EnviroTrac
Environmental Services

August 9, 2017

***VIA E-MAIL***
*NPDES.Generalpermits@epa.gov*

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

**Re: Remediation General Permit (RGP) – Notice of Intent (NOI)**
**Speedway Store #2410**
**2285 Providence Highway**
**Walpole, Massachusetts 02081**

To Whom It May Concern:

At the request of Speedway LLC (Speedway), EnviroTrac Ltd. (EnviroTrac) is submitting the attached RGP – NOI for the above-referenced location, referred to as the Site. The RGP-NOI form is included as **Appendix A**. A locus map (**Figure 1**) provides the regional location of the Site.

The Site is currently a Speedway-branded retail petroleum station. Temporary construction dewatering is required to facilitate the removal of the three existing single-walled cathodically-protected steel underground storage tanks (USTs). Based on gauging of groundwater monitoring wells at the Site, depth to the water table is approximately seven to 11 feet below ground surface (bgs). Excavation to approximately 16 to 17 feet bgs is required for the UST removal.

Petroleum impacts to soil and groundwater exist at the Site. The Massachusetts Department of Environmental Protection (MassDEP) assigned Release Tracking Number (RTN) 4-3017188 to the Site in August 1998. Response Actions in accordance with the Massachusetts Contingency Plan (MCP) for RTN 4-3017188 are ongoing.

The Town of Walpole Department of Public Works informed EnviroTrac via email on July 5, 2017, that the discharge of construction site dewatering to the sanitary sewer system in Walpole is prohibited by the Massachusetts Water Resources Authority (MWRA). Therefore, this RGP-NOI is required to discharge to the stormwater system.

During construction dewatering, groundwater will be pumped from the excavation into one fractionation (frac) tank for settlement. Prior to entering the frac tank, groundwater will flow through air injectors to aid in the oxidation and precipitation of metals. From the frac tank, groundwater will be pumped and treated through two parallel bag filter units equipped with 10 to 50 micron bag filters to remove excess suspended solids. After the bag filters, groundwater will be processed through two 2,000-pound liquid-phase carbon units arranged in-series to remove any potential dissolved petroleum constituents. Finally, groundwater will then flow through two cartridge filters units equipped with 1 to 5 micron filters as a final process to remove suspended sediments. A totalizer will be installed prior to the discharge point in order to monitor the system flow rate. The design flow of the treatment system is approximately 100 gallons per minute (gpm), and the average discharge rate of treated groundwater is anticipated to be approximately 50 to 75 gpm. A schematic of the proposed treatment system is included as **Figure 2**.

The treated effluent will be discharged via a catch basin located on Route 1 (Providence Highway) Southbound, which immediately abuts the Site to the south-southeast. A Discharge Location Plan (**Figure 3**) depicts the proposed discharge point. As this catch basin is located on a State Highway, an Application for Permit to Access State Highway will be filed with the Massachusetts Department of Transportation, pending approval of the attached NOI.

Water entering the catch basin discharges to a detention pond with wetlands located approximately 800 feet southwest of the Site. Water from the detention pond enters an unnamed intermittent stream, which eventually discharges to the Neponset River. The locations of the Site and discharge receiving waters are depicted on **Figures 4 and 5**. Per the Town of Foxborough Wetlands Bylaw and Conservation Commission Regulations, a Request for Determination of Applicability (RDA) was filed with the Town of Foxborough Conservation Commission on August 3, 2017. The RDA is on the agenda for the hearing scheduled for August 21, 2017.

On July 13, 2017, a groundwater sample was collected from monitoring well H-3 located adjacent to the proposed excavation area. Based on analytical data, volatile organic compounds (VOCs), total suspended solids (TSS), ammonia, chloride, and metals were detected in groundwater. Concentrations of TSS and metals (copper, iron, and lead) exceeded applicable Effluent Limits listed in the RGP under the National Pollutant Discharge Elimination System (NPDES) for Discharges in Massachusetts. Analytical data are summarized in **Table 1**. The laboratory analytical report supporting this NOI is included in **Appendix B**.

A dilution factor of 1.02 was calculated for metals which exceeded applicable Effluent Limitations (refer to **Appendix C**). Based on a Dilution Factor Range of <5, concentrations of copper, iron, and lead exceeded applicable Total Recoverable Metal Limits as established in the RGP.

Please note that the required ethanol analysis was conducted using method SW846-8015C and not one of the specified methods in the RGP. Based on email correspondence from Shauna Little, Physical Scientist, U.S. Environmental Protection Agency New England, a request can be made to EPA to allow data obtained using another method under the existing data substitution section in Part 4.1.5.a of the RGP. The data obtained by method SW846-8015C is sufficient for EPA to make a determination of coverage because the analysis meets the minimum level (ML) requirement. For ethanol, the detection limit must be 400 µg/L or less or ethanol is clearly detected. The analytical report states the detection limit for ethanol was 55 µg/L and the reporting limit was 100 µg/L.

According to the National Park Service's National Register Information System (NRIS) (http://www.nps.gov/history) two historical sites are located in Walpole and nine are located in Foxborough, Massachusetts. All eleven sites are located at least approximately 1.5 miles from the Site; therefore, the discharge will not likely adversely affect federal or state-listed historical sites. NRIS listings in Massachusetts have not yet been digitized; however, the spreadsheet of National Register listed properties can be accessed at http://nps.gov/nr/research.

The Massachusetts Historical Commission's Massachusetts Cultural Resource Information System (MACRIS) (http://mhc-macris.net/index.htm) listed 413 historical sites in Walpole. The nearest site, the Leland House, is located approximately 1,600 feet northwest of the Site. MACRIS lists 325 sites in Foxborough. The nearest site, the Foxborough Poor Farm, is located approximately 1.3 miles west of the Site. Based on the distances to the Site, the discharge will not likely adversely affect federal or state-listed historical sites. A copy of the MACRIS listing is included in **Appendix D**.

Based on a review of Appendix I of the RGP and the New England Listed Species shown on the U.S. Fish and Wildlife Service (FWS) New England Field Office web site, the Site is located within a county (Norfolk) listed by the U.S. FWS as a habitat of the federally threatened northern long-eared bat. The general habitat of this species is listed as caves and mines of wooded areas and/or trees of upland forests. No caves or mines are located within proximity of the discharge area. Also, as depicted in the MCP Priority Resource Map provided as **Figure 6**, the Site is not located within a Natural Heritage Endangered Species Program Estimated or Priority Habitat or within an Area of Critical Concern. Further, **Figures 4 and 5** show the area of discharge as wooded marsh and/or wetlands; therefore, it is unlikely that discharge will adversely affect this species or its critical habitat. A copy of the IPaC Resource List from the FWS is included in **Appendix E**.

The excavation and dewatering will be conducted as a Release Abatement Measure (RAM) pursuant to MCP 310 CMR 40.0440. A RAM Plan will be submitted to MassDEP as BWSC Form 106; therefore, completion and submittal of Massachusetts Application Form BRPWM 12 or payment of a state fee are not required.

If you have any questions or require further information, please contact the undersigned at (781) 793-0074.

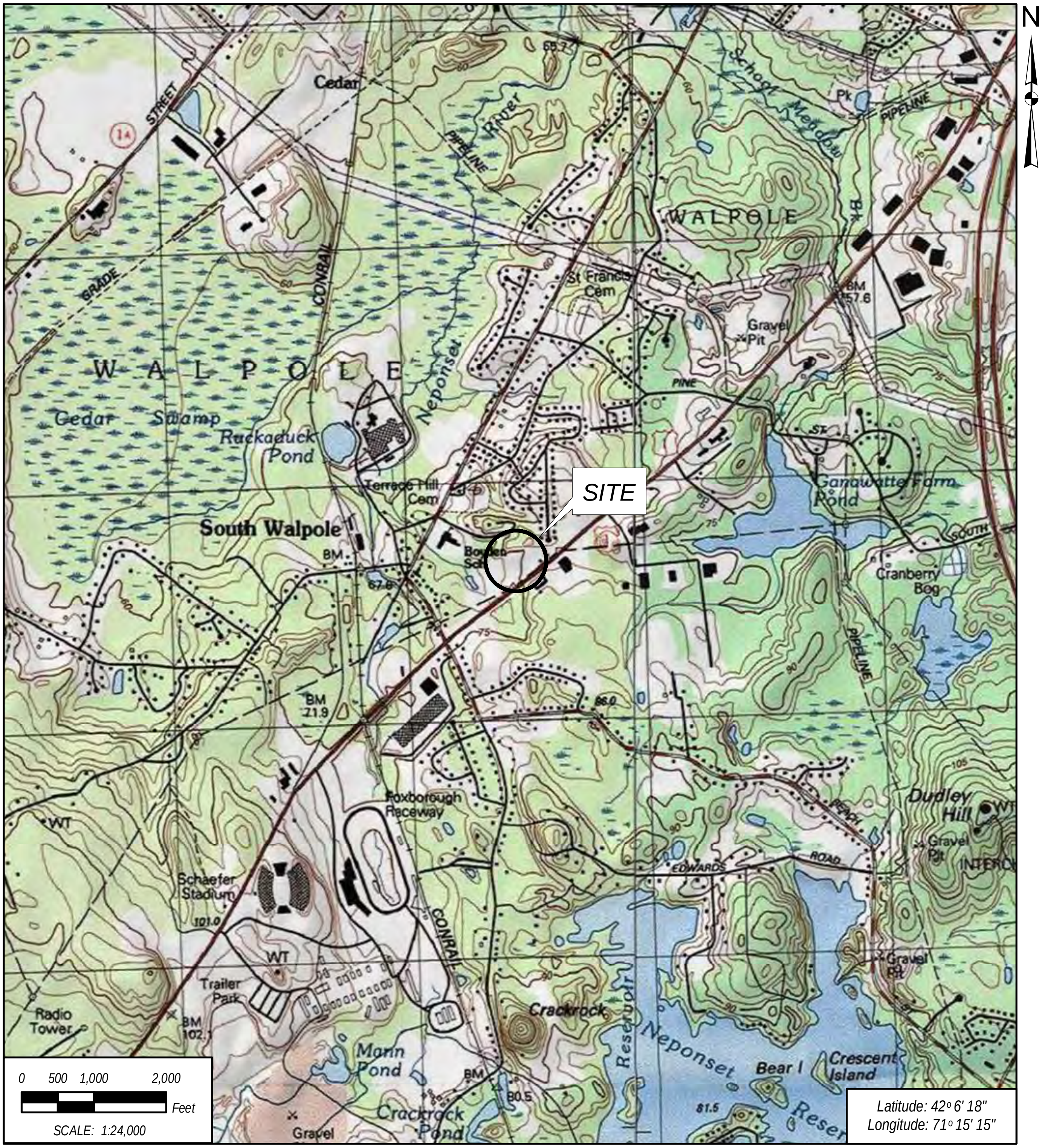
Sincerely,
***EnviroTrac Ltd.***

Sean P. Kennedy, PG
Regional Operations Manager

cc: MassDEP Southeast Regional Office
MassDOT District 5
Town of Walpole Board of Selectmen
Town of Foxborough Conservation Commission
John Engdahl, Speedway LLC

Attachments

# FIGURES



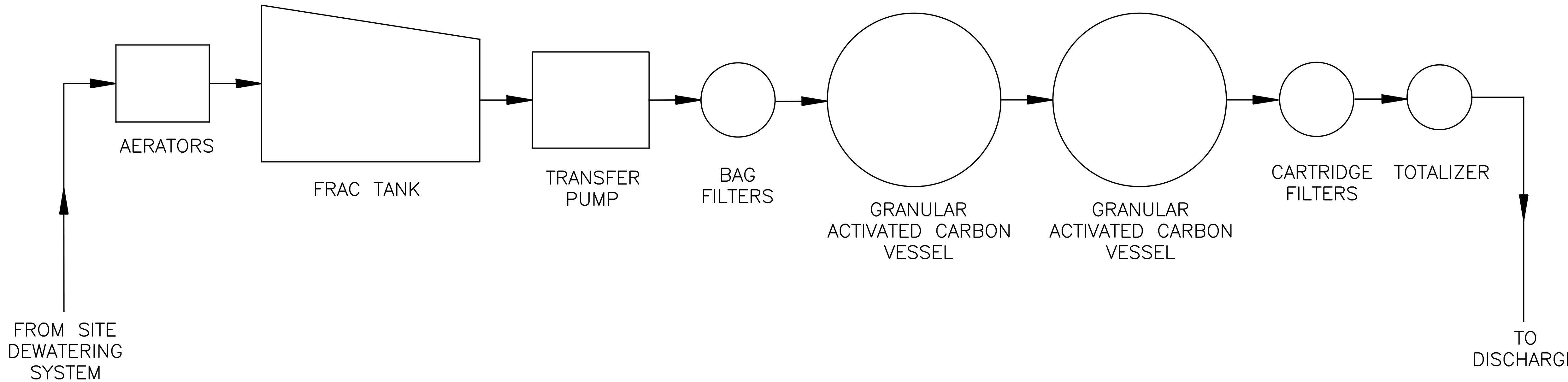

SOURCE: OFFICE OF GEOGRAPHIC INFORMATION (MassGIS), COMMONWEALTH OF MASSACHUSETTS INFORMATION TECHNOLOGY DIVISION
USGS TOPOGRAPHIC MAPS: MEDFIELD, NORWOOD, WRENTHAM, AND MANSFIELD, MA QUADRANGLES

EnviroTrac
Environmental Services
2 Merchant Street, Suite 2
Sharon, Massachusetts 02067
P: (781) 793-0074
F: (781) 793-7877
www.EnviroTrac.com

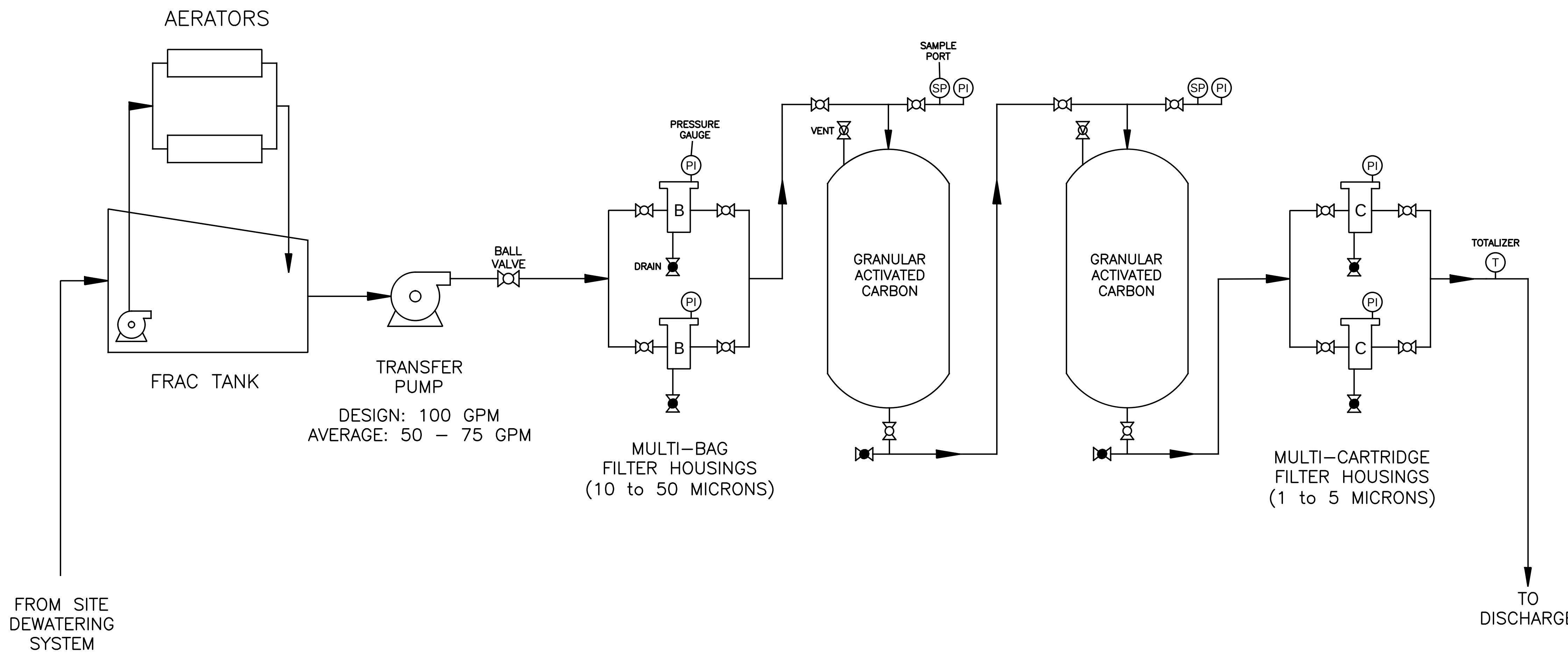
## LOCUS MAP

SPEEDWAY STORE #2140
2285 PROVIDENCE HIGHWAY
WALPOLE, MASSACHUSETTS

| DRAWN BY | PROJECT | DATE | FIGURE |
|---|---|---|---|
| DT | 03.SW2410.01 | 7/21/2017 | **1** |




PROCESS FLOW DIAGRAM
DEWATERING TREATMENT
SYSTEM (TYP.)




| | |
|---|---|
| DRAWN BY: DT<br>REVISION DATE: 07/21/2017 | FIGURE<br>2 |

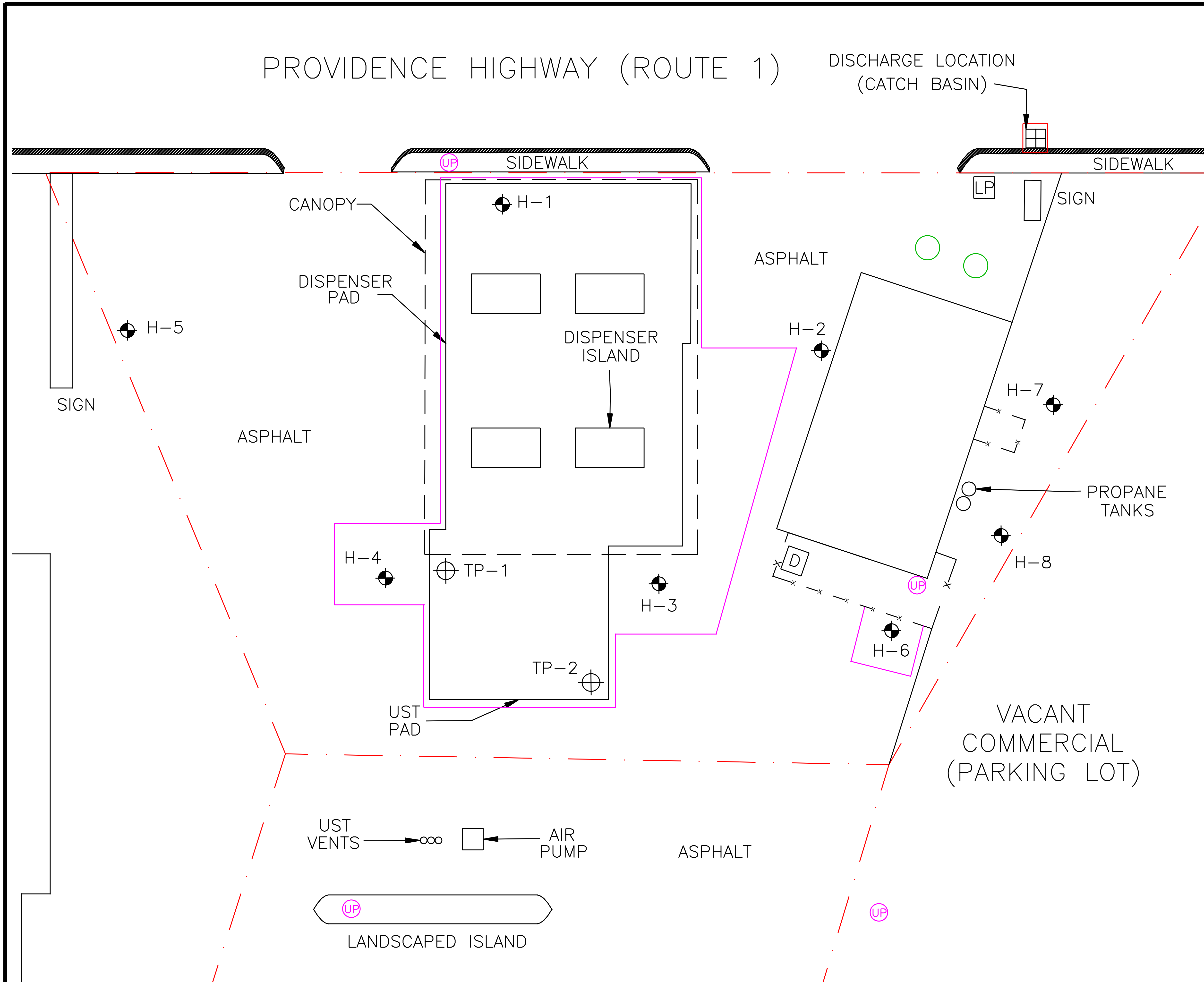
*DRAWING TITLE*

PROCESS FLOW DIAGRAM

*PREPARED FOR*

SPEEDWAY STORE #2410
2285 PROVIDENCE HIGHWAY
WALPOLE, MASSACHUSETTS

EnviroTrac
ENVIRONMENTAL SERVICES
2 MERCHANT STREET, SUITE 2, SHARON, MA
PHONE: (781) 793–0074 FAX: (781) 793–7877




*LEGEND*

- MONITORING WELL
- TANK PAD WELL
- UP — UTILITY POLE
- SEPTIC MANHOLE
- D — DUMPSTER
- LP — LIGHT POLE
- PROPERTY LINE
- PROPOSED EXCAVATION AREA
- FENCE

APPROXIMATE SCALE

0 8 16

1" = 16'

DRAWING BY: FM
DRAWING DATE: 07/06/2005
REVISED BY: DT
REVISION DATE: 07/21/2017

FIGURE: 3

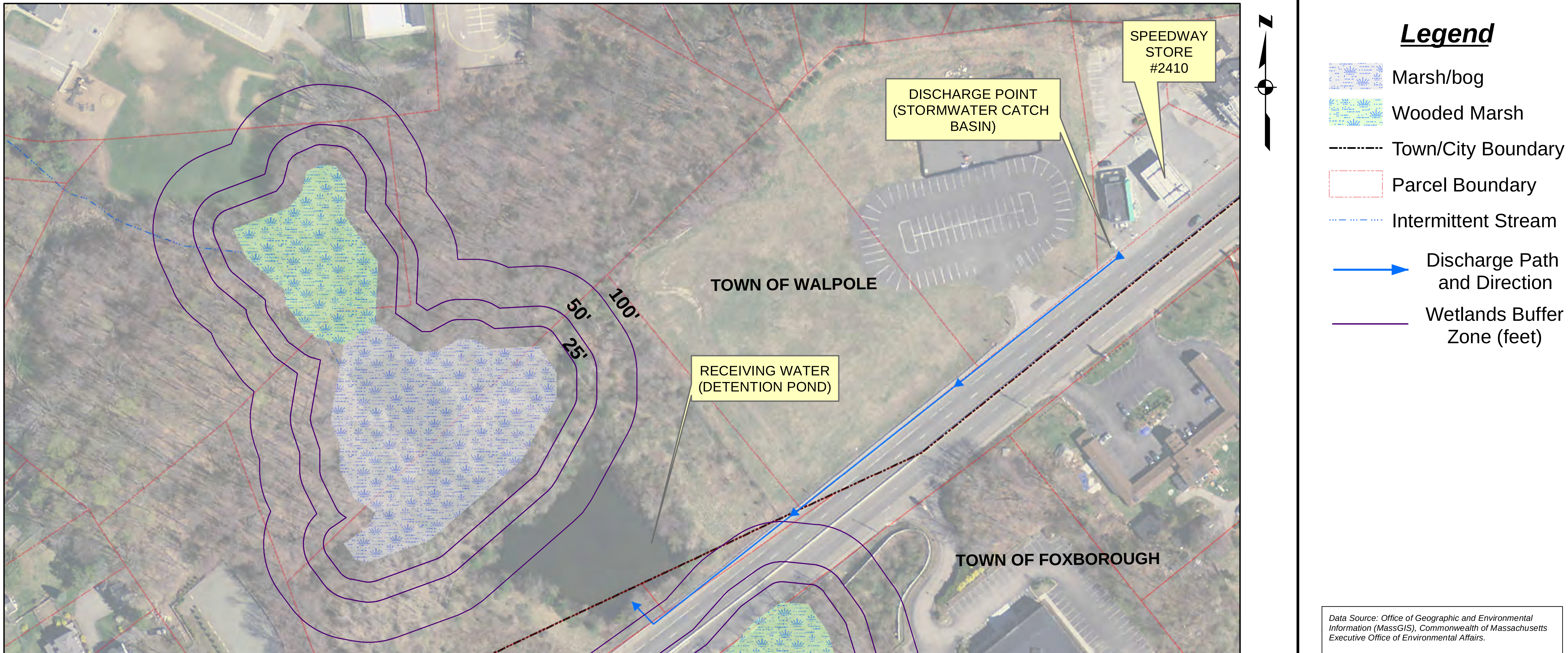
*DRAWING TITLE*

## DISCHARGE LOCATION PLAN

*PREPARED FOR*

SPEEDWAY STORE #2410
2285 PROVIDENCE HIGHWAY
WALPOLE, MASSACHUSETTS

EnviroTrac
2 Merchant Street, Suite 2
Sharon, Massachusetts 02067
PHONE: (781)793-0074 FAX: (781)793-7877




*Data Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.*

*0 50 100 200 Feet*

*REVISED BY: DT*
*DATE: 7/19/2017*

*FIGURE* **4**

*DEWATERING DISCHARGE MAP*

*SPEEDWAY STORE #2410*
*2285 PROVIDENCE HIGHWAY*
*WALPOLE, MASSACHUSETTS*

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## Legend

- Town/City Boundary
- Parcel Boundary
- Perennial Stream
- Intermittent Stream
- Shoreline
- Marsh/Bog
- Wooded Marsh
- Salt Marsh
- Discharge Path and Direction

Data Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.

