-135 |  |  |            |
| Diethylphthalate                      | 64.6 | 10  | µg/L | 100 |  | 64.6          | 1-114  |  |  |            |
| 2,4-Dimethylphenol                    | 65.4 | 10  | µg/L | 100 |  | 65.4          | 32-119 |  |  |            |
| Dimethylphthalate                     | 65.1 | 10  | µg/L | 100 |  | 65.1          | 1-112  |  |  |            |
| 4,6-Dinitro-2-methylphenol            | 86.3 | 10  | µg/L | 100 |  | 86.3          | 1-181  |  |  | V-04, V-20 |
| 2,4-Dinitrophenol                     | 84.8 | 10  | µg/L | 100 |  | 84.8          | 1-191  |  |  | V-19, V-20 |
| 2,4-Dinitrotoluene                    | 77.4 | 10  | µg/L | 100 |  | 77.4          | 39-139 |  |  |            |
| 2,6-Dinitrotoluene                    | 81.1 | 10  | µg/L | 100 |  | 81.1          | 50-158 |  |  |            |
| Di-n-octylphthalate                   | 81.4 | 10  | µg/L | 100 |  | 81.4          | 4-146  |  |  |            |
| 1,2-Diphenylhydrazine (as Azobenzene) | 74.6 | 10  | µg/L | 100 |  | 74.6          | 40-140 |  |  |            |
| Bis(2-Ethylhexyl)phthalate            | 75.1 | 10  | µg/L | 100 |  | 75.1          | 8-158  |  |  |            |
| Fluoranthene                          | 63.9 | 5.0 | µg/L | 100 |  | 63.9          | 26-137 |  |  |            |
| Fluorene                              | 60.5 | 5.0 | µg/L | 100 |  | 60.5          | 59-121 |  |  |            |
| Hexachlorobenzene                     | 63.6 | 10  | µg/L | 100 |  | 63.6          | 1-152  |  |  |            |
| Hexachlorobutadiene                   | 58.7 | 10  | µg/L | 100 |  | 58.7          | 24-116 |  |  |            |
| Hexachlorocyclopentadiene             | 63.2 | 10  | µg/L | 100 |  | 63.2          | 40-140 |  |  |            |
| Hexachloroethane                      | 69.6 | 10  | µg/L | 100 |  | 69.6          | 40-113 |  |  |            |
| Isophorone                            | 77.5 | 10  | µg/L | 100 |  | 77.5          | 21-196 |  |  |            |
| Naphthalene                           | 61.1 | 5.0 | µg/L | 100 |  | 61.1          | 21-133 |  |  |            |
| Nitrobenzene                          | 71.1 | 10  | µg/L | 100 |  | 71.1          | 35-180 |  |  |            |
| 2-Nitrophenol                         | 74.9 | 10  | µg/L | 100 |  | 74.9          | 29-182 |  |  |            |
| 4-Nitrophenol                         | 36.6 | 10  | µg/L | 100 |  | 36.6          | 1-132  |  |  |            |
| N-Nitrosodimethylamine                | 44.4 | 10  | µg/L | 100 |  | 44.4          | 40-140 |  |  |            |
| N-Nitrosodiphenylamine                | 82.3 | 10  | µg/L | 100 |  | 82.3          | 40-140 |  |  |            |
| N-Nitrosodi-n-propylamine             | 76.4 | 10  | µg/L | 100 |  | 76.4          | 1-230  |  |  |            |
| 2-Methylnaphthalene                   | 65.2 | 5.0 | µg/L | 100 |  | 65.2          | 40-140 |  |  |            |
| Phenanthrene                          | 61.9 | 5.0 | µg/L | 100 |  | 61.9          | 54-120 |  |  |            |

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

**QUALITY CONTROL**
**Semivolatile Organic Compounds by - GC/MS - Quality Control**

| Analyte                               | Result | Reporting Limit | Units | Spike Level | Source Result | %REC        | %REC Limits | RPD  | RPD Limit | Notes      |
|---------------------------------------|--------|-----------------|-------|-------------|---------------|-------------|-------------|------|-----------|------------|
| <b>Batch B186688 - SW-846 3510C</b>   |        |                 |       |             |               |             |             |      |           |            |
| <b>LCS (B186688-BS1)</b>              |        |                 |       |             |               |             |             |      |           |            |
| Prepared: 09/20/17 Analyzed: 09/22/17 |        |                 |       |             |               |             |             |      |           |            |
| 2-Methylphenol                        | 67.0   | 10              | µg/L  | 100         |               | 67.0        | 30-130      |      |           |            |
| Phenol                                | 34.1   | 10              | µg/L  | 100         |               | 34.1        | 5-112       |      |           |            |
| 3/4-Methylphenol                      | 63.1   | 10              | µg/L  | 100         |               | 63.1        | 30-130      |      |           |            |
| Pyrene                                | 64.6   | 5.0             | µg/L  | 100         |               | 64.6        | 52-115      |      |           |            |
| 1,2,4-Trichlorobenzene                | 64.2   | 5.0             | µg/L  | 100         |               | 64.2        | 44-142      |      |           |            |
| 2,4,6-Trichlorophenol                 | 67.6   | 10              | µg/L  | 100         |               | 67.6        | 37-144      |      |           |            |
| Surrogate: 2-Fluorophenol             | 101    |                 | µg/L  | 200         |               | 50.4        | 15-110      |      |           |            |
| Surrogate: Phenol-d6                  | 71.3   |                 | µg/L  | 200         |               | 35.6        | 15-110      |      |           |            |
| Surrogate: Nitrobenzene-d5            | 78.3   |                 | µg/L  | 100         |               | 78.3        | 30-130      |      |           |            |
| Surrogate: 2-Fluorobiphenyl           | 69.2   |                 | µg/L  | 100         |               | 69.2        | 30-130      |      |           |            |
| Surrogate: 2,4,6-Tribromophenol       | 142    |                 | µg/L  | 200         |               | 70.8        | 15-110      |      |           |            |
| Surrogate: p-Terphenyl-d14            | 73.9   |                 | µg/L  | 100         |               | 73.9        | 30-130      |      |           |            |
| <b>LCS Dup (B186688-BS1)</b>          |        |                 |       |             |               |             |             |      |           |            |
| Prepared: 09/20/17 Analyzed: 09/22/17 |        |                 |       |             |               |             |             |      |           |            |
| Acenaphthene                          | 56.3   | 5.0             | µg/L  | 100         |               | 56.3        | 47-145      | 10.2 |           |            |
| Acenaphthylene                        | 53.7   | 5.0             | µg/L  | 100         |               | 53.7        | 33-145      | 9.32 |           |            |
| Anthracene                            | 55.8   | 5.0             | µg/L  | 100         |               | 55.8        | 27-133      | 10.7 |           |            |
| Benzidine                             | 56.0   | 20              | µg/L  | 100         |               | 56.0        | 40-140      | 21.9 |           | V-04       |
| Benzo(g,h,i)perylene                  | 51.1   | 5.0             | µg/L  | 100         |               | 51.1        | 1-219       | 12.0 |           |            |
| 4-Bromophenylphenylether              | 55.2   | 10              | µg/L  | 100         |               | 55.2        | 53-127      | 15.9 |           |            |
| Butylbenzylphthalate                  | 62.5   | 10              | µg/L  | 100         |               | 62.5        | 1-152       | 20.2 |           |            |
| 4-Chloro-3-methylphenol               | 61.3   | 10              | µg/L  | 100         |               | 61.3        | 22-147      | 13.4 |           |            |
| Bis(2-chloroethyl)ether               | 64.7   | 10              | µg/L  | 100         |               | 64.7        | 12-158      | 19.4 |           |            |
| Bis(2-chloroisopropyl)ether           | 69.8   | 10              | µg/L  | 100         |               | 69.8        | 36-166      | 20.0 |           |            |
| <b>2-Chloronaphthalene</b>            | 53.0   | 10              | µg/L  | 100         |               | <b>53.0</b> | * 60-118    | 8.10 |           | L-04       |
| 2-Chlorophenol                        | 59.0   | 10              | µg/L  | 100         |               | 59.0        | 23-134      | 16.6 |           |            |
| 4-Chlorophenylphenylether             | 56.1   | 10              | µg/L  | 100         |               | 56.1        | 25-158      | 12.9 |           |            |
| Di-n-butylphthalate                   | 59.8   | 10              | µg/L  | 100         |               | 59.8        | 1-118       | 16.5 |           |            |
| 1,3-Dichlorobenzene                   | 56.8   | 5.0             | µg/L  | 100         |               | 56.8        | 1-172       | 15.3 |           |            |
| 1,4-Dichlorobenzene                   | 56.7   | 5.0             | µg/L  | 100         |               | 56.7        | 20-124      | 17.0 |           |            |
| 1,2-Dichlorobenzene                   | 57.6   | 5.0             | µg/L  | 100         |               | 57.6        | 32-129      | 16.4 |           |            |
| 3,3-Dichlorobenzidine                 | 67.9   | 10              | µg/L  | 100         |               | 67.9        | 1-262       | 11.0 |           |            |
| 2,4-Dichlorophenol                    | 59.2   | 10              | µg/L  | 100         |               | 59.2        | 39-135      | 14.7 |           |            |
| Diethylphthalate                      | 56.0   | 10              | µg/L  | 100         |               | 56.0        | 1-114       | 14.3 |           |            |
| 2,4-Dimethylphenol                    | 57.7   | 10              | µg/L  | 100         |               | 57.7        | 32-119      | 12.6 |           |            |
| Dimethylphthalate                     | 58.6   | 10              | µg/L  | 100         |               | 58.6        | 1-112       | 10.6 |           |            |
| 4,6-Dinitro-2-methylphenol            | 74.7   | 10              | µg/L  | 100         |               | 74.7        | 1-181       | 14.5 |           | V-04, V-20 |
| 2,4-Dinitrophenol                     | 81.4   | 10              | µg/L  | 100         |               | 81.4        | 1-191       | 4.20 |           | V-19, V-20 |
| 2,4-Dinitrotoluene                    | 69.4   | 10              | µg/L  | 100         |               | 69.4        | 39-139      | 10.8 |           |            |
| 2,6-Dinitrotoluene                    | 72.8   | 10              | µg/L  | 100         |               | 72.8        | 50-158      | 10.8 |           |            |
| Di-n-octylphthalate                   | 67.5   | 10              | µg/L  | 100         |               | 67.5        | 4-146       | 18.7 |           |            |
| 1,2-Diphenylhydrazine (as Azobenzene) | 64.8   | 10              | µg/L  | 100         |               | 64.8        | 40-140      | 14.2 |           |            |
| Bis(2-Ethylhexyl)phthalate            | 59.3   | 10              | µg/L  | 100         |               | 59.3        | 8-158       | 23.4 |           |            |
| Fluoranthene                          | 60.1   | 5.0             | µg/L  | 100         |               | 60.1        | 26-137      | 6.09 |           |            |
| <b>Fluorene</b>                       | 54.9   | 5.0             | µg/L  | 100         |               | <b>54.9</b> | * 59-121    | 9.60 |           | L-07       |
| Hexachlorobenzene                     | 55.5   | 10              | µg/L  | 100         |               | 55.5        | 1-152       | 13.5 |           |            |
| Hexachlorobutadiene                   | 50.3   | 10              | µg/L  | 100         |               | 50.3        | 24-116      | 15.5 |           |            |
| Hexachlorocyclopentadiene             | 53.9   | 10              | µg/L  | 100         |               | 53.9        | 40-140      | 15.7 |           |            |
| Hexachloroethane                      | 58.8   | 10              | µg/L  | 100         |               | 58.8        | 40-113      | 16.9 |           |            |
| Isophorone                            | 66.8   | 10              | µg/L  | 100         |               | 66.8        | 21-196      | 14.8 |           |            |
| Naphthalene                           | 53.7   | 5.0             | µg/L  | 100         |               | 53.7        | 21-133      | 12.8 |           |            |
| Nitrobenzene                          | 62.7   | 10              | µg/L  | 100         |               | 62.7        | 35-180      | 12.5 |           |            |

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

**QUALITY CONTROL**
**Semivolatile Organic Compounds by - GC/MS - Quality Control**

| Analyte                             | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result                      | %REC        | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|-------------------------------------|--------|--------------------|-------|----------------|---------------------------------------|-------------|----------------|------|--------------|-------|
| <b>Batch B186688 - SW-846 3510C</b> |        |                    |       |                |                                       |             |                |      |              |       |
| <b>LCS Dup (B186688-BSD1)</b>       |        |                    |       |                | Prepared: 09/20/17 Analyzed: 09/22/17 |             |                |      |              |       |
| 2-Nitrophenol                       | 66.7   | 10                 | µg/L  | 100            |                                       | 66.7        | 29-182         | 11.6 |              |       |
| 4-Nitrophenol                       | 35.0   | 10                 | µg/L  | 100            |                                       | 35.0        | 1-132          | 4.52 |              |       |
| N-Nitrosodimethylamine              | 40.8   | 10                 | µg/L  | 100            |                                       | 40.8        | 40-140         | 8.33 |              |       |
| N-Nitrosodiphenylamine              | 71.9   | 10                 | µg/L  | 100            |                                       | 71.9        | 40-140         | 13.6 |              |       |
| N-Nitrosodi-n-propylamine           | 62.0   | 10                 | µg/L  | 100            |                                       | 62.0        | 1-230          | 20.8 |              |       |
| 2-Methylnaphthalene                 | 56.8   | 5.0                | µg/L  | 100            |                                       | 56.8        | 40-140         | 13.8 | 20           |       |
| Phenanthrene                        | 56.1   | 5.0                | µg/L  | 100            |                                       | 56.1        | 54-120         | 9.79 |              |       |
| 2-Methylphenol                      | 56.4   | 10                 | µg/L  | 100            |                                       | 56.4        | 30-130         | 17.2 | 20           |       |
| Phenol                              | 28.8   | 10                 | µg/L  | 100            |                                       | 28.8        | 5-112          | 16.9 |              |       |
| 3/4-Methylphenol                    | 52.6   | 10                 | µg/L  | 100            |                                       | 52.6        | 30-130         | 18.2 | 20           |       |
| <b>Pyrene</b>                       | 51.8   | 5.0                | µg/L  | 100            |                                       | <b>51.8</b> | * 52-115       | 22.0 |              | L-07  |
| 1,2,4-Trichlorobenzene              | 56.0   | 5.0                | µg/L  | 100            |                                       | 56.0        | 44-142         | 13.7 |              |       |
| 2,4,6-Trichlorophenol               | 60.5   | 10                 | µg/L  | 100            |                                       | 60.5        | 37-144         | 11.1 |              |       |
| Surrogate: 2-Fluorophenol           | 86.4   |                    | µg/L  | 200            |                                       | 43.2        | 15-110         |      |              |       |
| Surrogate: Phenol-d6                | 60.6   |                    | µg/L  | 200            |                                       | 30.3        | 15-110         |      |              |       |
| Surrogate: Nitrobenzene-d5          | 67.7   |                    | µg/L  | 100            |                                       | 67.7        | 30-130         |      |              |       |
| Surrogate: 2-Fluorobiphenyl         | 61.4   |                    | µg/L  | 100            |                                       | 61.4        | 30-130         |      |              |       |
| Surrogate: 2,4,6-Tribromophenol     | 125    |                    | µg/L  | 200            |                                       | 62.5        | 15-110         |      |              |       |
| Surrogate: p-Terphenyl-d14          | 56.3   |                    | µg/L  | 100            |                                       | 56.3        | 30-130         |      |              |       |



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

**QUALITY CONTROL**
**Polychlorinated Biphenyls By GC/ECD - Quality Control**

| Analyte                               | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD   | RPD Limit | Notes |
|---------------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|-------|-----------|-------|
| <b>Batch B186668 - SW-846 3510C</b>   |        |                 |       |             |               |      |             |       |           |       |
| <b>Blank (B186668-BLK1)</b>           |        |                 |       |             |               |      |             |       |           |       |
| Prepared: 09/20/17 Analyzed: 09/21/17 |        |                 |       |             |               |      |             |       |           |       |
| Aroclor-1016                          | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1016 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1221                          | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1221 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1232                          | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1232 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1242                          | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1242 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1248                          | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1248 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1254                          | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1254 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1260                          | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Aroclor-1260 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |       |           |       |
| Surrogate: Decachlorobiphenyl         | 1.90   |                 | µg/L  | 2.00        |               | 94.9 | 30-150      |       |           |       |
| Surrogate: Decachlorobiphenyl [2C]    | 2.15   |                 | µg/L  | 2.00        |               | 107  | 30-150      |       |           |       |
| Surrogate: Tetrachloro-m-xylene       | 1.93   |                 | µg/L  | 2.00        |               | 96.4 | 30-150      |       |           |       |
| Surrogate: Tetrachloro-m-xylene [2C]  | 1.92   |                 | µg/L  | 2.00        |               | 96.2 | 30-150      |       |           |       |
| <b>LCS (B186668-BS1)</b>              |        |                 |       |             |               |      |             |       |           |       |
| Prepared: 09/20/17 Analyzed: 09/21/17 |        |                 |       |             |               |      |             |       |           |       |
| Aroclor-1016                          | 0.51   | 0.20            | µg/L  | 0.500       |               | 103  | 50-114      |       |           |       |
| Aroclor-1016 [2C]                     | 0.52   | 0.20            | µg/L  | 0.500       |               | 105  | 50-114      |       |           |       |
| Aroclor-1260                          | 0.47   | 0.20            | µg/L  | 0.500       |               | 93.8 | 8-127       |       |           |       |
| Aroclor-1260 [2C]                     | 0.47   | 0.20            | µg/L  | 0.500       |               | 94.1 | 8-127       |       |           |       |
| Surrogate: Decachlorobiphenyl         | 1.73   |                 | µg/L  | 2.00        |               | 86.5 | 30-150      |       |           |       |
| Surrogate: Decachlorobiphenyl [2C]    | 1.95   |                 | µg/L  | 2.00        |               | 97.3 | 30-150      |       |           |       |
| Surrogate: Tetrachloro-m-xylene       | 1.83   |                 | µg/L  | 2.00        |               | 91.4 | 30-150      |       |           |       |
| Surrogate: Tetrachloro-m-xylene [2C]  | 1.82   |                 | µg/L  | 2.00        |               | 91.2 | 30-150      |       |           |       |
| <b>LCS Dup (B186668-BSD1)</b>         |        |                 |       |             |               |      |             |       |           |       |
| Prepared: 09/20/17 Analyzed: 09/21/17 |        |                 |       |             |               |      |             |       |           |       |
| Aroclor-1016                          | 0.52   | 0.20            | µg/L  | 0.500       |               | 103  | 50-114      | 0.301 |           |       |
| Aroclor-1016 [2C]                     | 0.54   | 0.20            | µg/L  | 0.500       |               | 108  | 50-114      | 3.01  |           |       |
| Aroclor-1260                          | 0.48   | 0.20            | µg/L  | 0.500       |               | 96.9 | 8-127       | 3.22  |           |       |
| Aroclor-1260 [2C]                     | 0.48   | 0.20            | µg/L  | 0.500       |               | 95.2 | 8-127       | 1.16  |           |       |
| Surrogate: Decachlorobiphenyl         | 1.72   |                 | µg/L  | 2.00        |               | 85.8 | 30-150      |       |           |       |
| Surrogate: Decachlorobiphenyl [2C]    | 1.95   |                 | µg/L  | 2.00        |               | 97.5 | 30-150      |       |           |       |
| Surrogate: Tetrachloro-m-xylene       | 1.82   |                 | µg/L  | 2.00        |               | 90.9 | 30-150      |       |           |       |
| Surrogate: Tetrachloro-m-xylene [2C]  | 1.80   |                 | µg/L  | 2.00        |               | 90.2 | 30-150      |       |           |       |

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

**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B186577 - EPA 245.1**
**Blank (B186577-BLK1)**

Prepared: 09/19/17 Analyzed: 09/20/17

|         |    |         |      |
|---------|----|---------|------|
| Mercury | ND | 0.00010 | mg/L |
|---------|----|---------|------|

**LCS (B186577-BS1)**

Prepared: 09/19/17 Analyzed: 09/20/17

|         |         |         |      |         |      |        |
|---------|---------|---------|------|---------|------|--------|
| Mercury | 0.00186 | 0.00010 | mg/L | 0.00200 | 92.9 | 85-115 |
|---------|---------|---------|------|---------|------|--------|

**LCS Dup (B186577-BSD1)**

Prepared: 09/19/17 Analyzed: 09/20/17

|         |         |         |      |         |      |        |      |    |
|---------|---------|---------|------|---------|------|--------|------|----|
| Mercury | 0.00190 | 0.00010 | mg/L | 0.00200 | 94.8 | 85-115 | 2.03 | 20 |
|---------|---------|---------|------|---------|------|--------|------|----|

**Batch B186704 - EPA 200.7**
**Blank (B186704-BLK1)**

Prepared: 09/20/17 Analyzed: 09/21/17

|      |    |       |      |
|------|----|-------|------|
| Iron | ND | 0.050 | mg/L |
|------|----|-------|------|

**LCS (B186704-BS1)**

Prepared: 09/20/17 Analyzed: 09/21/17

|      |      |       |      |      |      |        |
|------|------|-------|------|------|------|--------|
| Iron | 4.00 | 0.050 | mg/L | 4.00 | 99.9 | 85-115 |
|------|------|-------|------|------|------|--------|

**LCS Dup (B186704-BSD1)**

Prepared: 09/20/17 Analyzed: 09/21/17

|      |      |       |      |      |     |        |      |    |
|------|------|-------|------|------|-----|--------|------|----|
| Iron | 4.05 | 0.050 | mg/L | 4.00 | 101 | 85-115 | 1.32 | 20 |
|------|------|-------|------|------|-----|--------|------|----|

**Batch B186706 - EPA 200.8**
**Blank (B186706-BLK1)**

Prepared: 09/20/17 Analyzed: 09/21/17

|          |    |      |      |
|----------|----|------|------|
| Antimony | ND | 1.0  | µg/L |
| Arsenic  | ND | 1.0  | µg/L |
| Cadmium  | ND | 0.20 | µg/L |
| Chromium | ND | 10   | µg/L |
| Copper   | ND | 1.0  | µg/L |
| Lead     | ND | 0.50 | µg/L |
| Nickel   | ND | 5.0  | µg/L |
| Selenium | ND | 5.0  | µg/L |
| Silver   | ND | 0.20 | µg/L |
| Zinc     | ND | 20   | µg/L |

**LCS (B186706-BS1)**

Prepared: 09/20/17 Analyzed: 09/21/17

|          |      |     |      |      |      |        |
|----------|------|-----|------|------|------|--------|
| Antimony | 518  | 10  | µg/L | 500  | 104  | 85-115 |
| Arsenic  | 521  | 10  | µg/L | 500  | 104  | 85-115 |
| Cadmium  | 508  | 2.0 | µg/L | 500  | 102  | 85-115 |
| Chromium | 514  | 100 | µg/L | 500  | 103  | 85-115 |
| Copper   | 998  | 10  | µg/L | 1000 | 99.8 | 85-115 |
| Lead     | 517  | 5.0 | µg/L | 500  | 103  | 85-115 |
| Nickel   | 501  | 50  | µg/L | 500  | 100  | 85-115 |
| Selenium | 519  | 50  | µg/L | 500  | 104  | 85-115 |
| Silver   | 486  | 2.0 | µg/L | 500  | 97.3 | 85-115 |
| Zinc     | 1070 | 200 | µg/L | 1000 | 107  | 85-115 |

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

**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch B186706 - EPA 200.8**
**LCS Dup (B186706-BSD1)**

Prepared: 09/20/17 Analyzed: 09/21/17

|          |      |     |      |      |  |     |        |      |    |  |
|----------|------|-----|------|------|--|-----|--------|------|----|--|
| Antimony | 533  | 10  | µg/L | 500  |  | 107 | 85-115 | 2.88 | 20 |  |
| Arsenic  | 543  | 10  | µg/L | 500  |  | 109 | 85-115 | 4.08 | 20 |  |
| Cadmium  | 524  | 2.0 | µg/L | 500  |  | 105 | 85-115 | 3.03 | 20 |  |
| Chromium | 530  | 100 | µg/L | 500  |  | 106 | 85-115 | 3.05 | 20 |  |
| Copper   | 1050 | 10  | µg/L | 1000 |  | 105 | 85-115 | 4.73 | 20 |  |
| Lead     | 537  | 5.0 | µg/L | 500  |  | 107 | 85-115 | 3.90 | 20 |  |
| Nickel   | 526  | 50  | µg/L | 500  |  | 105 | 85-115 | 4.78 | 20 |  |
| Selenium | 544  | 50  | µg/L | 500  |  | 109 | 85-115 | 4.73 | 20 |  |
| Silver   | 502  | 2.0 | µg/L | 500  |  | 100 | 85-115 | 3.11 | 20 |  |
| Zinc     | 1110 | 200 | µg/L | 1000 |  | 111 | 85-115 | 3.61 | 20 |  |

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

**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B186544 - EPA 200.8 Dissolved**
**Blank (B186544-BLK1)**

Prepared &amp; Analyzed: 09/19/17

|          |    |      |      |  |  |  |  |  |  |  |
|----------|----|------|------|--|--|--|--|--|--|--|
| Antimony | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Arsenic  | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.20 | µg/L |  |  |  |  |  |  |  |
| Chromium | ND | 10   | µg/L |  |  |  |  |  |  |  |
| Copper   | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Lead     | ND | 0.50 | µg/L |  |  |  |  |  |  |  |
| Nickel   | ND | 5.0  | µg/L |  |  |  |  |  |  |  |
| Selenium | ND | 5.0  | µg/L |  |  |  |  |  |  |  |
| Silver   | ND | 0.20 | µg/L |  |  |  |  |  |  |  |
| Zinc     | ND | 20   | µg/L |  |  |  |  |  |  |  |

**LCS (B186544-BS1)**

Prepared &amp; Analyzed: 09/19/17

|          |      |     |      |      |  |     |        |  |  |  |
|----------|------|-----|------|------|--|-----|--------|--|--|--|
| Antimony | 519  | 10  | µg/L | 500  |  | 104 | 85-115 |  |  |  |
| Arsenic  | 525  | 10  | µg/L | 500  |  | 105 | 85-115 |  |  |  |
| Cadmium  | 518  | 2.0 | µg/L | 500  |  | 104 | 85-115 |  |  |  |
| Chromium | 535  | 100 | µg/L | 500  |  | 107 | 85-115 |  |  |  |
| Copper   | 1040 | 10  | µg/L | 1000 |  | 104 | 85-115 |  |  |  |
| Lead     | 538  | 5.0 | µg/L | 500  |  | 108 | 85-115 |  |  |  |
| Nickel   | 529  | 50  | µg/L | 500  |  | 106 | 85-115 |  |  |  |
| Selenium | 532  | 50  | µg/L | 500  |  | 106 | 85-115 |  |  |  |
| Silver   | 536  | 2.0 | µg/L | 500  |  | 107 | 85-115 |  |  |  |
| Zinc     | 1100 | 200 | µg/L | 1000 |  | 110 | 85-115 |  |  |  |

**LCS Dup (B186544-BSD1)**

Prepared &amp; Analyzed: 09/19/17

|          |      |     |      |      |  |     |        |      |    |  |
|----------|------|-----|------|------|--|-----|--------|------|----|--|
| Antimony | 528  | 10  | µg/L | 500  |  | 106 | 85-115 | 1.73 | 20 |  |
| Arsenic  | 538  | 10  | µg/L | 500  |  | 108 | 85-115 | 2.40 | 20 |  |
| Cadmium  | 528  | 2.0 | µg/L | 500  |  | 106 | 85-115 | 1.95 | 20 |  |
| Chromium | 555  | 100 | µg/L | 500  |  | 111 | 85-115 | 3.72 | 20 |  |
| Copper   | 1080 | 10  | µg/L | 1000 |  | 108 | 85-115 | 3.42 | 20 |  |
| Lead     | 546  | 5.0 | µg/L | 500  |  | 109 | 85-115 | 1.53 | 20 |  |
| Nickel   | 553  | 50  | µg/L | 500  |  | 111 | 85-115 | 4.30 | 20 |  |
| Selenium | 539  | 50  | µg/L | 500  |  | 108 | 85-115 | 1.39 | 20 |  |
| Silver   | 547  | 2.0 | µg/L | 500  |  | 109 | 85-115 | 2.17 | 20 |  |
| Zinc     | 1130 | 200 | µg/L | 1000 |  | 113 | 85-115 | 2.44 | 20 |  |

**Duplicate (B186544-DUP1)**
**Source: 17I0770-01**

Prepared &amp; Analyzed: 09/19/17

|          |      |     |      |  |      |  |       |    |  |  |
|----------|------|-----|------|--|------|--|-------|----|--|--|
| Antimony | ND   | 5.0 | µg/L |  | ND   |  | NC    | 20 |  |  |
| Arsenic  | 21.1 | 5.0 | µg/L |  | 22.4 |  | 5.56  | 20 |  |  |
| Cadmium  | ND   | 1.0 | µg/L |  | ND   |  | NC    | 20 |  |  |
| Chromium | ND   | 50  | µg/L |  | ND   |  | NC    | 20 |  |  |
| Copper   | 79.5 | 5.0 | µg/L |  | 93.2 |  | 15.8  | 20 |  |  |
| Lead     | 13.4 | 2.5 | µg/L |  | 13.4 |  | 0.259 | 20 |  |  |
| Nickel   | ND   | 25  | µg/L |  | ND   |  | NC    | 20 |  |  |
| Selenium | 51.5 | 25  | µg/L |  | 53.5 |  | 3.95  | 20 |  |  |
| Silver   | ND   | 1.0 | µg/L |  | ND   |  | NC    | 20 |  |  |
| Zinc     | ND   | 100 | µg/L |  | ND   |  | NC    | 20 |  |  |

