NOTICE OF INTENT FOR

MASSACHUSETTS REMEDIATION GENERAL PERMIT

SHELL BRANDED SERVICE STATION
620 BELMONT STREET
BROCKTON, MA
RTN 4-16968

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

June 2019

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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 620 Belmont Street, in Brockton, 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 site is identified by Massachusetts Department of Environmental Protection (MassDEP) as Release Tracking Number (RTN) 4-16968 and is regulated in accordance with Massachusetts Contingency Plan (MCP) 310 CMR 40.0000. The site is presently in Phase V Remedy Operation Status.

This NOI for an 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 620 Belmont Street, in Brockton, 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 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:	Eric D. Simpson, Environmental Program Director Esimpson@eastsodeenterprise.com Tel: (401) 943-0005
USGS Quadrangle:	Brockton, Massachusetts
Longitude, Latitude: (approximate)	- 71° 02' 36.66" W, 42° 04' 18.88" N
Site Zoning:	General Commercial
County:	Plymouth

2.1 Facility Description

The facility is a Shell-branded service station located at 620 Belmont Street in a commercial area of Brockton, Massachusetts. The property is improved with a single-story building, which includes a convenience store, a car service center, and gasoline dispensers. Subsurface structures include three 10,000-gallon underground storage tanks (USTs) and two 1,000-gallon double-walled steel USTs (one for waste oil and one for heating oil. The facility is located on a 0.251-acre parcel. Refer to **Figure 2** - Site Plan, for the location of existing UST systems, dispensers, sampling locations, and pertinent facility features.

2.2 Sensitive Environmental Receptors

The nearest surface water body is West Meadow Brook, located approximately 500 feet to the west of the facility. Depth to water at the site ranges from approximately six to eight feet below ground surface (bgs), depending on measurement location. Groundwater does not intersect surface water or wetland areas within the boundaries of the facility. There are no wetland areas located within 500 feet of the facility. A waterbody assessment and TMDL status relative to the facility location is provided in **Figure 3**.

The facility is not located within a Zone II area, Interim Wellhead Protection Area (IWPA), or a Zone A or a Potentially Productive Aquifer. Areas of Critical Environmental Concern are not located within 500 feet of the site. Areas of Priority Habitats of Rare Species, Habitats of Rare Wildlife, or Certified Vernal Pools are not located within 500 feet of the facility. 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 was previously applied for in 2015 by Sovereign Consulting Inc. to address nuisance odors associated with petroleum impacted groundwater. However, based on the USEPA RGP NOI archive it does not appear that this RGP/NOI was granted for this site. Site redevelopment construction activities have not yet begun at the facility and are planned for mid to late summer 2019. 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 discharge.

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 on the southwestern portion of the property, as depicted on **Figure 2 and 2A**. This catch basin discharges to the West Meadow Brook (freshwater) located approximately 500 feet to the west of the site. The latitude and longitude of the catch basin discharge and outfall point are:

Catch Basin Discharge Point:

Latitude: 42.071788
Longitude: -71.043785

Outfall (Broad Meadow Brook) Point:

Latitude: 42.070529
Longitude: -71.045429

The dewatering and treatment system anticipated for this work includes a 20,000-gallon baffled setting 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 6.8 (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 July and September of 2019. The discharge point for these dewatering activities is a catch basin located on the western portion of the site along Forest 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 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 indirect discharge of groundwater from the facility is West Meadow Brook. StreamStats was consulted and it was determined based on a location on West Meadow Brook where the discharge outfall location is, that the 7Q10 is 0.022 cubic feet per second (cfs). The StreamStats Report is provided in **Attachment B**. Per the Waterbody Assessment and TMDL Status Map (**Figure 3**), West Meadow Brook does not have a TMDL assignment, but West Meadow Pond, which West Meadow Brook flows into, has been assigned a TMDL status of 4C – Impairment not Caused by a Pollutant.

3.2.1 Receiving Water Classification

Based on the MassDEP Division of Water Pollution Control the discharge (outfall) point is West Meadow Brook does not appear classified, and neither does downgradient West Meadow Brook Pond:

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

https://www.mass.gov/files/documents/2017/08/zu/16ilwplist.pdf

The West Meadow Brook Pond is identified as segment ID MA62208.

4.0 CONATAMINANT INFORMATION

On March 20, 2019, groundwater samples were collected from on-site monitoring well MW-4 and the outfall discharge location at the West Meadow Brook outfall (Receiving Water). Groundwater samples collected from MW-4 during March 2019 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, Receiving Waters, during March 2019 were submitted to ESS for analysis of ammonia, hexavalent chromium, metals, iron, pH, hardness, and salinity.

Results from the groundwater sampling of MW-4 demonstrated concentrations of fluoranthene and pyrene above detected above Massachusetts Department of Environmental Protection (MassDEP) reportable concentrations for groundwater (RCGW-2) but below the technology-based effluent limitations (TBELs). 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 (Receiving Water) did not demonstrate concentrations of potential contaminants of concern (pCOCs) exceeding TBELs or RCGW-2 standards. **Table 1** provides a summary of detected pCOCs from groundwater collected at the facility (influent) and the surface water sample. Groundwater and surface water laboratory analytical reports are provided in **Attachment C**.

5.0 DILUTION FACTOR

MassDEP was contacted on April 9, 2019 to confirm the 7Q10 flow and determine a dilution factor. Final correspondence received on April 11, 2019 confirmed a dilution factor of 1.1. 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. 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 Brockton 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 quarter mile of the facility and a table documenting the historic places is provided in **Attachment E**. No historic places are located within 500 feet of the facility. Based on the scope of this work, it is unlikely that dewatering activities associated with the redevelopment of this facility will adversely affect any historic places.

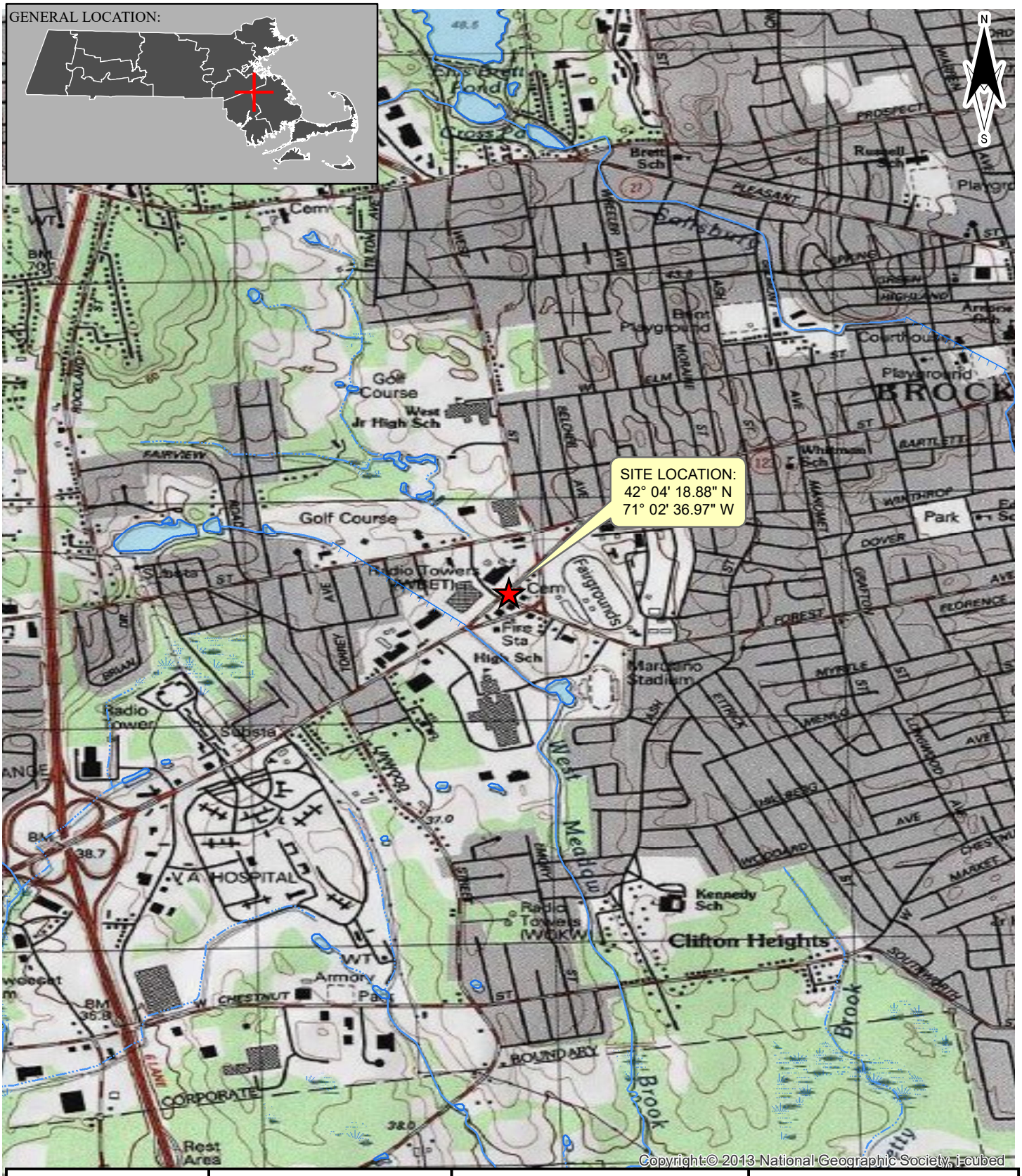
8.0 SUPPLEMENTAL INFORMATION

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 July 2019 and are anticipated to be complete by September 2019.

FIGURES



LEGEND

★ SITE LOCATION

NOTES:
1) NAD 83
2) LOCATION IS APPROXIMATE.

DATE: MARCH 13, 2019

0 1,000 2,000 4,000
Feet

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

FIGURE 1

SITE LOCUS MAP

SHELL-BRANDED STATION
620 BELMONT STREET
BROCKTON, MA

NOTES:
1) NAD 83
2) PARCEL BOUNDARIES PROVIDED BY MASS GIS - LEVEL 3 ASSESSOR'S PARCELS (2015). ALL BOUNDARIES ARE APPROXIMATE AND SHOULD NOT BE USED TO DETERMINE LEGAL OWNERSHIP.
3) ALL FEATURE LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
4) UST = UNDERGROUND STORAGE TANK

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

Legend

- MONITORING WELL
- OIL WATER SEPERATOR
- SOIL VAPOR MONITOR POINT
- SUMP
- PROPERTY BOUNDARY (APPROX)
- INJECTION POINT
- SOIL BORING
- CATCH BASIN
- DRY WELL
- MANHOLE
- UTILITY (AS MARKED)
- DISCHARGE LINE
- APPROXIMATE DISPOSAL SITE BOUNDARY
- FORMER EXCAVATION
- SITE FEATURE
- RGP SAMPLE LOCATION
- DISCHARGE LOCATION (APPROXIMATE)

0 20 40 80
Feet

DATE: MARCH 13, 2019

231 ELM STREET
BLACKSTONE, MA 01504

FIGURE 2

SITE PLAN

SHELL-BRANDED STATION
620 BELMONT STREET
BROCKTON, MA

NOTES:
1) NAD 83
2) PARCEL BOUNDARIES PROVIDED BY MASS GIS - LEVEL 3 ASSESSOR'S PARCELS (2015). ALL BOUNDARIES ARE APPROXIMATE AND SHOULD NOT BE USED TO DETERMINE LEGAL OWNERSHIP.
3) ALL FEATURE LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
4) UST = UNDERGROUND STORAGE TANK

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

Legend

- RGP SAMPLE LOCATION
- DISCHARGE LOCATION (APPROXIMATE)
- APPROXIMATE OUTFALL LOCATION
- STREAM/BROOK
- PROPERTY BOUNDARY (APPROX)