0 100 200 400 Feet

REVISED BY: DT
REVISION DATE: 7/19/2017

FIGURE 5

RECEIVING WATERS

SPEEDWAY STORE #2410
2285 PROVIDENCE HIGHWAY
WALPOLE, MASSACHUSETTS

EnviroTrac
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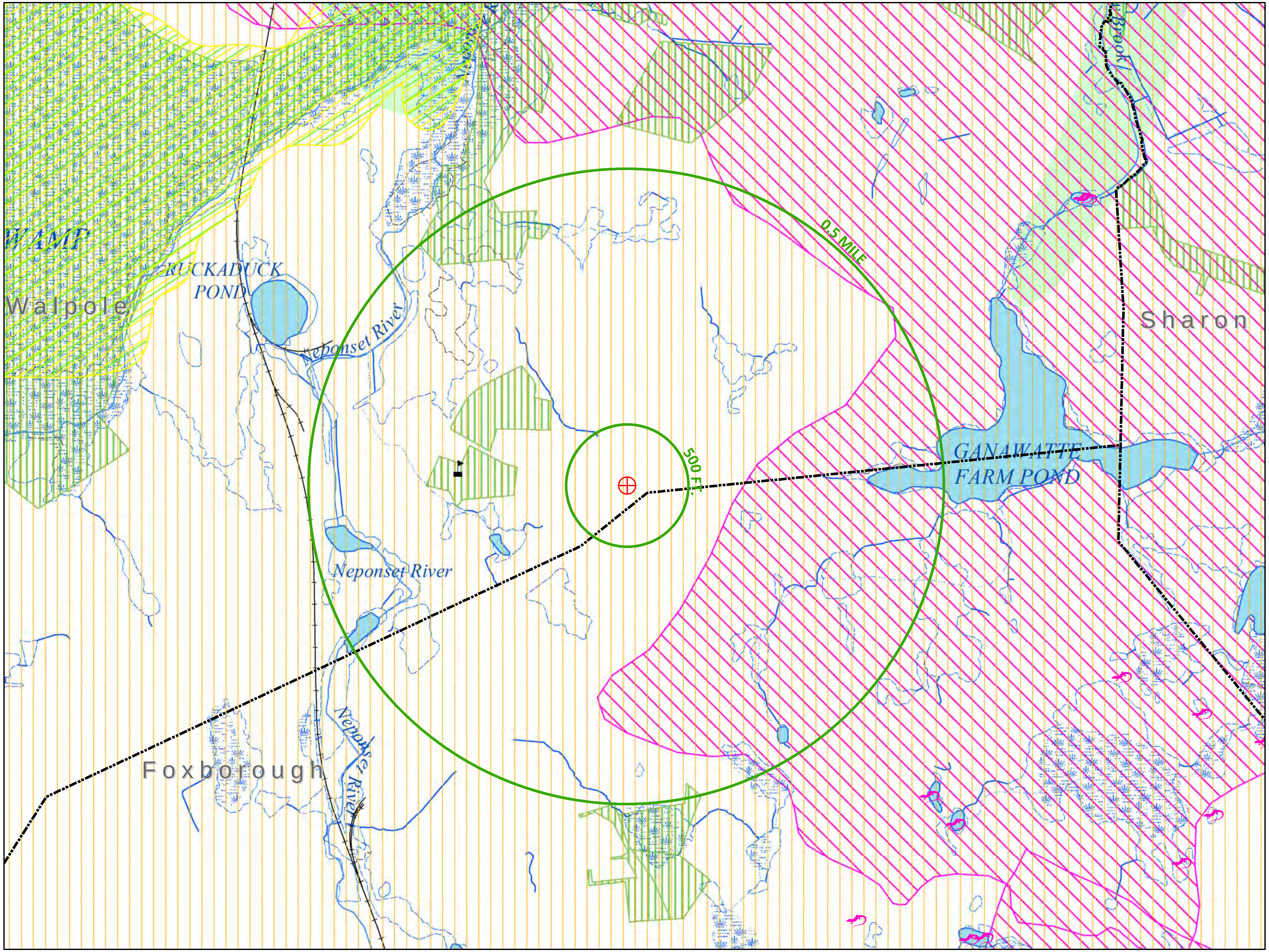


**LEGEND**

- Railroads
- Pipeline
- Pipeline Arbitrary Extension
- Solid Waste Landfills
- EPA Sole Source Aquifer
- NHESP Priority Habitats of Rare Species
- NHESP Certified Vernal Pools
- NHESP Potential Vernal Pools
- ACECs
- Protected Open Space
- Hospital
- School

**Roads**

- Limited Access Highway
- Multi-lane Hwy, not limited access
- Other Numbered Highway
- Major Road, Collector
- Minor Road, Arterial

**USGS Hydrography**

- Perennial Stream
- Intermittent Stream
- Shoreline
- Ditch/Canal
- Aqueduct
- Dam

**DEP Wetlands**

- Marsh/Bog
- Wooded Marsh
- Cranberry Bog
- Salt Marsh
- Open Water
- Reservoir (with PWSID)
- Tidal Flats
- Beach/Dune

**Public Water Supplies**

- Community Groundwater Source
- Surface Water Intake
- Non-Community Groundwater Source
- Emergency Surface Water
- DEP Approved Zone IIs
- Interim Wellhead Protection Areas
- Surface Water Supply Zone A

**Non-Potential Drinking Water Source Areas**

- High-Yield
- Medium-Yield

**Potentially Productive Aquifers**

- High-Yield
- Medium-Yield

Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts Information Technology Division.

0 800 1,600 Feet

SCALE: 1 inch=800 feet

REVISED BY: DT
REVISION DATE: 5/4/2017

FIGURE 6

MCP Priority Resource Map
500 foot and 0.5 mile Radii

SPEEDWAY STORE #2410
2285 PROVIDENCE HIGHWAY
WALPOLE, MASSACHUSETTS

EnviroTrac
Environmental Services

**TABLE**

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA

Speedway Store #2410
2285 Providence Highway
Walpole, Massachusetts

| Sample ID<br>Sample Date | H-3<br>7/13/2017 | SW-1<br>7/13/2017 | RGP Part 2<br>Effluent Limits |
|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS (µg/L) | | | |
| Benzene | <0.23 | -- | 5 |
| Toluene | <0.24 | -- | NE |
| Ethylbenzene | <0.21 | -- | NE |
| Total Xylenes | 0.37 | -- | NE |
| Total BTEX | 0.37 | -- | 100 |
| SEMIVOLATILE ORGANIC COMPOUNDS (µg/L) | | | |
| Total Group I PAHs | ND | -- | 1 |
| Benzo(a)anthracene | *<0.21* | -- | 0.0038 |
| Benzo(a)pyrene | *<0.22* | -- | 0.0038 |
| Benzo(b)fluoranthene | *<0.21* | -- | 0.0038 |
| Benzo(k)fluoranthene | *<0.21* | -- | 0.0038 |
| Chrysene | *<0.18* | -- | 0.0038 |
| Dibenzo(a,h)anthracene | *<0.34* | -- | 0.0038 |
| Indeno(1,2,3-cd)pyrene | *<0.34* | -- | 0.0038 |
| Total Group II PAHs | ND | -- | 100 |
| Acenaphthene | <0.19 | -- | NE |
| Acenaphthylene | <0.14 | -- | NE |
| Anthracene | <0.22 | -- | NE |
| Benzo(g,h,i)perylene | <0.35 | -- | NE |
| Fluoranthene | <0.17 | -- | NE |
| Fluorene | <0.17 | -- | NE |
| Naphthalene | *<0.24* | -- | 20 |
| Phenanthrene | <0.18 | -- | NE |
| Pyrene | <0.22 | -- | NE |
| Other SVOCs | ND | -- | NE |
| FUELS PARAMETERS (µg/L) | | | |
| Total Petroleum Hydrocarbons | *<5,200* | -- | 5,000 |
| Ethanol | <0.055 mg/L | -- | (Report mg/L) |
| Methyl Tert Butyl Ether | <0.24 | -- | 20 |
| Tertiary Butyl Alcohol | <5.2 | -- | 120 |
| tert-Amyl Methyl Ether | <0.29 | -- | 90 |
| INORGANICS (µg/L) | Total | Total | |
| Ammonia | 1.9 mg/L | 0.48 mg/L | (Report mg/L) |
| Chloride | 926,000 | -- | (Report) |
| Total Residual Chlorine | *<50* | -- | 11 |
| Total Suspended Solids | 71,600 | -- | 30,000 |
| Antimony | <2 | <2 | 206 |
| Arsenic | <1 | <1 | 10 |
| Cadmium | *<0.5* | *<0.5* | 0.25 |
| Chromium III | <14 | <14 | 74 |
| Chromium VI | <10 | <10 | 11 |
| Copper | 12.5 | <4 | 9 |
| Iron | 8,040 | 3,040 | 1,000 |
| Lead | 3.7 | 1.8 | 2.5 |
| Mercury | <0.20 | <0.20 | 0.739 |
| Nickel | <4 | <4 | 52 |
| Selenium | <1 | <1 | 5 |
| Silver | <2 | <2 | 3.2 |
| Zinc | 10.9 | 55.5 | 120 |
| Cyanide | *<10* | -- | 5.2 |
| GENERAL CHEMISTRY (mg/L) | | | |
| Hardness, Total as CaCO3 | 125,000 | 69,700 | NE |
| pH | 6.2 SU | 6.7 SU | 6.5-8.3 SU |
| Temperature | -- | 70.66° F | 83° F |

NOTES:

-- is not sampled
RGP is Remediation General Permit
mg/L is milligrams per liter
µg/L is micrograms per liter
SU is standard units
° F is degrees Fahrenheit
ND is not detected
NA is not applicable

NE is not established
SVOC is semivolatile organic compounds
PAH is polycyclic aromatic hydrocarbon
BTEX is benzene, toluene, ethylbenzene, and xylenes
< Indicates that the compound was not detected at the laboratory detection limit listed
*ITALICS* indicates laboratory detection limit is greater than applicable RGP Effluent limit
**BOLD** indicates concentrations greater than the laboratory detection limit
RED indicates concentrations greater than applicable RGP Effluent limits

# APPENDIX 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:<br>Speedway Store #2410</td><td colspan="3">Site address: 2285 Providence Highway<br>Street:</td></tr>
<tr><td>City: Walpole</td><td>State: MA</td><td>Zip: 02081</td></tr>
<tr><td rowspan="4">2. Site owner<br>2285 Providence Highway Realty Trust<br><br>Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private<br>☐ Other; if so, specify:</td><td colspan="3">Contact Person: John Engdahl</td></tr>
<tr><td>Telephone: 732-738-2923</td><td colspan="2">Email: jjengdahl@speedway.com</td></tr>
<tr><td colspan="3">Mailing address: 500 Speedway Drive<br>Street:</td></tr>
<tr><td>City: Enon</td><td>State: OH</td><td>Zip: 45332</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner<br>EnviroTrac Ltd.</td><td colspan="3">Contact Person: Frank Morrisey</td></tr>
<tr><td>Telephone: 781-793-0074</td><td colspan="2">Email: frankm@envirotrac.com</td></tr>
<tr><td colspan="3">Mailing address:<br>2 Merchant Street, Suite 2<br>Street:</td></tr>
<tr><td>City: Sharon</td><td>State: MA</td><td>Zip: 02067</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:<br><br>NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP<br>☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):<br>■ MA Chapter 21e; list RTN(s):<br>4-3017188<br>☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:<br>☐ CERCLA<br>☐ UIC Program<br>☐ POTW Pretreatment<br>☐ 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): |
|---|---|---|
| Unnamed tributary to the Neponset River | Neponset River Segment MA73-01 | Class B Warm Water Fishery |

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: Wetland area around receiving water

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. Segment on 303(d) list for priority organics, metals, nutrients, siltation, DO, pathogens, TSS, turbidity; has a Fecal Coliform TMDL: WLA & LA =

| | |
|---|---|
| 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. | 0.00353 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. | 1.02 |

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: July 11, 2017 Catherine Vakalopoulos, MassDEP

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

| | |
|---|---|
| 2. Source water contaminants: fuels parameters, non-halogenated VOCs, inorganics | |
| 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):<br>One stormwater outfall west of the southbound lane of Route 1. | Outfall location(s): (Latitude, Longitude)<br>42.10361111, -71.25666667 |
| Discharges enter the receiving water(s) via (check any that apply): ■ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify:<br>The discharge pathway is via a catch basin that drains to wetlands west of the property, from which an intermittent stream flows to the Neponset River.<br>☐ A private storm sewer system ■ A municipal storm sewer system<br>If the discharge enters the receiving water via a private or municipal storm sewer system:<br>Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No<br>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: MassDOT Application for Permit to Access State Highway concurrently filed with MassDOT District 5<br>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): August 2017-October 2017<br>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<br>☐ II – Non-Petroleum-Related Site Remediation<br>☐ III – Contaminated Site Dewatering<br>☐ IV – Dewatering of Pipelines and Tanks<br>☐ V – Aquifer Pump Testing<br>☐ VI – Well Development/Rehabilitation<br>☐ VII – Collection Structure Dewatering/Remediation<br>☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)<br><br>■ A. Inorganics<br>■ B. Non-Halogenated Volatile Organic Compounds<br>☐ C. Halogenated Volatile Organic Compounds<br>■ D. Non-Halogenated Semi-Volatile Organic Compounds<br>☐ E. Halogenated Semi-Volatile Organic Compounds<br>■ 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)<br><br>☐ A. Inorganics<br>☐ B. Non-Halogenated Volatile Organic Compounds<br>☐ C. Halogenated Volatile Organic Compounds<br>☐ D. Non-Halogenated Semi-Volatile Organic Compounds<br>☐ E. Halogenated Semi-Volatile Organic Compounds<br>☐ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

| Parameter | Known or believed absent | Known or believed present | # of samples | Test method (#) | Detection limit (μg/l) | Influent | | Effluent Limitations | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Daily maximum (μg/l) | Daily average (μg/l) | TBEL | WQBEL |
| **A. Inorganics** | | | | | | | | | |
| Ammonia | | ✔ | 1 | 4500NH3 | 200 | 1,900 | 1,900 | Report mg/L | --- |
| Chloride | | ✔ | 1 | 300/9056A | 10,000 | 926,000 | 926,000 | Report μg/l | --- |
| Total Residual Chlorine | ✔ | | 1 | 4500CL F | 50 | <50 | <50 | 0.2 mg/L | |
| Total Suspended Solids | | ✔ | 1 | 2540D-11 | 4,000 | 71,600 | 71,600 | 30 mg/L | --- |
| Antimony | ✔ | | 1 | 200.8 | 2 | <2 | <2 | 206 μg/L | |
| Arsenic | ✔ | | 1 | 200.8 | 1 | <1 | <1 | 104 μg/L | |
| Cadmium | ✔ | | 1 | 200.8 | 0.5 | <0.5 | <0.5 | 10.2 μg/L | |
| Chromium III | ✔ | | 1 | 200.8 | 14 | <14 | <14 | 323 μg/L | |
| Chromium VI | ✔ | | 1 | 7196A | 10 | <10 | <10 | 323 μg/L | |
| Copper | | ✔ | 1 | 200.8 | 4 | 12.5 | 12.5 | 242 μg/L | |
| Iron | | ✔ | 1 | 200.8 | 50 | 8,040 | 8,040 | 5,000 μg/L | |
| Lead | | ✔ | 1 | 200.8 | 0.5 | 3.7 | 3.7 | 160 μg/L | |
| Mercury | ✔ | | 1 | 245.1 | 0.20 | <0.20 | <0.20 | 0.739 μg/L | |
| Nickel | ✔ | | 1 | 200.8 | 4 | <4 | <4 | 1,450 μg/L | |
| Selenium | ✔ | | 1 | 200.8 | 1 | <1 | <1 | 235.8 μg/L | |
| Silver | ✔ | | 1 | 200.8 | 2 | <2 | <2 | 35.1 μg/L | |
| Zinc | | ✔ | 1 | 200.8 | 10 | 10.9 | 10.9 | 420 μg/L | |
| Cyanide | ✔ | | 1 | 335.4 | 10 | <10 | <10 | 178 mg/L | |
| **B. Non-Halogenated VOCs** | | | | | | | | | |
| Total BTEX | | ✔ | 1 | 624 | 0.20 | 0.37 | 0.37 | 100 μg/L | --- |
| Benzene | | ✔ | 1 | 624 | 0.23 | <0.23 | <0.23 | 5.0 μg/L | --- |
| 1,4 Dioxane | ✔ | | 0 | N/A | N/A | N/A | N/A | 200 μg/L | --- |
| Acetone | ✔ | | 0 | N/A | N/A | N/A | N/A | 7.97 mg/L | --- |
| Phenol | ✔ | | 0 | N/A | N/A | N/A | N/A | 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 | ✔ | | 0 | N/A | N/A | N/A | N/A | 4.4 µg/L | |
| 1,2 Dichlorobenzene | ✔ | | 0 | N/A | N/A | N/A | N/A | 600 µg/L | --- |
| 1,3 Dichlorobenzene | ✔ | | 0 | N/A | N/A | N/A | N/A | 320 µg/L | --- |
| 1,4 Dichlorobenzene | ✔ | | 0 | N/A | N/A | N/A | N/A | 5.0 µg/L | --- |
| Total dichlorobenzene | ✔ | | 0 | N/A | N/A | N/A | N/A | 763 µg/L in NH | --- |
| 1,1 Dichloroethane | ✔ | | 0 | N/A | N/A | N/A | N/A | 70 µg/L | --- |
| 1,2 Dichloroethane | ✔ | | 0 | N/A | N/A | N/A | N/A | 5.0 µg/L | --- |
| 1,1 Dichloroethylene | ✔ | | 0 | N/A | N/A | N/A | N/A | 3.2 µg/L | --- |
| Ethylene Dibromide | ✔ | | 0 | N/A | N/A | N/A | N/A | 0.05 µg/L | --- |
| Methylene Chloride | ✔ | | 0 | N/A | N/A | N/A | N/A | 4.6 µg/L | --- |
| 1,1,1 Trichloroethane | ✔ | | 0 | N/A | N/A | N/A | N/A | 200 µg/L | --- |
| 1,1,2 Trichloroethane | ✔ | | 0 | N/A | N/A | N/A | N/A | 5.0 µg/L | --- |
| Trichloroethylene | ✔ | | 0 | N/A | N/A | N/A | N/A | 5.0 µg/L | --- |
| Tetrachloroethylene | ✔ | | 0 | N/A | N/A | N/A | N/A | 5.0 µg/L | |
| cis-1,2 Dichloroethylene | ✔ | | 0 | N/A | N/A | N/A | N/A | 70 µg/L | --- |
| Vinyl Chloride | ✔ | | 0 | N/A | N/A | N/A | N/A | 2.0 µg/L | --- |
| **D. Non-Halogenated SVOCs** | | | | | | | | | |
| Total Phthalates | ✔ | | 0 | N/A | N/A | N/A | N/A | 190 µg/L | |
| Diethylhexyl phthalate | ✔ | | 0 | N/A | N/A | N/A | N/A | 101 µg/L | |
| Total Group I PAHs | ✔ | | 1 | 625 | N/A | 0 | 0 | 1.0 µg/L | --- |
| Benzo(a)anthracene | ✔ | | 1 | 625 | 0.21 | <0.21 | <0.21 | As Total PAHs | |
| Benzo(a)pyrene | ✔ | | 1 | 625 | 0.22 | <0.22 | <0.22 | | |
| Benzo(b)fluoranthene | ✔ | | 1 | 625 | 0.21 | <0.21 | <0.21 | | |
| Benzo(k)fluoranthene | ✔ | | 1 | 625 | 0.21 | <0.21 | <0.21 | | |
| Chrysene | ✔ | | 1 | 625 | 0.18 | <0.18 | <0.18 | | |
| Dibenzo(a,h)anthracene | ✔ | | 1 | 625 | 0.34 | <0.34 | <0.34 | | |
| Indeno(1,2,3-cd)pyrene | ✔ | | 1 | 625 | 0.34 | <0.34 | <0.34 | | |

| Parameter | Known or believed absent | Known or believed present | # of samples | Test method (#) | Detection limit (μg/l) | Influent | | Effluent Limitations | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Daily maximum (μg/l) | Daily average (μg/l) | TBEL | WQBEL |
| Total Group II PAHs | | ✔ | 1 | 625 | N/A | 0 | 0 | 100 μg/L | --- |
| Naphthalene | | ✔ | 1 | 625 | 0.24 | <0.24 | <0.24 | 20 μg/L | --- |
| **E. Halogenated SVOCs** | | | | | | | | | |
| Total PCBs | ✔ | | 0 | N/A | N/A | N/A | N/A | 0.000064 μg/L | --- |
| Pentachlorophenol | ✔ | | 0 | N/A | N/A | N/A | N/A | 1.0 μg/L | --- |
| **F. Fuels Parameters** | | | | | | | | | |
| Total Petroleum Hydrocarbons | | ✔ | 1 | 1664A | 5,200 | <5,200 | <5,200 | 5.0 mg/L | --- |
| Ethanol | ✔ | | 1 | 8015C | 55 | <55 | <55 | Report mg/L | --- |
| Methyl-tert-Butyl Ether | ✔ | | 1 | 624 | 0.24 | <0.24 | <0.24 | 70 μg/L | |
| tert-Butyl Alcohol | ✔ | | 1 | 624 | 5.2 | <5.2 | <5.2 | 120 μg/L in MA<br>40 μg/L in NH | --- |
| tert-Amyl Methyl Ether | ✔ | | 1 | 624 | 0.29 | <0.29 | <0.29 | 90 μg/L in MA<br>140 μg/L in NH | --- |
| **Other (i.e., pH, temperature, hardness, salinity, $LC_{50}$, additional pollutants present); if so, specify:** | | | | | | | | | |
| Hardness | | ✔ | 1 | 2340C-11 | 4,000 | 125,000 | 125,000 | | |
| pH | | ✔ | 1 | 4500HB | | 6.2 | 6.2 | | |
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## 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:

Air injectors will be used.

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

Groundwater will be pumped into a frac tank for settlement. Prior to the frac tank, groundwater will flow through air injectors to aid in oxidation & precipitation of metals. From the frac tank, groundwater will be pumped through two parallel bag filter units equipped with 10-50 micron filters to remove excess suspended solids. After bag filters, groundwater will go through two 2,000-pound liquid-phase carbon units arranged in-series to remove potential dissolved petroleum constituents. Groundwater will then flow through two cartridge filters units with 1-5 micron filters to remove suspended sediments. (Refer to Figure 2.)

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: Cartridge filters

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.<br>Indicate the most limiting component: Cartridge filters (are designed in parallel however, to minimize limitations on flow)<br>Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification: | 100 |
| Provide the proposed maximum effluent flow in gpm. | 100 |
| Provide the average effluent flow in gpm. | 50-75 |
| 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:
No chemical additives will be used.

2. Provide the following information for each chemical/additive, using attachments, if necessary:
No chemical additives will be used.
a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

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

## G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

## H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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

## I. Supplemental information

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

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

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

## J. Certification requirement

| | |
|---|---|
| *I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.* | |
| BMPP certification statement: I certify that 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: | Date: 8/11/2017 |
| Print Name and Title: Frank Morrissey, Project Scientist | |

# APPENDIX B

*e-Hardcopy 2.0*
*Automated Report*

# Technical Report for

EnviroTrac Ltd.

Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

03.SW2410.01

SGS Accutest Job Number: JC46991

Sampling Date: 07/13/17

Report to:

EnviroTrac, Ltd.
2 Merchant Street Suite # 2
Sharon, MA 02067
JessicaC@Envirotrac.com; DenaT@Envirotrac.com

ATTN: Jessica Cajigas

Total number of pages in report: **69**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Victoria Pushkova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

Sections: 1 2 3 4 5 6 7 8 9 10 11 12

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# Sample Summary

EnviroTrac Ltd.

**Job No:** JC46991

Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA
Project No: 03.SW2410.01

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JC46991-1 | 07/13/17 | 11:15 | TF | 07/13/17 | AQ | Ground Water | H-3 |
| JC46991-1R | 07/13/17 | 11:15 | TF | 07/13/17 | AQ | Ground Water | H-3 |
| JC46991-2 | 07/13/17 | 12:30 | TF | 07/13/17 | AQ | Surface Water | SW-1 |
| JC46991-2R | 07/13/17 | 12:30 | TF | 07/13/17 | AQ | Surface Water | SW-1 |

# CASE NARRATIVE / CONFORMANCE SUMMARY

2

**Client:** EnviroTrac Ltd. **Job No** JC46991

**Site:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highwa **Report Date** 8/8/2017 10:22:54 AM

On 07/13/2017, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS Accutest at a maximum corrected temperature of 3.1 C. Samples were intact and chemically preserved, unless noted below. A SGS Accutest Job Number of JC46991 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Please refer to certification exceptions summary for additional certification information.

## Volatiles by GCMS By Method EPA 624

**Matrix:** AQ **Batch ID:** VT9266

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Extractables by GCMS By Method EPA 625

**Matrix:** AQ **Batch ID:** OP4612

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Benzidine are outside in house control limits.
- JC46991-1 for Benzidine: This compound in BS is outside in house QC limits bias low.
- JC46991-1 for 2,4-Dinitrophenol: Quadratic regression was employed for this compound in associated ICAL.

## Volatiles by GC By Method SW846-8015C (DAI)

**Matrix:** AQ **Batch ID:** GGH5814

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Metals By Method EPA 200.8

**Matrix:** AQ **Batch ID:** MP2252

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Metals By Method EPA 245.1

**Matrix:** AQ **Batch ID:** MP2022

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Wet Chemistry By Method EPA 1664A

**Matrix:** AQ **Batch ID:** GP6606

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Wet Chemistry By Method EPA 300/SW846 9056A

| Matrix: AQ | Batch ID: GP6718 |
|---|---|

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Wet Chemistry By Method EPA 335.4/LACHAT

| Matrix: AQ | Batch ID: GP6601 |
|---|---|

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Wet Chemistry By Method SM21 4500CL F

| Matrix: AQ | Batch ID: M:GN55961 |
|---|---|

- The data for SM21 4500CL F meets quality control requirements.
- JC46991-1 for Total Residual Chlorine: Analysis performed past the required 15 minutes of collection time/holding time. Analysis performed at SGS Accutest, Marlborough, MA.

## Wet Chemistry By Method SM21 4500HB/EPA150.1

| Matrix: AQ | Batch ID: M:GN55964 |
|---|---|

- The data for SM21 4500HB/EPA150.1 meets quality control requirements.
- JC46991-1 for pH: Analysis performed past the required 15 minutes of collection time/holding time. Analysis performed at SGS Accutest, Marlborough, MA.
- JC46991-2 for pH: Analysis performed past the required 15 minutes of collection time/holding time. Analysis performed at SGS Accutest, Marlborough, MA.

## Wet Chemistry By Method SM2340 C-11

| Matrix: AQ | Batch ID: GN66982 |
|---|---|

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Wet Chemistry By Method SM2540 D-11

| Matrix: AQ | Batch ID: GN66919 |
|---|---|

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Wet Chemistry By Method SM4500NH3 H-11LACHAT

| Matrix: AQ | Batch ID: GP6565 |
|---|---|

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

## Wet Chemistry By Method SW846 6010/7196A M

| **Matrix:** AQ | **Batch ID:** R164751 |
| --- | --- |

- The data for SW846 6010/7196A M meets quality control requirements.
- JC46991-1R for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

| **Matrix:** AQ | **Batch ID:** R164752 |
| --- | --- |

- The data for SW846 6010/7196A M meets quality control requirements.
- JC46991-2R for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

## Wet Chemistry By Method SW846 7196A

| **Matrix:** AQ | **Batch ID:** M:GN55962 |
| --- | --- |

- The data for SW846 7196A meets quality control requirements.
- JC46991-1 for Chromium, Hexavalent: Analysis performed at SGS Accutest, Marlborough, MA.
- JC46991-2 for Chromium, Hexavalent: Analysis performed at SGS Accutest, Marlborough, MA.