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

**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B186544 - EPA 200.8 Dissolved**

| Matrix Spike (B186544-MS1) |      | Source: 1710770-01 |      | Prepared & Analyzed: 09/19/17 |      |      |        |  |  |  |
|----------------------------|------|--------------------|------|-------------------------------|------|------|--------|--|--|--|
| Antimony                   | 506  | 10                 | µg/L | 500                           | ND   | 101  | 70-130 |  |  |  |
| Arsenic                    | 532  | 10                 | µg/L | 500                           | 22.4 | 102  | 70-130 |  |  |  |
| Cadmium                    | 442  | 2.0                | µg/L | 500                           | ND   | 88.4 | 70-130 |  |  |  |
| Chromium                   | 522  | 100                | µg/L | 500                           | ND   | 104  | 70-130 |  |  |  |
| Copper                     | 1020 | 10                 | µg/L | 1000                          | 93.2 | 92.3 | 70-130 |  |  |  |
| Lead                       | 572  | 5.0                | µg/L | 500                           | 13.4 | 112  | 70-130 |  |  |  |
| Nickel                     | 500  | 50                 | µg/L | 500                           | 6.97 | 98.6 | 70-130 |  |  |  |
| Selenium                   | 493  | 50                 | µg/L | 500                           | 53.5 | 87.9 | 70-130 |  |  |  |
| Silver                     | 476  | 2.0                | µg/L | 500                           | ND   | 95.3 | 70-130 |  |  |  |
| Zinc                       | 858  | 200                | µg/L | 1000                          | ND   | 85.8 | 70-130 |  |  |  |

**Batch B186556 - EPA 200.7 Dissolved**

| Blank (B186556-BLK1)       |      | Prepared & Analyzed: 09/19/17 |      |                               |      |        |        |      |    |       |
|----------------------------|------|-------------------------------|------|-------------------------------|------|--------|--------|------|----|-------|
| Iron                       | ND   | 0.050                         | mg/L |                               |      |        |        |      |    |       |
| LCS (B186556-BS1)          |      | Prepared & Analyzed: 09/19/17 |      |                               |      |        |        |      |    |       |
| Iron                       | 4.04 | 0.050                         | mg/L | 4.00                          |      | 101    | 85-115 |      |    |       |
| LCS Dup (B186556-BSD1)     |      | Prepared & Analyzed: 09/19/17 |      |                               |      |        |        |      |    |       |
| Iron                       | 3.91 | 0.050                         | mg/L | 4.00                          |      | 97.7   | 85-115 | 3.33 | 20 |       |
| Duplicate (B186556-DUP1)   |      | Source: 1710770-01            |      | Prepared & Analyzed: 09/19/17 |      |        |        |      |    |       |
| Iron                       | 11.9 | 0.050                         | mg/L |                               | 12.6 |        |        | 5.54 | 20 |       |
| Matrix Spike (B186556-MS1) |      | Source: 1710770-01            |      | Prepared & Analyzed: 09/19/17 |      |        |        |      |    |       |
| Iron                       | 14.6 | 0.050                         | mg/L | 4.00                          | 12.6 | 51.0 * | 70-130 |      |    | MS-07 |

**Batch B186578 - EPA 245.1**

| Blank (B186578-BLK1)   |         | Prepared: 09/19/17 Analyzed: 09/20/17 |      |         |  |     |        |       |    |  |
|------------------------|---------|---------------------------------------|------|---------|--|-----|--------|-------|----|--|
| Mercury                | ND      | 0.00010                               | mg/L |         |  |     |        |       |    |  |
| LCS (B186578-BS1)      |         | Prepared: 09/19/17 Analyzed: 09/20/17 |      |         |  |     |        |       |    |  |
| Mercury                | 0.00202 | 0.00010                               | mg/L | 0.00200 |  | 101 | 85-115 |       |    |  |
| LCS Dup (B186578-BSD1) |         | Prepared: 09/19/17 Analyzed: 09/20/17 |      |         |  |     |        |       |    |  |
| Mercury                | 0.00203 | 0.00010                               | mg/L | 0.00200 |  | 102 | 85-115 | 0.675 | 20 |  |

**Batch B186698 - EPA 200.8 Dissolved**

| Blank (B186698-BLK1) |    | Prepared: 09/20/17 Analyzed: 09/22/17 |      |  |  |  |  |  |  |  |
|----------------------|----|---------------------------------------|------|--|--|--|--|--|--|--|
| Antimony             | ND | 1.0                                   | µg/L |  |  |  |  |  |  |  |
| Arsenic              | ND | 1.0                                   | µg/L |  |  |  |  |  |  |  |
| Cadmium              | ND | 0.20                                  | µg/L |  |  |  |  |  |  |  |
| Chromium             | ND | 10                                    | µg/L |  |  |  |  |  |  |  |
| Copper               | ND | 1.0                                   | µg/L |  |  |  |  |  |  |  |
| Lead                 | ND | 0.50                                  | µg/L |  |  |  |  |  |  |  |
| Nickel               | ND | 5.0                                   | µg/L |  |  |  |  |  |  |  |
| Selenium             | ND | 5.0                                   | µg/L |  |  |  |  |  |  |  |
| Silver               | ND | 0.20                                  | µg/L |  |  |  |  |  |  |  |
| Zinc                 | ND | 20                                    | µg/L |  |  |  |  |  |  |  |

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

**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch B186698 - EPA 200.8 Dissolved**
**LCS (B186698-BS1)**

Prepared: 09/20/17 Analyzed: 09/22/17

|          |      |     |      |      |  |      |        |  |  |  |
|----------|------|-----|------|------|--|------|--------|--|--|--|
| Antimony | 539  | 10  | µg/L | 500  |  | 108  | 85-115 |  |  |  |
| Arsenic  | 547  | 10  | µg/L | 500  |  | 109  | 85-115 |  |  |  |
| Cadmium  | 534  | 2.0 | µg/L | 500  |  | 107  | 85-115 |  |  |  |
| Chromium | 518  | 100 | µg/L | 500  |  | 104  | 85-115 |  |  |  |
| Copper   | 1040 | 10  | µg/L | 1000 |  | 104  | 85-115 |  |  |  |
| Lead     | 541  | 5.0 | µg/L | 500  |  | 108  | 85-115 |  |  |  |
| Nickel   | 522  | 50  | µg/L | 500  |  | 104  | 85-115 |  |  |  |
| Selenium | 540  | 50  | µg/L | 500  |  | 108  | 85-115 |  |  |  |
| Silver   | 460  | 2.0 | µg/L | 500  |  | 92.0 | 85-115 |  |  |  |
| Zinc     | 1100 | 200 | µg/L | 1000 |  | 110  | 85-115 |  |  |  |

**LCS Dup (B186698-BSD1)**

Prepared: 09/20/17 Analyzed: 09/22/17

|          |      |     |      |      |  |      |        |       |    |  |
|----------|------|-----|------|------|--|------|--------|-------|----|--|
| Antimony | 534  | 10  | µg/L | 500  |  | 107  | 85-115 | 0.838 | 20 |  |
| Arsenic  | 544  | 10  | µg/L | 500  |  | 109  | 85-115 | 0.561 | 20 |  |
| Cadmium  | 528  | 2.0 | µg/L | 500  |  | 106  | 85-115 | 1.11  | 20 |  |
| Chromium | 513  | 100 | µg/L | 500  |  | 103  | 85-115 | 1.01  | 20 |  |
| Copper   | 1030 | 10  | µg/L | 1000 |  | 103  | 85-115 | 0.835 | 20 |  |
| Lead     | 534  | 5.0 | µg/L | 500  |  | 107  | 85-115 | 1.23  | 20 |  |
| Nickel   | 518  | 50  | µg/L | 500  |  | 104  | 85-115 | 0.739 | 20 |  |
| Selenium | 531  | 50  | µg/L | 500  |  | 106  | 85-115 | 1.69  | 20 |  |
| Silver   | 463  | 2.0 | µg/L | 500  |  | 92.7 | 85-115 | 0.735 | 20 |  |
| Zinc     | 1090 | 200 | µg/L | 1000 |  | 109  | 85-115 | 1.33  | 20 |  |

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

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

| Analyte                              | Result | Reporting Limit | Units | Spike Level                   | Source Result | %REC | %REC Limits                   | RPD  | RPD Limit | Notes |
|--------------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------------------------|------|-----------|-------|
| <b>Batch B186528 - SM21-22 2540D</b> |        |                 |       |                               |               |      |                               |      |           |       |
| <b>Blank (B186528-BLK1)</b>          |        |                 |       | Prepared & Analyzed: 09/19/17 |               |      |                               |      |           |       |
| Total Suspended Solids               | ND     | 2.5             | mg/L  |                               |               |      |                               |      |           |       |
| <b>LCS (B186528-BS1)</b>             |        |                 |       | Prepared & Analyzed: 09/19/17 |               |      |                               |      |           |       |
| Total Suspended Solids               | 224    | 10              | mg/L  | 200                           |               | 112  | 66.7-117                      |      |           |       |
| <b>Batch B186642 - EPA 1664B</b>     |        |                 |       |                               |               |      |                               |      |           |       |
| <b>Blank (B186642-BLK1)</b>          |        |                 |       | Prepared & Analyzed: 09/20/17 |               |      |                               |      |           |       |
| Silica Gel Treated HEM (SGT-HEM)     | ND     | 1.4             | mg/L  |                               |               |      |                               |      |           |       |
| <b>LCS (B186642-BS1)</b>             |        |                 |       | Prepared & Analyzed: 09/20/17 |               |      |                               |      |           |       |
| Silica Gel Treated HEM (SGT-HEM)     | 9.8    |                 | mg/L  | 10.0                          |               | 98.0 | 64-132                        |      |           |       |
| <b>Duplicate (B186642-DUP1)</b>      |        |                 |       | <b>Source: 17I0770-02</b>     |               |      | Prepared & Analyzed: 09/20/17 |      |           |       |
| Silica Gel Treated HEM (SGT-HEM)     | ND     | 1.6             | mg/L  |                               | ND            |      |                               | NC   | 18        |       |
| <b>Matrix Spike (B186642-MS1)</b>    |        |                 |       | <b>Source: 17I0770-02</b>     |               |      | Prepared & Analyzed: 09/20/17 |      |           |       |
| Silica Gel Treated HEM (SGT-HEM)     | 89     | 14              | mg/L  | 100                           | ND            | 89.0 | 64-132                        |      |           |       |
| <b>Batch B186650 - EPA 420.1</b>     |        |                 |       |                               |               |      |                               |      |           |       |
| <b>Blank (B186650-BLK1)</b>          |        |                 |       | Prepared & Analyzed: 09/21/17 |               |      |                               |      |           |       |
| Phenol                               | ND     | 0.050           | mg/L  |                               |               |      |                               |      |           |       |
| <b>LCS (B186650-BS1)</b>             |        |                 |       | Prepared & Analyzed: 09/21/17 |               |      |                               |      |           |       |
| Phenol                               | 0.52   | 0.050           | mg/L  | 0.500                         |               | 103  | 71.1-117                      |      |           |       |
| <b>LCS Dup (B186650-BSD1)</b>        |        |                 |       | Prepared & Analyzed: 09/21/17 |               |      |                               |      |           |       |
| Phenol                               | 0.51   | 0.050           | mg/L  | 0.500                         |               | 102  | 71.1-117                      | 1.37 | 9.35      |       |
| <b>Duplicate (B186650-DUP1)</b>      |        |                 |       | <b>Source: 17I0770-01</b>     |               |      | Prepared & Analyzed: 09/21/17 |      |           |       |
| Phenol                               | 0.081  | 0.050           | mg/L  |                               | 0.074         |      |                               | 8.99 | 20        |       |
| <b>Matrix Spike (B186650-MS1)</b>    |        |                 |       | <b>Source: 17I0770-01</b>     |               |      | Prepared & Analyzed: 09/21/17 |      |           |       |
| Phenol                               | 0.47   | 0.050           | mg/L  | 0.500                         | 0.074         | 78.4 | 32.8-147                      |      |           |       |

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

**QUALITY CONTROL**
**Drinking Water Organics EPA 504.1 - Quality Control**

| Analyte                              | Result | Reporting Limit | Units | Spike Level                   | Source Result | %REC | %REC Limits | RPD  | RPD Limit | Notes |
|--------------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------|------|-----------|-------|
| <b>Batch B186764 - EPA 504 water</b> |        |                 |       |                               |               |      |             |      |           |       |
| <b>Blank (B186764-BLK1)</b>          |        |                 |       | Prepared & Analyzed: 09/21/17 |               |      |             |      |           |       |
| 1,2-Dibromoethane (EDB)              | ND     | 0.021           | µg/L  |                               |               |      |             |      |           |       |
| 1,2-Dibromoethane (EDB) [2C]         | ND     | 0.021           | µg/L  |                               |               |      |             |      |           |       |
| Surrogate: 1,3-Dibromopropane        | 0.900  |                 | µg/L  | 1.03                          |               | 87.1 | 70-130      |      |           |       |
| Surrogate: 1,3-Dibromopropane [2C]   | 0.884  |                 | µg/L  | 1.03                          |               | 85.5 | 70-130      |      |           |       |
| <b>LCS (B186764-BS1)</b>             |        |                 |       | Prepared & Analyzed: 09/21/17 |               |      |             |      |           |       |
| 1,2-Dibromoethane (EDB)              | 0.168  | 0.021           | µg/L  | 0.180                         |               | 93.1 | 70-130      |      |           |       |
| 1,2-Dibromoethane (EDB) [2C]         | 0.166  | 0.021           | µg/L  | 0.180                         |               | 92.0 | 70-130      |      |           |       |
| Surrogate: 1,3-Dibromopropane        | 0.935  |                 | µg/L  | 1.03                          |               | 90.8 | 70-130      |      |           |       |
| Surrogate: 1,3-Dibromopropane [2C]   | 0.940  |                 | µg/L  | 1.03                          |               | 91.3 | 70-130      |      |           |       |
| <b>LCS Dup (B186764-BSD1)</b>        |        |                 |       | Prepared & Analyzed: 09/21/17 |               |      |             |      |           |       |
| 1,2-Dibromoethane (EDB)              | 0.176  | 0.021           | µg/L  | 0.183                         |               | 96.6 | 70-130      | 4.89 |           |       |
| 1,2-Dibromoethane (EDB) [2C]         | 0.172  | 0.021           | µg/L  | 0.183                         |               | 94.3 | 70-130      | 3.73 |           |       |
| Surrogate: 1,3-Dibromopropane        | 0.964  |                 | µg/L  | 1.04                          |               | 92.4 | 70-130      |      |           |       |
| Surrogate: 1,3-Dibromopropane [2C]   | 0.977  |                 | µg/L  | 1.04                          |               | 93.7 | 70-130      |      |           |       |



---

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332**QUALITY CONTROL****Semivolatile Organic Compounds by GC - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch '[none]' - Alcohol Prep****BLK (BATCH-BLK1 (Water))**

Prepared: Analyzed: 09/21/17

|         |    |      |      |  |  |     |        |  |   |  |
|---------|----|------|------|--|--|-----|--------|--|---|--|
| Ethanol | ND | 2000 | µg/L |  |  | 100 | 70-130 |  | 0 |  |
|---------|----|------|------|--|--|-----|--------|--|---|--|

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

# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*EPA 608*

LCS

Lab Sample ID: B186668-BS1 Date(s) Analyzed 09/21/2017 09/21/2017

Instrument ID (1): ECD10 Instrument ID (2): ECD10

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

| ANALYTE      | COL | RT    | RT WINDOW |       | CONCENTRATION | %RPD |
|--------------|-----|-------|-----------|-------|---------------|------|
|              |     |       | FROM      | TO    |               |      |
| Aroclor-1016 | 1   | 0.000 | 0.000     | 0.000 | 0.51          |      |
|              | 2   | 0.000 | 0.000     | 0.000 | 0.52          | 1.9  |
| Aroclor-1260 | 1   | 0.000 | 0.000     | 0.000 | 0.47          |      |
|              | 2   | 0.000 | 0.000     | 0.000 | 0.47          | 0.0  |

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

# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*EPA 608*

LCS Dup

Lab Sample ID: B186668-BSD1 Date(s) Analyzed 09/21/2017 09/21/2017

Instrument ID (1): ECD10 Instrument ID (2): ECD10

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

| ANALYTE      | COL | RT    | RT WINDOW |       | CONCENTRATION | %RPD |
|--------------|-----|-------|-----------|-------|---------------|------|
|              |     |       | FROM      | TO    |               |      |
| Aroclor-1016 | 1   | 0.000 | 0.000     | 0.000 | 0.52          |      |
|              | 2   | 0.000 | 0.000     | 0.000 | 0.54          | 3.8  |
| Aroclor-1260 | 1   | 0.000 | 0.000     | 0.000 | 0.48          |      |
|              | 2   | 0.000 | 0.000     | 0.000 | 0.48          | 0.0  |

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

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES***EPA 504.1***LCS**Lab Sample ID: B186764-BS1 Date(s) Analyzed 09/21/2017 09/21/2017

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

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

| ANALYTE                 | COL | RT    | RT WINDOW |       | CONCENTRATION | %RPD |
|-------------------------|-----|-------|-----------|-------|---------------|------|
|                         |     |       | FROM      | TO    |               |      |
| 1,2-Dibromoethane (EDB) | 1   | 2.873 | 0.000     | 0.000 | 0.168         |      |
|                         | 2   | 2.855 | 0.000     | 0.000 | 0.166         | 2.4  |

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

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES***EPA 504.1***LCS Dup**Lab Sample ID: B186764-BSD1 Date(s) Analyzed 09/21/2017 09/21/2017

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

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

| ANALYTE                 | COL | RT    | RT WINDOW |       | CONCENTRATION | %RPD |
|-------------------------|-----|-------|-----------|-------|---------------|------|
|                         |     |       | FROM      | TO    |               |      |
| 1,2-Dibromoethane (EDB) | 1   | 2.874 | 0.000     | 0.000 | 0.176         |      |
|                         | 2   | 2.856 | 0.000     | 0.000 | 0.172         | 4.6  |

# FLAG/QUALIFIER SUMMARY

|       |                                                                                                                                                                                                                                                                 |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *     | QC result is outside of established limits.                                                                                                                                                                                                                     |
| †     | Wide recovery limits established for difficult compound.                                                                                                                                                                                                        |
| ‡     | Wide RPD limits established for difficult compound.                                                                                                                                                                                                             |
| #     | Data exceeded client recommended or regulatory level                                                                                                                                                                                                            |
| ND    | Not Detected                                                                                                                                                                                                                                                    |
| RL    | Reporting Limit                                                                                                                                                                                                                                                 |
| DL    | Method Detection Limit                                                                                                                                                                                                                                          |
| MCL   | Maximum Contaminant Level                                                                                                                                                                                                                                       |
|       | Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.                                                                                                          |
|       | No results have been blank subtracted unless specified in the case narrative section.                                                                                                                                                                           |
| B     | Analyte is found in the associated blank as well as in the sample.                                                                                                                                                                                              |
| DL-01 | Elevated reporting limits for all volatile compounds due to foaming sample matrix.                                                                                                                                                                              |
| DL-15 | Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.                                                                                                                                  |
| J     | Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).                                                                                                                             |
| L-04  | Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.                                                                    |
| L-07  | Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.                                        |
| MS-07 | Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated. |
| R-02  | Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.                                                                                                                                 |
| V-04  | Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.                                                                                                     |
| V-05  | Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.                                           |
| V-19  | Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.                                              |
| V-20  | Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.                                                                            |

**CERTIFICATIONS**
**Certified Analyses included in this Report**

| Analyte                          | Certifications          |
|----------------------------------|-------------------------|
| <b><i>EPA 200.7 in Water</i></b> |                         |
| Iron                             | CT,MA,NH,NY,RI,NC,ME,VA |
| Iron                             | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>EPA 200.8 in Water</i></b> |                         |
| Antimony                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Antimony                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Arsenic                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Arsenic                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Cadmium                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Cadmium                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Chromium                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Chromium                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Copper                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Copper                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Lead                             | CT,MA,NH,NY,RI,NC,ME,VA |
| Lead                             | CT,MA,NH,NY,RI,NC,ME,VA |
| Nickel                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Nickel                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Selenium                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Selenium                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Silver                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Silver                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Zinc                             | CT,MA,NH,RI,NY,NC,ME,VA |
| Zinc                             | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>EPA 245.1 in Water</i></b> |                         |
| Mercury                          | CT,MA,NH,RI,NY,NC,ME,VA |
| Mercury                          | CT,MA,NH,RI,NY,NC,ME,VA |
| <b><i>EPA 420.1 in Water</i></b> |                         |
| Phenol                           | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>EPA 608 in Water</i></b>   |                         |
| Aroclor-1016                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1016 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1221                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1221 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1232                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1232 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1242                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1242 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1248                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1248 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1254                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1254 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1260                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1260 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>EPA 624 in Water</i></b>   |                         |
| Acetone                          | NH,NY                   |

**CERTIFICATIONS**
**Certified Analyses included in this Report**

| Analyte                        | Certifications          |
|--------------------------------|-------------------------|
| <b><i>EPA 624 in Water</i></b> |                         |
| Benzene                        | CT,MA,NH,NY,RI,NC,ME,VA |
| Carbon Tetrachloride           | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,2-Dichlorobenzene            | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,3-Dichlorobenzene            | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,4-Dichlorobenzene            | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,2-Dichloroethane             | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,1-Dichloroethane             | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,1-Dichloroethylene           | CT,MA,NH,NY,RI,NC,ME,VA |
| Ethylbenzene                   | CT,MA,NH,NY,RI,NC,ME,VA |
| Methyl tert-Butyl Ether (MTBE) | NH,NY,NC                |
| Methylene Chloride             | CT,MA,NH,NY,RI,NC,ME,VA |
| Naphthalene                    | NC                      |
| Tetrachloroethylene            | CT,MA,NH,NY,RI,NC,ME,VA |
| Toluene                        | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,2,4-Trichlorobenzene         | NC                      |
| 1,1,1-Trichloroethane          | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,1,2-Trichloroethane          | CT,MA,NH,NY,RI,NC,ME,VA |
| Trichloroethylene              | CT,MA,NH,NY,RI,NC,ME,VA |
| Vinyl Chloride                 | CT,MA,NH,NY,RI,NC,ME,VA |
| m+p Xylene                     | CT,MA,NH,NY,RI,NC,VA    |
| o-Xylene                       | CT,MA,NH,NY,RI,NC,VA    |
| <b><i>EPA 625 in Water</i></b> |                         |
| Acenaphthene                   | CT,MA,NH,NY,NC,RI,ME,VA |
| Acenaphthylene                 | CT,MA,NH,NY,NC,RI,ME,VA |
| Anthracene                     | CT,MA,NH,NY,NC,RI,ME,VA |
| Benidine                       | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(a)anthracene             | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(a)pyrene                 | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(b)fluoranthene           | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(g,h,i)perylene           | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(k)fluoranthene           | CT,MA,NH,NY,NC,RI,ME,VA |
| 4-Bromophenylphenylether       | CT,MA,NH,NY,NC,RI,ME,VA |
| Butylbenzylphthalate           | CT,MA,NH,NY,NC,RI,ME,VA |
| 4-Chloro-3-methylphenol        | CT,MA,NH,NY,NC,RI,VA    |
| Bis(2-chloroethyl)ether        | CT,MA,NH,NY,NC,RI,ME,VA |
| Bis(2-chloroisopropyl)ether    | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Chloronaphthalene            | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Chlorophenol                 | CT,MA,NH,NY,NC,RI,ME,VA |
| 4-Chlorophenylphenylether      | CT,MA,NH,NY,NC,RI,ME,VA |
| Chrysene                       | CT,MA,NH,NY,NC,RI,ME,VA |
| Dibenz(a,h)anthracene          | CT,MA,NH,NY,NC,RI,ME,VA |
| Di-n-butylphthalate            | CT,MA,NH,NY,NC,RI,ME,VA |
| 1,3-Dichlorobenzene            | MA,NC                   |
| 1,4-Dichlorobenzene            | MA,NC                   |
| 1,2-Dichlorobenzene            | MA,NC                   |
| 3,3-Dichlorobenzidine          | CT,MA,NH,NY,NC,RI,ME,VA |



**CERTIFICATIONS**
**Certified Analyses included in this Report**

| Analyte                                   | Certifications          |
|-------------------------------------------|-------------------------|
| <b><i>EPA 625 in Water</i></b>            |                         |
| 2,4-Dichlorophenol                        | CT,MA,NH,NY,NC,RI,ME,VA |
| Diethylphthalate                          | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,4-Dimethylphenol                        | CT,MA,NH,NY,NC,RI,ME,VA |
| Dimethylphthalate                         | CT,MA,NH,NY,NC,RI,ME,VA |
| 4,6-Dinitro-2-methylphenol                | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,4-Dinitrophenol                         | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,4-Dinitrotoluene                        | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,6-Dinitrotoluene                        | CT,MA,NH,NY,NC,RI,ME,VA |
| Di-n-octylphthalate                       | CT,MA,NH,NY,NC,RI,ME,VA |
| 1,2-Diphenylhydrazine (as Azobenzene)     | NC                      |
| Bis(2-Ethylhexyl)phthalate                | CT,MA,NH,NY,NC,RI,ME,VA |
| Fluoranthene                              | CT,MA,NH,NY,NC,RI,ME,VA |
| Fluorene                                  | CT,MA,NH,NY,NC,RI,ME,VA |
| Hexachlorobenzene                         | CT,MA,NH,NY,NC,RI,ME,VA |
| Hexachlorobutadiene                       | CT,MA,NH,NY,NC,RI,ME,VA |
| Hexachlorocyclopentadiene                 | CT,MA,NH,NY,NC,RI,ME,VA |
| Hexachloroethane                          | CT,MA,NH,NY,NC,RI,ME,VA |
| Indeno(1,2,3-cd)pyrene                    | CT,MA,NH,NY,NC,RI,ME,VA |
| Isophorone                                | CT,MA,NH,NY,NC,RI,ME,VA |
| Naphthalene                               | CT,MA,NH,NY,NC,RI,ME,VA |
| Nitrobenzene                              | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Nitrophenol                             | CT,MA,NH,NY,NC,RI,ME,VA |
| 4-Nitrophenol                             | CT,MA,NH,NY,NC,RI,ME,VA |
| N-Nitrosodimethylamine                    | CT,MA,NH,NY,NC,RI,ME,VA |
| N-Nitrosodiphenylamine                    | CT,MA,NH,NY,NC,RI,ME,VA |
| N-Nitrosodi-n-propylamine                 | CT,MA,NH,NY,NC,RI,ME,VA |
| Pentachlorophenol                         | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Methylnaphthalene                       | NC                      |
| Phenanthrene                              | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Methylphenol                            | NY,NC                   |
| Phenol                                    | CT,MA,NH,NY,NC,RI,ME,VA |
| 3/4-Methylphenol                          | NY,NC                   |
| Pyrene                                    | CT,MA,NH,NY,NC,RI,ME,VA |
| 1,2,4-Trichlorobenzene                    | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,4,6-Trichlorophenol                     | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Fluorophenol                            | NC                      |
| <b><i>SM19-22 4500 NH3 C in Water</i></b> |                         |
| Ammonia as N                              | NY,MA,CT,RI,VA,NC,ME    |
| <b><i>SM21-22 2540D in Water</i></b>      |                         |
| Total Suspended Solids                    | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>SM21-22 4500 CN E in Water</i></b>  |                         |
| Cyanide                                   | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>SW-846 8015C in Water</i></b>       |                         |
| Ethanol                                   | NY                      |
| <b><i>SW-846 8270D in Water</i></b>       |                         |

# CERTIFICATIONS

## Certified Analyses included in this Report

| Analyte                               | Certifications       |
|---------------------------------------|----------------------|
| <i>SW-846 8270D in Water</i>          |                      |
| Acenaphthene                          | CT,NY,NC,ME,NH,VA,NJ |
| Acenaphthylene                        | CT,NY,NC,ME,NH,VA,NJ |
| Anthracene                            | CT,NY,NC,ME,NH,VA,NJ |
| Benidine                              | CT,NY,NC,ME,NH,VA,NJ |
| Benzo(a)anthracene                    | CT,NY,NC,ME,NH,VA,NJ |
| Benzo(a)pyrene                        | CT,NY,NC,ME,NH,VA,NJ |
| Benzo(b)fluoranthene                  | CT,NY,NC,ME,NH,VA,NJ |
| Benzo(g,h,i)perylene                  | CT,NY,NC,ME,NH,VA,NJ |
| Benzo(k)fluoranthene                  | CT,NY,NC,ME,NH,VA,NJ |
| Bis(2-chloroethyl)ether               | CT,NY,NC,ME,NH,VA,NJ |
| Bis(2-chloroisopropyl)ether           | CT,NY,NC,ME,NH,VA,NJ |
| Bis(2-Ethylhexyl)phthalate            | CT,NY,NC,ME,NH,VA,NJ |
| 4-Bromophenylphenylether              | CT,NY,NC,ME,NH,VA,NJ |
| Butylbenzylphthalate                  | CT,NY,NC,ME,NH,VA,NJ |
| 4-Chloro-3-methylphenol               | CT,NY,NC,ME,NH,VA,NJ |
| 2-Chloronaphthalene                   | CT,NY,NC,ME,NH,VA,NJ |
| 2-Chlorophenol                        | CT,NY,NC,ME,NH,VA,NJ |
| 4-Chlorophenylphenylether             | CT,NY,NC,ME,NH,VA,NJ |
| Chrysene                              | CT,NY,NC,ME,NH,VA,NJ |
| Dibenz(a,h)anthracene                 | CT,NY,NC,ME,NH,VA,NJ |
| Di-n-butylphthalate                   | CT,NY,NC,ME,NH,VA,NJ |
| 1,2-Dichlorobenzene                   | CT,NY,NC,ME,NH,VA,NJ |
| 1,3-Dichlorobenzene                   | CT,NY,NC,ME,NH,VA,NJ |
| 1,4-Dichlorobenzene                   | CT,NY,NC,ME,NH,VA,NJ |
| 3,3-Dichlorobenzidine                 | CT,NY,NC,ME,NH,VA,NJ |
| 2,4-Dichlorophenol                    | CT,NY,NC,ME,NH,VA,NJ |
| Diethylphthalate                      | CT,NY,NC,ME,NH,VA,NJ |
| 2,4-Dimethylphenol                    | CT,NY,NC,ME,NH,VA,NJ |
| Dimethylphthalate                     | CT,NY,NC,ME,NH,VA,NJ |
| 4,6-Dinitro-2-methylphenol            | CT,NY,NC,ME,NH,VA,NJ |
| 2,4-Dinitrophenol                     | CT,NY,NC,ME,NH,VA,NJ |
| 2,4-Dinitrotoluene                    | CT,NY,NC,ME,NH,VA,NJ |
| 2,6-Dinitrotoluene                    | CT,NY,NC,ME,NH,VA,NJ |
| Di-n-octylphthalate                   | CT,NY,NC,ME,NH,VA,NJ |
| 1,2-Diphenylhydrazine (as Azobenzene) | NY,NC,ME             |
| Fluoranthene                          | CT,NY,NC,ME,NH,VA,NJ |
| Fluorene                              | NY,NC,ME,NH,VA,NJ    |
| Hexachlorobenzene                     | CT,NY,NC,ME,NH,VA,NJ |
| Hexachlorobutadiene                   | CT,NY,NC,ME,NH,VA,NJ |
| Hexachlorocyclopentadiene             | CT,NY,NC,ME,NH,VA,NJ |
| Hexachloroethane                      | CT,NY,NC,ME,NH,VA,NJ |
| Indeno(1,2,3-cd)pyrene                | CT,NY,NC,ME,NH,VA,NJ |
| Isophorone                            | CT,NY,NC,ME,NH,VA,NJ |
| 2-Methylnaphthalene                   | CT,NY,NC,ME,NH,VA,NJ |
| 2-Methylphenol                        | CT,NY,NC,NH,VA,NJ    |
| 3/4-Methylphenol                      | CT,NY,NC,NH,VA,NJ    |
| Naphthalene                           | CT,NY,NC,ME,NH,VA,NJ |

