**DES Waste Management Division**
**29 Hazen Drive; PO Box 95**
**Concord, NH 03302-0095**

# 2015 ANNUAL SUMMARY REPORT
# Coakley Landfill
# Breakfast Hill Road
# North Hampton, NH

**NHDES Site #: 198712001**
**Project Type: CERCLA**
**Project Number: 431**
**EPA ID# NHD064424153**

**Prepared For:**
**Coakley Landfill Group**
**1 Junkins Avenue**
**Portsmouth, NH 03801**
**Phone Number: (603) 610-7215**
**RP Contact Name: Mr. Peter Britz**
**plbritz@cityofportsmouth.com**


**Prepared By:**
**CES, Inc.**
**640 Main Street**
**Lewiston, ME 04240**
**Phone Number: (207) 795-6009**
**Contact Names: Michael A. Deyling, PG and Suzanne L. Yerina, CG**
**Contact Email: mdeyling@ces-maine.com**

**Date of Report: February 17, 2016**

# Groundwater Monitoring Report Cover Sheet

**Site Name:** **Coakley Landfill**

**Town:** **North Hampton**

**Permit #:** **GWP-198712001-N-002**

**Type of Submittal (*Check all that apply*)**

☒ **Periodic Summary Report (*year*):** 2015 Annual Report

☐ **Data Submittal (*month and year per Condition #7 of Permit*):**

**Check each box where the answer to any of the following questions is "YES"**

**Sampling Results**

☒ **During the most recent monitoring event, were any new compounds detected at any sampling point?**

**Well/Compound:** 339BHR (chloroform and arsenic). Chloroform was not detected in on-site monitoring wells. Arsenic at 339BHR is below the regulatory standards.

☒ **Are there any detections of contamination in drinking water that is untreated prior to use?**

**Well/Compound:** R-3/339BHR (1,4-dioxane and manganese) – concentrations are consistent with historical results at both wells.

☐ **Do compounds detected exceed AGQS?** No

☐ **Was free product detected for the first time in any monitoring point?**

☐ **Surface Water (*visible sheen*)**

☐ **Groundwater (*1/8" or greater thickness*)**

**Location/Thickness:**

**Contaminant Trends**

☐ **Do sampling results show an increasing concentration trend in any source area monitoring well?**

**Well/Compound:**

☐ **Do sampling results indicate an AGQS violation in any of the GMZ boundary wells?**

**Well/Compound:**

**Recommendations**

☐ **Does the report include any recommendations requiring DES action? (*Do not check this box if the only recommendation is to continue with existing permit conditions.*)**

**This form is to be completed for groundwater monitoring data submittals and periodic summary reports submitted to the New Hampshire Department of Environmental Services Waste Management Division.**

SENSIBLE SOLUTIONS

CES INC

# DRAFT FOR AGENCY REVIEW
# 2015 ANNUAL SUMMARY REPORT
# GROUNDWATER MANAGEMENT PERMIT

## Coakley Landfill
**North Hampton, New Hampshire**
**NHDES Site #198712001**

**FOR**

## Coakley Landfill Group
1 Junkins Avenue
Portsmouth, NH 03801

**February 17, 2016**
**JN: 10424.005**


**Report Prepared By:**
CES, Inc.
640 Main Street
Lewiston, Maine 04240
207.795-6009



**Corporate Office**
465 South Main Street
PO Box 639
Brewer, Maine 04412
207.989.4824

www.ces-maine.com


Engineers ◆ Environmental Scientists ◆ Surveyors

February 17, 2016

Groundwater Management Permits Coordinator
New Hampshire Department of Environmental Services
29 Hazen Drive
Concord, NH 03302-0095

**Re: 2015 ANNUAL SUMMARY REPORT**
**Coakley Landfill – Breakfast Hill Road, North Hampton, New Hampshire**

On behalf of the Coakley Landfill Group (CLG), CES, Inc. (CES) is hereby submitting the 2015 Annual Summary Report describing long-term environmental monitoring activities completed at the closed Coakley Landfill (the Site) in 2015. This report has been prepared to meet the requirements of the August 2015 Sampling and Analysis Plan prepared by CES, which incorporated requirements contained in the New Hampshire Department of Environmental Services (NHDES) Groundwater Management Permit (GMP), GWP-198712001-N-002 and revised Cleanup Levels established in the Fifth Explanation of Significant Differences issued by USEPA on August 4, 2015.

Environmental monitoring results for the 2015 sampling event and trends in groundwater quality parameters are consistent with the conceptual site model, overall trends in groundwater quality, and overall findings discussed in the October 2013 Groundwater Management Permit Renewal Application prepared by Summit Environmental Consultants (a CES, Inc. company). In general, the compounds and locations that exceeded the regulatory thresholds during the 2015 long-term monitoring events are similar to historical monitoring events. Compounds reported at concentrations equaling or exceeding regulatory thresholds were limited to arsenic, manganese, and 1,4-dioxane. Note that benzene exceedances have occurred at MW-8 and GZ-105 as early as 2000. However, consistent with decreasing trends in benzene concentrations at these locations, no benzene exceedances occurred at monitoring wells sampled in September 2015.

Groundwater quality is stable or improving at most locations, and 1,4-dioxane concentrations reported in off-site water supply wells R-3 and 339BHR continue to be stable and below regulatory thresholds. Consistent with past events, 1,4-dioxane was not detected in water supply wells 415BHR and 346BHR. The concentration of manganese at 339BHR, which was reported slightly above the EPA Cleanup Level and below the NHDES Ambient Groundwater Quality Standard, continues to be consistent with what is considered to be typical of background bedrock water quality in the area, as discussed in previous site groundwater quality reports and assessments. Additional parameters sampled at all four water supply wells are below regulatory thresholds.

This is the first annual report prepared in accordance with the August 2015 Sampling and Analysis Plan (SAP). This report was developed based on requirements contained in the SAP and comments from the agencies on the 2014 Annual Report.



Six Locations in Maine | www.ces-maine.com
640 Main Street
Lewiston, Maine 04240
T 207.795.6009
F 207.795.6128

Please contact either of the undersigned with any questions or comments regarding this report.
Sincerely,

CES, Inc.

Suzanne Yerina, C.G.
Project Geologist

Michael A. Deyling, P.G.
Senior Project Geologist

SLY/MAD/jna
Attachments

cc: Peter Britz, Coakley Landfill Group
Gerardo Millan-Ramos, EPA

# 2015 ANNUAL SUMMARY REPORT
# GROUNDWATER MANAGEMENT PERMIT
# COAKLEY LANDFILL – NORTH HAMPTON, NEW HAMPSHIRE
# NHDES SITE #198712001

## TABLE OF CONTENTS

## LIST OF FIGURES



## LIST OF TABLES



## TIME SERIES PLOTS

## LIST OF APPENDICES

# 2015 ANNUAL SUMMARY REPORT
# GROUNDWATER MANAGEMENT PERMIT
# COAKLEY LANDFILL – NORTH HAMPTON, NEW HAMPSHIRE
# NHDES SITE #198712001

## SECTION 1 | INTRODUCTION

On behalf of the Coakley Landfill Group (CLG), CES, Inc. (CES) conducted the 2015 semi-annual environmental monitoring event at the closed Coakley Landfill located in North Hampton, New Hampshire. CES conducted the monitoring event in accordance with the August 2015 Sampling and Analysis Plan (SAP) prepared by CES, which incorporates by reference the New Hampshire Department of Environmental Services (NHDES) Hazardous Waste Remediation Bureau Master Quality Assurance Project Plan (HWRB Master QAPP) Revision 1 dated February 2014.

CES performed the field sampling work and reporting, Eastern Analytical, Inc. (EAI) of Concord, New Hampshire performed the laboratory analyses and Kestrel Environmental Technologies of Freeport, Maine completed the Tier 1 Plus Data Validation.

### 1.1 Background

The closed Coakley Landfill Site consists of approximately 107 acres of land located within the Towns of Greenland and North Hampton, New Hampshire. The actual landfill area is located in the southern portion of the Site and covers approximately 27 acres of land located in North Hampton, as shown on the Site Location Map (Figure 1) and Site Plan (Figure 2). The landfill area is located approximately 700 feet to the west of Lafayette Road (US Route 1), 2,500 feet to the south of Breakfast Hill Road, and 3,800 feet to the north of North Road. The Boston and Maine Railroad rail corridor is situated along the western boundary of the Site. The landfill borders farmland, undeveloped forests and wetlands to the north and west, and commercial and residential properties to the east and south.

Environmental monitoring at the Coakley Landfill is separated into two areas, or Operable Units. Operable Unit 1 (OU-1) includes the area in the immediate vicinity of the landfill where source control actions were completed to reduce impacts to surface water and groundwater quality and eliminate threats possibly posed by direct contact with or ingestion of contaminated media at the Site. Operable Unit 2 (OU-2) includes the area beyond landfill where the objective is to monitor the natural attenuation of water quality impacts and minimize exposure to potential receptors caused by groundwater and surface water migrating away from the Site.

Long-term monitoring at the Coakley Landfill has been ongoing since the remedial actions were completed in 1998. The long-term monitoring of groundwater, surface water, and sediment quality following landfill capping and site closure was initially conducted in accordance with the 1999 Environmental Monitoring Plan (Aries, 1999). Over time, the scope of environmental monitoring activities has been modified, and sediment and water quality monitoring is currently performed in accordance with the agency-approved August 2015 SAP (CES, 2015a)

The New Hampshire Department of Environmental Services (NHDES) issued a Groundwater Management Permit (GMP) GWP-198712001-N-001 for the Coakley Landfill site for a five-year term on June 19, 2008. The GMP includes a provision for the long-term monitoring of groundwater and created a Groundwater Management Zone (GMZ) that restricts property owners from extracting groundwater for potable use. NHDES issued a GMP renewal for a five-year term on January 7, 2014. The NHDES GMP ("the 2014 GMP") requires that groundwater in the GMZ be monitored at specific locations, that the results be compared to NHDES Ambient Groundwater Quality Standards (AGQSs), some of which are different than EPA's site-specific standards (Interim Cleanup Levels [ICLs] and Primary Drinking Water Standard Maximum Contaminant Levels [MCLs]). This report considers both EPA-established ICLs/MCLs and NHDES AGQSs.

Interim Cleanup Levels (ICLs) for contaminants of concern were established in the September 30, 1994 ROD for groundwater and subsequently modified in several Explanation of Significant Differences (ESDs). The Fifth ESD issued by USEPA in August 2015 formally changed the ICLs to Cleanup Levels (CLs) and established a CL for 1,4-dioxane.

Two water supply wells (R-3 and 339BHR) were sampled in February and September 2015 in accordance with the 2014 GMP (a semiannual requirement which was incorporated into the August 2015 SAP) for analysis of total arsenic, total manganese, volatile organic compounds (VOCs), and 1,4-dioxane using a low level detection limit methodology (Method 8260B SIM). VOC and 1,4-dioxane results for February and September 2015 were consistent with previous sampling events. Manganese exceeded the EPA CL of 0.3 mg/L at 339BHR during the February (0.36 mg/L) and September 2015 (0.31 mg/L) sampling events, but was well below the AGQS (0.84 mg/L). These manganese concentrations are considered to be typical of background bedrock water quality in the area. No other CL/AGQS exceedances occurred at R-3 and 339BHR. Results for the February 2015 sampling event were previously transmitted to the agencies on May 15, 2015 and a copy of the report is included as Appendix A. Results of the September 2015 event are described in this report.

This report provides an overview of the sample collection and analyses conducted for the September 2015 Annual monitoring event. The information presented in this report includes: sampling locations, sample collection protocols, quality assurance/quality control (QA/QC) procedures and results, summary of the analytical results, summary of CL/AGQS exceedances, discussion of historical trends, and conclusions and recommendations.

This report was developed based on requirements contained in the SAP and comments from the agencies on the 2014 Annual Report.

The constituents of concern (COCs) and associated NHDES-established AGQS and EPA-established CLs are summarized in the table below; status updates for the COCs are provided in Section 5.5.

| Constituents of Concern and Associated Cleanup Criteria | | | |
|---|---|---|---|
| **PARAMETER** | **Chemical Abstract Service Registry Number (CAS No.)** | **NHDES Ambient Groundwater Quality Standard (AGQSs)** | **EPA Cleanup Levels (CLs)** |
| Benzene | 71-43-2 | 5 ug/L | 5 ug/L |
| Chlorobenzene (Monochlorobenzene) | 108-90-7 | 100 ug/L | 100 ug/L |
| Tetrachloroethene (PCE, Tetrachloroethylene) | 127-18-4 | 5 ug/L | 3.5 ug/L |
| Tetrahydrofuran (THF) | 109-99-9 | 600 ug/L | 154 ug/L |
| 1,2-Dichloropropane | 78-87-5 | 5 ug/L | 5 ug/L |
| 2-Butanone (MEK, Methyl Ethyl Ketone) | 78-93-3 | 4,000 ug/L | 200 ug/L |
| Diethyl phthalate [1] | 84-66-2 | -- | 2,800 ug/L |
| Trans-1,2-dichloroethene ( trans DCE) | 156-60-5 | 100 ug/L | 100 ug/L |
| Phenol [1] | 108-95-2 | 4,000 ug/L | 280 ug/L |
| 1,4-dioxane | 123-91-1 | 3 ug/L | 3 ug/L |
| Tertiary butyl alcohol (TBA, tert-butyl alcohol) | 75-65-0 | 40 ug/L | -- |
| Antimony | 7440-36-0 | 0.006 mg/L | 0.006 mg/L |
| Arsenic | 7440-38-2 | 0.010 mg/L | 0.010 mg/L |
| Beryllium | 7440-41-7 | 0.004 mg/L | 0.004 mg/L |
| Chromium | 7440-47-3 | 0.100 mg/L | 0.05 mg/L |
| Lead | 7439-92-1 | 0.015 mg/L | 0.015 mg/L |
| Manganese | 7439-96-5 | 0.84 mg/L | 0.3 mg/L |
| Nickel | 7440-02-0 | 0.1 mg/L | 0.1 mg/L |
| Vanadium | 7440-62-2 | -- | 0.26 mg/L |

**Notes:**
ug/L = micrograms per liter (part per billion)
mg/L = milligrams per liter (parts per million)
1. SVOCs. In May 1998 and April 1999, groundwater samples were submitted for analysis of semi-volatile organic compounds (SVOCs) and no exceedances were reported; therefore, SVOCs were removed from the long-term monitoring plan after April 1999.

## SECTION 2 | SAMPLE COLLECTION

The August 2015 SAP requires annual sampling and analysis in at thirty-two groundwater monitoring wells, five off-site water supply wells, three surface water sampling locations, two sediment sampling locations, and one leachate sampling location. In addition, depth to groundwater level measurements are required at eight additional monitoring wells during the annual sampling event.

Tables summarizing the sample collection locations, sampling methods, and laboratory analyses are included in Appendix B (SAP Tables 3-3 through 3-8). Sampling locations are identified on Figure 2.

The Annual environmental monitoring event, typically completed in August, was completed between September 15 and 18, 2015 following approval of the August 2015 SAP by EPA/NHDES. The EPA and NHDES were given advance notice of the sampling event and no agency representatives were present during the sampling.

A Quality Assurance (QA) Field Audit was completed by Mr. Steve Marcotte with Sevee & Maher Engineers, Inc. in accordance with Section 4.4 of the 2015 SAP. The field audit included the supervision of field activities completed on the first two days of the annual monitoring event (September 14 and 15, 2015). Minor deviations from the SOPs were observed by the auditor and immediately discussed with field sampling personnel. Deviations were corrected in the field. The observed deviations did not affect data quality.

## 2.1 Groundwater Level Monitoring

Prior to the collection of groundwater samples, CES measured depth to groundwater with an electronic water level meter capable of measuring in 0.01 foot increments. Depth to ground water measurement field sheets and a table summarizing depth to water level measurements and corresponding water level elevation data for the monitoring event are presented in Appendix C. Historical groundwater elevation measurements are summarized in Table 1.

## 2.2 Well Depth Monitoring

The August 2015 SAP requires measurement of well depths during the sampling event prior to EPA 5-Year Reviews. The next EPA 5-Year Review will be completed in 2016. Well depths were required to be measured during the 2015 sampling event to determine the presence of silt, sand, or other obstructions that may impede or compromise use of the well as a sampling location.

Following the measurement of depth to water, CES measured well depth with a weighted electronic water level meter capable of measuring in 0.01 foot increments. Depth to ground water measurement field sheets and a table summarizing depth to water level measurements and corresponding water level elevation data for the monitoring event are presented in Appendix C. Current and historical well depth measurements are summarized in Table 2.

Of the forty wells that had well depths measured, seven monitoring wells (MW-6, MW-9, MW-10, FPC-8A, FPC-9A, FPC-11A, GZ-123) reported that greater than 10% of the screen interval may be obstructed based on historically reported elevations of the screen interval. However, virtually no change in well depth measurements have occurred since the previous well depth measurements in 2012, indicating that monitoring well conditions are stable. No evidence was observed in 2015 water quality monitoring results that indicate water quality analyses are being affected by sediment in the wells. As a result, we do not recommend any action to redevelop wells at this time.

## 2.3 Well Integrity Inspection

CES completed a well integrity inspection during the September 2015 sampling event and copies of the well integrity field sheets are included in Appendix B. CES notified CLG of the results of the well integrity inspection in an email dated October 15, 2014. The following corrective actions were identified.

- The road box cover at FPC-11C was observed to be cracked. CES obtained a replacement cover and installed it on November 16, 2015.

- No other well repairs were made in 2015.

## 2.4 Field Parameter Monitoring

Field parameter water quality meters were calibrated in accordance with SOP-8 Calibration of YSI and Hach Field Instruments included in the August 2015 SAP. CES measured field parameters including pH, Oxidation Reduction Potential (ORP), Temperature, Specific Conductance, and Dissolved Oxygen using a YSI-600XL water quality meter with a 250 milliliter flow-through cell and turbidity using a Hach 2100Q turbidity meter. Meters were calibrated in the office prior to using at the Site, every day prior to sampling, and a post-sampling check was completed at the end of every sampling day.

Equipment calibration logs are included in Appendix C. Field parameter measurements were recorded on field sheets and final readings were incorporated into Table 3 (OU-1 and OU-2 Groundwater Monitoring Wells), Table 4 (Off-Site Water Supply Wells), Table 5 (Surface Water), and Table 7 (Leachate).

## 2.5 Groundwater Sample Collection

The August 2015 SAP includes the collection of groundwater samples from thirty-two (32) monitoring wells located in OU-1 and OU-2, and five (5) off-site water supply wells. Note that while thirty-two (32) monitoring wells are identified in the SAP as groundwater sampling locations, FPC-5A was not sampled due to well integrity issues (discussed below) and according to conditions stated in the SAP (Appendix A, SAP Table 3-6).

CES collected groundwater samples from eleven (11) monitoring wells located in OU-1, twenty (20) monitoring wells in OU-2, and four (4) off-site water supply wells. The following deviations from the SAP groundwater sampling plan occurred during the September 2015 sampling event:

- Consistent with previous monitoring events, off-site water supply well R-5 was not sampled because the home is not occupied and the water system is out of service.

- Well FPC-5A was not sampled due to well integrity issues and according to conditions stated in the SAP (Appendix A, Table 3-6). As indicated to the agencies in 2015, CLG was unable to obtain an access agreement to replace FPC-5A prior to the September 2015 sampling event. The land is owned by Mr. Steven Sewall and the easement does not expressly give right to the easement holder to install a replacement well. The well will be replaced once permission is granted from the land owner.

Groundwater samples were collected in accordance with the site-specific Standard Operating Procedures (SOPs) listed in the August 2015 SAP. The sampling methodology used at each sampling location is listed in Appendix B (SAP Tables 3-5 through 3-7). Methodologies used for collection of groundwater samples are summarized below:

- Twenty-eight (28) monitoring wells were sampled with a peristaltic pump using a low-flow sampling methodology (*SOP-4 Low Flow Sampling Using a Peristaltic Pump*);

- Three (3) monitoring wells (AE-1A, AE-1B, and MW-4) were sampled with a bailer (*SOP-3 Sampling with a Bailer*). *Note that this was done because the depth to water level at these wells exceeds the suction lift limit of a peristaltic pump*; and

- Four (4) off-site water supply wells were sampled in accordance with *SOP-7 Drinking Water Supply Well Sampling Procedures*.

In accordance with recommendations made in the 2014 Annual Report (CES, 2015), new sampling tubing was installed at the well which was interval sampled in September/October 2014 (FPC-11B). The new sample tubing was installed at FPC-11B at least 72-hours prior to sample collection. In accordance with the SAP, sample tubing consisted of 1/4-inch inner diameter 3/8-inch outer diameter low density polyethylene (LDPE) tubing fitted with Masterflex #15 & #16 silicon tubing at the surface. The LDPE tubing was firmly attached to well riser plug with zip ties. Tubing depth for other wells was previously determined and can be found in Table 3-3 of the SAP.

Groundwater samples were collected in accordance with site-specific SOPs, placed into laboratory-supplied sampling containers in the order specified in the SOPs, and packed in loose ice for transport under chain-of-custody protocol to EAI. EAI analyzed the samples for the list of parameters identified in Appendix B (SAP Tables 3-5 through 3-7). Copies of groundwater sample collection logs are included in Appendix C.

In the recent past, overburden and bedrock groundwater samples were submitted for total metals analysis, and samples from select locations were filtered at the time of sample collection and submitted for analysis of dissolved manganese and dissolved iron. As discussed in the SAP, this practice was modified beginning in 2014 to analyze for and report dissolved metal results (filtered samples) for overburden groundwater and total metals results (unfiltered samples) for bedrock groundwater.

Analytical laboratory results are presented in Table 3 (OU-1 and OU-2 Groundwater Monitoring Wells) and Table 4 (Off-Site Water Supply Wells).

## 2.6 Surface Water and Sediment Sample Collection

On September 16, 2015, sediment samples were collected at SED-4 and SED-5, and surface water samples were collected at SW-5 and SW-103. In addition duplicate samples were collected a SW-5 and SED-5 for quality control purposes. Similar to previous Annual monitoring events, a sample was not collected at surface water sampling location SW-4 due to insufficient water. Samples were collected in accordance with *SOP-6 Surface Water, Leachate and Sediment Sampling Procedures*.

A Sampling Worksheet summarizing field parameter measurements, along with photographic documentation of the conditions at SW-4/SED-4, SW-5/SED-5, and SW-103 is provided in Appendix C.

Sediment and surface water samples were collected in accordance with site-specific SOPs, placed into laboratory-supplied containers in the order specified in the SOPs, and

packed in loose ice for transport under chain-of-custody protocol to EAI. EAI analyzed the samples for the list of parameters contained in Appendix B (SAP, Table 3-8).

A description of the conditions at the surface water and sediment sampling locations is provided below (also refer to photographs in Appendix C):

SW-4/SED-4

SW-4/SED-4 is located in a broad and flat pit-and-mound forested wetland approximately 500 feet west of the railroad. The soils at this location are composed predominately of leaf litter and twigs over poorly decomposed organic sediments. No evidence of channelization or the deposition of mineral sediment was observed in the vicinity of SW-4/SED-4. The leaf litter was removed and the underlying organic soils were sampled. A surface water sample was not collected due to insufficient water.

SW-5/SED-5

SW-5/SED-5 is located roughly between the northwestern boundary of the landfill (i.e., leachate seep L-1) and the railroad. The area between the landfill and railroad is wetland with very thick phragmites and grasses. The ground in the area of SW-5/SED is covered by a thick layer of partially decomposed phragmites. Channelization or ponded water was not observed in the area where SW-5/SED-5.

An area of ponded water along the margins of the phragmites stand was observed approximately 50 feet from the rail line in the vicinity of SW-5/SED-5, at the location identified on Figure 2 as SED-5/SW-5 (2015) – this is the same location were SW-5/SED-5 were collected in the 2014 Annual sampling event. The leaf litter was removed from the edge of the ponded water area where three to five-inches of organic material were observed above gray clay. There was no visually apparent evidence of mineral sediment deposition at this location. The samples were composed predominately of organic materials; however, some of the underlying clay was incorporated into the samples. Samples SW-5 and SED-5 were collected from this location.

SW-103

SW-103 is located in a dense phragmites stand where no evidence of channelization or the deposition of mineral sediment was observed. SW-103 had not been sampled since 2011 due to insufficient water. A large area of ponded water was observed in the vicinity of SW-103 and sampled in September 2015. It appears that surface water sampling station SW-103 was likely in this ponded area prior to 2011; however, previous sampling teams had apparently been unable to find the pool due to dense vegetation. SW-103 was clearly flagged and staked in 2015 so that this point will be easier to find in subsequent years.

Analytical laboratory results are presented in Table 5 (Surface Water – SW-5 and SW-103) and Table 6 (Sediment SED-4 and SED-5).

## 2.7 Leachate Seep Sample Collection

On September 17, 2015, CES collected a sample at leachate sampling point L-1. It is important to note that the landfill does not have a leachate collection system, and past sample data show the "leachate" samples collected at L-1 are more representative of shallow overburden groundwater discharging to an impounded wetland area on the northwestern margin of the landfill. Samples were collected in accordance with *SOP-6 Surface Water, Leachate and Sediment Sampling Procedures*.

A Sampling Worksheet summarizing field parameter measurements, along with photographic documentation of the conditions at L-1 is provided in Appendix C.

The leachate sample was collected in accordance with site-specific SOPs, placed into laboratory-supplied containers in the order specified in the SOPs, and packed in loose ice for transport under chain-of-custody protocol to EAI. EAI analyzed the samples for the list of parameters contained in Appendix B (SAP, Table 3-8).

Analytical laboratory results are presented in Table 7 (Leachate – L-1).

## 2.8 Quality Assurance / Quality Control (QA/QC) Samples

The Quality Assurance / Quality Control (QA/QC) sampling requirements are summarized in Appendix B (SAP Table 4-4). QA/QC samples collected during the September 2015 sampling event are summarized below.

- Field Duplicate samples were collected at three monitoring wells (MW-4, AE-3A, and GZ-105), water supply well R-3, surface water sampling location SW-5, sediment sampling location SED-5, and leachate sampling location L-1.
- Additional aliquots for Matrix Spike and Matrix Spike Duplicate analyses were collected at two groundwater monitoring wells (MW-8 and AE-3A), at surface water sampling location SW-5, and leachate sampling location L-1.
- Trip Blanks for volatile organic compounds (VOCs) and/or low-level 1,4-dioxane were included in each of the coolers submitted to EAI.
- A Field Blank (water used for final decontamination rinse) was submitted for analysis of VOCs (8260B and 524.2), target analyte list (TAL) total metals, and 1,4-dioxane (8260B SIM).
- Five Equipment (Rinsate) Blanks were collected during the September 2015 sampling event:
    - An electronic water level meter Equipment Blank was collected after well MW-8 was sampled and the water level meter was decontaminated.
    - The brass water supply well sampling apparatus Equipment Blank was collected prior to sampling water supply wells.
    - The sediment Equipment Blank was collected after all sediment samples were collected and the sediment sampling equipment (stainless steel bowl and spoon) was decontaminated.

- An Equipment Blank was collected for the single-use in-line 0.45 micron filter used to collect samples for analysis of dissolved metals at overburden monitoring wells sampled with a peristaltic pump.

- An Equipment Blank was collected for the single-use 0.45 micron filter/syringe setup used to collect samples for analysis of dissolved metals at surface water sampling locations and at overburden monitoring wells sampled using a bailer.

Results of QA/QC samples are discussed in Section 3.1 of this report.

## SECTION 3 | QUALITY ASSURANCE/QUALITY CONTROL RESULTS

A component of the SAP is the implementation of a QA/QC program, including both field and office elements. Field QA/QC activities were conducted to verify that sample collection, handling, and storage methods are adequate to ensure sample integrity. Office QA/QC activities focus on the data evaluation to assess whether the laboratory data are complete and representative of site conditions.

The data quality objectives and associated validation requirements are specified in the SAP and include:

- Review of field equipment calibration data and beginning and end of the day checks;

- Review of raw data and field notes for outliers or inconsistencies that may indicate a problem with the equipment or sampling procedure;

- Review of the chain of custody forms for correctness and completeness;

- Review of the chain of custody forms to ensure that each cooler contains temperature blanks and the proper trip blanks for both VOCs and 1,4-Dioxane and to ensure that the correct sample handling protocols are followed;

- Review of field sampling worksheets to ensure that all field data and parameters were collected and documented correctly and accurately according to proper protocols;

- Review of relative percent difference (RPD) for duplicate samples to assess whether the sampling methods produce reproducible results;

- Completion of a US EPA Region I Tier 1 Plus Data Validation to evaluate the laboratory reports for completeness, assess the results of QA/QC samples analyzed with field samples, confirm that all sample tests were performed within method holding times, and the qualification of laboratory data based on EPA guidelines for data validation listed in the SAP.

Results of the QA/QC activities are presented in Sections 3.1 and 3.2. Analytical laboratory reports are provided in Appendix D.

## 3.1 Field QA/QC Activities

### 3.1.1 Trip Blanks

Trip Blanks for volatile organic compounds (VOCs) and/or 1,4-dioxane were included in each of the coolers submitted to EAI containing samples for analysis of VOCs or 1,4-dioxane. A total of thirteen Trip Blanks were analyzed for VOCs, including five using EPA Method 8260B, two using EPA Method 524, and six were analyzed for 1,4-dioxane. EAI did not detect concentrations of VOCs and/or 1,4-dioxane at or above the laboratory reporting limits in any Trip Blanks submitted during the September 2015 sampling event.

### 3.1.2 Equipment Blanks and Field Blanks

CES collected one Field Blank and five Equipment Blanks for analysis of parameters identified in Appendix B (SAP Table 4-4). Refer to Section 3.2.3 (Tier 1 Plus Data Validation) for a discussion of Equipment and Field Blank results.

### 3.1.3 Field Sampling Data Review

Field sampling sheets included in Appendix C were reviewed for completeness and adherence to sampling SOPs included in the SAP. Field sampling data show that objectives were met at sampling points.

### 3.1.4 Other Field QA/QC Issues

There were Field QA/QA issues identified during completion of the September 2015 sampling event.

## 3.2 Office QA/QC activities

Office QA/QC activities, as required by the SAP, include verification of chain-of-custody protocols and sample holding times, verification that all field and laboratory analyses were completed, and completion of a Tier I Plus data validation of the laboratory reports in accordance with the EPA's Region I Data Validation Guidelines.

The two analytical laboratory reports associated with the September 2015 sampling event are provided in Appendix D.

### 3.2.1 Chain-of-Custody Forms

CES and Kestrel reviewed the chain-of-custody forms for completeness and/or lapses in custody. The forms were found to be complete and no lapses in chain-of-custody protocol were identified, with the following exception:

- Temperature was only measured in one cooler when multiple coolers were received at the same time by the lab. The temperatures for the seven coolers in data package 148117 were all reported as 4.9 degrees Celsius and 2.3 degrees Celsius for all three coolers in data package 148188.

Corrective Action

Prior to the next sampling event, CES will notify EAI to record the temperature blank temperature upon sample receipt of each individual cooler and that the temperature for each cooler must be documented on the chain of custody associated with each cooler.

### 3.2.2 Omitted Field and Laboratory Analyses

CES reviewed field sampling sheets and EAI laboratory reports and found that the required field parameters were collected and the required laboratory analyses for each of the samples collected were completed, with no exceptions. It should be noted that, although not required by the 2015 SAP, due to sampler error samples from AE-4A and AE-4B were submitted analysis of 1,4-dioxane using a low level detection limit methodology (Method 8260B SIM). 1,4-dioxane was reported as Not Detected above the reporting limit (< 0.25 ug/L) at AE-4A and AE-4B.

### 3.2.3 Tier I Data Validation

Kestrel Environmental Technologies, Inc. (Kestrel) of Freeport, Maine, performed a Tier I Plus validation of the EAI laboratory reports under contract to CES and in accordance with the *EPA Region I Environmental Data Review Supplement for Regional Data Review Elements and Superfund Specific Guidance/Procedures* (EPA, 2013), *National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, 2014a), and *National Functional Guidelines for Superfund Inorganic Methods Data Review* (EPA, 2014b).

Kestrel evaluated the laboratory reports for completeness, assessed the results of QA/QC samples analyzed with field samples, and verified that all sample tests were performed within method holding times. The Tier I Data Validation summary report is provided in Appendix E.

A summary of the finding presented in Kestrel's Data Evaluation Report (Appendix E) is provided below. The laboratory reports were complete, and the data was deemed acceptable for its intended purpose. The following data qualifications were applied based on data validation results:

- Results for certain metals at individual wells were qualified based on matrix spike /matrix spike duplicate (MS/MSD) non-compliance.
- Acetone and vinyl acetate results for certain samples were qualified due to laboratory control sample/laboratory control sample duplicate (LCS/LCSD) non-compliance.
- Arsenic and nickel results for MW-4 were qualified due to non-compliance with field duplicate acceptance criteria.
- All positive sample results for the sediment samples are qualified as estimated (J) and non-detected results are qualified as non-detected estimated (UJ) due to low total solids content in the samples.
- The vanadium (V) result for sample GW-FPC-11B is qualified as estimated (J+) due to the potential high bias indicated by the continuing calibration curve percent difference (%D) results.

- The non-detected (U) results for 1,4-dioxane analyzed by method 8260B with a reporting limit of 50 micorgrams per liter (ug/L) are qualified as non-detected estimated (UJ); the positive results are qualified as estimated (J). The relative response factor (RRF) is below the advisory guidance; however, recoveries of the continuing calibration verification standards and the LCS/LCSD samples indicate adequate accuracy to not reject the non-detected results. The low-level 1,4-dioxane results reported using method 8260B SIM results should be used when available.

None of the data collected for this project was qualified as rejected. Completeness is 100%.

There were 3,726 target analyte results reported for field blanks, primary, and field duplicate samples; 96.2% (2,824 results) are accepted without qualification. The majority of the sample results qualified due to non-compliant QC results were qualified due to the RRF for 1,4-dioxane by method 8260B (note that QC compliant Method 8260B SIM results for 1,4-dioxane are available for the majority of the locations sampled for VOC analysis) and low percent total solids for sediment samples.

Corrective Actions:
Issues with the results for vinyl acetate and 1,4-dioxane by 8260B are minor and no corrective actions are warranted. The issues did not affect the overall project objectives or conclusions and do not lead to data gaps.

Sediment sample results were qualified due to low percent solids (< 30%). The sediment samples were decanted during sample collection per SOP-6. No corrective actions are necessary. Refer to Section 4.4 for additional discussion of sediment sample results.

### 3.2.4 Field Duplicates

Primary and duplicate samples were collected at monitoring wells MW-4, AE-3A, GZ-105, off-site water supply well R-3, surface water sampling location SW-5, sediment sampling location SED-5, and leachate sampling location L-1 for the purposes of analytical data qualification (as previously discussed in Section 3.2.3) and for field sampling procedure QA/QC purposes, as discussed below. Table 8 presents the relative percent differences (RPDs) for parameter concentrations detected in the primary and duplicate samples. RPDs were compared to measurement performance criteria goals for aqueous duplicates (± 30% RPD) or non-aqueous duplicate (± 50%), as listed in SAP/QAPP. A summary of field duplicate results is provided below:

Aqueous Duplicates

- MW-4: All RPDs met the ± 30% measurement performance criteria goal, with the exception of dissolved arsenic (36%) and dissolved nickel (40%). Dissolved arsenic and nickel results for MW-4 were qualified as estimated (J) due to the precision results for the field duplicate.

- AE-3A: All RPDs met the ± 30% measurement performance criteria goal.

- GZ-105: RPDs met the ± 30% measurement performance criteria goal.

- R-3: All RPDs met the ± 30% measurement performance criteria goal;
- SW-5: All RPDs met the ± 30% measurement performance criteria goal; and
- L-1: All RPDs met the ± 30% measurement performance criteria goal, with the exception of toluene (67%). Toluene concentration was qualified with a (J).

Non-Aqueous Duplicate

- SED-5: RPDs met the ± 50% measurement performance criteria goal.

The consistency concentration values between primary and duplicate samples for the majority of the parameters analyzed shows that laboratory procedures and analyses, and sampling procedures, produced reproducible results.

### 3.2.5 Matrix Spike/Matrix Spike Duplicates

Matrix Spike and Matrix Spike Duplicate (MS/MSD) samples were collected at groundwater monitoring wells MW-8 and AE-3A, and at surface water sampling location SW-5. MS/MSD results were reviewed as part of the Tier 1 Plus data validation (Section 3.2.3).

Minor data qualifications for select metals were required. Refer to Appendix E for additional information.

## SECTION 4 | SUMMARY OF RESULTS

### 4.1 Groundwater Elevations

Groundwater potentiometric surface contour maps were developed for overburden groundwater (Figure 3) and bedrock groundwater (Figure 4) using data collected on September 14, 2015. Consistent with data generated during previous monitoring events, the following observations can be made from the overburden and bedrock groundwater potentiometric surface maps:

- Bedrock and overburden groundwater elevations in proximity to the landfill area support predominantly westward flow away from the landfill area toward a prominent north-northeast/south-southwest trending valley where the Little River and Berry's Brook are located.
- Bedrock and overburden groundwater elevations in the north-northeast/south-southwest trending valley west of the Site support the presence of a flow divide, with the direction of groundwater flow changing to north-northeast and south-southwest, along the trends of Berry's Brook and Little River, respectively.
- Water level elevations in overburden wells MW-4 and OP-5 along the eastern boundary of the landfill indicate an east/west shallow overburden flow divide is likely present proximal to the eastern boundary of the landfill.

Upward and downward hydraulic gradients are present at many of the well couplets monitored at the Site. However, the likelihood that the gradients lead to a significant component of vertical flow within the hydrogeological units is dependent on the hydrogeological conditions present at each location. In general, vertical gradients supporting a component of upward flow from bedrock to the till unit are present in proximity of railroad and the wetland area west of the landfill (headwaters of Little River and Berry's Brook). Whereas vertical gradients support a component of downward flow are present in areas to the east and west of the wetland area.

## 4.2 Groundwater Analytical Results

Analytical results for groundwater monitoring wells sampled during the September 2015 sampling event are provided in Table 3 (OU-1 and OU-2 Groundwater Monitoring Wells). Analytical results for off-site water supply wells sampled since January 2008 are provided in Table 4 (Off-site Water Supply Wells).

A historical summary of analytical results for contaminants of concern at groundwater monitoring points (monitoring wells and water supply wells) is provided in Table 10.

In general, parameter concentrations reported for samples collected during the September 2015 sampling event are similar to previous results. One new VOC detection was reported in Site groundwater. Chloroform was reported at off-site monitoring well 339BHR at a concentration of 0.7 ug/L. The concentration is well below the EPA/NHDES standard of 80 ug/L for total trihalomethanes (chloroform). Chloroform is not a constituent of concern at the Site and was not detected in other Site monitoring wells sampled in 2015. Chloroform is a chlorine by-product and is often associated with chlorination of a well. Therefore, the detection of chloroform is not judged to be associated with the Site. Refer to Section 5.3 for a discussion of groundwater regulatory threshold exceedances.

## 4.3 Surface Water Analytical Results

Surface water samples were collected at SW-5, and SW-103. Similar to previous Annual monitoring events, a sample at surface water sampling location SW-4 could not be collected due to insufficient water. Analytical results for SW-5 and SW-103 are summarized in Table 5. Results for samples collected in September 2015 indicate that water quality meets NHDES Surface Water Standards for acute and chronic exposure chronic standard scenarios, with the following exceptions:

- Copper at SW-5, slightly exceeded the chronic standard (0.0027 mg/L) in both the original and duplicate sample and exceeded the acute standard (0.0036 mg/L) in the original sample, but not the duplicate.

- Iron at SW-103 exceeded the chronic standard of 1 mg/L, which is consistent with historical data. Note that reporting detection limit (RDL) for zinc, silver and lead are consistent with RDLs specified in the SAP; however, they exceed the "default" NHDES Surface Water Standards for acute and/or chronic exposure scenarios (refer to Table 5).

## 4.4 Leachate Seep Analytical Results

A seep sample was collected at location L-1. Analytical results for L-1 are summarized in Table 7. Results for the sample collected in September 2015 indicate that water quality meets NHDES Surface Water Standards for acute and chronic exposure scenarios, with the exception of iron, which exceeded the chronic standard of 1 mg/L and ammonia, which exceeded the chronic standard of 5.91 mg/L. The seep sample collected at L-1 has historically exceeded the chronic standard for iron and ammonia.

## 4.5 Sediment Analytical Results

Sediment samples were collected at SED-4 and SED-5. A duplicate sample was also collected at SED-5. Analytical results for sediment samples and the National Oceanic and Atmospheric Administration Screening Quick Reference Tables (NOAA SQuiRT Tables) Threshold Effect Concentrations (TEC) standards for freshwater sediment applicable to this Site are summarized in Table 6.

As previously discussed in Section 3.2.3 and 3.2.4, all detections were qualified as estimated and all non-detects were qualified as having estimated detection limits due to low percent solids in accordance with EPA analytical data validation criteria (i.e., lower than 30% solids by dry weight). Historical data shown in Table 6 indicates that percent solids less than 30% have been commonly reported in the past at SED-4 and SED-5; however, sediment data was not qualified based on the percent solid criteria by the data validator in previous reports.

Sediment at SED-4 and SED-5 is primarily organic material which has a high capacity to retain water. A review of soil taxonomy literature indicates that the saturated water (non-free draining) content in organic soils (fibric or hemic soils) on the basis of percent of oven-dry weight ranges from 450% to 3,000%. On this basis, changes to sampling procedures (i.e., trying to decant more) are not warranted as the low percent solids (by dry weight) are inherent to the matrix itself.

TEC exceedances were reported at SED-4 for lead and mercury. TEC exceedances were reported at SED-5 and at the SED-5 (duplicate) for arsenic, copper, lead, mercury, and nickel. TEC exceedance for zinc was reported at the SED-5 (duplicate) only. A review of historical data for SED-4 and SED-5 indicates that the TEC exceedances reported for 2015 were similar to previous years. Note that historically, detection limits for cadmium and mercury were greater than TEC criteria.

The Coakley Landfill cap and surrounding areas within the perimeter fence have been stabilized for many years and no evidence of significant soil erosion has been observed in on-site inspection by CLG. On this basis, CES concludes that the landfill area (OU-1) is not actively contributing significant amounts of sediment to the wetland areas around the landfill.

# SECTION 5 | ANNUAL DATA SUMMARY AND DISCUSSION

The SAP requires water quality sampling data be evaluated to identify spatial and temporal trends and the status of remedial objectives. The following evaluations were completed to assess these objectives.

- Preparation of groundwater potentiometric surface contour maps for overburden and bedrock groundwater.

- Preparation of time series plots for constituents of concern at wells where concentrations currently or recently exceeded CLs or AGQSs.

- Trend analysis for constituents of concern at wells where concentrations currently or recently exceeded CLs or AGQSs.

- Preparation of figures showing the vertical and lateral distributions of constituents of concern present at the Site that exceed CLs or AGQSs.

## 5.1 Groundwater Potentiometric Surfaces

Overburden and bedrock groundwater flowing beyond the western margin of the landfill is affected by a flow divide located in a broad topographic saddle to the west of the landfill, which results in the bifurcation of groundwater flow into two distinct flow pathways along a prominent north-northeast/south-southwest trending valley. The north-northeastern flow pathway is situated within the watershed of Berry's Brook, which drains to the northeast across Breakfast Hill Road. The south-southwestern flow pathway is situated within the watershed of the Little River, which drains to the south-southwest across North Road.

In general, groundwater levels, flow direction, and hydraulic gradients determined using water level elevations from September 14, 2015 are consistent with those measured in previous annual sampling events.

## 5.2 Groundwater Quality Regulatory Threshold Exceedances

### 5.2.1 Monitoring Wells

Analytical results from overburden and bedrock monitoring wells (total of 31 monitoring wells) were tabulated and compared to EPA-established Cleanup Levels (CLs) and NHDES-established Ambient Groundwater Quality Standards (AGQSs). CL and AGQS exceedances reported in groundwater samples collected during the September 2015 sampling event are similar to previous results. The number of CL/AGQS exceedances in OU-1 and OU-2 are summarized in the right most columns on Table 3 and discussed herein. It is important to note that, with the exception of 1,4-dioxane, no VOC concentrations exceeded CLs or AGQSs, which is a slight improvement over 2014, where tertiary-butyl alcohol had also exceeded the AGQS in two bedrock wells.

Parameters reported at concentrations exceeding CLs or AGQSs during the September 2015 event are summarized below.

Total/Dissolved Arsenic

Groundwater samples from thirty-one (31) monitoring wells were submitted for analysis of total or dissolved arsenic.

The CL and AGQS for arsenic is 0.01 milligrams per liter (mg/L). CL/AGQS exceedances occurred at the following sixteen (16) wells:

OU-1: MW-4, MW-5S, MW-8, MW-9, MW-10, MW-11, OP-2, OP-5, and BP-4

OU-2: AE-1A, AE-2A, AE-2B, AE-3A, AE-3B, FPC-6A, and FPC-9A

Concentrations of arsenic ranged from non-detect (6 wells) to 0.22 mg/L (OP-2). Twenty-two of the thirty-one wells sampled and analyzed for arsenic were detected at concentrations below 0.02 mg/L.

Total/Dissolved Manganese

Groundwater samples from thirty-one (31) monitoring wells were submitted for analysis of total or dissolved manganese.

The CL for manganese is 0.3 mg/L. CL exceedances occurred at the following twenty-two (22 wells):

OU-1: MW-4, MW-5D, MW-5S, MW-6, MW-8, MW-9, MW-10, MW-11, OP-2, OP-5, and BP-4

OU-2: AE-1A, AE-1B, AE-2A, AE-2B, AE-3A, AE-3B, FPC-5B, FPC-6A, FPC-6B, FPC-11A, and FPC-11B

The AGQS for manganese is 0.84 mg/L. AGQS exceedances occurred at the following thirteen (13) wells:

OU-1: MW-4, MW-5S, MW-6, MW-8, MW-9, MW-10, OP-2, and OP-5

OU-2: AE-2B, AE-3A, AE-3B, FPC-6A, and FPC-11B

Concentrations of manganese ranged from non-detect (4 wells) to 3.1 mg/L (FPC-6A). Twenty-one of the thirty-one wells sampled and analyzed for manganese were detected at concentrations below 1 mg/L.

1,4-Dioxane

Groundwater samples from a subset of monitoring wells in OU-1 and OU-2 were submitted for analysis of 1,4-dioxane using a low level detection limit methodology, including 9 monitoring wells in OU-1 and 13 monitoring wells in OU-2 . The NHDES AGQS and EPA CL for 1,4-dioxane is 3 ug/L.

AGQS exceedances occurred at the following fifteen (15) wells:

OU-1: MW-4, MW-5D, MW-5S, MW-8, MW-9, MW-11, and BP-4

OU-2: AE-2A, AE-2B, AE-3A, AE-3B, FPC-5B, FPC-6A, FPC-6B, and GZ-105

Tertiary-butyl alcohol (TBA)

Groundwater samples from a subset of monitoring wells in OU-1 and OU-2 were submitted for analysis VOCs (EPA Method 8260B NHDES Full List), including 5 monitoring wells in OU-1 and 12 monitoring wells in OU-2. The EPA has not established an CL for TBA. The NHDES AGQS for TBA is 40 ug/L.

Historically AGQS exceedances have occurred at the two bedrock wells in OU-1 (MW-5D and MW-8). During the September 2015 sampling event, TBA was reported in MW-5D and MW-8 at a concentration equal to the AGQS (40 ug/L). TBA was reported as Not Detected (ND) above laboratory detection limits at the remaining monitoring wells sampled in OU-1 and OU-2.

The locations of these exceedances are consistent with past events. Reported concentrations are generally consistent with past events, the information provided in the 2013 GMP permit renewal application and results of the last annual sampling event (October 2014).

Other than arsenic, manganese and 1,4-dioxane, there were no exceedances above respective regulatory standards. Note that benzene CL/AGQS exceedances have occurred at MW-8 and GZ-105 as early as 2000. However, consistent with decreasing trends in benzene at these locations, no benzene exceedances occurred at monitoring wells sampled in September 2015. The highest benzene concentration reported during the September 2015 sampling event was at 3 ug/L at GZ-105 and MW-8.

### 5.2.2 Off-Site Water Supply Wells

Analytical results for VOCs (EPA Method 524 NHDES Full List) and 1,4-dioxane using a low-level detection limit methodology (EPA Method 8260B SIM) for the four off-site water supply wells sampled were tabulated and compared to EPA-established CLs and NHDES-established AGQSs. Results are summarized in Table 4.

Similar to results from previous monitoring events, no CL or AGQS exceedances were reported for arsenic, 1,4-dioxane or VOCs at the four off-site water supply wells sampled. The manganese concentration at 339BHR (0.31 mg/L) slightly exceeded the CL (0.3 mg/L), but is well below the AGQS (0.84 mg/L). The concentration of manganese at 339BHR continues to be consistent with what is considered to be typical of background bedrock water quality in the area, as discussed in previous site groundwater quality reports and assessments.

1,4-dioxane was reported as Not Detected above the laboratory detection limit of 0.25 ug/L in water supply well samples 415BHR and 346BHR. 1,4-dioxane was reported at very low concentrations close to the detection limit in two water supply wells (R-3 and 339BHR) at concentrations of 0.35 and 0.74 ug/L, respectively.

With the exception of a trace detection of chloroform (0.7 ug/L) at 339BHR, all other VOCs analyzed by EPA Method 524 (NHDES Full List) were reported as Not Detected above laboratory reporting limits. The concentration is well below the EPA/NHDES standard of 80 ug/L for total trihalomethanes (chloroform). Chloroform is not a constituent of concern at the Site and was not detected in other Site monitoring wells sampled in 2015. Chloroform is a chlorine by-product and is often associated with chlorination of a well. The detection of chloroform is not judged to be associated with the Site.

Analytical results for off-site water supply samples are noted in this report and provided to owners under separate cover.

## 5.3 Parameter Isoconcentration Maps and Cross Sections

Isoconcentration maps were prepared to show the lateral and vertical distributions of arsenic, manganese, and 1,4-dioxane concentrations in overburden and bedrock groundwater. Isoconcentration maps for benzene and tert-butyl alcohol were not prepared because no CL/AGQSs exceedances were reported in 2015.

The interpreted lateral distributions of arsenic, manganese, and 1,4-dioxane in overburden and bedrock groundwater are shown on Figures 5 to 10. The interpreted vertical distributions of arsenic, manganese, and 1,4-dioxane in groundwater are shown on Figures 11 to 16. General conclusions based on a review of Figures 5 through 16 are discussed below.

- In general, arsenic, manganese, and 1,4-dioxane concentrations in bedrock and overburden groundwater decrease with distance from the landfill area.
- The horizontal and vertical distributions of 1,4-dioxane, arsenic, and manganese concentrations in bedrock and overburden groundwater are generally consistent with groundwater flow directions established using groundwater potentiometric surface elevations at wells and well couplets.
- The pattern of 1,4-dioxane in groundwater in bedrock and overburden groundwater is consistent with the predominant direction of groundwater flow being westerly away from the landfill area toward the Berry's Brook valley, where the direction of groundwater flow is to the north-northeast.
- The extent of the 1,4-dioxane in groundwater is beyond the area where elevated redox metal (arsenic, iron and manganese) concentrations are observed. This result is consistent with previous interpretations (Summit, 2013) indicating that 1,4-dioxane defines the maximum extent of the impacted groundwater area.

## 5.4 Parameter Trend Analysis for Groundwater

Mann-Kendall statistical trend analysis tests were completed for arsenic and manganese at groundwater monitoring points where regulatory threshold exceedances were reported in the last five years, and at wells that were compliant with regulatory thresholds in the last five years, if arsenic or manganese exceedances were reported in the last five years in the associated well couplet. Statistical trend analysis tests were completed for TBA, 1,4-dioxane, and benzene at groundwater monitoring points where it has been detected in the last 12 years.

The Mann-Kendall test is a statistical method for assessing the probability that an increasing trend exists in a given data set. The test evaluates each data point relative to previous data points to calculate the number of positive and negative differences between constituent concentrations. Based on the number of data points and the sum of the negative and positive differences between adjacent data points, the probability that a statistically significant trend exists is calculated at the confidence limit selected.

Mann-Kendall trend analysis tests were completed using data collected from 2004 to 2015 when five or more data points and two or more detections above the laboratory practical quantitative limit (PQL) were available. For non-detect results, the detection limit was used to complete the trend test. For the majority of the tests, 10 or more data points were available for this 12 year period (2004-2015); however, fewer than 10 data points are available for TBA and 1,4-dioxane because analysis for these parameters did not begin until 2007 and 2009, respectively. A confidence limit of 95 percent was selected to identify statistically significant trends (i.e., there is a 95 percent probability that the trend calculated by the test exists). The Mann-Kendall trend tests were completed with ChemStat™ Starpoint Software, Advanced Statistical Analysis of Ground Water, Surface Water, Soil, or Air Quality Monitoring Data.

Time-series trend plots (attached) for each of the data sets were prepared and visually reviewed to verify that the last five years of data in each data set are consistent with statistical trend analysis results and in the context of the complete data set.

The results of CES' statistical analysis and qualitative/visual review of the time series charts for arsenic, manganese, benzene, TBA and 1,4-dioxane are provided on Table 9. Conclusions drawn by CES based on statistical trend analysis and a visual review of time-series plots are summarized below.

1,4-Dioxane

- All Mann-Kendall tests for 1,4-dioxane at monitoring wells indicate no statistically significant evidence of a decreasing or increasing trend (No Statistical Trend).

- Visual examination of the plots indicates 1,4-dioxane concentrations are stable (do not fluctuate significantly) at the majority of the monitoring wells, including bedrock monitoring wells AE-2B, AE-3B, FPC-8B, MW-5D, MW-8, MW-11, and BP-4; and overburden monitoring wells screened in the outwash unit (MW-9) and till unit (FPC-8A, AE-2A, and AE-3A).

- A visually apparent decreasing trend in 1,4-dioxane concentrations is present at shallow bedrock well MW-5S.

- A visually apparent increasing trend is present at overburden monitoring well MW-4 since August 2012. MW-4 is screened in the overburden-till and the magnitude of the increase is very low. Therefore, this apparent trend may be caused by seasonal variation in local recharge conditions and not indicative of an actual change in water quality at this location.

- 1,4-dioxane results for MW-9 (outwash unit) from 2010 to 2015 were 16, 14, 30, 6.1 28, and 26 ug/L, respectively. 1,4-dioxane concentrations at MW-9 are considered to be fluctuating based on a visual analysis of time series plots. MW-9 is a shallow overburden well screened 5 to 10 feet below the ground surface. Therefore, it is likely that the variation in 1,4-dioxane at this location is due to seasonal changes in recharge (precipitation) from year to year.

- 1,4-dioxane results for MW-11 (shallow bedrock unit) from 2010 to 2015 were 100, 45, 40, 56, 29.3 (average of August 2013 interval sampling results), 41, and 38 ug/L, respectively. 1,4-dioxane concentrations at MW-11 are considered to be fluctuating based on a visual analysis of time series plots. MW-11 is screened in the upper 20 feet of bedrock and located immediately downgradient from the landfill boundary. Therefore, it is likely that the variation in 1,4-dioxane at this location is due to seasonal changes in recharge and amount of infiltration through the landfill cap from year to year.

- 1,4-dioxane concentrations are very low and stable at the two off-site water supply wells (R-3 and 339BHR) where it has been detected.

Benzene

- Benzene concentrations at the 8 monitoring wells where it was detected in 2015 are stable or decreasing (i.e., MW-5D, MW-5S, MW-8, MW-11, AE-2B, AE-3A, FPC-6A, and GZ-105). A statistically significant increasing trend was not reported in any well. Statistically significant decreasing trends were reported in wells GZ-105 and MW-11 and confirmed by a review of time series plots. A visually decreasing trend was apparent for well MW-5S.

Tertiary-butyl alcohol

- TBA concentrations at the two wells where it has been detected (MW-5D and MW-8) are stable or decreasing. At MW-5D, no statistically significant trend is reported and review of time series plots indicates that concentrations are stable. At MW-8, a statistically significant decreasing trend was reported and review of time series plots support the decreasing trend determination.

Arsenic & Manganese (Redox Metals)

- A stable or decreasing trend in arsenic is apparent at nine groundwater monitoring locations, including: bedrock wells MW-5D, MW-5S, BP-4, FPC-6B, AE-2B, and AE-3B; overburden (outwash) well MW-4; and overburden (till) wells AE-1A, and AE-2A. A stable or decreasing trend in manganese is apparent at eighteen groundwater monitoring locations, including: bedrock wells MW-5D, MW-5S, MW-11, BP-4, FPC-5B, FPC-6B, AE-1B, AE-2B, AE-3B, and AE-4B; overburden (outwash) well AE-4A, MW-4, and MW-9; and overburden (till) wells AE-1A, AE-2A, AE-3A, FPC-9A, and FPC-11A. This is indicative of stable or improving water quality,

- At the GMZ boundary well couplet FPC-6, a review of time series plots for arsenic and manganese indicates that concentrations are stable in shallow bedrock well FPC-6B. A review of time series plots indicate that arsenic and manganese concentrations have continued to fluctuate in the shallow overburden (till) well FPC-6A; however, arsenic has shown an overall increasing trend since 2008.

- The Mann Kendall trend analysis shows that arsenic and manganese concentrations are increasing at overburden (outwash) well OP-2 and no apparent trend is present at OP-5. However, a review of time series plots indicate that arsenic is stable and manganese is increasing at OP-2 and both arsenic and manganese are increasing at OP-5. Arsenic and manganese concentrations at both wells remain within the historic ranges reported at each individual well.

- Arsenic concentrations at bedrock well MW-11 appear to be slowly increasing based on a review of the time series plot. However, concentrations remain within historical ranges reported at the well. Manganese concentrations have been relatively stable at MW-11, based on a review of the time series plot.

- Arsenic concentrations at overburden (till) well FPC-9A appear to have been slowly increasing since August 2008. However, the magnitude of increase is very low and concentrations remain within historical ranges reported at the well. Manganese concentrations are decreasing at FPC-9A.

- At bedrock well MW-6, manganese concentrations have fluctuated over time. The well is constructed as an open borehole in bedrock below the surface casing. Changes in sampling methodologies associated with this well construction (as highlighted on the time series plot) have been accompanied by significant changes in manganese concentrations and affect the ability to draw conclusions on the manganese trend determination. Arsenic concentrations continue to be well below the AGQS/CL and have remained stable during the transition between different sampling methods.

Parameter concentrations at the remaining sampling points did not show significant trends.

## 5.5 Status of Constituents of Concern

A table summarizing the COCs and associated EPA-established CLs and/or NHDES-established AGQSs is provided in Section 1.1. Analytical data for each COC from November 2000 to September 2015 at groundwater monitoring location identified in the August 2015 SAP are provided in Table 10. A brief summary of the status of each COC in groundwater, based on the data presented in Table 10 is provided below:

- Benzene: Trace concentrations below the CL/AGQS continue to be reported in 8 monitoring wells located in close proximity to or downgradient of the landfill. In the last five years, concentrations have exceeded CLs or AGQSs at 2 wells (MW-8 and GZ-105). No exceedances were reported in 2014 and 2015.

- Chlorobenzene: Trace concentrations continue to be reported in 6 monitoring wells located in close proximity to or downgradient of the landfill. The last exceedance of an CL or AGQS was reported at MW-9 in 2002.

- Tetrachloroethylene: No detections have been reported since the start of the long-term monitoring plan in 1999.

- Tetrahydrofuran: In the last five years, detections have been reported at 6 monitoring wells located in close proximity to or downgradient of the landfill. The last reported exceedance of an CL or AGQS was in 2010 (MW-8).

- 1,2-dichloropropane: No detections have been reported since the start of the long-term monitoring plan in 1999.

- 2-butanone: In 1998 and 1999, trace concentrations were reported at MW-11. No detections have been reported since 2000.

- Trans-1,2-dichloroethene: No detections have been reported since the start of the long-term monitoring plan in 1999.

- 1,4-dioxane: Since August 2009, samples from selected monitoring wells have been analyzed for 1,4-dioxane with a low level detection limit methodology (EPA Method 8260B SIM). 1,4-dioxane is commonly reported above the CL/AGQS in monitoring wells located in close proximity to or downgradient of the landfill. Trace concentrations below the AGQS have been reported at two water supply wells (R-3 and 339BHR) located downgradient of the landfill along Breakfast Hill Road.

- Tertiary butyl alcohol (TBA): Samples from selected monitoring wells have been analyzed for TBA since 2007. TBA has been reported above the reporting limits at two wells (MW-5D and MW-8). Both wells reported a concentration equal to the NHDES AGQS in 2015.

- Antimony: Antimony is rarely detected in groundwater. The last exceedance was an isolated detection/exceedance reported at AE-4A in 2006.

- Arsenic/Manganese: Arsenic and manganese are reported above cleanup criteria (CL/AGQS) at many wells located in close proximity to or downgradient of the landfill. Arsenic and/or manganese exceedances were or have been reported at several monitoring wells (FPC-7, AE-1 and AE-4, and historically at GZ-123, GZ-125 and FPC-2) located hydraulically upgradient or cross-gradient of the impacted groundwater area. This result is consistent with previous interpretations (Summit, 2013) indicating the landfill in not considered to be the primary source of arsenic and manganese in groundwater and that a reducing condition in groundwater downgradient of the landfill resulted in the mobilization of naturally occurring arsenic and manganese present in overburden and bedrock.

- Beryllium: Beryllium is rarely detected in groundwater. The last exceedance was an isolated detection/exceedance reported at MW-6, AE-1A and FPC-11A in 2004.

- Chromium/Lead/Nickel: Chromium, lead and/or nickel exceedances (total metals) were reported at one well (MW-4) in 2006, 2007 and 2008; however, only trace concentrations well below cleanup criteria were reported at MW-4 since 2009.

- Vanadium: Trace concentrations have been reported at selected monitoring wells. No exceedances have been reported since 2005.

## SECTION 6 | CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Conclusions

Based on a review of analytical results for the September 2015 sampling event and historical data, CES concludes the following:

Groundwater

- Results of Kestrel's Tier I Plus Data Validation and CES' review of the analytical data indicate the laboratory analytical data package is complete, of good quality, and meets data quality objectives; only minor data qualification was necessary.

- Groundwater quality results for September 2015 met EPA-established CLs and/or NHDES-established AGQSs for benzene, chlorobenzene, tetrachloroethene, tetrahydrofuran, 1,2-dichloropropane, methyl ethyl ketone (2-butanone), trans-1,2-dichloroethene, antimony, beryllium, chromium, lead, nickel, and vanadium. Consistent with historical results, tetrachloroethene, 1,2-dichloropropane, methyl ethyl ketone, and trans-1,2-dichloroethene were reported as Not Detected in all groundwater and surface water samples collected.

- Consistent with historical results, CL and/or AGQS exceedances were reported for 1,4-dioxane, arsenic, and manganese. In general, the parameters and locations that exceeded the regulatory thresholds are similar to historical monitoring events. Benzene exceedances have historically occurred at several monitoring wells. However, consistent with an overall decreasing trend in benzene concentrations in site groundwater, no benzene exceedances were reported in 2015.

- Groundwater samples from 20 monitoring wells in OU-1 and OU-2 were submitted for analysis of 1,4-dioxane using a low-level detection limit methodology (8260B SIM). 1,4-dioxane concentrations exceeding the NHDES AGQS were reported in 7 of the 9 monitoring wells sampled in OU-1, and 8 of the 11 monitoring wells sampled in OU-2.

- Similar to results from previous monitoring events, no CL or AGQS exceedances were reported for arsenic, 1,4-dioxane or VOCs at the four off-site water supply wells sampled. The manganese concentration at 339BHR (0.31 mg/L) for the September 2015 sampling event slightly exceeded the CL (0.3 mg/L), but is well below the AGQS (0.84 mg/L). The concentration of manganese at 339BHR continues to be consistent with what is considered to be typical of background bedrock water quality in the area, as discussed in previous site groundwater quality reports and assessments. Consistent with historical results, 1,4-dioxane was Not Detected above the laboratory reporting limit of 0.25 ug/L at water supply wells 415BHR and 346BHR. In February and October 2015, 1,4-dioxane was reported at very low concentrations (0.35 to 0.85 ug/L) close to the detection limit of 0.25 ug/L at two water supply wells (R-3 and 339BHR). Visual and statistical trend analyses indicate that 1,4-dioxane concentrations are stable at R-3 and 339BHR. Two monitoring well couplets (FPC-5 and FPC-6) located hydraulically upgradient of R-3 and 339BHR do not have enough data for trend analysis to be performed; however, a review of data that is available shows both well couplets are relatively stable.

- Arsenic concentrations exceeding the EPA CL and NHDES AGQS of 0.01 mg/L were reported in 9 of the 11 monitoring wells sampled in OU-1, and 7 of the 20 monitoring wells sampled in OU-2.

- Manganese concentrations exceeding the EPA CL (0.3 mg/L) were reported in all 11 of the monitoring wells sampled in OU-1, and 11 of the 20 monitoring wells sampled in OU-2. Manganese concentrations exceeding the AGQS (0.84 mg/L) were reported in 8 of the 11 monitoring wells in OU-1, and 5 of the 20 monitoring wells in OU-2.

- Trends in arsenic and/or manganese concentrations at AE-1A, AE-2A, AE-2B, BP-4, and MW-8 indicate a general trend towards more oxidizing conditions indicative of an improvement in groundwater quality. Trends in arsenic and manganese concentrations at FPC-6A, OP-2, OP-5, and possibly AE-1B and FPC-9A indicate a general trend towards more reducing conditions. Trends indicative of a change in water quality were not identified at the remaining sampling points.

- Water quality at wells FPC-4B, FPC-7A, FPC-7B, AE-4A, and AE-4B in September 2015 continues to be consistent with what is considered to be background conditions, as discussed in Summit (2013). Similarly, as discussed in Summit (2013), water quality at GZ-123, GZ-125, FPC-2A and FPC-2B is also considered to be consistent with what is considered to be background conditions.

Leachate Seep

- The water sample collected at this location met the applicable regulatory water quality standards, with the exception of iron and ammonia-N, which is consistent with historical data.

Surface Water

- Water quality met applicable regulatory standards except for copper at SW-5 and iron at SW-103, which is consistent with historical data.

Sediment

- Consistent with historical results, sediment standards were exceeded at SED-4 and SED-5 for several metals. The Coakley Landfill cap and surrounding areas within the perimeter fence have been stabilized for many years and no evidence of significant soil erosion has been observed in on-site inspection by CLG. On this basis, CES concludes that the landfill area (OU-1) is not actively contributing significant amounts of sediment to the wetland areas around the landfill.

## 6.2 Recommendations

Based on observations and monitoring results 2015, CES recommends the following:

- Well FPC-5A should be properly abandoned due to well integrity issues and a replacement well should be installed in close proximity to FPC-5B when access is obtained by the current landowner.

- Two monitoring well couplets still need to be installed in 2013 GMZ expansion area. The two areas are identified on Figure 2.

- The top of casing elevations for wells FPC-2A and FPC-2B should be resurveyed because well repair work was completed. FPC-2A and FPC-2B will be resurveyed when surveyors are on-site after the well FPC-5A abandonment/replacement activities are completed.

- The sediment sampling requirement should be eliminated, because the landfill cap and surrounding areas within the perimeter fence have been stabilized for many years and no evidence of significant soil erosion has been observed in on-site inspection. Furthermore, results of sediment toxicity testing for fresh water midges (*Chironomus dilutes*) and amphipods (Hyalella azteca) in 2007 documented no significant difference in measured endpoints between the laboratory control and the site (EnviroSystems, 2008a & 2008b).

## SECTION 7 | REFERENCES


Aries (1999), Sediment, Surface Water and Groundwater Monitoring Plan, Coakley Landfill OU-1 and OU-2 Study Area, North Hampton, New Hampshire. Prepared by Aries Engineering, Inc. for the Coakley Landfill Group.

Summit (2013), Groundwater Management Zone Evaluation, Coakley Landfill, North Hampton, New Hampshire. Prepared by Summit Environmental Consultants, Inc. for the Coakley Landfill Group, April 2013.

Summit (2014), DRAFT 2013 Annual Summary Report, Coakley Landfill, Breakfast Hill Road, North Hampton, NH. Prepared by Summit Environmental Consultants (a CES, Inc. company), January 17, 2014; revised August 2014.

CES (2015a), Sampling and Analysis Plan, Coakley Landfill Superfund Site, North Hampton and Greenland, New Hampshire . CES, Inc., August 2015, approved September 25, 2015.

EnviroSystems (2008a), Toxicological Evaluation of Freshwater Sediment Samples, *Chironomus dilutes* Survival and Growth Sediment Toxicity Tests, Coakley Landfill Projects. EnviroSystems, Incorporated. January 2008 (submitted in the 2007 Annual Report by Provan and Lorber, Inc.)

EnviroSystems (2008b), Toxicological Evaluation of Freshwater Sediment Samples, *Hyalella azteca* Survival and Growth Sediment Toxicity Tests, Coakley Landfill Projects. EnviroSystems, Incorporated. January 2008 (submitted in the 2007 Annual Report by Provan and Lorber, Inc.)

NHDES (2014), Hazardous Waste Remediation Bureau Master Quality Assurance Project Plan (HWRB Master QAPP) Revision 1, dated February 2014, http://des.nh.gov/organization/divisions/waste/hwrb/documents/hwrb_master_qapp.pdf

Starpoint Software, Inc. (2013), ChemStat™, Advanced Statistical Analysis of Ground Water, Surface Water, Soil, or Air Quality Monitoring Data. Version 6.3.0.2

USEPA (2013a), Environmental Data Review Supplement for Regional Date Review Elements and Superfund Specific Guidance/Procedures. U.S. Environmental Protection Agency New England (Region I) Quality Assurance Unit, Office of Environmental Measurement and Evaluation, EQADR-Supplement0, Final Version #0, April 22, 2013.

USEPA (2013a), National Functional Guidelines for Organic Superfund Data Review. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation, OSWER 9200.2-134, EPA-540-R-014-002, August 2014.

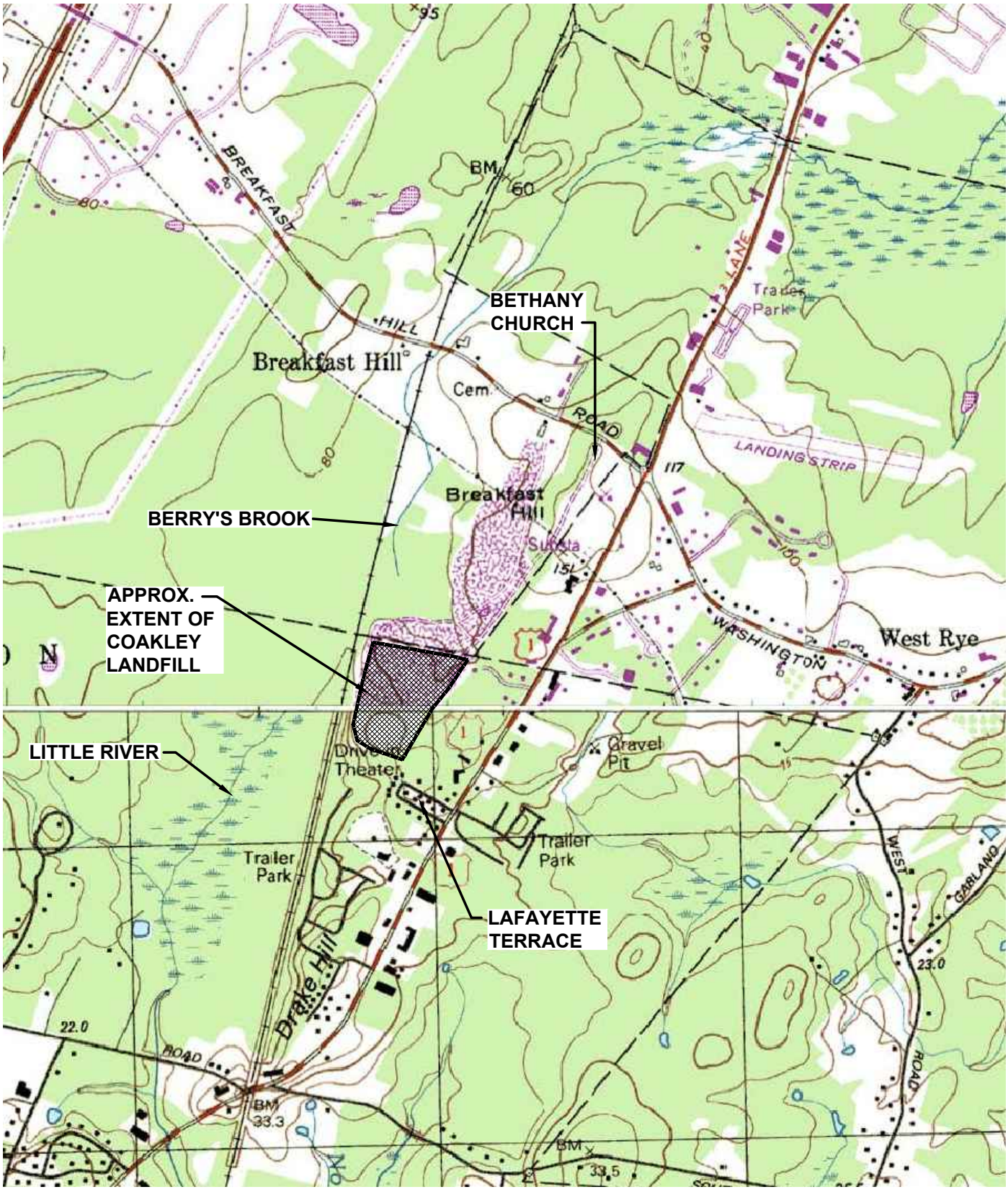
USEPA (2014b), National Functional Guidelines for Inorganic Superfund Data Review. Office of Superfund Remediation and Technology Innovation, OSWER 9200.2-133, EPA-540-R-013-001, August 2014.

