



NOTICE OF INTENT FOR MASSACHUSETTS REMEDIATION GENERAL PERMIT

SHELL-BRANDED GASOLINE STATION
237 Washington Street
ATTLEBORO, MA

Prepared for:
COLBEA ENTERPRISES LLC
2050 PLAINFIELD PIKE
CRANSTON, RI 02921

August 10, 2018

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1.0 INTRODUCTION

Tg2 Solutions, LLC (Tg2) prepared Notice of Intent (NOI) for a Massachusetts Remediation General Permit (RGP) for construction dewatering at the Shell-Branded gasoline station located at 237 Washington Street, Attleboro, Massachusetts on behalf of the site owner, Colbea Enterprises LLC (Colbea). This NOI is being submitted to the United State Environmental Protection Agency (USEPA) in accordance with the requirements of the Massachusetts General Permit No. MAG070000.

This NOI for a RGP is being submitted to account for site renovation activities being conducted at the facility. A portion of these activities include the dewatering of an excavation to allow for the removal and replacement of gasoline underground storage tanks (USTs). For the purpose of this NOI, the "facility" is defined as the area located within the property boundaries of 237 Washington Street, Attleboro, Massachusetts. A Site Locus Map is presented as **Figure 1**. A Site Plan is presented as **Figure 2**. A copy of the NOI is included as **Attachment A**.

2.0 GENERAL FACILITY INFORMATION

General disposal site information for which this Phase I applies includes the following:

Property Owner/Facility Operator:	Thomas Breckel Operator Colbea Enterprises LLC 2050 Plainfield Pike Cranston, RI 02920 Tel: (401) 943-0005
Owner/Facility Operator Contact:	Dennis Darveau, Director of Construction Ddarveau@seasoncornermarket.com Tel: (401) 490-2209
USGS Quadrangle:	Attleboro, Massachusetts
Longitude, Latitude: (approximate)	71° 21' 32.3994" W, 41° 55' 12.5472" N
Disposal Site Zoning:	General Business
County:	Bristol

2.1 Facility Description

The facility is a Colbea-owned, Shell-branded gasoline station located on an approximately one-acre parcel at 237 Washington Street in Attleboro, Massachusetts. MassGIS Oliver listed the map parcel ID as 14_73_E, zoned general business with the surrounding area identified as mixed business and residential. A topographic map with the facility location, receiving water, and discharge point is provided in **Figure 1**. **Figure 2** provides a site plan of current developments.

2.2 Sensitive Environmental Receptors

The nearest water body to the facility is an unnamed stream which flows into Lake Como located approximately 2,000 feet to the north of the facility. Lake Como is classified as an Impaired water body and Total Maximum Daily Load (TMDL) is required. A waterbody assessment and TMDL status relative to the facility location is provided in **Figure 3**. Groundwater does not intersect surface water or wetland areas within the boundaries of the facility.

There are no surface water impoundments, or drainage ditches within 500 feet of the facility. The site is not located within 500 feet of a potentially productive aquifer, public water supplies, zone II areas, interim wellhead protection areas, designated wetlands, zone A areas, areas of critical environmental concern, sole source aquifers, sole source aquifers, fish habitats, habitats of species of special concern, threatened or endangered concern, or protected open space. Areas of Concern in relation to the facility are located on **Figure 4**. **Figure 5** provides a Bureau of Waste Site Cleanup Receptor Map identifying potential environmental receptors within a 500 foot and ½ mile radius from the site.

2.3 National Pollutant Discharge Elimination System (NPDES) Status

A NPDES permit has not been previously applied for or granted for this discharge. Site redevelopment construction activities have not yet begun at the facility; however, they are planned for late summer 2018. The facility is not covered by an individual NPDES permit and there are no pending applications on file for any other permit with US EPA for this facility. As defined by 40 CFR Section 122.2, a new discharger means any building, structure, facility, or installation:

- A) From which there is or may be a “discharge of pollutants;”
- B) That did not commence the “discharge of pollutants” at a particular “site” prior to August 13, 1979;
- C) Which is not a “new source;” and,
- D) Which has never received a finally effected NPDES permit for discharges at that “site.”

Based on groundwater samples collected at the facility, this site is not considered a new discharger.

3.0 DISCHARGE INFORMATION

This NOI for an RGP is being applied for groundwater discharge necessary during site redevelopment construction activities. These activities include the raze and rebuild of the facility building, and removal and replacement of the existing USTs and associated piping, and dispenser islands. The proposed discharge location for treated groundwater is a catch basin located adjacent to the site to the south off of Highland Avenue, which discharges to an outlet of Lake Como, as depicted on **Figure 2**. The latitude and longitude of the discharge and outfall points are:

Catch Basin Discharge Point:

Latitude: 41.919752
Longitude: -71.359245

Outfall (Lake Como) Point:

Latitude: 41.926192
Longitude: -71.354997

The dewatering and treatment system anticipated for this work includes a 20,000-gallon baffled settling fractionation tank, sediment bag filters, a greensand filter vessel for iron removal, and two activated carbon filter vessels for remaining contaminant removal. This system is designed to meet the required effluent limits for this permit. A diagram of the treatment system is provided on **Figure 6**.

Only one discharge point, described above, will be necessary for dewatering activities. The estimated maximum daily flow is 40 gallons per minute (gpm), with a design flow of 60 gpm. These estimations are expected to decrease once the excavation has been dewatered, and do not include surface run-off following precipitation events. The pH of onsite groundwater was measured at 7.15 (s.u.) and site activities are not anticipated to alter this pH. Discharge activities will only occur during site redevelopment, which is expected to occur between August and October 2018. The discharge point for these dewatering activities is a catch basin located immediate adjacent to the site to the south off of Highland Avenue. Areas of Concern in relation to the facility are located on **Figure 4**. **Figure 5** provides a Bureau of Waste Site Cleanup Receptor Map identifying potential environmental receptors within a 500 foot and ½ mile radius from the disposal site.

If needed, modifications to the system will be made. Modifications to the system will be submitted for approval via a Notice of Change (NOC).

3.1 Receiving Water Information

The receiving water for the discharge of groundwater from the facility is a catch basin located adjacent to the site to the south. StreamStats 4.0 was consulted and it was determined that the closest water body with a 7Q10 is Lake Como. The 7Q10 for the Lake Como basin is 0.00452 cubic feet per second (cfs). The StreamStats Report is provided in **Attachment B**. Note, the nearest stream identified on StreamStats, did not have statistics for a 7Q10, therefore, the 7Q10 for the nearest waterbody with 7Q10 was selected, Lake Como. MassDEP was consulted to verify the 7Q10, and the outfall location appears to be at the outlet of Lake Como, which flows to an unnamed stream, eventually flowing to Sevenmile River. As documented in the MassDEP correspondence, also provided in Attachment B, a 7Q10 does not exist for the outfall location. Per the Waterbody Assessment and TMDL Status Map (**Figure 3**), Lake Como and Sevenmile River were assigned a TMDL status of 5 – Impaired – TMDL required.

3.2 Receiving Water Classification

Based on the MassDEP Division of Water Pollution Control the discharge (outfall) point is a catch basin which drains to the outlet of Lake Como, which flows to an unnamed stream. The unnamed stream flows to another unnamed stream and then into the Sevenmile River. Lake Como is not classified; however, the Sevenmile River is classified as Class B:

<http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/tblfig.pdf>

4.0 CONATAMINANT INFORMATION

On July 18, 2018, groundwater samples were collected from on-site monitoring well RGP Well MW-A and the outfall discharge location at Lake Como. Groundwater samples collected from RGP Well MW-A during July 2018 were submitted to ESS Laboratory, Cranston, Rhode Island (ESS) for analysis of metals, hardness, ethanol, chloride, total cyanide, total petroleum hydrocarbons (TPH), total suspended solids (TSS), total residual chlorine (TRC), ammonia, hexavalent chromium, trivalent chromium, phenol, 1,4-dioxane, ethylene dibromide, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PBCs), tert-butyl alcohol (TBA), and tert-amyl methyl ether (TAME). Surface water samples from the discharge location, Discharge Area, during July 2018 were submitted to ESS for analysis of ammonia, hexavalent chromium, metals, iron, pH, hardness, and salinity.

Results from the groundwater sampling of MW-A demonstrated concentrations of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and total suspended solids above technology-based effluent limitations (TBELs). No contaminants of concern were detected above Massachusetts Department of Environmental Protection (MassDEP) reportable concentrations for groundwater (RCGW-2). The facility has previously been, and is currently, a gasoline and service station, and does not use any pH neutralization or dechlorination chemicals. Based on the summarized groundwater sampling results there are potential water-quality issues in the vicinity of the discharge.

Results from the surface water sample (Lake Como Outfall - Receiving Water) did not demonstrate any constituents exceeding the TBEL. **Table 1** provides a summary of detected potential contaminants of concern (pCOCs) from groundwater collected at the facility (influent) and the surface water sample (effluent). Groundwater and surface water laboratory analytical reports are provided in **Attachment C**.

5.0 DILUTION FACTOR

MassDEP was contacted on July 30, 2018 to confirm the 7Q10 flow and determine a dilution factor. Final correspondence documented that a 7Q10 flow does not exist at the outfall location, and a dilution factor of 1.0 was received by MassDEP on July 31, 2018. The Dilution Factor and Effluent Limitation Calculations fillable electronic spreadsheet was subsequently completed. Copies of the Dilution Factor and Effluent Limitation

Calculations fillable electronic spreadsheet, StreamStats Report, and MassDEP correspondence are provided in **Attachment B**.

6.0 DETERMINATION OF ENDANGERED SPECIES ACT ELIGIBILITY (ESA)

The United States Department of the Interior Fish and Wildlife Service – New England Ecological Services Field Office was contacted regarding the determination of endangered species act eligibility (ESA). There are no endangered or candidate species and no critical habitats within the project area for this NOI. There is one threatened species, the Northern Long-eared Bat (*Myotis septentrionalis*), on the list for this facility. However, no critical habitat has been designated for this species. Per the U.S. Fish and Wildlife Services, the Northern Long-eared Bat hibernates in caves and mines, swarming in surrounded wooded areas in autumn, and foraging in upland forests in late spring and summer. Based on the location and scope of this work, which is in a commercially developed area and includes redevelopment of the current gasoline facility into a new gasoline facility, it is unlikely that dewatering activities associated with the redevelopment of this facility will adversely affect the Northern Long-eared Bat. Therefore, this ESA determination is FWS Criterion C. Fish and Wildlife Service – New England Service Field Office Correspondence is provided as **Attachment D**.

7.0 DOCUMENTATION OF NATION HISTORIC PRESERVATION ACT (NHPA) REQUIREMENTS

Listings of historic places within the City of Attleboro were obtained from the Massachusetts Cultural Resources Information System (MARCIS) online database:

<http://mhc-macris.net/Towns.aspx?Page=towns.asp>

A site vicinity map showing historic places within a 500 feet and a half mile radius of the facility is provided on **Figures 7**. No historic places are located within 500 feet of the facility. Based on the location of historic places relative to the facility and the scope of this work, it is unlikely that dewatering activities associated with the redevelopment of this facility will adversely affect any historic places.