# CERTIFICATIONS

## Certified Analyses included in this Report

| Analyte                      | Certifications       |
|------------------------------|----------------------|
| <i>SW-846 8270D in Water</i> |                      |
| Nitrobenzene                 | CT,NY,NC,ME,NH,VA,NJ |
| 2-Nitrophenol                | CT,NY,NC,ME,NH,VA,NJ |
| 4-Nitrophenol                | CT,NY,NC,ME,NH,VA,NJ |
| N-Nitrosodimethylamine       | CT,NY,NC,ME,NH,VA,NJ |
| N-Nitrosodiphenylamine       | CT,NY,NC,ME,NH,VA,NJ |
| N-Nitrosodi-n-propylamine    | CT,NY,NC,ME,NH,VA,NJ |
| Pentachlorophenol            | CT,NY,NC,ME,NH,VA,NJ |
| Phenanthrene                 | CT,NY,NC,ME,NH,VA,NJ |
| Phenol                       | CT,NY,NC,ME,NH,VA,NJ |
| Pyrene                       | CT,NY,NC,ME,NH,VA,NJ |
| 1,2,4-Trichlorobenzene       | CT,NY,NC,ME,NH,VA,NJ |
| 2,4,6-Trichlorophenol        | CT,NY,NC,ME,NH,VA,NJ |
| 2-Fluorophenol               | NC,VA                |
| Phenol-d6                    | VA                   |
| Nitrobenzene-d5              | VA                   |

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

| Code  | Description                                  | Number        | Expires    |
|-------|----------------------------------------------|---------------|------------|
| AIHA  | AIHA-LAP, LLC - ISO17025:2005                | 100033        | 02/1/2018  |
| MA    | Massachusetts DEP                            | M-MA100       | 06/30/2018 |
| CT    | Connecticut Department of Public Health      | PH-0567       | 09/30/2019 |
| NY    | New York State Department of Health          | 10899 NELAP   | 04/1/2018  |
| NH-S  | New Hampshire Environmental Lab              | 2516 NELAP    | 02/5/2018  |
| RI    | Rhode Island Department of Health            | LAO00112      | 12/30/2017 |
| NC    | North Carolina Div. of Water Quality         | 652           | 12/31/2017 |
| NJ    | New Jersey DEP                               | MA007 NELAP   | 06/30/2018 |
| FL    | Florida Department of Health                 | E871027 NELAP | 06/30/2018 |
| VT    | Vermont Department of Health Lead Laboratory | LL015036      | 07/30/2018 |
| ME    | State of Maine                               | 2011028       | 06/9/2019  |
| VA    | Commonwealth of Virginia                     | 460217        | 12/14/2017 |
| NH-P  | New Hampshire Environmental Lab              | 2557 NELAP    | 09/6/2018  |
| VT-DW | Vermont Department of Health Drinking Water  | VT-255716     | 06/12/2018 |
| NC-DW | North Carolina Department of Health          | 25703         | 07/31/2018 |



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

Email: info@contestlabs.com

Company Name: NSTAR/Eversource - Monthly Billing

Address: One NSTAR Way, Westwood, MA 02090

Phone: (339) 987-7029

Project Name: Mystic - East Eagle

Project Location: Mystic - East Eagle

Project Number: E-0754

Project Manager: Mike Zylich

Purchase Order Numbr: 64454-1

Invoice Recipient: NSTAR/Eversource - Monthly Billing

Sampled By:

Enhanced Data Package Required: ☐  
Email To: memartin@tighebond.com, Michael.Zylich@eversource.com

Format: PDF ☒ EXCEL ☒

Other: ☐

Request Turnaround Time

7-Day ☐ 10-Day ☐ 5 days ☒

Other: ☐

Rush-Approval Required

1-Day ☐ 3-Day ☐ 4-Day ☐

2-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒

Other: ☐

Enhanced Data Package Required: ☐

Email To: memartin@tighebond.com, Michael.Zylich@eversource.com

Format: PDF ☒ EXCEL ☒

Other: ☐

Request Turnaround Time

7-Day ☐ 10-Day ☐ 5 days ☒

Other: ☐

Rush-Approval Required

1-Day ☐ 3-Day ☐ 4-Day ☐

2-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒

Other: ☐

Enhanced Data Package Required: ☐

Email To: memartin@tighebond.com, Michael.Zylich@eversource.com

Format: PDF ☒ EXCEL ☒

Other: ☐

Request Turnaround Time

7-Day ☐ 10-Day ☐ 5 days ☒

Other: ☐

Rush-Approval Required

1-Day ☐ 3-Day ☐ 4-Day ☐

2-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒

Other: ☐

Enhanced Data Package Required: ☐

1710770

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 0 5 8 2015

39 Spruce Street  
East Longmeadow, MA 01028

Page 1 of 1

| Con-Test Work Order# | Client Sample ID / Description | Beginning Date/Time | Ending Date/Time | Composite | Grab | Matrix Code | Conc Code |
|----------------------|--------------------------------|---------------------|------------------|-----------|------|-------------|-----------|
| 1                    | MW-1                           | 9/15/2017           | 9:00             |           | Grab | GW          | U         |
| 2                    | MW-1F                          | 9/15/2017           | 10:30            |           | Grab | GW          | U         |
| 3                    | MW-206                         | 9/15/2017           | 12:00            |           | Grab | GW          | U         |
| 4                    | MW-206F                        | 9/15/2017           | 13:00            |           | Grab | GW          | U         |

**ANALYSIS REQUESTED**

|  | PCBs | VOCs | SVOCs | EDB | Ammonia | Ethanol | Total Phenols | Total Cyanide | Hex Chrom | Total RGP Metals | TSS/TRC/Chloride | TPH - Oil & Grease | TSS | Pentachlorophenol |
|--|------|------|-------|-----|---------|---------|---------------|---------------|-----------|------------------|------------------|--------------------|-----|-------------------|
|  | X    | X    | X     | X   | X       | X       | X             | X             | X         | X                | X                | X                  | X   | X                 |

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

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

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

**Program Information**

MCP Analytical Certification Form Required ☒  
~~RCP Analysis Certification Form Required~~  
MA State DW Form Required ☐  
PWSID # \_\_\_\_\_

NELAC and AIHA-LAP, LLC Accredited

**Notes:**  
2: VOCs include EDB, TBA, TAME and 1,4-dioxane  
RGP Metals (antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, zinc and iron)  
to: acantara@tighebond.com

3:   
Please use the following codes to indicate possible sample concentration within the Conc Code column above:  
H - High; M - Medium; L - Low; C - Clean; U - Unknown

**Relinquished by: (signature)** *[Signature]* Date/Time: 9/18/17 5:30  
**Received by: (signature)** *[Signature]* Date/Time: 9/18/17 13:38  
**Relinquished by: (signature)** *[Signature]* Date/Time: 9/18/17 16:45  
**Received by: (signature)** *[Signature]* Date/Time: 9/18/17 16:45  
**Relinquished by: (signature)** *[Signature]* Date/Time: 9/18/17 16:45  
**Received by: (signature)** *[Signature]* Date/Time: 9/18/17 16:45  
**Relinquished by: (signature)** *[Signature]* Date/Time: 9/18/17 16:45  
**Received by: (signature)** *[Signature]* Date/Time: 9/18/17 16:45

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

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St.  
East Longmeadow, MA. 01028  
P: 413-525-2332  
F: 413-525-6405  
www.contestlabs.com



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

## Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False

Statement will be brought to the attention of the Client - State True or False

Client NStar/Eversource

Received By JM Date 9/18/17 Time 1756

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

Direct from Sampling   Ambient   Melted Ice

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 3.3, 3.9, 4.1, 5.1

By Blank #   Actual Temp -

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

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

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

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

Did COC include all Client T Analysis T Sampler Name T

pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? N/A Who was notified?

Are there Rushes? N/A Who was notified?

Are there Short Holds? N/A Who was notified?

Is there enough Volume? T

Is there Headspace where applicable? T MS/MSD? N/A

Proper Media/Containers Used? T Is splitting samples required? N/A

Were trip blanks received? N/A On COC? N/A

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

| Vials        | #         | Containers:   | #         |                 | #         |               | # |
|--------------|-----------|---------------|-----------|-----------------|-----------|---------------|---|
| Unp-         |           | 1 Liter Amb.  | <u>31</u> | 1 Liter Plastic |           | 16 oz Amb.    |   |
| HCL-         | <u>24</u> | 500 mL Amb.   | <u>4</u>  | 500 mL Plastic  | <u>4</u>  | 8oz Amb/Clear |   |
| Meoh-        |           | 250 mL Amb.   |           | 250 mL Plastic  | <u>12</u> | 4oz Amb/Clear |   |
| Bisulfate-   |           | Col./Bacteria |           | Flashpoint      |           | 2oz Amb/Clear |   |
| DI-          |           | Other Plastic |           | Other Glass     |           | Encore        |   |
| Thiosulfate- | <u>12</u> | SOC Kit       |           | Plastic Bag     |           | Frozen:       |   |
| Sulfuric-    |           | Perchlorate   |           | Ziplock         |           |               |   |

## Unused Media

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

Comments:

October 10, 2017

Michael Zylich  
NSTAR Electric & Gas Corporation - Monthly Billing  
One NSTAR Way, SUM SE-250  
East Sandwich, MA 02090-9230

Project Location: Mystic- East Eagle  
Client Job Number:  
Project Number: [none]  
Laboratory Work Order Number: 1711356

Enclosed are results of analyses for samples received by the laboratory on September 28, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas", with a long, sweeping horizontal line extending to the right.

James M. Georgantas  
Project Manager

## Table of Contents

|                                                                      |    |
|----------------------------------------------------------------------|----|
| Sample Summary                                                       | 4  |
| Case Narrative                                                       | 5  |
| Sample Results                                                       | 8  |
| 17I1356-01                                                           | 8  |
| 17I1356-02                                                           | 18 |
| Sample Preparation Information                                       | 29 |
| QC Data                                                              | 31 |
| Volatile Organic Compounds by GC/MS                                  | 31 |
| B187367                                                              | 31 |
| Semivolatile Organic Compounds by GC/MS                              | 33 |
| B187912                                                              | 33 |
| Semivolatile Organic Compounds by - GC/MS                            | 34 |
| B187676                                                              | 34 |
| Polychlorinated Biphenyls By GC/ECD                                  | 38 |
| B187498                                                              | 38 |
| Metals Analyses (Total)                                              | 39 |
| B187411                                                              | 39 |
| B187422                                                              | 39 |
| B187761                                                              | 40 |
| Metals Analyses (Dissolved)                                          | 41 |
| B187476                                                              | 41 |
| B187506                                                              | 42 |
| B187994                                                              | 42 |
| Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) | 43 |
| B187491                                                              | 43 |

## Table of Contents (continued)

|                                 |    |
|---------------------------------|----|
| B187648                         | 43 |
| B187719                         | 43 |
| Flag/Qualifier Summary          | 44 |
| Certifications                  | 45 |
| Chain of Custody/Sample Receipt | 50 |



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

NSTAR Electric &amp; Gas Corporation - Monthly Billi

One NSTAR Way, SUM SE-250

East Sandwich, MA 02090-9230

ATTN: Michael Zylich

REPORT DATE: 10/10/2017

PURCHASE ORDER NUMBER: 64454 Release 1

PROJECT NUMBER: [none]

# ANALYTICAL SUMMARY

WORK ORDER NUMBER: 1711356

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

PROJECT LOCATION: Mystic- East Eagle

| FIELD SAMPLE # | LAB ID:    | MATRIX       | SAMPLE DESCRIPTION | TEST      | SUB LAB                                            |
|----------------|------------|--------------|--------------------|-----------|----------------------------------------------------|
| MW-204         | 1711356-01 | Ground Water |                    | EPA 1664B |                                                    |
|                |            |              |                    | EPA 200.7 |                                                    |
|                |            |              |                    | EPA 200.8 |                                                    |
|                |            |              |                    | EPA 245.1 |                                                    |
|                |            |              |                    | EPA 420.1 |                                                    |
|                |            |              |                    | EPA 504.1 | MA M-CT008/CT<br>PH-0465/NY11549                   |
|                |            |              |                    | EPA 608   |                                                    |
|                |            |              |                    | EPA 624   |                                                    |
|                |            |              |                    | EPA 625   |                                                    |
|                |            |              | SM19-22 4500 NH3 C |           | MA M-MA-086/CT<br>PH-0574/NY11148                  |
|                |            |              | SM21-22 2540D      |           |                                                    |
|                |            |              | SM21-22 4500 CN E  |           | MA M-MA-086/CT<br>PH-0574/NY11148                  |
|                |            |              | SW-846 8015C       |           | NH NELAC 2539/ MA<br>M-MA014/CT PH-0494<br>+others |
|                |            |              | SW-846 8270D       |           |                                                    |
| MW-204F        | 1711356-02 | Ground Water |                    | EPA 1664B |                                                    |
|                |            |              |                    | EPA 200.7 |                                                    |
|                |            |              |                    | EPA 200.8 |                                                    |
|                |            |              |                    | EPA 245.1 |                                                    |
|                |            |              |                    | EPA 420.1 |                                                    |
|                |            |              |                    | EPA 504.1 | MA M-CT008/CT<br>PH-0465/NY11549                   |
|                |            |              |                    | EPA 608   |                                                    |
|                |            |              |                    | EPA 624   |                                                    |
|                |            |              |                    | EPA 625   |                                                    |
|                |            |              | SM19-22 4500 NH3 C |           | MA M-MA-086/CT<br>PH-0574/NY11148                  |
|                |            |              | SM21-22 2540D      |           |                                                    |
|                |            |              | SM21-22 4500 CN E  |           | MA M-MA-086/CT<br>PH-0574/NY11148                  |
|                |            |              | SW-846 8015C       |           | NH NELAC 2539/ MA<br>M-MA014/CT PH-0494<br>+others |
|                |            |              | SW-846 8270D       |           |                                                    |

#### **CASE NARRATIVE SUMMARY**

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

For method 8270, only a select list of compounds was requested and reported.

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

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

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

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

1711356-02[MW-204F], B187506-MS1

**EPA 200.8****Qualifications:****DL-15**

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

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

1711356-01[MW-204], 1711356-02[MW-204F]

**Arsenic**

1711356-01[MW-204], 1711356-02[MW-204F]

**Cadmium**

1711356-01[MW-204], 1711356-02[MW-204F]

**Chromium**

1711356-01[MW-204], 1711356-02[MW-204F]

**Copper**

1711356-01[MW-204], 1711356-02[MW-204F]

**Lead**

1711356-01[MW-204], 1711356-02[MW-204F]

**Nickel**

1711356-01[MW-204], 1711356-02[MW-204F]

**Selenium**

1711356-01[MW-204], 1711356-02[MW-204F]

**Silver**

1711356-01[MW-204], 1711356-02[MW-204F]

**Zinc**

1711356-01[MW-204], 1711356-02[MW-204F]

**EPA 625****Qualifications:****V-04**

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

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

1711356-01[MW-204], 1711356-02[MW-204F], B187676-BLK1, B187676-BS1, B187676-BSD1

**V-05**

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

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

1711356-01[MW-204], 1711356-02[MW-204F], B187676-BLK1, B187676-BS1, B187676-BSD1

**Hexachlorocyclopentadiene**

1711356-01[MW-204], 1711356-02[MW-204F], B187676-BLK1, B187676-BS1, B187676-BSD1

**V-19**

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99.

Reduced precision and accuracy may be associated with reported result.

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

1711356-01[MW-204], 1711356-02[MW-204F], B187676-BLK1, B187676-BS1, B187676-BSD1

**V-20**

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

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

1711356-01[MW-204], 1711356-02[MW-204F], B187676-BLK1, B187676-BS1, B187676-BSD1

**SW-846 8270D****Qualifications:****V-06**

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

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

B187912-BS1, B187912-BSD1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopyscinski  
Laboratory Director

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

| Analyte                        | Results    | RL              | DL    | Units     | Dilution | Flag/Qual    | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|--------------------------------|------------|-----------------|-------|-----------|----------|--------------|---------|---------------|--------------------|---------|
| Acetone                        | 5.4        | 50              | 4.9   | µg/L      | 1        | J            | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| tert-Amyl Methyl Ether (TAME)  | ND         | 1.0             | 0.11  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Benzene                        | ND         | 1.0             | 0.12  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| tert-Butyl Alcohol (TBA)       | ND         | 20              | 2.2   | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Carbon Tetrachloride           | ND         | 2.0             | 0.25  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,2-Dichlorobenzene            | ND         | 2.0             | 0.17  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,3-Dichlorobenzene            | ND         | 2.0             | 0.17  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,4-Dichlorobenzene            | ND         | 2.0             | 0.15  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,2-Dichloroethane             | ND         | 2.0             | 0.19  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| cis-1,2-Dichloroethylene       | ND         | 1.0             | 0.15  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,1-Dichloroethane             | ND         | 2.0             | 0.16  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,1-Dichloroethylene           | ND         | 2.0             | 0.21  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,4-Dioxane                    | ND         | 50              | 26    | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Ethylbenzene                   | ND         | 2.0             | 0.13  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Methyl tert-Butyl Ether (MTBE) | ND         | 2.0             | 0.090 | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Methylene Chloride             | ND         | 5.0             | 3.2   | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Tetrachloroethylene            | ND         | 2.0             | 0.27  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Toluene                        | ND         | 1.0             | 0.17  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,1,1-Trichloroethane          | ND         | 2.0             | 0.13  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| 1,1,2-Trichloroethane          | ND         | 2.0             | 0.24  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Trichloroethylene              | ND         | 2.0             | 0.20  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Vinyl Chloride                 | ND         | 2.0             | 0.13  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| m+p Xylene                     | ND         | 2.0             | 0.26  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| o-Xylene                       | ND         | 2.0             | 0.13  | µg/L      | 1        |              | EPA 624 | 9/29/17       | 9/30/17 3:19       | EEH     |
| Surrogates                     | % Recovery | Recovery Limits |       | Flag/Qual |          |              |         |               |                    |         |
| 1,2-Dichloroethane-d4          | 109        | 70-130          |       |           |          | 9/30/17 3:19 |         |               |                    |         |
| Toluene-d8                     | 100        | 70-130          |       |           |          | 9/30/17 3:19 |         |               |                    |         |
| 4-Bromofluorobenzene           | 101        | 70-130          |       |           |          | 9/30/17 3:19 |         |               |                    |         |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

| Analyte                    | Results    | RL    | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------------------|------------|-------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| Benzo(a)anthracene         | ND         | 0.053 | 0.053           | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Benzo(a)pyrene             | ND         | 0.11  | 0.11            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Benzo(b)fluoranthene       | ND         | 0.053 | 0.053           | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Benzo(k)fluoranthene       | ND         | 0.21  | 0.21            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Bis(2-Ethylhexyl)phthalate | 0.18       | 1.1   | 0.11            | µg/L  | 1         | J         | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Chrysene                   | ND         | 0.21  | 0.21            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Dibenz(a,h)anthracene      | ND         | 0.21  | 0.21            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Indeno(1,2,3-cd)pyrene     | ND         | 0.21  | 0.21            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Pentachlorophenol          | ND         | 1.1   | 0.36            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:19      | CJM     |
| Surrogates                 | % Recovery |       | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| 2-Fluorophenol             | 58.3       |       | 15-110          |       |           |           | 10/5/17 19:19 |               |                    |         |
| Phenol-d6                  | 40.4       |       | 15-110          |       |           |           | 10/5/17 19:19 |               |                    |         |
| Nitrobenzene-d5            | 84.5       |       | 30-130          |       |           |           | 10/5/17 19:19 |               |                    |         |
| 2-Fluorobiphenyl           | 80.8       |       | 30-130          |       |           |           | 10/5/17 19:19 |               |                    |         |
| 2,4,6-Tribromophenol       | 85.2       |       | 15-110          |       |           |           | 10/5/17 19:19 |               |                    |         |
| p-Terphenyl-d14            | 69.1       |       | 30-130          |       |           |           | 10/5/17 19:19 |               |                    |         |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - GC/MS

| Analyte                               | Results | RL  | Units | Dilution | Flag/Qual  | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------------------------|---------|-----|-------|----------|------------|---------|---------------|--------------------|---------|
| Acenaphthene                          | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Acenaphthylene                        | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Anthracene                            | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Benzidine                             | ND      | 21  | µg/L  | 1        | V-04, V-05 | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Benzo(g,h,i)perylene                  | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 4-Bromophenylphenylether              | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Butylbenzylphthalate                  | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 4-Chloro-3-methylphenol               | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Bis(2-chloroethyl)ether               | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Bis(2-chloroisopropyl)ether           | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2-Chloronaphthalene                   | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2-Chlorophenol                        | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 4-Chlorophenylphenylether             | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Di-n-butylphthalate                   | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 1,3-Dichlorobenzene                   | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 1,4-Dichlorobenzene                   | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 1,2-Dichlorobenzene                   | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 3,3-Dichlorobenzidine                 | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2,4-Dichlorophenol                    | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Diethylphthalate                      | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2,4-Dimethylphenol                    | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Dimethylphthalate                     | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 4,6-Dinitro-2-methylphenol            | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2,4-Dinitrophenol                     | ND      | 11  | µg/L  | 1        | V-19, V-20 | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2,4-Dinitrotoluene                    | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2,6-Dinitrotoluene                    | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Di-n-octylphthalate                   | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 1,2-Diphenylhydrazine (as Azobenzene) | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Bis(2-Ethylhexyl)phthalate            | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Fluoranthene                          | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Fluorene                              | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Hexachlorobenzene                     | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Hexachlorobutadiene                   | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Hexachlorocyclopentadiene             | ND      | 11  | µg/L  | 1        | V-05       | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Hexachloroethane                      | ND      | 2.1 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Isophorone                            | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Naphthalene                           | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Nitrobenzene                          | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2-Nitrophenol                         | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 4-Nitrophenol                         | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| N-Nitrosodimethylamine                | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| N-Nitrosodiphenylamine                | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| N-Nitrosodi-n-propylamine             | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2-Methylnaphthalene                   | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - GC/MS

| Analyte                | Results    | RL              | Units | Dilution | Flag/Qual | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------|------------|-----------------|-------|----------|-----------|---------|---------------|--------------------|---------|
| Phenanthrene           | ND         | 5.3             | µg/L  | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2-Methylphenol         | ND         | 11              | µg/L  | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Phenol                 | ND         | 11              | µg/L  | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 3/4-Methylphenol       | ND         | 11              | µg/L  | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Pyrene                 | ND         | 5.3             | µg/L  | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 1,2,4-Trichlorobenzene | ND         | 5.3             | µg/L  | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| 2,4,6-Trichlorophenol  | ND         | 11              | µg/L  | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:23       | BGL     |
| Surrogates             | % Recovery | Recovery Limits |       |          | Flag/Qual |         |               |                    |         |
| 2-Fluorophenol         | 52.6       | 15-110          |       |          |           |         |               | 10/5/17 9:23       |         |
| Phenol-d6              | 37.5       | 15-110          |       |          |           |         |               | 10/5/17 9:23       |         |
| Nitrobenzene-d5        | 83.3       | 30-130          |       |          |           |         |               | 10/5/17 9:23       |         |
| 2-Fluorobiphenyl       | 76.8       | 30-130          |       |          |           |         |               | 10/5/17 9:23       |         |
| 2,4,6-Tribromophenol   | 89.2       | 15-110          |       |          |           |         |               | 10/5/17 9:23       |         |
| p-Terphenyl-d14        | 90.2       | 30-130          |       |          |           |         |               | 10/5/17 9:23       |         |



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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

### Polychlorinated Biphenyls By GC/ECD

| Analyte                  | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|--------------------------|------------|------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| Aroclor-1016 [1]         | ND         | 0.10 | 0.057           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:13      | JMB     |
| Aroclor-1221 [1]         | ND         | 0.10 | 0.062           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:13      | JMB     |
| Aroclor-1232 [1]         | ND         | 0.10 | 0.038           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:13      | JMB     |
| Aroclor-1242 [1]         | ND         | 0.10 | 0.054           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:13      | JMB     |
| Aroclor-1248 [1]         | ND         | 0.10 | 0.064           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:13      | JMB     |
| Aroclor-1254 [1]         | ND         | 0.10 | 0.071           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:13      | JMB     |
| Aroclor-1260 [1]         | ND         | 0.10 | 0.073           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:13      | JMB     |
| Surrogates               | % Recovery |      | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| Decachlorobiphenyl [1]   | 70.2       |      | 30-150          |       |           |           | 10/3/17 23:13 |               |                    |         |
| Decachlorobiphenyl [2]   | 92.5       |      | 30-150          |       |           |           | 10/3/17 23:13 |               |                    |         |
| Tetrachloro-m-xylene [1] | 94.4       |      | 30-150          |       |           |           | 10/3/17 23:13 |               |                    |         |
| Tetrachloro-m-xylene [2] | 92.4       |      | 30-150          |       |           |           | 10/3/17 23:13 |               |                    |         |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

## Metals Analyses (Total)

| Analyte  | Results | RL      | DL | Units | Dilution | Flag/Qual | Method    | Date Prepared | Date/Time Analyzed | Analyst |
|----------|---------|---------|----|-------|----------|-----------|-----------|---------------|--------------------|---------|
| Antimony | ND      | 5.0     |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Arsenic  | 17      | 5.0     |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Cadmium  | ND      | 1.0     |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Chromium | ND      | 50      |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Copper   | 18      | 5.0     |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Iron     | 15      | 0.050   |    | mg/L  | 1        |           | EPA 200.7 | 9/29/17       | 10/2/17 18:14      | MJH     |
| Lead     | ND      | 2.5     |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Mercury  | ND      | 0.00010 |    | mg/L  | 1        |           | EPA 245.1 | 10/4/17       | 10/5/17 9:12       | TJK     |
| Nickel   | ND      | 25      |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Selenium | 11      | 25      | 11 | µg/L  | 5        | DL-15, J  | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Silver   | ND      | 1.0     |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |
| Zinc     | ND      | 100     |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17       | 10/2/17 8:29       | WSD     |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

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

| Analyte                          | Results | RL    | Units | Dilution | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------------------------|---------|-------|-------|----------|-----------|---------------|---------------|--------------------|---------|
| Phenol                           | 0.068   | 0.050 | mg/L  | 1        |           | EPA 420.1     | 10/5/17       | 10/5/17 13:00      | LL      |
| Total Suspended Solids           | 74      | 5.0   | mg/L  | 1        |           | SM21-22 2540D | 10/2/17       | 10/2/17 14:20      | LL      |
| Silica Gel Treated HEM (SGT-HEM) | ND      | 1.4   | mg/L  | 1        |           | EPA 1664B     | 10/4/17       | 10/4/17 13:45      | LL      |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

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

| Analyte      | Results | RL    | Units | Dilution | Flag/Qual | Method             | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|--------------|---------|-------|-------|----------|-----------|--------------------|------------------|-----------------------|---------|
| Ammonia as N | 7.8     | 0.075 | mg/L  | 1        |           | SM19-22 4500 NH3 C |                  | 10/4/17 0:00          | ALPHA   |
| Cyanide      | 0.006   | 0.005 | mg/L  | 1        |           | SM21-22 4500 CN E  |                  | 10/2/17 0:00          | ALPHA   |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

### Drinking Water Organics EPA 504.1

| Analyte                 | Results | RL   | Units | Dilution | Flag/Qual | Method    | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|-------------------------|---------|------|-------|----------|-----------|-----------|------------------|-----------------------|---------|
| 1,2-Dibromoethane (EDB) | <0.0100 | 0.01 | µg/L  | 1        |           | EPA 504.1 |                  | 10/2/17 0:00          | MICRO   |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204