Weston (1988), Remedial Investigation Coakley Landfill North Hampton, New Hampshire. Prepared by Roy F. Weston, Inc. and Goldberg-Zoino and Associates, Inc. for the State of New Hampshire Department of Environmental Services Waste Management Division.

# FIGURES

# FIGURE 1

# SITE LOCATION MAP




SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
PORTSMOUTH
SCALE: 1"=1500'

CES INC

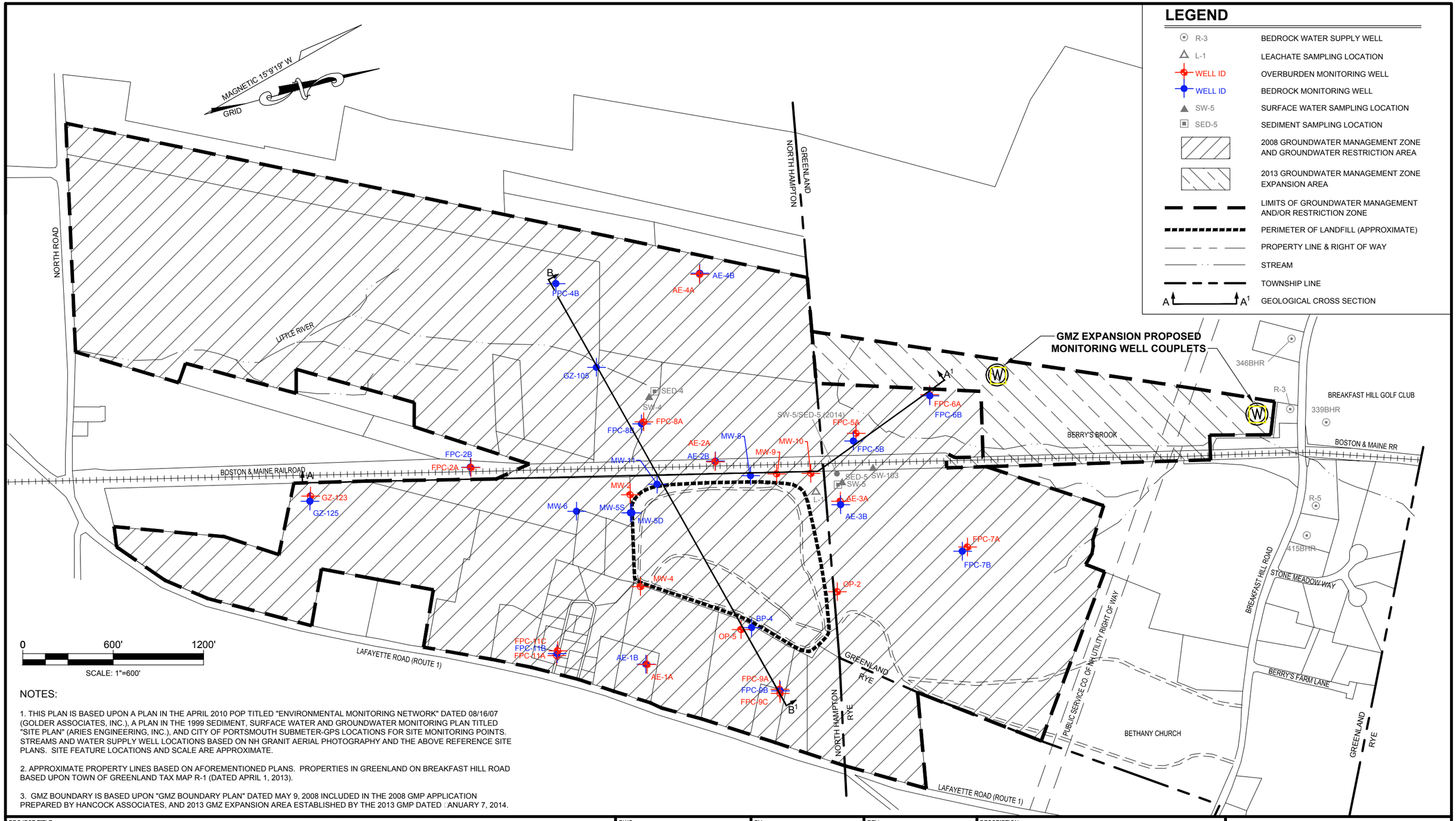
# COAKLEY LANDFILL
# NORTH HAMPTON & GREENLAND, NH
# LOCATION MAP

2015-02-11
10424.003

FIGURE 1

## FIGURE 2

## SITE PLAN




## LEGEND

| | |
|---|---|
| R-3 | BEDROCK WATER SUPPLY WELL |
| L-1 | LEACHATE SAMPLING LOCATION |
| WELL ID | OVERBURDEN MONITORING WELL |
| WELL ID | BEDROCK MONITORING WELL |
| SW-5 | SURFACE WATER SAMPLING LOCATION |
| SED-5 | SEDIMENT SAMPLING LOCATION |
| | 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA |
| | 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA |
| | LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE |
| | PERIMETER OF LANDFILL (APPROXIMATE) |
| | PROPERTY LINE & RIGHT OF WAY |
| | STREAM |
| | TOWNSHIP LINE |
| A — A1 | GEOLOGICAL CROSS SECTION |

NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.

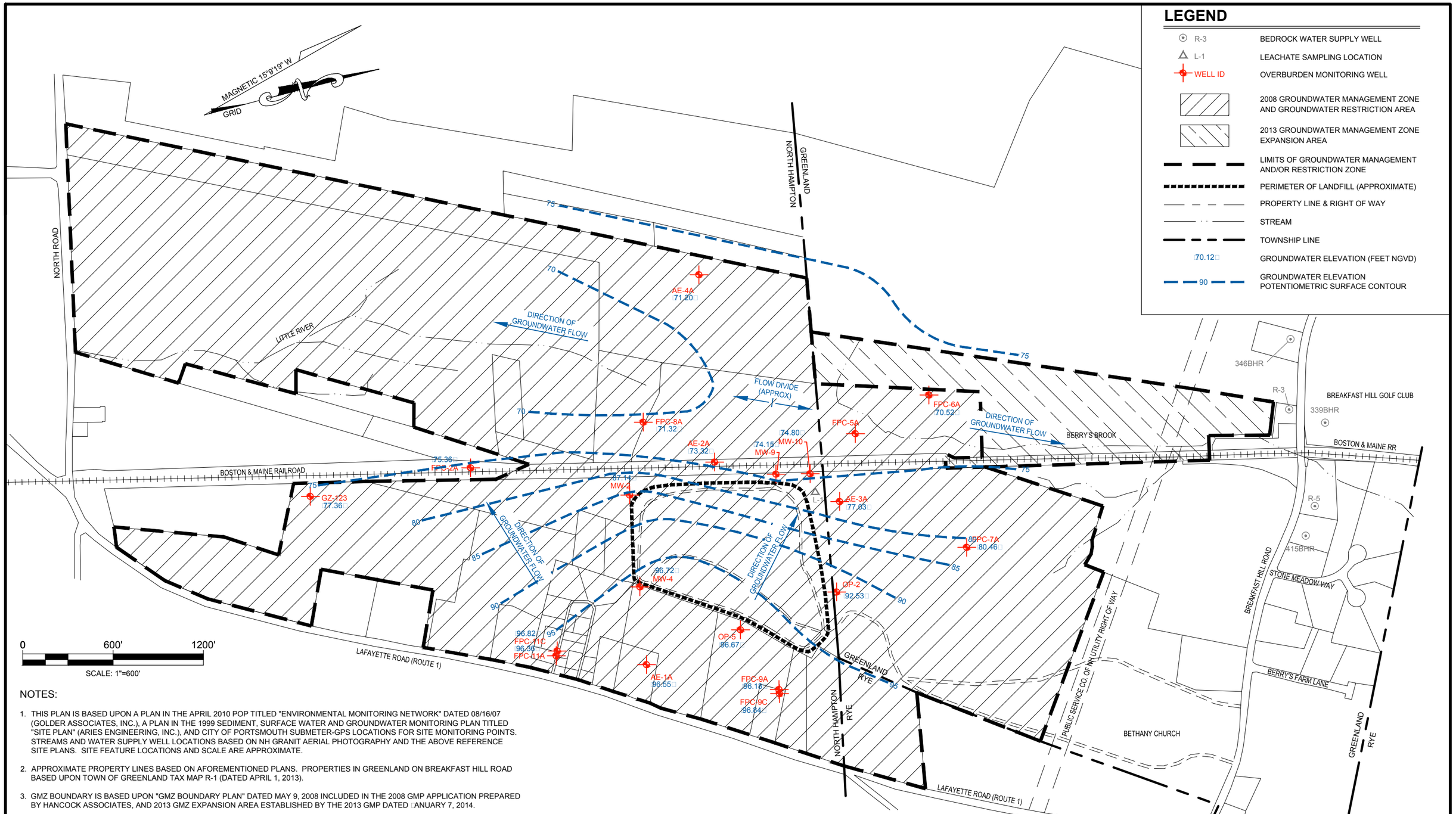
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).

3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED □ANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 1-2** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-02-16 | REV DATE: | | |
| SHEET TITLE: **GROUNDWATER MANAGEMENT ZONE & ENVIRONMENTAL MONITORING NETWORK** | JN: 10424.003 | APPROVED BY: SBM | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SBM | ISSUE DATE: | | |

# FIGURE 3

## GROUNDWATER CONTOURS
## SEPTEMBER 2015 – OVERBURDEN WELLS




## LEGEND

- R-3 — BEDROCK WATER SUPPLY WELL
- L-1 — LEACHATE SAMPLING LOCATION
- WELL ID — OVERBURDEN MONITORING WELL
- 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA
- 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA
- LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE
- PERIMETER OF LANDFILL (APPROXIMATE)
- PROPERTY LINE & RIGHT OF WAY
- STREAM
- TOWNSHIP LINE
- 70.12 — GROUNDWATER ELEVATION (FEET NGVD)
- 90 — GROUNDWATER ELEVATION POTENTIOMETRIC SURFACE CONTOUR

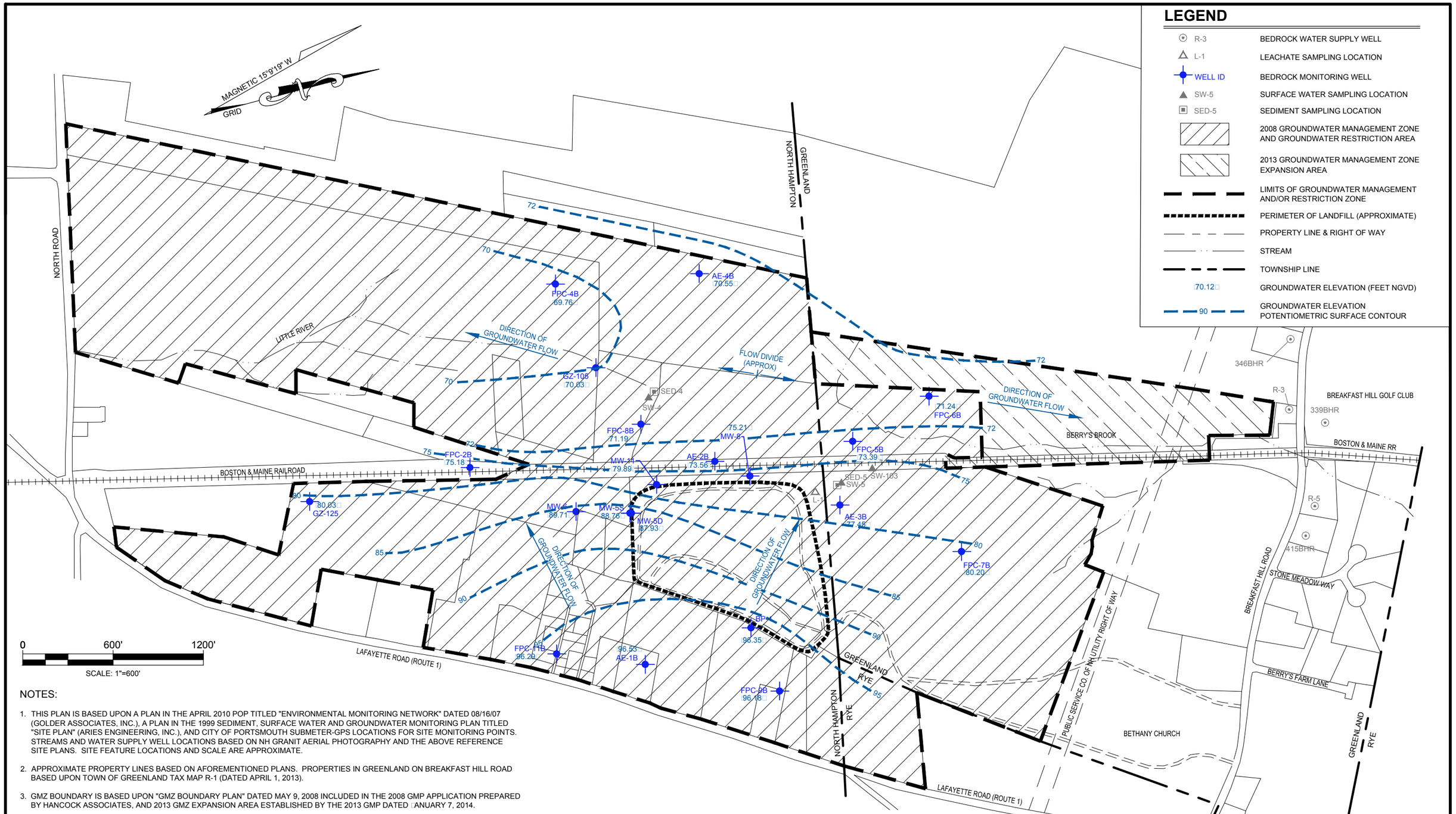
NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED □ANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 3** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2015-01-14 | REV DATE: | | |
| SHEET TITLE: **SEPTEMBER 2015 OVERBURDEN GROUNDWATER POTENTIOMETRIC SURFACE** | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 4

## GROUNDWATER CONTOURS
## SEPTEMBER 2015 – BEDROCK WELLS




## LEGEND

| | |
|---|---|
| R-3 | BEDROCK WATER SUPPLY WELL |
| L-1 | LEACHATE SAMPLING LOCATION |
| WELL ID | BEDROCK MONITORING WELL |
| SW-5 | SURFACE WATER SAMPLING LOCATION |
| SED-5 | SEDIMENT SAMPLING LOCATION |
| | 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA |
| | 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA |
| | LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE |
| | PERIMETER OF LANDFILL (APPROXIMATE) |
| | PROPERTY LINE & RIGHT OF WAY |
| | STREAM |
| | TOWNSHIP LINE |
| 70.12 | GROUNDWATER ELEVATION (FEET NGVD) |
| 90 | GROUNDWATER ELEVATION POTENTIOMETRIC SURFACE CONTOUR |

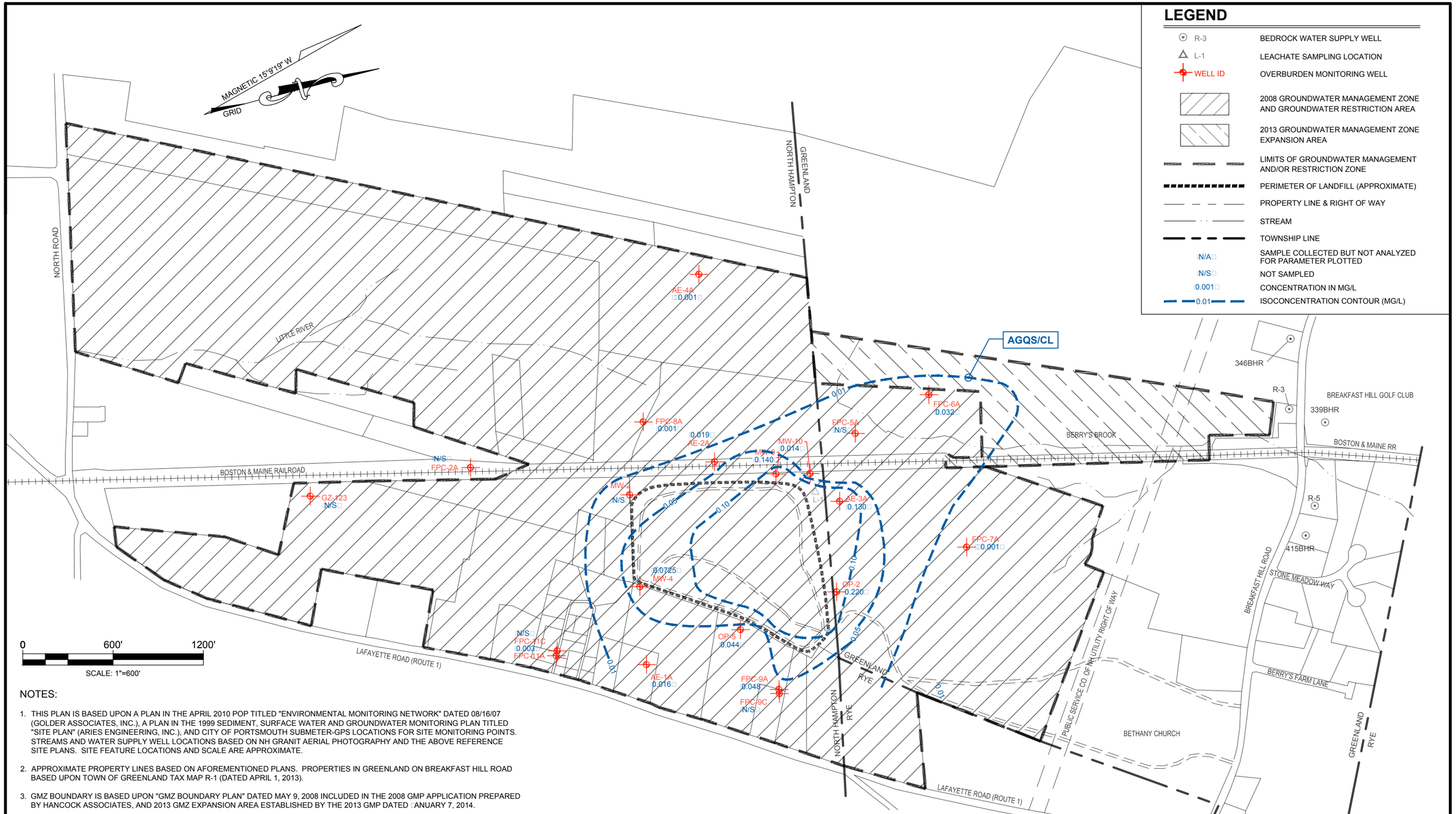
NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED □ANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 4** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: **SEPTEMBER 2015 BEDROCK GROUNDWATER POTENTIOMETRIC SURFACE** | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 5

## LATERAL DISTRIBUTION OF ARSENIC IN OVERBURDEN WELLS




## LEGEND

| | |
|---|---|
| R-3 | BEDROCK WATER SUPPLY WELL |
| L-1 | LEACHATE SAMPLING LOCATION |
| WELL ID | OVERBURDEN MONITORING WELL |
| | 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA |
| | 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA |
| | LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE |
| | PERIMETER OF LANDFILL (APPROXIMATE) |
| | PROPERTY LINE & RIGHT OF WAY |
| | STREAM |
| | TOWNSHIP LINE |
| N/A | SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED |
| N/S | NOT SAMPLED |
| 0.001 | CONCENTRATION IN MG/L |
| 0.01 | ISOCONCENTRATION CONTOUR (MG/L) |

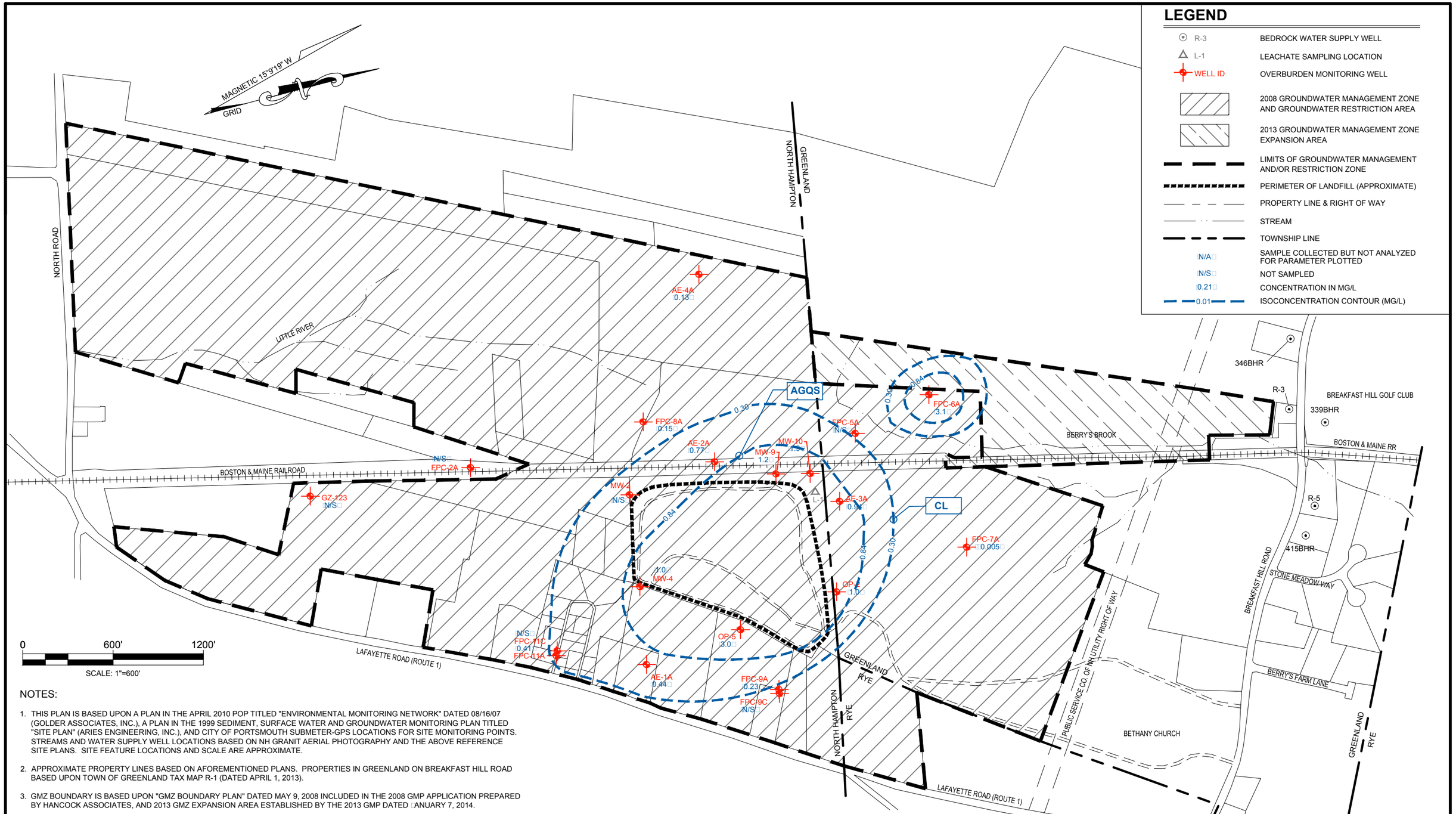
NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED JANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 5** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: **SEPTEMBER 2015 LATERAL DISTRIBUTION OF DISSOLVED ARSENIC IN OVERBURDEN GROUNDWATER** | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 6

## LATERAL DISTRIBUTION OF MANGANESE IN OVERBURDEN WELLS




## LEGEND

| | |
|---|---|
| R-3 | BEDROCK WATER SUPPLY WELL |
| L-1 | LEACHATE SAMPLING LOCATION |
| WELL ID | OVERBURDEN MONITORING WELL |
| | 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA |
| | 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA |
| | LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE |
| | PERIMETER OF LANDFILL (APPROXIMATE) |
| | PROPERTY LINE & RIGHT OF WAY |
| | STREAM |
| | TOWNSHIP LINE |
| N/A | SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED |
| N/S | NOT SAMPLED |
| 0.21 | CONCENTRATION IN MG/L |
| 0.01 | ISOCONCENTRATION CONTOUR (MG/L) |

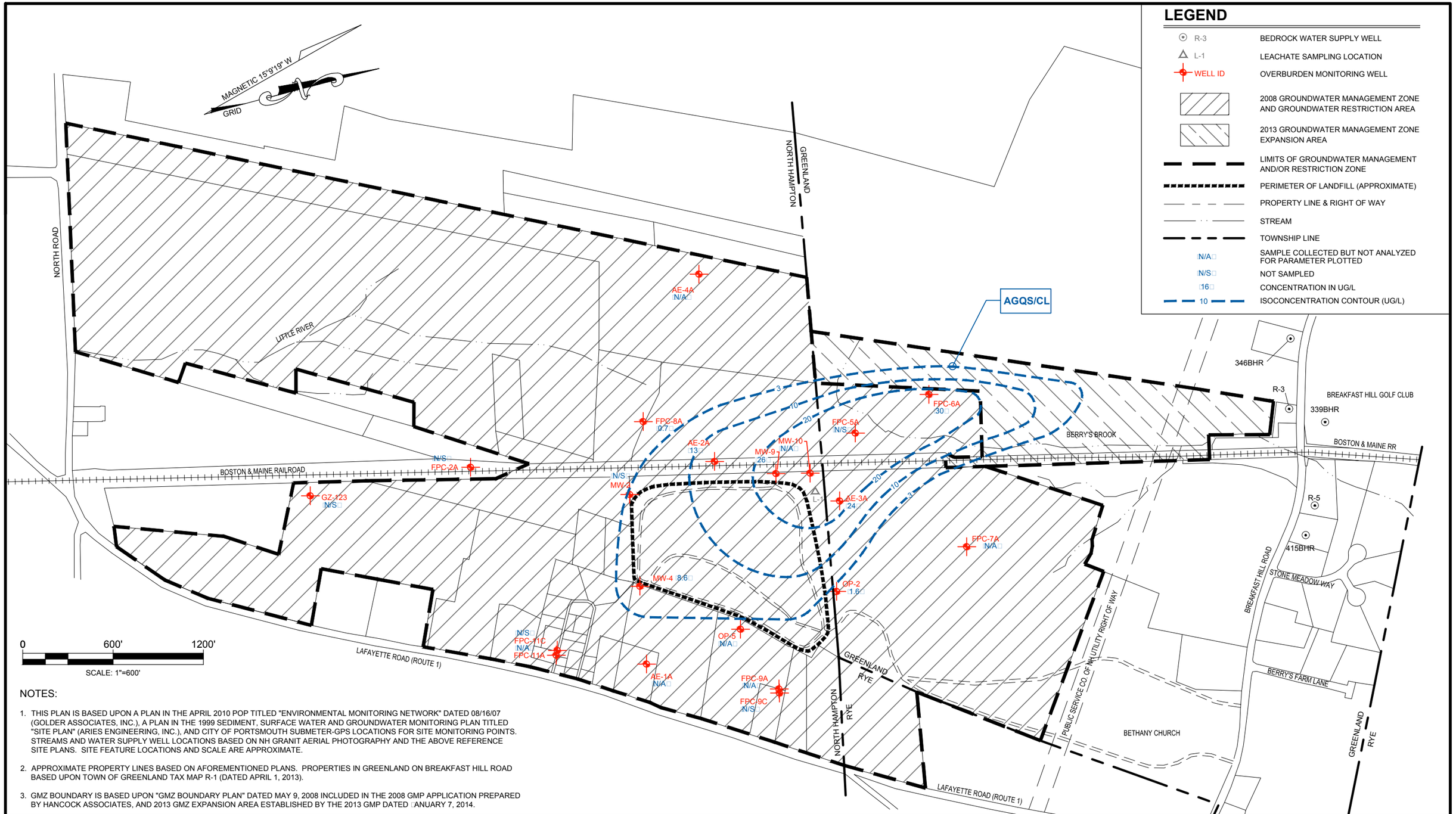
NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED □ANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 6** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: **SEPTEMBER 2015 LATERAL DISTRIBUTION OF DISSOLVED MANGANESE IN OVERBURDEN GROUNDWATER** | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

# FIGURE 7

# LATERAL DISTRIBUTION OF 1,4-DIOXANE IN OVERBURDEN WELLS




## LEGEND

- R-3 — BEDROCK WATER SUPPLY WELL
- L-1 — LEACHATE SAMPLING LOCATION
- WELL ID — OVERBURDEN MONITORING WELL
- 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA
- 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA
- LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE
- PERIMETER OF LANDFILL (APPROXIMATE)
- PROPERTY LINE & RIGHT OF WAY
- STREAM
- TOWNSHIP LINE
- N/A — SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED
- N/S — NOT SAMPLED
- 16 — CONCENTRATION IN UG/L
- 10 — ISOCONCENTRATION CONTOUR (UG/L)

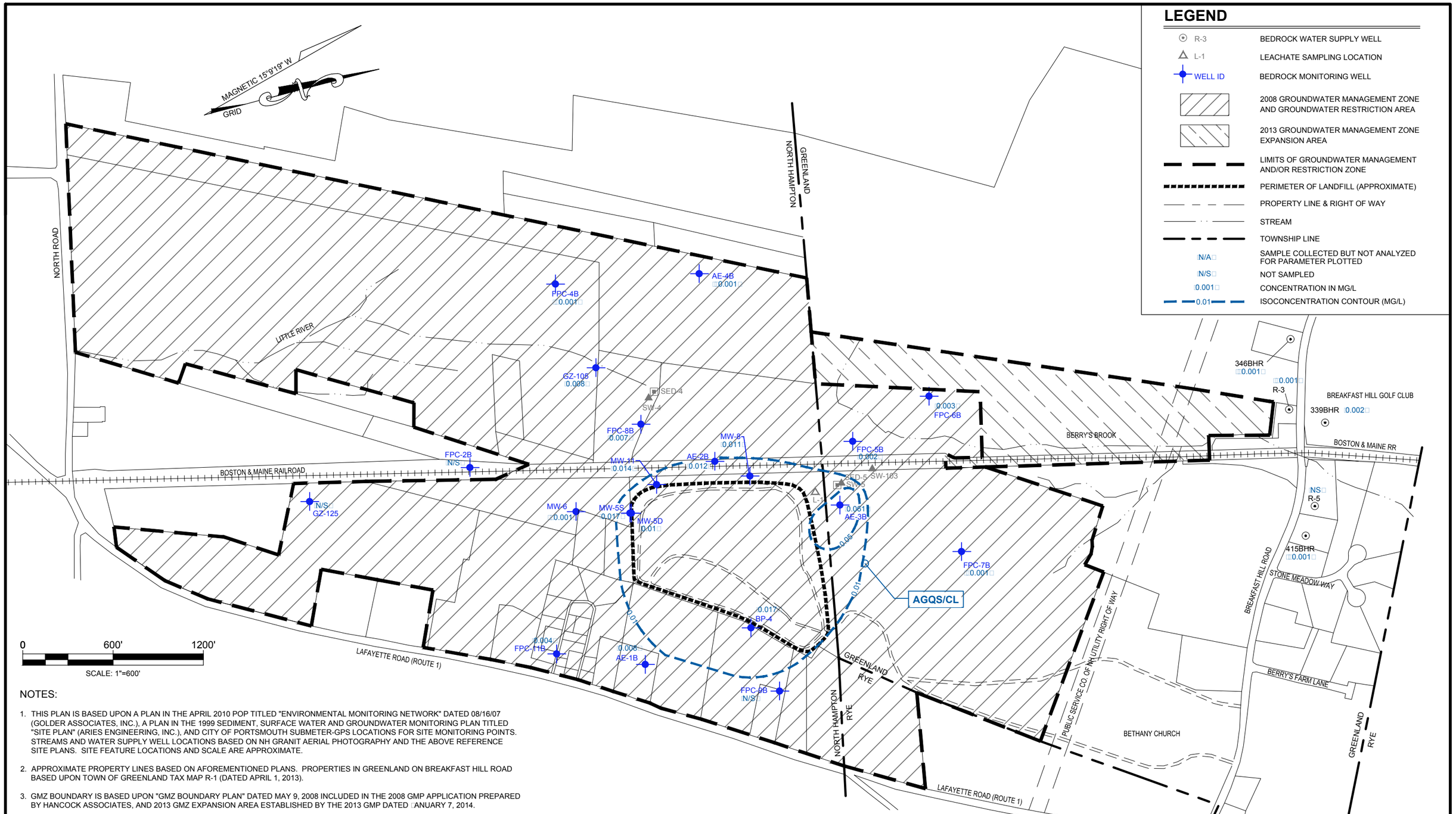
NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED JANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 7** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: **SEPTEMBER 2015 LATERAL DISTRIBUTION OF 1,4 - DIOXANE IN OVERBURDEN GROUNDWATER** | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 8

## LATERAL DISTRIBUTION OF ARSENIC IN BEDROCK WELLS




## LEGEND

| | |
|---|---|
| R-3 | BEDROCK WATER SUPPLY WELL |
| L-1 | LEACHATE SAMPLING LOCATION |
| WELL ID | BEDROCK MONITORING WELL |
| | 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA |
| | 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA |
| | LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE |
| | PERIMETER OF LANDFILL (APPROXIMATE) |
| | PROPERTY LINE & RIGHT OF WAY |
| | STREAM |
| | TOWNSHIP LINE |
| N/A | SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED |
| N/S | NOT SAMPLED |
| 0.001 | CONCENTRATION IN MG/L |
| 0.01 | ISOCONCENTRATION CONTOUR (MG/L) |

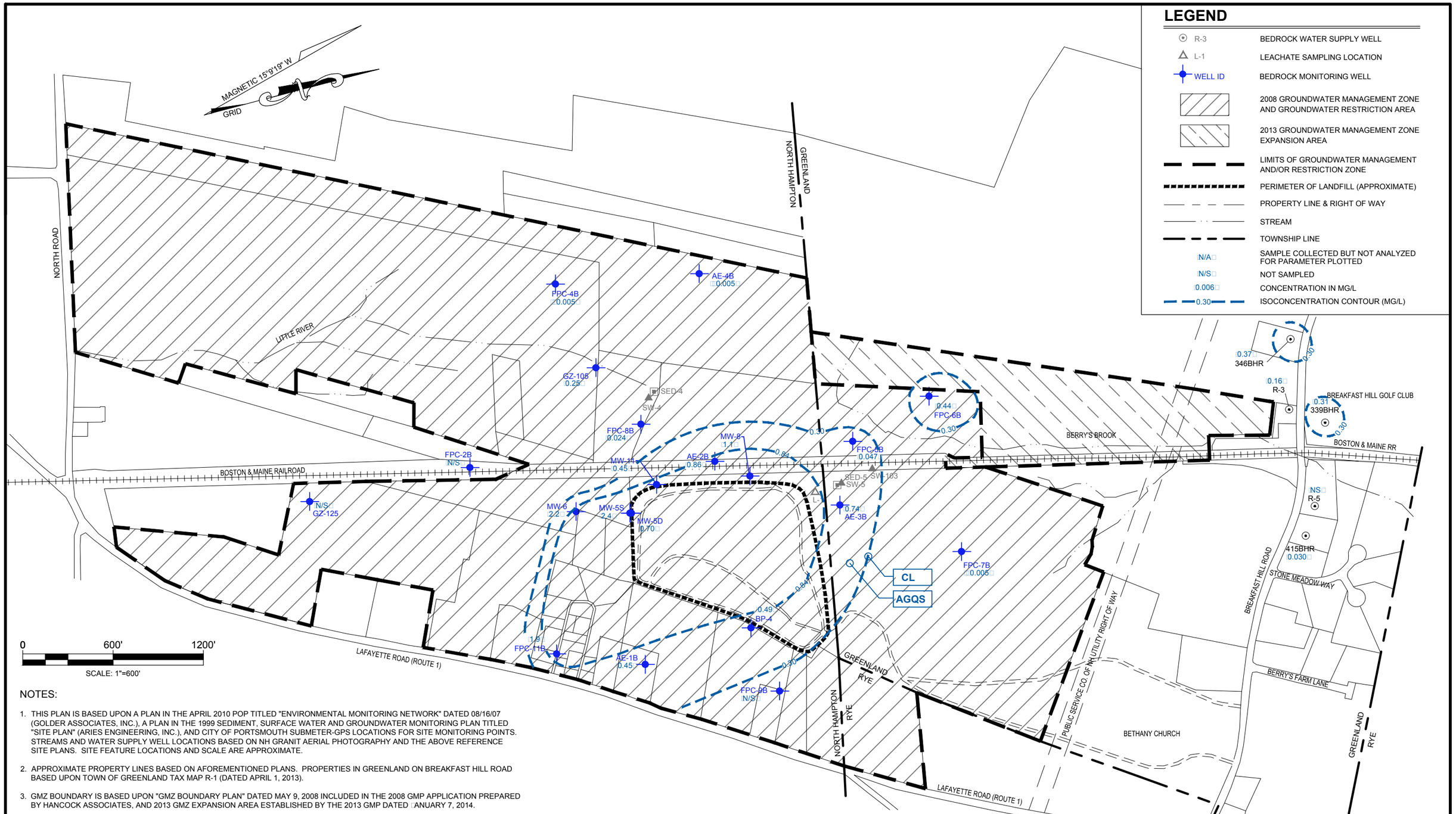
NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED JANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 8** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: **SEPTEMBER 2015 LATERAL EXTENT OF TOTAL ARSENIC IN BEDROCK GROUNDWATER** | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 9

## LATERAL DISTRIBUTION OF MANGANESE IN BEDROCK WELLS




## LEGEND

| | |
|---|---|
| R-3 | BEDROCK WATER SUPPLY WELL |
| L-1 | LEACHATE SAMPLING LOCATION |
| WELL ID | BEDROCK MONITORING WELL |
| | 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA |
| | 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA |
| | LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE |
| | PERIMETER OF LANDFILL (APPROXIMATE) |
| | PROPERTY LINE & RIGHT OF WAY |
| | STREAM |
| | TOWNSHIP LINE |
| N/A | SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED |
| N/S | NOT SAMPLED |
| 0.006 | CONCENTRATION IN MG/L |
| 0.30 | ISOCONCENTRATION CONTOUR (MG/L) |

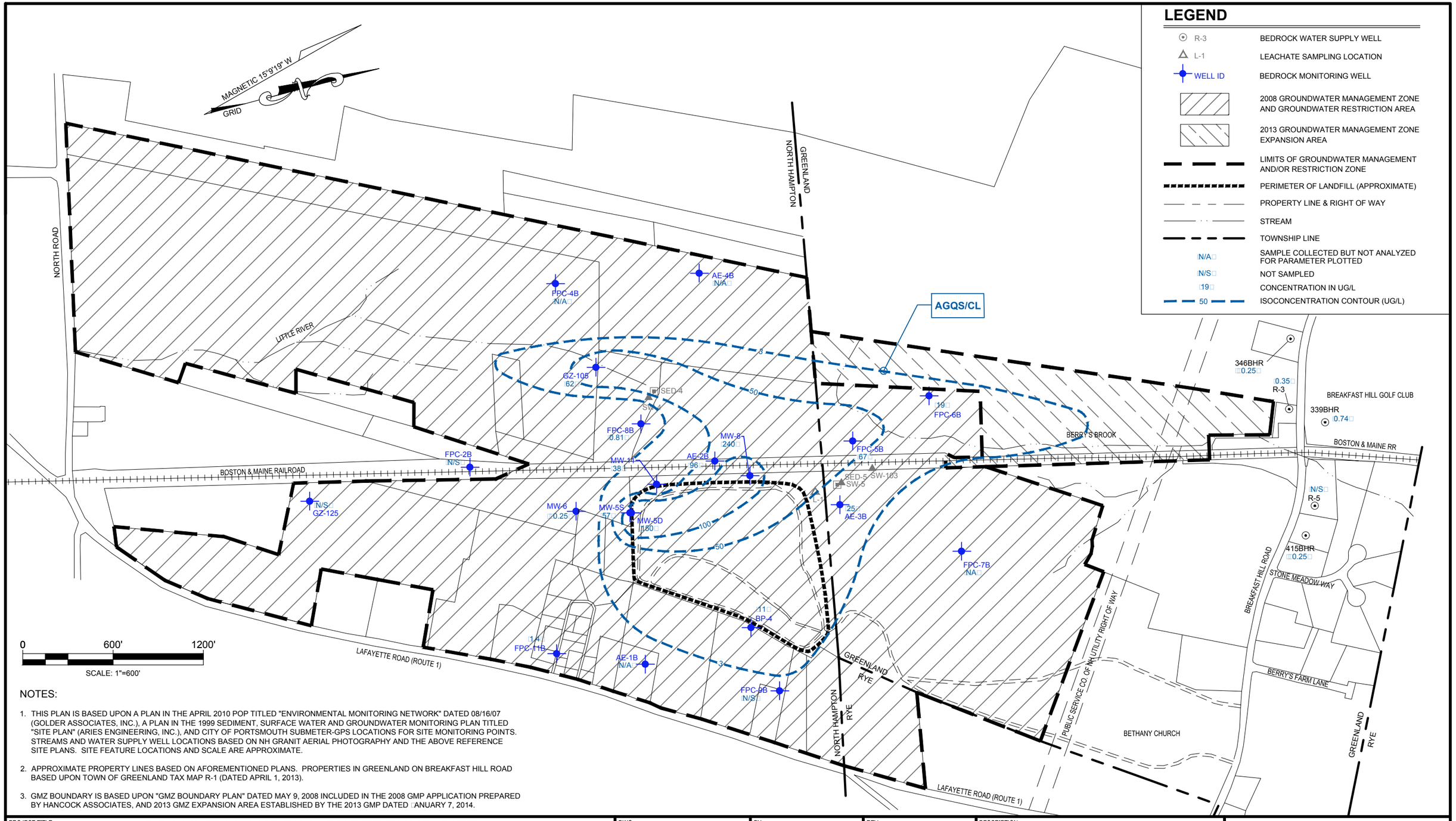
NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED JANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 9** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: **SEPTEMBER 2015 LATERAL EXTENT OF TOTAL MANGANESE IN BEDROCK GROUNDWATER** | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 10

## LATERAL DISTRIBUTION OF 1,4-DIOXANE IN BEDROCK WELLS




## LEGEND

| | |
|---|---|
| R-3 | BEDROCK WATER SUPPLY WELL |
| L-1 | LEACHATE SAMPLING LOCATION |
| WELL ID | BEDROCK MONITORING WELL |
| | 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA |
| | 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA |
| | LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE |
| | PERIMETER OF LANDFILL (APPROXIMATE) |
| | PROPERTY LINE & RIGHT OF WAY |
| | STREAM |
| | TOWNSHIP LINE |
| N/A | SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED |
| N/S | NOT SAMPLED |
| 19 | CONCENTRATION IN UG/L |
| 50 | ISOCONCENTRATION CONTOUR (UG/L) |

NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED □ANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 10** | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: **SEPTEMBER 2015 LATERAL DISTRIBUTION OF 1,4 - DIOXANE IN BEDROCK GROUNDWATER** | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 11

## VERTICAL DISTRIBUTION OF ARSENIC IN GROUNDWATER CROSS SECTION A-A’

FILL MATERIAL

LANDFILL REFUSE

Outwash: Dense brown, fine to coarse sand and gravel, trace silt, portions of sand and gravel vary widly with location

MARINE DEPOSITS: Medium dense, gray clay and silt to soft gray silt and clay, locally stratified with fine sand.

GLACIAL TILL: Very dense, brown, fine to coarse sand, some fine to coarse gravel, little silt.

CENTRAL SILICIC COMPLEX: Generally consists of moderately hard to hard muscovite-biotite granite, quartz-feldspar granite, mylonite gneiss, and vein quartz. complex likely correlates with the breakfast hill granite and the breakfast hill member of the rye gneiss.

METAMORPHIC ROCKS: Generally consist of soft to hard phyllite, meta-graywacke, quartzite, amphibolie, and schist. These rocks likely correlate with the Rye Gneiss.

CROSS SECTIONS BASED ON SECTION INCLUDED IN 2012 ANNUAL REPORT (PREPARED BY PROVAN & LORBER, INC.)

GENERAL SOIL AND BEDROCK DESCRIPTIONS FROM PLANS PREPARED BY GZA/WESTON, REMEDIAL INVESTIGATION - OCT. 1988

BOTTOM OF REFUSE BASED ON A PLAN PREPARED BY ARIES ENGINEERING, INC. NOV. 1999 MONITORING PLAN REPORT, FIGURE 5, FEBRUARY 2000

BORING LOGS AND WELL CONSTRUCTION DETAILS FROM MULTIPLE SOURCES WERE USED

WELL DESIGNATION (OFFSET DISTANCE AND DIRECTION)

10

GENERALIZED GROUNDWATER POTENTIOMETRIC SURFACE

SCREENED / OPEN INTERVAL

CONCENTRATION IN MG/L

## LEGEND

10 ISOCONCENTRATION CONTOUR MG/L

N/A SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED

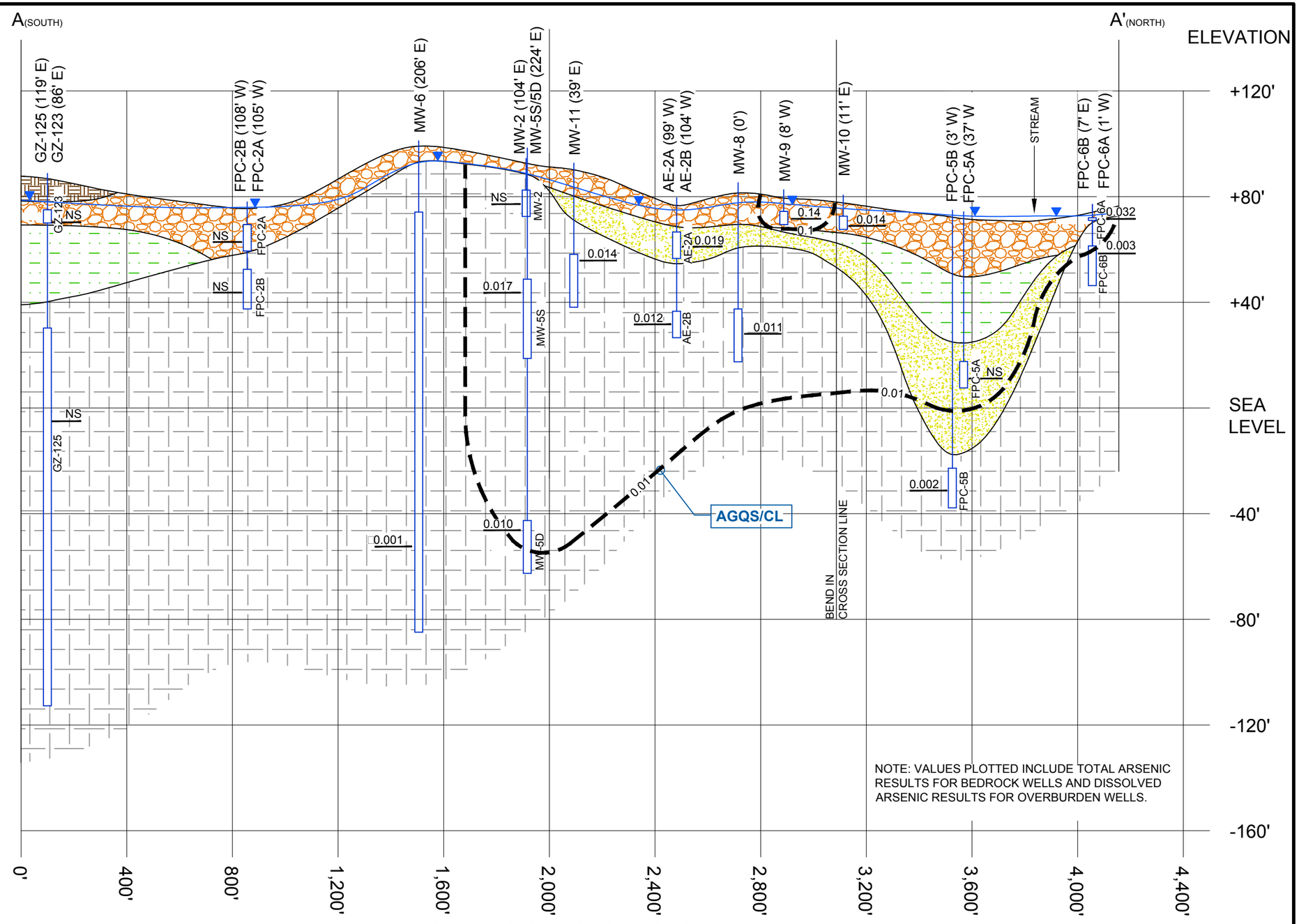
N/S NOT SAMPLED

0 400' 800'

HORIZONTAL SCALE: 1"=400'

0 40' 80'

VERTICAL SCALE: 1"=40'




# GEOLOGICAL CROSS SECTION A-A'

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE<br>NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE | DWG: FIGURE 11 | BY: TND | REV: | DESCRIPTION: | CES INC<br>Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: SEPTEMBER 2015 VERTICAL DISTRIBUTION OF ARSENIC IN GROUNDWATER A-A' | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 12

## VERTICAL DISTRIBUTION OF ARSENIC IN GROUNDWATER CROSS SECTION B-B’

FILL MATERIAL

LANDFILL REFUSE

Outwash: Dense brown, fine to coarse sand and gravel, trace silt, portions of sand and gravel vary widly with location

MARINE DEPOSITS: Medium dense, gray clay and silt to soft gray silt and clay, locally stratified with fine sand.

GLACIAL TILL: Very dense, brown, fine to coarse sand, some fine to coarse gravel, little silt.

CENTRAL SILICIC COMPLEX: Generally consists of moderately hard to hard muscovite-biotite granite, quartz-feldspar granite, mylonite gneiss, and vein quartz. complex likely correlates with the breakfast hill granite and the breakfast hill member of the rye gneiss.

METAMORPHIC ROCKS: Generally consist of soft to hard phyllite, meta-graywacke, quartzite, amphibolie, and schist. These rocks likely correlate with the Rye Gneiss.

CROSS SECTIONS BASED ON SECTION INCLUDED IN 2012 ANNUAL REPORT (PREPARED BY PROVAN & LORBER, INC.)

GENERAL SOIL AND BEDROCK DESCRIPTIONS FROM PLANS PREPARED BY GZA/WESTON, REMEDIAL INVESTIGATION - OCT. 1988

BOTTOM OF REFUSE BASED ON A PLAN PREPARED BY ARIES ENGINEERING, INC. NOV. 1999 MONITORING PLAN REPORT, FIGURE 5, FEBRUARY 2000

BORING LOGS AND WELL CONSTRUCTION DETAILS FROM MULTIPLE SOURCES WERE USED

GENERALIZED GROUNDWATER POTENTIOMETRIC SURFACE

WELL DESIGNATION (OFFSET DISTANCE AND DIRECTION)

10

SCREENED / OPEN INTERVAL

CONCENTRATION IN MG/L

## LEGEND

0.01 — ISOCONCENTRATION CONTOUR (MG/L)

N/A — SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED

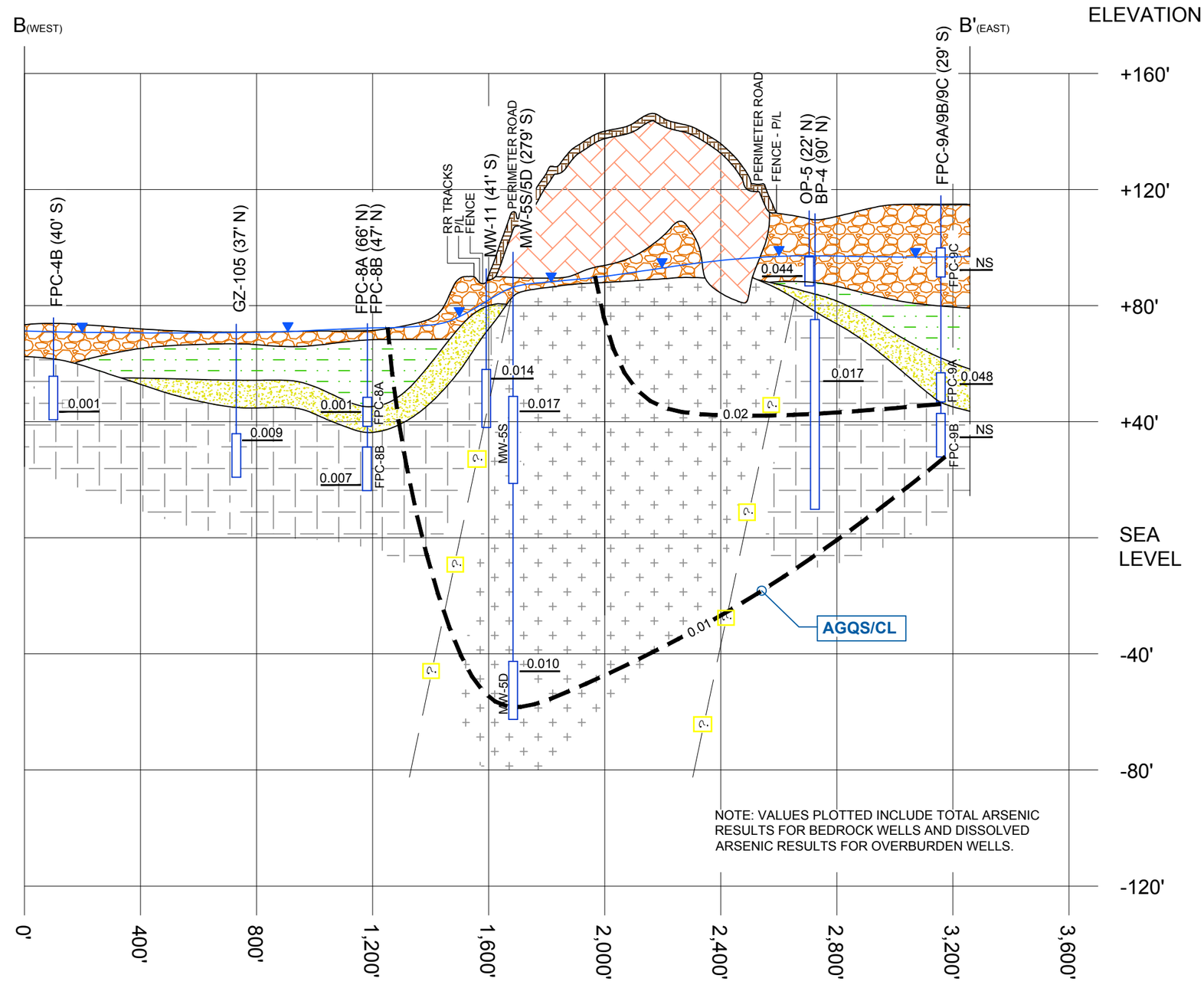
N/S — NOT SAMPLED

0 400' 800'

HORIZONTAL SCALE: 1"=400'

0 40' 80'

VERTICAL SCALE: 1"=40'




NOTE: VALUES PLOTTED INCLUDE TOTAL ARSENIC RESULTS FOR BEDROCK WELLS AND DISSOLVED ARSENIC RESULTS FOR OVERBURDEN WELLS.

## GEOLOGICAL CROSS SECTION B-B'

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE<br>NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE | DWG: FIGURE 12 | BY: TND | REV: | DESCRIPTION: | CES INC<br>Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: SEPTEMBER 2015 VERTICAL DISTRIBUTION OF ARSENIC IN GROUNDWATER B-B' | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 13

## VERTICAL DISTRIBUTION OF MANGANESE IN GROUNDWATER CROSS SECTION A-A’

FILL MATERIAL

LANDFILL REFUSE

Outwash: Dense brown, fine to coarse sand and gravel, trace silt, portions of sand and gravel vary widly with location

MARINE DEPOSITS: Medium dense, gray clay and silt to soft gray silt and clay, locally stratified with fine sand.

GLACIAL TILL: Very dense, brown, fine to coarse sand, some fine to coarse gravel, little silt.

CENTRAL SILICIC COMPLEX: Generally consists of moderately hard to hard muscovite-biotite granite, quartz-feldspar granite, mylonite gneiss, and vein quartz. complex likely correlates with the breakfast hill granite and the breakfast hill member of the rye gneiss.

METAMORPHIC ROCKS: Generally consist of soft to hard phyllite, meta-graywacke, quartzite, amphibolie, and schist. These rocks likely correlate with the Rye Gneiss.

CROSS SECTIONS BASED ON SECTION INCLUDED IN 2012 ANNUAL REPORT (PREPARED BY PROVAN & LORBER, INC.)

GENERAL SOIL AND BEDROCK DESCRIPTIONS FROM PLANS PREPARED BY GZA/WESTON, REMEDIAL INVESTIGATION - OCT. 1988

BOTTOM OF REFUSE BASED ON A PLAN PREPARED BY ARIES ENGINEERING, INC. NOV. 1999 MONITORING PLAN REPORT, FIGURE 5, FEBRUARY 2000

BORING LOGS AND WELL CONSTRUCTION DETAILS FROM MULTIPLE SOURCES WERE USED

WELL DESIGNATION (OFFSET DISTANCE AND DIRECTION)

10

SCREENED / OPEN INTERVAL

CONCENTRATION IN MG/L

GENERALIZED GROUNDWATER POTENTIOMETRIC SURFACE

## LEGEND

0.3 ISOCONCENTRATION CONTOUR (MG/L)

N/A SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED

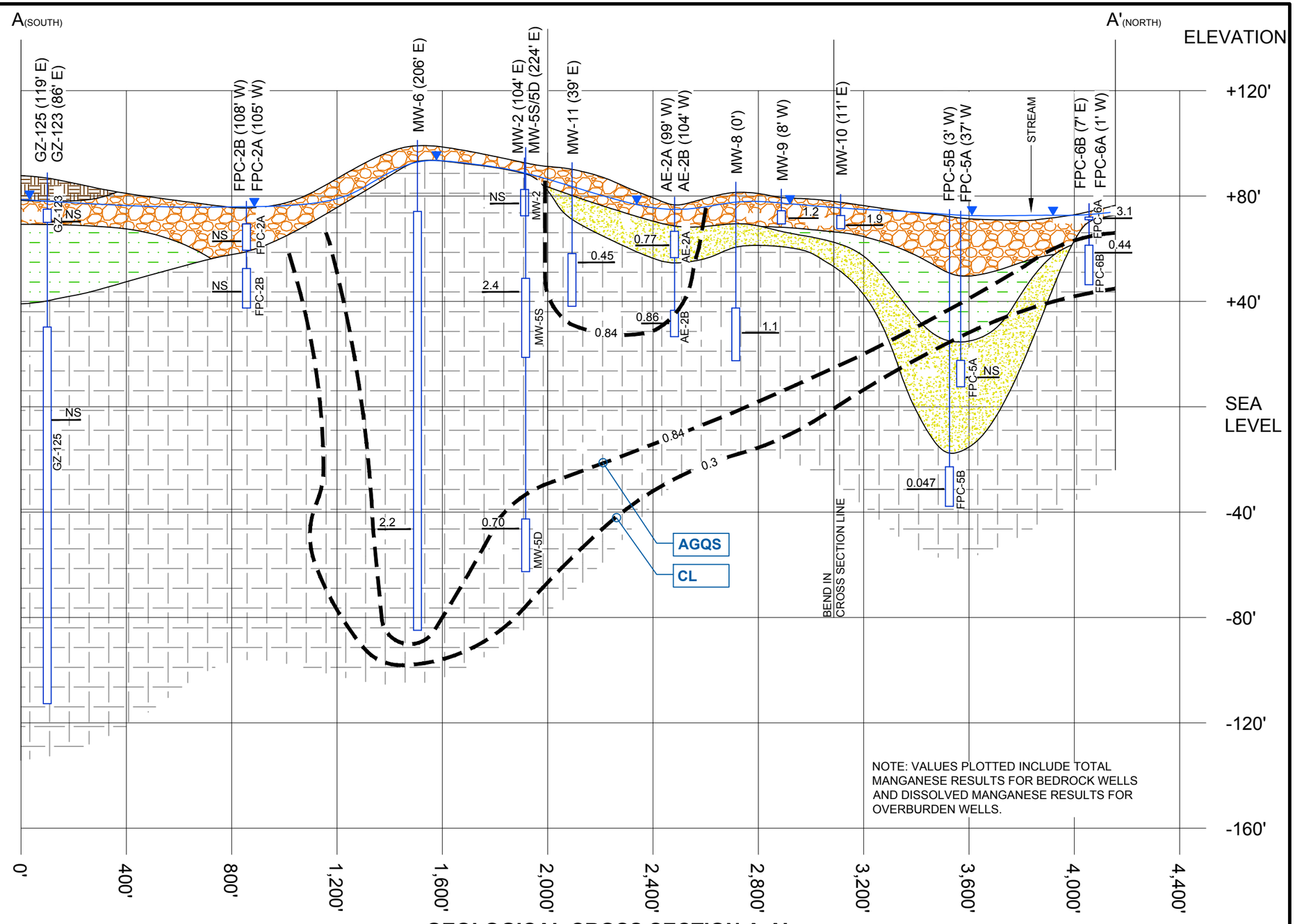
N/S NOT SAMPLED

0 400' 800'

HORIZONTAL SCALE: 1"=400'

0 40' 80'

VERTICAL SCALE: 1"=40'




NOTE: VALUES PLOTTED INCLUDE TOTAL MANGANESE RESULTS FOR BEDROCK WELLS AND DISSOLVED MANGANESE RESULTS FOR OVERBURDEN WELLS.

**GEOLOGICAL CROSS SECTION A-A'**

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE<br>NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE | DWG: FIGURE 13 | BY: TND | REV: | DESCRIPTION: | CES INC<br>Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: SEPTEMBER 2015 VERTICAL DISTRIBUTION OF MANGANESE IN GROUNDWATER A-A' | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 14

## VERTICAL DISTRIBUTION OF MANGANESE IN GROUNDWATER CROSS SECTION B-B’

FILL MATERIAL

LANDFILL REFUSE

Outwash: Dense brown, fine to coarse sand and gravel, trace silt, portions of sand and gravel vary widly with location

MARINE DEPOSITS: Medium dense, gray clay and silt to soft gray silt and clay, locally stratified with fine sand.

GLACIAL TILL: Very dense, brown, fine to coarse sand, some fine to coarse gravel, little silt.

CENTRAL SILICIC COMPLEX: Generally consists of moderately hard to hard muscovite-biotite granite, quartz-feldspar granite, mylonite gneiss, and vein quartz. complex likely correlates with the breakfast hill granite and the breakfast hill member of the rye gneiss.

METAMORPHIC ROCKS: Generally consist of soft to hard phyllite, meta-graywacke, quartzite, amphibolie, and schist. These rocks likely correlate with the Rye Gneiss.

CROSS SECTIONS BASED ON SECTION INCLUDED IN 2012 ANNUAL REPORT (PREPARED BY PROVAN & LORBER, INC.)

GENERAL SOIL AND BEDROCK DESCRIPTIONS FROM PLANS PREPARED BY GZA/WESTON, REMEDIAL INVESTIGATION - OCT. 1988

BOTTOM OF REFUSE BASED ON A PLAN PREPARED BY ARIES ENGINEERING, INC. NOV. 1999 MONITORING PLAN REPORT, FIGURE 5, FEBRUARY 2000

BORING LOGS AND WELL CONSTRUCTION DETAILS FROM MULTIPLE SOURCES WERE USED

WELL DESIGNATION (OFFSET DISTANCE AND DIRECTION)

10

GENERALIZED GROUNDWATER POTENTIOMETRIC SURFACE

SCREENED / OPEN INTERVAL

CONCENTRATION IN MG/L

## LEGEND

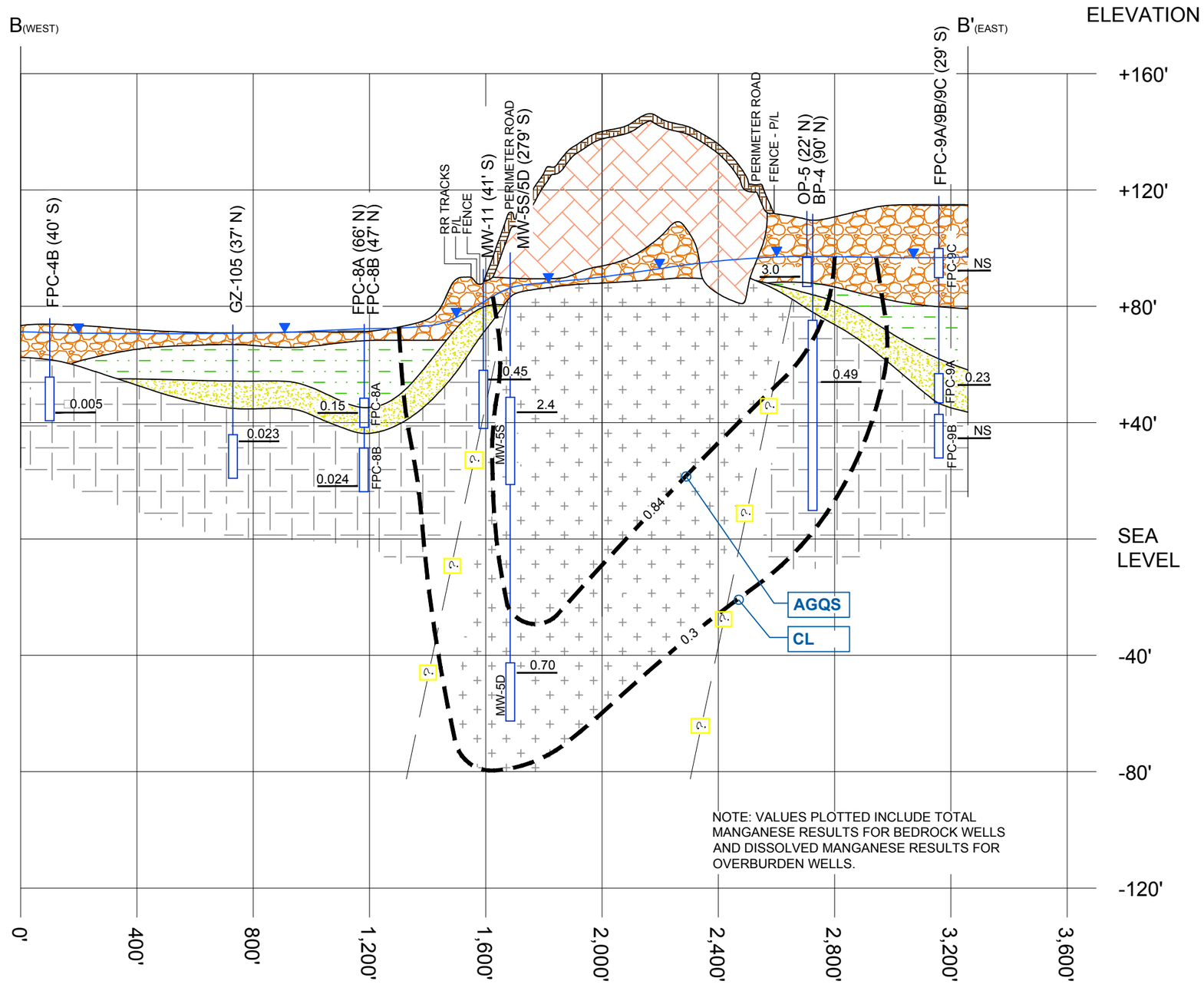
| | |
|---|---|
| 0.01 | ISOCONCENTRATION CONTOUR (MG/L) |
| N/A | SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED |
| N/S | NOT SAMPLED |

0 400' 800'

HORIZONTAL SCALE: 1"=400'

0 40' 80'

VERTICAL SCALE: 1"=40'




NOTE: VALUES PLOTTED INCLUDE TOTAL MANGANESE RESULTS FOR BEDROCK WELLS AND DISSOLVED MANGANESE RESULTS FOR OVERBURDEN WELLS.

# GEOLOGICAL CROSS SECTION B-B'

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE<br>NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE | DWG: FIGURE 14 | BY: TND | REV: | DESCRIPTION: | CES INC<br>Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: SEPTEMBER 2015 VERTICAL DISTRIBUTION OF MANGANESE IN GROUNDWATER B-B' | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 15

## VERTICAL DISTRIBUTION OF 1,4-DIOXANE IN GROUNDWATER CROSS SECTION A-A’

FILL MATERIAL

LANDFILL REFUSE

Outwash: Dense brown, fine to coarse sand and gravel, trace silt, portions of sand and gravel vary widly with location

MARINE DEPOSITS: Medium dense, gray clay and silt to soft gray silt and clay, locally stratified with fine sand.

GLACIAL TILL: Very dense, brown, fine to coarse sand, some fine to coarse gravel, little silt.

CENTRAL SILICIC COMPLEX: Generally consists of moderately hard to hard muscovite-biotite granite, quartz-feldspar granite, mylonite gneiss, and vein quartz. complex likely correlates with the breakfast hill granite and the breakfast hill member of the rye gneiss.

METAMORPHIC ROCKS: Generally consist of soft to hard phyllite, meta-graywacke, quartzite, amphibolie, and schist. These rocks likely correlate with the Rye Gneiss.

CROSS SECTIONS BASED ON SECTION INCLUDED IN 2012 ANNUAL REPORT (PREPARED BY PROVAN & LORBER, INC.)