0 40 80 160
Feet

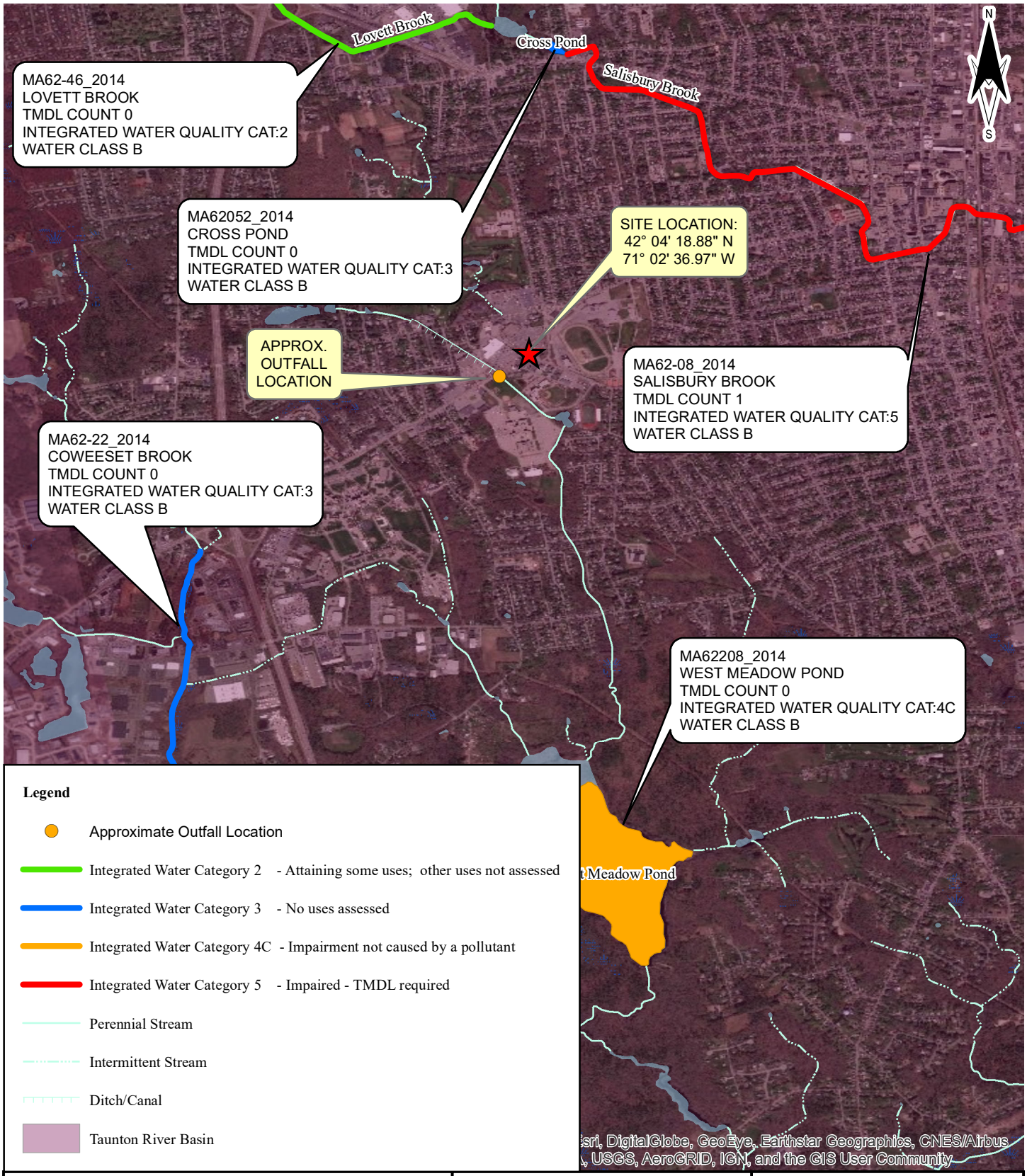
DATE: MARCH 13, 2019

231 ELM STREET
BLACKSTONE, MA 01504

FIGURE 2A

EXTENDED SITE PLAN

SHELL-BRANDED STATION
620 BELMONT STREET
BROCKTON, 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. MA82A-015_2014: ASSESSMENT ID WITH REPORTING CYCLE YEAR
4. UNNAMED TRIBUTARY: WATERBODY NAME BASED ON SARIS, PALIS, OR CAMIS.
5: (1): 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

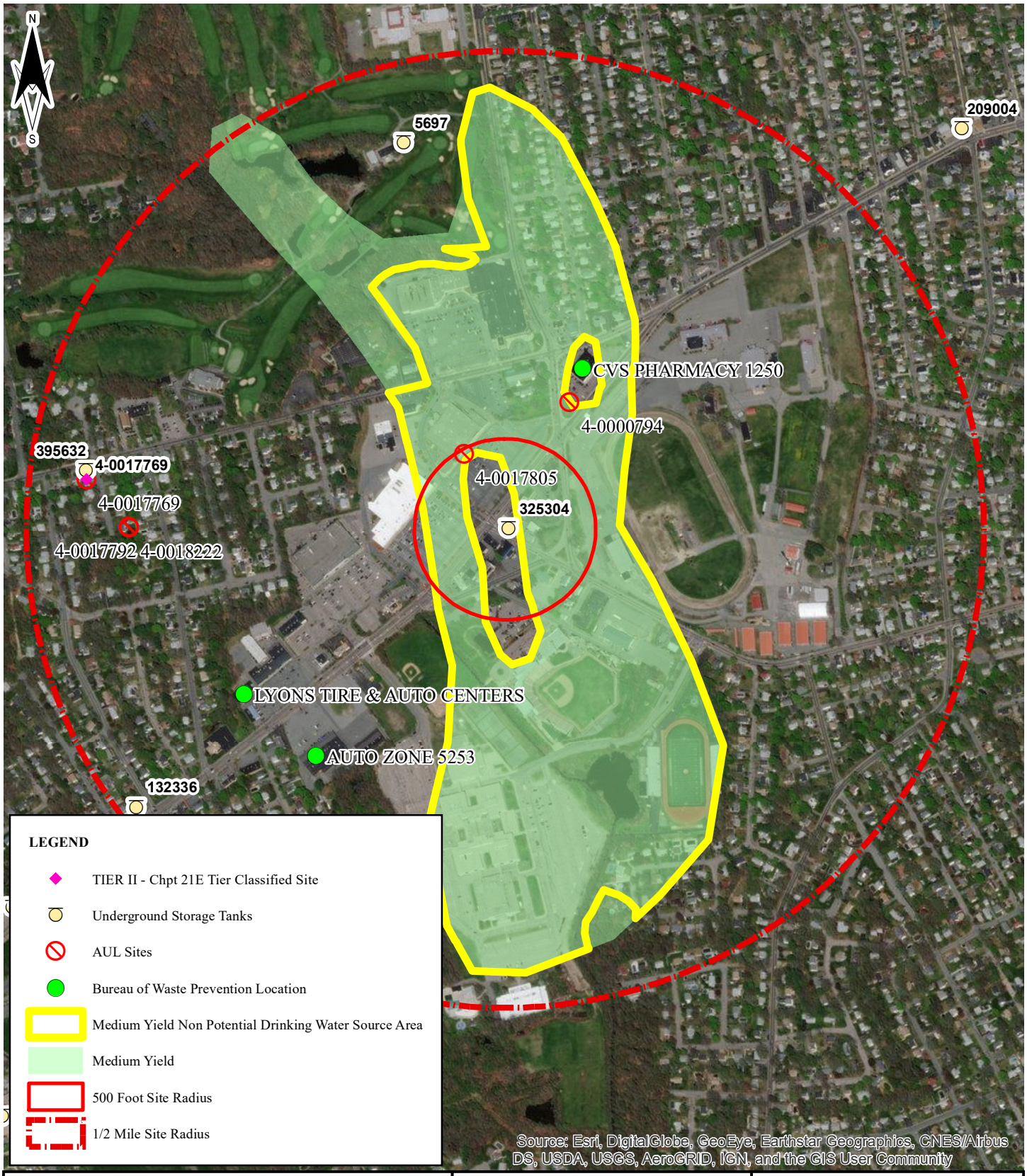
DATE: MARCH 13, 2019

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

FIGURE 3

WATERBODY ASSESSMENT & TMDL STATUS

SHELL-BRANDED STATION
620 BELMONT STREET
BROCKTON, MA



NOTES:
1) NAD 83
2) ALL LAYERS TAKEN FROM MASS GIS. THE MOST UP TO DATE DATA WAS USED FOR ALL LAYERS BUT IS SUBJECT TO CHANGE. ALL DATA MAINTAINED BY MASS GIS.

0 375 750 1,500
Feet

DATE: MARCH 13, 2019

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

FIGURE 4

AREAS OF ENVIRONMENTAL CONCERN

SHELL-BRANDED STATION
620 BELMONT STREET
BROCKTON, MA

MassDEP - Bureau of Waste Site Cleanup

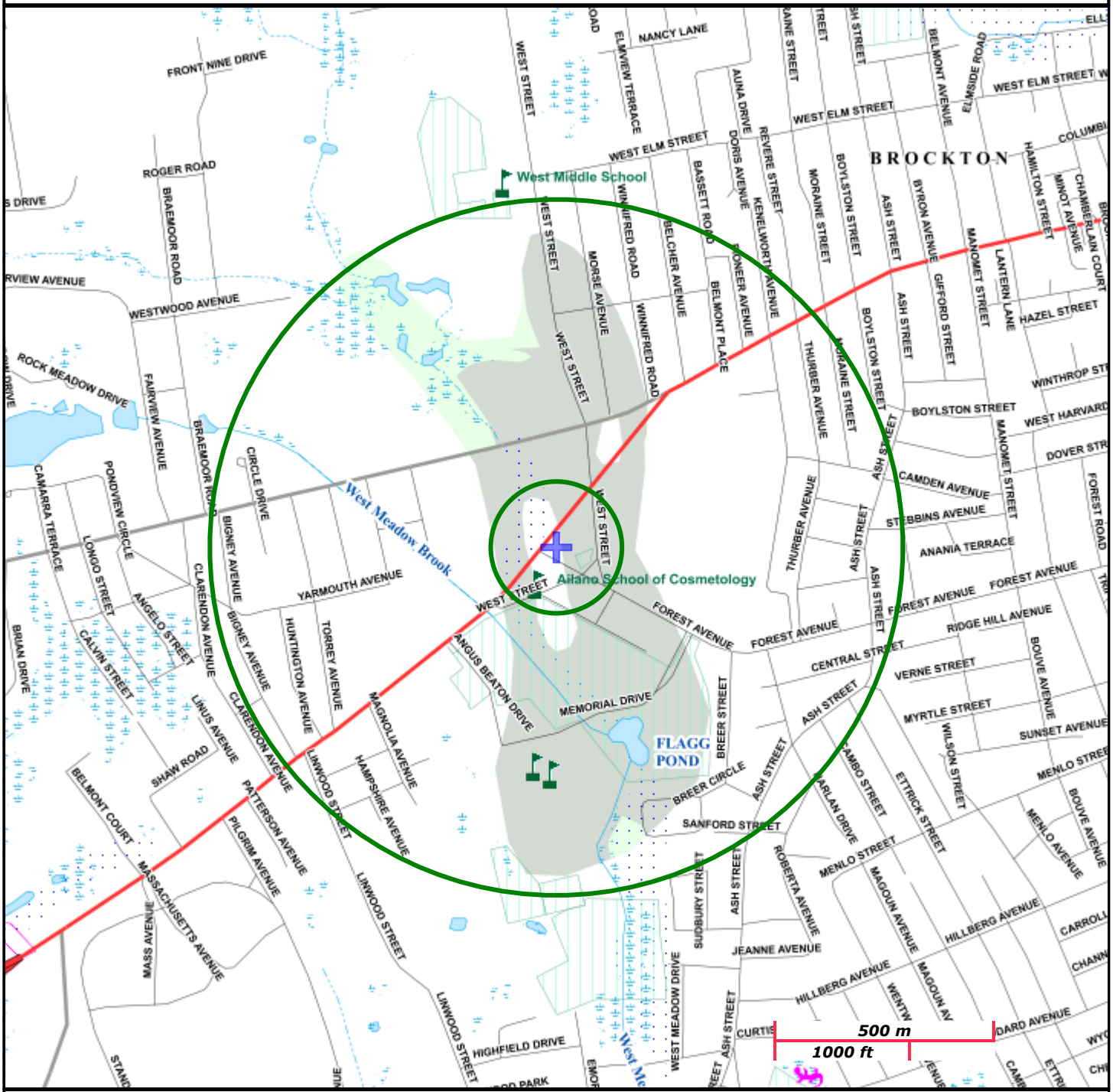
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
SHELL BRANDED SERVICE STATION
620 BELMONT STREET BROCKTON, MA
4-000016968

NAD83 UTM Meters:
4659780mN , 330944mE (Zone: 19)
March 13, 2019

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

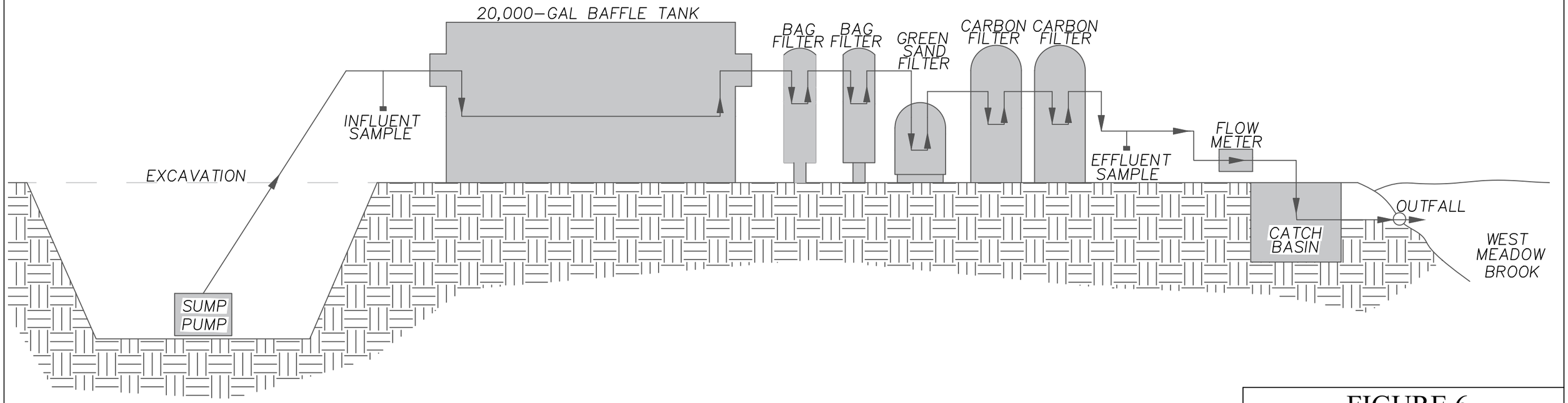
Hydrography: Open Water, PWS Reservoir, Tidal Flat

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.