Sampled: 9/27/2017 08:30

Sample ID: 1711356-01

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC

| Analyte | Results | RL   | DL  | Units | Dilution | Flag/Qual | Method       | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------|---------|------|-----|-------|----------|-----------|--------------|------------------|-----------------------|---------|
| Ethanol | ND      | 2000 | 500 | ug/L  | 1        |           | SW-846 8015C |                  | 10/6/17 0:00          | TA      |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

| Analyte                        | Results    | RL  | DL              | Units | Dilution  | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|--------------------------------|------------|-----|-----------------|-------|-----------|-----------|--------------|---------------|--------------------|---------|
| Acetone                        | 12         | 50  | 4.9             | µg/L  | 1         | J         | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| tert-Amyl Methyl Ether (TAME)  | ND         | 1.0 | 0.11            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Benzene                        | ND         | 1.0 | 0.12            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| tert-Butyl Alcohol (TBA)       | 10         | 20  | 2.2             | µg/L  | 1         | J         | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Carbon Tetrachloride           | ND         | 2.0 | 0.25            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,2-Dichlorobenzene            | ND         | 2.0 | 0.17            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,3-Dichlorobenzene            | ND         | 2.0 | 0.17            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,4-Dichlorobenzene            | ND         | 2.0 | 0.15            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,2-Dichloroethane             | 0.35       | 2.0 | 0.19            | µg/L  | 1         | J         | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| cis-1,2-Dichloroethylene       | ND         | 1.0 | 0.15            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,1-Dichloroethane             | ND         | 2.0 | 0.16            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,1-Dichloroethylene           | ND         | 2.0 | 0.21            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,4-Dioxane                    | ND         | 50  | 26              | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Ethylbenzene                   | ND         | 2.0 | 0.13            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Methyl tert-Butyl Ether (MTBE) | 0.15       | 2.0 | 0.090           | µg/L  | 1         | J         | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Methylene Chloride             | ND         | 5.0 | 3.2             | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Tetrachloroethylene            | ND         | 2.0 | 0.27            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Toluene                        | ND         | 1.0 | 0.17            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,1,1-Trichloroethane          | ND         | 2.0 | 0.13            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| 1,1,2-Trichloroethane          | ND         | 2.0 | 0.24            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Trichloroethylene              | ND         | 2.0 | 0.20            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Vinyl Chloride                 | ND         | 2.0 | 0.13            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| m+p Xylene                     | ND         | 2.0 | 0.26            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| o-Xylene                       | ND         | 2.0 | 0.13            | µg/L  | 1         |           | EPA 624      | 9/29/17       | 9/30/17 3:46       | EEH     |
| Surrogates                     | % Recovery |     | Recovery Limits |       | Flag/Qual |           |              |               |                    |         |
| 1,2-Dichloroethane-d4          | 110        |     | 70-130          |       |           |           | 9/30/17 3:46 |               |                    |         |
| Toluene-d8                     | 100        |     | 70-130          |       |           |           | 9/30/17 3:46 |               |                    |         |
| 4-Bromofluorobenzene           | 99.2       |     | 70-130          |       |           |           | 9/30/17 3:46 |               |                    |         |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

| Analyte                    | Results    | RL    | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------------------|------------|-------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| Benzo(a)anthracene         | ND         | 0.053 | 0.053           | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Benzo(a)pyrene             | ND         | 0.11  | 0.11            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Benzo(b)fluoranthene       | ND         | 0.053 | 0.053           | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Benzo(k)fluoranthene       | ND         | 0.21  | 0.21            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Bis(2-Ethylhexyl)phthalate | ND         | 1.1   | 0.11            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Chrysene                   | ND         | 0.21  | 0.21            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Dibenz(a,h)anthracene      | ND         | 0.21  | 0.21            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Indeno(1,2,3-cd)pyrene     | ND         | 0.21  | 0.21            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Pentachlorophenol          | ND         | 1.1   | 0.36            | µg/L  | 1         |           | SW-846 8270D  | 10/3/17       | 10/5/17 19:47      | CJM     |
| Surrogates                 | % Recovery |       | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| 2-Fluorophenol             | 50.5       |       | 15-110          |       |           |           | 10/5/17 19:47 |               |                    |         |
| Phenol-d6                  | 35.2       |       | 15-110          |       |           |           | 10/5/17 19:47 |               |                    |         |
| Nitrobenzene-d5            | 74.0       |       | 30-130          |       |           |           | 10/5/17 19:47 |               |                    |         |
| 2-Fluorobiphenyl           | 75.1       |       | 30-130          |       |           |           | 10/5/17 19:47 |               |                    |         |
| 2,4,6-Tribromophenol       | 75.6       |       | 15-110          |       |           |           | 10/5/17 19:47 |               |                    |         |
| p-Terphenyl-d14            | 63.3       |       | 30-130          |       |           |           | 10/5/17 19:47 |               |                    |         |



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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - GC/MS

| Analyte                               | Results | RL  | Units | Dilution | Flag/Qual  | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------------------------|---------|-----|-------|----------|------------|---------|---------------|--------------------|---------|
| Acenaphthene                          | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Acenaphthylene                        | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Anthracene                            | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Benzidine                             | ND      | 21  | µg/L  | 1        | V-04, V-05 | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Benzo(g,h,i)perylene                  | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 4-Bromophenylphenylether              | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Butylbenzylphthalate                  | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 4-Chloro-3-methylphenol               | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Bis(2-chloroethyl)ether               | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Bis(2-chloroisopropyl)ether           | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2-Chloronaphthalene                   | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2-Chlorophenol                        | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 4-Chlorophenylphenylether             | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Di-n-butylphthalate                   | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 1,3-Dichlorobenzene                   | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 1,4-Dichlorobenzene                   | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 1,2-Dichlorobenzene                   | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 3,3-Dichlorobenzidine                 | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2,4-Dichlorophenol                    | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Diethylphthalate                      | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2,4-Dimethylphenol                    | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Dimethylphthalate                     | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 4,6-Dinitro-2-methylphenol            | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2,4-Dinitrophenol                     | ND      | 11  | µg/L  | 1        | V-19, V-20 | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2,4-Dinitrotoluene                    | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2,6-Dinitrotoluene                    | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Di-n-octylphthalate                   | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 1,2-Diphenylhydrazine (as Azobenzene) | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Bis(2-Ethylhexyl)phthalate            | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Fluoranthene                          | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Fluorene                              | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Hexachlorobenzene                     | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Hexachlorobutadiene                   | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Hexachlorocyclopentadiene             | ND      | 11  | µg/L  | 1        | V-05       | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Hexachloroethane                      | ND      | 2.1 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Isophorone                            | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Naphthalene                           | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Nitrobenzene                          | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2-Nitrophenol                         | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 4-Nitrophenol                         | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| N-Nitrosodimethylamine                | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| N-Nitrosodiphenylamine                | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| N-Nitrosodi-n-propylamine             | ND      | 11  | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2-Methylnaphthalene                   | ND      | 5.3 | µg/L  | 1        |            | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - GC/MS

| Analyte                | Results    | RL              | Units     | Dilution | Flag/Qual | Method  | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------|------------|-----------------|-----------|----------|-----------|---------|---------------|--------------------|---------|
| Phenanthrene           | ND         | 5.3             | µg/L      | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2-Methylphenol         | ND         | 11              | µg/L      | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Phenol                 | ND         | 11              | µg/L      | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 3/4-Methylphenol       | ND         | 11              | µg/L      | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Pyrene                 | ND         | 5.3             | µg/L      | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 1,2,4-Trichlorobenzene | ND         | 5.3             | µg/L      | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| 2,4,6-Trichlorophenol  | ND         | 11              | µg/L      | 1        |           | EPA 625 | 10/3/17       | 10/5/17 9:45       | BGL     |
| Surrogates             | % Recovery | Recovery Limits | Flag/Qual |          |           |         |               |                    |         |
| 2-Fluorophenol         | 43.5       | 15-110          |           |          |           |         |               | 10/5/17 9:45       |         |
| Phenol-d6              | 31.4       | 15-110          |           |          |           |         |               | 10/5/17 9:45       |         |
| Nitrobenzene-d5        | 67.4       | 30-130          |           |          |           |         |               | 10/5/17 9:45       |         |
| 2-Fluorobiphenyl       | 65.1       | 30-130          |           |          |           |         |               | 10/5/17 9:45       |         |
| 2,4,6-Tribromophenol   | 79.5       | 15-110          |           |          |           |         |               | 10/5/17 9:45       |         |
| p-Terphenyl-d14        | 78.4       | 30-130          |           |          |           |         |               | 10/5/17 9:45       |         |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

### Polychlorinated Biphenyls By GC/ECD

| Analyte                  | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|--------------------------|------------|------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| Aroclor-1016 [1]         | ND         | 0.10 | 0.057           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:25      | JMB     |
| Aroclor-1221 [1]         | ND         | 0.10 | 0.062           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:25      | JMB     |
| Aroclor-1232 [1]         | ND         | 0.10 | 0.038           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:25      | JMB     |
| Aroclor-1242 [1]         | ND         | 0.10 | 0.054           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:25      | JMB     |
| Aroclor-1248 [1]         | ND         | 0.10 | 0.064           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:25      | JMB     |
| Aroclor-1254 [1]         | ND         | 0.10 | 0.071           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:25      | JMB     |
| Aroclor-1260 [1]         | ND         | 0.10 | 0.073           | µg/L  | 1         |           | EPA 608       | 10/2/17       | 10/3/17 23:25      | JMB     |
| Surrogates               | % Recovery |      | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| Decachlorobiphenyl [1]   | 83.4       |      | 30-150          |       |           |           | 10/3/17 23:25 |               |                    |         |
| Decachlorobiphenyl [2]   | 109        |      | 30-150          |       |           |           | 10/3/17 23:25 |               |                    |         |
| Tetrachloro-m-xylene [1] | 92.4       |      | 30-150          |       |           |           | 10/3/17 23:25 |               |                    |         |
| Tetrachloro-m-xylene [2] | 90.9       |      | 30-150          |       |           |           | 10/3/17 23:25 |               |                    |         |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

**Metals Analyses (Total)**

| Analyte | Results | RL  | DL | Units | Dilution | Flag/Qual | Method    | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------|---------|-----|----|-------|----------|-----------|-----------|------------------|-----------------------|---------|
| Zinc    | ND      | 100 |    | µg/L  | 5        | DL-15     | EPA 200.8 | 9/29/17          | 10/2/17 8:33          | WSD     |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

## Metals Analyses (Dissolved)

| Analyte  | Results | RL      | DL | Units | Dilution | Flag/Qual | Method    | Date Prepared | Date/Time Analyzed | Analyst |
|----------|---------|---------|----|-------|----------|-----------|-----------|---------------|--------------------|---------|
| Antimony | ND      | 10      |    | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |
| Arsenic  | 19      | 10      |    | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |
| Cadmium  | ND      | 2.0     |    | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |
| Chromium | ND      | 100     |    | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |
| Copper   | 18      | 10      |    | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |
| Iron     | 20      | 0.050   |    | mg/L  | 1        | MS-19     | EPA 200.7 | 10/2/17       | 10/4/17 19:44      | QNW     |
| Lead     | ND      | 5.0     |    | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |
| Mercury  | ND      | 0.00010 |    | mg/L  | 1        |           | EPA 245.1 | 10/6/17       | 10/6/17 15:43      | TJK     |
| Nickel   | ND      | 50      |    | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |
| Selenium | ND      | 50      | 21 | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |
| Silver   | ND      | 2.0     |    | µg/L  | 10       | DL-15     | EPA 200.8 | 10/2/17       | 10/2/17 22:44      | MJH     |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

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

| Analyte                          | Results | RL    | Units | Dilution | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------------------------|---------|-------|-------|----------|-----------|---------------|---------------|--------------------|---------|
| Phenol                           | 0.060   | 0.050 | mg/L  | 1        |           | EPA 420.1     | 10/5/17       | 10/5/17 13:00      | LL      |
| Total Suspended Solids           | 47      | 5.0   | mg/L  | 1        |           | SM21-22 2540D | 10/2/17       | 10/2/17 14:20      | LL      |
| Silica Gel Treated HEM (SGT-HEM) | ND      | 1.5   | mg/L  | 1        |           | EPA 1664B     | 10/4/17       | 10/4/17 13:45      | LL      |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

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

| Analyte      | Results | RL    | Units | Dilution | Flag/Qual | Method             | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|--------------|---------|-------|-------|----------|-----------|--------------------|------------------|-----------------------|---------|
| Ammonia as N | 6.69    | 0.075 | mg/L  | 1        |           | SM19-22 4500 NH3 C |                  | 10/4/17 0:00          | ALPHA   |
| Cyanide      | 0.006   | 0.005 | mg/L  | 1        |           | SM21-22 4500 CN E  |                  | 10/2/17 0:00          | ALPHA   |

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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

**Drinking Water Organics EPA 504.1**

| Analyte                 | Results | RL   | Units | Dilution | Flag/Qual | Method    | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|-------------------------|---------|------|-------|----------|-----------|-----------|------------------|-----------------------|---------|
| 1,2-Dibromoethane (EDB) | <0.0100 | 0.01 | µg/L  | 1        |           | EPA 504.1 |                  | 10/2/17 0:00          | MICRO   |



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

Project Location: Mystic- East Eagle

Sample Description:

Work Order: 1711356

Date Received: 9/28/2017

Field Sample #: MW-204F

Sampled: 9/27/2017 10:00

Sample ID: 1711356-02

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC

| Analyte | Results | RL   | DL  | Units | Dilution | Flag/Qual | Method       | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------|---------|------|-----|-------|----------|-----------|--------------|------------------|-----------------------|---------|
| Ethanol | ND      | 2000 | 500 | ug/L  | 1        |           | SW-846 8015C |                  | 10/6/17 0:00          | TA      |

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

### Sample Extraction Data

#### EPA 1664B

| Lab Number [Field ID] | Batch   | Initial [mL] | Date     |  |
|-----------------------|---------|--------------|----------|--|
| 17I1356-01 [MW-204]   | B187719 | 1000         | 10/04/17 |  |
| 17I1356-02 [MW-204F]  | B187719 | 930          | 10/04/17 |  |

#### Prep Method: EPA 200.7-EPA 200.7

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-01 [MW-204]   | B187422 | 50.0         | 50.0       | 09/29/17 |

#### Prep Method: EPA 200.7 Dissolved-EPA 200.7

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-02 [MW-204F]  | B187506 | 50.0         | 50.0       | 10/02/17 |

#### Prep Method: EPA 200.8-EPA 200.8

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-01 [MW-204]   | B187411 | 50.0         | 50.0       | 09/29/17 |
| 17I1356-02 [MW-204F]  | B187411 | 50.0         | 50.0       | 09/29/17 |

#### Prep Method: EPA 200.8 Dissolved-EPA 200.8

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-02 [MW-204F]  | B187476 | 50.0         | 50.0       | 10/02/17 |

#### Prep Method: EPA 245.1-EPA 245.1

| Lab Number [Field ID]   | Batch   | Initial [mL] | Final [mL] | Date     |
|-------------------------|---------|--------------|------------|----------|
| 17I1356-02RE1 [MW-204F] | B187994 | 6.00         | 6.00       | 10/06/17 |

#### Prep Method: EPA 245.1-EPA 245.1

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-01 [MW-204]   | B187761 | 6.00         | 6.00       | 10/04/17 |

#### EPA 420.1

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-01 [MW-204]   | B187648 | 50.0         | 50.0       | 10/05/17 |
| 17I1356-02 [MW-204F]  | B187648 | 50.0         | 50.0       | 10/05/17 |

#### Prep Method: SW-846 3510C-EPA 608

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-01 [MW-204]   | B187498 | 1000         | 5.00       | 10/02/17 |
| 17I1356-02 [MW-204F]  | B187498 | 1000         | 5.00       | 10/02/17 |

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

**Sample Extraction Data****Prep Method: SW-846 5030B-EPA 624**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-01 [MW-204]   | B187367 | 5            | 5.00       | 09/29/17 |
| 17I1356-02 [MW-204F]  | B187367 | 5            | 5.00       | 09/29/17 |

**Prep Method: SW-846 3510C-EPA 625**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-01 [MW-204]   | B187676 | 950          | 1.00       | 10/03/17 |
| 17I1356-02 [MW-204F]  | B187676 | 950          | 1.00       | 10/03/17 |

**SM21-22 2540D**

| Lab Number [Field ID] | Batch   | Initial [mL] |  | Date     |
|-----------------------|---------|--------------|--|----------|
| 17I1356-01 [MW-204]   | B187491 | 100          |  | 10/02/17 |
| 17I1356-02 [MW-204F]  | B187491 | 100          |  | 10/02/17 |

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

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 17I1356-01 [MW-204]   | B187912 | 950          | 1.00       | 10/03/17 |
| 17I1356-02 [MW-204F]  | B187912 | 950          | 1.00       | 10/03/17 |

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

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B187367 - SW-846 5030B**
**Blank (B187367-BLK1)**

Prepared &amp; Analyzed: 09/29/17

|                                  |      |      |      |      |  |      |        |  |  |  |
|----------------------------------|------|------|------|------|--|------|--------|--|--|--|
| Acetone                          | ND   | 50   | µg/L |      |  |      |        |  |  |  |
| tert-Amyl Methyl Ether (TAME)    | ND   | 0.50 | µg/L |      |  |      |        |  |  |  |
| Benzene                          | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| tert-Butyl Alcohol (TBA)         | ND   | 20   | µg/L |      |  |      |        |  |  |  |
| Carbon Tetrachloride             | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,2-Dichlorobenzene              | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,3-Dichlorobenzene              | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,4-Dichlorobenzene              | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,2-Dichloroethane               | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| cis-1,2-Dichloroethylene         | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,1-Dichloroethane               | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,1-Dichloroethylene             | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,4-Dioxane                      | ND   | 50   | µg/L |      |  |      |        |  |  |  |
| Ethylbenzene                     | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Methyl tert-Butyl Ether (MTBE)   | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Methylene Chloride               | ND   | 5.0  | µg/L |      |  |      |        |  |  |  |
| Tetrachloroethylene              | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Toluene                          | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,1-Trichloroethane            | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,2-Trichloroethane            | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Trichloroethylene                | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Vinyl Chloride                   | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| m+p Xylene                       | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| o-Xylene                         | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 24.8 |      | µg/L | 25.0 |  | 99.3 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 25.0 |      | µg/L | 25.0 |  | 100  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 25.2 |      | µg/L | 25.0 |  | 101  | 70-130 |  |  |  |

**LCS (B187367-BS1)**

Prepared &amp; Analyzed: 09/29/17

|                                |      |      |      |      |  |      |        |  |  |   |
|--------------------------------|------|------|------|------|--|------|--------|--|--|---|
| Acetone                        | 94.8 | 50   | µg/L | 100  |  | 94.8 | 70-160 |  |  | † |
| tert-Amyl Methyl Ether (TAME)  | 10.5 | 0.50 | µg/L | 10.0 |  | 105  | 70-130 |  |  |   |
| Benzene                        | 10.9 | 1.0  | µg/L | 10.0 |  | 109  | 37-151 |  |  |   |
| tert-Butyl Alcohol (TBA)       | 86.9 | 20   | µg/L | 100  |  | 86.9 | 40-160 |  |  | † |
| Carbon Tetrachloride           | 11.4 | 2.0  | µg/L | 10.0 |  | 114  | 70-140 |  |  |   |
| 1,2-Dichlorobenzene            | 10.8 | 2.0  | µg/L | 10.0 |  | 108  | 18-190 |  |  |   |
| 1,3-Dichlorobenzene            | 11.0 | 2.0  | µg/L | 10.0 |  | 110  | 59-156 |  |  |   |
| 1,4-Dichlorobenzene            | 10.4 | 2.0  | µg/L | 10.0 |  | 104  | 18-190 |  |  |   |
| 1,2-Dichloroethane             | 11.1 | 2.0  | µg/L | 10.0 |  | 111  | 49-155 |  |  |   |
| cis-1,2-Dichloroethylene       | 7.96 | 1.0  | µg/L | 10.0 |  | 79.6 | 70-130 |  |  |   |
| 1,1-Dichloroethane             | 7.75 | 2.0  | µg/L | 10.0 |  | 77.5 | 59-155 |  |  |   |
| 1,1-Dichloroethylene           | 11.1 | 2.0  | µg/L | 10.0 |  | 111  | 20-234 |  |  |   |
| 1,4-Dioxane                    | 113  | 50   | µg/L | 100  |  | 113  | 40-130 |  |  | † |
| Ethylbenzene                   | 11.3 | 2.0  | µg/L | 10.0 |  | 113  | 37-162 |  |  |   |
| Methyl tert-Butyl Ether (MTBE) | 8.02 | 2.0  | µg/L | 10.0 |  | 80.2 | 70-130 |  |  |   |
| Methylene Chloride             | 9.08 | 5.0  | µg/L | 10.0 |  | 90.8 | 50-221 |  |  |   |
| Tetrachloroethylene            | 11.8 | 2.0  | µg/L | 10.0 |  | 118  | 64-148 |  |  |   |
| Toluene                        | 11.1 | 1.0  | µg/L | 10.0 |  | 111  | 47-150 |  |  |   |
| 1,1,1-Trichloroethane          | 11.3 | 2.0  | µg/L | 10.0 |  | 113  | 52-162 |  |  |   |
| 1,1,2-Trichloroethane          | 11.4 | 2.0  | µg/L | 10.0 |  | 114  | 52-150 |  |  |   |
| Trichloroethylene              | 11.8 | 2.0  | µg/L | 10.0 |  | 118  | 71-157 |  |  |   |
| Vinyl Chloride                 | 9.42 | 2.0  | µg/L | 10.0 |  | 94.2 | 20-251 |  |  |   |
| m+p Xylene                     | 23.0 | 2.0  | µg/L | 20.0 |  | 115  | 70-130 |  |  |   |

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

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch B187367 - SW-846 5030B**
**LCS (B187367-BS1)**

Prepared &amp; Analyzed: 09/29/17

|                                  |      |     |      |      |  |     |        |  |  |  |
|----------------------------------|------|-----|------|------|--|-----|--------|--|--|--|
| o-Xylene                         | 11.2 | 2.0 | µg/L | 10.0 |  | 112 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 25.2 |     | µg/L | 25.0 |  | 101 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 25.4 |     | µg/L | 25.0 |  | 102 | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 25.5 |     | µg/L | 25.0 |  | 102 | 70-130 |  |  |  |

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

## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

| Analyte                               | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD    | RPD Limit | Notes |
|---------------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|--------|-----------|-------|
| <b>Batch B187912 - SW-846 3510C</b>   |        |                 |       |             |               |      |             |        |           |       |
| <b>Blank (B187912-BLK1)</b>           |        |                 |       |             |               |      |             |        |           |       |
| Prepared: 10/03/17 Analyzed: 10/05/17 |        |                 |       |             |               |      |             |        |           |       |
| Benzo(a)anthracene                    | ND     | 0.050           | µg/L  |             |               |      |             |        |           |       |
| Benzo(a)pyrene                        | ND     | 0.10            | µg/L  |             |               |      |             |        |           |       |
| Benzo(b)fluoranthene                  | ND     | 0.050           | µg/L  |             |               |      |             |        |           |       |
| Benzo(k)fluoranthene                  | ND     | 0.20            | µg/L  |             |               |      |             |        |           |       |
| Bis(2-Ethylhexyl)phthalate            | ND     | 1.0             | µg/L  |             |               |      |             |        |           |       |
| Chrysene                              | ND     | 0.20            | µg/L  |             |               |      |             |        |           |       |
| Dibenz(a,h)anthracene                 | ND     | 0.20            | µg/L  |             |               |      |             |        |           |       |
| Indeno(1,2,3-cd)pyrene                | ND     | 0.20            | µg/L  |             |               |      |             |        |           |       |
| Pentachlorophenol                     | ND     | 1.0             | µg/L  |             |               |      |             |        |           |       |
| Surrogate: 2-Fluorophenol             | 109    |                 | µg/L  | 200         |               | 54.5 | 15-110      |        |           |       |
| Surrogate: Phenol-d6                  | 73.0   |                 | µg/L  | 200         |               | 36.5 | 15-110      |        |           |       |
| Surrogate: Nitrobenzene-d5            | 87.2   |                 | µg/L  | 100         |               | 87.2 | 30-130      |        |           |       |
| Surrogate: 2-Fluorobiphenyl           | 84.9   |                 | µg/L  | 100         |               | 84.9 | 30-130      |        |           |       |
| Surrogate: 2,4,6-Tribromophenol       | 176    |                 | µg/L  | 200         |               | 87.9 | 15-110      |        |           |       |
| Surrogate: p-Terphenyl-d14            | 71.3   |                 | µg/L  | 100         |               | 71.3 | 30-130      |        |           |       |
| <b>LCS (B187912-BS1)</b>              |        |                 |       |             |               |      |             |        |           |       |
| Prepared: 10/03/17 Analyzed: 10/05/17 |        |                 |       |             |               |      |             |        |           |       |
| Benzo(a)anthracene                    | 95.4   | 1.2             | µg/L  | 100         |               | 95.4 | 40-140      |        |           |       |
| Benzo(a)pyrene                        | 101    | 2.5             | µg/L  | 100         |               | 101  | 40-140      |        |           |       |
| Benzo(b)fluoranthene                  | 100    | 1.2             | µg/L  | 100         |               | 100  | 40-140      |        |           |       |
| Benzo(k)fluoranthene                  | 97.1   | 5.0             | µg/L  | 100         |               | 97.1 | 40-140      |        |           |       |
| Bis(2-Ethylhexyl)phthalate            | 91.6   | 25              | µg/L  | 100         |               | 91.6 | 40-140      |        |           |       |
| Chrysene                              | 95.4   | 5.0             | µg/L  | 100         |               | 95.4 | 40-140      |        |           |       |
| Dibenz(a,h)anthracene                 | 99.8   | 5.0             | µg/L  | 100         |               | 99.8 | 40-140      |        |           |       |
| Indeno(1,2,3-cd)pyrene                | 101    | 5.0             | µg/L  | 100         |               | 101  | 40-140      |        |           |       |
| Pentachlorophenol                     | 97.3   | 25              | µg/L  | 100         |               | 97.3 | 30-130      |        |           | V-06  |
| Surrogate: 2-Fluorophenol             | 110    |                 | µg/L  | 200         |               | 54.8 | 15-110      |        |           |       |
| Surrogate: Phenol-d6                  | 80.5   |                 | µg/L  | 200         |               | 40.3 | 15-110      |        |           |       |
| Surrogate: Nitrobenzene-d5            | 87.8   |                 | µg/L  | 100         |               | 87.8 | 30-130      |        |           |       |
| Surrogate: 2-Fluorobiphenyl           | 91.6   |                 | µg/L  | 100         |               | 91.6 | 30-130      |        |           |       |
| Surrogate: 2,4,6-Tribromophenol       | 164    |                 | µg/L  | 200         |               | 82.1 | 15-110      |        |           |       |
| Surrogate: p-Terphenyl-d14            | 80.0   |                 | µg/L  | 100         |               | 80.0 | 30-130      |        |           |       |
| <b>LCS Dup (B187912-BSD1)</b>         |        |                 |       |             |               |      |             |        |           |       |
| Prepared: 10/03/17 Analyzed: 10/05/17 |        |                 |       |             |               |      |             |        |           |       |
| Benzo(a)anthracene                    | 98.2   | 1.2             | µg/L  | 100         |               | 98.2 | 40-140      | 2.87   | 20        |       |
| Benzo(a)pyrene                        | 104    | 2.5             | µg/L  | 100         |               | 104  | 40-140      | 3.20   | 20        |       |
| Benzo(b)fluoranthene                  | 103    | 1.2             | µg/L  | 100         |               | 103  | 40-140      | 2.36   | 20        |       |
| Benzo(k)fluoranthene                  | 100    | 5.0             | µg/L  | 100         |               | 100  | 40-140      | 2.92   | 20        |       |
| Bis(2-Ethylhexyl)phthalate            | 91.6   | 25              | µg/L  | 100         |               | 91.6 | 40-140      | 0.0273 | 20        |       |
| Chrysene                              | 98.0   | 5.0             | µg/L  | 100         |               | 98.0 | 40-140      | 2.69   | 20        |       |
| Dibenz(a,h)anthracene                 | 103    | 5.0             | µg/L  | 100         |               | 103  | 40-140      | 3.45   | 20        |       |
| Indeno(1,2,3-cd)pyrene                | 105    | 5.0             | µg/L  | 100         |               | 105  | 40-140      | 3.62   | 50        | ‡     |
| Pentachlorophenol                     | 100    | 25              | µg/L  | 100         |               | 100  | 30-130      | 2.74   | 50        | ‡     |
| Surrogate: 2-Fluorophenol             | 118    |                 | µg/L  | 200         |               | 58.9 | 15-110      |        |           |       |
| Surrogate: Phenol-d6                  | 82.3   |                 | µg/L  | 200         |               | 41.1 | 15-110      |        |           |       |
| Surrogate: Nitrobenzene-d5            | 97.2   |                 | µg/L  | 100         |               | 97.2 | 30-130      |        |           |       |
| Surrogate: 2-Fluorobiphenyl           | 99.0   |                 | µg/L  | 100         |               | 99.0 | 30-130      |        |           |       |
| Surrogate: 2,4,6-Tribromophenol       | 168    |                 | µg/L  | 200         |               | 83.8 | 15-110      |        |           |       |
| Surrogate: p-Terphenyl-d14            | 81.5   |                 | µg/L  | 100         |               | 81.5 | 30-130      |        |           |       |

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

## QUALITY CONTROL

## Semivolatile Organic Compounds by - GC/MS - Quality Control

| Analyte                               | Result | Reporting Limit | Units | Spike Level                           | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes      |
|---------------------------------------|--------|-----------------|-------|---------------------------------------|---------------|------|-------------|-----|-----------|------------|
| <b>Batch B187676 - SW-846 3510C</b>   |        |                 |       |                                       |               |      |             |     |           |            |
| <b>Blank (B187676-BLK1)</b>           |        |                 |       | Prepared: 10/03/17 Analyzed: 10/05/17 |               |      |             |     |           |            |
| Acenaphthene                          | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Acenaphthylene                        | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Anthracene                            | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Benzidine                             | ND     | 20              | µg/L  |                                       |               |      |             |     |           | V-04, V-05 |
| Benzo(g,h,i)perylene                  | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 4-Bromophenylphenylether              | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Butylbenzylphthalate                  | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 4-Chloro-3-methylphenol               | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Bis(2-chloroethyl)ether               | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Bis(2-chloroisopropyl)ether           | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2-Chloronaphthalene                   | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2-Chlorophenol                        | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 4-Chlorophenylphenylether             | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Di-n-butylphthalate                   | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 1,3-Dichlorobenzene                   | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 1,4-Dichlorobenzene                   | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 1,2-Dichlorobenzene                   | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 3,3-Dichlorobenzidine                 | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2,4-Dichlorophenol                    | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Diethylphthalate                      | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2,4-Dimethylphenol                    | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Dimethylphthalate                     | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 4,6-Dinitro-2-methylphenol            | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2,4-Dinitrophenol                     | ND     | 10              | µg/L  |                                       |               |      |             |     |           | V-19, V-20 |
| 2,4-Dinitrotoluene                    | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2,6-Dinitrotoluene                    | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Di-n-octylphthalate                   | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 1,2-Diphenylhydrazine (as Azobenzene) | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Bis(2-Ethylhexyl)phthalate            | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Fluoranthene                          | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Fluorene                              | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Hexachlorobenzene                     | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Hexachlorobutadiene                   | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Hexachlorocyclopentadiene             | ND     | 10              | µg/L  |                                       |               |      |             |     |           | V-05       |
| Hexachloroethane                      | ND     | 2.0             | µg/L  |                                       |               |      |             |     |           |            |
| Isophorone                            | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Naphthalene                           | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Nitrobenzene                          | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2-Nitrophenol                         | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 4-Nitrophenol                         | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| N-Nitrosodimethylamine                | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| N-Nitrosodiphenylamine                | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| N-Nitrosodi-n-propylamine             | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 2-Methylnaphthalene                   | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| Phenanthrene                          | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 2-Methylphenol                        | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Phenol                                | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| 3/4-Methylphenol                      | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Pyrene                                | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 1,2,4-Trichlorobenzene                | ND     | 5.0             | µg/L  |                                       |               |      |             |     |           |            |
| 2,4,6-Trichlorophenol                 | ND     | 10              | µg/L  |                                       |               |      |             |     |           |            |
| Surrogate: 2-Fluorophenol             | 95.1   |                 | µg/L  | 200                                   |               | 47.5 | 15-110      |     |           |            |