GENERAL SOIL AND BEDROCK DESCRIPTIONS FROM PLANS PREPARED BY GZA/WESTON, REMEDIAL INVESTIGATION - OCT. 1988

BOTTOM OF REFUSE BASED ON A PLAN PREPARED BY ARIES ENGINEERING, INC. NOV. 1999 MONITORING PLAN REPORT, FIGURE 5, FEBRUARY 2000

BORING LOGS AND WELL CONSTRUCTION DETAILS FROM MULTIPLE SOURCES WERE USED

WELL DESIGNATION (OFFSET DISTANCE AND DIRECTION)

10

GENERALIZED GROUNDWATER POTENTIOMETRIC SURFACE

SCREENED / OPEN INTERVAL

CONCENTRATION IN UG/L

## LEGEND

10 — ISOCONCENTRATION CONTOUR (UG/L)

N/A — SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED

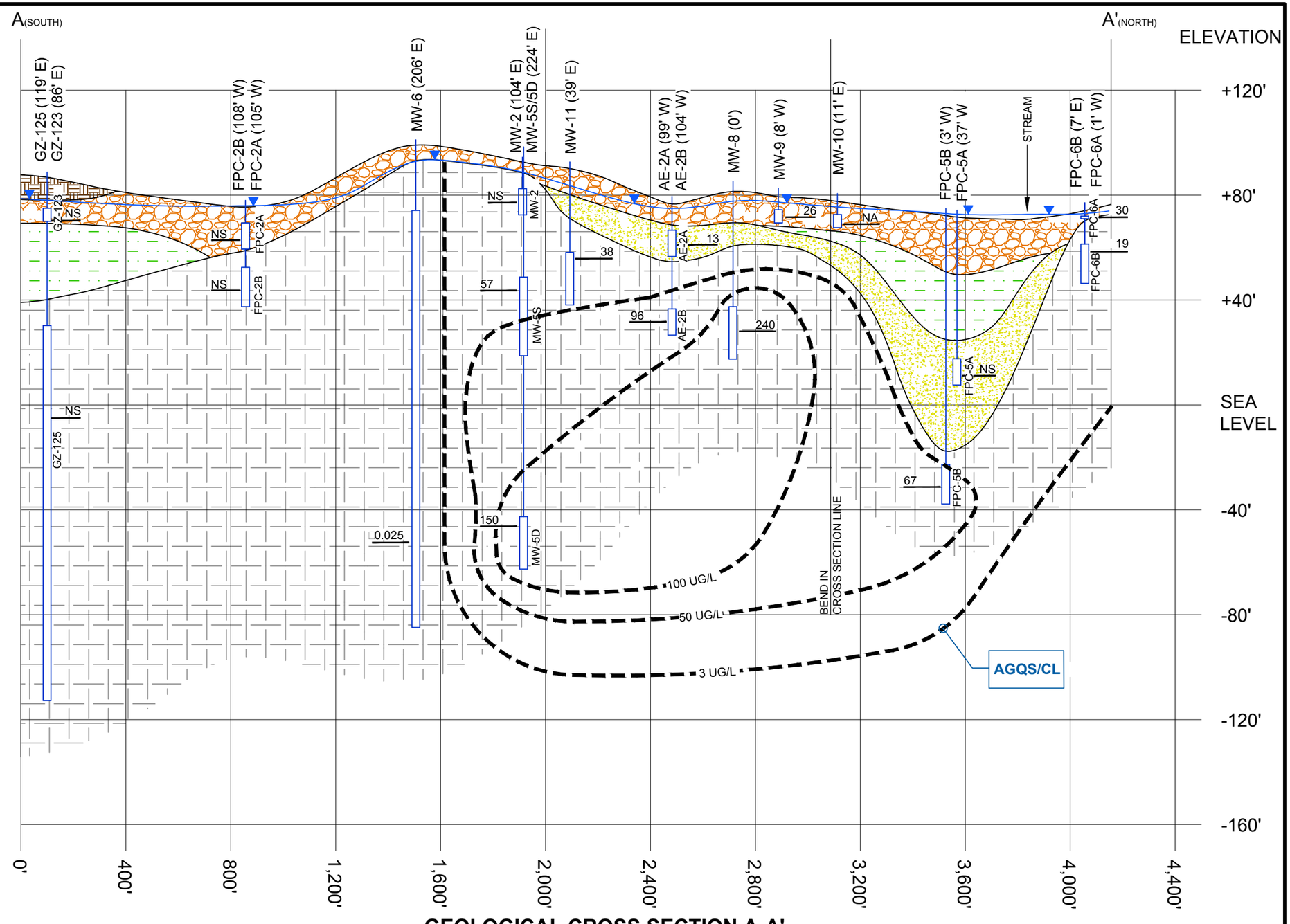
N/S — NOT SAMPLED

0 400' 800'

HORIZONTAL SCALE: 1"=400'

0 40' 80'

VERTICAL SCALE: 1"=40'




GEOLOGICAL CROSS SECTION A-A'

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE<br>NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE | DWG: FIGURE 15 | BY: TND | REV: | DESCRIPTION: | CES INC<br>Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: SEPTEMBER 2015 VERTICAL DISTRIBUTION OF 1,4 - DIOXANE IN GROUNDWATER A-A' | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

## FIGURE 16

## VERTICAL DISTRIBUTION OF 1,4-DIOXANE IN GROUNDWATER CROSS SECTION B-B’

FILL MATERIAL

LANDFILL REFUSE

Outwash: Dense brown, fine to coarse sand and gravel, trace silt, portions of sand and gravel vary widly with location

MARINE DEPOSITS: Medium dense, gray clay and silt to soft gray silt and clay, locally stratified with fine sand.

GLACIAL TILL: Very dense, brown, fine to coarse sand, some fine to coarse gravel, little silt.

CENTRAL SILICIC COMPLEX: Generally consists of moderately hard to hard muscovite-biotite granite, quartz-feldspar granite, mylonite gneiss, and vein quartz. complex likely correlates with the breakfast hill granite and the breakfast hill member of the rye gneiss.

METAMORPHIC ROCKS: Generally consist of soft to hard phyllite, meta-graywacke, quartzite, amphibolie, and schist. These rocks likely correlate with the Rye Gneiss.

CROSS SECTIONS BASED ON SECTION INCLUDED IN 2012 ANNUAL REPORT (PREPARED BY PROVAN & LORBER, INC.)

GENERAL SOIL AND BEDROCK DESCRIPTIONS FROM PLANS PREPARED BY GZA/WESTON, REMEDIAL INVESTIGATION - OCT. 1988

BOTTOM OF REFUSE BASED ON A PLAN PREPARED BY ARIES ENGINEERING, INC. NOV. 1999 MONITORING PLAN REPORT, FIGURE 5, FEBRUARY 2000

BORING LOGS AND WELL CONSTRUCTION DETAILS FROM MULTIPLE SOURCES WERE USED

WELL DESIGNATION (OFFSET DISTANCE AND DIRECTION)

10

SCREENED / OPEN INTERVAL

CONCENTRATION IN UG/L

GENERALIZED GROUNDWATER POTENTIOMETRIC SURFACE

## LEGEND

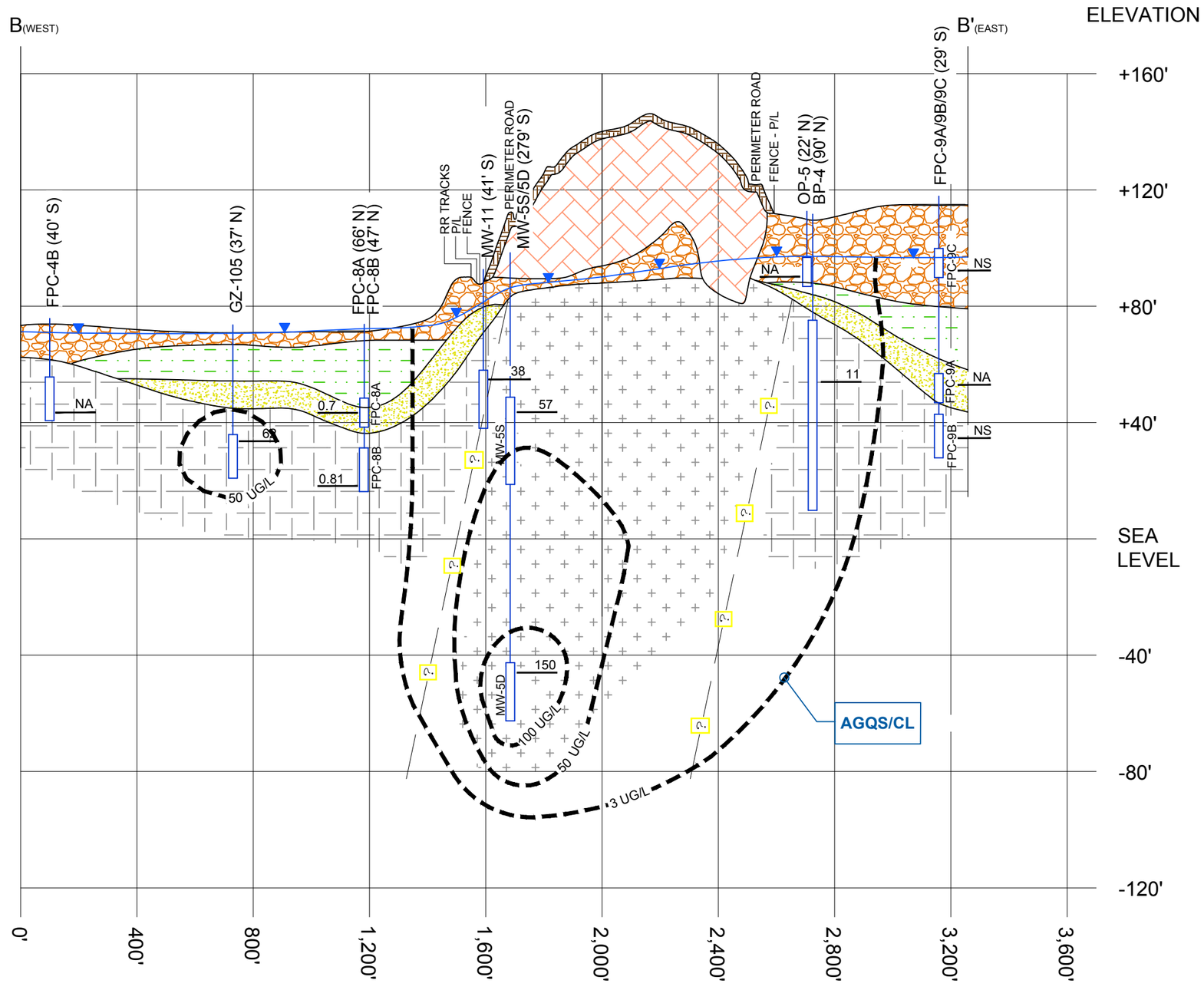
| | |
|---|---|
| 100 | ISOCONCENTRATION CONTOUR (UG/L) |
| N/A | SAMPLE COLLECTED BUT NOT ANALYZED FOR PARAMETER PLOTTED |
| N/S | NOT SAMPLED |

0 400' 800'

HORIZONTAL SCALE: 1"=400'

0 40' 80'

VERTICAL SCALE: 1"=40'




## GEOLOGICAL CROSS SECTION B-B'

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE | DWG: FIGURE 16 | BY: TND | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2016-01-14 | REV DATE: | | |
| SHEET TITLE: SEPTEMBER 2015 VERTICAL DISTRIBUTION OF 1,4 - DIOXANE IN GROUNDWATER B-B' | JN: 10424.005 | APPROVED BY: SLY | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SLY | ISSUE DATE: | | |

# TABLES

# TABLE 1

# GROUNDWATER ELEVATION DATA

**TABLE 1**

Summary of Groundwater Elevation Data
2015 Annual Summary Report
Coakley Landfull Superfund Site
North Hampton, New Hampshire

| MONITORING WELL IDENTIFICATION | Ref. Pt Elev. (FT. NGVD) | Apr-93 GW. EL. FT. | Dec-96 GW. EL. FT. | Apr-97 GW. EL. FT. | Sep-97 GW. EL. FT. | Dec-97 GW. EL. FT. | Jun-98 GW. EL. FT. | Aug-98 GW. EL. FT. | Apr-99 GW. EL. FT. | Aug-99 GW. EL. FT. | Nov-99 GW. EL. FT. | Apr-00 GW. EL. FT. | Aug-00 GW. EL. FT. | Nov-00 GW. EL. FT. | Apr-01 GW. EL. FT. | Aug-01 GW. EL. FT. | Jun-02 GW. EL. FT. | Aug-02 GW. EL. FT. | Aug-03 GW. EL. FT. | Aug-04 GW. EL. FT. | Aug-05 GW. EL. FT. | Aug-06 GW. EL. FT. | Nov-07 GW. EL. FT. | Aug-08 GW. EL. FT. | Aug-09 GW. EL. FT. | Aug-10 GW. EL. FT. | Aug-11 GW. EL. FT. | Aug-12 GW. EL. FT. | Aug-13 GW. EL. FT. | Sep-14 GW. EL. FT. | Sep-15 GW. EL. FT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | 111.70 | | 98.94 | 97.83 | 96.07 | 95.84 | 99.55 | 97.03 | 97.04 | 95.26 | 95.93 | 97.1 | 96.93 | 96.03 | 99.37 | 96.29 | 97.27 | 96.26 | 96.51 | 96.89 | 96.34 | 97.71 | 95.72 | 97.52 | 99.00 | 96.55 | 96.75 | 96.48 | 97.39 | 96.15 | 96.35 |
| MW-2 | 94.54 | | | | | | | | | | | | | | | 86.75 | 89.00 | | | | | | 88.61 | 88.95 | 88.40 | 87.88 | 88.79 | 86.85 | 87.69 | 85.69 | 87.14 |
| MW-4 | 129.12 | 101.52 | | | | | | | 98.41 | 95.94 | 96.78 | 97.92 | 97.61 | 96.65 | 100.33 | 96.88 | 98.01 | 96.99 | 97.07 | 97.35 | 96.71 | 98.12 | 96.17 | 97.98 | 98.43 | 96.93 | 97.20 | 96.90 | 97.75 | 96.49 | 96.72 |
| MW-5S (Note 4) | 101.96 | 93.69 | | | | | | | 91.89 | 87.81 | 90.96 | 91.5 | 91.11 | 91.24 | 92.24 | 89.33 | 91.46 | 88.78 | 88.71 | 90.89 | 88.54 | 91.42 | 89.54 | 91.47 | 90.99 | 89.70 | 89.89 | 89.02 | 90.06 | 88.33 | 88.76 |
| MW-5D (Note 4) | 99.72 | | | | | | | | 91.22 | 87.17 | 90.1 | 90.74 | 89.92 | 90.31 | 91.72 | 88.60 | 90.60 | 88.12 | 89.22 | 89.96 | 88.02 | 89.82 | 88.61 | 90.42 | 90.35 | 88.96 | 89.11 | 88.25 | 89.52 | 87.70 | 87.93 |
| MW-6 | 101.15 | 93.4 | 93.84 | 93.44 | 90.04 | 92.25 | 93.44 | 91.33 | 92.55 | 88.03 | 91.98 | 92.52 | 92.20 | 92.32 | 93.23 | 89.79 | 92.50 | 89.16 | 90.09 | 92.13 | 89.01 | 92.46 | 90.52 | 92.42 | 91.93 | 90.58 | 90.73 | 89.66 | 90.40 | 88.78 | 89.71 |
| MW-8 (Note 4) | 85.02 | | 81.1 | 79.46 | 78.48 | 78.07 | 78.71 | 76.66 | 78.32 | 75.04 | 77.63 | 78.09 | 77.70 | 78.22 | 78.33 | 76.02 | 77.93 | 75.64 | 76.32 | 77.58 | 75.66 | 77.90 | 76.61 | 78.20 | 77.61 | 76.35 | 77.26 | 75.70 | 77.42 | 75.25 | 75.21 |
| MW-9 | 82.62 | | 77.97 | 78.03 | 75.87 | 76.06 | 77.16 | 74.47 | 75.82 | 73.42 | 75.46 | 76.09 | 76.00 | 76.86 | 76.88 | 74.10 | 75.74 | 73.81 | 73.28 | 76.13 | 73.94 | 75.71 | 75.80 | 76.88 | 75.35 | 74.64 | 77.15 | 74.15 | 75.22 | 73.84 | 74.15 |
| MW-10 | 80.60 | | 74.56 | 74.67 | 73.96 | 74.07 | 74.68 | 73.17 | 74.51 | 72.78 | 74.57 | 74.63 | 74.83 | 75.06 | 75.22 | 73.93 | 74.91 | 73.45 | 74.20 | 74.93 | 73.99 | 74.71 | 74.95 | 74.86 | 74.50 | 74.21 | 75.46 | 74.22 | 74.50 | 74.05 | 74.80 |
| MW-11 | 92.70 | | 87.21 | 85.36 | 83.56 | 83.81 | 83.69 | 81.77 | 83.42 | 79.17 | 82.42 | 82.8 | 82.35 | 82.40 | 83.09 | 80.59 | 82.67 | 80.11 | 81.24 | 82.26 | 79.85 | 82.89 | 81.07 | 82.99 | 82.58 | 81.08 | 81.54 | 80.36 | 82.10 | 79.46 | 79.89 |
| OP-2 (Note 4) | 100.00 | 91.44 | 95.86 | 95.4 | | | | 92.85 | 93.62 | 91.03 | 92.39 | 93.37 | 93.27 | 92.75 | 87.25 | 92.00 | 93.49 | 91.85 | 92.26 | 93.05 | 91.94 | 93.80 | 92.28 | 94.04 | 93.98 | 92.50 | 93.17 | 92.52 | 77.42 | 92.28 | 92.53 |
| OP-5 | 112.68 | 94.92 | 99.26 | 98.28 | 96.59 | 96.41 | 100.41 | 100.41 | 97.39 | 95.84 | 96.41 | 97.58 | 97.33 | 96.40 | 107.29 | 97.54 | 97.72 | 96.82 | 96.98 | 97.31 | 96.78 | 98.03 | 96.04 | 97.81 | 98.28 | 96.91 | 97.22 | 96.86 | 97.72 | 96.48 | 96.67 |
| **Operating Unit 2** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | 127.00 | | | | | | | | 97.95 | 95.55 | 96.21 | 97.37 | 97.23 | 96.34 | 99.67 | 96.54 | 97.54 | 96.53 | 96.67 | 97.05 | 97.35 | 98.10 | 95.89 | 97.74 | 98.19 | 96.74 | 97.00 | 96.63 | 97.53 | 96.32 | 96.55 |
| AE-1B | 126.80 | | | | | | | | 97.91 | 95.51 | 96.13 | 97.35 | 97.19 | 96.31 | 99.65 | 96.43 | 97.51 | 96.51 | 96.65 | 97.09 | 96.49 | 98.09 | 95.87 | 97.73 | 97.98 | 96.55 | 96.93 | 96.61 | 97.51 | 96.30 | 96.53 |
| AE-2A | 79.60 | | | | | | | | | 72.49 | 75.74 | 75.71 | 75.67 | 76.03 | 75.69 | 73.58 | 75.66 | 72.98 | 73.75 | 75.19 | 73.18 | 75.70 | 74.69 | 75.81 | 75.29 | 73.76 | 75.00 | 73.52 | 74.70 | 72.92 | 73.32 |
| AE-2B | 79.50 | | | | | | | | | 72.59 | 75.79 | 75.79 | 75.44 | 76.04 | 75.78 | 73.49 | 75.65 | 73.16 | 74.42 | 75.33 | 73.60 | 75.61 | 74.22 | 75.94 | 76.02 | 74.35 | 74.26 | 74.01 | 75.30 | 73.49 | 73.56 |
| AE-3A | 86.10 | | | | | | | | 77.47 | 76.64 | 77.74 | 77.56 | 77.99 | 77.92 | 77.80 | 77.05 | 77.70 | 76.86 | 76.30 | 77.90 | 77.14 | 78.02 | 77.90 | 77.98 | 78.68 | 77.30 | 78.30 | 77.04 | 77.50 | 76.75 | 77.03 |
| AE-3B | 87.30 | | | | | | | | 78.55 | 77.19 | 78.38 | 78.35 | 78.47 | 78.61 | 78.64 | 78.30 | 78.49 | 77.47 | 77.90 | 78.58 | 76.86 | 78.66 | 78.47 | 78.50 | 78.32 | 77.76 | 78.84 | 77.50 | 77.84 | 77.22 | 77.45 |
| AE-4A | 77.20 | | | | | | | | | | | | | | | | | | | 73.47 | 70.75 | 73.75 | 72.91 | 73.10 | 73.20 | 71.49 | 73.10 | 70.80 | 72.29 | 70.42 | 71.20 |
| AE-4B | 77.50 | | | | | | | | | | | | | | | | | | | 73.42 | 70.51 | 73.30 | 72.28 | 73.61 | 73.01 | 71.10 | 72.18 | 70.58 | 72.12 | 70.26 | 70.55 |
| FPC-2A | 78.40 | | | | | | | | | | | 75.69 | 76.70 | 76.98 | NR | | 76.66 | 78.40 | 76.24 | 76.31 | 75.66 | 76.32 | 75.90 | 76.30 | 76.12 | 75.62 | 75.98 | 75.41 | 75.89 | 75.02 | 75.36 |
| FPC-2B | 77.98 | | | | | | | | | | | 77.47 | 77.30 | 77.71 | 77.78 | | 77.38 | 76.37 | 76.81 | 77.28 | 76.45 | 77.30 | 76.90 | 77.46 | 77.26 | 76.45 | 74.94 | 76.51 | 75.22 | 76.24 | 75.18 |
| FPC-4B | 75.83 | 71.83 | | | | | | | | | | | | | | | | | 69.96 | 71.58 | 68.21 | 71.63 | 70.95 | 71.81 | 71.24 | 69.80 | 71.01 | 69.51 | 70.43 | 68.98 | 69.76 |
| FPC-5A | 74.30 | 75.01 | 74.44 | 74.44 | 73.94 | | 74.44 | 73.29 | 74.14 | 72.2 | 73.93 | 73.9 | 73.98 | 74.18 | 74.14 | 73.02 | 73.10 | 73.03 | 73.10 | 74.30 | 72.18 | 73.50 | 73.50 | 73.73 | 73.37 | 72.73 | 72.91 | 72.05 | 72.11 | | |
| FPC-5B | 74.90 | 74.85 | 74.81 | 74.81 | 73.91 | 74.21 | 74.81 | 73.3 | 74.6 | 72.38 | 74.48 | 74.25 | 74.60 | 74.77 | 74.70 | 73.43 | 70.96 | 73.15 | 74.23 | 74.40 | 73.19 | 74.66 | 74.50 | 74.85 | 74.46 | 73.74 | 74.33 | 72.95 | 73.64 | 72.90 | 73.39 |
| FPC-6A (Note 5) | 79.20 | 73.23 | | | | | | | 72.74 | | 72.84 | 72.85 | 72.85 | 73.11 | 73.01 | | 72.65 | | | 75.03 | 72.91 | 75.03 | 74.58 | 75.22 | 74.42 | 70.88 | 71.87 | 70.77 | 71.22 | 70.12 | 70.52 |
| FPC-6B | 77.10 | 73.20 | | | | | | | 72.81 | 69.86 | 72.94 | | 72.09 | 73.21 | 73.14 | 70.88 | 72.33 | 70.30 | 71.94 | 70.32 | 68.37 | 70.47 | 70.19 | 72.93 | 72.35 | 71.26 | 72.35 | 71.06 | 71.60 | 70.49 | 71.24 |
| FPC-7A | 82.08 | 81.63 | | | | | | | 81.36 | | | | | | | | | | 80.12 | 80.99 | 80.03 | 81.46 | 81.30 | 81.49 | 81.16 | 80.39 | 81.10 | 80.20 | 80.73 | 79.78 | 80.46 |
| FPC-7B | 82.33 | 80.53 | | | | | | | 80.93 | | | | | | | | | | 79.82 | 80.72 | 79.69 | 81.02 | 79.43 | 81.20 | 80.87 | 80.14 | 80.82 | 79.95 | 80.42 | 79.54 | 80.20 |
| FPC-8A | 73.80 | 73.85 | 73.67 | 73.65 | 71.49 | 73.15 | 73.49 | 71.01 | 73.04 | 69.23 | 72.93 | 72.93 | 72.88 | 73.34 | 73.20 | 71.06 | 72.99 | 70.36 | 71.26 | 72.86 | 70.63 | 73.01 | 72.20 | 73.09 | 72.73 | 71.62 | 72.46 | 71.31 | 72.60 | 70.75 | 71.32 |
| FPC-8B | 73.60 | 72.83 | 73.52 | 73.49 | 71.44 | 73.04 | 73.33 | 70.84 | 72.88 | 69.14 | 72.77 | 72.78 | 72.63 | 73.18 | 72.99 | 70.93 | 72.79 | 70.07 | 71.22 | 72.69 | 70.58 | 72.83 | 72.03 | 72.00 | 72.68 | 71.10 | 72.28 | 71.16 | 72.40 | 70.61 | 71.19 |
| FPC-9A | 117.57 | 99.87 | | | | | | | 97.32 | 95.02 | 95.72 | 96.92 | 96.75 | 95.90 | 99.22 | 96.25 | 97.05 | 96.02 | 96.27 | 96.40 | 95.83 | 97.59 | 95.48 | 97.44 | 97.90 | 96.37 | 96.58 | 96.18 | 97.23 | 95.98 | 96.18 |
| FPC-9B | 117.87 | 99.99 | | | | | | | 97.81 | 95.07 | 95.79 | 96.98 | 96.83 | 95.99 | 99.28 | 96.15 | 97.08 | 96.11 | 96.37 | | | | 95.14 | 97.41 | 97.93 | 96.42 | 96.96 | 96.21 | 97.22 | 96.03 | 96.18 |
| FPC-9C | 117.75 | 100.45 | | | | | | | 97.87 | 95.77 | 96.33 | | 97.25 | 96.50 | 99.62 | | 97.52 | | 96.75 | | | | 96.08 | 97.62 | 98.10 | 96.75 | 96.65 | 96.78 | 97.69 | 96.53 | 96.84 |
| FPC-11A | 117.95 | 100.4 | | | | | | | 97.7 | | | | | | | | | | 96.65 | 97.01 | 96.51 | 97.71 | 95.81 | 97.58 | 97.95 | 96.50 | 96.68 | 96.38 | 97.45 | 96.09 | 96.36 |
| FPC-11B | 117.90 | 96.5 | | | | | | | 97.74 | | | | | | | | | | 96.70 | 96.90 | 96.34 | 97.69 | 95.54 | 97.57 | 97.89 | 96.56 | 97.10 | 96.37 | 97.30 | 96.07 | 96.29 |
| FPC-11C (Note 6) | 118.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | 96.58 | 97.44 | 96.23 | 96.82 |
| GZ-105 | 73.60 | 66.42 | | | | | | | 70.86 | 67.46 | 70.77 | 70.78 | 69.82 | 71.16 | 71.02 | 69.31 | 70.83 | 68.45 | 69.71 | 71.09 | 69.28 | 70.91 | 70.68 | 71.05 | 70.78 | 69.83 | 70.71 | 69.47 | 70.70 | 68.98 | 70.03 |
| GZ-123 | 87.49 | | | | | | | | | | | | | | | | | | | | | | 76.91 | 77.90 | 78.28 | 77.05 | 77.42 | 77.01 | 77.24 | 76.76 | 77.36 |
| GZ-125 | 88.77 | | | | | | | | | | | | | | | | | | | | | | 80.35 | 81.73 | 81.87 | 80.36 | 80.32 | 80.07 | 80.79 | 79.76 | 80.03 |

**NOTES:**

1. Shaded data denotes a bedrock monitoring well.
2. A blank indicates data was not collected.
3. GW.EL. indicates groundwater elevation and FT. indicates measurements were in feet.
4. Summit determined that Reference Point Elevations for MW-5S, MW-5D, MW-8 and OP-2 were incorrect for data collected since 1999. Correct measuring point elevations were identified on an as built survey plan prepared by Richard D. Bartlett and Associates, Inc. dated September 1998. Surveyed "top of cap" elevations for MW-5S, MW-5D and MW-8 were adjusted to top of PVC using field measurements (significant settling is not likely at these wells as they are 2-inch diameter wells install in 6 inch diamter boreholes through 6-inch diameter metal casings. A PVC casing elevation was listed for OP-2. Groundwater elevation data since April 1999 adjustments are as follows: MW-5S (+3.54 ft), MW-5D (+1.33 ft), MW-8 (-0.28 ft) and OP-2 (+1.51 ft).
5. A replacement well (point) for FPC-6A was installed in August 2003, due to insufficient water for sampling for extended periods of time. However, the reference point elevation was not updated at that time. Therefore, groundwater elevations presented in previous monitoring reports for FPC-6A since August 2003 were incorrect. Summit surveyed the FPC-6A reference point elevation in December 2013 relative to the FPC-6B reference point elevation and determined that the measure point elevation for FPC-6A is 79.20 feet (not 77.00 feet, as identifed in previous reports). Groundwater elevations at FPC-6A since August 2004 were corrected by +2.20 feet. In addition, the FPC-6A screened interval was updated based on well depth (9.97 feet), stickup (5.54 feet), and an assumed 1 foot screen interval.
6. FPC-11C: Well casing was modified during road box repairs at FPC-11A/B/C on 1/10/2014 (Summit Environmental Consultants). Top of PVC casing was resurveyed relative to FPC-11A/B measuring points on 2/27/2014. Original measuring point elevation was 118.04 feet. New measuring point elevation is 118.10

## TABLE 2

## WELL DEPTH COMPARISON

**TABLE 2**
**WELL DEPTH COMPARISON**
**COAKLEY LANDFILL SUPERFUND SITE**
**NORTH HAMPTON, NEW HAMPSHIRE**

| Well ID | Measuring Point Elevation (ft NGVD) | Adjusted Well Depths Based on Well Depth and Stickup (ft from Measuring Point) | Screen Length (in feet) | Screened Interval (ft from Measuring Point) | | August 2012 Measured Well Depth from 2012 (in ft from Measuring Point) | August 2015 Measured Well Depth (in ft from Measuring Point) | Amount of Sediment in Well |
|---|---|---|---|---|---|---|---|---|
| | | | | Upper | Lower | | | |
| **Operating Unit 1 Wells** | | | | | | | | |
| BP-4 | 111.70 | 101.78 | 65.4 | 36.4 | 101.8 | 101.56 | 101.8 | 0.0 |
| MW-2 | 94.54 | 21.74 | 10 | 11.7 | 21.7 | NM | 21.8 | 0.0 |
| MW-4 | 129.12 | 40.12 | 10 | 30.1 | 40.1 | 39.22 | 39.2 | 0.9 |
| MW-5D | 99.72 | 165.64 | 20 | 141.3 | 161.3 | 161.32 | 161.7 | -0.4 |
| MW-5S | 101.96 | 80.66 | 30 | 53.0 | 83.0 | 83.02 | 83.5 | -0.5 |
| MW-6 | 101.15 | 186.15 | 159 | 27.2 | 186.2 | 171 | 170.9 | 15.3 |
| MW-8 | 85.02 | 67.59 | 20 | 47.5 | 67.5 | 67.51 | 67.6 | -0.1 |
| MW-9 | 82.60 | 13.00 | 5 | 8.0 | 13.0 | 12.46 | 12.5 | 0.5 |
| MW-10 | 80.60 | 12.67 | 5 | 7.7 | 12.7 | 12.17 | 12.1 | 0.6 |
| MW-11 | 92.70 | 53.80 | 20 | 33.8 | 53.8 | 54.85 | 54.7 | -0.9 |
| OP-2 | 100.00 | 14.00 | 5 | 11.2 | 16.2 | 16.84 | 16.9 | -0.7 |
| OP-5 | 112.68 | 25.84 | 10 | 15.8 | 25.8 | 25.78 | 25.7 | 0.1 |
| **Operating Unit 2 Wells** | | | | | | | | |
| AE-1A | 127.00 | 67.00 | 10 | 56.0 | 66.0 | 66.15 | 66.1 | -0.1 |
| AE-1B | 126.80 | 87.30 | 10 | 76.8 | 86.8 | 87.69 | 87.7 | -0.9 |
| AE-2A*** | 79.60 | 22.63 | 10 | 12.6 | 22.6 | 22.55 | 22.6 | 0.1 |
| AE-2B*** | 79.50 | 52.46 | 10 | 42.5 | 52.5 | 52.8 | 52.8 | -0.4 |
| AE-3A* | 86.10 | 20.00 | 10* | ??* | 20* | 20.06 | 20.1 | #VALUE! |
| AE-3B | 87.30 | 43.40 | 12 | 31.4 | 43.4 | 43.02 | 43.1 | 0.3 |
| AE-4A | 77.20 | 17.25 | 10 | 7.3 | 17.3 | 16.05 | 16.6 | 0.7 |
| AE-4B | 77.50 | 46.70 | 10 | 36.7 | 46.7 | 46.1 | 46.1 | 0.6 |
| FPC-2A | 78.40 | 18.80 | 10 | 8.8 | 18.8 | 18.81 | 18.8 | 0.0 |
| FPC-2B | 77.98 | 40.38 | 15 | 25.1 | 40.1 | 40.01 | 40.3 | -0.2 |
| FPC-4B | 75.83 | 35.83 | 15 | 20.3 | 35.3 | 35.45 | 35.4 | -0.1 |
| FPC-5A** | 74.30 | 72.84 | 10 | 56.8** | 66.8** | 25.76** | Obstructed | Obstructed |
| FPC-5B | 74.90 | 113.11 | 15 | 97.8 | 112.8 | 113.56 | 113.4 | -0.6 |
| FPC-6A | 79.20 | 10.04 | 1 | 9.0 | 10.0 | 9.97 | 10.4 | -0.3 |
| FPC-6B | 77.10 | 30.99 | 15 | 15.5 | 30.5 | 30.2 | 30.2 | 0.3 |
| FPC-7A | 82.08 | 24.08 | 5 | 18.8 | 23.8 | 23.95 | 24.0 | -0.2 |
| FPC-7B | 82.33 | 47.43 | 15 | 32.2 | 47.2 | 46.9 | 47.0 | 0.3 |
| FPC-8A | 73.80 | 35.10 | 10 | 25.1 | 35.1 | 33.87 | 33.9 | 1.2 |
| FPC-8B | 73.60 | 57.94 | 15 | 42.2 | 57.2 | 57.45 | 57.7 | -0.4 |
| FPC-9A | 117.57 | 70.37 | 10 | 60.4 | 70.4 | 68.35 | 68.4 | 1.9 |
| FPC-9B | 117.87 | 89.47 | 15 | 74.5 | 89.5 | NM | 89.5 | 0.0 |
| FPC-9C | 117.75 | 27.35 | 10 | 17.4 | 27.4 | NM | 27.7 | -0.4 |
| FPC-11A | 117.95 | 51.59 | 5 | 46.6 | 51.6 | 50.41 | 50.4 | 1.2 |
| FPC-11B | 117.90 | 72.45 | 15 | 57.5 | 72.5 | 70.7 | 71.3 | 1.2 |
| FPC-11C | 118.10 | 32.71 | 15 | 17.7 | 32.7 | 32.12 | 31.8 | 0.9 |
| GZ-105 | 73.60 | 53.76 | 15 | 37.8 | 52.8 | 51.99 | 52.1 | 0.7 |
| GZ-123 | 87.49 | 17.89 | 5 | 12.9 | 17.9 | 17.58 | 17.4 | 0.5 |
| GZ-125 | 88.77 | 202.27 | 143 | 59.3 | 202.3 | 192.36 | 201.3 | 1.0 |

**TABLE NOTES**

1. ft bgs = feet below ground surface
2. ft NGVD = feet National Geodetic Vertical Datum
3. NM = Not Measured
4. Well depths relative to measuring point measured in August 2012 and listed in 2012 Annual Report (Provan and Lorber)

* AE-3A well screen interval not specifically listed on boring log (well construction log for AE-3A is the same as AE-3B). Assume 10 foot

** FPC-5A is obstructed with sediment and the well annulus seal is compromised. The well will be abandoned and a replace well will be in

# TABLE 3

# SUMMARY OF OU-1 AND OU-2 GROUNDWATER ANALYTICAL RESULTS

**TABLE 3**

Summary of September 2015 Groundwater Analytical Data

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

| OPERABLE UNIT 1 (OU-1) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Point ID** | | | **MW-4** | **MW-4-DUP** | **MW-5D** | **MW-5S** | **MW-6** | **MW-8** | **MW-9** | **MW-10** | **MW-11** | **OP-2** | **OP-5** | **BP-4** | **# of Exceedances** | |
| **Monitored Zone / Unit** | **EPA** | **NHDES** | Till | Till | DBR | SBR | OBH-BR | SBR | Outwash | Outwash | SBR | Outwash | Outwash | OBH-BR | **EPA** | **NHDES** |
| **Date of Sample Collection** | **CL** | **AGQS** | 9/16/15 | 9/16/15 | 9/16/15 | 9/16/15 | 9/16/15 | 9/17/15 | 9/16/15 | 9/16/15 | 9/17/15 | 9/15/15 | 9/15/15 | 9/15/15 | **CL** | **AGQS** |
| **VOLATILE ORGANIC COMPOUNDS BY 8260B - (ug/L)** | | | | | | | | | | | | | | | | |
| 1,2,4-Trimethylbenzene | --- | 330 | N/A | N/A | 1 U | 1 U | 1 U | 1 U | N/A | N/A | 1 U | N/A | N/A | N/A | --- | 0 |
| 1,2-Dichloropropane | 5 | 5 | N/A | N/A | 2 U | 2 U | 2 U | 2 U | N/A | N/A | 2 U | N/A | N/A | N/A | 0 | 0 |
| 1,4-Dichlorobenzene | --- | 75 | N/A | N/A | 1 U | 1 | 1 U | 1 U | N/A | N/A | 1 U | N/A | N/A | N/A | --- | 0 |
| 2-Butanone(MEK) | 200 | 4000 | N/A | N/A | 10 U | 10 U | 10 U | 10 U | N/A | N/A | 10 U | N/A | N/A | N/A | 0 | 0 |
| Benzene | 5 | 5 | N/A | N/A | 2 | 2 | 1 U | 3 | N/A | N/A | 2 | N/A | N/A | N/A | 0 | 0 |
| Chlorobenzene | 100 | 100 | N/A | N/A | 2 U | 2 U | 2 U | 3 | N/A | N/A | 2 U | N/A | N/A | N/A | 0 | 0 |
| Chloroethane | --- | --- | N/A | N/A | 34 | 5 U | 5 U | 13 | N/A | N/A | 5 U | N/A | N/A | N/A | --- | --- |
| Diethyl Ether | --- | 1400 | N/A | N/A | 98 | 22 | 5 U | 76 | N/A | N/A | 13 | N/A | N/A | N/A | --- | 0 |
| IsoPropylbenzene | --- | 800 | N/A | N/A | 1 U | 1U | 1 U | 1 U | N/A | N/A | 1 U | N/A | N/A | N/A | --- | 0 |
| Methyl-t-butyl ether(MTBE) | --- | 13 | N/A | N/A | 5 U | 5 U | 5 U | 5 U | N/A | N/A | 5 U | N/A | N/A | N/A | --- | 0 |
| m&p-Xylene | --- | 10000^ | N/A | N/A | 1 U | 1 U | 1 U | 1 U | N/A | N/A | 1 | N/A | N/A | N/A | --- | 0 |
| o-Xylene | --- | 10000^ | N/A | N/A | 1 U | 1 U | 1 U | 1 U | N/A | N/A | 1 U | N/A | N/A | N/A | --- | 0 |
| tert-Butyl Alcohol (TBA) | --- | 40 | N/A | N/A | 40 | 30 U | 30 U | 40 | N/A | N/A | 30 U | N/A | N/A | N/A | --- | 0 |
| Tetrachloroethene | 3.5 | 5 | N/A | N/A | 2 U | 2 U | 2 U | 2 U | N/A | N/A | 2 U | N/A | N/A | N/A | 0 | 0 |
| Tetrahydrofuran(THF) | 154 | 600 | N/A | N/A | 50 | 20 | 10 U | 140 | N/A | N/A | 10 | N/A | N/A | N/A | 0 | 0 |
| trans-1,2-Dichloroethene | 100 | 100 | N/A | N/A | 2 U | 2 U | 2 U | 2 U | N/A | N/A | 2 U | N/A | N/A | N/A | 0 | 0 |
| **1,4-DIOXANE BY 8260B SIM - (ug/L)** | | | | | | | | | | | | | | | | |
| 1,4-Dioxane | 3 | 3 | 8.5 | 8.6 | 150 | 57 | 0.25 U | 240 | 26 | N/A | 38 | 1.6 | N/A | 11 | 8 | 8 |
| **DISSOLVED METALS BY 200.8 - (mg/L)** | | | | | | | | | | | | | | | | |
| Dissolved Antimony | 0.006 | 0.006 | 0.001 U | 0.001 U | N/A | N/A | N/A | N/A | 0.001 U | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | 0 | 0 |
| Dissolved Arsenic | 0.01 | 0.01 | **0.05J** | **0.072J** | N/A | N/A | N/A | N/A | **0.14** | **0.014** | N/A | **0.22** | **0.044** | N/A | 4 | 4 |
| Dissolved Barium | --- | 2 | 0.066 | 0.058 | N/A | N/A | N/A | N/A | 0.095 | 0.055 | N/A | 0.024 | 0.02 | N/A | --- | 0 |
| Dissolved Beryllium | 0.004 | 0.004 | 0.001 U | 0.001 U | N/A | N/A | N/A | N/A | 0.001 U | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | 0 | 0 |
| Dissolved Calcium | --- | --- | 70 | 78 | N/A | N/A | N/A | N/A | 77 | 44 | N/A | 26 | 13 | N/A | --- | --- |
| Dissolved Chromium | 0.05 | 0.1 | 0.001 U | 0.001 U | N/A | N/A | N/A | N/A | 0.001 | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | 0 | 0 |
| Dissolved Iron | --- | --- | 20 | 19 | N/A | N/A | N/A | N/A | 45 | 24 | N/A | 36 | 18 | N/A | --- | --- |
| Dissolved Lead | 0.015 | 0.015 | 0.001 U | 0.001 U | N/A | N/A | N/A | N/A | 0.001 U | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | 0 | 0 |
| Dissolved Magnesium | --- | --- | 18 | 17 | N/A | N/A | N/A | N/A | 26 | 14 | N/A | 8.8 | 3.9 | N/A | --- | --- |
| Dissolved Manganese | 0.3 | 0.84 | **0.9** | **1** | N/A | N/A | N/A | N/A | **1.2** | **1.9** | N/A | **1** | **3** | N/A | 6 | 6 |
| Dissolved Nickel | 0.1 | 0.1 | 0.009J | 0.006J | N/A | N/A | N/A | N/A | 0.007 | 0.004 | N/A | 0.01 | 0.014 | N/A | 0 | 0 |
| Dissolved Potassium | --- | --- | 27 | 24 | N/A | N/A | N/A | N/A | 17 | 12 | N/A | 18 | 2.5 | N/A | --- | --- |
| Dissolved Sodium | --- | --- | 26 | 22 | N/A | N/A | N/A | N/A | 70 | 59 | N/A | 17 | 9 | N/A | --- | --- |
| Dissolved Vanadium | 0.26 | --- | 0.005 U | 0.005 U | N/A | N/A | N/A | N/A | 0.005 U | 0.005 U | N/A | 0.005 U | 0.005 U | N/A | 0 | --- |
| **TOTAL METALS BY 200.8** | | | | | | | | | | | | | | | | |
| Total Antimony | 0.006 | 0.006 | N/A | N/A | 0.001 U | 0.001 U | 0.001 U | 0.001 U | N/A | N/A | 0.001 U | N/A | N/A | 0.001 U | 0 | 0 |
| Total Arsenic | 0.01 | 0.01 | N/A | N/A | 0.01 | **0.017** | 0.001 U | **0.011** | N/A | N/A | **0.014** | N/A | N/A | **0.017** | 4 | 4 |
| Total Barium | --- | 2 | N/A | N/A | 0.099 | 0.12 | 0.006 | 0.17 | N/A | N/A | 0.067 | N/A | N/A | 0.03 | --- | 0 |
| Total Beryllium | 0.004 | 0.004 | N/A | N/A | 0.001 U | 0.001 U | 0.001 U | 0.001 U | N/A | N/A | 0.001 U | N/A | N/A | 0.001 U | 0 | 0 |
| Total Calcium | --- | --- | N/A | N/A | 28 | 26 | 16 | 26 | N/A | N/A | 18 | N/A | N/A | 34 | --- | --- |
| Total Chromium | 0.05 | 0.1 | N/A | N/A | 0.001 U | 0.001 U | 0.001 U | 0.001 U | N/A | N/A | 0.001 U | N/A | N/A | 0.001 U | 0 | 0 |
| Total Iron | --- | --- | N/A | N/A | 13 | 11 | 2.2 | 4 | N/A | N/A | 13 | N/A | N/A | 16 | --- | --- |
| Total Lead | 0.015 | 0.015 | N/A | N/A | 0.001 U | 0.001 U | 0.001 U | 0.001 U | N/A | N/A | 0.001 U | N/A | N/A | 0.001 U | 0 | 0 |
| Total Magnesium | --- | --- | N/A | N/A | 26 | 14 | 7 | 29 | N/A | N/A | 15 | N/A | N/A | 17 | --- | --- |
| Total Manganese | 0.3 | 0.84 | N/A | N/A | **0.7** | **2.4** | **2.2** | **1.1** | N/A | N/A | **0.45** | N/A | N/A | **0.49** | 6 | 3 |
| Total Nickel | 0.1 | 0.1 | N/A | N/A | 0.006 | 0.008 | 0.003 | 0.016 | N/A | N/A | 0.006 | N/A | N/A | 0.005 | 0 | 0 |
| Total Potassium | --- | --- | N/A | N/A | 17 | 14 | 1.9 | 11 | N/A | N/A | 8.4 | N/A | N/A | 15 | --- | --- |
| Total Sodium | --- | --- | N/A | N/A | 140 | 76 | 15 | 180 | N/A | N/A | 74 | N/A | N/A | 66 | --- | --- |
| Total Vanadium | 0.26 | --- | N/A | N/A | 0.005 U | 0.005 U | 0.005 U | 0.005 U | N/A | N/A | 0.005 U | N/A | N/A | 0.005 U | 0 | --- |
| **FIELD PARAMETERS** | | | | | | | | | | | | | | | | |
| Dissolved Oxygen (mg/l) | --- | --- | N/A | N/A | 1.3 | 1.4 | 1.1 | 1 | 1.7 | 1.3 | 0.9 | 0.9 | 2.1 | 1.7 | --- | --- |
| Oxidation Reduction Potential (mV) | --- | --- | N/A | N/A | -170 | -129 | 78 | -187 | -54 | -86 | -144 | -77 | -28 | -173 | --- | --- |
| pH (standard units) | --- | --- | N/A | N/A | 7.2 | 7 | 6.1 | 7.6 | 6.4 | 6.5 | 7 | 6.2 | 5.9 | 7 | --- | --- |
| Specific Conductance (us/cm) | --- | --- | N/A | N/A | 1394 | 851 | 293 | 1274 | 1249 | 722 | 593 | 690 | 256 | 823 | --- | --- |
| Temperature (degrees Celcius) | --- | --- | N/A | N/A | 16 | 16 | 15 | 17 | 16 | 16 | 16 | 16 | 14 | 17 | --- | --- |
| Turbidity (NTU) | --- | --- | N/A | N/A | 11 | 6 | <5 | 7 | 12 | 7 | 9 | <5 | < 5 | <5 | --- | --- |

**TABLE 3**

Summary of September 2015 Groundwater Analytical Data

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

| OPERABLE UNIT 2 (OU-2) | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sampling Point ID** | | | **AE-1A** | **AE-1B** | **AE-2A** | **AE-2B** | **AE-3A** | **AE-3A-DUP** | **AE-3B** | **AE-4A** | **AE-4B** | **FPC-4B** | **FPC-5B** | **FPC-6A** | **FPC-6B** | **FPC-7A** | **FPC-7B** | **FPC-8A** | **FPC-8B** | **FPC-9A** | **FPC-11A** | **FPC-11B** | **GZ-105** | **GZ-105-DUP** | **# of Exceedances** | |
| **Monitored Unit** | **EPA** | **NHDES** | Till | SBR | Till | SBR | Till | Till | SBR | Till | SBR | SBR | SBR | Till | SBR | Till | SBR | Till | SBR | Till | Till | Till | SBR | SBR | **EPA** | **NHDES** |
| **Date of Sample Collection** | **CL** | **AGQS** | 9/15/15 | 9/14/15 | 9/16/15 | 9/16/15 | 9/15/15 | 9/15/15 | 9/15/15 | 9/17/15 | 9/17/15 | 9/17/15 | 9/16/15 | 9/17/15 | 9/17/15 | 9/15/15 | 9/15/15 | 9/16/15 | 9/16/15 | 9/15/15 | 9/17/15 | 9/17/15 | 9/16/15 | 9/16/15 | **CL** | **AGQS** |
| **VOLATILE ORGANIC COMPOUNDS BY 8260B - (ug/L)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trimethylbenzene | --- | 330 | N/A | N/A | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | N/A | 1 U | 1 U | N/A | N/A | 1 U | 1 U | N/A | N/A | N/A | 1 U | 1 U | --- | 0 |
| 1,2-Dichloropropane | 5 | 5 | N/A | N/A | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | N/A | 2 U | 2 U | N/A | N/A | 2 U | 2 U | N/A | N/A | N/A | 2 U | 2 U | 0 | 0 |
| 1,4-Dichlorobenzene | --- | 75 | N/A | N/A | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | N/A | 1 | 1 U | N/A | N/A | 1 U | 1 U | N/A | N/A | N/A | 2 | 2 | --- | 0 |
| 2-Butanone(MEK) | 200 | 4000 | N/A | N/A | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | N/A | 10 U | 10 U | N/A | N/A | 10 U | 10 U | N/A | N/A | N/A | 10 U | 10 U | 0 | 0 |
| Benzene | 5 | 5 | N/A | N/A | 1 U | 1 | 2 | 2 | 1 U | 1 U | 1 U | 1 U | N/A | 1 | 1 U | N/A | N/A | 1 U | 1 U | N/A | N/A | N/A | 3 | 3 | 0 | 0 |
| Chlorobenzene | 100 | 100 | N/A | N/A | 2U | 2 U | 7 | 7 | 3 | 2 U | 2 U | 2 U | N/A | 4 | 2 | N/A | N/A | 2 U | 2 U | N/A | N/A | N/A | 5 | 5 | 0 | 0 |
| Chloroethane | --- | --- | N/A | N/A | 5 U | 5U | 7 | 7 | 5 U | 5 U | 5 U | 5 U | N/A | 5 U | 5 U | N/A | N/A | 5 U | 5 U | N/A | N/A | N/A | 5U | 5U | --- | --- |
| Diethyl Ether | --- | 1400 | N/A | N/A | 5 | 23 | 13 | 13 | 9 | 5 U | 5 U | 5 U | N/A | 13 | 10 | N/A | N/A | 5 U | 5 U | N/A | N/A | N/A | 28 | 25 | --- | 0 |
| IsoPropylbenzene | --- | 800 | N/A | N/A | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | N/A | 1 U | 1 U | N/A | N/A | 1 U | 1 U | N/A | N/A | N/A | 2U | 2U | --- | 0 |
| Methyl-t-butyl ether(MTBE) | --- | 13 | N/A | N/A | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | N/A | 5 U | 5 U | N/A | N/A | 5 U | 5 U | N/A | N/A | N/A | 5 U | 5 U | --- | 0 |
| m&p-Xylene | --- | 10000^ | N/A | N/A | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | N/A | 1 U | 1 U | N/A | N/A | 1 U | 1 U | N/A | N/A | N/A | 1 U | 1 U | --- | 0 |
| o-Xylene | --- | 10000^ | N/A | N/A | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | N/A | 1 U | 1 U | N/A | N/A | 1 U | 1 U | N/A | N/A | N/A | 1 U | 1 U | --- | 0 |
| tert-Butyl Alcohol (TBA) | --- | 40 | N/A | N/A | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | N/A | 30 U | 30 U | N/A | N/A | 30 U | 30 U | N/A | N/A | N/A | 30 U | 30 U | --- | 0 |
| Tetrachloroethene | 3.5 | 5 | N/A | N/A | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | N/A | 2 U | 2 U | N/A | N/A | 2 U | 2 U | N/A | N/A | N/A | 2 U | 2 U | 0 | 0 |
| Tetrahydrofuran(THF) | 154 | 600 | N/A | N/A | 10 U | 30 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | N/A | 10 U | 10 U | N/A | N/A | 10 U | 10 U | N/A | N/A | N/A | 20 | 20 | 0 | 0 |
| trans-1,2-Dichloroethene | 100 | 100 | N/A | N/A | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | N/A | 2 U | 2 U | N/A | N/A | 2 U | 2 U | N/A | N/A | N/A | 2 U | 2 U | 0 | 0 |
| **1,4-DIOXANE BY 8260B SIM - (ug/L)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,4-Dioxane | # | 3 | N/A | N/A | 13 | 96 | 24 | 20 | 25 | 0.25 U | 0.25 U | N/A | 67 | 30 | 19 | N/A | N/A | 0.7 | 0.81 | N/A | N/A | 1.4 | 62 | 60 | 10 | 10 |
| **DISSOLVED METALS BY 200.8 - (mg/L)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Antimony | 0.006 | 0.006 | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | 0.001 U | N/A | N/A | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | N/A | N/A | 0 | 0 |
| Dissolved Arsenic | 0.01 | 0.01 | **0.016** | N/A | **0.19** | N/A | **0.13** | **0.13** | N/A | 0.001 U | N/A | N/A | N/A | **0.032** | N/A | 0.001 U | N/A | 0.001 | N/A | **0.048** | 0.003 | N/A | N/A | N/A | 6 | 6 |
| Dissolved Barium | --- | 2 | 0.019 | N/A | 0.028 | N/A | 0.067 | 0.067 | N/A | 0.008 | N/A | N/A | N/A | 0.037 | N/A | 0.003 | N/A | 0.007 | N/A | 0.1 | 0.02 | N/A | N/A | N/A | --- | 0 |
| Dissolved Beryllium | 0.004 | 0.004 | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | 0.001 U | N/A | N/A | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | N/A | N/A | 0 | 0 |
| Dissolved Calcium | --- | --- | 31 | N/A | 22 | N/A | 36 J+ | 34 J+ | N/A | 6.8 | N/A | N/A | N/A | 32 | N/A | 11 | N/A | 33 | N/A | 60 | 63 | N/A | N/A | N/A | --- | --- |
| Dissolved Chromium | 0.05 | 0.1 | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | 0.001 U | N/A | N/A | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | N/A | N/A | 0 | 0 |
| Dissolved Iron | --- | --- | 0.37 | N/A | 16 | N/A | 20 | 20 | N/A | 0.09 | N/A | N/A | N/A | 2.3 | N/A | 0.05 U | N/A | 0.17 | N/A | 6.7 | 0.59 | N/A | N/A | N/A | --- | --- |
| Dissolved Lead | 0.015 | 0.015 | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | 0.001 U | N/A | N/A | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | N/A | N/A | N/A | 0 | 0 |
| Dissolved Magnesium | --- | --- | 11 | N/A | 9 | N/A | 18 | 18 | N/A | 5.9 | N/A | N/A | N/A | 14 | N/A | 3.7 | N/A | 5.4 | N/A | 26 | 16 | N/A | N/A | N/A | --- | --- |
| Dissolved Manganese | 0.3 | 0.84 | **0.44** | N/A | **0.77** | N/A | **0.94** | **0.94** | N/A | 0.13 | N/A | N/A | N/A | **3.1** | N/A | 0.005 U | N/A | 0.15 | N/A | 0.23 | **0.41** | N/A | N/A | N/A | 6 | 3 |
| Dissolved Nickel | 0.1 | 0.1 | 0.001 U | N/A | 0.007 | N/A | 0.006 | 0.006 | N/A | 0.001 U | N/A | N/A | N/A | 0.006 | N/A | 0.003 | N/A | 0.001U | N/A | 0.003 | 0.001 U | N/A | N/A | N/A | 0 | 0 |
| Dissolved Potassium | --- | --- | 3.6 | N/A | 14 | N/A | 17 | 16 | N/A | 2.7 | N/A | N/A | N/A | 8.3 | N/A | 1.9 | N/A | 2.6 | N/A | 9.6 | 5.6 | N/A | N/A | N/A | --- | --- |
| Dissolved Sodium | --- | --- | 20 | N/A | 33 | N/A | 73 | 73 | N/A | 9 | N/A | N/A | N/A | 110 | N/A | 8 | N/A | 16 | N/A | 93 | 160 | N/A | N/A | N/A | --- | --- |
| Dissolved Vanadium | 0.26 | --- | 0.005 U | N/A | 0.005 U | N/A | 0.005 U | 0.005 U | N/A | 0.005 U | N/A | N/A | N/A | 0.005 U | N/A | 0.005 U | N/A | 0.005 U | N/A | 0.005 U | 0.005 U | N/A | N/A | N/A | 0 | --- |
| **TOTAL METALS BY 200.8** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Antimony | 0.006 | 0.006 | N/A | 0.001 U | N/A | 0.001 U | N/A | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | N/A | 0.001 U | 0.001 U | 0.001 U | 0 | 0 |
| Total Arsenic | 0.01 | 0.01 | N/A | 0.008 | N/A | **0.012** | N/A | N/A | **0.061** | N/A | 0.001 U | 0.001 U | 0.002 | N/A | 0.003 | N/A | 0.001 U | N/A | 0.007 | N/A | N/A | 0.004 | 0.008 | 0.009 | 2 | 2 |
| Total Barium | --- | 2 | N/A | 0.063 | N/A | 0.098 | N/A | N/A | 0.13 | N/A | 0.008 | 0.005 | 0.035 | N/A | 0.072 | N/A | 0.002 | N/A | 0.006 | N/A | N/A | 0.19 | 0.032 | 0.035 | --- | 0 |
| Total Beryllium | 0.004 | 0.004 | N/A | 0.001 U | N/A | 0.001 U | N/A | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | N/A | 0.001 U | 0.001 U | 0.001 U | 0 | 0 |
| Total Calcium | --- | --- | N/A | 25 | N/A | 31 | N/A | N/A | 33 | N/A | 7 | 4.9 | 5.3 | N/A | 16 | N/A | 11 | N/A | 16 J- | N/A | N/A | 91 | 32 | 34 | --- | --- |
| Total Chromium | 0.05 | 0.1 | N/A | 0.001 U | N/A | 0.001 U | N/A | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | N/A | 0.001 U | 0.001 U | 0.001 U | 0 | 0 |
| Total Iron | --- | --- | N/A | 3.2 | N/A | 7.6 | N/A | N/A | 9.2 | N/A | 0.05 U | 0.05 U | 0.18 | N/A | 7.3 | N/A | 0.05 U | N/A | 0.08 | N/A | N/A | 9.2 | 1.9 | 2 | --- | --- |
| Total Lead | 0.015 | 0.015 | N/A | 0.002 | N/A | 0.001 U | N/A | N/A | 0.001 U | N/A | 0.001 U | 0.001 U | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | 0.001 U | N/A | N/A | 0.001 U | 0.001 U | 0.001 U | 0 | 0 |
| Total Magnesium | --- | --- | N/A | 12 | N/A | 24 | N/A | N/A | 18 | N/A | 5.5 | 3.1 | 3.1 | N/A | 9.6 | N/A | 3.6 | N/A | 4.1 J- | N/A | N/A | 23 | 12 | 12 | --- | --- |
| Total Manganese | 0.3 | 0.84 | N/A | **0.45** | N/A | **0.86** | N/A | N/A | **0.74** | N/A | 0.005 U | 0.005 U | **0.047** | N/A | **0.44** | N/A | 0.005 U | N/A | 0.024 | N/A | N/A | **1.9** | 0.23 | 0.25 | 5 | 2 |
| Total Nickel | 0.1 | 0.1 | N/A | 0.001 | N/A | 0.006 | N/A | N/A | 0.006 | N/A | 0.001 U | 0.001 U | 0.005 | N/A | 0.003 | N/A | 0.001 U | N/A | 0.001 U | N/A | N/A | 0.005 | 0.004 | 0.004 | 0 | 0 |
| Total Potassium | --- | --- | N/A | 4.9 | N/A | 9.6 | N/A | N/A | 15 | N/A | 3.6 | 2 | 5.4 | N/A | 6.6 | N/A | 1.6 | N/A | 2.4 | N/A | N/A | 17 | 4.6 | 4.9 | --- | --- |
| Total Sodium | --- | --- | N/A | 20 | N/A | 180 | N/A | N/A | 82 | N/A | 17 | 7 | 270 | N/A | 82 | N/A | 8 | N/A | 14 J- | N/A | N/A | 920 | 130 | 140 | --- | --- |
| Total Vanadium | 0.26 | --- | N/A | 0.005 U | N/A | 0.005 U | N/A | N/A | 0.005 U | N/A | 0.005 U | 0.005 U | 0.005 U | N/A | 0.005 U | N/A | 0.005 U | N/A | 0.005 U | N/A | N/A | 0.007J+ | 0.005 U | 0.005 U | 0 | --- |
| **FIELD PARAMETERS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen (mg/l) | --- | --- | N/A | N/A | 0.9 | 1 | 0.7 | N/A | 2.8 | 2.1 | 1.4 | 1 | 0.8 | <0.5 | <0.5 | 4.5 | 3.9 | 1 | 0.7 | 1 | 1.7 | 1.3 | <0.5 | N/A | --- | --- |
| Oxidation Reduction Potential (mV) | --- | --- | N/A | N/A | -91 | -136 | -80 | N/A | -47 | 75 | 317 | 97 | -172 | -60 | -102 | 147 | 145 | 24 | -187 | -124 | -149 | -134 | -151 | N/A | --- | --- |
| pH (standard units) | --- | --- | N/A | N/A | 6.6 | 7 | 6.8 | N/A | 5.2 | 6.3 | 6.4 | 6.1 | 7.8 | 6.6 | 6.6 | 6.5 | 6.6 | 6.8 | 8 | 7.2 | 7.4 | 7.2 | 7.2 | N/A | --- | --- |
| Specific Conductance (us/cm) | --- | --- | N/A | N/A | 530 | 1167 | 944 | N/A | 847 | 124 | 167 | 89 | 1099 | 777 | 482 | 145 | 159 | 334 | 225 | 1045 | 1196 | 4654 | 762 | N/A | --- | --- |
| Temperature (degrees Celcius) | --- | --- | N/A | N/A | 14 | 15 | 16 | N/A | 17 | 16 | 15 | 13 | 17 | 17 | 15 | 15 | 16.6 | 15 | 15 | 14 | 17 | 17 | 13 | N/A | --- | --- |
| Turbidity (NTU) | --- | --- | N/A | N/A | <5 | < 5 | < 5 | N/A | < 5 | 33.9 | < 5 | < 5 | < 5 | <5 | < 5 | < 5 | < 5 | < 5 | < 5 | <5 | 11 | 13 | < 5 | N/A | --- | --- |
| **Notes on Last Page of Table** | | | | | | | | | | | | | | | | | | | | | | | | | |

**TABLE 3**

Summary of September 2015 Groundwater Analytical Data

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

**NOTES**

1. Monitored Zone / Unit identifies the hydrogeological unit within the screened/open interval. The hydrogeology of the site is comprised of four principle geological units include including bedrock, glacial till, marine sediments consisting of predominately of silt and clay, and sandy outwash. Bedrock well screened intervals vary as follows: "OBH-BR" wells are standard 6-inch diameter wells with steel casing set in bedrock and open boreholes (typical water supply well construction). "SBR" indicates the screen interval is the upper most section of bedrock. "DBR" is used to differentiate a screened interval that is below the uppermost section of bedrock (i.e.; MW-5S versus MW-5D).
2. **Bolded values** denote concentration exceeding the EPA Interim Cleanup Level (ICL)
3. Shaded values denote concentration exceeding the NHDES Ambient Groundwater Quality Standard
4. The list of volatile organic compounds (VOCs) provided includes analytes detected in OU-1 or OU-2 since 2006, and all VOCs that have ICLs. ICLs were established for 1,2-dichloropropane and tetrachloroethylene (PCE), however, no detections have been reported at groundwater sampling points included in the long-term monitoring events since 1998. An ICL was established for trans-1,2-dichloroethene however no detections have been reported at groundwater sampling points included in the long-term monitoring events since 1999.
5. An ICL was established for the semi-volatile organic compounds (SVOCs) diethyl phthalate and phenol. However, in May 1998 and April 1999, groundwater samples were submitted for analysis of SVOCs and no exceedances were reported; therefore, SVOCs were removed from the long-term monitoring plan.
6. Result for groundwater primary/duplicate samples are provided in this table: MW-4/MW-4-DUP, AE-3A/AE-3A-DUP, and GZ-105/GZ-105-DUP.

**ABBREVIATIONS**

| | |
|---|---|
| N/A | Sample was not analyzed/measured for indicated parameter |
| #.## U | Not Detected at the reporting detection limit indicated |
| NHDES AGQS | NH Department of Environmental Services Ambient Groundwater Quality Standard (Env-Or-600, Table 600-1) |
| EPA CL | US Environmental Protection Agency Cleanup Level established in 2015 Fifth Explanation of Significant Difference. Cleanup Levels were historically called Interium Cleanup Levels. |
| uS/cm | microsiemens per centimeter |
| ug/L | micrograms per liter, parts per billion |
| mg/L | milligram per liter, parts per million |
| NTU | nephelometric turbidity unit |
| mV | millivolt |
| * | Field parameter result qualified due to failed QA/QC or suspected issues with measurements, as noted on field forms and |
| ^ | The AGQS for xylenes is for total xylene or the sum of all isomers, including: m&p-Xylene and o-Xylene. |

# TABLE 4

## SUMMARY OF OFF-SITE WATER SUPPLY WELL MONITORING RESULTS

# TABLE 4

Summary of Analytical Results for Off-Site Water Supply Wells
2015 Annual Report
Coakley Landfill - North Hampton, New Hampshire

| SAMPLE IDENTIFICATION | EPA | NHDES | EPA | R-3 | R-3 | R-3 | R-3 | R-3 | R-3 | R-3 | R-3-DUP | R-3 | R-3-DUP | R-3 | R-3-DUP | R-3 | R-3-DUP | R-3 | R-3-DUP | R-3 | R-3-DUP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DATE SAMPLED** | **CL** | **AGQS** | **MCL** | 24-Jan-08 | 13-Aug-08 | 19-Aug-09 | 17-Aug-10 | 18-Aug-11 | 30-Aug-12 | 26-Mar-13 | 26-Mar-13 | 16-Aug-13 | 16-Aug-13 | 27-Feb-14 | 27-Feb-14 | 3-Oct-14 | 3-Oct-14 | 25-Feb-15 | 25-Feb-15 | 15-Sep-15 | 15-Sep-15 |
| **VOLATILE ORGANIC COMPOUNDS** | | | | | | | | | | | | | | | | | | | | | |
| Methyl tert-butyl ether (ug/L) | - | 13 | - | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene (ug/L) | - | 1000 | 1000 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-dioxane (ug/L) | 3 | 3 | - | NA | NA | NA | NA | NA | 0.40 | 0.45 | 0.26 | 0.45 | 0.41 | 0.41 | 0.42 | 0.37 | 0.36 | 0.46 | 0.43 | 0.37 | 0.35 |
| **METALS** | | | | | | | | | | | | | | | | | | | | | |
| Arsenic, total (mg/L) | 0.01 | 0.01 | 0.01 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Manganese, total (mg/L) | 0.3 | 0.84 | - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.13 | 0.14 | 0.10 | 0.098 | 0.14 | 0.14 | 0.16 | 0.16 |
| **FIELD PARAMETERS** | | | | | | | | | | | | | | | | | | | | | |
| Temperature (degrees Celcius) | - | - | - | 13.51 | 12.51 | 11.38 | 12.58 | 12.62 | 12.73 | NM | NM | 13 | NA | 8 | NA | 12 | NA | 10.1 | NA | 13 | NA |
| pH (standard units) | - | - | - | 5.63 | 5.85 | 7.92 | 7.14 | 8.08 | 8.54 | NM | NM | 7 | NA | 7.9 | NA | 8.4 | NA | 8.3 | NA | 8.1 | NA |
| Conductivity (uS/cm) | - | - | - | 316 | 423 | 452 | 443 | 238 | 466 | NM | NM | 414 | NA | NR | NA | 417 | NA | 422 | NA | 448 | NA |
| Dissolved Oxygen (mg/L) | - | - | - | 4.16 | 3.72 | 4.64 | 2.19 | 4.65 | 4.98 | NM | NM | <0.5 | NA | <0.5 | NA | < 0.5 | NA | <0.5 | NA | 0.8 | NA |
| Turbidity (NTU) | - | - | - | 2.0 | 15.4 | 2.2 | 0.5 | 1.04 | 0.70 | NM | NM | 6.00 | NA | <5 | NA | < 5 | NA | <5 | NA | < 5 | NA |
| Oxidation/Reduction Potential (mV) | - | - | - | 157 | 95 | -122 | -35 | -164.5 | 22.5 | NM | NM | -224 | NA | -143 | NA | -219 | NA | -186 | NA | -194 | NA |

| SAMPLE IDENTIFICATION | EPA | NHDES | EPA | R-5 | R-5 | R-5 | R-5 |
|---|---|---|---|---|---|---|---|
| **DATE SAMPLED** | **CL** | **AGQS** | **MCL** | 24-Jan-08 | 13-Aug-08 | 19-Aug-09 | 19-Aug-10 |
| **VOLATILE ORGANIC COMPOUNDS** | | | | | | | |
| Methyl tert-butyl ether (ug/L) | - | 13 | - | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene (ug/L) | - | 1000 | 1000 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-dioxane (ug/L) | 3 | 3 | - | NA | NA | NA | NA |
| **METALS** | | | | | | | |
| Arsenic, total (mg/L) | 0.01 | 0.01 | 0.01 | NA | NA | NA | NA |
| Manganese, total (mg/L) | 0.3 | 0.84 | - | NA | NA | NA | NA |
| **FIELD PARAMETERS** | | | | | | | |
| Temperature (degrees Celcius) | - | - | - | 14 | 14 | 17 | 19 |
| pH (standard units) | - | - | - | 5.8 | 5.9 | 6.7 | 6.0 |
| Conductivity (uS/cm) | - | - | - | 243 | 281 | 456 | 222 |
| Dissolved Oxygen (mg/L) | - | - | - | 6.4 | 8.0 | 6.8 | 5.5 |
| Turbidity (NTU) | - | - | - | 1.4 | 12.0 | 2.0 | 0.2 |
| Oxidation/Reduction Potential (mV) | - | - | - | 162 | 87 | 194 | 146 |

| SAMPLE IDENTIFICATION | EPA | NHDES | EPA | 339BHR | 339BHR | 339BHR | 339BHR | 339BHR | 339BHR |
|---|---|---|---|---|---|---|---|---|---|
| **DATE SAMPLED** | **CL** | **AGQS** | **MCL** | 29-Apr-13 | 16-Aug-13 | 27-Feb-14 | 3-Oct-14 | 25-Feb-15 | 18-Sep-15 |
| **VOLATILE ORGANIC COMPOUNDS** | | | | | | | | | |
| Methyl tert-butyl ether (ug/L) | - | 13 | - | NA | <0.5 | <0.5 | < 0.5 | < 0.5 | < 0.5 |
| Toluene (ug/L) | - | 1000 | 1000 | NA | <0.5 | <0.5 | 1.8 | <0.5 | <0.5 |
| Chloroform (ug/L) | - | 80 | - | NA | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.7 |
| 1,4-dioxane (ug/L) | 3 | 3 | - | 0.38 | 0.42 | 0.63 | 0.42 | 0.85 | 0.74 |
| **METALS** | | | | | | | | | |
| Arsenic, total (mg/L) | 0.01 | 0.01 | 0.01 | NA | NA | < 0.001 | < 0.001 | <0.001 | 0.002 |
| Manganese, total (mg/L) | 0.3 | 0.84 | - | NA | NA | 0.25 | 0.32 | 0.36 | 0.31 |
| **FIELD PARAMETERS** | | | | | | | | | |
| Temperature (degrees Celcius) | - | - | - | NM | NM | 11 | 12 | 10 | 14 |
| pH (standard units) | - | - | - | NM | NM | 7.1 | 7.1 | 7.1 | 6.1 |
| Conductivity (uS/cm) | - | - | - | NM | NM | NR | 394 | 399 | 383 |
| Dissolved Oxygen (mg/L) | - | - | - | NM | NM | 0.7 | 0.7 | 0.7 | <0.5 |
| Turbidity (NTU) | - | - | - | NM | NM | 35 | 5 | 22 | <5 |
| Oxidation/Reduction Potential (mV) | - | - | - | NM | NM | -22 | -63 | 20 | -55 |

**Notes on last page of table**

# TABLE 4

Summary of Analytical Results for Off-Site Water Supply Wells
2015 Annual Report
Coakley Landfill - North Hampton, New Hampshire

| SAMPLE IDENTIFICATION | EPA | NHDES | EPA | 346BHR | 346BHR | 346BHR | 346BHR |
|---|---|---|---|---|---|---|---|
| DATE SAMPLED | CL | AGQS | MCL | 30-Aug-12 | 16-Aug-13 | 3-Oct-14 | 18-Sep-15 |
| **VOLATILE ORGANIC COMPOUNDS** | | | | | | | |
| Methyl tert-butyl ether (ug/L) | - | 13 | - | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene (ug/L) | - | 1000 | 1000 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-dioxane (ug/L) | 3 | 3 | - | <0.25 | <0.25 | <0.25 | <0.25 |
| **METALS** | | | | | | | |
| Arsenic, total (mg/L) | 0.01 | 0.01 | 0.01 | NA | NA | < 0.001 | < 0.001 |
| Manganese, total (mg/L) | 0.3 | 0.84 | - | NA | NA | 0.29 | 0.37 |
| **FIELD PARAMETERS** | | | | | | | |
| Temperature (degrees Celcius) | - | - | - | 13 | NM | 12 | 12 |
| pH (standard units) | - | - | - | 7.3 | NM | 6.9 | 6.8 |
| Conductivity (uS/cm) | - | - | - | 606 | NM | 608 | 600 |
| Dissolved Oxygen (mg/L) | - | - | - | 6.4 | NM | 0.9 | <0.5 |
| Turbidity (NTU) | - | - | - | 18 | NM | 21 | <5 |
| Oxidation/Reduction Potential (mV) | - | - | - | 76 | NM | -6 | -21 |

| SAMPLE IDENTIFICATION | EPA | NHDES | EPA | 415BHR | 415BHR | 415BHR | 415BHR |
|---|---|---|---|---|---|---|---|
| DATE SAMPLED | CL | AGQS | MCL | 16-Apr-13 | 16-Aug-13 | 3-Oct-14 | 15-Sep-15 |
| **VOLATILE ORGANIC COMPOUNDS** | | | | | | | |
| Methyl tert-butyl ether (ug/L) | 0.01 | 0.01 | 0.01 | NA | <0.5 | <0.5 | <0.5 |
| Toluene (ug/L) | - | 1000 | 1000 | NA | <0.5 | <0.5 | <0.5 |
| 1,4-dioxane (ug/L) | 3 | 3 | - | <0.25 | <0.25 | <0.25 | <0.25 |
| **METALS** | | | | | | | |
| Arsenic, total (mg/L) | 0.01 | 0.01 | 0.01 | NA | NA | < 0.001 | < 0.001 |
| Manganese, total (mg/L) | 0.3 | 0.84 | - | NA | NA | 0.028 | 0.03 |
| **FIELD PARAMETERS** | | | | | | | |
| Temperature (degrees Celcius) | - | - | - | NM | 13.00 | 13 | 14 |
| pH (standard units) | - | - | - | NM | 8.10 | 8.6 | 8.5 |
| Conductivity (uS/cm) | - | - | - | NM | 351.00 | 386 | 389 |
| Dissolved Oxygen (mg/L) | - | - | - | NM | 0.57 | 0.6 | <0.5 |
| Turbidity (NTU) | - | - | - | NM | < 5 | < 5 | < 5 |
| Oxidation/Reduction Potential (mV) | - | - | - | NM | -188 | -178 | -223 |

**TABLE NOTES:**

1. R-5 not sampled since Aug. 19, 2010 due to the water system being out of service.
2. Field parameter measurements prior to Aug. 2013 were not collected with a flow cell directly connected to the sampling tap; therefore, dissolved oxygen and oxidation reduction potential measurements may be biased high due to exposure to the atmosphere.
3. Only analytes detected in one or more groundwater samples at water supply wells are listed in this table. Analytical methods include, VOCs by 524.2, 1,4-dioxane by 8260B SIM, and metals by 200.8
4. Chloroform is synonamous with trihalomethane; therefore, the NHDES AGQS for trihalomethane will be used for chloroform.