SGS Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS Accutest is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS Accutest indicated via signature on the report cover

# SAMPLE DELIVERY GROUP CASE NARRATIVE

| | | | |
|---|---|---|---|
| **Client:** | SGS Accutest New Jersey | **Job No** | JC46991 |
| **Site:** | ENVMAS: Speedway # 2410 (Former Hess # 21213), 2285 Provide | **Report Date** | 7/18/2017 5:23:40 PM |

2 Sample(s) were collected on 07/13/2017 and were received at SGS Accutest New England on 07/14/2017 properly preserved, at -0.4 Deg. C and intact. These Samples received a job number of JC46991. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Wet Chemistry By Method SM21 4500CL F

**Matrix:** AQ **Batch ID:** GN55961

- All method blanks for this batch meet method specific criteria.
- JC46991-1 for Total Residual Chlorine: Analysis performed past the required 15 minutes of collection time/holding time.

## Wet Chemistry By Method SM21 4500HB/EPA150.1

**Matrix:** AQ **Batch ID:** GN55964

- JC46991-2 for pH: Analysis performed past the required 15 minutes of collection time/holding time.
- JC46991-1 for pH: Analysis performed past the required 15 minutes of collection time/holding time.

## Wet Chemistry By Method SW846 7196A

**Matrix:** AQ **Batch ID:** GN55962

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

SGS Accutest New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(JC46991).

# Summary of Hits



**Job Number:** JC46991
**Account:** EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA
**Collected:** 07/13/17



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **JC46991-1** | **H-3** | | | | | |
| Xylenes (total) | | 0.37 J | 1.0 | 0.20 | ug/l | EPA 624 |
| Chloride | | 926 | 10 | | mg/l | EPA 300/SW846 9056A |
| Hardness, Total as CaCO3 | | 125 | 4.0 | | mg/l | SM2340 C-11 |
| Nitrogen, Ammonia | | 1.9 | 0.20 | | mg/l | SM4500NH3 H-11LACHAT |
| Solids, Total Suspended | | 71.6 | 4.0 | | mg/l | SM2540 D-11 |
| pH [a] | | 6.2 | | | su | SM21 4500HB/EPA150.1 |
| **JC46991-1R** | **H-3** | | | | | |
| Copper | | 12.5 | 4.0 | | ug/l | EPA 200.8 |
| Iron | | 8040 | 50 | | ug/l | EPA 200.8 |
| Lead | | 3.7 | 0.50 | | ug/l | EPA 200.8 |
| Zinc | | 10.9 | 10 | | ug/l | EPA 200.8 |
| **JC46991-2** | **SW-1** | | | | | |
| Hardness, Total as CaCO3 | | 69.7 | 4.0 | | mg/l | SM2340 C-11 |
| Nitrogen, Ammonia | | 0.48 | 0.20 | | mg/l | SM4500NH3 H-11LACHAT |
| pH [a] | | 6.7 | | | su | SM21 4500HB/EPA150.1 |
| **JC46991-2R** | **SW-1** | | | | | |
| Iron | | 3040 | 50 | | ug/l | EPA 200.8 |
| Lead | | 1.8 | 0.50 | | ug/l | EPA 200.8 |
| Zinc | | 55.5 | 10 | | ug/l | EPA 200.8 |

(a) Analysis performed past the required 15 minutes of collection time/holding time. Analysis performed at SGS Accutest, Marlborough, MA.

4

# Sample Results

## Report of Analysis

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | H-3 | | |
| **Lab Sample ID:** | JC46991-1 | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 07/13/17 |
| **Method:** | EPA 624 | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | T225700.D | 1 | 07/20/17 16:54 | PR | n/a | n/a | VT9266 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | 0.23 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.24 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.21 | ug/l | |
| 1330-20-7 | Xylenes (total) | 0.37 | 1.0 | 0.20 | ug/l | J |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | 0.24 | ug/l | |
| 75-65-0 | Tertiary Butyl Alcohol | ND | 25 | 5.2 | ug/l | |
| 994-05-8 | tert-Amyl Methyl Ether | ND | 1.0 | 0.29 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 (SUR) | 99% | | 76-122% |
| 2037-26-5 | Toluene-D8 (SUR) | 100% | | 80-120% |
| 460-00-4 | 4-Bromofluorobenzene (SUR) | 99% | | 80-120% |
| 1868-53-7 | Dibromofluoromethane (S) | 99% | | 80-120% |

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS Accutest

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | H-3 | | |
| **Lab Sample ID:** | JC46991-1 | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 07/13/17 |
| **Method:** | EPA 625 EPA 625 | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 5P41034.D | 1 | 07/25/17 12:51 | SB | 07/20/17 16:30 | OP4612 | E5P2010 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 980 ml | 1.0 ml |
| Run #2 | | |

**ABN PPL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 95-57-8 | 2-Chlorophenol | ND | 5.1 | 0.84 | ug/l | |
| 59-50-7 | 4-Chloro-3-methyl phenol | ND | 5.1 | 0.91 | ug/l | |
| 120-83-2 | 2,4-Dichlorophenol | ND | 2.0 | 1.3 | ug/l | |
| 105-67-9 | 2,4-Dimethylphenol | ND | 5.1 | 2.5 | ug/l | |
| 51-28-5 | 2,4-Dinitrophenol [a] | ND | 10 | 1.6 | ug/l | |
| 534-52-1 | 4,6-Dinitro-o-cresol | ND | 5.1 | 1.3 | ug/l | |
| 88-75-5 | 2-Nitrophenol | ND | 5.1 | 0.98 | ug/l | |
| 100-02-7 | 4-Nitrophenol | ND | 10 | 1.2 | ug/l | |
| 87-86-5 | Pentachlorophenol | ND | 5.1 | 1.4 | ug/l | |
| 108-95-2 | Phenol | ND | 2.0 | 0.40 | ug/l | |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | 5.1 | 0.94 | ug/l | |
| 83-32-9 | Acenaphthene | ND | 1.0 | 0.19 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 1.0 | 0.14 | ug/l | |
| 120-12-7 | Anthracene | ND | 1.0 | 0.22 | ug/l | |
| 92-87-5 | Benzidine [b] | ND | 10 | 0.92 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 1.0 | 0.21 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 1.0 | 0.22 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 1.0 | 0.21 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 1.0 | 0.35 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 1.0 | 0.21 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 2.0 | 0.41 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 2.0 | 0.47 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 2.0 | 0.24 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 5.1 | 0.35 | ug/l | |
| 218-01-9 | Chrysene | ND | 1.0 | 0.18 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 2.0 | 0.28 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 2.0 | 0.25 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 2.0 | 0.41 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 2.0 | 0.37 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | 0.17 | ug/l | |
| 122-66-7 | 1,2-Diphenylhydrazine | ND | 1.0 | 0.19 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | 0.19 | ug/l | |

ND = Not detected  MDL = Method Detection Limit  J = Indicates an estimated value
RL = Reporting Limit  B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range  N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | H-3 | | |
| **Lab Sample ID:** | JC46991-1 | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 07/13/17 |
| **Method:** | EPA 625 EPA 625 | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

**ABN PPL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | 0.18 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 1.0 | 0.56 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 1.0 | 0.49 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 2.0 | 0.52 | ug/l | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 1.0 | 0.34 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 2.0 | 0.51 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 2.0 | 0.24 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 2.0 | 0.27 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 2.0 | 0.22 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 2.0 | 1.7 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 1.0 | 0.17 | ug/l | |
| 86-73-7 | Fluorene | ND | 1.0 | 0.17 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 1.0 | 0.33 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 1.0 | 0.50 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 10 | 2.8 | ug/l | |
| 67-72-1 | Hexachloroethane | ND | 2.0 | 0.40 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 1.0 | 0.34 | ug/l | |
| 78-59-1 | Isophorone | ND | 2.0 | 0.28 | ug/l | |
| 91-20-3 | Naphthalene | ND | 1.0 | 0.24 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 2.0 | 0.66 | ug/l | |
| 62-75-9 | n-Nitrosodimethylamine | ND | 2.0 | 0.83 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 2.0 | 0.49 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.1 | 0.23 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 1.0 | 0.18 | ug/l | |
| 129-00-0 | Pyrene | ND | 1.0 | 0.22 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 1.0 | 0.26 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 367-12-4 | 2-Fluorophenol | 48% | | 10-110% |
| 4165-62-2 | Phenol-d5 | 33% | | 10-110% |
| 118-79-6 | 2,4,6-Tribromophenol | 76% | | 35-147% |
| 4165-60-0 | Nitrobenzene-d5 | 73% | | 32-132% |
| 321-60-8 | 2-Fluorobiphenyl | 77% | | 40-117% |
| 1718-51-0 | Terphenyl-d14 | 70% | | 33-126% |

(a) Quadratic regression was employed for this compound in associated ICAL.
(b) This compound in BS is outside in house QC limits bias low.

ND = Not detected  MDL = Method Detection Limit  J = Indicates an estimated value
RL = Reporting Limit  B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range  N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | H-3 | | |
| **Lab Sample ID:** | JC46991-1 | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 07/13/17 |
| **Method:** | SW846-8015C (DAI) | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | GH110905.D | 1 | 07/21/17 11:54 | XPL | n/a | n/a | GGH5814 |
| Run #2 | | | | | | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | 55 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 111-27-3 | Hexanol | 110% | | 56-145% |
| 111-27-3 | Hexanol | 104% | | 56-145% |

ND = Not detected    MDL = Method Detection Limit    J = Indicates an estimated value
RL = Reporting Limit    B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range    N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | H-3 | | |
| **Lab Sample ID:** | JC46991-1 | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 07/13/17 |
| | | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 07/21/17 | 07/21/17 | JA | EPA 245.1 [1] | EPA 245.1 [2] |

(1) Instrument QC Batch: MA42448
(2) Prep QC Batch: MP2022

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | H-3 | | |
| **Lab Sample ID:** | JC46991-1 | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 07/13/17 |
| | | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

**General Chemistry**

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chloride | 926 | 10 | mg/l | 5 | 07/24/17 10:46 | TG | EPA 300/SW846 9056A |
| Chromium, Hexavalent [a] | < 0.010 | 0.010 | mg/l | 1 | 07/13/17 18:10 | AMA | SW846 7196A |
| Cyanide | < 0.010 | 0.010 | mg/l | 1 | 07/18/17 12:31 | BM | EPA 335.4/LACHAT |
| HEM Petroleum Hydrocarbons | < 5.2 | 5.2 | mg/l | 1 | 07/18/17 13:00 | TT | EPA 1664A |
| Hardness, Total as CaCO3 | 125 | 4.0 | mg/l | 1 | 07/18/17 10:36 | MP | SM2340 C-11 |
| Nitrogen, Ammonia | 1.9 | 0.20 | mg/l | 1 | 07/17/17 11:33 | BM | SM4500NH3 H-11LACHAT |
| Solids, Total Suspended | 71.6 | 4.0 | mg/l | 1 | 07/16/17 12:53 | TZW | SM2540 D-11 |
| Total Residual Chlorine [b] | < 0.050 | 0.050 | mg/l | 1 | 07/13/17 17:14 | AMA | SM21 4500CL F |
| pH [b] | 6.2 | | su | 1 | 07/13/17 17:49 | AMA | SM21 4500HB/EPA150.1 |

(a) Analysis performed at SGS Accutest, Marlborough, MA.
(b) Analysis performed past the required 15 minutes of collection time/holding time. Analysis performed at SGS Accutest, Marlborough, MA.

RL = Reporting Limit

SGS Accutest

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | H-3 | | |
| **Lab Sample ID:** | JC46991-1R | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 07/13/17 |
| | | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |



## Total Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | < 2.0 | 2.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Arsenic | < 1.0 | 1.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Cadmium | < 0.50 | 0.50 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Chromium | < 4.0 | 4.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Copper | 12.5 | 4.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Iron | 8040 | 50 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Lead | 3.7 | 0.50 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Nickel | < 4.0 | 4.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Selenium | < 1.0 | 1.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Silver | < 2.0 | 2.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Zinc | 10.9 | 10 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |

(1) Instrument QC Batch: MA42545
(2) Prep QC Batch: MP2252

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | H-3 | | |
| **Lab Sample ID:** | JC46991-1R | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 07/13/17 |
| | | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |



## General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chromium, Trivalent [a] | < 0.014 | 0.014 | mg/l | 1 | 08/05/17 15:04 | GT | SW846 6010/7196A M |

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | SW-1 | | |
| **Lab Sample ID:** | JC46991-2 | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Surface Water | **Date Received:** | 07/13/17 |
| | | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 07/21/17 | 07/21/17 | JA | EPA 245.1 [1] | EPA 245.1 [2] |

(1) Instrument QC Batch: MA42448
(2) Prep QC Batch: MP2022

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | SW-1 | | |
| **Lab Sample ID:** | JC46991-2 | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Surface Water | **Date Received:** | 07/13/17 |
| | | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

## General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent [a] | < 0.010 | 0.010 | mg/l | 1 | 07/13/17 18:10 | AMA | SW846 7196A |
| Hardness, Total as CaCO3 | 69.7 | 4.0 | mg/l | 1 | 07/18/17 10:36 | MP | SM2340 C-11 |
| Nitrogen, Ammonia | 0.48 | 0.20 | mg/l | 1 | 07/17/17 11:34 | BM | SM4500NH3 H-11LACHAT |
| pH [b] | 6.7 | | su | 1 | 07/13/17 17:57 | AMA | SM21 4500HB/EPA150.1 |

(a) Analysis performed at SGS Accutest, Marlborough, MA.
(b) Analysis performed past the required 15 minutes of collection time/holding time. Analysis performed at SGS Accutest, Marlborough, MA.

RL = Reporting Limit

SGS Accutest

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | SW-1 | | |
| **Lab Sample ID:** | JC46991-2R | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Surface Water | **Date Received:** | 07/13/17 |
| | | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |



**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | < 2.0 | 2.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Arsenic | < 1.0 | 1.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Cadmium | < 0.50 | 0.50 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Chromium | < 4.0 | 4.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Copper | < 4.0 | 4.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Iron | 3040 | 50 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Lead | 1.8 | 0.50 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Nickel | < 4.0 | 4.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Selenium | < 1.0 | 1.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Silver | < 2.0 | 2.0 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |
| Zinc | 55.5 | 10 | ug/l | 1 | 08/04/17 | 08/05/17 | GT | EPA 200.8 [1] | EPA 200.8 [2] |

(1) Instrument QC Batch: MA42545
(2) Prep QC Batch: MP2252

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | SW-1 | | |
| **Lab Sample ID:** | JC46991-2R | **Date Sampled:** | 07/13/17 |
| **Matrix:** | AQ - Surface Water | **Date Received:** | 07/13/17 |
| | | **Percent Solids:** | n/a |
| **Project:** | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | | |

**General Chemistry**

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|
| Chromium, Trivalent [a] | < 0.014 | 0.014 | mg/l | 1 | 08/05/17 15:08 | GT | SW846 6010/7196A M |

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

# Misc. Forms

## Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- MCP Form
- MCP Form (SGS Accutest New England)
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits

# Parameter Certification Exceptions



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

| Parameter | CAS# | Method | Mat | Certification Status |
|---|---|---|---|---|
| 1,2-Dichlorobenzene | 95-50-1 | **EPA 625** | AQ | Accutest is not certified for this parameter.[a] |
| 1,3-Dichlorobenzene | 541-73-1 | **EPA 625** | AQ | Accutest is not certified for this parameter.[a] |
| 1,4-Dichlorobenzene | 106-46-7 | **EPA 625** | AQ | Accutest is not certified for this parameter.[a] |
| Chromium, Trivalent | | **SW846 6010/7196A M** | AQ | Accutest is not certified for this parameter.[a] |

(a) Lab cert for analyte not supported by NJDEP, OQA. Only methods/analytes required for reporting by the State of NJ can be certified in NJ. Use of this analyte for compliance must be verified through the appropriate regulatory office.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

SGS ACCUTEST

GW SW

# CHAIN OF CUSTODY

SGS Accutest of New England
50 D'Angelo Drive/495 Technology Center West, Building One Marlborough, MA 01752
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 1

| | |
|---|---|
| FED-EX Tracking # 7273 7516 4304 | Bottle Order Control # |
| SGS Accutest Quote # | SGS Accutest Job # JC46991 |

| Client / Reporting Information | Project Information | |
|---|---|---|
| Company Name: ENVIROTRAC | Project Name: SPEEDWAY STORE #2410 | |
| Street Address: 2 MERCHANT ST, SUITE 2 | Street: | Billing Information ( If different from Report to) |
| City State Zip: SHARON, MA 02067 | City: WALPOLE, MA | Company Name: |
| Project Contact: J. CAIIGAS  E-mail: jessicac@envirotrac.com | Project#: | Street Address: |
| Phone #: (781) 793-0074  Fax #: | Client PO#: | City: State: Zip: |
| Sampler(s) Name(s):  Phone #: | Project Manager: | Attention: PO#: |

Requested Analysis ( see TEST CODE sheet)

| SGS Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Date | Time | Sampled by | Matrix | # of bottles (20) | HCl (11) | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | Bisulfate | pH, HARDNESS, Cl SM 4110B, ~~TOTAL RES. Cl~~, TSS SM 2540D, Cr VI BY 7196A | pH, HARDNESS, Cr VI | AMMONIA SM 4500 B&D | Hg 245.1 OR 7470A | CYANIDE 335.4 | BENZENE & TOTAL BTEX 624 | SVOCs 625 | TPH 1664A | MTBE, TBA, TAME 524.2 | Ethanol * RUN 7/14/17 | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | H-3 | | 7/13/17 | 1115 | TF | GW | ~~17~~ | 8 | 1 | 1 | 1 | 6 | | | | | X | | X | X | X | X | X | X | X | X | C38 |
| 2 | SW-1 | | 7/13/17 | 1230 | TF | SW | 6 | 0 | | 1 | 1 | 4 | | | | | | X | X | X | ~~X~~ TF | | | | | | E90 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | A24 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | G40 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | V323 |

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB- Equipment Blank; RB- Rinse Blank; TB-Trip Blank

INITIAL ASSESSMENT 28 / CL

LABEL VERIFICATION JK

**Turnaround Time ( Business days)**

- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

**Data Deliverable Information**

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" ( Level 2)
- [ ] FULLT1 ( Level 3+4 )
- [ ] CT RCP
- [x] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

**Comments / Special Instructions**

* Hold Ethanol analysis
* REVISED 7/14 RUN ETHANOL PER M.V.
SEE ATTACHED EMAIL

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

| Relinquished by | Date Time | Received By | Relinquished By | Date Time | Received By |
|---|---|---|---|---|---|
| 1 (Relinquished by Sampler) [signature] | 7/13/17 1330 | 1 ET SECURE FRIDGE | 2 [signature] | 7/13/17 15:55 | 2 [signature] |
| 3 (Relinquished by Sampler) [signature] | 7/13/17 1636 | 3 [signature] | 4 [signature] | 7/13/17 | 4 Fed ey |
| 5 Fed ey | 7/14/17 930 | 5 [signature] | Custody Seal # 643 | Intact / Not intact; Preserved where applicable | On Ice; Cooler Temp. 2.3°C 1.8°C IR |

# JC46991: Chain of Custody
# Page 1 of 7

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SGS ACCUTEST

# CHAIN OF CUSTODY

SGS Accutest of New England
50 D'Angelo Drive/495 Technology Center West, Building One Marlborough, MA 01752
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # | Bottle Order Control #
SGS Accutest Quote # | SGS Accutest Job # JC46991

**Client / Reporting Information**

Company Name: ENVIROTRAC
Street Address: 2 MERCHANT ST, SUITE 2
City, State, Zip: SHARON, MA 02067
Project Contact: J. CAJIGAS E-mail: jessicac@envirotrac.com
Phone #: (781) 793-0074 Fax #
Sampler(s) Name(s) Phone #

**Project Information**

Project Name: SPEEDWAY STORE #2410
Street:
City: WALPOLE, MA
Project#
Client PO#
Project Manager

**Billing Information ( If different from Report to)**

Company Name
Street Address
City State Zip
Attention: PO#

**Requested Analysis ( see TEST CODE sheet)**

| SGS Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Date | Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | Bisulfate | pH, HARDNESS, Cl SM4110B, TSS SM2540D, TOTAL RES. Cl, Cr VI BY 7196A | pH, HARDNESS, Cr VI | AMMONIA SM4500 B+D | Hg 245.1 OR 7470A | CYANIDE 335.4 | BENZENE & TOTAL BTEX 624 | SVOCs 625 | TPH 1664A | MTBE, TBA, TAME 524.2 | Ethanol * | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H-3 | | 7/13/17 | 1115 | TF | GW | ~~7~~ 8 (20) | 8 (11) | 1 | 1 | 1 | 6 | | | | | X | | X | X | X | X | X | X | X | X | |
| | SW-1 | | 7/13/17 | 1230 | TF | SW | 6 | 0 | 1 | 1 | 1 | 4 | | | | | | X | X | X | ~~X~~ | | | | | | |

-1 Limited Volume (W/P)

We kept XCR, TRC, pH

**Turnaround Time ( Business days)**

- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

**Data Deliverable Information**

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" ( Level 2)
- [ ] FULLT1 ( Level 3+4 )
- [ ] CT RCP
- [x] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

**Comments / Special Instructions**

* Hold Ethanol analysis

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

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 [signature] | 7/13/17 1330 | 1 ET SECURE FRIDGE | 2 [signature] | 7/13/17 15:35 | 2 [signature] |
| Relinquished by Sampler: 3 [signature] | Date Time: 7/13/17 1636 | Received By: 3 [signature] | Relinquished By: 4 | Date Time: | Received By: 4 |
| Relinquished by: 5 | Date Time: | Received By: 5 | Custody Seal # | Intact / Not intact; Preserved where applicable | On Ice ☑ Cooler Temp. 3.9 |

JC46991: Chain of Custody
Page 2 of 7

# SGS Accutest Sample Receipt Summary

**Job Number:** JC46991 **Client:** Envirotrac **Project:** Speedway Store #2410

**Date / Time Received:** 7/13/2017 9:30:00 AM **Delivery Method:** FedEx **Airbill #'s:** 727375164304

**Cooler Temps (Raw Measured) °C:** Cooler 1: (1.8);

**Cooler Temps (Corrected) °C:** Cooler 1: (3.1);

**Cooler Security**

| | Y | N |
|---|---|---|
| 1. Custody Seals Present: | ☑ | ☐ |
| 2. Custody Seals Intact: | ☑ | ☐ |
| 3. COC Present: | ☑ | ☐ |
| 4. Smpl Dates/Time OK | ☑ | ☐ |

**Cooler Temperature**

| | Y | N |
|---|---|---|
| 1. Temp criteria achieved: | ☑ | ☐ |
| 2. Cooler temp verification: | IR Gun | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

**Quality Control Preservation**

| | Y | N | N/A |
|---|---|---|---|
| 1. Trip Blank present / cooler: | ☐ | ☑ | ☐ |
| 2. Trip Blank listed on COC: | ☐ | ☑ | ☐ |
| 3. Samples preserved properly: | ☑ | ☐ | |
| 4. VOCs headspace free: | ☑ | ☐ | ☐ |

**Sample Integrity - Documentation**

| | Y | N |
|---|---|---|
| 1. Sample labels present on bottles: | ☑ | ☐ |
| 2. Container labeling complete: | ☑ | ☐ |
| 3. Sample container label / COC agree: | ☑ | ☐ |

**Sample Integrity - Condition**

| | Y | N |
|---|---|---|
| 1. Sample recvd within HT: | ☑ | ☐ |
| 2. All containers accounted for: | ☑ | ☐ |
| 3. Condition of sample: | Intact | |

**Sample Integrity - Instructions**

| | Y | N | N/A |
|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | ☐ | |
| 4. Compositing instructions clear: | ☐ | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | ☐ | ☑ |

Comments 1) -1 Please note limited volume of 3x 250ml for TSS.
2) -1 Please note CN volume is preserved with NaOH only.

SM089-02
Rev. Date 12/1/16

Responded to by: CSR: N/A

Response Date: Response Date: 7/14/2017

Response:

Response: Proceed with analysis

## Job Change Order: JC46991

| | | | |
|---|---|---|---|
| **Requested Date:** | 8/2/2017 | **Received Date:** | 7/13/2017 |
| **Account Name:** | EnviroTrac Ltd. | **Due Date:** | 7/27/2017 |
| **Project Description:** | Speedway # 2410 (Former Hess # 21213), 2285 Pr | **Deliverable:** | MAMCP |
| **CSR:** | MartyV | **TAT (Days):** | 2 |

==========================================================================================

| | | |
|---|---|---|
| **Sample #:** | JC46991-1, 2 | **Change:** |
| **Dept:** | | Relog for SB, AS, CD, CR, CU, PB, NI, SE, AG, ZN, FE, CR3 (Lab needs to manaully obtain the XCR data from ALNE) |
| **TAT:** | 2 | |

==========================================================================================

**Above Changes Per:** Dena Tomasi **Date/Time:** 8/2/2017 4:34:13 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

## Job Change Order: JC46991

| | | | |
|---|---|---|---|
| **Requested Date:** | 8/2/2017 | **Received Date:** | 7/13/2017 |
| **Account Name:** | EnviroTrac Ltd. | **Due Date:** | 7/27/2017 |
| **Project Description:** | Speedway # 2410 (Former Hess # 21213), 2285 Pr | **Deliverable:** | MAMCP |
| **CSR:** | MartyV | **TAT (Days):** | 2 |

=====================================================================================================

| | | |
|---|---|---|
| **Sample #:** | JC46991-1, 2 | **Change:** |
| **Dept:** | | Relog for SB, AS, CD, CR, CU, PB, NI, SE, AG, ZN, FE, CR3 (Lab needs to manaully obtain the XCR data from ALNE) |
| **TAT:** | 2 | |

=====================================================================================================

**Above Changes Per:** Dena Tomasi **Date/Time:** 8/2/2017 4:34:13 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

Page 1 of 1

## Job Change Order: JC46991

| | | | |
|---|---|---|---|
| **Requested Date:** | 8/4/2017 | **Received Date:** | 7/13/2017 |
| **Account Name:** | EnviroTrac Ltd. | **Due Date:** | 7/27/2017 |
| **Project Description:** | Speedway # 2410 (Former Hess # 21213), 2285 Pr | **Deliverable:** | MAMCP |
| **CSR:** | mattc | **TAT (Days):** | 2 |

==========================================================================================

**Sample #:** JC46991-1R,2R

**Dept:**

**TAT:**

**Change:**
revise metals to ICPMS codes method 200.8

==========================================================================================

**Above Changes Per:** Jessica Cajigas **Date/Time:** 8/4/2017 1:54:23 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

Page 1 of 1

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JC46991: Chain of Custody
Page 7 of 7

| | Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup | WSC-CAM | Exhibit VII A |
|---|---|---|---|
| | | July 1, 2010 | Revision No. 1 |
| | | **Final** | |

**Exhibit VII A-2: MassDEP Analytical Protocol Certification Form**

## MassDEP Analytical Protocol Certification Form

| | | | |
|---|---|---|---|
| Laboratory Name: | Accutest Mid-Atlantic | Project #: | JC46991 |
| Project Location:#01074, | Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA | MADEP RTN | None |

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
JC46991-1,JC46991-2

Matrices: Groundwater/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air (x ) Other ( )

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| 8260 VOC ( ) CAM IIA | 7470/7471 Hg ( ) CAM III B | MassDEP VPH ( ) CAM IV A | 8081 Pesticides ( ) CAM V B | 7196 Hex Cr (X) CAM VI B | Mass DEP APH ( ) CAM IX A |
| 8270 SVOC ( ) CAM II B | 7010 Metals ( ) CAM III C | MassDEP EPH ( ) CAM IV B | 8151 Herbicides ( ) CAM V C | 8330 Explosives ( ) CAM VIII A | TO-15 VOC ( ) CAM IX B |
| 6010 Metals ( ) CAM III A | 6020 Metals ( ) CAM III D | 8082 PCB ( ) CAM V A | 9014 Total ( ) Cyanide/PAC CAM VI A | 6860 Perchlorate ( ) CAM VIII B | |

***Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status***

| | | | |
|---|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | ☑ Yes | ☐ No |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | ☑ Yes | ☐ No |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | ☑ Yes | ☐ No |
| D | Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | ☑ Yes | ☐ No |
| E | VPH, EPH, APH, and TO-15 only:<br>a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | ☐ Yes | ☐ No |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | ☐ Yes | ☐ No |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | ☑ Yes | ☐ No |

***Responses to questions G, H, and I below is required for "Presumptive Certainty" status***

| | | | |
|---|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols | ☑ Yes | ☐ No [1] |
| | **Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.** | | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | ☐ Yes | ☑ No [1] |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | ☐ Yes | ☑ No [1] |

[1] ***All Negative responses must be addressed in an attached Environmental Laboratory case narrative.***

***I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

**Signature:** Nancy F. Cole **Position:** **Laboratory Director**

**Printed Name:** **Nancy F. Cole** **Date:** **27-Jul-17**

| | Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup | WSC-CAM | Exhibit VII A |
|---|---|---|---|
| | | July 1, 2010 | Revision No. 1 |
| | | **Final** | |

**Exhibit VII A-2: MassDEP Analytical Protocol Certification Form**

## MassDEP Analytical Protocol Certification Form

| | | | |
|---|---|---|---|
| Laboratory Name: | SGS Accutest- Marlborough | Project #: | JC46991 |
| Project Location: | ENVMAS: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, | MADEP RTN | None |

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
JC46991-1,JC46991-2

Test method: Refer to case narrative.