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

**QUALITY CONTROL**
**Semivolatile Organic Compounds by - GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B187676 - SW-846 3510C**
**Blank (B187676-BLK1)**

Prepared: 10/03/17 Analyzed: 10/05/17

|                                 |      |  |      |     |  |      |        |  |  |  |
|---------------------------------|------|--|------|-----|--|------|--------|--|--|--|
| Surrogate: Phenol-d6            | 64.4 |  | µg/L | 200 |  | 32.2 | 15-110 |  |  |  |
| Surrogate: Nitrobenzene-d5      | 81.9 |  | µg/L | 100 |  | 81.9 | 30-130 |  |  |  |
| Surrogate: 2-Fluorobiphenyl     | 75.7 |  | µg/L | 100 |  | 75.7 | 30-130 |  |  |  |
| Surrogate: 2,4,6-Tribromophenol | 175  |  | µg/L | 200 |  | 87.4 | 15-110 |  |  |  |
| Surrogate: p-Terphenyl-d14      | 86.0 |  | µg/L | 100 |  | 86.0 | 30-130 |  |  |  |

**LCS (B187676-BS1)**

Prepared: 10/03/17 Analyzed: 10/05/17

|                                       |      |     |      |     |  |      |        |  |  |            |
|---------------------------------------|------|-----|------|-----|--|------|--------|--|--|------------|
| Acenaphthene                          | 70.4 | 5.0 | µg/L | 100 |  | 70.4 | 47-145 |  |  |            |
| Acenaphthylene                        | 64.0 | 5.0 | µg/L | 100 |  | 64.0 | 33-145 |  |  |            |
| Anthracene                            | 71.2 | 5.0 | µg/L | 100 |  | 71.2 | 27-133 |  |  |            |
| Benztidine                            | 48.2 | 20  | µg/L | 100 |  | 48.2 | 40-140 |  |  | V-04, V-05 |
| Benzo(g,h,i)perylene                  | 66.1 | 5.0 | µg/L | 100 |  | 66.1 | 1-219  |  |  |            |
| 4-Bromophenylphenylether              | 78.2 | 10  | µg/L | 100 |  | 78.2 | 53-127 |  |  |            |
| Butylbenzylphthalate                  | 87.5 | 10  | µg/L | 100 |  | 87.5 | 1-152  |  |  |            |
| 4-Chloro-3-methylphenol               | 80.8 | 10  | µg/L | 100 |  | 80.8 | 22-147 |  |  |            |
| Bis(2-chloroethyl)ether               | 78.4 | 10  | µg/L | 100 |  | 78.4 | 12-158 |  |  |            |
| Bis(2-chloroisopropyl)ether           | 81.9 | 10  | µg/L | 100 |  | 81.9 | 36-166 |  |  |            |
| 2-Chloronaphthalene                   | 62.7 | 10  | µg/L | 100 |  | 62.7 | 60-118 |  |  |            |
| 2-Chlorophenol                        | 71.1 | 10  | µg/L | 100 |  | 71.1 | 23-134 |  |  |            |
| 4-Chlorophenylphenylether             | 75.1 | 10  | µg/L | 100 |  | 75.1 | 25-158 |  |  |            |
| Di-n-butylphthalate                   | 80.4 | 10  | µg/L | 100 |  | 80.4 | 1-118  |  |  |            |
| 1,3-Dichlorobenzene                   | 63.0 | 5.0 | µg/L | 100 |  | 63.0 | 1-172  |  |  |            |
| 1,4-Dichlorobenzene                   | 63.1 | 5.0 | µg/L | 100 |  | 63.1 | 20-124 |  |  |            |
| 1,2-Dichlorobenzene                   | 65.4 | 5.0 | µg/L | 100 |  | 65.4 | 32-129 |  |  |            |
| 3,3-Dichlorobenzidine                 | 84.3 | 10  | µg/L | 100 |  | 84.3 | 1-262  |  |  |            |
| 2,4-Dichlorophenol                    | 76.7 | 10  | µg/L | 100 |  | 76.7 | 39-135 |  |  |            |
| Diethylphthalate                      | 79.3 | 10  | µg/L | 100 |  | 79.3 | 1-114  |  |  |            |
| 2,4-Dimethylphenol                    | 73.1 | 10  | µg/L | 100 |  | 73.1 | 32-119 |  |  |            |
| Dimethylphthalate                     | 77.8 | 10  | µg/L | 100 |  | 77.8 | 1-112  |  |  |            |
| 4,6-Dinitro-2-methylphenol            | 88.3 | 10  | µg/L | 100 |  | 88.3 | 1-181  |  |  |            |
| 2,4-Dinitrophenol                     | 115  | 10  | µg/L | 100 |  | 115  | 1-191  |  |  | V-19, V-20 |
| 2,4-Dinitrotoluene                    | 90.9 | 10  | µg/L | 100 |  | 90.9 | 39-139 |  |  |            |
| 2,6-Dinitrotoluene                    | 91.8 | 10  | µg/L | 100 |  | 91.8 | 50-158 |  |  |            |
| Di-n-octylphthalate                   | 86.7 | 10  | µg/L | 100 |  | 86.7 | 4-146  |  |  |            |
| 1,2-Diphenylhydrazine (as Azobenzene) | 76.9 | 10  | µg/L | 100 |  | 76.9 | 40-140 |  |  |            |
| Bis(2-Ethylhexyl)phthalate            | 89.8 | 10  | µg/L | 100 |  | 89.8 | 8-158  |  |  |            |
| Fluoranthene                          | 71.6 | 5.0 | µg/L | 100 |  | 71.6 | 26-137 |  |  |            |
| Fluorene                              | 67.9 | 5.0 | µg/L | 100 |  | 67.9 | 59-121 |  |  |            |
| Hexachlorobenzene                     | 76.9 | 10  | µg/L | 100 |  | 76.9 | 1-152  |  |  |            |
| Hexachlorobutadiene                   | 67.4 | 10  | µg/L | 100 |  | 67.4 | 24-116 |  |  |            |
| Hexachlorocyclopentadiene             | 75.0 | 10  | µg/L | 100 |  | 75.0 | 40-140 |  |  | V-05       |
| Hexachloroethane                      | 66.0 | 10  | µg/L | 100 |  | 66.0 | 40-113 |  |  |            |
| Isophorone                            | 84.3 | 10  | µg/L | 100 |  | 84.3 | 21-196 |  |  |            |
| Naphthalene                           | 64.4 | 5.0 | µg/L | 100 |  | 64.4 | 21-133 |  |  |            |
| Nitrobenzene                          | 75.5 | 10  | µg/L | 100 |  | 75.5 | 35-180 |  |  |            |
| 2-Nitrophenol                         | 83.2 | 10  | µg/L | 100 |  | 83.2 | 29-182 |  |  |            |
| 4-Nitrophenol                         | 46.7 | 10  | µg/L | 100 |  | 46.7 | 1-132  |  |  |            |
| N-Nitrosodimethylamine                | 51.2 | 10  | µg/L | 100 |  | 51.2 | 40-140 |  |  |            |
| N-Nitrosodiphenylamine                | 93.3 | 10  | µg/L | 100 |  | 93.3 | 40-140 |  |  |            |
| N-Nitrosodi-n-propylamine             | 76.3 | 10  | µg/L | 100 |  | 76.3 | 1-230  |  |  |            |
| 2-Methylnaphthalene                   | 72.0 | 5.0 | µg/L | 100 |  | 72.0 | 40-140 |  |  |            |
| Phenanthrene                          | 69.8 | 5.0 | µg/L | 100 |  | 69.8 | 54-120 |  |  |            |



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

**QUALITY CONTROL**
**Semivolatile Organic Compounds by - GC/MS - Quality Control**

| Analyte                               | Result | Reporting Limit | Units | Spike Level                           | Source Result | %REC | %REC Limits | RPD   | RPD Limit | Notes      |
|---------------------------------------|--------|-----------------|-------|---------------------------------------|---------------|------|-------------|-------|-----------|------------|
| <b>Batch B187676 - SW-846 3510C</b>   |        |                 |       |                                       |               |      |             |       |           |            |
| <b>LCS (B187676-BS1)</b>              |        |                 |       |                                       |               |      |             |       |           |            |
|                                       |        |                 |       | Prepared: 10/03/17 Analyzed: 10/05/17 |               |      |             |       |           |            |
| 2-Methylphenol                        | 70.9   | 10              | µg/L  | 100                                   |               | 70.9 | 30-130      |       |           |            |
| Phenol                                | 33.3   | 10              | µg/L  | 100                                   |               | 33.3 | 5-112       |       |           |            |
| 3/4-Methylphenol                      | 63.3   | 10              | µg/L  | 100                                   |               | 63.3 | 30-130      |       |           |            |
| Pyrene                                | 72.6   | 5.0             | µg/L  | 100                                   |               | 72.6 | 52-115      |       |           |            |
| 1,2,4-Trichlorobenzene                | 70.4   | 5.0             | µg/L  | 100                                   |               | 70.4 | 44-142      |       |           |            |
| 2,4,6-Trichlorophenol                 | 78.2   | 10              | µg/L  | 100                                   |               | 78.2 | 37-144      |       |           |            |
| Surrogate: 2-Fluorophenol             | 97.4   |                 | µg/L  | 200                                   |               | 48.7 | 15-110      |       |           |            |
| Surrogate: Phenol-d6                  | 68.5   |                 | µg/L  | 200                                   |               | 34.2 | 15-110      |       |           |            |
| Surrogate: Nitrobenzene-d5            | 80.4   |                 | µg/L  | 100                                   |               | 80.4 | 30-130      |       |           |            |
| Surrogate: 2-Fluorobiphenyl           | 74.2   |                 | µg/L  | 100                                   |               | 74.2 | 30-130      |       |           |            |
| Surrogate: 2,4,6-Tribromophenol       | 179    |                 | µg/L  | 200                                   |               | 89.7 | 15-110      |       |           |            |
| Surrogate: p-Terphenyl-d14            | 83.1   |                 | µg/L  | 100                                   |               | 83.1 | 30-130      |       |           |            |
| <b>LCS Dup (B187676-BS1)</b>          |        |                 |       |                                       |               |      |             |       |           |            |
|                                       |        |                 |       | Prepared: 10/03/17 Analyzed: 10/05/17 |               |      |             |       |           |            |
| Acenaphthene                          | 71.9   | 5.0             | µg/L  | 100                                   |               | 71.9 | 47-145      | 2.08  |           |            |
| Acenaphthylene                        | 65.5   | 5.0             | µg/L  | 100                                   |               | 65.5 | 33-145      | 2.42  |           |            |
| Anthracene                            | 71.4   | 5.0             | µg/L  | 100                                   |               | 71.4 | 27-133      | 0.365 |           |            |
| Benzidine                             | 55.1   | 20              | µg/L  | 100                                   |               | 55.1 | 40-140      | 13.5  |           | V-04, V-05 |
| Benzo(g,h,i)perylene                  | 66.9   | 5.0             | µg/L  | 100                                   |               | 66.9 | 1-219       | 1.14  |           |            |
| 4-Bromophenylphenylether              | 76.4   | 10              | µg/L  | 100                                   |               | 76.4 | 53-127      | 2.24  |           |            |
| Butylbenzylphthalate                  | 89.4   | 10              | µg/L  | 100                                   |               | 89.4 | 1-152       | 2.19  |           |            |
| 4-Chloro-3-methylphenol               | 77.7   | 10              | µg/L  | 100                                   |               | 77.7 | 22-147      | 3.91  |           |            |
| Bis(2-chloroethyl)ether               | 76.8   | 10              | µg/L  | 100                                   |               | 76.8 | 12-158      | 1.96  |           |            |
| Bis(2-chloroisopropyl)ether           | 84.0   | 10              | µg/L  | 100                                   |               | 84.0 | 36-166      | 2.47  |           |            |
| 2-Chloronaphthalene                   | 64.6   | 10              | µg/L  | 100                                   |               | 64.6 | 60-118      | 2.94  |           |            |
| 2-Chlorophenol                        | 68.6   | 10              | µg/L  | 100                                   |               | 68.6 | 23-134      | 3.61  |           |            |
| 4-Chlorophenylphenylether             | 75.5   | 10              | µg/L  | 100                                   |               | 75.5 | 25-158      | 0.465 |           |            |
| Di-n-butylphthalate                   | 81.9   | 10              | µg/L  | 100                                   |               | 81.9 | 1-118       | 1.91  |           |            |
| 1,3-Dichlorobenzene                   | 60.5   | 5.0             | µg/L  | 100                                   |               | 60.5 | 1-172       | 4.02  |           |            |
| 1,4-Dichlorobenzene                   | 60.5   | 5.0             | µg/L  | 100                                   |               | 60.5 | 20-124      | 4.19  |           |            |
| 1,2-Dichlorobenzene                   | 63.4   | 5.0             | µg/L  | 100                                   |               | 63.4 | 32-129      | 3.08  |           |            |
| 3,3-Dichlorobenzidine                 | 83.2   | 10              | µg/L  | 100                                   |               | 83.2 | 1-262       | 1.37  |           |            |
| 2,4-Dichlorophenol                    | 74.4   | 10              | µg/L  | 100                                   |               | 74.4 | 39-135      | 3.15  |           |            |
| Diethylphthalate                      | 79.1   | 10              | µg/L  | 100                                   |               | 79.1 | 1-114       | 0.240 |           |            |
| 2,4-Dimethylphenol                    | 69.8   | 10              | µg/L  | 100                                   |               | 69.8 | 32-119      | 4.70  |           |            |
| Dimethylphthalate                     | 76.3   | 10              | µg/L  | 100                                   |               | 76.3 | 1-112       | 2.04  |           |            |
| 4,6-Dinitro-2-methylphenol            | 87.6   | 10              | µg/L  | 100                                   |               | 87.6 | 1-181       | 0.853 |           |            |
| 2,4-Dinitrophenol                     | 114    | 10              | µg/L  | 100                                   |               | 114  | 1-191       | 0.523 |           | V-19, V-20 |
| 2,4-Dinitrotoluene                    | 91.3   | 10              | µg/L  | 100                                   |               | 91.3 | 39-139      | 0.516 |           |            |
| 2,6-Dinitrotoluene                    | 92.5   | 10              | µg/L  | 100                                   |               | 92.5 | 50-158      | 0.781 |           |            |
| Di-n-octylphthalate                   | 87.7   | 10              | µg/L  | 100                                   |               | 87.7 | 4-146       | 1.18  |           |            |
| 1,2-Diphenylhydrazine (as Azobenzene) | 79.9   | 10              | µg/L  | 100                                   |               | 79.9 | 40-140      | 3.79  |           |            |
| Bis(2-Ethylhexyl)phthalate            | 90.9   | 10              | µg/L  | 100                                   |               | 90.9 | 8-158       | 1.26  |           |            |
| Fluoranthene                          | 73.1   | 5.0             | µg/L  | 100                                   |               | 73.1 | 26-137      | 2.05  |           |            |
| Fluorene                              | 68.7   | 5.0             | µg/L  | 100                                   |               | 68.7 | 59-121      | 1.26  |           |            |
| Hexachlorobenzene                     | 75.5   | 10              | µg/L  | 100                                   |               | 75.5 | 1-152       | 1.92  |           |            |
| Hexachlorobutadiene                   | 64.4   | 10              | µg/L  | 100                                   |               | 64.4 | 24-116      | 4.56  |           |            |
| Hexachlorocyclopentadiene             | 73.6   | 10              | µg/L  | 100                                   |               | 73.6 | 40-140      | 1.96  |           | V-05       |
| Hexachloroethane                      | 63.9   | 10              | µg/L  | 100                                   |               | 63.9 | 40-113      | 3.31  |           |            |
| Isophorone                            | 84.0   | 10              | µg/L  | 100                                   |               | 84.0 | 21-196      | 0.368 |           |            |
| Naphthalene                           | 65.0   | 5.0             | µg/L  | 100                                   |               | 65.0 | 21-133      | 0.804 |           |            |
| Nitrobenzene                          | 76.8   | 10              | µg/L  | 100                                   |               | 76.8 | 35-180      | 1.66  |           |            |

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

**QUALITY CONTROL**
**Semivolatile Organic Compounds by - GC/MS - Quality Control**

| Analyte                             | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result                      | %REC | %REC<br>Limits | RPD    | RPD<br>Limit | Notes |
|-------------------------------------|--------|--------------------|-------|----------------|---------------------------------------|------|----------------|--------|--------------|-------|
| <b>Batch B187676 - SW-846 3510C</b> |        |                    |       |                |                                       |      |                |        |              |       |
| <b>LCS Dup (B187676-BSD1)</b>       |        |                    |       |                | Prepared: 10/03/17 Analyzed: 10/05/17 |      |                |        |              |       |
| 2-Nitrophenol                       | 82.6   | 10                 | µg/L  | 100            |                                       | 82.6 | 29-182         | 0.748  |              |       |
| 4-Nitrophenol                       | 47.5   | 10                 | µg/L  | 100            |                                       | 47.5 | 1-132          | 1.63   |              |       |
| N-Nitrosodimethylamine              | 49.9   | 10                 | µg/L  | 100            |                                       | 49.9 | 40-140         | 2.49   |              |       |
| N-Nitrosodiphenylamine              | 92.6   | 10                 | µg/L  | 100            |                                       | 92.6 | 40-140         | 0.753  |              |       |
| N-Nitrosodi-n-propylamine           | 76.1   | 10                 | µg/L  | 100            |                                       | 76.1 | 1-230          | 0.289  |              |       |
| 2-Methylnaphthalene                 | 71.5   | 5.0                | µg/L  | 100            |                                       | 71.5 | 40-140         | 0.739  | 20           |       |
| Phenanthrene                        | 70.4   | 5.0                | µg/L  | 100            |                                       | 70.4 | 54-120         | 0.970  |              |       |
| 2-Methylphenol                      | 66.5   | 10                 | µg/L  | 100            |                                       | 66.5 | 30-130         | 6.46   | 20           |       |
| Phenol                              | 31.3   | 10                 | µg/L  | 100            |                                       | 31.3 | 5-112          | 6.20   |              |       |
| 3/4-Methylphenol                    | 59.3   | 10                 | µg/L  | 100            |                                       | 59.3 | 30-130         | 6.61   | 20           |       |
| Pyrene                              | 72.7   | 5.0                | µg/L  | 100            |                                       | 72.7 | 52-115         | 0.0963 |              |       |
| 1,2,4-Trichlorobenzene              | 68.3   | 5.0                | µg/L  | 100            |                                       | 68.3 | 44-142         | 3.04   |              |       |
| 2,4,6-Trichlorophenol               | 77.4   | 10                 | µg/L  | 100            |                                       | 77.4 | 37-144         | 0.990  |              |       |
| Surrogate: 2-Fluorophenol           | 93.1   |                    | µg/L  | 200            |                                       | 46.6 | 15-110         |        |              |       |
| Surrogate: Phenol-d6                | 64.2   |                    | µg/L  | 200            |                                       | 32.1 | 15-110         |        |              |       |
| Surrogate: Nitrobenzene-d5          | 80.5   |                    | µg/L  | 100            |                                       | 80.5 | 30-130         |        |              |       |
| Surrogate: 2-Fluorobiphenyl         | 74.4   |                    | µg/L  | 100            |                                       | 74.4 | 30-130         |        |              |       |
| Surrogate: 2,4,6-Tribromophenol     | 171    |                    | µg/L  | 200            |                                       | 85.3 | 15-110         |        |              |       |
| Surrogate: p-Terphenyl-d14          | 82.9   |                    | µg/L  | 100            |                                       | 82.9 | 30-130         |        |              |       |

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

**QUALITY CONTROL**
**Polychlorinated Biphenyls By GC/ECD - Quality Control**

| Analyte                               | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD  | RPD Limit | Notes |
|---------------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|------|-----------|-------|
| <b>Batch B187498 - SW-846 3510C</b>   |        |                 |       |             |               |      |             |      |           |       |
| <b>Blank (B187498-BLK1)</b>           |        |                 |       |             |               |      |             |      |           |       |
| Prepared: 10/02/17 Analyzed: 10/03/17 |        |                 |       |             |               |      |             |      |           |       |
| Aroclor-1016                          | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1016 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1221                          | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1221 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1232                          | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1232 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1242                          | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1242 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1248                          | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1248 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1254                          | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1254 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1260                          | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Aroclor-1260 [2C]                     | ND     | 0.10            | µg/L  |             |               |      |             |      |           |       |
| Surrogate: Decachlorobiphenyl         | 1.25   |                 | µg/L  | 2.00        |               | 62.6 | 30-150      |      |           |       |
| Surrogate: Decachlorobiphenyl [2C]    | 1.62   |                 | µg/L  | 2.00        |               | 81.1 | 30-150      |      |           |       |
| Surrogate: Tetrachloro-m-xylene       | 1.50   |                 | µg/L  | 2.00        |               | 74.8 | 30-150      |      |           |       |
| Surrogate: Tetrachloro-m-xylene [2C]  | 1.47   |                 | µg/L  | 2.00        |               | 73.3 | 30-150      |      |           |       |
| <b>LCS (B187498-BS1)</b>              |        |                 |       |             |               |      |             |      |           |       |
| Prepared: 10/02/17 Analyzed: 10/03/17 |        |                 |       |             |               |      |             |      |           |       |
| Aroclor-1016                          | 0.47   | 0.20            | µg/L  | 0.500       |               | 93.7 | 50-114      |      |           |       |
| Aroclor-1016 [2C]                     | 0.49   | 0.20            | µg/L  | 0.500       |               | 98.2 | 50-114      |      |           |       |
| Aroclor-1260                          | 0.43   | 0.20            | µg/L  | 0.500       |               | 86.1 | 8-127       |      |           |       |
| Aroclor-1260 [2C]                     | 0.45   | 0.20            | µg/L  | 0.500       |               | 90.3 | 8-127       |      |           |       |
| Surrogate: Decachlorobiphenyl         | 1.49   |                 | µg/L  | 2.00        |               | 74.6 | 30-150      |      |           |       |
| Surrogate: Decachlorobiphenyl [2C]    | 1.95   |                 | µg/L  | 2.00        |               | 97.5 | 30-150      |      |           |       |
| Surrogate: Tetrachloro-m-xylene       | 1.61   |                 | µg/L  | 2.00        |               | 80.4 | 30-150      |      |           |       |
| Surrogate: Tetrachloro-m-xylene [2C]  | 1.57   |                 | µg/L  | 2.00        |               | 78.6 | 30-150      |      |           |       |
| <b>LCS Dup (B187498-BSD1)</b>         |        |                 |       |             |               |      |             |      |           |       |
| Prepared: 10/02/17 Analyzed: 10/03/17 |        |                 |       |             |               |      |             |      |           |       |
| Aroclor-1016                          | 0.44   | 0.20            | µg/L  | 0.500       |               | 88.3 | 50-114      | 5.97 |           |       |
| Aroclor-1016 [2C]                     | 0.46   | 0.20            | µg/L  | 0.500       |               | 92.5 | 50-114      | 6.05 |           |       |
| Aroclor-1260                          | 0.41   | 0.20            | µg/L  | 0.500       |               | 82.0 | 8-127       | 4.88 |           |       |
| Aroclor-1260 [2C]                     | 0.43   | 0.20            | µg/L  | 0.500       |               | 86.1 | 8-127       | 4.80 |           |       |
| Surrogate: Decachlorobiphenyl         | 1.42   |                 | µg/L  | 2.00        |               | 71.0 | 30-150      |      |           |       |
| Surrogate: Decachlorobiphenyl [2C]    | 1.85   |                 | µg/L  | 2.00        |               | 92.7 | 30-150      |      |           |       |
| Surrogate: Tetrachloro-m-xylene       | 1.50   |                 | µg/L  | 2.00        |               | 75.1 | 30-150      |      |           |       |
| Surrogate: Tetrachloro-m-xylene [2C]  | 1.46   |                 | µg/L  | 2.00        |               | 73.1 | 30-150      |      |           |       |

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

**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B187411 - EPA 200.8**
**Blank (B187411-BLK1)**

Prepared: 09/29/17 Analyzed: 09/30/17

|          |    |      |      |  |  |  |  |  |  |  |
|----------|----|------|------|--|--|--|--|--|--|--|
| Antimony | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Arsenic  | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.20 | µg/L |  |  |  |  |  |  |  |
| Chromium | ND | 10   | µg/L |  |  |  |  |  |  |  |
| Copper   | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Lead     | ND | 0.50 | µg/L |  |  |  |  |  |  |  |
| Nickel   | ND | 5.0  | µg/L |  |  |  |  |  |  |  |
| Selenium | ND | 5.0  | µg/L |  |  |  |  |  |  |  |
| Silver   | ND | 0.20 | µg/L |  |  |  |  |  |  |  |
| Zinc     | ND | 20   | µg/L |  |  |  |  |  |  |  |

**LCS (B187411-BS1)**

Prepared: 09/29/17 Analyzed: 09/30/17

|          |      |     |      |      |  |      |        |  |  |  |
|----------|------|-----|------|------|--|------|--------|--|--|--|
| Antimony | 527  | 10  | µg/L | 500  |  | 105  | 85-115 |  |  |  |
| Arsenic  | 516  | 10  | µg/L | 500  |  | 103  | 85-115 |  |  |  |
| Cadmium  | 513  | 2.0 | µg/L | 500  |  | 103  | 85-115 |  |  |  |
| Chromium | 489  | 100 | µg/L | 500  |  | 97.9 | 85-115 |  |  |  |
| Copper   | 974  | 10  | µg/L | 1000 |  | 97.4 | 85-115 |  |  |  |
| Lead     | 512  | 5.0 | µg/L | 500  |  | 102  | 85-115 |  |  |  |
| Nickel   | 490  | 50  | µg/L | 500  |  | 98.0 | 85-115 |  |  |  |
| Selenium | 520  | 50  | µg/L | 500  |  | 104  | 85-115 |  |  |  |
| Silver   | 473  | 2.0 | µg/L | 500  |  | 94.7 | 85-115 |  |  |  |
| Zinc     | 1050 | 200 | µg/L | 1000 |  | 105  | 85-115 |  |  |  |

**LCS Dup (B187411-BSD1)**

Prepared: 09/29/17 Analyzed: 09/30/17

|          |      |     |      |      |  |     |        |      |    |  |
|----------|------|-----|------|------|--|-----|--------|------|----|--|
| Antimony | 558  | 10  | µg/L | 500  |  | 112 | 85-115 | 5.86 | 20 |  |
| Arsenic  | 543  | 10  | µg/L | 500  |  | 109 | 85-115 | 5.11 | 20 |  |
| Cadmium  | 540  | 2.0 | µg/L | 500  |  | 108 | 85-115 | 5.10 | 20 |  |
| Chromium | 512  | 100 | µg/L | 500  |  | 102 | 85-115 | 4.61 | 20 |  |
| Copper   | 1020 | 10  | µg/L | 1000 |  | 102 | 85-115 | 4.62 | 20 |  |
| Lead     | 538  | 5.0 | µg/L | 500  |  | 108 | 85-115 | 5.00 | 20 |  |
| Nickel   | 519  | 50  | µg/L | 500  |  | 104 | 85-115 | 5.73 | 20 |  |
| Selenium | 549  | 50  | µg/L | 500  |  | 110 | 85-115 | 5.49 | 20 |  |
| Silver   | 502  | 2.0 | µg/L | 500  |  | 100 | 85-115 | 5.81 | 20 |  |
| Zinc     | 1100 | 200 | µg/L | 1000 |  | 110 | 85-115 | 4.66 | 20 |  |

**Batch B187422 - EPA 200.7**
**Blank (B187422-BLK1)**

Prepared: 09/29/17 Analyzed: 10/02/17

|      |    |       |      |  |  |  |  |  |  |  |
|------|----|-------|------|--|--|--|--|--|--|--|
| Iron | ND | 0.050 | mg/L |  |  |  |  |  |  |  |
|------|----|-------|------|--|--|--|--|--|--|--|

**LCS (B187422-BS1)**

Prepared: 09/29/17 Analyzed: 10/02/17

|      |      |       |      |      |  |     |        |  |  |  |
|------|------|-------|------|------|--|-----|--------|--|--|--|
| Iron | 4.18 | 0.050 | mg/L | 4.00 |  | 104 | 85-115 |  |  |  |
|------|------|-------|------|------|--|-----|--------|--|--|--|