**TABLE ABBREVIATIONS:**

NA = Not Analyzed
NM = Not Measured
NR = Not Recorded - field parameter measurement did not meet QA/QC criteria and were rejected
uS/cm = microsiemens per centimeter
ug/L = micrograms per liter (parts per billion)
mg/L = milligrams per liter (parts per million)
NTU - Nephelometric Turbidity Units
mV = millivolts
< = parameter concentration below detection limit indicated
R-3-DUP = duplicate sample collected at R-3
NHDES AGQS = NHDES Ambient Groundwater Quality Standard
EPA MCL = EPA Primary Drinking Water Standard
EPA CL = EPA Groundwater Quality Standard

# TABLE 5

## SUMMARY OF SURFACT WATER ANALYTICAL RESULTS

TABLE 5
Summary of Surface Water Analytical Data for SW-5 & SW-103
Coakley Landfill Superfund Site - North Hampton Greenland, New Hampshire

| SAMPLE IDENTIFICATION | NHDES Surface Water Standard | | SW-5 | SW-5 | SW-5 | | SW-5 | | SW-5 | SW-5 | SW-5 | SW-5 | SW-5 (DUP) | SW-5 | SW-5 (DUP) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE SAMPLED | Acute | Chronic | 26-Aug-04 | 29-Aug-05 | 30-Aug-06 | | 15-Nov-07 | | 14-Aug-08 | 19-Aug-09 | 19-Aug-11 | 3-Oct-14 | 3-Oct-14 | 16-Sep-15 | 16-Sep-15 |
| **VOLATILE ORGANIC COMPOUNDS BY 8260B (ug/L)** | | | | | | | | | | | | | | | |
| Toluene | --- | --- | < 2 | < 2 | < 2 | | < 1 | | < 1 | 7.2 | < 1 | < 1 | < 1 | < 1 | < 1 |
| **METALS BY 200.8 (mg/L)** | | | | | | | | | | | | | | | |
| **TOTAL OR DISSOLVED (METALS ONLY)** | | | **Total** | **Total** | **Total** | **Dissolved** | **Total** | **Dissolved** | **Total** | **Total** | **Total** | **Dissolved** | **Dissolved** | **Dissolved** | **Dissolved** |
| Aluminum | 0.75 | 0.087 | **240** | **9.1 J** | **3** | **0.08** | 0.15 | < 0.05 | < 0.05 | < 0.5 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Antimony | 9 | 1.6 | < 0.004 | < 0.05 | < 0.004 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Arsenic* | 0.34 | 0.15 | **0.72** | **1.2** | 0.017 | 0.019 | 0.006 | 0.008 | 0.002 | 0.045 | 0.007 | < 0.001 | < 0.001 | 0.002 | 0.002 |
| Barium | --- | --- | 6.1 | 0.36 | 0.07 | 0.056 | 0.029 | 0.033 | 0.053 | 0.063 | 0.023 | 0.013 | 0.014 | 0.016 | 0.015 |
| Beryllium | 0.13 | 0.0053 | 0.011 | < 0.01 | < 0.002 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Cadmium* | 0.00095 | 0.0008 | 0.01 | < 0.01 | < 0.002 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Calcium | --- | --- | 310 | 54 J | 67 | 66 | 28 | 33 | 43 | 66 | 29 | 29 | 30 | 19 J- | 19 J- |
| Chromium (Cr+3 + Cr+6)* | 0.183 (Cr+3)<br>0.016 (Cr+6) | 0.024 (Cr+3)<br>0.011 (Cr+6) | **0.38** | **0.03** | 0.005 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Cobalt | --- | --- | 0.2 | 0.01 | 0.003 | < 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.003 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Copper* | 0.0036 | 0.0027 | **0.14** | < 0.01 J | < 0.005 | < 0.004 | 0.003 | 0.002 | < 0.001 | 0.001 | 0.003 | 0.001 | 0.001 | **0.004** | 0.003 |
| Iron | --- | 1 | 1,200 | 250 | 25 | 14 | 5 | 6 | 2 | 30 | 4.6 | 0.6 | 0.6 | 0.41 | 0.42 |
| Lead* | 0.014 | 0.00054 | **0.44** | 0.01 | < 0.002 | < 0.002 | 0.001 | < 0.001 | < 0.001 | 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Magnesium | --- | --- | 90 | 18 | 19 | 17 | 8 | 10 | 10 | 15 | 7.3 | 8.3 | 8.2 | 5.4 | 5.1 |
| Manganese | --- | --- | 200 | 6 | 3 | 2.6 | 1 | 2 | 1 | 2 | 2.1 | 0.35 | 0.36 | 0.26 | 0.24 |
| Mercury* | 0.0014 | 0.00077 | 0.002 | < 0.001 | < 0.0002 | < 0.0002 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Nickel* | 0.1449 | 0.016 | **0.27** | 0.02 | 0.008 | 0.005 | 0.005 | 0.006 | 0.005 | 0.005 | 0.004 | 0.002 | 0.002 | 0.003 | 0.003 |
| Potassium | --- | --- | 50 | 20 | 20 | 23 | 21 | 24 | 7 | 20 | 14 | 5.4 | 5.5 | 5.0 | 4.7 |
| Selenium | --- | 0.0005 | 0.009 | < 0.01 J | < 0.002 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.001 | 0.001 | <0.001 | 0.001 |
| Silver* | 0.00032 | --- | < 0.004 | < 0.01 | < 0.002 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Sodium | --- | --- | 22 | 21 | 43 | 52 | 35 | 42 | 36 | 46 | 20 | 28 | 27 | 25 J- | 23 J- |
| Thallium | 1.4 | 0.04 | < 0.004 | < 0.01 | < 0.002 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Vanadium | --- | --- | 0.36 | 0.019 | < 0.004 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | 0.001 | < 0.001 | < 0.005 | < 0.005 | < 0.005 | < 0.005 |
| Zinc* | 0.0362 | 0.0365 | **0.53** | **0.05** | **0.019** | 0.019 | 0.01 | **0.9** | < 0.005 | **0.089** | 0.016 | < 0.005 | < 0.005 | 0.013 | 0.011 |
| **GENERAL CHEMISTRY** | | | | | | | | | | | | | | | |
| Ammonia** (mg/L) | pH Dependent | | 9.85 | 11.3 | 5.8 | | 2.9 | | < 0.05 | 8.7 | 1.9 | 0.08 | 0.08 | 0.08 | 0.06 |
| **FIELD PARAMETERS** | | | | | | | | | | | | | | | |
| Temperature (degrees C) | --- | --- | NA | NA | NA | | 7.46 | | 18.1 | 19.69 | 18.48 | 11.5 | NA | 18 | NA |
| pH (Standard Units) | --- | --- | NA | NA | NA | | 6.99 | | 6.45 | 6.31 | 6.51 | 6.8 | NA | 6.2 | NA |
| Specific Conductance (us/cm) | --- | --- | NA | NA | NA | | 675 | | 451 | 965 | 178 | 397 | NA | 347 | NA |
| Dissolved Oxygen (mg/L) | --- | --- | NA | NA | NA | | 0.5 | | 3.29 | 0.84 | 2.25 | 3.2 | NA | 1.8 | NA |
| Turbidity (NTU) | --- | --- | NA | NA | NA | | 12.6 | | 8.4 | 33 | 5.48 | 7 | NA | <5 | NA |
| Oxidation Reduction Potential (mV) | --- | --- | NA | NA | NA | | -70 | | 73 | -111 | -50 | 41 | NA | 63 | NA |

**NOTES:**

1. VOCs list is limited to analytes detected in samples
2. --- no standard has been established for the indicated parameter.
3. NHDES Surface Water Standards are listed in Env Wq 1700, Table 1703.1
4. There are no ROD ICLs established for surface water.
5. Highlighting: Bold values denote NHDES Acute Surface Water Criteria Exceedances; Gray shaded values denote NHDES Chronic Criteria Exceedances
6. The reporting detection limit (RDL) for zinc, silver and lead are consistent with RDLs specified in the SAP; however, they exceed the "default" (see footnote *) acute and/or chronic standards.

* Acute and chronic standards based on "default" values listed in Env Wq 1700, Table 1703.1. Actual standards may vary based on the water effect ratio (WER) value used and/or total hardness.

** The freshwater and saltwater aquatic life criteria for ammonia are pH dependent. Refer to Env-Wq 1703.25 through Env-Wq 1703.31.

(DUP) Duplicate sample results.

TABLE 5
Summary of Surface Water Analytical Data for SW-5 & SW-103
Coakley Landfill Superfund Site - North Hampton Greenland, New Hampshire

| SAMPLE IDENTIFICATION | NHDES Surface Water Standard | | SW-103 | SW-103 | | SW-103 | SW-103 | SW-103 | SW-103 |
|---|---|---|---|---|---|---|---|---|---|
| DATE SAMPLED | Acute | Chronic | 28-Aug-06 | 13-Sep-07 | | 14-Aug-08 | 19-Aug-09 | 19-Aug-11 | 16-Sep-15 |
| **VOLATILE ORGANIC COMPOUNDS BY 8260B (ug/L)** | | | | | | | | | |
| Toluene | --- | --- | < 2 | < 1 | | < 1 | 7.2 | < 1 | < 1 |
| **METALS BY 200.8 (mg/L)** | | | | | | | | | |
| **TOTAL OR DISSOLVED (METALS ONLY)** | | | **Total** | **Total** | **Dissolved** | **Total** | **Total** | **Total** | **Dissolved** |
| Aluminum | 0.75 | 0.087 | 0.2 | <0.05 | < 0.05 | < 0.05 | < 0.5 | < 0.05 | < 0.05 |
| Antimony | 9 | 1.6 | < 0.05 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Arsenic* | 0.34 | 0.15 | 0.004 | 0.005 | 0.006 | 0.002 | 0.011 | 0.002 | 0.002 |
| Barium | --- | --- | 0.038 | 0.04 | 0.045 | 0.029 | 0.078 | 0.019 | 0.017 |
| Beryllium | 0.13 | 0.0053 | < 0.01 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Cadmium* | 0.00095 | 0.0008 | < 0.01 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Calcium | --- | --- | 48 | 33 | 37 | 46 | 55 | 26 | 22 |
| Chromium (Cr+3 + Cr+6)* | 0.183 (Cr+3)<br>0.016 (Cr+6) | 0.024 (Cr+3)<br>0.011 (Cr+6) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Cobalt | --- | --- | < 0.01 | 0.007 | 0.009 | < 0.001 | 0.002 | < 0.001 | < 0.001 |
| Copper* | 0.0036 | 0.0027 | < 0.01 | 0.003 | 0.002 | 0.002 | 0.003 | 0.002 | <0.001 |
| Iron | --- | 1 | 14 | 11 | 13 | 2.8 | 25 | 0.96 | 4.40 |
| Lead* | 0.014 | 0.00054 | < 0.01 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Magnesium | --- | --- | 12 | 8.9 | 9.9 | 10 | 14 | 7.5 | 5.4 |
| Manganese | --- | --- | 1.6 | 1.4 | 1.6 | 0.59 | 3.3 | 0.4 | 0.60 |
| Mercury* | 0.0014 | 0.00077 | < 0.01 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Nickel* | 0.1449 | 0.016 | <0.01 | 0.007 | 0.007 | 0.006 | 0.005 | 0.003 | 0.003 |
| Potassium | --- | --- | 7.1 | 18.0 | 18.0 | 9.4 | 8.2 | 11.0 | 6.0 |
| Selenium | --- | 0.0005 | < 0.01 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | <0.001 |
| Silver* | 0.00032 | --- | < 0.01 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Sodium | --- | --- | 23 | 38 | 41 | 16 | 39 | 24 | 20 |
| Thallium | 1.4 | 0.04 | < 0.01 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Vanadium | --- | --- | <0.01 | < 0.001 | < 0.001 | < 0.001 | 0.002 | < 0.001 | < 0.005 |
| Zinc* | 0.0362 | 0.0365 | 0.006 | 0.01 | **0.74** | < 0.005 | **0.69** | 0.013 | 0.011 |
| **GENERAL CHEMISTRY** | | | | | | | | | |
| Ammonia** (mg/L) | pH Dependent | | 0.2 | 0.44 | | 0.81 | 0.48 | 0.24 | 0.08 |
| **FIELD PARAMETERS** | | | | | | | | | |
| Temperature (degrees C) | --- | --- | NA | 7.71 | | 17.84 | 21.04 | 18.62 | 16 |
| pH (Standard Units) | --- | --- | NA | 6.69 | | 6.35 | 6.77 | 7.87 | 6.3 |
| Specific Conductance (us/cm) | --- | --- | NA | 603 | | 388 | 610 | 189 | 272 |
| Dissolved Oxygen (mg/L) | --- | --- | NA | 1.3 | | 2.85 | 1.09 | 0.76 | 3.1 |
| Turbidity (NTU) | --- | --- | NA | 2.44 | | 7.4 | 43.5 | 2.68 | 12.7 |
| Oxidation Reduction Potential (mV) | --- | --- | NA | -9 | | 114 | -137 | 20.4 | -55 |

**NOTES:**

1. VOCs list is limited to analytes detected in samples
2. --- no standard has been established for the indicated parameter.
3. NHDES Surface Water Standards are listed in Env Wq 1700, Table 1703.1
4. There are no ROD ICLs established for surface water.
5. Highlighting: Bold values denote NHDES Acute Surface Water Criteria Exceedances; Gray shaded values denote NHDES Chronic Criteria Exceedances
6. The reporting detection limit (RDL) for zinc, silver and lead are consistent with RDLs specified in the SAP; however, they exceed the "default" (see footnote

* Acute and chronic standards based on "default" values listed in Env Wq 1700, Table 1703.1. Actual standards may vary based on the water effect ratio (WER

** The freshwater and saltwater aquatic life criteria for ammonia are pH dependent. Refer to Env-Wq 1703.25 through Env-Wq 1703.31.

# TABLE 6

## SUMMARY OF SEDIMENT ANALYTICAL RESULTS

**TABLE 6**

Summary of Sediment Analytical Data for SED-4 & SED-5

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

| **Sampling Point ID** | SQuiRT TEC | SED-4 | SED-4 | SED-4 | SED-4 | SED-4 | SED-4 | SED-4 | | SED-4 | SED-4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date of Sample Collection** | (Dry Weight) | 4/26/2001 | 8/26/2004 | 8/29/2005 | 8/29/2006 | 11/15/2007 | 8/14/2008 | 8/19/2009 | | 10/03/2014 | 9/16/2015 |
| **TOTAL METALS BY 6020 - (mg/kg)** | | | | | | | | | | | |
| Total Aluminum | --- | 8100 | 4400 | 7900 | 6700 | 3800 | 12000 | 3100 | Sediment Sampling Not Required for 2010-2013 | 3900 J | 4600 J |
| Total Antimony | --- | 5.3 | < 12 | < 4 | < 24 | 1 | < 0.5 | 0.7 | | < 1 UJ | 0.8 J |
| Total Arsenic | 9.79 | 40 | < 6 | < 4 | < 6 | 4.2 | 2.1 | 3.1 | | 4 J | 3.6 J |
| Total Barium | --- | 220 | 28 | 60 | 49 | 68 | 71 | 52 | | 95 J | 57 J |
| Total Beryllium | --- | 1.8 | < 12 | < 4 | < 6 | < 0.5 | 0.6 | < 0.5 | | < 1 UJ | <0.5 UJ |
| Total Cadmium | 0.99 | 0.8 | < 6 | < 4 | < 6 | 0.8 | < 0.5 | 0.5 | | 1 J | 0.8 J |
| Total Calcium | --- | 31000 | 9200 | 13000 | 12000 | 15000 | 2000 | 17000 | | 20000 J | 16000 J |
| Total Chromium | 43.4 | 69 | 6 | 12 | < 6 | 4 | 14 | 3.4 | | 5 J | 4.8 J |
| Total Cobalt | --- | 14 | < 3 | < 4 | < 6 | 17 | 1.2 | 2 | | 5 J | 1.6 J |
| Total Copper | 31.6 | 67 | < 6 | 17 | 20 | 2.3 | 2.5 | 16 | | 15 J | 14 J |
| Total Iron | --- | 2500 | 1200 | 3900 | 2400 | 3100 | 2100 | 2800 | | 9100 J | 3300 J |
| Total Lead | 35.8 | 250 | 15 | 130 | 110 | 68 | 10 | 32 | | 91 J | 89 J |
| Total Magnesium | --- | 4400 | 1500 | 3500 | 2400 | 2000 | 900 | 2000 | | 2100 J | 2000 J |
| Total Manganese | --- | 500 | 400 | 190 | 160 | 910 | 63 | 980 | | 2100 J | 470 J |
| Total Mercury | 0.18 | 0.3 | < 0.6 | 0.4 | < 0.6 | 0.5 | < 0.1 | 0.3 | | 0.5 J | 0.4 J |
| Total Nickel | 22.7 | 53 | < 6 | 14 | < 9 | 7.4 | 6.3 | 6.9 | | 9 J | 7.1 J |
| Total Potassium | --- | 800 | 370 | 500 | 340 | 300 | 1700 | 200 | | 800 J | 800 J |
| Total Selenium | --- | 2.9 | < 6 | < 4 | < 6 | < 0.5 | < 0.5 | 2.2 | | 3 J | 1.8 J |
| Total Silver | --- | < 1 | < 6 | < 4 | < 6 | < 0.5 | < 0.5 | < 0.5 | | < 1 UJ | <0.5 UJ |
| Total Sodium | --- | 100 | 230 | 190 | 1100 | 300 | 200 | 400 | | 300 J | 200 J |
| Total Thallium | --- | < 1 | < 15 | < 4 | < 6 | < 0.5 | < 0.5 | < 0.5 | | < 1 UJ | <0.5 UJ |
| Total Vanadium | --- | 71 | 7 | 38 | 29 | 14 | 14 | 10 | | 27 J | 28 J |
| Total Zinc | 121 | 220 | 57 | 91 | 74 | 110 | 8.3 | 93 | | 170 J | 74 J |
| **TOTAL SOLIDS BY 2540G-91 - (Percent - %)** | | | | | | | | | | | |
| Solids Total | --- | 60.5 | 22.0 | 20.9 | 14.5 | 12.7 | 54.8 | 11.4 | | 12.2 | 17.3 |

**NOTES:**

mg/kg = milligram per kilogram, parts per million

--- = no standard has been established for the indicated parameter.

< = concentration is below reporting detection limit indicated

J, UJ = data qualifiers applied based on EPA's Tier I Plus data validation guidelines. J = estimated, UJ = estimated detection limit

1. Beginning in 2014, sediment data was qualified in accordance with EPA's Tier I Plus data validation guidelines.
2. The EPA has not established a cleanup standard for sediment.
3. Sediment laboratory analytical data are compared to the NHDES Draft Evaluation of Sediment Quality Guidance Document, dated April 2005, that includes the "National Oceanic and Atmospheric Administration Screening Quick Reference Tables (NOAA SQuiRT Tables for Inorganics in Sediment - Freshwater). Current SQuiRT Tables are located on the NOAA website: http://archive.orr.noaa.gov/book_shelf/122_NEW-SQuiRTs.pdf . TEC is Threshold Effect Concentration, which is consensus-based and incorporates the Ontario Ministry of the Environment lowest-observed effect levels (LELs).
4. Shaded values denote concentrations exceeding the NOAA SQuiRT TEC standard.

**TABLE 6**

Summary of Sediment Analytical Data for SED-4 & SED-5

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

| **Sampling Point ID** | SQuiRT TEC | SED-5 | SED-5 | SED-5 | SED-5 | SED-5/SED-3T | SED-5 | SED-5 | | SED-5 | SED-5-DUP | SED-5 | SED-5-DUP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date of Sample Collection** | (Dry Weight) | 8/27/2003 | 8/26/2004 | 8/29/2005 | 8/30/2006 | 11/15/2007 | 8/14/2008 | 8/19/2009 | | 10/03/2014 | 10/3/2014 | 9/16/2015 | 9/16/2015 |
| **TOTAL METALS BY 6020 - (mg/kg)** | | | | | | | | | | | | | |
| Total Aluminum | --- | 18000 | 17000 | 6600 | 34000 | 9900 | 11000 | 17000 | Sediment Sampling Not Required for 2010-2013 | 16000 J | 24000 J | 14000 J | 16000 J |
| Total Antimony | --- | < 2 | < 12 | < 4 | < 8 | 1 | < 0.5 | < 0.5 | | 0.8 J | 0.7 J | 1.8 J | 1.9 J |
| Total Arsenic | 9.79 | 19 | 36 | 310 | 17 | 15 | 16 | 15 | | 10 J | 12 J | 14 J | 16 J |
| Total Barium | --- | 88 | 130 | 270 | 150 | 110 | 49 | 110 | | 140 J | 210 J | 120 J | 140 J |
| Total Beryllium | --- | < 4 | < 12 | < 4 | < 2 | < 0.5 | < 0.5 | 1 | | 0.9 J | 1.3 J | 0.7 J | 0.8 J |
| Total Cadmium | 0.99 | < 1 | < 6 | < 4 | < 2 | 2.7 | < 0.5 | < 0.5 | | < 0.5 UJ | 0.5 J | 0.6 J | 0.6 J |
| Total Calcium | --- | 4700 | 11000 | 8900 | 3600 | 8700 | 1700 | 1700 | | 5600 J | 11000 J | 9800 J | 11000 J |
| Total Chromium | 43.4 | 46 | 56 | 13 | 69 | 39 | 23 | 49 | | 28 J | 45 J | 26 J | 29 J |
| Total Cobalt | --- | 12 | 13 | 6 | 14 | 55 | 5.1 | 11 | | 5.9 J | 8 J | 7 J | 7 J |
| Total Copper | 31.6 | 37 | 20 | 6 | 45 | 9.7 | 16 | 28 | | 21 J | 34 J | 36 J | 38 J |
| Total Iron | --- | 31000 | 37000 | 210000 | 40000 | 54000 | 13000 | 29000 | | 18000 J | 30000 J | 20000 J | 23000 J |
| Total Lead | 35.8 | 25 | 40 | 20 | 23 | 4000 | 10 | 18 | | 15 J | 22 J | 55 J | 58 J |
| Total Magnesium | --- | 6500 | 6000 | 3200 | 10000 | 4500 | 3800 | 7700 | | 3900 J | 6800 J | 3700 J | 4400 J |
| Total Manganese | --- | 840 | 1400 | 2500 | 500 | 600 | 240 | 300 | | 350 J | 570 J | 470 J | 520 J |
| Total Mercury | 0.18 | < 0.2 | < 0.6 | 0.5 | < 0.2 | 0.9 | 0.2 | < 0.1 | | < 0.1 UJ | 0.1 J | 0.4 J | 0.4 J |
| Total Nickel | 22.7 | 38 | 38 | 9 | 53 | 32 | 14 | 38 | | 21 J | 33 J | 24 J | 26 J |
| Total Potassium | --- | 4400 | 2000 | 1300 | 8200 | 1600 | 1300 | 5400 | | 5200 J | 8200 J | 3800 J | 4200 J |
| Total Selenium | --- | < 2 | < 6 | < 4 | < 2 | < 0.5 | < 0.5 | < 0.5 | | 0.7 J | 0.7 J | 1.9 J | 1.3 J |
| Total Silver | --- | < 2 | < 6 | < 4 | < 2 | 1.4 | < 0.5 | < 0.5 | | < 0.5 UJ | < 0.5 UJ | < 0.5 UJ | < 0.5 UJ |
| Total Sodium | --- | 480 | 270 | 240 | 800 | 400 | 200 | 300 | | 400 J | 700 J | 300 J | 400 J |
| Total Thallium | --- | < 1 | < 6 | < 4 | < 2 | < 0.5 | < 0.5 | < 0.5 | | < 0.5 UJ | < 0.5 UJ | < 0.5 UJ | < 0.5 UJ |
| Total Vanadium | --- | 35 | 38 | 17 | 55 | 24 | 25 | 41 | | 34 J | 53 J | 46 J | 49 J |
| Total Zinc | 121 | 170 | 120 | 38 | 130 | 700 | 28 | 80 | | 94 J | 130 J | 110 J | 120 J |
| **TOTAL SOLIDS BY 2540G-91 - (Percent - %)** | | | | | | | | | | | | | |
| Solids Total | --- | 39.9 | 22.0 | 23.4 | 45.5 | 32 | 82.1 | 60.1 | | 20.9 | 19.2 | 22.8 | 22.2 |

**NOTES:**

mg/kg = milligram per kilogram, parts per million

--- = no standard has been established for the indicated parameter.

< = concentration is below reporting detection limit indicated

J, UJ = data qualifiers applied based on EPA's Tier I Plus data validation guidelines. J = estimated, UJ = estimated detection limit

1. Beginning in 2014, sediment data was qualified in accordance with EPA's Tier I Plus data validation guidelines.
2. The EPA has not established a cleanup standard for sediment.
3. Sediment laboratory analytical data are compared to the NHDES Draft Evaluation of Sediment Quality Guidance Document, dated April 2005, that includes the "National Oceanic and Atmospheric Administration Screening Quick Reference Tables (NOAA SQuiRT Tables for Inorganics in Sediment - Freshwater). Current SQuiRT Tables are located on the NOAA website: http://archive.orr.noaa.gov/book_shelf/122_NEW-SQuiRTs.pdf . TEC is Threshold Effect Concentration, which is consensus-based and incorporates the Ontario Ministry of the Environment lowest-observed effect levels (LELs).
4. Shaded values denote concentrations exceeding the NOAA SQuiRT TEC standard.

# TABLE 7

## SUMMARY OF LEACHATE ANALYTICAL RESULTS

# TABLE 7

Summary of Leachate Analytical Results
2015 Annual Report
Coakley Landfill - North Hampton, New Hampshire

| SAMPLE IDENTIFICATION | NHDES SURFACE | | L-1 | L-1 | L-1 | L-1 | L-1 | L-1 | L-1 | | L-1 | L-1 | L-1 | L-1 | L-1 | L-1 | L-1-DUP | L-1 | L-1-DUP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE SAMPLED | WATER STANDARDS | | 16-Aug-01 | 7-Aug-02 | 27-Aug-03 | 25-Aug-04 | 25-Aug-05 | 30-Nov-06 | 13-Nov-07 | | 12-Aug-08 | 19-Aug-09 | 17-Aug-10 | 19-Aug-11 | 30-Aug-12 | 14-Aug-13 | 14-Aug-13 | 17-Sep-15 | 17-Sep-15 |
| COMMENTS | ACUTE | CHRONIC | | | | | | ID 104240 | | | | | | | | | | | |
| PARAMETER ANALYZED | | | | | | | | | | | | | | | | | | | |
| **VOLATILE ORGANIC COMPOUNDS (ug/L)** | | | | | | | | | | | | | | | | | | | |
| Benzene | 5300 | NSE | 3 | 2 | 2 | <2 | 2 | 2 | 3 | | <1 | 1.9 | 2 | 2.0 | 2 | 2 | 2 | 2 | 2 |
| Chlorobenzene | 250 | 50 | 27 | 15 | 18 | 12 | 20 | 18 | 22 | | <2 | 20 | 24 | 18 | 15 | 13 | 14 | 16 | 14 |
| Chloroethane | NSE | NSE | 8 | 6 | 6 | 3 | 6 | <10 | 6 | | <5 | 4.4 | <5 | 4.1 | <5 | <5 | <5 | <5 | <5 |
| 1,4 Dichlorobenzene (See Note 5) | 1120 | 763 | <2 | 3 | 2 | <2 | 3 | 2 | 3 | | <1 | 2.5 | 3 | 2.3 | 2 | 2 | 2 | 2 | 2 |
| 1,2 Dichlorobenzene (See Note 5) | | | <2 | <2 | <2 | <2 | <2 | <2 | 1 | | <1 | 1.1 | 2 | 1.2 | 1 | <1 | <1 | <1 | <1 |
| Isopropylbenzene | NSE | NSE | <2 | <2 | <2 | <2 | <2 | 2 | 2 | | <1 | 1.5 | 2 | 1.6 | 1 | 1 | 1 | 1 | <1 |
| Diethyl Ether | NSE | NSE | 31 | <10 | <10 | <10 | <10 | <10 | 23 | | <5 | 13 | 15 | 12 | 10 | 10 | 10 | 11 | 10 |
| Naphthalene | 2300 | 620 | <10 | <10 | <10 | <10 | <10 | <10 | <5 | | <5 | 0.6 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Tetrahydrofuran | NSE | NSE | 32 | <30 | <30 | <30 | <30 | <30 | 20 | | <10 | 12 | 10 | 13 | <10 | <10 | <10 | 10 | 10 |
| Toluene | NSE | NSE | <2 | <2 | <2 | <2 | <2 | <2 | <1 | | <1 | <1 | 1 | <1 | <1 | <1 | <1 | <1 | 2J |
| **LOW LEVEL 1,4-DIOXANE (ug/L)** | | | | | | | | | | | | | | | | | | | |
| 1,4-Dioxane | NSE | NSE | NA | NA | NA | NA | NA | NA | NA | | NA | 26 | 20 | 25 | 28 | 22 | 24 | NA | NA |
| **METALS (ug/L)** | | | Total | Total | Total | Total | Total | | Total | Dissolved | Total | Total | Total | Total | Total | Total | Total | Total | Total |
| Aluminum | 750 | 87 | **3200** | **4100** | **9,500** | **29,000** | **18,000** | NA | <50 | <50 | 170 | <50 | <50 | <50 | <50 | <50 | 80 | <50 | <50 |
| Antimony | 9,000 | 1,600 | 6 | <2 | <2 | <4 | <6 | NA | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Arsenic | 340 | 150 | 83 | 23 | 67 | 150 | 300 | NA | 7 | 6 | 4 | 4 | 7 | 6 | 4 | 5 | 7 | 6 | 6 |
| Barium | NSE | NSE | 1300 | 260 | 610 | 2200 | 4600 | NA | 97 | 99 | 11 | 100 | 100 | 97 | 87 | 92 | 110 | 100 | 96 |
| Beryllium | 130 | 5.3 | 3 | <4 | <4 | 3 | <2 | NA | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cadmium | 0.95 | 0.80 | <2 | <2 | <2 | <4 | <6 | NA | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Calcium | NSE | NSE | 120,000 | 97,000 | 100,000 | 140,000 | 150,000 | NA | 50,000 | 62,000 | 20,000 | 64,000 | 71,000 | 63,000 | 79,000 | 56,000 | 57,000 | 67,000 | 67,000 |
| Chromium | 183 | 24 | 20 | 13 | 27 | 55 | 70 | NA | <1 | <1 | 1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | NSE | NSE | <2 | 3 | 6 | 11 | 10 | NA | <1 | 1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper | 3.6 | 2.7 | <2 | **5** | **13** | **36** | **40** | NA | <1 | 1 | **8** | <1 | <1 | 1 | <1 | <1 | <1 | <1 | <1 |
| Iron | NSE | 1,000 | 350,000 | 130,000 | 330,000 | 1,000,000 | 1,100,000 | NA | 30,000 | 27,000 | 1,200 | 35,000 | 34,000 | 31,000 | 31,000 | 35,000 | 45,000 | 35,000 | 33,000 |
| Lead | 14 | 0.54 | <2 | 2 | 8 | **34** | <6 | NA | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | NSE | NSE | 49,000 | 43,000 | 36,000 | 34,000 | 43,000 | NA | 20,000 | 25,000 | 2,500 | 25,000 | 21,000 | 21,000 | 20,000 | 16,000 | 16,000 | 17,000 | 17,000 |
| Manganese | NSE | NSE | 7,600 | 5,700 | 5,900 | 10,000 | 9,800 | NA | 2,700 | 3,200 | 98 | 3,200 | 2,900 | 2,700 | 3,300 | 2,500 | 2,500 | 2400 J+ | 2,200 J+ |
| Mercury | 1.4 | 0.77 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | NA | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | 144.9 | 16.1 | 22 | 18 | 28 | 32 | 40 | NA | 7 | 8 | 3 | 7 | 6 | 4 | 6 | 5 | 5 | 5 | 5 |
| Potassium | NSE | NSE | 66 | 55 | 46,000 | 38,000 | 50,000 | NA | 34,000 | 40 | 7,800 | 37,000 | 33,000 | 30,000 | 31,000 | 25,000 | 27,000 | 26,000 | 27,000 |
| Selenium | NSE | 5 | 7 | 8 | 4 | 3 | <2 | NA | <1 | <1 | <1 | <1 | 2 | 2 | 5 | 5 | 5 | 5 | 5 |
| Silver | 0.32 | NSE | <2 | <2 | **2** | <4 | <6 | NA | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Sodium | NSE | NSE | 220,000 | 200,000 | 160,000 | 140,000 | 150,000 | NA | 130,000 | 150,000 | <10 | 100,000 | 110,000 | 91,000 | 100,000 | 78,000 | 76,000 | 90,000 | 90,000 |
| Thallium | 1,400 | 40 | <2 | <2 | <2 | <4 | <6 | NA | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Vanadium | NSE | NSE | 46 | 13 | 36 | 89 | 220 | NA | 1 | 1 | 2 | 2 | 1 | <5 | <5 | <5 | <5 | <5 | <5 |
| Zinc | 36.2 | 36.5 | **45** | **51** | **140** | **390** | **690** | NA | <5 | **650** | **56** | 12 | 6 | <5 | <5 | <5 | 10 | <5 | <5 |
| **GENERAL CHEMISTRY** | | | | | | | | | | | | | | | | | | | |
| Chemical Oxygen Demand (mg/l) | NSE | NSE | 190 | 178 | 560 | 282 | 377 | NA | 70 | | 50 | 50 | 54 | 40 | 44 | 52 | 68 | 32 | 43 |
| Ammonia-N (mg/l) | 36.1 | 5.91 | **44** | **41** | **44.8** | **56.8** | **79** | NA | 33 | | 0.62 | 21 | 22 | 25 | 24 | 21 | 19 | 23 | 23 |

| **FIELD PARAMETERS** | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Temperature (degrees Celcius) | | | | | | | | | 12 | | 18 | 14 | 16 | 15 | 16 | 15 | NA | 15 | NA |
| Ph (standard units) | | | | | | | | | 6.2 | | 6.6 | 6.4 | 6.6 | 5.1 | 6.6 | 6.3 | NA | 6.4 | NA |
| Conductivity (us/cm) | | | | | | | | | 1,600 | | 176 | 1,459 | 1,500 | 821 | 1,399 | 1,220 | NA | 1,283 | NA |
| Dissolved Oxygen (mg/l) | | | | | | | | | 2.2 | | 4.9 | 1.3 | 0.6 | 3.4 | 2.3 | 2.3 | NA | 2.6 | NA |
| Turbidity (NTU) | | | | | | | | | 18 | | 90 | 10 | 9 | 2 | 17 | 144 | NA | 6 | NA |
| Oxidation/Reduction Potential (mV) | | | | | | | | | 138 | | 42 | -38 | -99 | -73.1 | -76.0 | -102.0 | NA | -111.0 | NA |

**NOTES:**

1. <1 = Below Detection Limit; NA = Not Analyzed
2. NSE indicates no standard has been established for the indicated parameter.
3. NHDES Surface Water Standard are listed in Env Wq 1700
4. Acute and chronic standards based on total dichlorobenzenes
5. Ammonia-N standard is based on pH of 7.0 at 14 C, salinoids not present.
6. A **bold** entry indicates the parameter exceeded the acute surface water standard.
7. Shaded values indicate the parameter exceeded the chronic surface water standard.
8. **Bold** and shaded values indicate exceedances of both NHDES acute and chronic criteria.
9. Volatile organic compounds and metals results are in micrograms per liter (µg/l).
10. Only volatile organic compounds detected in one or more leachate sample during the period shown are listed.
11. Only volatile organic compounds detected in one or more leachate sample during the period shown are listed.
12. Refer to Table 2 and 3 for Field Parameter unit abbreviations
13. The laboratory detection limits (for 2013) were above the either the Acute or Chronic standard for the following parameters (detection limit in parantheses): Cadmium (1 ug/L), Lead (1 ug/L) and Silver (1 ug/L).

**LABORATORY ANALYTICAL METHODS***(Not Confirmed for Analyses Performed Prior to 2010)*

1. Volatile Organic Compounds (VOC) analyzed by EPA Method 8260B.
2. 1,4-dioxane (low level) analyzed by EPA Method 8260B SIM
3. Metals analyzed by EPA Method 200.8
4. Chemical Oxygen Demand analyzed by 4500-NH3
5. Ammonia-N analyzed by H8000

# TABLE 8

# DUPLICATE SAMPLE COMPARISONS

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | GW-AE-3A | | | GW-AE-3A-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/15/15 | | | 9/15/15 | | | |
| **Laboratory Sample ID** | | | 148117.06 | | | 148117.07 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Dissolved Antimony | 200.8-Dissolved | mg/L | 0.001 | U | 0 | 0.001 | U | 0 | 0% |
| Dissolved Arsenic | 200.8-Dissolved | mg/L | 0.13 | | 0 | 0.13 | | 0 | 0% |
| Dissolved Barium | 200.8-Dissolved | mg/L | 0.067 | | 0 | 0.067 | | 0 | 0% |
| Dissolved Beryllium | 200.8-Dissolved | mg/L | 0.001 | U | 0 | 0.001 | U | 0 | 0% |
| Dissolved Calcium | 200.8-Dissolved | mg/L | 36 | J+ | 0.05 | 34 | J+ | 0.1 | 6% |
| Dissolved Chromium | 200.8-Dissolved | mg/L | 0.001 | U | 0 | 0.001 | U | 0 | 0% |
| Dissolved Iron | 200.8-Dissolved | mg/L | 20 | | 0.05 | 20 | | 0.05 | 0% |
| Dissolved Lead | 200.8-Dissolved | mg/L | 0.001 | U | 0 | 0.001 | U | 0 | 0% |
| Dissolved Magnesium | 200.8-Dissolved | mg/L | 18 | | 0.1 | 18 | | 0.1 | 0% |
| Dissolved Manganese | 200.8-Dissolved | mg/L | 0.94 | | 0.01 | 0.94 | | 0.01 | 0% |
| Dissolved Nickel | 200.8-Dissolved | mg/L | 0.006 | | 0 | 0.006 | | 0 | 0% |
| Dissolved Potassium | 200.8-Dissolved | mg/L | 17 | | 0.1 | 16 | | 0.1 | 6% |
| Dissolved Sodium | 200.8-Dissolved | mg/L | 73 | | 5 | 73 | | 5 | 0% |
| Dissolved Vanadium | 200.8-Dissolved | mg/L | 0.005 | U | 0.01 | 0.005 | U | 0.01 | 0% |
| | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,1-Trichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,2,2-Tetrachloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,2-Trichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1-Dichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1-Dichloroethene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,1-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2,3-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2,3-Trichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2,4-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2,4-Trimethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2-Dibromo-3-chloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dibromoethane(EDB) | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2-Dichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,3,5-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3,5-Trimethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,4-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,4-Dioxane | 8260B | ug/l | 50 | U | 50 | 50 | U | 50 | 0% |
| 2,2-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | GW-AE-3A | | | GW-AE-3A-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/15/15 | | | 9/15/15 | | | |
| **Laboratory Sample ID** | | | 148117.06 | | | 148117.07 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| 2-Butanone(MEK) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| 2-Chlorotoluene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 2-Hexanone | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| 4-Chlorotoluene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 4-Methyl-2-pentanone(MIBK) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Acetone | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Benzene | 8260B | ug/l | 2 | | 1 | 2 | | 1 | 0% |
| Bromobenzene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromochloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromodichloromethane | 8260B | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromoform | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromomethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Carbon disulfide | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Carbon tetrachloride | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chlorobenzene | 8260B | ug/l | 7 | | 2 | 7 | | 2 | 0% |
| Chloroethane | 8260B | ug/l | 7 | | 5 | 7 | | 5 | 0% |
| Chloroform | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| cis-1,2-Dichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| cis-1,3-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dibromochloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dibromomethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dichlorodifluoromethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Diethyl Ether | 8260B | ug/l | 13 | | 5 | 13 | | 5 | 0% |
| Ethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Ethyl-t-butyl ether(ETBE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Hexachlorobutadiene | 8260B | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Isopropyl ether(DIPE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| IsoPropylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Methylene chloride | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Methyl-t-butyl ether(MTBE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| mp-Xylene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Naphthalene | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| n-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | GW-AE-3A | | | GW-AE-3A-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/15/15 | | | 9/15/15 | | | |
| **Laboratory Sample ID** | | | 148117.06 | | | 148117.07 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| n-Propylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| o-Xylene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| p-Isopropyltoluene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| sec-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Styrene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| tert-amyl methyl ether(TAME) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| tert-Butyl Alcohol (TBA) | 8260B | ug/l | 30 | U | 30 | 30 | U | 30 | 0% |
| tert-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Tetrachloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Tetrahydrofuran(THF) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Toluene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| trans-1,2-Dichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| trans-1,3-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Trichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Trichlorofluoromethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Vinyl chloride | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| | | | | | | | | | |
| 1,4-Dioxane | 8260B SIM | ug/l | 24 | | 3 | 20 | | 3 | 18% |

**Notes on first page of table**

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | GW-GZ-105 | | | GW-GZ-105-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/16/15 | | | 9/16/15 | | | |
| **Laboratory Sample ID** | | | 148117.41 | | | 148117.42 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Total Antimony | 200.8-Total | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Total Arsenic | 200.8-Total | mg/L | 0.008 | | 0.001 | 0.009 | | 0.001 | 12% |
| Total Barium | 200.8-Total | mg/L | 0.032 | | 0.001 | 0.035 | | 0.001 | 9% |
| Total Beryllium | 200.8-Total | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Total Calcium | 200.8-Total | mg/L | 32 | | 0.05 | 34 | | 0.05 | 6% |
| Total Chromium | 200.8-Total | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Total Iron | 200.8-Total | mg/L | 1.9 | | 0.05 | 2 | | 0.05 | 5% |
| Total Lead | 200.8-Total | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Total Magnesium | 200.8-Total | mg/L | 12 | | 0.05 | 12 | | 0.05 | 0% |
| Total Manganese | 200.8-Total | mg/L | 0.23 | | 0.005 | 0.25 | | 0.005 | 8% |
| Total Nickel | 200.8-Total | mg/L | 0.004 | | 0.001 | 0.004 | | 0.001 | 0% |
| Total Potassium | 200.8-Total | mg/L | 4.6 | | 0.05 | 4.9 | | 0.05 | 6% |
| Total Sodium | 200.8-Total | mg/L | 130 | | 5 | 140 | | 5 | 7% |
| Total Vanadium | 200.8-Total | mg/L | 0.005 | U | 0.005 | 0.005 | U | 0.005 | 0% |
| | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,1-Trichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,2,2-Tetrachloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,2-Trichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1-Dichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1-Dichloroethene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,1-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2,3-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2,3-Trichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2,4-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2,4-Trimethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2-Dibromo-3-chloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dibromoethane(EDB) | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2-Dichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,3,5-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3,5-Trimethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,4-Dichlorobenzene | 8260B | ug/l | 2 | | 1 | 2 | | 1 | 0% |
| 1,4-Dioxane | 8260B | ug/l | 50 | U | 50 | 50 | U | 50 | 0% |
| 2,2-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 2-Butanone(MEK) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| 2-Chlorotoluene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 2-Hexanone | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | GW-GZ-105 | | | GW-GZ-105-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/16/15 | | | 9/16/15 | | | |
| **Laboratory Sample ID** | | | 148117.41 | | | 148117.42 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| 4-Chlorotoluene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 4-Methyl-2-pentanone(MIBK) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Acetone | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Benzene | 8260B | ug/l | 3 | | 1 | 3 | | 1 | 0% |
| Bromobenzene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromochloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromodichloromethane | 8260B | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromoform | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromomethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Carbon disulfide | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Carbon tetrachloride | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chlorobenzene | 8260B | ug/l | 5 | | 2 | 5 | | 2 | 0% |
| Chloroethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Chloroform | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| cis-1,2-Dichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| cis-1,3-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dibromochloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dibromomethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dichlorodifluoromethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Diethyl Ether | 8260B | ug/l | 28 | | 5 | 25 | | 5 | 11% |
| Ethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Ethyl-t-butyl ether(ETBE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Hexachlorobutadiene | 8260B | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Isopropyl ether(DIPE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| IsoPropylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Methylene chloride | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Methyl-t-butyl ether(MTBE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| mp-Xylene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Naphthalene | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| n-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| n-Propylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| o-Xylene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| p-Isopropyltoluene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| sec-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Styrene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| tert-amyl methyl ether(TAME) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| tert-Butyl Alcohol (TBA) | 8260B | ug/l | 30 | U | 30 | 30 | U | 30 | 0% |
| tert-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Tetrachloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Tetrahydrofuran(THF) | 8260B | ug/l | 20 | | 10 | 20 | | 10 | 0% |
| Toluene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | GW-GZ-105 | | | GW-GZ-105-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/16/15 | | | 9/16/15 | | | |
| **Laboratory Sample ID** | | | 148117.41 | | | 148117.42 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| trans-1,2-Dichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| trans-1,3-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Trichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Trichlorofluoromethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Vinyl chloride | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| | | | | | | | | | |
| 1,4-Dioxane | 8260B SIM | ug/l | 62 | | 3 | 60 | | 3 | 3% |

**Notes on first page of table**

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | GW-MW-4 | | | GW-MW-4-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/16/15 | | | 9/16/15 | | | |
| **Laboratory Sample ID** | | | 148117.24 | | | 148117.25 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Dissolved Antimony | 200.8-Dissolved | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Arsenic | 200.8-Dissolved | mg/L | 0.05 | J | 0.001 | 0.072 | J | 0.001 | 36% |
| Dissolved Barium | 200.8-Dissolved | mg/L | 0.066 | | 0.001 | 0.058 | | 0.001 | 13% |
| Dissolved Beryllium | 200.8-Dissolved | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Calcium | 200.8-Dissolved | mg/L | 70 | | 0.1 | 78 | | 0.1 | 11% |
| Dissolved Chromium | 200.8-Dissolved | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Iron | 200.8-Dissolved | mg/L | 20 | | 0.05 | 19 | | 0.05 | 5% |
| Dissolved Lead | 200.8-Dissolved | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Magnesium | 200.8-Dissolved | mg/L | 18 | | 0.1 | 17 | | 0.1 | 6% |
| Dissolved Manganese | 200.8-Dissolved | mg/L | 0.9 | | 0.005 | 1 | | 0.005 | 11% |
| Dissolved Nickel | 200.8-Dissolved | mg/L | 0.009 | J | 0.001 | 0.006 | J | 0.001 | 40% |
| Dissolved Potassium | 200.8-Dissolved | mg/L | 27 | | 0.1 | 24 | | 0.1 | 12% |
| Dissolved Sodium | 200.8-Dissolved | mg/L | 26 | | 5 | 22 | | 5 | 17% |
| Dissolved Vanadium | 200.8-Dissolved | mg/L | 0.005 | U | 0.005 | 0.005 | U | 0.005 | 0% |
| | | | | | | | | | |
| 1,4-Dioxane | 8260B SIM | ug/l | 8.5 | | 0.25 | 8.6 | | 0.25 | 1% |

**Notes on first page of table**

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | DW-R3 | | | DW-R3-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/15/15 | | | 9/15/15 | | | |
| **Laboratory Sample ID** | | | 148117.12 | | | 148117.13 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Total Arsenic | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Total Manganese | 200.8 | mg/L | 0.16 | | 0.005 | 0.16 | | 0.005 | 0% |
| | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1,1-Trichloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1,2,2-Tetrachloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1,2-Trichloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1-Dichloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1-Dichloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1-Dichloropropene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2,3-Trichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2,3-Trichloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2,4-Trichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2,4-Trimethylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dibromo-3-chloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dibromoethane(EDB) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dichloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dichloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,3,5-Trichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,3,5-Trimethylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,3-Dichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,3-Dichloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,4-Dichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 2,2-Dichloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 2-Butanone(MEK) | 524.2 | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| 2-Chlorotoluene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 2-Hexanone | 524.2 | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| 4-Chlorotoluene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 4-Methyl-2-pentanone(MIBK) | 524.2 | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Acetone | 524.2 | ug/l | 10 | UJ | 10 | 10 | UJ | 10 | 0% |
| Benzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | DW-R3 | | | DW-R3-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/15/15 | | | 9/15/15 | | | |
| **Laboratory Sample ID** | | | 148117.12 | | | 148117.13 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Bromochloromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromodichloromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromoform | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromomethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Carbon disulfide | 524.2 | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Carbon tetrachloride | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Chlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Chloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Chloroform | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Chloromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| cis-1,2-Dichloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| cis-1,3-Dichloropropene | 524.2 | ug/l | 0.3 | U | 0.3 | 0.3 | U | 0.3 | 0% |
| Dibromochloromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Dibromomethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Dichlorodifluoromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Diethyl Ether | 524.2 | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Ethylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Ethyl-t-butyl ether(ETBE) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Hexachlorobutadiene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Isopropyl ether(DIPE) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| IsoPropylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Methylene chloride | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Methyl-t-butyl ether(MTBE) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| mp-Xylene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Naphthalene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| n-Butylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| n-Propylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| o-Xylene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| p-Isopropyltoluene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| sec-Butylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Styrene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| tert-amyl methyl ether(TAME) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| tert-Butyl Alcohol (TBA) | 524.2 | ug/l | 30 | U | 30 | 30 | U | 30 | 0% |
| tert-Butylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | DW-R3 | | | DW-R3-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/15/15 | | | 9/15/15 | | | |
| **Laboratory Sample ID** | | | 148117.12 | | | 148117.13 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Tetrachloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Tetrahydrofuran(THF) | 524.2 | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Toluene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| trans-1,2-Dichloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| trans-1,3-Dichloropropene | 524.2 | ug/l | 0.3 | U | 0.3 | 0.3 | U | 0.3 | 0% |
| Trichloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Trichlorofluoromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Vinyl acetate | 524.2 | ug/l | 10 | UJ | 10 | 10 | UJ | 10 | 0% |
| Vinyl chloride | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| | | | | | | | | | |
| 1,4-Dioxane | 8260B SIM | ug/l | 0.37 | | 0.25 | 0.35 | | 0.25 | 6% |

**Notes on first page of table**

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | L-L-1 | | | L-L-1-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/17/15 | | | 9/17/15 | | | |
| **Laboratory Sample ID** | | | 148117.47 | | | 148117.48 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Dissolved Aluminum | 200.8 | mg/L | 0.05 | U | 0.05 | 0.05 | U | 0.05 | 0% |
| Dissolved Antimony | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Arsenic | 200.8 | mg/L | 0.006 | | 0.001 | 0.006 | | 0.001 | 0% |
| Dissolved Barium | 200.8 | mg/L | 0.1 | | 0.001 | 0.096 | | 0.001 | 4% |
| Dissolved Beryllium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Cadmium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Calcium | 200.8 | mg/L | 67 | | 0.05 | 67 | | 0.05 | 0% |
| Dissolved Chromium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Cobalt | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Copper | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Iron | 200.8 | mg/L | 35 | | 0.05 | 33 | | 0.05 | 6% |
| Dissolved Lead | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Magnesium | 200.8 | mg/L | 17 | | 0.05 | 17 | | 0.05 | 0% |
| Dissolved Manganese | 200.8 | mg/L | 2.4 | J+ | 0.005 | 2.2 | J+ | 0.005 | 9% |
| Dissolved Mercury | 200.8 | mg/L | 0.0001 | U | 0.0001 | 0.0001 | U | 0.0001 | 0% |
| Dissolved Nickel | 200.8 | mg/L | 0.005 | | 0.001 | 0.005 | | 0.001 | 0% |
| Dissolved Potassium | 200.8 | mg/L | 26 | | 0.05 | 27 | | 0.05 | 4% |
| Dissolved Selenium | 200.8 | mg/L | 0.005 | | 0.001 | 0.005 | | 0.001 | 0% |
| Dissolved Silver | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Sodium | 200.8 | mg/L | 90 | | 5 | 90 | | 5 | 0% |
| Dissolved Thallium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Vanadium | 200.8 | mg/L | 0.005 | U | 0.005 | 0.005 | U | 0.005 | 0% |
| Dissolved Zinc | 200.8 | mg/L | 0.005 | U | 0.005 | 0.005 | U | 0.005 | 0% |
| | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,1-Trichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,2,2-Tetrachloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,2-Trichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1-Dichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1-Dichloroethene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,1-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2,3-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2,3-Trichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2,4-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2,4-Trimethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2-Dibromo-3-chloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dibromoethane(EDB) | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2-Dichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,3,5-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3,5-Trimethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | L-L-1 | | | L-L-1-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/17/15 | | | 9/17/15 | | | |
| **Laboratory Sample ID** | | | 148117.47 | | | 148117.48 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| 1,4-Dichlorobenzene | 8260B | ug/l | 2 | | 1 | 2 | | 1 | 0% |
| 1,4-Dioxane | 8260B | ug/l | 50 | U | 50 | 50 | U | 50 | 0% |
| 2,2-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 2-Butanone(MEK) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| 2-Chlorotoluene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 2-Hexanone | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| 4-Chlorotoluene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 4-Methyl-2-pentanone(MIBK) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Acetone | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Benzene | 8260B | ug/l | 2 | | 1 | 2 | | 1 | 0% |
| Bromobenzene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromochloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromodichloromethane | 8260B | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromoform | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromomethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Carbon disulfide | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Carbon tetrachloride | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chlorobenzene | 8260B | ug/l | 16 | | 2 | 14 | | 2 | 13% |
| Chloroethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Chloroform | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| cis-1,2-Dichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| cis-1,3-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dibromochloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dibromomethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dichlorodifluoromethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Diethyl Ether | 8260B | ug/l | 11 | | 5 | 10 | | 5 | 10% |
| Ethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Ethyl-t-butyl ether(ETBE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Hexachlorobutadiene | 8260B | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Isopropyl ether(DIPE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| IsoPropylbenzene | 8260B | ug/l | 1 | | 1 | 1 | U | 1 | 0% |
| Methylene chloride | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Methyl-t-butyl ether(MTBE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| mp-Xylene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Naphthalene | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| n-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| n-Propylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| o-Xylene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| p-Isopropyltoluene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| sec-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Styrene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| tert-amyl methyl ether(TAME) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| tert-Butyl Alcohol (TBA) | 8260B | ug/l | 30 | U | 30 | 30 | U | 30 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | L-L-1 | | | L-L-1-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/17/15 | | | 9/17/15 | | | |
| **Laboratory Sample ID** | | | 148117.47 | | | 148117.48 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| tert-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Tetrachloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Tetrahydrofuran(THF) | 8260B | ug/l | 10 | | 10 | 10 | | 10 | 0% |
| Toluene | 8260B | ug/l | 1 | U | 1 | 2 | | 1 | 67% |
| trans-1,2-Dichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| trans-1,3-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Trichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Trichlorofluoromethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Vinyl chloride | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| | | | | | | | | | |
| Ammonia-N | TM NH3-001 | mg/L | 23 | | 0.05 | 23 | | 0.05 | 0% |
| COD | H8000 | mg/L | 32 | | 0.05 | 43 | | 0.05 | 29% |

**Notes on first page of table**

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | SW-SW-5 | | | SW-SW-5-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/16/15 | | | 9/16/15 | | | |
| **Laboratory Sample ID** | | | 148117.36 | | | 1148117.37 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Dissolved Aluminum | 200.8 | mg/L | 0.05 | U | 0.05 | 0.05 | U | 0.05 | 0% |
| Dissolved Antimony | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Arsenic | 200.8 | mg/L | 0.002 | | 0.001 | 0.002 | | 0.001 | 0% |
| Dissolved Barium | 200.8 | mg/L | 0.016 | | 0.001 | 0.015 | | 0.001 | 6% |
| Dissolved Beryllium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Cadmium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Calcium | 200.8 | mg/L | 19 | J- | 0.05 | 19 | J- | 0.05 | 0% |
| Dissolved Chromium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Cobalt | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Copper | 200.8 | mg/L | 0.004 | | 0.001 | 0.003 | | 0.001 | 29% |
| Dissolved Iron | 200.8 | mg/L | 0.41 | | 0.05 | 0.42 | | 0.05 | 2% |
| Dissolved Lead | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Magnesium | 200.8 | mg/L | 5.4 | J- | 0.05 | 5.1 | J- | 0.05 | 6% |
| Dissolved Manganese | 200.8 | mg/L | 0.26 | | 0.005 | 0.24 | | 0.005 | 8% |
| Dissolved Mercury | 200.8 | mg/L | 0.0001 | U | 0.0001 | 0.0001 | U | 0.0001 | 0% |
| Dissolved Nickel | 200.8 | mg/L | 0.003 | | 0.001 | 0.003 | | 0.001 | 0% |
| Dissolved Potassium | 200.8 | mg/L | 5 | | 0.05 | 4.7 | | 0.05 | 6% |
| Dissolved Selenium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | | 0.001 | 0% |
| Dissolved Silver | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Sodium | 200.8 | mg/L | 25 | J- | 5 | 23 | J- | 5 | 8% |
| Dissolved Thallium | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Dissolved Vanadium | 200.8 | mg/L | 0.005 | U | 0.005 | 0.005 | U | 0.005 | 0% |
| Dissolved Zinc | 200.8 | mg/L | 0.013 | | 0.005 | 0.011 | | 0.005 | 17% |
| | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,1-Trichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,2,2-Tetrachloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1,2-Trichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1-Dichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,1-Dichloroethene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,1-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2,3-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2,3-Trichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2,4-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2,4-Trimethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2-Dibromo-3-chloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dibromoethane(EDB) | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,2-Dichloroethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,2-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 1,3,5-Trichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3,5-Trimethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,3-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | SW-SW-5 | | | SW-SW-5-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/16/15 | | | 9/16/15 | | | |
| **Laboratory Sample ID** | | | 148117.36 | | | 1148117.37 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| 1,4-Dichlorobenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| 1,4-Dioxane | 8260B | ug/l | 50 | U | 50 | 50 | U | 50 | 0% |
| 2,2-Dichloropropane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 2-Butanone(MEK) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| 2-Chlorotoluene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 2-Hexanone | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| 4-Chlorotoluene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| 4-Methyl-2-pentanone(MIBK) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Acetone | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Benzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Bromobenzene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromochloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromodichloromethane | 8260B | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromoform | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Bromomethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Carbon disulfide | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Carbon tetrachloride | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chlorobenzene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chloroethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Chloroform | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Chloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| cis-1,2-Dichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| cis-1,3-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dibromochloromethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dibromomethane | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Dichlorodifluoromethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Diethyl Ether | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Ethylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Ethyl-t-butyl ether(ETBE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Hexachlorobutadiene | 8260B | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Isopropyl ether(DIPE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| IsoPropylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Methylene chloride | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Methyl-t-butyl ether(MTBE) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| mp-Xylene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Naphthalene | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| n-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| n-Propylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| o-Xylene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| p-Isopropyltoluene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| sec-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Styrene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| tert-amyl methyl ether(TAME) | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| tert-Butyl Alcohol (TBA) | 8260B | ug/l | 30 | U | 30 | 30 | U | 30 | 0% |

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | SW-SW-5 | | | SW-SW-5-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/16/15 | | | 9/16/15 | | | |
| **Laboratory Sample ID** | | | 148117.36 | | | 1148117.37 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| tert-Butylbenzene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| Tetrachloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Tetrahydrofuran(THF) | 8260B | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Toluene | 8260B | ug/l | 1 | U | 1 | 1 | U | 1 | 0% |
| trans-1,2-Dichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| trans-1,3-Dichloropropene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Trichloroethene | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| Trichlorofluoromethane | 8260B | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Vinyl chloride | 8260B | ug/l | 2 | U | 2 | 2 | U | 2 | 0% |
| | | | | | | | | | |
| Ammonia-N | TM NH3-001 | mg/L | 0.08 | | 0.05 | 0.06 | | 0.05 | 29% |

**Notes on first page of table**

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | S-SED-5 | | | S-SED-5-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 9/16/15 | | | 9/16/15 | | | |
| **Laboratory Sample ID** | | | 136602.37 | | | 136602.38 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Solids Total | 2540G-91 | Percent | 22.8 | J | 0.1 | 22.2 | J | 0.1 | 3% |
| | | | | | | | | | |
| Total Aluminum | 6020 | mg/kg | 14000 | J | 100 | 16000 | J | 200 | 13% |
| Total Antimony | 6020 | mg/kg | 1.8 | J | 0.5 | 1.9 | J | 0.5 | 5% |
| Total Arsenic | 6020 | mg/kg | 14 | J | 0.5 | 16 | J | 0.5 | 13% |
| Total Barium | 6020 | mg/kg | 120 | J | 0.5 | 140 | J | 0.5 | 15% |
| Total Beryllium | 6020 | mg/kg | 0.7 | J | 0.5 | 0.8 | J | 0.5 | 13% |
| Total Cadmium | 6020 | mg/kg | 0.6 | J | 0.5 | 0.6 | J | 0.5 | 0% |
| Total Calcium | 6020 | mg/kg | 9800 | J | 100 | 11000 | J | 400 | 12% |
| Total Chromium | 6020 | mg/kg | 26 | J | 0.5 | 29 | J | 2 | 11% |
| Total Cobalt | 6020 | mg/kg | 7 | J | 0.5 | 7 | J | 2 | 0% |
| Total Copper | 6020 | mg/kg | 36 | J | 0.5 | 38 | J | 2 | 5% |
| Total Iron | 6020 | mg/kg | 20000 | J | 100 | 23000 | J | 200 | 14% |
| Total Lead | 6020 | mg/kg | 55 | J | 0.5 | 58 | J | 0.5 | 5% |
| Total Magnesium | 6020 | mg/kg | 3700 | J | 100 | 4400 | J | 400 | 17% |
| Total Manganese | 6020 | mg/kg | 470 | J | 0.5 | 520 | J | 2 | 10% |
| Total Mercury | 6020 | mg/kg | 0.4 | J | 0.1 | 0.4 | J | 0.1 | 0% |
| Total Nickel | 6020 | mg/kg | 24 | J | 0.5 | 26 | J | 2 | 8% |
| Total Potassium | 6020 | mg/kg | 3800 | J | 100 | 4200 | J | 400 | 10% |
| Total Selenium | 6020 | mg/kg | 1.9 | J | 0.5 | 1.3 | J | 0.5 | 38% |
| Total Silver | 6020 | mg/kg | 0.5 | UJ | 0.5 | 0.5 | UJ | 0.5 | 0% |
| Total Sodium | 6020 | mg/kg | 300 | J | 100 | 400 | J | 400 | 29% |
| Total Thallium | 6020 | mg/kg | 0.5 | UJ | 0.5 | 0.5 | UJ | 0.5 | 0% |
| Total Vanadium | 6020 | mg/kg | 46 | J | 0.5 | 49 | J | 2 | 6% |
| Total Zinc | 6020 | mg/kg | 110 | J | 0.5 | 120 | J | 2 | 9% |

**Notes on first page of table**

**Table 8**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

## DUPLICATE COMPARISON TABLE NOTES

### ABBREVIATIONS

| | |
|---|---|
| U | Not Detected |
| UJ | Not Detected, detection limit estimated |
| J | Laboratory estimated value |
| J- | Laboratory estimated value, biased low |
| J+ | Laboratory estimated value, biased high |
| EB | Parameter Detected in Equipment Blank |

### NOTES

1. Primary/Duplicate sample pairs were evaluated for reproducibility to assess whether the sampling methods provide reproducible data. The relative percent difference (RPD) acceptance criteria is described in the August 2014 Sampling and Analysis Plan Table 4-3 (Field Quality Control Requirements).
2. Acceptance criteria for duplicates are ± 30% for aqueous samples and ± 50% for solid samples.
3. Exceedances of the acceptance criteria are shaded gray.
4. A Tier I Plus data validation was completed on the data set and laboratory results were qualified in accordance with the August 2014 Sampling and Analysis Plan. The flags (Qualifiers) listed in the duplicate comparison tables are based on the results of the Tier 1 Plus data validation.