8.0 SUPPLEMENTAL INFORMATION

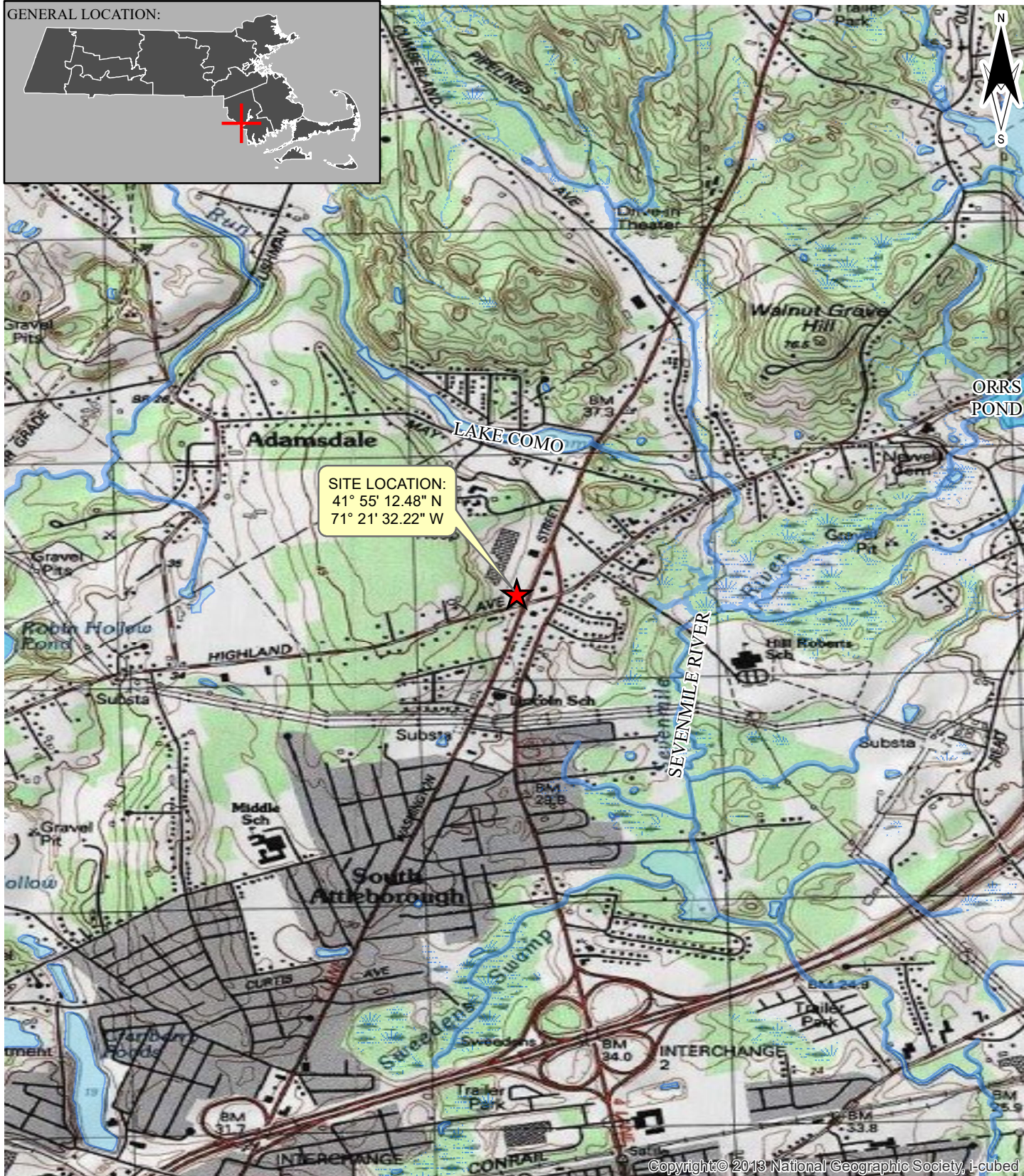
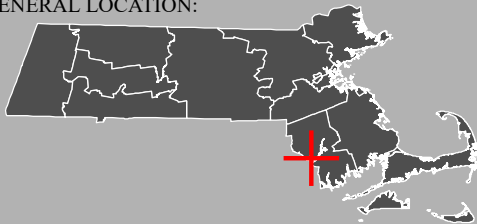
At this time no additional supplemental information is necessary to meet the requirements of the NOI for the RGP.

9.0 REDEVELOPMENT CONSTRUCTION SCHEDULE

Redevelopment construction activities requiring dewatering are anticipated to begin in August 2018 and are anticipated to be complete by October 2018.

FIGURES

GENERAL LOCATION:



Copyright © 2013 National Geographic Society, I-cubed

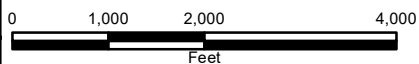
LEGEND

★ SITE LOCATION

NOTES:

- 1) NAD 83
- 2) LOCATION IS APPROXIMATE.

DATE: JULY 21, 2018

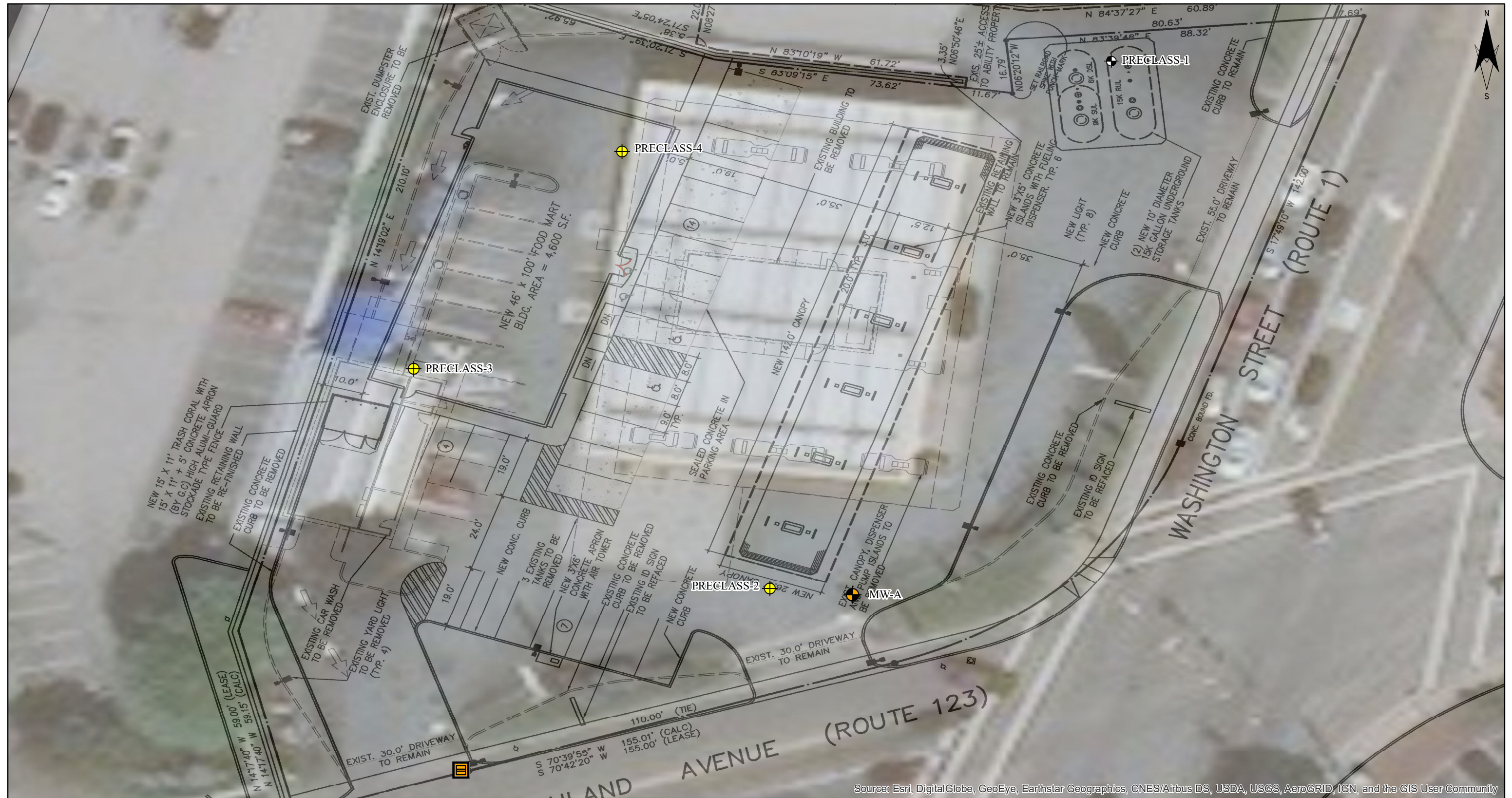


PREPARED BY:
TG2 SOLUTIONS LLC
231 ELM STREET
BLACKSTONE, MA 01504






FIGURE 1

SITE LOCUS MAP

SHELL-BRANDED STATION
237 WASHINGTON STREET
ATTLEBORO, MA






Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

<div>Legend</div> <div><div> RGP SAMPLE LOCATION</div><div> MONITORING WELL</div><div> SOIL BORING (NOVEMBER 2016)</div><div> CATCH BASIN/ DISCHARGE LOCATION</div></div> <div><div><div>0153060</div><div>Feet</div></div></div>		<div>NOTES:</div> <div>1) NAD 83</div> <div>2) SITE REDEVELOPMENT PLAN (SK-3) PROVIDED BY AYOUB ENGINEERING (OCTOBER 2016).</div> <div>3) LOCATIONS OF SOIL BORINGS AND MONITORING WELL IS APPROXIMATE.</div> <div><div>DATE: JULY 31, 2018</div><div>BY: ROV</div></div>	<div></div> <div>231 ELM STREET BLACKSTONE, MA 01504</div>	<div>FIGURE 2</div> <div>SITE PLAN</div> <div>SHELL-BRANDED STATION 237 WASHINGTON STREET ATTLEBORO, MA</div>
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

-  CATCH BASIN/ DISCHARGE LOCATION
-  OUTFALL
-  RGP SAMPLE LOCATION



NOTES:

- 1) NAD 83
- 2) SITE REDEVELOPMENT PLAN (SK-3) PROVIDED BY AYOUB ENGINEERING (OCTOBER 2016).
- 3) LOCATIONS ARE APPROXIMATE.

DATE: JULY 29, 2018

BY: ROV

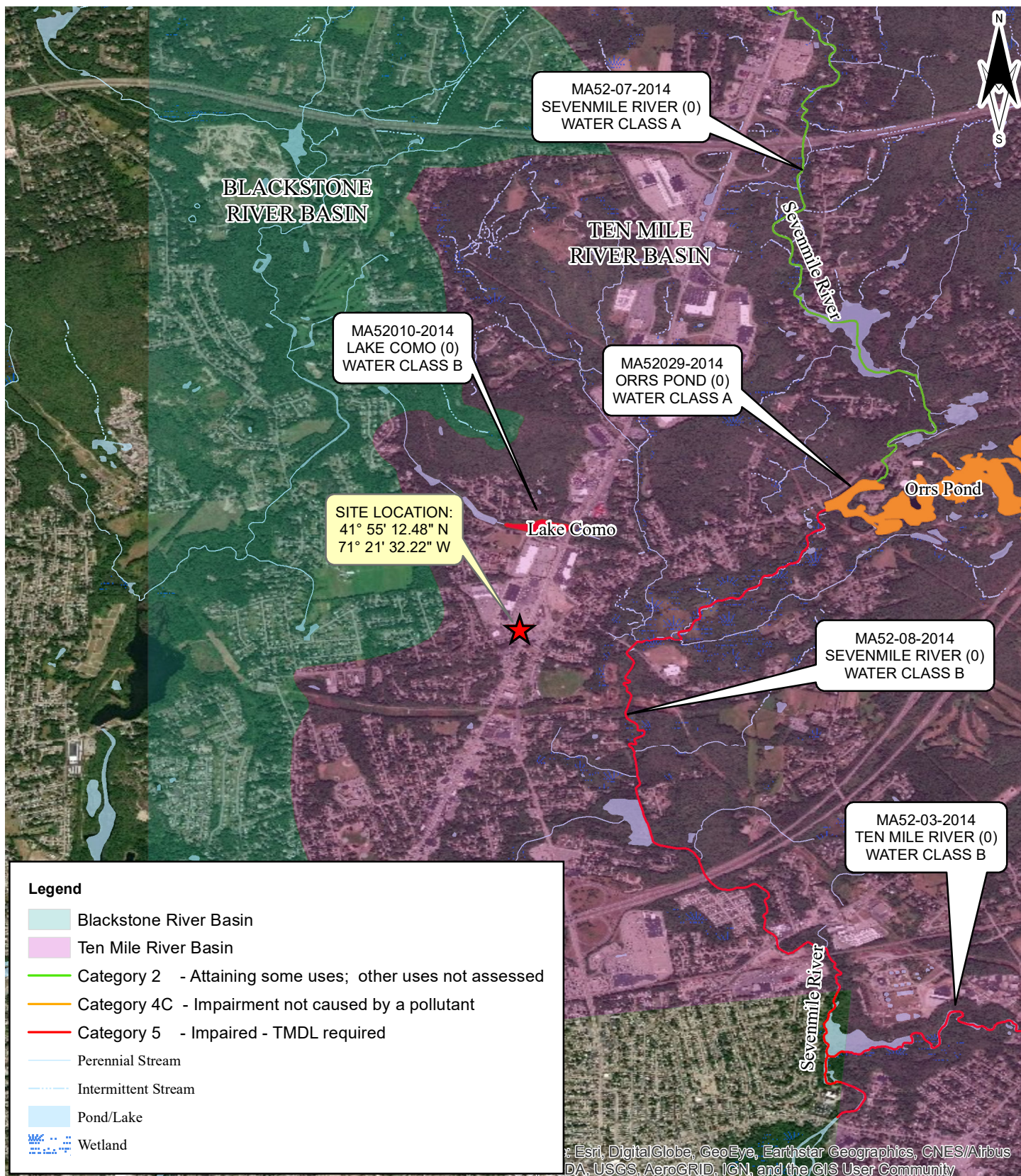


231 ELM STREET
BLACKSTONE, MA 01504

FIGURE 2a

EXTENDED SITE PLAN

SHELL-BRANDED STATION
237 WASHINGTON STREET
ATTLEBORO, MA



NOTES:

- 1) NAD 83
- 2) MassDEP 2014 INTEGRATED LIST OF WATERS (305(b)/303(d)) (2016) AND MassDEP HYDROGRAPHY (2010) TAKEN FROM MASSGIS.
3. MA52-03_2014: ASSESSMENT ID WITH REPORTING CYCLE YEAR
4. TEN MILE RIVER: WATERBODY NAME BASED ON SARIS, PALIS, OR CAMIS.
- 5: (2): NUMBER OF UNIQUE DWM/WPP TMDLs ASSOCIATED FOR ASSOCIATED REPORTING YEAR.
- 6: CLASS B: CLASS LISTED IN 314 CMR 4.05(3) AND (4).