NOTES:
1) NOT TO SCALE.
2) THE DISTANCE FROM THE CATCH BASIN/DISCHARGE LOCATION TO THE WEST MEADOW BROOK OUTFALL IS APPROXIMATELY 650 FEET.

FIGURE 6

GROUNDWATER DEWATERING INSTALLATION DIAGRAM

SHELL-BRANDED SERVICE STATION
LOCATED AT
620 BELMONT STREET
BROCKTON, MA
PREPARED FOR
COLBEA ENTERPRISES LLC

TG2 SOLUTIONS, LLC
231 ELM STREET
BLACKSTONE, MA 0154

DATE: MARCH 13, 2019 REVISED:

TABLES

TABLE 1
SUMMARY OF WATER MONITORING DATA
Shell-Branded Service Station
620 Belmont Street
Brockton, Massachusetts

		Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Zinc (µg/L)	Benzene (µg/L)	Fluoranthene[b] (µg/L)	Pyrene[b] (µg/L)	Chloride (mg/L)	Total Suspended Solids (mg/L)	Hardness (mg/L)	pH
MassDEP Reportable Concentrations (RCGW-2)		100,000	NA	1,000	900	1,000	0.2	0.02	NA	NA	NA	NA
Effluent Limitations - TBEL		242	5,000	160	420	5.0	100	100	Report	30	NA	NA
Well ID	**Sample Date**											
Receiving Water - West Meadow Brook	03/20/19	**4.2**	**275**	ND	**18.8**	--	--	--	--	--	**46.10**	**6.41**
MW-4	03/20/19	**4.5**	**661**	**3.0**	**13.2**	**1.9**	**0.24**	**0.19**	**340**	**8**	**67.8**	**6.80**

Notes:
µg/L - micrograms per liter
mg/L - milligram per liter
MassDEP - Massachusetts Department of Envnironmental 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:

<table>
<tr><td rowspan="2">1. Name of site:

Colbea Shell-Branded Gasoline Station
620 Belmont Street, Brockton, MA</td><td colspan="3">Site address:
Street: 620 Belmont Street</td></tr>
<tr><td>City: Brockton</td><td>State: MA</td><td>Zip: 02301</td></tr>
<tr><td rowspan="4">2. Site owner

Colbea Enterprises, LLC
2050 Plainfield Pike
Cranston, RI 02921

Owner is (check one): ☐ Federal ☐ State/Tribal ☒ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Eric Simpson</td></tr>
<tr><td colspan="2">Telephone: 401-943-0005</td><td>Email: Esimpson@eastsodeenterprise.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 2050 Plainfield Pike</td></tr>
<tr><td>City: Cranston</td><td>State: RI</td><td>Zip: 02920</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner

Same as owner</td><td colspan="3">Contact Person: Same as above</td></tr>
<tr><td colspan="2">Telephone:</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address:
Street:</td></tr>
<tr><td>City:</td><td>State:</td><td>Zip:</td></tr>
<tr><td colspan="2">4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ☑ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="2">5. Other regulatory program(s) that apply to the site (check all that apply):
☑ MA Chapter 21e; list RTN(s): 4-16968
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Catch basin to West Meadow Brook	MA62208	Unclassified

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

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

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

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. Not listed/classified

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	0.022 cfs
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	1.1

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ☑ Yes ☐ No
If yes, indicate date confirmation received: April 10, 2019

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

C. Source water information:

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

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

2. Source water contaminants:	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ☑ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ☑ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ☑ New discharge ☐ New source	
Outfall(s): The proposed discharge location for treated groundwater is a catch basin located on the western corner of the site, which discharges to West Meadow Brook.	Outfall location(s): (Latitude, Longitude) Catch Basin Discharge Point: Latitude: 42.071788, Longitude:-71.043785 Outfall (West Meadow Brook) Point: Latitude: 42.070629, Longitude: -71.045429
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ☑ Indirect discharge, if so, specify: ☐ A private storm sewer system ☑ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☑ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☑ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☑ No	
Provide the expected start and end dates of discharge(s) (month/year): May to August 2019 for construction, dewatering expected to be less than that Indicate if the discharge is expected to occur over a duration of: ☑ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ☑ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia	x		1	350.1	0.10	<0.10	0.0	Report mg/L	---
Chloride	x		1	300.0	50,000	340,000	340,000	Report µg/l	---
Total Residual Chlorine	x		1	4500CID	0.02	<0.02	0.0	0.2 mg/L	13
Total Suspended Solids		x	1	2340D	5	8	8	30 mg/L	–
Antimony	x		1	200.8	5	<5	0.0	206 µg/L	–
Arsenic	x		1	3113B	5	<5	0.0	104 µg/L	–
Cadmium	x		1	200.8	5	<5	0.0	10.2 µg/L	–
Chromium III	x		1	200.7	10	<10	0.0	323 µg/L	–
Chromium VI	x		1	3500Cr	10	<10	0.0	323 µg/L	–
Copper		x	1	200.7	2.0	4.5	4.5	242 µg/L	–
Iron		x	1	200.7	10	661	661	5,000 µg/L	–
Lead		x	1	200.7	0.5	3	3	160 µg/L	1.46
Mercury	x		1	245.1	0.2	<0.2	0.0	0.739 µg/L	–
Nickel	x		1	200.7	0.2	<0.2	0.0	1,450 µg/L	–
Selenium	x		1	200.7	5	<5	0.0	235.8 µg/L	–
Silver	x		1	200.7	0.5	<0.5	0.0	35.1 µg/L	–
Zinc		x	1	200.7	5	13.2	13.2	420 µg/L	–
Cyanide	x		1	4500CN CE	5	<5	0.0	178 mg/L	–
B. Non-Halogenated VOCs									
Total BTEX		x	1	524.2	0.5	1.9	1.9	100 µg/L	---
Benzene		x	1	524.2	0.5	1.9	1.9	5.0 µg/L	---
1,4 Dioxane	x		1	8270 D SIM	0.250	<0.250	0.0	200 µg/L	---
Acetone	x		1	524.2	5.0	<5.0	0.0	7.97 mg/L	---
Phenol	x		1	420.1	100	<100	0.0	1,080 µg/L	–

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	x		1	524.2	0.3	<0.3	0.0	4.4 µg/L	–
1,2 Dichlorobenzene	x		1	524.2	0.5	<0.5	0.0	600 µg/L	---
1,3 Dichlorobenzene	x		1	524.2	0.5	<0.5	0.0	320 µg/L	---
1,4 Dichlorobenzene	x		1	524.2	0.5	<0.5	0.0	5.0 µg/L	---
Total dichlorobenzene	x		1	524.2	0.5	<0.5	0.0	763 µg/L in NH	---
1,1 Dichloroethane	x		1	524.2	0.5	<0.5	0.0	70 µg/L	---
1,2 Dichloroethane	x		1	524.2	0.5	<0.5	0.0	5.0 µg/L	---
1,1 Dichloroethylene	x		1	524.2	0.5	<0.5	0.0	3.2 µg/L	---
Ethylene Dibromide	x		1	524.2	0.5	<0.5	0.0	0.05 µg/L	---
Methylene Chloride	x		1	524.2	0.5	<0.5	0.0	4.6 µg/L	---
1,1,1 Trichloroethane	x		1	524.2	0.5	<0.5	0.0	200 µg/L	---
1,1,2 Trichloroethane	x		1	524.2	0.5	<0.5	0.0	5.0 µg/L	---
Trichloroethylene	x		1	524.2	0.5	<0.5	0.0	5.0 µg/L	---
Tetrachloroethylene	x		1	524.2	0.5	<0.5	0.0	5.0 µg/L	–
cis-1,2 Dichloroethylene	x		1	524.2	0.5	<0.5	0.0	70 µg/L	---
Vinyl Chloride	x		1	524.2	0.2	<0.2	0.0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	x		1	625.1 SIM	2.34	<2.34	0.0	190 µg/L	–
Diethylhexyl phthalate	x		1	625.1 SIM	2.34	<2.34	0.0	101 µg/L	–
Total Group I PAHs	x		1	625.1 SIM	0.05	<0.05	0.0	1.0 µg/L	---
Benzo(a)anthracene	x		1	625.1 SIM	0.05	<0.05	0.0	As Total PAHs	–
Benzo(a)pyrene	x		1	625.1 SIM	0.05	<0.05	0.0		–
Benzo(b)fluoranthene	x		1	625.1 SIM	0.05	<0.05	0.0		–
Benzo(k)fluoranthene	x		1	625.1 SIM	0.05	<0.05	0.0		–
Chrysene	x		1	625.1 SIM	0.05	<0.05	0.0		–
Dibenzo(a,h)anthracene	x		1	625.1 SIM	0.05	<0.05	0.0		–
Indeno(1,2,3-cd)pyrene	x		1	625.1 SIM	0.05	<0.05	0.0		–

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		x	1	625.1 SIM	0.19	0.43	0.43	100 µg/L	---
Naphthalene	x		1	625.1 SIM	0.19	<0.19	0.0	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	x		1	608.3	0.09	<0.09	0.0	0.000064 µg/L	---
Pentachlorophenol	x		1	625.1 SIM	0.84	<0.84	0.0	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	x		1	1664A	5	<5.0	0.0	5.0 mg/L	---
Ethanol	x		1	D3695	10	<10	0.0	Report mg/L	---
Methyl-tert-Butyl Ether	x		1	524.2	0.5	3.7	3.7	70 µg/L	
tert-Butyl Alcohol	x		1	524.2	25.0	124	124	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	x		1	524.2	1.0	<1.0	0.0	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
Hardness		x	1	200.7	82.4	67,800	67,800		
pH		x	1	9040	—	6.41			

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ☑ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ☑ Separation/Filtration ☐ Other; if so, specify:

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

See NOI RGP Report Section 3.0, and Figure 6

Identify each major treatment component (check any that apply):
☑ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☑ Mechanical filter ☑ Media filter
☐ Chemical feed tank ☐ Air stripping unit ☑ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Is use of a flow meter feasible? (check one): ☑ Yes ☐ No, if so, provide justification:	60 gpm
Provide the proposed maximum effluent flow in gpm.	40 gpm
Provide the average effluent flow in gpm.	< 40 gpm
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

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

F. Chemical and additive information

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

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

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

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

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

G. Endangered Species Act eligibility determination

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

☐ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

☐ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

☑ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☑ the operator ☐ EPA ☐ Other; if so, specify:

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

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

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

H. National Historic Preservation Act eligibility determination

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

☑ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

☐ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

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

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

I. Supplemental information

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

Please refer to the NOI RGP Report, attached. This report includes a site map with discharge and outfall locations, water classifications, potential environmental receptors, groundwater analytical tables and laboratory analytical reports, and supporting documentation for the ESA determination and historic sites within the vicinity of the facility this NOI RGP is being applied for.

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

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

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
BMPP certification statement: A BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ☑ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ☑ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☑ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☑ No ☐ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ☑
Signature: Eric S	Date: 6/24/19
Print Name and Title: Eric Simpson - Environmental Manager	

ATTACHMENT B

Enter number values in green boxes below

Enter values in the units specified

↓		
0.0124	Q_R = Enter upstream flow in **MGD**	Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor approved
0.0864	Q_P = Enter discharge flow in **MGD**	Saltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry
		Discharge flow is equal to the design flow or 1 MGD, whichever is less
0	Downstream 7Q10	Only if approved by State as the entry for Q_R; leave 0 if no entry

Enter a dilution factor, if other than zero

↓	
1.1	

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

Enter values in the units specified

↓	
46.1	C_d = Enter influent hardness in **mg/L** $CaCO_3$
67.8	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$

Freshwater only

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

↓	
6.41	pH in **Standard Units**
17.5	Temperature in **°C**
0	Ammonia in **mg/L**
46.1	Hardness in **mg/L** $CaCO_3$
0.3	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**
4.2	Copper in **µg/L**
275	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**
18.8	Zinc in **µg/L**

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

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**
4.5	Copper in **µg/L**
661	Iron in **µg/L**
3	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
13.2	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

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:

$$C_r = \frac{Q_dC_d + Q_sC_s}{Q_r}$$

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:

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:

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

B. Calculate WQBEL:

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

$$C_d = \frac{Q_r C_r - Q_sC_s}{Q_d}$$

C_r = Water quality criterion in µg/L

Q_d = Discharge flow in MGD

C_d = WQBEL in µg/L

Q_s = Upstream flow (7Q10) in MGD

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

Q_r = Downstream receiving water flow in MGD

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

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

C_r = Water quality criterion in µg/L
Q_d = Discharge flow in MGD
Q_r = Downstream receiving water flow in MGD

C. Determine if a WQBEL applies:

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

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

C_r = Downstream concentration in µg/L
Q_d = Discharge flow in MGD
C_d = Influent concentration in µg/L
Q_s = Upstream flow (7Q10) in MGD
C_s = Upstream (receiving water) concentration in µg/L
Q_r = Downstream receiving water flow in MGD

The WQBEL applies if:

1) the projected downstream concentration calculated in accordance with Step 1, above, and the discharge concentration of a parameter 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