## TABLE 9

## STATISTICAL AND VISUAL ANALYSIS RESULTS

**TABLE 9**

Statistical and Visual Trend Analysis Results

2015 Annual Report - Coakley Landfill, North Hampton, New Hampshire

| | 1,4-dioxane | | Benzene | | Tertiary-butyl Alcohol (TBA) | | Arsenic | | Manganese | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Well** | **Statistical Trend** | **Visual Trend** | **Statistical Trend** | **Visual Trend** | **Statistical Trend** | **Visual Trend** | **Statistical Trend** | **Visual Trend** | **Statistical Trend** | **Visual Trend** |
| **Operating Unit 1 Wells** | | | | | | | | | | |
| BP-4 | No Trend | **Stable** | NA | NA | NA | NA | No Trend | **Decreasing** | No Trend | **Decreasing** |
| MW-4 | No Trend | **Increasing** | NA | NA | NA | NA | No Trend | **Stable** | **Decreasing** | **Stable** |
| MW-5D | No Trend | **Stable** | No Trend | **Stable** | No Trend | **Stable** | No Trend | **Stable** | No Trend | **Decreasing** |
| MW-5S | No Trend | **Decreasing** | No Trend | **Decreasing** | ND | ND | No Trend | **Stable** | **Decreasing** | **Decreasing** |
| MW-6 | ND | ND | ND | ND | ND | ND | NP | NP | **Increasing** | **Not Stable** |
| MW-8 | No Trend | **Stable** | No Trend | **Stable** | **Decreasing** | **Decreasing** | **Increasing** | **Not Stable** | No Trend | **Decreasing** |
| MW-9 | No Trend | **Not Stable** | NA | NA | NA | NA | No Trend | **Not Stable** | No Trend | **Stable** |
| MW-10 | NA | NA | NA | NA | NA | NA | No Trend | **Not Stable** | **Decreasing** | **Not Stable** |
| MW-11 | No Trend | **Not Stable** | **Decreasing** | **Decreasing** | ND | ND | No Trend | **Increasing** | No Trend | **Stable** |
| OP-2 | NP | NP | NA | NA | NA | NA | **Increasing** | **Stable** | **Increasing** | **Increasing** |
| OP-5 | NA | NA | NA | NA | NA | NA | No Trend | **Increasing** | No Trend | **Increasing** |
| **Operating Unit 2 Wells** | | | | | | | | | | |
| AE-1A | NA | NA | NA | NA | NA | NA | No Trend | **Decreasing** | No Trend | **Decreasing** |
| AE-1B | NA | NA | NA | NA | NA | NA | **Increasing** | **Increasing** | No Trend | **Decreasing** |
| AE-2A | No Trend | **Stable** | **Decreasing** | **Stable** | ND | ND | **Decreasing** | **Decreasing** | No Trend | **Stable** |
| AE-2B | No Trend | **Stable** | **Decreasing** | **Stable** | ND | ND | No Trend | **Not Stable** | **Decreasing** | **Decreasing** |
| AE-3A | No Trend | **Stable** | No Trend | **Stable** | ND | ND | No Trend | **Not Stable** | **Increasing** | **Stable** |
| AE-3B | No Trend | **Stable** | **Decreasing** | **Stable** | ND | ND | No Trend | **Stable** | No Trend | **Decreasing** |
| AE-4A | NA | NA | ND | ND | ND | ND | NP | NP | No Trend | **Decreasing** |
| AE-4B | NA | NA | ND | ND | ND | ND | NP | NP | **Decreasing** | **Stable** |
| FPC-4B | NA | NA | ND | ND | ND | ND | NP | NP | NP | NP |
| FPC-5B | NP* | NP* | NA | NA | NA | NA | NP | NP | No Trend | **Decreasing** |
| FPC-6A | NP* | NP* | **Decreasing** | **Stable** | ND | ND | **Increasing** | **Increasing** | **Increasing** | **Not Stable** |
| FPC-6B | NP* | NP* | **Decreasing** | **Stable** | ND | ND | No Trend | **Stable** | **Decreasing** | **Stable** |
| FPC-7A | NA | NA | NA | NA | NA | NA | NP | NP | NP | NP |
| FPC-7B | NA | NA | NA | NA | NA | NA | NP | NP | NP | NP |
| FPC-8A | No Trend | **Stable** | ND | ND | ND | ND | NP | NP | NP | NP |
| FPC-8B | No Trend | **Stable** | ND | ND | ND | ND | NP | NP | NP | NP |
| FPC-9A | NA | NA | NA | NA | NA | NA | **Increasing** | **Increasing** | No Trend | **Decreasing** |
| FPC-11A | NA | NA | NA | NA | NA | NA | NP | NP | No Trend | **Stable** |
| FPC-11B | NA | NA | NA | NA | NA | NA | NP | NP | No Trend | **Increasing** |
| GZ-105 | NP* | NP* | **Decreasing** | **Decreasing** | ND | ND | No Trend | **Decreasing** | NP | NP |
| **Water Supply Wells** | | | | | | | | | | |
| R-3 | No Trend | **Stable** | ND | ND | ND | ND | NP* | NP* | NP* | NP* |
| 339BHR | No Trend | **Stable** | ND | ND | ND | ND | NP* | NP* | NP* | NP* |
| 346BHR | ND | ND | ND | ND | ND | ND | NP* | NP* | NP* | NP* |
| 415BHR | ND | ND | ND | ND | ND | ND | NP* | NP* | NP* | NP* |
| **Trend Tests Completed** | 16 | | 11 | | 2 | | 23 | | 24 | |
| **Trends Identified** | 0 | | 7 | | 1 | | 9 | | 13 | |
| **Increasing Trends** | 0 | | 1 | | 0 | | 7 | | 6 | |
| **Decreasing Trends** | 0 | | 6 | | 1 | | 2 | | 7 | |
| **No Trend** | 16 | | 4 | | 1 | | 14 | | 11 | |

**NOTES:**

| | |
|---|---|
| NA | Parameter Not Analyzed |
| ND | Parameter Not Detected |
| NP | Not Performed, trend analysis not performed because parameter has not recently exceeded USEPA ICL or NHDES AGQS. |
| NP* | Not Performed, data from at least 5 sampling events are required for Mann Kendall statistical analysis or visual trend analysis. |
| 1. | Wells with screened interval longer than 10 feet were interval sampled in August 2013 (MW-5D, MW-5S, MW-8, MW-11, AE-3B, FPC-4B, FPC-5B, FPC-6B, FPC-7B, FPC-8B, GZ-105), or September/October 2014 (FPC-11B). Samples collected using the interval sampling method are not considered to be directly comparable to data from low flow purging sampling methods; therefore, the interval sampling data was excluded from the trends analyses - although it is noted that average concentrations for the interval data were used when plotting time series plots. |
| 2. | Mann Kendall trend analysis completed using 95% confidence interval. Possible outcomes include: No Trend, Increasing, or Decreasing. |
| 3. | Visual trend analysis focused on data from last 5 years, in the context of complete data set. Possible outcomes include: Stable, Not Stable, Increasing, or Decreasing. |
| 4. | FPC-5A: Not sampled in 2015; therefore no trend analysis was completed. |
| 5. | FPC-11B - trend analysis was not performed because the well was interval sampled in Fall 2014. |

# TABLE 10

## CONTAMINANTS OF CONCERN ANALYTICAL DATA
## (NOVEMBER 2000 – SEPTEMBER 2015)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Antimony** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 0.005 | < 0.001 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.04 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | < 0.02 | < 0.005 | NA | < 0.004 | < 0.004 | < 0.004 | < 0.012 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-5D | < 0.001 | < 0.01 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-5S | < 0.02 | < 0.001 | NA | < 0.002 | < 0.004 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-6 | < 0.02 | < 0.005 | NA | < 0.005 | < 0.002 | < 0.005 | < 0.012 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-8 | < 0.02 | < 0.005 | NA | < 0.002 | < 0.004 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-9 | < 0.02 | < 0.005 | NA | 0.002 | <0.004 | **0.007** | < 0.006 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-10 | < 0.02 | < 0.005 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-11 | < 0.02 | < 0.005 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| OP-2 | < 0.02 | < 0.001 | NA | < 0.002 | < 0.002 | < 0.005 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| OP-5 | < 0.005 | < 0.001 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.016 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 0.005 | < 0.001 | NA | < 0.002 | 0.002 | < 0.004 | **0.012** | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-1B | < 0.02 | < 0.005 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.006 | < 0.002 | NS | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-2A | < 0.005 | < 0.001 | NA | < 0.002 | < 0.002 | < 0.005 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-2B | < 0.025 | < 0.005 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.04 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-3A | < 0.025 | < 0.005 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.04 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-3B | < 0.025 | < 0.01 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.016 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| AE-4A | NS | NS | NS | NS | 0.005 | < 0.005 | < 0.008 | **0.008** | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-4B | NS | NS | NS | NS | < 0.008 | < 0.005 | < 0.008 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-2A | NA | < 0.001 | NA | NA | < 0.002 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 0.002 | **0.007** | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 0.004 | < 0.004 | < 0.004 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-5A | < 0.025 | < 0.001 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.004 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | NS | NS |
| FPC-5B | 0.006 | < 0.005 | NA | < 0.002 | < 0.004 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-6A | < 0.005 | < 0.001 | NS | NS | < 0.008 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-6B | < 0.025 | < 0.001 | NA | < 0.002 | < 0.004 | < 0.004 | < 0.02 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-7A | NS | NS | NS | NS | < 0.004 | NA | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-7B | NS | NS | NS | NS | < 0.004 | NA | < 0.006 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-8A | < 0.025 | 0.005 | NA | 0.002 | < 0.004 | < 0.004 | < 0.008 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-8B | < 0.005 | < 0.001 | NA | < 0.004 | < 0.002 | < 0.004 | < 0.008 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-9A | < 0.001 | < 0.005 | NA | < 0.002 | < 0.002 | < 0.004 | < 0.006 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-9B | < 0.02 | NS | NS | < 0.005 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 0.002 | < 0.004 | < 0.016 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | < 0.001 | < 0.001 |
| FPC-11B | NS | NS | NS | NS | 0.003 | < 0.004 | < 0.016 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | INT | <0.001 |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 0.001 | < 0.005 | NA | < 0.002 | < 0.004 | < 0.004 | < 0.04 | 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NA | NA | NA | NS | NA | NA | NA | NA |
| R-5 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NA | NA |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NS | NA | NA |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NA | NA | NA | NA |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NA |

**Table Notes:**

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Antimony is 0.006 mg/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Antimony is 0.006 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**
Contaminants of Concern Analytical Data (November 2000 – September 2015)
**Arsenic** in Groundwater
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | **0.035** | **0.02** | **0.031** | **0.036** | **0.032** | **0.022** | **0.011** | **0.026** | **0.03** | NS | **0.023** | **0.022** | NS | **0.034** | **0.033** | **0.034** | NS | NS | **0.032** | NS | **0.025** | **0.017** |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | **0.06** | **0.042** | **0.064** | **0.041** | **0.04** | **0.066** | **0.13** | **0.043** | **0.058** | NS | **0.069** | **0.07** | **0.064** | NS | **0.081** | **0.08** | NS | NS | **0.053** | NS | **0.063** | **0.05J** |
| MW-5D | 0.009 | 0.007 | 0.008 | 0.006 | 0.007 | 0.005 | 0.006 | 0.005 | **0.011** | NS | 0.005 | 0.006 | 0.01 | NS | 0.01 | **0.011** | NS | NS | INT | NS | 0.009 | 0.01 |
| MW-5S | **0.018** | **0.021** | **0.023** | **0.026** | 0.01 | **0.015** | **0.014** | 0.01 | **0.026** | NS | **0.026** | **0.018** | **0.016** | NS | **0.018** | **0.017** | NS | NS | INT | NS | **0.022** | **0.017** |
| MW-6 | < 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 J | < 0.002 | < 0.004 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | NS | 0.002 | NS | < 0.001 | < 0.001 |
| MW-8 | 0.01 | **0.011** | **0.043** | 0.009 | 0.008 | 0.006 | 0.01 | 0.007 | 0.01 | NS | 0.008 | 0.008 | **0.013** | NS | **0.016** | **0.018** | NS | NS | INT | NS | 0.009 | **0.011** |
| MW-9 | **0.069** | **0.063** | **0.15** | **0.14** | **0.12** | **0.06** | **0.28** | **0.081** | **0.056** | NS | **0.057** | **0.078** | **0.12** | NS | **0.13** | **0.14** | NS | NS | **0.046** | NS | **0.12** | **0.14** |
| MW-10 | 0.01 | 0.003 | **0.032** | **0.028** | 0.011 J | **0.033** | **0.024** | **0.011** | **0.012** | NS | 0.009 | **0.017** | **0.019** | NS | **0.012** | **0.019** | NS | NS | **0.015** | NS | **0.022** | **0.014** |
| MW-11 | 0.01 | **0.014** | **0.02** | **0.017** | **0.015** | **0.011** | **0.012** | 0.01 | **0.015** | NS | **0.013** | **0.011** | **0.011** | NS | 0.008 | 0.009 | NS | NS | INT | NS | **0.013** | **0.014** |
| OP-2 | **0.2** | **0.17** | **0.29** | **0.26** | **0.27** | **0.19** | **0.025** | **0.2** | **0.19** | NS | **0.17** | **0.2** | **0.22** | NS | **0.21** | **0.22** | NS | NS | **0.2** | NS | **0.23** | **0.22** |
| OP-5 | **0.05** | **0.027** | **0.043** | **0.048** | **0.046** | **0.033** | **0.025** | **0.027** | **0.033** | NS | **0.017** | **0.013** | **0.019** | NS | **0.027** | **0.03** | NS | NS | **0.03** | NS | **0.048** | **0.044** |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | **0.017** | **0.018** | **0.017** | **0.018** | **0.02** | **0.022** | **0.02** | **0.015** | **0.039** | NS | **0.041** | **0.029** | **0.02** | NS | **0.022** | **0.018** | NS | NS | **0.018** | NS | **0.014** | **0.016** |
| AE-1B | 0.004 | 0.005 | 0.005 | 0.005 | 0.004 J | 0.004 | 0.003 | < 0.002 | NS | NS | 0.003 | 0.004 | 0.006 | NS | 0.006 | 0.007 | NS | NS | 0.008 | NS | 0.008 | 0.008 |
| AE-2A | **0.29** | **0.3** | **0.34** | **0.29** | **0.33** | **0.29** | **0.3** | **0.24** | **0.28** | NS | **0.23** | **0.24** | **0.24** | NS | **0.25** | **0.24** | NS | NS | **0.19** | NS | **0.012** | **0.19** |
| AE-2B | **0.026** | **0.013** | **0.016** | **0.011** | **0.018** | **0.016** | **0.025** | **0.024** | **0.02** | NS | **0.019** | **0.026** | **0.016** | NS | **0.028** | **0.02** | NS | NS | **0.02** | NS | **0.014** | **0.012** |
| AE-3A | **0.1** | **0.09** | **0.13** | **0.11** | **0.11** | **0.11** | **0.12** | **0.1** | **0.13** | NS | **0.15** | **0.12** | **0.12** | NS | **0.11** | **0.11** | NS | NS | **0.14** | NS | **0.13** | **0.13** |
| AE-3B | **0.093** | **0.083** | **0.11** | **0.073** | 0.084 J | **0.092** | **0.078** | **0.091** | **0.082** | NS | **0.095** | **0.091** | **0.079** | NS | **0.083** | **0.088** | NS | NS | INT | NS | **0.087** | **0.061** |
| AE-4A | NS | NS | NS | NS | < 0.002 JM | < 0.002 | < 0.002 | < 0.002 | 0.003 | NS | 0.01 | 0.003 | 0.002 | NS | 0.001 | 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-4B | NS | NS | NS | NS | 0.003 | < 0.002 | < 0.002 | < 0.002 | 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-2A | < 0.005 | 0.001 | < 0.001 | NA | 0.001 | < 0.002 | 0.005 | < 0.002 | 0.008 | NS | 0.003 | 0.002 | 0.002 | NS | 0.002 | 0.002 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | 0.004 | < 0.002 | 0.004 | < 0.002 | 0.002 | NS | 0.003 | 0.003 | 0.003 | NS | 0.003 | 0.002 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-5A | < 0.001 | 0.001 | **0.046** | **0.054** | 0.008 | **0.045** | **0.065** | **0.042** | **0.053** | NS | **0.054** | **0.053** | **0.055** | NS | **0.051** | **0.053** | NS | NS | **0.052** | NS | NS | NS |
| FPC-5B | **0.031** | **0.034** | 0.002 | 0.001 | 0.038 J | < 0.002 | 0.004 | < 0.002 | 0.004 | NS | 0.001 | 0.001 | 0.003 | NS | 0.002 | 0.002 | NS | NS | 0.002 | NS | 0.002 | 0.002 |
| FPC-6A | < 0.005 | < 0.001 | NS | NS | 0.009 | < 0.002 | 0.003 | < 0.002 | 0.003 | NS | 0.002 | **0.013** | **0.03** | NS | 0.009 | **0.037** | NS | NS | **0.018** | NS | **0.038** | **0.032** |
| FPC-6B | 0.003 | 0.006 | 0.006 | 0.003 | < 0.002 J | **0.013** | **0.05** | 0.005 | 0.009 | NS | **0.014** | 0.002 | 0.003 | NS | 0.005 | 0.004 | NS | NS | INT | NS | 0.003 | 0.003 |
| FPC-7A | NS | NS | NS | NS | < 0.001 J | < 0.004 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-7B | NS | NS | NS | NS | < 0.001 J | 0.007 | 0.002 | < 0.002 | < 0.001 | NS | 0.002 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-8A | 0.003 | 0.004 | 0.007 | 0.008 | 0.004 | < 0.002 | 0.008 | <0.002 | 0.004 | NS | 0.002 | 0.006 | 0.007 | NS | 0.008 | 0.006 | NS | NS | 0.002 | NS | 0.001 | 0.001 |
| FPC-8B | 0.007 | 0.008 | 0.008 | 0.008 | 0.009 | 0.004 | 0.005 | 0.005 | 0.007 | NS | 0.007 | 0.007 | 0.007 | NS | 0.008 | 0.007 | NS | NS | INT | NS | 0.008 | 0.007 |
| FPC-9A | **0.07** | **0.53** | **0.065** | **0.079** | **0.064** | < 0.002 | < 0.002 | **0.044** | **0.037** | NS | **0.026** | **0.034** | **0.036** | NS | **0.042** | **0.041** | NS | NS | **0.045** | NS | **0.058** | **0.048** |
| FPC-9B | < 0.002 | NS | NS | < 0.001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | 0.002 J | < 0.002 | < 0.004 | < 0.002 | 0.001 | NS | 0.001 | < 0.001 | 0.009 | NS | 0.008 | 0.007 | NS | NS | NS | NS | 0.004 | 0.003 |
| FPC-11B | NS | NS | NS | NS | 0.03 J | 0.008 | **0.011** | 0.006 | 0.009 | NS | 0.008 | 0.01 | 0.01 | NS | 0.004 | 0.003 | NS | NS | NS | NS | INT | 0.004 |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | **0.018** | 0.008 | **0.012** | **0.013** | 0.009 | 0.01 | 0.009 | 0.006 | **0.011** | NS | 0.01 | **0.013** | **0.015** | NS | **0.016** | **0.015** | NS | NS | INT | NS | **0.012** | 0.008 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NA | NA | NA | NS | NA | < 0.001 | < 0.001 | < 0.001 |
| R-5 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NA | NA |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NS | < 0.001 | < 0.001 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NA | < 0.001 | < 0.001 | 0.002 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | < 0.001 | < 0.001 |

**Table Notes:**

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Arsenic is 0.01 mg/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Arsenic is 0.01 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Beryllium** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 0.005 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | < 0.001 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | 0.003 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-5D | < 0.01 | 0.002 | NA | < 0.02 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-5S | < 0.01 | < 0.02 | NA | < 0.02 | < 0.02 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-6 | < 0.005 | < 0.002 | NA | < 0.004 | < 0.004 J | < 0.002 | **0.006** | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-8 | < 0.005 | < 0.002 | NA | < 0.02 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-9 | < 0.001 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.002 M | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-10 | < 0.005 | < 0.002 | NA | < 0.004 | < 0.004 J | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-11 | < 0.005 | < 0.002 | NA | < 0.02 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| OP-2 | < 0.001 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| OP-5 | < 0.005 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.004 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 0.005 | < 0.002 | NA | < 0.004 | < 0.004 J | < 0.002 | **0.006** | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-1B | < 0.005 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | NS | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-2A | < 0.005 | < 0.002 | NA | < 0.008 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-2B | < 0.01 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-3A | < 0.001 | < 0.004 | NA | < 0.004 | < 0.004 J | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-3B | < 0.001 | < 0.004 | NA | < 0.004 | < 0.004 J | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| AE-4A | NS | NS | NS | NS | < 0.008 M | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-4B | NS | NS | NS | NS | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-2A | NA | < 0.002 | NA | NA | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-5A | < 0.001 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | NS | NS |
| FPC-5B | < 0.001 | < 0.002 | NA | < 0.004 | < 0.004 J | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-6A | < 0.005 | < 0.002 | NS | NS | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-6B | < 0.001 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.1 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-7A | NS | NS | NS | NS | < 0.004 J | NA | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-7B | NS | NS | NS | NS | < 0.004 J | NA | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-8A | < 0.001 | < 0.002 | NA | < 0.004 | < 0.004 J | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-8B | < 0.005 | < 0.002 | NA | < 0.008 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-9A | < 0.005 | < 0.002 | NA | < 0.004 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-9B | < 0.005 | NS | NS | < 0.004 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 0.004 J | < 0.002 | **0.006** | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | < 0.001 | < 0.001 |
| FPC-11B | NS | NS | NS | NS | < 0.004 J | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | INT | <0.001 |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 0.005 | < 0.002 | NA | < 0.008 | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NA | NA | NA | NS | NA | NA | NA | NA |
| R-5 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NA | NA |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NS | NA | NA |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NA | NA | NA | NA |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NA |

**Table Notes:**

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Beryllium is 0.004 mg/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Beryllium is 0.004 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Chromium** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 0.005 | 0.002 | NA | 0.001 | 0.002 | < 0.002 | 0.015 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | 0.042 | < 0.002 | NA | 0.006 | 0.032 | < 0.002 | **0.6** | **0.15** | **0.14** | NS | **0.19** | 0.002 | < 0.001 | NS | 0.001 | < 0.001 | NS | NS | 0.003 | NS | < 0.001 | < 0.001 |
| MW-5D | < 0.005 | < 0.02 | NA | 0.001 | 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-5S | < 0.015 | 0.002 | NA | 0.002 | 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-6 | < 0.015 | < 0.02 | NA | < 0.002 | < 0.002 | < 0.002 | < 0.004 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-8 | < 0.015 | < 0.02 | NA | 0.001 | 0.004 | < 0.002 | 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-9 | < 0.015 | < 0.02 | NA | 0.014 | 0.007 | 0.005 | 0.003 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | 0.001 | NS | < 0.001 | 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-10 | < 0.015 | < 0.02 | NA | 0.001 | 0.005 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-11 | < 0.015 | < 0.02 | NA | 0.002 | 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| OP-2 | < 0.015 | 0.003 | NA | 0.002 | 0.003 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| OP-5 | < 0.005 | < 0.001 | NA | < 0.001 | < 0.001 | < 0.002 | 0.007 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 0.005 | 0.001 | NA | < 0.001 | 0.016 | < 0.002 | 0.005 | < 0.002 | 0.005 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | 0.008 | NS | < 0.001 | < 0.001 |
| AE-1B | < 0.015 | < 0.02 | NA | 0.003 | 0.002 | < 0.002 | < 0.002 | < 0.002 | NS | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-2A | < 0.005 | 0.002 | NA | < 0.002 | 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-2B | **0.13** | 0.03 | NA | 0.013 | 0.003 | 0.002 | < 0.01 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-3A | < 0.02 | < 0.02 | NA | 0.017 | 0.006 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | 0.003 | NS | < 0.001 | < 0.001 |
| AE-3B | < 0.02 | < 0.02 | NA | 0.005 | 0.009 | < 0.002 | < 0.004 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| AE-4A | NS | NS | NS | NS | 0.0042 | < 0.002 | 0.005 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-4B | NS | NS | NS | NS | **0.34** | < 0.002 | 0.004 | < 0.004 | 0.003 | NS | 0.002 | < 0.001 | 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-2A | NA | < 0.001 | NA | NA | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 0.001 | 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | 0.003 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-5A | < 0.02 | 0.001 | NA | 0.002 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | NS | NS |
| FPC-5B | < 0.02 | < 0.02 | NA | < 0.001 | 0.005 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-6A | < 0.005 | 0.001 | NS | NS | 0.013 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-6B | < 0.02 | 0.001 | NA | < 0.001 | 0.001 | 0.008 | 0.008 | < 0.004 | 0.003 | NS | 0.002 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-7A | NS | NS | NS | NS | 0.003 | < 0.004 | < 0.002 | < 0.002 | 0.002 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-7B | NS | NS | NS | NS | 0.002 | **0.067** | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-8A | 0.013 | < 0.02 | NA | 0.023 | 0.008 | < 0.002 | 0.01 | <0.004 | < 0.001 | NS | < 0.001 | 0.006 | 0.006 | NS | 0.003 | 0.003 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-8B | < 0.005 | < 0.001 | NA | < 0.002 | < 0.001 | < 0.002 | 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-9A | < 0.005 | < 0.02 | NA | < 0.001 | 0.001 | < 0.002 | < 0.002 | < 0.002 | 0.002 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-9B | < 0.015 | NS | NS | 0.002 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | 0.006 | < 0.002 | 0.024 | < 0.004 | 0.002 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | < 0.001 | < 0.001 |
| FPC-11B | NS | NS | NS | NS | 0.046 | < 0.002 | **0.14** | 0.016 | < 0.001 | NS | 0.002 | < 0.001 | < 0.001 | NS | 0.016 | < 0.001 | NS | NS | NS | NS | INT | <0.001 |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 0.005 | < 0.02 | NA | 0.002 | 0.004 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NA | NA | NA | NS | NA | NA | NA | NA |
| R-5 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NA | NA |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NS | NA | NA |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NA | NA | NA | NA |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NA |

**Table Notes:**

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Chromium is 0.1 mg/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Chromium is 0.05 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Lead** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 0.005 | < 0.001 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | 0.004 | 0.01 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | 0.002 | < 0.005 | NA | < 0.001 | < 0.002 | < 0.002 | **0.1** | **0.023** | **0.037** | NS | **0.043** | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | 0.002 | NS | < 0.001 | < 0.001 |
| MW-5D | < 0.005 | < 0.002 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-5S | < 0.002 | < 0.001 | NA | < 0.01 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-6 | < 0.002 | < 0.005 | NA | < 0.002 | < 0.001 | < 0.002 | < 0.004 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | 0.003 | 0.001 | 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-8 | < 0.002 | < 0.01 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| MW-9 | < 0.002 | < 0.01 | NA | 0.002 | < 0.001 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | 0.001 | NS | < 0.001 | < 0.001 |
| MW-10 | < 0.002 | < 0.01 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| MW-11 | < 0.002 | < 0.01 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| OP-2 | < 0.002 | < 0.001 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | 0.006 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| OP-5 | < 0.005 | < 0.001 | NA | < 0.001 | < 0.001 | < 0.002 | 0.003 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 0.005 | < 0.001 | NA | < 0.001 | 0.001 | < 0.002 | < 0.004 | < 0.002 | 0.015 | NS | 0.003 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | 0.004 | NS | < 0.001 | < 0.001 |
| AE-1B | < 0.002 | < 0.005 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | NS | NS | < 0.001 | < 0.001 | < 0.001 | NS | 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | 0.002 |
| AE-2A | < 0.005 | < 0.001 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-2B | **0.017** | < 0.005 | NA | < 0.02 | < 0.001 | < 0.002 | < 0.01 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-3A | < 0.001 | < 0.002 | NA | 0.007 | < 0.001 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-3B | < 0.001 | < 0.002 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.004 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| AE-4A | NS | NS | NS | NS | 0.007 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-4B | NS | NS | NS | NS | **0.05** | < 0.002 | < 0.002 | < 0.004 | 0.002 | NS | 0.002 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-2A | NA | < 0.001 | NA | NA | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | 0.003 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-5A | < 0.001 | < 0.001 | NA | < 0.005 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-5B | < 0.001 | < 0.01 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-6A | < 0.005 | < 0.001 | NA | NS | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-6B | < 0.001 | < 0.001 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.01 J | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-7A | NS | NS | NS | NS | < 0.001 | < 0.004 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-7B | NS | NS | NS | NS | < 0.001 | **0.018** | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-8A | 0.001 | < 0.01 | NA | 0.003 | < 0.001 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | 0.001 | 0.002 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-8B | < 0.005 | < 0.001 | NA | < 0.002 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-9A | < 0.005 | < 0.005 | NA | < 0.001 | < 0.001 | < 0.002 | < 0.002 | < 0.002 | 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-9B | < 0.002 | NS | NS | < 0.002 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 0.001 | < 0.002 | < 0.004 | < 0.004 | 0.002 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | < 0.001 | < 0.001 |
| FPC-11B | NS | NS | NS | NS | 0.007 | < 0.002 | < 0.004 | 0.006 | 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | 0.006 | < 0.001 | NS | NS | NS | NS | INT | <0.001 |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 0.005 | < 0.01 | NA | < 0.002 | < 0.001 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | NS | 0.002 | 0.004 | < 0.001 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NA | NA | NA | NS | NA | NA | NA | NA |
| R-5 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NA | NA |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NS | NA | NA |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NA | NA | NA | NA |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NA |

**Table Notes:**

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Lead is 0.015 mg/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Lead is 0.015 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Manganese** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | **1.4** | **1.7** | **1.5** | **1.3** | **1.4** | **1.3** | **1.7** | **1.3** | **1.2** | NS | **1.1** | 0.094 | NS | **1.2** | **1.1** | **1.2** | NS | NS | **0.96** | NS | **0.69** | **0.49** |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | **1.5** | **1.6** | **1.4** | **1.3** | **1.7** | **1.4** | **13** | **4.5** | **5.9** | NS | **5.8** | **1.2** | **1.1** | NS | **1.3** | **1.2** | NS | NS | **0.97** | NS | **1.2** | **0.9** |
| MW-5D | **0.92** | **1.2** | **0.92** | **0.86** | **0.88** | **0.87** | **0.89** | **0.89** | **0.86** | NS | **0.78** | **0.77** | **0.73** | NS | **0.78** | **0.96** | NS | NS | INT | NS | **0.79** | **0.7** |
| MW-5S | **3.4** | **3.1** | **3.2** | **3.5** | **4.1** | **3.8** | **3.6** | **3.7** | **4.4** | NS | **3.9** | **3.4** | **2.9** | NS | **2.9** | **3.6** | NS | NS | INT | NS | **3.3** | **2.4** |
| MW-6 | 0.08 | **0.6** | **1.2** | **1.2** | **1.1** | **0.7** | **0.97** | **0.54** | **0.74** | NS | **0.52** | **0.49** | NS | **1.9** | **1.8** | **2.5** | NS | NS | **0.99** | NS | **2.7** | **2.2** |
| MW-8 | **3.6** | **3.2** | **9.8** | **2.8** | **2.9** | **2.4** | **2.5** | **2.5** | **1.6** | NS | **1.9** | **2** | **2.1** | NS | **1.7** | **2.2** | NS | NS | INT | NS | **1.3** | **1.1** |
| MW-9 | **1.1** | **0.88** | **1** | **1.1** | **1.3** | **1.1** | **0.71** | **2.4** | **1.2** | NS | **3.5** | **2.1** | **1.4** | NS | **0.88** | **1.4** | NS | NS | **1.3** | NS | **1.4** | **1.2** |
| MW-10 | **1.9** | **0.91** | **3.9** | **4.4** | **8.1** | **3.9** | **3.5** | **3.2** | **2.8** | NS | **0.76** | **2.2** | **2.7** | NS | **1.6** | **3** | NS | NS | **1.7** | NS | **2.3** | **1.9** |
| MW-11 | **0.95** | **0.78** | **0.71** | **0.6** | **0.6** | **0.59** | **0.53** | **0.45** | **0.41** | NS | **0.44** | **0.39** | **0.34** | NS | **0.35** | **0.41** | NS | NS | INT | NS | **0.43** | **0.45** |
| OP-2 | **0.45** | **0.5** | 0.29 | **0.33** | **0.36** | **0.38** | **0.39** | **0.47** | **0.62** | NS | **0.58** | **0.63** | **0.76** | NS | **1** | **1** | NS | NS | **0.98** | NS | **1.2** | **1** |
| OP-5 | **6.7** | **4.9** | **5.6** | **5.2** | **3.9** | **3.5** | **3.8** | **2.5** | **3.8** | NS | **2.3** | **1.8** | **2.2** | NS | **2.7** | **3.7** | NS | NS | **3.1** | NS | **4.3** | **3** |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | 0.16 | 0.21 | **0.31** | **0.35** | **0.38** | 0.28 | 0.25 | **0.44** | 0.13 | NS | 0.014 | 0.25 | **0.38** | NS | **0.39** | **0.5** | NS | NS | **0.47** | NS | **0.46** | **0.44** |
| AE-1B | **0.64** | **0.62** | **0.61** | **0.61** | **0.66** | **0.65** | **0.72** | **0.64** | NS | NS | 0.3 | **0.73** | **0.53** | NS | **0.56** | **0.59** | NS | NS | **0.49** | NS | **0.53** | **0.45** |
| AE-2A | **0.65** | **0.83** | **0.74** | **0.95** | **0.83** | **0.76** | **0.72** | **0.51** | **0.77** | NS | **0.61** | **0.65** | **0.7** | NS | **0.74** | **0.82** | NS | NS | **0.81** | NS | **0.81** | **0.77** |
| AE-2B | **6.4** | **5.1** | **4.4** | **4.4** | **3.7** | **3** | **3.1** | **2.4** | **2.1** | NS | **1.7** | **1.7** | **1.3** | NS | **1.2** | **1.5** | NS | NS | **1.2** | NS | **1.1** | **0.86** |
| AE-3A | **1.2** | **0.89** | **0.9** | **0.95** | **1.3** | **0.74** | **0.69** | **0.69** | **0.84** | NS | **0.85** | **1.3** | **0.76** | NS | **0.9** | **1.2** | NS | NS | **0.84** | NS | **1** | **0.94** |
| AE-3B | **2.1** | **2** | **1.4** | **1.4** | **1.5** | **1.1** | **1.1** | **1** | **0.57** | NS | **0.48** | **1.4** | **0.95** | NS | **1.4** | **1.5** | NS | NS | INT | NS | **1.1** | **0.74** |
| AE-4A | NS | NS | NS | NS | **0.93** | **0.35** | **0.38** | **0.31** | 0.29 | NS | **0.4** | **0.32** | 0.29 | NS | **0.47** | **0.42** | NS | NS | **0.38** | NS | 0.21 | 0.13 |
| AE-4B | NS | NS | NS | NS | **2.2** | **0.46** | **0.7** | 0.22 | **1.1** | NS | **0.6** | 0.26 | 0.19 | NS | 0.22 | 0.013 | NS | NS | 0.008 | NS | 0.018 | <0.005 |
| FPC-2A | **0.74** | **0.92** | **0.68** | **0.67** | **0.6** | **0.59** | **0.57** | **0.67** | **0.8** | NS | **0.62** | **0.73** | **0.5** | NS | **0.55** | **0.63** | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | 0.035 | 0.027 | 0.012 | 0.018 | < 0.001 | NS | 0.023 | 0.084 | 0.021 | NS | 0.019 | 0.015 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | 0.046 | 0.003 | 0.079 | < 0.003 | 0.031 | NS | 0.066 | < 0.005 | < 0.005 | NS | < 0.005 | < 0.005 | NS | NS | INT | NS | 0.006 | <0.005 |
| FPC-5A | 0.05 | 0.055 | 0.17 | 0.16 | 0.074 | 0.18 | 0.15 | 0.14 | 0.11 | NS | 0.11 | 0.11 | 0.1 | NS | 0.11 | 0.14 | NS | NS | 0.11 | NS | NS | NS |
| FPC-5B | 0.2 | 0.19 | 0.055 | 0.07 | 0.17 | 0.073 | 0.076 | 0.088 | 0.095 | NS | 0.074 | 0.087 | 0.07 | NS | 0.056 | 0.059 | NS | NS | INT | NS | 0.057 | 0.047 |
| FPC-6A | 0.2 | 0.15 | NS | NS | **7.2** | **0.53** | **0.61** | **0.41** | **0.5** | NS | **0.36** | **2.4** | **3.6** | NS | **2.1** | **3.9** | NS | NS | **2.3** | NS | **3.1** | **3.1** |
| FPC-6B | **0.69** | **0.62** | **0.83** | **0.75** | **0.6** | **5.9** | **6.2** | **2.1** | **3.1** | NS | **3** | **0.34** | **0.4** | NS | **0.38** | **0.47** | NS | NS | INT | NS | **0.39** | **0.44** |
| FPC-7A | NS | NS | NS | NS | 0.014 | NA | 0.006 | < 0.003 | 0.11 | NS | 0.034 | < 0.005 | < 0.005 | NS | < 0.005 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| FPC-7B | NS | NS | NS | NS | **0.34** | NA | **0.37** | 0.2 | 0.076 | NS | **1.8** | 0.11 | 0.014 | NS | 0.015 | 0.009 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| FPC-8A | **0.46** | **0.35** | **0.44** | **0.41** | 0.3 | **0.31** | 0.26 | 0.15 | 0.15 | NS | 0.062 | 0.19 | 0.21 | NS | 0.26 | 0.27 | NS | NS | 0.21 | NS | 0.17 | 0.15 |
| FPC-8B | 0.023 | 0.033 | 0.025 | 0.033 | 0.035 | 0.022 | 0.03 | 0.021 | 0.029 | NS | 0.028 | 0.025 | 0.032 | NS | 0.032 | 0.029 | NS | NS | INT | NS | 0.03 | 0.024 |
| FPC-9A | **0.32** | **0.35** | 0.3 | **0.34** | **0.42** | 0.04 | 0.03 | 0.27 | **0.41** | NS | **0.52** | 0.27 | 0.22 | NS | 0.26 | **0.31** | NS | NS | 0.24 | NS | 0.18 | 0.23 |
| FPC-9B | 0.08 | NS | NS | 0.053 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | **1** | **0.31** | **0.5** | 0.022 | **0.5** | NS | 0.036 | 0.01 | **0.4** | NS | **0.35** | **0.44** | NS | NS | NS | NS | **0.43** | **0.41** |
| FPC-11B | NS | NS | NS | NS | **3** | **2.2** | **2.5** | **0.88** | **1.3** | NS | **1.4** | **0.71** | **0.52** | NS | 0.21 | **0.58** | NS | NS | NS | NS | INT | **1.9** |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | **0.67** | **0.67** | **0.64** | **0.7** | **0.68** | **0.57** | **0.63** | **0.48** | **0.39** | NS | **0.4** | **0.5** | **0.46** | NS | **0.47** | **0.52** | NS | NS | INT | NS | **0.34** | 0.23 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | **3.3** | NS | **2.3** | **3** | **2.2** | NS | **2.4** | **1.7** | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | 0.16 | NS | 0.062 | 0.081 | NS | 0.29 | 0.23 | **0.31** | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NA | NA | NA | NS | NA | 0.14 | 0.1 | 0.16 |
| R-5 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NS | 0.29 | **0.37** |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NA | 0.25 | **0.32** | **0.31** |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | 0.028 | 0.03 |

**Table Notes:**

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Manganese is 0.84 mg/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Manganese is 0.3 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Nickel** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | 0.014 | 0.011 | NA | 0.009 | 0.013 | 0.019 | **0.15** | 0.009 | 0.01 | NS | 0.013 | 0.008 | NS | 0.015 | 0.009 | 0.008 | NS | NS | 0.011 | NS | 0.008 | 0.005 |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | 0.039 | 0.021 | NA | 0.014 | 0.032 | 0.01 | **0.41** | 0.099 | **0.13** | NS | **0.15** | 0.009 | 0.008 | NS | 0.012 | 0.006 | NS | NS | 0.008 | NS | 0.007 | 0.009J |
| MW-5D | 0.021 | 0.021 J | NA | 0.017 | 0.019 | 0.016 | 0.017 | < 0.002 | 0.011 | NS | 0.012 | 0.01 | 0.009 | NS | 0.009 | 0.009 | NS | NS | INT | NS | 0.009 | 0.006 |
| MW-5S | 0.027 | 0.021 | NA | 0.024 | 0.023 | 0.02 | 0.022 | < 0.002 | 0.022 | NS | 0.019 | 0.014 | 0.011 | NS | 0.01 | 0.01 | NS | NS | INT | NS | 0.013 | 0.008 |
| MW-6 | < 0.002 | 0.003 | NA | < 0.005 | 0.003 | < 0.002 | < 0.004 | < 0.002 | 0.003 | NS | 0.001 | 0.002 | NS | 0.002 | 0.002 | 0.004 | NS | NS | 0.002 | NS | 0.003 | 0.003 |
| MW-8 | 0.018 | 0.018 | NA | 0.014 | 0.018 | 0.019 | 0.02 | 0.018 | 0.019 | NS | 0.026 | 0.022 | 0.017 | NS | 0.019 | 0.02 | NS | NS | INT | NS | 0.021 | 0.016 |
| MW-9 | 0.012 | 0.013 | NA | 0.028 | 0.018 | 0.01 | 0.014 | 0.005 | 0.016 | NS | 0.007 | 0.004 | 0.005 | NS | 0.005 | 0.014 | NS | NS | 0.008 | NS | 0.009 | 0.007 |
| MW-10 | 0.01 | 0.003 | NA | 0.012 | 0.029 | 0.012 | 0.014 | < 0.002 | 0.008 | NS | 0.003 | 0.005 | 0.006 | NS | 0.004 | 0.005 | NS | NS | 0.002 | NS | 0.003 | 0.004 |
| MW-11 | 0.019 | 0.022 | NA | 0.015 | 0.014 | 0.01 | 0.018 | 0.008 | 0.012 | NS | 0.018 | 0.008 | 0.006 | NS | 0.005 | 0.005 | NS | NS | INT | NS | 0.007 | 0.006 |
| OP-2 | 0.015 | 0.012 | NA | 0.01 | 0.01 | 0.008 | 0.011 | 0.007 | 0.007 | NS | 0.006 | 0.007 | 0.009 | NS | 0.007 | 0.034 | NS | NS | 0.006 | NS | 0.01 | 0.01 |
| OP-5 | 0.039 | 0.022 | NA | 0.031 | 0.027 | 0.028 | 0.031 | < 0.002 | 0.033 | NS | 0.03 | 0.025 | 0.027 | NS | 0.024 | 0.026 | NS | NS | 0.017 | NS | 0.015 | 0.014 |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 0.005 | < 0.001 | NA | < 0.001 | 0.011 | < 0.002 | 0.005 | < 0.002 | 0.005 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | 0.013 | NS | < 0.001 | < 0.001 |
| AE-1B | 0.003 | 0.001 | NA | 0.002 | 0.001 | < 0.002 | 0.002 | < 0.002 | NS | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | 0.001 |
| AE-2A | 0.025 | 0.026 | NA | 0.03 | 0.024 | 0.019 | 0.018 | 0.012 | 0.012 | NS | 0.012 | 0.01 | 0.009 | NS | 0.008 | 0.008 | NS | NS | 0.017 | NS | 0.007 | 0.007 |
| AE-2B | 0.08 | 0.028 | NA | 0.02 | 0.014 | 0.016 | 0.03 | 0.01 | 0.013 | NS | 0.01 | 0.01 | 0.009 | NS | 0.007 | 0.008 | NS | NS | 0.008 | NS | 0.007 | 0.006 |
| AE-3A | 0.016 | 0.015 | NA | 0.025 | 0.015 | 0.011 | 0.013 | 0.008 | 0.008 | NS | 0.009 | 0.008 | 0.007 | NS | 0.006 | 0.007 | NS | NS | 0.006 | NS | 0.007 | 0.006 |
| AE-3B | 0.02 | 0.018 | NA | 0.014 | 0.016 | 0.011 | 0.014 | 0.008 | 0.008 | NS | 0.009 | 0.007 | 0.006 | NS | 0.005 | 0.006 | NS | NS | INT | NS | 0.008 | 0.006 |
| AE-4A | NS | NS | NS | NS | 0.04 | < 0.002 | 0.003 | < 0.002 | 0.007 | NS | 0.002 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| AE-4B | NS | NS | NS | NS | 0.084 | 0.004 | 0.003 | < 0.004 | 0.003 | NS | 0.002 | 0.001 | 0.001 | NS | < 0.001 | < 0.001 | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 |
| FPC-2A | < 0.005 | < 0.001 | NA | NA | < 0.001 | < 0.002 | 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 0.001 | < 0.002 | 0.002 | < 0.002 | < 0.001 | NS | < 0.001 | 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | 0.002 | < 0.002 | 0.002 | < 0.002 | 0.001 | NS | 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-5A | 0.01 | 0.004 | NA | 0.013 | 0.006 | 0.011 | 0.011 | 0.008 | 0.004 | NS | 0.01 | 0.007 | 0.007 | NS | 0.006 | 0.006 | NS | NS | 0.006 | NS | NS | NS |
| FPC-5B | 0.02 | 0.017 | NA | 0.005 | 0.014 | 0.005 | 0.008 | 0.005 | 0.008 | NS | 0.006 | 0.007 | 0.006 | NS | 0.005 | 0.005 | NS | NS | INT | NS | 0.006 | 0.005 |
| FPC-6A | 0.008 | 0.005 | NA | NS | 0.027 | 0.004 | 0.005 | < 0.002 | 0.005 | NS | 0.002 | 0.005 | 0.006 | NS | 0.005 | 0.006 | NS | NS | 0.005 | NS | 0.006 | 0.006 |
| FPC-6B | < 0.01 | 0.004 | NA | 0.007 | 0.006 | 0.017 | 0.019 | < 0.004 | 0.013 | NS | 0.008 | 0.003 | 0.004 | NS | 0.004 | 0.004 | NS | NS | INT | NS | 0.003 | 0.003 |
| FPC-7A | NS | NS | NS | NS | 0.006 | NA | 0.006 | 0.003 | 0.013 | NS | 0.007 | 0.004 | 0.004 | NS | 0.003 | 0.004 | NS | NS | 0.003 | NS | 0.003 | 0.003 |
| FPC-7B | NS | NS | NS | NS | 0.003 | NA | 0.013 | < 0.004 | 0.002 | NS | 0.018 | 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-8A | < 0.01 | 0.004 | NA | 0.012 | 0.005 | < 0.002 | 0.007 | < 0.004 | 0.002 | NS | < 0.001 | 0.004 | 0.005 | NS | 0.003 | 0.003 | NS | NS | 0.001 | NS | 0.002 | <0.001 |
| FPC-8B | < 0.005 | < 0.001 | NA | < 0.002 | < 0.001 | < 0.002 | 0.003 | < 0.002 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | NS | NS | INT | NS | < 0.001 | < 0.001 |
| FPC-9A | 0.01 | 0.012 | NA | 0.009 | 0.008 | < 0.002 | 0.002 | 0.004 | 0.003 | NS | 0.004 | 0.003 | 0.003 | NS | 0.003 | 0.003 | NS | NS | 0.004 | NS | 0.006 | 0.003 |
| FPC-9B | < 0.002 | NS | NS | < 0.005 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | 0.016 | 0.01 | 0.028 | 0.003 | 0.009 | NS | 0.004 | 0.003 | < 0.001 | NS | 0.001 | < 0.001 | NS | NS | NS | NS | 0.003 | <0.001 |
| FPC-11B | NS | NS | NS | NS | 0.05 | 0.02 | **0.15** | < 0.002 | 0.013 | NS | 0.012 | 0.003 | < 0.001 | NS | 0.03 | 0.002 | NS | NS | NS | NS | INT | 0.005 |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | 0.009 | 0.014 | NA | 0.01 | 0.013 | 0.01 | 0.015 | 0.007 | 0.008 | NS | 0.009 | 0.009 | 0.009 | NS | 0.008 | 0.008 | NS | NS | INT | NS | 0.006 | 0.004 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | 0.005 | NS | 0.004 | 0.005 | 0.004 | NS | 0.003 | 0.002 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NA | NA | NA | NS | NA | NA | NA | NA |
| R-5 | NS | NA | NS | NS | NA | NA | NA | NS | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NA | NA |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NS | NA | NA |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NA | NA | NA | NA |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NA |

**Table Notes:**

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Nickel is 0.1 mg/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Nickel is 0.1 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Vanadium** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | 0.013 | 0.004 | NA | < 0.002 | 0.006 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | 0.007 | 0.004 | NA | 0.003 | 0.008 | < 0.002 | **0.35** | 0.063 | 0.082 | NS | 0.091 | 0.002 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| MW-5D | 0.004 | 0.002 | NA | < 0.002 | 0.004 | < 0.002 | 0.003 | < 0.004 | 0.001 | NS | 0.001 | 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| MW-5S | 0.001 | 0.004 | NA | < 0.04 | < 0.002 | 0.003 | 0.004 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| MW-6 | < 0.001 | < 0.001 | NA | < 0.001 | < 0.002 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| MW-8 | 0.001 | 0.001 | NA | < 0.002 | < 0.002 | < 0.002 | 0.003 | < 0.004 | 0.001 | NS | 0.002 | 0.002 | 0.001 | NS | 0.002 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| MW-9 | 0.004 | 0.003 | NA | 0.009 | 0.004 | 0.003 | 0.007 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| MW-10 | < 0.001 | 0.001 | NA | 0.002 | < 0.002 | 0.003 | 0.004 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| MW-11 | 0.002 | 0.002 | NA | 0.002 | 0.006 | 0.003 | 0.003 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| OP-2 | 0.003 | 0.005 | NA | 0.003 | 0.008 | < 0.002 | 0.004 | < 0.004 | < 0.001 | NS | 0.001 | 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| OP-5 | 0.009 | 0.002 | NA | < 0.002 | 0.003 | < 0.002 | 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 0.002 | < 0.001 | NA | < 0.002 | 0.005 | < 0.002 | < 0.002 | < 0.004 | 0.003 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | 0.01 | NS | < 0.005 | < 0.005 |
| AE-1B | < 0.001 | < 0.001 | NA | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.004 | NS | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| AE-2A | 0.009 | 0.004 | NA | < 0.004 | 0.006 | 0.002 | 0.004 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| AE-2B | 0.076 | 0.007 | NA | 0.006 | 0.009 | 0.005 | < 0.01 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| AE-3A | < 0.002 | 0.002 | NA | < 0.002 | 0.005 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | 0.001 | 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| AE-3B | < 0.002 | 0.002 | NA | < 0.002 | 0.005 | 0.004 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| AE-4A | NS | NS | NS | NS | 0.039 | < 0.002 | < 0.002 | < 0.002 | < 0.001 | NS | 0.002 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| AE-4B | NS | NS | NS | NS | 0.12 | < 0.002 | < 0.002 | < 0.004 | 0.003 | NS | 0.002 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| FPC-2A | NA | 0.001 | NA | NA | < 0.001 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 0.002 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 0.002 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| FPC-5A | < 0.002 | 0.003 | NA | < 0.01 | 0.002 | 0.004 | < 0.002 | < 0.004 | < 0.001 | NS | 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | NS | NS |
| FPC-5B | < 0.002 | 0.003 | NA | < 0.002 | < 0.002 | < 0.002 | 0.003 | < 0.004 | 0.001 | NS | 0.001 | 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| FPC-6A | < 0.002 | 0.001 | NA | NS | 0.006 | < 0.002 | 0.003 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| FPC-6B | < 0.001 | 0.003 | NA | < 0.002 | 0.004 | < 0.002 | < 0.004 | < 0.004 | 0.003 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| FPC-7A | NS | NS | NS | NS | < 0.002 | NA | < 0.002 | < 0.004 | 0.002 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| FPC-7B | NS | NS | NS | NS | < 0.002 | NA | 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| FPC-8A | 0.009 | 0.006 | NA | 0.016 | 0.005 | < 0.002 | 0.008 | < 0.004 | 0.001 | NS | < 0.001 | 0.007 | 0.006 | NS | 0.002 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| FPC-8B | < 0.002 | < 0.001 | NA | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| FPC-9A | 0.006 | 0.001 | NA | < 0.002 | 0.004 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | < 0.005 | NS | < 0.005 | < 0.005 |
| FPC-9B | < 0.001 | NS | NS | < 0.001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | 0.004 | < 0.002 | 0.008 | < 0.004 | 0.003 | NS | 0.001 | < 0.001 | < 0.001 | NS | 0.002 | < 0.005 | NS | NS | NS | NS | < 0.005 | < 0.005 |
| FPC-11B | NS | NS | NS | NS | 0.019 | < 0.002 | 0.048 | < 0.004 | 0.001 | NS | < 0.001 | < 0.001 | < 0.001 | NS | 0.012 | < 0.005 | NS | NS | NS | NS | INT | 0.007 J+ |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | 0.005 | 0.002 | NA | < 0.004 | < 0.002 | < 0.002 | < 0.002 | < 0.004 | < 0.001 | NS | 0.001 | < 0.001 | < 0.001 | NS | < 0.001 | < 0.005 | NS | NS | INT | NS | < 0.005 | < 0.005 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | 0.001 | 0.001 | 0.001 | NS | < 0.001 | < 0.005 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 0.001 | NS | 0.001 | 0.001 | NS | < 0.001 | < 0.001 | < 0.005 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | NA | NS | NS | NA | NA | NA | NS | NS | NA | NA | NA | NA | NS | NA | NA | NA | NS | NA | NA | NA | NA |
| R-5 | NS | NA | NS | NS | NA | NA | NA | NS | NS | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NA | NA |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NS | NA | NA |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NA | NA | NA | NA |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NA | NA | NS | NA | NA |

**Table Notes:**

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. An NHDES Ambient Groundwater Quality Standard (AGQS) for Vanadium has not been established.
3. EPA Interim Cleanup Level (ICL) for Vanadium is 0.26 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Benzene** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | 2 | 3 | 2 | 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | < 2 | < 2 | 1 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-5D | **6** | < 2 | 3 | 2 | < 2 | 2 | < 2 | 2 | 3 | NS | 2 | 2 | 2 | NS | 2 | 2 | NS | NS | INT | NS | 1 | 2 |
| MW-5S | **8** | **7** | **6** | **6** | 2 | < 2 | < 2 | < 2 | 5 | NS | 4 | 3 | 4 | NS | 4 | 3 | NS | NS | INT | NS | 2 | 2 |
| MW-6 | < 2 | < 2 | 1 | < 2 | < 2 | < 2 | < 2 | < 2 | < 1 | NS | < 1 | < 1 | NA | < 1 | < 1 | < 1 | NS | NS | < 1 | NS | < 1 | <1 |
| MW-8 | **8** | 5 | 5 | 3 | 4 | < 2 | 3 | 5 | 3 | NS | 4 | 4 | **6** | NS | **6** | **6** | NS | NS | INT | NS | 3 | 3 |
| MW-9 | 5 | 3 | **7** | **10** | 5 | < 2 | 5 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-10 | < 2 | < 2 | 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | **19** | **22** | **26** | **22** | **14** | **7** | **8** | 5 | **8** | NS | 5 | 4 | 3 | NS | 2 | 2 | NS | NS | INT | NS | 2 | 2 |
| OP-2 | 5 | 3 | 1 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| OP-5 | < 2 | < 2 | 1 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NS | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | 3 | 3 | 2 | 3 | < 2 | < 2 | < 2 | < 2 | 2 | NS | < 1 | < 1 | 1 | NS | 1 | < 1 | NS | NS | < 1 | NS | < 1 | < 1 |
| AE-2B | **10** | 4 | **6** | **8** | 5 | 3 | 4 | 3 | 5 | NS | 5 | 2 | 2 | NS | 1 | 2 | NS | NS | 2 | NS | 2 | 1 |
| AE-3A | 4 | 2 | 3 | 3 | 2 | < 2 | < 2 | < 2 | 2 | NS | 2 | 2 | 2 | NS | 1 | 1 | NS | NS | 1 | NS | 2 | 2 |
| AE-3B | 4 | 4 | 3 | 3 | 2 | < 2 | < 2 | < 2 | < 1 | NS | < 1 | 1 | 1 | NS | 2 | 1 | NS | NS | INT | NS | < 1 | < 1 |
| AE-4A | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 1 | NS | < 1 | < 1 | < 1 | NS | < 1 | < 1 | NS | NS | < 1 | NS | < 1 | < 1 |
| AE-4B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 1 | NS | < 1 | < 1 | < 1 | NS | < 1 | < 1 | NS | NS | < 1 | NS | < 1 | < 1 |
| FPC-2A | NA | NA | NA | NA | < 2 | < 2 | < 2 | < 2 | < 1 | NS | < 1 | < 1 | < 1 | NS | < 1 | < 1 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 1 | NS | < 1 | < 1 | < 1 | NS | < 1 | < 1 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 2 | < 2 | NA | < 2 | < 1 | NS | < 1 | < 1 | < 1 | NS | < 1 | < 1 | NS | NS | INT | NS | < 1 | NA |
| FPC-5A | < 2 | < 2 | 5 | 5 | < 2 | 3 | 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NS | NS |
| FPC-5B | **6** | 5 | < 2 | < 2 | 4 | < 2 | 5 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-6A | < 2 | < 2 | NS | NS | 3 | < 2 | < 2 | < 2 | 2 | NS | < 1 | < 1 | 2 | NS | 1 | 1 | NS | NS | < 1 | NS | 1 | 1 |
| FPC-6B | 4 | 2 | 4 | 4 | 3 | 3 | 3 | < 2 | 2 | NS | 1 | < 1 | 2 | NS | 1 | 2 | NS | NS | INT | NS | < 1 | < 1 |
| FPC-7A | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-7B | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | < 1 | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-8A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 1 | NS | < 1 | < 1 | < 1 | NS | < 1 | < 1 | NS | NS | < 1 | NS | < 1 | < 1 |
| FPC-8B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NS | < 1 | < 1 | < 1 | NS | < 1 | < 1 | NS | NS | INT | NS | < 1 | < 1 |
| FPC-9A | 4 | 4 | 3 | 3 | 3 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | < 2 | NS | NS | < 2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | NA | NA |
| FPC-11B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | INT | NA |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | **10** | **10** | **10** | **11** | **9** | **7** | **7** | **6** | **6** | NS | **6** | **6** | **7** | NS | **6** | **6** | NS | NS | INT | NS | 4 | 3 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 1 | NS | < 1 | < 1 | < 1 | NS | < 1 | < 1 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 1 | NS | < 1 | < 1 | NS | < 1 | < 1 | < 1 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| R-5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | NS | < 0.5 | < 0.5 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 |

**Table Notes:**

1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Benzene is 5 ug/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Benzene is 5 ug/L. Exceedances are identified with BOLD text.

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Chlorobenzene** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 2 | 6 | 5 | 5 | 3 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | 5 | 11 | 7 | 5 | 7 | 5 | 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-5D | 8 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | NS | 4 | 3 | 4 | NS | 3 | 3 | NS | NS | INT | NS | < 2 | < 2 |
| MW-5S | 7 | 7 | 6 | 5 | 3 | < 2 | < 2 | < 2 | 3 | NS | 2 | 2 | 3 | NS | 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-6 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NA | < 2 | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| MW-8 | 3 | 3 | 3 | < 2 | 2 | 2 | 2 | 4 | 3 | NS | 4 | 3 | 7 | NS | 23 | 9 | NS | NS | INT | NS | 2 | 3 |
| MW-9 | 62 | 66 | **122** | **160** | 80 | 25 | 79 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-10 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | 6 | 5 | 4 | 4 | 4 | 3 | 3 | 2 | 3 | NS | 2 | 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| OP-2 | 9 | 6 | 4 | 4 | 3 | 2 | 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| OP-5 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NS | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | 6 | 8 | 5 | 8 | 4 | 3 | 3 | < 2 | 5 | NS | 2 | 2 | 3 | NS | 3 | < 2 | NS | NS | < 2 | NS | 2 | <2 |
| AE-2B | 8 | 4 | 6 | 8 | 5 | 3 | 3 | 3 | 5 | NS | 5 | 3 | 3 | NS | 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-3A | 12 | 7 | 11 | 9 | 8 | 6 | 5 | 6 | 9 | NS | 8 | 7 | 6 | NS | 6 | 6 | NS | NS | 5 | NS | 6 | 7 |
| AE-3B | 10 | 11 | 9 | 8 | 6 | 4 | 2 | < 2 | < 2 | NS | < 2 | 5 | 5 | NS | 7 | 5 | NS | NS | INT | NS | 3 | 3 |
| AE-4A | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-4B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-2A | NA | NA | NA | NA | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 2 | < 2 | NA | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | NA |
| FPC-5A | < 2 | < 2 | 16 | 13 | < 2 | 9 | 6 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NS | NS |
| FPC-5B | 20 | 17 | < 2 | < 2 | 11 | < 2 | 76 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-6A | < 2 | < 2 | < 2 | NS | 9 | 4 | 3 | 3 | 5 | NS | < 2 | 3 | 5 | NS | 3 | 4 | NS | NS | 3 | NS | 3 | 4 |
| FPC-6B | 7 | 4 | 9 | 8 | 6 | 7 | 7 | 3 | 7 | NS | 4 | 3 | 5 | NS | 4 | 4 | NS | NS | INT | NS | 2 | 2 |
| FPC-7A | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-7B | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | < 2 | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-8A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-8B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| FPC-9A | 11 | 10 | 8 | 9 | 8 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | < 2 | NS | NS | < 2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | NA | NA |
| FPC-11B | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | INT | NA |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | 9 | 9 | 10 | 13 | 12 | 9 | 10 | 9 | 10 | NS | 10 | 11 | 11 | NS | 11 | 9 | NS | NS | INT | NS | 6 | 5 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 2 | NS | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| R-5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | NS | NS | <0.5 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | NS | <0.5 |

**Table Notes:**

1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Chlorobenzene is 100 ug/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Chlorobenzene is 100 ug/L. Exceedances are identified with BOLD text.

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Trans-1,2-Dichloroethene** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-5D | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-5S | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-6 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NA | < 2 | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| MW-8 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-9 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-10 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| OP-2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| OP-5 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NS | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-2B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-3A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-3B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| AE-4A | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-4B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-2A | NA | NA | NA | NA | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 2 | < 2 | NA | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | NA |
| FPC-5A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NS | NS |
| FPC-5B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-6A | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-6B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| FPC-7A | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-7B | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | < 2 | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-8A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-8B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| FPC-9A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | < 2 | NS | NS | < 2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | NA | NA |
| FPC-11B | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | INT | NA |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 2 | NS | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| R-5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | NS | < 0.5 | < 0.5 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 |

**Table Notes:**

1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Trans-1,2-dichloroethene (Trans-DCE) is 100 ug/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for Trans-1,2-dichloroethene (Trans-DCE) is 100 ug/L. Exceedances are identified with BOLD text.

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**1,2-Dichloropropane** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-5D | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-5S | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-6 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | NA | < 2 | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| MW-8 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-9 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-10 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| OP-2 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| OP-5 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NS | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-2B | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-3A | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-3B | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| AE-4A | NS | NS | NS | NS | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-4B | NS | NS | NS | NS | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-2A | NA | NA | NA | NA | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 4 | < 4 | NA | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | NA |
| FPC-5A | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NS | NS |
| FPC-5B | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-6A | < 4 | < 4 | < 4 | NS | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-6B | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| FPC-7A | NS | NS | NS | NS | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-7B | NS | NS | NS | NS | < 4 | < 4 | < 4 | NA | < 2 | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-8A | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-8B | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| FPC-9A | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | < 4 | NS | NS | < 4 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | NA | NA |
| FPC-11B | NS | NS | NS | NS | < 4 | < 4 | < 4 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | INT | NA |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 4 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 2 | NS | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| R-5 | NS | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | NS | < 0.5 | < 0.5 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 |

**Table Notes:**

1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for 1,2-dichloropropane is 5 ug/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for 1,2-dichloropropane is 5 ug/L. Exceedances are identified with BOLD text.

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Tetrachloroethene (PCE)** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-5D | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-5S | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-6 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NA | < 2 | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| MW-8 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| MW-9 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-10 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| OP-2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| OP-5 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NS | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-2B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-3A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-3B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| AE-4A | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| AE-4B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-2A | NA | NA | NA | NA | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 2 | < 2 | NA | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | NA |
| FPC-5A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NS | NS |
| FPC-5B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-6A | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-6B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| FPC-7A | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-7B | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | < 2 | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-8A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | < 2 | NS | < 2 | < 2 |
| FPC-8B | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| FPC-9A | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | < 2 | NS | NS | < 2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | NA | NA |
| FPC-11B | NS | NS | NS | NS | < 2 | < 2 | < 2 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | INT | NA |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | INT | NS | < 2 | < 2 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 2 | NS | < 2 | < 2 | < 2 | NS | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 2 | NS | < 2 | < 2 | NS | < 2 | < 2 | < 2 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| R-5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | NS | < 0.5 | < 0.5 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 0.5 | < 0.5 | NS | < 0.5 | < 0.5 |

**Table Notes:**

1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for tetrachloroethene (PCE) is 5 ug/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for tetrachloroethene (PCE) is 3.5 ug/L. Exceedances are identified with BOLD text.

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**
Contaminants of Concern Analytical Data (November 2000 – September 2015)
**Methyl Ethyl Ketone (MEK)** in Groundwater
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-5D | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| MW-5S | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| MW-6 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | NA | < 10 | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| MW-8 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| MW-9 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-10 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| OP-2 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| OP-5 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NS | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| AE-2B | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| AE-3A | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| AE-3B | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| AE-4A | NS | NS | NS | NS | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| AE-4B | NS | NS | NS | NS | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| FPC-2A | NA | NA | NA | NA | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 50 | < 50 | NA | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | NA |
| FPC-5A | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NS | NS |
| FPC-5B | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-6A | < 50 | < 50 | < 50 | NS | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| FPC-6B | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| FPC-7A | NS | NS | NS | NS | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-7B | NS | NS | NS | NS | < 50 | < 50 | < 50 | NA | < 10 | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-8A | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| FPC-8B | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| FPC-9A | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | < 50 | NS | NS | < 50 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | NA | NA |
| FPC-11B | NS | NS | NS | NS | < 50 | < 50 | < 50 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | INT | NA |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 10 | NS | < 10 | < 10 | NS | < 10 | < 10 | < 10 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | < 12.5 | < 12.5 | < 12.5 | < 12.5 | < 12.5 | < 12.5 | < 12.5 | NS | < 5 | < 5 | < 5 | < 5 | NS | < 5 | < 5 | < 5 | NS | < 5 | < 5 | < 5 | < 5 |
| R-5 | NS | < 12.5 | < 12.5 | < 12.5 | < 12.5 | < 12.5 | < 12.5 | < 12.5 | NS | < 5 | < 5 | < 5 | < 5 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 5 | < 5 | NS | < 5 | NS | < 5 | < 5 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 5 | < 5 | NS | < 5 | < 5 |

**Table Notes:**
1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for methyl ethyl ketone (MEK, 2-butanone) is 4000 ug/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for methyl ethyl ketone (MEK, 2-butanone) is 200 ug/L. Exceedances are identified with BOLD text.

**Abbreviations:**
NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**Tetrahydrofuran (THF)** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-00 | Apr-01 | Aug-01 | Aug-02 | Aug-03 | Aug-04 | Aug-05 | Aug-06 | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| BP-4 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-5D | **162** | 60 | < 30 | 101 | 85 | 142 | 88 | 110 | 110 | NS | 110 | 90 | 90 | NS | 110 | 90 | NS | NS | INT | NS | 50 | 50 |
| MW-5S | 44 | 35 | < 30 | 46 | < 30 | 34 | < 30 | < 30 | 60 | NS | 40 | 40 | 40 | NS | 40 | 30 | NS | NS | INT | NS | 20 | 20 |
| MW-6 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | NA | < 10 | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| MW-8 | **248** | **157** | < 30 | **175** | **184** | **282** | **273** | **239** | **180** | NS | **180** | **180** | **160** | NS | 140 | 100 | NS | NS | INT | NS | 150 | 140 |
| MW-9 | < 30 | < 30 | < 30 | 137 | < 30 | < 30 | 84 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-10 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | **246** | **228** | < 30 | **225** | 130 | 114 | < 30 | 50 | 60 | NS | 30 | 30 | 20 | NS | 20 | 10 | NS | NS | INT | NS | 10 | 10 |
| OP-2 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | 87 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| OP-5 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | | | | | | | | | |
| AE-1A | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | NA | NS | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | 30 | 33 | < 30 | 45 | < 30 | < 30 | < 30 | < 30 | 20 | NS | < 10 | 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| AE-2B | **157** | 86 | < 30 | 127 | 104 | 92 | 81 | 69 | 60 | NS | 70 | 50 | 30 | NS | 30 | 30 | NS | NS | 30 | NS | 30 | 30 |
| AE-3A | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| AE-3B | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| AE-4A | NS | NS | NS | NS | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| AE-4B | NS | NS | NS | NS | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| FPC-2A | NA | NA | NA | NA | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | NS | NS | NS | NS |
| FPC-2B | NS | NS | NS | NS | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | NS | NS | NS | NS |
| FPC-4B | NS | NS | NS | NS | < 30 | < 30 | NA | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | NA |
| FPC-5A | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NS | NS |
| FPC-5B | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | 79 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-6A | < 30 | < 30 | < 30 | NS | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| FPC-6B | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| FPC-7A | NS | NS | NS | NS | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-7B | NS | NS | NS | NS | < 30 | < 30 | < 30 | NA | < 10 | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-8A | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | < 10 | NS | < 10 | < 10 |
| FPC-8B | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 | NA | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | INT | NS | < 10 | < 10 |
| FPC-9A | 32 | < 30 | < 30 | 30 | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | < 30 | NS | NS | < 30 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NS | NS | NS | NS | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | NA | NA |
| FPC-11B | NS | NS | NS | NS | < 30 | < 30 | < 30 | NA | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | INT | NA |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | **169** | 120 | < 30 | 112 | 113 | 131 | 151 | 83 | 80 | NS | 70 | 80 | 70 | NS | 70 | 50 | NS | NS | INT | NS | 20 | 20 |
| GZ-123 | NS | NS | NS | NS | NS | NS | NS | NS | < 10 | NS | < 10 | < 10 | < 10 | NS | < 10 | < 10 | NS | NS | NS | NS | NS | NS |
| GZ-125 | NS | NS | NS | NS | NS | NS | NS | NS | < 10 | NS | < 10 | < 10 | NS | < 10 | < 10 | < 10 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | | | | | | | | | |
| R-3 | NS | < 7.5 | < 7.5 | < 7.5 | < 7.5 | < 7.5 | < 7.5 | < 7.5 | NS | < 5 | < 5 | < 5 | < 5 | NS | < 5 | < 5 | < 5 | NS | < 5 | < 5 | < 5 | < 5 |
| R-5 | NS | < 7.5 | < 7.5 | < 7.5 | < 7.5 | < 7.5 | < 7.5 | < 7.5 | NS | < 5 | < 5 | < 5 | < 5 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 5 | < 5 | NS | < 5 | NS | < 5 | < 5 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 5 | < 5 | NS | < 5 | < 5 |

**Table Notes:**

1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for tetrahydrofuran (THF) is 154 ug/L. Exceedances are identified with GRAY shading.
3. EPA Interim Cleanup Level (ICL) for tetrahydrofuran (THF) is 154 ug/L. Exceedances are identified with BOLD text.

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**
Contaminants of Concern Analytical Data (November 2000 – September 2015)
**Tertiary Butyl Alchohol (TBA)** in Groundwater
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Nov-07 | Jan-08 | Aug-08 | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | | | | |
| BP-4 | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-5D | 60 | NS | 50 | 40 | 40 | NS | 50 | 40 | NS | NS | INT | NS | 60 | 40 |
| MW-5S | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | INT | NS | < 30 | < 30 |
| MW-6 | < 30 | NS | < 30 | < 30 | NA | < 30 | < 30 | < 30 | NS | NS | < 30 | NS | < 30 | < 30 |
| MW-8 | 70 | NS | 70 | 60 | 50 | NS | 50 | 40 | NS | NS | INT | NS | 50 | 40 |
| MW-9 | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-10 | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | INT | NS | < 30 | < 30 |
| OP-2 | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| OP-5 | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | | | | |
| AE-1A | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | NS | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | < 30 | NS | < 30 | < 30 |
| AE-2B | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | < 30 | NS | < 30 | < 30 |
| AE-3A | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | < 30 | NS | < 30 | < 30 |
| AE-3B | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | INT | NS | < 30 | < 30 |
| AE-4A | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | < 30 | NS | < 30 | < 30 |
| AE-4B | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | < 30 | NS | < 30 | < 30 |
| FPC-2A | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | NS | NS | NS | NS |
| FPC-2B | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | NS | NS | NS | NS |
| FPC-4B | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | INT | NS | < 30 | NA |
| FPC-5A | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NS | NS |
| FPC-5B | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-6A | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | < 30 | NS | < 30 | < 30 |
| FPC-6B | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | INT | NS | < 30 | < 30 |
| FPC-7A | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-7B | < 30 | NS | NA | NA | NA | NS | NA | NA | NS | NS | INT | NS | NA | NA |
| FPC-8A | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | < 30 | NS | < 30 | < 30 |
| FPC-8B | NA | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | INT | NS | < 30 | < 30 |
| FPC-9A | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | NA | NA |
| FPC-11B | NA | NS | NA | NA | NA | NS | NA | NA | NS | NS | NS | NS | INT | NA |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | INT | NS | < 30 | < 30 |
| GZ-123 | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | NS | NS | NS | NS | NS | NS |
| GZ-125 | < 30 | NS | < 30 | < 30 | NS | < 30 | < 30 | < 30 | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | | | | |
| R-3 | NS | < 30 | < 30 | < 30 | < 30 | NS | < 30 | < 30 | < 30 | NS | < 30 | < 30 | < 30 | < 30 |
| R-5 | NS | < 30 | < 30 | < 30 | < 30 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | NS | NS | NS | < 30 | < 30 | NS | < 30 | NS | < 30 | < 30 |
| 339BHR | NS | NS | NS | NS | NS | NS | NS | NS | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 |
| 415BHR | NS | NS | NS | NS | NS | NS | NS | NS | NS | < 30 | < 30 | NS | < 30 | < 30 |

**Table Notes:**

1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for tertiary butyl alchohol (TBA) is 40 ug/L. Exceedances are identified with GRAY shading
3. An EPA Interim Cleanup Level (ICL) for Chlorobenzene has not been established.
4. Tertiary butyl alcohol (TBA) not included on Method 8260B parameter list prior to November 2007.

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

**TABLE 10**

Contaminants of Concern Analytical Data (November 2000 – September 2015)

**1,4-Dioxane (Low Level Method)** in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| Well ID / Appox. Date | Aug-09 | Aug-10 | Feb-11 | Aug-11 | Aug-12 | Mar-13 | Apr-13 | Aug-13 | Feb-14 | Sep-14 | Sep-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Unit 1 Wells** | | | | | | | | | | | |
| BP-4 | NA | NA | 9 | 10 | 13 | NS | NS | 9.6 | NS | 12 | 11 |
| MW-2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 | NA | 6 | NS | 6 | 2.5 | NS | NS | 4.8 | NS | 6.9 | 8.5 |
| MW-5D | 140 | 150 | NS | 140 | 140 | NS | NS | INT | NS | 130 | 150 |
| MW-5S | 70 | 90 | NS | 70 | 61 | NS | NS | INT | NS | 49 | 57 |
| MW-6 | < 1 | NA | NS | < 1 | < 0.25 | NS | NS | < 0.25 | NS | < 0.25 | < 0.25 |
| MW-8 | 310 | 230 | NS | 200 | 210 | NS | NS | INT | NS | 200 | 240 |
| MW-9 | NA | 16 | NS | 14 | 30 | NS | NS | 6.1 | NS | 28 | 26 |
| MW-10 | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| MW-11 | 100 | 45 | NS | 40 | 56 | NS | NS | INT | NS | 41 | 38 |
| OP-2 | NA | 1 | NS | 1 | 1 | NS | NS | 1.2 | NS | 1.5 | 1.6 |
| OP-5 | NA | < 1 | NS | < 1 | NA | NS | NS | NA | NS | NA | NA |
| **Operating Unit 2 Wells** | | | | | | | | | | | |
| AE-1A | NA | NA | NS | < 1 | NA | NS | NS | NA | NS | NA | NA |
| AE-1B | NA | NA | NS | < 1 | NA | NS | NS | NA | NS | NA | NA |
| AE-2A | NA | 12 | NS | 14 | 16 | NS | NS | 15 | NS | 16 | 13 |
| AE-2B | NA | 110 | NS | 80 | 82 | NS | NS | 88 | NS | 87 | 96 |
| AE-3A | NA | 23 | NS | 19 | 24 | NS | NS | 21 | NS | 25 | 24 |
| AE-3B | NA | 24 | NS | 19 | 27 | NS | NS | INT | NS | 26 | 25 |
| AE-4A | NA | NA | NA | NA | < 0.25 | NS | NS | NA | NS | NA | <0.25 |
| AE-4B | NA | NA | NA | NA | < 0.25 | NS | NS | NA | NS | NA | <0.25 |
| FPC-2A | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS |
| FPC-2B | NA | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS |
| FPC-4B | NA | NA | NA | NA | < 0.25 | NA | NA | INT | NS | NA | NA |
| FPC-5A | NA | NA | NS | 27 | 25 | NS | NS | 29 | NS | NS | NS |
| FPC-5B | NA | NA | NS | 50 | 53 | NS | NS | INT | NS | 64 | 67 |
| FPC-6A | NA | NA | NS | NA | 31 | NS | NS | 21 | NS | 26 | 30 |
| FPC-6B | NA | NA | NS | NA | 23 | NS | NS | INT | NS | 19 | 19 |
| FPC-7A | NA | NA | NA | < 1 | < 0.25 | NA | NA | NA | NS | NA | NA |
| FPC-7B | NA | NA | NA | < 1 | < 0.25 | NA | NA | INT | NS | NA | NA |
| FPC-8A | NA | < 1 | NS | < 1 | 0.51 | NS | NS | 0.6 | NS | 0.60 | 0.70 |
| FPC-8B | NA | 1 | NS | < 1 | 0.93 | NS | NS | INT | NS | 0.62 | 0.81 |
| FPC-9A | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-9B | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-9C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| FPC-11A | NA | NA | NS | NA | NA | NS | NS | NA | NS | NA | NA |
| FPC-11B | NA | NA | NS | NA | NA | NS | NS | NA | NS | INT | 1.4 |
| FPC-11C | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GZ-105 | NA | NA | NS | 80 | 98 | NS | NS | INT | NS | 69 | 62 |
| GZ-123 | NA | NA | NS | NA | NA | NS | NS | NS | NS | NS | NS |
| GZ-125 | NA | NA | NS | NA | NA | NS | NS | NS | NS | NS | NS |
| **Water Supply Wells** | | | | | | | | | | | |
| R-3 | NA | NA | NS | NA | 0.4 | 0.45 | NS | 0.45 | 0.42 | 0.37 | 0.37 |
| R-5 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 346BHR | NS | NS | NS | NS | < 0.25 | NS | NS | < 0.25 | NS | < 0.25 | < 0.25 |
| 339BHR | NS | NS | NS | NS | NS | NS | 0.38 | 0.42 | 0.63 | 0.42 | 0.74 |
| 415BHR | NS | NS | NS | NS | NS | NS | < 0.25 | < 0.25 | NS | < 0.25 | < 0.25 |

**Table Notes:**

1. All data in micrograms per liter (ug/L), parts per billion - Analysis by Method 8260B SIM (a low level detection limit methodology)
2. 1,4-dioxane not included on Method 8260B parameter list prior to August 2010. First analyses by 8260B SIM were completed in Aug. 2009.
3. Results for standard Method 8260B (detection limit of 50 ug/L) are not provided in this table
4. NHDES Ambient Groundwater Quality Standard (AGQS) for 1,4-dioxane is 3 ug/L. Exceedances are identified with GRAY shading.
5. An EPA Interim Cleanup Level (ICL) for 1,4-dioxane has not been established.

**Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TIME SERIES PLOTS

ARSENIC SUMMARY PLOTS

MANGANESE SUMMARY PLOTS

BENZENE SUMMARY PLOTS

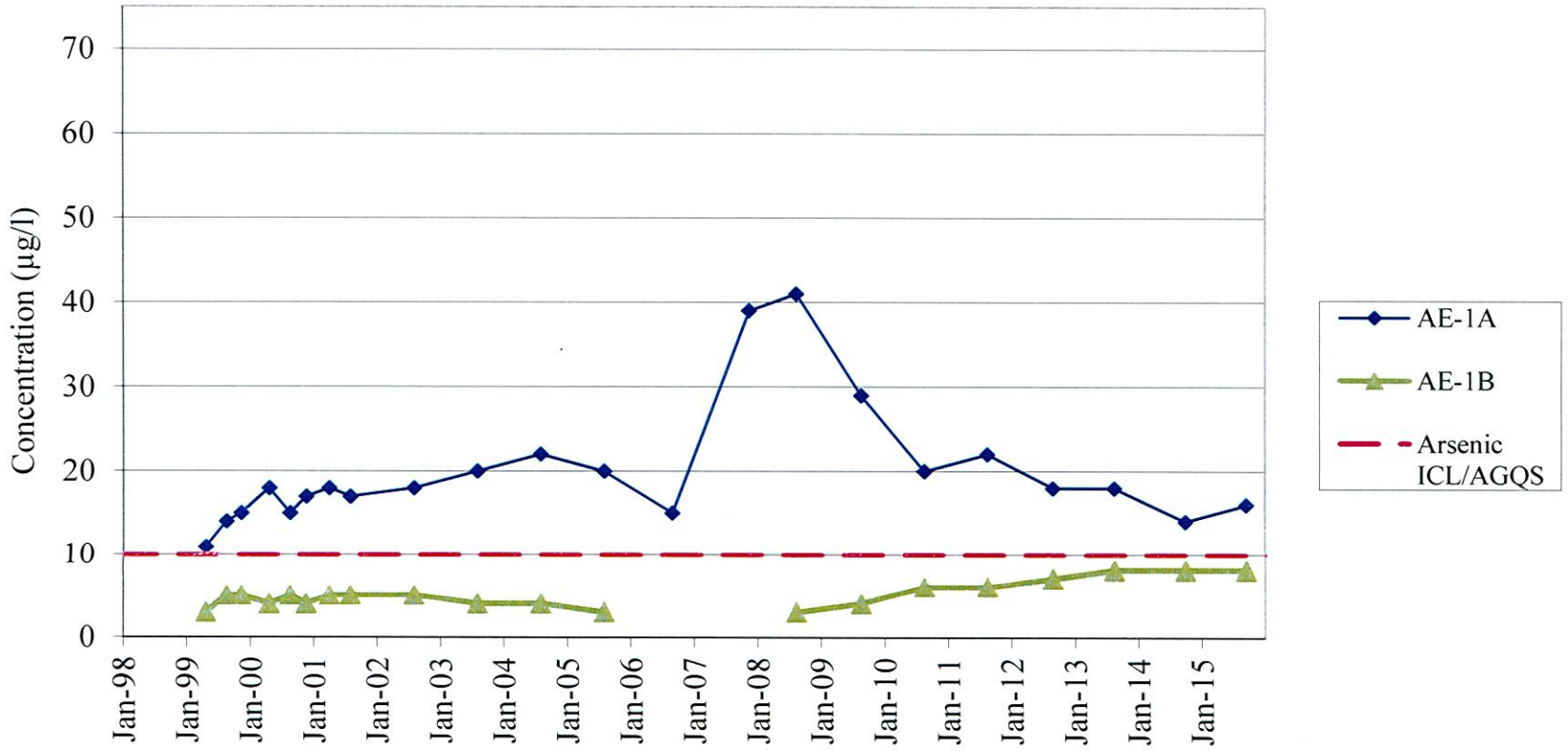
1,4-DIOXANE SUMMARY PLOTS

TERTIARY-BUTYL ALCOHOL SUMMARY PLOT

ARSENIC, MANGANESE AND BENZENE PLOTS AT SELECT WELLS

# AE-1A & AE-1B

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

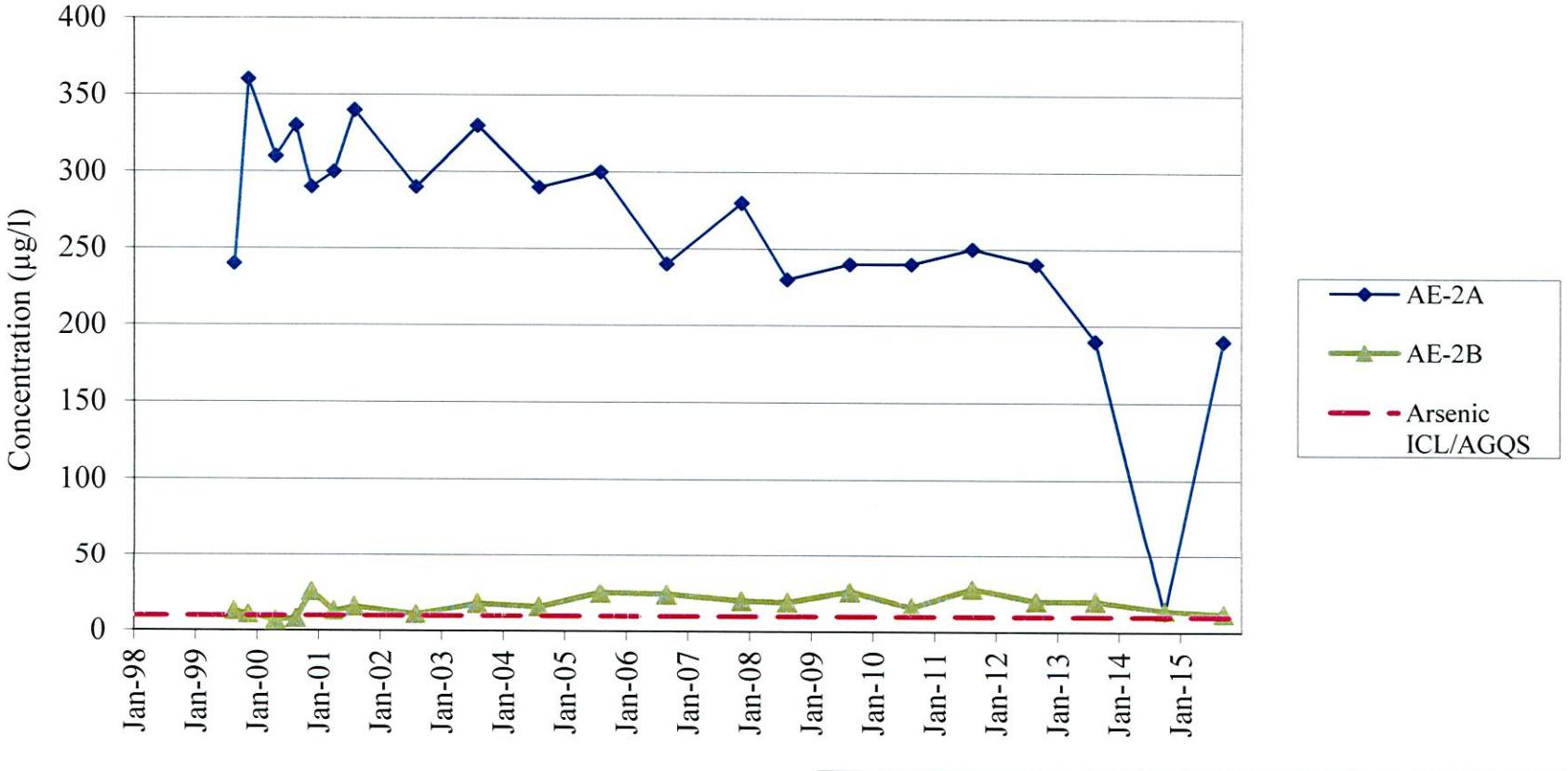



Sample Date

**Notes:** For AE-1A, Total Arsenic values plotted prior to 2014 and Dissolved Arsenic values plotted beginning in 2014. All AE-1B values are for Total Arsenic

# AE-2A & AE-2B

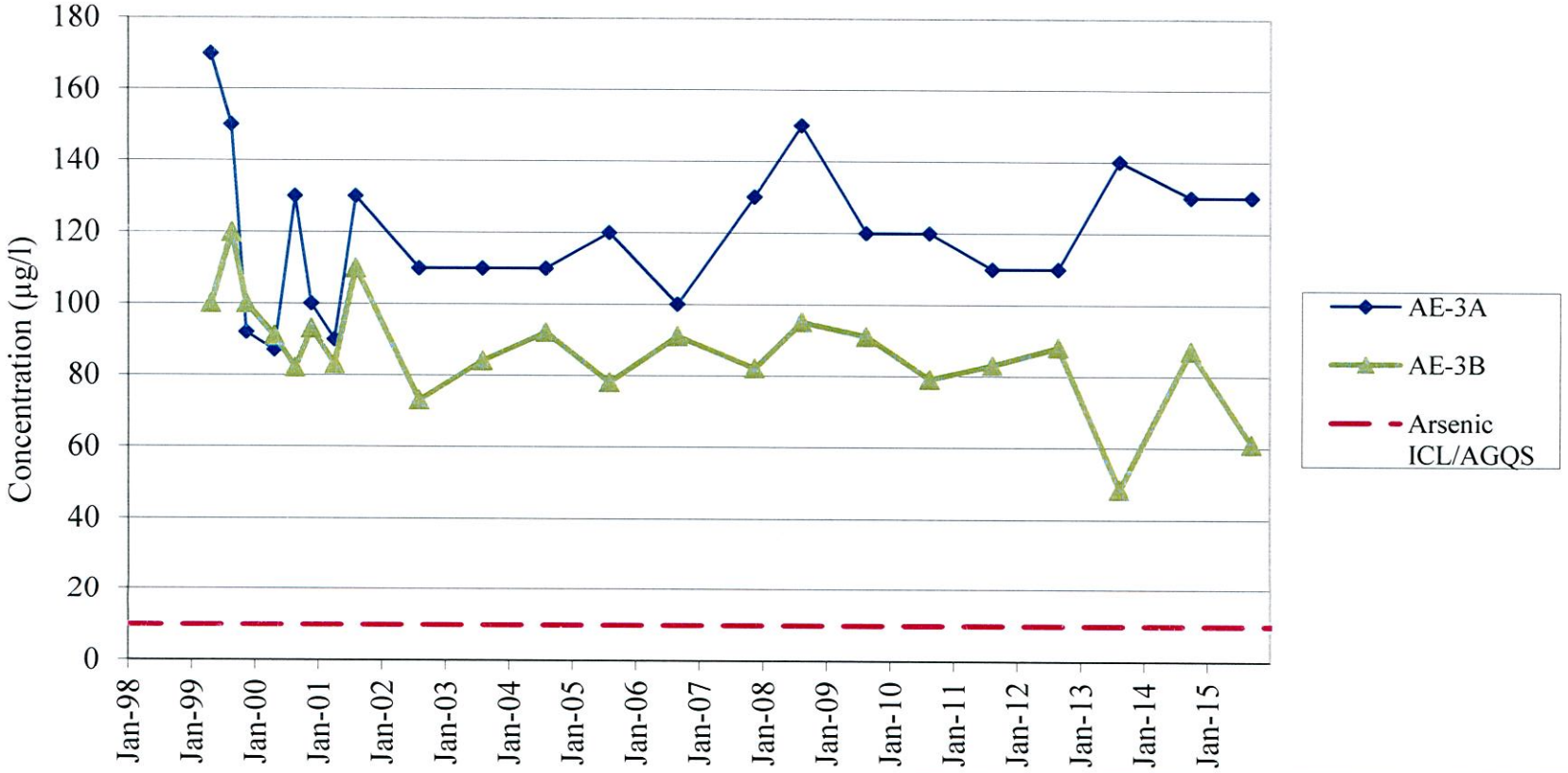
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** For AE-2A, Total Arsenic values plotted prior to 2014 and Dissolved Arsenic values plotted beginning in 2014. All AE-2B values are for Total Arsenic

# AE-3A & AE-3B

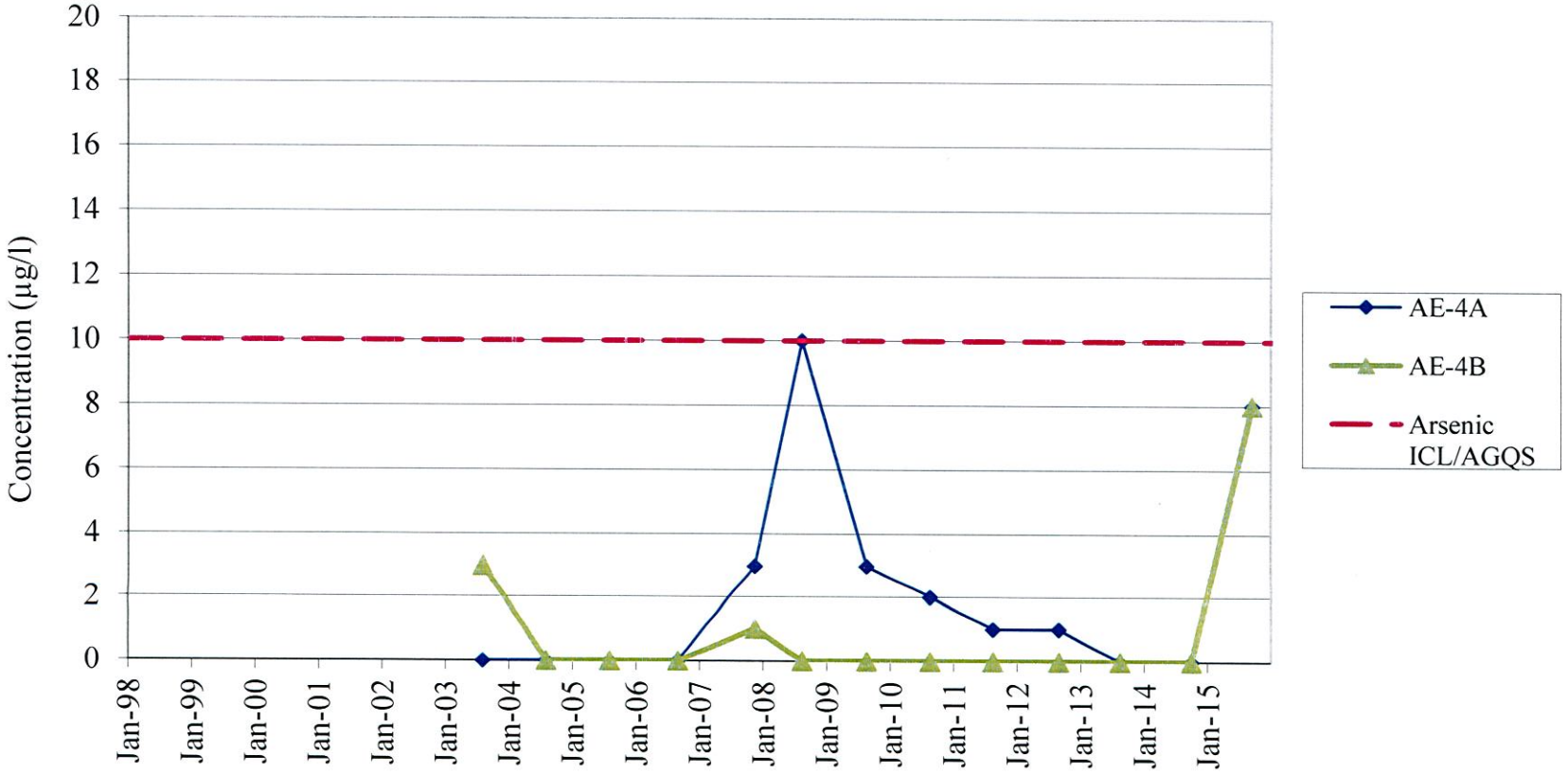
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** For AE-3A, Total Arsenic values plotted prior to 2014 and Dissolved Arsenic values plotted beginning in 2014. All AE-3B values are for Total Arsenic. At AE-3B interval samples were collected in August 2013 and the average value was used to prepare this plot.

# AE-4A & AE-4B

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

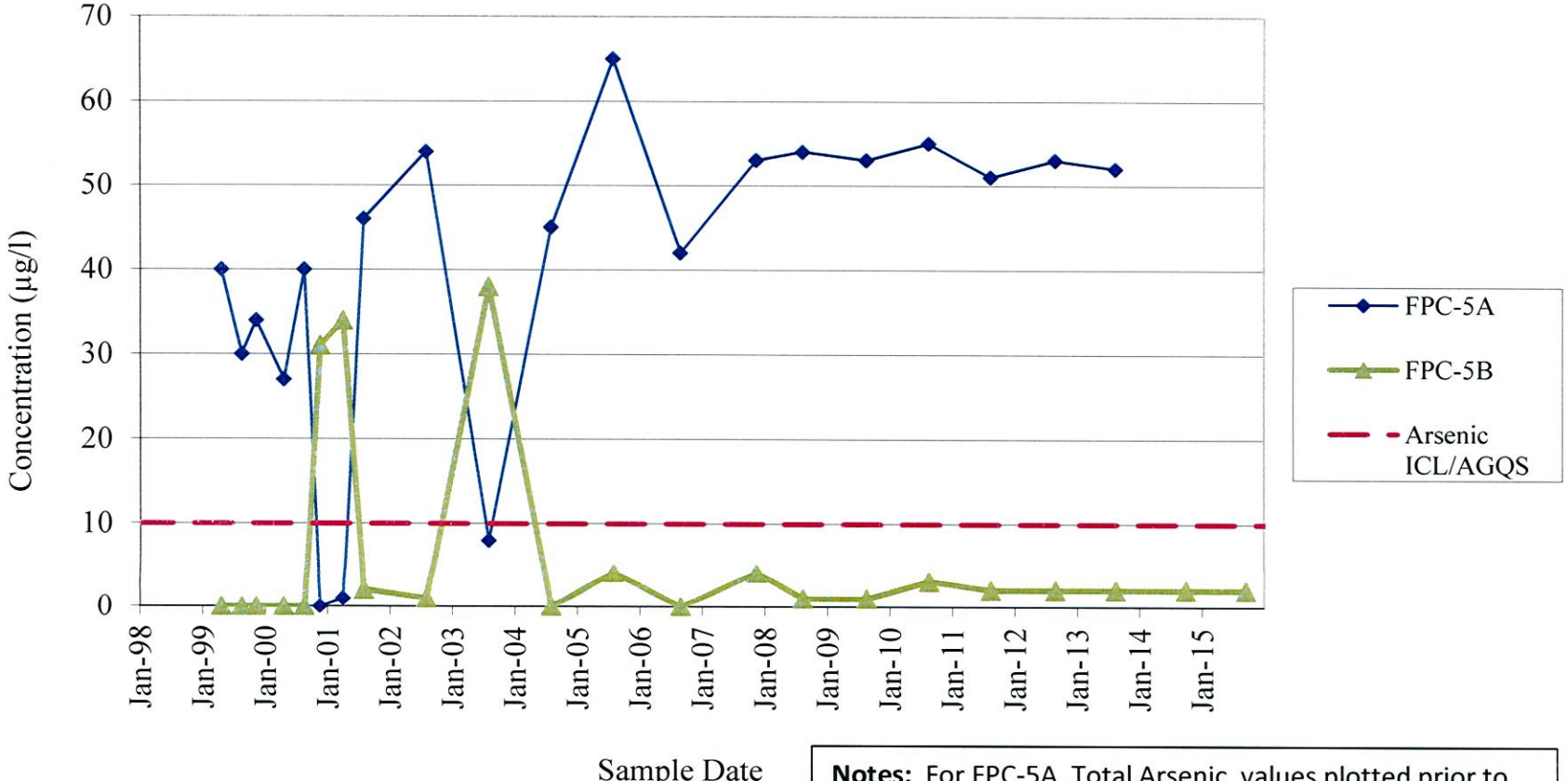



Sample Date

**Notes:** For AE-4A, Total Arsenic values plotted prior to 2014 and Dissolved Arsenic values plotted beginning in 2014. All AE-4B values are for Total Arsenic

# FPC-5A & FPC-5B

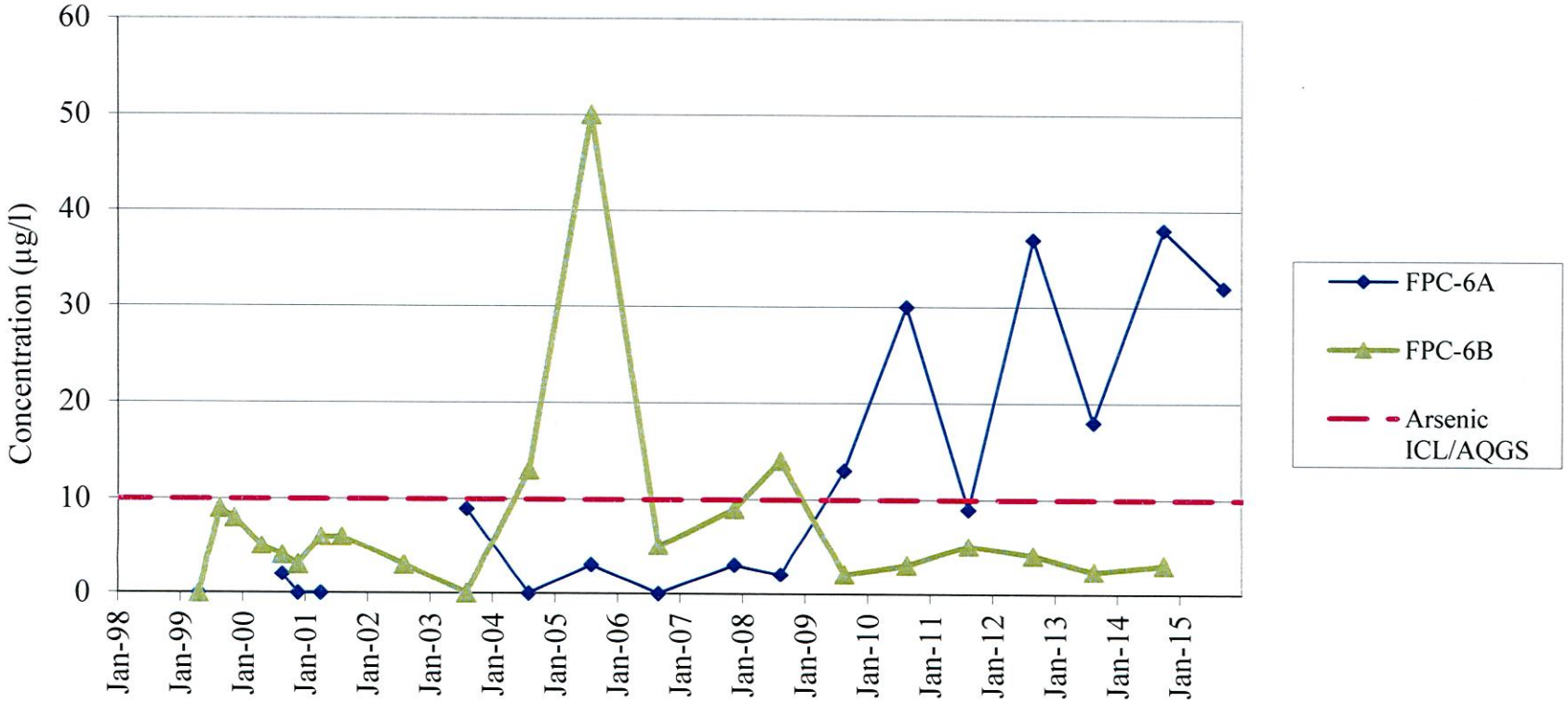
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** For FPC-5A, Total Arsenic values plotted prior to 2014 and FPC-5A was not sampled in 2014 due to well integrity issues. All FPC-5B values are for Total Arsenic. At FPC-5B interval samples were collected in August 2013 and the average value was used to prepare this plot.

# FPC-6A & FPC-6B

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

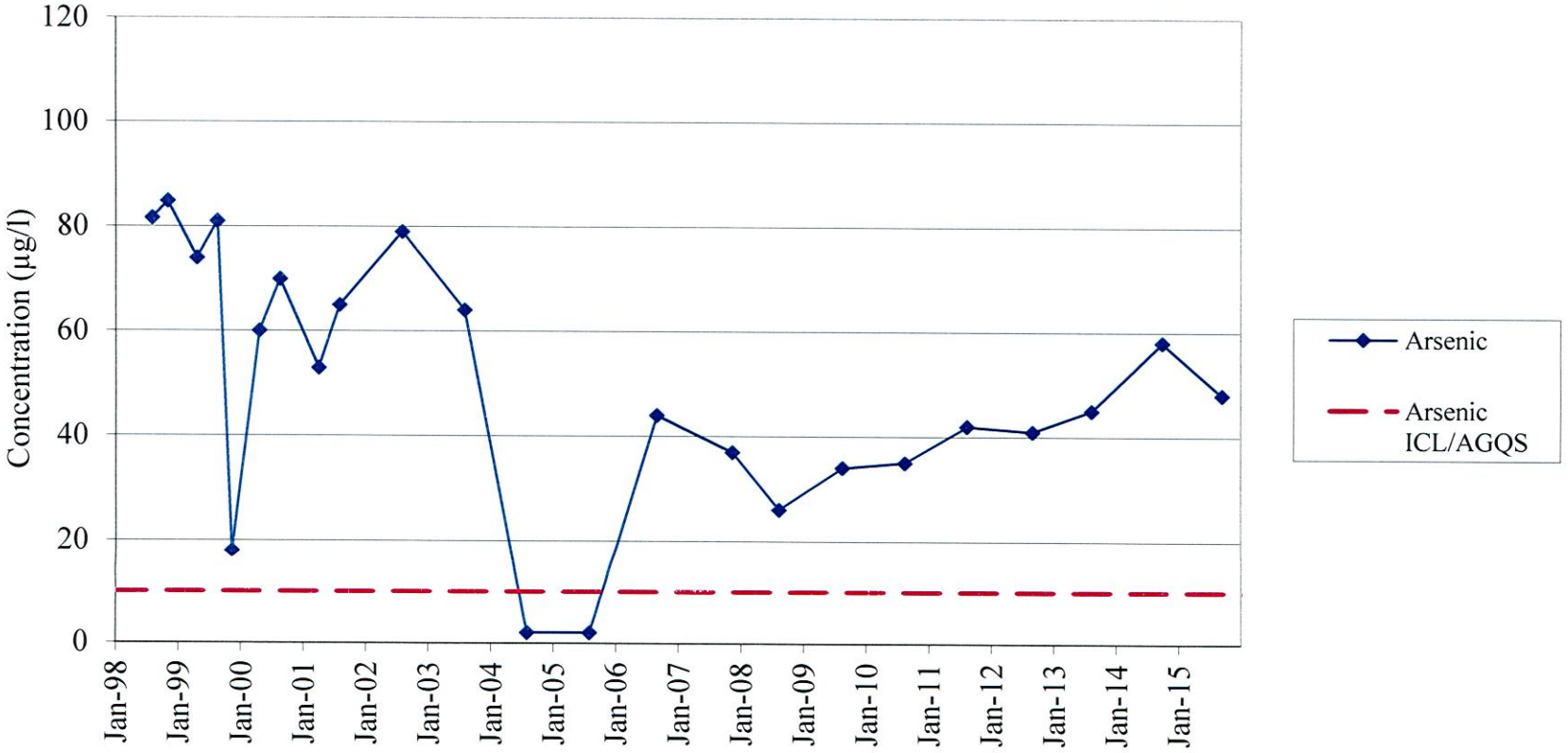



Sample Date

**Notes:** For FPC-6A, Total Arsenic values plotted prior to 2014 and Dissolved Arsenic values plotted beginning in 2014. All FPC-6B values are for Total Arsenic. At FPC-6B interval samples were collected in August 2013 and the average value was used to prepare this plot.

# FPC-9A

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

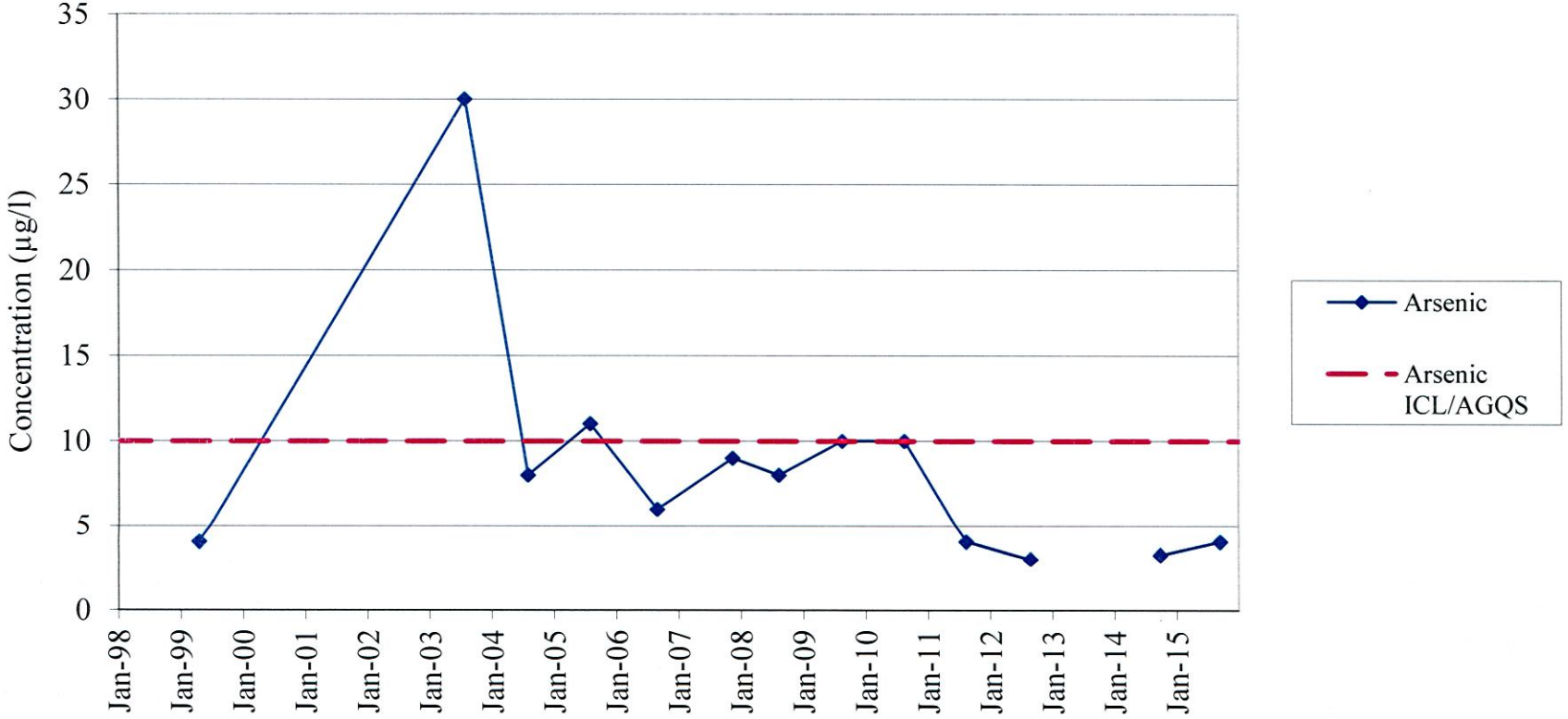



Sample Date

**Notes:** Total Arsenic values plotted prior to 2014.
Dissolved Arsenic values plotted beginning in 2014.

# FPC-11B

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

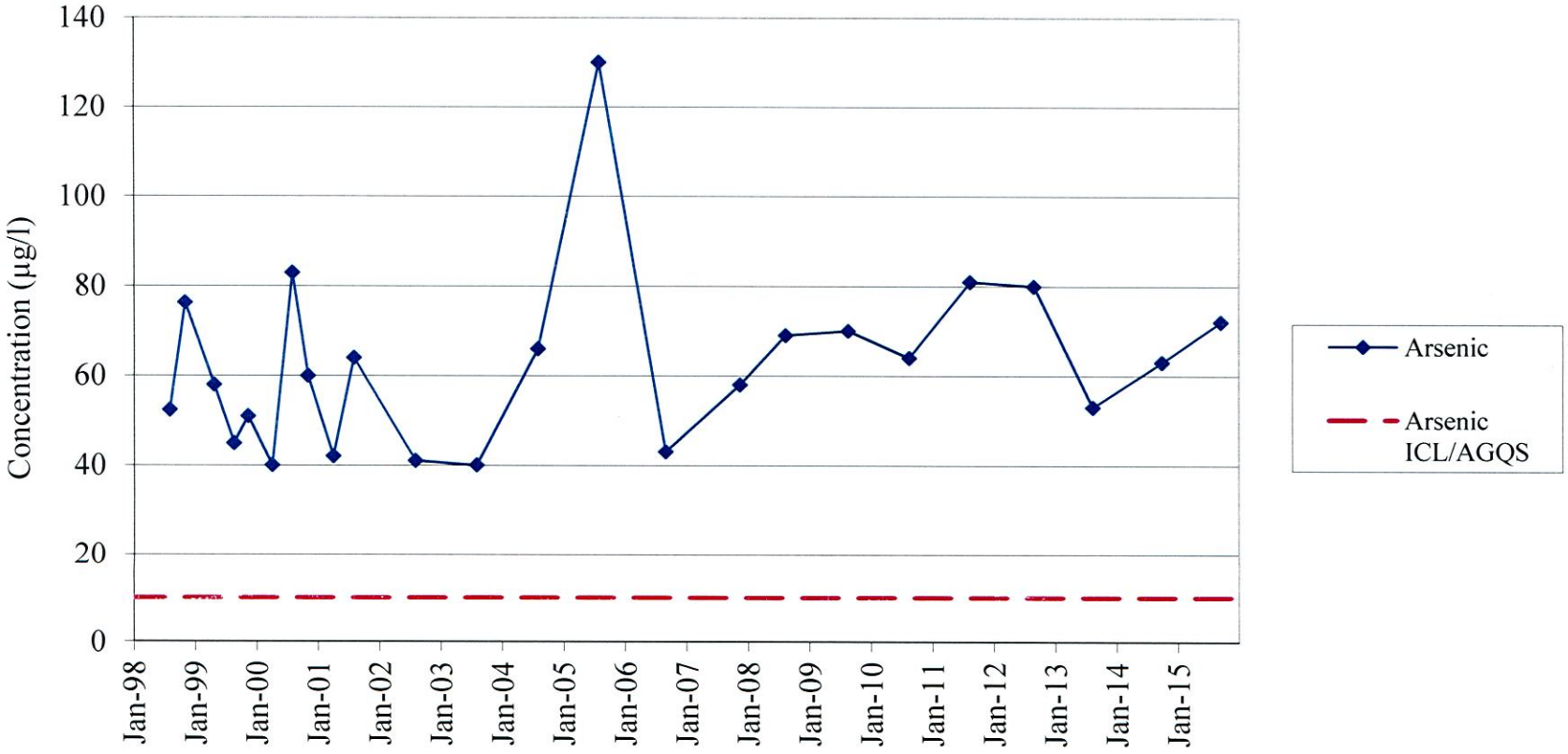



**Notes:** All values are for Total Arsenic. Well was not sampled in August 2013 due to well integrity issues. Interval samples were collected in September 2014 and the average value was used to prepare this plot.

**MW-4**

Arsenic Concentrations vs. Time

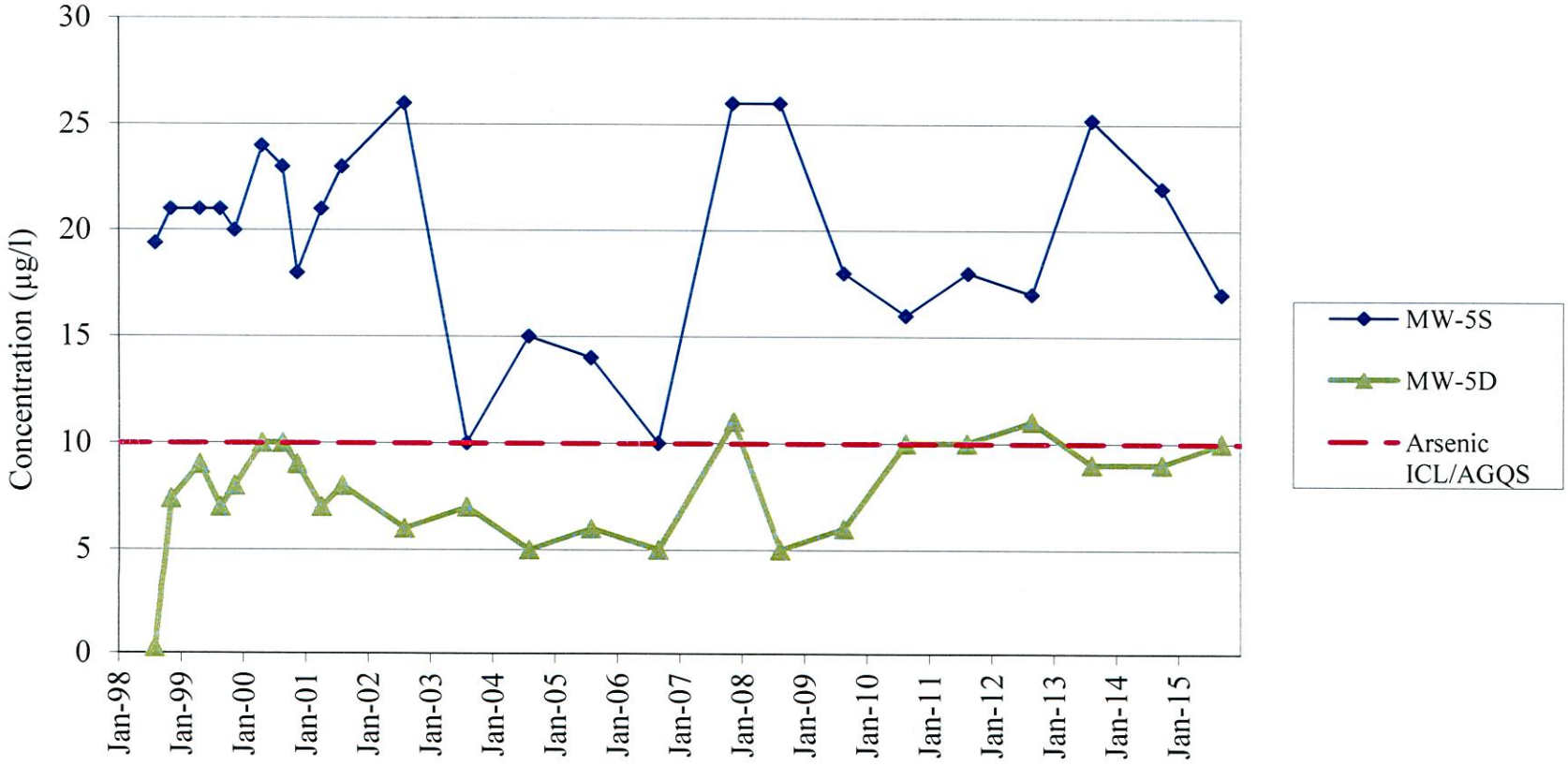
Coakley Landfill, North Hampton, NH




**Notes:** Total Arsenic values plotted prior to 2014.
Dissolved Arsenic values plotted beginning in 2014.

# MW-5S & MW-5D

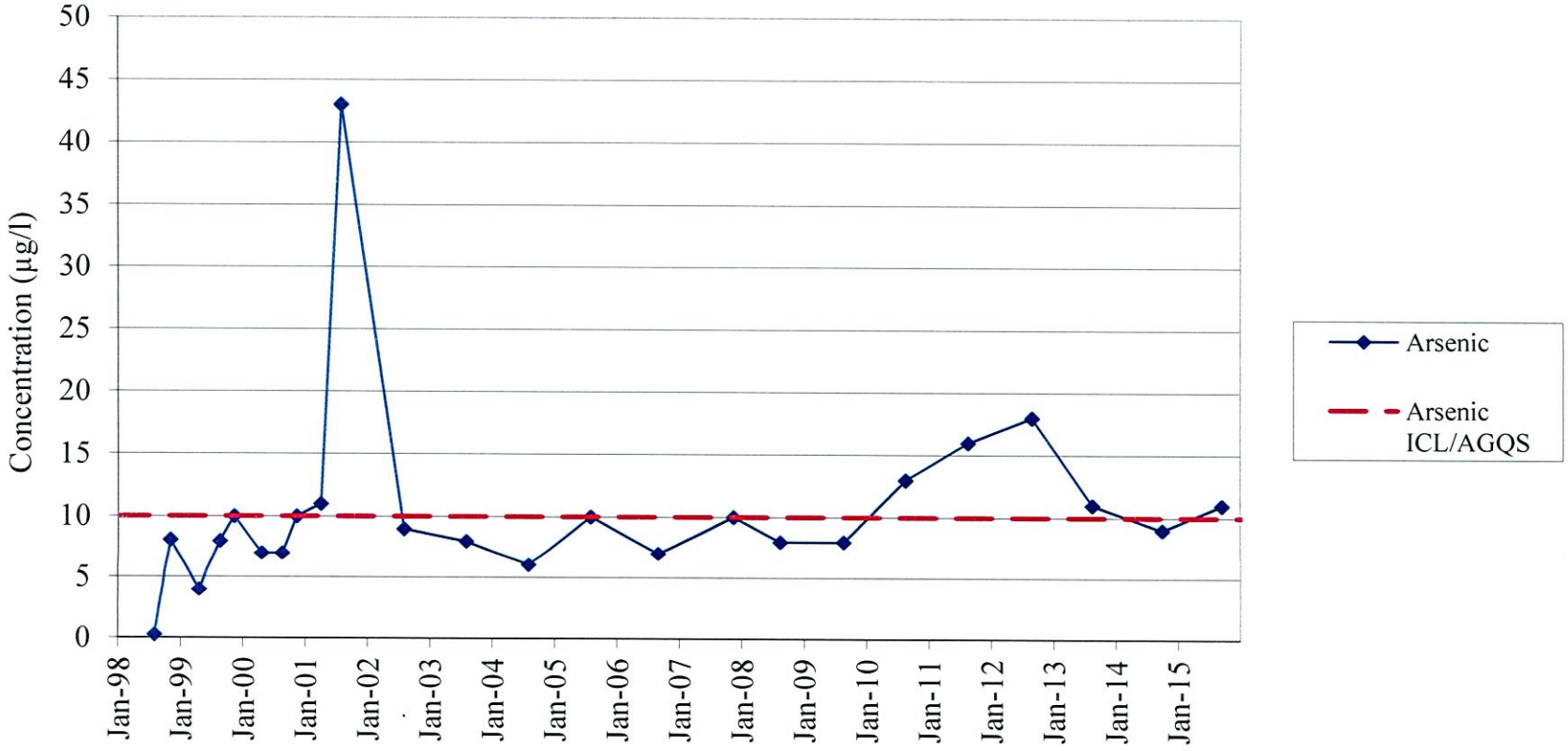
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Interval samples were collected in August 2013 and the average value was used to prepare this plot. All value are for Total Arsenic.

# MW-8

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

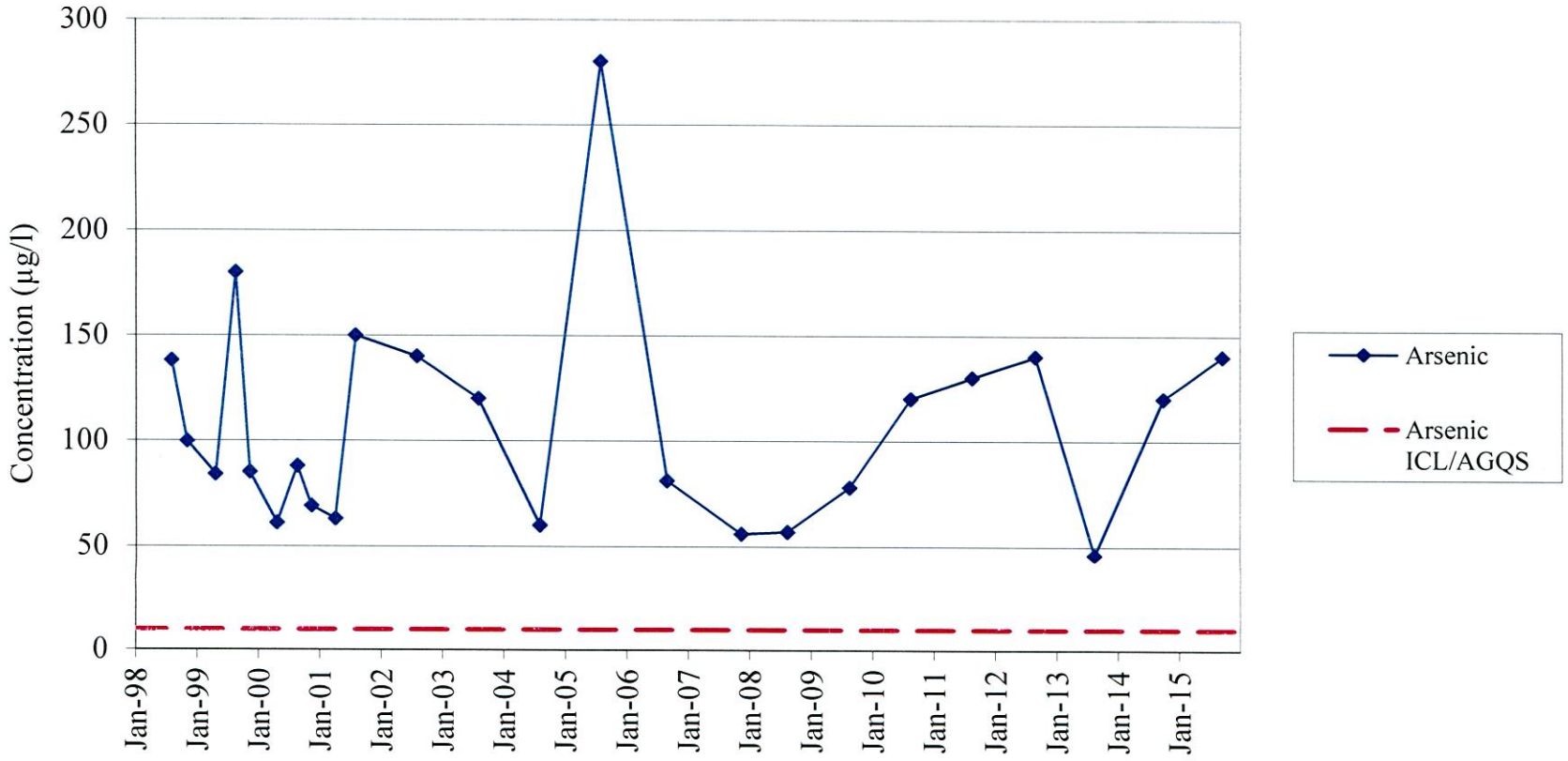



Sample Date

**Notes:** Interval samples were collected in August 2013 and the average value was used to prepare this plot. All value are for Total Arsenic.

# MW-9

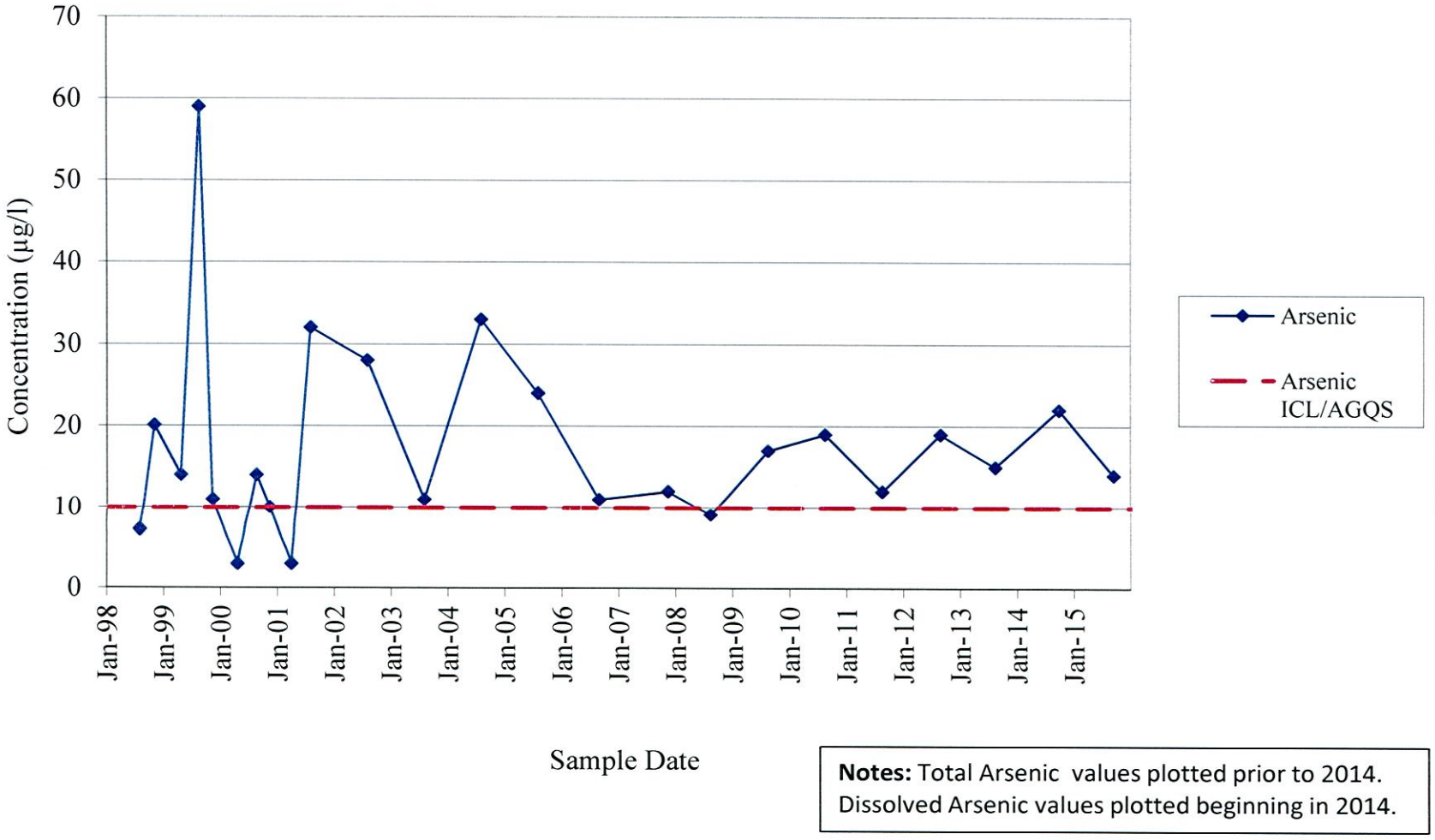
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Arsenic values plotted prior to 2014.
Dissolved Arsenic values plotted beginning in 2014.

# MW-10

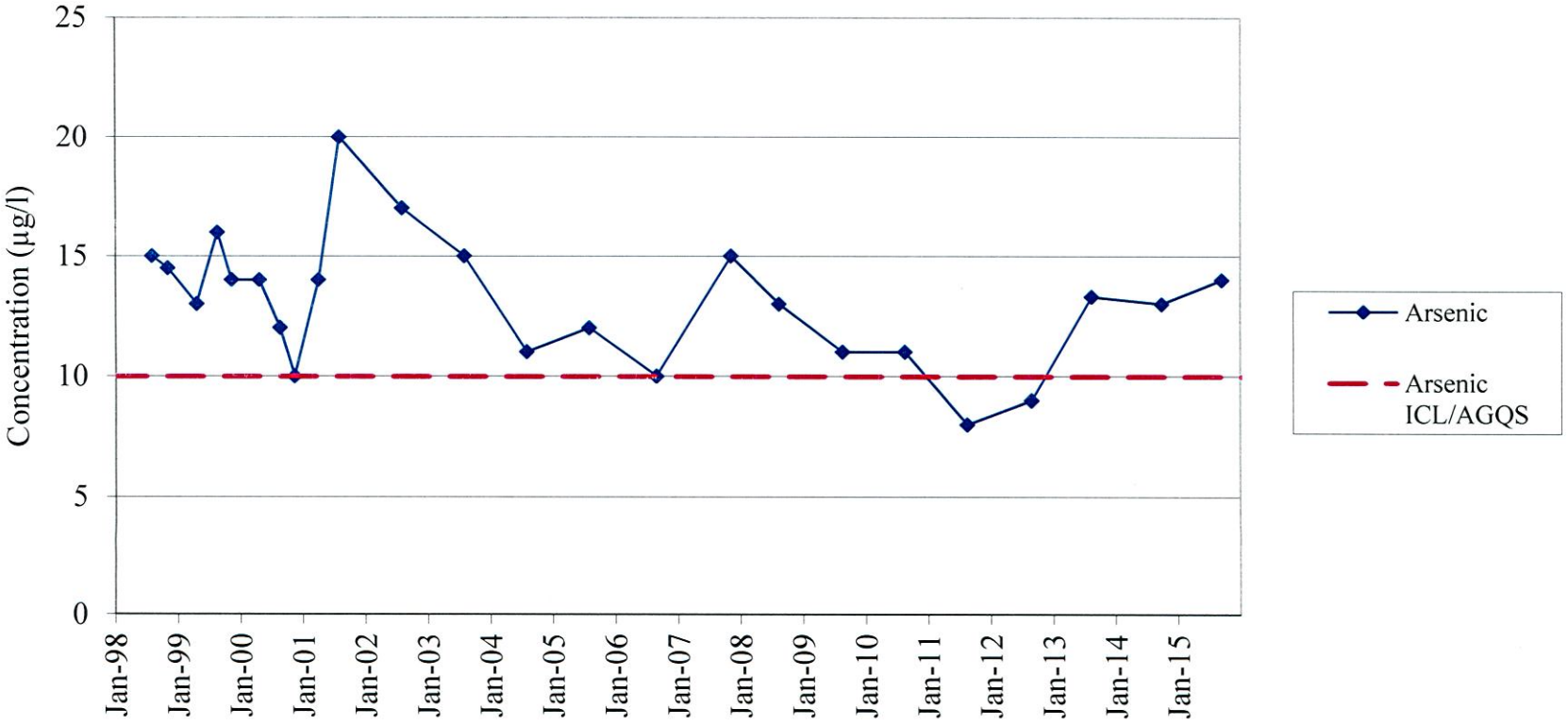
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Arsenic values plotted prior to 2014.
Dissolved Arsenic values plotted beginning in 2014.

# MW-11

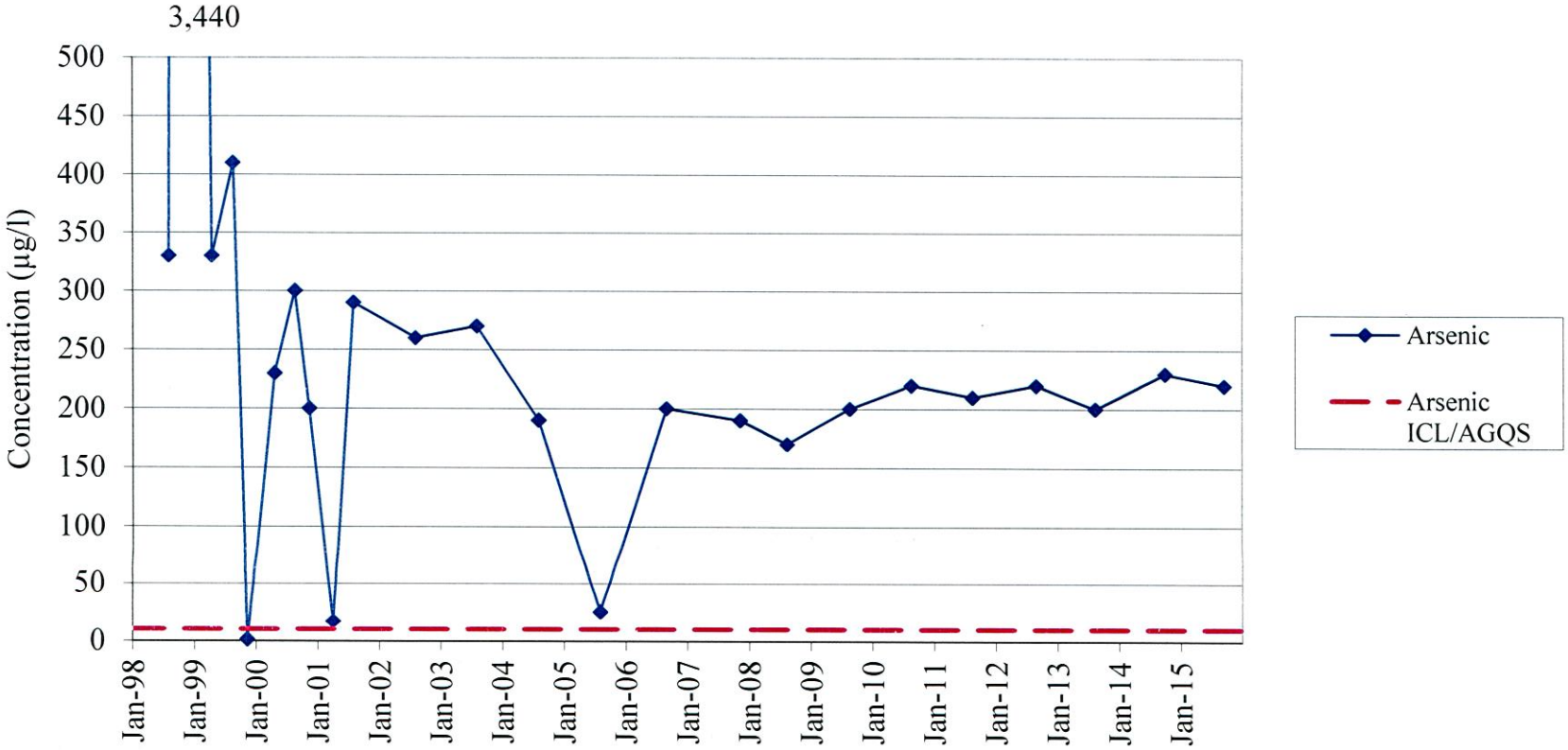
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Interval samples were collected in August 2013 and the average value was used to prepare this plot. All value are for Total Arsenic.

# OP-2

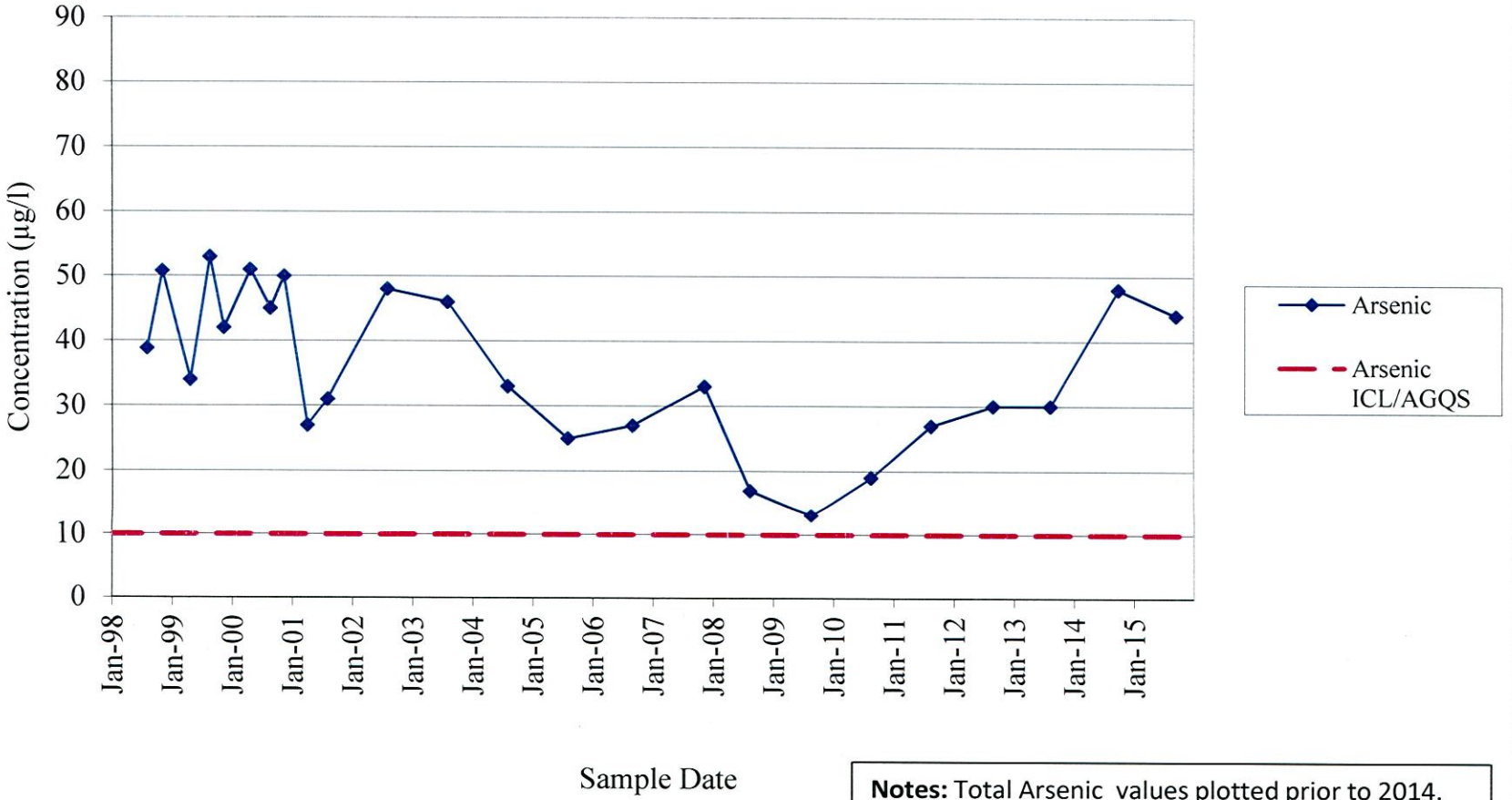
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Arsenic values plotted prior to 2014.
Dissolved Arsenic values plotted beginning in 2014.

# OP-5

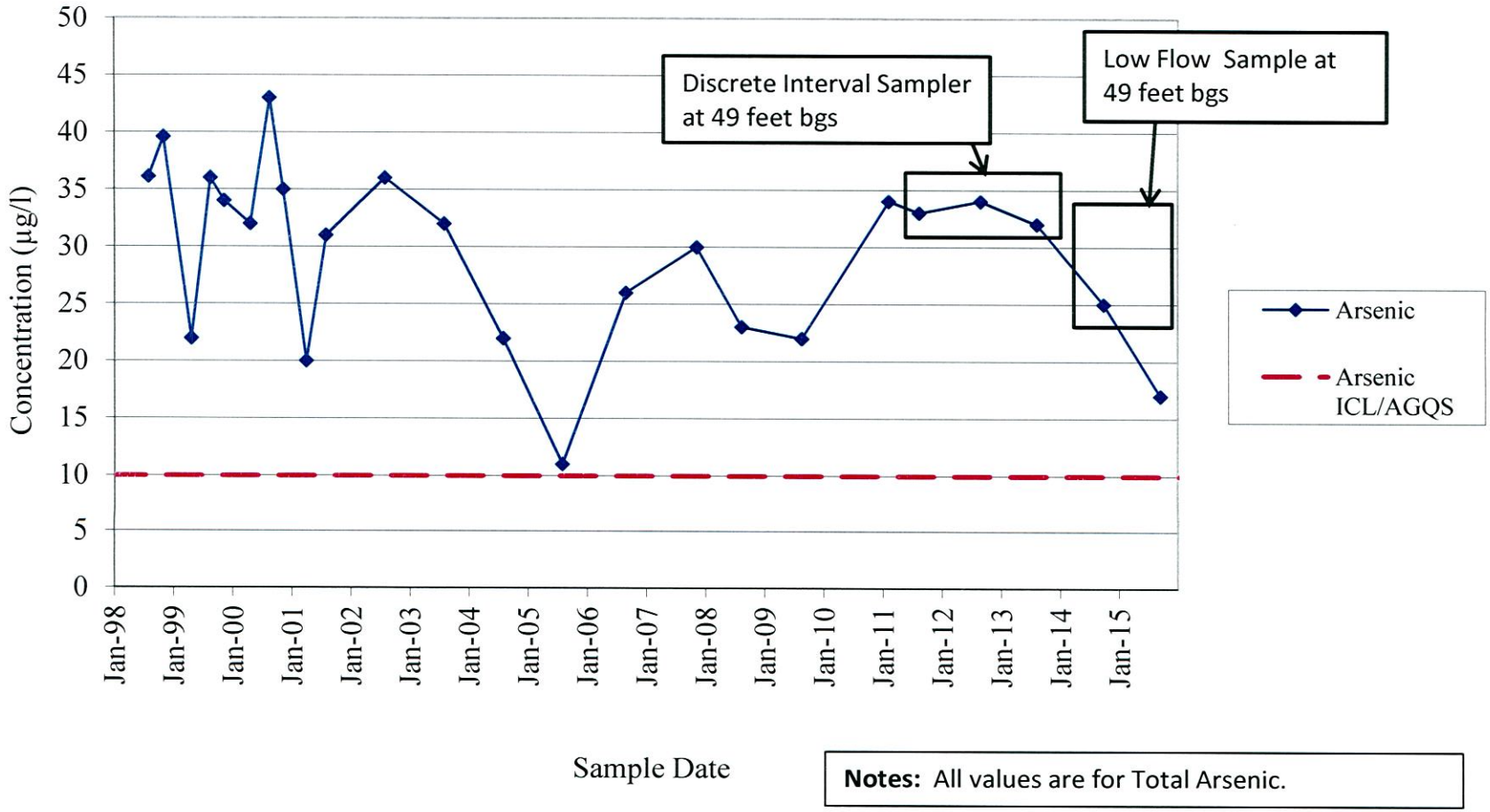
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Arsenic values plotted prior to 2014.
Dissolved Arsenic values plotted beginning in 2014.

# BP-4

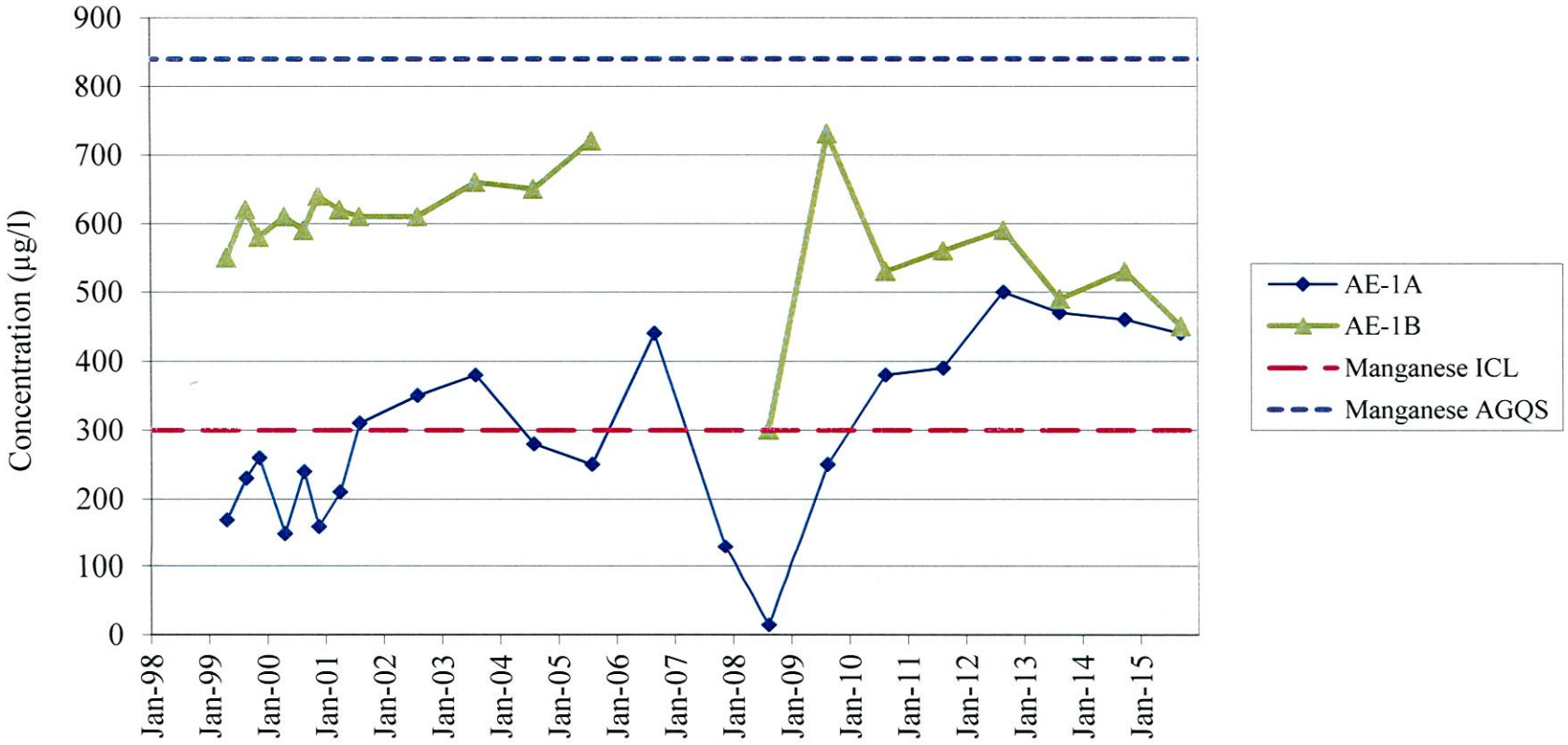
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** All values are for Total Arsenic.

# AE-1A & AE-1B

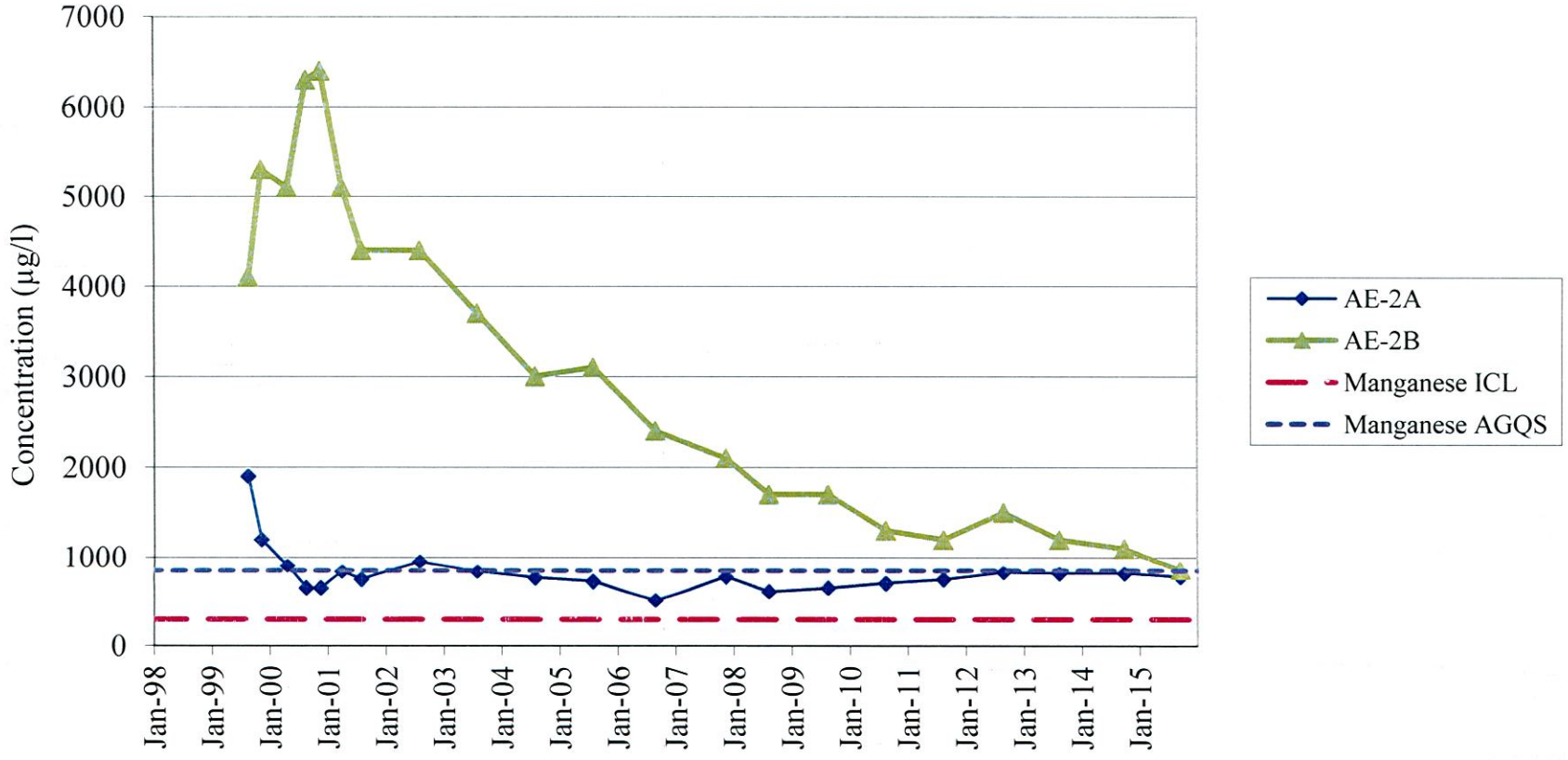
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** For AE-1A, Total Manganese values plotted prior to 2014 and Dissolved Manganese values plotted beginning in 2014. All AE-1B values are for Total Manganese.

# AE-2A & AE-2B

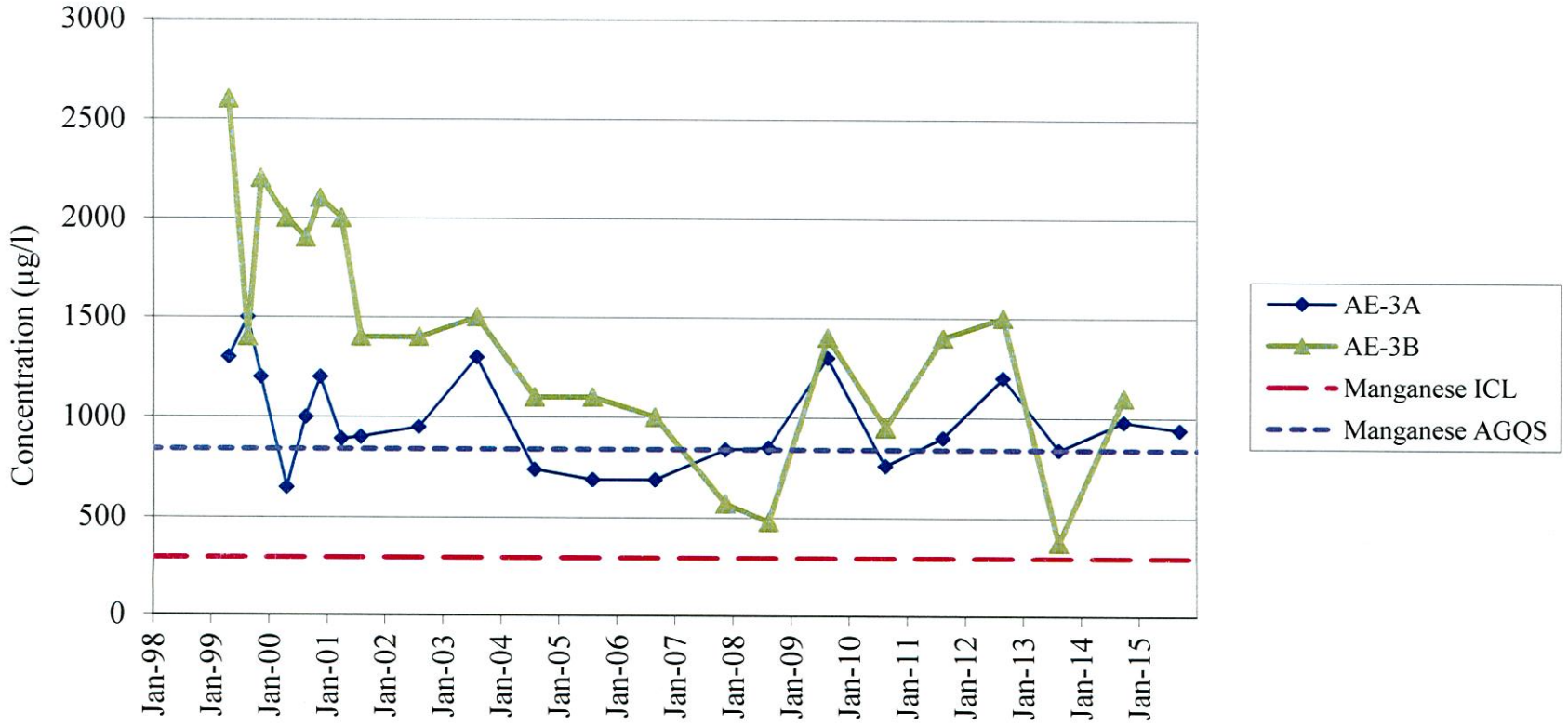
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** For AE-2A, Total Manganese values plotted prior to 2014 and Dissolved Manganese values plotted beginning in 2014. All AE-2B values are for Total Manganese.

# AE-3A & AE-3B

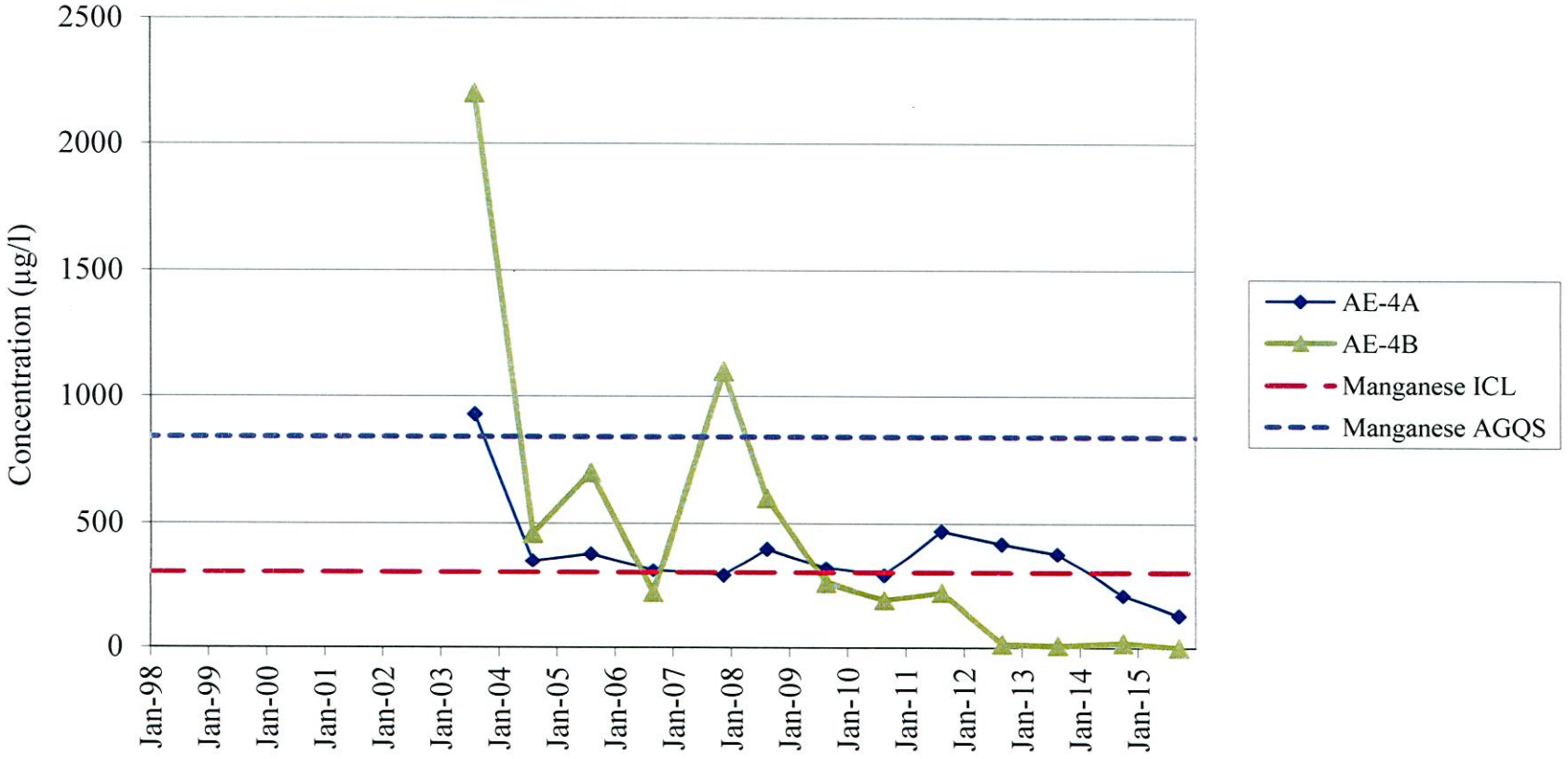
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** For AE-3A, Total Manganese values plotted prior to 2014 and Dissolved Manganese values plotted beginning in 2014. All AE-3B values are for Total Manganese. At AE-3B interval samples were collected in August 2013 and the average value was used to prepare this plot.

# AE-4A & AE-4B

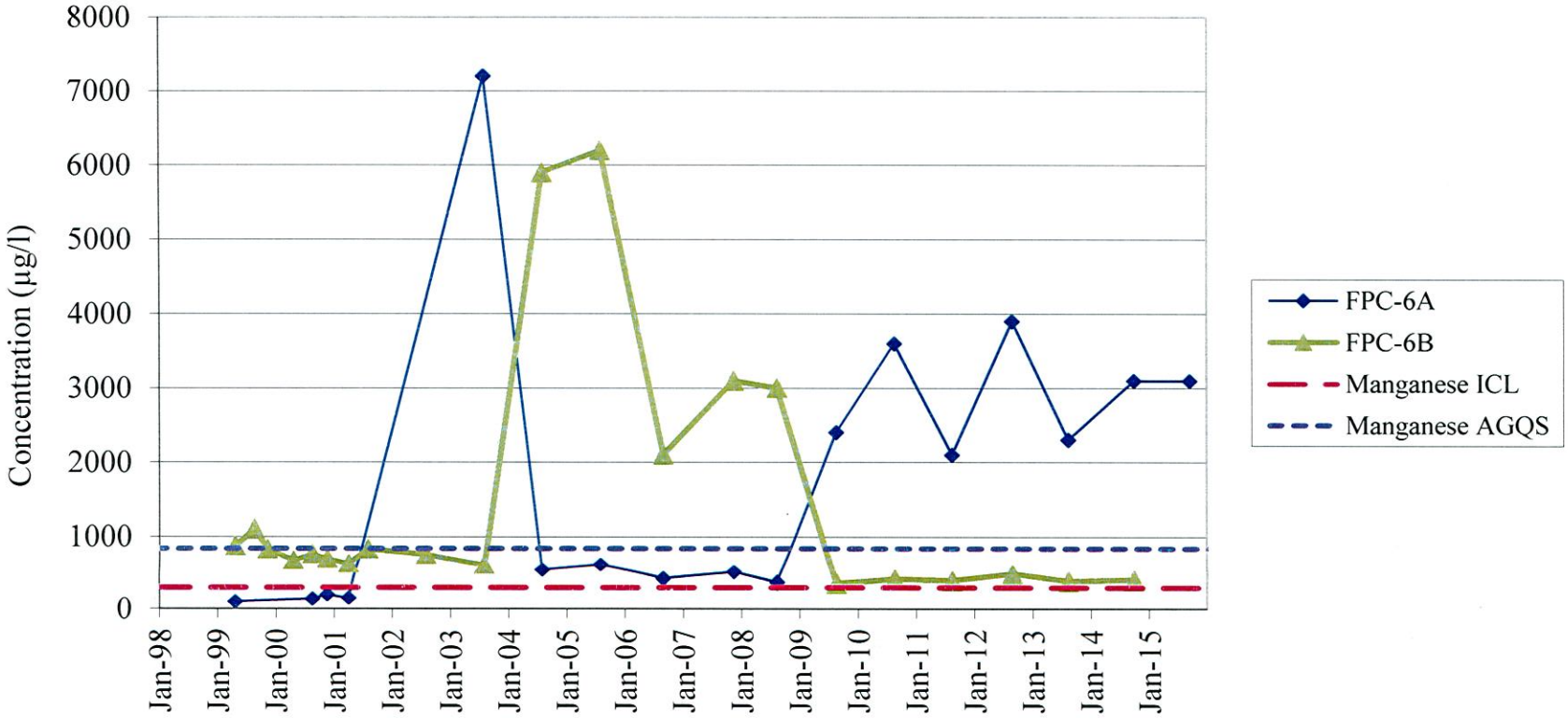
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** For AE-4A, Total Manganese values plotted prior to 2014 and Dissolved Manganese values plotted beginning in 2014. All AE-4B values are for Total Manganese.

# FPC-6A & FPC-6B

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH

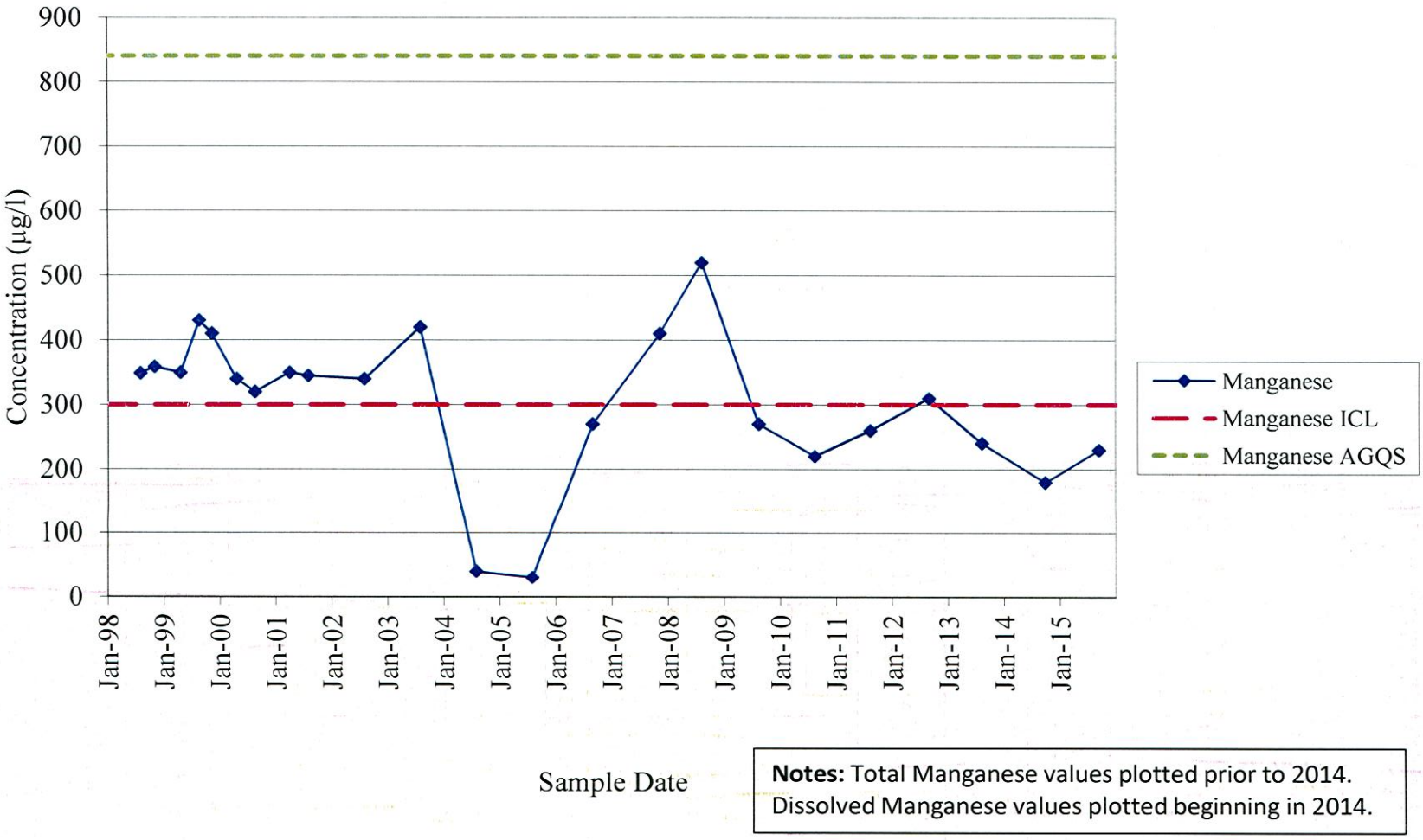



Sample Date

**Notes:** For FPC-6A, Total Manganese values plotted prior to 2014 and Dissolved Manganese values plotted beginning in 2014. All FPC-6B values are for Total Manganese. At FPC-6B interval samples were collected in August 2013 and the average value was used to prepare this plot.

# FPC-9A

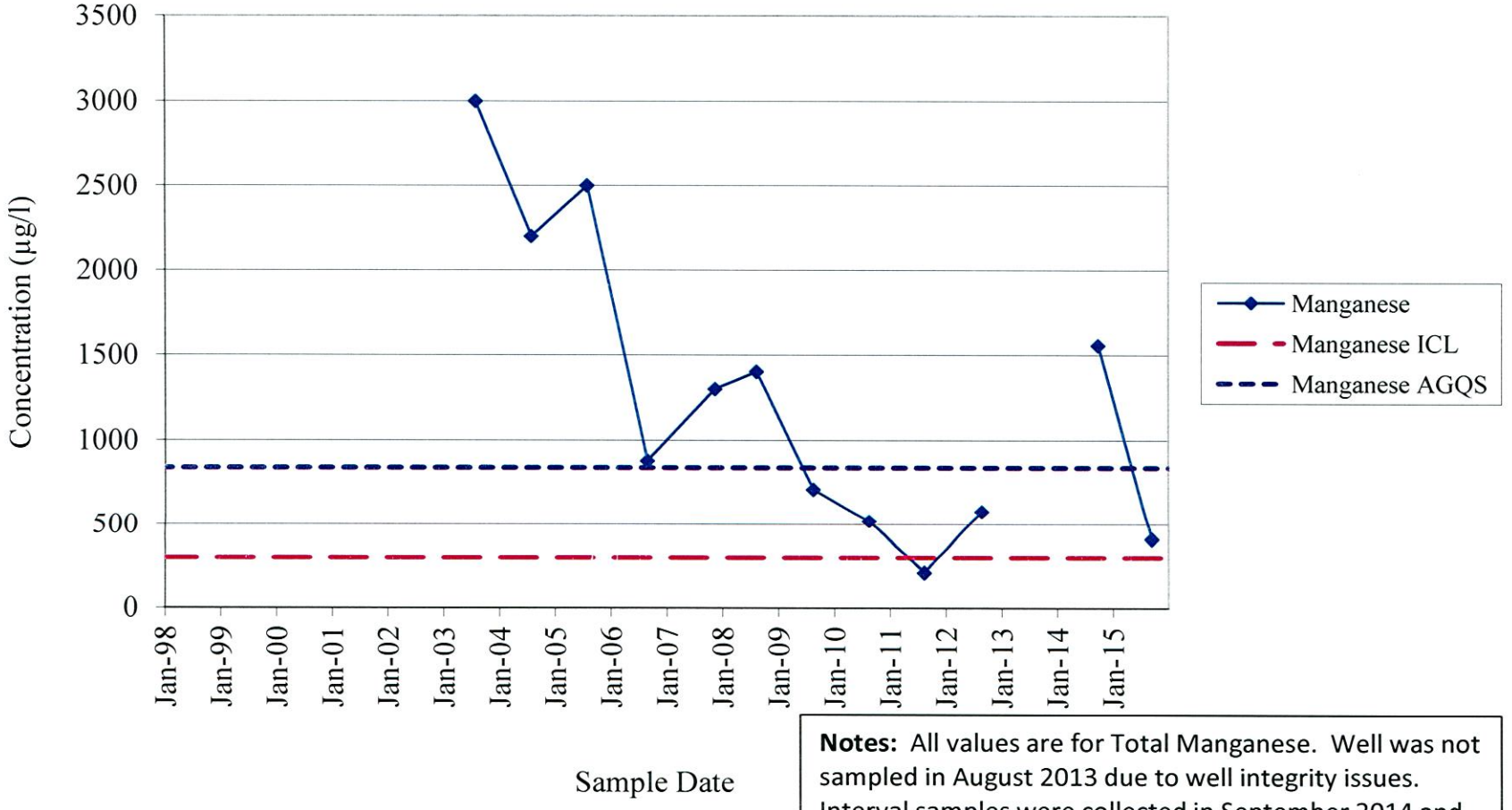
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Manganese values plotted prior to 2014.
Dissolved Manganese values plotted beginning in 2014.

# FPC-11B

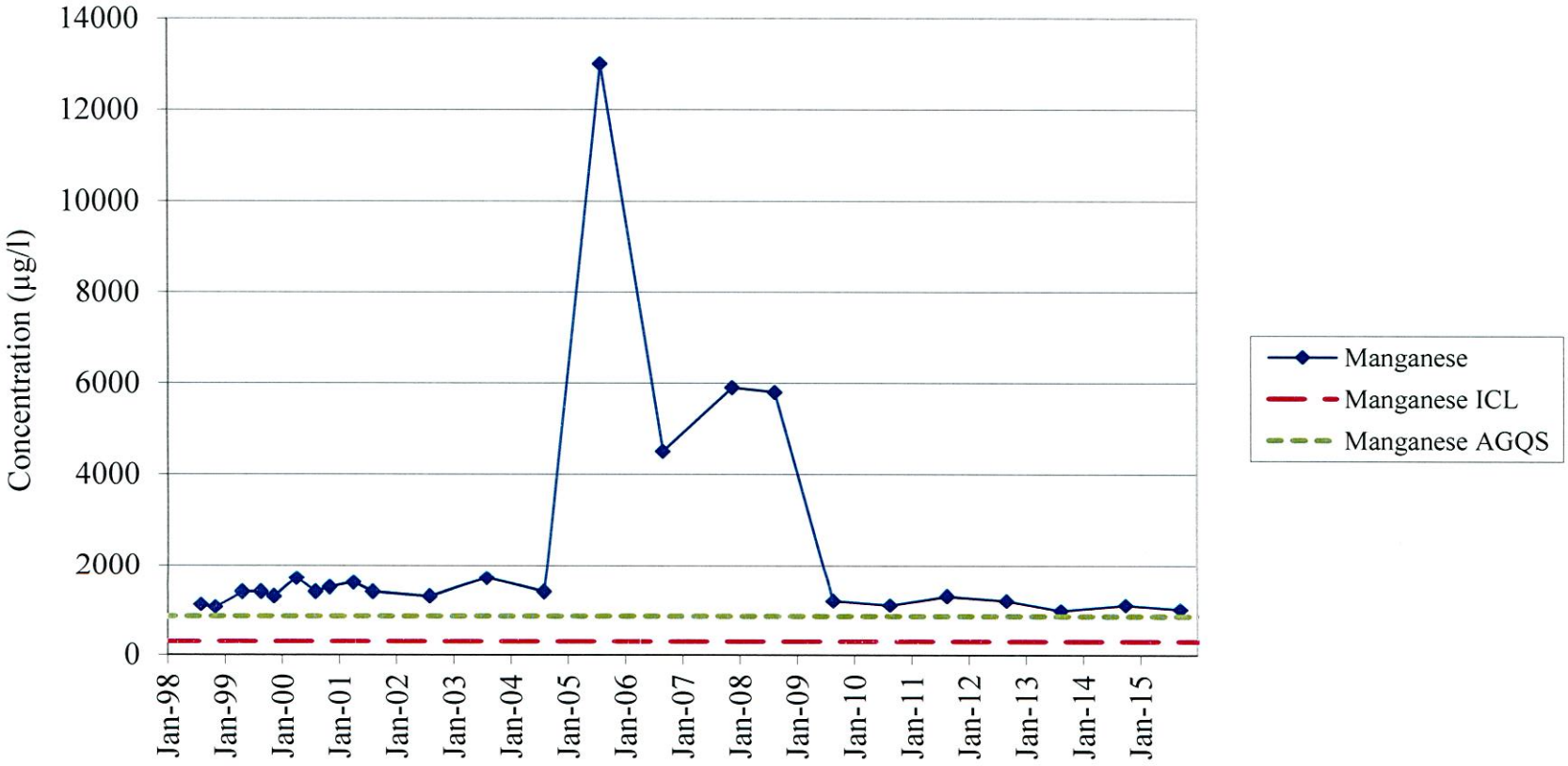
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** All values are for Total Manganese. Well was not sampled in August 2013 due to well integrity issues. Interval samples were collected in September 2014 and the average value was used to prepare this plot.

**MW-4**

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH

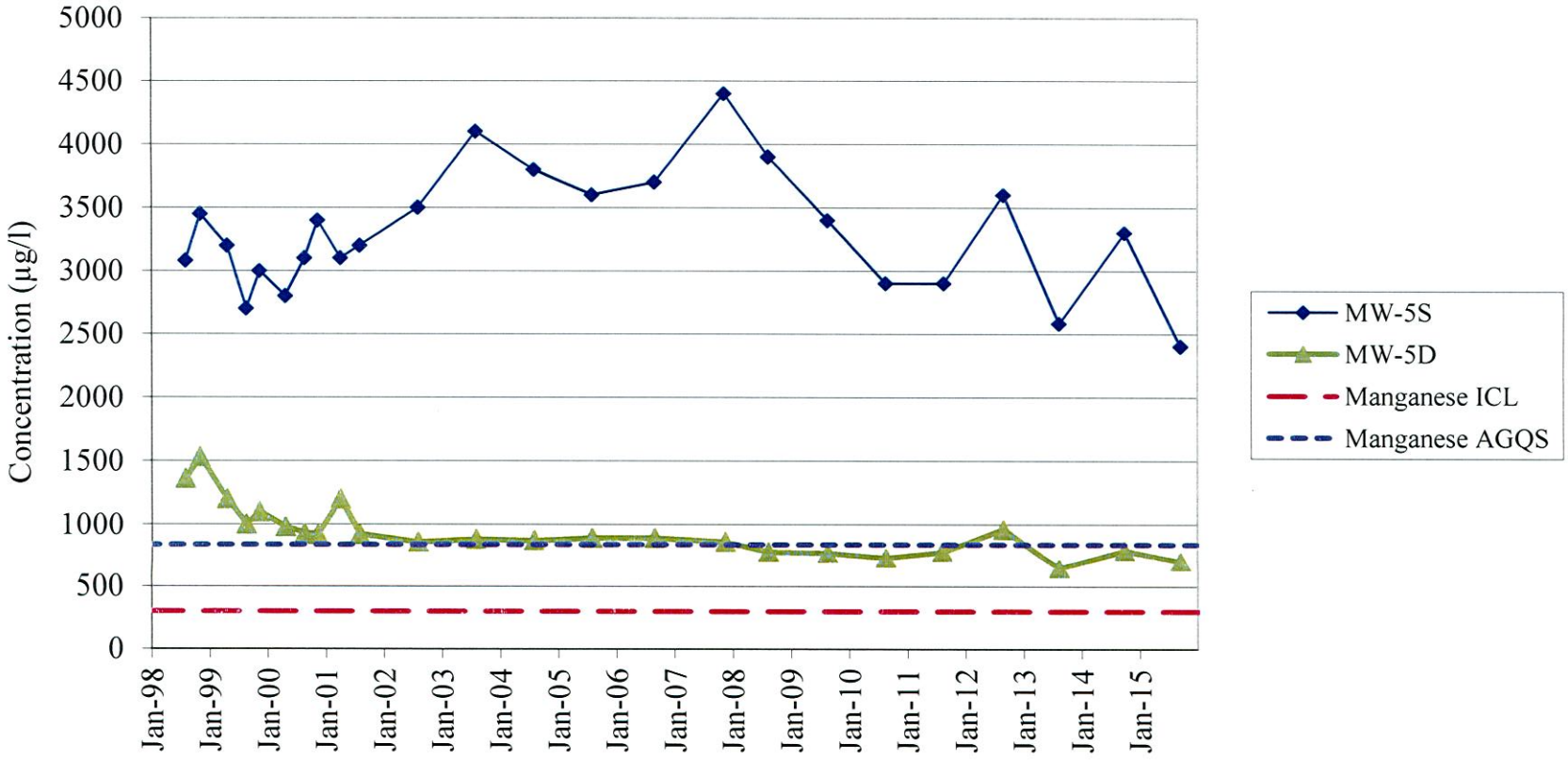



Sample Date

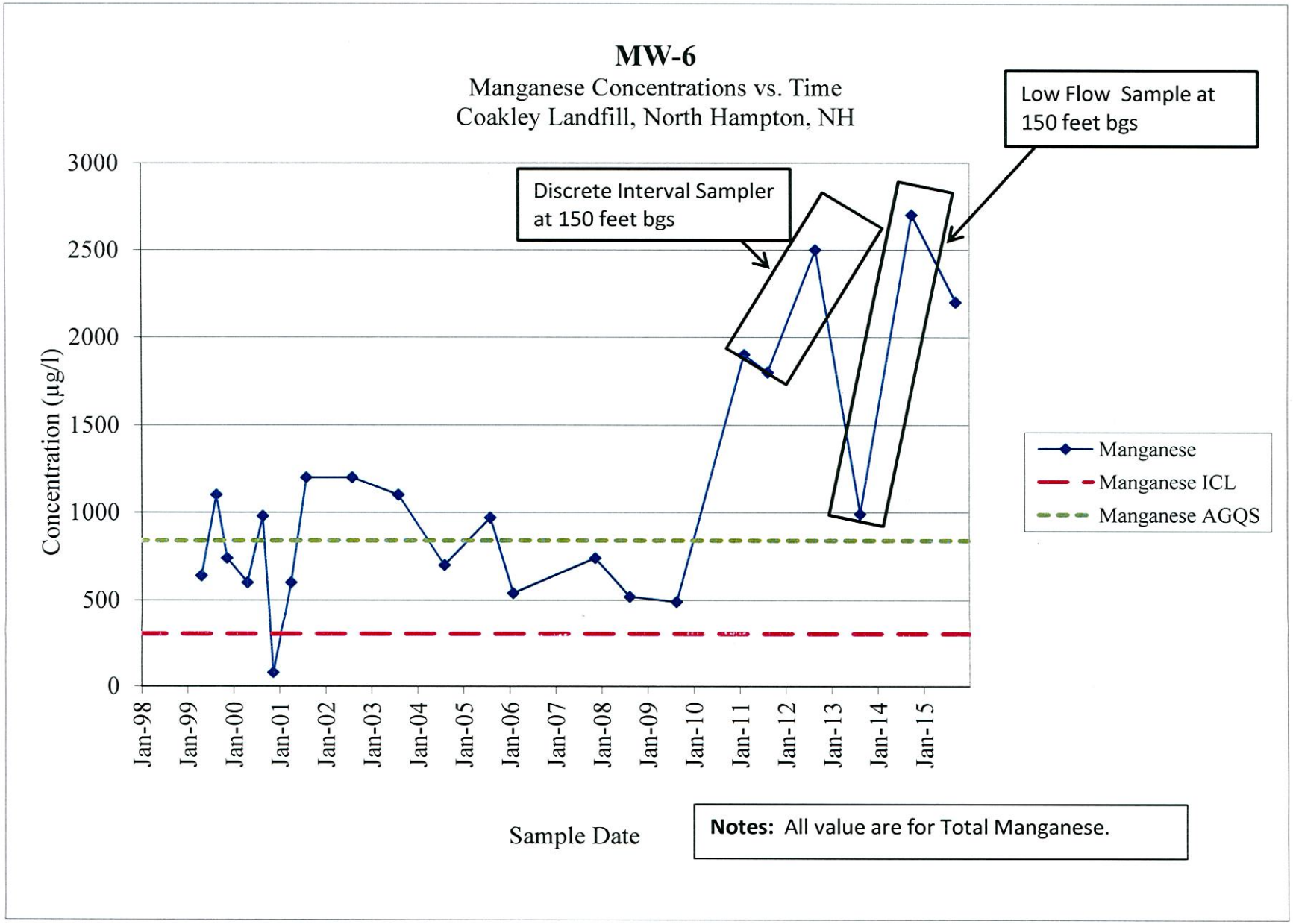
**Notes:** Total Manganese values plotted prior to 2014.
Dissolved Manganese values plotted beginning in 2014.

# MW-5S & MW-5D

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH

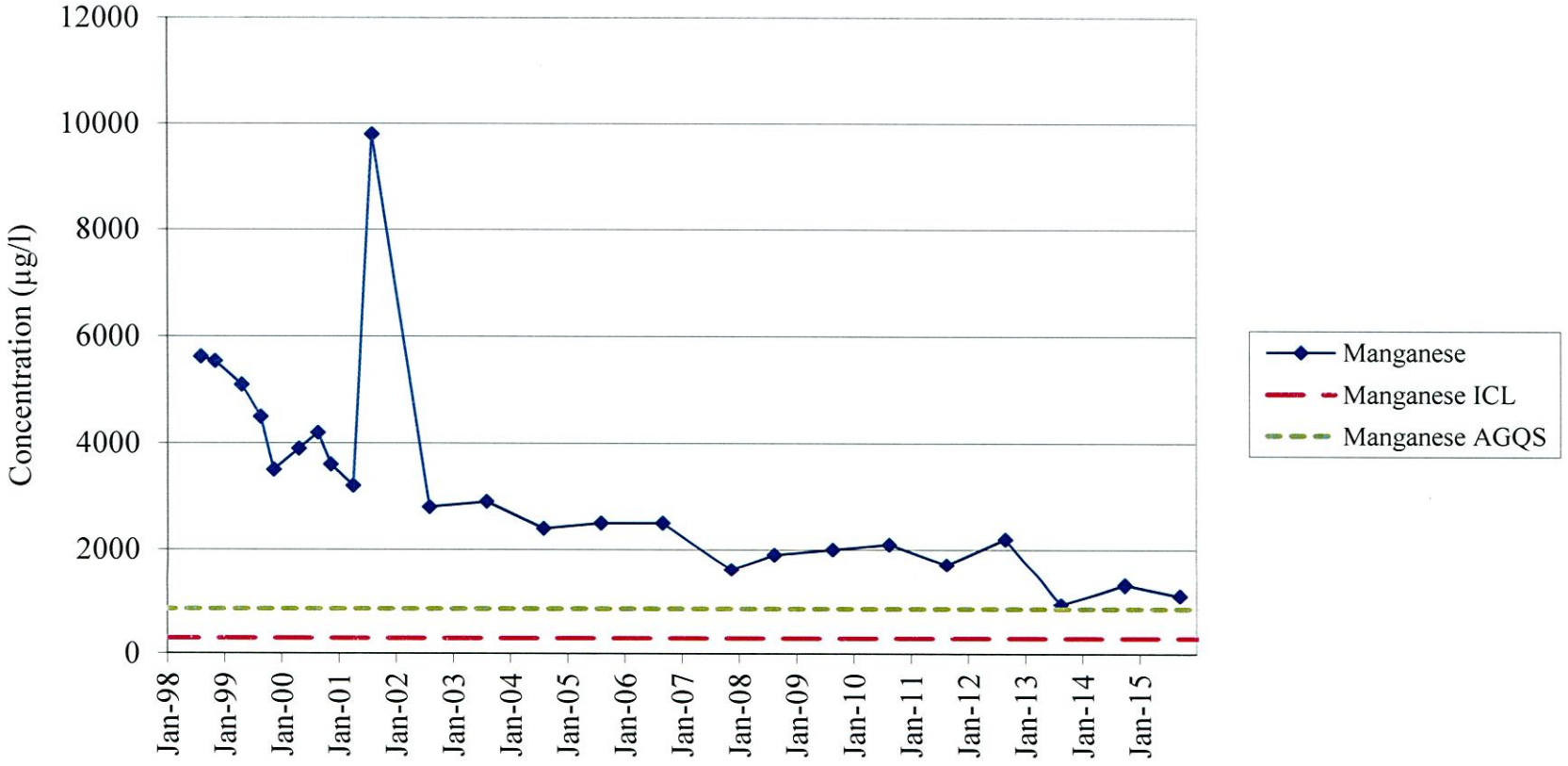



**Notes:** Interval samples were collected in August 2013 and the average value was used to prepare this plot. All value are for Total Manganese.


MW-6
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH
Low Flow Sample at 150 feet bgs
Discrete Interval Sampler at 150 feet bgs
Concentration (µg/l)
3000
2500
2000
1500
1000
500
0
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Manganese
Manganese ICL
Manganese AGQS
Sample Date
Notes: All value are for Total Manganese.

# MW-8

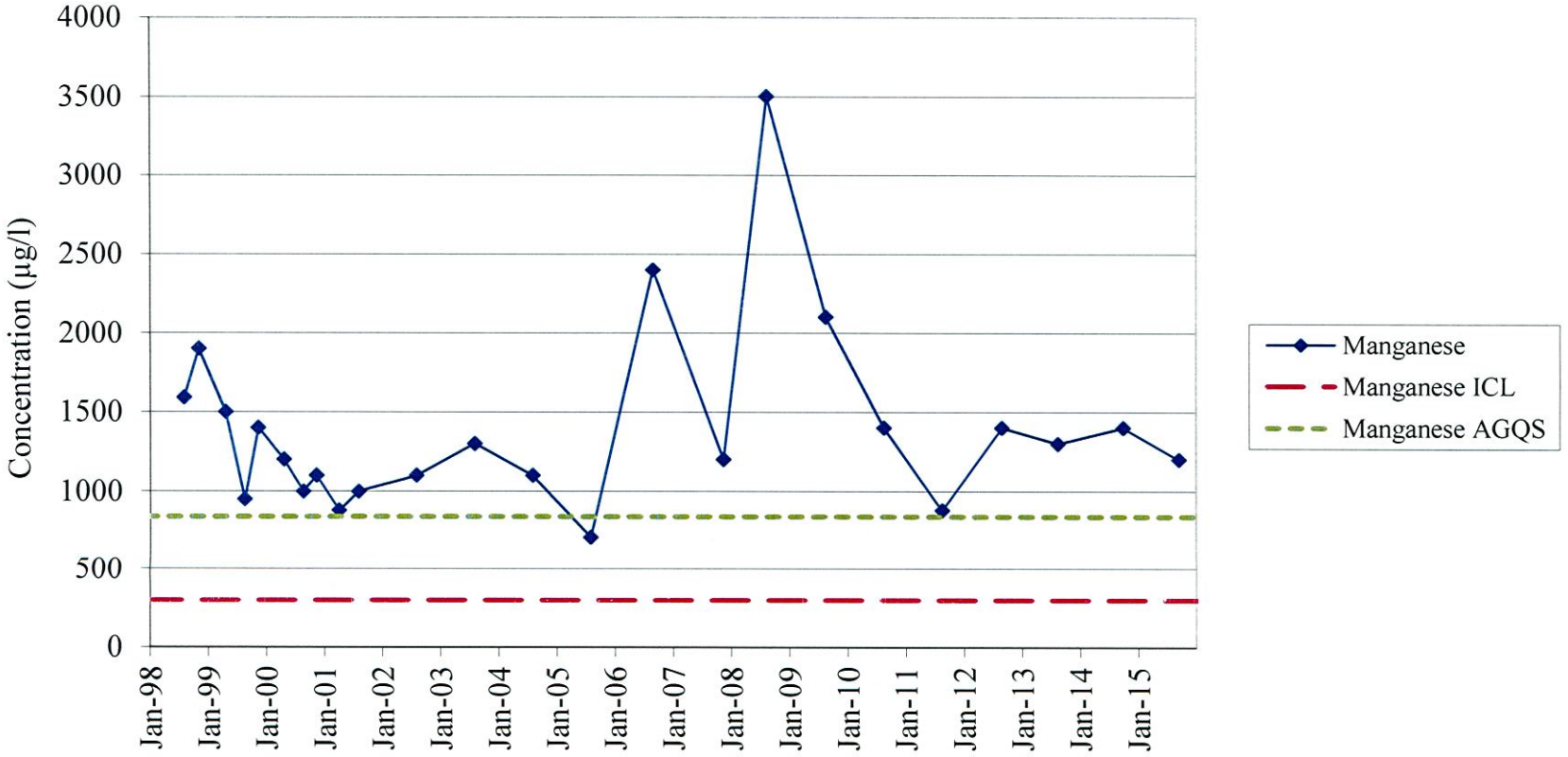
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Interval samples were collected in August 2013 and the average value was used to prepare this plot. All value are for Total Manganese.

# MW-9

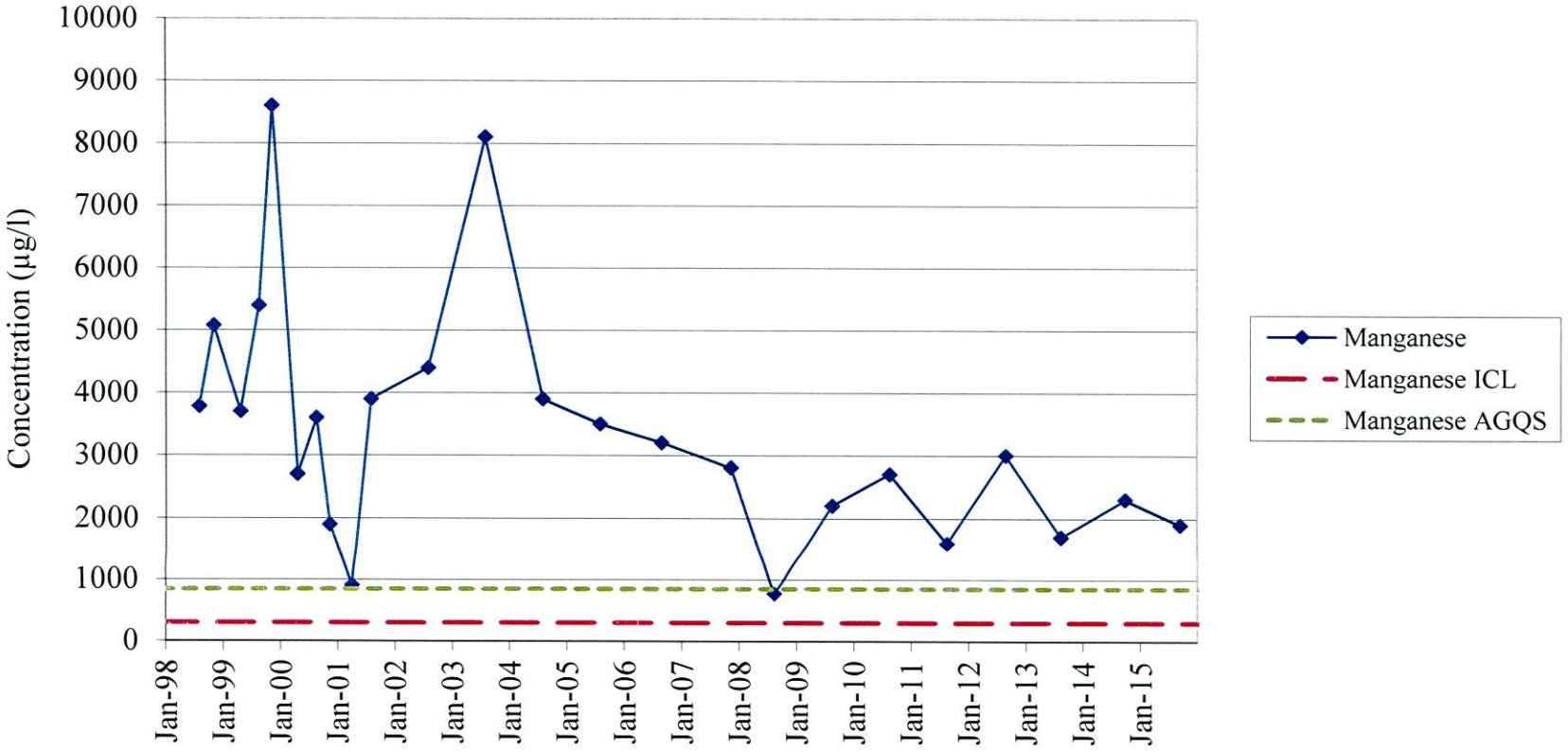
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Manganese values plotted prior to 2014.
Dissolved Manganese values plotted beginning in 2014.

# MW-10

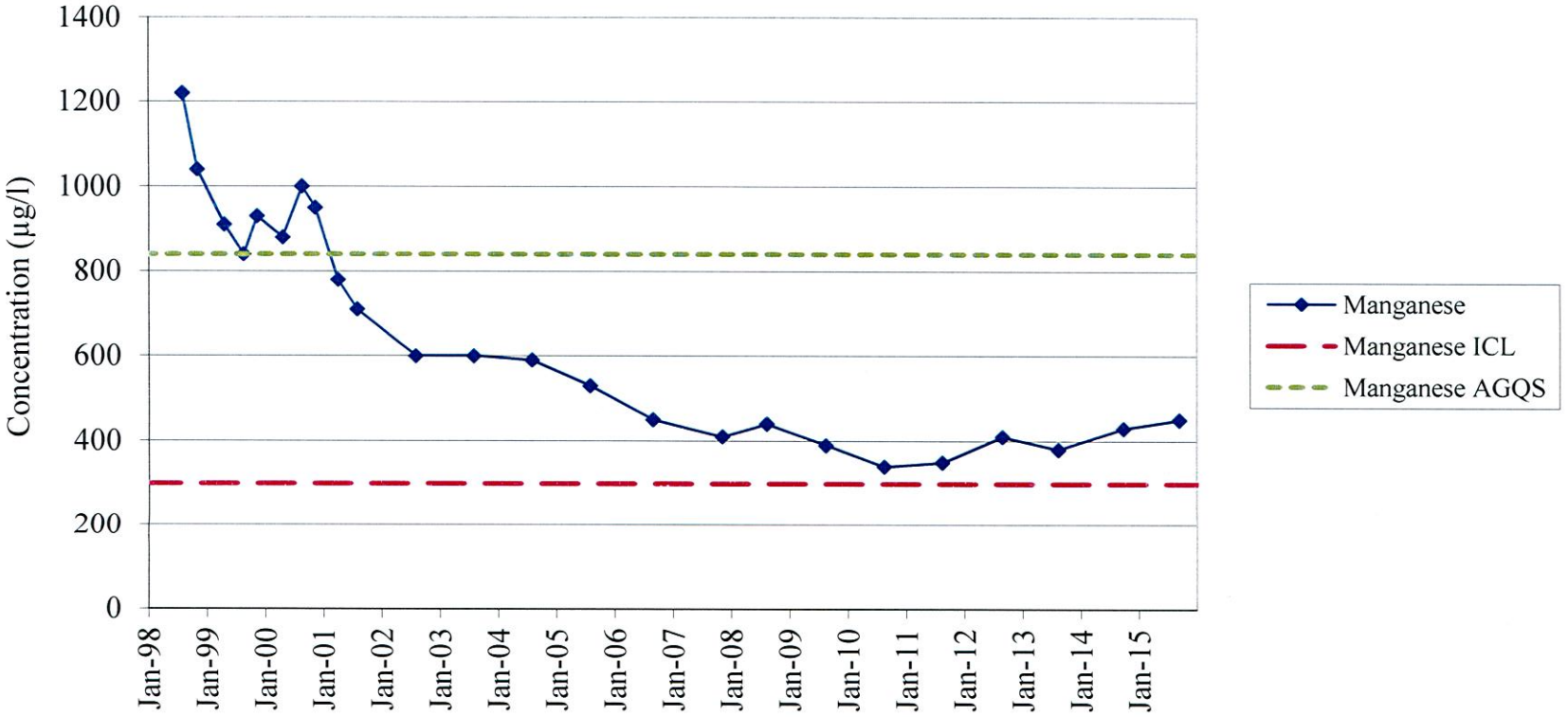
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Manganese values plotted prior to 2014.
Dissolved Manganese values plotted beginning in 2014.

# MW-11

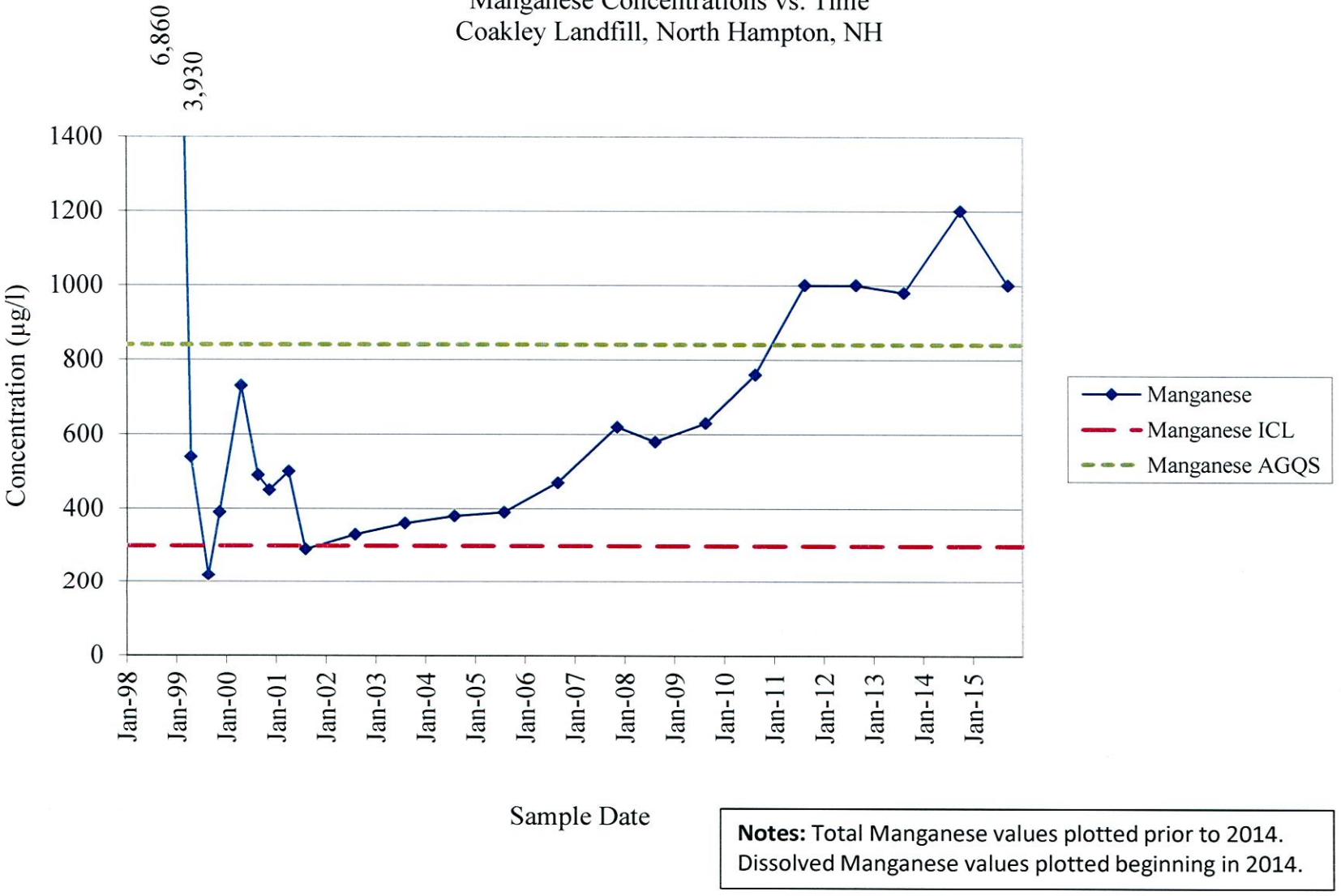
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Interval samples were collected in August 2013 and the average value was used to prepare this plot. All value are for Total Manganese.

# OP-2

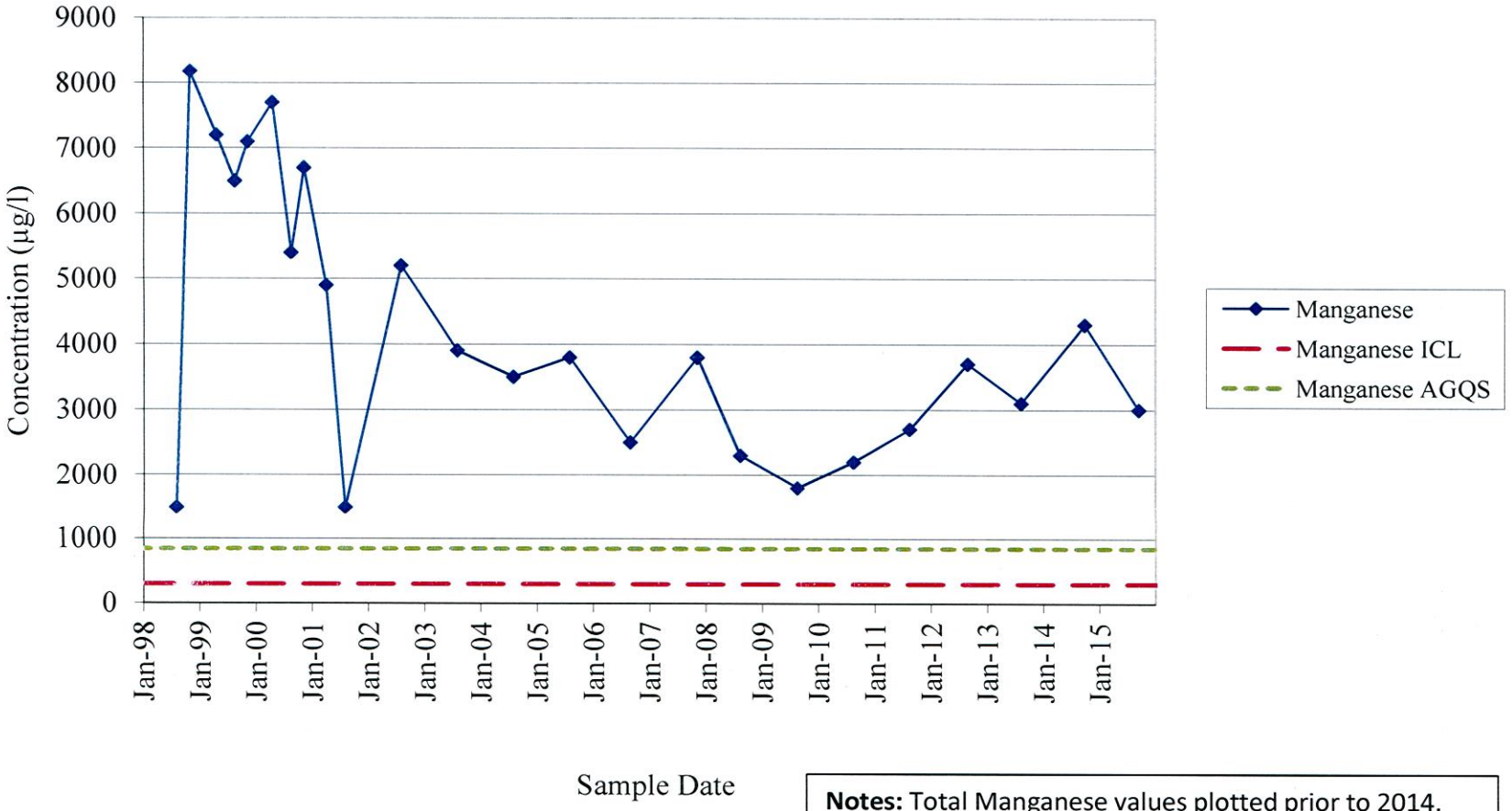
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Manganese values plotted prior to 2014.
Dissolved Manganese values plotted beginning in 2014.

# OP-5

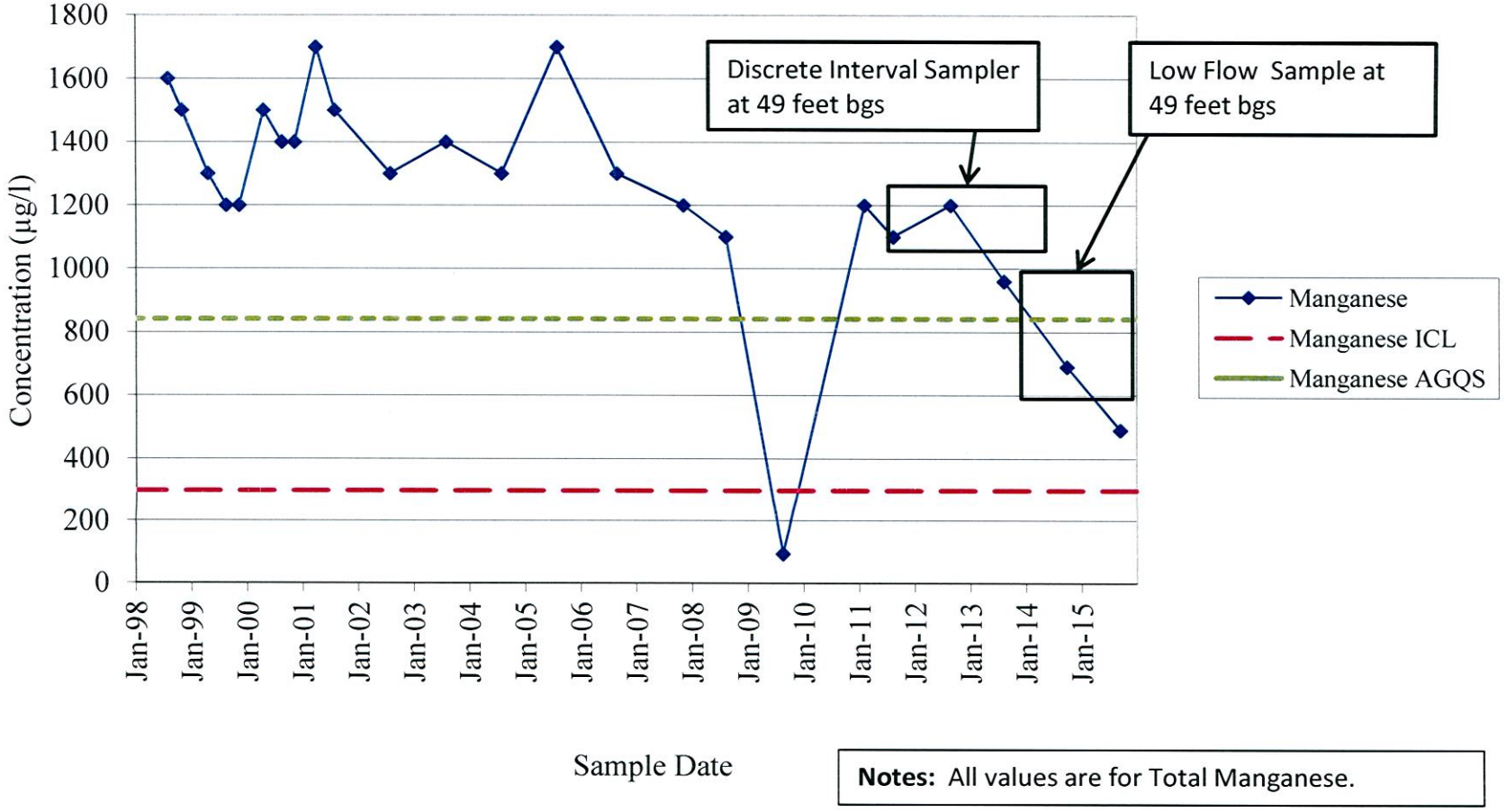
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** Total Manganese values plotted prior to 2014.
Dissolved Manganese values plotted beginning in 2014.

**BP-4**

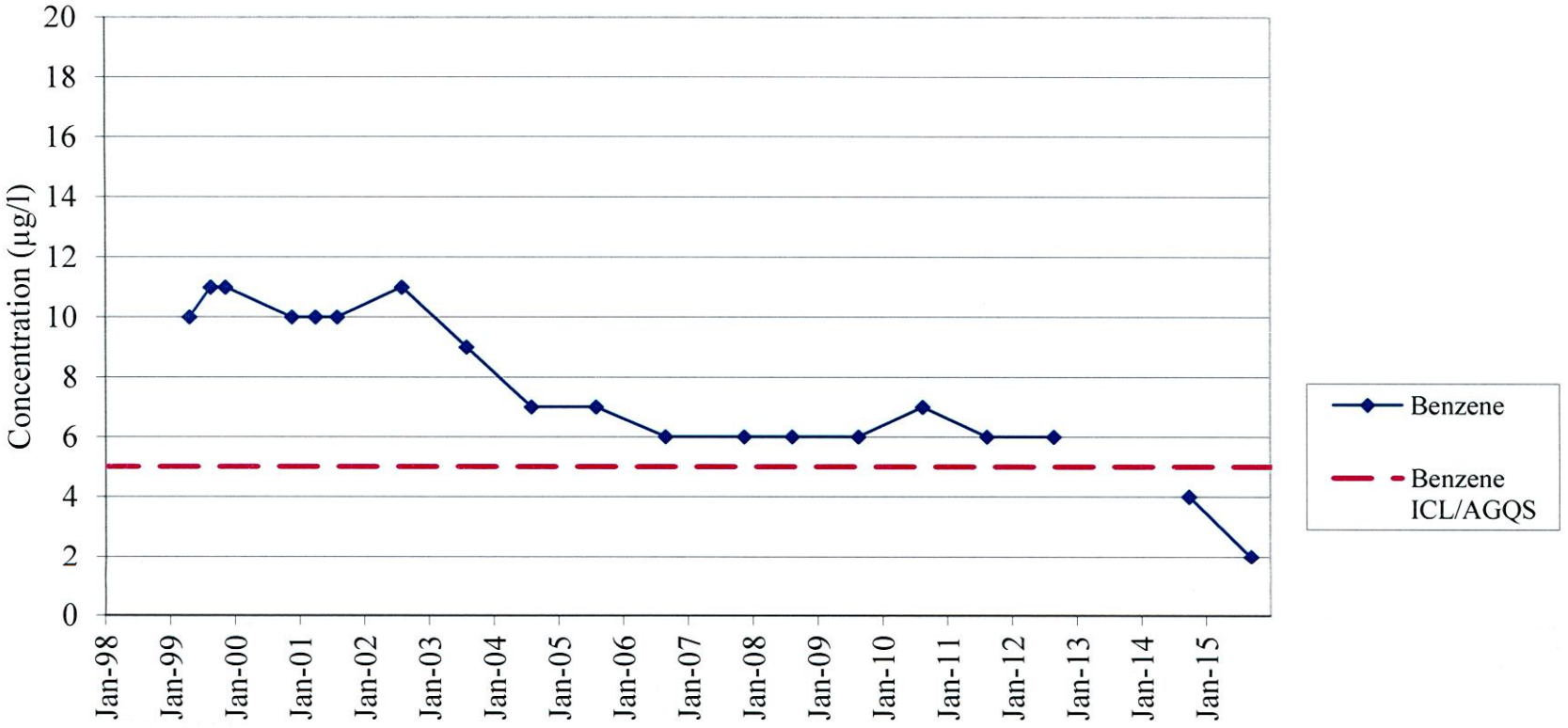
Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH




**Notes:** All values are for Total Manganese.

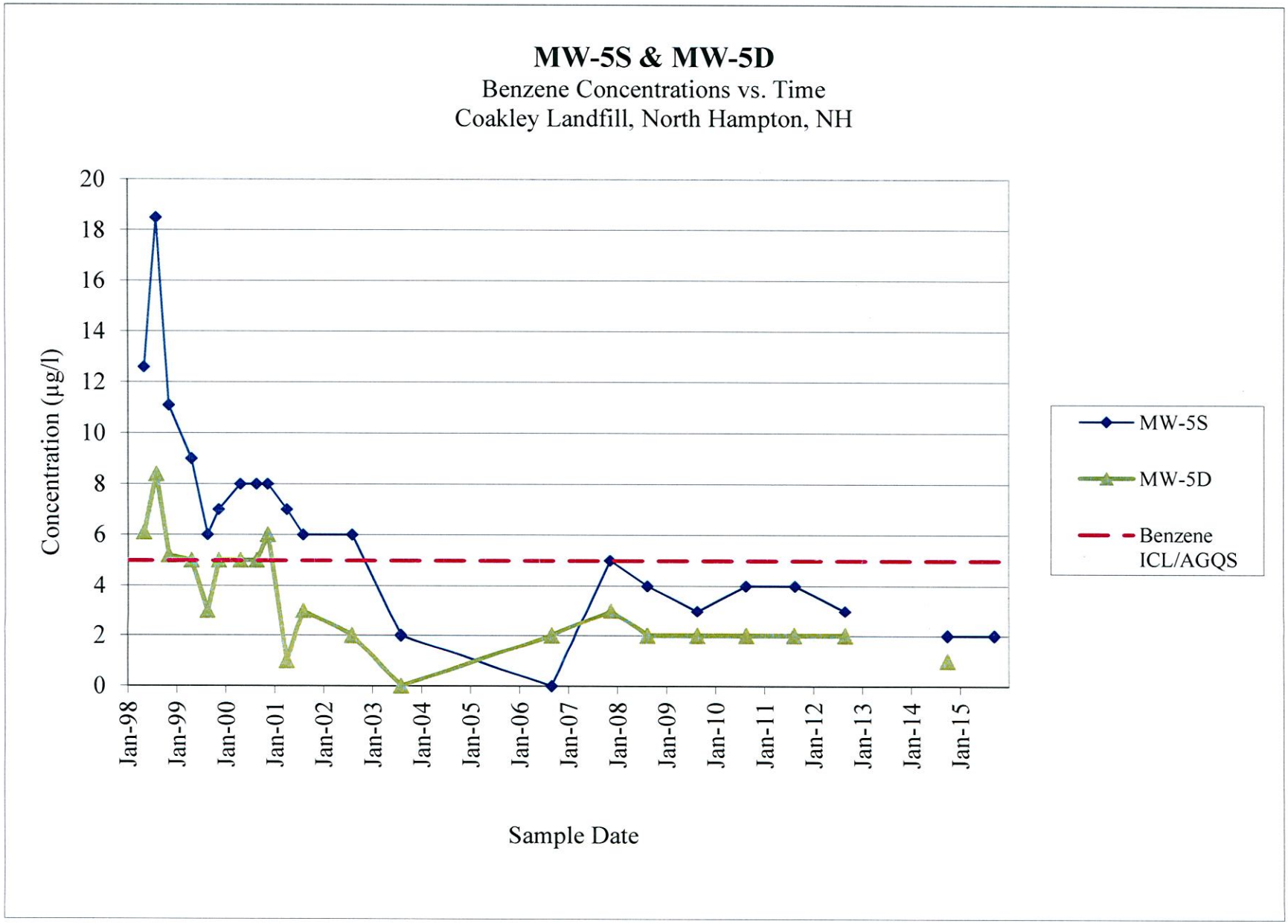
# GZ-105

Benzene Concentrations vs. Time
Coakley Landfill, North Hampton, NH

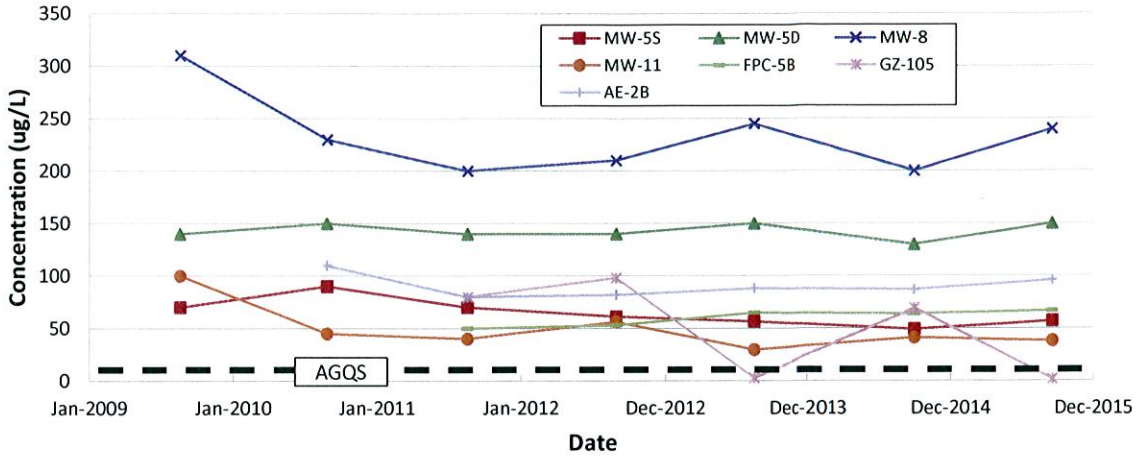


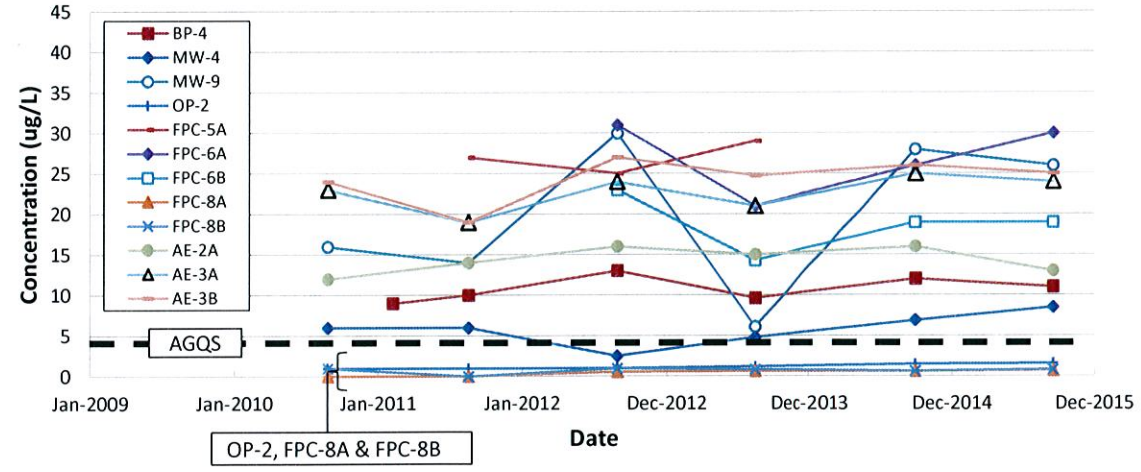

Sample Date

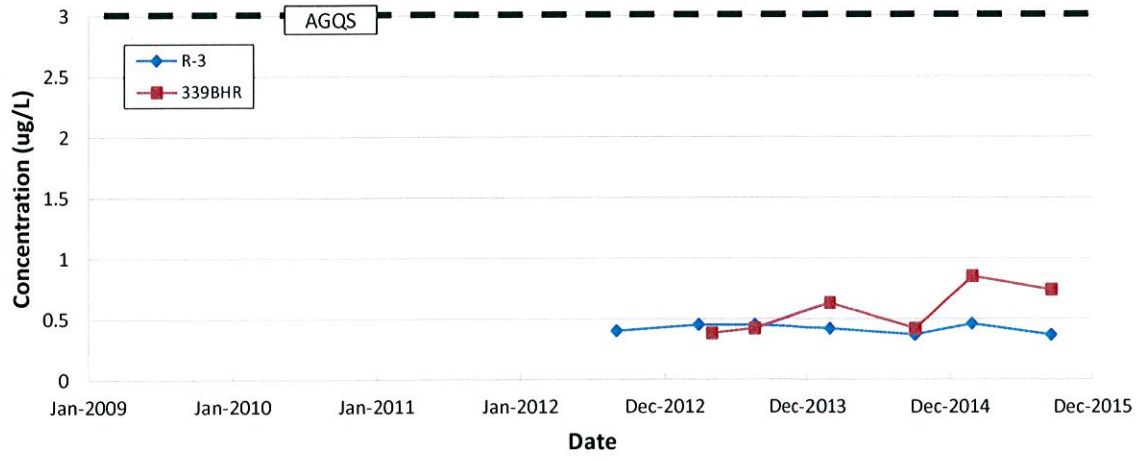
**Notes:** In August 2013, interval samples were collected and benzene was not included on the paramter list.


MW-5S & MW-5D
Benzene Concentrations vs. Time
Coakley Landfill, North Hampton, NH
Concentration (µg/l)
20
18
16
14
12
10
8
6
4
2
0
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Sample Date
MW-5S
MW-5D
Benzene
ICL/AGQS

**Time vs Concentration Graphs - 1,4-Dioxane**
**2015 Annual Report**
**Coakley Landfill - North Hampton, New Hampshire**



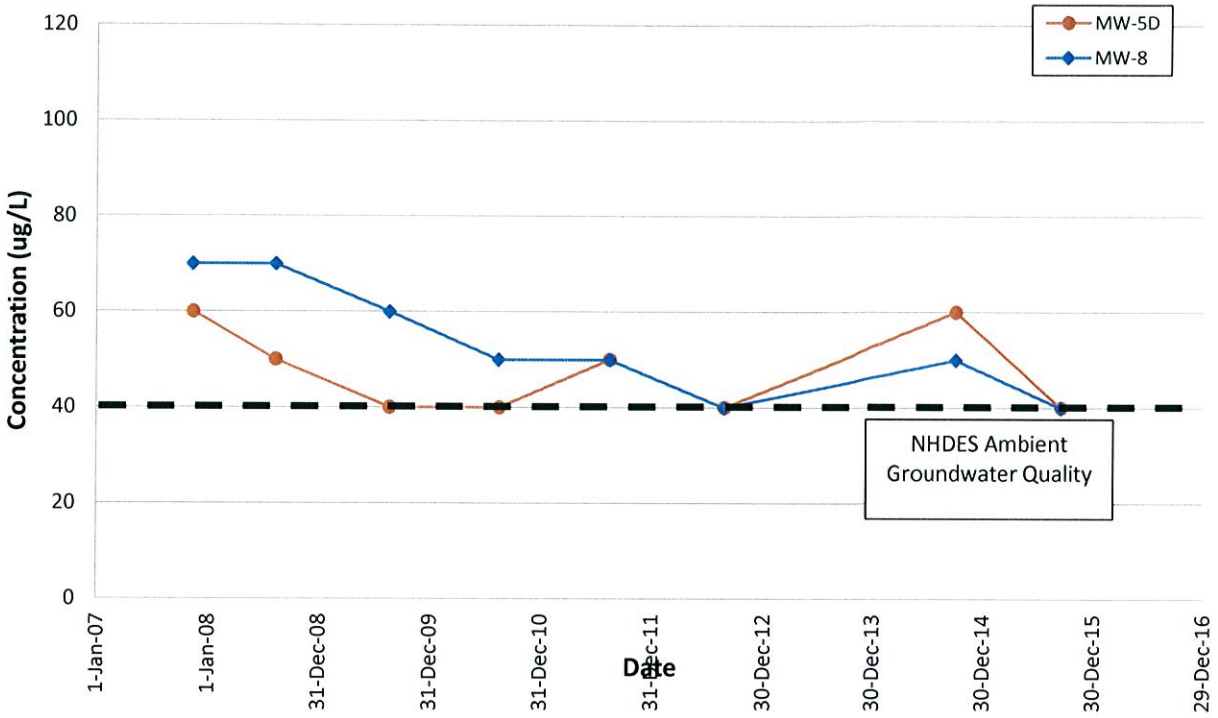




**NOTES:**

1. NHDES Ambient Groundwater Quality Standard (AGQS) for 1,4-Dioxane is 3 ug/L
2. Non-Detects are plotted at zero.
3. Interval samples were collected at MW-5S, MW-5D, MW-8, MW-11, FPC-5B, FPC-6B, FPC-8B, GZ-105 and AE-3B in Aug. 2013 and at FPC-11B in Sept. 2014. The average 1,4-dioxane concentration for interval sample results at each individual well were used to prepare this graph.
4. In instances where primary and duplicate samples were collected, the higher value is plotted.

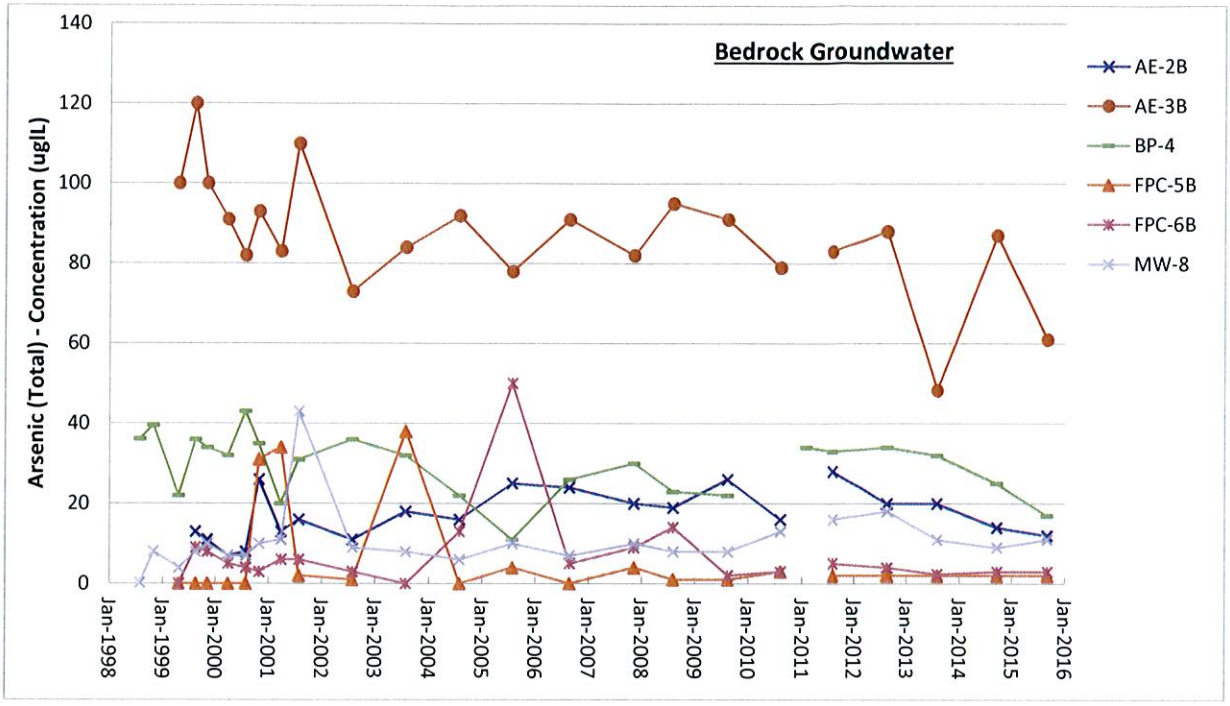
**Time vs Concentration Graphs - Tertiary-butyl Alcohol (TBA)**
**2015 Annual Report**
**Coakley Landfill - North Hampton, New Hampshire**

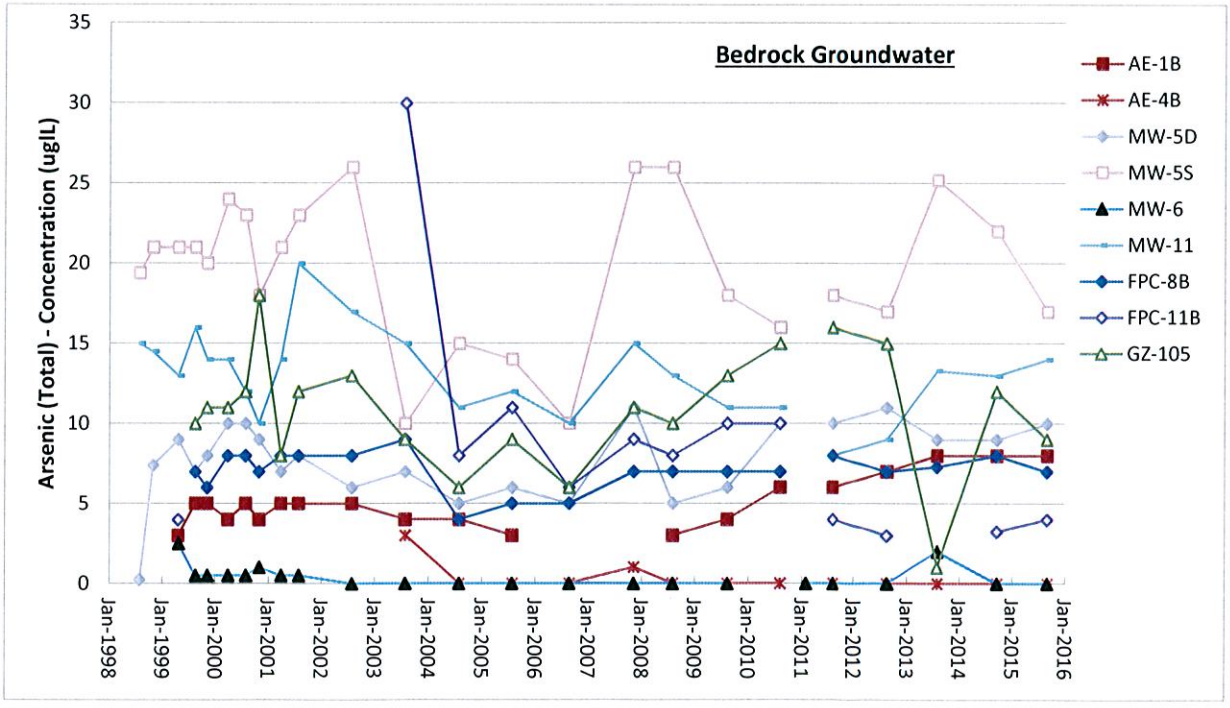



**NOTES:**

1. NHDES Ambient Groundwater Quality Standard for Tertiary-butyl Alcohol (TBA) is 40 ug/L.
2. EPA has not established an Interim Cleanup Level for Tertiary-butyl Alcohol (TBA).
3. Since 2006, TBA has been reported at groundwater sampling points MW-5D and MW-8, only.

**Time Series Plots - Arsenic (Total) in Bedrock Wells**
**2015 Annual Report**
**Coakley Landfill - North Hampton, New Hampshire**

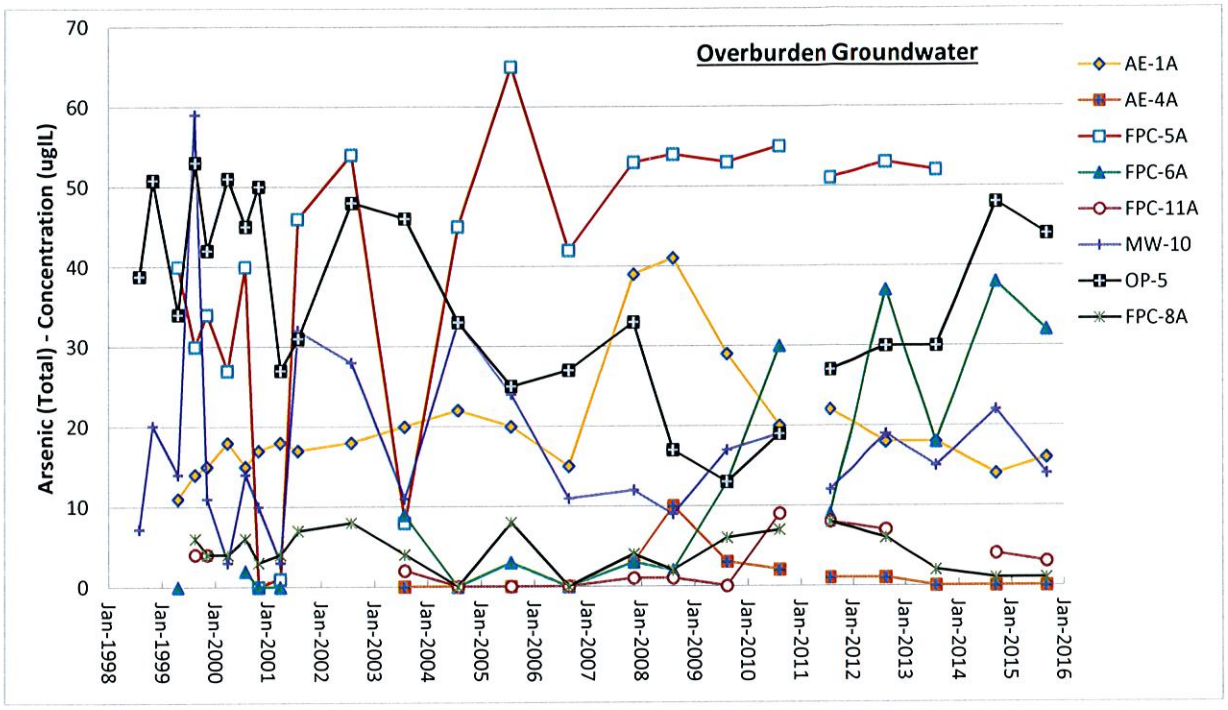


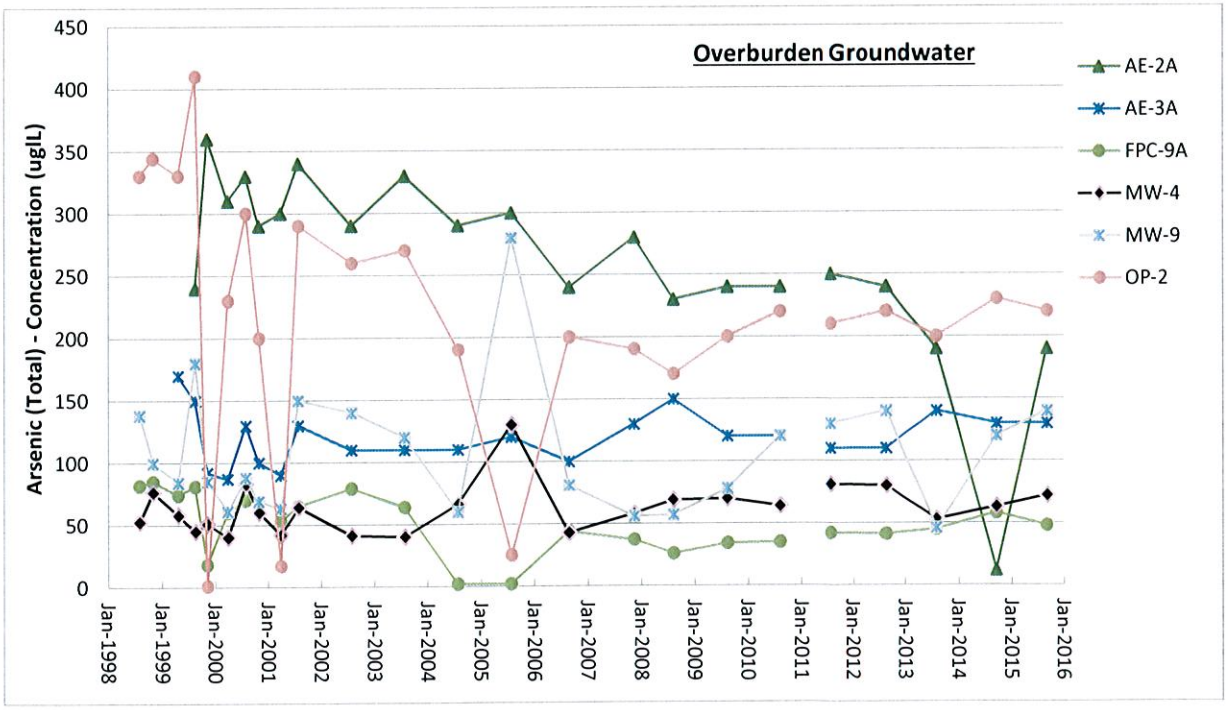




**NOTES:**

1. NHDES Ambient Groundwater Quality Standard for Arsenic is 10 ug/L.
2. EPA Interim Cleanup Level for Arsenic 10 ug/L.
3. Non-Detects are plotted at zero.
4. In instances where primary and duplicate samples were collected, the higher value is plotted.
5. Interval samples were collected at MW-5S, MW-5D, MW-8, MW-11, FPC-5B, FPC-6B, FPC-8B, GZ-105 and AE-3B in Aug. 2013 and at FPC-11B in Sept. 2014. The average concentration for interval sample results at each individual well were used to prepare this plot.

**Time Series Plots - Arsenic (Total/Dissolved) in Overburden Wells**
**2015 Annual Report**
**Coakley Landfill - North Hampton, New Hampshire**

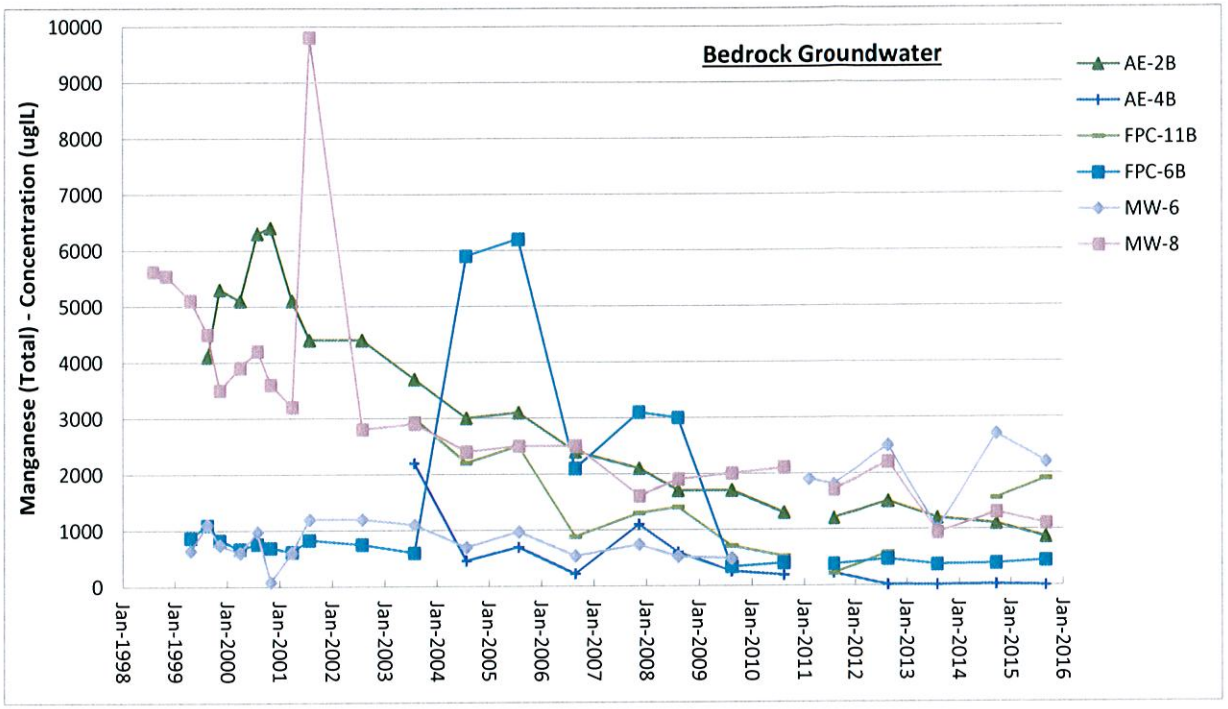


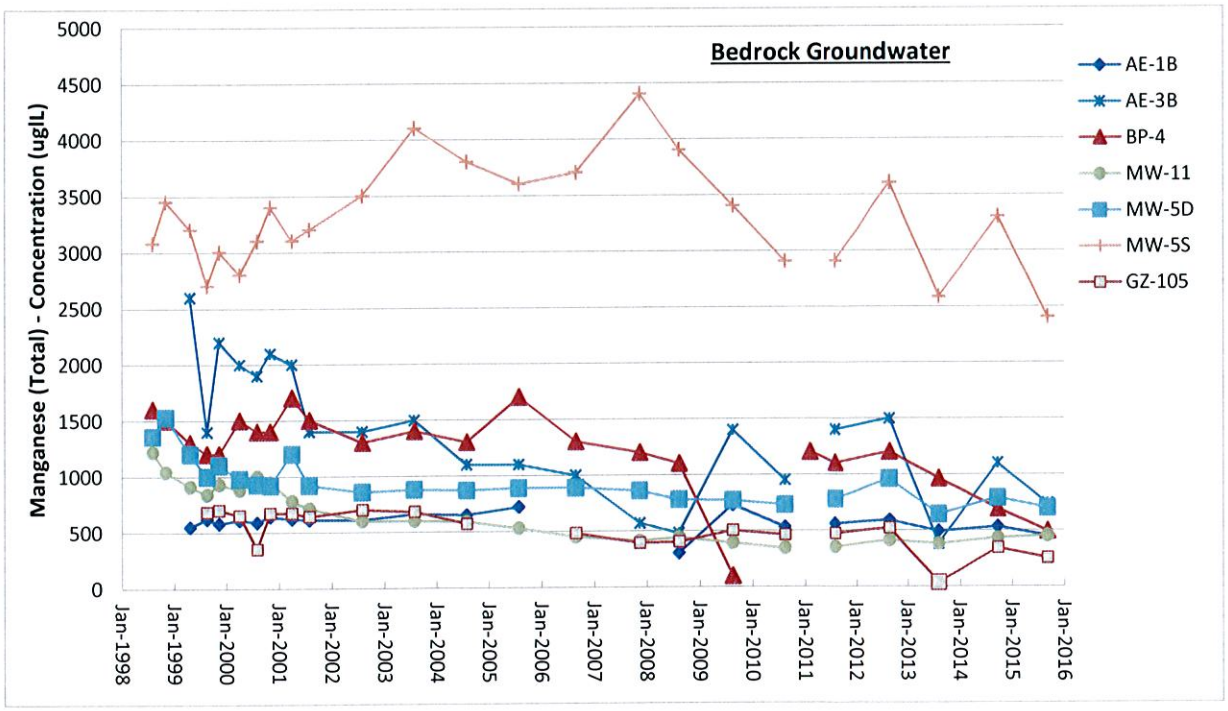




**NOTES:**

1. NHDES Ambient Groundwater Quality Standard for Arsenic is 10 ug/L.
2. EPA Interim Cleanup Level for Arsenic 10 ug/L.
3. Non-Detects are plotted at zero.
4. In instances where primary and duplicate samples were collected, the higher value is plotted.
5. Total Arsenic results are plotted for events prior to Fall 2014. Beginning in Fall 2014 samples from all overburden wells were filtered (0.45 micron) at the time of sampling and Dissolved Arsenic results are plotted.

**Time Series Plots - Manganese (Total) in Bedrock Wells**
**2015 Annual Report**
**Coakley Landfill - North Hampton, New Hampshire**

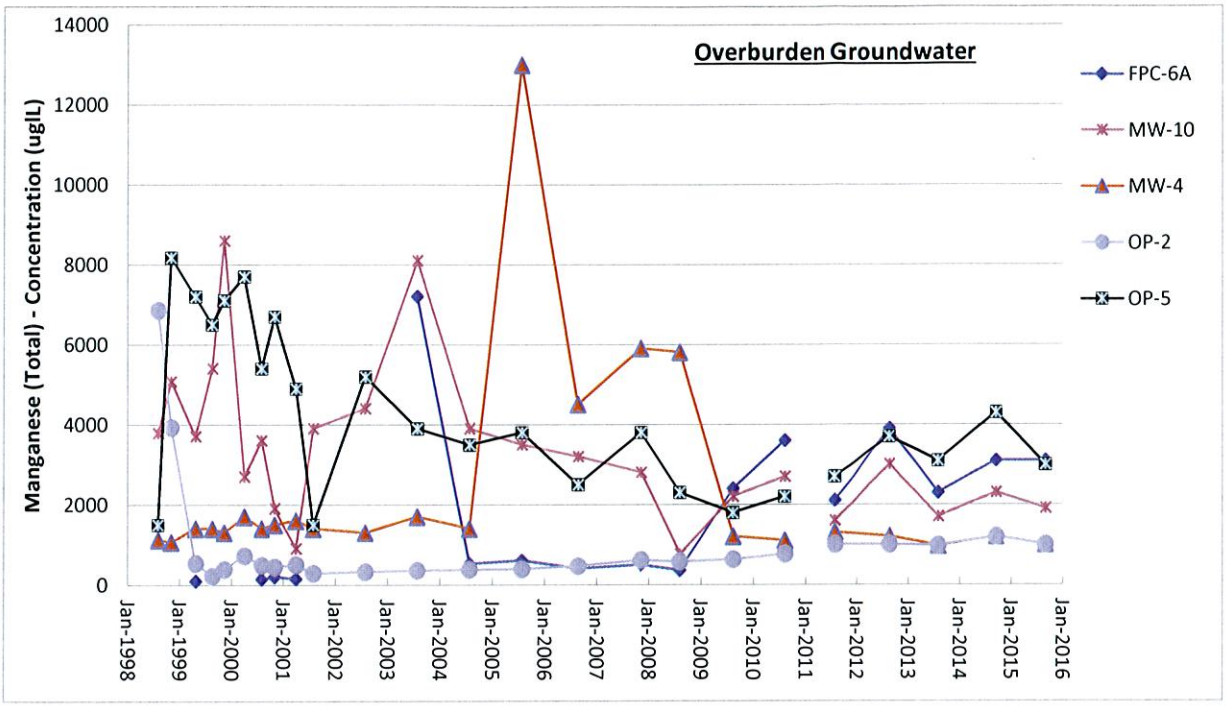


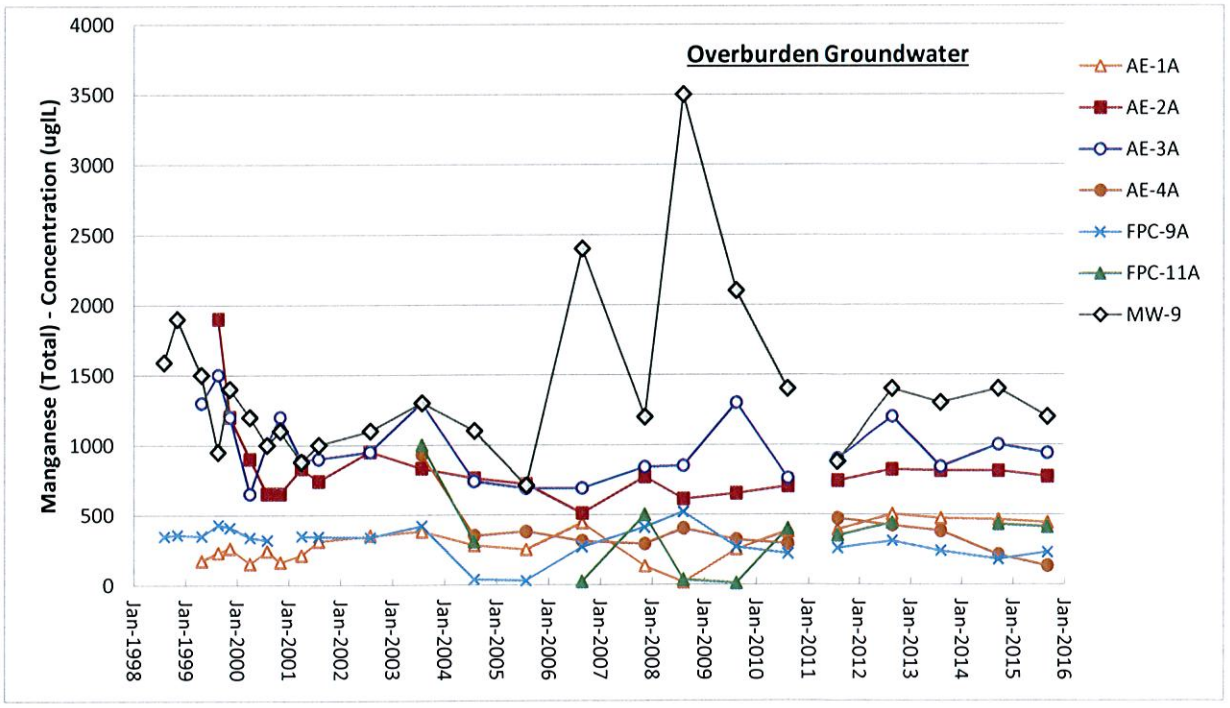




**NOTES:**

1. NHDES Ambient Groundwater Quality Standard for Manganese is 840 ug/L.
2. EPA Interim Cleanup Level for Manganese is 300 ug/L.
3. Non-Detects are plotted at zero.
4. In instances where primary and duplicate samples were collected, the higher value is plotted.
5. Interval samples were collected at MW-5S, MW-5D, MW-8, MW-11, FPC-5B, FPC-6B, FPC-8B, GZ-105 and AE-3B in Aug. 2013 and at FPC-11B in Sept. 2014. The average concentration for interval sample results at each individual well were used to prepare this plot.

**Time Series Plots - Manganese (Total/Dissolved) in Overburden Wells**
**2015 Annual Report**
**Coakley Landfill - North Hampton, New Hampshire**

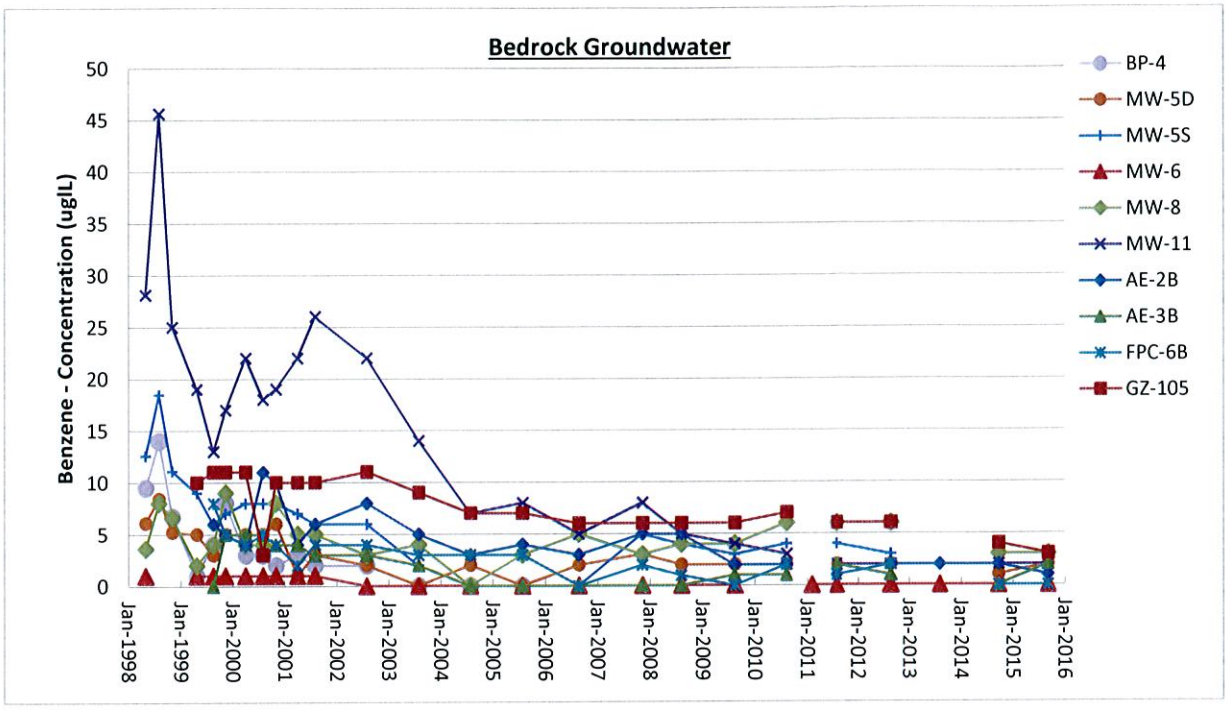


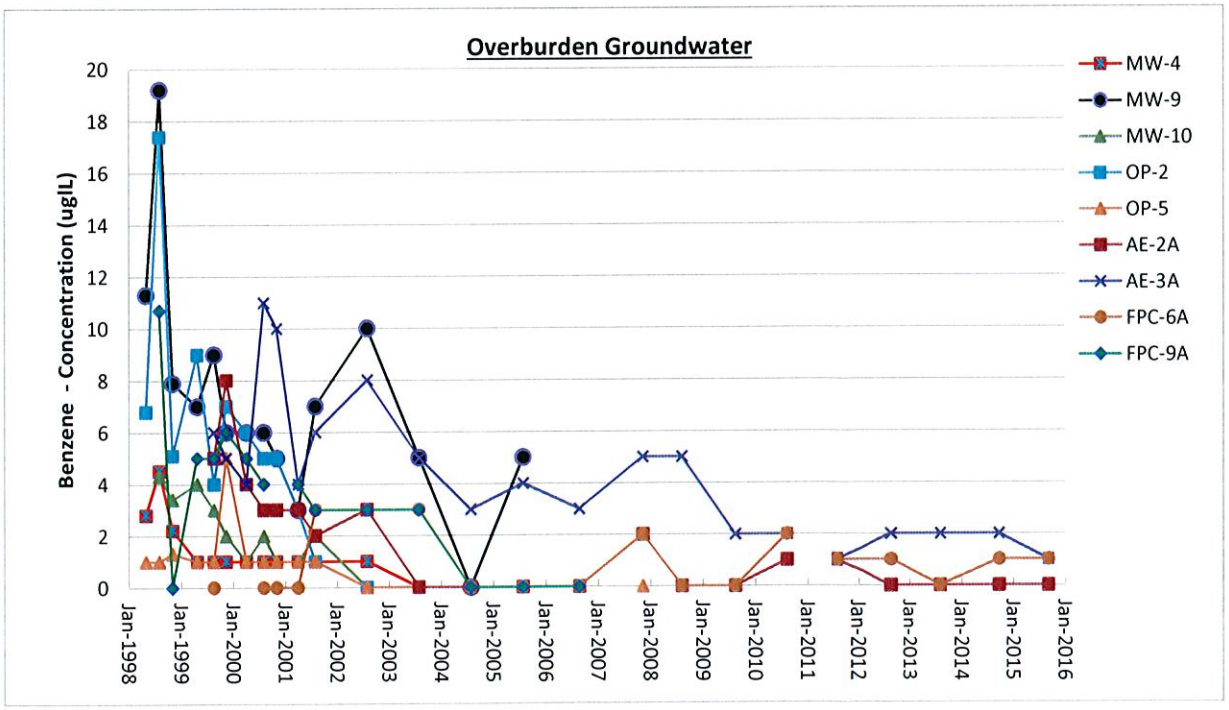




**NOTES:**

1. NHDES Ambient Groundwater Quality Standard for Manganese is 840 ug/L.
2. EPA Interim Cleanup Level for Manganese is 300 ug/L.
3. Non-Detects are plotted at zero.
4. In instances where primary and duplicate samples were collected, the higher value is plotted.
5. Total Manganiese results are plotted for events prior to Fall 2014. Beginning in Fall 2014 samples from all overburden wells were filtered (0.45 micron) at the time of sampling and Dissolved Manganese results are plotted.

**Time Series Plots - Benzene in Groundwater**
**2015 Annual Report**
**Coakley Landfill - North Hampton, New Hampshire**




**NOTES:**

1. NHDES Ambient Groundwater Quality Standard for Benzene is 5 ug/L.
2. EPA Interim Cleanup Level for for Benzene is 5 ug/L.
3. Non-Detects are plotted at zero.
4. In instances where primary and duplicate samples were collected, the higher value is plotted.

# APPENDIX A

# FEBRUARY 2015 WATER SUPPLY WELL DATA TRANSMITTAL REPORT

# DES WASTE MANAGEMENT DIVISION

**29 Hazen Drive; PO Box 95**
**Concord, NH 03302-0095**

# FEBRUARY 2015 DATA TRANSMITTAL
# COAKLEY LANDFILL

**Breakfast Hill Road**
**North Hampton, NH**

**NHDES Site #: 198712001**
**Project Type: CERCLA**
**Project Number: 431**
**EPA ID# NHD064424153**

**Report Prepared For:**
**Coakley Landfill Group**
**1 Junkins Avenue**
**Portsmouth, NH 03801**
**Phone Number: (603) 610-7215**
**RP Contact Name: Mr. Peter Britz**
**plbritz@cityofportsmouth.com**

**Report Prepared By:**
**CES, Inc.**
**640 Main Street**
**Lewiston, ME 04240**
**Phone Number: (207) 795-6009**
**Contact Names: Stephen B. Marcotte, PG and Michael A. Deyling, PG**
**Contact Email: smarcotte@ces-maine.com**

**Date of Report: DRAFT May 15, 2015**

# Groundwater Monitoring Report Cover Sheet

---

**Site Name:** **Coakley Landfill**

**Town:** **North Hampton**

**Permit #:** **GWP-198712001-N-002**

**Type of Submittal (*Check all that apply*)**

☐ **Periodic Summary Report (*year*):**

☒ **Data Submittal (*month and year per Condition #7 of Permit*): February 2015**

---

**Check each box where the answer to any of the following questions is "YES"**

**Sampling Results**

☐ **During the most recent monitoring event, were any new compounds detected at any sampling point?**
**Well/Compound:**

☒ **Are there any detections of contamination in drinking water that is untreated prior to use?**
**Well/Compound: R-3/339BHR (1,4-dioxane) – concentrations do not exceed AGQS.**

☐ **Do compounds detected exceed AGQS?**

☐ **Was free product detected for the first time in any monitoring point?**
☐ **Surface Water (*visible sheen*)**
☐ **Groundwater (*1/8" or greater thickness*)**
**Location/Thickness:**

**Contaminant Trends**

☐ **Do sampling results show an increasing concentration trend in any source area monitoring well?**
**Well/Compound:**

☐ **Do sampling results indicate an AGQS violation in any of the GMZ boundary wells?**
**Well/Compound:**

**Recommendations**

☐ **Does the report include any recommendations requiring DES action? (*Do not check this box if the only recommendation is to continue with existing permit conditions.*)**

# FEBRUARY 2015 DATA TRANSMITTAL REPORT
# GROUNDWATER MANAGEMENT PERMIT
# COAKLEY LANDFILL – NORTH HAMPTON, NEW HAMPSHIRE
# NHDES SITE #198712001

## TABLE OF CONTENTS



### LIST OF FIGURES



### LIST OF TABLES



### LIST OF APPENDICES

# FEBRUARY 2015 DATA TRANSMITTAL REPORT
# GROUNDWATER MANAGEMENT PERMIT
# COAKLEY LANDFILL – NORTH HAMPTON, NEW HAMPSHIRE
# NHDES SITE #198712001

## SECTION 1 | INTRODUCTION

On behalf of the Coakley Landfill Group (CLG), CES, Inc. (CES) completed the February 2015 semi-annual water supply well sampling activities at the Coakley Landfill Site located in North Hampton and Greenland, New Hampshire. CES conducted the monitoring event in accordance with the August 2014 Sampling and Analysis Plan (SAP) prepared by CES, which incorporates by reference the New Hampshire Department of Environmental Services (NHDES) Hazardous Waste Remediation Bureau Master Quality Assurance Project Plan (HWRB Master QAPP) Revision 1 dated February 2014. A site location map is included as Figure 1.

CES performed the field sampling work and reporting, Eastern Analytical, Inc. (EAI) of Concord, New Hampshire performed the laboratory analyses and Kestrel Environmental Technologies (Kestrel) of Freeport, Maine completed the Tier 1 Plus Data Validation. The monitoring program for the Site is currently managed by CES.

This report provides an overview of the sample collection and analyses conducted for the February 2015 monitoring event. The information presented in this report includes: sampling locations, sample collection protocols, quality assurance/quality control (QA/QC) procedures, summary of analytical results, and conclusions and recommendations.

## SECTION 2 | SAMPLE COLLECTION

The August 2014 SAP requires the collection of semiannual groundwater quality samples in February and August of each calendar year at two off-site water supply wells (R-3 and 339BHR) located on Breakfast Hill Road in Greenland, New Hampshire. A Site Plan showing sampling locations is included as Figure 2.

Water quality samples from off-site water supply wells R-3 and 339BHR were collected on February 25, 2015 in accordance with SOP-7 Drinking Water Supply Well Sampling Procedures contained in the SAP. Samples were submitted to EAI for analysis of 1,4-dioxane, volatile organic compounds (VOCs), total arsenic and total manganese.

The brass water supply well sampling apparatus was decontaminated prior to using in the field per SOP-8 Equipment Decontamination and rinsed with deionized water between sampling locations per SOP-7. Sample collection locations (fixtures) were consistent with historical locations used at R-3 and 339BHR.

### 2.1 Field Parameter Monitoring

Field parameter water quality meters were calibrated in accordance with SOP-9 Calibration of YSI and Hach Field Instruments included in the August 2014 SAP. CES

measured field parameters including pH, Oxidation Reduction Potential (ORP), Temperature, Specific Conductance, and Dissolved Oxygen using a YSI-600XL water quality meter with a 250 milliliter flow-through cell and turbidity using a Hach 2100Q turbidity meter. Meters were calibrated in the office prior to use at the Site, in the field prior to sampling, and a post-sampling check was completed at the end sampling.

Equipment calibration logs and field sampling sheets are included in Appendix A.
Field parameter measurements are presented in Table 1 (Summary of Analytical Results for Off-Site Water Supply Wells).

## 2.2 Quality Assurance / Quality Control (QA/QC) Samples

The Quality Assurance / Quality Control (QA/QC) sampling requirements are summarized in Table 4-4 of the SAP. QA/QC samples collected during the February 2015 sampling event are summarized below.

- One Field Duplicate sample was collected at off-site water supply well R-3.
- A Trip Blank for volatile organic compounds (VOCs) and low-level 1,4-dioxane was included in each of the coolers submitted to EAI.
- A Field Blank (water used for final decontamination rinse); and
- A brass water supply well sampling apparatus Equipment Blank was collected prior to sampling water supply wells.

Results of QA/QC samples are discussed in Section 3.1 of this report.

# SECTION 3 | QUALITY ASSURANCE/QUALITY CONTROL RESULTS

A component of the SAP is the implementation of a QA/QC program, including both field and office elements. Field QA/QC activities were conducted to verify that sample collection, handling, and storage methods are adequate to ensure sample integrity. Office QA/QC activities focus on the data evaluation to assess whether the laboratory data are complete and representative of site conditions.

The data quality objectives and associated validation requirements are specified in the SAP and include:

- Review of field equipment calibration data and beginning and end of the day checks;
- Review of raw data and field notes for outliers or inconsistencies that may indicate a problem with the equipment or sampling procedure;
- Review of the chain of custody forms for correctness and completeness;
- Review of the chain of custody forms to ensure that each cooler contains temperature blanks and the proper trip blanks for both VOCs and 1,4-Dioxane and to ensure that the correct sample handling protocols are followed;
- Review of field sampling worksheets to ensure that all field data and parameters were collected and documented correctly and accurately according to proper protocols;

- Review of relative percent difference (RPD) for duplicate samples to assess whether the sampling methods produce reproducible results; and
- Completion of a US EPA Region I Tier 1 Plus Data Validation to evaluate the laboratory reports for completeness, assess the results of QA/QC samples analyzed with field samples, confirm that all sample tests were performed within method holding times, and the qualification of laboratory data based on EPA guidelines for data validation listed in the SAP.

Results of the QA/QC activities are presented in Sections 3.1 and 3.2. Analytical laboratory reports are provided in Appendix B.

## 3.1 Field QA/QC Activities

### 3.1.1 Trip Blanks

Trip Blanks for VOCs and 1,4-dioxane were included in the cooler containing sampling containers and submitted to EAI. EAI reported all parameters as Not Detected above laboratory detection limits in Trip Blanks submitted for the February 2015 sampling event.

### 3.1.2 Equipment Blanks and Field Blanks

CES collected an Equipment/Field Blank pair for the brass water supply well sampling apparatus. The Equipment/Field Blank pair was submitted for analysis of VOCs, 1,4-dioxane, total arsenic, and total manganese. EAI reported all parameters as Not Detected above laboratory detection limits.

### 3.1.3 Field Sampling Data Review

The field sampling sheet included in Appendix A was reviewed for completeness and adherence to sampling SOPs included in SAP. Field sampling data show that objectives were met at sampling points.

### 3.1.4 Other Field QA/QC Issues

No other field QA/QA issues were noted during completion of the February 2015 sampling event.

## 3.2 Office QA/QC activities

Office QA/QC activities, as required by the SAP, include verification of chain-of-custody protocols and sample holding times, verification that all field and laboratory analyses were completed, and completion of a Tier I Plus data validation of the laboratory reports in accordance with the EPA's Region I Data Validation Guidelines.

The analytical laboratory report associated with the February 2015 sampling event is provided in Appendix B.

### 3.2.1 Chain-of-Custody Forms

CES and Kestrel reviewed the chain-of-custody forms for completeness and/or lapses in custody. The forms were found to be complete and no lapses in chain-of-custody protocol were identified. EAI received the sample cooler at a temperature of +1.0º C.

### 3.2.2 Omitted Field and Laboratory Analyses

CES reviewed field sampling sheets and EAI laboratory reports and found that the required field parameters were collected and the required laboratory analyses for each of the samples collected were completed, with no exceptions.

### 3.2.3 Tier I Plus Data Validation

Kestrel Environmental Technologies, Inc. (Kestrel) of Freeport, Maine, performed a Tier I Plus validation of the EAI laboratory reports under contract to CES and in accordance with the EPA standards and SAP requirements, as described in the Kestrel's Data Evaluation Report in included in Appendix C.

Kestrel evaluated the laboratory reports for completeness, assessed the results of QA/QC samples analyzed with field samples, and verified that all sample tests were performed within method holding times. A summary of the finding presented in Kestrel's Data Evaluation Report (Appendix E) is provided below.

The laboratory reports were complete, and the data were deemed acceptable for its intended purpose. Duplicate sample result for R-3 met acceptance criteria. The following data qualifications were applied based on data validation results:

- The method 524.2 carbon disulfide, 2-butanone (MEK), tetrahydrofuran and vinyl acetate results for all samples were reported as non-detect (U) and are qualified as non-detect estimated (UJ) due to the potential for low bias indicated by the laboratory control standard / laboratory control standard duplicate (LCS/LCSD) recoveries.
- The method 524.2 2,2-dichloropropane and carbon tetrachloride results for all samples were reported as non-detect (U) and are qualified as non-detect estimated (UJ) due to continuing calibration verification (CCV) results that do not meet acceptance criteria.

There were 454 target analyte results reported for field and QC samples; 92.1% are accepted without qualification. Only 36 results are qualified due to non-compliant QC sample results discussed above.

No systemic problems were detected during the Tier 1 Plus data review of this data set completed by Kestrel. None of the data collected for this project was qualified as rejected. Completeness is 100%. No corrective actions are necessary.

### 3.2.4 Field Duplicates

A primary and duplicate sample was collected at R-3 for the purposes of analytical data qualification (as previously discussed in Section 3.2.3) and for field sampling procedure QA/QC purposes, as discussed below. Table 2 presents the relative percent differences (RPDs) for parameter concentrations detected in the primary and duplicate samples. RPDs were compared to measurement performance criteria goal for aqueous duplicates (± 30% RPD) listed in SAP/QAPP.

All RPDs met the ± 30% measurement performance criteria goal.

The consistency of aqueous parameter concentration values between primary and duplicate samples for the parameters analyzed shows that laboratory procedures and analyses, and sampling procedures, produced reproducible values.

### 3.2.5 Matrix Spike/Matrix Spike Duplicates

Matrix Spike and Matrix Spike Duplicate (MS/MSD) samples were not required to be collected.

## SECTION 4 | GROUNDWATER ANALYTICAL RESULTS:

Analytical results for the February 2015 semi-annual sampling event and historical results dating back to January 2008 for water supply wells R-3 and 339BHR are provided in Table 1.

1,4-dioxane was the only VOC detected at water supply wells R-3 and 339BHR. 1,4-dioxane concentrations ranged from 0.46 micrograms per liter (ug/L) at R-3 to 0.85 ug/L at well 339BHR. 1,4-dioxane concentrations reported at R-3 and 339BHR for the February 2015 sampling event are similar to previous results.

Consistent with historical results, total arsenic at R-3 and 339BHR was reported as Not Detected above the laboratory detection limit of 0.001 milligrams per liter (mg/L). Total manganese at R-3 and BHR339 was reported at 0.14 and 0.36 mg/L, respectively.

Results indicate the concentration of arsenic and 1,4-dioxane at both wells is below NHDES Ambient Groundwater Quality Standards (AGQSs) and the site-specific EPA Interim Cleanup Levels (ICLs). Manganese was reported at a concentration below the ICL (0.3 mg/L) and AGQS (0.84 mg/L) at R-3. However, the manganese concentration at 339BHR (0.36 mg/ L) slightly exceeded the ICL, but is well below the AGQS.

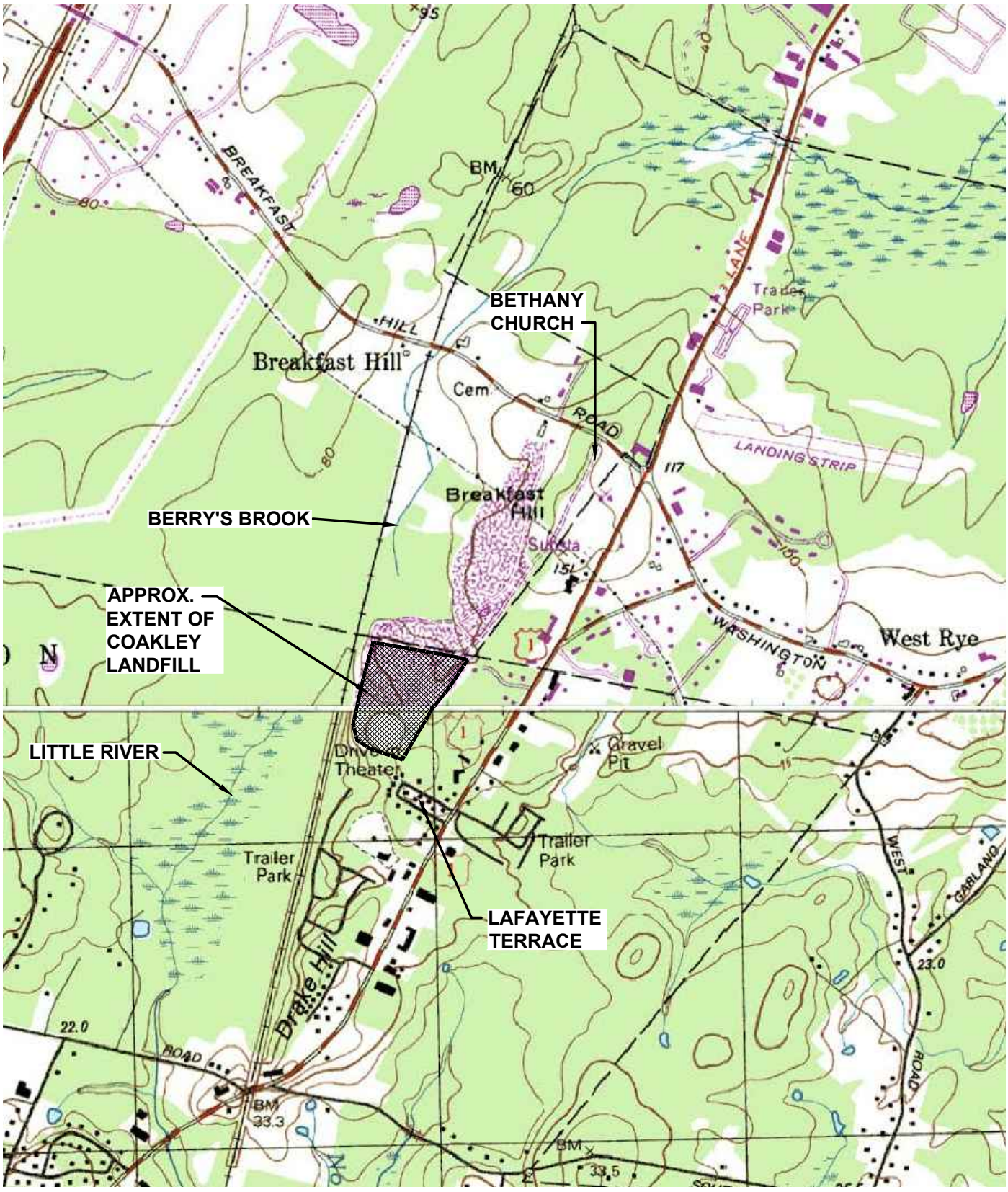
Groundwater regulatory threshold exceedances at monitoring points were limited to a manganese ICL exceedance at 339BHR. No NHDES AGQSs exceedances occurred.

## SECTION 5 | CONCLUSIONS AND RECOMMENDATIONS:

Water quality at the two water supply wells (R-3 and 339BHR) sampled during the February 2015 semi-annual long-term monitoring event is consistent with historical data at these monitoring points. Results indicate that concentration of arsenic and 1,4-dioxane are below applicable NHDES AGQS and site-specific EPA ICLs. The manganese concentration at 339BHR slightly exceeded the EPA ICL, but is well below the NHDES AGQS. The concentration of manganese at 339BHR continues to be consistent with what is considered to be typical of background bedrock water quality in the area, as discussed in previous site groundwater quality reports and assessments.

The next semi-annual sampling event is planned for August 2015.

# FIGURES



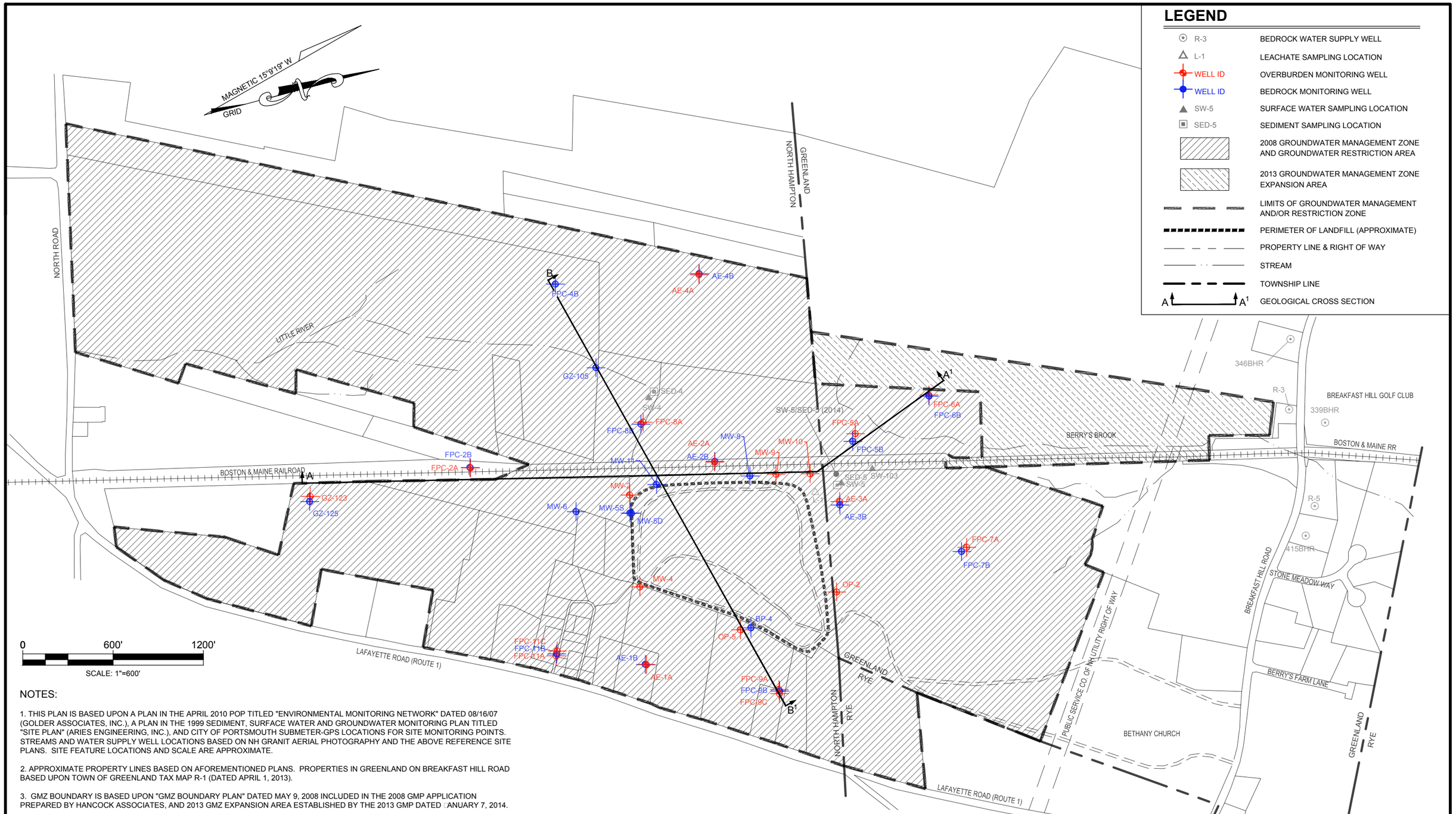

SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
PORTSMOUTH
SCALE: 1"=1500'

CES INC

# COAKLEY LANDFILL
# NORTH HAMPTON & GREENLAND, NH
# LOCATION MAP

2015-02-11
10424.003

FIGURE 1




## LEGEND

| | |
|---|---|
| R-3 | BEDROCK WATER SUPPLY WELL |
| L-1 | LEACHATE SAMPLING LOCATION |
| WELL ID | OVERBURDEN MONITORING WELL |
| WELL ID | BEDROCK MONITORING WELL |
| SW-5 | SURFACE WATER SAMPLING LOCATION |
| SED-5 | SEDIMENT SAMPLING LOCATION |
| | 2008 GROUNDWATER MANAGEMENT ZONE AND GROUNDWATER RESTRICTION AREA |
| | 2013 GROUNDWATER MANAGEMENT ZONE EXPANSION AREA |
| | LIMITS OF GROUNDWATER MANAGEMENT AND/OR RESTRICTION ZONE |
| | PERIMETER OF LANDFILL (APPROXIMATE) |
| | PROPERTY LINE & RIGHT OF WAY |
| | STREAM |
| | TOWNSHIP LINE |
| A — A1 | GEOLOGICAL CROSS SECTION |

NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.

2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).

3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED □ANUARY 7, 2014.

| | | | | | |
|---|---|---|---|---|---|
| PROJECT TITLE: **COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE** | DWG: **FIGURE 2** | BY: BL□ | REV: | DESCRIPTION: | CES INC Engineers • Environmental Scientists • Surveyors |
| | | DATE: 2015-02-06 | REV DATE: | | |
| SHEET TITLE: **GROUNDWATER MANAGEMENT ZONE & ENVIRONMENTAL MONITORING NETWORK** | JN: 10424.003 | APPROVED BY: SBM | ISSUE: | DESCRIPTION: | |
| | SCALE: 1"=600' | CHECKED BY: SBM | ISSUE DATE: | | |

# TABLES

**TABLE 1**
Summary of Analytical Results for Off-Site Water Supply Wells
2015 Semi-Annual Data Transmittal Report
Coakley Landfill - North Hampton, New Hampshire

| SAMPLE IDENTIFICATION | EPA | NHDES | EPA | R-3 | R-3 | R-3 | R-3 | R-3 | R-3 | R-3 | R-3-DUP | R-3 | R-3-DUP | R-3 | R-3-DUP | R-3 | R-3-DUP | R-3 | R-3-DUP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DATE SAMPLED** | **ICL** | **AGQS** | **MCL** | 24-Jan-08 | 13-Aug-08 | 19-Aug-09 | 17-Aug-10 | 18-Aug-11 | 30-Aug-12 | 26-Mar-13 | 26-Mar-13 | 16-Aug-13 | 16-Aug-13 | 27-Feb-14 | 27-Feb-14 | 3-Oct-14 | 3-Oct-14 | 25-Feb-15 | 25-Feb-15 |
| **VOLATILE ORGANIC COMPOUNDS** | | | | | | | | | | | | | | | | | | | |
| Methyl tert-butyl ether (ug/L) | - | 13 | - | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene (ug/L) | - | 1000 | 1000 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-dioxane (ug/L) | - | 3 | - | NA | NA | NA | NA | NA | 0.40 | 0.45 | 0.26 | 0.45 | 0.41 | 0.41 | 0.42 | 0.37 | 0.36 | 0.46 | 0.43 |
| **METALS** | | | | | | | | | | | | | | | | | | | |
| Arsenic, total (mg/L) | 0.01 | 0.01 | 0.01 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Manganese, total (mg/L) | 0.3 | 0.84 | - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.13 | 0.14 | 0.10 | 0.10 | 0.14 | 0.14 |
| **FIELD PARAMETERS** | | | | | | | | | | | | | | | | | | | |
| Temperature (degrees Celcius) | - | - | - | 13.51 | 12.51 | 11.38 | 12.58 | 12.62 | 12.73 | NM | NM | 13 | NA | 8 | NA | 12 | NA | 10.1 | NA |
| pH (standard units) | - | - | - | 5.63 | 5.85 | 7.92 | 7.14 | 8.08 | 8.54 | NM | NM | 7 | NA | 7.9 | NA | 8.4 | NA | 8.3 | NA |
| Conductivity (uS/cm) | - | - | - | 316 | 423 | 452 | 443 | 238 | 466 | NM | NM | 414 | NA | NR | NA | 417 | NA | 422 | NA |
| Dissolved Oxygen (mg/L) | - | - | - | 4.16 | 3.72 | 4.64 | 2.19 | 4.65 | 4.98 | NM | NM | <0.5 | NA | <0.5 | NA | < 0.5 | NA | < 0.5 | NA |
| Turbidity (NTU) | - | - | - | 2.0 | 15.4 | 2.2 | 0.5 | 1.04 | 0.70 | NM | NM | 6.00 | NA | <5 | NA | < 5 | NA | < 5 | NA |
| Oxidation/Reduction Potential (mV) | - | - | - | 157 | 95 | -122 | -35 | -164.5 | 22.5 | NM | NM | -224 | NA | -143 | NA | -219 | NA | -186 | NA |

| SAMPLE IDENTIFICATION | EPA | NHDES | EPA | 339BHR | 339BHR | 339BHR | 339BHR | 339BHR |
|---|---|---|---|---|---|---|---|---|
| **DATE SAMPLED** | **ICL** | **AGQS** | **MCL** | 29-Apr-13 | 16-Aug-13 | 27-Feb-14 | 3-Oct-14 | 25-Feb-15 |
| **VOLATILE ORGANIC COMPOUNDS** | | | | | | | | |
| Methyl tert-butyl ether (ug/L) | - | 13 | - | NA | <0.5 | <0.5 | < 0.5 | <0.5 |
| Toluene (ug/L) | - | 1000 | 1000 | NA | <0.5 | <0.5 | 1.8 | <0.5 |
| 1,4-dioxane (ug/L) | - | 3 | - | 0.38 | 0.42 | 0.63 | 0.42 | 0.85 |
| **METALS** | | | | | | | | |
| Arsenic, total (mg/L) | 0.01 | 0.01 | 0.01 | NA | NA | < 0.001 | < 0.001 | < 0.001 |
| Manganese, total (mg/L) | 0.3 | 0.84 | - | NA | NA | 0.25 | 0.32 | 0.36 |
| **FIELD PARAMETERS** | | | | | | | | |
| Temperature (degrees Celcius) | - | - | - | NM | NM | 11 | 12 | 10.3 |
| pH (standard units) | - | - | - | NM | NM | 7.1 | 7.1 | 7.1 |
| Conductivity (uS/cm) | - | - | - | NM | NM | NR | 394 | 399 |
| Dissolved Oxygen (mg/L) | - | - | - | NM | NM | 0.7 | 0.7 | 0.7 |
| Turbidity (NTU) | - | - | - | NM | NM | 35 | 5 | 22 |
| Oxidation/Reduction Potential (mV) | - | - | - | NM | NM | -22 | -63 | 20 |

**TABLE NOTES:**

1. Field parameter measurements prior to Aug. 2013 were not collected with a flow cell directly connected to the sampling tap; therefore, dissolved oxygen and oxidation reduction potential measurements may be biased high due to exposure to the atmosphere.
2. Only analytes detected in one or more groundwater samples at water supply wells are listed in this table. Analytical methods include, VOCs by 524.2, 1,4-dioxane by 8260B SIM, and metals by 200.8

**TABLE ABBREVIATIONS:**

NA = Not Analyzed
NM = Not Measured
NR = Not Recorded - field parameter measurement did not meet QA/QC criteria and were rejected
uS/cm = microsiemens per centimeter
ug/L = micrograms per liter (parts per billion)
mg/L = milligrams per liter (parts per million)
NTU - Nephelometric Turbidity Units
mV = millivolts
< = parameter concentration below detection limit indicated
R-3-DUP = duplicate sample collected at R-3
NHDES AGQS = NHDES Ambient Groundwater Quality Standard
EPA MCL = EPA Primary Drinking Water Standard
EPA ICL = EPA Interim Groundwater Quality Standard

**Table 2**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | DW-R-3 | | | DW-R-3-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 02/25/2015 | | | 02/25/2015 | | | |
| **Laboratory Sample ID** | | | 140900.01 | | | 140900.02 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Total Arsenic | 200.8 | mg/L | 0.001 | U | 0.001 | 0.001 | U | 0.001 | 0% |
| Total Manganese | 200.8 | mg/L | 0.14 | | 0.005 | 0.14 | | 0.005 | 0% |
| | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1,1-Trichloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1,2,2-Tetrachloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1,2-Trichloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1-Dichloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1-Dichloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,1-Dichloropropene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2,3-Trichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2,3-Trichloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2,4-Trichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2,4-Trimethylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dibromo-3-chloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dibromoethane(EDB) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dichloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,2-Dichloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,3,5-Trichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,3,5-Trimethylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,3-Dichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,3-Dichloropropane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 1,4-Dichlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 2,2-Dichloropropane | 524.2 | ug/l | 0.5 | UJ | 0.5 | 0.5 | UJ | 0.5 | 0% |
| 2-Butanone(MEK) | 524.2 | ug/l | 5 | UJ | 5 | 5 | UJ | 5 | 0% |
| 2-Chlorotoluene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 2-Hexanone | 524.2 | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| 4-Chlorotoluene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| 4-Methyl-2-pentanone(MIBK) | 524.2 | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Acetone | 524.2 | ug/l | 10 | U | 10 | 10 | U | 10 | 0% |
| Benzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromochloromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromodichloromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromoform | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Bromomethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Carbon disulfide | 524.2 | ug/l | 2 | UJ | 2 | 2 | UJ | 2 | 0% |
| Carbon tetrachloride | 524.2 | ug/l | 0.5 | UJ | 0.5 | 0.5 | UJ | 0.5 | 0% |
| Chlorobenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Chloroethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Chloroform | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |

**Table 2**

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

| **Sample ID** | | | DW-R-3 | | | DW-R-3-DUP | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sample Collection Date** | | | 02/25/2015 | | | 02/25/2015 | | | |
| **Laboratory Sample ID** | | | 140900.01 | | | 140900.02 | | | **Relative Percent** |
| **Parameter** | **Method** | **Units** | **Result** | **Flag** | **RL** | **Result** | **Flag** | **RL** | **Difference (RPD)** |
| Chloromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| cis-1,2-Dichloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| cis-1,3-Dichloropropene | 524.2 | ug/l | 0.3 | U | 0.3 | 0.3 | U | 0.3 | 0% |
| Dibromochloromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Dibromomethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Dichlorodifluoromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Diethyl Ether | 524.2 | ug/l | 5 | U | 5 | 5 | U | 5 | 0% |
| Ethylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Ethyl-t-butyl ether(ETBE) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Hexachlorobutadiene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Isopropyl ether(DIPE) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| IsoPropylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Methylene chloride | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Methyl-t-butyl ether(MTBE) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| mp-Xylene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Naphthalene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| n-Butylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| n-Propylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| o-Xylene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| p-Isopropyltoluene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| sec-Butylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Styrene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| tert-amyl methyl ether(TAME) | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| tert-Butyl Alcohol (TBA) | 524.2 | ug/l | 30 | U | 30 | 30 | U | 30 | 0% |
| tert-Butylbenzene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Tetrachloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Tetrahydrofuran(THF) | 524.2 | ug/l | 5 | UJ | 5 | 5 | UJ | 5 | 0% |
| Toluene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| trans-1,2-Dichloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| trans-1,3-Dichloropropene | 524.2 | ug/l | 0.3 | U | 0.3 | 0.3 | U | 0.3 | 0% |
| Trichloroethene | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Trichlorofluoromethane | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| Vinyl acetate | 524.2 | ug/l | 10 | UJ | 10 | 10 | UJ | 10 | 0% |
| Vinyl chloride | 524.2 | ug/l | 0.5 | U | 0.5 | 0.5 | U | 0.5 | 0% |
| | | | | | | | | | |
| 1,4-Dioxane | 8260B SIM | ug/l | 0.46 | | 0.25 | 0.43 | | 0.25 | 7% |

**Notes on first page of table**