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

**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

| Analyte                           | Result  | Reporting<br>Limit | Units | Spike<br>Level                                                  | Source<br>Result | %REC | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|-----------------------------------|---------|--------------------|-------|-----------------------------------------------------------------|------------------|------|----------------|-------|--------------|-------|
| <b>Batch B187422 - EPA 200.7</b>  |         |                    |       |                                                                 |                  |      |                |       |              |       |
| <b>LCS Dup (B187422-BSD1)</b>     |         |                    |       | Prepared: 09/29/17 Analyzed: 10/02/17                           |                  |      |                |       |              |       |
| Iron                              | 4.16    | 0.050              | mg/L  | 4.00                                                            |                  | 104  | 85-115         | 0.313 | 20           |       |
| <b>Duplicate (B187422-DUP1)</b>   |         |                    |       | <b>Source: 17I1356-01</b> Prepared: 09/29/17 Analyzed: 10/02/17 |                  |      |                |       |              |       |
| Iron                              | 14.9    | 0.050              | mg/L  |                                                                 | 15.0             |      |                | 0.250 | 20           |       |
| <b>Matrix Spike (B187422-MS1)</b> |         |                    |       | <b>Source: 17I1356-01</b> Prepared: 09/29/17 Analyzed: 10/02/17 |                  |      |                |       |              |       |
| Iron                              | 18.0    | 0.050              | mg/L  | 4.00                                                            | 15.0             | 75.5 | 70-130         |       |              |       |
| <b>Batch B187761 - EPA 245.1</b>  |         |                    |       |                                                                 |                  |      |                |       |              |       |
| <b>Blank (B187761-BLK1)</b>       |         |                    |       | Prepared: 10/04/17 Analyzed: 10/05/17                           |                  |      |                |       |              |       |
| Mercury                           | ND      | 0.00010            | mg/L  |                                                                 |                  |      |                |       |              |       |
| <b>LCS (B187761-BS1)</b>          |         |                    |       | Prepared: 10/04/17 Analyzed: 10/05/17                           |                  |      |                |       |              |       |
| Mercury                           | 0.00184 | 0.00010            | mg/L  | 0.00200                                                         |                  | 91.8 | 85-115         |       |              |       |
| <b>LCS Dup (B187761-BSD1)</b>     |         |                    |       | Prepared: 10/04/17 Analyzed: 10/05/17                           |                  |      |                |       |              |       |
| Mercury                           | 0.00190 | 0.00010            | mg/L  | 0.00200                                                         |                  | 94.8 | 85-115         | 3.21  | 20           |       |

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

**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch B187476 - EPA 200.8 Dissolved**
**Blank (B187476-BLK1)**

Prepared &amp; Analyzed: 10/02/17

|          |    |      |      |  |  |  |  |  |  |  |
|----------|----|------|------|--|--|--|--|--|--|--|
| Antimony | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Arsenic  | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.20 | µg/L |  |  |  |  |  |  |  |
| Chromium | ND | 10   | µg/L |  |  |  |  |  |  |  |
| Copper   | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Lead     | ND | 0.50 | µg/L |  |  |  |  |  |  |  |
| Nickel   | ND | 5.0  | µg/L |  |  |  |  |  |  |  |
| Selenium | ND | 5.0  | µg/L |  |  |  |  |  |  |  |
| Silver   | ND | 0.20 | µg/L |  |  |  |  |  |  |  |

**LCS (B187476-BS1)**

Prepared: 10/02/17 Analyzed: 10/03/17

|          |      |     |      |      |      |        |  |  |  |  |
|----------|------|-----|------|------|------|--------|--|--|--|--|
| Antimony | 534  | 10  | µg/L | 500  | 107  | 85-115 |  |  |  |  |
| Arsenic  | 524  | 10  | µg/L | 500  | 105  | 85-115 |  |  |  |  |
| Cadmium  | 510  | 2.0 | µg/L | 500  | 102  | 85-115 |  |  |  |  |
| Chromium | 530  | 100 | µg/L | 500  | 106  | 85-115 |  |  |  |  |
| Copper   | 1040 | 10  | µg/L | 1000 | 104  | 85-115 |  |  |  |  |
| Lead     | 533  | 5.0 | µg/L | 500  | 107  | 85-115 |  |  |  |  |
| Nickel   | 527  | 50  | µg/L | 500  | 105  | 85-115 |  |  |  |  |
| Selenium | 503  | 50  | µg/L | 500  | 101  | 85-115 |  |  |  |  |
| Silver   | 462  | 2.0 | µg/L | 500  | 92.3 | 85-115 |  |  |  |  |

**LCS Dup (B187476-BSD1)**

Prepared: 10/02/17 Analyzed: 10/03/17

|          |     |     |      |      |      |        |      |    |  |  |
|----------|-----|-----|------|------|------|--------|------|----|--|--|
| Antimony | 496 | 10  | µg/L | 500  | 99.2 | 85-115 | 7.34 | 20 |  |  |
| Arsenic  | 496 | 10  | µg/L | 500  | 99.2 | 85-115 | 5.48 | 20 |  |  |
| Cadmium  | 478 | 2.0 | µg/L | 500  | 95.5 | 85-115 | 6.58 | 20 |  |  |
| Chromium | 495 | 100 | µg/L | 500  | 99.0 | 85-115 | 6.77 | 20 |  |  |
| Copper   | 970 | 10  | µg/L | 1000 | 97.0 | 85-115 | 7.02 | 20 |  |  |
| Lead     | 500 | 5.0 | µg/L | 500  | 100  | 85-115 | 6.28 | 20 |  |  |
| Nickel   | 491 | 50  | µg/L | 500  | 98.2 | 85-115 | 7.06 | 20 |  |  |
| Selenium | 469 | 50  | µg/L | 500  | 93.8 | 85-115 | 6.94 | 20 |  |  |
| Silver   | 480 | 2.0 | µg/L | 500  | 96.1 | 85-115 | 4.00 | 20 |  |  |

**Duplicate (B187476-DUP1)**

Source: 17I1356-02

Prepared &amp; Analyzed: 10/02/17

|          |      |     |      |  |      |  |      |    |  |  |
|----------|------|-----|------|--|------|--|------|----|--|--|
| Antimony | ND   | 10  | µg/L |  | ND   |  | NC   | 20 |  |  |
| Arsenic  | 15.8 | 10  | µg/L |  | 19.0 |  | 18.7 | 20 |  |  |
| Cadmium  | ND   | 2.0 | µg/L |  | ND   |  | NC   | 20 |  |  |
| Chromium | ND   | 100 | µg/L |  | ND   |  | NC   | 20 |  |  |
| Copper   | 14.7 | 10  | µg/L |  | 17.8 |  | 18.9 | 20 |  |  |
| Lead     | ND   | 5.0 | µg/L |  | ND   |  | NC   | 20 |  |  |
| Nickel   | ND   | 50  | µg/L |  | ND   |  | NC   | 20 |  |  |
| Selenium | ND   | 50  | µg/L |  | ND   |  | NC   | 20 |  |  |
| Silver   | ND   | 2.0 | µg/L |  | ND   |  | NC   | 20 |  |  |

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

**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch B187476 - EPA 200.8 Dissolved**

|                                   |     |                           |      |                               |      |      |        |  |  |  |
|-----------------------------------|-----|---------------------------|------|-------------------------------|------|------|--------|--|--|--|
| <b>Matrix Spike (B187476-MS1)</b> |     | <b>Source: 17I1356-02</b> |      | Prepared & Analyzed: 10/02/17 |      |      |        |  |  |  |
| Antimony                          | 497 | 10                        | µg/L | 500                           | ND   | 99.3 | 70-130 |  |  |  |
| Arsenic                           | 513 | 10                        | µg/L | 500                           | 19.0 | 98.7 | 70-130 |  |  |  |
| Cadmium                           | 437 | 2.0                       | µg/L | 500                           | ND   | 87.4 | 70-130 |  |  |  |
| Chromium                          | 505 | 100                       | µg/L | 500                           | ND   | 101  | 70-130 |  |  |  |
| Copper                            | 941 | 10                        | µg/L | 1000                          | 17.8 | 92.3 | 70-130 |  |  |  |
| Lead                              | 517 | 5.0                       | µg/L | 500                           | ND   | 103  | 70-130 |  |  |  |
| Nickel                            | 484 | 50                        | µg/L | 500                           | 7.46 | 95.3 | 70-130 |  |  |  |
| Selenium                          | 458 | 50                        | µg/L | 500                           | ND   | 91.6 | 70-130 |  |  |  |
| Silver                            | 431 | 2.0                       | µg/L | 500                           | ND   | 86.2 | 70-130 |  |  |  |

**Batch B187506 - EPA 200.7 Dissolved**

|                                   |      |                                       |      |                                       |      |             |          |       |    |       |
|-----------------------------------|------|---------------------------------------|------|---------------------------------------|------|-------------|----------|-------|----|-------|
| <b>Blank (B187506-BLK1)</b>       |      | Prepared: 10/02/17 Analyzed: 10/04/17 |      |                                       |      |             |          |       |    |       |
| Iron                              | ND   | 0.050                                 | mg/L |                                       |      |             |          |       |    |       |
| <b>LCS (B187506-BS1)</b>          |      | Prepared: 10/02/17 Analyzed: 10/04/17 |      |                                       |      |             |          |       |    |       |
| Iron                              | 3.99 | 0.050                                 | mg/L | 4.00                                  |      | 99.7        | 85-115   |       |    |       |
| <b>LCS Dup (B187506-BSD1)</b>     |      | Prepared: 10/02/17 Analyzed: 10/04/17 |      |                                       |      |             |          |       |    |       |
| Iron                              | 4.01 | 0.050                                 | mg/L | 4.00                                  |      | 100         | 85-115   | 0.693 | 20 |       |
| <b>Duplicate (B187506-DUP1)</b>   |      | <b>Source: 17I1356-02</b>             |      | Prepared: 10/02/17 Analyzed: 10/04/17 |      |             |          |       |    |       |
| Iron                              | 19.0 | 0.050                                 | mg/L |                                       | 20.1 |             |          | 5.67  | 20 |       |
| <b>Matrix Spike (B187506-MS1)</b> |      | <b>Source: 17I1356-02</b>             |      | Prepared: 10/02/17 Analyzed: 10/04/17 |      |             |          |       |    |       |
| <b>Iron</b>                       | 22.1 | 0.050                                 | mg/L | 4.00                                  | 20.1 | <b>48.7</b> | * 70-130 |       |    | MS-19 |

**Batch B187994 - EPA 245.1**

|                               |         |                               |      |         |  |      |        |      |    |  |
|-------------------------------|---------|-------------------------------|------|---------|--|------|--------|------|----|--|
| <b>Blank (B187994-BLK1)</b>   |         | Prepared & Analyzed: 10/06/17 |      |         |  |      |        |      |    |  |
| Mercury                       | ND      | 0.00010                       | mg/L |         |  |      |        |      |    |  |
| <b>LCS (B187994-BS1)</b>      |         | Prepared & Analyzed: 10/06/17 |      |         |  |      |        |      |    |  |
| Mercury                       | 0.00177 | 0.00010                       | mg/L | 0.00200 |  | 88.5 | 85-115 |      |    |  |
| <b>LCS Dup (B187994-BSD1)</b> |         | Prepared & Analyzed: 10/06/17 |      |         |  |      |        |      |    |  |
| Mercury                       | 0.00181 | 0.00010                       | mg/L | 0.00200 |  | 90.6 | 85-115 | 2.33 | 20 |  |

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

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

| Analyte                              | Result | Reporting Limit | Units | Spike Level                   | Source Result | %REC | %REC Limits | RPD  | RPD Limit | Notes |
|--------------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------|------|-----------|-------|
| <b>Batch B187491 - SM21-22 2540D</b> |        |                 |       |                               |               |      |             |      |           |       |
| <b>Blank (B187491-BLK1)</b>          |        |                 |       | Prepared & Analyzed: 10/02/17 |               |      |             |      |           |       |
| Total Suspended Solids               | ND     | 2.5             | mg/L  |                               |               |      |             |      |           |       |
| <b>LCS (B187491-BS1)</b>             |        |                 |       | Prepared & Analyzed: 10/02/17 |               |      |             |      |           |       |
| Total Suspended Solids               | 160    | 10              | mg/L  | 200                           |               | 80.0 | 66.7-117    |      |           |       |
| <b>Batch B187648 - EPA 420.1</b>     |        |                 |       |                               |               |      |             |      |           |       |
| <b>Blank (B187648-BLK1)</b>          |        |                 |       | Prepared & Analyzed: 10/05/17 |               |      |             |      |           |       |
| Phenol                               | ND     | 0.050           | mg/L  |                               |               |      |             |      |           |       |
| <b>LCS (B187648-BS1)</b>             |        |                 |       | Prepared & Analyzed: 10/05/17 |               |      |             |      |           |       |
| Phenol                               | 0.47   | 0.050           | mg/L  | 0.500                         |               | 94.3 | 71.1-117    |      |           |       |
| <b>LCS Dup (B187648-BSD1)</b>        |        |                 |       | Prepared & Analyzed: 10/05/17 |               |      |             |      |           |       |
| Phenol                               | 0.46   | 0.050           | mg/L  | 0.500                         |               | 92.8 | 71.1-117    | 1.60 | 9.35      |       |
| <b>Duplicate (B187648-DUP1)</b>      |        |                 |       | Prepared & Analyzed: 10/05/17 |               |      |             |      |           |       |
| Phenol                               | 0.060  | 0.050           | mg/L  |                               | 0.068         |      |             | 11.7 | 20        |       |
| <b>Matrix Spike (B187648-MS1)</b>    |        |                 |       | Prepared & Analyzed: 10/05/17 |               |      |             |      |           |       |
| Phenol                               | 0.47   | 0.050           | mg/L  | 0.500                         | 0.068         | 80.8 | 32.8-147    |      |           |       |
| <b>Reference (B187648-SRM1)</b>      |        |                 |       | Prepared & Analyzed: 10/05/17 |               |      |             |      |           |       |
| Phenol                               | 0.479  | 0.050           | mg/L  | 0.500                         |               | 95.8 | 0-200       |      |           |       |
| <b>Batch B187719 - EPA 1664B</b>     |        |                 |       |                               |               |      |             |      |           |       |
| <b>Blank (B187719-BLK1)</b>          |        |                 |       | Prepared & Analyzed: 10/04/17 |               |      |             |      |           |       |
| Silica Gel Treated HEM (SGT-HEM)     | ND     | 1.4             | mg/L  |                               |               |      |             |      |           |       |
| <b>LCS (B187719-BS1)</b>             |        |                 |       | Prepared & Analyzed: 10/04/17 |               |      |             |      |           |       |
| Silica Gel Treated HEM (SGT-HEM)     | 9.7    |                 | mg/L  | 10.0                          |               | 97.0 | 64-132      |      |           |       |
| <b>Duplicate (B187719-DUP1)</b>      |        |                 |       | Prepared & Analyzed: 10/04/17 |               |      |             |      |           |       |
| Silica Gel Treated HEM (SGT-HEM)     | ND     | 1.5             | mg/L  |                               | ND            |      |             | NC   | 18        |       |
| <b>Matrix Spike (B187719-MS1)</b>    |        |                 |       | Prepared & Analyzed: 10/04/17 |               |      |             |      |           |       |
| Silica Gel Treated HEM (SGT-HEM)     | 100    | 14              | mg/L  | 100                           | ND            | 100  | 64-132      |      |           |       |



# FLAG/QUALIFIER SUMMARY

|       |                                                                                                                                                                                                                         |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *     | QC result is outside of established limits.                                                                                                                                                                             |
| †     | Wide recovery limits established for difficult compound.                                                                                                                                                                |
| ‡     | Wide RPD limits established for difficult compound.                                                                                                                                                                     |
| #     | Data exceeded client recommended or regulatory level                                                                                                                                                                    |
| ND    | Not Detected                                                                                                                                                                                                            |
| RL    | Reporting Limit                                                                                                                                                                                                         |
| DL    | Method Detection Limit                                                                                                                                                                                                  |
| MCL   | Maximum Contaminant Level                                                                                                                                                                                               |
|       | Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.                                                                  |
|       | No results have been blank subtracted unless specified in the case narrative section.                                                                                                                                   |
| DL-15 | Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.                                                                                          |
| J     | Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).                                                                                     |
| MS-19 | Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.                               |
| V-04  | Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.                                                             |
| V-05  | Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.   |
| V-06  | Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side. |
| V-19  | Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.      |
| V-20  | Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.                                    |

**CERTIFICATIONS**
**Certified Analyses included in this Report**

| Analyte                          | Certifications          |
|----------------------------------|-------------------------|
| <b><i>EPA 200.7 in Water</i></b> |                         |
| Iron                             | CT,MA,NH,NY,RI,NC,ME,VA |
| Iron                             | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>EPA 200.8 in Water</i></b> |                         |
| Antimony                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Antimony                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Arsenic                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Arsenic                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Cadmium                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Cadmium                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Chromium                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Chromium                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Copper                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Copper                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Lead                             | CT,MA,NH,NY,RI,NC,ME,VA |
| Lead                             | CT,MA,NH,NY,RI,NC,ME,VA |
| Nickel                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Nickel                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Selenium                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Selenium                         | CT,MA,NH,NY,RI,NC,ME,VA |
| Silver                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Silver                           | CT,MA,NH,NY,RI,NC,ME,VA |
| Zinc                             | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>EPA 245.1 in Water</i></b> |                         |
| Mercury                          | CT,MA,NH,RI,NY,NC,ME,VA |
| <b><i>EPA 420.1 in Water</i></b> |                         |
| Phenol                           | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>EPA 608 in Water</i></b>   |                         |
| Aroclor-1016                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1016 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1221                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1221 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1232                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1232 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1242                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1242 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1248                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1248 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1254                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1254 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1260                     | CT,MA,NH,NY,RI,NC,ME,VA |
| Aroclor-1260 [2C]                | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>EPA 624 in Water</i></b>   |                         |
| Acetone                          | NH,NY                   |
| Benzene                          | CT,MA,NH,NY,RI,NC,ME,VA |
| Carbon Tetrachloride             | CT,MA,NH,NY,RI,NC,ME,VA |

**CERTIFICATIONS**
**Certified Analyses included in this Report**

| Analyte                        | Certifications          |
|--------------------------------|-------------------------|
| <b><i>EPA 624 in Water</i></b> |                         |
| 1,2-Dichlorobenzene            | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,3-Dichlorobenzene            | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,4-Dichlorobenzene            | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,2-Dichloroethane             | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,1-Dichloroethane             | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,1-Dichloroethylene           | CT,MA,NH,NY,RI,NC,ME,VA |
| Ethylbenzene                   | CT,MA,NH,NY,RI,NC,ME,VA |
| Methyl tert-Butyl Ether (MTBE) | NH,NY,NC                |
| Methylene Chloride             | CT,MA,NH,NY,RI,NC,ME,VA |
| Naphthalene                    | NC                      |
| Tetrachloroethylene            | CT,MA,NH,NY,RI,NC,ME,VA |
| Toluene                        | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,2,4-Trichlorobenzene         | NC                      |
| 1,1,1-Trichloroethane          | CT,MA,NH,NY,RI,NC,ME,VA |
| 1,1,2-Trichloroethane          | CT,MA,NH,NY,RI,NC,ME,VA |
| Trichloroethylene              | CT,MA,NH,NY,RI,NC,ME,VA |
| Vinyl Chloride                 | CT,MA,NH,NY,RI,NC,ME,VA |
| m+p Xylene                     | CT,MA,NH,NY,RI,NC,VA    |
| o-Xylene                       | CT,MA,NH,NY,RI,NC,VA    |
| <b><i>EPA 625 in Water</i></b> |                         |
| Acenaphthene                   | CT,MA,NH,NY,NC,RI,ME,VA |
| Acenaphthylene                 | CT,MA,NH,NY,NC,RI,ME,VA |
| Anthracene                     | CT,MA,NH,NY,NC,RI,ME,VA |
| Benidine                       | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(a)anthracene             | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(a)pyrene                 | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(b)fluoranthene           | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(g,h,i)perylene           | CT,MA,NH,NY,NC,RI,ME,VA |
| Benzo(k)fluoranthene           | CT,MA,NH,NY,NC,RI,ME,VA |
| 4-Bromophenylphenylether       | CT,MA,NH,NY,NC,RI,ME,VA |
| Butylbenzylphthalate           | CT,MA,NH,NY,NC,RI,ME,VA |
| 4-Chloro-3-methylphenol        | CT,MA,NH,NY,NC,RI,VA    |
| Bis(2-chloroethyl)ether        | CT,MA,NH,NY,NC,RI,ME,VA |
| Bis(2-chloroisopropyl)ether    | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Chloronaphthalene            | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Chlorophenol                 | CT,MA,NH,NY,NC,RI,ME,VA |
| 4-Chlorophenylphenylether      | CT,MA,NH,NY,NC,RI,ME,VA |
| Chrysene                       | CT,MA,NH,NY,NC,RI,ME,VA |
| Dibenz(a,h)anthracene          | CT,MA,NH,NY,NC,RI,ME,VA |
| Di-n-butylphthalate            | CT,MA,NH,NY,NC,RI,ME,VA |
| 1,3-Dichlorobenzene            | MA,NC                   |
| 1,4-Dichlorobenzene            | MA,NC                   |
| 1,2-Dichlorobenzene            | MA,NC                   |
| 3,3-Dichlorobenzidine          | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,4-Dichlorophenol             | CT,MA,NH,NY,NC,RI,ME,VA |
| Diethylphthalate               | CT,MA,NH,NY,NC,RI,ME,VA |

**CERTIFICATIONS**
**Certified Analyses included in this Report**

| Analyte                                   | Certifications          |
|-------------------------------------------|-------------------------|
| <b><i>EPA 625 in Water</i></b>            |                         |
| 2,4-Dimethylphenol                        | CT,MA,NH,NY,NC,RI,ME,VA |
| Dimethylphthalate                         | CT,MA,NH,NY,NC,RI,ME,VA |
| 4,6-Dinitro-2-methylphenol                | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,4-Dinitrophenol                         | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,4-Dinitrotoluene                        | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,6-Dinitrotoluene                        | CT,MA,NH,NY,NC,RI,ME,VA |
| Di-n-octylphthalate                       | CT,MA,NH,NY,NC,RI,ME,VA |
| 1,2-Diphenylhydrazine (as Azobenzene)     | NC                      |
| Bis(2-Ethylhexyl)phthalate                | CT,MA,NH,NY,NC,RI,ME,VA |
| Fluoranthene                              | CT,MA,NH,NY,NC,RI,ME,VA |
| Fluorene                                  | CT,MA,NH,NY,NC,RI,ME,VA |
| Hexachlorobenzene                         | CT,MA,NH,NY,NC,RI,ME,VA |
| Hexachlorobutadiene                       | CT,MA,NH,NY,NC,RI,ME,VA |
| Hexachlorocyclopentadiene                 | CT,MA,NH,NY,NC,RI,ME,VA |
| Hexachloroethane                          | CT,MA,NH,NY,NC,RI,ME,VA |
| Indeno(1,2,3-cd)pyrene                    | CT,MA,NH,NY,NC,RI,ME,VA |
| Isophorone                                | CT,MA,NH,NY,NC,RI,ME,VA |
| Naphthalene                               | CT,MA,NH,NY,NC,RI,ME,VA |
| Nitrobenzene                              | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Nitrophenol                             | CT,MA,NH,NY,NC,RI,ME,VA |
| 4-Nitrophenol                             | CT,MA,NH,NY,NC,RI,ME,VA |
| N-Nitrosodimethylamine                    | CT,MA,NH,NY,NC,RI,ME,VA |
| N-Nitrosodiphenylamine                    | CT,MA,NH,NY,NC,RI,ME,VA |
| N-Nitrosodi-n-propylamine                 | CT,MA,NH,NY,NC,RI,ME,VA |
| Pentachlorophenol                         | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Methylnaphthalene                       | NC                      |
| Phenanthrene                              | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Methylphenol                            | NY,NC                   |
| Phenol                                    | CT,MA,NH,NY,NC,RI,ME,VA |
| 3/4-Methylphenol                          | NY,NC                   |
| Pyrene                                    | CT,MA,NH,NY,NC,RI,ME,VA |
| 1,2,4-Trichlorobenzene                    | CT,MA,NH,NY,NC,RI,ME,VA |
| 2,4,6-Trichlorophenol                     | CT,MA,NH,NY,NC,RI,ME,VA |
| 2-Fluorophenol                            | NC                      |
| <b><i>SM19-22 4500 NH3 C in Water</i></b> |                         |
| Ammonia as N                              | NY,MA,CT,RI,VA,NC,ME    |
| <b><i>SM21-22 2540D in Water</i></b>      |                         |
| Total Suspended Solids                    | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>SM21-22 4500 CN E in Water</i></b>  |                         |
| Cyanide                                   | CT,MA,NH,NY,RI,NC,ME,VA |
| <b><i>SW-846 8015C in Water</i></b>       |                         |
| Ethanol                                   | NY                      |
| <b><i>SW-846 8270D in Water</i></b>       |                         |
| Acenaphthene                              | CT,NY,NC,ME,NH,VA,NJ    |
| Acenaphthylene                            | CT,NY,NC,ME,NH,VA,NJ    |

**CERTIFICATIONS**
**Certified Analyses included in this Report**

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

# CERTIFICATIONS

## Certified Analyses included in this Report

| Analyte                      | Certifications       |
|------------------------------|----------------------|
| <i>SW-846 8270D in Water</i> |                      |
| 4-Nitrophenol                | CT,NY,NC,ME,NH,VA,NJ |
| N-Nitrosodimethylamine       | CT,NY,NC,ME,NH,VA,NJ |
| N-Nitrosodiphenylamine       | CT,NY,NC,ME,NH,VA,NJ |
| N-Nitrosodi-n-propylamine    | CT,NY,NC,ME,NH,VA,NJ |
| Pentachlorophenol            | CT,NY,NC,ME,NH,VA,NJ |
| Phenanthrene                 | CT,NY,NC,ME,NH,VA,NJ |
| Phenol                       | CT,NY,NC,ME,NH,VA,NJ |
| Pyrene                       | CT,NY,NC,ME,NH,VA,NJ |
| 1,2,4-Trichlorobenzene       | CT,NY,NC,ME,NH,VA,NJ |
| 2,4,6-Trichlorophenol        | CT,NY,NC,ME,NH,VA,NJ |
| 2-Fluorophenol               | NC,VA                |
| Phenol-d6                    | VA                   |
| Nitrobenzene-d5              | VA                   |

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

| Code  | Description                                  | Number        | Expires    |
|-------|----------------------------------------------|---------------|------------|
| AIHA  | AIHA-LAP, LLC - ISO17025:2005                | 100033        | 02/1/2018  |
| MA    | Massachusetts DEP                            | M-MA100       | 06/30/2018 |
| CT    | Connecticut Department of Public Health      | PH-0567       | 09/30/2019 |
| NY    | New York State Department of Health          | 10899 NELAP   | 04/1/2018  |
| NH-S  | New Hampshire Environmental Lab              | 2516 NELAP    | 02/5/2018  |
| RI    | Rhode Island Department of Health            | LAO00112      | 12/30/2017 |
| NC    | North Carolina Div. of Water Quality         | 652           | 12/31/2017 |
| NJ    | New Jersey DEP                               | MA007 NELAP   | 06/30/2018 |
| FL    | Florida Department of Health                 | E871027 NELAP | 06/30/2018 |
| VT    | Vermont Department of Health Lead Laboratory | LL015036      | 07/30/2018 |
| ME    | State of Maine                               | 2011028       | 06/9/2019  |
| VA    | Commonwealth of Virginia                     | 460217        | 12/14/2017 |
| NH-P  | New Hampshire Environmental Lab              | 2557 NELAP    | 09/6/2018  |
| VT-DW | Vermont Department of Health Drinking Water  | VT-255716     | 06/12/2018 |
| NC-DW | North Carolina Department of Health          | 25703         | 07/31/2018 |



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

Email: info@contestlabs.com

Company Name: NSTAR/Eversource - Monthly Billing  
Address: One NSTAR Way, Westwood, MA 02090

Phone: (339) 987-7029

Project Name: Mystic - East Eagle  
Project Location: E-0754

Project Number: Mike Zylich

Purchase Order Number: 64454-1

Invoice Recipient: NSTAR/Eversource - Monthly Billing

Sampled By:

Enhanced Data Package Required: ☐  
Email To: memartin@ttighebond.com,  
Michael.Zylich@eversource.com

Format: PDF ☒ EXCEL ☒  
Other: Data Delivery

Requested Turnaround Time  
7-Day ☐ 10-Day ☐  
Other: 5 days ☒

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

Con-Test Work Order#

Client Sample ID / Description

Beginning Date/Time

Ending Date/Time

Composite

Grab

Matrix Code

Conc Code

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

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

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

ANALYSIS REQUESTED

PCBs

VOCs

SVOCs

EDB

Ammonia

Ethanol

Total Phenols

Total Cyanide

Hex Chrom

Total RGP Metals

TSS/TRC/Chloride

TPH - Oil & Grease

TSS

Pentachlorophenol

# of Containers

2 Preservation Code

3 Container Code

Dissolved Metals Samples  
☒ Field Filtered  
☐ Lab to Filter

Orthophosphate Samples  
☐ Field Filtered  
☐ Lab to Filter

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

Notes:  
2: VOCs include EDB, TBA, TAME and 1,4-dioxane  
RGP Metals (antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, zinc and iron)

Relinquished by: (signature) *Callie Weir*  
Date/Time: 9-28-17 9:00 AM

Received by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 13:40

Relinquished by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 16:40

Received by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 18:40

Relinquished by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 19:40

Received by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 21:40

Relinquished by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 23:40

Received by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 25:40

Relinquished by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 27:40

Received by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 29:40

Relinquished by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 31:40

Received by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 33:40

Relinquished by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 35:40

Received by: (signature) *Paul Chubb*  
Date/Time: 9-28-17 37:40

### Program Information

MCP Analytical Certification Form Required  
RCP Analysis Certification Form Required  
MA State DW Form Required  
PWSID # \_\_\_\_\_

NELAC and AIHA-LAP, LLC Accredited

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

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St.  
East Longmeadow, MA. 01028  
P: 413-525-2332  
F: 413-525-6405  
www.contestlabs.com



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client N/Star  
Received By JM Date 9/28/17 Time 1915

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

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 2.2, 2.4  
By Blank # \_\_\_\_\_ Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A  
Was COC Relinquished? T Does Chain Agree With Samples? T

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

Is COC in ink/ Legible? T Were samples received within holding time? T  
Did COC include all pertinent Information? Client T Analysis T Sampler Name T  
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T  
Are there Lab to Filters? N/A Who was notified? \_\_\_\_\_  
Are there Rushes? N/A Who was notified? \_\_\_\_\_  
Are there Short Holds? N/A Who was notified? \_\_\_\_\_

Is there enough Volume? T MS/MSD? N/A  
Is there Headspace where applicable? T Is splitting samples required? N/A  
Proper Media/Containers Used? T On COC? N/A  
Were trip blanks received? N/A Acid T Base T

Do all samples have the proper pH?

| Vials        | #         | Containers:   | #         | #               | #        | #             |
|--------------|-----------|---------------|-----------|-----------------|----------|---------------|
| Unp-         |           | 1 Liter Amb.  | <u>16</u> | 1 Liter Plastic |          | 16 oz Amb.    |
| HCL-         | <u>12</u> | 500 mL Amb.   | <u>2</u>  | 500 mL Plastic  | <u>2</u> | 8oz Amb/Clear |
| Meoh-        |           | 250 mL Amb.   |           | 250 mL Plastic  | <u>6</u> | 4oz Amb/Clear |
| Bisulfate-   |           | Col./Bacteria |           | Flashpoint      |          | 2oz Amb/Clear |
| DI-          |           | Other Plastic |           | Other Glass     |          | Encore        |
| Thiosulfate- | <u>6</u>  | SOC Kit       |           | Plastic Bag     |          | Frozen:       |
| Sulfuric-    |           | Perchlorate   |           | Ziplock         |          |               |

**Unused Media**

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

**Comments:**

Received in 2 coolers



**Project Name:** 17I1356  
**Project Number:** 17I1356

**Lab Number:** L1734956  
**Report Date:** 10/09/17

**CT DEP Reasonable Confidence Protocols  
Laboratory Analysis  
QA/QC Certification Form**

|    |                                                                                                                                                                                                                                                                                                                    |     |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1  | For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed (including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents)? | YES |
| 1a | Were the method specified preservation and holding time requirements met?                                                                                                                                                                                                                                          | YES |
| 1b | VPH & EPH Methods Only: Was the VPH or EPH Method conducted without significant modifications (see Section 11.3 of respective Methods)?                                                                                                                                                                            | N/A |
| 2  | Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?                                                                                                                                                                          | YES |
| 3  | Were all samples received at an appropriate temperature (<6°C)?                                                                                                                                                                                                                                                    | YES |
| 4  | Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?                                                                                                                                                                                                     | YES |
| 5a | Were reporting limits specified or referenced on the chain-of-custody?                                                                                                                                                                                                                                             | NO  |
| 5b | Were these reporting limits met?                                                                                                                                                                                                                                                                                   | N/A |
| 6  | For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?                                                                                     | YES |
| 7  | Are project-specific matrix spikes and laboratory duplicates included in this data set?                                                                                                                                                                                                                            | NO  |

**Note:** For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or question B is "No", the data package does not meet the requirements for "Reasonable Confidence".





## REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

**Laboratory Name:** Con-Test Analytical Laboratory

**Client:** NSTAR Electric & Gas Corporation - Mo

**Project Location:** Mystic- East Eagle

**Project Number:** 17I1356

**Laboratory Sample ID(s):**
**Sample Date(s):**

17I1356-01 thru 17I1356-02

09/27/2017

**List RCP Methods Used:**

SW-846 8270D

|           |                                                                                                                                                                                                                                                                                                                  |                                                                                                     |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>1</b>  | For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                 |
| <b>1A</b> | Were the method specified preservation and holding time requirements met?                                                                                                                                                                                                                                        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                 |
| <b>1B</b> | VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?                                                                                                                                                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input checked="" type="checkbox"/> N/A |
| <b>2</b>  | Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?                                                                                                                                                                        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                 |
| <b>3</b>  | Were samples received at an appropriate temperature (< 6 degrees C.)?                                                                                                                                                                                                                                            | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> N/A |
| <b>4</b>  | Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?                                                                                                                                                                                                    | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                 |
| <b>5A</b> | Were reporting limits specified or referenced on the chain-of-custody?                                                                                                                                                                                                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                 |
| <b>5B</b> | Were these reporting limits met?                                                                                                                                                                                                                                                                                 | <input type="checkbox"/> Yes <input type="checkbox"/> No                                            |
| <b>6</b>  | For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?                                                                                   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                 |
| <b>7</b>  | Are project-specific matrix spikes and laboratory duplicates included in this data set?                                                                                                                                                                                                                          | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                 |

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

**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.**

**Authorized Signature:**
**Position:** Laboratory Director
**Printed Name:** Tod E. Kopyscinski
**Date:** 10/10/17
**Name of Laboratory:** Con-Test Analytical Laboratory

**This certification form is to be used for RCP methods only.**

December 12, 2017

Michael Zylich  
NSTAR Electric & Gas Corporation - Monthly Billing  
One NSTAR Way, SUM SE-250  
East Sandwich, MA 02090-9230

Project Location: Mystic to East Eagle  
Client Job Number:  
Project Number: E-0754-014  
Laboratory Work Order Number: 17L0043

Enclosed are results of analyses for samples received by the laboratory on December 1, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman  
Project Manager

## Table of Contents

|                                                                      |    |
|----------------------------------------------------------------------|----|
| Sample Summary                                                       | 3  |
| Case Narrative                                                       | 4  |
| Sample Results                                                       | 5  |
| 17L0043-01                                                           | 5  |
| 17L0043-02                                                           | 9  |
| Sample Preparation Information                                       | 13 |
| QC Data                                                              | 14 |
| Metals Analyses (Total)                                              | 14 |
| B192411                                                              | 14 |
| B192415                                                              | 14 |
| B192610                                                              | 15 |
| Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) | 16 |
| B192314                                                              | 16 |
| Flag/Qualifier Summary                                               | 17 |
| Certifications                                                       | 18 |
| Chain of Custody/Sample Receipt                                      | 19 |

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

NSTAR Electric &amp; Gas Corporation - Monthly Billir

One NSTAR Way, SUM SE-250

East Sandwich, MA 02090-9230

ATTN: Michael Zylich

REPORT DATE: 12/12/2017

PURCHASE ORDER NUMBER: 64454 Release 1

PROJECT NUMBER: E-0754-014

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 17L0043

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

PROJECT LOCATION: Mystic to East Eagle

| FIELD SAMPLE #       | LAB ID:    | MATRIX        | SAMPLE DESCRIPTION | TEST               | SUB LAB                           |
|----------------------|------------|---------------|--------------------|--------------------|-----------------------------------|
| Island End at Mystic | 17L0043-01 | Surface Water |                    | EPA 200.7          | MA M-MA-086/CT<br>PH-0574/NY11148 |
|                      |            |               |                    | EPA 200.8          |                                   |
|                      |            |               |                    | EPA 245.1          |                                   |
|                      |            |               |                    | SM19-22 4500 NH3 C |                                   |
|                      |            |               |                    | SM21-22 3500 Cr B  |                                   |
|                      |            |               |                    | SM2520B            |                                   |
| Chelsea River        | 17L0043-02 | Surface Water |                    | Tri Chrome Calc.   | NY11393/MA-MAI138/M<br>A1110      |
|                      |            |               |                    | EPA 200.7          |                                   |
|                      |            |               |                    | EPA 200.8          |                                   |
|                      |            |               |                    | EPA 245.1          |                                   |
|                      |            |               |                    | SM19-22 4500 NH3 C |                                   |
|                      |            |               |                    | SM21-22 3500 Cr B  |                                   |
|                      |            |               |                    | SM2520B            | NY11393/MA-MAI138/M<br>A1110      |
|                      |            |               |                    |                    |                                   |
|                      |            |               |                    | Tri Chrome Calc.   |                                   |

**CASE NARRATIVE SUMMARY**

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

REVISED REPORT - 12/12/2017 - Project location and number revised per the request of Tighe & Bond.

**EPA 200.8****Qualifications:****DL-15**

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

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

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Arsenic**

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Cadmium**

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Chromium**

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Copper**

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Lead**

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Nickel**

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Selenium**

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Silver**

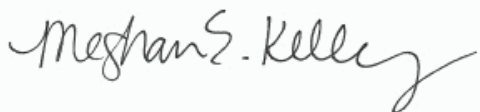
17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

**Zinc**

17L0043-01[Island End at Mystic], 17L0043-02[Chelsea River]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley  
Project Manager

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

Project Location: Mystic to East Eagle

Sample Description:

Work Order: 17L0043

Date Received: 12/1/2017

Field Sample #: Island End at Mystic

Sampled: 12/1/2017 08:20

Sample ID: 17L0043-01

Sample Matrix: Surface Water

## Metals Analyses (Total)

| Analyte             | Results | RL      | DL | Units | Dilution | Flag/Qual | Method           | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------|---------|---------|----|-------|----------|-----------|------------------|---------------|--------------------|---------|
| Antimony            | ND      | 5.0     |    | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |
| Arsenic             | 43      | 5.0     |    | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |
| Cadmium             | ND      | 1.0     |    | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |
| Chromium            | ND      | 50      |    | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |
| Chromium, Trivalent | 0.0     |         |    | mg/L  | 1        |           | Tri Chrome Calc. | 12/4/17       | 12/7/17 5:50       | MJH     |
| Copper              | 93      | 5.0     |    | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |
| Iron                | 0.12    | 0.050   |    | mg/L  | 1        |           | EPA 200.7        | 12/4/17       | 12/5/17 18:31      | TJK     |
| Lead                | ND      | 5.0     |    | µg/L  | 10       | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:52      | MJH     |
| Mercury             | ND      | 0.00010 |    | mg/L  | 1        |           | EPA 245.1        | 12/6/17       | 12/7/17 9:25       | EJB     |
| Nickel              | ND      | 25      |    | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |
| Selenium            | 140     | 25      | 11 | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |
| Silver              | ND      | 1.0     |    | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |
| Zinc                | ND      | 100     |    | µg/L  | 5        | DL-15     | EPA 200.8        | 12/4/17       | 12/6/17 15:58      | MJH     |

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

Project Location: Mystic to East Eagle

Sample Description:

Work Order: 17L0043

Date Received: 12/1/2017

Field Sample #: Island End at Mystic

Sampled: 12/1/2017 08:20

Sample ID: 17L0043-01

Sample Matrix: Surface Water

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

| Analyte             | Results | RL     | Units | Dilution | Flag/Qual | Method            | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------|---------|--------|-------|----------|-----------|-------------------|---------------|--------------------|---------|
| Hexavalent Chromium | ND      | 0.0040 | mg/L  | 1        |           | SM21-22 3500 Cr B | 12/1/17       | 12/1/17 18:15      | IS      |



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

Project Location: Mystic to East Eagle

Sample Description:

Work Order: 17L0043

Date Received: 12/1/2017

Field Sample #: Island End at Mystic

Sampled: 12/1/2017 08:20

Sample ID: 17L0043-01

Sample Matrix: Surface Water

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

| Analyte  | Results | RL | Units | Dilution | Flag/Qual | Method  | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|----------|---------|----|-------|----------|-----------|---------|------------------|-----------------------|---------|
| Salinity | 26.1    | 1  | ppt   | 1        |           | SM2520B |                  | 12/8/17 0:00          | EURO    |

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

Project Location: Mystic to East Eagle

Sample Description:

Work Order: 17L0043

Date Received: 12/1/2017

Field Sample #: Island End at Mystic

Sampled: 12/1/2017 08:20

Sample ID: 17L0043-01

Sample Matrix: Surface Water

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

| Analyte      | Results | RL    | Units | Dilution | Flag/Qual | Method             | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|--------------|---------|-------|-------|----------|-----------|--------------------|------------------|-----------------------|---------|
| Ammonia as N | 0.108   | 0.075 | mg/L  | 1        |           | SM19-22 4500 NH3 C |                  | 12/6/17 0:00          | ALPHA   |

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

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

| Lab Number [Field ID]             | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------------------|---------|--------------|------------|----------|
| 17L0043-01 [Island End at Mystic] | B192415 | 50.0         | 50.0       | 12/04/17 |
| 17L0043-02 [Chelsea River]        | B192415 | 50.0         | 50.0       | 12/04/17 |

**Prep Method: EPA 200.8-EPA 200.8**

| Lab Number [Field ID]             | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------------------|---------|--------------|------------|----------|
| 17L0043-01 [Island End at Mystic] | B192411 | 50.0         | 50.0       | 12/04/17 |
| 17L0043-02 [Chelsea River]        | B192411 | 50.0         | 50.0       | 12/04/17 |

**Prep Method: EPA 245.1-EPA 245.1**

| Lab Number [Field ID]             | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------------------|---------|--------------|------------|----------|
| 17L0043-01 [Island End at Mystic] | B192610 | 6.00         | 6.00       | 12/06/17 |
| 17L0043-02 [Chelsea River]        | B192610 | 6.00         | 6.00       | 12/06/17 |

**SM21-22 3500 Cr B**

| Lab Number [Field ID]             | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------------------|---------|--------------|------------|----------|
| 17L0043-01 [Island End at Mystic] | B192314 | 50.0         | 50.0       | 12/01/17 |
| 17L0043-02 [Chelsea River]        | B192314 | 50.0         | 50.0       | 12/01/17 |

**Prep Method: SW-846 3005A-Tri Chrome Calc.**

| Lab Number [Field ID]             | Batch   | Initial [mL] | Date     |
|-----------------------------------|---------|--------------|----------|
| 17L0043-01 [Island End at Mystic] | B192413 | 1.00         | 12/04/17 |
| 17L0043-02 [Chelsea River]        | B192413 | 1.00         | 12/04/17 |

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

**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B192411 - EPA 200.8**
**Blank (B192411-BLK1)**

Prepared: 12/04/17 Analyzed: 12/05/17

|          |    |      |      |  |  |  |  |  |  |  |
|----------|----|------|------|--|--|--|--|--|--|--|
| Antimony | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Arsenic  | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.20 | µg/L |  |  |  |  |  |  |  |
| Chromium | ND | 10   | µg/L |  |  |  |  |  |  |  |
| Copper   | ND | 1.0  | µg/L |  |  |  |  |  |  |  |
| Lead     | ND | 0.50 | µg/L |  |  |  |  |  |  |  |
| Nickel   | ND | 5.0  | µg/L |  |  |  |  |  |  |  |
| Selenium | ND | 5.0  | µg/L |  |  |  |  |  |  |  |
| Silver   | ND | 0.20 | µg/L |  |  |  |  |  |  |  |
| Zinc     | ND | 20   | µg/L |  |  |  |  |  |  |  |

**LCS (B192411-BS1)**

Prepared: 12/04/17 Analyzed: 12/05/17

|          |      |     |      |      |  |     |        |  |  |  |
|----------|------|-----|------|------|--|-----|--------|--|--|--|
| Antimony | 568  | 10  | µg/L | 500  |  | 114 | 85-115 |  |  |  |
| Arsenic  | 568  | 10  | µg/L | 500  |  | 114 | 85-115 |  |  |  |
| Cadmium  | 568  | 2.0 | µg/L | 500  |  | 114 | 85-115 |  |  |  |
| Chromium | 542  | 100 | µg/L | 500  |  | 108 | 85-115 |  |  |  |
| Copper   | 1060 | 10  | µg/L | 1000 |  | 106 | 85-115 |  |  |  |
| Lead     | 566  | 5.0 | µg/L | 500  |  | 113 | 85-115 |  |  |  |
| Nickel   | 534  | 50  | µg/L | 500  |  | 107 | 85-115 |  |  |  |
| Selenium | 577  | 50  | µg/L | 500  |  | 115 | 85-115 |  |  |  |
| Silver   | 525  | 2.0 | µg/L | 500  |  | 105 | 85-115 |  |  |  |
| Zinc     | 1120 | 200 | µg/L | 1000 |  | 112 | 85-115 |  |  |  |

**LCS Dup (B192411-BSD1)**

Prepared: 12/04/17 Analyzed: 12/05/17

|          |      |     |      |      |  |      |        |      |    |  |
|----------|------|-----|------|------|--|------|--------|------|----|--|
| Antimony | 514  | 10  | µg/L | 500  |  | 103  | 85-115 | 9.91 | 20 |  |
| Arsenic  | 520  | 10  | µg/L | 500  |  | 104  | 85-115 | 8.88 | 20 |  |
| Cadmium  | 518  | 2.0 | µg/L | 500  |  | 104  | 85-115 | 9.30 | 20 |  |
| Chromium | 497  | 100 | µg/L | 500  |  | 99.5 | 85-115 | 8.50 | 20 |  |
| Copper   | 978  | 10  | µg/L | 1000 |  | 97.8 | 85-115 | 7.93 | 20 |  |
| Lead     | 514  | 5.0 | µg/L | 500  |  | 103  | 85-115 | 9.66 | 20 |  |
| Nickel   | 492  | 50  | µg/L | 500  |  | 98.5 | 85-115 | 8.13 | 20 |  |
| Selenium | 534  | 50  | µg/L | 500  |  | 107  | 85-115 | 7.66 | 20 |  |
| Silver   | 479  | 2.0 | µg/L | 500  |  | 95.8 | 85-115 | 9.26 | 20 |  |
| Zinc     | 1070 | 200 | µg/L | 1000 |  | 107  | 85-115 | 4.70 | 20 |  |

**Batch B192415 - EPA 200.7**
**Blank (B192415-BLK1)**

Prepared: 12/04/17 Analyzed: 12/05/17

|      |    |       |      |  |  |  |  |  |  |  |
|------|----|-------|------|--|--|--|--|--|--|--|
| Iron | ND | 0.050 | mg/L |  |  |  |  |  |  |  |
|------|----|-------|------|--|--|--|--|--|--|--|

**LCS (B192415-BS1)**

Prepared: 12/04/17 Analyzed: 12/05/17

|      |      |       |      |      |  |     |        |  |  |  |
|------|------|-------|------|------|--|-----|--------|--|--|--|
| Iron | 4.27 | 0.050 | mg/L | 4.00 |  | 107 | 85-115 |  |  |  |
|------|------|-------|------|------|--|-----|--------|--|--|--|

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

**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

| Analyte                          | Result  | Reporting<br>Limit | Units | Spike<br>Level                        | Source<br>Result | %REC | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|----------------------------------|---------|--------------------|-------|---------------------------------------|------------------|------|----------------|-------|--------------|-------|
| <b>Batch B192415 - EPA 200.7</b> |         |                    |       |                                       |                  |      |                |       |              |       |
| <b>LCS Dup (B192415-BSD1)</b>    |         |                    |       | Prepared: 12/04/17 Analyzed: 12/05/17 |                  |      |                |       |              |       |
| Iron                             | 4.23    | 0.050              | mg/L  | 4.00                                  |                  | 106  | 85-115         | 1.12  | 20           |       |
| <b>Batch B192610 - EPA 245.1</b> |         |                    |       |                                       |                  |      |                |       |              |       |
| <b>Blank (B192610-BLK1)</b>      |         |                    |       | Prepared: 12/06/17 Analyzed: 12/07/17 |                  |      |                |       |              |       |
| Mercury                          | ND      | 0.00010            | mg/L  |                                       |                  |      |                |       |              |       |
| <b>LCS (B192610-BS1)</b>         |         |                    |       | Prepared: 12/06/17 Analyzed: 12/07/17 |                  |      |                |       |              |       |
| Mercury                          | 0.00199 | 0.00010            | mg/L  | 0.00200                               |                  | 99.4 | 85-115         |       |              |       |
| <b>LCS Dup (B192610-BSD1)</b>    |         |                    |       | Prepared: 12/06/17 Analyzed: 12/07/17 |                  |      |                |       |              |       |
| Mercury                          | 0.00198 | 0.00010            | mg/L  | 0.00200                               |                  | 99.2 | 85-115         | 0.298 | 20           |       |

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

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

| Analyte                                  | Result | Reporting Limit | Units | Spike Level                   | Source Result | %REC | %REC Limits | RPD  | RPD Limit | Notes |
|------------------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------|------|-----------|-------|
| <b>Batch B192314 - SM21-22 3500 Cr B</b> |        |                 |       |                               |               |      |             |      |           |       |
| <b>Blank (B192314-BLK1)</b>              |        |                 |       | Prepared & Analyzed: 12/01/17 |               |      |             |      |           |       |
| Hexavalent Chromium                      | ND     | 0.0040          | mg/L  |                               |               |      |             |      |           |       |
| <b>LCS (B192314-BS1)</b>                 |        |                 |       | Prepared & Analyzed: 12/01/17 |               |      |             |      |           |       |
| Hexavalent Chromium                      | 0.11   | 0.0040          | mg/L  | 0.100                         |               | 112  | 86.6-115    |      |           |       |
| <b>LCS Dup (B192314-BSD1)</b>            |        |                 |       | Prepared & Analyzed: 12/01/17 |               |      |             |      |           |       |
| Hexavalent Chromium                      | 0.12   | 0.0040          | mg/L  | 0.100                         |               | 115  | 86.6-115    | 2.46 | 6.61      |       |
| <b>Matrix Spike (B192314-MS1)</b>        |        |                 |       | Prepared & Analyzed: 12/01/17 |               |      |             |      |           |       |
| Hexavalent Chromium                      | 0.098  | 0.0040          | mg/L  | 0.100                         | ND            | 98.3 | 23.5-142    |      |           |       |
| <b>Matrix Spike Dup (B192314-MSD1)</b>   |        |                 |       | Prepared & Analyzed: 12/01/17 |               |      |             |      |           |       |
| Hexavalent Chromium                      | 0.10   | 0.0040          | mg/L  | 0.100                         | ND            | 104  | 23.5-142    | 5.54 | 7.59      |       |

---

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

**FLAG/QUALIFIER SUMMARY**

|       |                                                                                                                                                        |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| *     | QC result is outside of established limits.                                                                                                            |
| †     | Wide recovery limits established for difficult compound.                                                                                               |
| ‡     | Wide RPD limits established for difficult compound.                                                                                                    |
| #     | Data exceeded client recommended or regulatory level                                                                                                   |
| ND    | Not Detected                                                                                                                                           |
| RL    | Reporting Limit                                                                                                                                        |
| DL    | Method Detection Limit                                                                                                                                 |
| MCL   | Maximum Contaminant Level                                                                                                                              |
|       | Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded. |
|       | No results have been blank subtracted unless specified in the case narrative section.                                                                  |
| DL-15 | Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.                         |

# CERTIFICATIONS

## Certified Analyses included in this Report

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

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

| Code  | Description                                  | Number        | Expires    |
|-------|----------------------------------------------|---------------|------------|
| AIHA  | AIHA-LAP, LLC - ISO17025:2005                | 100033        | 02/1/2018  |
| MA    | Massachusetts DEP                            | M-MA100       | 06/30/2018 |
| CT    | Connecticut Department of Public Health      | PH-0567       | 09/30/2019 |
| NY    | New York State Department of Health          | 10899 NELAP   | 04/1/2018  |
| NH-S  | New Hampshire Environmental Lab              | 2516 NELAP    | 02/5/2018  |
| RI    | Rhode Island Department of Health            | LAO00112      | 12/30/2017 |
| NC    | North Carolina Div. of Water Quality         | 652           | 12/31/2017 |
| NJ    | New Jersey DEP                               | MA007 NELAP   | 06/30/2018 |
| FL    | Florida Department of Health                 | E871027 NELAP | 06/30/2018 |
| VT    | Vermont Department of Health Lead Laboratory | LL015036      | 07/30/2018 |
| ME    | State of Maine                               | 2011028       | 06/9/2019  |
| VA    | Commonwealth of Virginia                     | 460217        | 12/14/2017 |
| NH-P  | New Hampshire Environmental Lab              | 2557 NELAP    | 09/6/2018  |
| VT-DW | Vermont Department of Health Drinking Water  | VT-255716     | 06/12/2018 |
| NC-DW | North Carolina Department of Health          | 25703         | 07/31/2018 |



17L0043



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

Address: NSTAR/ Eversource-Monthly Billing  
One NSTAR Way 247 Station Drive

Phone: (339) 987-7029

Project Name: Mystic-EE

Project Location:

Project Number: E-0754-014

Project Manager: Mike Zytich

Con-Test Quote Name/Number:

Invoice Recipient: NSTAR/ Eversource-Monthly Billing

Sampled By: Colleen Brothers

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 1\_03242017

39 Spruce Street  
East Longmeadow, MA 01028

Page 1\_ of 1\_

| Requested Turnaround Time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                | Due Date:           |                  | Rush-Approval Required |       | Data Delivery |           | Format: PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> |       | Other: |       | CLP Like Data Pkg Required: <input type="checkbox"/> |       | Email To: <a href="mailto:memartin@tighebond.com">memartin@tighebond.com</a> |       | Email To: <a href="mailto:michael.zytich@eversource.com">michael.zytich@eversource.com</a> |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------|------------------|------------------------|-------|---------------|-----------|-------------------------------------------------------------------------------------------|-------|--------|-------|------------------------------------------------------|-------|------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------|-------|
| 7-Day                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10-Day                         | 5-day turn          | 1-Day            | 3-Day                  | 4-Day | 1-Day         | 2-Day     | 1-Day                                                                                     | 2-Day | 1-Day  | 2-Day | 1-Day                                                | 2-Day | 1-Day                                                                        | 2-Day | 1-Day                                                                                      | 2-Day |
| <b>Company Name:</b> <b>con-test</b><br><b>Address:</b> <b>39 Spruce Street</b><br><b>Phone:</b> <b>(339) 987-7029</b><br><b>Project Name:</b> <b>Mystic-EE</b><br><b>Project Location:</b> <b>One NSTAR Way 247 Station Drive</b><br><b>Project Number:</b> <b>E-0754-014</b><br><b>Project Manager:</b> <b>Mike Zytich</b><br><b>Con-Test Quote Name/Number:</b> <b>NSTAR/ Eversource-Monthly Billing</b><br><b>Invoice Recipient:</b> <b>NSTAR/ Eversource-Monthly Billing</b><br><b>Sampled By:</b> <b>Colleen Brothers</b>                                                      |                                |                     |                  |                        |       |               |           |                                                                                           |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
| Con-Test Work Order#                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Client Sample ID / Description | Beginning Date/Time | Ending Date/Time | Composite              | Grab  | Matrix Code   | Conc Code | ANALYSIS REQUESTED                                                                        |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Island End at Mystic           | 12/1/2017           | 8:20             |                        | X     | O             | U         | Ammonia                                                                                   |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Chelsea River                  | 12/1/2017           | 9:00             |                        | X     | O             | U         | Salinity                                                                                  |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                |                     |                  |                        |       |               |           | Total Metals                                                                              |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                |                     |                  |                        |       |               |           | Hexavalent Chromium                                                                       |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
| <b>Total Metals:</b> Antimony, Arsenic, Cadmium, Chromium III, Copper, Iron, Lead, Mercury, Nickel, Selenium, Silver, Zinc<br><b>RCP metals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                |                     |                  |                        |       |               |           |                                                                                           |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
| Please use the following codes to indicate possible sample concentration within the Conc Code column above:<br>H - High; M - Medium; L - Low; C - Clean; U - Unknown                                                                                                                                                                                                                                                                                                                                                                                                                 |                                |                     |                  |                        |       |               |           |                                                                                           |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
| <b>Relinquished by: (signature)</b> <i>Colleen Brothers</i> <b>Date/Time:</b> 11:00 am 12-1-17<br><b>Relinquished by: (signature)</b> <i>Colleen Brothers</i> <b>Date/Time:</b> 1430 12-1-17<br><b>Relinquished by: (signature)</b> <i>Colleen Brothers</i> <b>Date/Time:</b> 1700 12-1-17<br><b>Relinquished by: (signature)</b> <i>Colleen Brothers</i> <b>Date/Time:</b> 1700 12-1-17<br><b>Relinquished by: (signature)</b> <i>Colleen Brothers</i> <b>Date/Time:</b> 1700 12-1-17<br><b>Relinquished by: (signature)</b> <i>Colleen Brothers</i> <b>Date/Time:</b> 1700 12-1-17 |                                |                     |                  |                        |       |               |           |                                                                                           |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
| <b>Project Entity:</b> <input type="checkbox"/> Government <input type="checkbox"/> Federal <input type="checkbox"/> City <input type="checkbox"/> Municipality <input type="checkbox"/> 21 J <input type="checkbox"/> Brownfield <input type="checkbox"/> MBTA <input type="checkbox"/> WRTA <input type="checkbox"/> Chromatogram <input type="checkbox"/> AIHA-LAP, LLC                                                                                                                                                                                                           |                                |                     |                  |                        |       |               |           |                                                                                           |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |
| <b>PCB ONLY:</b> <input type="checkbox"/> Soxhlet <input type="checkbox"/> Non Soxhlet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                     |                  |                        |       |               |           |                                                                                           |       |        |       |                                                      |       |                                                                              |       |                                                                                            |       |

39 Spruce St.  
East Longmeadow, MA. 01028  
P: 413-525-2332  
F: 413-525-6405  
www.contestlabs.com



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client NStar  
Received By JM Date 12/1/17 Time 1700

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

Were samples within Temperature? 2-6°C T By Gun # 577 Actual Temp - 3.1  
By Blank #        Actual Temp -       

Was Custody Seal Intact? N/A Were Samples Tampled with? N/A  
Was COC Relinquished? T Does Chain Agree With Samples? T

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

Is COC in ink/ Legible? T Were samples received within holding time? T  
Did COC include all Client T Analysis T Sampler Name T  
pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T  
Are there Lab to Filters? N/A Who was notified?         
Are there Rushes? N/A Who was notified?         
Are there Short Holds? T Who was notified? Irma

Is there enough Volume? T  
Is there Headspace where applicable? N/A MS/MSD? N/A  
Proper Media/Containers Used? T Is splitting samples required? N/A  
Were trip blanks received? N/A On COC? N/A  
Do all samples have the proper pH? Acid T Base       

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

**Unused Media**

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

Comments:

## MADEP MCP Analytical Method Report Certification Form

|                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                             |                                   |                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------|
| Laboratory Name: Con-Test Analytical Laboratory                                                                                                                                                                                                                                         |                                                                                                                                                                                                                             | Project #: 17L0043                |                                                                                  |
| Project Location: Mystic , CT                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                             | RTN:                              |                                                                                  |
| This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]<br>17L0043-01 thru 17L0043-02                                                                                                                                                       |                                                                                                                                                                                                                             |                                   |                                                                                  |
| Matrices: Water                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                             |                                   |                                                                                  |
| <b>CAM Protocol (check all that below)</b>                                                                                                                                                                                                                                              |                                                                                                                                                                                                                             |                                   |                                                                                  |
| 8260 VOC<br>CAM II A ( )                                                                                                                                                                                                                                                                | 7470/7471 Hg<br>CAM IIIB ( )                                                                                                                                                                                                | MassDEP VPH<br>CAM IV A ( )       | 8081 Pesticides<br>CAM V B ( )                                                   |
| 8270 SVOC<br>CAM II B ( )                                                                                                                                                                                                                                                               | 7010 Metals<br>CAM III C ( )                                                                                                                                                                                                | MassDEP EPH<br>CAM IV A ( )       | 8151 Herbicides<br>CAM V C ( )                                                   |
| 6010 Metals<br>CAM III A ( )                                                                                                                                                                                                                                                            | 6020 Metals<br>CAM III D ( )                                                                                                                                                                                                | 8082 PCB<br>CAM V A ( )           | 9014 Total<br>Cyanide/PAC<br>CAM VI A ( )                                        |
| 7196 Hex Cr<br>CAM VI B ( )                                                                                                                                                                                                                                                             | MassDEP APH<br>CAM IX A ( )                                                                                                                                                                                                 | 8330 Explosives<br>CAM VIII A ( ) | TO-15 VOC<br>CAM IX B ( )                                                        |
| 6860 Perchlorate<br>CAM VIII B ( )                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                             |                                   |                                                                                  |
| <b>Affirmative response to Questions A through F is required for "Presumptive Certainty" status</b>                                                                                                                                                                                     |                                                                                                                                                                                                                             |                                   |                                                                                  |
| <b>A</b>                                                                                                                                                                                                                                                                                | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? |                                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup> |
| <b>B</b>                                                                                                                                                                                                                                                                                | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?                                                                                                        |                                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup> |
| <b>C</b>                                                                                                                                                                                                                                                                                | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?                                        |                                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup> |
| <b>D</b>                                                                                                                                                                                                                                                                                | Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?                        |                                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup> |
| <b>E a</b>                                                                                                                                                                                                                                                                              | VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).                                                 |                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>            |
| <b>E b</b>                                                                                                                                                                                                                                                                              | APH and TO-15 Methods only: Was the complete analyte list reported for each method?                                                                                                                                         |                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>            |
| <b>F</b>                                                                                                                                                                                                                                                                                | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?                                     |                                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup> |
| <b>A response to questions G, H and I below is required for "Presumptive Certainty" status</b>                                                                                                                                                                                          |                                                                                                                                                                                                                             |                                   |                                                                                  |
| <b>G</b>                                                                                                                                                                                                                                                                                | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?                                                                                                                   |                                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup> |
| <b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.</b>                                                                            |                                                                                                                                                                                                                             |                                   |                                                                                  |
| <b>H</b>                                                                                                                                                                                                                                                                                | Were all QC performance standards specified in the CAM protocol(s) achieved?                                                                                                                                                |                                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup> |
| <b>I</b>                                                                                                                                                                                                                                                                                | Were results reported for the complete analyte list specified in the selected CAM protocol(s)?                                                                                                                              |                                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup> |
| <sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.                                                                                                                                                                           |                                                                                                                                                                                                                             |                                   |                                                                                  |
| <b>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</b> |                                                                                                                                                                                                                             |                                   |                                                                                  |
| Signature:                                                                                                                                                                                           |                                                                                                                                                                                                                             | Position: Director of Operations  |                                                                                  |
| Printed Name: Daren J. Damboragian                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                             | Date: 12/08/17                    |                                                                                  |

## CERTIFICATE OF ANALYSIS

Michael Martin  
Tighe & Bond  
4 Barlows Landing Road, Unit 15  
Pocasset, MA 02559

**RE: Woburn to Mystic - RGP (N-998-11)**  
**ESS Laboratory Work Order Number: 1711482**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.