0 1,500 3,000 6,000
Feet



PREPARED BY:
TG2 SOLUTIONS LLC
231 ELM STREET
BLACKSTONE, MA 01504

FIGURE 3

WATERBODY ASSESSMENT
& TMDL STATUS

SHELL-BRANDED STATION
237 WASHINGTON STREET
ATTLEBORO, MA

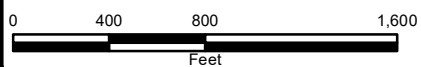


LEGEND

- ◆ 21E TIER 1D CLASSIFIED SITE WITH RTN
- ◆ 21E TIER II CLASSIFIED SITE WITH RTN
- ⊕ POTENTIAL VERNAL POOL
- ⊕ NHESP CERTIFIED VERNAL POOL
- MASS DEP MAJOR FACILITY
- HIGH YIELD AQUIFER
- MEDIUM YIELD AQUIFER

NOTES:

- 1) NAD 83
- 2) ALL DATA LAYERS TAKEN FROM MASSGIS.
- 3) ALL BOUNDARIES ARE APPROXIMATE.



DATE: JULY 21, 2018



PREPARED BY:
TG2 SOLUTIONS LLC
231 ELM STREET
BLACKSTONE, MA 01504

FIGURE 4

AREAS OF ENVIRONMENTAL
CONCERN

237 WASHINGTON STREET
ATTLEBORO, MA

MassDEP - Bureau of Waste Site Cleanup



FIGURE 5

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

Site Information:

SHELL BRANDED SERVICE STATION
237 WASHINGTON STREET ATTLEBORO, MA

NAD83 UTM Meters:

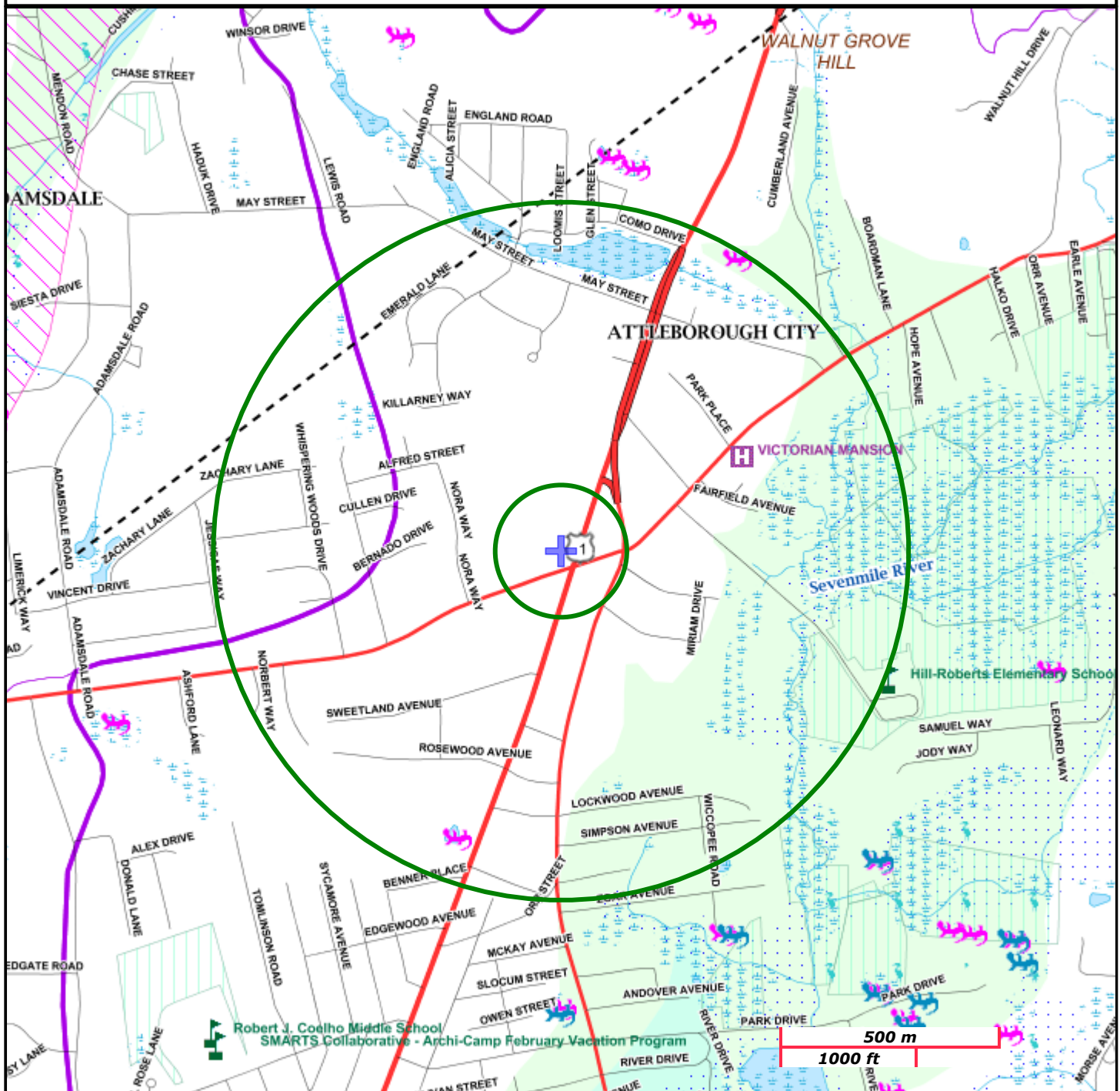
4643601mN, 304389mE (Zone: 19)
July 21, 2018

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<http://www.mass.gov/mgis/>



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

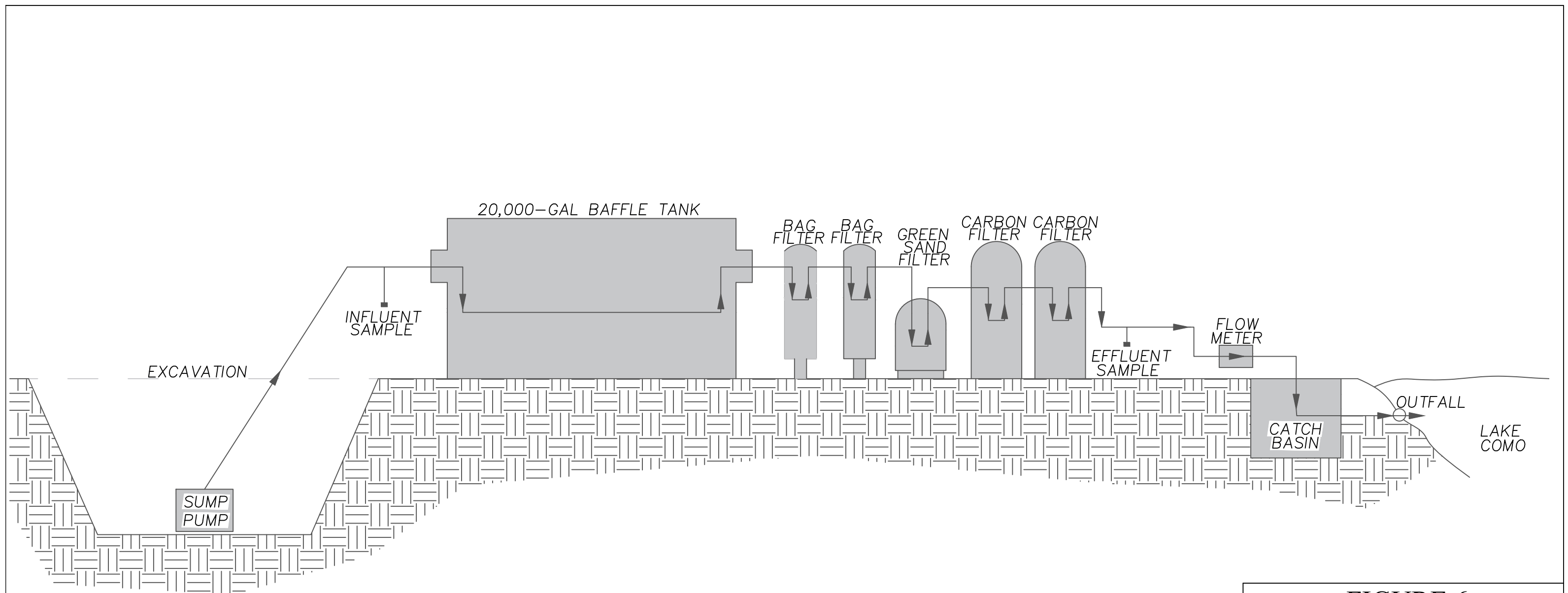
FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.

500 m

1000 ft



NOTES:
1) NOT TO SCALE.
2) THE DISTANCE FROM THE CATCH BASIN/DISCHARGE
LOCATION TO THE LAKE COMO OUTFALL IS APPROXIMATELY
2492 FEET.

FIGURE 6	
GROUNDWATER DEWATERING INSTALLATION DIAGRAM	
SHELL-BRANDED SERVICE STATION LOCATED AT 237 WASHINGTON STREET ATTLEBORO, MA PREPARED FOR COLBEA ENTERPRISES LLC	
	TG2 SOLUTIONS, LLC 231 ELM STREET BLACKSTONE, MA 0154
DATE: JULY 21, 2018	REVISED:



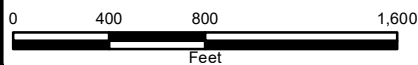
LEGEND

- 17 MHC HISTORIC INVENTORY
- HALF MILE SITE RADIUS
- 500 FOOT SITE RADIUS

NOTES:

- 1) NAD 83 STATE PLANE MASSACHUSETTS (METERS)
- 2) MASSGIS - MHC HISTORIC INVENTORY (UPDATED CONTINUALLY). The MACRIS MAPS ONLINE MAPPING APPLICATION DISPLAYS HISTORIC RESOURCES INCLUDED IN THE MASSACHUSETTS CULTURAL RESOURCE INFORMATION SYSTEM MAINTAINED BY THE MASSACHUSETTS HISTORICAL COMMISSION.
- 3) NUMBERS SHOWN ON MAP CORRESPOND TO "OBJECTID" IN TABLE. ALL NUMBERS MAY NOT BE SHOWN. PLEASE SEE TABLE FOR COMPLETE LIST.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



DATE: JULY 21, 2018



PREPARED BY:
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231 ELM STREET
BLACKSTONE, MA 01504

FIGURE 7

EXTENDED AREA MAP
WITH MARCIS INVENTORY

237 WASHINGTON STREET
ATTLEBORO, MA

TABLES

TABLE 1
SUMMARY OF WATER MONITORING DATA
Shell-Branded Service Station
237 Washington Street
Attleboro, Massachusetts

	Copper (µg/L)	Iron (µg/L)	Zinc (µg/L)	Benzo(a)- anthracene (µg/L)	Benzo(a)- pyrene (µg/L)	Benzo(b)- fluoranthene (µg/L)	Benzo(g,h,i)- perylene (µg/L)	Benzo(k)- fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) J Anthracene (µg/L)	Fluoran- thene (µg/L)	Indeno- (1,2,3-cd)- Pyrene (µg/L)	Pyrene (µg/L)	Tetrachloro- ethene (µg/L)	Chloride (mg/L)	Total Suspended Solids (mg/L)	Hardness (mg/L)	pH	
MassDEP Reportable Concentrations (RCGW-2)	100,000	NA	900	1,000	1,000	400	20	100	70	40	200	100	20	50	NA	NA	NA	NA	
Effluent Limitations - TBEL	242	5,000	420	0.1 ^a	0.1 ^a	0.1 ^b	100 ^b	0.1 ^b	0.1 ^b	0.1 ^a	100 ^b	0.1 ^b	100 ^b	3.3	Report	30	NA	NA	
Well ID	Sample Date																		
Effluent - Lake Como Outfall	07/18/18	<5	61	10	—	—	—	—	—	—	—	—	—	—	—	—	70.100	7.30	
RGP Well MW-A	07/18/18	5.7	103	28.6	0.11	0.24	0.48	0.41	0.18	0.26	0.08	0.40	0.33	0.28	0.7	274	40	131	7.15

Notes:
µg/L - micrograms per liter
mg/L - milligram per liter
MassDEP - Massachusetts Department of Environmental Protection
NA - not available
TBEL - Technology-Based Effluent Limitations
"--" - not sampled
MTBE - Methyl tert-Butyl Ether
^a - Total Group I PAHs is the sum of: benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene. The compliance level for each individual PAH is 0.1 µg/L.
^b - Total Group II PAHs is the sum of: acenaphthene, acenaphthylene, anthracene, benzo[g,h,i]perylene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene. The total compliance level for Group II PAHs is 100 µg/L.

Bold - above method detection limits
Bold & Shaded - above RCGW-2 and/or TBEL Effluent Limitations

ATTACHMENT A

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

A. General site information:

1. Name of site:	Site address:		
	Street:		
	City:	State:	Zip:
2. Site owner Owner is (check one): <input type="checkbox"/> Federal <input type="checkbox"/> State/Tribal <input type="checkbox"/> Private <input type="checkbox"/> Other; if so, specify:	Contact Person:		
	Telephone:	Email:	
	Mailing address:		
	Street:		
	City:	State:	Zip:
3. Site operator, if different than owner	Contact Person:		
	Telephone:	Email:	
	Mailing address:		
	Street:		
	City:	State:	Zip:
4. NPDES permit number assigned by EPA: NPDES permit is (check all that apply): <input type="checkbox"/> RGP <input type="checkbox"/> DGP <input type="checkbox"/> CGP <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):		
	<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> MA Chapter 21e; list RTN(s): <input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit: </div> <div> <input type="checkbox"/> CERCLA <input type="checkbox"/> UIC Program <input type="checkbox"/> POTW Pretreatment <input type="checkbox"/> CWA Section 404 </div> </div>		

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 Are sensitive receptors present near the site? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, specify:		
3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP.		
4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.		
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.		
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, indicate date confirmation received:		
7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): <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 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): <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): <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: <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)
<p>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:</p> <p><input type="checkbox"/> A private storm sewer system <input type="checkbox"/> A municipal storm sewer system</p> <p>If the discharge enters the receiving water via a private or municipal storm sewer system:</p> <p>Has notification been provided to the owner of this system? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>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:</p> <p>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</p>	
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 <input type="checkbox"/> II – Non-Petroleum-Related Site Remediation <input type="checkbox"/> III – Contaminated Site Dewatering <input type="checkbox"/> IV – Dewatering of Pipelines and Tanks <input type="checkbox"/> V – Aquifer Pump Testing <input type="checkbox"/> VI – Well Development/Rehabilitation <input type="checkbox"/> VII – Collection Structure Dewatering/Remediation <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="970 800 1419 873"><input type="checkbox"/> G. Sites with Known Contamination</td><td data-bbox="1419 800 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
A. Inorganics									
Ammonia								Report mg/L	---
Chloride								Report $\mu\text{g/l}$	---
Total Residual Chlorine								0.2 mg/L	
Total Suspended Solids								30 mg/L	---
Antimony								206 $\mu\text{g/L}$	
Arsenic								104 $\mu\text{g/L}$	
Cadmium								10.2 $\mu\text{g/L}$	
Chromium III								323 $\mu\text{g/L}$	
Chromium VI								323 $\mu\text{g/L}$	
Copper								242 $\mu\text{g/L}$	
Iron								5,000 $\mu\text{g/L}$	
Lead								160 $\mu\text{g/L}$	
Mercury								0.739 $\mu\text{g/L}$	
Nickel								1,450 $\mu\text{g/L}$	
Selenium								235.8 $\mu\text{g/L}$	
Silver								35.1 $\mu\text{g/L}$	
Zinc								420 $\mu\text{g/L}$	
Cyanide								178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX								100 $\mu\text{g/L}$	---
Benzene								5.0 $\mu\text{g/L}$	---
1,4 Dioxane								200 $\mu\text{g/L}$	---
Acetone								7.97 mg/L	---
Phenol								1,080 $\mu\text{g/L}$	

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

[illegible]

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 design flow capacity 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

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

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

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

I. Supplemental information

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

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

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

J. Certification requirement

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

BMPP certification statement:

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:

ATTACHMENT B

Enter number values in green boxes below

Enter values in the units specified

↓	
0.00452	Q _R = Enter upstream flow in MGD
0.0864	Q _P = Enter discharge flow in MGD
1	Downstream 7Q10

Enter a dilution factor, if other than zero

↓	
1	

Enter values in the units specified

↓	
131	C _d = Enter influent hardness in mg/L CaCO₃
70100	C _s = Enter receiving water hardness in mg/L CaCO₃

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

↓	
7.3	pH in Standard Units
21.2	Temperature in °C
0	Ammonia in mg/L
70100	Hardness in mg/L CaCO₃
0.2	Salinity in ppt
0	Antimony in µg/L
0	Arsenic in µg/L
0	Cadmium in µg/L
0	Chromium III in µg/L
0	Chromium VI in µg/L
0	Copper in µg/L
61	Iron in µg/L
0	Lead in µg/L
0	Mercury in µg/L
0	Nickel in µg/L
0	Selenium in µg/L
0	Silver in µg/L
10	Zinc in µg/L

Enter **influent** concentrations in the units specified

↓	
0	TRC in µg/L
0	Ammonia in mg/L
0	Antimony in µg/L
0	Arsenic in µg/L
0	Cadmium in µg/L
0	Chromium III in µg/L
0	Chromium VI in µg/L
5.7	Copper in µg/L
103	Iron in µg/L
0	Lead in µg/L
0	Mercury in µg/L
0	Nickel in µg/L
0	Selenium in µg/L
0	Silver in µg/L
28.6	Zinc in µg/L
0	Cyanide in µg/L
0	Phenol in µg/L
0	Carbon Tetrachloride in µg/L
0.7	Tetrachloroethylene in µg/L
0	Total Phthalates in µg/L
0	Diethylhexylphthalate in µg/L
0.11	Benzo(a)anthracene in µg/L
0.24	Benzo(a)pyrene in µg/L
0.48	Benzo(b)fluoranthene in µg/L
0.18	Benzo(k)fluoranthene in µg/L
0.26	Chrysene in µg/L
0.08	Dibenzo(a,h)anthracene in µg/L
0.33	Indeno(1,2,3-cd)pyrene in µg/L
0	Methyl-tert butyl ether in µg/L

Notes:Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor approvedSaltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry

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

Only if approved by State as the entry for Q_R; leave 0 if no entry

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

Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges

Hardness required for freshwater

Salinity required for saltwater (estuarine and marine)

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

Enter 0 if non-detect or testing not required

if >1 sample, enter maximum

if >10 samples, may enter 95th percentile

Enter 0 if non-detect or testing not required

I. Dilution Factor Calculation Method

A. 7Q10

Refer to Appendix V for determining critical low flow; must be approved by State before use in calculations.

B. Dilution Factor

Calculated as follows:

$$Df = \frac{Q_R + Q_P}{Q_P}$$

Q_R = 7Q10 in MGD

Q_P = Discharge flow, in MGD

II. Effluent Limitation Calculation Method

A. Calculate Water Quality Criterion:

Step 1. Downstream hardness, calculated as follows:

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

C_r = Downstream hardness in mg/L

Q_d = Discharge flow in MGD

C_d = Discharge hardness in mg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Upstream (receiving water) hardness in mg/L

Q_r = Downstream receiving water flow in MGD

Step 2. Total recoverable water quality criteria for hardness-dependent metals, calculated as follows:

$$\text{Total Recoverable Criteria} = \exp \{ m_c [\ln(h)] + b_c \}$$

m_c = Pollutant-specific coefficient (m_a for silver)

b_c = Pollutant-specific coefficient (b_a for silver)

\ln = Natural logarithm

h = Hardness calculated in Step 1

Step 3. Total recoverable water quality criteria for non-hardness-dependent 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 WQBEL:

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

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

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

Q_d = Discharge flow in MGD

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

Q_s = Upstream flow (7Q10) in MGD

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

Q_r = Downstream receiving water flow in MGD

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

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

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

Q_d = Discharge flow in MGD

Q_r = Downstream receiving water flow in MGD

C. Determine if a WQBEL applies:

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

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

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

Q_d = Discharge flow in MGD

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

Q_s = Upstream flow (7Q10) in MGD

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

Q_r = Downstream receiving water flow in MGD

The WQBEL applies if:

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

AND

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

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

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

AND

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

Part 2.1.1 of the RGP for that parameter applies.

Dilution Factor	1.1					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	Report	mg/L	---			
Chloride	Report	µg/L	---			
Total Residual Chlorine	0.2	mg/L	127	µg/L	---	µg/L
Total Suspended Solids	30	mg/L	---			
Antimony	206	µg/L	7407	µg/L		
Arsenic	104	µg/L	116	µg/L		
Cadmium	10.2	µg/L	7.5549	µg/L		
Chromium III	323	µg/L	2639.8	µg/L		
Chromium VI	323	µg/L	132.3	µg/L		
Copper	242	µg/L	298.1	µg/L		
Iron	5000	µg/L	11571	µg/L		
Lead	160	µg/L	167.16	µg/L		
Mercury	0.739	µg/L	10.48	µg/L		
Nickel	1450	µg/L	1649.9	µg/L		
Selenium	235.8	µg/L	57.9	µg/L		
Silver	35.1	µg/L	338.2	µg/L		
Zinc	420	µg/L	3795.2	µg/L		
Cyanide	178	mg/L	60.2	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	100	µg/L	---			
Benzene	5.0	µg/L	---			
1,4 Dioxane	200	µg/L	---			
Acetone	7970	µg/L	---			
Phenol	1,080	µg/L	3472	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	4.4	µg/L	18.5	µg/L		
1,2 Dichlorobenzene	600	µg/L	---			
1,3 Dichlorobenzene	320	µg/L	---			
1,4 Dichlorobenzene	5.0	µg/L	---			
Total dichlorobenzene	---	µg/L	---			
1,1 Dichloroethane	70	µg/L	---			
1,2 Dichloroethane	5.0	µg/L	---			
1,1 Dichloroethylene	3.2	µg/L	---			
Ethylene Dibromide	0.05	µg/L	---			
Methylene Chloride	4.6	µg/L	---			
1,1,1 Trichloroethane	200	µg/L	---			
1,1,2 Trichloroethane	5.0	µg/L	---			
Trichloroethylene	5.0	µg/L	---			
Tetrachloroethylene	5.0	µg/L	38.2	µg/L		
cis-1,2 Dichloroethylene	70	µg/L	---			
Vinyl Chloride	2.0	µg/L	---			
D. Non-Halogenated SVOCs						
Total Phthalates	190	µg/L	---	µg/L		
Diethylhexyl phthalate	101	µg/L	25.5	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	1.0	µg/L	---			
Benzo(a)anthracene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Benzo(a)pyrene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Benzo(b)fluoranthene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Benzo(k)fluoranthene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Chrysene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	100	µg/L	---			
Naphthalene	20	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	0.000064	µg/L	---		0.5	µg/L
Pentachlorophenol	1.0	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	5.0	mg/L	---			
Ethanol	Report	mg/L	---			
Methyl-tert-Butyl Ether	70	µg/L	231	µg/L		
tert-Butyl Alcohol	120	µg/L	---			
tert-Amyl Methyl Ether	90	µg/L	---			

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 WQBEL:

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

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

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

Q_d = Discharge flow in MGD

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

Q_s = Upstream flow (7Q10) in MGD

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

Q_r = Downstream receiving water flow in MGD

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

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

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

Q_d = Discharge flow in MGD

Q_r = Downstream receiving water flow in MGD

C. Determine if a WQBEL applies:

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

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

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

Q_d = Discharge flow in MGD

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

Q_s = Upstream flow (7Q10) in MGD

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

Q_r = Downstream receiving water flow in MGD

The WQBEL applies if:

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

AND

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

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

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

AND

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

Dilution Factor	1.0					
	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
A. Inorganics						
Ammonia	Report	mg/L	---			
Chloride	Report	µg/L	---			
Total Residual Chlorine	0.2	mg/L	86.8	µg/L	---	µg/L
Total Suspended Solids	30	mg/L	---			
Antimony	206	µg/L	7407	µg/L		
Arsenic	104	µg/L	417	µg/L		
Cadmium	10.2	µg/L	102.5	µg/L		
Chromium III	323	µg/L	1157.4	µg/L		
Chromium VI	323	µg/L	583	µg/L		
Copper	242	µg/L	43.2	µg/L		
Iron	5000	µg/L	---	µg/L		
Lead	160	µg/L	98.6	µg/L		
Mercury	0.739	µg/L	12.80	µg/L		
Nickel	1450	µg/L	95.9	µg/L		
Selenium	235.8	µg/L	823	µg/L		
Silver	35.1	µg/L	25.9	µg/L		
Zinc	420	µg/L	990	µg/L		
Cyanide	178	mg/L	11.6	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	100	µg/L	---			
Benzene	5.0	µg/L	---			
1,4 Dioxane	200	µg/L	---			
Acetone	7.97	mg/L	---			
Phenol	1,080	µg/L	3472	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	4.4		18.5	µg/L		
1,2 Dichlorobenzene	600	µg/L	---			
1,3 Dichlorobenzene	320	µg/L	---			
1,4 Dichlorobenzene	5.0	µg/L	---			
Total dichlorobenzene	---	µg/L	---			
1,1 Dichloroethane	70	µg/L	---			
1,2 Dichloroethane	5.0	µg/L	---			
1,1 Dichloroethylene	3.2	µg/L	---			
Ethylene Dibromide	0.05	µg/L	---			
Methylene Chloride	4.6	µg/L	---			
1,1,1 Trichloroethane	200	µg/L	---			
1,1,2 Trichloroethane	5.0	µg/L	---			
Trichloroethylene	5.0	µg/L	---			
Tetrachloroethylene	5.0	µg/L	38.2	µg/L		
cis-1,2 Dichloroethylene	70	µg/L	---			
Vinyl Chloride	2.0	µg/L	---			
D. Non-Halogenated SVOCs						
Total Phthalates	190	µg/L	---	µg/L		
Diethylhexyl phthalate	101	µg/L	25.5	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	1.0	µg/L	---			
Benzo(a)anthracene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Benzo(a)pyrene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Benzo(b)fluoranthene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Benzo(k)fluoranthene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Chrysene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0440	µg/L	0.1	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	100	µg/L	---			
Naphthalene	20	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	0.000064	µg/L	---		0.5	µg/L
Pentachlorophenol	1.0	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	5.0	mg/L	---			
Ethanol	Report	mg/L	---			
Methyl-tert-Butyl Ether	70	µg/L	231	µg/L		
tert-Butyl Alcohol	120	µg/L	---			
tert-Amyl Methyl Ether	90	µg/L	---			

Subject: RE: 237 Washington Street, Attleboro - EPA RGP
Date: Tuesday, July 31, 2018 at 2:47:00 PM Eastern Daylight Time
From: Vakalopoulos, Catherine (DEP)
To: Leah Smith

Hi Leah,

The outfall appears to be at the outlet of Lake Como which flows to an unnamed stream. In GIS it looks like this stream is low-lying with wetlands. Since this is the receiving water, this is where the 7Q10 should be calculated. The reason why StreamStats isn't working for you is because the drainage area is very small and it's possible the stream goes dry during certain times of the year. Therefore, there is no dilution at this site (DF = 1).

For the permit limit calculation spreadsheet, even though the treatment system operates only 8 hours a day, you should convert to MGD *without* taking this into account because we want to know the worst case scenario, i.e. when 60 gpm is being discharged in order to be protective of the environment. So $(60 \text{ gpm} \times 60 \times 24) / 1 \text{ mil} = 0.0864 \text{ MGD}$. The same would be the case if you were calculating a dilution factor.

Here is the WQ information you will need when filling out the NOI:

This unnamed stream flows into another unnamed stream and then to the Seven Mile River which is in the Ten Mile Watershed. The water bodies from Lake Como to the Seven Mile River are not Outstanding Resource Waters. The Seven Mile River has a segment ID of MA52-08 and is classified as Class B. There are no TMDLs for this river and to see the impairments, go to:

https://www.mass.gov/files/documents/2016/08/sa/14list2_0.pdf and look up "MA52-08". I just checked and it's impaired for fecal coliform.

In addition to submitting the NOI to EPA, if this is not *currently* an MCP site, you will also have to apply with the state (submit same NOI to me, fill out a transmittal form, and submit a \$500 fee unless exempt). Instructions are located here: <https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent>.

Please let me know if you have any additional questions.

Cathy

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

 Please consider the environment before printing this e-mail

From: Leah Smith [mailto:lsmith@tg2solutions.com]
Sent: Monday, July 30, 2018 6:28 PM
To: Vakalopoulos, Catherine (DEP)
Cc: Jason Sherburne; Eric Simpson
Subject: 237 Washington Street, Attleboro - EPA RGP

Good evening,

I'm working on behalf of a client to complete a NOI for a RGP for redevelopment activities at 237 Washington Street in Attleboro, MA. This facility has historically been a gasoline station and will be redeveloped into another gasoline station. The RGP is for dewatering activities during redevelopment.

Attached please find the dilution factor spreadsheet and effluent limit calculations. A dilution factor of 1.2 is being requested for this RGP. Calculations are based on the groundwater concentrations at the facility (MW-

A), the surface water samples collected from Lake Como, the 7Q10 from USGS, and the projected maximum daily flow. The discharge location is a catch basin located adjacent to the site to the south off Highland Avenue, which discharges to Lake Como – see Figure 2A.

Please note that the Streamstats data is attached, and is based on the basin delineated north of the facility where Lake Como is located. There is a small stream identified on Streamstats to the east, however it did not have a 7Q10, therefore, the 7Q10 for Lake Como was selected. This provided a 7Q10 flow of 0.00452 cubic feet per second (cfs). The discharge flow was calculated based on the design flow: $(60 \text{ gpm} \times 60 \text{ mph} \times 8 \text{ hpd}) / 1 \text{ million} = 0.0288 \text{ mgd}$.

I've attached a table with the summary of contaminants detected in the influent sample (site groundwater) and the outfall surface water sample, and a site plan showing the proposed construction location for dewatering and outfall location.

Could you please check the 7Q10 and dilution factor? Please let me know if you require any additional information.

Thank you for your help,

Leah Smith

StreamStats Report

Region ID:

MA

Workspace ID:

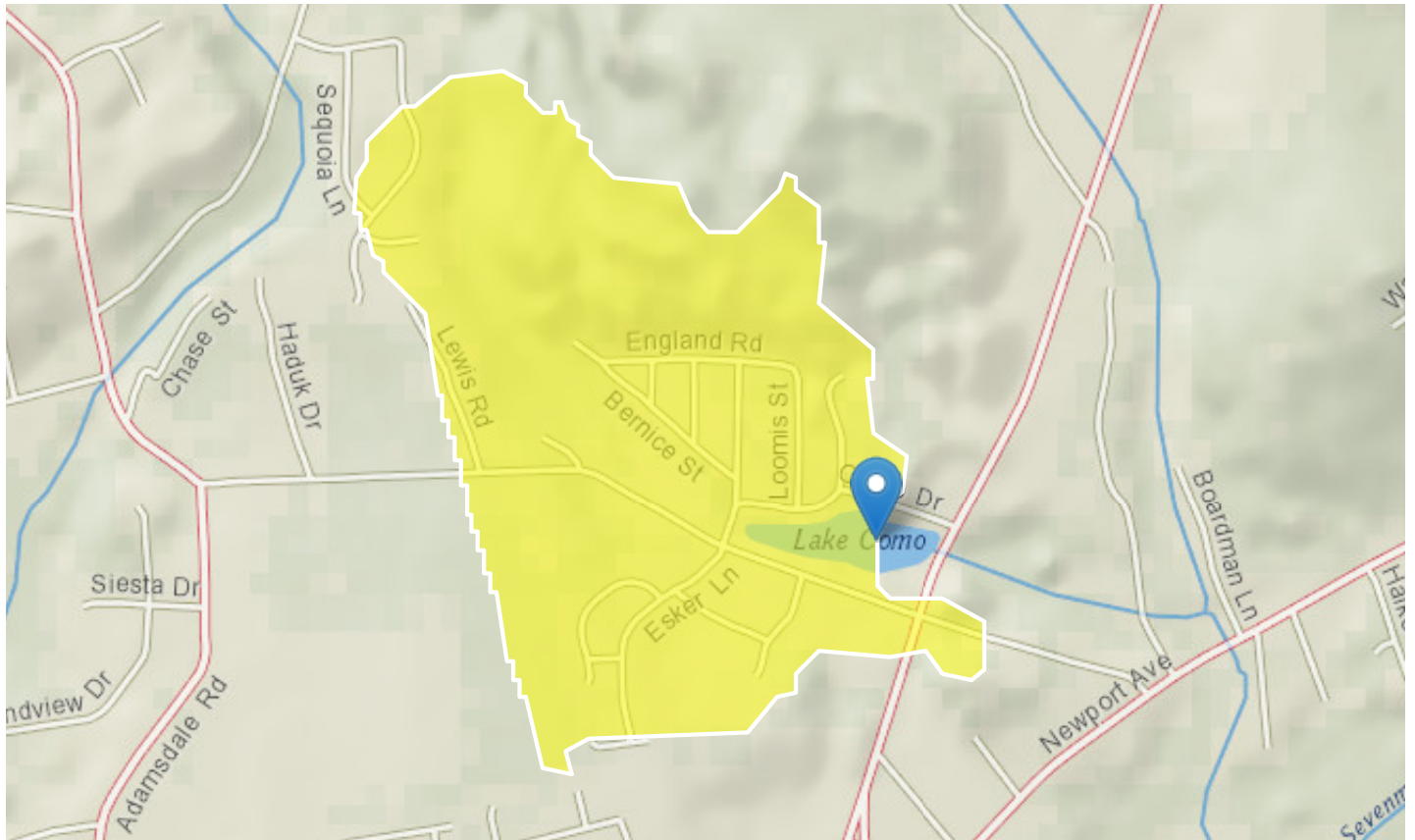
MA20180729172231194000

Clicked Point (Latitude, Longitude):

41.92624, -71.35715

Time:

2018-07-29 13:22:45 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.27	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	3.047	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.0973	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.27	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	3.047	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.0973	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0133	ft ³ /s
7 Day 10 Year Low Flow	0.00452	ft ³ /s

Low-Flow Statistics Citations

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

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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Application Version: 4.2.1

ATTACHMENT C

CERTIFICATE OF ANALYSIS

Jason Sherburne
Tg2 Solutions
231 Elm Street
Blackstone, MA 01504

RE: Attleboro 237-RGP (N/A)
ESS Laboratory Work Order Number: 1807406

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 5:28 pm, Jul 25, 2018****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: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807406

SAMPLE RECEIPT

The following samples were received on July 18, 2018 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 laboratory that is able to achieve this limit. The data for Ethanol has been reported using our current method reporting limit.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1807406-01	Receiving Water	Surface Water	200.7, 245.1, 2520B, 350.1, 3500Cr B-2009, 4500 H+ B



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807406

PROJECT NARRATIVE

Classical Chemistry
1807406-01



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. Consult your IT Support personnel for information on how to clear your internet cookies.





CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807406

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
MADEP 04-2.1 - 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: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: Receiving Water
Date Sampled: 07/18/18 11:00
Percent Solids: N/A

ESS Laboratory Work Order: 1807406
ESS Laboratory Sample ID: 1807406-01
Sample Matrix: Surface Water
Units: mg/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>
Antimony	ND (0.005)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Arsenic	ND (0.005)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Beryllium	ND (0.0001)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Cadmium	ND (0.0010)		200.7		1	KJK	07/20/18 16:03	100	10	CG81836
Chromium	ND (0.002)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Copper	ND (0.002)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Hardness	70100 (82.4)		200.7		1	KJK	07/20/18 3:28	1	1	[CALC]
Iron	0.061 (0.010)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Lead	ND (0.002)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Mercury	ND (0.00020)		245.1		1	MJV	07/20/18 14:35	20	40	CG81942
Nickel	ND (0.005)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Selenium	ND (0.005)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Silver	ND (0.001)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Thallium	ND (0.010)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836
Zinc	0.010 (0.005)		200.7		1	KJK	07/20/18 3:28	100	10	CG81836



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: Receiving Water
Date Sampled: 07/18/18 11:00
Percent Solids: N/A

ESS Laboratory Work Order: 1807406
ESS Laboratory Sample ID: 1807406-01
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	ND (0.10)		350.1		1	JLK	07/20/18 18:57	mg/L	CG81903
Hexavalent Chromium	ND (10.0)		3500Cr B-2009		1	CCP	07/18/18 16:55	ug/L	CG81826
pH	7.30 (N/A)		4500 H+ B		1	JLK	07/18/18 17:34	S.U.	CG81823
pH Sample Temp	Aqueous pH measured in water at 21.2 °C. (N/A)								
Salinity	0.2 (0.1)		2520B		1	JLK	07/20/18 16:39	ppt	CG82041



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807406

Quality Control Data

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

Total Metals

Batch CG81836 - 3005A/200.7

Blank

Antimony	ND	0.005	mg/L
Arsenic	ND	0.005	mg/L
Beryllium	ND	0.0001	mg/L
Cadmium	ND	0.0020	mg/L
Chromium	ND	0.002	mg/L
Copper	ND	0.002	mg/L
Hardness	ND	82.4	ug/L
Iron	ND	0.010	mg/L
Lead	ND	0.002	mg/L
Nickel	ND	0.005	mg/L
Selenium	ND	0.005	mg/L
Silver	ND	0.001	mg/L
Thallium	ND	0.010	mg/L
Zinc	ND	0.005	mg/L

LCS

Antimony	0.045	0.005	mg/L	0.05015	90	85-115
Arsenic	0.046	0.005	mg/L	0.05000	92	85-115
Beryllium	0.0046	0.0001	mg/L	0.005000	92	85-115
Cadmium	0.0234	0.0020	mg/L	0.02502	94	85-115
Chromium	0.047	0.002	mg/L	0.05000	93	85-115
Copper	0.050	0.002	mg/L	0.05000	99	85-115
Hardness	3130	82.4	ug/L			
Iron	0.236	0.010	mg/L	0.2501	94	85-115
Lead	0.047	0.002	mg/L	0.05000	95	85-115
Nickel	0.047	0.005	mg/L	0.05000	93	85-115
Selenium	0.086	0.005	mg/L	0.09995	86	85-115
Silver	0.024	0.001	mg/L	0.02498	95	85-115
Thallium	0.047	0.010	mg/L	0.05005	95	85-115
Zinc	0.047	0.005	mg/L	0.05000	94	85-115

LCS Dup

Hardness	2870	82.4	ug/L
----------	------	------	------

Batch CG81942 - 245.1/7470A

Blank

Mercury	ND	0.00020	mg/L
---------	----	---------	------

LCS

Mercury	0.00655	0.00020	mg/L	0.006000	109	85-115
---------	---------	---------	------	----------	-----	--------

LCS Dup

Mercury	0.00651	0.00020	mg/L	0.006000	109	85-115	0.5	20
---------	---------	---------	------	----------	-----	--------	-----	----

Classical Chemistry

Batch CG81826 - General Preparation

Blank



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807406

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CG81826 - General Preparation										
Hexavalent Chromium	ND	10.0	ug/L							
LCS										
Hexavalent Chromium	0.499		mg/L	0.4998		100	90-110			
LCS Dup										
Hexavalent Chromium	0.502		mg/L	0.4998		100	90-110	0.6	20	
Batch CG81903 - NH4 Prep										
Blank										
Ammonia as N	ND	0.10	mg/L							
LCS										
Ammonia as N	0.11	0.10	mg/L	0.09994		108	80-120			
LCS										
Ammonia as N	1.06	0.10	mg/L	0.9994		106	80-120			
Batch CG82041 - General Preparation										
LCS										
Salinity	0.9		ppt	1.000		94	85-115			



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions

Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807406

Notes and Definitions

Z16	Aqueous pH measured in water at 21.2 °C.
U	Analyte included in the analysis, but not detected
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
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: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807406

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

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

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: Tg2 TB/DS
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 1807406
 Date Received: 7/18/2018
 Project Due Date: 7/25/2018
 Days for Project: 5 Day

1. Air bill manifest present? ☐ No
 Air No.: NA
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
 Temp: 2.8 Iced with: Ice
5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ No
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about short holds & rushes? ☒ Yes / No / NA
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: _____
 b. Low Level VOA vials frozen: _____

Date: _____ Time: _____ By: _____
 Date: _____ Time: _____ By: _____

Sample Receiving Notes:

COC collection date = 6/18 ; Labels = 7/18

m 7/18/18

14. Was there a need to contact Project Manager?
 a. Was there a need to contact the client?
 Who was contacted? _____

☒ Yes / No
 Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	247754	Yes	NA	Yes	1L Amber - Unpres	NP	
01	247755	Yes	NA	Yes	1L Amber - Unpres	NP	
01	247756	Yes	NA	Yes	500 mL Poly - H2SO4	H2SO4	
01	247757	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
01	247758	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	

2nd Review

- Are barcode labels on correct containers?
 Are all necessary stickers attached?

☒ Yes / No
☒ Yes / No

Completed By: [Signature] Date & Time: 7/18/18 1519
 Reviewed By: [Signature] Date & Time: 7/18/18 1639
 Delivered By: [Signature] Date & Time: 7/18/18 1639

1807406

CHAIN OF CUSTODY RECORD

ESS



Project Name	ATTLEBORO CSF
Address	
Contact	Jason Sherburne
Location ID #	
Description	

MATRIX

1. Wastewater
2. Groundwater
3. Drinking Water
4. Soil
5. Surface Water
6. Other _____

Analytical Information

Lab to Invoice:

Tg2 Solutions

Lab Report to:

esimpson@tg2solutions.com
jsherburne@tg2solutions.com

Billing Reference:

Comments:

[illegible]

Turnaround Information

QA/QC

SPECIAL QA/QC or DATA Requirements:

☒ Std. 10 Day Turnaround

Approved By:

☐ 7 Day RUSH☐ 5 Day *RUSH* (HIGH PRIORITY)☐ 3 Day RUSH☐ 2 Day RUSH☐ 1 Day RUSH

WILL EMAIL TEAM
DETECTION (REQUIRED)

RGP PERMITS APPLICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:

Reinforced by Sampler:

Relinquished by Sampler:

Date Time:

Date Time:

Received 0

Received By:

Received By:

Date Time:

Date Time: 7/18/18 1220

Date Time: 2/18/18 1430

Preserve where applicable

On 11/11/2019 11:11:11 AM, "On 11/11/2019 11:11:11 AM" wrote:

2.8 ICF RC Temp

231 Elm Street, Blackstone, MA 01504



CHAIN OF CUSTODY RECORD

Laboratory:

ESS

Client	Tg2 Solutions
Address	231 Elm Street, Blackstone MA
Contact	Jason Sherburne
Phone #	617-947-7702

Project Name	ATTLEBORO 237
Address	
Contact	Jason Sherburne
Location ID #	
Description	

MATRIX

1. Wastewater
2. Groundwater
3. Drinking Water
4. Soil
5. Surface Water
6. Other _____

Analytical Information

Lab to Invoice:

Tg2 Solutions

Lab Report to:

esimpson@tq2solutions.com
jsherburne@tq2solutions.com

Billing Reference:

Comments:

[illegible][illegible]

Turnaround Information

QA/QC

☒ Std. 10 Day Turnaround

Approved By:

☐ 7 Day RUSH☐ 5 Day *RUSH* (HIGH PRIORITY)☐ 3 Day RUSH☐ 2 Day RUSH☐ 1 Day RUSH

SPECIAL QA/QC or DATA Requirements:

WILL EMAIL DEMO
DETECTION (REQUIREMENT)

RGP PERMITS APPLICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:

Relaymaster's Sampler:

Collected by Sampler:

Date Time:

Date Time:

Received 0

Received By:

Received By:

Date Time:

Date Time:

Date Time:

serve where app

Seal #	
--------	--

Preserve where applicable

On loc

2.8 ICF RC Temp.

CERTIFICATE OF ANALYSIS

Jason Sherburne
Tg2 Solutions
231 Elm Street
Blackstone, MA 01504

RE: Attleboro 237-RGP (N/A)
ESS Laboratory Work Order Number: 1807408

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 5:13 pm, Jul 26, 2018****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: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

SAMPLE RECEIPT

The following samples were received on July 18, 2018 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.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1807408-01	MW-A	Ground Water	1664A, 200.7, 200.8, 245.1, 2540D, 300.0, 350.1, 3500Cr B-2009, 420.1, 4500 CN CE, 4500Cl D, 504.1, 524.2, 608.3, 625.1 SIM, 8270D SIM, ASTM D3695



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

PROJECT NARRATIVE

625.1(SIM) Semi-Volatile Organic Compounds

C8G0347-CCV1

Pentachlorophenol (120% @ 80-120%)

C8G0347-TUN1

C8G0347-TUN1

CG81915-BSD1

Di-n-butylphthalate (21% @ 20%)

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

C8G0407-TUN1

C8G0407-TUN1

Classical Chemistry
1807408-01

Dissolved Metals

CG81836-BS1

Cadmium (133% @ 85-115%)

CG81836-BSD1

Cadmium (148% @ 85-115%)

Total Metals

CG82535-BS1

Cadmium (151% @ 85-115%)

CG82535-BSD1

Cadmium (145% @ 85-115%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

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
MADEP 04-2.1 - 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: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Dissolved 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 (5.0)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836
Arsenic	ND (5.00)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836
Cadmium	ND (0.1)		200.8		5	NAR	07/25/18 19:02	100	10	CG81836
Chromium	ND (2.0)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836
Copper	4.2 (2.0)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836
Iron	ND (200)		200.7		20	KJK	07/20/18 16:40	100	10	CG81836
Lead	ND (2.0)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836
Mercury	ND (0.20)		245.1		1	MJV	07/20/18 15:06	20	40	CG81942
Nickel	ND (5.0)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836
Selenium	ND (5.0)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836
Silver	ND (1.0)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836
Zinc	15.0 (5.0)		200.7		1	KJK	07/20/18 3:44	100	10	CG81836



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
Sample Matrix: Ground 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>
Antimony	ND (5.0)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Arsenic	ND (5.0)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Cadmium	ND (0.100)		200.8		5	NAR	07/25/18 22:30	100	10	CG82535
Chromium	ND (2.0)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Chromium III	ND (10.0)		200.7		1	CCP	07/20/18 3:38	1	1	[CALC]
Copper	5.7 (2.0)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Hardness	131000 (82.4)		200.7		1	KJK	07/20/18 3:38	1	1	[CALC]
Iron	103 (10.0)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Lead	ND (2.0)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Mercury	ND (0.200)		245.1		1	MJV	07/20/18 15:04	20	40	CG81942
Nickel	ND (5.0)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Selenium	ND (5)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Silver	ND (0.5)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836
Zinc	28.6 (5.0)		200.7		1	KJK	07/20/18 3:38	100	10	CG81836



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A
Initial Volume: 25
Final Volume: 25
Extraction Method: 524.2

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

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	07/20/18 12:44	C8G0370	CG82035
1,1,2-Trichloroethane	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
1,1-Dichloroethane	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
1,1-Dichloroethene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
1,2-Dichlorobenzene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
1,2-Dichloroethane	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
1,3-Dichlorobenzene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
1,4-Dichlorobenzene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Acetone	ND (5.0)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Benzene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Carbon Tetrachloride	ND (0.3)		524.2		1	07/20/18 12:44	C8G0370	CG82035
cis-1,2-Dichloroethene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Ethylbenzene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Methyl tert-Butyl Ether	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Methylene Chloride	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Naphthalene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Tertiary-amyl methyl ether	ND (1.0)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Tertiary-butyl Alcohol	ND (25.0)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Tetrachloroethene	0.7 (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Toluene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Trichloroethene	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Vinyl Chloride	ND (0.2)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Xylene O	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035
Xylene P,M	ND (0.5)		524.2		1	07/20/18 12:44	C8G0370	CG82035

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	99 %		80-120
<i>Surrogate: 4-Bromofluorobenzene</i>	99 %		80-120



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A
Initial Volume: 1010
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: CAD
Prepared: 7/23/18 11:01

608.3 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 (0.10)		608.3		1	07/24/18 14:02		CG82308
Aroclor 1221	ND (0.10)		608.3		1	07/24/18 14:02		CG82308
Aroclor 1232	ND (0.10)		608.3		1	07/24/18 14:02		CG82308
Aroclor 1242	ND (0.10)		608.3		1	07/24/18 14:02		CG82308
Aroclor 1248	ND (0.10)		608.3		1	07/24/18 14:02		CG82308
Aroclor 1254	ND (0.10)		608.3		1	07/24/18 14:02		CG82308
Aroclor 1260	ND (0.10)		608.3		1	07/24/18 14:02		CG82308
Aroclor 1262	ND (0.10)		608.3		1	07/24/18 14:02		CG82308
Aroclor 1268	ND (0.10)		608.3		1	07/24/18 14:02		CG82308

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	76 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	85 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	66 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	74 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A
Initial Volume: 1040
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 7/19/18 14:00

625.1(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	ND (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Acenaphthylene	ND (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Anthracene	ND (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Benzo(a)anthracene	0.11 (0.05)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Benzo(a)pyrene	0.24 (0.05)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Benzo(b)fluoranthene	0.48 (0.05)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Benzo(g,h,i)perylene	0.41 (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Benzo(k)fluoranthene	0.18 (0.05)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
bis(2-Ethylhexyl)phthalate	ND (2.40)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Butylbenzylphthalate	ND (2.40)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Chrysene	0.26 (0.05)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Dibenzo(a,h)Anthracene	0.08 (0.05)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Diethylphthalate	ND (2.40)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Dimethylphthalate	ND (2.40)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Di-n-butylphthalate	ND (2.40)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Di-n-octylphthalate	ND (2.40)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Fluoranthene	0.40 (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Fluorene	ND (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Indeno(1,2,3-cd)Pyrene	0.33 (0.05)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Naphthalene	ND (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Pentachlorophenol	ND (0.87)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Phenanthrene	ND (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915
Pyrene	0.28 (0.19)		625.1 SIM		1	07/20/18 1:48	C8G0347	CG81915

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	55 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	96 %		15-110
<i>Surrogate: 2-Fluorobiphenyl</i>	75 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	83 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	93 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A
Initial Volume: 500
Final Volume: 0.5
Extraction Method: 3535A

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 7/19/18 18:00

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	ND (0.250)		8270D SIM		1	07/23/18 19:25	C8G0407	CG81948
<hr/>								
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
Surrogate: 1,4-Dioxane-d8		69 %		15-115				



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
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	ND (0.10)		350.1		1	JLK	07/20/18 18:59	mg/L	CG81903
Chloride	276000 (50000)		300.0		100	JLK	07/19/18 19:24	ug/L	CG81940
Hexavalent Chromium	ND (10.0)		3500Cr B-2009		1	CCP	07/18/18 16:55	ug/L	CG81826
Phenols	ND (100)		420.1		1	JLK	07/19/18 15:38	ug/L	CG81939
Total Cyanide (LL)	ND (5.00)		4500 CN CE		1	EEM	07/19/18 14:10	ug/L	CG81918
Total Petroleum Hydrocarbon	ND (5)		1664A		1	LAB	07/23/18 13:25	mg/L	CG81946
Total Residual Chlorine	ND (20.0)		4500Cl D		1	CCP	07/18/18 18:22	ug/L	CG81824
Total Suspended Solids	40 (5)		2540D		1	CCP	07/20/18 18:00	mg/L	CG82034



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: SMR
Prepared: 7/24/18 13:50

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	07/25/18 0:47		CG82432
<hr/>								
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: Pentachloroethane</i>		83 %		30-150				
<i>Surrogate: Pentachloroethane [2C]</i>		101 %		30-150				



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP
Client Sample ID: MW-A
Date Sampled: 07/18/18 10:00
Percent Solids: N/A
Initial Volume: 1
Final Volume: 1
Extraction Method: No Prep

ESS Laboratory Work Order: 1807408
ESS Laboratory Sample ID: 1807408-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC
Prepared: 7/19/18 10:48

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	07/19/18 12:50		CG81921



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Dissolved Metals

Batch CG81836 - 3005A/200.7

Blank

Antimony	ND	5.0	ug/L
Arsenic	ND	5.00	ug/L
Cadmium	ND	0.1	ug/L
Chromium	ND	2.0	ug/L
Copper	ND	2.0	ug/L
Iron	ND	10.0	ug/L
Lead	ND	2.0	ug/L
Nickel	ND	5.0	ug/L
Selenium	ND	5.0	ug/L
Silver	ND	1.0	ug/L
Zinc	ND	5.0	ug/L

LCS

Antimony	45.2	5.0	ug/L	50.15	90	85-115	
Arsenic	45.9	5.00	ug/L	50.00	92	85-115	
Cadmium	33.3	0.5	ug/L	25.02	133	85-115	B+
Chromium	46.6	2.0	ug/L	50.00	93	85-115	
Copper	49.7	2.0	ug/L	50.00	99	85-115	
Iron	236	10.0	ug/L	250.1	94	85-115	
Lead	47.3	2.0	ug/L	50.00	95	80-120	
Nickel	46.7	5.0	ug/L	50.00	93	85-115	
Selenium	86.1	5.0	ug/L	99.95	86	80-120	
Silver	23.7	1.0	ug/L	24.98	95	85-115	
Zinc	47.2	5.0	ug/L	50.00	94	85-115	

LCS Dup

Cadmium	37.0	0.5	ug/L	25.02	148	85-115	10	20	B+
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Batch CG81942 - 245.1/7470A

Blank

Mercury	ND	0.20	ug/L
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LCS

Mercury	6.55	0.20	ug/L	6.000	109	85-115
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LCS Dup

Mercury	6.51	0.20	ug/L	6.000	109	85-115	0.5	20
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Total Metals

Batch CG81826 - [CALC]

Blank

Chromium III	ND	10.0	ug/L
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LCS

Chromium III	ND		ug/L
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LCS Dup

Chromium III	ND		ug/L
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CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CG81836 - 3005A/200.7

Blank

Antimony	ND	5.0	ug/L
Arsenic	ND	5.0	ug/L
Chromium	ND	2.0	ug/L
Chromium III	ND	2.00	ug/L
Copper	ND	2.0	ug/L
Hardness	ND	82.4	ug/L
Iron	ND	10.0	ug/L
Lead	ND	2.0	ug/L
Nickel	ND	5.0	ug/L
Selenium	ND	5	ug/L
Silver	ND	0.5	ug/L
Zinc	ND	5.0	ug/L

LCS

Antimony	45.2	5.0	ug/L	50.15	90	85-115
Arsenic	45.9	5.0	ug/L	50.00	92	85-115
Chromium	46.6	2.0	ug/L	50.00	93	85-115
Chromium III	46.6	2.00	ug/L			
Copper	49.7	2.0	ug/L	50.00	99	85-115
Hardness	3130	82.4	ug/L			
Iron	236	10.0	ug/L	250.1	94	85-115
Lead	47.3	2.0	ug/L	50.00	95	85-115
Nickel	46.7	5.0	ug/L	50.00	93	85-115
Selenium	86	5	ug/L	99.95	86	85-115
Silver	23.7	0.5	ug/L	24.98	95	85-115
Zinc	47.2	5.0	ug/L	50.00	94	85-115

LCS Dup

Chromium III	43.7	2.00	ug/L
Hardness	2870	82.4	ug/L

Batch CG81942 - 245.1/7470A

Blank

Mercury	ND	0.200	ug/L
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LCS

Mercury	6.55	0.200	ug/L	6.000	109	85-115
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LCS Dup

Mercury	6.51	0.200	ug/L	6.000	109	85-115	0.5	20
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Batch CG82535 - 3005A/200.7

Blank

Cadmium	ND	0.100	ug/L
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LCS

Cadmium	37.8	0.500	ug/L	25.02	151	85-115			B+
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LCS Dup

Cadmium	36.2	0.500	ug/L	25.02	145	85-115	4	20	B+
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CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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524.2 Volatile Organic Compounds

Batch CG82035 - 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	5.19		ug/L	5.000		104	80-120			
Surrogate: 4-Bromofluorobenzene	5.06		ug/L	5.000		101	80-120			

LCS

1,1,1-Trichloroethane	10.3		ug/L	10.00		103	70-130			
1,1,2-Trichloroethane	9.9		ug/L	10.00		99	70-130			
1,1-Dichloroethane	9.5		ug/L	10.00		95	70-130			
1,1-Dichloroethene	11.0		ug/L	10.00		110	70-130			
1,2-Dichlorobenzene	10.8		ug/L	10.00		108	70-130			
1,2-Dichloroethane	9.9		ug/L	10.00		99	70-130			
1,3-Dichlorobenzene	10.7		ug/L	10.00		107	70-130			
1,4-Dichlorobenzene	10.8		ug/L	10.00		108	70-130			
Acetone	49.3		ug/L	50.00		99	70-130			
Benzene	9.9		ug/L	10.00		99	70-130			
Carbon Tetrachloride	9.9		ug/L	10.00		99	70-130			
cis-1,2-Dichloroethene	10.3		ug/L	10.00		103	70-130			
Ethylbenzene	10.1		ug/L	10.00		101	70-130			
Methyl tert-Butyl Ether	10.0		ug/L	10.00		100	70-130			
Methylene Chloride	10.0		ug/L	10.00		100	70-130			
Naphthalene	11.1		ug/L	10.00		111	70-130			
Tertiary-amyl methyl ether	10.0		ug/L	10.00		100	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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524.2 Volatile Organic Compounds

Batch CG82035 - 524.2

Tertiary-butyl Alcohol	58.4		ug/L	50.00		117	70-130			
Tetrachloroethene	9.9		ug/L	10.00		99	70-130			
Toluene	10.4		ug/L	10.00		104	70-130			
Trichloroethene	10.2		ug/L	10.00		102	70-130			
Vinyl Chloride	9.1		ug/L	10.00		91	70-130			
Xylene O	10.5		ug/L	10.00		105	70-130			
Xylene P,M	20.7		ug/L	20.00		103	70-130			
Surrogate: 1,2-Dichlorobenzene-d4	5.08		ug/L	5.000		102	80-120			
Surrogate: 4-Bromofluorobenzene	5.17		ug/L	5.000		103	80-120			

LCS Dup

1,1,1-Trichloroethane	10.0		ug/L	10.00		100	70-130	3	20	
1,1,2-Trichloroethane	9.8		ug/L	10.00		98	70-130	0.6	20	
1,1-Dichloroethane	9.4		ug/L	10.00		94	70-130	1	20	
1,1-Dichloroethene	10.7		ug/L	10.00		107	70-130	3	20	
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	5	20	
1,2-Dichloroethane	9.9		ug/L	10.00		99	70-130	0.4	20	
1,3-Dichlorobenzene	10.2		ug/L	10.00		102	70-130	4	20	
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130	4	20	
Acetone	56.5		ug/L	50.00		113	70-130	14	20	
Benzene	9.6		ug/L	10.00		96	70-130	3	20	
Carbon Tetrachloride	9.5		ug/L	10.00		95	70-130	4	20	
cis-1,2-Dichloroethene	10.1		ug/L	10.00		101	70-130	1	20	
Ethylbenzene	9.7		ug/L	10.00		97	70-130	4	20	
Methyl tert-Butyl Ether	9.9		ug/L	10.00		99	70-130	2	20	
Methylene Chloride	9.9		ug/L	10.00		99	70-130	2	20	
Naphthalene	10.8		ug/L	10.00		108	70-130	3	20	
Tertiary-amyl methyl ether	9.7		ug/L	10.00		97	70-130	3	20	
Tertiary-butyl Alcohol	56.2		ug/L	50.00		112	70-130	4	25	
Tetrachloroethene	9.3		ug/L	10.00		93	70-130	6	20	
Toluene	9.9		ug/L	10.00		99	70-130	5	20	
Trichloroethene	9.9		ug/L	10.00		99	70-130	2	20	
Vinyl Chloride	8.9		ug/L	10.00		89	70-130	3	20	
Xylene O	10.0		ug/L	10.00		100	70-130	5	20	
Xylene P,M	19.5		ug/L	20.00		97	70-130	6	20	
Surrogate: 1,2-Dichlorobenzene-d4	4.97		ug/L	5.000		99	80-120			
Surrogate: 4-Bromofluorobenzene	5.10		ug/L	5.000		102	80-120			

608.3 Polychlorinated Biphenyls (PCB)

Batch CG82308 - 3510C

Blank

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							



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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608.3 Polychlorinated Biphenyls (PCB)

Batch CG82308 - 3510C

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	0.0373		ug/L	0.05000		75	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0433		ug/L	0.05000		87	30-150			
Surrogate: Tetrachloro-m-xylene	0.0266		ug/L	0.05000		53	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0325		ug/L	0.05000		65	30-150			

LCS

Aroclor 1016	0.88	0.10	ug/L	1.000		88	50-140			
Aroclor 1016 [2C]	0.86	0.10	ug/L	1.000		86	50-140			
Aroclor 1260	0.90	0.10	ug/L	1.000		90	1-164			
Aroclor 1260 [2C]	0.92	0.10	ug/L	1.000		92	1-164			

Surrogate: Decachlorobiphenyl	0.0415		ug/L	0.05000		83	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0459		ug/L	0.05000		92	30-150			
Surrogate: Tetrachloro-m-xylene	0.0333		ug/L	0.05000		67	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0340		ug/L	0.05000		68	30-150			

LCS Dup

Aroclor 1016	0.79	0.10	ug/L	1.000		79	50-140	11	36	
Aroclor 1016 [2C]	0.76	0.10	ug/L	1.000		76	50-140	12	36	
Aroclor 1260	0.78	0.10	ug/L	1.000		78	1-164	14	38	
Aroclor 1260 [2C]	0.79	0.10	ug/L	1.000		79	1-164	16	38	

Surrogate: Decachlorobiphenyl	0.0367		ug/L	0.05000		73	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0405		ug/L	0.05000		81	30-150			
Surrogate: Tetrachloro-m-xylene	0.0281		ug/L	0.05000		56	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0284		ug/L	0.05000		57	30-150			

625.1(SIM) Semi-Volatile Organic Compounds

Batch CG81915 - 3510C

Blank

Acenaphthene	ND	0.20	ug/L							
Acenaphthylene	ND	0.20	ug/L							
Anthracene	ND	0.20	ug/L							



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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625.1(SIM) Semi-Volatile Organic Compounds

Batch CG81915 - 3510C

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	ND	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	1.18		ug/L	2.500		47	30-130			
Surrogate: 2,4,6-Tribromophenol	2.64		ug/L	3.750		70	15-110			
Surrogate: 2-Fluorobiphenyl	1.60		ug/L	2.500		64	30-130			
Surrogate: Nitrobenzene-d5	1.89		ug/L	2.500		75	30-130			
Surrogate: p-Terphenyl-d14	2.28		ug/L	2.500		91	30-130			

LCS

Acenaphthene	2.72	0.20	ug/L	4.000		68	40-140			
Acenaphthylene	2.79	0.20	ug/L	4.000		70	40-140			
Anthracene	2.83	0.20	ug/L	4.000		71	40-140			
Benzo(a)anthracene	2.72	0.05	ug/L	4.000		68	40-140			
Benzo(a)pyrene	2.87	0.05	ug/L	4.000		72	40-140			
Benzo(b)fluoranthene	3.27	0.05	ug/L	4.000		82	40-140			
Benzo(g,h,i)perylene	3.01	0.20	ug/L	4.000		75	40-140			
Benzo(k)fluoranthene	2.79	0.05	ug/L	4.000		70	40-140			
bis(2-Ethylhexyl)phthalate	3.29	2.50	ug/L	4.000		82	40-140			
Butylbenzylphthalate	3.34	2.50	ug/L	4.000		84	40-140			
Chrysene	2.70	0.05	ug/L	4.000		67	40-140			
Dibenzo(a,h)Anthracene	3.10	0.05	ug/L	4.000		78	40-140			
Diethylphthalate	3.06	2.50	ug/L	4.000		76	40-140			
Dimethylphthalate	3.28	2.50	ug/L	4.000		82	40-140			
Di-n-butylphthalate	2.98	2.50	ug/L	4.000		74	40-140			
Di-n-octylphthalate	3.32	2.50	ug/L	4.000		83	40-140			
Fluoranthene	2.99	0.20	ug/L	4.000		75	40-140			
Fluorene	3.12	0.20	ug/L	4.000		78	40-140			
Indeno(1,2,3-cd)Pyrene	3.12	0.05	ug/L	4.000		78	40-140			



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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625.1(SIM) Semi-Volatile Organic Compounds

Batch CG81915 - 3510C

Naphthalene	2.04	0.20	ug/L	4.000		51	40-140			
Pentachlorophenol	4.09	0.90	ug/L	4.000		102	30-130			
Phenanthrene	2.76	0.20	ug/L	4.000		69	40-140			
Pyrene	2.93	0.20	ug/L	4.000		73	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	1.23		ug/L	2.500		49	30-130			
Surrogate: 2,4,6-Tribromophenol	3.40		ug/L	3.750		91	15-110			
Surrogate: 2-Fluorobiphenyl	1.85		ug/L	2.500		74	30-130			
Surrogate: Nitrobenzene-d5	2.10		ug/L	2.500		84	30-130			
Surrogate: p-Terphenyl-d14	2.63		ug/L	2.500		105	30-130			

LCS Dup

Acenaphthene	2.99	0.20	ug/L	4.000		75	40-140	9	20	
Acenaphthylene	2.97	0.20	ug/L	4.000		74	40-140	6	20	
Anthracene	3.23	0.20	ug/L	4.000		81	40-140	13	20	
Benzo(a)anthracene	2.98	0.05	ug/L	4.000		74	40-140	9	20	
Benzo(a)pyrene	3.30	0.05	ug/L	4.000		83	40-140	14	20	
Benzo(b)fluoranthene	3.58	0.05	ug/L	4.000		90	40-140	9	20	
Benzo(g,h,i)perylene	3.52	0.20	ug/L	4.000		88	40-140	16	20	
Benzo(k)fluoranthene	3.08	0.05	ug/L	4.000		77	40-140	10	20	
bis(2-Ethylhexyl)phthalate	3.59	2.50	ug/L	4.000		90	40-140	9	20	
Butylbenzylphthalate	3.67	2.50	ug/L	4.000		92	40-140	10	20	
Chrysene	2.89	0.05	ug/L	4.000		72	40-140	7	20	
Dibenzo(a,h)Anthracene	3.74	0.05	ug/L	4.000		94	40-140	19	20	
Diethylphthalate	3.33	2.50	ug/L	4.000		83	40-140	9	20	
Dimethylphthalate	3.54	2.50	ug/L	4.000		88	40-140	8	20	
Di-n-butylphthalate	3.67	2.50	ug/L	4.000		92	40-140	21	20	D+
Di-n-octylphthalate	3.46	2.50	ug/L	4.000		87	40-140	4	20	
Fluoranthene	3.63	0.20	ug/L	4.000		91	40-140	20	20	
Fluorene	3.42	0.20	ug/L	4.000		85	40-140	9	20	
Indeno(1,2,3-cd)Pyrene	3.52	0.05	ug/L	4.000		88	40-140	12	20	
Naphthalene	2.22	0.20	ug/L	4.000		55	40-140	8	20	
Pentachlorophenol	4.93	0.90	ug/L	4.000		123	30-130	19	20	
Phenanthrene	3.17	0.20	ug/L	4.000		79	40-140	14	20	
Pyrene	3.17	0.20	ug/L	4.000		79	40-140	8	20	
Surrogate: 1,2-Dichlorobenzene-d4	1.28		ug/L	2.500		51	30-130			
Surrogate: 2,4,6-Tribromophenol	3.94		ug/L	3.750		105	15-110			
Surrogate: 2-Fluorobiphenyl	1.95		ug/L	2.500		78	30-130			
Surrogate: Nitrobenzene-d5	2.13		ug/L	2.500		85	30-130			
Surrogate: p-Terphenyl-d14	2.51		ug/L	2.500		100	30-130			

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

Batch CG81948 - 3535A

Blank

1,4-Dioxane	ND	0.250	ug/L							
Surrogate: 1,4-Dioxane-d8	3.65		ug/L	5.000		73	15-115			

LCS



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution										
Batch CG81948 - 3535A										
1,4-Dioxane	6.82	0.250	ug/L	10.00		68	40-140			
Surrogate: 1,4-Dioxane-d8	3.94		ug/L	5.000		79	15-115			
LCS Dup										
1,4-Dioxane	6.86	0.250	ug/L	10.00		69	40-140	0.5	20	
Surrogate: 1,4-Dioxane-d8	4.53		ug/L	5.000		91	15-115			
Classical Chemistry										
Batch CG81824 - General Preparation										
Blank										
Total Residual Chlorine	ND	20.0	ug/L							
LCS										
Total Residual Chlorine	0.98		mg/L	0.9790		100	85-115			
Batch CG81826 - General Preparation										
Blank										
Hexavalent Chromium	ND	10.0	ug/L							
LCS										
Hexavalent Chromium	0.499		mg/L	0.4998		100	90-110			
LCS Dup										
Hexavalent Chromium	0.502		mg/L	0.4998		100	90-110	0.6	20	
Batch CG81903 - NH4 Prep										
Blank										
Ammonia as N	ND	0.10	mg/L							
LCS										
Ammonia as N	0.11	0.10	mg/L	0.09994		108	80-120			
LCS										
Ammonia as N	1.06	0.10	mg/L	0.9994		106	80-120			
Batch CG81918 - TCN Prep										
Blank										
Total Cyanide (LL)	ND	5.00	ug/L							
LCS										
Total Cyanide (LL)	20.4	5.00	ug/L	20.06		102	90-110			
LCS										
Total Cyanide (LL)	150	5.00	ug/L	150.4		99	90-110			
LCS Dup										
Total Cyanide (LL)	149	5.00	ug/L	150.4		99	90-110	0.7	20	
Batch CG81939 - General Preparation										
Blank										
Phenols	ND	100	ug/L							
LCS										
Phenols	97	100	ug/L	100.0		97	80-120			



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Classical Chemistry

Batch CG81939 - General Preparation

LCS

Phenols	993	100	ug/L	1000		99	80-120
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Batch CG81940 - General Preparation

Blank

Chloride	ND	500	ug/L				
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LCS

Chloride	2		mg/L	2.500		95	90-110
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Batch CG81946 - General Preparation

Blank

Total Petroleum Hydrocarbon	ND	5	mg/L				
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LCS

Total Petroleum Hydrocarbon	14	5	mg/L	19.38		73	66-114
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Batch CG82034 - General Preparation

Blank

Total Suspended Solids	ND	5	mg/L				
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LCS

Total Suspended Solids	24		mg/L	22.00		109	80-120
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504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

Batch CG82432 - 504/8011

Blank

1,2-Dibromoethane	ND	0.015	ug/L				
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1,2-Dibromoethane [2C]	ND	0.015	ug/L				
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Surrogate: Pentachloroethane

0.133		ug/L	0.2000		66	30-150
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Surrogate: Pentachloroethane [2C]

0.134		ug/L	0.2000		67	30-150
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LCS

1,2-Dibromoethane	0.086	0.015	ug/L	0.08000		107	70-130
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1,2-Dibromoethane [2C]	0.085	0.015	ug/L	0.08000		106	70-130
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Surrogate: Pentachloroethane

0.0811		ug/L	0.08000		101	30-150
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Surrogate: Pentachloroethane [2C]

0.0857		ug/L	0.08000		107	30-150
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LCS

1,2-Dibromoethane	0.209	0.015	ug/L	0.2000		105	70-130
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1,2-Dibromoethane [2C]	0.197	0.015	ug/L	0.2000		98	70-130
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Surrogate: Pentachloroethane

0.204		ug/L	0.2000		102	30-150
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Surrogate: Pentachloroethane [2C]

0.198		ug/L	0.2000		99	30-150
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Alcohol Scan by GC/FID

Batch CG81921 - No Prep

Blank



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Alcohol Scan by GC/FID										
Batch CG81921 - No Prep										
Ethanol	ND	10	mg/L							
LCS										
Ethanol	759	10	mg/L	1007		75	60-140			
LCS Dup										
Ethanol	704	10	mg/L	1007		70	60-140	8	30	



CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions

Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

Notes and Definitions

U	Analyte included in the analysis, but not detected
Q	Calibration required quadratic regression (Q).
PT	Pentachlorophenol tailing factor > 2.
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
BT	Benzidine tailing factor >2.
B+	Blank Spike recovery is above upper control limit (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: Tg2 Solutions
Client Project ID: Attleboro 237-RGP

ESS Laboratory Work Order: 1807408

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

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

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>

ATTACHMENT D



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>



In Reply Refer To:
Consultation Code: 05E1NE00-2018-SLI-2550
Event Code: 05E1NE00-2018-E-05977
Project Name: Coblea Shell-Branded Gasoline Station

July 28, 2018

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List
-

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2018-SLI-2550

Event Code: 05E1NE00-2018-E-05977

Project Name: Coblea Shell-Branded Gasoline Station

Project Type: DEVELOPMENT

Project Description: This facility has historically been an active gasoline station with underground storage tanks (USTs) and dispenser islands. Plans to upgrade the facility, including the USTs and dispenser islands are anticipated under a National Pollutant Discharge Elimination System (NPDES). Therefore, a determination of endangered species act eligibility is required.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/41.920139679884514N71.35883431212085W>



Counties: Bristol, MA

Endangered Species Act Species

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

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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