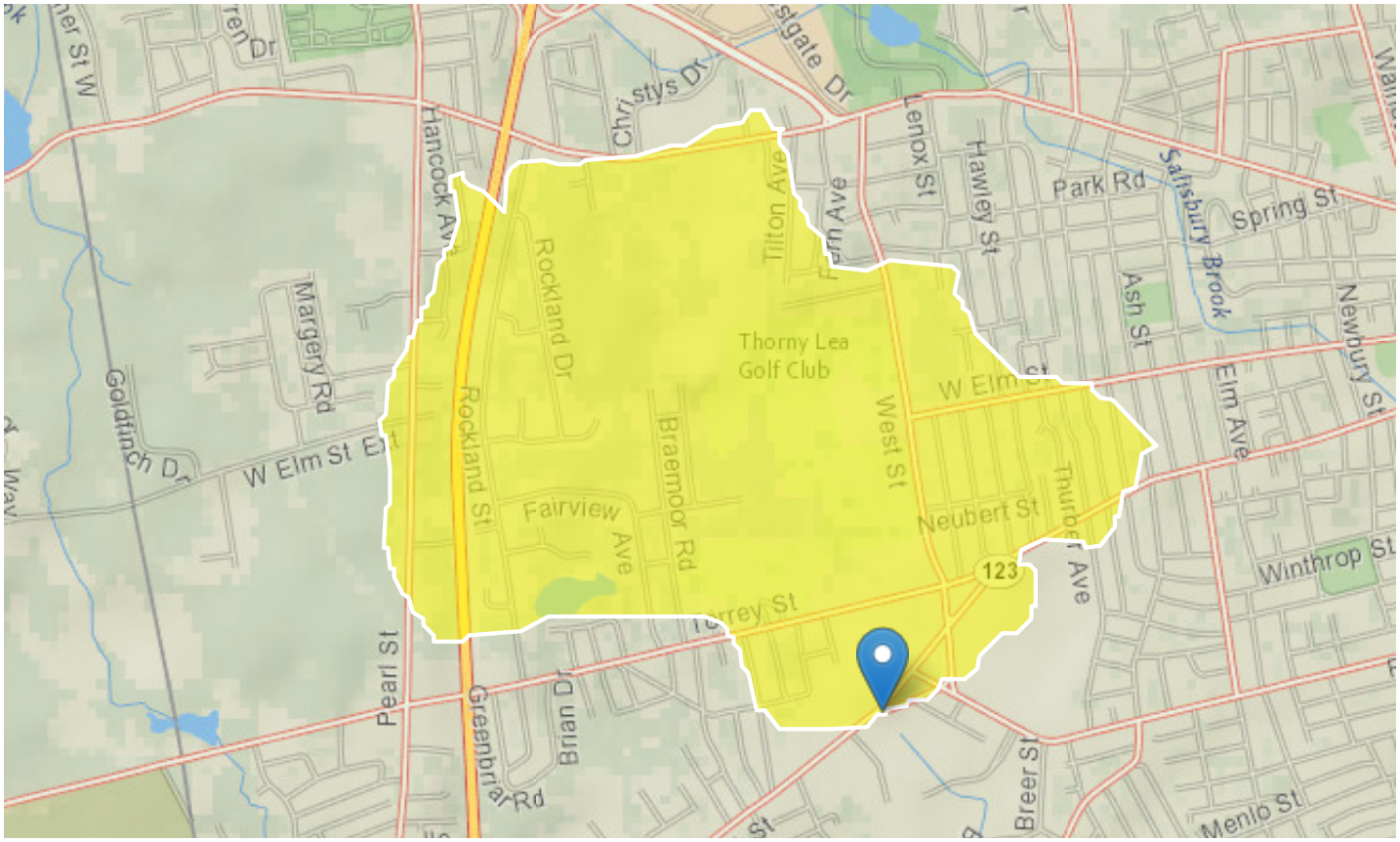
Part 2.1.1 of the RGP for that parameter applies.

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	**13**	µg/L	50	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	732	µg/L		
Arsenic	**104**	µg/L	11	µg/L		
Cadmium	**10.2**	µg/L	0.1819	µg/L		
Chromium III	**323**	µg/L	54.8	µg/L		
Chromium VI	**323**	µg/L	13.1	µg/L		
Copper	**242**	µg/L	5.2	µg/L		
Iron	**5000**	µg/L	1104	µg/L		
Lead	160	µg/L	**1.46**	µg/L		
Mercury	**0.739**	µg/L	1.04	µg/L		
Nickel	**1450**	µg/L	32.5	µg/L		
Selenium	**235.8**	µg/L	5.7	µg/L		
Silver	**35.1**	µg/L	1.3	µg/L		
Zinc	**420**	µg/L	71.9	µg/L		
Cyanide	**178**	mg/L	5.9	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	343	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**	µg/L	1.8	µg/L		
1,2 Dichlorobenzene	**600**	µg/L	---			
1,3 Dichlorobenzene	**320**	µg/L	---			
1,4 Dichlorobenzene	**5.0**	µg/L	---			
Total dichlorobenzene	**---**	µg/L	---			
1,1 Dichloroethane	**70**	µg/L	---			
1,2 Dichloroethane	**5.0**	µg/L	---			
1,1 Dichloroethylene	**3.2**	µg/L	---			
Ethylene Dibromide	**0.05**	µg/L	---			
Methylene Chloride	**4.6**	µg/L	---			
1,1,1 Trichloroethane	**200**	µg/L	---			
1,1,2 Trichloroethane	**5.0**	µg/L	---			
Trichloroethylene	**5.0**	µg/L	---			
Tetrachloroethylene	**5.0**	µg/L	3.8	µg/L		
cis-1,2 Dichloroethylene	**70**	µg/L	---			
Vinyl Chloride	**2.0**	µg/L	---			

D. Non-Halogenated SVOCs						
Total Phthalates	**190**	µg/L	---	µg/L		
Diethylhexyl phthalate	**101**	µg/L	2.5	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	**1.0**	µg/L	0.0043	µg/L	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0043	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.0043	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0043	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.0043	µg/L	---	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0043	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0043	µg/L	---	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	**100**	µg/L	---			
Naphthalene	**20**	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	**0.000064**	µg/L	---		0.5	µg/L
Pentachlorophenol	**1.0**	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	**5.0**	mg/L	---			
Ethanol	**Report**	mg/L	---			
Methyl-tert-Butyl Ether	**70**	µg/L	23	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

620 Belmont Street, Brockton, MA

Region ID:
MA
Workspace ID:
MA20190409195844678000
Clicked Point (Latitude, Longitude):
42.07053, -71.04543
Time:
2019-04-09 15:58:59 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.32	square miles
ELEV	Mean Basin Elevation	161	feet
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	2.5	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.15	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
BSLDEM250	Mean basin slope computed from 1:250K DEM	1.037	percent
BSLDEM10M	Mean basin slope computed from 10 m DEM	2.848	percent
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	35.15	percent
FOREST	Percentage of area covered by forest	15.75	percent

Peak-Flow Statistics Parameters [Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.32	square miles	0.16	512
ELEV	Mean Basin Elevation	161	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	2.5	percent	0	32.3

Peak-Flow Statistics Flow Report [Peak Statewide 2016 5156]

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

Statistic	Value	Unit	PII	PIu	SEp
2 Year Peak Flood	53.5	ft^3/s	27.1	105	42.3
5 Year Peak Flood	89	ft^3/s	44.4	178	43.4
10 Year Peak Flood	117	ft^3/s	57.1	240	44.7
25 Year Peak Flood	158	ft^3/s	74.4	336	47.1
50 Year Peak Flood	192	ft^3/s	87.5	422	49.4
100 Year Peak Flood	228	ft^3/s	101	518	51.8
200 Year Peak Flood	268	ft^3/s	115	627	54.1
500 Year Peak Flood	325	ft^3/s	146	723	57.6

Peak-Flow Statistics Citations

Zarriello, P.J.,2017, Magnitude of flood flows at selected annual exceedance probabilities for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2016–5156, 99 p. (https://dx.doi.org/10.3133/sir20165156)

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.32	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0.15	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	1.037	percent	0.32	24.6

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

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

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

Statistic	Value	Unit
50 Percent Duration	1.27	ft^3/s
60 Percent Duration	0.861	ft^3/s
70 Percent Duration	0.498	ft^3/s
75 Percent Duration	0.377	ft^3/s
80 Percent Duration	0.262	ft^3/s
85 Percent Duration	0.177	ft^3/s
90 Percent Duration	0.115	ft^3/s
95 Percent Duration	0.0594	ft^3/s
98 Percent Duration	0.0386	ft^3/s
99 Percent Duration	0.0268	ft^3/s

Flow-Duration 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/)

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.32	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	1.037	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.15	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	0.0728	ft^3/s
7 Day 10 Year Low Flow	0.022	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/)

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.32	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	1.037	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.15	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

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

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

Statistic	Value	Unit
August 50 Percent Duration	0.202	ft^3/s

August Flow-Duration 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/)

Bankfull Statistics Parameters [Bankfull Statewide SIR2013 5155]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.32	square miles	0.6	329
BSLDEM10M	Mean Basin Slope from 10m DEM	2.848	percent	2.2	23.9

Bankfull Statistics Flow Report [Bankfull Statewide SIR2013 5155]

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

Statistic	Value	Unit	SEp
Bankfull Width	14.3	ft	21.3
Bankfull Depth	0.91	ft	19.8
Bankfull Area	12.8	ft^2	29
Bankfull Streamflow	22.7	ft^3/s	55

Bankfull Statistics Citations

Bent, G.C., and Waite, A.M.,2013, Equations for estimating bankfull channel geometry and discharge for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2013–5155, 62 p., (http://pubs.usgs.gov/sir/2013/5155/)

Probability Statistics Parameters [Perennial Flow Probability]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.32	square miles	0.01	1.99
PCTSNDGRV	Percent Underlain By Sand And Gravel	35.15	percent	0	100
FOREST	Percent Forest	15.75	percent	0	100
MAREGION	Massachusetts Region	0	dimensionless	0	1

Probability Statistics Flow Report [Perennial Flow Probability]

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

Statistic	Value	Unit	PC
Probability Stream Flowing Perennially	0.957	dim	71

Probability Statistics Citations

Bent, G.C., and Steeves, P.A.,2006, A revised logistic regression equation and an automated procedure for mapping the probability of a stream flowing perennially in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2006–5031, 107 p. (http://pubs.usgs.gov/sir/2006/5031/pdfs/SIR_2006-5031rev.pdf)

Subject: RE: 629 Belmont Street, Brockton - RGP
Date: Thursday, April 11, 2019 at 11:01:33 AM Eastern Daylight Time
From: Ruan, Xiaodan (DEP)
To: Leah Smith
CC: Vakalopoulos, Catherine (DEP)

Thank you Leah for the clarification. That's fine.
I used the coordinates you provided to check the 7Q10 so I can confirm that the 7Q10 and the DF are the same and correct.
Since this is a current MCP site, you do not need to apply or submit a fee to MassDEP.

Thanks,
Xiaodan

From: Leah Smith [mailto:lsmith@tg2solutions.com]
Sent: Wednesday, April 10, 2019 6:04 PM
To: Ruan, Xiaodan (DEP)
Subject: Re: 629 Belmont Street, Brockton - RGP

Hi Xiaodan,

I apologize for the confusion, but this site is actually at 620 Belmont Street, not 629, and it does have an active RTN of 4-16968. The wrong address was a typo in the email title. However, as the discharge location on-site and at the outfall location are the same coordinates I believe the information provided for the discharge should be the same (i.e. dilution factor, etc.). Can you please re-confirm. Again, apologies for the confusion.

Thanks,
Leah

From: "Ruan, Xiaodan (DEP)" <xiaodan.ruan@state.ma.us>
Date: Wednesday, April 10, 2019 at 12:09 PM
To: Leah Smith <lsmith@tg2solutions.com>
Cc: "Vakalopoulos, Catherine (DEP)" <catherine.vakalopoulos@state.ma.us>
Subject: RE: 629 Belmont Street, Brockton - RGP

Hi Leah,

I checked the 7Q10 and dilution factor calculation (DF = 1.1) for this proposed discharge to the West Meadow Brook in Brockton and they are correct. This discharge is not to an Outstanding Resource Water so no additional MassDEP review is needed.

The water quality information for the West Meadow Brook Pond in the attachment (Figure 3) was also correct.

In addition to submitting the EPA NOI for the RGP, since this is a closed MCP site and is not an active one currently, you will have to apply to MassDEP and submit a fee (unless fee exempt, e.g. a municipality). 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 questions.

Thanks,
Xiaodan

From: Vakalopoulos, Catherine (DEP)
Sent: Tuesday, April 09, 2019 5:59 PM
To: Ruan, Xiaodan (DEP)
Cc: Leah Smith
Subject: FW: 629 Belmont Street, Brockton - RGP

Hi Xiaodan,
Do you have time to look at this?
Thanks,
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: Tuesday, April 09, 2019 5:42 PM
To: Vakalopoulos, Catherine (DEP)
Cc: Jason Sherburne; Eric Simpson; Raquel Vella
Subject: 629 Belmont Street, Brockton - RGP

Good evening,

I'm working on a RGP on behalf of a client to complete a NOI for a RGP for redevelopment activities at 620 Belmont Street, Brocktono. This facility is an active gasoline station with a closed RTN (4-16968) and is being redeveloped into an updated gasoline station facility with new tanks, etc.

Attached please find the dilution factor spreadsheet and effluent limit calculations, as well as the StreamStats output. The discharge location is a catch basin located on the western portion of the site property, which discharges to West Meadow Brook located west of the site – see Figure 2A. The discharge flow was calculated based on the design flow: (60 gpm x 60 mph x 24h) / 1 million = 0.0864 mgd. The latitude and longitude of the catch basin discharge and outfall point are:

Catch Basin Discharge Point:
Latitude: 42.071788
Longitude: -71.043785

Outfall (Broad Meadow Brook) Point:
Latitude: 42.070529
Longitude: -71.045429

The outfall is West Meadow Brook which appears to flow to West Meadow Brook Pond, ID MA62208. I've also attached a table with the summary of contaminants detected in the influent sample (site groundwater) and the outfall surface water sample.

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

information.

Thanks for your help.

Leah

Application Version: 4.3.0

ATTACHMENT C

CERTIFICATE OF ANALYSIS

Eric D. Simpson
Tg2 Solutions
231 Elm Street
Blackstone, MA 01504

RE: Brockton 620 (N/A)
ESS Laboratory Work Order Number: 1903539

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:30 pm, Mar 27, 2019

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: Brockton 620

ESS Laboratory Work Order: 1903539

SAMPLE RECEIPT

The following samples were received on March 20, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1903539-01	Receiving Water 1	Ground Water	2520B, 350.1, 6010C, 6020A, 7010, 7196A, 7470A, 9040

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620

ESS Laboratory Work Order: 1903539

PROJECT NARRATIVE

Total Metals
CC92044-BSD1 [redacted]
Antimony (127% @ 80-120%)

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.

[redacted]

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620

ESS Laboratory Work Order: 1903539

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 18-2.1 - 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
5035A - 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: Brockton 620
Client Sample ID: Receiving Water 1
Date Sampled: 03/20/19 11:45
Percent Solids: N/A

ESS Laboratory Work Order: 1903539
ESS Laboratory Sample ID: 1903539-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (0.2)		6020A		1	KJK	03/22/19 19:00	100	10	CC92044
Arsenic	ND (0.5)		7010		1	KJK	03/26/19 21:26	100	10	CC92044
Beryllium	ND (0.1)		6010C		1	KJK	03/22/19 12:32	100	10	CC92044
Cadmium	ND (0.1)		6020A		1	KJK	03/22/19 13:54	100	10	CC92044
Chromium	ND (2.0)		6010C		1	KJK	03/22/19 12:32	100	10	CC92044
Copper	**4.2** (2.0)		6010C		1	KJK	03/22/19 12:32	100	10	CC92044
Hardness	**46100** (82.4)		6010C		1	KJK	03/22/19 12:32	1	1	[CALC]
Iron	**275** (10.0)		6010C		1	KJK	03/22/19 12:32	100	10	CC92044
Lead	ND (2.0)		6010C		1	KJK	03/22/19 12:32	100	10	CC92044
Mercury	ND (0.20)		7470A		1	MKS	03/22/19 16:06	20	40	CC92162
Nickel	ND (5.0)		6010C		1	KJK	03/22/19 12:32	100	10	CC92044
Selenium	ND (1.0)		7010		1	KJK	03/27/19 6:31	100	10	CC92044
Silver	ND (1.0)		6010C		1	KJK	03/22/19 12:32	100	10	CC92044
Thallium	ND (0.1)		6020A		1	KJK	03/22/19 19:00	100	10	CC92044
Zinc	**18.8** (5.0)		6010C		1	KJK	03/22/19 12:32	100	10	CC92044

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620
Client Sample ID: Receiving Water 1
Date Sampled: 03/20/19 11:45
Percent Solids: N/A

ESS Laboratory Work Order: 1903539
ESS Laboratory Sample ID: 1903539-01
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Ammonia as N	ND (0.10)		350.1		1	JLK	03/26/19 17:28	mg/L	CC92556
Hexavalent Chromium	ND (10)		7196A		1	JLK	03/20/19 21:16	ug/L	CC92031
pH	**6.41** (N/A)		9040		1	JLK	03/20/19 21:55	S.U.	CC92029
pH Sample Temp	**Aqueous pH measured in water at 17.5 ºC.** (N/A)								
Salinity	**0.3** (0.1)		2520B		1	EEM	03/21/19 16:00	ppt	CC92125

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620

ESS Laboratory Work Order: 1903539

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CC92044 - 3005A/200.7										
Blank										
Antimony	ND	0.2	ug/L							
Arsenic	ND	0.5	ug/L							
Beryllium	ND	0.1	ug/L							
Cadmium	ND	0.1	ug/L							
Calcium	ND	0.020	mg/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							
Magnesium	ND	0.020	mg/L							
Nickel	ND	5.0	ug/L							
Selenium	ND	1.0	ug/L							
Silver	ND	1.0	ug/L							
Thallium	ND	0.1	ug/L							
Zinc	ND	5.0	ug/L							
LCS										
Antimony	58.1	1.0	ug/L	50.00		116	80-120			
Arsenic	53.6	12.5	ug/L	50.00		107	80-120			
Beryllium	4.9	0.1	ug/L	5.000		97	80-120			
Cadmium	25.7	0.5	ug/L	25.00		103	80-120			
Calcium	0.497	0.020	mg/L	0.5000		99	80-120			
Chromium	48.4	2.0	ug/L	50.00		97	80-120			
Copper	52.1	2.0	ug/L	50.00		104	80-120			
Iron	246	10.0	ug/L	250.0		99	80-120			
Lead	50.4	2.0	ug/L	50.00		101	80-120			
Magnesium	0.495	0.020	mg/L	0.5000		99	80-120			
Nickel	48.1	5.0	ug/L	50.00		96	80-120			
Selenium	99.7	25.0	ug/L	100.0		100	80-120			
Silver	24.3	1.0	ug/L	25.00		97	80-120			
Thallium	47.8	0.5	ug/L	50.00		96	80-120			
Zinc	50.6	5.0	ug/L	50.00		101	80-120			
LCS Dup										
Antimony	63.4	1.0	ug/L	50.00		127	80-120	9	20	B+
Arsenic	55.2	12.5	ug/L	50.00		110	80-120	3	20	
Beryllium	4.8	0.1	ug/L	5.000		97	80-120	0.6	20	
Cadmium	24.7	0.5	ug/L	25.00		99	80-120	4	20	
Calcium	0.483	0.020	mg/L	0.5000		97	80-120	3	20	
Chromium	48.2	2.0	ug/L	50.00		96	80-120	0.4	20	
Copper	52.0	2.0	ug/L	50.00		104	80-120	0.3	20	
Iron	239	10.0	ug/L	250.0		96	80-120	3	20	
Lead	48.2	2.0	ug/L	50.00		96	80-120	5	20	
Magnesium	0.480	0.020	mg/L	0.5000		96	80-120	3	20	
Nickel	47.9	5.0	ug/L	50.00		96	80-120	0.5	20	
Selenium	104	25.0	ug/L	100.0		104	80-120	4	20	

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620

ESS Laboratory Work Order: 1903539

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CC92044 - 3005A/200.7										
Silver	24.1	1.0	ug/L	25.00		97	80-120	0.7	20	
Thallium	48.7	0.5	ug/L	50.00		97	80-120	2	20	
Zinc	50.1	5.0	ug/L	50.00		100	80-120	1	20	
Batch CC92162 - 245.1/7470A										
Blank										
Mercury	ND	0.20	ug/L							
LCS										
Mercury	6.18	0.20	ug/L	6.042		102	80-120			
LCS Dup										
Mercury	6.29	0.20	ug/L	6.042		104	80-120	2	20	
Classical Chemistry										
Batch CC92031 - General Preparation										
Blank										
Hexavalent Chromium	ND	10	ug/L							
LCS										
Hexavalent Chromium	500	10	ug/L	499.8		100	90-110			
LCS Dup										
Hexavalent Chromium	497	10	ug/L	499.8		99	90-110	0.6	20	
Batch CC92125 - General Preparation										
LCS										
Salinity	1.0		ppt	1.000		96	85-115			
Batch CC92556 - NH4 Prep										
Blank										
Ammonia as N	ND	0.10	mg/L							
LCS										
Ammonia as N	0.12	0.10	mg/L	0.09994		119	80-120			
LCS										
Ammonia as N	0.95	0.10	mg/L	0.9994		95	80-120			

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 ESS Laboratory Work Order: 1903539

Notes and Definitions

Z16	Aqueous pH measured in water at 17.5 ºC.
U	Analyte included in the analysis, but not detected
D	Diluted.
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
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620

ESS Laboratory Work Order: 1903539

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/mecdc/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: 1903539
Date Received: 3/20/2019
Project Due Date: 3/27/2019
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: 1.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
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: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608.3 Pesticides)
01	325829	Yes	NA	Yes	1L Poly - Unpres	NP	
01	325830	Yes	NA	Yes	500 mL Poly - Unpres	NP	
01	325831	Yes	NA	Yes	250 mL Poly - Unpres	NP	
01	325832	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
01	325833	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	

2nd Review
All containers scanned into storage/lab Initials: MA
Are barcode labels on correct containers? Yes / No
Are all necessary stickers attached? Yes / No

Completed By: Date & Time: 3/20/19 2108
Reviewed By: Date & Time: 3/20/19 2109
Delivered By: 3/20/19 2109

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # ~~190350~~ 1903539

Turn Time: STD Rush:
Regulatory State: MA

Reporting Limits

Is this project for any of the following?: ☐ MA-MCP ☐ CT-RCP ☐ RGP ☐ Remediation

Electonic Deliverables ☐ Limit Checker ☐ Excel ☐ Other (Please Specify) →

Company Name: TGZ Solutions
Contact Person: Jason Salisbury
Project #:
Project Name: Brockton 620
Address:
City:
State:
Zip Code:
PO #:
Telephone Number:
FAX Number:
Email Address:

Analysis: Hardness, Ammonia, Salinity, pH, PP-13 + Iron, Cr+6

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Hardness	Ammonia	Salinity	pH	PP-13 + Iron	Cr+6
1	3/20/19	11:45	G	GW	Receiving Water	X	X	X	X	X	X

Container Type: AG-Amber Glass B-BOD Bottle G-Glass P-Poly S-Sterile V-Vial O-Other | ag | ag

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Number of Containers: 1 1 1 1

Laboratory Use Only
Cooler Present:
Seals Intact:
Cooler Temperature: 1.1 °C ICE RC

Sampled by: TC
Comments: RCP

Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
3/20/19 3:00	R Carlos 3/20/19 1605	R Carlos 3/20/19 1822	3/20/19 2004
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

2 of 2

CERTIFICATE OF ANALYSIS

Eric D. Simpson
Tg2 Solutions
231 Elm Street
Blackstone, MA 01504

RE: Brockton 620 - RGP (N/A)
ESS Laboratory Work Order Number: 1903538

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

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: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

SAMPLE RECEIPT

The following samples were received on March 20, 2019 for the analyses specified on the enclosed Chain of Custody Record.

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

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

Lab Number	Sample Name	Matrix	Analysis
1903538-01	MW-4	Ground Water	1664A, 200.7, 200.8, 245.1, 2540D, 300.0, 3113B, 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: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

PROJECT NARRATIVE

625.1(SIM) Semi-Volatile Organic Compounds

1903538-01 [redacted]
2,4,6-Tribromophenol (116% @ 15-110%)

C9C0342-CCV1 [redacted]
2,4,6-Tribromophenol (154% @ 20%)

CC92108-BLK1 [redacted]
2,4,6-Tribromophenol (229% @ 15-110%)

CC92108-BS1 [redacted]
2,4,6-Tribromophenol (224% @ 15-110%)

CC92108-BSD1 [redacted]
Benzo(b)fluoranthene (22% @ 20%), Butylbenzylphthalate (23% @ 20%), Chrysene (22% @ 20%), Pyrene (25% @ 20%)

CC92108-BSD1 [redacted]
2,4,6-Tribromophenol (198% @ 15-110%)

Classical Chemistry

1903538-01 [redacted]

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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[redacted]

[redacted]

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

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 18-2.1 - 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
5035A - 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: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Dissolved Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (5.0)		200.7		1	KJK	03/22/19 12:44	100	10	CC92044
Arsenic	ND (0.5)		3113B		1	KJK	03/26/19 22:13	100	10	CC92044
Cadmium	ND (0.5)		200.8		5	KJK	03/22/19 19:24	100	10	CC92044
Chromium	ND (2.0)		200.7		1	KJK	03/22/19 12:44	100	10	CC92044
Copper	**2.2** (2.0)		200.7		1	KJK	03/22/19 12:44	100	10	CC92044
Iron	**599** (10.0)		200.7		1	KJK	03/22/19 12:44	100	10	CC92044
Lead	**2.2** (0.1)		200.8		5	KJK	03/22/19 19:24	100	10	CC92044
Mercury	ND (0.20)		245.1		1	MKS	03/22/19 15:58	20	40	CC92162
Nickel	ND (5.0)		200.7		1	KJK	03/22/19 12:44	100	10	CC92044
Selenium	ND (5.0)		200.7		1	KJK	03/22/19 12:44	100	10	CC92044
Silver	ND (1.0)		200.7		1	KJK	03/22/19 12:44	100	10	CC92044
Zinc	**13.2** (5.0)		200.7		1	KJK	03/22/19 12:44	100	10	CC92044

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (5.0)		200.7		1	KJK	03/22/19 12:19	100	10	CC92044
Arsenic	ND (0.5)		3113B		1	KJK	03/26/19 20:58	100	10	CC92044
Cadmium	ND (0.500)		200.8		5	KJK	03/22/19 18:45	100	10	CC92044
Chromium	ND (2.0)		200.7		1	KJK	03/22/19 12:19	100	10	CC92044
Chromium III	ND (10.0)		200.7		1	JLK	03/22/19 12:19	1	1	[CALC]
Copper	**4.5** (2.0)		200.7		1	KJK	03/22/19 12:19	100	10	CC92044
Hardness	**67800** (82.4)		200.7		1	KJK	03/22/19 12:19	1	1	[CALC]
Iron	**661** (10.0)		200.7		1	KJK	03/22/19 12:19	100	10	CC92044
Lead	**3.0** (0.5)	0.1	200.8		5	KJK	03/22/19 18:45	100	10	CC92044
Mercury	ND (0.2)		245.1		1	MKS	03/22/19 15:58	20	40	CC92162
Nickel	ND (5.0)		200.7		1	KJK	03/22/19 12:19	100	10	CC92044
Selenium	ND (5.0)		200.7		1	KJK	03/22/19 12:19	100	10	CC92044
Silver	ND (0.5)		200.7		1	KJK	03/22/19 12:19	100	10	CC92044
Zinc	**13.1** (5.0)		200.7		1	KJK	03/22/19 12:19	100	10	CC92044

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A
Initial Volume: 25
Final Volume: 25
Extraction Method: 524.2

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

524.2 Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
1,1,2-Trichloroethane	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
1,1-Dichloroethane	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
1,1-Dichloroethene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
1,2-Dichlorobenzene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
1,2-Dichloroethane	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
1,3-Dichlorobenzene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
1,4-Dichlorobenzene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Acetone	ND (5.0)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Benzene	**1.9** (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Carbon Tetrachloride	ND (0.3)		524.2		1	03/21/19 15:24	C9C0328	CC92140
cis-1,2-Dichloroethene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Ethylbenzene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Methyl tert-Butyl Ether	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Methylene Chloride	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Naphthalene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Tertiary-amyl methyl ether	ND (1.0)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Tertiary-butyl Alcohol	ND (25.0)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Tetrachloroethene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Toluene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Trichloroethene	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Vinyl Chloride	ND (0.2)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Xylene O	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140
Xylene P,M	ND (0.5)		524.2		1	03/21/19 15:24	C9C0328	CC92140

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*94 %*		*80-120*
Surrogate: 4-Bromofluorobenzene	*98 %*		*80-120*

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MJV
Prepared: 3/21/19 9:27

608.3 Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)		608.3		1	03/21/19 12:12		CC92001
Aroclor 1221	ND (0.09)		608.3		1	03/21/19 12:12		CC92001
Aroclor 1232	ND (0.09)		608.3		1	03/21/19 12:12		CC92001
Aroclor 1242	ND (0.09)		608.3		1	03/21/19 12:12		CC92001
Aroclor 1248	ND (0.09)		608.3		1	03/21/19 12:12		CC92001
Aroclor 1254	ND (0.09)		608.3		1	03/21/19 12:12		CC92001
Aroclor 1260	ND (0.09)		608.3		1	03/21/19 12:12		CC92001
Aroclor 1262	ND (0.09)		608.3		1	03/21/19 12:12		CC92001
Aroclor 1268	ND (0.09)		608.3		1	03/21/19 12:12		CC92001

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*86 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*74 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*61 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*64 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 3/21/19 15:21

625.1(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acenaphthene	ND (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Acenaphthylene	ND (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Anthracene	ND (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Benzo(a)anthracene	ND (0.05)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Benzo(a)pyrene	ND (0.05)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Benzo(b)fluoranthene	ND (0.05)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Benzo(g,h,i)perylene	ND (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Benzo(k)fluoranthene	ND (0.05)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
bis(2-Ethylhexyl)phthalate	ND (2.34)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Butylbenzylphthalate	ND (2.34)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Chrysene	ND (0.05)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Dibenzo(a,h)Anthracene	ND (0.05)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Diethylphthalate	ND (2.34)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Dimethylphthalate	ND (2.34)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Di-n-butylphthalate	ND (2.34)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Di-n-octylphthalate	ND (2.34)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Fluoranthene	**0.24** (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Fluorene	ND (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Indeno(1,2,3-cd)Pyrene	ND (0.05)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Naphthalene	ND (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Pentachlorophenol	ND (0.84)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Phenanthrene	ND (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108
Pyrene	**0.19** (0.19)		625.1 SIM		1	03/23/19 23:10	C9C0362	CC92108

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*52 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*116 %*	*S+*	*15-110*
Surrogate: 2-Fluorobiphenyl	*66 %*		*30-130*
Surrogate: Nitrobenzene-d5	*64 %*		*30-130*
Surrogate: p-Terphenyl-d14	*73 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A
Initial Volume: 500
Final Volume: 0.5
Extraction Method: 3535A

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 3/25/19 16:13

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

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,4-Dioxane	ND (0.250)		8270D SIM		1	03/26/19 3:33	C9C0402	CC92577

	%Recovery	Qualifier	Limits
Surrogate: 1,4-Dioxane-d8	62 %		15-115

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Ammonia as N	ND (0.10)		350.1		1	JLK	03/26/19 17:19	mg/L	CC92556
Chloride	**340000** (50000)		300.0		100	EEM	03/21/19 15:17	ug/L	CC92119
Hexavalent Chromium	ND (10.0)		3500Cr B-2009		1	JLK	03/20/19 21:16	ug/L	CC92031
Phenols	ND (100)		420.1		1	JLK	03/26/19 17:04	ug/L	CC92653
Total Cyanide	ND (5.00)		4500 CN CE		1	EEM	03/21/19 14:00	ug/L	CC92120
Total Petroleum Hydrocarbon	ND (5)		1664A		1	LAB	03/27/19 16:49	mg/L	CC92632
Total Residual Chlorine	ND (20.0)		4500Cl D		1	CCP	03/20/19 21:15	ug/L	CC92032
Total Suspended Solids	**8** (5)		2540D		1	CCP	03/21/19 17:00	mg/L	CC92149

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: CAD
Prepared: 3/26/19 11:15

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

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,3-Trichloropropane	ND (0.025)		504.1		1	03/26/19 15:40		CC92639
1,2-Dibromo-3-Chloropropane	ND (0.015)		504.1		1	03/26/19 15:40		CC92639
1,2-Dibromoethane	ND (0.015)		504.1		1	03/26/19 15:40		CC92639

	%Recovery	Qualifier	Limits
Surrogate: Pentachloroethane	*86 %*		*30-150*
Surrogate: Pentachloroethane [2C]	*92 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP
Client Sample ID: MW-4
Date Sampled: 03/20/19 11:00
Percent Solids: N/A
Initial Volume: 1
Final Volume: 1
Extraction Method: No Prep

ESS Laboratory Work Order: 1903538
ESS Laboratory Sample ID: 1903538-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC
Prepared: 3/25/19 10:47

Alcohol Scan by GC/FID

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Ethanol	ND (10)		ASTM D3695		1	ZLC	03/25/19 12:01		CC92531

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals										
Batch CC92044 - 3005A/200.7										
Blank										
Antimony	ND	5.0	ug/L							
Arsenic	ND	0.5	ug/L							
Cadmium	ND	0.5	ug/L							
Chromium	ND	2.0	ug/L							
Copper	ND	2.0	ug/L							
Iron	ND	10.0	ug/L							
Lead	ND	0.1	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	50.3	5.0	ug/L	50.00		101	85-115			
Arsenic	53.6	12.5	ug/L	50.00		107	85-115			
Cadmium	25.7	2.5	ug/L	25.00		103	85-115			
Chromium	48.4	2.0	ug/L	50.00		97	85-115			
Copper	52.1	2.0	ug/L	50.00		104	85-115			
Iron	246	10.0	ug/L	250.0		99	85-115			
Lead	51.5	0.5	ug/L	50.00		103	85-115			
Nickel	48.1	5.0	ug/L	50.00		96	85-115			
Selenium	94.8	5.0	ug/L	100.0		95	80-120			
Silver	24.3	1.0	ug/L	25.00		97	85-115			
Zinc	50.6	5.0	ug/L	50.00		101	85-115			
Batch CC92162 - 245.1/7470A										
Blank										
Mercury	ND	0.20	ug/L							
LCS										
Mercury	6.18	0.20	ug/L	6.042		102	85-115			
LCS Dup										
Mercury	6.29	0.20	ug/L	6.042		104	85-115	2	20	
Total Metals										
Batch CC92044 - 3005A/200.7										
Blank										
Antimony	ND	5.0	ug/L							
Arsenic	ND	0.5	ug/L							
Cadmium	ND	0.500	ug/L							
Chromium	ND	2.0	ug/L							
Copper	ND	2.0	ug/L							
Iron	ND	10.0	ug/L							
Lead	ND	0.5	ug/L							
Nickel	ND	5.0	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CC92044 - 3005A/200.7										
Selenium	ND	5.0	ug/L							
Silver	ND	0.5	ug/L							
Zinc	ND	5.0	ug/L							
LCS										
Antimony	50.3	5.0	ug/L	50.00		101	85-115			
Arsenic	53.6	12.5	ug/L	50.00		107	85-115			
Cadmium	25.7	2.50	ug/L	25.00		103	85-115			
Chromium	48.4	2.0	ug/L	50.00		97	85-115			
Copper	52.1	2.0	ug/L	50.00		104	85-115			
Iron	246	10.0	ug/L	250.0		99	85-115			
Lead	51.5	2.5	ug/L	50.00		103	85-115			
Nickel	48.1	5.0	ug/L	50.00		96	85-115			
Selenium	94.8	5.0	ug/L	100.0		95	85-115			
Silver	24.3	0.5	ug/L	25.00		97	85-115			
Zinc	50.6	5.0	ug/L	50.00		101	85-115			
Batch CC92162 - 245.1/7470A										
Blank										
Mercury	ND	0.2	ug/L							
LCS										
Mercury	6.2	0.2	ug/L	6.042		102	85-115			
LCS Dup										
Mercury	6.3	0.2	ug/L	6.042		104	85-115	2	20	
524.2 Volatile Organic Compounds										
Batch CC92140 - 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							

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
524.2 Volatile Organic Compounds										
Batch CC92140 - 524.2										
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	*4.70*		ug/L	*5.000*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*4.83*		ug/L	*5.000*		*97*	*80-120*			
LCS										
1,1,1-Trichloroethane	10.0		ug/L	10.00		100	70-130			
1,1,2-Trichloroethane	10.5		ug/L	10.00		105	70-130			
1,1-Dichloroethane	10.1		ug/L	10.00		101	70-130			
1,1-Dichloroethene	9.8		ug/L	10.00		98	70-130			
1,2-Dichlorobenzene	9.4		ug/L	10.00		94	70-130			
1,2-Dichloroethane	10.1		ug/L	10.00		101	70-130			
1,3-Dichlorobenzene	9.7		ug/L	10.00		97	70-130			
1,4-Dichlorobenzene	9.5		ug/L	10.00		95	70-130			
Acetone	43.3		ug/L	50.00		87	70-130			
Benzene	10.5		ug/L	10.00		105	70-130			
Carbon Tetrachloride	9.8		ug/L	10.00		98	70-130			
cis-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130			
Ethylbenzene	9.9		ug/L	10.00		99	70-130			
Methyl tert-Butyl Ether	9.6		ug/L	10.00		96	70-130			
Methylene Chloride	9.6		ug/L	10.00		96	70-130			
Naphthalene	9.6		ug/L	10.00		96	70-130			
Tertiary-amyl methyl ether	9.7		ug/L	10.00		97	70-130			
Tertiary-butyl Alcohol	50.0		ug/L	50.00		100	70-130			
Tetrachloroethene	9.7		ug/L	10.00		97	70-130			
Toluene	9.9		ug/L	10.00		99	70-130			
Trichloroethene	9.8		ug/L	10.00		98	70-130			
Vinyl Chloride	9.5		ug/L	10.00		95	70-130			
Xylene O	10.1		ug/L	10.00		101	70-130			
Xylene P,M	19.6		ug/L	20.00		98	70-130			
Surrogate: 1,2-Dichlorobenzene-d4	*4.93*		ug/L	*5.000*		*99*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*4.76*		ug/L	*5.000*		*95*	*80-120*			
LCS Dup										
1,1,1-Trichloroethane	9.4		ug/L	10.00		94	70-130	7	20	
1,1,2-Trichloroethane	11.1		ug/L	10.00		111	70-130	5	20	
1,1-Dichloroethane	9.9		ug/L	10.00		99	70-130	1	20	
1,1-Dichloroethene	9.0		ug/L	10.00		90	70-130	9	20	
1,2-Dichlorobenzene	9.7		ug/L	10.00		97	70-130	2	20	
1,2-Dichloroethane	9.9		ug/L	10.00		99	70-130	2	20	
1,3-Dichlorobenzene	9.1		ug/L	10.00		91	70-130	6	20	
1,4-Dichlorobenzene	9.4		ug/L	10.00		94	70-130	2	20	
Acetone	44.2		ug/L	50.00		88	70-130	2	20	

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
524.2 Volatile Organic Compounds										
Batch CC92140 - 524.2										
Benzene	9.9		ug/L	10.00		99	70-130	5	20	
Carbon Tetrachloride	9.5		ug/L	10.00		95	70-130	3	20	
cis-1,2-Dichloroethene	10.1		ug/L	10.00		101	70-130	1	20	
Ethylbenzene	9.6		ug/L	10.00		96	70-130	3	20	
Methyl tert-Butyl Ether	10.0		ug/L	10.00		100	70-130	4	20	
Methylene Chloride	9.7		ug/L	10.00		97	70-130	1	20	
Naphthalene	10.2		ug/L	10.00		102	70-130	6	20	
Tertiary-amyl methyl ether	10.2		ug/L	10.00		102	70-130	4	20	
Tertiary-butyl Alcohol	49.2		ug/L	50.00		98	70-130	2	25	
Tetrachloroethene	8.9		ug/L	10.00		89	70-130	8	20	
Toluene	9.7		ug/L	10.00		97	70-130	2	20	
Trichloroethene	9.5		ug/L	10.00		95	70-130	3	20	
Vinyl Chloride	8.5		ug/L	10.00		85	70-130	12	20	
Xylene O	9.9		ug/L	10.00		99	70-130	2	20	
Xylene P,M	18.8		ug/L	20.00		94	70-130	4	20	
Surrogate: 1,2-Dichlorobenzene-d4	*5.06*		ug/L	*5.000*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*4.96*		ug/L	*5.000*		*99*	*80-120*			
608.3 Polychlorinated Biphenyls (PCB)										
Batch CC92001 - 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							
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	*0.0417*		ug/L	*0.05000*		*83*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0443*		ug/L	*0.05000*		*89*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0360*		ug/L	*0.05000*		*72*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0364*		ug/L	*0.05000*		*73*	*30-150*			
LCS										

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
608.3 Polychlorinated Biphenyls (PCB)										
Batch CC92001 - 3510C										
Aroclor 1016	0.89	0.10	ug/L	1.000		89	50-140			
Aroclor 1016 [2C]	0.92	0.10	ug/L	1.000		92	50-140			
Aroclor 1260	0.95	0.10	ug/L	1.000		95	1-164			
Aroclor 1260 [2C]	0.98	0.10	ug/L	1.000		98	1-164			
Surrogate: Decachlorobiphenyl	*0.0486*		ug/L	*0.05000*		*97*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0506*		ug/L	*0.05000*		*101*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0352*		ug/L	*0.05000*		*70*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0331*		ug/L	*0.05000*		*66*	*30-150*			
LCS Dup										
Aroclor 1016	0.88	0.10	ug/L	1.000		88	50-140	0.9	36	
Aroclor 1016 [2C]	0.91	0.10	ug/L	1.000		91	50-140	0.8	36	
Aroclor 1260	0.95	0.10	ug/L	1.000		95	1-164	0.4	38	
Aroclor 1260 [2C]	0.97	0.10	ug/L	1.000		97	1-164	1	38	
Surrogate: Decachlorobiphenyl	*0.0457*		ug/L	*0.05000*		*91*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0493*		ug/L	*0.05000*		*99*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0339*		ug/L	*0.05000*		*68*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0321*		ug/L	*0.05000*		*64*	*30-150*			
625.1(SIM) Semi-Volatile Organic Compounds										
Batch CC92108 - 3510C										
Blank										
Acenaphthene	ND	0.20	ug/L							
Acenaphthylene	ND	0.20	ug/L							
Anthracene	ND	0.20	ug/L							
Benzo(a)anthracene	ND	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	ug/L							
Benzo(g,h,i)perylene	ND	0.20	ug/L							
Benzo(k)fluoranthene	ND	0.05	ug/L							
bis(2-Ethylhexyl)phthalate	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							

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
625.1(SIM) Semi-Volatile Organic Compounds										
Batch CC92108 - 3510C										
Pyrene	ND	0.20	ug/L							
Surrogate: 1,2-Dichlorobenzene-d4	*1.27*		ug/L	*2.500*		*51*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*8.57*		ug/L	*3.750*		*229*	*15-110*			*S+*
Surrogate: 2-Fluorobiphenyl	*1.55*		ug/L	*2.500*		*62*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.68*		ug/L	*2.500*		*67*	*30-130*			
Surrogate: p-Terphenyl-d14	*1.78*		ug/L	*2.500*		*71*	*30-130*			
LCS										
Acenaphthene	2.52	0.20	ug/L	4.000		63	40-140			
Acenaphthylene	2.68	0.20	ug/L	4.000		67	40-140			
Anthracene	2.92	0.20	ug/L	4.000		73	40-140			
Benzo(a)anthracene	2.96	0.05	ug/L	4.000		74	40-140			
Benzo(a)pyrene	2.87	0.05	ug/L	4.000		72	40-140			
Benzo(b)fluoranthene	3.08	0.05	ug/L	4.000		77	40-140			
Benzo(g,h,i)perylene	3.05	0.20	ug/L	4.000		76	40-140			
Benzo(k)fluoranthene	2.87	0.05	ug/L	4.000		72	40-140			
bis(2-Ethylhexyl)phthalate	3.61	2.50	ug/L	4.000		90	40-140			
Butylbenzylphthalate	3.62	2.50	ug/L	4.000		91	40-140			
Chrysene	2.92	0.05	ug/L	4.000		73	40-140			
Dibenzo(a,h)Anthracene	2.89	0.05	ug/L	4.000		72	40-140			
Diethylphthalate	3.38	2.50	ug/L	4.000		84	40-140			
Dimethylphthalate	3.23	2.50	ug/L	4.000		81	40-140			
Di-n-butylphthalate	3.75	2.50	ug/L	4.000		94	40-140			
Di-n-octylphthalate	3.66	2.50	ug/L	4.000		92	40-140			
Fluoranthene	3.28	0.20	ug/L	4.000		82	40-140			
Fluorene	2.90	0.20	ug/L	4.000		72	40-140			
Indeno(1,2,3-cd)Pyrene	3.24	0.05	ug/L	4.000		81	40-140			
Naphthalene	2.24	0.20	ug/L	4.000		56	40-140			
Pentachlorophenol	4.39	0.90	ug/L	4.000		110	30-130			
Phenanthrene	2.90	0.20	ug/L	4.000		72	40-140			
Pyrene	3.08	0.20	ug/L	4.000		77	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*1.08*		ug/L	*2.500*		*43*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*8.41*		ug/L	*3.750*		*224*	*15-110*			*S+*
Surrogate: 2-Fluorobiphenyl	*1.46*		ug/L	*2.500*		*59*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.59*		ug/L	*2.500*		*64*	*30-130*			
Surrogate: p-Terphenyl-d14	*1.74*		ug/L	*2.500*		*70*	*30-130*			
LCS Dup										
Acenaphthene	2.71	0.20	ug/L	4.000		68	40-140	7	20	
Acenaphthylene	2.86	0.20	ug/L	4.000		72	40-140	7	20	
Anthracene	3.06	0.20	ug/L	4.000		77	40-140	5	20	
Benzo(a)anthracene	3.62	0.05	ug/L	4.000		91	40-140	20	20	
Benzo(a)pyrene	3.49	0.05	ug/L	4.000		87	40-140	20	20	
Benzo(b)fluoranthene	3.83	0.05	ug/L	4.000		96	40-140	22	20	D+
Benzo(g,h,i)perylene	3.67	0.20	ug/L	4.000		92	40-140	18	20	
Benzo(k)fluoranthene	3.46	0.05	ug/L	4.000		87	40-140	19	20	
bis(2-Ethylhexyl)phthalate	4.41	2.50	ug/L	4.000		110	40-140	20	20	

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
625.1(SIM) Semi-Volatile Organic Compounds										
Batch CC92108 - 3510C										
Butylbenzylphthalate	4.57	2.50	ug/L	4.000		114	40-140	23	20	D+
Chrysene	3.65	0.05	ug/L	4.000		91	40-140	22	20	D+
Dibenzo(a,h)Anthracene	3.52	0.05	ug/L	4.000		88	40-140	19	20	
Diethylphthalate	3.60	2.50	ug/L	4.000		90	40-140	6	20	
Dimethylphthalate	3.44	2.50	ug/L	4.000		86	40-140	6	20	
Di-n-butylphthalate	3.97	2.50	ug/L	4.000		99	40-140	6	20	
Di-n-octylphthalate	4.45	2.50	ug/L	4.000		111	40-140	19	20	
Fluoranthene	3.54	0.20	ug/L	4.000		89	40-140	8	20	
Fluorene	3.11	0.20	ug/L	4.000		78	40-140	7	20	
Indeno(1,2,3-cd)Pyrene	3.78	0.05	ug/L	4.000		94	40-140	15	20	
Naphthalene	2.18	0.20	ug/L	4.000		55	40-140	3	20	
Pentachlorophenol	4.54	0.90	ug/L	4.000		113	30-130	3	20	
Phenanthrene	3.04	0.20	ug/L	4.000		76	40-140	5	20	
Pyrene	3.95	0.20	ug/L	4.000		99	40-140	25	20	D+
Surrogate: 1,2-Dichlorobenzene-d4	*0.779*		ug/L	*2.500*		*31*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*7.43*		ug/L	*3.750*		*198*	*15-110*			*S+*
Surrogate: 2-Fluorobiphenyl	*1.28*		ug/L	*2.500*		*51*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.46*		ug/L	*2.500*		*59*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.13*		ug/L	*2.500*		*85*	*30-130*			
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution										
Batch CC92577 - 3535A										
Blank										
1,4-Dioxane	ND	0.250	ug/L							
Surrogate: 1,4-Dioxane-d8	*3.23*		ug/L	*5.000*		*65*	*15-115*			
LCS										
1,4-Dioxane	9.02	0.250	ug/L	10.00		90	40-140			
Surrogate: 1,4-Dioxane-d8	*3.11*		ug/L	*5.000*		*62*	*15-115*			
LCS Dup										
1,4-Dioxane	8.59	0.250	ug/L	10.00		86	40-140	5	20	
Surrogate: 1,4-Dioxane-d8	*3.64*		ug/L	*5.000*		*73*	*15-115*			
Classical Chemistry										
Batch CC92031 - General Preparation										
Blank										
Hexavalent Chromium	ND	10.0	ug/L							
LCS										
Hexavalent Chromium	500	10.0	ug/L	499.8		100	90-110			
LCS Dup										
Hexavalent Chromium	497	10.0	ug/L	499.8		99	90-110	0.6	20	
Batch CC92032 - General Preparation										
Blank										
Total Residual Chlorine	ND	20.0	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CC92032 - General Preparation										
LCS										
Total Residual Chlorine	0.73		mg/L	0.7320		100	85-115			
Batch CC92119 - General Preparation										
Blank										
Chloride	ND	500	ug/L							
LCS										
Chloride	2		mg/L	2.500		97	90-110			
Batch CC92120 - TCN Prep										
Blank										
Total Cyanide	ND	5.00	ug/L							
LCS										
Total Cyanide	20.7	5.00	ug/L	20.06		103	90-110			
LCS										
Total Cyanide	150	5.00	ug/L	150.4		100	90-110			
LCS Dup										
Total Cyanide	151	5.00	ug/L	150.4		100	90-110	0.9	20	
Batch CC92149 - General Preparation										
Blank										
Total Suspended Solids	ND	5	mg/L							
LCS										
Total Suspended Solids	84		mg/L	85.00		99	80-120			
Batch CC92556 - NH4 Prep										
Blank										
Ammonia as N	ND	0.10	mg/L							
LCS										
Ammonia as N	0.12	0.10	mg/L	0.09994		119	80-120			
LCS										
Ammonia as N	0.95	0.10	mg/L	0.9994		95	80-120			
Batch CC92632 - General Preparation										
Blank										
Total Petroleum Hydrocarbon	ND	5	mg/L							
LCS										
Total Petroleum Hydrocarbon	16	5	mg/L	19.38		80	66-114			
Batch CC92653 - General Preparation										
Blank										
Phenols	ND	100	ug/L							
LCS										
Phenols	92	100	ug/L	100.0		92	80-120			
LCS										
Phenols	1010	100	ug/L	1000		101	80-120			

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane										
Batch CC92639 - 504/8011										
Blank										
1,2,3-Trichloropropane	ND	0.025	ug/L							
1,2,3-Trichloropropane [2C]	ND	0.025	ug/L							
1,2-Dibromo-3-Chloropropane	ND	0.015	ug/L							
1,2-Dibromo-3-Chloropropane [2C]	ND	0.015	ug/L							
1,2-Dibromoethane	ND	0.015	ug/L							
1,2-Dibromoethane [2C]	ND	0.015	ug/L							
Surrogate: Pentachloroethane	*0.134*		ug/L	*0.2000*		*67*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.147*		ug/L	*0.2000*		*73*	*30-150*			
LCS										
1,2,3-Trichloropropane	0.059	0.025	ug/L	0.08000		73	70-130			
1,2,3-Trichloropropane [2C]	0.079	0.025	ug/L	0.08000		99	70-130			
1,2-Dibromo-3-Chloropropane	0.059	0.015	ug/L	0.08000		74	70-130			
1,2-Dibromo-3-Chloropropane [2C]	0.065	0.015	ug/L	0.08000		81	70-130			
1,2-Dibromoethane	0.080	0.015	ug/L	0.08000		100	70-130			
1,2-Dibromoethane [2C]	0.086	0.015	ug/L	0.08000		108	70-130			
Surrogate: Pentachloroethane	*0.0750*		ug/L	*0.08000*		*94*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.0869*		ug/L	*0.08000*		*109*	*30-150*			
LCS										
1,2,3-Trichloropropane	0.173	0.025	ug/L	0.2000		87	70-130			
1,2,3-Trichloropropane [2C]	0.182	0.025	ug/L	0.2000		91	70-130			
1,2-Dibromo-3-Chloropropane	0.168	0.015	ug/L	0.2000		84	70-130			
1,2-Dibromo-3-Chloropropane [2C]	0.187	0.015	ug/L	0.2000		94	70-130			
1,2-Dibromoethane	0.194	0.015	ug/L	0.2000		97	70-130			
1,2-Dibromoethane [2C]	0.214	0.015	ug/L	0.2000		107	70-130			
Surrogate: Pentachloroethane	*0.168*		ug/L	*0.2000*		*84*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.165*		ug/L	*0.2000*		*83*	*30-150*			
Alcohol Scan by GC/FID										
Batch CC92531 - No Prep										
Blank										
Ethanol	ND	10	mg/L							
LCS										
Ethanol	816	10	mg/L	1134		72	60-140			
LCS Dup										
Ethanol	860	10	mg/L	1134		76	60-140	5	30	

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP ESS Laboratory Work Order: 1903538

Notes and Definitions

U	Analyte included in the analysis, but not detected
S+	Surrogate recovery(ies) above upper control limit (S+).
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
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
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Tg2 Solutions
Client Project ID: Brockton 620 - RGP

ESS Laboratory Work Order: 1903538

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/mecdc/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: 1903538
Date Received: 3/20/2019
Project Due Date: 3/27/2019
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: 1.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
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: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608.3 Pesticides)
01	325794	Yes	No	Yes	VOA Vial - HCl	HCl	
01	325795	Yes	No	Yes	VOA Vial - HCl	HCl	
01	325796	Yes	No	Yes	VOA Vial - HCl	HCl	
01	325797	Yes	No	Yes	VOA Vial - HCl	HCl	
01	325798	Yes	No	Yes	VOA Vial - HCl	HCl	
01	325799	Yes	No	Yes	VOA Vial - HCl	HCl	
01	325800	Yes	No	Yes	VOA Vial - Unpres	NP	
01	325801	Yes	NA	Yes	1L Amber - Unpres	NP	
01	325802	Yes	NA	Yes	1L Amber - Unpres	NP	
01	325803	Yes	NA	Yes	1L Amber - Unpres	NP	
01	325804	Yes	NA	Yes	1L Amber - Unpres	NP	
01	325805	Yes	NA	Yes	1L Amber - Unpres	NP	
01	325806	Yes	NA	Yes	1L Amber - Unpres	NP	
~~01~~	~~325807~~	~~Yes~~	~~NA~~	~~Yes~~	~~1L Poly - Unpres~~	~~NP~~	
01	325808	Yes	NA	Yes	1L Poly - Unpres	NP	
~~01~~	~~325809~~	~~Yes~~	~~NA~~	~~Yes~~	~~250 mL Poly - Unpres~~	~~NP~~	
01	325810	Yes	NA	Yes	1L Amber - H2SO4	H2SO4	
01	325811	Yes	NA	Yes	1L Amber - H2SO4	H2SO4	
01	325812	Yes	NA	Yes	500 mL Poly - H2SO4	H2SO4	
~~01~~	~~325813~~	~~Yes~~	~~NA~~	~~Yes~~	~~500 mL Poly - HNO3~~	~~HNO3~~	
01	325814	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
01	325815	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
01	325816	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	

pc 3/20/19

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Tg2 TB/DS

ESS Project ID: 1903538

Date Received: 3/20/2019

~~01~~	~~325817~~	~~Yes~~	~~NA~~	~~Yes~~	~~250 mL Poly - HNO3~~	~~HNO3~~	
01	325818	Yes	NA	Yes	250 mL Poly - NaOH	NaOH	pH >12
01	325819	Yes	NA	Yes	250 mL Poly - Unpres	NP	
~~01~~	~~325820~~	~~Yes~~	~~NA~~	~~Yes~~	~~500 mL Poly - H2SO4~~	~~H2SO4~~	

mc 3/20/19

2nd Review

All containers scanned into storage/lab Initials:

Are barcode labels on correct containers? Yes / No

Are all necessary stickers attached? Yes / No

Completed By: _____ Date & Time: 3/20/19 2007

Reviewed By: _____ Date & Time: 3/20/19 2033

Delivered By: _____ 3/20/19 2033

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS LAB PROJECT ID: 1903538

Turn Time: X Standard Rush____ Approved By: ________

Reporting Limits -
Discharge into: Fresh Water ☒ Salt Water ☐

State where samples were collected: (MA) NH

Is this project for: (RGP)

Electonic Deliverable Yes____ No____
Format: Excel___ Access___ PDF___ Other_____

Project Manager: JASON SHERBURNE
Company: Tg2 SOLUTIONS
Address:

Project #: BROCKTON 620
Project Name: 620 BELMONT BROCKTON MA
PO #:

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Containers	RGP Metals Total	RGP Metals Dissolved	Hardness (Calculation)	Ethanol ASTM D3695	Chloride 300.0*	Total Cyanide 4500 LL	TPH 1664	TSS 2540D*	**TRC 4500-CL D***	Ammonia 350.1	Tri Cr (Calc. MUST run T. Cr)	**Hex Cr 3500**	Phenol 420.1	RGP VOC Long List 524	1,4-Dioxane 8270-SIM	EDB 504.1	RGP SVOC Log List 625-SIM	PCB 608	Comment #
1	3/20/19	11:00	GRAB	GW	MW-4	22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1,2
Preservation Code							4	4	4	1	1	5	3	1	1	3	-	1	3	2	1	2	1	1	
Container Type							P	P	P	V	P	P	AG	P	P	P	-	P	AG	V	AG	V	AG	AG	

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-______
Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA
Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present ✓ Yes ____ No
Seals Intact ___ Yes ___ No NA: ___
Cooler Temperature: 1.1 ICE RC

Sampled by: JASON SHERBURNE

Comments: 1) RGP Metals include Sb, As, Cd, Cu, Fe, Pb, Ni, Se, Ag and Zn by 200.7/3113B and Hg by 245.1
2) Parameters in **BOLD** have Short hold-time **PERMIT ATTACHED**
* **TSS, TRC and Cl taken from the same container**
ESS HAS RGP PARAMETERS

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
		R Carlino 3/20/19 1605	R Carlino	3/20/19 1822	[signature] 3/20/19 1947
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Please E-mail all changes to Chain of Custody in writir

Page 1 of 2

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: April 09, 2019
Consultation Code: 05E1NE00-2019-SLI-1368
Event Code: 05E1NE00-2019-E-03236
Project Name: Shell-Branded Service Station - 620 Belmont Street, Brockton

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2019-SLI-1368

Event Code: 05E1NE00-2019-E-03236

Project Name: Shell-Branded Service Station - 620 Belmont Street, Brockton

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/42.07188274800639N71.04358230238313W

Counties: Plymouth, MA

Endangered Species Act Species

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

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

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

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

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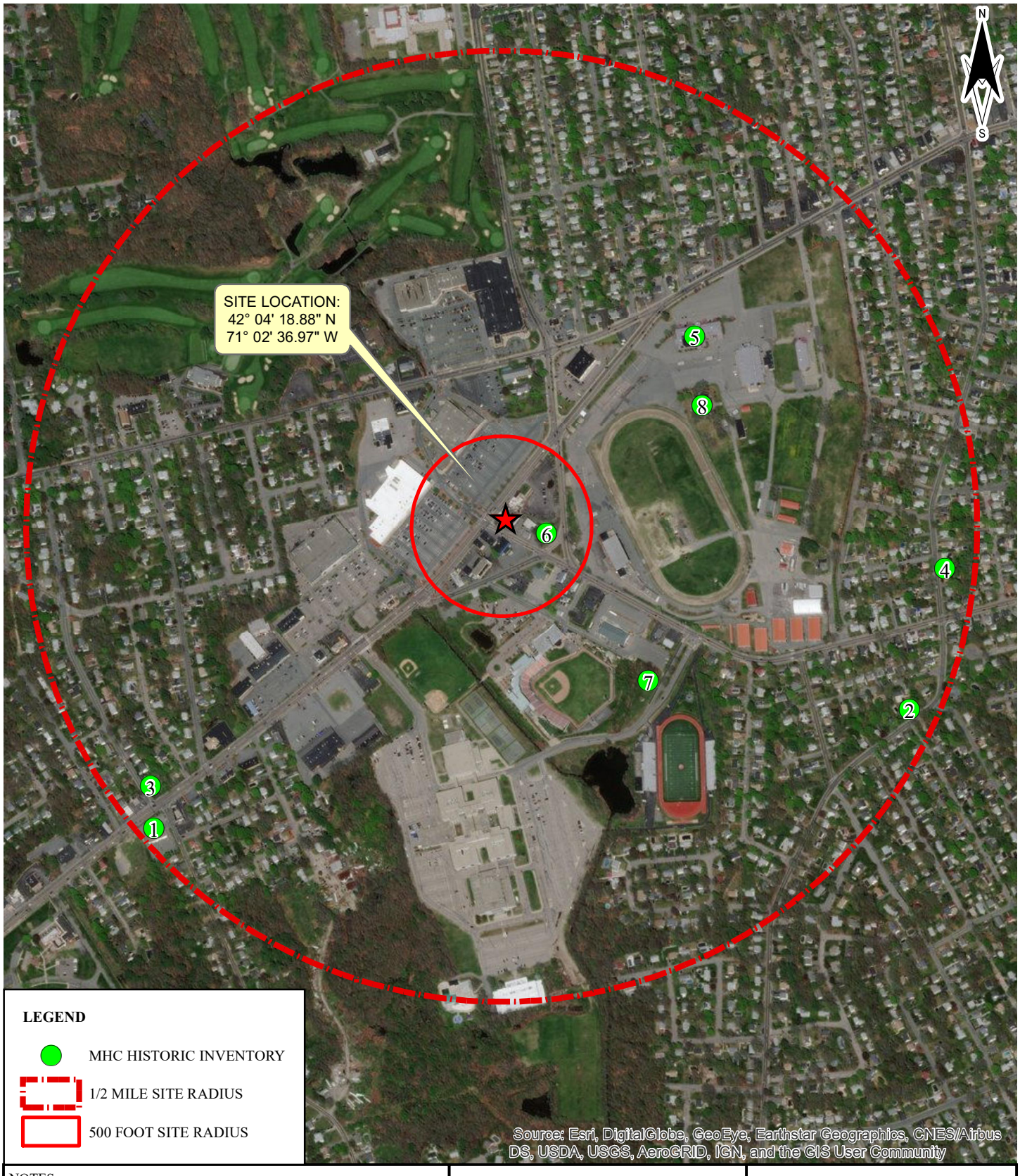
1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Critical habitats

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

ATTACHMENT E



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.

0 375 750 1,500
Feet

DATE: MARCH 13, 2019

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

ATTACHMENT E

EXTENDED AREA MAP
WITH MARCIS INVENTORY

SHELL-BRANDED STATION
620 BELMONT STREET
BROCKTON, MA

OBJECTID	MHCN	DEMOLISHI	TYPE	DESIGNATI	D_DATE	HISTORIC_N	COMMON_	ADDRESS	TOWN_NAI	CONSTRUC	ARCHITECT	MAKER	USE_TYPE	SIGNIFICAN
1	BRO.205	y	Building			Minor, Wes		826 Belmo	Brockton	1870	Italianate;		Single Fami	Architecture;
2	BRO.188	y	Building			Perkins, Jes		585 Ash St	Brockton	1825	Colonial; N		Single Fami	Architecture;
3	BRO.159		Building			Bryant, Wil	Ames, Fiske	815 Belmo	Brockton	1810	Federal;		Single Fami	Architecture; Literature;
4	BRO.5		Building			Robinson, A		514 Ash St	Brockton	1747	Cape; Colo		Single Fami	Architecture;
5	BRO.187		Building			Brockton Fa	Brockton A	Belmont St	Brockton	1876	Stick Style;		Business Of	Agriculture; Architecture; Education; Recreation;
6	BRO.804		Burial Grou			Snell Cemet		Belmont St	Brockton	1747			Burial Grou	Community Planning; Religion;
7	BRO.133		Building	NRIND	07/15/198	Little Red S	Forest Aven	Concord Av	Brockton	1875	Greek Revi		Abandoned	Architecture; Education;
8	BRO.14		Building			Brockton Fa	Massachuse	Thurber Av	Brockton	1931	Colonial Re	Ritchie, Jan	Other Educ	Agriculture; Architecture; Education;