Matrices: Groundwater/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other ( )

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| 8260 VOC ( ) CAM IIA | 7470/7471 Hg ( ) CAM III B | MassDEP VPH ( ) CAM IV A | 8081 Pesticides ( ) CAM V B | 7196 Hex Cr (X) CAM VI B | Mass DEP APH ( ) CAM IX A |
| 8270 SVOC ( ) CAM II B | 7010 Metals ( ) CAM III C | MassDEP EPH ( ) CAM IV B | 8151 Herbicides ( ) CAM V C | 8330 Explosives ( ) CAM VIII A | TO-15 VOC ( ) CAM IX B |
| 6010 Metals ( ) CAM III A | 6020 Metals ( ) CAM III D | 8082 PCB ( ) CAM V A | 9014 Total ( ) Cyanide/PAC CAM VI A | 6860 Perchlorate ( ) CAM VIII B | |

***Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status***

| | | | |
|---|---|---|---|
| **A** | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | ☐ Yes | ☑ No |
| **B** | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | ☑ Yes | ☐ No |
| **C** | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | ☑ Yes | ☐ No |
| **D** | Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | ☑ Yes | ☐ No |
| **E** | VPH, EPH, APH, and TO-15 only:<br>a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).<br>b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | ☐ Yes<br>☐ Yes | ☐ No<br>☐ No |
| **F** | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | ☑ Yes | ☐ No |

***Responses to questions G, H, and I below is required for "Presumptive Certainty" status***

| | | | |
|---|---|---|---|
| **G** | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols | ☑ Yes | ☐ No [1] |
| | **Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.** | | |
| **H** | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | ☑ Yes | ☐ No [1] |
| **I** | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | ☑ Yes | ☐ No [1] |

[1] ***All Negative responses must be addressed in an attached Environmental Laboratory case narrative.***

***I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

**Signature:** [signature] **Position:** **Laboratory Director**

**Printed Name:** **H. (Brad) Madadian** **Date:** **18-Jul-17**

# Internal Sample Tracking Chronicle

EnviroTrac Ltd.

**Job No:** JC46991

Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA
Project No: 03.SW2410.01

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JC46991-1 H-3 | Collected: 13-JUL-17 11:15 By: TF | | Received: 13-JUL-17 By: AS | | | |
| JC46991-1 | SM21 4500CL F | 13-JUL-17 17:14 | AMA | | | TRC |
| JC46991-1 | SM21 4500HB/EPA150.1 | 13-JUL-17 17:49 | AMA | | | PHLAB |
| JC46991-1 | SW846 7196A | 13-JUL-17 18:10 | AMA | | | XCR |
| JC46991-1 | SM2540 D-11 | 16-JUL-17 12:53 | TZW | | | TSS |
| JC46991-1 | SM4500NH3 H-11LACHAT | 17-JUL-17 11:33 | BM | 17-JUL-17 | BM | AMN |
| JC46991-1 | SM2340 C-11 | 18-JUL-17 10:36 | MP | | | HRD |
| JC46991-1 | EPA 335.4/LACHAT | 18-JUL-17 12:31 | BM | 18-JUL-17 | RP | CN |
| JC46991-1 | EPA 1664A | 18-JUL-17 13:00 | TT | 18-JUL-17 | TT | PHC1664 |
| JC46991-1 | EPA 624 | 20-JUL-17 16:54 | PR | | | V624BTX |
| JC46991-1 | EPA 245.1 | 21-JUL-17 10:36 | JA | 21-JUL-17 | JA | HG |
| JC46991-1 | SW846-8015C (DAI) | 21-JUL-17 11:54 | XPL | | | D8015ETHL |
| JC46991-1 | EPA 300/SW846 9056A | 24-JUL-17 10:46 | TG | 24-JUL-17 | YR | CHL |
| JC46991-1 | EPA 625 | 25-JUL-17 12:51 | SB | 20-JUL-17 | RF | AB625PPL |
| JC46991-2 SW-1 | Collected: 13-JUL-17 12:30 By: TF | | Received: 13-JUL-17 By: AS | | | |
| JC46991-2 | SM21 4500HB/EPA150.1 | 13-JUL-17 17:57 | AMA | | | PHLAB |
| JC46991-2 | SW846 7196A | 13-JUL-17 18:10 | AMA | | | XCR |
| JC46991-2 | SM4500NH3 H-11LACHAT | 17-JUL-17 11:34 | BM | 17-JUL-17 | BM | AMN |
| JC46991-2 | SM2340 C-11 | 18-JUL-17 10:36 | MP | | | HRD |
| JC46991-2 | EPA 245.1 | 21-JUL-17 10:38 | JA | 21-JUL-17 | JA | HG |
| JC46991-1R H-3 | Collected: 13-JUL-17 11:15 By: TF | | Received: 13-JUL-17 By: AS | | | |
| JC46991-1R | EPA 200.8 | 05-AUG-17 15:04 | GT | 04-AUG-17 | RM | AGMS,ASMS,CDMS,CRMS,CUMS, FEMS,NIMS,PBMS,SBMS,SEMS, ZNMS |
| JC46991-1R | SW846 6010/7196A M | 05-AUG-17 15:04 | GT | | | CR3 |
| JC46991-2R SW-1 | Collected: 13-JUL-17 12:30 By: TF | | Received: 13-JUL-17 By: AS | | | |
| JC46991-2R | EPA 200.8 | 05-AUG-17 15:08 | GT | 04-AUG-17 | RM | AGMS,ASMS,CDMS,CRMS,CUMS, FEMS,NIMS,PBMS,SBMS,SEMS, ZNMS |

# Internal Sample Tracking Chronicle

EnviroTrac Ltd.

**Job No:** JC46991

Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA
Project No: 03.SW2410.01

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JC46991-2R | SW846 6010/7196A M | 05-AUG-17 15:08 | GT | | | CR3 |

# QC Evaluation: MA MCP Limits

**Job Number:** JC46991
**Account:** EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA
**Collected:** 07/13/17

| QC Sample ID | CAS# | Analyte | Sample Type | Result Type | Result | Units | Limits |
|---|---|---|---|---|---|---|---|

No Exceptions found.

* Sample used for QC is not from job JC46991

# GC/MS Volatiles

## QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VT9266-MB | T225686.D | 1 | 07/20/17 | PR | n/a | n/a | VT9266 |

**The QC reported here applies to the following samples:** **Method:** EPA 624

JC46991-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | 0.23 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.21 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | 0.24 | ug/l | |
| 75-65-0 | Tertiary Butyl Alcohol | ND | 25 | 5.2 | ug/l | |
| 994-05-8 | tert-Amyl Methyl Ether | ND | 1.0 | 0.29 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.24 | ug/l | |
| 1330-20-7 | Xylenes (total) | ND | 1.0 | 0.20 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 (SUR) | 101% | 76-122% |
| 2037-26-5 | Toluene-D8 (SUR) | 100% | 80-120% |
| 460-00-4 | 4-Bromofluorobenzene (SUR) | 102% | 80-120% |
| 1868-53-7 | Dibromofluoromethane (S) | 98% | 80-120% |

# Blank Spike/Blank Spike Duplicate Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VT9266-BS | T225687.D | 1 | 07/20/17 | PR | n/a | n/a | VT9266 |
| VT9266-BSD | T225688.D | 1 | 07/20/17 | PR | n/a | n/a | VT9266 |

**The QC reported here applies to the following samples:** **Method:** EPA 624

JC46991-1

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | BSD ug/l | BSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | 20 | 20.0 | 100 | 20.1 | 101 | 0 | 78-118/10 |
| 100-41-4 | Ethylbenzene | 20 | 19.2 | 96 | 19.6 | 98 | 2 | 76-118/10 |
| 1634-04-4 | Methyl Tert Butyl Ether | 40 | 38.3 | 96 | 38.0 | 95 | 1 | 69-121/10 |
| 75-65-0 | Tertiary Butyl Alcohol | 100 | 83.6 | 84 | 81.8 | 82 | 2 | 77-125/10 |
| 994-05-8 | tert-Amyl Methyl Ether | 20 | 18.5 | 93 | 18.6 | 93 | 1 | 73-120/10 |
| 108-88-3 | Toluene | 20 | 20.1 | 101 | 20.4 | 102 | 1 | 78-119/10 |
| 1330-20-7 | Xylenes (total) | 60 | 57.0 | 95 | 58.2 | 97 | 2 | 76-120/10 |

| CAS No. | Surrogate Recoveries | BSP | BSD | Limits |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 (SUR) | 99% | 100% | 76-122% |
| 2037-26-5 | Toluene-D8 (SUR) | 101% | 101% | 80-120% |
| 460-00-4 | 4-Bromofluorobenzene (SUR) | 102% | 105% | 80-120% |
| 1868-53-7 | Dibromofluoromethane (S) | 98% | 98% | 80-120% |

* = Outside of Control Limits.

# Volatile Internal Standard Area Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| | | | |
|---|---|---|---|
| **Check Std:** | VT9266-CC9264 | **Injection Date:** | 07/20/17 |
| **Lab File ID:** | T225684.D | **Injection Time:** | 08:39 |
| **Instrument ID:** | GCMST | **Method:** | EPA 624 |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 104840 | 7.45 | 175637 | 9.48 | 268557 | 10.34 | 181495 | 16.09 | 260393 | 13.55 |
| Upper Limit [a] | 209680 | 7.95 | 351274 | 9.98 | 537114 | 10.84 | 362990 | 16.59 | 520786 | 14.05 |
| Lower Limit [b] | 52420 | 6.95 | 87819 | 8.98 | 134279 | 9.84 | 90748 | 15.59 | 130197 | 13.05 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| VT9266-MB | 102186 | 7.45 | 176112 | 9.48 | 259190 | 10.34 | 182759 | 16.10 | 256149 | 13.55 |
| VT9266-BS | 105745 | 7.45 | 176979 | 9.48 | 266906 | 10.34 | 181016 | 16.09 | 261466 | 13.55 |
| VT9266-BSD | 107007 | 7.45 | 176965 | 9.48 | 265309 | 10.34 | 179556 | 16.09 | 261665 | 13.55 |
| ZZZZZZ | 106048 | 7.45 | 179776 | 9.48 | 269073 | 10.34 | 189622 | 16.10 | 264315 | 13.55 |
| JC47318-2 | 112919 | 7.45 | 184540 | 9.49 | 275666 | 10.35 | 195009 | 16.09 | 269106 | 13.55 |
| JC47318-3 | 99345 | 7.45 | 176039 | 9.48 | 266708 | 10.34 | 191716 | 16.10 | 258922 | 13.55 |
| ZZZZZZ | 101880 | 7.45 | 181598 | 9.49 | 271274 | 10.35 | 196697 | 16.09 | 264594 | 13.55 |
| ZZZZZZ | 121816 | 7.46 | 186880 | 9.48 | 281915 | 10.35 | 197165 | 16.09 | 274649 | 13.55 |
| ZZZZZZ | 108018 | 7.45 | 184009 | 9.48 | 277210 | 10.35 | 198046 | 16.09 | 266836 | 13.55 |
| JC47318-2MS [c] | 108681 | 7.45 | 191128 | 9.49 | 284653 | 10.34 | 197056 | 16.09 | 275736 | 13.55 |
| JC47318-3DUP [c] | 102592 | 7.45 | 182830 | 9.48 | 277614 | 10.34 | 196845 | 16.10 | 269431 | 13.55 |
| ZZZZZZ | 95823 | 7.45 | 177838 | 9.48 | 271477 | 10.34 | 196240 | 16.10 | 267473 | 13.55 |
| JC46991-1 | 97019 | 7.45 | 182048 | 9.48 | 272546 | 10.35 | 195328 | 16.09 | 268803 | 13.55 |
| ZZZZZZ | 94795 | 7.45 | 179722 | 9.48 | 271783 | 10.34 | 198579 | 16.09 | 265275 | 13.55 |
| ZZZZZZ | 89742 | 7.45 | 174600 | 9.48 | 264835 | 10.34 | 190469 | 16.09 | 262735 | 13.55 |
| ZZZZZZ | 88039 | 7.45 | 177715 | 9.48 | 270854 | 10.34 | 198612 | 16.09 | 265782 | 13.55 |
| ZZZZZZ | 99765 | 7.45 | 179039 | 9.49 | 270717 | 10.34 | 193992 | 16.09 | 271274 | 13.55 |
| ZZZZZZ | 103552 | 7.45 | 188318 | 9.48 | 285530 | 10.35 | 202287 | 16.09 | 278895 | 13.55 |
| ZZZZZZ | 100050 | 7.45 | 186770 | 9.49 | 282169 | 10.34 | 208151 | 16.10 | 279201 | 13.55 |
| ZZZZZZ | 102688 | 7.45 | 181994 | 9.48 | 278406 | 10.34 | 198821 | 16.09 | 273144 | 13.55 |
| ZZZZZZ | 100872 | 7.44 | 185969 | 9.48 | 284136 | 10.34 | 206260 | 16.10 | 275603 | 13.55 |
| ZZZZZZ | 102312 | 7.45 | 179803 | 9.48 | 274681 | 10.34 | 197072 | 16.09 | 267872 | 13.55 |
| ZZZZZZ | 107598 | 7.44 | 179664 | 9.48 | 277934 | 10.34 | 196071 | 16.09 | 270862 | 13.55 |
| ZZZZZZ | 108993 | 7.45 | 184069 | 9.48 | 281948 | 10.35 | 208905 | 16.10 | 276095 | 13.55 |
| ZZZZZZ | 110669 | 7.45 | 178922 | 9.49 | 275121 | 10.34 | 195584 | 16.09 | 266677 | 13.55 |
| ZZZZZZ | 106450 | 7.45 | 177603 | 9.48 | 268321 | 10.34 | 199542 | 16.09 | 262285 | 13.55 |
| ZZZZZZ | 129248 | 7.44 | 179258 | 9.49 | 278175 | 10.34 | 197893 | 16.09 | 272528 | 13.55 |
| ZZZZZZ | 108710 | 7.44 | 182001 | 9.48 | 276076 | 10.34 | 205809 | 16.10 | 268858 | 13.55 |
| ZZZZZZ | 134830 | 7.45 | 186738 | 9.48 | 286623 | 10.35 | 199419 | 16.09 | 278266 | 13.55 |
| ZZZZZZ | 110887 | 7.44 | 182930 | 9.48 | 273296 | 10.34 | 209783 | 16.09 | 272655 | 13.55 |
| ZZZZZZ | 109413 | 7.44 | 183063 | 9.48 | 275893 | 10.34 | 212193 | 16.09 | 272749 | 13.55 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene

# Volatile Internal Standard Area Summary

**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| | | | |
|---|---|---|---|
| **Check Std:** | VT9266-CC9264 | **Injection Date:** | 07/20/17 |
| **Lab File ID:** | T225684.D | **Injection Time:** | 08:39 |
| **Instrument ID:** | GCMST | **Method:** | EPA 624 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|

**IS 4** = 1,4-Dichlorobenzene-d4
**IS 5** = Chlorobenzene-D5

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Results reported from the HCl preserved sample. This reported result can only be used for screening purposes for acrolein and acrylonitrile.

# Volatile Surrogate Recovery Summary

**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

**Method:** EPA 624 **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 | S2 | S3 | S4 |
|---|---|---|---|---|---|
| JC46991-1 | T225700.D | 99 | 100 | 99 | 99 |
| VT9266-BS | T225687.D | 99 | 101 | 102 | 98 |
| VT9266-BSD | T225688.D | 100 | 101 | 105 | 98 |
| VT9266-MB | T225686.D | 101 | 100 | 102 | 98 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| **S1** = 1,2-Dichloroethane-D4 (SUR) | 76-122% |
| **S2** = Toluene-D8 (SUR) | 80-120% |
| **S3** = 4-Bromofluorobenzene (SUR) | 80-120% |
| **S4** = Dibromofluoromethane (S) | 80-120% |

# GC/MS Semi-volatiles

## QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP4612-MB1 | 5P40961.D | 1 | 07/23/17 | KLS | 07/20/17 | OP4612 | E5P2007 |

**The QC reported here applies to the following samples:** **Method:** EPA 625

JC46991-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 95-57-8 | 2-Chlorophenol | ND | 5.0 | 0.82 | ug/l | |
| 59-50-7 | 4-Chloro-3-methyl phenol | ND | 5.0 | 0.89 | ug/l | |
| 120-83-2 | 2,4-Dichlorophenol | ND | 2.0 | 1.3 | ug/l | |
| 105-67-9 | 2,4-Dimethylphenol | ND | 5.0 | 2.4 | ug/l | |
| 51-28-5 | 2,4-Dinitrophenol | ND | 10 | 1.6 | ug/l | |
| 534-52-1 | 4,6-Dinitro-o-cresol | ND | 5.0 | 1.3 | ug/l | |
| 88-75-5 | 2-Nitrophenol | ND | 5.0 | 0.96 | ug/l | |
| 100-02-7 | 4-Nitrophenol | ND | 10 | 1.2 | ug/l | |
| 87-86-5 | Pentachlorophenol | ND | 5.0 | 1.4 | ug/l | |
| 108-95-2 | Phenol | ND | 2.0 | 0.39 | ug/l | |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | 5.0 | 0.92 | ug/l | |
| 83-32-9 | Acenaphthene | ND | 1.0 | 0.19 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 1.0 | 0.14 | ug/l | |
| 120-12-7 | Anthracene | ND | 1.0 | 0.21 | ug/l | |
| 92-87-5 | Benzidine | ND | 10 | 0.90 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 1.0 | 0.20 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 1.0 | 0.21 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 1.0 | 0.21 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 1.0 | 0.34 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 1.0 | 0.21 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 2.0 | 0.40 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 2.0 | 0.46 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 2.0 | 0.24 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 5.0 | 0.34 | ug/l | |
| 218-01-9 | Chrysene | ND | 1.0 | 0.18 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 2.0 | 0.28 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 2.0 | 0.25 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 2.0 | 0.40 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 2.0 | 0.37 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | 0.17 | ug/l | |
| 122-66-7 | 1,2-Diphenylhydrazine | ND | 1.0 | 0.19 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | 0.19 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | 0.17 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 1.0 | 0.55 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 1.0 | 0.48 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 2.0 | 0.51 | ug/l | |

# Method Blank Summary

**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP4612-MB1 | 5P40961.D | 1 | 07/23/17 | KLS | 07/20/17 | OP4612 | E5P2007 |

**The QC reported here applies to the following samples:** **Method:** EPA 625

JC46991-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 1.0 | 0.33 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 2.0 | 0.50 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 2.0 | 0.23 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 2.0 | 0.26 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 2.0 | 0.22 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 2.0 | 1.7 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 1.0 | 0.17 | ug/l | |
| 86-73-7 | Fluorene | ND | 1.0 | 0.17 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 1.0 | 0.33 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 1.0 | 0.49 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 10 | 2.8 | ug/l | |
| 67-72-1 | Hexachloroethane | ND | 2.0 | 0.39 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 1.0 | 0.33 | ug/l | |
| 78-59-1 | Isophorone | ND | 2.0 | 0.28 | ug/l | |
| 91-20-3 | Naphthalene | ND | 1.0 | 0.23 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 2.0 | 0.64 | ug/l | |
| 62-75-9 | n-Nitrosodimethylamine | ND | 2.0 | 0.82 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 2.0 | 0.48 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.0 | 0.22 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 1.0 | 0.18 | ug/l | |
| 129-00-0 | Pyrene | ND | 1.0 | 0.22 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 367-12-4 | 2-Fluorophenol | 36% | 10-110% |
| 4165-62-2 | Phenol-d5 | 26% | 10-110% |
| 118-79-6 | 2,4,6-Tribromophenol | 75% | 35-147% |
| 4165-60-0 | Nitrobenzene-d5 | 82% | 32-132% |
| 321-60-8 | 2-Fluorobiphenyl | 61% | 40-117% |
| 1718-51-0 | Terphenyl-d14 | 82% | 33-126% |

# Blank Spike Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP4612-BS1 | 5P40962.D | 1 | 07/23/17 | KLS | 07/20/17 | OP4612 | E5P2007 |

**The QC reported here applies to the following samples:** **Method:** EPA 625

JC46991-1

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 95-57-8 | 2-Chlorophenol | 50 | 26.3 | 53 | 43-100 |
| 59-50-7 | 4-Chloro-3-methyl phenol | 50 | 46.4 | 93 | 46-110 |
| 120-83-2 | 2,4-Dichlorophenol | 50 | 31.5 | 63 | 44-109 |
| 105-67-9 | 2,4-Dimethylphenol | 50 | 44.0 | 88 | 42-116 |
| 51-28-5 | 2,4-Dinitrophenol | 100 | 84.2 | 84 | 38-131 |
| 534-52-1 | 4,6-Dinitro-o-cresol | 50 | 45.6 | 91 | 50-124 |
| 88-75-5 | 2-Nitrophenol | 50 | 33.5 | 67 | 44-109 |
| 100-02-7 | 4-Nitrophenol | 50 | 30.0 | 60 | 14-110 |
| 87-86-5 | Pentachlorophenol | 50 | 40.7 | 81 | 25-128 |
| 108-95-2 | Phenol | 50 | 16.2 | 32 | 20-110 |
| 88-06-2 | 2,4,6-Trichlorophenol | 50 | 33.8 | 68 | 52-118 |
| 83-32-9 | Acenaphthene | 50 | 31.5 | 63 | 47-110 |
| 208-96-8 | Acenaphthylene | 50 | 29.0 | 58 | 45-110 |
| 120-12-7 | Anthracene | 50 | 36.4 | 73 | 52-110 |
| 92-87-5 | Benzidine | 100 | 1.8 | 2* [a] | 10-110 |
| 56-55-3 | Benzo(a)anthracene | 50 | 35.9 | 72 | 53-110 |
| 50-32-8 | Benzo(a)pyrene | 50 | 34.9 | 70 | 55-110 |
| 205-99-2 | Benzo(b)fluoranthene | 50 | 34.5 | 69 | 57-110 |
| 191-24-2 | Benzo(g,h,i)perylene | 50 | 32.8 | 66 | 51-110 |
| 207-08-9 | Benzo(k)fluoranthene | 50 | 35.4 | 71 | 56-110 |
| 101-55-3 | 4-Bromophenyl phenyl ether | 50 | 34.5 | 69 | 51-112 |
| 85-68-7 | Butyl benzyl phthalate | 50 | 36.8 | 74 | 50-122 |
| 91-58-7 | 2-Chloronaphthalene | 50 | 27.4 | 55 | 41-110 |
| 106-47-8 | 4-Chloroaniline | 50 | 26.5 | 53 | 10-110 |
| 218-01-9 | Chrysene | 50 | 34.4 | 69 | 52-110 |
| 111-91-1 | bis(2-Chloroethoxy)methane | 50 | 37.7 | 75 | 36-110 |
| 111-44-4 | bis(2-Chloroethyl)ether | 50 | 33.0 | 66 | 40-111 |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 50 | 24.6 | 49 | 37-110 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 50 | 32.9 | 66 | 48-110 |
| 95-50-1 | 1,2-Dichlorobenzene | 50 | 24.5 | 49 | 35-110 |
| 122-66-7 | 1,2-Diphenylhydrazine | 50 | 39.9 | 80 | 39-128 |
| 541-73-1 | 1,3-Dichlorobenzene | 50 | 22.9 | 46 | 32-110 |
| 106-46-7 | 1,4-Dichlorobenzene | 50 | 23.7 | 47 | 33-110 |
| 121-14-2 | 2,4-Dinitrotoluene | 50 | 39.9 | 80 | 61-117 |
| 606-20-2 | 2,6-Dinitrotoluene | 50 | 39.8 | 80 | 61-119 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 100 | 55.4 | 55 | 20-110 |

* = Outside of Control Limits.

# Blank Spike Summary

**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP4612-BS1 | 5P40962.D | 1 | 07/23/17 | KLS | 07/20/17 | OP4612 | E5P2007 |

**The QC reported here applies to the following samples:** **Method:** EPA 625

JC46991-1

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 53-70-3 | Dibenzo(a,h)anthracene | 50 | 33.8 | 68 | 55-110 |
| 84-74-2 | Di-n-butyl phthalate | 50 | 35.8 | 72 | 55-118 |
| 117-84-0 | Di-n-octyl phthalate | 50 | 38.9 | 78 | 49-124 |
| 84-66-2 | Diethyl phthalate | 50 | 35.6 | 71 | 54-113 |
| 131-11-3 | Dimethyl phthalate | 50 | 36.1 | 72 | 56-110 |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 50 | 37.9 | 76 | 50-120 |
| 206-44-0 | Fluoranthene | 50 | 34.9 | 70 | 55-111 |
| 86-73-7 | Fluorene | 50 | 33.5 | 67 | 51-110 |
| 118-74-1 | Hexachlorobenzene | 50 | 34.4 | 69 | 47-116 |
| 87-68-3 | Hexachlorobutadiene | 50 | 21.4 | 43 | 24-110 |
| 77-47-4 | Hexachlorocyclopentadiene | 100 | 34.7 | 35 | 10-110 |
| 67-72-1 | Hexachloroethane | 50 | 22.0 | 44 | 28-110 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 50 | 33.7 | 67 | 51-112 |
| 78-59-1 | Isophorone | 50 | 38.2 | 76 | 42-111 |
| 91-20-3 | Naphthalene | 50 | 25.0 | 50 | 34-110 |
| 98-95-3 | Nitrobenzene | 50 | 33.5 | 67 | 39-110 |
| 62-75-9 | n-Nitrosodimethylamine | 50 | 17.2 | 34 | 15-110 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 50 | 36.2 | 72 | 33-117 |
| 86-30-6 | N-Nitrosodiphenylamine | 50 | 33.4 | 67 | 54-110 |
| 85-01-8 | Phenanthrene | 50 | 35.5 | 71 | 53-110 |
| 129-00-0 | Pyrene | 50 | 36.1 | 72 | 52-110 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 50 | 21.9 | 44 | 30-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 367-12-4 | 2-Fluorophenol | 39% | 10-110% |
| 4165-62-2 | Phenol-d5 | 30% | 10-110% |
| 118-79-6 | 2,4,6-Tribromophenol | 82% | 35-147% |
| 4165-60-0 | Nitrobenzene-d5 | 80% | 32-132% |
| 321-60-8 | 2-Fluorobiphenyl | 57% | 40-117% |
| 1718-51-0 | Terphenyl-d14 | 93% | 33-126% |

(a) Outside of in house control limits.

* = Outside of Control Limits.

# Semivolatile Internal Standard Area Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| | | | |
|---|---|---|---|
| **Check Std:** | E5P2007-CC1981 | **Injection Date:** | 07/23/17 |
| **Lab File ID:** | 5P40957.D | **Injection Time:** | 10:45 |
| **Instrument ID:** | GCMS5P | **Method:** | EPA 625 |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 266413 | 4.56 | 1014604 | 5.75 | 639564 | 7.46 | 1157017 | 8.94 | 1157137 | 12.42 | 1102175 | 14.44 |
| Upper Limit [a] | 532826 | 5.06 | 2029208 | 6.25 | 1279128 | 7.96 | 2314034 | 9.44 | 2314274 | 12.92 | 2204350 | 14.94 |
| Lower Limit [b] | 133207 | 4.06 | 507302 | 5.25 | 319782 | 6.96 | 578509 | 8.44 | 578569 | 11.92 | 551088 | 13.94 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OP4655-BSD | 225020 | 4.56 | 847111 | 5.75 | 539027 | 7.46 | 981183 | 8.94 | 965748 | 12.41 | 923925 | 14.43 |
| OP4612-MB1 | 246000 | 4.56 | 944012 | 5.75 | 582338 | 7.45 | 1043171 | 8.94 | 1113177 | 12.41 | 962386 | 14.43 |
| OP4612-BS1 | 278417 | 4.56 | 1025902 | 5.75 | 636195 | 7.46 | 1174077 | 8.94 | 1168992 | 12.41 | 1087081 | 14.43 |
| OP4655-MB1 | 288580 | 4.56 | 1101089 | 5.75 | 687651 | 7.45 | 1240680 | 8.94 | 1289494 | 12.41 | 1125939 | 14.43 |
| OP4655-BS1 | 271629 | 4.56 | 1023117 | 5.75 | 649188 | 7.45 | 1186143 | 8.94 | 1161166 | 12.41 | 1089687 | 14.43 |
| OP4624-MB1 | 268410 | 4.56 | 1015232 | 5.75 | 625214 | 7.45 | 1090339 | 8.94 | 1073585 | 12.41 | 903086 | 14.42 |
| OP4624-BS1 | 252744 | 4.56 | 937998 | 5.75 | 585970 | 7.45 | 1032348 | 8.94 | 973616 | 12.41 | 904341 | 14.43 |
| ZZZZZZ | 269478 | 4.56 | 1007692 | 5.75 | 560427 | 7.45 | 1012874 | 8.94 | 957936 | 12.41 | 834939 | 14.42 |
| ZZZZZZ | 276741 | 4.56 | 1054518 | 5.75 | 626670 | 7.45 | 1042851 | 8.94 | 951449 | 12.41 | 868513 | 14.43 |
| JC47310-19 | 288053 | 4.56 | 1054320 | 5.75 | 626668 | 7.45 | 1070185 | 8.94 | 965392 | 12.41 | 873161 | 14.43 |
| ZZZZZZ | 242115 | 4.56 | 887910 | 5.75 | 517356 | 7.45 | 858456 | 8.94 | 840698 | 12.41 | 826177 | 14.43 |
| ZZZZZZ | 280612 | 4.56 | 1011176 | 5.75 | 590968 | 7.45 | 957806 | 8.94 | 967096 | 12.42 | 1009573 | 14.45 |
| OP4624-MS | 266379 | 4.56 | 946556 | 5.75 | 579857 | 7.46 | 960450 | 8.95 | 931909 | 12.42 | 933495 | 14.44 |
| OP4624-MSD | 247529 | 4.56 | 883748 | 5.75 | 548621 | 7.46 | 921154 | 8.95 | 864838 | 12.42 | 873645 | 14.44 |
| ZZZZZZ | 276261 | 4.56 | 1017469 | 5.75 | 611230 | 7.46 | 991738 | 8.95 | 940828 | 12.41 | 891016 | 14.44 |
| ZZZZZZ | 266148 | 4.56 | 940808 | 5.75 | 562566 | 7.46 | 955795 | 8.95 | 957639 | 12.41 | 906025 | 14.44 |
| ZZZZZZ | 250524 | 4.56 | 943756 | 5.75 | 555470 | 7.46 | 943823 | 8.95 | 894154 | 12.41 | 837494 | 14.44 |
| ZZZZZZ | 256912 | 4.56 | 913500 | 5.75 | 504664 | 7.46 | 851781 | 8.95 | 919432 | 12.41 | 842237 | 14.44 |
| ZZZZZZ | 267975 | 4.56 | 977428 | 5.75 | 586324 | 7.46 | 993755 | 8.94 | 945356 | 12.41 | 855754 | 14.44 |
| ZZZZZZ | 253338 | 4.56 | 933528 | 5.75 | 543306 | 7.46 | 892924 | 8.94 | 918514 | 12.41 | 833248 | 14.44 |
| ZZZZZZ | 268643 | 4.56 | 998588 | 5.75 | 632168 | 7.45 | 1129941 | 8.95 | 1187634 | 12.41 | 1036923 | 14.44 |
| ZZZZZZ | 263652 | 4.56 | 993787 | 5.76 | 625943 | 7.46 | 1145709 | 8.95 | 1296037 | 12.42 | 1213912 | 14.45 |
| JC47267-1 | 267137 | 4.56 | 983631 | 5.75 | 609170 | 7.46 | 1064350 | 8.95 | 1099111 | 12.41 | 990931 | 14.44 |
| OP4612-MS | 276476 | 4.56 | 1012746 | 5.75 | 625791 | 7.46 | 1141286 | 8.95 | 1141401 | 12.42 | 1093635 | 14.44 |
| OP4612-MSD | 259930 | 4.56 | 949464 | 5.75 | 607700 | 7.46 | 1074901 | 8.95 | 1094211 | 12.42 | 1040251 | 14.44 |
| JC47422-1 | 265372 | 4.56 | 916506 | 5.75 | 610896 | 7.46 | 1075870 | 8.95 | 1190111 | 12.42 | 1071669 | 14.44 |
| ZZZZZZ | 277232 | 4.56 | 1049953 | 5.75 | 640367 | 7.46 | 1089673 | 8.95 | 1132489 | 12.41 | 1036062 | 14.44 |
| ZZZZZZ | 267172 | 4.56 | 999372 | 5.75 | 596989 | 7.46 | 1043611 | 8.94 | 1123393 | 12.41 | 1018862 | 14.44 |
| ZZZZZZ | 272497 | 4.56 | 1001808 | 5.75 | 585217 | 7.46 | 1019347 | 8.95 | 1138767 | 12.42 | 1055995 | 14.44 |
| ZZZZZZ | 251780 | 4.56 | 951091 | 5.75 | 557314 | 7.45 | 974687 | 8.95 | 1069230 | 12.41 | 984130 | 14.44 |
| ZZZZZZ | 246066 | 4.56 | 924753 | 5.75 | 546349 | 7.46 | 954689 | 8.95 | 1057204 | 12.41 | 988896 | 14.44 |
| ZZZZZZ | 252692 | 4.56 | 959543 | 5.75 | 570640 | 7.46 | 986929 | 8.95 | 1069456 | 12.41 | 980753 | 14.44 |
| OP4655-MS | 250958 | 4.56 | 872305 | 5.76 | 578156 | 7.46 | 1028562 | 8.95 | 1078431 | 12.42 | 1031727 | 14.44 |
| OP4655-MSD | 255229 | 4.56 | 868489 | 5.76 | 581027 | 7.46 | 1019634 | 8.95 | 1098224 | 12.42 | 1036693 | 14.44 |

# Semivolatile Internal Standard Area Summary

**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| | | | |
|---|---|---|---|
| **Check Std:** | E5P2007-CC1981 | **Injection Date:** | 07/23/17 |
| **Lab File ID:** | 5P40957.D | **Injection Time:** | 10:45 |
| **Instrument ID:** | GCMS5P | **Method:** | EPA 625 |

| Lab | IS 1 | | IS 2 | | IS 3 | | IS 4 | | IS 5 | | IS 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT |

**IS 1** = 1,4-Dichlorobenzene-d4
**IS 2** = Naphthalene-d8
**IS 3** = Acenaphthene-D10
**IS 4** = Phenanthrene-d10
**IS 5** = Chrysene-d12
**IS 6** = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Internal Standard Area Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| | | | |
|---|---|---|---|
| **Check Std:** | E5P2010-CC2009 | **Injection Date:** | 07/25/17 |
| **Lab File ID:** | 5P41027.D | **Injection Time:** | 09:57 |
| **Instrument ID:** | GCMS5P | **Method:** | EPA 625 |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 219613 | 4.46 | 837053 | 5.66 | 517731 | 7.36 | 966469 | 8.84 | 1006026 | 12.27 | 973044 | 14.29 |
| Upper Limit [a] | 439226 | 4.96 | 1674106 | 6.16 | 1035462 | 7.86 | 1932938 | 9.34 | 2012052 | 12.77 | 1946088 | 14.79 |
| Lower Limit [b] | 109807 | 3.96 | 418527 | 5.16 | 258866 | 6.86 | 483235 | 8.34 | 503013 | 11.77 | 486522 | 13.79 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OP4678-MB1 | 290609 | 4.46 | 1109551 | 5.66 | 672620 | 7.36 | 1158227 | 8.83 | 1198951 | 12.27 | 1122844 | 14.28 |
| OP4678-BS1 | 249847 | 4.47 | 923795 | 5.66 | 570670 | 7.36 | 995106 | 8.84 | 993185 | 12.27 | 955345 | 14.29 |
| OP4678-BS13 | 251319 | 4.46 | 949947 | 5.66 | 567153 | 7.36 | 967491 | 8.83 | 976389 | 12.27 | 893894 | 14.28 |
| ZZZZZZ | 246234 | 4.46 | 896942 | 5.66 | 514835 | 7.36 | 913491 | 8.84 | 1052187 | 12.28 | 992927 | 14.30 |
| JC46991-1 | 269756 | 4.46 | 991594 | 5.66 | 594427 | 7.36 | 1041325 | 8.83 | 1105172 | 12.27 | 1022658 | 14.29 |
| ZZZZZZ | 244665 | 4.46 | 841766 | 5.66 | 545375 | 7.36 | 953876 | 8.83 | 1031476 | 12.27 | 987934 | 14.29 |
| ZZZZZZ | 203282 | 4.47 | 794652 | 5.66 | 535299 | 7.36 | 960699 | 8.84 | 1082606 | 12.28 | 1003760 | 14.29 |
| OP4678-MS | 258267 | 4.47 | 922896 | 5.66 | 558438 | 7.36 | 937197 | 8.84 | 891532 | 12.28 | 893668 | 14.29 |
| OP4678-MSD | 275139 | 4.47 | 983155 | 5.66 | 593640 | 7.36 | 995754 | 8.84 | 962374 | 12.28 | 969449 | 14.29 |
| JC47563-1Q | 290011 | 4.46 | 1070499 | 5.66 | 644298 | 7.36 | 1072503 | 8.84 | 1098675 | 12.27 | 1065407 | 14.29 |
| ZZZZZZ | 241193 | 4.46 | 902767 | 5.66 | 546683 | 7.36 | 944773 | 8.83 | 954001 | 12.27 | 858912 | 14.29 |
| ZZZZZZ | 242643 | 4.46 | 894119 | 5.66 | 538607 | 7.36 | 935991 | 8.84 | 981539 | 12.27 | 886307 | 14.29 |
| ZZZZZZ | 225470 | 4.46 | 834677 | 5.66 | 497178 | 7.36 | 862136 | 8.83 | 911438 | 12.27 | 831765 | 14.28 |
| ZZZZZZ | 235552 | 4.46 | 878990 | 5.66 | 527812 | 7.36 | 902469 | 8.83 | 937730 | 12.27 | 869154 | 14.29 |
| ZZZZZZ | 249542 | 4.46 | 927431 | 5.66 | 551337 | 7.36 | 955816 | 8.83 | 1005386 | 12.27 | 910699 | 14.29 |
| ZZZZZZ | 229759 | 4.46 | 852992 | 5.66 | 499818 | 7.36 | 817629 | 8.83 | 803634 | 12.28 | 828468 | 14.29 |
| JC47224-13 | 268416 | 4.46 | 1014090 | 5.66 | 600461 | 7.36 | 1043820 | 8.84 | 1028848 | 12.27 | 976911 | 14.29 |
| ZZZZZZ | 301697 | 4.47 | 1090680 | 5.66 | 626890 | 7.36 | 1022809 | 8.84 | 1079036 | 12.28 | 1095994 | 14.30 |
| ZZZZZZ | 279683 | 4.47 | 968691 | 5.66 | 578067 | 7.36 | 935025 | 8.84 | 1087879 | 12.30 | 1116551 | 14.32 |
| ZZZZZZ | 289992 | 4.47 | 1040602 | 5.66 | 594321 | 7.36 | 963460 | 8.84 | 1027208 | 12.28 | 1061501 | 14.31 |

**IS 1** = 1,4-Dichlorobenzene-d4
**IS 2** = Naphthalene-d8
**IS 3** = Acenaphthene-D10
**IS 4** = Phenanthrene-d10
**IS 5** = Chrysene-d12
**IS 6** = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Surrogate Recovery Summary

**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

**Method:** EPA 625 **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 | S2 | S3 | S4 | S5 | S6 |
|---|---|---|---|---|---|---|---|
| JC46991-1 | 5P41034.D | 48 | 33 | 76 | 73 | 77 | 70 |
| OP4612-BS1 | 5P40962.D | 39 | 30 | 82 | 80 | 57 | 93 |
| OP4612-MB1 | 5P40961.D | 36 | 26 | 75 | 82 | 61 | 82 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| **S1** = 2-Fluorophenol | 10-110% |
| **S2** = Phenol-d5 | 10-110% |
| **S3** = 2,4,6-Tribromophenol | 35-147% |
| **S4** = Nitrobenzene-d5 | 32-132% |
| **S5** = 2-Fluorobiphenyl | 40-117% |
| **S6** = Terphenyl-d14 | 33-126% |

# GC Volatiles

## QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

# Method Blank Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| GGH5814-MB1 | GH110899.D | 1 | 07/21/17 | XPL | n/a | n/a | GGH5814 |

**The QC reported here applies to the following samples:** **Method:** SW846-8015C (DAI)

JC46991-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | 55 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 111-27-3 | Hexanol | 99% | 56-145% |
| 111-27-3 | Hexanol | 105% | 56-145% |

# Blank Spike Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| GGH5814-BS | GH110900.D | 1 | 07/21/17 | XPL | n/a | n/a | GGH5814 |

**The QC reported here applies to the following samples:** **Method:** SW846-8015C (DAI)

JC46991-1

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | 5000 | 4730 | 95 | 74-123 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 111-27-3 | Hexanol | 88% | 56-145% |
| 111-27-3 | Hexanol | 92% | 56-145% |

8.2.1

8

* = Outside of Control Limits.

# Volatile Surrogate Recovery Summary



**Job Number:** JC46991
**Account:** ENVMAS EnviroTrac Ltd.
**Project:** Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

**Method:** SW846-8015C (DAI) **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 [a] | S1 [b] |
|---|---|---|---|
| JC46991-1 | GH110905.D | 110 | 104 |
| GGH5814-BS | GH110900.D | 88 | 92 |
| GGH5814-MB1 | GH110899.D | 99 | 105 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| **S1** = Hexanol | 56-145% |

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

# Metals Analysis

## QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC46991
Account: ENVMAS - EnviroTrac Ltd.
Project: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

QC Batch ID: MP2022
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 07/21/17

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Mercury | 0.20 | .058 | .082 | 0.023 | <0.20 |

Associated samples MP2022: JC46991-1, JC46991-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC46991
Account: ENVMAS - EnviroTrac Ltd.
Project: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

QC Batch ID: MP2022
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 07/21/17 07/21/17

| Metal | BSP Result | Spikelot HGPW3 | % Rec | QC Limits | BSD Result | Spikelot HGPW3 | % Rec | BSD RPD | QC Limit |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 2.0 | 2 | 100.0 | 85-115 | 2.1 | 2 | 105.0 | 4.9 | |

Associated samples MP2022: JC46991-1, JC46991-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.1.2
9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC46991
Account: ENVMAS - EnviroTrac Ltd.
Project: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

QC Batch ID: MP2252
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 08/04/17

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Aluminum | 50 | .96 | 4 | | |
| Antimony | 2.0 | .03 | 1.2 | 0.090 | <2.0 |
| Arsenic | 1.0 | .03 | .22 | -0.21 | <1.0 |
| Barium | 1.0 | .014 | .27 | | |
| Beryllium | 0.50 | .0021 | .016 | | |
| Boron | 50 | .81 | 18 | | |
| Cadmium | 0.50 | .0065 | .063 | 0.000014 | <0.50 |
| Calcium | 250 | 2.4 | 30 | | |
| Chromium | 4.0 | .025 | .34 | 0.0036 | <4.0 |
| Cobalt | 0.50 | .0034 | .019 | | |
| Copper | 4.0 | .02 | .77 | 0.056 | <4.0 |
| Iron | 50 | .86 | 13 | 1.6 | <50 |
| Lead | 0.50 | .0045 | .16 | 0.0065 | <0.50 |
| Magnesium | 250 | .78 | 3.1 | | |
| Manganese | 1.0 | .013 | .2 | | |
| Molybdenum | 1.0 | .032 | .14 | | |
| Nickel | 4.0 | .012 | .48 | 0.00028 | <4.0 |
| Potassium | 250 | 2.1 | 46 | | |
| Selenium | 1.0 | .029 | .24 | 0.014 | <1.0 |
| Silver | 2.0 | .0042 | .051 | 0.0010 | <2.0 |
| Sodium | 250 | 2 | 77 | | |
| Strontium | 5.0 | .022 | .34 | | |
| Thallium | 0.50 | .0028 | .036 | | |
| Tin | 5.0 | .057 | .85 | | |
| Titanium | 1.0 | .056 | .49 | | |
| Vanadium | 4.0 | .03 | .24 | | |
| Zinc | 10 | .055 | 1.5 | 0.39 | <10 |

Associated samples MP2252: JC46991-1R, JC46991-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC46991
Account: ENVMAS - EnviroTrac Ltd.
Project: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

QC Batch ID: MP2252
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 08/04/17 08/04/17

| Metal | BSP Result | Spikelot MPX200.8A | % Rec | QC Limits | BSD Result | Spikelot MPX200.8A | % Rec | BSD RPD | QC Limit |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | anr | | | | | | | | |
| Antimony | 111 | 100 | 111.0 | 85-115 | 111 | 100 | 111.0 | 0.0 | 20 |
| Arsenic | 100 | 100 | 100.0 | 85-115 | 101 | 100 | 101.0 | 1.0 | 20 |
| Barium | | | | | | | | | |
| Beryllium | | | | | | | | | |
| Boron | | | | | | | | | |
| Cadmium | 101 | 100 | 101.0 | 85-115 | 101 | 100 | 101.0 | 0.0 | 20 |
| Calcium | | | | | | | | | |
| Chromium | 102 | 100 | 102.0 | 85-115 | 104 | 100 | 104.0 | 1.9 | 20 |
| Cobalt | | | | | | | | | |
| Copper | 103 | 100 | 103.0 | 85-115 | 103 | 100 | 103.0 | 0.0 | 20 |
| Iron | 2240 | 2000 | 112.0 | 85-115 | 2230 | 2000 | 111.5 | 0.4 | 20 |
| Lead | 104 | 100 | 104.0 | 85-115 | 105 | 100 | 105.0 | 1.0 | 20 |
| Magnesium | | | | | | | | | |
| Manganese | | | | | | | | | |
| Molybdenum | | | | | | | | | |
| Nickel | 103 | 100 | 103.0 | 85-115 | 102 | 100 | 102.0 | 1.0 | 20 |
| Potassium | | | | | | | | | |
| Selenium | 188 | 200 | 94.0 | 85-115 | 191 | 200 | 95.5 | 1.6 | 20 |
| Silver | 82.3 | 80 | 102.9 | 85-115 | 82.5 | 80 | 103.1 | 0.2 | 20 |
| Sodium | | | | | | | | | |
| Strontium | | | | | | | | | |
| Thallium | | | | | | | | | |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | 96.9 | 100 | 96.9 | 85-115 | 97.6 | 100 | 97.6 | 0.7 | 20 |

Associated samples MP2252: JC46991-1R, JC46991-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.2
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# General Chemistry

## QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC46991
Account: ENVMAS - EnviroTrac Ltd.
Project: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole, MA

| Analyte | Batch ID | RL | MB Result | Units | Spike Amount | BSP Result | BSP %Recov | QC Limits |
|---|---|---|---|---|---|---|---|---|
| Chloride | GP6718/GN67222 | 2.0 | 0.31 | mg/l | 80 | 84.9 | 106.1 | 90-110% |
| Cyanide | GP6601/GN67014 | 0.010 | 0.0 | mg/l | 0.0833 | 0.0913 | 109.6 | 90-110% |
| HEM Petroleum Hydrocarbons | GP6606/GN66998 | 5.0 | 2.1 | mg/l | 20.10 | 18.2 | 90.5 | 64-132% |
| Hardness, Total as CaCO3 | GN66982 | 4.0 | 0.0 | mg/l | 80 | 79.6 | 99.5 | 80-120% |
| Hardness, Total as CaCO3 | GN66982 | | | mg/l | 160 | 159 | 99.4 | 80-120% |
| Hardness, Total as CaCO3 | GN66982 | | | mg/l | 160 | 161 | 100.6 | 80-120% |
| Nitrogen, Ammonia | GP6565/GN66940 | 0.20 | 0.0 | mg/l | 1 | 1.12 | 112.0 | 80-120% |
| Solids, Total Suspended | GN66919 | 4.0 | 0.0 | mg/l | | | | |
| Sulfate | GP6718/GN67222 | 2.0 | 0.0 | mg/l | 80 | 86.4 | 108.0 | 90-110% |

Associated Samples:
Batch GP6565: JC46991-1, JC46991-2
Batch GP6601: JC46991-1
Batch GP6606: JC46991-1
Batch GP6718: JC46991-1
Batch GN66919: JC46991-1
Batch GN66982: JC46991-1, JC46991-2
(*) Outside of QC limits

# Misc. Forms

## Custody Documents and Other Forms

(SGS Accutest New England)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits

GW SW

# CHAIN OF CUSTODY

SGS ACCUTEST

SGS Accutest of New England
50 D'Angelo Drive/495 Technology Center West, Building One Marlborough, MA 01752
TEL. 508-481-5200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # 7273 7516 4304
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest Job # JC46991

**Client / Reporting Information**

Company Name: ENVIROTRAC
Street Address: 2 MERCHANT ST, SUITE 2
City / State / Zip: SHARON, MA 02067
Project Contact: J. CALIGAS E-mail: jessicac@envirotrac.com
Phone #: (781) 793-0074 Fax #:
Sampler(s) Name(s): Phone #:

**Project Information**

Project Name: SPEEDWAY STORE #2410
Street:
City: WALPOLE, MA
Project#:
Client PO#:
Project Manager:

Billing Information ( If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention: PO#:

**Requested Analysis ( see TEST CODE sheet)**

Analysis columns:
A. PH, HARDNESS, Cl SM 4110B, TOTAL RES. Cl, TSS SM2540D, Cr VI BY 7196A
B. PH, HARDNESS, Cr VI
C. AMMONIA SM4500 B&D
D. Hg 245.1 OR 7470A
E. CYANIDE 335.4
F. BENZENE & TOTAL BTEX 624
G. SVOCs 625
H. TPH 1664A
I. MTBE, TBA, TAME 524.2
J. Ethanol * RUN ® 7/14/17

| SGS Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Date | Time | Sampled by | Matrix | # of bottles (PD 20) | HCl (PD 11) | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | Bisulfate | A | B | C | D | E | F | G | H | I | J | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | H-3 | | 7/13/17 | 1115 | TF | GW | ~~17~~ | 8 | 1 | 1 | 1 | 6 | | | | | X | | X | X | X | X | X | X | X | X | C38 |
| 2 | SW-1 | | 7/13/17 | 1230 | TF | SW | 6 | ~~0~~ TF | | 1 | 1 | 4 | | | | | | X | X | X | ~~X~~ TF | | | | | | E90 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | A24 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | G40 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | V323 |

INITIAL ASSESSMENT 2B / CL

LABEL VERIFICATION JK

**Matrix Codes**

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

**Turnaround Time ( Business days)**

- ☒ Std. 10 Business Days
- ☐ Std. 5 Business Days (By Contract only)
- ☐ 5 Day *RUSH*
- ☐ 3 Day *EMERGENCY*
- ☐ 2 Day *EMERGENCY*
- ☐ 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

**Data Deliverable information**

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" ( Level 2)
- ☐ FULLT1 ( Level 3+4 )
- ☐ CT RCP
- ☒ MA MCP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

**Comments / Special Instructions**

* Hold Ethanol analysis
* REVISED 7/14 RUN ETHANOL PER M.V.
SEE ATTACHED EMAIL ® 7/14

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

| | Relinquished by | Date Time | Received By | Relinquished By | Date Time | Received By |
|---|---|---|---|---|---|---|
| | 1 Relinquished by Sampler: [signature] | 7/13/17 1330 | 1 ET SECURE FRIDGE | 2 [signature] | 7/13/17 1555 | 2 [signature] |
| | 3 Relinquished by Sampler: [signature] | 7/13/17 1636 | 3 [signature] | 4 [signature] | 7/13/17 | 4 Fed Ex |
| | 5 Relinquished by: Fed Ex | 7/14/17 930 | 5 [signature] | Custody Seal # 643 | ☒ Intact ☐ Not intact | Preserved where applicable ☒ CL · On Ice ☒ · Cooler Temp. 3.8°C 1.8°C TR |

JC46991: Chain of Custody
Page 1 of 2
SGS Accutest New England

11.1 | 11

# SGS Accutest NE Sample Receipt Summary

**Job Number:** JC46991 **Client:** ENVIROTRAC **Project:** SPEEDWAY #2410

**Date / Time Received:** 7/13/2017 4:36:00 PM **Delivery Method:** SGS Courier **Airbill #'s:**

**Cooler Temps (Initial/Adjusted):** #1: (0.1/-0.4);

| **Cooler Security** | Y | N |
|---|---|---|
| 1. Custody Seals Present: | ☐ | ☑ |
| 2. Custody Seals Intact: | ☐ | ☑ |
| 3. COC Present: | ☑ | ☐ |
| 4. Smpl Dates/Time OK | ☑ | ☐ |

| **Cooler Temperature** | Y | N |
|---|---|---|
| 1. Temp criteria achieved: | ☑ | ☐ |
| 2. Thermometer ID: | IRGUN1; | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

| **Quality Control Preservation** | Y | N | N/A |
|---|---|---|---|
| 1. Trip Blank present / cooler: | ☐ | ☐ | ☑ |
| 2. Trip Blank listed on COC: | ☐ | ☐ | ☑ |
| 3. Samples preserved properly: | ☑ | ☐ | |
| 4. VOCs headspace free: | ☐ | ☐ | ☑ |

| **Sample Integrity - Documentation** | Y | N |
|---|---|---|
| 1. Sample labels present on bottles: | ☑ | ☐ |
| 2. Container labeling complete: | ☑ | ☐ |
| 3. Sample container label / COC agree: | ☑ | ☐ |

| **Sample Integrity - Condition** | Y | N |
|---|---|---|
| 1. Sample recvd within HT: | ☑ | ☐ |
| 2. All containers accounted for: | ☑ | ☐ |
| 3. Condition of sample: | Intact | |

| **Sample Integrity - Instructions** | Y | N | N/A |
|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | ☐ | |
| 4. Compositing instructions clear: | ☐ | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | ☐ | ☑ |

Comments NOTE: pH, TRC, and XCR performed at ALNE.

11.1

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JC46991: Chain of Custody

Page 2 of 2

# Internal Sample Tracking Chronicle

SGS Accutest New Jersey

**Job No:** JC46991

ENVMAS: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole,
Project No: 03.SW2410.01

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JC46991-1<br>H-3 | Collected: 13-JUL-17 11:15 By: TF | | Received: 13-JUL-17 By: TF | | | |
| JC46991-1 | SM21 4500CL F | 13-JUL-17 17:14 | VY | | | TRC |
| JC46991-1 | SM21 4500HB/EPA150.1 | 13-JUL-17 17:49 | VY | | | PHLAB |
| JC46991-1 | SW846 7196A | 13-JUL-17 18:10 | VY | | | XCR |
| JC46991-2<br>SW-1 | Collected: 13-JUL-17 12:30 By: TF | | Received: 13-JUL-17 By: TF | | | |
| JC46991-2 | SM21 4500HB/EPA150.1 | 13-JUL-17 17:57 | VY | | | PHLAB |
| JC46991-2 | SW846 7196A | 13-JUL-17 18:10 | VY | | | XCR |

11.2

11

# QC Evaluation: MA MCP Limits



**Job Number:** JC46991
**Account:** SGS Accutest New Jersey
**Project:** ENVMAS: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole,
**Collected:** 07/13/17

| QC Sample ID | CAS# | Analyte | Sample Type | Result Type | Result | Units | Limits |
|---|---|---|---|---|---|---|---|

No Exceptions found.

* Sample used for QC is not from job JC46991

# General Chemistry

## QC Data Summaries

(SGS Accutest New England)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC46991
Account: ALNJ - SGS Accutest New Jersey
Project: ENVMAS: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole,

| Analyte | Batch ID | RL | MB Result | Units | Spike Amount | BSP Result | BSP %Recov | QC Limits |
|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | GN55962 | 0.010 | 0.0 | mg/l | .10 | 0.10 | 100.0 | 85-115% |
| Total Residual Chlorine | GN55961 | 0.050 | 0.0 | mg/l | 1.0 | 1.1 | 110.0 | 80-120% |

Associated Samples:
Batch GN55961: JC46991-1
Batch GN55962: JC46991-1, JC46991-2
(*) Outside of QC limits

12.1
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BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC46991
Account: ALNJ - SGS Accutest New Jersey
Project: ENVMAS: Speedway # 2410 (Former Hess # 21213), 2285 Providence Highway, Walpole,

| Analyte | Batch ID | Units | Spike Amount | BSD Result | RPD | QC Limit |
|---|---|---|---|---|---|---|
| Chromium, Hexavalent | GN55962 | mg/l | .10 | 0.10 | 0.0 | 20% |

Associated Samples:
Batch GN55962: JC46991-1, JC46991-2
(*) Outside of QC limits

12.2
12

# APPENDIX C

**Dilution Factor (DF) Calculation**

The site will discharge to freshwater receiving waters in Massachusetts. The DF is calculated using the equation below.

**A. Determine 7Q10:**

The 7Q10 was obtained from the online StreamStats application available at: http://water.usgs.gov/osw/streamstats/massachusetts.html.

The 7Q10 of the receiving water is 0.00353 cubic feet per second (cfs).

**B. Calculate Dilution Factor:**

The equation used to calculate the dilution factor is:

$$\frac{QS + QD}{QD}$$

Where:

QS= 7Q10 in million gallons per day (MGD)
QD = Discharge flow in MGD

QS = 0.00353 cfs = 0.00228 MGD

QD = 100 gpm (design flow) = 0.144 MGD

The DF is calculated as:

$$DF = \frac{0.00228 + 0.144}{0.144} = 1.02$$

## Jessica Cajigas

**From:** Vakalopoulos, Catherine (DEP) <Catherine.Vakalopoulos@MassMail.State.MA.US>
**Sent:** Tuesday, July 11, 2017 4:21 PM
**To:** Jessica Cajigas
**Subject:** RE: RGP 7Q10 and Dilution Factor review

Hi Jessica,
It's interesting that you got StreamStats to work at the discharge location. I plugged in the lat/long and it kept coming back with "no stream gauges available at this location". Same thing happened when I tried to click on the other streams in the area. I wonder if StreamStats is having trouble at the moment. Regardless, I see that you did get StreamStats to work and have confirmed that the dilution factor (with a design flow of 0.144 MGD and 7Q10 of 0.00228 MGD) is 1.02 for this discharge from 2285 Providence Highway in Walpole.

As you mentioned below, the DF for the discharge from 305 Main St. in Dennisport is 1. I have also checked MassGIS and there are no Outstanding Resource Waters in the vicinity of this discharge, therefore you are all set from MassDEP.

Cathy

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



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**From:** Jessica Cajigas [mailto:jessicac@envirotrac.com]
**Sent:** Tuesday, July 11, 2017 3:42 PM
**To:** Vakalopoulos, Catherine (DEP)
**Subject:** RGP 7Q10 and Dilution Factor review

Hello Cathy,

Thank you for calling me back earlier regarding my RGP questions. Attached are the StreamStats summary and my dilution factor calculation for our Walpole site located at 2285 Providence Highway. The 7Q10 is 0.00353 cubic feet per second and my calculated DF is 1.02.

As discussed on the phone, the second site is in Dennisport at 305 Main Street. Here the discharge will flow into a wetland and then into a pond. StreamStats did not have a 7Q10 for this area of Cape Cod. Therefore the DF will be 1.0.

Please let me know if you have any questions or require any additional information.

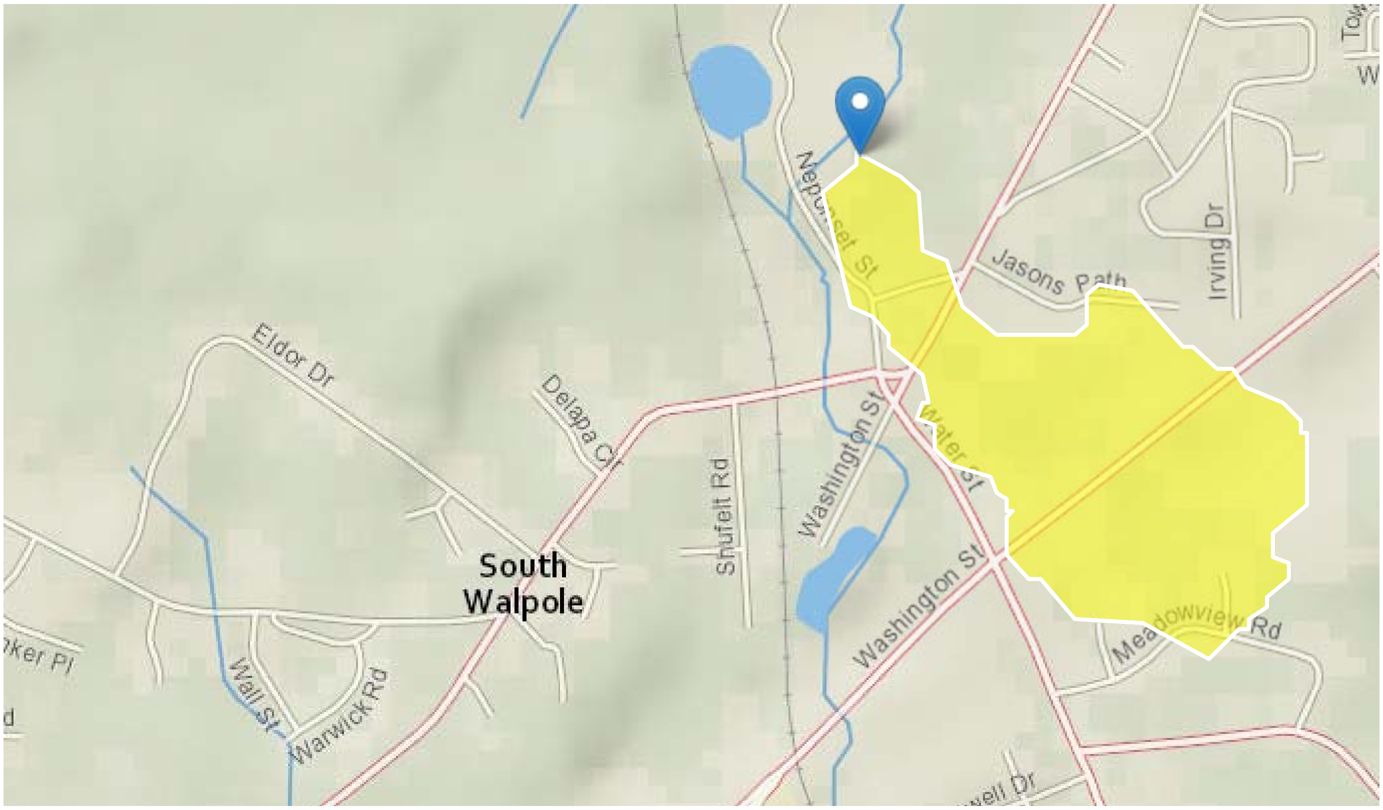
Thank you.

Jessica

Jessica Cajigas | Project Manager | EnviroTrac Ltd. | 2 Merchant Street Suite 2, Sharon MA 02067
781.793.0074 (Office) | 781.793.7877 (Fax) | 978.930.3777 (Cell) | jessicac@envirotrac.com

# StreamStats Report

**Region ID:**
MA
**Workspace ID:**
MA20170707131559444000
**Clicked Point (Latitude, Longitude):**
42.10848, -71.26185
**Time:**
2017-07-07 13:16:48 -0400




RGP #2410

## Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| DRNAREA | Area that drains to a point on a stream | 0.13 | square miles |
| BSLDEM250 | Mean basin slope computed from 1:250K DEM | 1.961 | percent |
| DRFTPERSTR | Area of stratified drift per unit of stream length | 0.3 | square mile per mile |
| MAREGION | Region of Massachusetts 0 for Eastern 1 for Western | 0 | dimensionless |

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| PCTSNDGRV | Percentage of land surface underlain by sand and gravel deposits | 100 | percent |
| FOREST | Percentage of area covered by forest | 33.93 | percent |

## Low-Flow Statistics Parameters [100 Percent (0.129 square miles) Statewide Low Flow WRIR00 4135]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 0.13 | square miles | 1.61 | 149 |
| BSLDEM250 | Mean Basin Slope from 250K DEM | 1.961 | percent | 0.32 | 24.6 |
| DRFTPERSTR | Stratified Drift per Stream Length | 0.3 | square mile per mile | 0 | 1.29 |
| MAREGION | Massachusetts Region | 0 | dimensionless | 0 | 1 |

## Low-Flow Statistics Disclaimers [100 Percent (0.129 square miles) 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 [100 Percent (0.129 square miles) Statewide Low Flow WRIR00 4135]

| Statistic | Value | Unit |
|---|---|---|
| 7 Day 2 Year Low Flow | 0.00944 | ft^3/s |
| 7 Day 10 Year Low Flow | 0.00353 | 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/)**

## Probability Statistics Parameters [100 Percent (0.129 square miles) Perennial Flow Probability]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 0.13 | square miles | 0.01 | 1.99 |

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| PCTSNDGRV | Percent Underlain By Sand And Gravel | 100 | percent | 0 | 100 |
| FOREST | Percent Forest | 33.93 | percent | 0 | 100 |
| MAREGION | Massachusetts Region | 0 | dimensionless | 0 | 1 |

## Probability Statistics Flow Report [100 Percent (0.129 square miles) Perennial Flow Probability]

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

| Statistic | Value | Unit | PIl | PIu | PC |
|---|---|---|---|---|---|
| Probability Stream Flowing Perennially | 0.752 | 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)**

# APPENDIX D

MACRIS Search Results

Search Criteria: Town(s): Foxborough,Walpole; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| FOX.A | Foxborough Town Common Area | | Foxborough | |
| FOX.B | Sherman and Leonard Streets | | Foxborough | |
| FOX.C | Foxborough State Hospital | | Foxborough | |
| FOX.D | F. Gilbert Hills State Forest - Pine Knoll | | Foxborough | |
| FOX.E | Massachusetts State Hospitals and State Schools | | Foxborough | |
| FOX.F | F. Gilbert Hills State Forest - High Rock Area | | Foxborough | |
| FOX.G | F. Gilbert Hills State Forest - CCC Camp Site | | Foxborough | |
| FOX.H | Baker Street Local Historic District | | Foxborough | |
| FOX.917 | Stoughtonham Furnace Site | | Foxborough | |
| FOX.170 | Williams, Edward B. House | 7 Baker St | Foxborough | 1889 |
| FOX.160 | Dickerman, Dr. Lemuel House and Office | 8 Baker St | Foxborough | 1860 |
| FOX.264 | Turner, Willard Warren House | 9 Baker St | Foxborough | 1887 |
| FOX.106 | Pickens, Capt. Ezra House | 12 Baker St | Foxborough | 1856 |
| FOX.97 | Turner, Willard P. House | 13 Baker St | Foxborough | 1835 |
| FOX.265 | Lane, Irving W. House | 14 Baker St | Foxborough | 1892 |
| FOX.266 | Allen, Dea. Ebenezer W. House | 15 Baker St | Foxborough | 1854 |
| FOX.267 | Comey, H. T. House | 16 Baker St | Foxborough | 1860 |
| FOX.268 | Alden, Joseph House | 17 Baker St | Foxborough | 1890 |
| FOX.171 | Aldrich, Dea. Amos R. House | 18 Baker St | Foxborough | 1846 |
| FOX.269 | Pond, Lewis House | 21 Baker St | Foxborough | 1854 |
| FOX.270 | | 22 Baker St | Foxborough | 1929 |
| FOX.271 | Quimby, Harrie House | 23 Baker St | Foxborough | 1915 |
| FOX.272 | Maddocks, Joel House | 25 Baker St | Foxborough | 1865 |
| FOX.273 | Richardson, Moses A. House | 26 Baker St | Foxborough | 1851 |
| FOX.274 | Lindley, Capt. Henry C. House | 27 Baker St | Foxborough | 1865 |
| FOX.275 | Caton, Thomas House | 28 Baker St | Foxborough | 1890 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| FOX.162 | Wheeler, George S. House | 29 Baker St | Foxborough | 1858 |
| FOX.276 | Cleveland, Sarah C. House | 30 Baker St | Foxborough | 1930 |
| FOX.277 | Godfrey, Dea. Henry S. House | 31 Baker St | Foxborough | 1868 |
| FOX.278 | Pike, Donald House | 32 Baker St | Foxborough | 1920 |
| FOX.279 | Turner, Salmon Jr. House | 33 Baker St | Foxborough | 1840 |
| FOX.280 | Roe, Daniel House | 34-36 Baker St | Foxborough | 1873 |
| FOX.281 | Perry, Jonathan Pratt House | 35 Baker St | Foxborough | 1850 |
| FOX.282 | Quimby, Hattie M. House | 38 Baker St | Foxborough | 1910 |
| FOX.283 | Leavitt, Harry P. House | 39 Baker St | Foxborough | 1906 |
| FOX.284 | Quimby, Hattie M. House | 40 Baker St | Foxborough | 1910 |
| FOX.285 | Bragg, Dr. Francis A. House | 42 Baker St | Foxborough | 1942 |
| FOX.286 | Rost, Harvey C. House | 43 Baker St | Foxborough | 1962 |
| FOX.287 | Weger, George House | 44 Baker St | Foxborough | 1947 |
| FOX.288 | Truax, Edwin B. House | 45 Baker St | Foxborough | 1912 |
| FOX.289 | Burgess, Joseph House | 46 Baker St | Foxborough | 1923 |
| FOX.290 | Watts, Aaron L. House | 47 Baker St | Foxborough | 1913 |
| FOX.291 | Parker, George House | 49 Baker St | Foxborough | 1909 |
| FOX.292 | Burgess, Joseph House | 50 Baker St | Foxborough | 1920 |
| FOX.293 | Sanford, Walter House | 62 Baker St | Foxborough | 1916 |
| FOX.258 | Foxborough State Hospital - B Cottage | 66 Baker St | Foxborough | 1908 |
| FOX.256 | Foxborough State Hospital - E Cottage | 100 Baker St | Foxborough | c 1858 |
| FOX.120 | Smith, Warren House | 144 Beach St | Foxborough | 1815 |
| FOX.122 | Congdon House | 188 Beach St | Foxborough | r 1845 |
| FOX.15 | | Bird St | Foxborough | c 1855 |
| FOX.94 | Foxboro House | Bird St | Foxborough | 1900 |
| FOX.16 | Foxborough Universalist Church | 6 Bird St | Foxborough | 1843 |
| FOX.177 | Foxboro Grange Hall | 11-15 Bird St | Foxborough | 1897 |
| FOX.105 | Doolittle, Allen House | 16 Bird St | Foxborough | c 1855 |
| FOX.103 | Saint Mary's Roman Catholic Church | Carpenter St | Foxborough | c 1951 |
| FOX.113 | Saint Mary's Roman Catholic Church | Carpenter St | Foxborough | 1878 |
| FOX.58 | Shepherd, Jacob House | 41 Cedar St | Foxborough | 1719 |
| FOX.110 | Wilber Brothers Dry Good Store | Central St | Foxborough | 1890 |
| FOX.156 | Faught, L. Porter House | Central St | Foxborough | c 1876 |
| FOX.115 | Foxborough Emmanuel Church | 106 Central St | Foxborough | r 1925 |
| FOX.28 | | 286 Central St | Foxborough | r 1835 |
| FOX.29 | Paine, Asa House | 298 Central St | Foxborough | 1792 |
| FOX.30 | | 310 Central St | Foxborough | r 1845 |
| FOX.31 | | 364 Central St | Foxborough | 1820 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| FOX.178 | Foxborough State Hospital - Ward B | Chestnut St | Foxborough | 1891 |
| FOX.179 | Foxborough State Hospital - Ward C | Chestnut St | Foxborough | 1891 |
| FOX.181 | Foxborough State Hospital - Ward D | Chestnut St | Foxborough | 1891 |
| FOX.182 | Foxborough State Hospital - Ward E | Chestnut St | Foxborough | 1891 |
| FOX.183 | Foxborough State Hospital - Gymnasium and Chapel | Chestnut St | Foxborough | 1899 |
| FOX.223 | Foxborough State Hospital Administration Building | Chestnut St | Foxborough | 1924 |
| FOX.224 | Foxborough State Hospital - Dining Hall - Kitchen | Chestnut St | Foxborough | 1917 |
| FOX.225 | Foxborough State Hospital - K Building (Acute) | Chestnut St | Foxborough | 1916 |
| FOX.226 | Foxborough State Hospital - A Building (Acute) | Chestnut St | Foxborough | 1915 |
| FOX.227 | Foxborough State Hospital - Power Plant - Laundry | Chestnut St | Foxborough | 1891 |
| FOX.228 | Foxborough State Hospital - Work - Mason Shop | Chestnut St | Foxborough | 1897 |
| FOX.229 | Foxborough State Hospital - New Laundry | Chestnut St | Foxborough | 1915 |
| FOX.230 | Foxborough State Hospital - Paint Shop | Chestnut St | Foxborough | c 1945 |
| FOX.231 | Foxborough State Hospital - Carpenter Shop | Chestnut St | Foxborough | 1901 |
| FOX.232 | Foxborough State Hospital - Salvage Shed | Chestnut St | Foxborough | |
| FOX.233 | Foxborough State Hospital - Broom Shop | Chestnut St | Foxborough | 1894 |
| FOX.234 | Foxborough State Hospital - Main Garage | Chestnut St | Foxborough | 1956 |
| FOX.235 | Foxborough State Hospital - L Ward | Chestnut St | Foxborough | r 1920 |
| FOX.236 | Foxborough State Hospital - M Ward | Chestnut St | Foxborough | r 1920 |
| FOX.237 | Foxborough State Hospital - N Ward | Chestnut St | Foxborough | r 1920 |
| FOX.238 | Foxborough State Hospital - O Ward | Chestnut St | Foxborough | r 1920 |
| FOX.239 | Foxborough State Hospital - O Ward Rear | Chestnut St | Foxborough | 1905 |
| FOX.240 | Foxborough State Hospital - Nurse's Home | Chestnut St | Foxborough | 1930 |
| FOX.241 | Foxborough State Hospital - Employee Home | Chestnut St | Foxborough | 1929 |
| FOX.242 | Foxborough State Hospital - Nurses' Cottage A | Chestnut St | Foxborough | 1915 |
| FOX.243 | Foxborough State Hospital - Assembly Hall | Chestnut St | Foxborough | 1934 |
| FOX.246 | Foxborough State Hospital - J Cottage | Chestnut St | Foxborough | c 1900 |
| FOX.247 | Foxborough State Hospital - Staff Cottage | Chestnut St | Foxborough | c 1900 |
| FOX.248 | Foxborough State Hospital - K Cottage | Chestnut St | Foxborough | c 1900 |
| FOX.249 | Foxborough State Hospital - Staff Cottage | Chestnut St | Foxborough | 1950 |
| FOX.250 | Foxborough State Hospital - D Cottage | Chestnut St | Foxborough | c 1920 |
| FOX.252 | Foxborough State Hospital - Dexter Building | Chestnut St | Foxborough | 1957 |
| FOX.253 | Foxborough State Hospital Superintendent's House | Chestnut St | Foxborough | 1892 |
| FOX.254 | Foxborough State Hospital - Garage | Chestnut St | Foxborough | 1960 |
| FOX.257 | Foxborough State Hospital - Fieldstone Garage | Chestnut St | Foxborough | c 1920 |

| Inv. No. | Property Name | Street | Town | Year |
| --- | --- | --- | --- | --- |
| FOX.259 | Foxborough State Hospital - Garage | Chestnut St | Foxborough | c 1930 |
| FOX.260 | Foxborough State Hospital - Pavilion | Chestnut St | Foxborough | c 1900 |
| FOX.801 | Foxborough State Hospital - Cemetery | Chestnut St | Foxborough | c 1900 |
| FOX.802 | Foxborough State Hospital - Cemetery | Chestnut St | Foxborough | c 1900 |
| FOX.906 | Foxborough State Hospital - New Power Plant | Chestnut St | Foxborough | 1908 |
| FOX.907 | Foxborough State Hospital - Coal Trestle | Chestnut St | Foxborough | 1907 |
| FOX.908 | Foxborough State Hospital - Greenhouses | Chestnut St | Foxborough | c 1970 |
| FOX.909 | Foxborough State Hospital - Agricultural Fields | Chestnut St | Foxborough | |
| FOX.910 | Foxborough State Hospital - Sewage Treatment | Chestnut St | Foxborough | c 1970 |
| FOX.916 | Foxborough State Hospital - Front Lawn | Chestnut St | Foxborough | |
| FOX.255 | Foxborough State Hospital - H Cottage | 41 Chestnut St | Foxborough | c 1920 |
| FOX.147 | Carpenter, Oliver House | Cocasset St | Foxborough | 1845 |
| FOX.900 | NY, NH & H Railroad Bridge (Milepost #22.67) | Cocasset St | Foxborough | 1936 |
| FOX.220 | U. S. Post Office - Foxboro Main Branch | 4 Cocasset St | Foxborough | 1938 |
| FOX.151 | Sumner, Charles Calvin House | 8 Cocasset St | Foxborough | r 1870 |
| FOX.48 | Leonard, Sanford House | 28 Cocasset St | Foxborough | 1839 |
| FOX.9 | Comey House | 36 Cocasset St | Foxborough | c 1770 |
| FOX.219 | | 46 Cocasset St | Foxborough | c 1880 |
| FOX.218 | Murphy, J. House | 47 Cocasset St | Foxborough | c 1875 |
| FOX.159 | Capen, J. House | 58 Cocasset St | Foxborough | 1870 |
| FOX.150 | Sumner, Charles Calvin House | 61 Cocasset St | Foxborough | 1854 |
| FOX.32 | Sumner, Calvin House | 75 Cocasset St | Foxborough | 1831 |
| FOX.117 | Comey, John House | 96 Cocasset St | Foxborough | 1770 |
| FOX.100 | | 154 Cocasset St | Foxborough | 1782 |
| FOX.79 | | 196 Cocasset St | Foxborough | r 1845 |
| FOX.33 | Sumner, Turner House | 207 Cocasset St | Foxborough | 1850 |
| FOX.34 | | 250 Cocasset St | Foxborough | r 1845 |
| FOX.35 | | 298 Cocasset St | Foxborough | 1860 |
| FOX.26 | | Community Way | Foxborough | r 1885 |
| FOX.95 | Pratt Elementary School | Community Way | Foxborough | 1902 |
| FOX.116 | | 7 East St | Foxborough | c 1750 |
| FOX.36 | Greeley House | 50 East St | Foxborough | r 1835 |
| FOX.37 | | 137 East St | Foxborough | 1820 |
| FOX.12 | Pratt, Capt. Josiah House | 141 East St | Foxborough | c 1760 |
| FOX.27 | Kingsbury, J. - Rothschild House | 171 East St | Foxborough | r 1805 |
| FOX.38 | Eddy, Philander House | 209 East St | Foxborough | r 1845 |
| FOX.39 | Dassance, Dominic House | 232 East St | Foxborough | 1812 |
| FOX.40 | Foxborough Baptist Church Parsonage | 7 Elm St | Foxborough | 1832 |

| Inv. No. | Property Name | Street | Town | Year |
| --- | --- | --- | --- | --- |
| FOX.57 | | 17 Fales Pl | Foxborough | r 1845 |
| FOX.221 | Barton, William Eleazer Octagonal Tea House | Granite St | Foxborough | r 1915 |
| FOX.222 | Barton, William Eleazer Summer House | Granite St | Foxborough | 1901 |
| FOX.261 | Barton, William Eleazer Carriage Barn - Garage | Granite St | Foxborough | c 1901 |
| FOX.262 | Barton, William Eleazer Shed - Chicken Coop | Granite St | Foxborough | c 1901 |
| FOX.901 | Barton, William Eleazer House Grounds | Granite St | Foxborough | 1895 |
| FOX.902 | Barton, William Eleazer House - Entrance Gates | Granite St | Foxborough | c 1901 |
| FOX.911 | Barton, William Eleazer Culvert | Granite St | Foxborough | |
| FOX.912 | Barton, William Eleazer Earth Dam | Granite St | Foxborough | r 1850 |
| FOX.913 | Barton, William Eleazer Wigwam Ruins | Granite St | Foxborough | 1896 |
| FOX.108 | Gary, James House | 30 Granite St | Foxborough | 1839 |
| FOX.93 | | 31 Granite St | Foxborough | c 1845 |
| FOX.52 | Pettee, Calvin House | 52 Granite St | Foxborough | 1810 |
| FOX.6 | Kendall, Rev. Thomas House | 55 Granite St | Foxborough | 1792 |
| FOX.5 | Pettee, Simon Cotton Mill | 59 Granite St | Foxborough | r 1815 |
| FOX.51 | Forrest, Dea. Ebenezer - Young, Asa House | 100 Granite St | Foxborough | c 1820 |
| FOX.53 | Guild, Freedom House | 111 Granite St | Foxborough | 1821 |
| FOX.55 | | 22 Lakeview Rd | Foxborough | c 1845 |
| FOX.54 | | 38 Lakeview Rd | Foxborough | r 1835 |
| FOX.56 | | 52 Lakeview Rd | Foxborough | 1850 |
| FOX.185 | | 6 Leonard St | Foxborough | 1876 |
| FOX.186 | Johnson, Maria and Isabel E. House | 8 Leonard St | Foxborough | c 1880 |
| FOX.187 | Shaw, Eben House | 9 Leonard St | Foxborough | c 1880 |
| FOX.188 | | 11 Leonard St | Foxborough | c 1880 |
| FOX.189 | Foulkes, Thomas House | 12 Leonard St | Foxborough | c 1890 |
| FOX.190 | | 16 Leonard St | Foxborough | c 1885 |
| FOX.191 | Union Straw Works Worker Housing | 18 Leonard St | Foxborough | 1861 |
| FOX.192 | Union Straw Works Worker Housing | 20 Leonard St | Foxborough | 1862 |
| FOX.193 | Nutter, Eliza - Cook, Warren B. House | 22 Leonard St | Foxborough | c 1880 |
| FOX.194 | Union Straw Works Worker Housing | 24 Leonard St | Foxborough | 1862 |
| FOX.195 | Union Straw Works Worker Housing | 26 Leonard St | Foxborough | 1862 |
| FOX.196 | Union Straw Works Worker Housing | 28 Leonard St | Foxborough | 1862 |
| FOX.200 | Chestnut, D. House | 29 Leonard St | Foxborough | r 1865 |
| FOX.197 | Union Straw Works Worker Housing | 30 Leonard St | Foxborough | 1862 |
| FOX.198 | Union Straw Works Worker Housing | 32 Leonard St | Foxborough | 1860 |
| FOX.201 | Union Straw Works Worker Housing | 33 Leonard St | Foxborough | c 1876 |
| FOX.199 | | 34 Leonard St | Foxborough | c 1876 |
| FOX.202 | Grover, L. House | 38 Leonard St | Foxborough | r 1860 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| FOX.206 | Igoe, William House | 39 Leonard St | Foxborough | r 1870 |
| FOX.203 | Kingman, Frank B. House | 40 Leonard St | Foxborough | r 1860 |
| FOX.204 | Kendal, J. L. House | 42 Leonard St | Foxborough | r 1860 |
| FOX.205 | Calvin, E. H. - Haxie House | 44-46 Leonard St | Foxborough | r 1860 |
| FOX.208 | Kendal, J. L. House | 48 Leonard St | Foxborough | r 1860 |
| FOX.903 | Union Straw Works Water Reservoir | Liberty Pl | Foxborough | 1858 |
| FOX.173 | Carpenter, Erastus P. House | 2 Liberty St | Foxborough | 1850 |
| FOX.2 | Everret House | Main St | Foxborough | 1790 |
| FOX.19 | | Main St | Foxborough | |
| FOX.21 | Foxborough First Baptist Church | Main St | Foxborough | |
| FOX.22 | | Main St | Foxborough | r 1850 |
| FOX.23 | | Main St | Foxborough | r 1920 |
| FOX.143 | Sumner, Gen. Henry House | Main St | Foxborough | c 1845 |
| FOX.161 | Pettee, A. House | Main St | Foxborough | r 1870 |
| FOX.905 | Foxborough Town Common | Main St | Foxborough | |
| FOX.157 | Buckley, Dr. Francis C. House and Office | 25 Main St | Foxborough | r 1885 |
| FOX.168 | | 29 Main St | Foxborough | r 1885 |
| FOX.176 | Jackson, A. A. House | 32 Main St | Foxborough | r 1870 |
| FOX.175 | Walker, Leonard Home School | 33 Main St | Foxborough | c 1850 |
| FOX.154 | Aldrich, H. House | 35 Main St | Foxborough | 1850 |
| FOX.114 | Pond, Virgil House | 39 Main St | Foxborough | 1853 |
| FOX.144 | Foxborough Jewelry Company | 62 Main St | Foxborough | 1856 |
| FOX.135 | Carpenter, Daniels House | 80 Main St | Foxborough | 1824 |
| FOX.50 | | 83 Main St | Foxborough | c 1840 |
| FOX.137 | | 210 Main St | Foxborough | 1855 |
| FOX.131 | | 229 Main St | Foxborough | r 1845 |
| FOX.132 | Brastow, Thomas Jr. House | 251 Main St | Foxborough | c 1775 |
| FOX.133 | | 264 Main St | Foxborough | r 1850 |
| FOX.8 | Dean, Abbie House | Market St | Foxborough | 1855 |
| FOX.180 | Fuller, D. House | Mechanic St | Foxborough | r 1860 |
| FOX.111 | | 7-9 Mechanic St | Foxborough | 1840 |
| FOX.118 | Turner, Salmon House | 32 Mechanic St | Foxborough | 1849 |
| FOX.41 | Wood, Dr. Joshua - Sumner House | 46 Mechanic St | Foxborough | 1782 |
| FOX.129 | | 47 Mechanic St | Foxborough | 1846 |
| FOX.119 | | 110 Mechanic St | Foxborough | r 1835 |
| FOX.922 | F. Gilbert Hills State Forest - CCC Chimney | Mill St | Foxborough | 1933 |
| FOX.923 | F. Gilbert Hills State Forest - CCC Concrete Slab | Mill St | Foxborough | 1933 |
| FOX.924 | F. Gilbert Hills State Forest - CCC Stone Wall | Mill St | Foxborough | 1933 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| FOX.925 | F. Gilbert Hills State Forest - CCC Powder Magazin | Mill St | Foxborough | 1933 |
| FOX.926 | F. Gilbert Hills State Forest - CCC Foundation | Mill St | Foxborough | 1933 |
| FOX.61 | | 7 Mill St | Foxborough | c 1825 |
| FOX.60 | | 93 Mill St | Foxborough | c 1830 |
| FOX.141 | Bannon House | Morse St | Foxborough | 1920 |
| FOX.152 | Mansfield Bleachery | Morse St | Foxborough | 1876 |
| FOX.184 | Van Choate Electric Company | Neponset Ave | Foxborough | 1894 |
| FOX.251 | Foxborough State Hospital | 17 North St | Foxborough | c 1990 |
| FOX.130 | | 66 North St | Foxborough | r 1825 |
| FOX.128 | Morse, Newell House | 70 North St | Foxborough | 1835 |
| FOX.127 | Morse, Amos House | 77 North St | Foxborough | 1804 |
| FOX.126 | Morse, Leonard - Boyden, Uriah House | 80 North St | Foxborough | 1836 |
| FOX.124 | Morse, David House | 92 North St | Foxborough | r 1825 |
| FOX.125 | Mann House | 106 North St | Foxborough | 1815 |
| FOX.169 | Plimpton Elementary School | 154 North St | Foxborough | 1850 |
| FOX.123 | | 200 North St | Foxborough | r 1825 |
| FOX.49 | Foxborough Poor Farm | 205 North St | Foxborough | r 1800 |
| FOX.14 | | Oak St | Foxborough | r 1680 |
| FOX.142 | | 66 Oak St | Foxborough | 1825 |
| FOX.146 | Capen, David House | 129 Oak St | Foxborough | r 1835 |
| FOX.13 | Boyden, Seth House | 135 Oak St | Foxborough | r 1780 |
| FOX.91 | | 36 Old West St | Foxborough | 1850 |
| FOX.244 | Foxborough State Hospital - Tuberculosis Building | Payson Rd | Foxborough | 1935 |
| FOX.245 | Foxborough State Hospital - G Cottage | 8 Payson Rd | Foxborough | c 1920 |
| FOX.263 | Foxborough Pumping Station | 25 Pumping Station Rd | Foxborough | 1891 |
| FOX.96 | Foxborough Masonic Hall | Rockhill St | Foxborough | 1856 |
| FOX.139 | | Rockhill St | Foxborough | 1850 |
| FOX.165 | Bethany Congregational Church | Rockhill St | Foxborough | 1845 |
| FOX.140 | | 9 Rockhill St | Foxborough | 1875 |
| FOX.3 | Everett, Aaron House | Rt 1 | Foxborough | 1784 |
| FOX.136 | Everett, Aaron - Lafayette House Ell | Rt 1 | Foxborough | 1784 |
| FOX.904 | NY, NH & H Railroad Bridge (Milepost #44.71) | Rt 1 | Foxborough | 1931 |
| FOX.918 | F. Gilbert Hills State Forest - CCC Stone Steps | Rt 1 | Foxborough | 1934 |
| FOX.919 | F. Gilbert Hills State Forest - CCC Stone Wall | Rt 1 | Foxborough | 1934 |
| FOX.920 | F. Gilbert Hills State Forest - CCC Fire Pits | Rt 1 | Foxborough | 1934 |
| FOX.921 | F. Gilbert Hills State Forest - CCC Water Hole #17 | Rt 1 | Foxborough | 1934 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| FOX.915 | Route 2 Bridge over Route 140 | Rt 2 | Foxborough | 1931 |
| FOX.1 | Orpheum Theatre | 1 School St | Foxborough | 1926 |
| FOX.20 | | 18-22 School St | Foxborough | |
| FOX.172 | Carpenter, Linus House | 8 Shaw Pl | Foxborough | 1835 |
| FOX.209 | Taber, Joseph House | 10 Sherman St | Foxborough | c 1876 |
| FOX.210 | Foley, Patrick House | 20 Sherman St | Foxborough | c 1876 |
| FOX.211 | Union Straw Works Double Worker Housing | 24-26 Sherman St | Foxborough | c 1869 |
| FOX.212 | Union Straw Works Double Worker Housing | 28-30 Sherman St | Foxborough | c 1869 |
| FOX.213 | Union Straw Works Double Worker Housing | 32-34 Sherman St | Foxborough | c 1869 |
| FOX.214 | Union Straw Works Double Worker Housing | 36-38 Sherman St | Foxborough | c 1869 |
| FOX.217 | | 37 Sherman St | Foxborough | r 1880 |
| FOX.215 | Union Straw Works Double Worker Housing | 42-44 Sherman St | Foxborough | r 1875 |
| FOX.216 | Union Straw Works Double Worker Housing | 46-48 Sherman St | Foxborough | 1869 |
| FOX.207 | | 51 Sherman St | Foxborough | r 1885 |
| FOX.78 | | 83 South Grove St | Foxborough | 1850 |
| FOX.74 | | 93 South Grove St | Foxborough | 1845 |
| FOX.7 | Rhodes House | South St | Foxborough | 1800 |
| FOX.98 | Quaker Hill School | South St | Foxborough | r 1895 |
| FOX.104 | Union Church of South Foxborough | South St | Foxborough | 1876 |
| FOX.145 | South Foxborough Union Chapel Community Club | South St | Foxborough | 1927 |
| FOX.148 | Carpenter Memorial Chapel | South St | Foxborough | 1894 |
| FOX.174 | Foxborough High School | South St | Foxborough | |
| FOX.800 | Rockhill Cemetery | South St | Foxborough | 1853 |
| FOX.11 | Memorial Hall | 22 South St | Foxborough | 1868 |
| FOX.66 | | 26 South St | Foxborough | 1855 |
| FOX.65 | | 30 South St | Foxborough | r 1865 |
| FOX.47 | Hartshorn, Jeremiah House | 31-35 South St | Foxborough | r 1805 |
| FOX.4 | Hughes, Solomon House | 34 South St | Foxborough | c 1710 |
| FOX.112 | American House - American Hall Building | 37-39 South St | Foxborough | 1855 |
| FOX.101 | Saint Marks Episcopal Church | 41 South St | Foxborough | 1893 |
| FOX.64 | | 43 South St | Foxborough | 1850 |
| FOX.155 | Muddocks, L. S. House | 48 South St | Foxborough | 1840 |
| FOX.107 | Bourne, Dea. Thomas House | 69 South St | Foxborough | 1870 |
| FOX.149 | Nason, Elias House | 85 South St | Foxborough | c 1793 |
| FOX.77 | | 90 South St | Foxborough | c 1850 |
| FOX.69 | | 92 South St | Foxborough | 1825 |
| FOX.81 | | 95 South St | Foxborough | 1840 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| FOX.68 | | 96 South St | Foxborough | r 1800 |
| FOX.71 | | 97 South St | Foxborough | r 1845 |
| FOX.166 | Carpenter, P. T. House | 102 South St | Foxborough | 1850 |
| FOX.138 | Carpenter, P. House | 106 South St | Foxborough | 1850 |
| FOX.109 | Saint Marks Episcopal Church | 116 South St | Foxborough | 1955 |
| FOX.70 | | 141 South St | Foxborough | 1840 |
| FOX.167 | | 163 South St | Foxborough | r 1885 |
| FOX.67 | | 164 South St | Foxborough | r 1845 |
| FOX.83 | Carpenter, Ezra House | 168 South St | Foxborough | c 1800 |
| FOX.62 | Cary, Otis Elementary School | 188 South St | Foxborough | c 1850 |
| FOX.80 | | 203 South St | Foxborough | c 1820 |
| FOX.73 | Ambrose House | 204 South St | Foxborough | r 1840 |
| FOX.63 | | 241 South St | Foxborough | 1825 |
| FOX.59 | Cary, Otis House | 242 South St | Foxborough | 1837 |
| FOX.85 | | 255 South St | Foxborough | 1800 |
| FOX.84 | | 263 South St | Foxborough | r 1845 |
| FOX.87 | Stratton, George - Torrey, Dea. House | 343 South St | Foxborough | c 1810 |
| FOX.89 | | 358 South St | Foxborough | c 1817 |
| FOX.90 | | 389 South St | Foxborough | c 1825 |
| FOX.99 | Paine School | Spring St | Foxborough | 1870 |
| FOX.102 | Paine School | Spring St | Foxborough | 1850 |
| FOX.42 | | 12 Spring St | Foxborough | r 1855 |
| FOX.43 | | 32 Spring St | Foxborough | r 1845 |
| FOX.44 | | 73 Spring St | Foxborough | r 1830 |
| FOX.45 | Blanchard, Josiah House | 120 Spring St | Foxborough | 1777 |
| FOX.86 | | 6 Stratton Ln | Foxborough | c 1825 |
| FOX.88 | | 15 Stratton Ln | Foxborough | 1850 |
| FOX.158 | West India Tea Company | Wall St | Foxborough | 1853 |
| FOX.164 | Carpenter Straw Hat Factory | 18 Wall St | Foxborough | 1844 |
| FOX.75 | | 6 Walnut St | Foxborough | r 1840 |
| FOX.72 | | 20 Walnut St | Foxborough | 1850 |
| FOX.76 | | 21 Walnut St | Foxborough | 1850 |
| FOX.134 | Everett, Meletiah House | Washington St | Foxborough | 1810 |
| FOX.82 | | 19 Water St | Foxborough | r 1840 |
| FOX.92 | | 31 West St | Foxborough | 1790 |
| FOX.153 | Daniels, Francois House | 63 West St | Foxborough | c 1825 |
| FOX.121 | | 17 Willis Ln | Foxborough | r 1835 |
| FOX.46 | Pratt, Isaac House | 82 Willow St | Foxborough | r 1763 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| FOX.914 | Wolomolopoag Street Bridge | Wolomolopoag St | Foxborough | |
| WLP.A | South Walpole Area | | Walpole | |
| WLP.B | Allen's Corner - Peach Street Area | | Walpole | |
| WLP.C | Fisher and North Streets | | Walpole | |
| WLP.D | Main Street Area | | Walpole | |
| WLP.E | Walpole Town Forest | | Walpole | |
| WLP.F | Bird and Son Roofing and Siding Factory | | Walpole | |
| WLP.G | Lewis Park - Plimptonville Area | | Walpole | |
| WLP.H | East Walpole Area | | Walpole | |
| WLP.I | Bird, Francis William Park | | Walpole | |
| WLP.J | Town Center Municipal Area | | Walpole | |
| WLP.K | Walpole Center - Common Street Area | | Walpole | |
| WLP.L | Bird Estate - Endean | | Walpole | |
| WLP.939 | Bird Pond 1 Site | | Walpole | |
| WLP.58 | Smith, Moses House | 40 Cedar St | Walpole | 1745 |
| WLP.31 | West Walpole Schoolhouse | 785 Cedar St | Walpole | c 1774 |
| WLP.907 | Bird, Mary Memorial Fountain | Chestnut St | Walpole | 1895 |
| WLP.260 | | 15 Chestnut St | Walpole | c 1870 |
| WLP.947 | Bird Memorial Clock and Tower | 57 Chestnut St | Walpole | c 1894 |
| WLP.914 | Walpole Firefighters Monument | Common St | Walpole | 1969 |
| WLP.81 | U. S. Post Office - Walpole Main Branch | 10 Common St | Walpole | 1937 |
| WLP.82 | First Parish Church - Unitarian | 30 Common St | Walpole | 1783 |
| WLP.83 | Fuller, Lewis F. House | 32 Common St | Walpole | 1903 |
| WLP.84 | Hawes House | 40 Common St | Walpole | c 1840 |
| WLP.78 | Moore, Col. William House - Lionhurst | 45 Common St | Walpole | 1875 |
| WLP.85 | Hartshorn House | 48 Common St | Walpole | c 1899 |
| WLP.86 | Glover, Washington House | 64 Common St | Walpole | 1830 |
| WLP.92 | Walpole Public Library | 65 Common St | Walpole | 1903 |
| WLP.87 | Connally, Dr. House and Office | 74 Common St | Walpole | c 1925 |
| WLP.80 | Clapp, Edmund House | 79 Common St | Walpole | c 1870 |
| WLP.309 | | 84 Common St | Walpole | r 1880 |
| WLP.310 | | 89 Common St | Walpole | c 1946 |
| WLP.88 | | 92-94 Common St | Walpole | c 1890 |
| WLP.89 | | 102 Common St | Walpole | r 1900 |
| WLP.93 | Clapp - Cobb House | 103 Common St | Walpole | r 1825 |
| WLP.90 | Gilmore, Frank R. House | 108 Common St | Walpole | c 1900 |
| WLP.94 | Wade House | 109 Common St | Walpole | c 1890 |
| WLP.91 | Hartshorn, Calvin G. House | 118 Common St | Walpole | 1827 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.95 | Boyden, Porter House | 119 Common St | Walpole | c 1880 |
| WLP.311 | | 128 Common St | Walpole | c 1901 |
| WLP.96 | | 129 Common St | Walpole | r 1920 |
| WLP.97 | | 131 Common St | Walpole | c 1925 |
| WLP.312 | | 134 Common St | Walpole | c 1850 |
| WLP.98 | | 140 Common St | Walpole | c 1900 |
| WLP.99 | | 150 Common St | Walpole | c 1890 |
| WLP.100 | | 150R Common St | Walpole | |
| WLP.101 | | 158 Common St | Walpole | |
| WLP.102 | | 168 Common St | Walpole | c 1920 |
| WLP.103 | | 174 Common St | Walpole | c 1900 |
| WLP.181 | Dolan, John P. House | 218 Common St | Walpole | c 1903 |
| WLP.143 | Walpole High School | 275 Common St | Walpole | 1907 |
| WLP.182 | Plimpton, George A. School | 319 Common St | Walpole | 1913 |
| WLP.144 | Blessed Sacrament Roman Catholic Church | Diamond St | Walpole | 1912 |
| WLP.162 | Diamond Manufacturing Company Cotton Textile Mill | Diamond St | Walpole | c 1830 |
| WLP.164 | Higgins, Michael House | 159 Diamond St | Walpole | c 1886 |
| WLP.171 | Bird and Son Box Factory #2 | East St | Walpole | 1912 |
| WLP.172 | Bird and Son Box Factory #2 Extension | East St | Walpole | 1960 |
| WLP.173 | Bird and Son Box Factory #2 Addition | East St | Walpole | c 1925 |
| WLP.902 | Fountain in Lewis Square, The | East St | Walpole | 1910 |
| WLP.906 | Lewis, Lt. Barachiah Equestrian Statue | East St | Walpole | 1911 |
| WLP.928 | East Street Bridge over Abandoned Railroad Tracks | East St | Walpole | 1891 |
| WLP.938 | Bird and Son Factory Transformer Building | East St | Walpole | |
| WLP.945 | Lewis Park - Lewis Square | East St | Walpole | 1775 |
| WLP.151 | Pettee House | 158 East St | Walpole | c 1720 |
| WLP.238 | | 400 East St | Walpole | c 1850 |
| WLP.41 | Lewis, Jason House - Lewis Farm | 401 East St | Walpole | c 1815 |
| WLP.239 | Lewis Farm Stone Outbuilding | 421 East St | Walpole | c 1890 |
| WLP.240 | | 427 East St | Walpole | c 1960 |
| WLP.241 | | 439 East St | Walpole | r 1840 |
| WLP.242 | | 460 East St | Walpole | c 1949 |
| WLP.32 | Lewis, Isaac Newton House | 470 East St | Walpole | c 1896 |
| WLP.211 | Allen, Joshua Cottage | 603 East St | Walpole | c 1850 |
| WLP.212 | | 611 East St | Walpole | c 1915 |
| WLP.213 | | 619 East St | Walpole | c 1915 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.42 | Smith, Henry W. House | 638-640 East St | Walpole | c 1870 |
| WLP.214 | | 641 East St | Walpole | c 1955 |
| WLP.43 | | 655 East St | Walpole | c 1820 |
| WLP.215 | | 660 East St | Walpole | c 1890 |
| WLP.61 | Allen, Daniel House | 663 East St | Walpole | 1795 |
| WLP.216 | | 677 East St | Walpole | c 1910 |
| WLP.45 | | 712 East St | Walpole | |
| WLP.62 | Allen, Melzar House | 713 East St | Walpole | 1867 |
| WLP.44 | Allen, Melzar House | 777 East St | Walpole | c 1832 |
| WLP.46 | Pratt House | 793 East St | Walpole | c 1875 |
| WLP.47 | | 805 East St | Walpole | |
| WLP.48 | | 807 East St | Walpole | |
| WLP.49 | | 809 East St | Walpole | |
| WLP.67 | Scott House | 819 East St | Walpole | |
| WLP.69 | Shubitawksi, Lee House | 829 East St | Walpole | c 1875 |
| WLP.68 | | 835 East St | Walpole | |
| WLP.71 | | 863 East St | Walpole | |
| WLP.73 | | 868 East St | Walpole | 1875 |
| WLP.74 | | 874 East St | Walpole | c 1875 |
| WLP.70 | Lewis, Dea. Willard House | 875 East St | Walpole | c 1875 |
| WLP.75 | | 880 East St | Walpole | c 1875 |
| WLP.76 | Bean House | 886 East St | Walpole | 1875 |
| WLP.77 | | 892 East St | Walpole | |
| WLP.72 | Gilbert, Samuel House | 919 East St | Walpole | |
| WLP.30 | Turner, D. House | 519 Elm Rd | Walpole | 1749 |
| WLP.921 | Norfolk County Railroad Bridge over Elm Street | Elm St | Walpole | 1911 |
| WLP.159 | Turner, Abner House | 298 Elm St | Walpole | c 1800 |
| WLP.243 | | 1 Everett St | Walpole | c 1840 |
| WLP.244 | | 5 Everett St | Walpole | 2005 |
| WLP.36 | | 546 Fisher St | Walpole | |
| WLP.23 | Fairbanks House | 930 Fisher St | Walpole | r 1780 |
| WLP.150 | Episcopal Church of the Epiphany | Front St | Walpole | 1895 |
| WLP.313 | United Church Parsonage | 20 Front St | Walpole | c 1900 |
| WLP.79 | Craig, George House | 40 Front St | Walpole | 1882 |
| WLP.314 | | 62 Front St | Walpole | r 1920 |
| WLP.152 | Smith, Warren House | 1 High Plain St | Walpole | c 1890 |
| WLP.27 | Allen, Robert House | 2 High Plain St | Walpole | c 1740 |
| WLP.217 | | 45 High Plain St | Walpole | c 1927 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.218 | | 55 High Plain St | Walpole | c 1890 |
| WLP.806 | Maple Grove Cemetery | Kendall St | Walpole | 1817 |
| WLP.930 | Kendall Street Bridge over Conrail | Kendall St | Walpole | 1905 |
| WLP.153 | Dalton, Patrick House | 48 Kendall St | Walpole | r 1820 |
| WLP.141 | Sleeper, Eugene House | 15 Lake Ave | Walpole | 1908 |
| WLP.900 | Walpole Lime Stone Kiln | 319 Lincoln Rd | Walpole | r 1750 |
| WLP.3 | Stetson, E. House | Main St | Walpole | |
| WLP.802 | Old Burial Place | Main St | Walpole | 1718 |
| WLP.901 | French and Indian War Memorial and Fountain | Main St | Walpole | 1901 |
| WLP.903 | Walpole Civil War Memorial | Main St | Walpole | 1883 |
| WLP.904 | Walpole First Parish Church Marker | Main St | Walpole | 1936 |
| WLP.910 | Walpole Veterans Memorial Boulder | Main St | Walpole | 1958 |
| WLP.912 | Walpole Bandstand | Main St | Walpole | 1902 |
| WLP.913 | Bird Fountain | Main St | Walpole | c 1905 |
| WLP.924 | Walpole Tunnel | Main St | Walpole | c 1848 |
| WLP.929 | Main Street Bridge over Neponset River | Main St | Walpole | 1924 |
| WLP.931 | Main Street Bridge over Neponset River | Main St | Walpole | 1912 |
| WLP.970 | Walpole Common | Main St | Walpole | 1739 |
| WLP.2 | Hartshorn House | 600 Main St | Walpole | c 1820 |
| WLP.60 | Morse, Joshua - Clap, Levi House | 792 Main St | Walpole | r 1800 |
| WLP.4 | Babbitt, W. House | 812 Main St | Walpole | c 1832 |
| WLP.1 | Bullard, Solomon House | 841 Main St | Walpole | c 1725 |
| WLP.5 | Bowker, J. P. House | 844 Main St | Walpole | |
| WLP.139 | Plimpton Block | 930 Main St | Walpole | 1888 |
| WLP.65 | Walpole Town Hall | 972 Main St | Walpole | 1881 |
| WLP.315 | Walpole Bank - Norfolk County Trust Company | 979 Main St | Walpole | 1927 |
| WLP.911 | Walpole - Boston Mile Marker | 980 Main St | Walpole | 1740 |
| WLP.316 | New England Telephone Exchange | 982 Main St | Walpole | c 1920 |
| WLP.317 | Walpole Centre Block | 996-1000 Main St | Walpole | 1928 |
| WLP.318 | Walpole Centre Block | 1002-1004 Main St | Walpole | 1928 |
| WLP.319 | Walpole Centre Block | 1006-1008 Main St | Walpole | 1928 |
| WLP.320 | | 1049 Main St | Walpole | c 1970 |
| WLP.158 | Smith - Gray House | 1185 Main St | Walpole | |
| WLP.166 | Bird, Francis W. House | Mylod St | Walpole | r 1855 |
| WLP.934 | Mylod Street Bridge over Conrail | Mylod St | Walpole | 1940 |
| WLP.922 | Norfolk County Railroad Bridge over Neponset River | Neponset River | Walpole | 1910 |
| WLP.925 | Norfolk County Railroad Bridge over Neponset | Neponset River | Walpole | 1902 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| | River | | | |
| WLP.163 | Smith, Daniel and Elbridge Cotton Thread Mill | Neponset St | Walpole | c 1835 |
| WLP.15 | Wright - Easton, Jay House | 2 Neponset St | Walpole | c 1770 |
| WLP.161 | Boston and Providence Coach Company Stable | 4 Neponset St | Walpole | r 1810 |
| WLP.183 | | 31 Neponset St | Walpole | 1946 |
| WLP.184 | | 35-37 Neponset St | Walpole | 1932 |
| WLP.54 | Mann, Col. Timothy House | 40 Neponset St | Walpole | c 1770 |
| WLP.185 | Clarke, Truman Barn | 59 Neponset St | Walpole | c 1829 |
| WLP.9 | Walpole Manufacturing Company Worker Housing | 61-67 Neponset St | Walpole | c 1814 |
| WLP.923 | Norfolk County Railroad Bridge | Norfolk Railroad | Walpole | 1899 |
| WLP.21 | Ellis, P. House | North St | Walpole | r 1780 |
| WLP.38 | Smith House | North St | Walpole | c 1832 |
| WLP.39 | Ellis, J. House | North St | Walpole | c 1832 |
| WLP.59 | Day, Jeremiah - Goss, J. Dan House | 309 North St | Walpole | 1712 |
| WLP.154 | Day, Jeremiah House | 389 North St | Walpole | c 1770 |
| WLP.26 | Gould, J. A. House | 411 North St | Walpole | c 1800 |
| WLP.25 | Gay, E. House | 425 North St | Walpole | c 1820 |
| WLP.24 | Gay, N. House | 654 North St | Walpole | r 1720 |
| WLP.22 | Ellis, W. House | 962 North St | Walpole | c 1780 |
| WLP.40 | Ellis, J. House | 1018 North St | Walpole | c 1823 |
| WLP.20 | Ellis, E. House | 1270 North St | Walpole | c 1750 |
| WLP.37 | Smith, L. House | 1326 North St | Walpole | c 1832 |
| WLP.19 | Smith House | 1350 North St | Walpole | c 1740 |
| WLP.805 | Guild Cemetery | Old Post Rd | Walpole | 1793 |
| WLP.155 | Allen, Abel - Allen, Catherine Cottage | 1 Peach St | Walpole | c 1780 |
| WLP.29 | Allen, Samuel House | 2 Peach St | Walpole | r 1865 |
| WLP.219 | | 14 Peach St | Walpole | c 1947 |
| WLP.220 | | 19 Peach St | Walpole | c 1960 |
| WLP.33 | Allen, Samuel Barn | 24 Peach St | Walpole | c 1850 |
| WLP.34 | Allen, J. - Harkness, Capt. Edward W. House | 38 Peach St | Walpole | c 1840 |
| WLP.35 | | 54 Peach St | Walpole | c 1840 |
| WLP.221 | | 58 Peach St | Walpole | c 1948 |
| WLP.222 | | 88 Peach St | Walpole | c 1950 |
| WLP.223 | | 110 Peach St | Walpole | c 1937 |
| WLP.224 | | 111 Peach St | Walpole | c 1926 |
| WLP.225 | | 115 Peach St | Walpole | c 1938 |
| WLP.226 | | 126 Peach St | Walpole | c 1927 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.227 | | 135 Peach St | Walpole | c 1936 |
| WLP.105 | Allen, L. House | 136 Peach St | Walpole | c 1825 |
| WLP.228 | | 140 Peach St | Walpole | c 1951 |
| WLP.104 | Myers - Goss, G. Daniel - Thomas, Daniel W. House | 166 Peach St | Walpole | 1878 |
| WLP.804 | Walpole Rural Cemetery | Pemberton St | Walpole | 1843 |
| WLP.50 | | Pine St | Walpole | 1700 |
| WLP.918 | Dedham Rock | Pine St | Walpole | 1685 |
| WLP.7 | Lewis, Sgt. William House | 1 Plimpton St | Walpole | c 1832 |
| WLP.245 | | 24 Plimpton St | Walpole | 1994 |
| WLP.246 | | 28 Plimpton St | Walpole | 1993 |
| WLP.247 | | 31 Plimpton St | Walpole | c 1844 |
| WLP.248 | | 32 Plimpton St | Walpole | 1994 |
| WLP.249 | | 40 Plimpton St | Walpole | c 1900 |
| WLP.250 | | 42 Plimpton St | Walpole | c 1900 |
| WLP.251 | Goss, John House | 44 Plimpton St | Walpole | c 1900 |
| WLP.252 | Plimpton, Henry Jr. House | 49-53 Plimpton St | Walpole | c 1850 |
| WLP.253 | Plimpton, Calvin G. House | 79 Plimpton St | Walpole | 1862 |
| WLP.254 | Plimpton, Calvin G. Barn | 79 Plimpton St | Walpole | c 1862 |
| WLP.946 | Plimpton, Calvin G. Wrought Iron Fence | 79 Plimpton St | Walpole | 1862 |
| WLP.255 | | 100 Plimpton St | Walpole | c 1900 |
| WLP.256 | Ellis, Daniel Satinet Company Boarding House | 105 Plimpton St | Walpole | 1828 |
| WLP.257 | Ellis, Daniel Satinet Company Boarding House | 110 Plimpton St | Walpole | c 1820 |
| WLP.258 | Ellis, Daniel Satinet Company Worker Housing | 122 Plimpton St | Walpole | c 1816 |
| WLP.259 | Plimpton, Henry House | 129 Plimpton St | Walpole | 1816 |
| WLP.926 | Norfolk County Railroad Bridge over Plympton St | Plympton St | Walpole | 1905 |
| WLP.146 | East Walpole Union Congregational Church | Rhoades Ave | Walpole | 1915 |
| WLP.261 | | 16 Rhoades Ave | Walpole | c 1920 |
| WLP.262 | | 20-22 Rhoades Ave | Walpole | 1964 |
| WLP.263 | | 30 Rhoades Ave | Walpole | c 1910 |
| WLP.264 | | 34 Rhoades Ave | Walpole | c 1910 |
| WLP.265 | | 40 Rhoades Ave | Walpole | c 1910 |
| WLP.266 | | 42 Rhoades Ave | Walpole | c 1910 |
| WLP.267 | | 44 Rhoades Ave | Walpole | c 1915 |
| WLP.268 | | 46 Rhoades Ave | Walpole | c 1917 |
| WLP.269 | | 59 Rhoades Ave | Walpole | c 1910 |
| WLP.270 | | 60 Rhoades Ave | Walpole | c 1910 |
| WLP.271 | | 63 Rhoades Ave | Walpole | c 1915 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.272 | | 68 Rhoades Ave | Walpole | c 1910 |
| WLP.273 | | 73 Rhoades Ave | Walpole | c 1910 |
| WLP.274 | | 80 Rhoades Ave | Walpole | c 1910 |
| WLP.275 | | 81 Rhoades Ave | Walpole | c 1905 |
| WLP.927 | Fisher Coal Company Shed | Riverview Pl | Walpole | r 1920 |
| WLP.916 | School Street Memorial Bridge | School St | Walpole | 1924 |
| WLP.974 | Alger Cannon | School St | Walpole | c 1850 |
| WLP.149 | Stone Elementary School | 135 School St | Walpole | 1950 |
| WLP.304 | Blackburn Memorial Hall | 135 School St | Walpole | 1932 |
| WLP.305 | Memorial Park Bath House | 144 School St | Walpole | 1926 |
| WLP.905 | Nevins, Harriet F. Memorial Fountain | 144 School St | Walpole | 1930 |
| WLP.967 | Memorial Park | 144 School St | Walpole | 1923 |
| WLP.968 | Memorial Pond | 144 School St | Walpole | 1923 |
| WLP.969 | Memorial Park Swimming Pool | 144 School St | Walpole | 1926 |
| WLP.186 | Terrace Hill Cemetery - Jackson Memorial Chapel | South St | Walpole | 1905 |
| WLP.803 | Terrace Hill Cemetery | South St | Walpole | 1775 |
| WLP.321 | Clark, Beeri House | 3-5 South St | Walpole | c 1850 |
| WLP.53 | Robbins, Ebenezer House | 773 South St | Walpole | r 1700 |
| WLP.160 | Morse, Ezekiel House | 215 Spring St | Walpole | c 1810 |
| WLP.142 | Stone School, Old | Stone St | Walpole | 1885 |
| WLP.306 | Central Fire Station | 20 Stone St | Walpole | 1952 |
| WLP.975 | Central Fire Station Cannon | 20 Stone St | Walpole | |
| WLP.307 | Walpole Italian-American Society Club | 109-111 Stone St | Walpole | 1934 |
| WLP.308 | First Central Fire Station | 137 Stone St | Walpole | r 1895 |
| WLP.187 | Boston and Providence Coach Company Stable Ell | 8-12 Summer St | Walpole | r 1810 |
| WLP.188 | South Walpole Fire Station | 29 Summer St | Walpole | 1923 |
| WLP.189 | NY, NH & Hartford Railroad Passenger Station | 44 Summer St | Walpole | c 1915 |
| WLP.56 | Garside, John House | 111 Summer St | Walpole | 1849 |
| WLP.52 | Carroll, Joseph House | 131 Summer St | Walpole | c 1720 |
| WLP.51 | | 290 Summer St | Walpole | c 1755 |
| WLP.276 | Sharon Credit Union | 2 Union St | Walpole | 1980 |
| WLP.277 | | 9 Union St | Walpole | c 1900 |
| WLP.278 | | 15 Union St | Walpole | c 1936 |
| WLP.279 | | 17 Union St | Walpole | c 1904 |
| WLP.280 | | 21 Union St | Walpole | c 1910 |
| WLP.281 | | 27 Union St | Walpole | c 1887 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.167 | U. S. Post Office - East Walpole Branch | 31 Union St | Walpole | 1940 |
| WLP.282 | | 33 Union St | Walpole | c 1928 |
| WLP.283 | Rhoades, Dea. William House | 62 Union St | Walpole | c 1840 |
| WLP.284 | | 63 Union St | Walpole | c 1900 |
| WLP.285 | | 73 Union St | Walpole | c 1911 |
| WLP.286 | | 78 Union St | Walpole | c 1951 |
| WLP.287 | | 80 Union St | Walpole | c 1900 |
| WLP.288 | | 88 Union St | Walpole | c 1900 |
| WLP.289 | | 89 Union St | Walpole | c 1900 |
| WLP.290 | Larrabee House | 91 Union St | Walpole | c 1886 |
| WLP.291 | Godbold, Horatio House | 96 Union St | Walpole | c 1851 |
| WLP.292 | | 100 Union St | Walpole | 1900 |
| WLP.137 | | Washington St | Walpole | r 1920 |
| WLP.140 | Carlisle, Thomas Blacksmith Shop | Washington St | Walpole | c 1828 |
| WLP.148 | Bird School | Washington St | Walpole | 1919 |
| WLP.168 | Bird and Son Factory Main Office Building | Washington St | Walpole | c 1910 |
| WLP.169 | Bird and Son Factory Labor Bureau | Washington St | Walpole | c 1910 |
| WLP.170 | Bird and Son Box Factory #1 | Washington St | Walpole | 1900 |
| WLP.174 | Bird and Son Factory Research Laboratories | Washington St | Walpole | c 1925 |
| WLP.175 | Bird and Son Factory Paper Production Building #1 | Washington St | Walpole | c 1925 |
| WLP.176 | Bird and Son Factory Paper Production Building #2 | Washington St | Walpole | c 1925 |
| WLP.177 | Bird and Son Factory Power Plant | Washington St | Walpole | 1927 |
| WLP.178 | Bird and Son Factory Modern Power Plant | Washington St | Walpole | 1950 |
| WLP.179 | Bird and Son Factory Paint Shop | Washington St | Walpole | r 1880 |
| WLP.180 | Bird and Son Factory Corporate Building | Washington St | Walpole | 1958 |
| WLP.235 | Walpole Department of Public Works Metal Garage | Washington St | Walpole | c 1986 |
| WLP.236 | Walpole Department of Public Works Metal Garage | Washington St | Walpole | c 1986 |
| WLP.237 | Walpole Department of Public Works Metal Garage | Washington St | Walpole | c 1986 |
| WLP.302 | Bird Park - Music Court | Washington St | Walpole | 1926 |
| WLP.303 | Bird Park - Staff and Maintenance Building | Washington St | Walpole | c 1925 |
| WLP.801 | Blake Family Cemetery | Washington St | Walpole | 1789 |
| WLP.908 | Walpole Public Works Department Employees Memorial | Washington St | Walpole | |
| WLP.915 | Bird, Francis William Park | Washington St | Walpole | 1925 |
| WLP.917 | Norfolk and Bristol Turnpike Bridge | Washington St | Walpole | c 1806 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.935 | Bird and Son Factory Water Storage Tank | Washington St | Walpole | c 1900 |
| WLP.936 | Bird and Son Factory Dam | Washington St | Walpole | c 1900 |
| WLP.937 | Bird and Son Factory Smokestack | Washington St | Walpole | c 1910 |
| WLP.940 | South Common | Washington St | Walpole | r 1825 |
| WLP.943 | Memorial Tree Boulder | Washington St | Walpole | c 1916 |
| WLP.944 | Town Forest Monument | Washington St | Walpole | 1966 |
| WLP.948 | Bird Park - Memorial Gate | Washington St | Walpole | 1926 |
| WLP.949 | Bird Park - Pergola Gate | Washington St | Walpole | 1926 |
| WLP.950 | Bird Park - Shelter Gate | Washington St | Walpole | 1926 |
| WLP.951 | Bird Park - Vista, The | Washington St | Walpole | 1926 |
| WLP.952 | Bird Park - Allee, The | Washington St | Walpole | 1926 |
| WLP.953 | Bird Park - Willow Pond | Washington St | Walpole | 1926 |
| WLP.954 | Bird Park - Upper Pond | Washington St | Walpole | 1926 |
| WLP.955 | Bird Park - Upper Pond Bridge | Washington St | Walpole | 1926 |
| WLP.956 | Bird Park - Carberry Pond | Washington St | Walpole | 1926 |
| WLP.957 | Bird Park - Rhododendron Path Bridge | Washington St | Walpole | c 1926 |
| WLP.958 | Bird Park - Gate Way Gate | Washington St | Walpole | 1926 |
| WLP.959 | Bird Park - Granolithic Tile Walk | Washington St | Walpole | 1926 |
| WLP.960 | Bird Park - Flag Pole | Washington St | Walpole | 1999 |
| WLP.961 | Bird Park - Tennis Courts | Washington St | Walpole | 1926 |
| WLP.965 | Bird Park - Playground #1 | Washington St | Walpole | c 1990 |
| WLP.966 | Bird Park - Playground #2 | Washington St | Walpole | c 1990 |
| WLP.971 | Massachusetts Chemical Company Dam | Washington St | Walpole | 1900 |
| WLP.972 | Massachusetts Chemical Company Reservoir | Washington St | Walpole | 1900 |
| WLP.973 | White Bridge | Washington St | Walpole | r 1950 |
| WLP.145 | Chapel of Saint Mary | 176 Washington St | Walpole | 1926 |
| WLP.147 | Walpole Hose and Ladder #2 Fire Station | 183 Washington St | Walpole | 1922 |
| WLP.136 | East Walpole Market | 196 Washington St | Walpole | r 1905 |
| WLP.134 | Coon, Dr. George House | 202 Washington St | Walpole | r 1875 |
| WLP.135 | Sansone Block | 214 Washington St | Walpole | c 1907 |
| WLP.138 | Sline House | 233 Washington St | Walpole | r 1905 |
| WLP.106 | | 236 Washington St | Walpole | 1907 |
| WLP.107 | | 238 Washington St | Walpole | r 1920 |
| WLP.110 | Newer House | 241 Washington St | Walpole | r 1900 |
| WLP.108 | | 244 Washington St | Walpole | r 1880 |
| WLP.109 | Murphy House | 248 Washington St | Walpole | r 1880 |
| WLP.111 | Newer House | 265 Washington St | Walpole | c 1907 |
| WLP.112 | Hammond House | 267 Washington St | Walpole | c 1907 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.113 | Harrison House | 273 Washington St | Walpole | c 1907 |
| WLP.114 | | 319 Washington St | Walpole | c 1907 |
| WLP.115 | Carbory House | 334 Washington St | Walpole | c 1907 |
| WLP.116 | Murphy House | 341 Washington St | Walpole | c 1907 |
| WLP.117 | Thompson, Elija House | 367 Washington St | Walpole | r 1820 |
| WLP.118 | Leithead House | 457 Washington St | Walpole | r 1905 |
| WLP.119 | Clark House | 465 Washington St | Walpole | c 1910 |
| WLP.120 | | 514 Washington St | Walpole | c 1890 |
| WLP.121 | Kirk House | 612 Washington St | Walpole | c 1890 |
| WLP.122 | | 615 Washington St | Walpole | r 1850 |
| WLP.123 | Kirk, Jasper House | 690 Washington St | Walpole | c 1910 |
| WLP.124 | Regan House | 702 Washington St | Walpole | r 1880 |
| WLP.125 | Thomas, Frederick House | 762 Washington St | Walpole | c 1890 |
| WLP.126 | Thomas, Granville House | 784 Washington St | Walpole | |
| WLP.127 | | 1231 Washington St | Walpole | r 1880 |
| WLP.128 | Walpole Water Works Pumping Station | 1303 Washington St | Walpole | 1895 |
| WLP.229 | Department of Public Works Superintendent House | 1303 Washington St | Walpole | c 1900 |
| WLP.230 | Walpole Water Works Garage - Storage Building | 1303 Washington St | Walpole | r 1925 |
| WLP.909 | | 1303 Washington St | Walpole | c 1864 |
| WLP.231 | Walpole Department of Public Works Headquarters | 1385 Washington St | Walpole | 1955 |
| WLP.232 | Walpole Department of Public Works Garage | 1385 Washington St | Walpole | r 1980 |
| WLP.233 | Walpole Department of Public Works Garage | 1385 Washington St | Walpole | r 1980 |
| WLP.234 | Walpole Department of Public Works Garage | 1385 Washington St | Walpole | r 1980 |
| WLP.941 | Hartshorn-Smith, Abigail Clap Tomb | 1385 Washington St | Walpole | c 1824 |
| WLP.942 | American Tree Farm Sign | 1385 Washington St | Walpole | c 2000 |
| WLP.129 | | 1549 Washington St | Walpole | r 1820 |
| WLP.130 | | 1641 Washington St | Walpole | r 1820 |
| WLP.133 | | 1685 Washington St | Walpole | r 1820 |
| WLP.132 | Kener - Allen, Samuel House | 1724 Washington St | Walpole | c 1880 |
| WLP.131 | Leland House | 1784 Washington St | Walpole | c 1860 |
| WLP.190 | Boyden School | 1852 Washington St | Walpole | 1930 |
| WLP.11 | Mann, J. House | 1871 Washington St | Walpole | r 1870 |
| WLP.10 | Fuller House - Fuller Tavern Annex | 1873 Washington St | Walpole | r 1825 |
| WLP.12 | Boyden House | 1876 Washington St | Walpole | c 1800 |
| WLP.55 | Fuller Tavern | 1885 Washington St | Walpole | 1807 |
| WLP.13 | South Walpole Methodist Episcopal Church | 1886 Washington St | Walpole | 1846 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.191 | NY, NH and Hartford Railroad Freight House | 1887 Washington St | Walpole | c 1915 |
| WLP.14 | Blake, J. House | 1890 Washington St | Walpole | r 1825 |
| WLP.16 | | 1896 Washington St | Walpole | r 1825 |
| WLP.192 | | 1915 Washington St | Walpole | 1953 |
| WLP.17 | Gay, Timothy Grist Mill | 1916 Washington St | Walpole | r 1825 |
| WLP.193 | Norfolk and Bristol Turnpike Toll House | 1928 Washington St | Walpole | r 1825 |
| WLP.194 | | 8 Water St | Walpole | c 1910 |
| WLP.195 | | 9 Water St | Walpole | c 1880 |
| WLP.196 | | 16 Water St | Walpole | r 1890 |
| WLP.197 | | 16 Water St | Walpole | c 1900 |
| WLP.198 | | 25 Water St | Walpole | c 1890 |
| WLP.199 | | 26 Water St | Walpole | c 1890 |
| WLP.200 | | 30 Water St | Walpole | r 1850 |
| WLP.201 | | 32 Water St | Walpole | 1953 |
| WLP.202 | | 33 Water St | Walpole | r 1850 |
| WLP.203 | South Walpole Old Methodist Church Parsonage | 36 Water St | Walpole | c 1870 |
| WLP.204 | | 40 Water St | Walpole | r 1850 |
| WLP.205 | | 42 Water St | Walpole | c 1900 |
| WLP.206 | | 44 Water St | Walpole | c 1890 |
| WLP.207 | | 45 Water St | Walpole | r 1850 |
| WLP.208 | | 54 Water St | Walpole | c 1890 |
| WLP.57 | Walpole Schoolhouse | West St | Walpole | c 1820 |
| WLP.64 | Union Station | West St | Walpole | 1893 |
| WLP.807 | Plain Street Cemetery | West St | Walpole | 1741 |
| WLP.919 | Norfolk County Railroad Bridge over West Street | West St | Walpole | 1910 |
| WLP.920 | Norfolk County Railroad Bridge over West Street | West St | Walpole | 1910 |
| WLP.932 | West Street Bridge over Conrail | West St | Walpole | 1929 |
| WLP.933 | West Street Bridge over Conrail | West St | Walpole | 1932 |
| WLP.322 | Odd Fellows Hall - Reliance Lodge No. 137 | 1-5 West St | Walpole | 1934 |
| WLP.323 | | 7-9 West St | Walpole | c 1971 |
| WLP.324 | Spear's Market | 15-17 West St | Walpole | r 1880 |
| WLP.8 | Lewis, Dea. Willard House | 33 West St | Walpole | c 1826 |
| WLP.156 | Morse, Jotham House | 397 West St | Walpole | c 1800 |
| WLP.157 | Morse, Jotham House | 399 West St | Walpole | 1795 |
| WLP.18 | Boyden, O. House | 1 Willow St | Walpole | c 1840 |
| WLP.209 | | 5 Willow St | Walpole | 1950 |
| WLP.210 | | 6 Willow St | Walpole | 1955 |
| WLP.63 | Boyden House | 453 Winter St | Walpole | c 1720 |

| Inv. No. | Property Name | Street | Town | Year |
|---|---|---|---|---|
| WLP.165 | Union Congregational Church, Old | 5 Wolcott Ave | Walpole | 1883 |
| WLP.293 | | 9 Wolcott Ave | Walpole | c 1905 |
| WLP.294 | | 12 Wolcott Ave | Walpole | c 1910 |
| WLP.295 | | 15 Wolcott Ave | Walpole | c 1920 |
| WLP.296 | | 16 Wolcott Ave | Walpole | c 1936 |
| WLP.297 | | 20 Wolcott Ave | Walpole | c 1910 |
| WLP.298 | | 27 Wolcott Ave | Walpole | c 1910 |
| WLP.299 | | 28 Wolcott Ave | Walpole | c 1910 |
| WLP.300 | | 31 Wolcott Ave | Walpole | c 1905 |
| WLP.301 | | 35 Wolcott Ave | Walpole | c 1905 |

# APPENDIX E

**IPaC** **U.S. Fish & Wildlife Service**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Norfolk County, Massachusetts




## Local office

New England Ecological Services Field Office

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

http://www.fws.gov/newengland

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.

5. Click REQUEST SPECIES LIST.

Listed species[1] are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

## Mammals

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

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.



## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

| NAME | SEASON(S) |
|---|---|
| American Bittern Botaurus lentiginosus<br>https://ecos.fws.gov/ecp/species/6582 | On Land: Breeding |
| American Oystercatcher Haematopus palliatus<br>https://ecos.fws.gov/ecp/species/8935 | On Land: Breeding |
| Bald Eagle Haliaeetus leucocephalus<br>https://ecos.fws.gov/ecp/species/1626 | On Land: Year-round |
| Black-billed Cuckoo Coccyzus erythropthalmus<br>https://ecos.fws.gov/ecp/species/9399 | On Land: Breeding |

| | |
|---|---|
| Blue-winged Warbler Vermivora pinus | On Land: Breeding |
| Canada Warbler Wilsonia canadensis | On Land: Breeding |
| Fox Sparrow Passerella iliaca | On Land: Wintering |
| Hudsonian Godwit Limosa haemastica | At Sea: Migrating |
| Least Bittern Ixobrychus exilis https://ecos.fws.gov/ecp/species/6175 | On Land: Breeding |
| Olive-sided Flycatcher Contopus cooperi https://ecos.fws.gov/ecp/species/3914 | On Land: Breeding |
| Peregrine Falcon Falco peregrinus https://ecos.fws.gov/ecp/species/8831 | On Land: Wintering |
| Pied-billed Grebe Podilymbus podiceps | On Land: Year-round |
| Prairie Warbler Dendroica discolor | On Land: Breeding |
| Purple Sandpiper Calidris maritima | On Land: Wintering |
| Short-eared Owl Asio flammeus https://ecos.fws.gov/ecp/species/9295 | On Land: Wintering |
| Snowy Egret Egretta thula | On Land: Breeding |
| Upland Sandpiper Bartramia longicauda https://ecos.fws.gov/ecp/species/9294 | On Land: Breeding |
| Willow Flycatcher Empidonax traillii https://ecos.fws.gov/ecp/species/3482 | On Land: Breeding |
| Wood Thrush Hylocichla mustelina | On Land: Breeding |
| Worm Eating Warbler Helmitheros vermivorum | On Land: Breeding |



**What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?**

**Landbirds:**

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

**Atlantic Seabirds:**

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

**Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?**

**Landbirds:**

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

**Atlantic Seabirds:**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.



# Facilities

## Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

## Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

# Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND
PEM1E

A full description for each wetland code can be found at the National Wetlands Inventory website: https://ecos.fws.gov/ipac/wetlands/decoder

**Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

**Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.