Laurel Stoddard  
Laboratory Director

**REVIEWED**

*By ESS Laboratory at 2:25 pm, Nov 20, 2017*

**Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Woburn to Mystic - RGP

ESS Laboratory Work Order: 1711482

**SAMPLE RECEIPT**

The following samples were received on November 15, 2017 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the 2017 Remediation General Permit under the National Pollutant Discharge Elimination System (NPDES).

ESS Laboratory is unable to achieve the required detection limit of 0.4 mg/L for Ethanol for the RGP permit. We have also been unable to procure a subcontract laboatory that is able to achieve this limit. The data for Ethanol has been reported using our current method reporting limit.

| <b><u>Lab Number</u></b> | <b><u>Sample Name</u></b> | <b><u>Matrix</u></b> | <b><u>Analysis</u></b>                          |
|--------------------------|---------------------------|----------------------|-------------------------------------------------|
| 1711482-01               | Mystic at Winter          | Surface Water        | 200.7, 3113B, 350.1, 3500Cr B-2009, 9040        |
| 1711482-02               | Mystic                    | Surface Water        | 200.7, 3113B, 350.1, 3500Cr B-2009, 9040        |
| 1711482-03               | Mystic Crossing           | Surface Water        | 200.7, 3113B, 350.1, 3500Cr B-2009, 9040        |
| 1711482-04               | Aberjona                  | Surface Water        | 200.7, 3113B, 350.1, 3500Cr B-2009, 9040        |
| 1711482-05               | Winter Pond               | Surface Water        | 200.7, 3113B, 350.1, 3500Cr B-2009, 9040        |
| 1711482-06               | Mystic at Boston Inner    | Surface Water        | 200.7, 2520B, 3113B, 350.1, 3500Cr B-2009, 9040 |
| 1711482-07               | Mystic at Laydown         | Surface Water        | 200.7, 3113B, 350.1, 3500Cr B-2009, 9040        |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Woburn to Mystic - RGP

ESS Laboratory Work Order: 1711482

**PROJECT NARRATIVE**

**Total Metals**

1711482-06 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)

Cadmium , Copper , Nickel

1711482-07 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)

Cadmium , Copper , Nickel

**No other observations noted.**

**End of Project Narrative.**

**DATA USABILITY LINKS**

*To ensure you are viewing the most current version of the documents below, please clear your internet cookies for [www.ESSLaboratory.com](http://www.ESSLaboratory.com). Consult your IT Support personnel for information on how to clear your internet cookies.*

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Woburn to Mystic - RGP

ESS Laboratory Work Order: 1711482

**CURRENT SW-846 METHODOLOGY VERSIONS**

**Analytical Methods**

1010A - Flashpoint  
6010C - ICP  
6020A - ICP MS  
7010 - Graphite Furnace  
7196A - Hexavalent Chromium  
7470A - Aqueous Mercury  
7471B - Solid Mercury  
8011 - EDB/DBCP/TCP  
8015C - GRO/DRO  
8081B - Pesticides  
8082A - PCB  
8100M - TPH  
8151A - Herbicides  
8260B - VOA  
8270D - SVOA  
8270D SIM - SVOA Low Level  
9014 - Cyanide  
9038 - Sulfate  
9040C - Aqueous pH  
9045D - Solid pH (Corrosivity)  
9050A - Specific Conductance  
9056A - Anions (IC)  
9060A - TOC  
9095B - Paint Filter  
MADEP 04-1.1 - EPH / VPH

**Prep Methods**

3005A - Aqueous ICP Digestion  
3020A - Aqueous Graphite Furnace / ICP MS Digestion  
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion  
3060A - Solid Hexavalent Chromium Digestion  
3510C - Separatory Funnel Extraction  
3520C - Liquid / Liquid Extraction  
3540C - Manual Soxhlet Extraction  
3541 - Automated Soxhlet Extraction  
3546 - Microwave Extraction  
3580A - Waste Dilution  
5030B - Aqueous Purge and Trap  
5030C - Aqueous Purge and Trap  
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Woburn to Mystic - RGP  
Client Sample ID: Mystic at Boston Inner  
Date Sampled: 11/15/17 11:30  
Percent Solids: N/A

ESS Laboratory Work Order: 1711482  
ESS Laboratory Sample ID: 1711482-06  
Sample Matrix: Surface Water  
Units: ug/L

Extraction Method: 3005A/200.7

**Total Metals**

| <u>Analyte</u> | <u>Results (MRL)</u> | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyst</u> | <u>Analyzed</u> | <u>I/V</u> | <u>F/V</u> | <u>Batch</u> |
|----------------|----------------------|------------|---------------|--------------|-----------|----------------|-----------------|------------|------------|--------------|
| Arsenic        | ND (5.0)             |            | 3113B         |              | 10        | KJK            | 11/19/17 4:59   | 100        | 10         | CK71531      |
| Cadmium        | EL ND (10.0)         |            | 200.7         |              | 10        | KJK            | 11/16/17 15:24  | 100        | 10         | CK71531      |
| Chromium       | ND (20.0)            |            | 200.7         |              | 10        | KJK            | 11/16/17 15:24  | 100        | 10         | CK71531      |
| Chromium III   | ND (20.0)            |            | 200.7         |              | 10        | JLK            | 11/16/17 15:24  | 1          | 1          | [CALC]       |
| Copper         | EL ND (10.0)         |            | 200.7         |              | 10        | KJK            | 11/16/17 15:24  | 100        | 10         | CK71531      |
| Iron           | ND (100)             |            | 200.7         |              | 10        | KJK            | 11/16/17 15:24  | 100        | 10         | CK71531      |
| Lead           | ND (2.0)             |            | 3113B         |              | 10        | KJK            | 11/17/17 21:31  | 100        | 10         | CK71531      |
| Nickel         | EL ND (20.0)         |            | 200.7         |              | 10        | KJK            | 11/16/17 15:24  | 100        | 10         | CK71531      |
| Zinc           | ND (50.0)            |            | 200.7         |              | 10        | KJK            | 11/16/17 15:24  | 100        | 10         | CK71531      |





*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Woburn to Mystic - RGP  
Client Sample ID: Mystic at Boston Inner  
Date Sampled: 11/15/17 11:30  
Percent Solids: N/A

ESS Laboratory Work Order: 1711482  
ESS Laboratory Sample ID: 1711482-06  
Sample Matrix: Surface Water

**Classical Chemistry**

| <u>Analyte</u>      | <u>Results (MRL)</u>                           | <u>MDL</u> | <u>Method</u> | <u>Limit</u> | <u>DF</u> | <u>Analyst</u> | <u>Analyzed</u> | <u>Units</u> | <u>Batch</u> |
|---------------------|------------------------------------------------|------------|---------------|--------------|-----------|----------------|-----------------|--------------|--------------|
| Ammonia as N        | 0.43 (0.10)                                    |            | 350.1         |              | 1         | EEM            | 11/17/17 14:51  | mg/L         | CK71613      |
| Hexavalent Chromium | ND (10.0)                                      |            | 3500Cr B-2009 |              | 1         | JLK            | 11/15/17 20:47  | ug/L         | CK71546      |
| pH                  | 7.75 (N/A)                                     |            | 9040          |              | 1         | BCA            | 11/15/17 21:40  | S.U.         | CK71549      |
| pH Sample Temp      | Aqueous pH measured in water at 17.2 °C. (N/A) |            |               |              |           |                |                 |              |              |
| Salinity            | 14.9 (0.1)                                     |            | 2520B         |              | 1         | JLK            | 11/16/17 17:10  | ppt          | CK71644      |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Woburn to Mystic - RGP

ESS Laboratory Work Order: 1711482

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

**Total Metals**

**Batch CK71531 - 3005A/200.7**

**Blank**

|              |    |      |      |
|--------------|----|------|------|
| Arsenic      | ND | 0.5  | ug/L |
| Cadmium      | ND | 1.00 | ug/L |
| Chromium     | ND | 2.0  | ug/L |
| Chromium III | ND | 2.00 | ug/L |
| Copper       | ND | 1.0  | ug/L |
| Hardness     | ND | 82.4 | ug/L |
| Iron         | ND | 10.0 | ug/L |
| Lead         | ND | 0.2  | ug/L |
| Lead         | ND | 2.0  | ug/L |
| Nickel       | ND | 2.0  | ug/L |
| Silver       | ND | 0.5  | ug/L |
| Zinc         | ND | 5.0  | ug/L |

**LCS**

|              |      |      |      |       |     |        |
|--------------|------|------|------|-------|-----|--------|
| Arsenic      | 44.8 | 12.5 | ug/L | 50.00 | 90  | 85-115 |
| Cadmium      | 23.6 | 1.00 | ug/L | 25.00 | 94  | 85-115 |
| Chromium     | 48.9 | 2.0  | ug/L | 50.00 | 98  | 85-115 |
| Chromium III | 48.9 | 2.00 | ug/L |       |     |        |
| Copper       | 52.4 | 1.0  | ug/L | 50.00 | 105 | 85-115 |
| Hardness     | 3260 | 82.4 | ug/L |       |     |        |
| Iron         | 239  | 10.0 | ug/L | 250.0 | 96  | 85-115 |
| Lead         | 45.3 | 5.0  | ug/L | 50.00 | 91  | 85-115 |
| Lead         | 49.7 | 2.0  | ug/L | 50.00 | 99  | 85-115 |
| Nickel       | 48.8 | 2.0  | ug/L | 50.00 | 98  | 85-115 |
| Silver       | 26.1 | 0.5  | ug/L | 25.00 | 104 | 85-115 |
| Zinc         | 51.7 | 5.0  | ug/L | 50.00 | 103 | 85-115 |

**LCS Dup**

|              |      |      |      |       |     |        |      |    |
|--------------|------|------|------|-------|-----|--------|------|----|
| Arsenic      | 48.5 | 12.5 | ug/L | 50.00 | 97  | 85-115 | 8    | 20 |
| Cadmium      | 23.4 | 1.00 | ug/L | 25.00 | 94  | 85-115 | 0.7  | 20 |
| Chromium     | 48.7 | 2.0  | ug/L | 50.00 | 97  | 85-115 | 0.4  | 20 |
| Chromium III | 48.7 | 2.00 | ug/L |       |     |        |      |    |
| Copper       | 52.0 | 1.0  | ug/L | 50.00 | 104 | 85-115 | 0.8  | 20 |
| Hardness     | 3210 | 82.4 | ug/L |       |     |        |      |    |
| Iron         | 237  | 10.0 | ug/L | 250.0 | 95  | 85-115 | 0.8  | 20 |
| Lead         | 47.5 | 5.0  | ug/L | 50.00 | 95  | 85-115 | 5    | 20 |
| Lead         | 49.8 | 2.0  | ug/L | 50.00 | 100 | 85-115 | 0.02 | 20 |
| Nickel       | 48.2 | 2.0  | ug/L | 50.00 | 96  | 85-115 | 1    | 20 |
| Silver       | 26.0 | 0.5  | ug/L | 25.00 | 104 | 85-115 | 0.2  | 20 |
| Zinc         | 53.8 | 5.0  | ug/L | 50.00 | 108 | 85-115 | 4    | 20 |

**Batch CK71546 - [CALC]**

**Blank**

|              |    |      |      |
|--------------|----|------|------|
| Chromium III | ND | 10.0 | ug/L |
|--------------|----|------|------|

**LCS**

|              |    |  |      |
|--------------|----|--|------|
| Chromium III | ND |  | ug/L |
|--------------|----|--|------|



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Woburn to Mystic - RGP

ESS Laboratory Work Order: 1711482

**Quality Control Data**

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

**Total Metals**

**Batch CK71546 - [CALC]**

**LCS Dup**

|              |    |  |      |  |  |  |  |  |  |  |
|--------------|----|--|------|--|--|--|--|--|--|--|
| Chromium III | ND |  | ug/L |  |  |  |  |  |  |  |
|--------------|----|--|------|--|--|--|--|--|--|--|

**Classical Chemistry**

**Batch CK71546 - General Preparation**

**Blank**

|                     |    |      |      |  |  |  |  |  |  |  |
|---------------------|----|------|------|--|--|--|--|--|--|--|
| Hexavalent Chromium | ND | 10.0 | ug/L |  |  |  |  |  |  |  |
|---------------------|----|------|------|--|--|--|--|--|--|--|

**LCS**

|                     |       |  |      |        |  |     |        |  |  |  |
|---------------------|-------|--|------|--------|--|-----|--------|--|--|--|
| Hexavalent Chromium | 0.503 |  | mg/L | 0.4998 |  | 101 | 90-110 |  |  |  |
|---------------------|-------|--|------|--------|--|-----|--------|--|--|--|

**LCS Dup**

|                     |       |  |      |        |  |     |        |   |    |  |
|---------------------|-------|--|------|--------|--|-----|--------|---|----|--|
| Hexavalent Chromium | 0.516 |  | mg/L | 0.4998 |  | 103 | 90-110 | 3 | 20 |  |
|---------------------|-------|--|------|--------|--|-----|--------|---|----|--|

**Batch CK71613 - NH4 Prep**

**Blank**

|              |    |      |      |  |  |  |  |  |  |  |
|--------------|----|------|------|--|--|--|--|--|--|--|
| Ammonia as N | ND | 0.10 | mg/L |  |  |  |  |  |  |  |
|--------------|----|------|------|--|--|--|--|--|--|--|

**LCS**

|              |      |      |      |         |  |    |        |  |  |  |
|--------------|------|------|------|---------|--|----|--------|--|--|--|
| Ammonia as N | 0.08 | 0.10 | mg/L | 0.09994 |  | 81 | 80-120 |  |  |  |
|--------------|------|------|------|---------|--|----|--------|--|--|--|

**LCS**

|              |      |      |      |        |  |     |        |  |  |  |
|--------------|------|------|------|--------|--|-----|--------|--|--|--|
| Ammonia as N | 1.02 | 0.10 | mg/L | 0.9994 |  | 102 | 80-120 |  |  |  |
|--------------|------|------|------|--------|--|-----|--------|--|--|--|

**Batch CK71644 - General Preparation**

**LCS**

|          |     |  |     |       |  |    |        |  |  |  |
|----------|-----|--|-----|-------|--|----|--------|--|--|--|
| Salinity | 1.0 |  | ppt | 1.000 |  | 96 | 85-115 |  |  |  |
|----------|-----|--|-----|-------|--|----|--------|--|--|--|



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond

Client Project ID: Woburn to Mystic - RGP

ESS Laboratory Work Order: 1711482

**Notes and Definitions**

|        |                                                                                                     |
|--------|-----------------------------------------------------------------------------------------------------|
| Z16d   | Aqueous pH measured in water at 17.7 °C.                                                            |
| Z16c   | Aqueous pH measured in water at 17.6 °C.                                                            |
| Z16b   | Aqueous pH measured in water at 17.4 °C.                                                            |
| Z16a   | Aqueous pH measured in water at 17.2 °C.                                                            |
| Z16    | Aqueous pH measured in water at 17.1 °C.                                                            |
| U      | Analyte included in the analysis, but not detected                                                  |
| EL     | Elevated Method Reporting Limits due to sample matrix (EL).                                         |
| D      | Diluted.                                                                                            |
| ND     | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes     |
| dry    | Sample results reported on a dry weight basis                                                       |
| RPD    | Relative Percent Difference                                                                         |
| MDL    | Method Detection Limit                                                                              |
| MRL    | Method Reporting Limit                                                                              |
| LOD    | Limit of Detection                                                                                  |
| LOQ    | Limit of Quantitation                                                                               |
| DL     | Detection Limit                                                                                     |
| I/V    | Initial Volume                                                                                      |
| F/V    | Final Volume                                                                                        |
| §      | Subcontracted analysis; see attached report                                                         |
| 1      | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2      | Range result excludes concentrations of target analytes eluting in that range.                      |
| 3      | Range result excludes the concentration of the C9-C10 aromatic range.                               |
| Avg    | Results reported as a mathematical average.                                                         |
| NR     | No Recovery                                                                                         |
| [CALC] | Calculated Analyte                                                                                  |
| SUB    | Subcontracted analysis; see attached report                                                         |
| RL     | Reporting Limit                                                                                     |
| EDL    | Estimated Detection Limit                                                                           |



*CERTIFICATE OF ANALYSIS*

Client Name: Tighe & Bond  
Client Project ID: Woburn to Mystic - RGP

ESS Laboratory Work Order: 1711482

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179  
<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750  
[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/OutofStateCommercialLaboratories.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf)

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002  
<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002  
<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424  
<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313  
<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006  
[http://datamine2.state.nj.us/DEP\\_OPRA/OpraMain/pi\\_main?mode=pi\\_by\\_site&sort\\_order=PI\\_NAMEA&Select+a+Site:=58715](http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715)

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752  
<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: Tighe & Bond - KPB/TB/MM

ESS Project ID: 1711482

Shipped/Delivered Via: ESS Courier

Date Received: 11/15/2017

Project Due Date: 11/17/2017

Days for Project: 2 Day

1. Air bill manifest present? ☐ No  
Air No.: NA

6. Does COC match bottles? ☐ Yes

2. Were custody seals present? ☐ No

7. Is COC complete and correct? ☐ Yes

3. Is radiation count <100 CPM? ☐ Yes

8. Were samples received intact? ☐ Yes

4. Is a Cooler Present? ☐ Yes  
Temp: 0.4 Iced with: Ice

9. Were labs informed about short holds & rushes? ☒ Yes / No / NA

5. Was COC signed and dated by client? ☐ Yes

10. Were any analyses received outside of hold time? ☒ Yes / No

11. Any Subcontracting needed? Yes ☒ No  
ESS Sample IDs: \_\_\_\_\_  
Analysis: \_\_\_\_\_  
TAT: \_\_\_\_\_

12. Were VOAs received? Yes ☒ No  
a. Air bubbles in aqueous VOAs? Yes / No  
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? ☒ Yes / No  
a. If metals preserved upon receipt: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_  
b. Low Level VOA vials frozen: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes ☒ No  
a. Was there a need to contact the client? Yes / No  
Who was contacted? \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type        | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---------------|--------------|------------------|---------------------|-------------------|-----------------------|--------------|----------------------------------------|
| 01            | 182550       | Yes              | NA                  | Yes               | 500 mL Poly - H2SO4   | H2SO4        |                                        |
| 01            | 182557       | Yes              | NA                  | Yes               | 250 mL Poly - HNO3    | HNO3         |                                        |
| 01            | 182570       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 01            | 182571       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 01            | 182578       | Yes              | NA                  | Yes               | 250 mL Amber - Unpres | NP           |                                        |
| 02            | 182549       | Yes              | NA                  | Yes               | 500 mL Poly - H2SO4   | H2SO4        |                                        |
| 02            | 182556       | Yes              | NA                  | Yes               | 250 mL Poly - HNO3    | HNO3         |                                        |
| 02            | 182568       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 02            | 182569       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 02            | 182577       | Yes              | NA                  | Yes               | 250 mL Amber - Unpres | NP           |                                        |
| 03            | 182548       | Yes              | NA                  | Yes               | 500 mL Poly - H2SO4   | H2SO4        |                                        |
| 03            | 182555       | Yes              | NA                  | Yes               | 250 mL Poly - HNO3    | HNO3         |                                        |
| 03            | 182566       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 03            | 182567       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 03            | 182576       | Yes              | NA                  | Yes               | 250 mL Amber - Unpres | NP           |                                        |
| 04            | 182547       | Yes              | NA                  | Yes               | 500 mL Poly - H2SO4   | H2SO4        |                                        |
| 04            | 182554       | Yes              | NA                  | Yes               | 250 mL Poly - HNO3    | HNO3         |                                        |
| 04            | 182564       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 04            | 182565       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 04            | 182575       | Yes              | NA                  | Yes               | 250 mL Amber - Unpres | NP           |                                        |
| 05            | 182546       | Yes              | NA                  | Yes               | 500 mL Poly - H2SO4   | H2SO4        |                                        |
| 05            | 182553       | Yes              | NA                  | Yes               | 250 mL Poly - HNO3    | HNO3         |                                        |
| 05            | 182562       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |
| 05            | 182563       | Yes              | NA                  | Yes               | 250 mL Poly - Unpres  | NP           |                                        |

## ESS Laboratory Sample and Cooler Receipt Checklist

|                                             |  |  |  |  |                                  |  |
|---------------------------------------------|--|--|--|--|----------------------------------|--|
| Client: <u>Tighe &amp; Bond - KPB/TB/MM</u> |  |  |  |  | ESS Project ID: <u>1711482</u>   |  |
|                                             |  |  |  |  | Date Received: <u>11/15/2017</u> |  |

|    |        |     |    |     |                       |       |
|----|--------|-----|----|-----|-----------------------|-------|
| 05 | 182574 | Yes | NA | Yes | 250 mL Amber - Unpres | NP    |
| 06 | 182545 | Yes | NA | Yes | 500 mL Poly - H2SO4   | H2SO4 |
| 06 | 182552 | Yes | NA | Yes | 250 mL Poly - HNO3    | HNO3  |
| 06 | 182560 | Yes | NA | Yes | 250 mL Poly - Unpres  | NP    |
| 06 | 182561 | Yes | NA | Yes | 250 mL Poly - Unpres  | NP    |
| 06 | 182573 | Yes | NA | Yes | 250 mL Amber - Unpres | NP    |
| 07 | 182544 | Yes | NA | Yes | 500 mL Poly - H2SO4   | H2SO4 |
| 07 | 182551 | Yes | NA | Yes | 250 mL Poly - HNO3    | HNO3  |
| 07 | 182558 | Yes | NA | Yes | 250 mL Poly - Unpres  | NP    |
| 07 | 182559 | Yes | NA | Yes | 250 mL Poly - Unpres  | NP    |
| 07 | 182572 | Yes | NA | Yes | 250 mL Amber - Unpres | NP    |

**2nd Review**

Are barcode labels on correct containers?

☒ Yes / ☐ No

Completed

By: [Signature]

Date & Time: 11/15/17 1907

Reviewed

By: [Signature]

Date & Time: 11/15/17 2029

Delivered

By: [Signature]

11/15/17 2029



# ESS Laboratory

Division of Thielsch Engineering, Inc.  
185 Frances Avenue, Cranston RI 02910  
Tel. (401) 461-7181 Fax (401) 461-4486  
[www.esslaboratory.com](http://www.esslaboratory.com)

## CHAIN OF CUSTODY

ESS Lab #

1711482

|                                            |               |      |       |
|--------------------------------------------|---------------|------|-------|
| Turn Time                                  | 5-Day         | Rush | 2-Day |
| Regulatory State                           | Massachusetts |      |       |
| Is this project for any of the following?: |               |      |       |
| OCT RCP                                    | OMA MCP       | RGP  |       |

Reporting Limits

GW-1

Electronic Deliverables

☒ Limit Checker

☒ Standard Excel

☒ Other (Please Specify →) pdf

|                                    |             |                                                                                   |                                  |  |
|------------------------------------|-------------|-----------------------------------------------------------------------------------|----------------------------------|--|
| Company Name<br>Tighe & Bond       |             | Project #<br>N-998-11                                                             | Project Name<br>Mystic to Woburn |  |
| Contact Person<br>Dean Bebis       |             | Address<br>1 University Ave                                                       |                                  |  |
| City<br>Westwood                   | State<br>MA | Zip Code<br>02090                                                                 | PO #                             |  |
| Telephone Number<br>(508) 654-0492 | FAX Number  | Email Address<br><a href="mailto:dsbebis@tighebond.com">dsbebis@tighebond.com</a> |                                  |  |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID              | pH | Hardness | Cr+6 | NH4 | Salinity | Arsenic | Cadmium | Chromium III | Copper | Iron | Lead | Nickel | Silver | Zinc |
|------------|-----------------|-----------------|-------------|---------------|------------------------|----|----------|------|-----|----------|---------|---------|--------------|--------|------|------|--------|--------|------|
| 01         | 11-15-17        | 10:00           | Grab        | Surface Water | Mystic at Winter       | X  | X        | X    | X   |          | X       | X       | X            | X      | X    | X    | X      |        | X    |
| 02         | 11-15-17        | 10:30           | Grab        | Surface Water | Mystic                 | X  | X        | X    | X   |          | X       | X       | X            | X      | X    | X    | X      |        | X    |
| 03         | 11-15-17        | 9:30            | Grab        | Surface Water | Mystic Crossing        | X  | X        | X    | X   |          | X       | X       | X            | X      | X    | X    | X      |        | X    |
| 04         | 11-15-17        | 9:00            | Grab        | Surface Water | Aberjona               | X  | X        | X    | X   |          | X       | X       | X            | X      | X    | X    | X      | X      | X    |
| 05         | 11-15-17        | 8:30            | Grab        | Surface Water | Winter Pond            | X  | X        | X    | X   |          | X       | X       | X            | X      | X    | X    | X      | X      | X    |
| 06         | 11-15-17        | 11:30           | Grab        | Surface Water | Mystic at Boston Inner | X  |          | X    | X   | X        | X       | X       | X            | X      | X    | X    | X      |        | X    |
| 07         | 11-15-17        | 11:00           | Grab        | Surface Water | Mystic at Laydown      | X  | X        | X    | X   |          | X       | X       | X            | X      | X    | X    | X      |        | X    |
|            |                 |                 |             |               |                        |    |          |      |     |          |         |         |              |        |      |      |        |        |      |
|            |                 |                 |             |               |                        |    |          |      |     |          |         |         |              |        |      |      |        |        |      |
|            |                 |                 |             |               |                        |    |          |      |     |          |         |         |              |        |      |      |        |        |      |

|                                  |                 |                |              |              |           |            |           |               |         |           |           |
|----------------------------------|-----------------|----------------|--------------|--------------|-----------|------------|-----------|---------------|---------|-----------|-----------|
| Container Type:                  | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | G - Glass | O-Other    | P-Poly    | S-Sterile     | V-Vial  |           |           |
| Container Volume:                | 1-100 mL        | 2-2.5 gal      | 3-250 mL     | 4-300 mL     | 5-500 mL  | 6-1L       | 7-VOA     | 8-2 oz        | 9-4 oz  | 10-8 oz   | 11-Other* |
| Preservation Code:               | 1-Non Preserved | 2-HCl          | 3-H2SO4      | 4-HNO3       | 5-NaOH    | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* |
| Number of Containers per Sample: |                 |                |              |              |           |            |           |               |         |           |           |

|                                                     |                                                   |                                                                                  |  |
|-----------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------|--|
| Laboratory Use Only                                 |                                                   | Sampled by: Colleen Brothers                                                     |  |
| Cooler Present: <input checked="" type="checkbox"/> | Seals Intact: <input checked="" type="checkbox"/> | Comments: Please specify "Other" preservative and containers types in this space |  |
| Cooler Temperature: 0.4°C                           |                                                   | Eversource Pricing                                                               |  |

|                                           |                                       |                                           |                                       |
|-------------------------------------------|---------------------------------------|-------------------------------------------|---------------------------------------|
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| <i>Colleen E. Brothers</i> 11-15-17 14:00 | <i>[Signature]</i> 11/15/17 16:00     | <i>[Signature]</i> 11/15/17 17:00         | <i>[Signature]</i> 11/15/17 18:55     |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |