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

ANNUAL SUMMARY REPORT
CALENDAR YEAR 2017
CROSS ROAD LANDFILL
EXETER, NEW HAMPSHIRE
NHDES SITE # 198401081
GROUNDWATER MANAGEMENT PERMIT #198401081-E-004
PROJECT NO. 978

Prepared For:
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Date: 2018.01.31 16:41:39 -05'00'

Date of Report: January 31, 2018

Groundwater Monitoring Report Cover Sheet

Site Name: Cross Road Landfill and Stump Dump

Town: Exeter, New Hampshire

Permit #: GWP-198401081-E-004

Type of Submittal (*Check all that apply*)

☒ Periodic Summary Report (*year*): 2017

☐ Data Submittal (*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:

☐ Are there any detections of contamination in drinking water that is untreated prior to use?
Well/Compound:
☐ 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.*)

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.

Proactive by Design

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January 31, 2018
File No. 04.0021270.29

Groundwater Management Permit Coordinator
New Hampshire Department of Environmental Services
Waste Management Division
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

Re: Annual Summary Report Calendar Year 2017
Cross Road Landfill
Exeter, New Hampshire
Groundwater Management Permit No. GWP-198401081-E-004

Dear Permit Coordinator:

On behalf of the Town of Exeter (Town), GZA GeoEnvironmental, Inc. (GZA) is pleased to provide the New Hampshire Department of Environmental Services (NHDES) this report summarizing water quality monitoring at the Cross Road Landfill (Landfill; site) in Exeter during calendar year 2017. This report has been submitted to fulfill the requirement of an Annual Summary Report for the Landfill for calendar year 2017, as required by Condition No. 7 of the Groundwater Management Permit (Permit; GWP-198401081-E-004) issued on December 16, 2013 and revised on October 13, 2014.

This report includes GZA's conclusions and recommendations regarding the Landfill water quality monitoring completed in accordance with the Permit and focuses on the results from the November 2017 monitoring round. The results of the April 2017 sampling were previously submitted to NHDES in GZA's data transmittal[1] dated June 13, 2017. GZA's work and this report are subject to the attached **Limitations**.

The following data summary documents are attached:

- **Table 1 -** summarizing the results of water quality monitoring associated with the Landfill through 2017, including results of analytical laboratory and field screening analyses;
- **Table 2 -** summarizing recent surface water and groundwater level elevation data;
- **Plots 1A** through **5D -** illustrating primary indicator water quality parameter concentration data;

[1] *April 2017 Data Transmittal, Cross Road Landfill, Exeter, New Hampshire,* prepared by GZA dated June 13, 2017.

- **Figure 1 -** illustrating Landfill and vicinity features including water quality monitoring locations;
- **Figure 2 -** summarizing recent Landfill water quality and elevation data; and
- **Figure 3 -** illustrating a hydrogeologic cross-section from the Landfill to the Exeter River.

The following sections summarize recent work performed, results, water quality trends, and GZA's conclusions and recommendations.

WORK PERFORMED

PERMIT-RELATED LANDFILL WATER QUALITY MONITORING

In accordance with Condition No. 7 of the Permit, water quality monitoring during the reporting period included sampling in April and November at the following sampling locations depicted on **Figure 1**:

- Nine groundwater monitoring wells (RFW-2, RFW-3, RFW-4, GZ-1L, GZ-2L, GZ-3L, GZ-104, GZ-201 and GZ-202A);[2]
- Two piezometers (P-9R [a.k.a., SW-P-9, P-9, and north spring], and P-2R [a.k.a. south spring, November monitoring round only]); and
- Two surface water sampling locations (SW-17 [groundwater seep located proximate to the Exeter River] and SW-13 [November monitoring round only]).

Due to low groundwater levels at monitoring well GMW-11, a water quality sample could not be collected during April or November 2017.

Available water quality data for historical Landfill sampling locations include the results of sampling from May 1992 through November 2017 and are summarized in **Table 1**. Water quality monitoring has historically included volatile organic compounds (VOCs), arsenic, barium, cadmium, chloride, chromium, iron, lead, mercury, manganese, nitrate, total kjeldahl nitrogen (TKN), selenium, silver, and thallium. Sampling frequencies for individual water quality parameters and locations have been modified over time, with modifications based on the results of monitoring.

As required by the Permit (GWP-198401081-E-004), current water quality monitoring includes sample collection and analyses for specific conductance, pH, chloride, nitrate, TKN, iron, manganese, and arsenic biannually during November and April. During the November groundwater sampling round, VOCs, barium, cadmium, chromium, lead, mercury, selenium, and silver were also analyzed as required by the permit.

With the exception of wells GZ-1L, GZ-2L, and GZ-3L, each of the Permit-related Landfill groundwater quality monitoring wells and piezometers are screened within overburden. Consistent with the Permit and standard NHDES requirements, overburden groundwater and groundwater seep samples collected for analytical laboratory analysis of metals concentrations are field-filtered, and the data represent dissolved concentrations. Surface

[2] Well GMW-11 is required by the Permit but could not be sampled due to the observed dry condition of the well.

water and bedrock groundwater samples for analytical laboratory analysis of metals concentrations are not field-filtered, and the data represent total concentrations.

Except as noted, Civil & Environmental Consultants, Inc. (CEC) performs sample collection and field screening on behalf of the Town. Water quality samples are submitted by CEC to Eastern Analytical, Inc. (EAI), of Concord, New Hampshire for analytical laboratory analyses. GZA understands that copies of CEC's reports and EAI's analytical laboratory reports are submitted to the NHDES by the Town. GZA provides environmental consulting support to the Town and is provided with copies of CEC's field screening and EAI's laboratory reports for summary and evaluation of the data.

REVISED CONCEPTUAL SITE MODEL

The following describes GZA's Conceptual Site Model (CSM) for the Landfill. The conceptual model provides a summary of our understanding of site hydrogeology and contaminant distribution and transport, and is described in the following subsections.

HYDROGEOLOGY

Geology

Based on the results of subsurface explorations at and within the vicinity of the Landfill[3] and published information, the geology beneath the Landfill includes a sequence of glacially derived sediments overlying a fractured metasedimentary bedrock. A hydrostratigraphic cross section through the Landfill and the area east of the Landfill is illustrated on **Figure 3**. Overburden geology includes up to 99 feet (RFW-3) of glacial outwash sand and gravel overlying a thin (about 4 feet) discontinuous layer of glacial till. The thickness of the sand and gravel deposit beneath the Landfill area varies, in part, due to historical sand and gravel mining. Up to 11 feet of silt and clay was encountered in certain borings drilled along the western side of the Landfill. The silt and clay unit may be associated with glaciolacustrian deposits identified to the west of the site underlying the Jones Swamp, or may be the result of a temporary ice damming on the surface of the glacial outwash sand and gravel during deglaciation.

Overburden borings drilled along the eastern side of the Landfill and further east of the Landfill encountered between 10 feet to 31 feet of primarily fine sand glacial outwash deposits. A fine sand, silt, and clay deposit interbedded with sand and gravel layers was encountered at a depth of 31 feet below ground surface (bgs) within one boring that was drilled to a total depth of 57 feet bgs at a location east of the Landfill (GZ-107). Sand and gravel deposits were also encountered within the generally fine sand outwash deposits encountered to the east of the Landfill.

Bedrock cored beneath the site includes metasedimentary rock consisting of a generally fresh and slightly fractured fine-grained gray to purple-gray phyllite. Weston described bedrock cores drilled from borings RFW-1 and RFW-4 as gray, fine-grained schist belonging to the Eliot Formation. Based on review of the USGS map titled "Bedrock Geologic Map of New Hampshire," dated 1997, both of the rock types cored beneath the site are consistent with the description provided for the Eliot Formation. The bedrock surface encountered in the borings generally slopes downward from a high of about elevation 82 feet (GZ-2L) to the north (about elevation 47 feet

[3] *Supplemental Hydrogeologic Investigation, 2002 Annual Water Quality Monitoring, Cross Road Landfill,* prepare by GZA dated May 2002.

[RWF-4]) and east (about elevation 35 feet [RFW-1]). South of boring GZ-2L, the bedrock surface slopes downward to the south as suggested by the elevation of the bedrock surface encountered in boring GZ-3L (about 69 feet). East of RFW-1 the bedrock surface appears to slope upward, as suggested by the elevation of the bedrock surface encountered in boring GZ-1L (about 44 feet) and bedrock outcrops observed in the area of SW-17.

Based on review of the USGS map titled "Lineament Map of Area 1 of the New Hampshire Bedrock Aquifer Assessment, Southeastern New Hampshire," dated 1997, a lineament, identified using 1:250,000-scale side-looking airborne radar imagery, transects the site as shown on **Figure 1**. If this lineament is indicative of the presence of an interconnected set of fractures in bedrock (i.e., a potential fracture zone) located beneath the site, it may represent a preferential pathway for groundwater flow. Notwithstanding, the presence of a bedrock fracture zone at this location has not been confirmed, and the shallow bedrock cored within boring GZ-1L was not highly fractured. No other lineaments were identified crossing or adjacent to the site.

Groundwater Flow

Groundwater within outwash sands is estimated to flow radially away from the Landfill. The estimated horizontal component of the direction of groundwater flow ranges from east-northeast beneath the central and eastern portions of the Landfill to northwest beneath the northwestern portion of the Landfill near the Jones Swamp. Groundwater surface elevation contours, developed based on water level measurements obtained during November 2017 by CEC, are shown on **Figure 2**. Historical depth-to-water and water surface elevation data collected by GZA and others are summarized in **Table 2**. Historical water quality data are generally consistent with the estimated radial flow pattern and indicate contaminant transport in overburden toward the north with transport locally northwest and northeast.

Based on the November 2017 data, the calculated estimate of the average horizontal component of the overburden hydraulic gradient beneath the site is approximately 0.01 and varies from approximately 0.024 (beneath the northeast portion of site) to 0.007 (beneath the central portion of site).

As discussed in GZA's May 2002 Supplemental Hydrogeologic Investigation Report, recharge from the sedimentation ponds located along the southern site boundary may cause a local reversal in the direction of shallow overburden groundwater flow south of the Landfill. The extent of this effect has not been evaluated, but would likely have a limited effect on the overall direction of groundwater flow due to the relatively high hydraulic conductivity of the sand and gravel unit underlying the ponds.

Upward vertical components of hydraulic head gradient beneath the Landfill have been measured between the bedrock and overburden. This upward vertical gradient suggests groundwater discharge from bedrock to overburden may occur. The measured difference in hydraulic head between overburden and bedrock at the GZ-1 and GZ-3 locations on July 23, 2001 and August 9, 2001 was 2.0 feet (GZ-1) and greater than 4.6 feet and 0.1 feet (GZ-3), respectively.

Estimates of hydraulic conductivity for the sand and gravel unit based on slug testing range from 4.7×10^{-3} centimeter per second (cm/sec) to 7.0×10^{-3} cm/sec. Based on an average estimated hydraulic conductivity of 5.5×10^{-3} cm/sec, an average hydraulic gradient of about 0.01, and an assumed effective porosity of 0.30, the estimated average seepage velocity for the sand and gravel unit beneath the Landfill is approximately 0.6 feet per day. Based on an average estimated hydraulic conductivity of 5.5×10^{-3} cm/sec, and average hydraulic gradient from the eastern side of the Landfill to the seep located east of the Landfill of about 0.024, and an

assumed effective porosity of 0.30, the estimated average seepage velocity for the sand and gravel unit beneath the Landfill is approximately 1.2 feet per day.

Based on constant head pumping tests of bedrock well GZ-3L, an effective hydraulic conductivity of about $2.2x10^{-4}$ cm/sec is estimated for the upper 20 feet of the bedrock at this location. This value provides a measure of how rapidly groundwater can flow to the well under pumping conditions relative to flow in a porous media. Due to the nature of groundwater flow through fractured rock, this value, which assumes porous media flow, should not be used to calculate estimates of seepage velocities for fractured bedrock.

Based on this understanding of the horizontal and vertical direction of groundwater flow beneath the site, the areas located to the southwest, south, and southeast of the Landfill that are currently not supplied with municipal water are considered upgradient of the Landfill. The effects of bedrock groundwater extraction could alter the direction of groundwater flow in bedrock beneath the site. Similarly, the presence of interconnected bedrock fractures or fracture zones may create preferential pathways for groundwater flow and Landfill contaminant transport. As indicated above, the presence of significant zones of interconnected fractures or fracture zones has not been identified beneath the site.

CONTAMINANT DISTRIBUTION/TRANSPORT

The following subsection describes the site conceptual model with respect to contaminant, distribution, and transport. The term contaminant as used herein refers to dissolved-phase VOCs, metals, and inorganic parameters with a Landfill source. Routine water quality monitoring has been on-going at the Landfill since May 1992, and Landfill post-closure water quality monitoring has been on-going in accordance with a Permit since November 1996. Historical Landfill groundwater quality data are summarized in **Table 1**. Water quality monitoring locations are shown on **Figure 1.** Contaminant concentration trends are described in the *Water Quality Trend Evaluation* section of this report.

In general, the results of historical and recent Landfill groundwater quality and elevation data indicate contaminants are transported in overburden toward the north with transport locally toward the northwest and northeast, likely discharging to the Exeter River. Therefore, sampling locations RFW-3, RFW-4, and SW-P-9 are downgradient of the Landfill; RFW-2 is located hydraulically sidegradient of the Landfill; and GZ-3L (bedrock) is assumed to be upgradient of the Landfill.

Supplemental hydrogeologic investigations to the east of the Landfill and descriptions of the work performed are included in GZA's October 16, 2009 and January 18, 2013 reports.[4] These off-site investigations have been focused on evaluating the source of Landfill-related groundwater contaminants discharged through a seep located proximate to the Exeter River and concluded that while other sources may be possible, the most likely source is the Landfill.

The areas located north and east of the Landfill are zoned for residential purposes and are supplied with municipal water. While GZA found evidence of residential bedrock groundwater supply wells within the study area, the residences were reportedly connected to the municipal water supply, and wells were reportedly not used as drinking water sources. Three of these wells were sampled and analyzed for landfill-related contaminants during

[4] Reports by GZA titled "*Calendar Year 2007/2008 Annual Report, Cross Road Landfill, Exeter, New Hampshire, Groundwater Management Permit No. GWP-198401081-E-003*," and "*Annual Summary Report Calendar Year 2012, Application for Groundwater Management Permit Renewal, Cross Road Landfill, Exeter, New Hampshire, Groundwater Management Permit No. GWP-198401081-E-003*," dated October 16, 2009 and January 18, 2013, respectively.

2013; however, the results of the analyses did not indicate that the groundwater intersected by the open borehole portion of the wells had been impacted by the Landfill.

To evaluate off-site impacts, shallow overburden groundwater monitoring wells GZ-101 through GZ-107 were installed in 2009. Based on the results of the shallow overburden well sampling, potential Landfill-related impacts to overburden groundwater quality were identified in the vicinity of the groundwater seep (GZ-102 and GZ-104). The general direction of groundwater flow and limited surficial geophysical (electrical conductivity methods) evidence suggested a Landfill source. Monitoring wells were subsequently installed along Juniper Ridge Road (GZ-201) and immediately east of the Landfill (GZ-202 and GZ-202A) to further evaluate the source of the Landfill-related contaminants in groundwater in the vicinity of the seep.

April and November 2017 arsenic, iron, and manganese concentration data are summarized on **Figure 2** to illustrate the spatial distribution of these landfill-related contaminants. The data summarized on **Figure 2** are consistent with a landfill source migrating east-northeastward toward the seep and suggest a background contribution (evidence by the presence of manganese and/or iron at concentrations exceeding the New Hampshire Ambient Groundwater Standards (NH AQGS) in monitoring well GZ-2L. The historical presence of 1,4-dioxane in monitoring wells (GZ-104, GZ-202A, and RFW-4) indicates the presence of a landfill source. While background and/or other sources may be present for other Landfill contaminants including metals, chloride, and nitrate, no potential sources of 1,4-dioxane, other than the Landfill, have been identified.

GZA anticipates that the presence of the seep and apparent direction of Landfill-related contaminant transport may be due to variations in hydraulic conductivity within the subsurface between the Landfill and the seep. **Figure 3** illustrates a hydrogeologic cross section from the Landfill to the seep. The location of the cross section is illustrated on **Figure 1**.

SUMMARY OF RECENT LANDFILL WATER QUALITY MONITORING RESULTS

Overall calendar year 2017 groundwater quality data are generally consistent with historical Landfill water quality monitoring, indicating that groundwater quality improved or has remained relatively stable following closure of the Landfill during 1994. Recent and historical monitoring indicates limited exceedances of NH AGQS and/or Secondary Maximum Concentration Limits (SMCLs),[5] primarily for certain parameters typical of Landfill-related water quality (i.e., arsenic, iron, and manganese).

Landfill-related groundwater contaminants routinely detected in groundwater sampled from monitoring locations located downgradient of the Landfill include arsenic, barium, chloride, iron, manganese, and 1,4-dioxane. It is GZA's opinion, based on the date of closure of the Landfill, and distribution and concentrations of 1,4-dioxane, that the presence of 1,4-dioxane is the result of historical waste disposal and does not indicate a recent or ongoing release of 1,4-dioxane at the Landfill.

Certain other metals, inorganic parameters, and VOCs have been intermittently detected in groundwater sampled from monitoring points located downgradient of the Landfill, including cadmium, chromium, lead, mercury, selenium, and silver. Significantly, only arsenic, iron, and manganese are routinely detected in Landfill groundwater samples at concentrations exceeding NH AGQS (arsenic and manganese) or SMCLs (iron). Detected concentrations of the other water quality parameters have infrequently exceeded NH AGQS, SMCLs, or surface

[5] SMCLs are aesthetic-based secondary maximum contaminant-level water quality standards used to regulate public water systems (Env-Dw 706 [Regulated Secondary Maximum Contaminant Levels]).

water quality criteria. The following table summarizes post-closure (i.e., since September 1994) exceedances of applicable water quality standards for Landfill-related contaminants other than arsenic, manganese, iron, and VOCs, and has been revised through year 2017.

PARAMETER	LOCATION	CONCENTRATION (mg/L)	SAMPLING DATE	WATER QUALITY STANDARDS (mg/L)
Cadmium	SW-P-2/P-2R	0.007	4/99	AGQS – 0.005 WQCTS – 0.00095
		0.0078	4/01	
	SW-1	0.0022	4/01	
		0.005	4/02	
	RFW-2	0.01	4/03	
	SW-13	0.010	11/10	
	GZ-1U	0.006	4/12	
Chromium	SW-1	0.26	4/06	AGQS – 0.10 WQCTS- NE
Lead	SW-P-2/P-2R	0.18	4/97	AGQS – 0.015 WQCTS- NE
		0.041	11/15	
		0.028	11/17	
	RFW-2	0.053	7/96	
	RFW-3	18	4/98	
	SW-1	0.36	4/06	
	SW-13	0.058	11/10	
Barium	SW-1	1.9	11/01	WQCTS – 1
		2.3	4/06	
Chloride	RFW-1	420	7/00	SMCL – 250 AGQS –NE
	GZ-6	460	7/01	
Nitrate	RFW-4	19	11/96	AGQS – 10
Selenium	RFW-3	0.06	11/03	AGQS – 0.05 WQCTS- 0.170
	GZ-1U	0.0711	8/01	
	GZ-1L	0.082	8/01	
	GZ-2L	0.101	8/01	
	SW-1	0.13	4/06	
Mercury	SW-5	0.0012	7/96	WQCTS – 0.00005

Notes:

1. WQCTS indicates surface water quality criteria, protection of human health, water and fish ingestion standard shown.[6]
2. mg/L indicates milligrams per liter.
3. NE indicates not established.

During 2017, VOCs other than 1,4-dioxane were detected in groundwater quality samples collected from monitoring locations RFW-3 located northeast of the Landfill, P-9R located west of the Landfill, and SW-13 located to the northwest. VOCs detected in the November 2017 water quality samples collected from these locations included methyl-t-butyl-ether (MTBE) (1 µg/L at RFW-3), p-Isopropyltoluene (66 µg/L at P-9R), and acetone (10 µg/L at SW-13). The detected concentrations of p-isopropyltoluene, MTBE, and acetone do not exceed the NH AGQS 260 µg/L, 13 µg/L, and 6,000 µg/L respectively. GZA will review the results of future sampling rounds for the presence of these compounds.

[6] As defined in New Hampshire Code of Administrative Rules Env-Ws 1703.21 (Water Quality Criteria for Toxic Substances, Protection of Human Health). Refer to **Table 1** for further information.

1,4-Dioxane has been historically detected in groundwater quality samples collected from RFW-2, RFW-3, RFW-4, SW-P2 (P-2R), SW-P-9 (P-9R), GZ-P-5R, GZ-102, GZ-104, GZ-106, GZ-202A, and SW-16 at concentrations up to 6 µg/L. Most recently (November 2017) 1,4-dioxane was detected in water quality samples collected from P-2R, P-9R, RFW-3, RFW-4, GZ-104, GZ-202A, and SW-17. 1,4-Dioxane exceeds the NH AGQS of 3 µg/L in the groundwater quality sample collected at RFW-4. The November 2017 sampling round was the first round during which 1,4-dioxane was detected in a sample collected from SW-17 (1.3 ug/L; seep located east-northeast of the Landfill).

The results of the year 2017 Permit-related groundwater quality monitoring indicate exceedances of NH AGQS for arsenic (RFW-3, RFW-4, P-2R, P-9R, GZ-104, GZ-201, GZ-202A, SW-13, and SW-17) and for manganese (RFW-3, RFW-4, GZ-2L, GZ-104, GZ-201, GZ-202A, P-2R, P-9R, SW-13, and SW-17) in water quality samples collected during one or more of the sampling rounds. In addition, lead was detected at groundwater seep location P-2R at a concentration exceeding the applicable NH AGQS. The remaining target analytes were not detected in the water quality samples or were detected at concentrations less than their associated water quality standards (excluding SMCLs which are not directly applicable to the samples collected).

WATER QUALITY TREND EVALUATION

Time series charts of arsenic, iron, manganese, and chloride concentrations were prepared using data from selected water quality monitoring locations to illustrate concentration trends for graphical evaluation. Copies of these plots are attached and summarized below. Please note that where concentrations are reported as less than the laboratory reporting limits (RL), one half of the RL is shown.

SUMMARY

In general, the concentration of the Landfill-related contaminants in groundwater and surface water are relatively stable. However, the concentrations of the contaminants fluctuate to varying degrees at each of the monitoring locations. Fluctuations are likely due to variations in groundwater flow due to seasonal variations in infiltration. Monitoring locations exhibiting potential recent increasing or decreasing concentration trends for the primary Landfill-related groundwater contaminants include:

- Arsenic Increasing Trend – Overburden wells GZ-104 and RFW-3, and piezometers P-2R and P-9R;
- Iron Increasing Trend – Overburden wells GZ-104 and RFW-3, and piezometers P-2R and P-9R;
- Manganese Increasing Trend – Overburden wells RFW-3 and GZ-104, and piezometer P-2R;
- Chloride Decreasing Trend – Bedrock well GZ-2L, and surface water location SW-17; and
- Chloride Increasing Trend – Piezeometer P-9R.

Increasing concentration trends were indicated for downgradient overburden wells GZ-104 and RFW-3 to the northeast, and downgradient monitoring locations P-2R and P-9R to the west and northwest, respectively. The significance of the increasing trends for P-9R should continue to be assessed based on the results of future monitoring, as should the apparent increasing arsenic, iron, and manganese, concentrations at overburden monitoring well GZ-104.

The sampling results indicate an AGQS violations in downgradient wells RFW-3 (manganese) and P-9R (manganese and arsenic). As discussed above, GZA recommends an on-going assessment of the observed concentration trends

in groundwater samples collected from P-9R due to variability in the results. Monitoring well GZ-106 is located downgradient of monitoring well RFW-3 and was last sampled in November 2014 for manganese. Results of the analysis of the sample collected during November 2014 indicated that the detected manganese concentration was less than the AGQS. GZA recommends including sampling of this well at least once during the next permit period.

As noted in the April 2017 Data Transmittal, the pH and specific conductance field measurements for the groundwater sample collected from monitoring well GZ-2L were above the previously measured ranges at that location. In addition, the iron and manganese concentrations were also above the historically measured concentrations at monitoring locations SW-17 and GZ-201. The reason for the abnormally high results is not known. The pH and specific conductance measurements collected during November 2017 from monitoring location GZ-2L were within the historical ranges. Excluding the manganese concentration in monitoring well GZ-201, the iron and manganese concentrations observed in samples collected during the November 2017 monitoring round appear to have decreased to within historical ranges. GZA will continue to monitor this condition in subsequent monitoring rounds.

DISSOLVED-PHASE CONTAMINANT TRANSPORT

Sampling locations RFW-2, and GZ-201 are located side gradient to downgradient of the Landfill, and exhibit relatively limited impacts to groundwater quality. Sampling locations RFW-3, RFW-4, P-2R, P-9R, GZ-102, GZ-104, GZ-202A, SW-16, and SW-17 are located downgradient of the Landfill, and generally exhibit greater impacts to groundwater quality.

The results of recent sampling at monitoring well locations GZ-202A, GZ-104, and SW-17 suggest a potential Landfill source for the groundwater contaminants detected in groundwater and surface water samples collected in the seep area. The data collected to date suggest the presence of a potential groundwater flow pathway from the eastern side of the Landfill east-northeastward toward the seep.

On August 10, 2016, GZA personnel visited the area surrounding the groundwater seep to evaluate the condition of the riverbed of the Exeter River relative to the potential for the collection of pore water samples. Due to observed site conditions and as requested by NHDES, GZA installed a temporary weir in the observed seepage/stream near SW-14 to collect total and dissolved metals samples monthly. The results and recommendations of this study are included in the attached letter prepared by GZA[7].

CONCLUSIONS/DISCUSSION

The following summarize our primary findings regarding the Landfill water quality monitoring.

- Groundwater quality data for the current reporting period are generally consistent with the previously described concentration ranges and temporal trends for the water quality parameters monitored in accordance with the Permit for the Landfill;

- Recent water quality monitoring to the northeast of the Landfill in the general area of the seep indicates possible increasing contaminant concentrations (arsenic, iron, and manganese); however, concentrations

[7] *Summary Letter Report*, prepared by GZA dated January 31, 2018.

detected during 2015 at monitoring location SW-16, outside the boundary of the Groundwater Management Zone (GMZ), did not exceed the AGQS;

- Additional potential Landfill-related contaminants including: chloride, iron, nitrate, 1,4-dioxane, and TKN were detected in one or more of the water quality samples collected during the reporting period. The concentrations of these parameters were below the NH AGQS or WQCTS during the reporting period except for 1,4-dioxine at RFW-3; and

- Calculated groundwater elevations for wells sampled during November 2017 are consistent with radial groundwater flow from the Landfill toward the northwest, north, northeast, and east of the Landfill within the shallow overburden outwash deposits underlying the area.

RECOMMENDATIONS

GZA recommends the following:

- Continued groundwater and surface water quality monitoring during 2018 as outlined in the current Permit. Recommendations for permit modifications, if deemed warranted, will be included in the permit renewal application due to the NHDES during December 2018;

- Continued evaluation of the increasing concentration trends for P-9R and GZ-104 based on the results of future monitoring;

- Further evaluation of the potential effects of the seep discharge on surface water quality within the Exeter River including: stream gauging of the Exeter River at the location of the seep discharge during spring and late summer; sampling of surface water in the Exeter River immediately up and downstream of the confluence with the seep concurrent with the stream gauging; and comparison of the results to flow and water quality data at the Town's water supply intake. This recommendation is based on the results of the recent weir sampling and is summarized in the attached letter referenced above.

- Metals sampling of downgradient monitoring well GZ-106 during the next five year permitting period.

- Collection of surface water samples from the Exeter River (SW-15) downstream of the confluence of the river and groundwater seep discharge for 1,4-dioxane;

- Field analysis of groundwater samples collected during the GMP sampling rounds for dissolved oxygen and oxidation-reduction potential to provide data for evaluation of the geochemical conditions beneath the Landfill relative to the increase in the mobilization of metals suggested by increasing arsenic, iron, and manganese concentration trends in groundwater samples collected from wells GZ-104 and RFW-3, and piezometers P-2R and P-9R; and

- Due to the intermittent presence of groundwater within well GMW-11, GZA recommends installation of an overburden groundwater monitoring well at the approximate location of well GMW-11, to provide a background overburden monitoring location that consistently contains groundwater. GZA recommends continued sampling of GMW-11 until installation of the recommended well can occur as allowed by the Town budgeting process.

On behalf of the Town, we greatly appreciate your review of this report and trust the information contained herein and attached meet the needs of the NHDES. Should you have any questions, please contact the undersigned at (603) 232-8740.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Dawna M. Tousignant, P.E.
Project Manager

James M. Wieck, P.G.
Consultant/Reviewer

Jeffrey D. Bowell, P.E.
Associate Principal

DMT/JDR/JMW:kr
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Attachments: Limitations
Tables
Figures
Plots
November 2017 Analytical Laboratory Data
Summary Letter Report

cc: Ms. Jennifer Mates, P.E., Department of Public Works; Town of Exeter

Limitations

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

SUBSURFACE CONDITIONS

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

COMPLIANCE WITH CODES AND REGULATIONS

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

SCREENING AND ANALYTICAL TESTING

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.

9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.

10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

INTERPRETATION OF DATA

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

ADDITIONAL INFORMATION

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

CONCEPTUAL SITE MODEL

14. Our opinions were developed, in part, based upon a comparison of site data to conditions anticipated within our Conceptual Site Model (CSM). The CSM is based on available information, and professional judgment. There are rarely sufficient data to develop a unique CSM. Therefore observations over time, and/or space, may vary from those depicted in the CSM provided in this report. In addition, the CSM should be evaluated and refined (as appropriate) whenever significant new information and/or data is obtained.

Tables

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Arsenic (mg/L)

NH AGQS = 0.01 mg/L
WQCTS (Water and Fish Ingestion) = 0.000018 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring and Residential Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations								Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	**0.02**	**0.04**	**0.02**	**0.25**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-		-	-	**0.04**
	11/12/1992	<0.01	<0.01	<0.01	**0.0284**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-		-	-	-
	4/6/1993	**0.001**	**0.17**	**0.025**	**0.16**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.001**	-	-	-	-		-	-	**0.03**
	7/1/1993	**0.001**	**0.001**	**0.001**	**0.001**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.001**	-	-	-	-		-	-	-
	11/5/1993	**0.001**	**0.002**	**0.002**	**0.015**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.007**	-	-	-	-		-	-	**0.048**
	4/14/1994	<0.005	**0.06**	**0.058**	**0.263**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.034**	-	-	-	-		-	-	-
	7/15/1994	<0.100	<0.100	<0.100	**0.245**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.100	-	-	-	-		-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	**0.057**
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	**0.002**
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	**0.001**
	11/18/1994	**0.001**	**0.059**	**0.038**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.013**	-	-	-	-		-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	**0.05**
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	**0.005**
	4/12/1995	<0.005	**0.039**	**0.022**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-		-	-	<0.005
	7/28/1995	<0.005	**0.021**	**0.011**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-		-	-	**0.018**
	12/8/1995	<0.01	<0.01	**0.042**	**0.22**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.027**	-	-	-	-		-	-	**0.099**
	4/26/1996	<0.01	<0.01	**0.01**	**0.02**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-		-	-	<0.01
	7/25/1996	<0.005	<0.005	<0.005	**0.21**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.04**	-	-	-	-		-	-	-
	11/14/1996	-	**0.015**	**0.17**	**0.13**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	**0.017**	<0.005	-	-	-	-	-		-	-	-
	4/21/1997	-	<0.005	**0.024**	**0.14**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	**0.012**	**0.008**	-	-	-	-	-		-	-	-
	7/22/1997	<0.005	<0.005	**0.014**	**0.005**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.005**	-	**0.006**	<0.005	-	-	-	-	-		-	-	-
	11/11/1997	<0.005	**0.011**	**0.04**	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	**0.15**	**0.008**	-	-	-	-	-		-	-	-
	4/15/1998	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.14**	-	-	<0.005	-	-	-	-	-		-	-	-
	7/6/1998	-	<0.005	**0.021**	**0.15**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.75**	-	**4.9**	<0.005	-	-	-	-	-		-	-	-
	11/16/1998	<0.005	**0.012**	**0.001**	**0.19**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	**0.58**	<0.005	-	-	-	-	-		-	-	-
	4/19/1999	<0.005	<0.005	**0.037**	**0.15**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	**0.66**	<0.005	-	-	-	-	-		-	-	-
	7/27/1999	<0.005	<0.005	**0.026**	**0.18**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	**12**	**0.009**	-	-	-	-	-		-	-	-
	11/18/1999	**0.01**	**0.018**	**0.2**	**0.14**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.12**	-	**5.9**	**1.2**	-	-	-	-	-		-	-	-
	5/5/2000	<0.005	<0.005	**0.054**	**0.18**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-		-	-	-
	7/7/2000	<0.005	**0.008**	**0.46**	**0.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.009**	-	**0.71**	**0.008**	-	-	-	-	-		-	-	-
	11/16/2000	<0.01	<0.01	**0.13**	**0.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.023**	-	**0.013**	**0.3**	-	-	-	-	-		-	-	-
	4/25/2001	<0.01	**0.014**	**0.21**	**0.28**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.91**	-	**0.032**	**0.047**	-	-	-	-	-		-	-	-
	7/25/2001	<0.005	**0.009**	**0.22**	**0.19**	**0.0124**	-	-	<0.004	**0.0102**	**0.0062**	-	-	-	-	-	-	<0.004	<0.004	<0.004	-	**0.015**	-	**27**	**0.03**	-	-	-	-	-		-	-	-
	8/9/2001	-	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	**0.008**	**0.006**	<0.004	-	-	-	-	-	-	-	-	-	-		-	-	-
	11/28/2001	<0.01	<0.01	**0.09**	**0.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	**1.9**	-	-	-	-	-		-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.026	-	<0.026	<0.026	<0.026	-		-	-	-
	4/24/2002	<0.02	<0.02	**0.22**	**0.22**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	<0.02	<0.02	<0.02	-		-	-	-
	11/20/2002	<0.05	<0.05	**0.28**	**0.25**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.01	<0.01	<0.01	-		-	-	-
	4/29/2003	<0.01	<0.01	**0.24**	**0.19**	<0.01	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	-	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	<0.01	-		-	-	-
	11/17/2003	-	**0.014**	**0.22**	**0.18**	<0.005	-	-	-	-	-	-	-	-	-	-	-	<0.005	**0.011**	<0.005	-	-	-	**0.12**	<0.005	-	<0.005	<0.005	<0.005	-		-	-	-
	4/28/2004	-	**0.01**	**0.20**	**0.22**	<0.005	-	-	-	-	-	**0.01**	-	-	-	-	-	<0.005	**0.005**	<0.005	<0.005	<0.005	**0.005**	**0.043**	<0.005	-	-	-	-	-		-	-	-
	11/15/2004	-	**0.017**	**0.076**	**0.19**	<0.005	-	-	-	-	-	**0.013**	-	-	-	-	-	<0.005	**0.008**	<0.005	-	**0.41**	<0.005	**0.063**	<0.005	-	-	-	-	-		-	-	-
	4/28/2005	-	<0.01	**0.07**	**0.2**	<0.01	-	-	-	-	-	**0.03**	-	-	-	-	-	<0.01	<0.01	<0.01	-	**0.12**	<0.01	**0.03**	<0.01	-	<0.01	<0.01	<0.01	-		-	-	-
	11/8/2005	-	**0.006**	**0.023**	**0.156**	<0.005	-	-	-	-	-	**0.058**	-	-	-	-	-	<0.005	**0.013**	<0.005	-	**0.149**	<0.005	**0.017**	**0.008**	-	<0.005	<0.005	<0.005	-		-	-	-
	4/17/2006	-	<0.005	**0.011**	**0.16**	<0.005	-	-	-	-	-	**0.076**	-	-	-	-	-	<0.005	**0.007**	<0.005	-	**0.034**	<0.005	**0.023**	**1.2**	-	<0.01	<0.01	<0.01	-		-	-	-
	11/20/2006	-	**0.007**	**0.014**	**0.14**	<0.005	-	-	-	-	-	**0.062**	-	-	-	-	-	<0.005	**0.01**	<0.005	-	**0.026**	<0.005	**0.042**	<0.005	-	<0.005	<0.005	<0.005	-		-	-	-
	5/2/2007	-	**0.012**	**0.006**	**0.13**	<0.005	-	-	-	-	-	**0.029**	-	-	-	-	-	-	**0.006**	-	-	**0.011**	<0.005	**0.011**	**0.029**	-	<0.005	<0.005	<0.005	-		-	<0.005	-
	11/14/2007	-	<0.005	**0.006**	**0.13**	<0.005	-	-	-	-	-	**0.032**	-	**0.087**	-	-	-	<0.005	<0.005	**0.007**	-	**0.024**	**0.007**	**0.036**	<0.005	-	<0.005	<0.005	<0.005	-		-	<0.005	-
	4/25/2008	-	**0.007**	**0.007**	**0.17**	<0.005	-	-	-	-	-	**0.040**	-	-	-	-	-	-	<0.005	-	-	**0.016**	<0.005	**0.024**	<0.01	-	-	-	-	-		-	<0.01	-
	11/18/2008	-	**0.005**	**0.009**	**0.16**	**0.006**	-	-	-	-	-	Dry	-	**0.008**	-	-	-	**0.005**	<0.005	-	-	Dry	**0.008**	**0.025**	<0.005	-	-	-	-	**0.010**		-	-	<0.002	-
	4/27/2009	-	**0.002**	**0.004**	**0.13**	**0.001**	-	-	-	-	-	**0.026**	-	-	-	-	-	-	**0.001**	-	-	**0.024**	**0.003**	**0.023**	**0.009**	-	-	-	-	**0.002**	-	**0.001**	<0.001	-
	11/4/2009	-	**0.002**	**0.001**	**0.13**	<0.001	-	-	-	-	-	Dry	-	**0.009**	-	-	-	**0.002**	**0.003**	<0.001	-	**0.038**	**0.003**	**0.024**	-	-	-	-	-	**0.001**	-	**0.056**	<0.001	-
	4/20/2010	-	**0.004**	**0.002**	**0.16**	**0.001**	-	-	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	-	**0.017**	**0.002**	**0.008**	-	-	-	-	-	**0.007**	-	**0.009**	<0.001	-
	11/11/2010	-	**0.007**	**0.002**	**0.13**	**0.001**	-	-	-	-	-	-	-	**0.003**	-	-	-	**0.003**	**0.001**	**0.002**	-	**0.022**	**0.003**	**0.042**	-	-	-	-	-	**0.002**	-	**0.007**	<0.001	-
	4/22/2011	-	**0.005**	**0.002**	**0.12**	**0.001**	-	-	-	-	-	-	-	**0.002**	-	-	-	-	<0.001	-	-	**0.014**	**0.002**	**0.032**	-	-	-	-	-	<0.001	-	**0.009**	<0.001	-
	11/14/2011	-	**0.003**	**0.003**	**0.11**	**0.001**	-	-	-	-	-	-	-	**0.012**	-	-	-	**0.002**	<0.001	**0.002**	-	**0.007**	**0.001**	**0.010**	-	-	-	-	-	**0.002**	-	**0.002**	<0.001	-
	4/30/2012	-	**0.003**	**0.012**	**0.13**	**0.002**	-	-	-	-	-	-	-	**0.075**	-	-	-	-	<0.001	-	-	**0.030**	**0.003**	**0.024**	-	-	-	-	-	**0.002**	-	**0.001**	<0.001	-
	11/5/2012	-	<0.001	**0.002**	**0.12**	<0.001	-	-	-	-	-	-	-	**0.020**	-	<0.001	**0.41**	**0.003**	<0.001	-	-	**0.014**	**0.001**	**0.12**	-	-	-	-	-	**0.021**	-	**0.018**	<0.001	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	**0.001**	**0.14**	-	**0.001**	**0.49**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	**0.014**	**0.013**	**0.12**	**0.001**	-	-	-	-	-	-	<0.001	**0.13**	-	**0.004**	**0.28**	**0.003**	**0.006**	**0.003**	-	**0.016**	-	**0.048**	-	-	-	-	-	-	**0.053**	**0.007**	-	-
	4/15/2014	-	**0.019**	**0.010**	**0.14**	<0.001	-	-	-	-	-	-	<0.001	**0.031**	<0.001	**0.002**	**0.31**	**0.002**	**0.007**	-	-	-	-	**0.037**	-	-	-	-	-	-	**0.058**	**0.032**	-	-
	11/3/2014	-	**0.012**	**0.005**	**0.014**	-	-	-	-	-	-	-	<0.001	**0.033**	<0.001	**0.003**	**0.27**	**0.004**	**0.004**	**0.004**	-	-	-	**0.15**	-	-	-	-	-	-	<0.001	**0.059**	-	-
	4/6/2015	-	**0.008**	**0.009**	**0.13**	-	-	-	-	-	-	-	-	**0.26**	-	**0.008**	**0.22**	**0.004**	**0.004**	**0.007**	-	-	-	**0.029**	-	-	-	-	-	-	<0.001	**0.017**	-	-
	11/17/2015	-	**0.007**	**0.280**	**0.14**	-	-	-	-	-	-	-	-	**0.30**	-	**0.001**	**0.17**	**0.004**	**0.002**	**0.003**	-	**0.073**	-	**0.092**	-	-	-	-	-	<0.001	-	**0.004**	-	-
	4/14/2016	-	**0.001**	**0.006**	**0.20**	-	-	-	-	-	-	-	-	**0.060**	-	**0.005**	**0.17**	**0.004**	**0.003**	**0.006**	-	-	-	**0.026**	-	-	-	-	-	-	-	**0.011**	-	-
	11/2/2016	-	**0.007**	**0.015**	**0.09**	-	-	-	-	-	-	-	-	**0.160**	-	<0.001	**0.15**	**0.005**	**0.003**	**0.006**	-	-	-	**0.055**	-	-	-	-	-	-	-	**0.004**	-	-
	4/24/2017	-	**0.002**	**0.024**	**0.14**	-	-	-	-	-	-	-	-	**0.097**	-	**0.19**	**0.002**	**0.004**	**0.004**	**0.006**	-	-	-	**0.022**	-	-	-	-	-	-	-	**0.093**	-	-
	11/7/2017	-	<0.001	**0.038**	**0.13**	-	-	-	-	-	-	-	-	**0.160**	-	**0.009**	**0.14**	**0.003**	**0.004**	**0.007**	-	**0.053**	-	**0.23**	-	-	-	-	-	**0.027**	-	**0.004**	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Barium (mg/L)

NH AGQS= 2 mg/L
WQCTS (Water and Fish Ingestion) = 1.0 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	<0.1	**0.2**	**0.1**	**0.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.2**
	11/12/1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/6/1993	<0.1	**1.2**	<0.1	**1.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	**0.7**
	7/1/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/5/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/14/1994	**0.015**	**0.034**	**0.105**	**0.256**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.043**	-	-	-	-	-	-	-
	7/15/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.8**
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**11.8**
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2.3**
	11/18/1994	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.2**
	4/12/1995	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	**0.6**
	7/28/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/8/1995	<0.4	<0.4	<0.4	**0.56**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.027**	-	-	-	-	-	-	<0.5
	4/26/1996	<0.4	<0.4	<0.4	<0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.9**	-	-	-	-	-	-	**0.7**
	7/25/1996	**0.025**	**0.036**	**0.1**	**0.21**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.1**	-	-	-	-	-	-	-
	11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/21/1997	-	**0.046**	**0.13**	**0.23**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.009**	-	**0.024**	**0.008**	-	-	-	-	-	-	-	-
	7/22/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POST-CLOSURE	4/15/1998	**0.006**	**0.016**	**0.094**	**0.14**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.42**	-	-	**0.01**	-	-	-	-	-	-	-	-
	7/6/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/1999	**0.007**	**0.013**	**0.11**	**0.14**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.011**	-	**0.064**	**0.071**	-	-	-	-	-	-	-	-
	7/27/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/5/2000	**0.014**	**0.013**	**0.096**	**0.14**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.009**	-	-	-	-	-	-	-	-
	7/7/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/25/2001	**0.01**	**0.016**	**0.081**	**0.15**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.11**	-	**0.027**	**0.023**	-	-	-	-	-	-	-	-
	7/25/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	**0.0418**	-	-	-	-	-	-	-	-	-	-	-	**0.061**	**0.11**	**0.012**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	<0.01	<0.01	**0.09**	**0.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	**1.9**	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	<0.03	<0.03	**0.12**	**0.14**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.03	-	-	-	-	-	-	-	-
	11/20/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/29/2003	<0.005	<0.005	**0.12**	**0.15**	<0.05	-	-	-	-	-	-	-	-	-	-	-	<0.05	**0.12**	<0.05	-	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	-
	11/17/2003	-	<0.005	**0.08**	**0.12**	<0.05	-	-	-	-	-	-	-	-	-	-	-	<0.05	**0.1**	<0.05	-	-	-	<0.05	<0.05	-	-	-	-	-	-	-	-
	4/28/2004	-	<0.05	**0.09**	**0.17**	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	**0.05**	<0.05	<0.05	-	-	-	-	-	-	-	-
	11/15/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/28/2005	-	<0.05	**0.14**	**0.13**	<0.05	-	-	-	-	-	0.06	-	-	-	-	-	<0.05	**0.1**	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-
	11/8/2005	-	<0.05	**0.14**	**0.17**	<0.05	-	-	-	-	-	**0.07**	-	-	-	-	-	<0.05	**0.09**	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-
	4/17/2006	-	<0.05	**0.10**	**0.15**	<0.05	-	-	-	-	-	**0.05**	-	-	-	-	-	<0.05	**0.08**	<0.05	-	<0.05	<0.05	<0.05	**2.3**	-	-	-	-	-	-	-	-
	11/20/2006	-	<0.05	**0.09**	**0.11**	**0.06**	-	-	-	-	-	**0.05**	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-
	5/2/2007	-	<0.05	**0.11**	**0.11**	<0.05	-	-	-	-	-	**0.06**	-	-	-	-	-	-	**0.06**	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	<0.05	-
	11/14/2007	-	<0.05	**0.13**	**0.12**	<0.05	-	-	-	-	-	**0.06**	-	**0.052**	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	<0.05	-
	4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2008	-	<0.05	**0.12**	**0.17**	<0.05	-	-	-	-	-	Dry	-	**0.014**	-	-	-	<0.05	<0.05	-	-	Dry	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	<0.05	-
	11/4/2009	-	**0.027**	**0.11**	**0.16**	**0.015**	-	-	-	-	-	-	-	**0.019**	-	-	-	**0.022**	**0.038**	**0.007**	-	**0.010**	**0.005**	**0.017**	-	-	-	-	-	**0.011**	-	**0.15**	**0.011**	-
	4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/2010	-	**0.022**	**0.077**	**0.13**	**0.019**	-	-	-	-	-	-	-	**0.025**	-	-	-	**0.020**	**0.027**	**0.008**	-	**0.011**	**0.005**	**0.028**	-	-	-	-	-	**0.018**	-	**0.039**	**0.017**	-
	4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2011	-	**0.023**	**0.069**	**0.11**	**0.027**	-	-	-	-	-	-	-	**0.021**	-	-	-	**0.019**	**0.025**	**0.006**	-	**0.020**	**0.006**	**0.025**	-	-	-	-	-	**0.007**	-	**0.031**	0.011	-
	4/30/2012	-	**0.024**	**0.068**	**0.13**	**0.022**	-	-	-	-	-	-	-	**0.035**	-	-	-	-	**0.018**	-	-	**0.009**	**0.005**	**0.011**	-	-	-	-	-	**0.008**	-	**0.032**	**0.010**	-
	11/5/2012	-	**0.030**	**0.062**	**0.12**	**0.021**	-	-	-	-	-	-	-	**0.034**	-	**0.075**	**0.080**	**0.020**	**0.026**	-	-	**0.013**	**0.005**	**0.027**	-	-	-	-	-	**0.025**	-	**0.075**	**0.014**	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	**0.030**	**0.039**	-	**0.043**	**0.093**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	**0.018**	**0.093**	**0.080**	**0.026**	-	-	-	-	-	-	**0.019**	**0.029**	-	**0.077**	**0.065**	**0.019**	**0.048**	**0.012**	-	**0.058**	-	**0.016**	-	-	-	-	-	-	**0.021**	**0.035**	-	-
	4/15/2014	-	-	-	-	-	-	-	-	-	-	-	**0.005**	-	**0.005**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.071**	-	-	-
	11/3/2014	-	-	-	-	-	-	-	-	-	-	-	**0.010**	-	**0.031**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.026**	-	-	-
	4/6/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.27**	-	-	-	-	-	-	-	0.011	-	-	-	-
	4/14/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/20117	-	**0.024**	**0.065**	**0.15**	-	-	-	-	-	-	-	-	**0.041**	-	**0.23**	**0.069**	**0.028**	**0.064**	**0.055**	-	**0.49**	-	**0.082**	-	-	-	-	-	**0.033**	-	**0.022**	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Cadmium (mg/L)

NH AGQS = 0.005 mg/L
WQCTS (Protection of Aquatic Life - Fresh Water Acute) = 0.21 ug/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	<0.005	**0.007**	<0.005	**0.007**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	<0.005
	11/12/1992	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-
	4/6/1993	**0.01**	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	<0.005
	7/1/1993	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-
	11/5/1993	**0.02**	**0.02**	**0.02**	**0.02**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.01**	-	-	-	-	-	-	-	**0.02**
	4/14/1994	**0.015**	<0.01	<0.01	**0.029**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.016**	-	-	-	-	-	-	-	-
	7/15/1994	<0.01	<0.01	**0.017**	**0.028**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.014**
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.022**
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.011**
	11/18/1994	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005
	4/12/1995	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	<0.005
	7/28/1995	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	**0.7**
	12/8/1995	<0.004	<0.004	<0.004	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	-	-	-	-	-	-	-	<0.004
	4/26/1996	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	<0.005
	7/25/1996	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-
	11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/21/1997	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-
	7/22/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/15/1998	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	-	-	-
	7/6/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/1999	<0.001	<0.001	**0.002**	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.007**	-	**0.012**	<0.001	-	-	-	-	-	-	-	-	-
	7/27/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/5/2000	<0.001	<0.001	**0.002**	**0.001**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-
	7/7/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/25/2001	<0.001	<0.001	<0.001	**0.0016**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.0078**	-	**0.0042**	**0.0022**	-	-	-	-	-	-	-	-	-
	7/25/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	<0.004	<0.004	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.005**	-	-	-	-	-	-	-	-	-
	11/20/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/29/2003	<0.005	**0.01**	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	11/17/2003	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	-	-	-	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	4/28/2004	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	11/15/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/28/2005	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	11/8/2005	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	4/17/2006	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	11/20/2006	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	5/2/2007	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	<0.005	-	-	-	-	-	-	<0.005	-	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	<0.005	-
	11/14/2007	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	<0.005	-
	4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2008	-	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	Dry	-	<0.005	-	-	-	<0.005	<0.005	-	-	Dry	<0.005	<0.005	-	-	-	-	-	<0.005	-	-	<0.005	-
	11/4/2009	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/2010	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	**0.010**	-	<0.001	<0.001	-
	4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2011	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/30/2012	-	<0.001	<0.001	<0.001	**0.006**	-	-	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	11/5/2012	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	-	-	-	-	-	<0.001	<0.001	<0.001	-
	4/15/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-
	11/3/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-
	4/6/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-
	4/14/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POST-CLOSURE	11/7/2017	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	<0.001	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Chloride (mg/L)

NH AGQS = NE
SMCL = 250 mg/L
WQTS (Protection of Aquatic Life - Fresh Water Acute) = 230 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	17	56	78	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-	900
	11/12/1992	24	70	78	188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	-	-	-	-	-	-	-	-
	4/6/1993	32	70	34	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	1,150
	7/1/1993	900	700	650	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,200	-	-	-	-	-	-	-	-
	11/5/1993	18	52	66	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-	-	700
	4/14/1994	6.6	56	52.6	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-
	7/15/1994	5.24	49.7	46.6	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50.1	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	950
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	450
	11/18/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	470
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
	4/12/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	490
	7/28/1995	10	54	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	-	-	-	-	-	-	510
	12/8/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,200
	4/26/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	550
	7/25/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/1996	-	66	35	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	49	52	-	-	-	-	-	-	-	-	-
	4/21/1997	-	60	32	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	23	8	-	-	-	-	-	-	-	-	-
	7/22/1997	17	37	29	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	-	49	39	-	-	-	-	-	-	-	-	-
POST-CLOSURE	11/11/1997	78	103	36	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	80	40	-	-	-	-	-	-	-	-	-
	4/15/1998	52	56	22	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-	25	-	-	-	-	-	-	-	-	-
	7/6/1998	-	39	31	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	90	17	-	-	-	-	-	-	-	-	-
	11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/1999	28	50	140	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	27	44	-	-	-	-	-	-	-	-	-
	7/27/1999	9.9	37	21	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	51	67	-	-	-	-	-	-	-	-	-
	11/18/1999	40	47	28	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	47	53	-	-	-	-	-	-	-	-	-
	5/5/2000	83	51	8.1	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-
	7/7/2000	420	53	14	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	-	54	43	-	-	-	-	-	-	-	-	-
	11/16/2000	120	73	44	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	62	60	-	-	-	-	-	-	-	-	-
	4/25/2001	72	63	34	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	42	39	-	-	-	-	-	-	-	-	-
	7/25/2001	42	63	17	100	94	-	-	77	45	460	-	-	-	-	-	-	81	<5	26	-	11	-	41	37	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	51	-	-	-	-	-	-	-	-	-	-	-	120	13	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	43	74	40	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	96	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	34	68	51	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
	11/20/2002	28	67	24	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	-	-	-	-	-	-	-	-
	4/29/2003	18	61	6.1	45	48	-	-	-	-	-	-	-	-	-	-	-	140	6.8	22	-	17	-	30	14	-	-	-	-	-	-	-	-	-
	11/17/2003	-	71	33	160	53	-	-	-	-	-	-	-	-	-	-	-	140	5.4	27	-	27	-	62	22	-	-	-	-	-	-	-	-	-
	4/28/2004	-	51	<0.5	94	64	-	-	-	-	-	41	-	-	-	-	-	120	5.5	21	6.8	19	22	45	24	-	-	-	-	-	-	-	-	-
	11/15/2004	-	38	8.8	79	31	-	-	-	-	-	19	-	-	-	-	-	67	7.3	20	-	20	4.0	74	57	-	-	-	-	-	-	-	-	-
	4/28/2005	-	65	24	130	70	-	-	-	-	-	36	-	-	-	-	-	130	14	26	-	11	8.3	45	22	-	-	-	-	-	-	-	-	-
	11/8/2005	-	47	11	120	88	-	-	-	-	-	15	-	-	-	-	-	120	12	34	-	16	6.7	62	39	-	-	-	-	-	-	-	-	-
	4/17/2006	-	51	13	98	51	-	-	-	-	-	35	-	-	-	-	-	130	29 M	36	-	23	19	61	69	-	-	-	-	-	-	-	-	-
	11/20/2006	-	11	5.0	35	63	-	-	-	-	-	4	-	-	-	-	-	50	10	7.9	-	5.2	1.8	18	3.4	-	-	-	-	-	-	-	-	-
	5/2/2007	-	80	56.0	95	68	-	-	-	-	-	32	-	-	-	-	-	-	66	-	-	28	17	41	45	-	-	-	-	-	-	-	22	-
	11/14/2007	-	63	37	98	38	-	-	-	-	-	35	-	-	-	-	-	130	59	14	-	35	13	53 M	55	-	-	-	-	-	-	-	30	-
	4/25/2008	-	74	66	110	75	-	-	-	-	-	48	-	-	-	-	-	-	59	-	-	45	10	46 M	39	-	-	-	-	33	-	-	33	-
	11/18/2008	-	70	45	230	150	-	-	-	-	-	170	-	46	-	-	-	160	39	-	-	Dry	6.1	35	28	-	-	-	-	-	-	-	-	-
	4/27/2009	-	77	52	130	35	-	-	-	-	-	46	-	-	-	-	-	-	33	-	-	25	7	37	29	-	-	-	-	26	-	-	27	-
	11/4/2009	-	75	40	180	53	-	-	-	-	-	-	-	41	-	-	-	120	44	19	-	30	16	72	-	-	-	-	-	29	-	100	30	-
	4/20/2010	-	77	40	140	30	-	-	-	-	-	-	-	6	-	-	-	-	43	-	-	35	33	38	-	-	-	-	-	27	-	87	25	-
	11/11/2010	-	57	43	140	61	-	-	-	-	-	-	-	43	-	-	-	120	52	24	-	35	9	88	-	-	-	-	-	30	-	100	29	-
	4/22/2011	-	54	50	130	39	-	-	-	-	-	-	-	19	-	-	-	-	50	-	-	35	8	50	-	-	-	-	-	24	-	73	28	-
	11/14/2011	-	62	45	160	61	-	-	-	-	-	-	-	42	-	-	-	130	48	24	-	26	5	36	-	-	-	-	-	21	-	75	24	-
	4/30/2012	-	60	39	210	41	-	-	-	-	-	-	-	33	-	-	-	-	32	-	-	27	16	53	-	-	-	-	-	26	-	73	28	-
	11/5/2012	-	77	40	210	46	-	-	-	-	-	-	-	53	-	90	48	120	27	-	-	32	19	87	-	-	-	-	-	37	-	83	30	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	60	46	-	79	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	60	42	170	91	-	-	-	-	-	-	41	42	-	96	44	130	15	12	-	28	-	79	-	-	-	-	-	-	46	66	-	-
	4/15/2014	-	64	42	97	110	-	-	-	-	-	-	34	37	6	98	40	130	12	-	-	-	-	51	-	-	-	-	-	-	78	60	-	-
	11/3/2014	-	57	39	170	-	-	-	-	-	-	-	44	47	30	130	40	120	10	23	-	-	-	89	-	-	-	-	-	-	120	50	-	-
	4/6/2015	-	50	43	78	-	-	-	-	-	-	-	-	52	-	170	42	120	10	15	-	-	-	10	-	-	-	-	-	-	82	52	-	-
	11/17/2015	-	57	38	170	-	-	-	-	-	-	-	-	41	170	-	40	120	8	20	-	20	-	85	-	-	-	-	-	44	-	47	-	-
	4/14/2016	-	51	42	86	-	-	-	-	-	-	-	-	57	-	98	44	130	8	13	-	-	-	47	-	-	-	-	-	-	-	50	-	-
	11/2/2016	-	59	40	71	-	-	-	-	-	-	-	-	54	-	220	38	120	9	18	-	-	-	110	-	-	-	-	-	-	-	50	-	-
	4/24/2017	-	67	42	53	-	-	-	-	-	-	-	-	49	-	99	45	120	10	3	-	-	-	59	-	-	-	-	-	-	-	44	-	-
	11/7/2017	-	59	37	170	-	-	-	-	-	-	-	-	45	-	210	43	120	6	18	-	39	-	80	-	-	-	-	-	48	-	51	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Chromium (mg/L)

NH AGQS= 0.10 mg/L
WQCTS (Water and Fish Ingestion) = NE

Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
	RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
5/27/1992	**0.01**	**0.1**	**0.04**	**0.07**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	**0.06**
11/12/1992	**0.1**	<0.01	**0.02**	**0.03**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.01**	-	-	-	-	-	-	-
4/6/1993	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	**0.08**
7/1/1993	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-
11/5/1993	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.05
4/14/1994	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-
7/15/1994	<0.01	<0.01	**0.016**	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-
8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.08**
9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.16**
10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
11/18/1994	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-
12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01
2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
4/12/1995	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1
7/28/1995	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1
12/8/1995	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.03	-	-	-	-	-	-	**0.018**
4/26/1996	<0.03	<0.03	<0.03	**0.04**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.03	-	-	-	-	-	-	<0.03
7/25/1996	<0.004	<0.004	<0.004	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	-	-	-	-	-	-	-
11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/21/1997	-	<0.004	<0.004	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	-	<0.004	<0.004	-	-	-	-	-	-	-	-
7/22/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/11/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/15/1998	<0.004	<0.004	<0.004	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	-	-	<0.004	-	-	-	-	-	-	-	-
7/6/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/19/1999	<0.004	<0.004	<0.004	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	-	<0.004	<0.004	-	-	-	-	-	-	-	-
7/27/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/18/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/5/2000	<0.004	<0.004	0.008	0.009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	-	-	-	-	-	-	-	-
7/7/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/16/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/25/2001	<0.004	<0.004	<0.004	**0.006**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.012**	-	**0.0045**	<0.004	-	-	-	-	-	-	-	-
7/25/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/9/2001	-	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	<0.004	<0.004	<0.004	-		-		-	-	-	-	-	-	-	-	-
11/28/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/24/2002	<0.01	<0.01	<0.01	**0.01**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-
11/20/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/29/2003	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	-
11/17/2003	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	-	-	-	-	-	-	-	-
4/28/2004	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-
11/15/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/28/2005	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-
11/8/2005	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-
4/17/2006	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	**0.26**	-	-	-	-	-	-	-	-
11/20/2006	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-
5/2/2007	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	<0.05	-
11/14/2007	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	<0.05	-
4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/18/2008	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	Dry	-	<0.002	-	-	-	<0.05	<0.05	-	-	Dry	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	<0.05	-
11/4/2009	-	<0.001	**0.002**	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	**0.007**	<0.001	-
4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/11/2010	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	**0.001**	-	<0.001	<0.001	-
4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/14/2011	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
4/30/2012	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-	**0.001**	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
11/5/2012	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	**0.002**	<0.001	-
5/7/2013	-	-	-	-	-	-	-	-	-	-	-	**0.008**	<0.001	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/19/2013	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	<0.001	<0.001	-	**0.011**	<0.001	<0.001	<0.001	<0.001	-	**0.002**	-	<0.001	-	-	-	-	-	-	<0.001	-	<0.001	-
4/15/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.003**	-	-	-
11/3/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-
4/6/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	<0.001	-	-	-	-
4/14/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/7/2017	-	<0.001	<0.001	**0.003**	-	-	-	-	-	-	-	-	<0.001	-	**0.017**	<0.001	**0.003**	<0.001	**0.017**	-	**0.008**	-	**0.002**	-	-	-	-	-	<0.001	-	<0.001	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

1,4-Dioxane (mg/L)

NH AGQS = 3 µg/L
WQCTS (Water and Fish Ingestion) = NE

Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
	RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
4/27/2009	-	-	**1**	6	-	-	-	-	-	-	<1	-	-	-	-	-	-	<1	-	-	**1**	-	5	-	-	-	-	-	-	-	-	-	-
11/4/2009	-	-	**1**	4	-	-	-	-	-	-	-	-	<1	-	-	-	-	<1	-	-	**1**	-	**2**	-	-	-	-	-	<1	-	<1	<1	-
4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/11/2010	-	<1	**2**	4	<1	-	-	-	-	-	-	-	**1**	-	-	-	<1	<1	<1	-	**1**	<1	3	-	-	-	-	-	-	-	-	-	-
4/22/2011	-	<0.25	**1**	**1**	<0.25	-	-	-	-	-	-	-	**0.95**	-	-	-	-	<0.25	-	-	**0.58**	<0.25	**2**	-	-	-	-	-	-	-	-	-	-
11/4/2011	-	<0.25	**1.3**	**1.4**	<0.25	-	-	-	-	-	-	-	**1.6**	-	-	-	<0.25	<0.25	<0.25	-	**0.56**	<0.25	-	-	-	-	-	-	-	-	-	-	-
4/30/2012	-	**0.55**	**1.6**	**2.8**	<0.25	-	-	-	-	-	-	-	**0.83**	-	-	-	-	<0.25	-	-	**1.2**	**0.50**	-	-	-	-	-	-	-	-	-	-	-
11/5/2012	-	<0.25	**1.5**	**1.3**	<0.25	-	-	-	-	-	-	-	**1.7**	-	<0.25	**2.8**	<0.25	<0.25	-	-	**1.4**	**0.55**	**2.1**	-	-	-	-	-	<0.25	-	<0.25	<0.25	-
5/7/2013	-	-	-	-	-	-	-	-	-	-	-	**0.70**	**1.2**	-	<0.25	**2.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/19/2013	-	<0.25	**0.25**	**1.1**	<0.25	-	-	-	-	-	-	**0.79**	**1.2**	-	<0.25	**2.0**	<0.25	<0.25	<0.25	-	-	-	**1.1**	-	-	-	-	-	-	**1.3**	<0.25	-	-
4/15/2014	-	-	-	-	-	-	-	-	-	-	-	<0.25	-	<0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.25	-	-	-	-
11/3/2014	-	-	-	-	-	-	-	-	-	-	-	**0.33**	-	**0.92**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.25	-	-	-	-
11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.2**	-	-	-	-	-	-	-	<0.25	-	-	-	-
11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/7/2017	-	<0.25	**2.2**	3.2	-	-	-	-	-	-	-	-	**0.71**	-	<0.25	**2.0**	<0.25	<0.25	<0.25	-	**1.4**	-	**1.4**	-	-	-	-	-	<0.25	-	**1.3**	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Iron (mg/L)

NH AGQS = NE
SMCL = 0.30 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	9.3	42	19	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110
	11/12/1992	0.06	0.35	0.21	2.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24	-	-	-	-	-	-	-	-
	4/6/1993	0.16	22.8	9.8	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	-	-	-	-	-	-	-	174
	7/1/1993	0.93	3.01	25.59	4.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.07	-	-	-	-	-	-	-	-
	11/5/1993	0.81	1.6	4.4	15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.37	-	-	-	-	-	-	-	49
	4/14/1994	2.55	8.82	3.22	46.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.25	-	-	-	-	-	-	-	-
	7/15/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	470
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135
	11/18/1994	0.98	1.75	1.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43
	4/12/1995	<0.1	4.1	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	85
	7/28/1995	<0.1	1.32	0.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	11
	12/8/1995	<0.04	0.41	3.7	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.91	-	-	-	-	-	-	-	66
	4/26/1996	<0.02	0.55	0.55	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	-	-	-	-	-	-	3.5
	7/25/1996	0.015	0.37	0.038	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-	-	-
	11/14/1996	-	0.45	12	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	5.9	3.7	-	-	-	-	-	-	-	-	-
	4/21/1997	-	0.34	1.5	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	-	3.3	0.49	-	-	-	-	-	-	-	-	-
	7/22/1997	3.4	0.66	0.036	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.095	-	0.065	0.67	-	-	-	-	-	-	-	-	-
	11/11/1997	0.024	0.48	4.8	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	-	26	0.4	-	-	-	-	-	-	-	-	-
	4/15/1998	0.012	0.59	18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	0.34	-	-	-	-	-	-	-	-	-
	7/6/1998	-	0.24	4.1	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	-	280	1.1	-	-	-	-	-	-	-	-	-
	11/16/1998	0.041	0.51	0.28	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.74	-	63	0.53	-	-	-	-	-	-	-	-	-
	4/19/1999	0.018	0.48	2.96	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.85	-	110	0.64	-	-	-	-	-	-	-	-	-
	7/27/1999	0.032	0.29	3.8	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.62	-	1500	1.3	-	-	-	-	-	-	-	-	-
	11/18/1999	0.019	0.51	410	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36	-	1900	420	-	-	-	-	-	-	-	-	-
	5/5/2000	0.071	0.53	12	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	-	-	-	-	-	-	-	-	-
	7/7/2000	0.028	0.35	62	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5	-	160	1	-	-	-	-	-	-	-	-	-
	11/16/2000	0.046	0.16	10	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	6.8	122	-	-	-	-	-	-	-	-	-
	4/25/2001	0.2	2.2	16	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	-	10	7.3	-	-	-	-	-	-	-	-	-
	7/25/2001	<0.03	0.34	22	38	<0.004	-	-	<0.044	<0.044	<0.044	<0.044	-	-	-	-	-	0.291	<0.044	<0.044	-	32	-	3,700	21	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	<0.044	-	-	-	-	-	-	-	-	-	-	-	<0.044	0.578	0.054	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	<0.05	0.29	7.4	16		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45	-	-	510	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	<0.03	0.78	15	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.77	-	-	-	-	-	-	-	-	-
	11/20/2002	<0.05	3.6	58	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24	-	-	-	-	-	-	-	-	-
	4/29/2003	<0.05	2.2	100	38	<0.05	-	-	-	-	-	-	-	-	-	-	-	<0.05	28	<0.05	-	0.78	-	15	0.14	-	-	-	-	-	-	-	-	-
	11/17/2003	-	3.1	38	25	<0.05	-	-	-	-	-	-	-	-	-	-	-	<0.05	26	0.06	-	-	-	7.0	0.18	-	-	-	-	-	-	-	-	-
	4/28/2004	-	1.9	22	37	<0.05	-	-	-	-	-	2.1	-	-	-	-	-	<0.05	0.21	<0.05	0.05	0.35	2.4	0.06	0.49	-	-	-	-	-	-	-	-	-
	11/15/2004	-	5.2	8.7	32	<0.05	-	-	-	-	-	5.4	-	-	-	-	-	<0.05	2.5	0.09	-	5.0	0.53	7.0	1.8	-	-	-	-	-	-	-	-	-
	4/28/2005	-	2.0	8.6	26	<0.05	-	-	-	-	-	7.1	-	-	-	-	-	<0.05	3.2	<0.05	-	0.72	0.27	2.4	0.59	-	-	-	-	-	-	-	-	-
	11/8/2005	-	3.0	1.8	38	<0.05	-	-	-	-	-	13	-	-	-	-	-	<0.05	10	<0.05	-	2.3	0.98	6.0	4.0	-	-	-	-	-	-	-	-	-
	4/17/2006	-	0.68	1.6	32	<0.05	-	-	-	-	-	12	-	-	-	-	-	<0.05	6.8	<0.05	-	0.58	0.57	2.9	380.0	-	-	-	-	-	-	-	-	-
	11/20/2006	-	1.1	2.9	25	<0.05	-	-	-	-	-	11	-	-	-	-	-	<0.05	0.08	<0.05	-	2.0	0.39	0.45	0.49	-	-	-	-	-	-	-	-	-
	5/2/2007	-	2.4	2.2	25	<0.05	-	-	-	-	-	20	-	-	-	-	-	-	2.4	-	-	4.7	0.87	5.30	5.40	-	-	-	-	-	-	-	0.03	-
	11/14/2007	-	1.4	2.7	37	<0.05	-	-	-	-	-	21	-	1.7	-	-	-	0.43	<0.05	0.10	-	0.67	0.23	6.0	0.32	-	-	-	-	-	-	-	0.29	-
	4/25/2008	-	0.73	3.8	37	<0.05	-	-	-	-	-	22	-	-	-	-	-	-	0.32	-	-	5.4	<0.05	4.7	0.31	-	-	-	-	0.64	-	-	0.38	-
	11/18/2008	-	0.85	0.50	48	<0.05	-	-	-	-	-	Dry	-	0.84	-	-	-	<0.05	<0.05	-	-	Dry	2.3	9.3	0.57	-	-	-	-	1.7	-	-	0.7	-
	4/27/2009	-	0.44	0.07	32	<0.05	-	-	-	-	-	3.2	-	-	-	-	-	-	<0.05	-	-	3.4	0.39	4.2	2.7	-	-	-	-	0.31	-	0.22	0.34	-
	11/4/2009	-	2.0	<0.05	40	<0.05	-	-	-	-	-	-	-	0.68	-	-	-	<0.05	0.69	<0.05	-	6.2	0.48	8.2	-	-	-	-	-	0.61	-	26	0.39	-
	4/20/2010	-	1.0	0.31	36	<0.05	-	-	-	-	-	-	-	<0.05	-	-	-	-	<0.05	-	-	3.2	0.16	3	-	-	-	-	-	0.69	-	4.5	0.20	-
	11/11/2010	-	3.7	0.17	29	<0.05	-	-	-	-	-	-	-	<0.05	-	-	-	<0.05	<0.05	<0.05	-	3.4	0.41	11	-	-	-	-	-	0.32	-	2.8	0.30	-
	4/22/2011	-	0.62	0.27	20	<0.05	-	-	-	-	-	-	-	0.07	-	-	-	-	<0.05	-	-	1.9	<0.05	7	-	-	-	-	-	2.6	-	5.1	0.23	-
	11/14/2011	-	0.43	1.1	26	<0.05	-	-	-	-	-	-	-	2.6	-	-	-	<0.05	<0.05	<0.05	-	0.08	<0.05	3.3	-	-	-	-	0.26	0.12	-	0.53	0.25	-
	4/30/2012	-	1.8	2.1	37	0.27	-	-	-	-	-	-	-	5.9	-	-	-	-	<0.05	-	-	6.5	0.38	15	-	-	-	-	-	0.42	-	0.37	0.36	-
	11/5/2012	-	0.15	0.90	31	<0.05	-	-	-	-	-	-	-	6.3	-	<0.05	46	<0.05	0.09	-	-	4.1	0.12	15	-	-	-	-	-	2.4	-	8.5	0.35	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	0.55	14	-	0.09	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	2.4	3.1	20	<0.05	-	-	-	-	-	-	3.1	16	-	2.8	38	<0.05	1.4	0.46	-	6.6	-	7.8	-	-	-	-	-	-	6.0	3.5	-	-
	4/15/2014	-	5.3	4.7	24	<0.05	-	-	-	-	-	-	<0.05	8.7	0.06	0.81	66	1.1	2.3	-	-	-	-	14	-	-	-	-	-	-	4.7	24	-	-
	11/3/2014	-	3.0	7.0	20	-	-	-	-	-	-	-	<0.05	8.9	0.05	0.98	48	1.7	2.3	4.0	-	-	-	8.3	-	-	-	-	-	-	<0.05	5.4	-	-
	4/6/2015	-	2.1	10.0	41	-	-	-	-	-	-	-	-	18	-	7.3	43	0.96	2.2	8.3	-	-	-	1.6	-	-	-	-	-	-	0.17	3.4	-	-
	11/17/2015	-	1.6	59.0	19	-	-	-	-	-	-	-	-	24	-	0.2	35	0.91	0.81	1.9	-	31	-	6.7	-	-	-	-	-	0.09	-	0.12	-	-
	4/14/2016	-	0.19	6.0	22	-	-	-	-	-	-	-	-	6.1	-	3.1	21	0.27	1.5	6.3	-	-	-	3.0	-	-	-	-	-	-	-	0.76	-	-
	11/2/2016	-	4.9	16.0	55	-	-	-	-	-	-	-	-	20.0	-	<0.05	30	2.2	1.9	9.9	-	-	-	14.0	-	-	-	-	-	-	-	0.18	-	-
	4/24/2017	-	0.62	21	27	-	-	-	-	-	-	-	-	6.9	-	41	0.58	0.50	3.2	12	-	-	-	2.5	-	-	-	-	-	-	-	28	-	-
	11/7/2017	-	0.10	21	32	-	-	-	-	-	-	-	-	16	-	7.4	51	0.95	0.42	9.4	-	42	-	43	-	-	-	-	-	5.6	-	0.24	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Lead (mg/L)

NH AGQS = 0.015 mg/L
WQCTS (Water and Fish Ingestion) = NE

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	**0.006**	**0.031**	**0.011**	**0.025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	**0.03**
	11/12/1992	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-
	4/6/1993	**0.001**	**0.001**	**0.001**	**0.001**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.001**	-	-	-	-	-	-	-	**0.018**
	7/1/1993	<0.1	<0.1	**9.06**	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.78**	-	-	-	-	-	-	-	-
	11/5/1993	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<0.01
	4/14/1994	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-
	7/15/1994	<0.05	**0.052**	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.9**
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.03**
	11/18/1994	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
	4/12/1995	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	<0.005
	7/28/1995	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	<0.005
	12/8/1995	<0.002	**0.003**	**0.006**	**0.004**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.003**	-	-	-	-	-	-	-	**0.009**
	4/26/1996	<0.02	<0.02	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	<0.02
	7/25/1996	<0.005	**0.053**	<0.005	**0.007**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-
	11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POST-CLOSURE	4/21/1997	-	**0.004**	**0.004**	**0.004**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.18**	-	**0.012**	**0.003**	-	-	-	-	-	-	-	-	-
	7/22/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/15/1998	<0.002	<0.002	**18**	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	<0.002	-	-	-	-	-	-	-	-	-
	7/6/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/1999	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.002**	-	**0.003**	<0.002	-	-	-	-	-	-	-	-	-
	7/27/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/5/2000	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-
	7/7/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/25/2001	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-	<0.002	<0.002	-	-	-	-	-	-	-	-	-
	7/25/2001	-	-	-	-		-	-										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	<0.016	-	-	-	-	-	-	-	-	-	-	-	<0.016	<0.016	<0.016	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-
	11/20/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/29/2003	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	-	<0.01	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-
	11/17/2003	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-
	4/28/2004	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-
	11/15/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/28/2005	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-
	11/8/2005	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-
	4/17/2006	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	**0.36**	-	-	-	-	-	-	-	-	-
	11/20/2006	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-
	5/2/2007	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	-	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	<0.01	-
	11/14/2007	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	**0.01**	-	-	-	-	-	-	-	<0.01	-
	4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2008	-	<0.008	<0.008	<0.008	<0.008	-	-	-	-	-	Dry	-	<0.001	-	-	-	<0.008	<0.008	-	-	Dry	<0.008	<0.008	-	-	-	-	-	-	<0.008	-	-	<0.008	-
	11/4/2009	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	<0.001	-	**0.012**	<0.001	-
	4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/2010	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	**0.058**	-	<0.001	<0.001	-
	4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2011	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/30/2012	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	**0.002**	-	-	-	-	<0.001	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	11/5/2012	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	**0.001**	-	**0.003**	<0.001	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	<0.001	<0.001	-	**0.004**	<0.001	<0.001	<0.001	<0.001	-	**0.009**	-	<0.001	-	-	-	-	-	-	-	<0.001	**0.001**	-	-
	4/15/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.003**	-	-
	11/3/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
	4/6/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.041**	-	-	-	-	-	-	-	-	-	<0.001	-	-	-
	4/14/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2017	-	<0.001	<0.001	**0.003**	-	-	-	-	-	-	-	-	<0.001	-	**0.010**	<0.001	**0.001**	<0.001	**0.006**	-	**0.028**	-	**0.006**	-	-	-	-	-	-	<0.001	-	<0.001	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Mercury (mg/L)

NH AGQS = 0.002 mg/L
WQCTS (Water and Fish Ingestion) = 0.00005 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	<0.0003	<0.0003	<0.0003	<0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003	-	-	-	-	-	-	-	-	-	<0.0003
	11/12/1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/6/1993	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	<0.0002
	7/1/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/5/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/14/1994	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	-
	7/15/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002
	11/18/1994	<0.0002	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002
	4/12/1995	<0.001	<0.001	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	<0.001
	7/28/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
	12/8/1995	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	<0.0002
	4/26/1996	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	<0.0002
	7/25/1996	**0.0008**	**0.0007**	**0.0007**	**0.0012**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.0012**	-	-	-	-	-	-	-	-
	11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/21/1997	-	**0.0003**	<0.0002	0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-
	7/22/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POST-CLOSURE	4/15/1998	<0.0002	<0.0002	<0.0003	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	-	-	-	-	-	-
	7/6/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/1999	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-
	7/27/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/5/2000	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	-
	7/7/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/25/2001	<0.00035	<0.00035	<0.00035	<0.00035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00035	-	<0.00035	<0.00035	-	-	-	-	-	-	-	-	-
	7/25/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	<0.0004	<0.0004	<0.0004	<0.0004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0004	-	-	-	-	-	-	-	-
	11/20/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/29/2003	<0.0005	<0.0005	<0.0005	<0.0005	**0.0005**	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	-	<0.0005	-	<0.0005	<0.0005	-	-	-	-	-	-	-	-	-
	11/17/2003	-	<0.0005	<0.0005	<0.0005	<0.0009	-	-	-	-	-	-	-	-	-	-	-	<0.0009	<0.0009	<0.0009	-	-	-	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-
	4/28/2004	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	<0.0009	-	-	-	-	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	**0.0013**	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-
	11/15/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/28/2005	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	<0.0009	-	-	-	-	-	<0.0009	<0.0009	<0.0009	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-
	11/8/2005	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	<0.0009	-	-	-	-	-	<0.0009	<0.0009	<0.0009	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-
	4/17/2006	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	<0.0009	-	-	-	-	-	<0.0009	<0.0009	<0.0009	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-
	11/20/2006	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	<0.0009	-	-	-	-	-	<0.0009	<0.0009	<0.0009	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-
	5/2/2007	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	<0.0009	-	-	-	-	-	-	<0.0009	-	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	<0.0009	-
	11/14/2007	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-	-	-	-	<0.0009	-	-	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-	-
	4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2008	-	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	Dry	-	<0.01	-	-	-	<0.0009	<0.0009	-	-	Dry	<0.0009	<0.0009	-	-	-	-	-	<0.0009	-	-	<0.0009	-
	11/4/2009	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	**0.0002**	**0.0002**	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/2010	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	-	<0.0001	<0.0001	**0.0001**	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	-
	4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2011	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	-	<0.0001	**0.0002**	**0.0002**	-	<0.0001	-	<0.0001	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	-
	4/30/2012	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	<0.0001	-	-	-	-	**0.0003**	-	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	-
	11/5/2012	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	**0.0001**	<0.0001	-	<0.0001	-	<0.0001	-	-	-	-	-	-	<0.0001	<0.0001	-	-
	4/15/2014	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	-
	11/3/2014	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	-
	4/6/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	-	-	<0.0001	-	-	-
	4/14/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2017	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	**0.0002**	-	<0.0001	-	<0.0001	-	-	-	-	-	<0.0001	-	<0.0001	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Manganese (mg/L)

NH AGQS = 0.840 mg/L
WQCTS (Water and Fish Ingestion) = 0.05 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	**0.14**	**0.93**	**4.9**	**4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.16**	-	-	-	-	-	-	-	-	-	**6.4**
	11/12/1992	**0.01**	**0.01**	**4.75**	**0.965**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2.53**	-	-	-	-	-	-	-	-
	4/6/1993	<0.01	**0.56**	**6.62**	**4.32**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.04**	-	-	-	-	-	-	-	**1.56**
	7/1/1993	**0.59**	**0.39**	**6.24**	**5.24**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-
	11/5/1993	**0.12**	**0.34**	**10.8**	**4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.7**	-	-	-	-	-	-	-	**0.78**
	4/14/1994	**1.31**	**1.07**	**11.3**	**4.75**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4.29**	-	-	-	-	-	-	-	-
	7/15/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1994	**0.05**	**0.19**	**9.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.08**	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/12/1995	<0.05	**0.68**	**10.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-
	7/28/1995	<0.05	**0.26**	**12.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**7.3**	-	-	-	-	-	-	-	-
	12/8/1995	<0.01	**0.56**	**13**	**3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6.1**	-	-	-	-	-	-	-	-
	4/26/1996	<0.01	**0.61**	**9.2**	**3.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-
	7/25/1996	<0.02	**0.66**	**15**	**5.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**8.4**	-	-	-	-	-	-	-	-
	11/14/1996	-	**0.77**	**16**	**3.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.37**	-	**1.8**	**0.54**	-	-	-	-	-	-	-	-	-
	4/21/1997	-	**0.4**	**14**	**3.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.01**	-	**1.4**	**0.11**	-	-	-	-	-	-	-	-	-
	7/22/1997	**0.8**	**0.47**	**0.36**	**3.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.42**	-	**2.8**	**0.8**	-	-	-	-	-	-	-	-	-
	11/11/1997	<0.005	**0.73**	**19**	**3.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.031**	-	**4.4**	**0.14**	-	-	-	-	-	-	-	-	-
	4/15/1998	<0.005	**0.67**	**14**	**3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.5**	-	-	**0.055**	-	-	-	-	-	-	-	-	-
	7/6/1998	-	**0.52**	**21**	**4.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**10**	-	**3.6**	**0.17**	-	-	-	-	-	-	-	-	-
	11/16/1998	<0.005	**0.64**	**3.9**	**3.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.028**	-	**3**	**0.065**	-	-	-	-	-	-	-	-	-
	4/19/1999	<0.005	**0.57**	**6.8**	**3.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.01**	-	**3.4**	**3.8**	-	-	-	-	-	-	-	-	-
	7/27/1999	<0.005	**0.51**	**6.3**	**3.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**16**	-	**54**	**1.8**	-	-	-	-	-	-	-	-	-
	11/18/1999	<0.005	**0.61**	**7.8**	**3.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.32**	-	**320**	**94**	-	-	-	-	-	-	-	-	-
	5/5/2000	**0.018**	**0.55**	**7.8**	**4.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.096**	-	-	-	-	-	-	-	-	-
	7/7/2000	**0.16**	**0.56**	**7**	**5.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**8.5**	-	**50**	**2.1**	-	-	-	-	-	-	-	-	-
	11/16/2000	<0.005	**0.51**	**4.8**	**4.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4.5**	-	**2.6**	**51**	-	-	-	-	-	-	-	-	-
	4/25/2001	<0.005	**0.97**	**2.9**	**5.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.6**	-	**1.7**	**1.8**	-	-	-	-	-	-	-	-	-
	7/25/2001	<0.003	**0.62**	**2.5**	**4.8**	**1.53**	-	-	**0.0946**	**0.893**	**0.0834**	-	-	-	-	-	-	**0.413**	**0.404**	**0.175**	-	**1.2**	-	**100**	**5.7**	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	**0.902**	-	-	-	-	-	-	-	-	-	-	-	**0.399**	**1.730**	**0.195**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	<0.03	**0.42**	**1.2**	**2.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.03**	-	-	**110**	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	<0.03	**0.81**	**2.1**	**6.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.39**	-	-	-	-	-	-	-	-	-
	11/20/2002	<0.03	**1.1**	**4.8**	**5.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.05**	-	-	-	-	-	-	-	-	-
	4/29/2003	<0.03	**0.89**	**6.8**	**2.8**	**0.23**	-	-	-	-	-	-	-	-	-	-	-	**0.34**	**9.9**	**0.11**	-	**0.52**	-	**3.5**	**0.05**	-	-	-	-	-	-	-	-	-
	11/17/2003	-	**1.1**	**3.0**	**3.6**	**0.2**	-	-	-	-	-	-	-	-	-	-	-	**0.45**	**19**	**0.16**	-	-	-	**2.5**	**0.1**	-	-	-	-	-	-	-	-	-
	4/28/2004	-	**0.75**	**1.9**	**5.5**	**0.08**	-	-	-	-	-	**4.9**	-	-	-	-	-	**0.48**	**5.8**	**0.12**	<0.05	**0.84**	**1.1**	**0.64**	<0.05	-	-	-	-	-	-	-	-	-
	11/15/2004	-	**0.81**	**1.0**	**5.2**	<0.03	-	-	-	-	-	**4.6**	-	-	-	-	-	**0.09**	**14**	**0.17**	-	**1.1**	**0.66**	**2.0**	**0.17**	-	-	-	-	-	-	-	-	-
	4/28/2005	-	**0.86**	**0.88**	**4.7**	**0.04**	-	-	-	-	-	**6.8**	-	-	-	-	-	**0.05**	**18**	**0.16**	-	**0.53**	**0.29**	**1.1**	<0.03	-	-	-	-	-	-	-	-	-
	11/8/2005	-	**0.71**	**0.21**	**3.8**	<0.03	-	-	-	-	-	**5.3**	-	-	-	-	-	<0.03	**10**	**0.10**		**1.1**	**0.63**	**2.5**	**1.9**	-	-	-	-	-	-	-	-	-
	4/17/2006	-	**0.72**	**0.33**	**3.0**	<0.03	-	-	-	-	-	**4.2**	-	-	-	-	-	<0.03	**11**	**0.07**	-	**0.94**	**0.68**	**1.4**	**260**	-	-	-	-	-	-	-	-	-
	11/20/2006	-	**0.78**	**0.36**	**2.3**	**1.5**	-	-	-	-	-	**2.7**	-	-	-	-	-	**0.03**	**7.5**	**0.10**	-	**1.1**	**0.48**	**1.5**	**0.19**	-	-	-	-	-	-	-	-	-
	5/2/2007	-	**1**	**4.1**	**2.5**	**1.1**	-	-	-	-	-	**3.2**	-	-	-	-	-	-	**8.5**	-	-	**1.6**	**0.74**	**2.3**	**2.7**	-	-	-	-	-	-	-	**0.05**	-
	11/14/2007	-	**1**	**1.9**	**3.4**	**0.54**	-	-	-	-	-	**3.8**	-	**4.0**	-	-	-	**0.13**	**4**	**0.12**	-	**1.0**	**0.39**	**2.8**	**0.26**	-	-	-	-	-	-	-	**0.06**	-
	4/25/2008	-	**1.1**	**6.1**	**3.9**	**2.9**	-	-	-	-	-	**4.0**	-	-	-	-	-	-	**6.1**	-	-	**1.8**	**0.41**	**2.4**	**0.13**	-	-	-	-	**0.30**	-	-	**0.10**	-
	11/18/2008	-	**1.2**	**0.75**	**4.7**	**4.2**	-	-	-	-	-	Dry	-	**0.27**	-	-	-	<0.03	**0.70**	-	-	Dry	**0.63**	**2.5**	**0.05**	-	-	-	-	**3.2**	-	-	**0.15**	-
	4/27/2009	-	**1.2**	**0.35**	**3.5**	**3.7**	-	-	-	-	-	**1.5**	-	-	-	-	-	-	**0.93**	-	-	**1.2**	**0.31**	**1.5**	**0.77**	-	-	-	-	**0.11**	-	**0.17**	**0.12**	-
	11/4/2009	-	**1.2**	**0.11**	**4.2**	**2.2**	-	-	-	-	-	-	-	**0.94**	-	-	-	**0.038**	**4.9**	**0.11**	-	**1.8**	**0.48**	**2.8**	-	-	-	-	-	**0.29**	-	**3.6**	**0.035**	-
	4/20/2010	-	**1.0**	**0.89**	**3.2**	**0.24**	-	-	-	-	-	-	-	**0.037**	-	-	-	-	**0.60**	-	-	**0.85**	**0.29**	**0.92**	**-**	-	-	-	-	**0.15**	-	**0.69**	**0.031**	-
	11/11/2010	-	**0.91**	**0.27**	**3.2**	**4.6**	-	-	-	-	-	-	-	**0.31**	-	-	-	**0.007**	**1.7**	**0.028**	-	**1.2**	**0.27**	**2.6**	**-**	-	-	-	-	**0.15**	-	**0.14**	**0.045**	-
	4/22/2011	-	**0.7**	**0.42**	**2.8**	**3.6**	-	-	-	-	-	-	-	**0.10**	-	-	-	-	**1.6**	-	-	**0.64**	**0.21**	**1.6**	**-**	-	-	-	-	**0.054**	-	**0.39**	**0.042**	-
	11/14/2011	-	**0.87**	**1.8**	**3.1**	**6.9**	-	-	-	-	-	-	-	**1.1**	-	-	-	**0.009**	**3.8**	**0.009**	-	**1.5**	**0.31**	**2.1**	**-**	-	-	-	**0.026**	**0.061**	-	**0.082**	**0.031**	-
	4/30/2012	-	**0.92**	**1.6**	**4.1**	**6.2**	-	-	-	-	-	-	-	**1.2**	-	-	-	-	**2.2**	-	-	**1.6**	**0.33**	**2.4**	**-**	-	-	-	-	**0.13**	-	**0.069**	**0.066**	-
	11/5/2012	-	**0.98**	**1.9**	**3.9**	**5.5**	-	-	-	-	-	-	-	**3.5**	-	**1.2**	**2.8**	**0.024**	**2.8**	-	-	**1.6**	**0.064**	**1.9**	**-**	-	-	-	-	**1.1**	-	**1.1**	**0.036**	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	**5.9**	**3.6**	-	**0.13**	**3.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	**0.81**	**3.1**	**3.6**	**6.4**	-	-	-	-	-	-	**3.8**	**3.4**	-	**0.19**	**3.2**	<0.005	**20**	**0.056**	-	**2.0**	-	**1.4**	-	-	-	-	-	-	-	**1.3**	**0.25**	-	-
	4/15/2014	-	**1.1**	**2.3**	**6.0**	**8.3**	-	-	-	-	-	-	**0.052**	**1.7**	**0.018**	**0.15**	**5.6**	**0.27**	**20**	-	-	-	-	**1.6**	-	-	-	-	-	-	**1.6**	**3.9**	-	-
	11/3/2014	-	**0.77**	**2.9**	**3.8**	-	-	-	-	-	-	**1.6**	**4.1**	**0.15**	**0.21**	**3.8**	**0.21**	**25**	**0.14**	-	-	-	**1.5**	-	-	-	-	-	-	<0.005	**2.2**	-	-
	4/6/2015	-	**0.70**	**2.5**	**5.6**	-	-	-	-	-	-	-	**3.9**	-	**0.51**	**3.6**	**0.13**	**19**	**0.20**	-	-	-	**0.37**	-	-	-	-	-	-	**0.59**	**1.4**	-	-
	11/17/2015	-	**0.83**	**2**	**4.1**	-	-	-	-	-	-	-	**3.6**	-	**0.39**	**2.8**	**0.23**	**17**	**0.13**	-	**2.8**	-	**1.6**	-	-	-	-	-	**0.018**	-	**1.7**	-	-
	4/14/2016	-	**0.64**	**1.3**	**3.9**	-	-	-	-	-	-	-	**1.6**	-	**0.43**	**2.1**	**0.089**	**11**	**0.19**	-	-	-	**0.68**	-	-	-	-	-	-	-	**1.5**	-	-
	11/2/2016	-	**0.76**	**2.8**	**3.9**	-	-	-	-	-	-	-	**3.0**	-	**0.71**	**2.2**	**0.16**	**11**	**0.26**	-	-	-	**1.2**	-	-	-	-	-	-	-	**2.2**	-	-
	4/24/2017	-	**0.81**	**2.3**	**2.3**	-	-	-	-	-	-	-	**1.1**	-	**3.1**	**0.80**	**0.11**	**3.6**	**0.24**	-	-	-	**0.67**	-	-	-	-	-	-	-	**390**	-	-
POST-CLOSURE	11/7/2017	-	**0.72**	**2.4**	**5.2**	-	-	-	-	-	-	-	**3.7**	-	**2.4**	**4.3**	**0.22**	**15**	**0.28**	-	**4.8**	-	**4.1**	-	-	-	-	-	**2.9**	-	**2.2**	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Nitrate (mg/L)

NH AGQS = 10 mg/L
WQCTS (Water and Fish Ingestion) = 10 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	<0.05
	11/12/1992	**1.35**	**0.36**	**2.15**	**0.38**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	**0.34**	-	-	-	-	-	-	-	-
	4/6/1993	**0.5**	**0.5**	**0.5**	**0.5**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	**0.5**	-	-	-	-	-	-	-	**1.5**
	7/1/1993	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
	11/5/1993	**0.6**	**0.5**	**0.5**	**0.5**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	**0.5**	-	-	-	-	-	-	-	**1.5**
	4/14/1994	**0.197**	**0.091**	**0.226**	<0.03	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.03	-	-	-	-	-	-	-	-
	7/15/1994	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.03	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1994	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/12/1995	**0.52**	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
	7/28/1995	**0.7**	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
	12/8/1995	**0.17**	<0.05	**0.16**	**0.078**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-
	4/26/1996	**0.1**	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-
	7/25/1996	**0.17**	<0.05	<0.05	**0.07**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-
	11/14/1996	-	**0.6**	**0.47**	**19**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	**3.2**	-	**0.74**	**0.49**	-	-	-	-	-	-	-	-
	4/21/1997	-	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	**0.34**	-	**2.1**	**1.4**	-	-	-	-	-	-	-	-
POST-CLOSURE	7/22/1997	**0.35**	<0.05	**0.06**	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	-
	11/11/1997	**0.89**	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	-
	4/15/1998	**0.46**	<0.05	**0.06**	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	<0.05	-	-	<0.05	-	-	-	-	-	-	-	-
	7/6/1998	-	<0.05	<0.05	**5.6**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	**4.1**	-	<0.05	<0.05	-	-	-	-	-	-	-	-
	11/16/1998	**0.52**	<0.05	**0.31**	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	**0.08**	-	<0.05	**0.12**	-	-	-	-	-	-	-	-
	4/19/1999	**0.39**	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	-
	7/27/1999	**0.096**	<0.05	**0.37**	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	<0.05	-	<0.05	**0.18**	-	-	-	-	-	-	-	-
	11/18/1999	**0.51**	<0.05	<0.05	<0.3	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	**0.09**	-	<0.1	<0.1	-	-	-	-	-	-	-	-
	5/5/2000	**2.7**	**0.1**	**0.39**	**0.1**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	**0.1**	-	-	-	-	-	-	-	-
	7/7/2000	**7**	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	**0.43**	-	<0.05	**0.06**	-	-	-	-	-	-	-	-
	11/16/2000	**2.1**	**0.051**	**0.55**	<0.1	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	<0.05	-	<0.05	**0.38**	-	-	-	-	-	-	-	-
	4/25/2001	**0.98**	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	<0.05	-	**0.12**	<0.05	-	-	-	-	-	-	-	-
	7/25/2001	**1**	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	<0.5	-	<0.5	<0.5	-	-	-	-	-	-	-	-
	8/9/2001	**-**	-	-	-	**1.3**	-	-	-	-	-	-	-	-		-	-	<0.100	<0.100	**0.140**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	**1.3**	**0.16**	**0.44**	**3**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	**0.26**	-	-	<0.05	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	**1**	**0.2**	**0.3**	**0.2**	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	**0.2**	-	-	-	-	-	-	-	-
	11/20/2002	**0.8**	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-
	4/29/2003	**0.7**	<0.1	**0.2**	<0.1	**1.8**	-	-	-	-	-	-	-	-		-	-	<0.1	<0.1	**0.2**	-	<0.1	-	<0.1	**0.3**	-	-	-	-	-	-	-	-
	11/17/2003	-	<0.1	<0.1	<0.1	**3.6**	-	-	-	-	-	-	-	-		-	-	**0.1**	<0.1	**0.2**	-	<0.1	-	<0.1	<0.1	-	-	-	-	-	-	-	-
	4/28/2004	**-**	<0.1	**0.3**	<0.1	**2.6**	-	-	-	-	-	**0.4**	-	-		-	-	**0.1**	<0.1	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
	11/15/2004	**-**	<0.1	**0.9**	<0.1	**0.8**	-	-	-	-	-	**0.2**	-	-		-	-	**0.2**	<0.1	**0.2**	-	<0.1	<0.1	<0.1	**2.1**	-	-	-	-	-	-	-	-
	4/28/2005	**-**	<0.1	**0.1**	<0.1	**2.0**	-	-	-	-	-	**0.2**	-	-		-	-	**0.1**	<0.1	**0.1**	-	**0.8**	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
	11/8/2005	-	<0.1	**1.2**	<0.1	**1.0**	-	-	-	-	-	<0.1	-	-		-	-	**0.3**	<0.1	**0.2**	-	<0.5	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
	4/17/2006	**-**	<0.1	<0.1	<0.1	**0.4**	-	-	-	-	-	<0.1	-	-		-	-	**0.2**	<0.1	**0.2**	-	<0.1	<0.1	<0.1	**0.1**	-	-	-	-	-	-	-	-
	11/20/2006	**-**	<0.1	<0.1	<0.1	**0.2**	-	-	-	-	-	<0.1	-	-		-	-	<0.1	<0.1	**0.1**	-	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
	5/2/2007	-	<0.1	**0.2**	<0.1	**0.2**	-	-	-	-	-	<0.1	-	-		-	-	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	<0.1	-
	11/14/2007	**-**	<0.1	**0.6**	<0.1	<0.1	-	-	-	-	-	<0.1	-	<0.5		-	-	**0.4**	**0.2**	**0.1**	-	<0.1	**0.1**	<0.1	<0.1	-	-	-	-	-	-	**0.2**	-
	4/25/2008	-	<0.1	**0.2**	<0.1	**0.2**	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	-	-	-	-	<0.1	-	<0.1	-
	11/18/2008	-	<0.1	**1.1**	<0.1	<0.1	-	-	-	-	-	<0.1	-	**0.27**	-	-	-	**0.2**	<0.1	**-**	-	Dry	<0.1	<0.1	<0.1	-	-	-	-	<0.1	-	-	-
	4/27/2009	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	**0.7**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	<0.5	-	<0.5	-
	11/4/2009	-	<0.5	**0.6**	<0.5	<0.5	-	-	-	-	-	-	-	**0.7**	-	-	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	4/20/2010	-	<0.5	**1.3**	<0.5	**1.4**	-	-	-	-	-	-	-	<0.5	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	11/11/2010	-	<0.5	**1.0**	<0.5	<0.5	-	-	-	-	-	-	-	**0.7**	-	-	-	<0.5	**0.6**	<0.5	-	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	4/22/2011	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	-	-	-	**1.0**	-	-	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	11/14/2011	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	-	-	<0.5	**0.8**	<0.5	-	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	4/30/2012	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	-	-		<0.5	-	-	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	11/5/2012	-	<0.5	**1.3**	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	**0.6**	-	-	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	<0.5	<0.5	-	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	**-**	<0.5	-	-	-	-	-	**-**	<0.5	<0.5	-	-
	4/15/2014	-	<0.5	**0.8**	<0.5	<0.5	-	-	-	-	-	-	**0.8**	<0.5	<0.5	**0.7**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	**-**	<0.5	-	-	-	-	-	**-**	<0.5	<0.5	-	-
	11/3/2014	-	<0.5	**3.3**	<0.5	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.8**	**1.1**	-	<0.5	**-**	<0.5	-	-	-	-	-	**-**	**1.2**	<0.5	-	-
	4/6/2015	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	-	**0.9**	<0.5	<0.5	**0.9**	**0.5**	-	-	-	-	<0.5	-	-	-	-	-	-	<0.5	<0.5	-	-
	11/17/2015	-	<0.5	0.7	<0.5	-	-	-	-	-	-	-	-	<0.5	-	**0.8**	<0.5	<0.5	**<0.5**	**0.5**	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	-	<0.5	<0.5	-	-
	4/14/2016	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	-	-	-	-	<0.5	<0.5	-	-
	11/2/2016	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	-	**2**	<0.5	1	1.4	1.1	-	-	-	<0.5	<0.5	-	-	-	-	-	-	<0.5	<0.5	-	-
	4/24/2017	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	-	**1.0**	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	-	-	-	-	<0.5	<0.5	-	-
	11/7/2017	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	<0.5	-	**1.2**	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	-	-	-	-	-	-	<0.5	<0.5	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

pH (mg/L)

NH AGQS = NE
WQCTS (Water and Fish Ingestion) = NE

Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations				Surface Water Monitoring Stations									Leachate Monitoring Well
	RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/ South Spring)	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
5/27/1992	6.51	6.42	6.53	6.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.58	-	-	-	-	-	-	-	-	-	-	-
11/12/1992	7.00	6.50	6.30	6.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.70	-	-	-	-	-	-	-	-
4/6/1993	6.95	6.41	6.51	6.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.15	-	-	-	-	-	-	-	6.90
4/25/1996	6.34	7.15	6.42	6.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.72	-	-	-	-	-	-	-	6.84
7/25/1996	6.48	6.67	7.05	6.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.58	-	-	-	-	-	-	-	-
4/21/1997	-	6.70	6.70	6.60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.10	7.10	-	6.60	-		-	-	-	-	-	-	-	-
7/22/1997	6.42	6.96	6.46	6.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.19	7.08	-	6.72	-		-	-	-	-	-	-	-	-
7/27/1999	6.68	6.52	6.37	6.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.92	7.04	-	7.36	-		-	-	-	-	-	-	-	-
4/25/2001	6.81	6.86	6.60	6.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.44	6.77	-	7.02	-		-	-	-	-	-	-	-	-
7/25/2001	6.40	6.61	6.51	6.43	5.90	-	-	5.80	5.90	5.50	-	-	-	-	-	-	7.10	7.40	7.10	-	7.08	7.03	-	6.63	-		-	-	-	-	-	-	-	-
8/9/2001	-	-	-	-	6.60	-	-	7.00	7.10	6.10	-	-	-	-	-	-	7.10	7.40	7.60	-	-	-	-	-	-		-	-	-	-	-	-	-	-
11/28/2001	6.22	6.41	6.40	6.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.69	6.96	-	6.90	-		-	-	-	-	-	-	-	-
4/24/2002	6.94	6.88	6.70	6.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.10	-		-	-	-	-	-	-	-	-
11/20/2002	6.19	6.29	6.26	6.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.94	-		-	-	-	-	-	-	-	-
4/29/2003	6.37	6.19	6.51	6.57	6.16	-	-	-	-	-	-	-	-	-	-	-	9.20	6.95	6.78	-	6.37	6.38	-	6.77	-	-	-	-	-	-	-	-	-	-
11/17/2003	-	6.72	6.47	6.66	6.35	-	-	-	-	-	-	-	-	-	-	-	7.26	6.70	6.80	-	6.59	6.82	-	6.88	-	-	-	-	-	-	-	-	-	-
4/28/2004	-	6.43	6.46	6.90	6.53	-	-	-	-	-	6.80	-	-	-	-	-	7.46	8.23	7.62	7.69	-	6.76	6.58	6.81	-	-	-	-	-	-	-	-	-	-
11/15/2004	-	6.44	6.52	6.50	6.39	-	-	-	-	-	6.45	-	-	-	-	-	7.38	7.06	6.86	-	-	6.72	6.56	6.97	-	-	-	-	-	-	-	-	-	-
4/28/2005	-	6.39	6.33	6.81	6.48	-	-	-	-	-	6.77	-	-	-	-	-	7.44	8.04	7.51	-	-	6.70	6.49	6.74	-	-	-	-	-	-	-	-	-	-
11/8/2005	-	6.45	6.67	6.65	6.42	-	-	-	-	-	6.63	-	-	-	-	-	7.41	6.86	6.88	-	-	7.08	6.64	7.23	-	-	-	-	-	-	-	-	-	-
4/17/2006	-	6.29	6.60	6.46	6.24	-	-	-	-	-	6.43	-	-	-	-	-	6.98	7.36	6.77	-	-	6.64	6.41	7.06	7.12	-	-	-	-	-	-	-	-	-
11/20/2006	-	6.10	6.35	6.46	6.23	-	-	-	-	-	6.34	-	-	-	-	-	7.13	7.32	7.28	-	-	6.46	6.33	7.11	7.62	-	-	-	-	-	-	-	-	-
5/2/2007	-	6.40	6.35	6.54	6.41	-	-	-	-	-	6.50	-	-	-	-	-	-	6.90	-	-	-	6.76	6.56	6.91	6.95	-	-	-	-	-	-	-	7.09	-
11/14/2007	-	6.29	6.38	6.49	6.35	-	-	-	-	-	6.47	-	-	-	-	-	7.09	6.87	7.16	-	-	6.61	6.44	6.98	6.90	-	-	-	-	-	-	-	7.04	-
4/25/2008		6.01	5.91	6.05	6.33	-	-	-	-	-	6.64	-	-	-	-	-	6.65	-	-	-	-	6.37	6.39	6.77	6.65	-	-	-	-	6.83	-	-	6.71	-
11/18/2008	-	5.96	5.97	6.11	6.37	-	-	-	-	-	Dry	-	6.56	-	-	-	7.02	6.68	-	-	-	-	6.44	6.80	6.77	-	-	-	-	6.88	-	-	6.69	-
4/27/2009	-	6.00	5.89	6.08	6.26	-	-	-	-	-	6.70	-	-	-	-	-	-	6.61	-	-	-	6.38	6.41	6.73	6.81	-	-	-	-	6.88	-	6.69	6.76	-
11/4/2009	-	5.88	6.42	6.35	6.51	-	-	-	-	-	-	-	6.42	-	-	-	7.44	6.81	7.17	-	-	6.42	6.14	6.68	-	-	-	-	-	6.83	-	6.72	6.71	-
4/20/2010	-	5.84	6.45	6.31	6.57	-	-	-	-	-	-	-	6.49	-	-	-	-	6.87	-	-	-	6.40	6.12	6.73	-	-	-	-	-	6.86	-	6.70	6.70	-
11/11/2010	-	5.83	6.51	6.41	6.56	-	-	-	-	-	-	-	6.36	-	-	-	7.31	6.77	7.13	-	-	6.39	6.08	6.56	-	-	-	-	-	6.81	-	6.77	6.63	-
4/22/2011	-	5.93	6.55	6.39	6.61	-	-	-	-	-	-	-	6.44	-	-	-	-	6.83	-	-	-	6.38	6.06	6.67	-	-	-	-	-	6.8	-	6.72	6.63	-
11/14/2011	-	5.91	6.58	6.49	6.61	-	-	-	-	-	-	-	6.29	-	-	-	7.27	6.7	7.06	-	-	6.34	6.11	6.63	-	-	-	-	-	6.78	-	6.68	6.68	-
4/30/2012	-	5.96	6.38	6.41	6.38	-	-	-	-	-	-	-	6.44	-	-	-	-	6.84	-	-	-	6.49	6.4	6.83	-	-	-	-	-	6.59	-	6.77	6.68	-
11/5/2012	-	6.02	5.66	6.48	6.38	-	-	-	-	-	-	-	6.18	-	6.23	6.7	7.68	6.84	7.16	-	-	6.51	6.33	6.9	-	-	-	-	-	6.01	-	6.85	5.87	-
5/7/2013	-	-	-	-	-	-	-	-	-	-	-	6.40	6.53	-	6.29	6.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/19/2013	-	6.34	6.60	6.81	6.81	-	-	-	-	-	-	6.68	6.97	-	6.55	6.79	7.91	7.16	7.21	-	-	6.98	-	7.18	-	-	-	-	-	7.45	7.48	-	-
11/3/2014	-	6.35	6.15	6.53	-	-	-	-	-	-	-	6.55	6.77	6.92	6.19	6.67	7.50	6.72	7.02	-	-	-	-	6.94	-	-	-	-	-	-	7.22	7.35	-	-
4/6/2015	-	7.1	6.50	6.72	-	-	-	-	-	-	-	-	6.89	-	6.36	6.75	7.75	8.1	8.15	-	-	-	-	8.05	-	-	-	-	-	-	7.41	7.46	-	-
11/17/2015	-	6.91	6.77	6.89	-	-	-	-	-	-	-	-	7.03	-	7.03	6.97	7.27	6.99	7.58	-	-	6.99	-	7.64	-	-	-	-	-	8.24	-	7.83	-	-
4/14/2016	-	6.50	6.51	6.63	-	-	-	-	-	-	-	-	6.82	-	6.39	6.78	7.17	6.99	7.78	-	-	-	-	7.48	-	-	-	-	-	-	-	7.46	-	-
11/2/2016	-	6.91	6.40	7.41	-	-	-	-	-	-	-	-	6.56	-	6.37	6.78	6.92	6.70	7.12	-	-	-	-	8.95	-	-	-	-	-	-	-	6.37	-	-
4/24/2017	-	6.56	6.30	6.68	-	-	-	-	-	-	-	-	6.73	-	6.43	7.92	7.75	12.78	7.95	-	-	-	-	7.60	-	-	-	-	-	-	-	7.19	-	-
4/24/2017	-	6.78	6.45	7.48	-	-	-	-	-	-	-	-	7.34	-	6.88	7.18	8.22	7.44	7.29	-	-	7.36	-	7.38	-	-	-	-	-	7.38	-	7.46	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Selenium (mg/L)

NH AGQS = 0.05 mg/L
WQCTS (Water and Fish Ingestion) = 0.170 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	<0.01
	11/12/1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/6/1993	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<0.01
	7/1/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/5/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/14/1994	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-
	7/15/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002
	11/18/1994	<0.002	**0.005**	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002
	4/12/1995	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	<0.005
	7/28/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005
	12/8/1995	<0.005	<0.005	**0.01**	**0.009**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.006**	-	-	-	-	-	-	-	**0.019**
	4/26/1996	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<0.01
	7/25/1996	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.007	-	-	-	-	-	-	-	-
	11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/21/1997	-	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	7/22/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POST-CLOSURE	4/15/1998	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	**0.006**	-	-	-	-	-	-	-	-	-
	7/6/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/1999	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	<0.005	<0.005	-	-	-	-	-	-	-	-	-
	7/27/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/5/2000	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-
	7/7/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/25/2001	**0.018**	**0.013**	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	**0.012**	<0.005	-	-	-	-	-	-	-	-	-
	7/25/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	**0.0711**	-	-	-	-	-	-	-	-	-	-	-	**0.082**	**0.101**	<0.034	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.03	-	-	-	-	-	-	-	-	-
	11/20/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/29/2003	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	-	-
	11/17/2003	-	<0.05	**0.06**	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	<0.05	**0.05**	<0.05	-	-	-	<0.05	<0.05	-	-	-	-	-	-	-	-	-
	4/28/2004	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
	11/15/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/28/2005	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
	11/8/2005	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
	4/17/2006	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	**0.13**	-	-	-	-	-	-	-	-	-
	11/20/2006	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
	5/2/2007	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	<0.05	-
	11/14/2007	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	<0.05	-
	4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2008	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	Dry	-	<0.002	-	-	-	<0.05	<0.05	-	-	Dry	<0.05	<0.05	-	-	-	-	-	-	<0.05	-	-	<0.05	-
	11/4/2009	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/2010	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2011	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/30/2012	-	<0.0001	<0.0001	<0.0001	<0.001	-	-	-	-	-	-	-	<0.0001	-	-	-	-	<0.0001	-	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	-
	11/5/2012	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	-	-	-	-	-	<0.001	<0.001	-	-
	4/15/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-
	11/3/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-
	4/6/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-
	4/14/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/7/2017	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	<0.001	-	**0.002**	<0.001	<0.001	<0.001	<0.001	-	**0.003**	-	<0.001	-	-	-	-	-	<0.001	-	<0.001	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Silver (mg/L)

NH AGQS = 0.10 mg/L
WQCTS (Water and Fish Ingestion) = 0.05 mg/L

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	<0.02	<0.02	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	<0.02
	11/12/1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/6/1993	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<0.01
	7/1/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/5/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/14/1994	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.007	-	-	-	-	-	-	-	-
	7/15/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.02**
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.03**
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.01**
	11/18/1994	**0.06**	**0.03**	**0.04**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.04**	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.01**
	4/12/1995	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	<0.05
	7/28/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
	12/8/1995	<0.008	<0.008	<0.008	<0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.008	-	-	-	-	-	-	-	**0.011**
	4/26/1996	<0.008	<0.008	<0.008	<0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.008	-	-	-	-	-	-	-	<0.008
	7/25/1996	<0.003	<0.003	<0.003	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.003	-	-	-	-	-	-	-	-
	11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/21/1997	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-
	7/22/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/15/1998	<0.001	**0.019**	<0.001	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	-	-	-
	7/6/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/1999	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	**0.001**	<0.001	-	-	-	-	-	-	-	-	-
	7/27/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/5/2000	**0.005**	**0.002**	**0.005**	**0.005**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.004**	-	-	-	-	-	-	-	-	-
	7/7/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/25/2001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-
	7/25/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	<0.013	-	-	-	-	-	-	-	-	-	-	-	<0.013	<0.013	<0.013	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-
	11/20/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/29/2003	<0.007	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-	-	-	<0.007	<0.007	<0.007	-	<0.007	-	<0.007	<0.007	-	-	-	-	-	-	-	-	-
	11/17/2003	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-	-	-	<0.007	<0.007	<0.007	-	-	-	<0.007	<0.007	-	-	-	-	-	-	-	-	-
	4/28/2004	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	<0.007	-	-	-	-	-	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-
	11/15/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/28/2005	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	<0.007	-	-	-	-	-	<0.007	<0.007	<0.007	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-
	11/8/2005	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	<0.007	-	-	-	-	-	<0.007	<0.007	<0.007	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-
	4/17/2006	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	<0.007	-	-	-	-	-	<0.007	<0.007	<0.007	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-
	11/20/2006	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	<0.007	-	-	-	-	-	<0.007	<0.007	<0.007	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	-	-
	5/2/2007	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	<0.007	-	-	-	-	-	-	<0.007	-	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	<0.007	-
	11/14/2007	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	<0.007	-	-	-	-	-	<0.007	<0.007	<0.007	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	-	-	<0.007	-
	4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2008	-	<0.007	<0.007	<0.007	<0.007	-	-	-	-	-	Dry	-	<0.001	-	-	-	<0.007	<0.007	-	-	Dry	<0.007	<0.007	-	-	-	-	-	-	<0.007	-	-	<0.007	-
	11/4/2009	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/2010	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2011	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	4/30/2012	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	11/5/2012	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	-	-	-	-	-	<0.001	<0.001	-	-
	4/15/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-
	11/3/2014	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-
	4/6/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-
	4/14/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POST-CLOSURE	11/7/2017	-	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	<0.001	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Specific Conductance (µS/cm)

NH AGQS = NE
WQCTS (Water and Fish Ingestion) = NE

Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations				Surface Water Monitoring Stations									Leachate Monitoring Well
	RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/ Southern Spring)	SW-P-2 (P-2/1P-2R Southern Spring)	GW-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
5/27/1992	150	370	910	1,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	510	-	-	-	-	-	-	-	-	-	-	7,500
11/12/1992	130	347	858	1,270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	630	-	-	-	-	-	-	-	-
4/6/1993	180	340	699	855	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	148	-	-	-	-	-	-	-	6,790
7/1/1993	134	368	991	1,350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	721	-	-	-	-	-	-	-	-
11/5/1993	136	352	943	1,310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	727	-	-	-	-	-	-	-	5,830
4/14/1994	69	350	710	958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-	-	-	-	-	-	-	-
7/15/1994	77	335	740	1,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	665	-	-	-	-	-	-	-	-
11/18/1994	140	340	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800	-	-	-	-	-	-	-	-
7/22/1997	189	1,024	202	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,274	1,107	-	166	-	-	-	-	-	-	-	-	-	-
7/22/1999	117	325	1,076	1,100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	615	1,045	-	610	-	-	-	-	-	-	-	-	-	-
4/25/2001	261	327	887	847	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	314	274	-	371	-	-	-	-	-	-	-	-	-	-
7/25/2001	229	301	1,390	982	810	-	-	504	296	805	-	-	-	-	-	-	530	290	585	-	131	494	-	261	-	-	-	-	-	-	-	-	-	-
8/9/2001	-	-	-	-	662	-	-	435	225	-	-	-	-	-	-	-	603	769	279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/28/2001	590	387	1,610	984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	470	477	-	398	-	-	-	-	-	-	-	-	-	-
4/24/2002	266	349	912	940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	307	-	-	-	-	-	-	-	-	-	-
11/20/2002	192	355	822	782	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	291	-	-	-	-	-	-	-	-	-	-
4/29/2003	535	94	1,003	431	346	-	-	-	-	-	-	-	-	-	-	-	586	696	224	-	259	573	-	140	-	-	-	-	-	-	-	-	-	-
11/17/2003	-	117	968	412	362	-	-	-	-	-	-	-	-	-	-	-	613	712	242	-	230	508	-	103	-	-	-	-	-	-	-	-	-	-
4/28/2004	-	542	1,017	760	405	-	-	-	-	-	936	-	-	-	-	-	596	553	382	342	-	247	270	762	-	-	-	-	-	-	-	-	-	-
11/15/2004	-	226	1,262	794	251	-	-	-	-	-	580	-	-	-	-	-	436	402	204	-	-	199	180	406	-	-	-	-	-	-	-	-	-	-
4/28/2005	-	558	1,093	717	390	-	-	-	-	-	909	-	-	-	-	-	559	561	366	-	-	240	235	723	-	-	-	-	-	-	-	-	-	-
11/8/2005	-	268	1,330	905	554	-	-	-	-	-	855	-	-	-	-	-	623	711	284	-	-	265	397	581	-	-	-	-	-	-	-	-	-	-
4/17/2006	-	205	1,231	606	301	-	-	-	-	-	548	-	-	-	-	-	393	324	218	-	-	170	255	464	320	-	-	-	-	-	-	-	-	-
11/20/2006	-	274	796	756	1,050	-	-	-	-	-	718	-	-	-	-	-	582	308	257	-	-	197	363	442	113	-	-	-	-	-	-	-	-	-
5/2/2007	-	358	603	707	508	-	-	-	-	-	121	-	-	-	-	-	-	627	-	-	-	308	363	517	347	-	-	-	-	-	-	-	119	-
11/14/2007	-	303	633	715	510	-	-	-	-	-	975	-	-	-	-	-	525	605	229	-	-	217	344	485	208	-	-	-	-	-	-	-	97	-
4/25/2008	-	367	681	856	700	-	-	-	-	-	913	-	-	-	-	-	-	668	-	-	-	325	246	517	257	-	-	-	-	165	-	-	155	-
11/18/2008	-	341	634	871	765	-	-	-	-	-	-	-	417	-	-	-	487	677	-	-	-	-	255	492	249	-	-	-	-	137	-	-	131	-
4/27/2009	-	367	636	835	712	-	-	-	-	-	938	-	-	-	-	-	-	625	-	-	-	317	226	502	117	-	-	-	-	131	-	248	130	-
11/4/2009	-	350	1,062	1,070	338	-	-	-	-	-	-	-	607	-	-	-	668	554	217	-	-	330	264	481	-	-	-	-	-	114	-	262	106	-
4/20/2010	-	347	1,071	1,019	321	-	-	-	-	-	-	-	618	-	-	-	-	568	-	-	-	322	249	446	-	-	-	-	-	105	-	250	93	-
11/11/2010	-	344	1,138	1,048	322	-	-	-	-	-	-	-	592	-	-	-	683	561	202	-	-	338	246	456	-	-	-	-	-	119	-	240	98	-
4/22/2011	-	339	1033	987	337	-	-	-	-	-	-	-	641	-	-	-	-	554	-	-	-	308	228	461	-	-	-	-	-	96	-	227	67	-
11/14/2011	-	267	628	692	416	-	-	-	-	-	-	-	568	-	-	-	515	626	214	-	-	304	234	422	-	-	-	-	-	174	-	212	151	-
4/30/2012	-	290	918	844	301	-	-	-	-	-	-	-	509	-	-	-	-	500	-	-	-	288	251	426	-	-	-	-	-	133	-	71	92	-
11/5/2012	-	248	467	703	286	-	-	-	-	-	-	-	546	-	421	649	446	500	228	-	-	231	212	408	-	-	-	-	-	151	-	88	100	-
5/7/2013	-	-	-	-	-	-	-	-	-	-	-	559	579	-	449	691	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/19/2013	-	346	880	808	595	-	-	-	-	-	-	614	588	-	578	570	605	819	221	-	-	339	-	498	-	-	-	-	-	-	496	520	-	-
11/3/2014	-	344	612	786	-	-	-	-	-	-	-	547	688	329	676	610	583	839	241	-	-	-	-	577	-	-	-	-	-	-	528	510	-	-
4/6/2015	-	306	482	786	-	-	-	-	-	-	-	-	571	-	828	629	571	897	834	-	-	-	-	275	-	-	-	-	-	-	712	478	-	-
11/17/2015	-	235	469	537	-	-	-	-	-	-	-	-	495	-	625	482	404	239	155	-	-	239	-	410	-	-	-	-	-	167	-	345	-	-
4/14/2016	-	211	381	537	-	-	-	-	-	-	-	-	543	-	543	411	452	698	195.7	-	-	-	-	292	-	-	-	-	-	-	-	407	-	-
11/2/2016	-	277	435	632	-	-	-	-	-	-	-	-	538	-	762	383	490	518	190	-	-	-	-	518	-	-	-	-	-	-	-	392	-	-
4/24/2017	-	374	620	623	-	-	-	-	-	-	-	-	628	-	738	546	628	4,160	172.7	-	-	-	-	473	-	-	-	-	-	-	-	529	-	-
11/7/2017	-	288	632	828	-	-	-	-	-	-	-	-	600	-	929	535	617	1,058	236	-	-	369	-	636	-	-	-	-	-	374	-	494	-	-

See last page for notes.

TABLE 1
HISTORICAL WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Total VOCs (mg/L)

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/ South Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	BDL	BDL	BDL	**6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**11,122**
	11/12/1992	BDL	BDL	BDL	**3.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-
	4/6/1993	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	**1,338.6**
	7/1/1993	BDL	BDL	**25.17**	**5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-
	11/5/1993	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	**154.6**
	4/14/1994	BDL	BDL	**3.5**	**17**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-
	7/15/1994	BDL	BDL	BDL	**7.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**697.1**
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**801.5**
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**731.5**
	11/18/1994	BDL	BDL	**6.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,443**
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**283.4**
	4/12/1995	BDL	BDL	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	**235.5**
	7/28/1995	BDL	BDL	DA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	DA	-	-	-	-	-	-	-	**260.3**
	12/8/1995	BDL	BDL	**4**	**11**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**	-	-	-	-	-	-	-	**201.5**
	4/26/1996	BDL	BDL	**14.2**	**39.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	**2,279.6**
	7/25/1996	BDL	BDL	**4.1**	**49.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-
	11/14/1996	-	BDL	**4.7**	**332.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	4/21/1997	-	BDL	**2.9**	**24.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	7/22/1997	BDL	BDL	**3**	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	11/11/1997	**4.6**	BDL	BDL	**26.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	4/15/1998	BDL	**3**	BDL	**27**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**11**	-	-	BDL	-	-	-	-	-	-	-	-	-
	7/6/1998	-	**4**	BDL	**93.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**8.2**	-	**2.1**	BDL	-	-	-	-	-	-	-	-	-
	11/16/1998	DA	**19.9**	DA	**27.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6.2**	-	DA		-	-	-	-	-	-	-	-	-
	4/19/1999	BDL	BDL	**2.8**	**7.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	**2.4**	BDL	-	-	-	-	-	-	-	-	-
	7/27/1999	BDL	BDL	BDL	**4.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	11/18/1999	BDL	BDL	**4.6**	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	**2.1**	BDL	-	-	-	-	-	-	-	-	-
	5/5/2000	BDL	BDL	BDL	**10.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-	-
	7/7/2000	BDL	BDL	BDL	**2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	11/16/2000	BDL	BDL	BDL	**3.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	4/25/2001	BDL	BDL	**2.1**	**6.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**76**	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	7/25/2001	BDL	BDL	BDL	**10**	BDL	-	-	BDL	BDL	BDL	-	-	-	-	-	-	**17**	BDL	BDL	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	BDL	-	-	BDL	BDL	BDL	-	-	-	-	-	-	**3.1**	**2**	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	BDL	BDL	BDL	**6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-
	4/24/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/20/2002	BDL	BDL	BDL	**11**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-	-
	4/29/2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2003	-	BDL	BDL	**2**	BDL	-	-	-	-	-	-	-	-	-	-	-	BDL	**3**	BDL	-	BDL	-	BDL	BDL	-	-	-	-	-	-	-	-	-
	4/28/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/15/2004	-	BDL	BDL	**5**	BDL	-	-	-	-	-	BDL	-	-	-	-	-	BDL	BDL	BDL	-	**10**	BDL	BDL	BDL	-	-	-	-	-	-	-	-	-
	4/28/2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/8/2005	-	BDL	BDL	**2.2**	BDL	-	-	-	-	-	BDL	-	-	-	-	-	BDL	BDL	BDL	-	**8.7**	BDL	BDL	**14**	-	-	-	-	-	-	-	-	-
	4/17/2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/20/2006	-	BDL	**3**	BDL	BDL	-	-	-	-	-	**6**	-	-	-	-	-	BDL	**23**	BDL	-	**19**	BDL	**21**	BLD	-	-	-	-	-	-	-	-	-
	5/2/2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2007	-	BDL	BDL	BDL	BDL	-	-	-	-	-	**8**	-	-	-	-	-	BDL	BDL	BDL	-	BDL	BDL	**14**	BDL	-	-	-	-	-	-	-	BDL	-
	4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2008	-	BDL	BDL	BDL	BDL	-	-	-	-	-	**13**	-	**2.5**	-	-	-	BDL	BDL	-	-	Dry	BDL	**4**	BDL	-	-	-	-	BDL	-	-	-	-
	11/4/2009	-	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	BDL	-	-	-	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	-	-	-	BDL	-	BDL	-	-
	4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/2010	-	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	BDL	-	-	-	BDL	BDL	BDL	-	BDL	BDL	BDL	-	-	-	-	-	BDL	-	BDL	BDL	-
	4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2011	-	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	BDL	-	-	-	BDL	BDL	BDL	-	BDL	BDL	**21**	-	-	-	-	-	BDL	-	BDL	BDL	-
	4/30/2012	-	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	BDL	-	-	-	-	BDL	-	-	**1**	BDL	BDL	-	-	-	-	-	BDL	-	BDL	BDL	-
	11/5/2012	-	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	BDL	-	BDL	BDL	BDL	BDL	-	-	BDL	BDL	**3**	-	-	-	-	-	BDL	-	BDL	BDL	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	BDL	BDL	-	BDL	**5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	BDL	BDL	BDL	BDL	-	-	-	-	-	-	BDL	BDL	-	BDL	**2**	BDL	BDL	BDL	-	**8**	-	**11**	-	-	-	-	-	-	BDL	BDL	-	-
	4/15/2014	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-
	11/3/2014	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-
	4/6/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BDL	-	-	-	-	-	-	-	BDL	-	-	-	-
	4/14/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/2/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POST-CLOSURE	11/7/2017	-	BDL	**1**	BDL	-	-	-	-	-	-	-	-	BDL	-	BDL	**1**	BDL	BDL	BDL	-	BDL	-	**66**	-	-	-	-	-	**10**	-	BDL	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

TKN (mg/L)

NH AGQS = NE
WQCTS = NE

	Sampling Date	Overburden Monitoring Wells																Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations			Surface Water Monitoring Stations									Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-102	GZ-104	GZ-106	GZ-201	GZ-202A	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/ South Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-16	SW-17	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	**0.5**	**0.5**	**1.2**	**8.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**150**
	11/12/1992	**0.665**	**0.904**	**0.477**	**7.50**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.425**	-	-	-	-	-	-	-
	4/6/1993	**2.09**	**1.39**	**1.39**	**7.65**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.39**	-	-	-	-	-	-	**207**
	7/1/1993	<1.0	<1.0	**24**	**10**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**9.1**	-	-	-	-	-	-	-
	11/5/1993	**0.164**	**0.164**	**0.789**	**8.24**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2.2**	-	-	-	-	-	-	**213**
	4/14/1994	**0.393**	**0.241**	**1.24**	**7.08**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.685**	-	-	-	-	-	-	-
	7/15/1994	**0.317**	**0.099**	**0.404**	**6.47**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.343**	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/12/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7/28/1995	**1.64**	<1	**3.47**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-
	12/8/1995	**0.56**	**0.31**	**3.8**	**7.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**8.7**	-	-	-	-	-	-	-
	4/26/1996	<1	**0.24**	**2.5**	**1.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.28**	-	-	-	-	-	-	-
	7/25/1996	**0.05**	**0.15**	**2.6**	**7.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.4**	-	-	-	-	-	-	-
	11/14/1996	-	**0.69**	**11**	**19**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.12**	-	**0.74**	**0.52**	-	-	-	-	-	-	-	-
	4/21/1997	-	**0.61**	**1.5**	**14**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.34**	-	**2.1**	**1.4**	-	-	-	-	-	-	-	-
	7/22/1997	**0.27**	**0.61**	**1.29**	**10.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2.45**	-	**3.36**	**0.44**	-	-	-	-	-	-	-	-
	11/11/1997	**0.3**	**1.9**	**0.2**	**0.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.4**	-	**1.5**	**0.8**	-	-	-	-	-	-	-	-
	4/15/1998	<0.1	**0.95**	**1.5**	**2.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.5**	-	-	**1.1**	-	-	-	-	-	-	-	-
	7/6/1998	-	**1.8**	**1.4**	**2.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.2**	-	**4.3**	**0.3**	-	-	-	-	-	-	-	-
	11/16/1998	**2.2**	**0.27**	**1.8**	**6.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.16**	-	**0.47**	**3.6**	-	-	-	-	-	-	-	-
	4/19/1999	<0.5	<0.5	**1.6**	**4.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.6**	-	<0.5	<0.5	-	-	-	-	-	-	-	-
	7/27/1999	<0.01	<0.01	**1.9**	**5.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.3**	-	**1.5**	**0.8**	-	-	-	-	-	-	-	-
	11/18/1999	<0.5	<0.5	**5.3**	**4.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	**2.4**	**2**	-	-	-	-	-	-	-	-
	5/5/2000	<0.5	<0.5	**2.7**	**5.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
	7/7/2000	<0.5	<0.5	**3.5**	**3.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.5**	-	**0.5**	<0.5	-	-	-	-	-	-	-	-
	11/16/2000	**1.3**	**0.5**	**2.5**	**3.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**	-	**4.1**	**45.2**	-	-	-	-	-	-	-	-
	4/25/2001	**0.7**	ND	**1.8**	**5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**	-	**5**	**2.2**	-	-	-	-	-	-	-	-
	7/25/2001	**0.8**	<0.3	**1.1**	**4.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**	-	**4**	**16**	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	**0.6**	**0.3**	**1.2**	**4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.4**	-	-	**77**	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	**0.4**	**0.2**	**1.1**	**3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.8**	-	-	-	-	-	-	-	-
	11/20/2002	**0.4**	**0.5**	**1.3**	**3.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.8**	-	-	-	-	-	-	-	-
	4/29/2003	<0.3	<0.3	**1.2**	**3.8**	**0.4**	-	-	-	-	-	-	-	-	-	-	-	**1.1**	**0.5**	<0.3	-	**1.3**	-	**1.1**	<0.3	-	-	-	-	-	-	-	-
	11/17/2003	-	**0.7**	**1.2**	**2.6**	**1.1**	-	-	-	-	-	-	-	-	-	-	-	**1.1**	**3.1**	<0.3	-	-	-	**3.5**	**0.4**	-	-	-	-	-	-	-	-
	4/28/2004	-	**5.0**	**0.8**	**2.8**	**1.2**	-	-	-	-	-	**2.0**	-	-	-	-	-	**0.4**	**3.0**	<0.3	<0.3	**5.1**	**1.2**	**1.5**	**0.7**	-	-	-	-	-	-	-	-
	11/15/2004	-	**0.8**	**2.2**	**3.2**	**0.4**	-	-	-	-	-	**3.5**	-	-	-	-	-	<0.3	**0.8**	<0.3	-	**3.9**	<1.5	**2.5**	**1.2**	-	-	-	-	-	-	-	-
	4/28/2005	-	**0.8**	**0.5**	**1.9**	**0.4**	-	-	-	-	-	**1.5**	-	-	-	-	-	<0.3	**0.4**	<0.3	-	**4.3**	**0.4**	**1.8**	**0.7**	-	-	-	-	-	-	-	-
	11/8/2005	-	**0.5**	**0.5**	**6.2**	**0.4**	-	-	-	-	-	**1.7**	-	-	-	-	-	<0.3	**14.7**	**0.3**	-	**5.8**	**1.2**	**5.1**	**1.2**	-	-	-	-	-	-	-	-
	4/17/2006	-	**0.3**	**0.6**	**5.4**	**0.6**	-	-	-	-	-	**2.4**	-	-	-	-	-	**0.3**	**3.5**	**1.1**	-	**12.1**	**2.2**	**4.9**	**20.0**	-	-	-	-	-	-	-	-
	11/20/2006	-	**1.3**	**1.7**	**6.2**	<1	-	-	-	-	-	**2.2**	-	-	-	-	-	<1	**14**	**1.3**	-	**77**	**6.0**	**110**	<1	-	-	-	-	-	-	-	-
	5/2/2007	-	<0.5	**0.7**	**4**	<0.5	-	-	-	-	-	**3.9**	-	-	-	-	-	-	**1.5**	-	-	**36**	**2.1**	**7**	<0.5	-	-	-	-	-	-	<0.5	-
	11/14/2007	-	<0.5	<0.5	**3.9**	**0.5**	-	-	-	-	-	**1.3**	-	**0.6**	-	-	-	<0.5	<0.5	**1.0**	-	**17**	**2.1**	**7.1**	**1.4**	-	-	-	-	-	-	**1.0**	-
	4/25/2008	-	<0.5	**1.1**	**3.6**	**0.6**	-	-	-	-	-	**1.3**	-	-	-	-	-	-	<0.5	-	-	**1.9**	**0.9**	**0.8**	<0.5	-	-	-	-	<0.5	-	<0.5	-
	11/18/2008	-	<0.5	**0.6**	**6.1**	<0.5	-	-	-	-	-	**2.7**	-	**0.91**	-	-	-	<0.5	**2.8**	-	-	Dry	<0.5	**0.8 M**	<0.5	-	-	-	-	<0.5	-	-	-
	4/27/2009	-	<0.5	<0.5	**4.3**	**0.7**	-	-	-	-	-	<0.5	-	-	-	-	-	-	<0.5	-	-	**4.0**	<0.5	**1.7**	**0.9**	-	-	-	-	<0.5	-	-	<0.5	-
	11/4/2009	-	<0.5	<0.5	**4.6**	<0.5	-	-	-	-	-	-	-	<0.5	-	-	-	<0.5	**1.3**	<0.5	-	**2.2**	<0.5	**1.6**	-	-	-	-	-	**0.7**	-	<0.5	<0.5	-
	4/20/2010	-	<0.5	**0.7**	**3.4**	**0.6**	-	-	-	-	-	-	-	<0.5	-	-	-	-	**0.7**	-	-	**4.8**	<0.5	**0.9**	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	11/11/2010	-	**0.6**	<0.5	**4.0**	<0.5	-	-	-	-	-	-	-	<0.5	-	-	-	<0.5	**<0.5**	<0.5	-	**2.8**	<0.5	**1.9**	-	-	-	-	-	<0.5	-	<0.5	**0.6**	-
	4/22/2011	-	<0.5	<0.5	**1.8**	<0.5	-	-	-	-	-	-	-	<0.5	-	-	-	-	<0.5	-	-	**2.9**	<0.5	**1.5**	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	11/14/2011	-	**0.5**	**0.8**	**2.9**	**0.6**	-	-	-	-	-	-	-	<0.5	-	-	-	<0.5	**0.5**	<0.5	-	**2.9**	<0.5	**17**	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	4/30/2012	-	<0.5	**0.6**	**3.5**	<0.5	-	-	-	-	-	-	-	<0.5	-	-	-	-	<0.5	-	-	**3.2**	<0.5	**2.1**	-	-	-	-	-	<0.5	-	<0.5	<0.5	-
	11/5/2012	-	<0.5	**0.8**	**3.1**	**0.6**	-	-	-	-	-	-	-	**1.2**	-	<0.5	**3.7**	<0.5	**0.5**	-	-	**1.8**	<0.5	**2.2**	-	-	-	-	-	**0.7**	-	<0.5	**0.6**	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	**0.8**	**0.8**	-	<0.5	**1.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	**5.8**	**1.1**	**2.2**	**1.6**	-	-	-	-	-	-	**0.5**	**2.0**	-	**0.6**	**1.4**	**0.8**	**0.7**	**0.7**	-	**2.0**	-	**1.8**	-	-	-	-	-	-	**1.3**	<0.5	-	-
	4/15/2014	-	**7.3**	<0.5	**2.1**	**0.9**	-	-	-	-	-	-	<0.5	**0.9**	<0.5	<0.5	**2.0**	<0.5	**0.5**	-	-	-	**-**	**2.2**	-	-	-	-	-	-	<0.5	**0.7**	-	-
	11/3/2014	-	**13**	**0.5**	**1.4**	-	-	-	-	-	-	-	<0.5	**1.3**	**0.6**	<0.5	**1.5**	<0.5	**3.9**	<0.5	-	-	**-**	**3.0**	-	-	-	-	-	-	<0.5	**0.7**	-	-
	4/6/2015	-	**8.9**	**0.5**	**3.9**	-	-	-	-	-	-	-	-	**1.2**	-	<0.5	**2.6**	<0.5	**1.2**	<0.5	-	-	-	**1.3**	-	-	-	-	-	-	<0.5	<0.5	-	-
	11/17/2015	-	**3.4**	**1.2**	**1.4**	-	-	-	-	-	-	-	-	**1.2**	-	<0.5	**2.6**	<0.5	**0.5**	<0.5	-	**2.7**	-	**1.5**	-	-	-	-	-	**0.7**	-	**0.5**	-	-
	4/14/2016	-	<0.5	<0.5	**2.3**	-	-	-	-	-	-	-	-	<0.5	-	<0.5	**1.8**	**0.6**	**0.6**	<0.5	-	-	-	**0.8**	-	-	-	-	-	-	-	**0.5**	-	-
	11/2/2016	-	**4.2**	**0.6**	**5.1**	-	-	-	-	-	-	-	-	**0.9**	-	<0.5	**0.9**	<0.5	**3.1**	<0.5	-	-	-	**2.4**	-	-	-	-	-	-	-	<0.5	-	-
	4/24/2017	-	<0.5	<0.5	**2.8**	-	-	-	-	-	-	-	-	<0.5	-	<0.5	**1.0**	<0.5	**0.8**	<0.5	-	-	-	**0.6**	-	-	-	-	-	-	-	**0.6**	-	-
	11/7/2017	-	<0.5	<0.5	**1.3**	-	-	-	-	-	-	-	-	**0.7**	-	<0.5	**0.9**	<0.5	**0.7**	<0.5	-	**1.3**	-	**1.3**	-	-	-	-	-	**1.2**	-	<0.5	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

Thallium (mg/L)

NH AGQS = 0.002 mg/L
WQCTS (Water and Fish Ingestion) = 0.0017 mg/L

	Sampling Date	Overburden Monitoring Wells												Bedrock Monitoring Wells				Groundwater Seep Monitoring Stations		Surface Water Monitoring Locations								Leachate Monitoring Well
		RFW-1	RFW-2	RFW-3	RFW-4	GZ-1U	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZWP-1	GZ-104	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	GZ-P-5R	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	Exeter River	MW-6
PRE-CLOSURE	5/27/1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/12/1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/6/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7/1/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/5/1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/14/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7/15/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.023**
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.001**
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
	11/18/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.04
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
	4/12/1995	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005
	7/28/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005
	12/8/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.24**
	4/26/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.06**
	7/25/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/21/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POST-CLOSURE	7/22/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/15/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7/6/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7/27/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/5/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7/7/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/16/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/25/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7/25/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8/9/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/28/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1/17/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/24/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/20/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/29/2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/28/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/15/2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/28/2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/8/2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/17/2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/20/2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/2/2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/25/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/18/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/27/2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/4/2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/11/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/22/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/14/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/30/2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/5/2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/7/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/19/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/15/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/3/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See last page for notes.

TABLE 1
HISTORIC WATER QUALITY DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

NOTES:

1. Concentrations are in milligrams per liter (mg/L) or micrograms per liter (µg/L) as indicated.
2. "-" indicates that measurement were not made/not applicable.
3. "< " indicates the parameter was not detected above the detection limit shown.
4. **Bold** face print indicates detection.
5. "NH AGQS" indicates New Hampshire Ambient Groundwater Quality Standards as defined in the New Hampshire Code of Administrative Rules Env-Or 603.03 revised October 22, 2016.
6. Shading indicates that the measured level exceeds its NH AGQS, Secondary Maximum Contaminant Level (SMCL), or Water Quality Criteria for Toxic Substances (WQCTS) as defined by the New Hampshire Code of Administrative Rules Env-Wq 1703.23, adopted November 17, 2016. For groundwater monitoring locations where NH AGQS are not established for the referenced parameter SMCLs are used to shade data. For surface water monitoring locations where WQCTS are not established for the referenced parameter NH AGQS are used to shade data.
7. "NE" indicates none established.
8. "DA" indicates that the Chain-of-Custody indicates a sample taken and a volatile organic compound (VOC) laboratory report was not available.
9. Water quality data were compiled by GZA GeoEnvironmental, Inc. from analytical laboratory reports provided by the Town of Exeter.
10. "BDL" indicates target VOCs for the method used were below laboratory detection limits.
11. "µS/cm" indicates microseimens per centimeter.
12. “M” indicates that the percent recovery for the matrix was outside of the acceptance criteria. Refer to analytical reports for additional information.
13. The analytical laboratory reports provided by Resource Environmental Group for groundwater monitoring wells RFW-2, RFW-3 and RFW-4 during November 2006 are mislabeled GZ-2, GZ-3 and GZ-4, respectively.
14. The groundwater elevation data provided by Resource Environmental Group for GZ-2U during November 2006 is mislabeled GZ-2M.
15. For 11/14/2007 the percent recovery for sample P-9R for chloride was 85.
16. Please note that based on review of historic chain-of-custody forms, samples for metals analyses collected from groundwater monitoring wells have been field filtered and represent dissolved metals analyses. Samples collected from surface water location SW-1 have not been field filtered and represent total metals analyses. Samples collected at P-2 (southern spring) and P-9 (northern spring) through 2002 were also not field filtered and represent total metals analyses. Samples collected from the replacement well points (P-2R, P-5R, and P-9R) during 2006 were field filtered. For further information regarding historic sampling procedures, please refer to Section 5.2.4 (Review of Historic Total Metals and Dissolved Metals Analyses) of GZA’s May 10, 2002 report.
17. Landfill water quality monitoring associated with the samples labeled P-2 and P-9 has been performed by Mr. Tom Walker of REG. Based on conversations with Mr. Walker during a site visit on April 17, 2002, the samples designated P-2 and P-9 on laboratory reports and chain-of-custody forms since November 1996 (the start of routine sampling of P-2 and P-9) were collected from surface water proximate to P-2 and about 300 feet south of P-9 from November 1996 through November 2001. The locations sampled from November 1996 through November 2001 are designated SW-P-2 and SW-P-9 on ***Figure 1***. The data from these locations represent total metals analyses of surface water. Replacement groundwater well points designated P-2R and P-9R have been sampled since November 2001.
18. Historical VOC concentrations are represented as Total VOCs.

\\GZAMAN1\Jobs\JOBS\21000s\21270\04.0021270.29\Report\2017 Annual Report\Table 1 Notes.doc

TABLE 2
REFERENCE/GROUNDWATER ELEVATION DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NH DES No. 198401081

Monitoring Location	Ground Surface Elevation	Bedrock Surface Elevation	Depth to Bottom (drilled) (ft bgs)	Reference Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation
					04/25/01		07/23/01		07/25/01		08/09/01		11/28/01		04/24/02	
GZ-1U	97.1	-		99.68	-	-	22.6	77.1	-	-	22.8	76.9	-	-	-	-
GZ-1L	97.1	45.1		99.44	-	-	20.4	79.1	-	-	20.5	78.9	-	-	-	-
GMW-10	114.2	-		-	-	-	Dry	-	-	-	-	-	-	-	-	-
GZ-2U	113.8	-		116.29	-	-	Dry	<116.3	-	-	Dry	<116.3	-	-	-	-
GZ-2L	114.6	81.6		117.12	-	-	33.9	83.3	-	-	34.2	82.9	-	-	-	-
GMW-11	93.8	-		96.32	-	-	Dry	<81.32	-	-	10.9	85.4	-	-	-	-
GZ-3L	94.8	68.8		97.32	-	-	11.5	85.9	-	-	11.8	85.5	-	-	-	-
GZ-4	142.9	<85.9		142.29	-	-	50.1	92.2	-	-	50.3	92.0	-	-	-	-
GZ-5	141.1	<84.1		140.73	-	-	50.8	89.9	-	-	51.1	89.6	-	-	-	-
GZ-6	141.4	<84.4		141.16	-	-	50.0	91.2	-	-	51.2	89.9	-	-	-	-
GZ-101	69.4	-	15	72.11	-	-	-	-	-	-	-	-	-	-	-	-
GZ-102	77.0	-	21.5	80	-	-	-	-	-	-	-	-	-	-	-	-
GZ-103	78.3	-	22	81.39	-	-	-	-	-	-	-	-	-	-	-	-
GZ-104	72.4	-	15.5	75.02	-	-	-	-	-	-	-	-	-	-	-	-
GZ-105	65.4	-	24	67.89	-	-	-	-	-	-	-	-	-	-	-	-
GZ-106	73.5	-	13	76.13	-	-	-	-	-	-	-	-	-	-	-	-
GZ-107	108.7	-	45	103.66	-	-	-	-	-	-	-	-	-	-	-	-
GZ-201	123.3		58	122.85	-	-	-	-	-	-	-	-	-	-	-	-
GZ-202A	121.1		62	123.99	-	-	-	-	-	-	-	-	-	-	-	-
P-1	64.5	-		67.17	-	-	-	-	-	-	-	-	-	-	-	-
P-2 / P-2R	68.3	-		69.18	-	-	-	-	-	-	0.7	68.5	-	-	-	-
P-3	67.9	-		68.41	-	-	-	-	-	-	2.0	66.4	-	-	-	-
P-4	70.5	-		71.15	-	-	-	-	-	-	2.0	69.2	-	-	-	-
GW-P-5R/P-5	82.3	-		84.52	-	-	-	-	-	-	-	-	-	-	-	-
P-6	74.8	-		76.01	-	-	-	-	-	-	3.2	72.8	-	-	-	-
P-7	-	-		84.52	-	-	-	-	-	-	-	-	-	-	-	-
P-8	69.7	-		70.25	-	-	-	-	-	-	2.5	67.8	-	-	-	-
P-9 / P-9R	68	-		68.35	-	-	-	-	-	-	-	-	-	-	-	-
RFW-1	85.6	34.6		88.11	3.23	84.88	-	-	4.95	83.16	5.3	82.8	7.5	80.6	7.9	80.2
RFW-2	118	-		119.72	41.34	78.38	-	-	43.02	76.7	-	-	44.9	74.8	45.2	74.5
RFW-3	140.6	-		143.48	72.95	70.53	-	-	72.89	70.59	73.2	70.3	74.9	68.6	75.6	67.9
RFW-4	116.9	46.9		118.71	45	73.71	-	-	45.75	72.96	46.0	72.8	47.5	71.3	47.9	70.8
WS-1	102	-		102.26	-	-	-	-	-	-	12.2	90.0	-	-	-	-
WS-2	93	-		93.57	-	-	-	-	-	-	4.3	89.3	-	-	-	-
SW-17/Seep		-		61.65	-	-	-	-	-	-	-	-	-	-	-	-
SW-14	-	-		40.47	-	-	-	-	-	-	-	-	-	-	-	-
Bridge		-		60.55	-	-	-	-	-	-	-	-	-	-	-	-

See last page for notes.

TABLE 2
REFERENCE/GROUNDWATER ELEVATION DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NH DES No. 198401081

Monitoring Location	Ground Surface Elevation	Bedrock Surface Elevation	Depth to Bottom (drilled) (ft bgs)	Reference Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation
					11/20/02		04/29/03		06/17/03		11/17/03		04/28/04		11/15/04	
GZ-1U	97.1	-		99.68	-	-	23.5	76.2	23.2	76.5	23.5	76.2	22.6	77.1	22.3	77.4
GZ-1L	97.1	45.1		99.44	-	-	23.2	76.3	20.8	78.6	21.1	78.3	23.2	76.3	20.9	78.6
GMW-10	114.2	-		-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-2U	113.8	-		116.29	-	-	dry	<116.3	dry	<116.3	dry	<116.3	-	-	-	-
GZ-2L	114.6	81.6		117.12	-	-	33.6	83.5	33.7	83.4	36.6	80.5	32.8	84.3	34.7	82.4
GMW-11	93.8	-		96.32	-	-	-	-	-	-	-	-	-	-	-	-
GZ-3L	94.8	68.8		97.32	-	-	13.9	83.4	12.2	85.2	13.0	84.4	10.8	86.5	12.4	84.9
GZ-4	142.9	<85.9		142.29	-	-	-	-	-	-	-	-	-	-	-	-
GZ-5	141.1	<84.1		140.73	-	-	-	-	-	-	-	-	-	-	-	-
GZ-6	141.4	<84.4		141.16	-	-	-	-	-	-	-	-	-	-	-	-
GZ-101	69.4	-	15	72.11	-	-	-	-	-	-	-	-	-	-	-	-
GZ-102	77.0	-	21.5	80	-	-	-	-	-	-	-	-	-	-	-	-
GZ-103	78.3	-	22	81.39	-	-	-	-	-	-	-	-	-	-	-	-
GZ-104	72.4	-	15.5	75.02	-	-	-	-	-	-	-	-	-	-	-	-
GZ-105	65.4	-	24	67.89	-	-	-	-	-	-	-	-	-	-	-	-
GZ-106	73.5	-	13	76.13	-	-	-	-	-	-	-	-	-	-	-	-
GZ-107	108.7	-	45	103.66	-	-	-	-	-	-	-	-	-	-	-	-
GZ-201	123.3		58	122.85	-	-	-	-	-	-	-	-	-	-	-	-
GZ-202A	121.1		62	123.99	-	-	-	-	-	-	-	-	-	-	-	-
P-1	64.5	-		67.17	-	-	-	-	-	-	-	-	-	-	-	-
P-2 / P-2R	68.3	-		69.18	-	-	3.2	68.3	-	-	3.7	68.3	3.6	65.6	3.6	65.6
P-3	67.9	-		68.41	-	-	-	-	-	-	-	-	-	-	-	-
P-4	70.5	-		71.15	-	-	-	-	1.8	69.4	-	-	-	-	-	-
GW-P-5R/P-5	82.3	-		84.52	-	-	-	-	2.0	72.8	-	-	7.8	76.7	7.6	76.9
P-6	74.8	-		76.01	-	-	-	-	-	-	-	-	-	-	-	-
P-7	-	-		84.52	-	-	-	-	-	-	-	-	-	-	-	-
P-8	69.7	-		70.25	-	-	-	-	-	-	-	-	-	-	-	-
P-9 / P-9R	68	-		68.35	-	-	2.7	68.0	-	-	3.2	68.0	3.0	65.4	3.0	65.3
RFW-1	85.6	34.6		88.11	8.0	80.2	5.7	82.4	5.8	82.3	destroyed	-	-	-	-	-
RFW-2	118	-		119.72	45.7	74.0	43.5	76.2	43.6	76.1	43.8	75.9	42.3	77.4	43.5	76.2
RFW-3	140.6	-		143.48	76.2	67.3	74.3	69.2	-	-	74.6	68.9	73.6	69.9	73.9	69.6
RFW-4	116.9	46.9		118.71	48.5	70.3	46.4	72.3	-	-	47.0	71.8	45.8	73.0	46.5	72.2
WS-1	102	-		102.26	-	-	-	-	12.4	89.8	-	-	-	-	-	-
WS-2	93	-		93.57	-	-	-	-	destroyed	-	-	-	-	-	-	-
SW-17/Seep		-		61.65	-	-	-	-	-	-	-	-	-	-	-	-
SW-14	-	-		40.47	-	-	-	-	-	-	-	-	-	-	-	-
Bridge		-		60.55	-	-	-	-	-	-	-	-	-	-	-	-

See last page for notes.

TABLE 2
REFERENCE/GROUNDWATER ELEVATION DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NH DES No. 198401081

Monitoring Location	Ground Surface Elevation	Bedrock Surface Elevation	Depth to Bottom (drilled) (ft bgs)	Reference Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation
					04/28/05		11/08/05		04/17/06		11/20/06		05/20/07		11/12/07	
GZ-1U	97.1	-		99.68	21.3	78.4	21.9	77.8	21.4	78.3	19.9	79.8	19.7	80.0	22.7	77.0
GZ-1L	97.1	45.1		99.44	18.5	81.0	18.0	81.4	18.6	80.9	16.8	82.6	16.4	83.0	27.0	72.5
GMW-10	114.2	-		-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-2U	113.8	-		116.29	-	-	-	-	30.9	85.4	28.6	87.7	28.1	88.2	-	-
GZ-2L	114.6	81.6		117.12	32.0	85.1	31.7	85.4	32.5	84.7	31.5	85.6	30.7	86.5	35.2	81.9
GMW-11	93.8	-		96.32	-	-	-	-	-	-	-	-	-	-	-	-
GZ-3L	94.8	68.8		97.32	8.8	88.5	8.7	88.6	9.2	88.1	7.5	89.9	7.3	90.1	12.1	85.2
GZ-4	142.9	<85.9		142.29	-	-	-	-	-	-	-	-	-	-	-	-
GZ-5	141.1	<84.1		140.73	-	-	-	-	-	-	-	-	-	-	-	-
GZ-6	141.4	<84.4		141.16	-	-	-	-	-	-	-	-	-	-	-	-
GZ-101	69.4	-	15	72.11	-	-	-	-	-	-	-	-	-	-	11.0	61.1
GZ-102	77.0	-	21.5	80	-	-	-	-	-	-	-	-	-	-	16.5	63.5
GZ-103	78.3	-	22	81.39	-	-	-	-	-	-	-	-	-	-	17.8	63.6
GZ-104	72.4	-	15.5	75.02	-	-	-	-	-	-	-	-	-	-	12.7	62.3
GZ-105	65.4	-	24	67.89	-	-	-	-	-	-	-	-	-	-	11.1	56.8
GZ-106	73.5	-	13	76.13	-	-	-	-	-	-	-	-	-	-	12.3	63.9
GZ-107	108.7	-	45	103.66	-	-	-	-	-	-	-	-	-	-	37.1	66.6
GZ-201	123.3		58	122.85	-	-	-	-	-	-	-	-	-	-	-	-
GZ-202A	121.1		62	123.99	-	-	-	-	-	-	-	-	-	-	-	-
P-1	64.5	-		67.17	-	-	-	-	-	-	-	-	-	-	-	-
P-2 / P-2R	68.3	-		69.18	3.4	65.8	3.6	65.6	3.8	65.4	3.5	65.7	3.6	65.5	4.0	65.2
P-3	67.9	-		68.41	-	-	-	-	-	-	-	-	-	-	-	-
P-4	70.5	-		71.15	-	-	-	-	-	-	-	-	-	-	-	-
GW-P-5R/P-5	82.3	-		84.52	6.7	77.8	5.1	79.4	7.1	77.5	5.3	79.2	5.4	79.2	9.3	75.2
P-6	74.8	-		76.01	-	-	-	-	-	-	-	-	-	-	-	-
P-7	-	-		84.52	-	-	-	-	-	-	-	-	-	-	-	-
P-8	69.7	-		70.25	-	-	-	-	-	-	-	-	-	-	-	-
P-9 / P-9R	68	-		68.35	2.9	65.4	3.2	65.2	3.0	65.3	3.3	65.1	3.3	65.1	3.4	64.9
RFW-1	85.6	34.6		88.11	-	-	-	-	-	-	-	-	-	-	-	-
RFW-2	118	-		119.72	41.2	78.5	40.2	79.5	41.5	78.2	39.3	80.4	39.4	80.3	43.3	76.4
RFW-3	140.6	-		143.48	72.0	71.5	72.0	71.5	71.6	71.9	70.8	72.7	70.5	73.0	73.9	69.6
RFW-4	116.9	46.9		118.71	44.5	74.2	44.5	74.2	44.7	74.0	43.9	74.9	43.4	75.3	46.8	71.9
WS-1	102	-		102.26	-	-	-	-	-	-	-	-	-	-	-	-
WS-2	93	-		93.57	-	-	-	-	-	-	-	-	-	-	-	-
SW-17/Seep		-		61.65	-	-	-	-	-	-	-	-	-	-	3.8	57.9
SW-14	-	-		40.47	-	-	-	-	-	-	-	-	-	-	2.9	37.6
Bridge		-		60.55	-	-	-	-	-	-	-	-	-	-	13.14	47.4

See last page for notes.

TABLE 2
REFERENCE/GROUNDWATER ELEVATION DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NH DES No. 198401081

Monitoring Location	Ground Surface Elevation	Bedrock Surface Elevation	Depth to Bottom (drilled) (ft bgs)	Reference Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation
					04/25/08		11/18/08		04/27/09		11/04/09		04/20/10		11/11/10	
GZ-1U	97.1	-		99.68	21.2	78.5	21.9	77.8	20.80	78.9	22.15	77.5	17.42	82.3	22.18	77.5
GZ-1L	97.1	45.1		99.44	-	-	19.3	80.2	-	-	19.55	79.9	-	-	19.78	79.7
GMW-10	114.2	-		-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-2U	113.8	-		116.29	-	-	-	-	-	-	-	-	-	-	-	-
GZ-2L	114.6	81.6		117.12	32.2	84.9	33.2	83.9	31.76	85.4	33.68	83.4	29.2	87.9	34.31	82.8
GMW-11	93.8	-		96.32	-	-	-	-	-	-	-	-	-	-	-	-
GZ-3L	94.8	68.8		97.32	-	-	-	-	-	-	10.71	86.6	-	-	11.2	86.1
GZ-4	142.9	<85.9		142.29	-	-	-	-	-	-	-	-	-	-	-	-
GZ-5	141.1	<84.1		140.73	-	-	-	-	-	-	-	-	-	-	-	-
GZ-6	141.4	<84.4		141.16	-	-	-	-	-	-	-	-	-	-	-	-
GZ-101	69.4	-	15	72.11	-	-	-	-	-	-	-	-	-	-	-	-
GZ-102	77.0	-	21.5	80	-	-	-	-	-	-	-	-	-	-	-	-
GZ-103	78.3	-	22	81.39	-	-	-	-	-	-	-	-	-	-	-	-
GZ-104	72.4	-	15.5	75.02	-	-	12.3	62.7	-	-	12.40	62.6	8.94	66.1	12.40	62.6
GZ-105	65.4	-	24	67.89	-	-	-	-	-	-	-	-	-	-	-	-
GZ-106	73.5	-	13	76.13	-	-	-	-	-	-	-	-	-	-	-	-
GZ-107	108.7	-	45	103.66	-	-	-	-	-	-	-	-	-	-	-	-
GZ-201	123.3		58	122.85	-	-	-	-	-	-	-	-	-	-	-	-
GZ-202A	121.1		62	123.99	-	-	-	-	-	-	-	-	-	-	-	-
P-1	64.5	-		67.17	-	-	-	-	-	-	-	-	-	-	-	-
P-2 / P-2R	68.3	-		69.18	3.5	65.6	3.5	65.7	3.51	65.7	3.46	65.7	3.61	65.6	3.41	65.8
P-3	67.9	-		68.41	-	-	-	-	-	-	-	-	-	-	-	-
P-4	70.5	-		71.15	-	-	-	-	-	-	-	-	-	-	-	-
GW-P-5R/P-5	82.3	-		84.52	7.0	77.5	7.7	76.9	6.47	78.1	7.93	76.6	4.08	80.4	8.22	76.3
P-6	74.8	-		76.01	-	-	-	-	-	-	-	-	-	-	-	-
P-7	-	-		84.52	-	-	-	-	-	-	-	-	-	-	-	-
P-8	69.7	-		70.25	-	-	-	-	-	-	-	-	-	-	-	-
P-9 / P-9R	68	-		68.35	2.8	65.6	2.9	65.5	2.90	65.5	2.81	65.5	2.76	65.6	2.86	65.5
RFW-1	85.6	34.6		88.11	-	-	-	-	-	-	-	-	-	-	-	-
RFW-2	118	-		119.72	41.4	78.3	41.9	77.8	40.67	79.1	42.16	77.6	37.81	81.9	42.37	77.4
RFW-3	140.6	-		143.48	71.8	71.7	71.7	71.8	71.87	71.6	72.75	70.7	71.68	71.8	73.66	69.8
RFW-4	116.9	46.9		118.71	44.5	74.2	45.4	73.3	44.19	74.5	45.68	73.0	42.04	76.7	45.74	73.0
WS-1	102	-		102.26	-	-	-	-	-	-	-	-	-	-	-	-
WS-2	93	-		93.57	-	-	-	-	-	-	-	-	-	-	-	-
SW-17/Seep		-		61.65	-	-	-	-	-	-	-	-	-	-	-	-
SW-14	-	-		40.47	-	-	-	-	-	-	-	-	-	-	-	-
Bridge		-		60.55	-	-	-	-	-	-	-	-	-	-	-	-

See last page for notes.

TABLE 2
REFERENCE/GROUNDWATER ELEVATION DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NH DES No. 198401081

Monitoring Location	Ground Surface Elevation	Bedrock Surface Elevation	Depth to Bottom (drilled) (ft bgs)	Reference Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation
					04/22/11		11/14/11		04/30/12		11/05/12		05/07/13		12/19/2013		11/03/14	
GZ-1U	97.1	-		99.68	21.97	77.7	22.17	77.5	22.87	76.8	24.20	75.5	-	-	24.66	75.0	-	-
GZ-1L	97.1	45.1		99.44	-	-	19.63	79.8	-	-	26.40	73.0	-	-	22.44	77.0	22.63	76.8
GMW-10	114.2	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-2U	113.8	-		116.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-2L	114.6	81.6		117.12	32.54	84.6	33.40	83.7	33.92	83.2	36.85	80.3	-	-	37.32	79.8	35.78	81.3
GMW-11	93.8	-		96.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-3L	94.8	68.8		97.32	-	-	10.72	86.6	-	-	13.96	83.4	-	-	14.74	82.6	15.87	81.5
GZ-4	142.9	<85.9		142.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-5	141.1	<84.1		140.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-6	141.4	<84.4		141.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GZ-101	69.4	-	15	72.11	-	-	-	-	-	-	-	-	11.50	60.6	-	-	-	-
GZ-102	77.0	-	21.5	80	-	-	-	-	-	-	-	-	17.05	63.0	17.85	62.2	18.18	61.8
GZ-103	78.3	-	22	81.39	-	-	-	-	-	-	-	-	18.20	63.2	-	-	-	-
GZ-104	72.4	-	15.5	75.02	8.94	66.1	12.72	62.3	12.44	62.6	13.77	61.3	13.50	61.5	13.87	61.2	14.22	60.8
GZ-105	65.4	-	24	67.89	-	-	-	-	-	-	-	-	11.48	56.4	-	-	-	-
GZ-106	73.5	-	13	76.13	-	-	-	-	-	-	-	-	14.15	62.0	-	-	13.53	62.6
GZ-107	108.7	-	45	103.66	-	-	-	-	-	-	-	-	38.21	65.5	-	-	-	-
GZ-201	123.3		58	122.85	-	-	-	-	-	-	51.68	71.2	51.12	71.7	51.94	70.9	52.23	70.6
GZ-202A	121.1		62	123.99	-	-	-	-	-	-	52.48	71.5	51.58	72.4	52.38	71.6	52.76	71.2
P-1	64.5	-		67.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P-2 / P-2R	68.3	-		69.18	3.55	65.6	3.48	65.7	3.50	65.7	3.47	65.7	-	-	3.55	65.6	-	-
P-3	67.9	-		68.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P-4	70.5	-		71.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW-P-5R/P-5	82.3	-		84.52	7.46	77.1	7.96	76.6	8.68	75.8	9.98	74.5	-	-	-	-	-	-
P-6	74.8	-		76.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P-7	-	-		84.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P-8	69.7	-		70.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P-9 / P-9R	68	-		68.35	2.77	65.6	2.74	65.6	2.78	65.6	2.92	65.4	-	-	2.8	65.6	3.26	65.1
RFW-1	85.6	34.6		88.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RFW-2	118	-		119.72	41.82	77.9	42.06	77.7	43.10	76.6	44.48	75.2	-	-	45.11	74.6	44.27	75.5
RFW-3	140.6	-		143.48	73.09	70.4	73.97	69.5	73.31	70.2	74.9	68.6	-	-	75.90	67.6	75.48	68.0
RFW-4	116.9	46.9		118.71	45.35	73.4	45.68	73.0	46.03	72.7	47.4	71.3	-	-	47.71	71.0	47.84	70.9
WS-1	102	-		102.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-2	93	-		93.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW-17/Seep		-		61.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW-14	-	-		40.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge		-		60.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See last page for notes.

TABLE 2
REFERENCE/GROUNDWATER ELEVATION DATA SUMMARY
Cross Road Landfill - Exeter, New Hampshire
NH DES No. 198401081

Monitoring Location	Ground Surface Elevation	Bedrock Surface Elevation	Depth to Bottom (drilled) (ft bgs)	Reference Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation	Depth-to-Water	Groundwater Surface Elevation
					11/17/15		04/14/16		11/02/16		04/24/17		11/07/17	
GZ-1U	97.1	-		99.68	-	-	-	-	-	-	-	-	-	-
GZ-1L	97.1	45.1		99.44	22.90	76.5	21.94	77.5	23.52	75.9	22.95	76.5	21.39	78.1
GMW-10	114.2	-		-	-	-	-	-	-	-	-	-	-	-
GZ-2U	113.8	-		116.29	-	-	-	-	-	-	-	-	-	-
GZ-2L	114.6	81.6		117.12	38.07	79.1	35.28	81.8	38.72	78.4	34.28	82.8	36.17	81.0
GMW-11	93.8	-		96.32	-	-	-	-	-	-	dry	-	dry	-
GZ-3L	94.8	68.8		97.32	15.25	82.1	13.68	83.6	15.79	81.5	11.63	85.7	12.94	84.4
GZ-4	142.9	<85.9		142.29	-	-	-	-	-	-	-	-	-	-
GZ-5	141.1	<84.1		140.73	-	-	-	-	-	-	-	-	-	-
GZ-6	141.4	<84.4		141.16	-	-	-	-	-	-	-	-	-	-
GZ-101	69.4	-	15	72.11	-	-	-	-	-	-	-	-	-	-
GZ-102	77.0	-	21.5	80	18.18	61.8	-	-	-	-	-	-	-	-
GZ-103	78.3	-	22	81.39	-	-	-	-	-	-	-	-	-	-
GZ-104	72.4	-	15.5	75.02	14.32	60.7	13.62	61.4	14.60	60.4	13.3	61.7	13.53	61.5
GZ-105	65.4	-	24	67.89	-	-	-	-	-	-	-	-	-	-
GZ-106	73.5	-	13	76.13	13.53	62.6	-	-	-	-	-	-	-	-
GZ-107	108.7	-	45	103.66	-	-	-	-	-	-	-	-	-	-
GZ-201	123.3		58	122.85	52.45	70.4	51.95	70.9	53.15	69.7	51.37	71.5	51.27	71.6
GZ-202A	121.1		62	123.99	52.95	71.0	52.40	71.6	53.58	70.4	51.83	72.2	51.69	72.3
P-1	64.5	-		67.17	-	-	-	-	-	-	-	-	-	-
P-2 / P-2R	68.3	-		69.18	3.7	65.5	-	-	-	-	-	-	3.04	66.1
P-3	67.9	-		68.41	-	-	-	-	-	-	-	-	-	-
P-4	70.5	-		71.15	-	-	-	-	-	-	-	-	-	-
GW-P-5R/P-5	82.3	-		84.52	-	-	-	-	-	-	-	-	-	-
P-6	74.8	-		76.01	-	-	-	-	-	-	-	-	-	-
P-7	-	-		84.52	-	-	-	-	-	-	-	-	-	-
P-8	69.7	-		70.25	-	-	-	-	-	-	-	-	-	-
P-9 / P-9R	68	-		68.35	3.05	65.3	2.73	65.6	3.19	65.2	2.8	65.6	2.54	65.8
RFW-1	85.6	34.6		88.11	-	-	-	-	-	-	-	-	-	-
RFW-2	118	-		119.72	44.27	75.5	44.35	75.4	45.83	73.9	42.9	76.8	43.82	75.9
RFW-3	140.6	-		143.48	75.66	67.8	74.93	68.6	76.32	67.2	74.5	69.0	74.43	69.1
RFW-4	116.9	46.9		118.71	48.08	70.6	47.26	71.5	48.55	70.2	46.39	72.3	38.98	79.7
WS-1	102	-		102.26	-	-	-	-	-	-	-	-	-	-
WS-2	93	-		93.57	-	-	-	-	-	-	-	-	-	-
SW-17/Seep		-		61.65	-	-	-	-	-	-	-	-	-	-
SW-14	-	-		40.47	-	-	-	-	-	-	-	-	-	-
Bridge		-		60.55	-	-	-	-	-	-	-	-	-	-

See last page for notes.

TABLE 2

REFERENCE/GROUNDWATER ELEVATION DATA SUMMARY

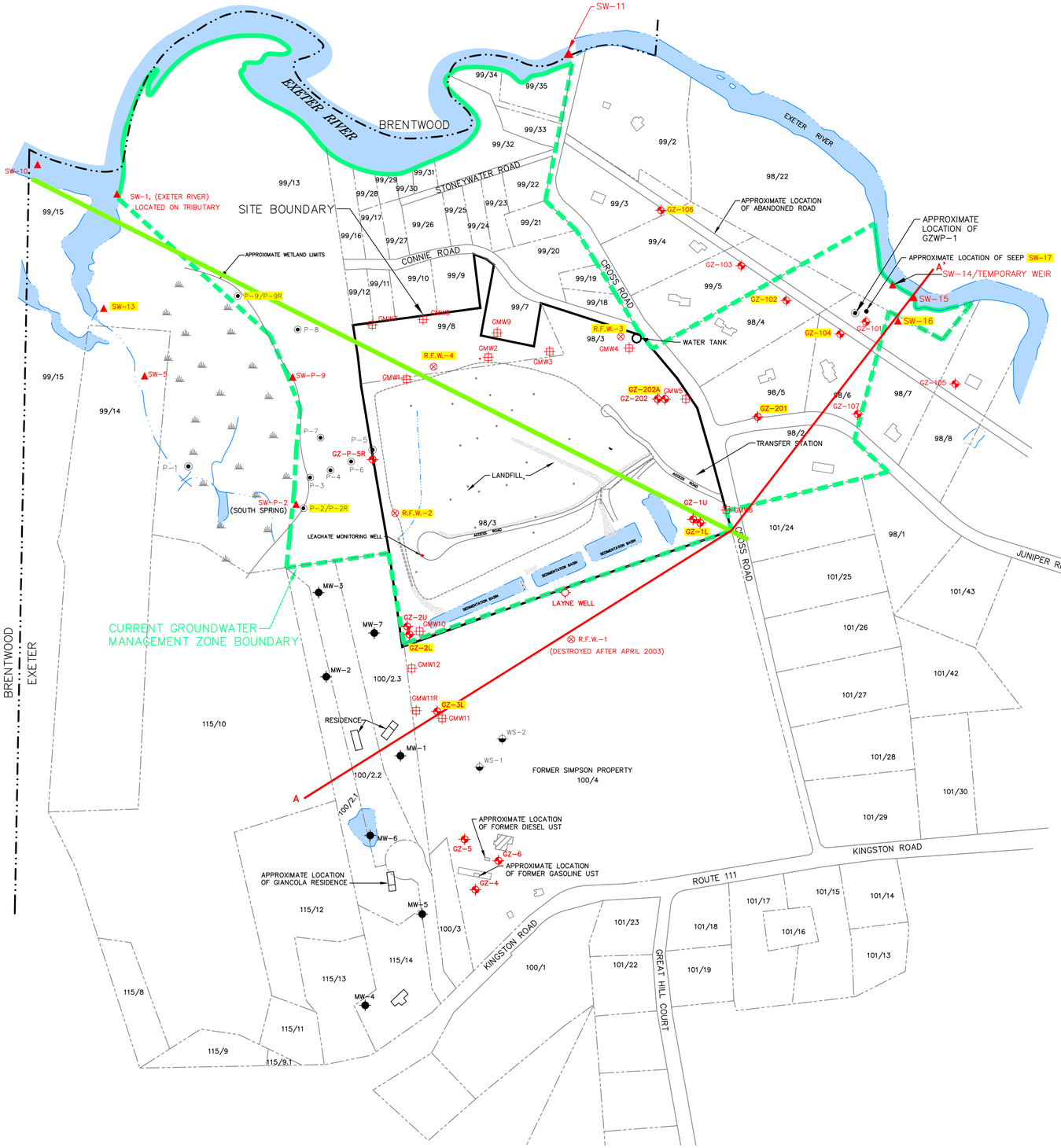
Cross Road Landfill - Exeter, New Hampshire

NH DES No. 198401081

NOTES:

1. Groundwater elevation data were collected by GZA GeoEnvironmental, Inc. (GZA) on 7/23/01 and 8/9/01, and provided by the Town of Exeter for 4/25/01, 7/25/01, and 11/28/01 through the present.
2. Reference elevation is the top of PVC riser or top of well point casing.
3. Elevations are reported in feet above the National Geodetic Vertical Datum.
4. Reference elevations for wells RFW-1 through RFW-4 and piezometers P-1 through P-9 are based on Table 2 (Water Level Measurements, Exeter Landfill, Exeter, New Hampshire) of Weston's report dated June 1990.
5. Reference elevations for wells GZ-1U through GZ-3L, GZ-101 through GZ-107, and GZ-201 through GZ-202A were established by GZA using optical survey techniques and referenced to a benchmark established by TF Moran approximately 75 feet south of well GZ-2L (GZ-1U through GZ-3L) and top of PVC of selected wells (each of the other monitoring wells referenced in this note).
6. Reference elevations for former water supply wells WS-1 and WS-2 were established by GZA on using optical survey techniques and referenced to the top of PVC (reference elevation) for monitoring well RFW-1 [88.11 feet] as indicated on Table 2 (Water Level Measurements, Exeter Landfill, Exeter, New Hampshire) of Weston's report dated June 1990.
7. Wells GMW-10 and GMW-11 were installed for use as Landfill gas monitoring wells. Groundwater was encountered in GMW-11 during the August 9, 2001 monitoring round.
8. "-" indicates water level measurements were not performed at the location and date specified, or no data/not encountered.
9. Bedrock surface elevations are based on depth to bedrock encountered while drilling borings and as shown on boring logs RFW-1, RFW-2, RFW-3, and RFW-4 in Weston's 1990 report.
10. P-5 was replaced with GZ-P-5R during April 2004.

Figures



LOCUS MAP
SCALE: 1" = 2000'±

NOTES:

1. BASE MAP DEVELOPED FROM PROPERTY TAX MAPS PROVIDED BY THE TOWN OF EXETER, NEW HAMPSHIRE INCLUDING TAX MAPS 98, 99, 100 AND 101.
2. LOCUS MAP DEVELOPED FROM UNITED STATES GEOLOGIC SURVEY MAPS, KINGSTON, 1981 PHOTO REVISED 1989 AND EXETER 1985.
3. THE LOCATIONS OF SITE FEATURES INCLUDING WELLS, PIEZOMETERS, AND ROADS ARE BASED ON INFORMATION SHOWN ON PLANS TITLED "TOPOGRAPHIC PLAN OF LAND OF CROSSROAD LANDFILL, PREPARED FOR THE TOWN OF EXETER, NEW HAMPSHIRE," PREPARED BY T.F. MORAN, INC. OF BEDFORD, NEW HAMPSHIRE, DATED JANUARY 24, 1994; "GROUNDWATER ELEVATION CONTOUR MAP–26 APRIL 1990, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY ROY F. WESTON, INC. (WESTON) OF CONCORD NEW HAMPSHIRE, DATED MAY 1990; "EXPLORATION LOCATION PLAN, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY GZA GEOENVIRONMENTAL, INC. OF MANCHESTER, NEW HAMPSHIRE, DATED JULY 1997; SITE SKETCH TITLED "PARKER SURVEY" PROVIDED BY THE TOWN OF EXETER, NEW HAMPSHIRE DATED NOVEMBER 1997. THE LOCATIONS OF CERTAIN WELLS, PIEZOMETERS, AND SURFACE WATER SAMPLING LOCATIONS ARE BASED ON TAPED MEASUREMENTS FROM SITE FEATURES BY GZA AND ARE APPROXIMATE.
4. WETLAND LIMITS AND LOCATIONS OF SW–1, NORTH SPRING, SOUTH SPRING, AND P–6 WERE OBTAINED FROM FIGURE 4 OF A REPORT TITLED "REPORT OF HYDROGEOLOGIC INVESTIGATION, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY ROY F. WESTON, INC. OF CONCORD, NEW HAMPSHIRE, DATED JUNE 1990. THE LOCATIONS ARE APPROXIMATE.
5. THE MONITORING WELL DESIGNATED "LAYNE WELL" WAS INSTALLED BY LAYNE NEW ENGLAND AS DIRECTED BY GIDLEY LABORATORIES, INC. (GIDLAB) OF FAIRHAVEN, MASSACHUSETTS DURING OR BEFORE 1979. PIEZOMETERS P–1 THROUGH P–9 WERE INSTALLED BY GIDLAB DURING OR BEFORE 1979. MONITORING WELLS RFW–1 THROUGH RFW–4 WERE INSTALLED BY WESTON DURING MARCH 27 THROUGH APRIL 4, 1990. MONITORING WELLS MW–1 THROUGH MW–3 LOCATED ON THE BRADSHER PROPERTY WERE INSTALLED BY EXETER ENVIRONMENTAL ASSOCIATES, (EEA) ON DECEMBER 22, 2000. MONITORING WELLS MW–4 THROUGH MW–7, ALSO LOCATED ON THE BRADSHER PROPERTY WERE INSTALLED BY EEA ON MAY 15, 2001. MONITORING WELLS GZ–1U, GZ–1L, GZ–2U, GZ–2L, GZ– 3L, GZ–4, GZ–5 AND GZ–6 AND SOIL GAS MONITORING WELLS GMW10 AND GMW11 WERE INSTALLED BY CAPITAL ENVIRONMENTAL DRILLING SERVICE OF DUNBARTON, NEW HAMPSHIRE DURING JUNE 28 THROUGH JULY 6 2001. WELL POINTS P–2R AND P–3R WERE INSTALLED BY GZA DURING APRIL 2003. GZ–P–5R WAS INSTALLED BY NEW HAMPSHIRE BORING OF LONDONDERRY, NH ON APRIL 20, 2004. MONITORING WELLS GZ–201, GZ–202, AND GZ–202A WERE INSTALLED BY NEW HAMPSHIRE BORING DURING SEPTEMBER AND NOVEMBER 2012.
6. LOCATION OF PHOTO LINEAMENT SHOWN BASED ON THE UNITED STATES GEOLOGIC SURVEY MAP TITLED "LINEAMENT MAP OF AREA 1 OF THE NEW HAMPSHIRE BEDROCK AQUIFER ASSESSMENT, SOUTH EASTERN NEW HAMPSHIRE," DATED 1997.
7. LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

GZ–1L	GROUNDWATER MONITORING WELL BY GZA
R.F.W.–4	GROUNDWATER MONITORING WELL
LAYNE WELL	LAYNE WELL FORMER MONITORING WELL BY OTHERS
	MW–1 – OFFSITE OVERBURDEN MONITORING WELL BY OTHERS
WS–1	ABANDONED OVERBURDEN WATER SUPPLY WELL
SW–5	SURFACE WATER SAMPLING LOCATION
GMW4	SOIL GAS MONITORING WELL LOCATION
P–5	PIEZOMETER LOCATION
	STREAM
	OPEN SURFACE WATER
100/4	TOWN OF EXETER, NEW HAMPSHIRE PROPERTY TAX MAP NO./LOT NO.
	TOWN OF EXETER, NEW HAMPSHIRE PROPERTY LOT BOUNDARY
	APPROXIMATE LOCATION OF STRUCTURE
	APPROXIMATE LOCATION OF FORMER STRUCTURE
	CURRENT GROUNDWATER MANAGEMENT PERMIT REQUIRED SAMPLING LOCATION
	APPROXIMATE LOCATION OF PHOTO LINEAMENT IDENTIFIED BY THE UNITED STATES GEOLOGICAL SURVEY
A – A'	LOCATION OF CROSS SECTION LINE

N

0 100' 200' 400' 600'
SCALE IN FEET

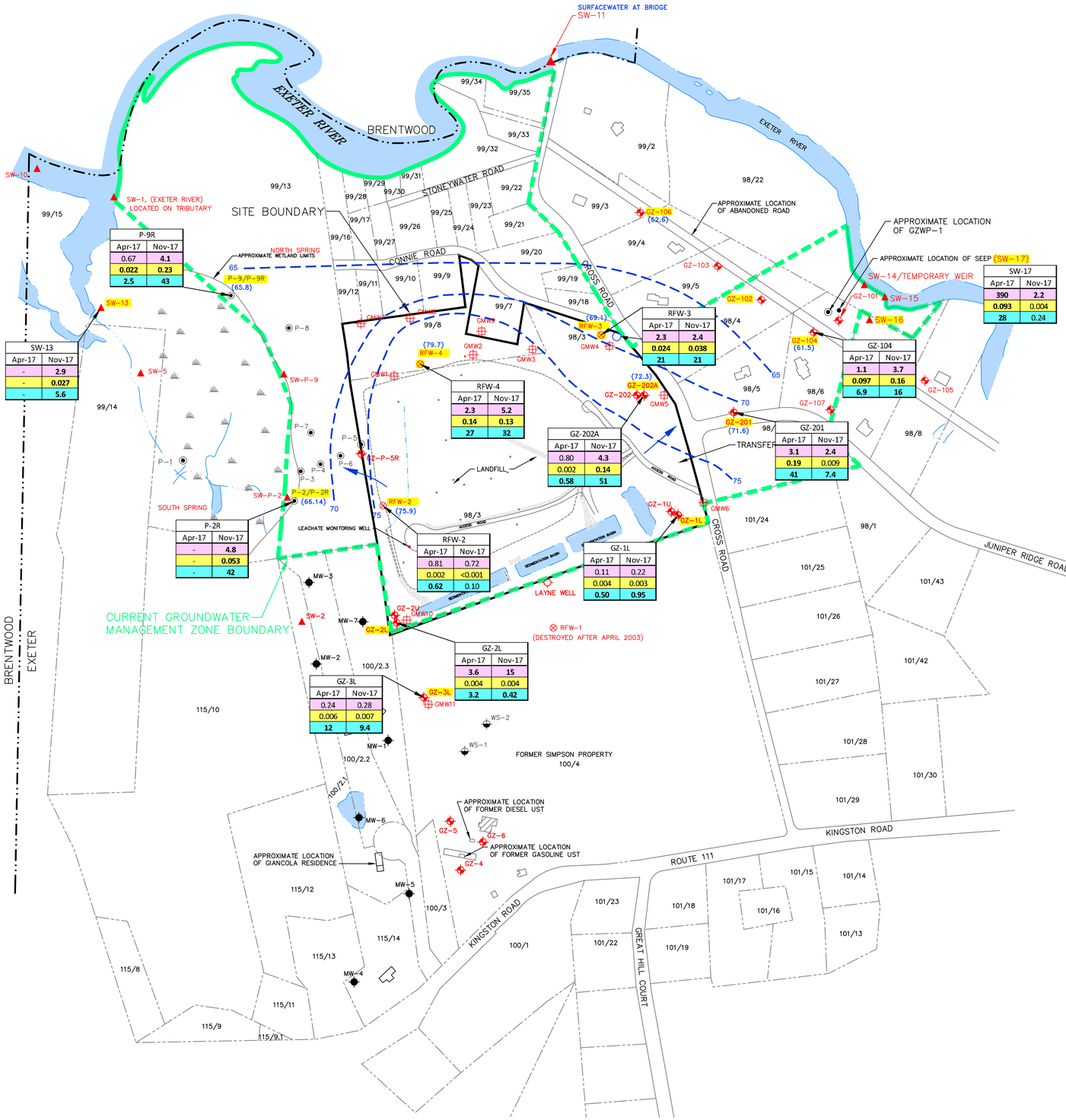
2017 ANNUAL SUMMARY REPORT
CROSS ROAD LANDFILL
GWP-198401081-E-004
EXETER, NEW HAMPSHIRE

SITE/SITE VICINITY PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
5 COMMERCE PARK NORTH, SUITE 201
BEDFORD, NEW HAMPSHIRE 03110
(603) 623-3600

PREPARED FOR:
TOWN OF EXETER

PROJ MGR: DMT	REVIEWED BY: JDR	CHECKED BY: JMW	FIGURE 1
DESIGNED BY: JMW	DRAWN BY: MR	SCALE: 1" = 200'	
DATE: JANUARY 2018	PROJECT NO. 04.0021270.29	REVISION NO.	SHEET NO. 1 OF 3



NOTES:

1. BASE MAP DEVELOPED FROM PROPERTY TAX MAPS PROVIDED BY THE TOWN OF EXETER, NEW HAMPSHIRE INCLUDING TAX MAPS 98, 99, 100 AND 101.
2. LOCUS MAP DEVELOPED FROM UNITED STATES GEOLOGIC SURVEY MAPS, KINGSTON, 1981 PHOTO REVISED 1989 AND EXETER 1985.
3. THE LOCATIONS OF SITE FEATURES INCLUDING WELLS, PIEZOMETERS, AND ROADS ARE BASED ON INFORMATION SHOWN ON PLANS TITLED "TOPOGRAPHIC PLAN OF LAND OF CROSSROAD LANDFILL, PREPARED FOR THE TOWN OF EXETER, NEW HAMPSHIRE," PREPARED BY T.F. MORAN, INC. OF BEDFORD, NEW HAMPSHIRE, DATED JANUARY 24, 1994; "GROUNDWATER ELEVATION CONTOUR MAP–26 APRIL 1990, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY ROY F. WESTON, INC. (WESTON) OF CONCORD NEW HAMPSHIRE, DATED MAY 1990; "EXPLORATION LOCATION PLAN, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY GZA GEOENVIRONMENTAL, INC. OF MANCHESTER, NEW HAMPSHIRE, DATED JULY 1997; AND SITE SKETCH TITLED "PARKER SURVEY" PROVIDED BY THE TOWN OF EXETER, NEW HAMPSHIRE DATED NOVEMBER 1997.
4. ESTIMATED GROUNDWATER SURFACE ELEVATION CONTOURS AND INFERRED DIRECTION OF GROUNDWATER FLOW ARE BASED ON DEPTH–TO–WATER MEASUREMENTS MADE ON NOVEMBER 7, 2017 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC), REFERENCE POINT ELEVATION DATA SHOWN IN TABLE 1 AND TABLE 2 OF ROY F. WESTON, INC.'S REPORT TITLED "REPORT OF HYDROGEOLOGIC INVESTIGATION, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," DATED JUNE 1990, AND LEVEL ELEVATION SURVEYS BY GZA ON JUNE 22, 2001, JULY 24, 2001, AND NOVEMBER 12, 2007. GROUNDWATER ELEVATION DATA ALSO CONSIDER DEPTH–TO–GROUNDWATER MEASUREMENTS, MADE BY CEC ON MARCH 7, 2013.
5. WETLAND LIMITS AND LOCATIONS OF SW–1, NORTH SPRING, SOUTH SPRING, AND P–6 WERE OBTAINED FROM FIGURE 4 OF A REPORT TITLED "REPORT OF HYDROGEOLOGIC INVESTIGATION, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY ROY F. WESTON, INC. OF CONCORD, NEW HAMPSHIRE, DATED JUNE 1990. THE LOCATIONS ARE APPROXIMATE.
6. GROUNDWATER SURFACE AND GROUND SURFACE ELEVATIONS REFERENCED TO THE NATIONAL GEODETIC SURVEY DATUM OF 1929 (NGVD).
7. THE MONITORING WELL DESIGNATED "LAYNE WELL" WAS INSTALLED BY LAYNE NEW ENGLAND AS DIRECTED BY GIDLEY LABORATORIES, INC. (GIDLAB) OF FAIRHAVEN, MASSACHUSETTS DURING OR BEFORE 1979. PIEZOMETERS P–1 THROUGH P–9 WERE INSTALLED BY GIDLAB DURING OR BEFORE 1979. MONITORING WELLS RFW–1 THROUGH RFW–4 WERE INSTALLED BY WESTON DURING MARCH 27 THROUGH APRIL 4, 1990. MONITORING WELLS MW–1 THROUGH MW–3 LOCATED ON THE BRADSHER PROPERTY WERE INSTALLED BY EXETER ENVIRONMENTAL ASSOCIATES, (EEA) ON DECEMBER 22, 2000. MONITORING WELLS MW–4 THROUGH MW–7, ALSO LOCATED ON THE BRADSHER PROPERTY WERE INSTALLED BY EEA ON MAY 15, 2001. MONITORING WELLS GZ–1U, GZ–1L, GZ–2U, GZ–2L, GZ– 3L, GZ–4, GZ–5 AND GZ–6 AND SOIL GAS MONITORING WELLS GMW10 AND GMW11 WERE INSTALLED BY CAPITAL ENVIRONMENTAL DRILLING SERVICE OF DUNBARTON, NEW HAMPSHIRE DURING JUNE 28 THROUGH JULY 6 2001. WELL POINTS P–2R AND P–9R WERE INSTALLED BY GZA DURING APRIL 2003. GZ–P–5R WAS INSTALLED BY NEW HAMPSHIRE BORING OF LONDONDERRY, NH ON APRIL 20, 2004.
8. WATER QUALITY DATA SHOWN HEREON SUMMARIZE THE RESULTS OF WATER QUALITY MONITORING FOR ARSENIC, IRON, AND MANGANESE FROM SAMPLES COLLECTED BY BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DURING APRIL AND NOVEMBER 2016.
9. LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. REFER TO PREVIOUS FIGURE FOR ADDITIONAL NOTES AND LEGEND.

LEGEND:

- GZ–1L — GROUNDWATER MONITORING WELL BY GZA
- R.F.W.–4 — GROUNDWATER MONITORING WELL
- LAYNE WELL — LAYNE WELL FORMER MONITORING WELL BY OTHERS
- WS–1 — ABANDONED OVERBURDEN WATER SUPPLY WELL
- SW–5 — SURFACE WATER SAMPLING LOCATION
- GMW4 — SOIL GAS MONITORING WELL LOCATION
- P–6 — PIEZOMETER LOCATION
- STREAM
- OPEN SURFACE WATER (POND/POND)
- 100/4 — TOWN OF EXETER, NEW HAMPSHIRE PROPERTY TAX MAP NO./LOT NO.
- TOWN OF EXETER, NEW HAMPSHIRE PROPERTY LOT BOUNDARY
- APPROXIMATE LOCATION OF STRUCTURE
- APPROXIMATE LOCATION OF FORMER STRUCTURE
- 0.11 — INDICATES MANGANESE CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)
- <0.01 — INDICATES ARSENIC CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)
- <0.05 — INDICATES IRON CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)

BOLD PRINT INDICATES EXCEEDANCE OF NH AGQS OR SMCL

- (82.6) — INDICATES ESTIMATED OVERBURDEN GROUNDWATER SURFACE ELEVATION IN FEET BASED ON DEPTH TO GROUNDWATER MEASUREMENTS DURING NOVEMBER 2017 (SEE NOTE 4).
- ESTIMATED OVERBURDEN GROUNDWATER SURFACE ELEVATION CONTOUR IN FEET BASED ON DEPTH TO GROUNDWATER MEASUREMENTS DURING NOVEMBER 2017 (SEE NOTE 4).
- INFERRED DIRECTION OF OVERBURDEN GROUNDWATER FLOW
- CURRENT GROUNDWATER MANAGEMENT PERMIT REQUIRED SAMPLING LOCATION

LOCUS MAP
SCALE: 1" = 2000'±

N

0 100' 200' 400' 600'
SCALE IN FEET

2017 ANNUAL SUMMARY REPORT
CROSS ROAD LANDFILL
GWP-198401081-E-004
EXETER, NEW HAMPSHIRE

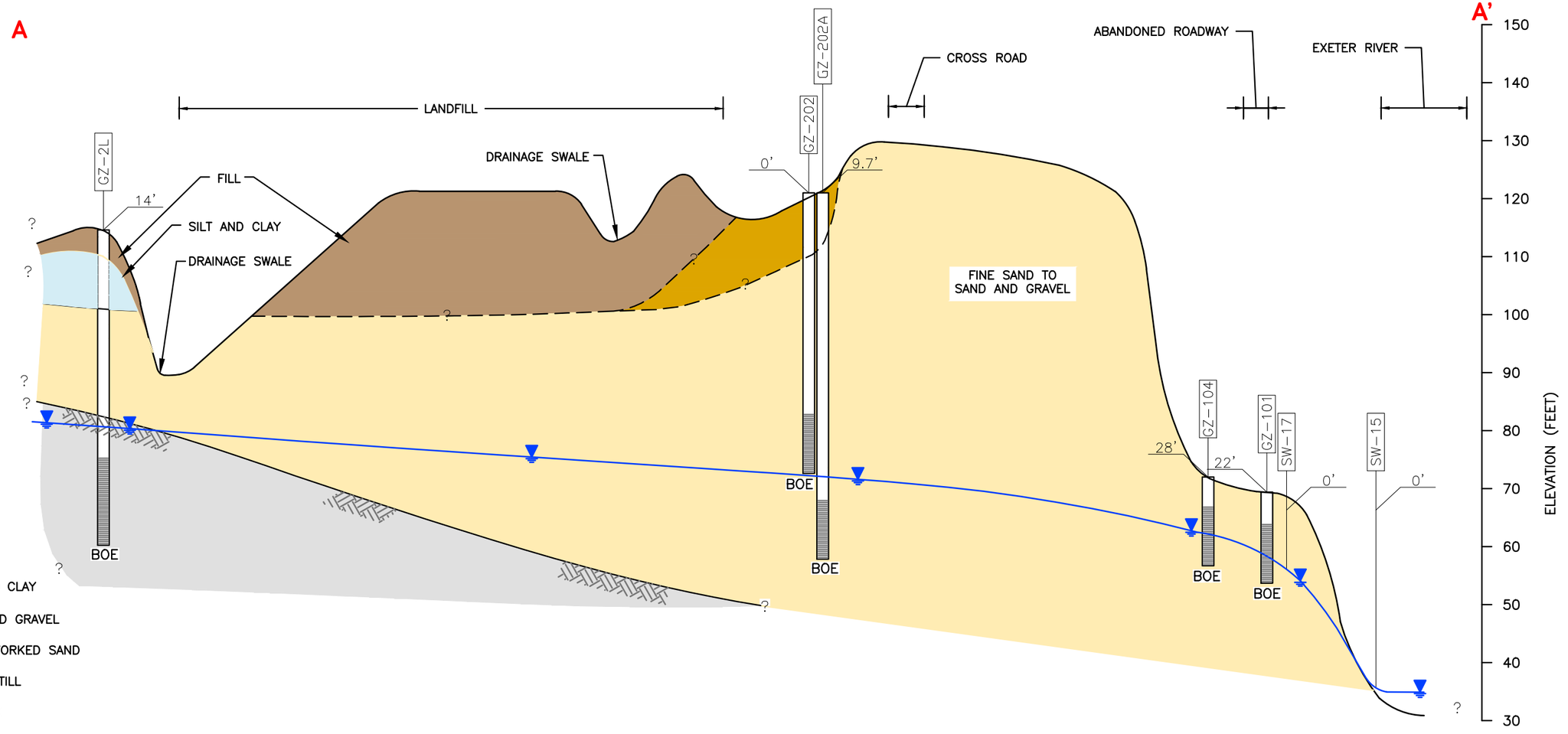
WATER QUALITY AND ELEVATION DATA SUMMARY

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
5 COMMERCE PARK NORTH, SUITE 201
BEDFORD, NEW HAMPSHIRE 03110
(603) 623-3600

PREPARED FOR:
TOWN OF EXETER

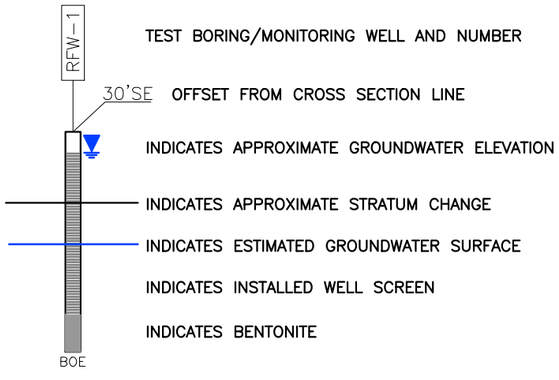
PROJ MGR: DMT	REVIEWED BY: JDR	CHECKED BY: JMW	FIGURE 2	
DESIGNED BY: JMW	DRAWN BY: MR	SCALE: 1" = 200'		
DATE: JANUARY 2018	PROJECT NO. 04.0021270.29	REVISION NO.	SHEET NO. 2 OF 3	

CROSS-SECTION A-A'



LEGEND:

- SILT AND CLAY
- SAND AND GRAVEL
- FILL/REWORKED SAND
- GLACIAL TILL
- BEDROCK
- STRATIFIED FINE SAND, SILT, AND CLAY WITH OCCASIONAL GRAVEL
- APPROXIMATE LOCATION OF LANDFILL MATERIALS



- TEST BORING/MONITORING WELL AND NUMBER
- OFFSET FROM CROSS SECTION LINE
- INDICATES APPROXIMATE GROUNDWATER ELEVATION
- INDICATES APPROXIMATE STRATUM CHANGE
- INDICATES ESTIMATED GROUNDWATER SURFACE
- INDICATES INSTALLED WELL SCREEN
- INDICATES BENTONITE

NOTES:

1) GEOLOGIC UNITS ARE GENERALIZED IN ORDER TO DEMONSTRATE MAJOR STRATIGRAPHIC RELATIONSHIPS. REFER TO BORING LOGS FOR DETAILED SOIL DESCRIPTIONS FOR INDIVIDUAL SUBSURFACE EXPLORATIONS.

2) STRATIFICATION LINES ARE APPROXIMATE AND ARE BASED ON DATA COLLECTED FROM WIDELY SPACED EXPLORATIONS AND REPRESENT APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES. ACTUAL TRANSITIONS MAY VARY FROM THOSE SHOWN.

3) THE ESTIMATED GROUNDWATER ELEVATION IS BASED ON WATER LEVEL MEASUREMENTS MADE AT VARIOUS TIMES AND IS PROVIDED TO SHOW THE GENERAL LOCATION OF THE SATURATED ZONE.

4) THE GENERALIZED HYDROSTRATIGRAPHIC CROSS-SECTIONS SHOWN ARE BASED ON THE RESULTS OF THE EXPLORATIONS SHOWN ON THE CROSS-SECTIONS.

5) 'R' INDICATES REFUSAL.

6) 'BOE' INDICATES BOTTOM OF EXPLORATION.

7) GROUNDWATER SURFACE AND GROUND SURFACE ELEVATIONS REFERENCED TO THE NATIONAL GEODETIC SURVEY DATUM OF 1929 (NGVD).

8) PLEASE REFER TO FIGURE 1 FOR ADDITIONAL NOTES.

VERTICAL SCALE: 1" = 20'

0 10' 20' 40'

0 100' 200' 400'

HORIZONTAL SCALE: 1" = 200'

2017 ANNUAL SUMMARY REPORT
CROSS ROAD LANDFILL
GWP-198401081-E-004
EXETER, NEW HAMPSHIRE

HYDROGEOLOGIC CROSS SECTION

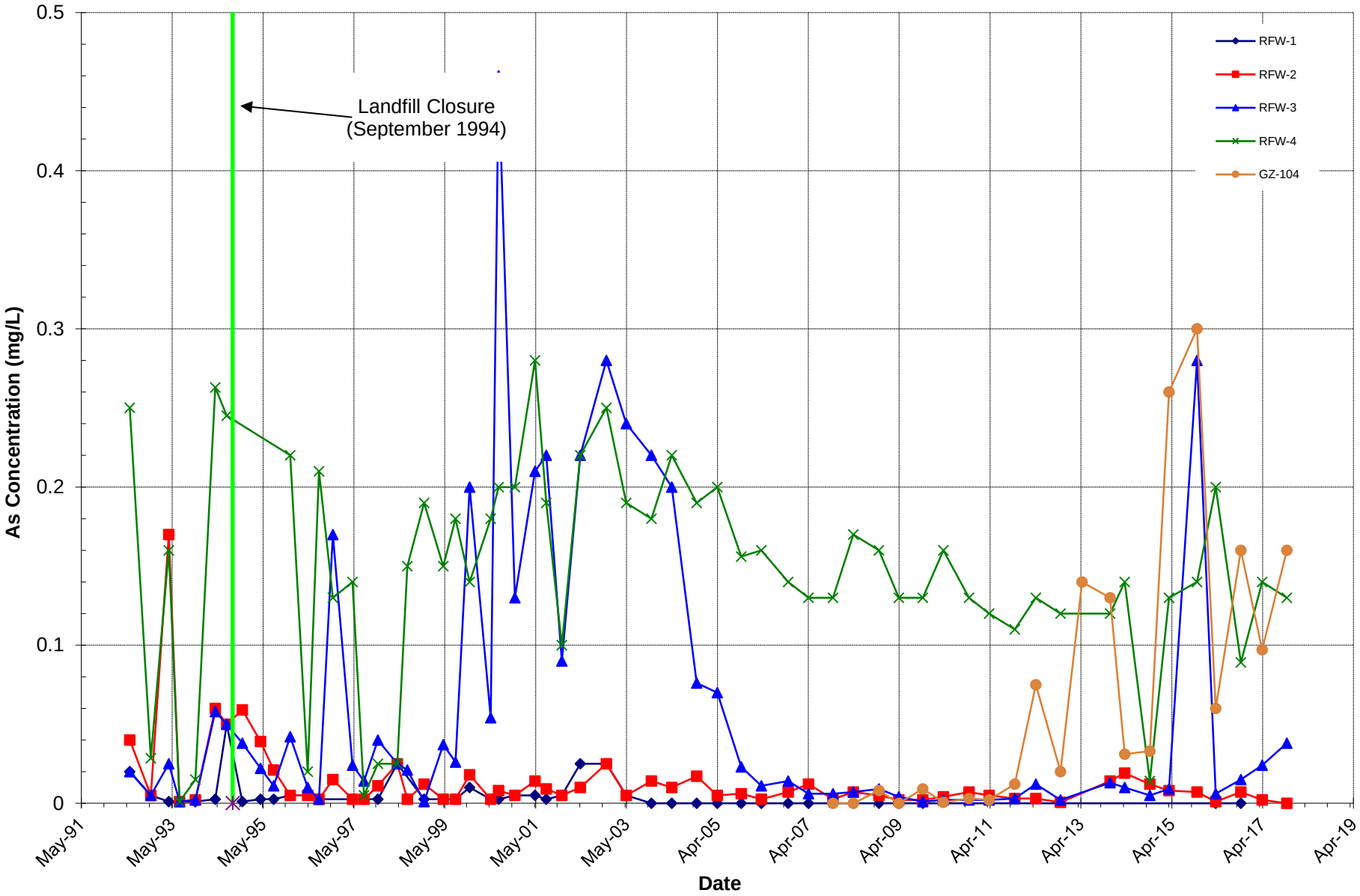
PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
5 COMMERCE PARK NORTH, SUITE 201
BEDFORD, NEW HAMPSHIRE 03110
(603) 623-3600

PREPARED FOR:
TOWN OF EXETER

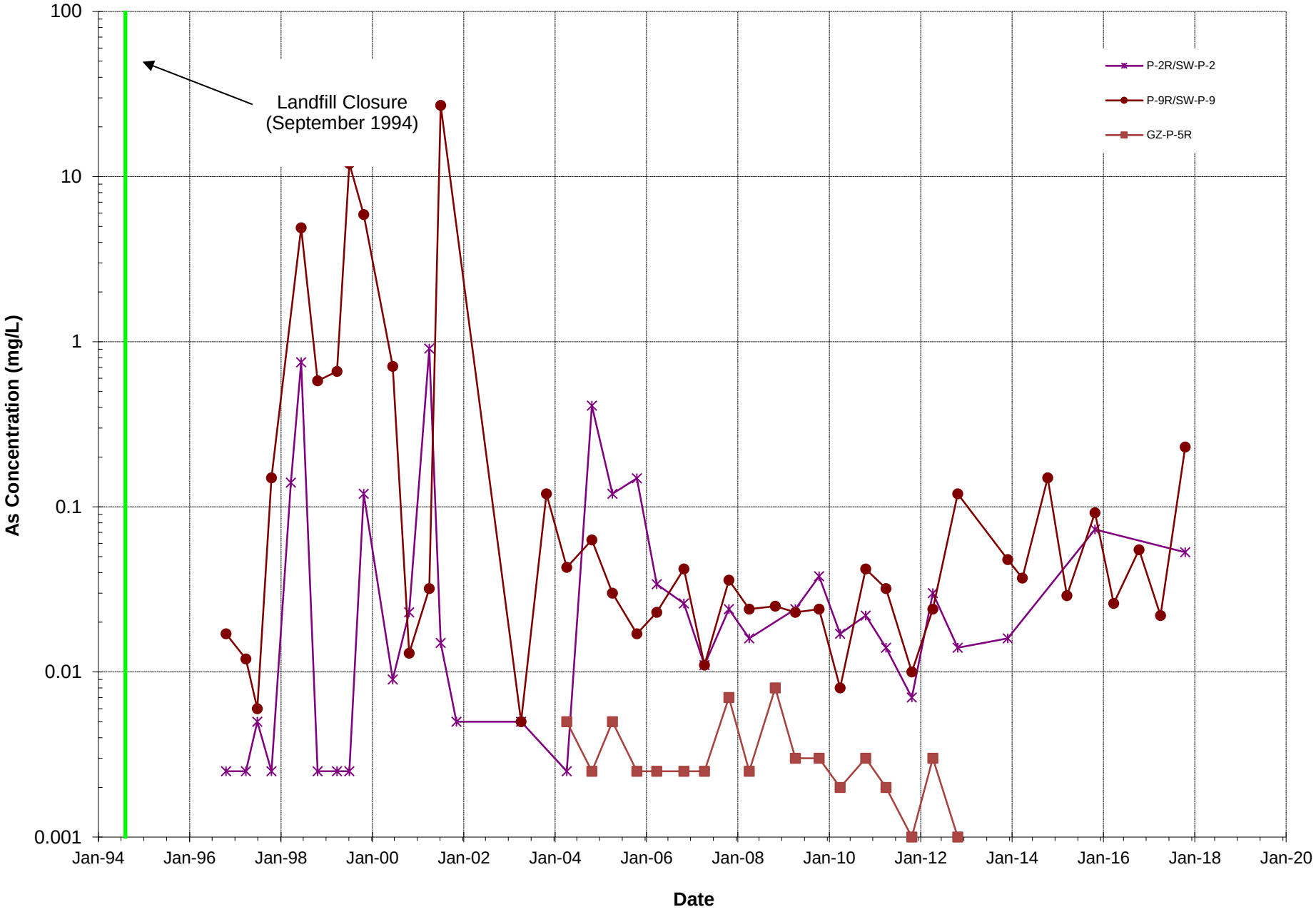
PROJ MGR: DMT	REVIEWED BY: JDR	CHECKED BY: JMW	FIGURE 3
DESIGNED BY: JMW	DRAWN BY: MR	SCALE: AS SHOWN	
DATE JANUARY 2018	PROJECT NO. 04.0021270.29	REVISION NO.	SHEET NO. 3 OF 3

Plots

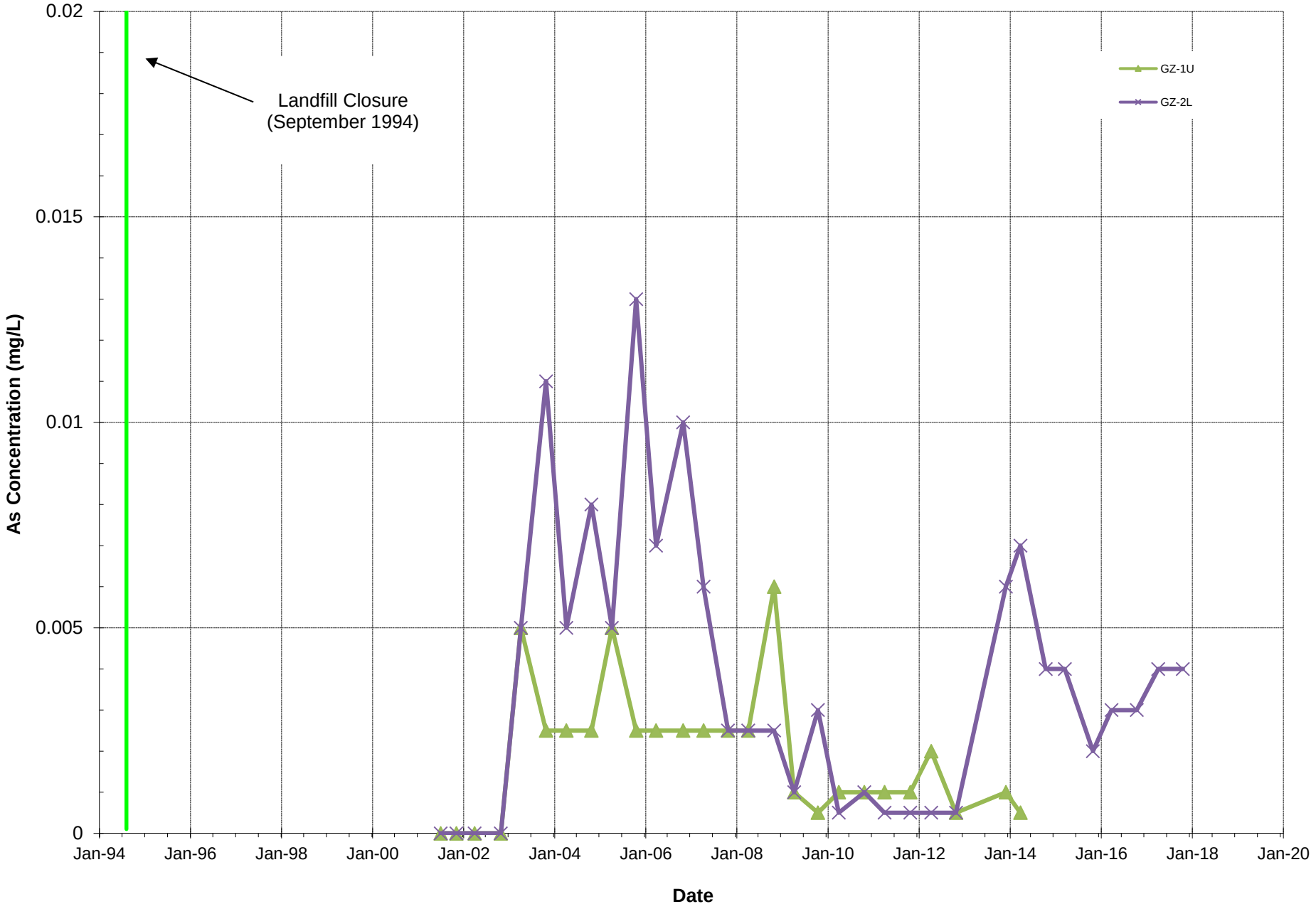
PLOT 1A
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



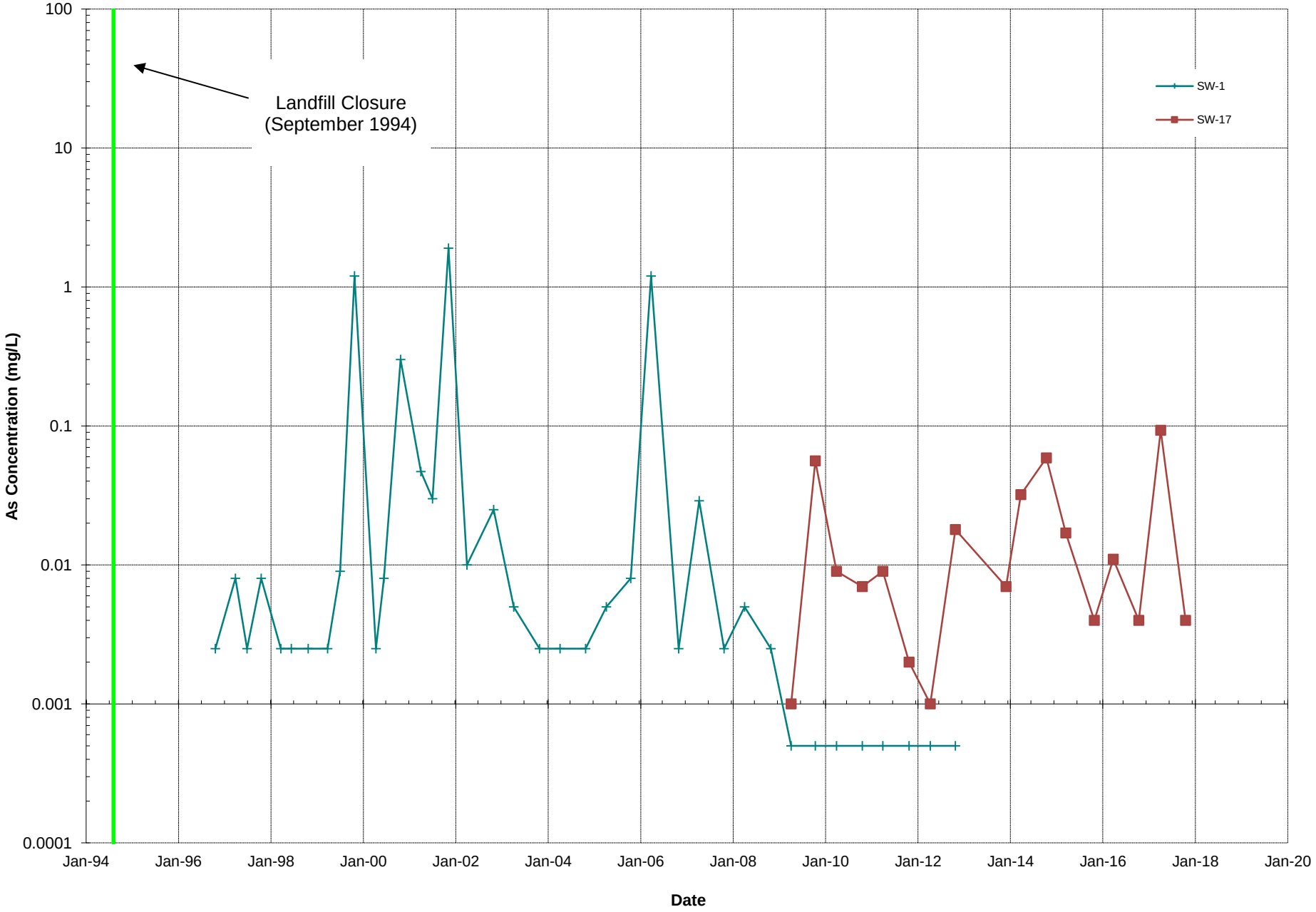
PLOT 1B
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



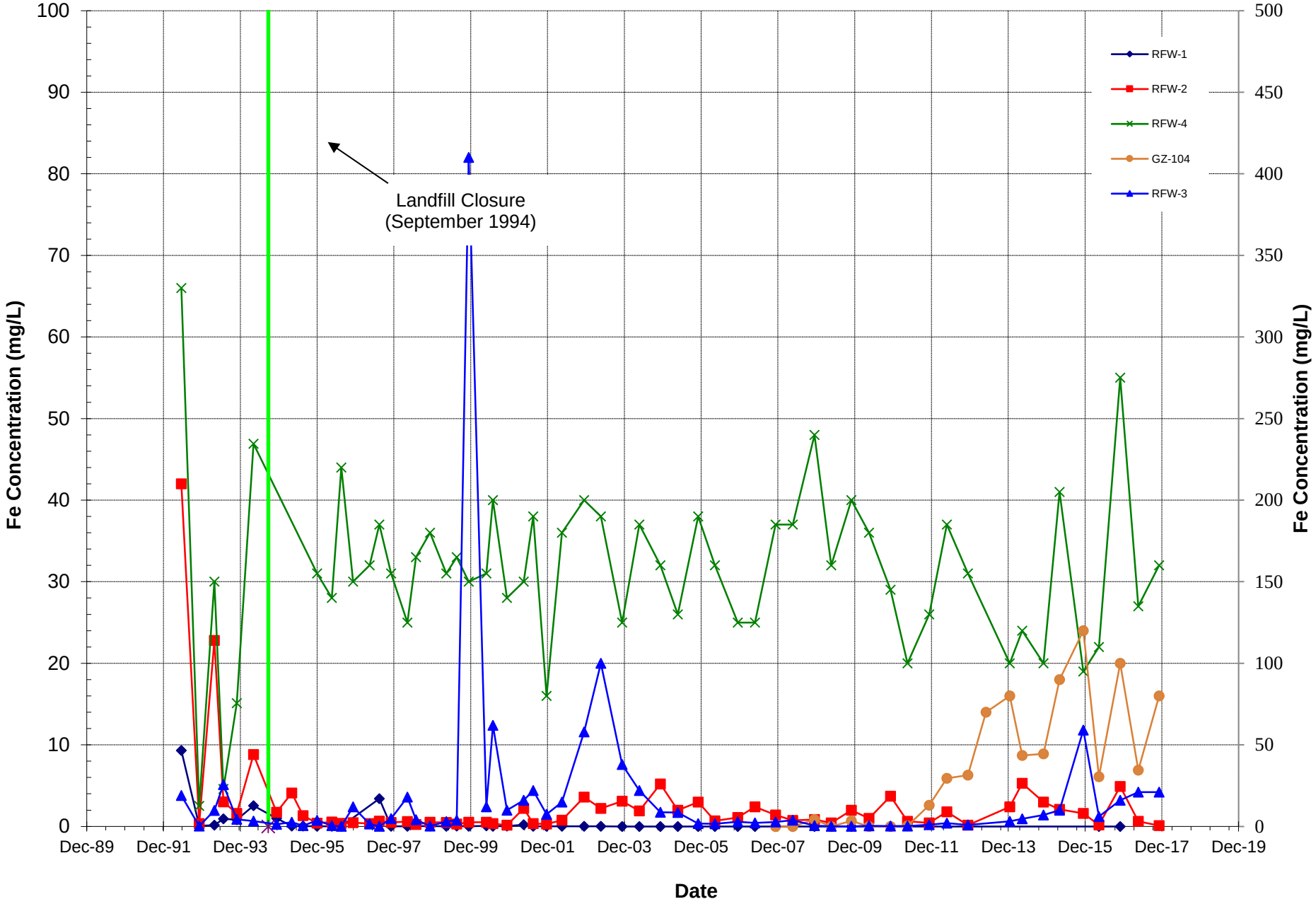
PLOT 1C
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



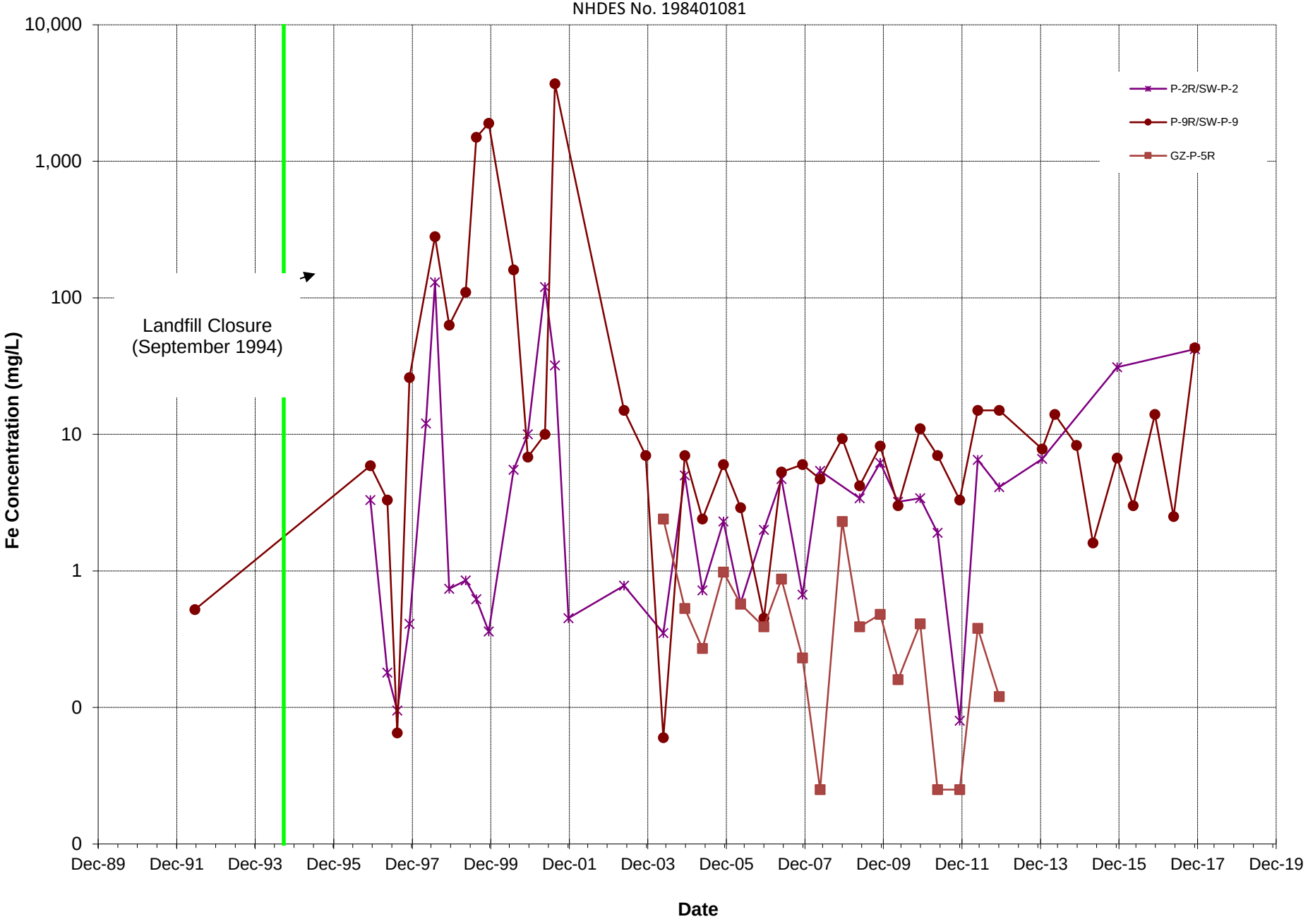
PLOT 1D
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



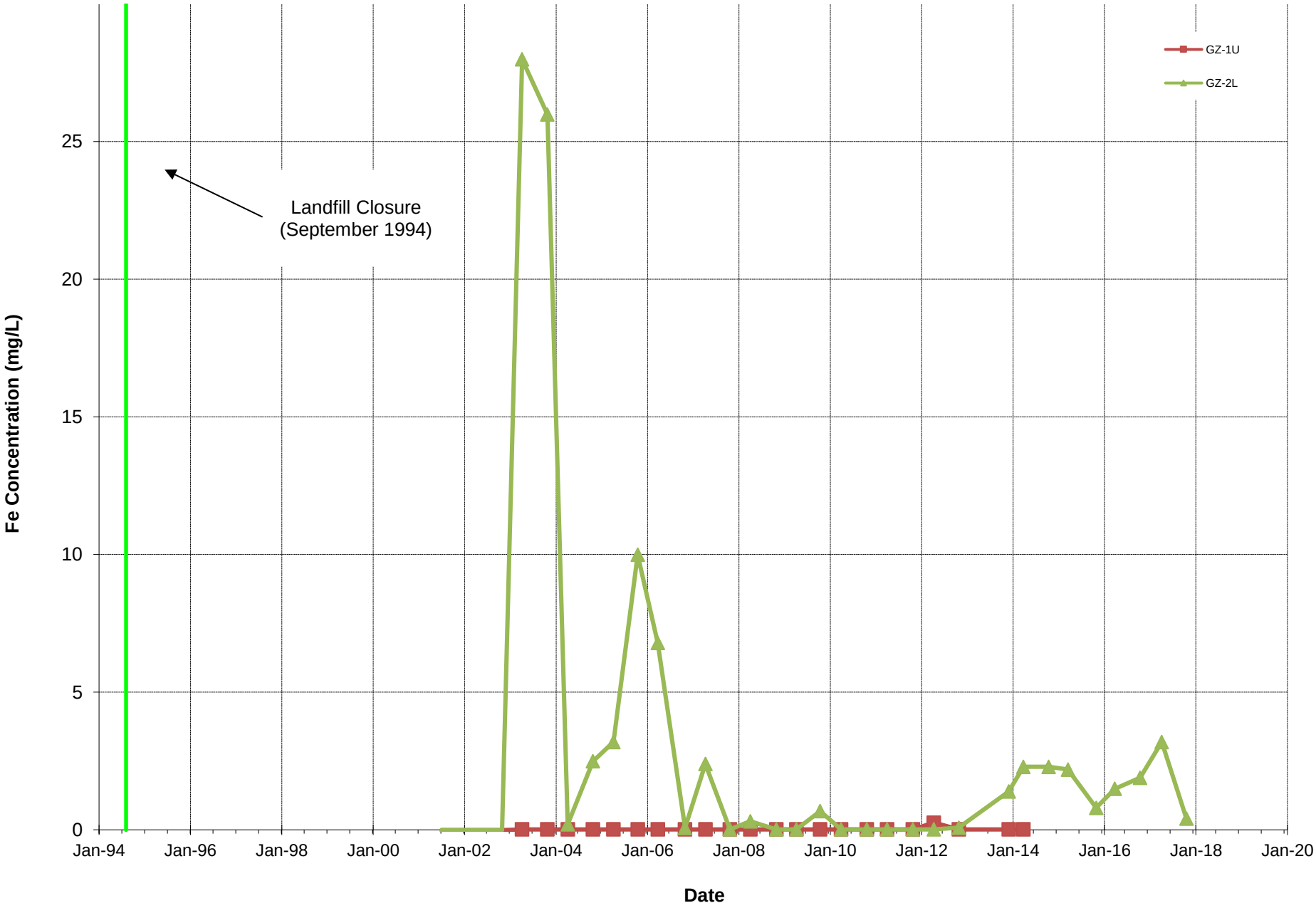
PLOT 2A
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



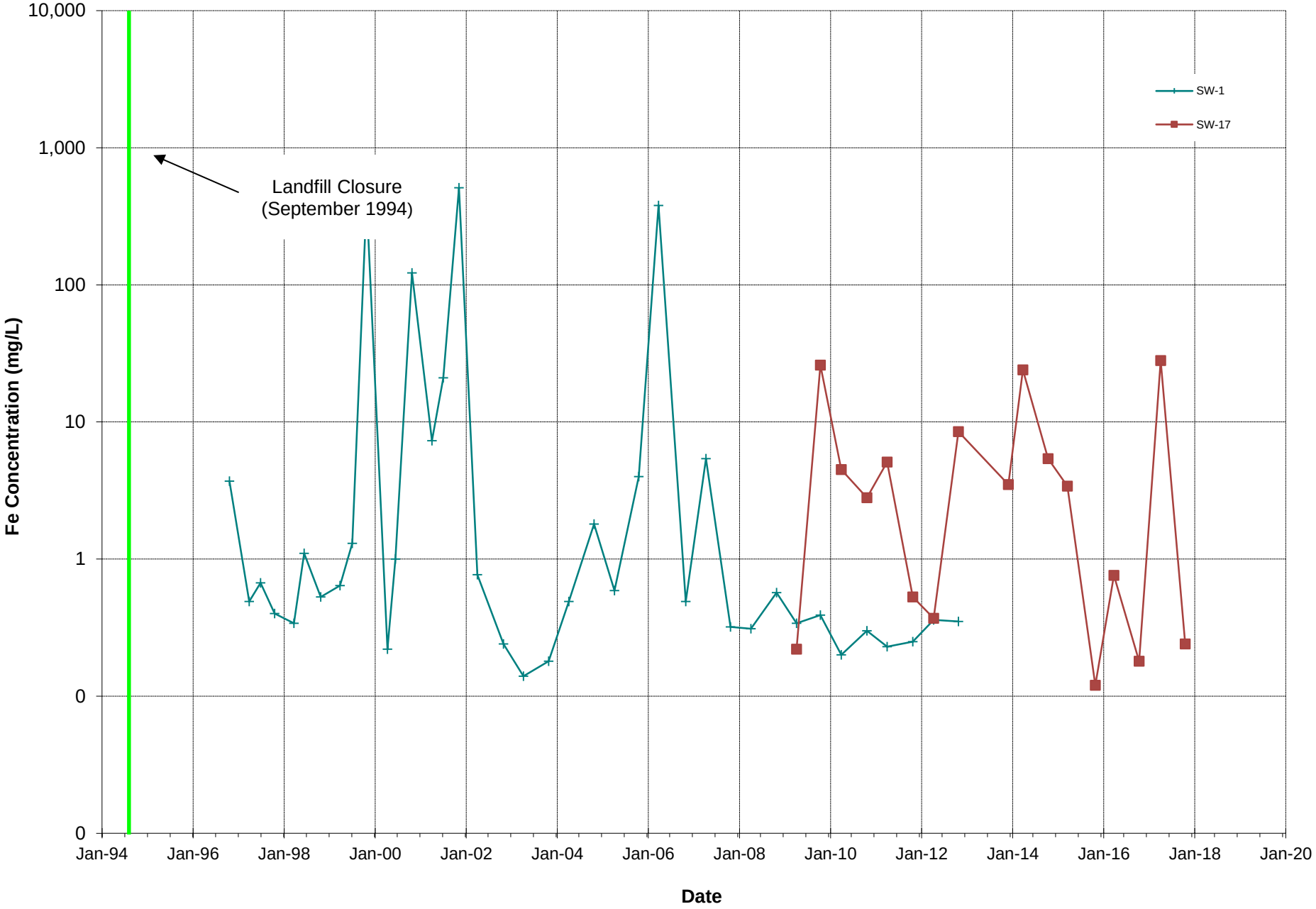
PLOT 2B
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



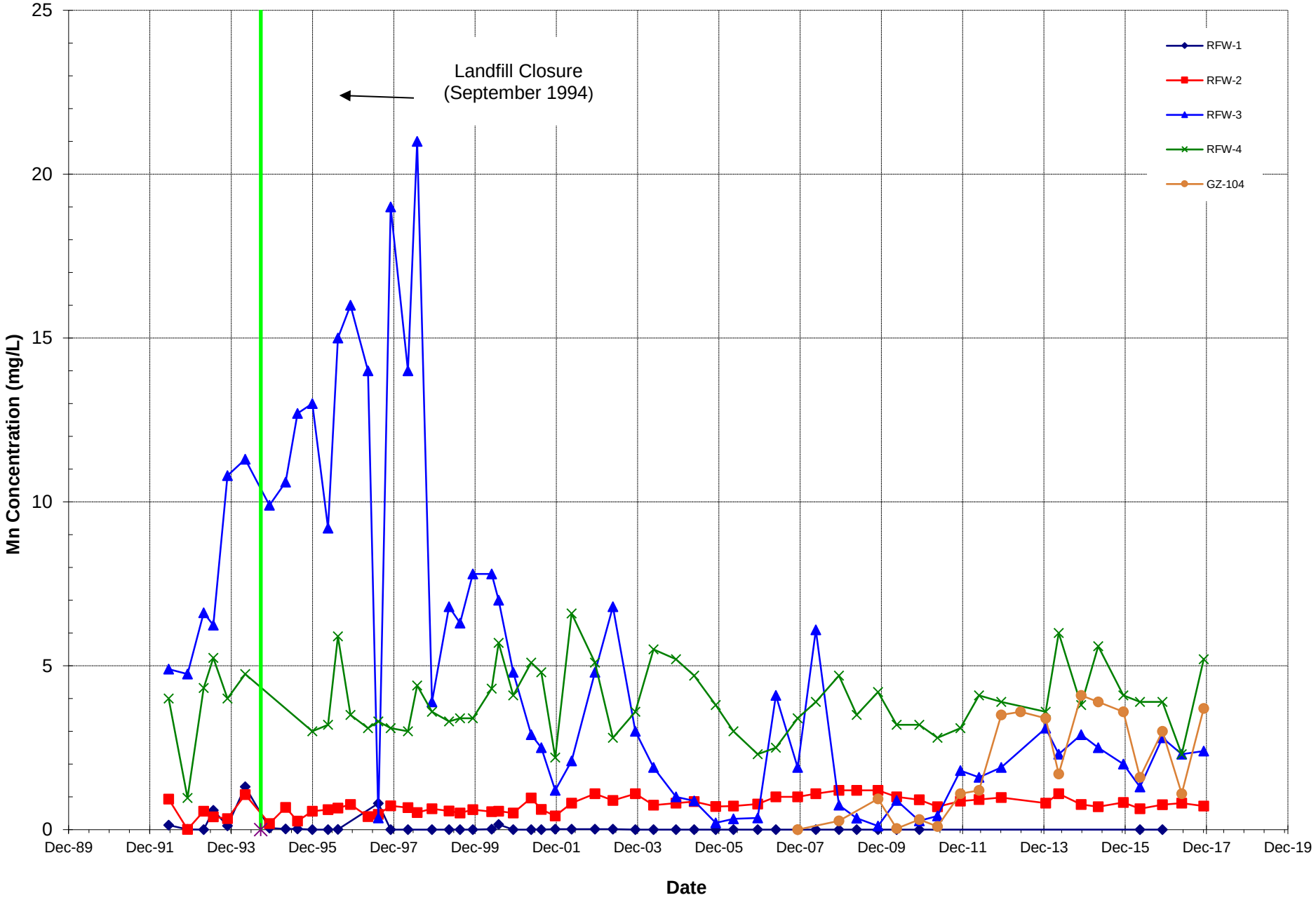
PLOT 2C
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



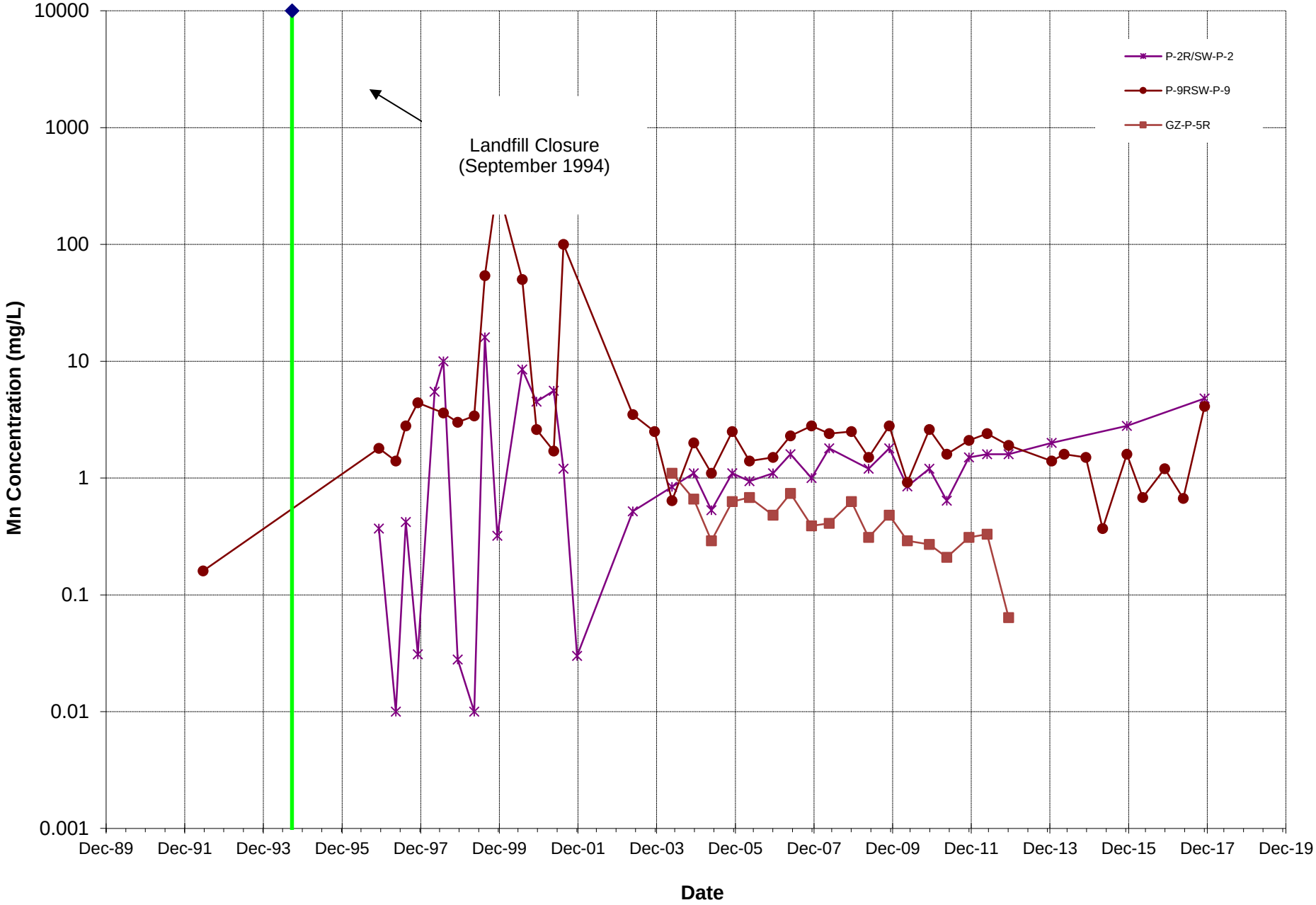
PLOT 2D
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



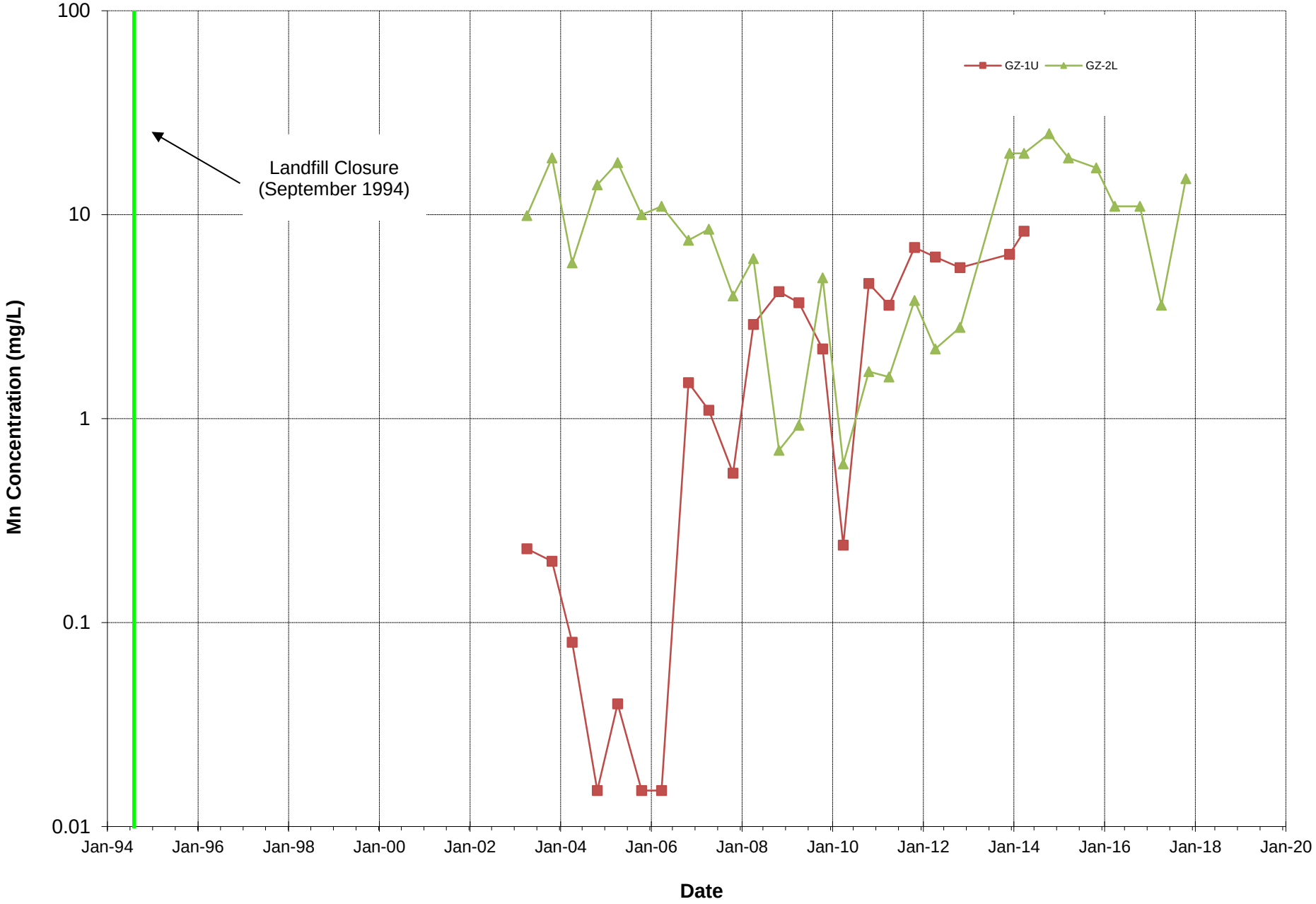
PLOT 3A
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



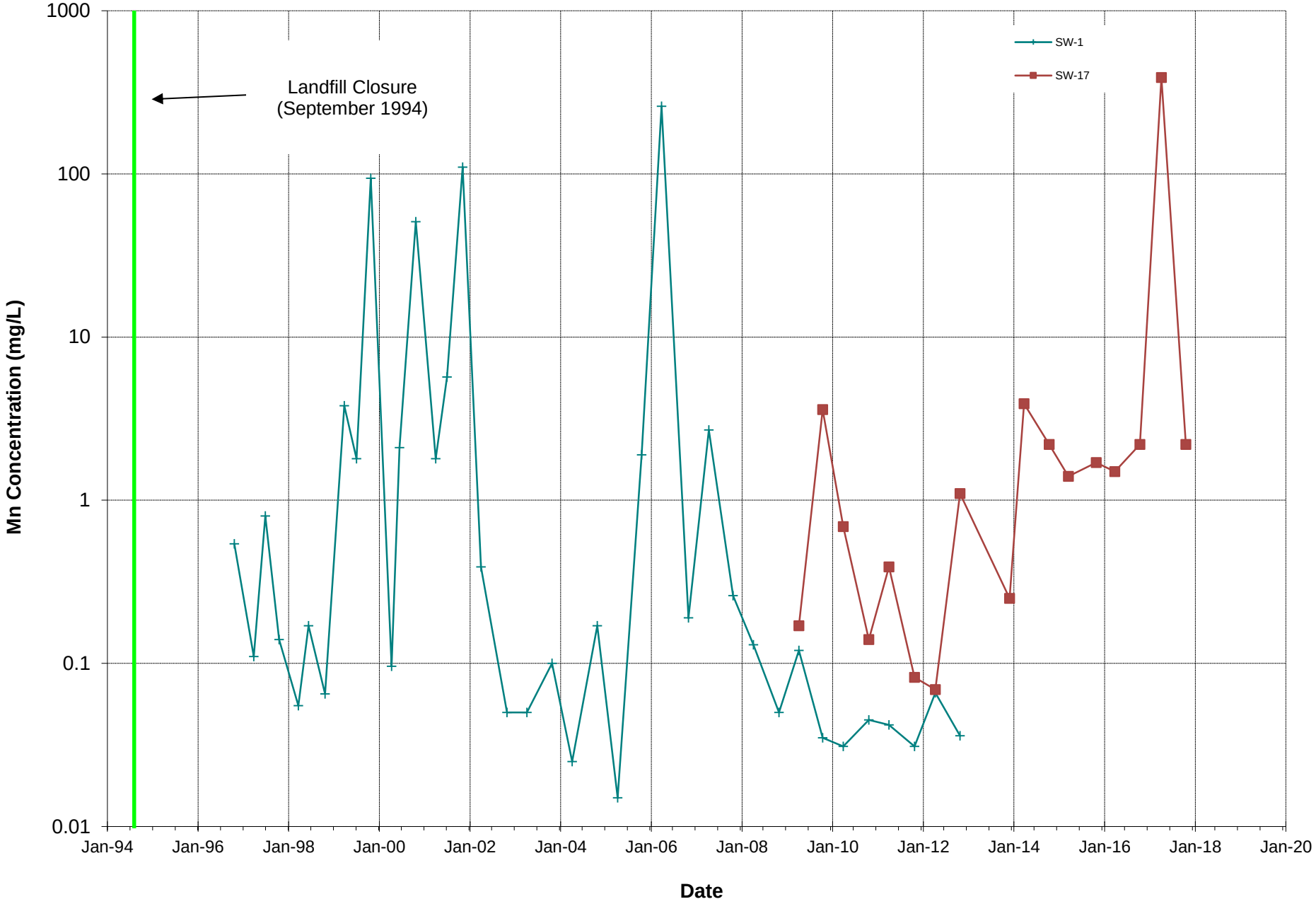
PLOT 3B
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



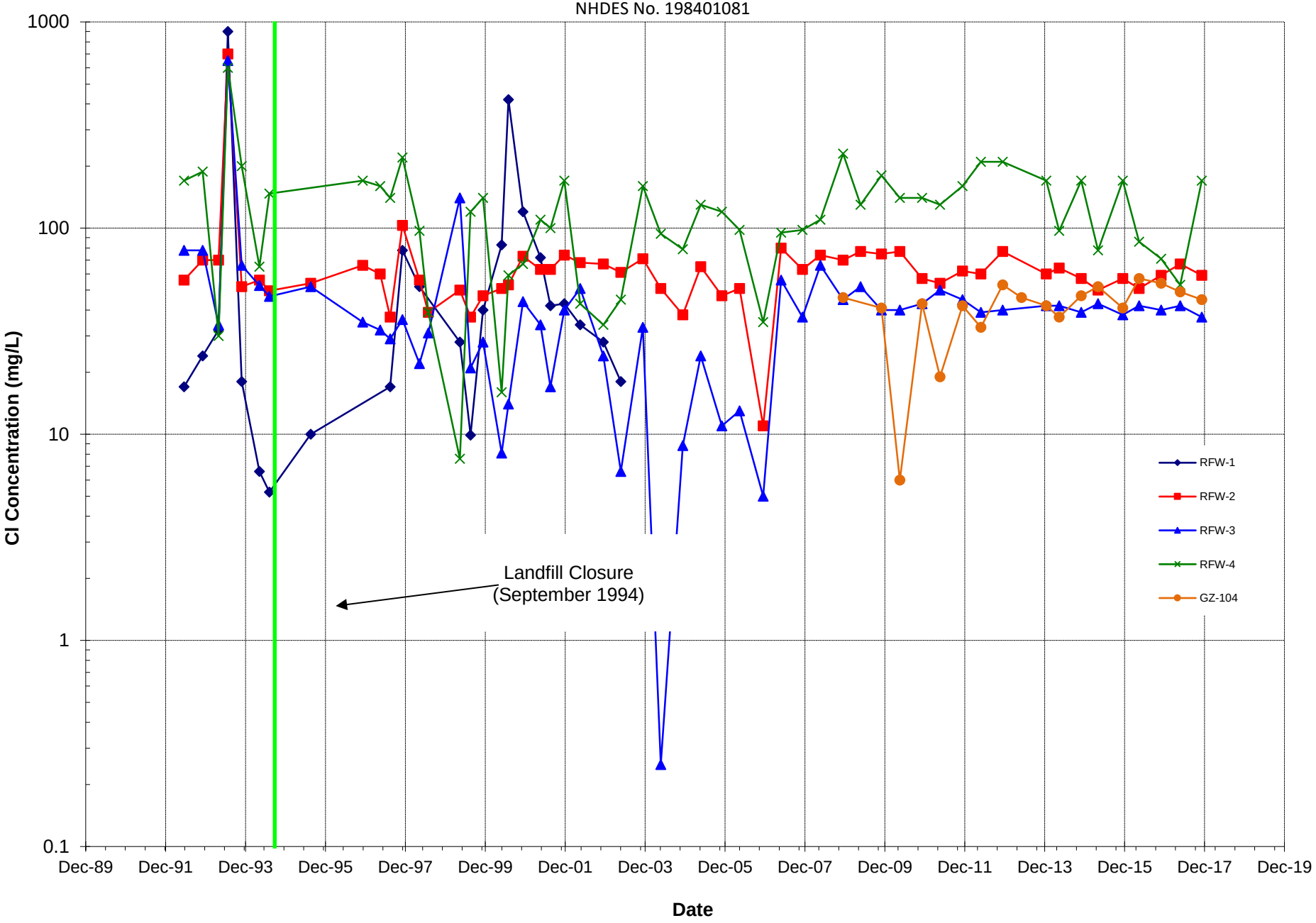
PLOT 3C
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



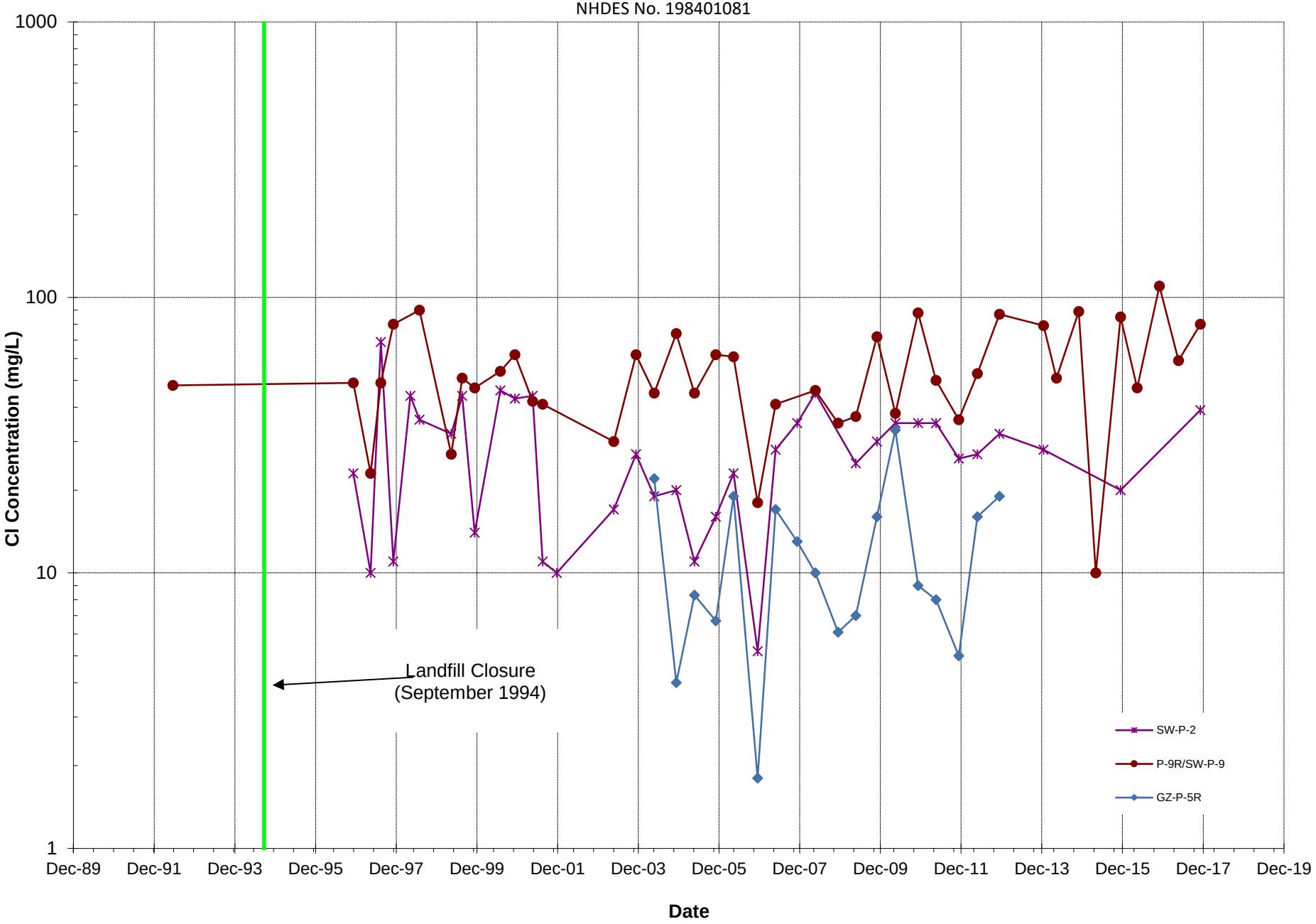
PLOT 3D
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



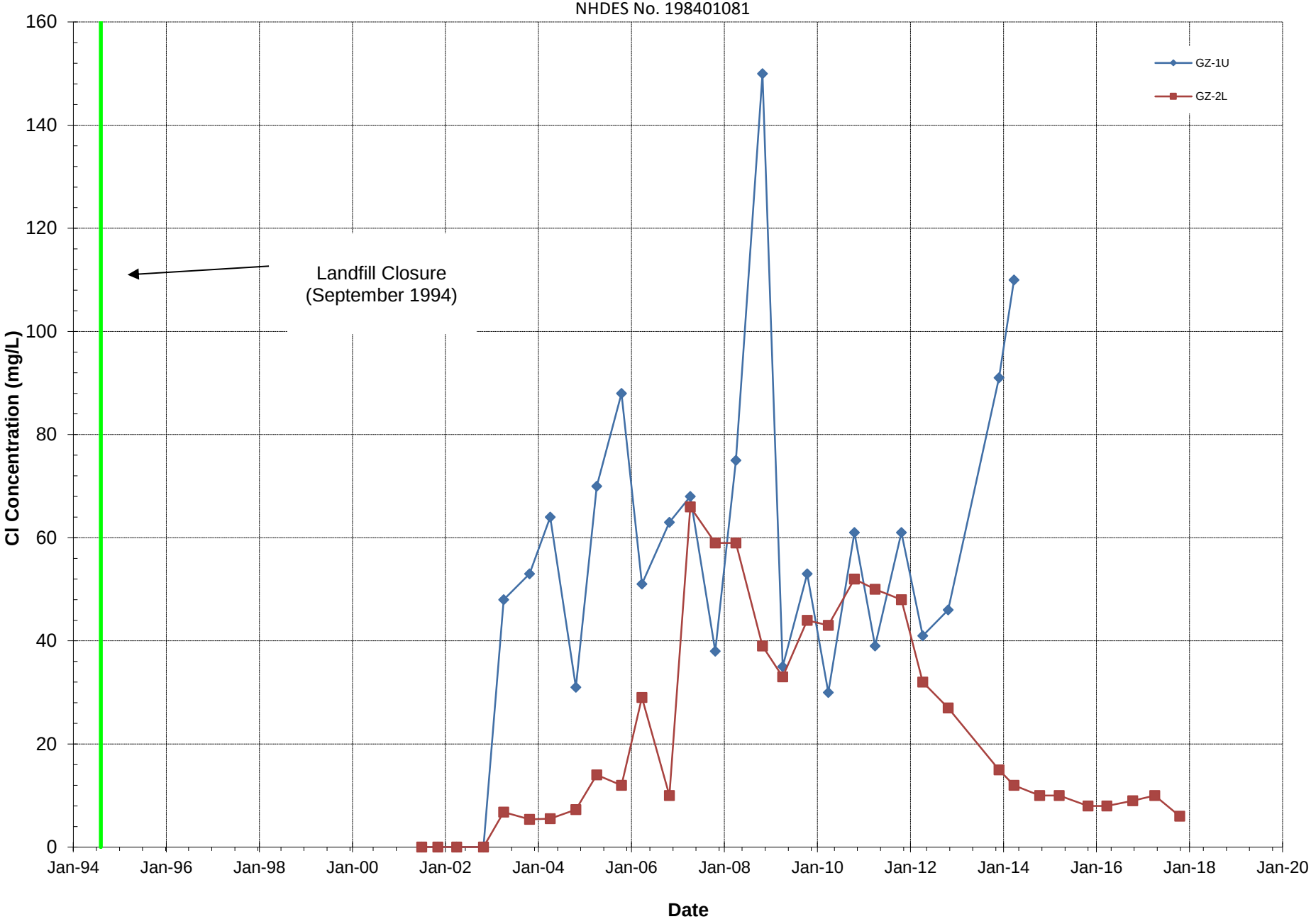
PLOT 4A
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



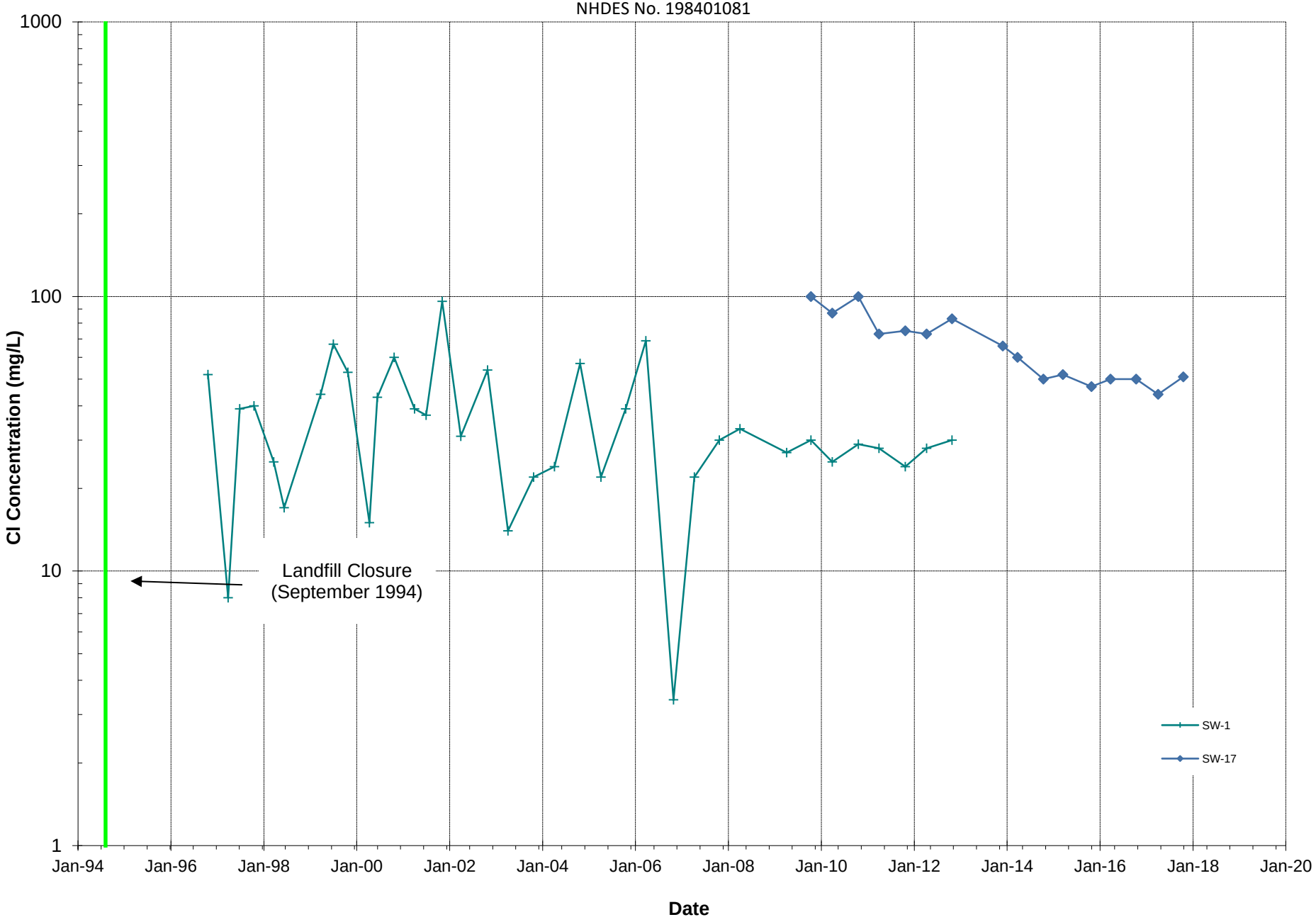
PLOT 4B
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



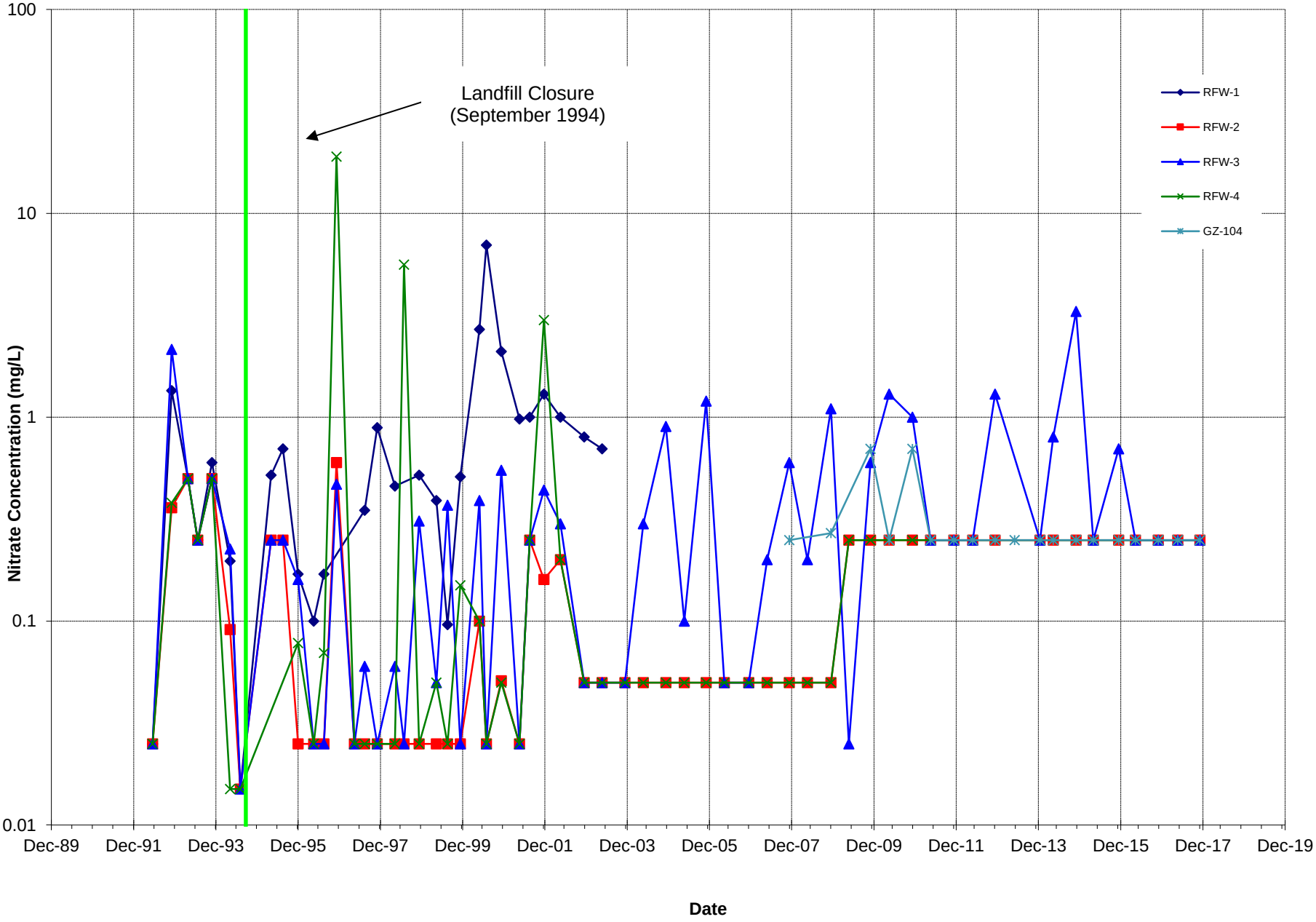
PLOT 4C
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



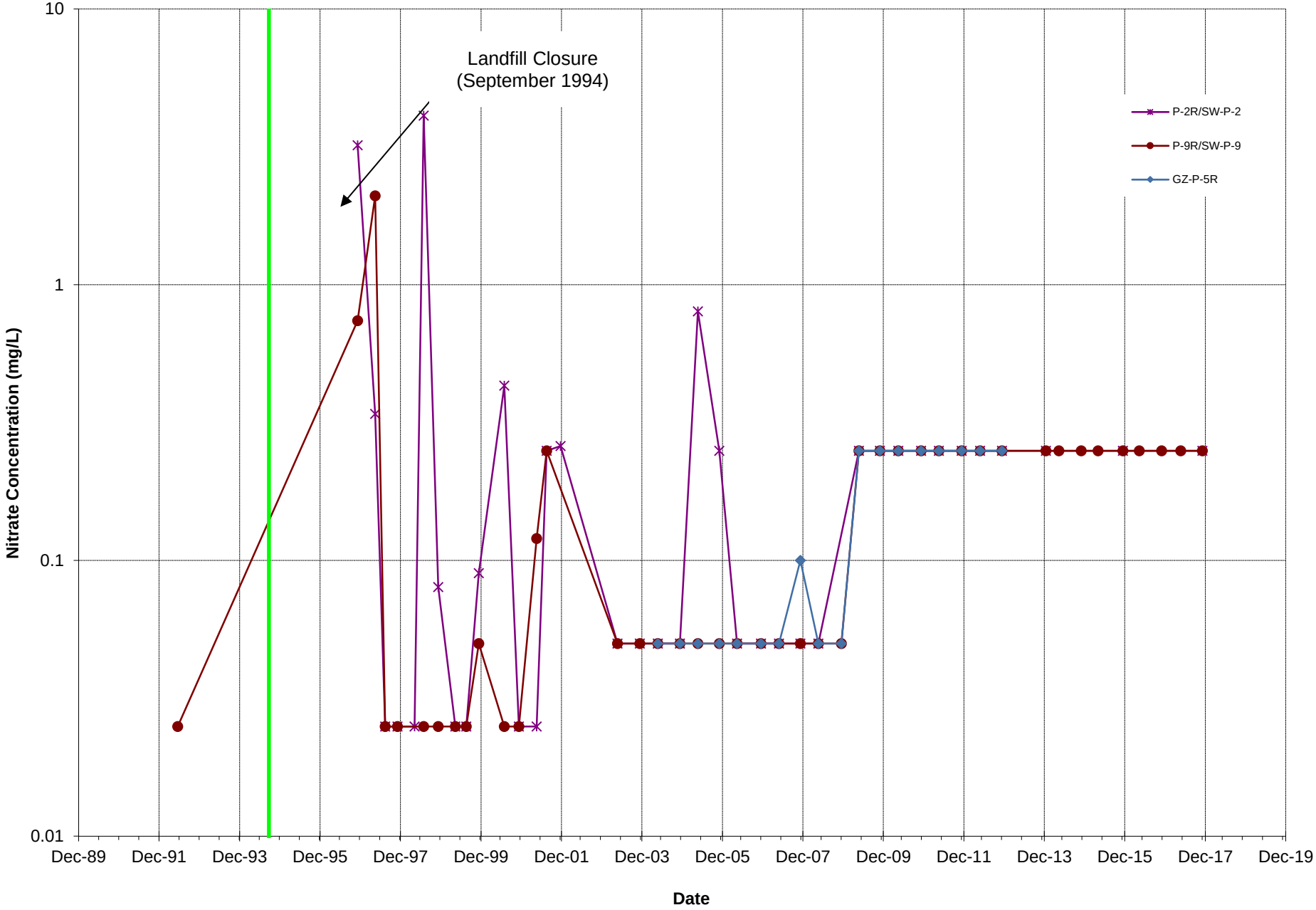
PLOT 4D
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



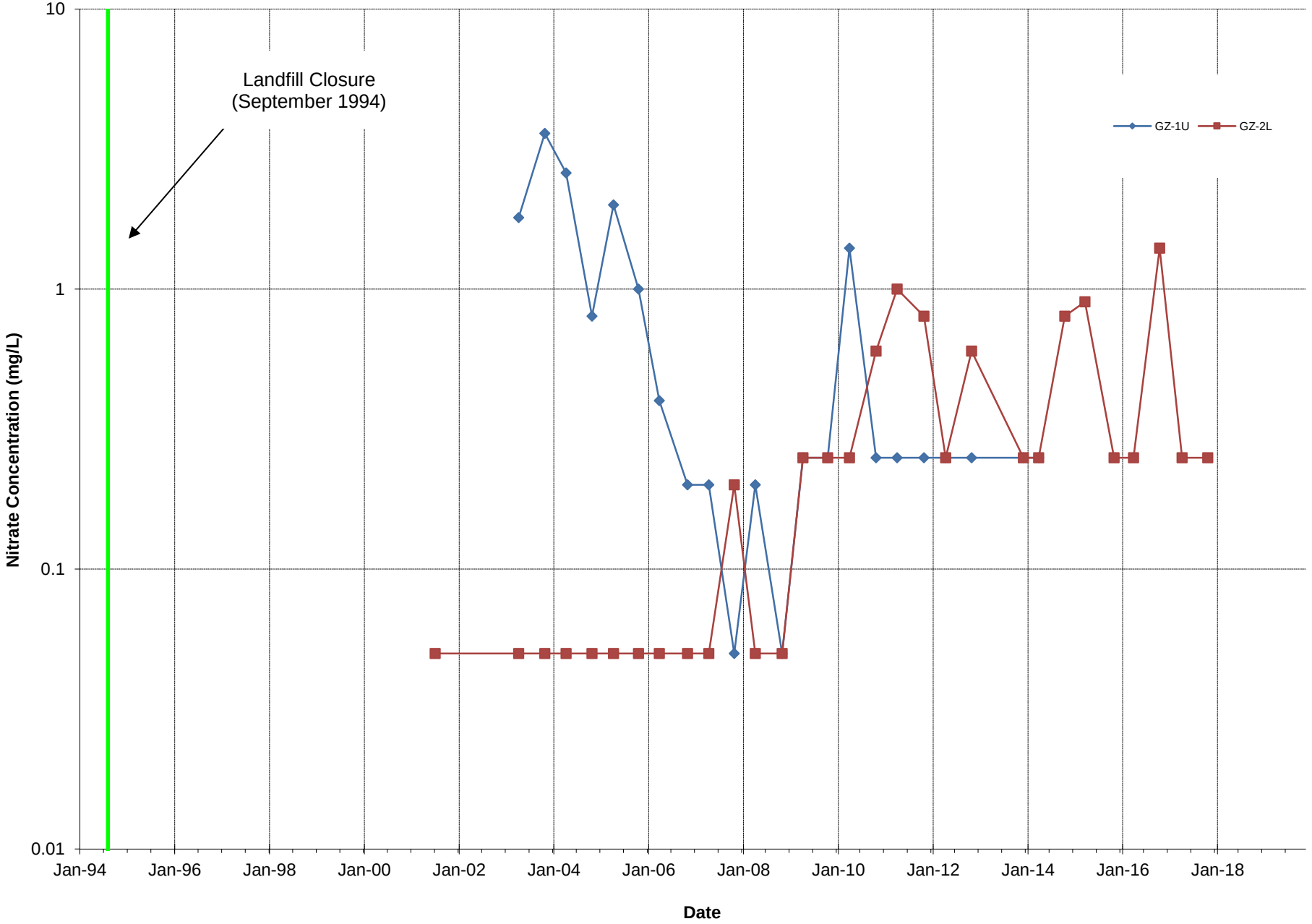
PLOT 5A
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



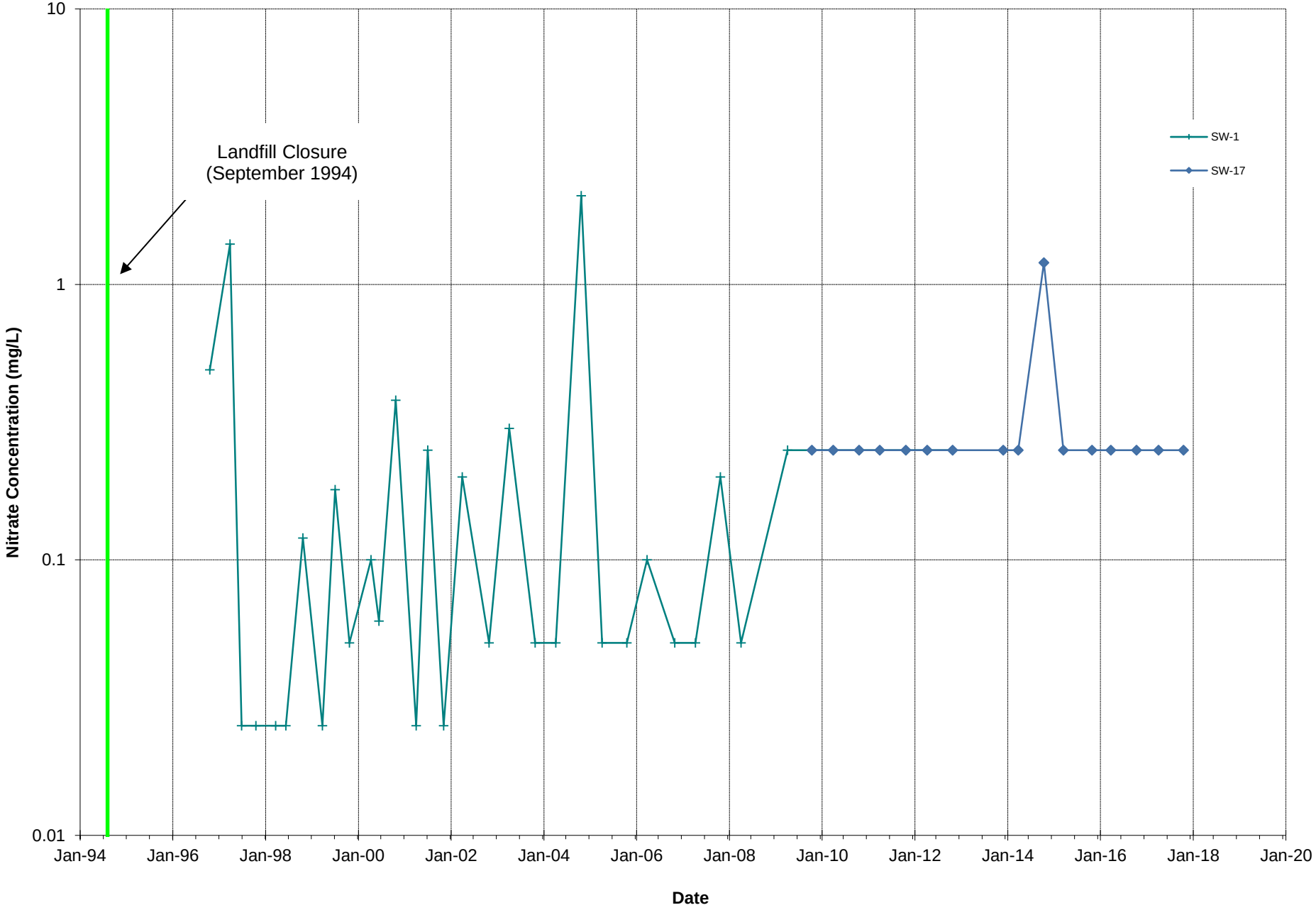
PLOT 5B
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



PLOT 5C
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



PLOT 5D
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



November 2017 Analytical Laboratory Data

November 10, 2017

Ms. Jennifer Mates, P.E.
Town of Exeter DPW
13 Newfields Road
Exeter, NH 03833

Subject: November 2017 Semi Annual Groundwater Monitoring
Cross Road Landfill – Exeter, NH
NHDES GWP-1984010812-E-004
CEC Project Number 150-583

Dear Ms. Mates,

The following is a summary of field sampling procedures and chain of custody documents for the above referenced groundwater monitoring project that occurred November 7, 2017.

Civil & Environmental Consultants, Inc. (CEC) was contracted to collect samples from 12 groundwater monitoring wells and piezometers identified as RFW-2, RFW-3. RFW-4, GMW-11, GZ-1L, GZ-2L, GZ-3L, GZ-104, GZ-201, GZ-202A, P-2R, P-9R, and two surface water points identified as SW-13 and SW-17.

Following the well purge, water levels were allowed to return to 95% of their original static level prior to sample collection for field analysis and off-site chemistry. The samples for off-site analysis were collected into bottles (pre-preserved if required) provided by the contract laboratory, Eastern Analytical Inc. (EAI) of Concord, NH, logged on to the chain of custody and placed on ice for delivery.

The dedicated waterra tubing and foot-valves in all monitoring wells was in good condition after a site survey that took place when we arrived onsite. All monitoring points were sampled with the exception of GMW-11, which was dry. All wells were capped and those that had locks were secured prior to leaving the site.

FIELD ANALYSIS

An Oakton Multi-parameter Tester 35 was calibrated and functioning properly during all field chemistry analysis. There were no onsite conditions (weather, construction, etc.) that would have an adverse impact on the sample data quality or integrity.

Almost all of the wells sampled showed slightly higher pH levels, as well as higher specific conductance compared to historical data from the last few sampling events. As a quality control measure multiple wells were analyzed with another Oakton Multi-parameter Tester 35, which was also calibrated in the morning on November 7, 2017 to ensure the measurements being recorded were accurate. There was no pH excursion at monitoring GZ-2L that was experienced during the April 2017 monitoring round.

Groundwater samples noted as 'dissolved metals' were field filtered using a 0.45 micron filter apparatus prior to preservation.

You will receive the analytical data directly from EAI within 10 – 14 business days.

The next required round of permit monitoring will take place in April 2018.

Thank you for your continued utilization of our field sampling services. Please do not hesitate to contact me with any questions or comments regarding the work performed.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Brandon R. Patrick
Assistant Project Manager

Thomas E. Walker
Senior Project Manager

Attachments:
November 2017 Field Summary Table
Eastern Analytical Chain of Custody Documents

cc: Dawna Tousignant – GZA GeoEnvironmental

Project Location: Exeter, NH – Cross Road Landfill
Field Personnel: Brandon Patrick & Andrew Tarani
Date: November 7, 2017
Weather: Partly Cloudy, 36-45°F

Well ID	Depth To Water	Depth To Bottom	Purge Volume	pH	Conductivity	Temperature
	ft	*ft*	*gal*	*s.u.*	*µs*	*°C*
RFW-2	43.82	71.91	14	6.78	288	10.9
RFW-3	74.43	98.61	12	6.45	632	12.4
RFW-4	38.98	69.03	15	7.48	828	11.7
GMW-11	DRY	11.16	DRY			
GZ-1L	21.39	77.49	27.5 TD	8.22	617	11.3
GZ-2L	36.17	56.59	10 TD	7.44	1058	9.9
GZ-3L	12.94	39.40	12.5	7.29	236	10.4
GZ-104	13.53	16.78	2	7.34	600	11.9
GZ-201	51.27	57.63	3.5	6.88	929	13.0
GZ-202A	51.69	66.52	7.5	7.18	535	14.2
P-2R	3.04	8.12	2.5	7.36	369	10.1
P-9R	2.54	7.62	2.5	7.38	636	11.5
SW-13	N/A	N/A	N/A	7.38	374	10.0
SW-17	N/A	N/A	N/A	7.46	494	11.3

NOTES:

- **TD** = Well purged until dry
- GMW-11 could not be sampled due to low yield / well dryness.
- Dissolved metals samples were field filtered using 0.45 micron filter prior to preservation with HNO_3.
- Samples were stored and transported on ice after collection
- Field measurements for static elevation taken using a Solinst Tape, readings for pH, Specific Conductivity and Temperature taken using an Oakton Multi-parameter Tester 35.

1 of 4 Rev 11/9/17

Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

175643

EXENH

Sample IDs	Date/Time (Composites need start and stop dates/times)	Matrix	Parameters and Sample Notes	# of containers
RFW-2	11/7/17 1450	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒
RFW-3	11/7/17 1150	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒
RFW-4	11/7/17 1430	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒
GZ-1L	11/7/17 1620	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☐

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 31
Project Name Cross Road Landfill | Nov 2017
State NH
Client (Pro Mgr) Jennifer Mates
Customer Exeter, Town of
Address Town Office, 13 Newfields Rd.
City Exeter NH 03833-2792
Phone 778-0591 **Fax** 772-4709
Email: jmates@exeternh.gov
Direct

Results Needed by: Preferred date _____
Notes:

Attn sampler: Auto chain of custody provided for your convenience, please review for accuracy and write in any needed changes

QC deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ PC

ReportingOptions
☐ HC ☒ EDD PDF ☒ EDD email ☒ PDF prelim, NO FAX ☐ e-mail Login Confirmation
☐ NO FAX ☐ Partial FAX ☒ PDF Invoice ☐ EQUIS

PO# 4335-309
Quote#: 1013778
Temp 2.0 °C
Ice Y ☒ N ☐

Samples Collected by: ANDREW TARANI

Relinquished by	Date/Time	Received by
	11/7/17 1640	Lisa Burton
Lisa Burton	11-7-17 17:55	

Relinquished by	Date/Time	Received by

2 of 4 Rev. 11/5/17

Eastern Analytical, Inc. CHAIN-OF-CUSTODY RECORD **175643**

Sample IDs	Date/Time (Composites need start and stop dates/times)	Matrix	Parameters and Sample Notes	# of containers
GZ-2L	11/7/17 1428	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE *TOTAL METALS 3/4 FOR DUE TO LOW YIELD	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
GZ-3L	11/7/17 1418	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
GZ-104	11/7/17 1254	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☒
GZ-201	11/7/17 1145	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☒

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 31
Project Name Cross Road Landfill | Nov 2017
State NH
Client (Pro Mgr) Jennifer Mates
Customer Exeter, Town of
Address Town Office, 13 Newfields Rd.
City Exeter NH 03833-2792
Phone 778-0591 Fax 772-4709
Email: jmates@exeternh.gov
Direct

Results Needed by: Preferred date _____
Notes:

Attn sampler: Auto chain of custody provided for your convenience, please review for accuracy and write in any needed changes

QC deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ PC

ReportingOptions
☐ HC ☐ NO FAX
☒ EDD PDF ☐ Partial FAX
☒ EDD email ☒ PDF Invoice
☒ PDF prelim, NO FAX ☐ EQUIS
☐ e-mail Login Confirmation

PO# 4335-309
Quote#: 1013778
Temp 2.0 °C
Ice Y ☒ N ☐

Samples Collected by: ANDREW TARANI

Relinquished by	Date/Time	Received by
	11/7/17 1640	
	11.7.17 17.55	

Eastern Analytical, Inc. www.easternanalytical.com | 800.287.0525 | customerservice@easternanalytical.com

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Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

175643

EXENH

Sample IDs	Date/Time (Composites need start and stop dates/times)	Matrix	Parameters and Sample Notes	# of containers
GZ-202A	11/7/17 1618	aqueous (Grab or Comp)	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) HNO3 (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒
P-9R	11/7/17 1548	aqueous (Grab or Comp)	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒
SW-17	11/7/17 1307	aqueous (Grab or Comp)	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☐
P-2R (South Spring)	11/7/17 1520	aqueous (Grab or Comp)	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 31
Project Name Cross Road Landfill | Nov 2017
State NH
Client (Pro Mgr) Jennifer Mates
Customer Exeter, Town of
Address Town Office, 13 Newfields Rd.
City Exeter NH 03833-2792
Phone 778-0591 **Fax** 772-4709
Email: jmates@exeternh.gov
Direct

Results Needed by: Preferred date _____
Notes:

Attn sampler: Auto chain of custody provided for your convenience, please review for accuracy and write in any needed changes

QC deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ PC

ReportingOptions
☐ HC ☒ EDD PDF ☒ EDD email ☒ PDF prelim, NO FAX ☐ e-mail Login Confirmation
☐ NO FAX ☐ Partial FAX ☒ PDF Invoice ☐ EQUIS

PO# 4335-309
Quote#: 1013778
Temp 20 °C
Ice Y ☒ N ☐

Samples Collected by: ANDREW TARANI

Relinquished by	Date/Time	Received by
Andrew Tarani	11/7/17 1640	Hope Burton
Hope Burton	11-7-17 17:55	

4 of 4 PM 11/9/17

Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

175643

EXENH

Sample IDs	Date/Time (Composites need start and stop dates/times)	Matrix	Parameters and Sample Notes	# of containers
SW-13	11/7/17 1220	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
GMW-11	N/A	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg NO YIELD	X
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
Trip Blank - 8260	11/7/17 9/22/17 16:15 EAI	aqueous Grab or Comp	AqTot/VNH8260CFullList	2
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
Trip Blank - 1,4 Dioxane	11/7/17 9/18/17 8:00 EAI	aqueous Grab or Comp	AqTot/V8260SIM14DIOXANE	2
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 31

Project Name Cross Road Landfill | Nov 2017

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Rd.

City Exeter NH 03833-2792

Phone 778-0591 **Fax** 772-4709

Email: jmates@exeternh.gov

Direct

Results Needed by: Preferred date _____

Notes:

Attn sampler: Auto chain of custody provided for your convenience, please review for accuracy and write in any needed changes

QC deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ PC

ReportingOptions

☐ HC ☐ NO FAX

☒ EDD PDF ☐ Partial FAX

☒ EDD email ☒ PDF Invoice

☒ PDF prelim, NO FAX ☐ EQUIS

☐ e-mail Login Confirmation

PO# 4335-309

Quote#: 1013778

Temp 2.0°C

Ice Y☒ N☐

Samples Collected by: ANDREW TARANI

Relinquished by	Date/Time	Received by
Andrew Tarani	11/7/17 1640	Lisa Burton
Lisa Burton	11-7-17 17:55	

Relinquished by	Date/Time	Received by

Eastern Analytical, Inc.
professional laboratory and drilling services

Jennifer Mates
Exeter, Town of
Town Office, 13 Newfields Rd.
Exeter , NH 03833-2792

Subject: Laboratory Report

Eastern Analytical, Inc. ID:	175643
Client Identification:	Cross Road Landfill | Nov 2017
Date Received:	11/7/2017

Dear Ms. Mates :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director | 11.16.17 Date | 20 # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Temperature upon receipt (°C): 2.0 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
175643.01	RFW-2	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.02	RFW-3	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.03	RFW-4	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.04	GZ-1L	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.05	GZ-2L	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.06	GZ-3L	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.07	GZ-104	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.08	GZ-201	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.09	GZ-202A	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.1	P-9R	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.11	SW-17	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.12	P-2R (South Spring)	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.13	SW-13	11/7/17	11/7/17	aqueous		Adheres to Sample Acceptance Policy
175643.14	Trip Blank - 8260	11/7/17	9/20/17	aqueous		Adheres to Sample Acceptance Policy
175643.15	Trip Blank - 1,4 Dioxane	11/7/17	9/18/17	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.
Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.
All results contained in this report relate only to the above listed samples.
References include:
1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater,20th Edition, 1998 and 22nd Edition, 2012
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 2nd edition, 1992

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	RFW-2	RFW-3	RFW-4	GZ-1L	GZ-2L	GZ-3L	GZ-104
Lab Sample ID:	175643.01	175643.02	175643.03	175643.04	175643.05	175643.06	175643.07
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17
Analyst:	BAM	BAM	BAM	BAM	BAM	BAM	BAM
Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1	1	1	1
Dichlorodifluoromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Vinyl chloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromomethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Trichlorofluoromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Diethyl Ether	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acetone	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
tert-Butyl Alcohol (TBA)	< 30	< 30	< 30	< 30	< 30	< 30	< 30
Methylene chloride	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Carbon disulfide	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Methyl-t-butyl ether(MTBE)	< 1	1	< 1	< 1	< 1	< 1	< 1
Ethyl-t-butyl ether(ETBE)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Isopropyl ether(DIPE)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
tert-amyl methyl ether(TAME)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Butanone(MEK)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromochloromethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrahydrofuran(THF)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon tetrachloride	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloropropene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dioxane	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-Methyl-2-pentanone(MIBK)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Hexanone	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrachloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane(EDB)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	RFW-2	RFW-3	RFW-4	GZ-1L	GZ-2L	GZ-3L	GZ-104
Lab Sample ID:	175643.01	175643.02	175643.03	175643.04	175643.05	175643.06	175643.07
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17
Analyst:	BAM	BAM	BAM	BAM	BAM	BAM	BAM
Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1	1	1	1
mp-Xylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
o-Xylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	< 2	< 2	< 2	< 2	< 2	< 2	< 2
IsoPropylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
tert-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
sec-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
p-Isopropyltoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
n-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,3,5-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2,3-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-Bromofluorobenzene (surr)	**101 %R**	**103 %R**	**101 %R**	**102 %R**	**101 %R**	**101 %R**	**102 %R**
1,2-Dichlorobenzene-d4 (surr)	**101 %R**	**101 %R**	**100 %R**	**99 %R**	**99 %R**	**99 %R**	**99 %R**
Toluene-d8 (surr)	**95 %R**	**95 %R**	**95 %R**	**95 %R**	**95 %R**	**95 %R**	**95 %R**
1,2-Dichloroethane-d4 (surr)	**95 %R**	**95 %R**	**95 %R**	**93 %R**	**96 %R**	**95 %R**	**96 %R**

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	GZ-201	GZ-202A	P-9R	SW-17	P-2R (South Spring)	SW-13	Trip Blank - 8260
Lab Sample ID:	175643.08	175643.09	175643.1	175643.11	175643.12	175643.13	175643.14
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	9/20/17
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17
Analyst:	BAM	BAM	BAM	BAM	BAM	BAM	BAM
Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1	1	1	1
Dichlorodifluoromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Vinyl chloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromomethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Trichlorofluoromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Diethyl Ether	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acetone	< 10	< 10	< 10	< 10	< 10	**10**	< 10
1,1-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
tert-Butyl Alcohol (TBA)	< 30	< 30	< 30	< 30	< 30	< 30	< 30
Methylene chloride	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Carbon disulfide	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Methyl-t-butyl ether(MTBE)	< 1	**1**	< 1	< 1	< 1	< 1	< 1
Ethyl-t-butyl ether(ETBE)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Isopropyl ether(DIPE)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
tert-amyl methyl ether(TAME)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Butanone(MEK)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromochloromethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrahydrofuran(THF)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon tetrachloride	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloropropene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dioxane	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-Methyl-2-pentanone(MIBK)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Hexanone	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrachloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane(EDB)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	GZ-201	GZ-202A	P-9R	SW-17	P-2R (South Spring)	SW-13	Trip Blank - 8260
Lab Sample ID:	175643.08	175643.09	175643.1	175643.11	175643.12	175643.13	175643.14
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	9/20/17
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17
Analyst:	BAM	BAM	BAM	BAM	BAM	BAM	BAM
Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1	1	1	1
mp-Xylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
o-Xylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	< 2	< 2	< 2	< 2	< 2	< 2	< 2
IsoPropylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
tert-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
sec-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
p-Isopropyltoluene	< 1	< 1	**66**	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
n-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,3,5-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2,3-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-Bromofluorobenzene (surr)	**101 %R**	**102 %R**	**102 %R**	**101 %R**	**103 %R**	**100 %R**	**100 %R**
1,2-Dichlorobenzene-d4 (surr)	**100 %R**	**102 %R**	**99 %R**	**100 %R**	**101 %R**	**99 %R**	**99 %R**
Toluene-d8 (surr)	**95 %R**	**96 %R**	**96 %R**	**93 %R**	**95 %R**	**94 %R**	**94 %R**
1,2-Dichloroethane-d4 (surr)	**96 %R**	**94 %R**	**95 %R**	**99 %R**	**97 %R**	**98 %R**	**96 %R**

QC REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 5	18 (90 %R)	19 (93 %R) (3 RPD)	11/9/2017	ug/L	40 - 160	20	8260C
Chloromethane	< 2	16 (80 %R)	16 (81 %R) (1 RPD)	11/9/2017	ug/L	40 - 160	20	8260C
Vinyl chloride	< 2	20 (98 %R)	21 (103 %R) (5 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Bromomethane	< 2	15 (75 %R)	16 (79 %R) (5 RPD)	11/9/2017	ug/L	40 - 160	20	8260C
Chloroethane	< 5	20 (101 %R)	20 (102 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Trichlorofluoromethane	< 5	18 (92 %R)	18 (90 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Diethyl Ether	< 5	18 (89 %R)	18 (92 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Acetone	< 10	20 (110 %R)	20 (108 %R) (1 RPD)	11/9/2017	ug/L	40 - 160	20	8260C
1,1-Dichloroethene	< 1	17 (84 %R)	17 (84 %R) (0 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
tert-Butyl Alcohol (TBA)	< 30	80 (76 %R)	80 (77 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Methylene chloride	< 5	18 (92 %R)	19 (93 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Carbon disulfide	< 2	19 (95 %R)	20 (99 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Methyl-t-butyl ether(MTBE)	< 1	18 (90 %R)	18 (91 %R) (0 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Ethyl-t-butyl ether(ETBE)	< 5	21 (103 %R)	21 (104 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Isopropyl ether(DIPE)	< 5	22 (110 %R)	22 (111 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
tert-amyl methyl ether(TAME)	< 5	20 (101 %R)	20 (102 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
trans-1,2-Dichloroethene	< 1	19 (97 %R)	19 (97 %R) (0 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,1-Dichloroethane	< 1	20 (98 %R)	20 (98 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
2,2-Dichloropropane	< 1	* 14 (68 %R)	* 14 (69 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
cis-1,2-Dichloroethene	< 1	22 (108 %R)	22 (109 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
2-Butanone(MEK)	< 10	20 (90 %R)	20 (92 %R) (2 RPD)	11/9/2017	ug/L	40 - 160	20	8260C
Bromochloromethane	< 1	19 (97 %R)	19 (95 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Tetrahydrofuran(THF)	< 10	20 (92 %R)	20 (95 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Chloroform	< 1	20 (99 %R)	20 (101 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,1,1-Trichloroethane	< 1	19 (95 %R)	19 (97 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Carbon tetrachloride	< 1	18 (92 %R)	19 (97 %R) (5 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,1-Dichloropropene	< 1	20 (101 %R)	21 (103 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Benzene	< 1	20 (102 %R)	21 (104 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2-Dichloroethane	< 1	19 (94 %R)	19 (97 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Trichloroethene	< 1	19 (95 %R)	20 (98 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2-Dichloropropane	< 1	21 (106 %R)	22 (108 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Dibromomethane	< 1	20 (98 %R)	20 (101 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Bromodichloromethane	< 0.5	21 (104 %R)	22 (108 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,4-Dioxane	< 50	< 50 (104 %R)	< 50 (83 %R) (23 RPD) !	11/9/2017	ug/L	40 - 160	20	8260C
4-Methyl-2-pentanone(MIBK)	< 10	20 (91 %R)	20 (92 %R) (2 RPD)	11/9/2017	ug/L	40 - 160	20	8260C
cis-1,3-Dichloropropene	< 0.5	19 (96 %R)	20 (98 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Toluene	< 1	18 (90 %R)	19 (93 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
trans-1,3-Dichloropropene	< 0.5	17 (83 %R)	17 (85 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,1,2-Trichloroethane	< 1	18 (90 %R)	19 (93 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
2-Hexanone	< 10	20 (88 %R)	20 (92 %R) (5 RPD)	11/9/2017	ug/L	40 - 160	20	8260C
Tetrachloroethene	< 1	17 (83 %R)	17 (86 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,3-Dichloropropane	< 1	18 (90 %R)	19 (93 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Dibromochloromethane	< 1	21 (107 %R)	22 (111 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2-Dibromoethane(EDB)	< 2	18 (90 %R)	18 (92 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Chlorobenzene	< 1	17 (87 %R)	18 (90 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,1,1,2-Tetrachloroethane	< 1	18 (88 %R)	18 (91 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C

QC REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Ethylbenzene	< 1	18 (89 %R)	19 (94 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
mp-Xylene	< 1	35 (86 %R)	36 (90 %R) (4 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
o-Xylene	< 1	18 (89 %R)	18 (91 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Styrene	< 1	* 14 (68 %R)	14 (70 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Bromoform	< 2	19 (96 %R)	20 (99 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
IsoPropylbenzene	< 1	17 (87 %R)	18 (90 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Bromobenzene	< 1	17 (84 %R)	17 (85 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,1,2,2-Tetrachloroethane	< 1	17 (87 %R)	17 (86 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2,3-Trichloropropane	< 0.5	16 (81 %R)	17 (83 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
n-Propylbenzene	< 1	17 (86 %R)	18 (88 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
2-Chlorotoluene	< 1	17 (84 %R)	17 (86 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
4-Chlorotoluene	< 1	17 (85 %R)	17 (86 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,3,5-Trimethylbenzene	< 1	17 (83 %R)	17 (85 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
tert-Butylbenzene	< 1	16 (82 %R)	17 (84 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2,4-Trimethylbenzene	< 1	17 (85 %R)	17 (86 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
sec-Butylbenzene	< 1	16 (80 %R)	16 (82 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,3-Dichlorobenzene	< 1	16 (81 %R)	16 (82 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
p-Isopropyltoluene	< 1	16 (79 %R)	16 (81 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,4-Dichlorobenzene	< 1	16 (80 %R)	16 (82 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2-Dichlorobenzene	< 1	16 (80 %R)	16 (81 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
n-Butylbenzene	< 1	15 (74 %R)	15 (75 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2-Dibromo-3-chloropropane	< 2	15 (77 %R)	16 (78 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,3,5-Trichlorobenzene	< 1	* 13 (66 %R)	* 14 (68 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2,4-Trichlorobenzene	< 1	* 12 (59 %R)	* 12 (60 %R) (2 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Hexachlorobutadiene	< 0.5	* 10 (51 %R)	* 11 (54 %R) (7 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
Naphthalene	< 5	14 (70 %R)	14 (71 %R) (1 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
1,2,3-Trichlorobenzene	< 1	* 11 (56 %R)	* 12 (58 %R) (3 RPD)	11/9/2017	ug/L	70 - 130	20	8260C
4-Bromofluorobenzene (surr)	101 %R	104 %R	105 %R	11/9/2017	% Rec	70 - 130	20	8260C
1,2-Dichlorobenzene-d4 (surr)	101 %R	103 %R	102 %R	11/9/2017	% Rec	70 - 130	20	8260C
Toluene-d8 (surr)	92 %R	94 %R	93 %R	11/9/2017	% Rec	70 - 130	20	8260C
1,2-Dichloroethane-d4 (surr)	95 %R	94 %R	92 %R	11/9/2017	% Rec	70 - 130	20	8260C

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.
Analytes that exceed limits high but are not detected in the field samples do not impact the data. For analytes that show low recovery and are not detected in the field samples, a low point calibration standard has been analyzed to support the reporting limit.

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	RFW-2	RFW-3	RFW-4	GZ-1L	GZ-2L	GZ-3L	GZ-104
Lab Sample ID:	175643.01	175643.02	175643.03	175643.04	175643.05	175643.06	175643.07
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17
Analyst:	VG	VG	VG	VG	VG	VG	VG
Method:	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM
Dilution Factor:	1	1	1	1	1	1	1
1,4-Dioxane	< 0.25	**2.2**	**3.2**	< 0.25	< 0.25	< 0.25	**0.71**
4-Bromofluorobenzene (surr)	**105 %R**	**105 %R**	**104 %R**	**105 %R**	**104 %R**	**101 %R**	**102 %R**
Toluene-d8 (surr)	**96 %R**	**96 %R**	**96 %R**	**96 %R**	**97 %R**	**95 %R**	**95 %R**

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	GZ-201	GZ-202A	P-9R	SW-17	P-2R (South Spring)	SW-13	Trip Blank - 1,4 Dioxane
Lab Sample ID:	175643.08	175643.09	175643.1	175643.11	175643.12	175643.13	175643.15
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	9/18/17
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17	11/7/17
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17	11/9/17
Analyst:	VG	VG	VG	VG	VG	VG	VG
Method:	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM
Dilution Factor:	1	1	1	1	1	1	1
1,4-Dioxane	< 0.25	**2.0**	**1.4**	**1.3**	**1.4**	< 0.25	< 0.25
4-Bromofluorobenzene (surr)	**106 %R**	**105 %R**	**107 %R**	**104 %R**	**106 %R**	**105 %R**	**105 %R**
Toluene-d8 (surr)	**96 %R**	**96 %R**	**96 %R**	**96 %R**	**96 %R**	**96 %R**	**96 %R**

QC REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
1,4-Dioxane	< 0.25	6.0 (119 %R)	5.7 (113 %R) (5 RPD)	ug/L	11/9/17	70 - 130	20	8260B SIM
4-Bromofluorobenzene (surr)	105 %R	110 %R	109 %R	% Rec	11/9/17	70 - 130	50	8260B SIM
Toluene-d8 (surr)	96 %R	97 %R	97 %R	% Rec	11/9/17	70 - 130	50	8260B SIM

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	RFW-2	RFW-3	RFW-4	GZ-1L					
Lab Sample ID:	175643.01	175643.02	175643.03	175643.04					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17		Analysis			
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	**Units**	**Date**	**Time**	**Method**	**Analyst**
Chloride	**59**	**37**	**170**	**120**	mg/L	11/08/17	11:05	4500ClE-97	KD
Nitrate-N	< 0.5	< 0.5	< 0.5	< 0.5	mg/L	11/08/17	11:05	353.2	KD
TKN	< 0.5	< 0.5	**1.3**	< 0.5	mg/L	11/09/17	13:36	$4500N_{org}C/N$	SEL

Sample ID:	GZ-2L	GZ-3L	GZ-104	GZ-201					
Lab Sample ID:	175643.05	175643.06	175643.07	175643.08					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17		Analysis			
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	**Units**	**Date**	**Time**	**Method**	**Analyst**
Chloride	**6**	**18**	**45**	**210**	mg/L	11/08/17	11:26	4500ClE-97	KD
Nitrate-N	< 0.5	< 0.5	< 0.5	**1.2**	mg/L	11/08/17	11:26	353.2	KD
TKN	**0.7**	< 0.5	**0.7**	< 0.5	mg/L	11/09/17	13:46	$4500N_{org}C/N$	SEL

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	GZ-202A	P-9R	SW-17	P-2R (South Spring)					
Lab Sample ID:	175643.09	175643.1	175643.11	175643.12					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17		Analysis			
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17	**Units**	**Date**	**Time**	**Method**	**Analyst**
Chloride	**43**	**80**	**51**	**39**	mg/L	11/08/17	11:32	4500ClE-97	KD
Nitrate-N	< 0.5	< 0.5	< 0.5	< 0.5	mg/L	11/08/17	11:32	353.2	KD
TKN	**0.9**	**1.3**	< 0.5	**1.3**	mg/L	11/09/17	13:56	$4500N_{org}C/N$	SEL

Sample ID:	SW-13					
Lab Sample ID:	175643.13					
Matrix:	aqueous					
Date Sampled:	11/7/17	Analysis				
Date Received:	11/7/17	**Units**	**Date**	**Time**	**Method**	**Analyst**
Chloride	**48**	mg/L	11/08/17	11:51	4500ClE-97	KD
Nitrate-N	< 0.5	mg/L	11/08/17	11:51	353.2	KD
TKN	**1.2**	mg/L	11/09/17	14:18	$4500N_{org}C/N$	SEL

QC REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Chloride	< 1	24 (97 %R)	25 (100 %R) (3 RPD)	mg/L	11/8/17	90 - 110	20	4500ClE-97
Nitrate-N	< 0.5	5.1 (101 %R)	5.0 (100 %R) (1 RPD)	mg/L	11/8/17	90 - 110	20	353.2
TKN	< 0.5	10 (101 %R)	10 (100 %R) (2 RPD)	mg/L	11/9/17	90 - 111	20	4500N_{org}C/NH

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	RFW-2	RFW-3	RFW-4	GZ-104					
Lab Sample ID:	175643.01	175643.02	175643.03	175643.07					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17					
Arsenic	< 0.001	**0.038**	**0.13**	**0.16**	AqDis	mg/L	11/13/17	200.8	DS
Barium	**0.024**	**0.065**	**0.15**	**0.041**	AqDis	mg/L	11/13/17	200.8	DS
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/13/17	200.8	DS
Chromium	< 0.001	< 0.001	**0.003**	< 0.001	AqDis	mg/L	11/13/17	200.8	DS
Iron	**0.10**	**21**	**32**	**16**	AqDis	mg/L	11/13/17	200.8	DS
Lead	< 0.001	< 0.001	**0.003**	< 0.001	AqDis	mg/L	11/13/17	200.8	DS
Manganese	**0.72**	**2.4**	**5.2**	**3.7**	AqDis	mg/L	11/13/17	200.8	DS
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	AqDis	mg/L	11/13/17	200.8	DS
Selenium	< 0.001	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/13/17	200.8	DS
Silver	< 0.001	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/13/17	200.8	DS

Sample ID:	GZ-201	GZ-202A	P-9R	P-2R (South Spring)					
Lab Sample ID:	175643.08	175643.09	175643.1	175643.12					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17					
Arsenic	**0.009**	**0.14**	**0.23**	**0.053**	AqDis	mg/L	11/13/17	200.8	DS
Barium	**0.23**	**0.069**	**0.082**	**0.49**	AqDis	mg/L	11/13/17	200.8	DS
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/13/17	200.8	DS
Chromium	**0.017**	< 0.001	**0.002**	**0.008**	AqDis	mg/L	11/13/17	200.8	DS
Iron	**7.4**	**51**	**43**	**42**	AqDis	mg/L	11/13/17	200.8	DS
Lead	**0.010**	< 0.001	**0.006**	**0.028**	AqDis	mg/L	11/13/17	200.8	DS
Manganese	**2.4**	**4.3**	**4.1**	**4.8**	AqDis	mg/L	11/13/17	200.8	DS
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	AqDis	mg/L	11/13/17	200.8	DS
Selenium	**0.002**	< 0.001	< 0.001	**0.003**	AqDis	mg/L	11/13/17	200.8	DS
Silver	< 0.001	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/13/17	200.8	DS

LABORATORY REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Sample ID:	GZ-1L	GZ-2L	GZ-3L	SW-17					
Lab Sample ID:	175643.04	175643.05	175643.06	175643.11					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	11/7/17	11/7/17	11/7/17	11/7/17	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**
Date Received:	11/7/17	11/7/17	11/7/17	11/7/17					
Arsenic	**0.003**	**0.004**	**0.007**	**0.004**	AqTot	mg/L	11/13/17	200.8	DS
Barium	**0.028**	**0.064**	**0.055**	**0.022**	AqTot	mg/L	11/13/17	200.8	DS
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	AqTot	mg/L	11/13/17	200.8	DS
Chromium	**0.003**	< 0.001	**0.017**	< 0.001	AqTot	mg/L	11/13/17	200.8	DS
Iron	**0.95**	**0.42**	**9.4**	**0.24**	AqTot	mg/L	11/13/17	200.8	DS
Lead	**0.001**	< 0.001	**0.006**	< 0.001	AqTot	mg/L	11/13/17	200.8	DS
Manganese	**0.22**	**15**	**0.28**	**2.2**	AqTot	mg/L	11/13/17	200.8	DS
Mercury	< 0.0001	< 0.0001	**0.0002**	< 0.0001	AqTot	mg/L	11/13/17	200.8	DS
Selenium	< 0.001	< 0.001	< 0.001	< 0.001	AqTot	mg/L	11/13/17	200.8	DS
Silver	< 0.001	< 0.001	< 0.001	< 0.001	AqTot	mg/L	11/13/17	200.8	DS

Sample ID:	SW-13							
Lab Sample ID:	175643.13							
Matrix:	aqueous							
Date Sampled:	11/7/17	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**		
Date Received:	11/7/17							
Arsenic	**0.027**	AqTot	mg/L	11/13/17	200.8	DS		
Barium	**0.033**	AqTot	mg/L	11/13/17	200.8	DS		
Cadmium	< 0.001	AqTot	mg/L	11/13/17	200.8	DS		
Chromium	< 0.001	AqTot	mg/L	11/13/17	200.8	DS		
Iron	**5.6**	AqTot	mg/L	11/13/17	200.8	DS		
Lead	< 0.001	AqTot	mg/L	11/13/17	200.8	DS		
Manganese	**2.9**	AqTot	mg/L	11/13/17	200.8	DS		
Mercury	< 0.0001	AqTot	mg/L	11/13/17	200.8	DS		
Selenium	< 0.001	AqTot	mg/L	11/13/17	200.8	DS		
Silver	< 0.001	AqTot	mg/L	11/13/17	200.8	DS		

QC REPORT

EAI ID#: **175643**

Client: **Exeter, Town of**

Client Designation: **Cross Road Landfill | Nov 2017**

Parameter Name	Blank	LCS	LCSD		Units	Date of Analysis	Limits	RPD	Method
Arsenic	< 0.001	1.0 (102 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Barium	< 0.001	1.1 (112 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Cadmium	< 0.001	0.99 (99 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Chromium	< 0.001	1.0 (101 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Iron	< 0.05	11 (98 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Lead	< 0.001	0.93 (93 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Manganese	< 0.005	1.0 (102 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Mercury	< 0.0001	0.0010 (104 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Selenium	< 0.001	0.95 (95 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8
Silver	< 0.001	0.11 (110 %R)		NA	mg/L	11/13/17	85 - 115	20	200.8

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

1 of 4 Rev 11/9/17

Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

175643

EXENH 17

Sample IDs	Date/Time (Composites need start and stop dates/times)	Matrix	Parameters and Sample Notes	# of containers
RFW-2	11/7/17 1450	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒
RFW-3	11/7/17 1150	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒
RFW-4	11/7/17 1430	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☒
GZ-1L	11/7/17 1620	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s* (HCl) (HNO3) (H2SO4) NaOH MEOH Na2S2O3 ICE	Dissolved Sample Field Filtered ☐

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 31

Project Name Cross Road Landfill | Nov 2017

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Rd.

City Exeter NH 03833-2792

Phone 778-0591 Fax 772-4709

Email: jmates@exeternh.gov

Direct

Results Needed by: Preferred date _____

Notes:

Attn sampler: Auto chain of custody provided for your convenience, please review for accuracy and write in any needed changes

QC deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ PC

ReportingOptions

☐ HC ☐ NO FAX

☒ EDD PDF ☐ Partial FAX

☒ EDD email ☒ PDF Invoice

☒ PDF prelim, NO FAX ☐ EQUIS

☐ e-mail Login Confirmation

PO# 4335-309

Quote#: 1013778

Temp 2.0 °C

Ice Y☒ N☐

Samples Collected by: ANDREW TARANI

Relinquished by	Date/Time	Received by
	11/7/17 1640	Lisa Bunton
Lisa Bunton	11-7-17 17:55	
Relinquished by	Date/Time	Received by

2 of 4 Rev. 11/5/17

Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

175643

18

Sample IDs	Date/Time (Composites need start and stop dates/times)	Matrix	Parameters and Sample Notes	# of containers
GZ-2L	11/7/17 1428	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE *TOTAL METALS 3/4 FULL DUE TO LOW YIELD	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
GZ-3L	11/7/17 1418	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
GZ-104	11/7/17 1254	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☒
GZ-201	11/7/17 1145	aqueous (Grab) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☒

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 31

Project Name Cross Road Landfill | Nov 2017

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Rd.

City Exeter NH 03833-2792

Phone 778-0591 Fax 772-4709

Email: jmates@exeternh.gov

Direct

Results Needed by: Preferred date _____

Notes:

Attn sampler: Auto chain of custody provided for your convenience, please review for accuracy and write in any needed changes

QC deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ PC

ReportingOptions

☐ HC ☐ NO FAX

☒ EDD PDF ☐ Partial FAX

☒ EDD email ☒ PDF Invoice

☒ PDF prelim, NO FAX ☐ EQUIS

☐ e-mail Login Confirmation

PO# 4335-309

Quote#: 1013778

Temp 2.0 °C

Ice Y ☒ N ☐

Samples Collected by: ANDREW TARINI

Relinquished by	Date/Time	Received by
Andrew Tarini	11/7/17 1640	Jen Bratton
Jen Bratton	11.7.17 17.55	
Relinquished by	Date/Time	Received by

3 of 4 ... 11/9/17

Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

175643 19

EXENH

Sample IDs	Date/Time (Composites need start and stop dates/times)	Matrix	Parameters and Sample Notes	# of containers
GZ-202A	11/7/17 1618	aqueous, Grab (circled) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			Circle preservative/s: (HCl) (HNO$_3$) (H$_2$SO$_4$) NaOH MEOH Na$_2$S$_2$O$_3$ ICE	Dissolved Sample Field Filtered ☒
P-9R	11/7/17 1548	aqueous, Grab (circled) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			Circle preservative/s: (HCl) (HNO$_3$) (H$_2$SO$_4$) NaOH MEOH Na$_2$S$_2$O$_3$ ICE	Dissolved Sample Field Filtered ☒
SW-17	11/7/17 1307	aqueous, Grab (circled) or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE	7
☒ Sampler confirms ID and parameters are accurate			Circle preservative/s: (HCl) (HNO$_3$) (H$_2$SO$_4$) NaOH MEOH Na$_2$S$_2$O$_3$ ICE	Dissolved Sample Field Filtered ☐
P-2R (South Spring)	11/7/17 1520	aqueous, Grab (circled) or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg	7
☒ Sampler confirms ID and parameters are accurate			Circle preservative/s: (HCl) (HNO$_3$) (H$_2$SO$_4$) NaOH MEOH Na$_2$S$_2$O$_3$ ICE	Dissolved Sample Field Filtered ☒

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 31
Project Name Cross Road Landfill | Nov 2017
State NH
Client (Pro Mgr) Jennifer Mates
Customer Exeter, Town of
Address Town Office, 13 Newfields Rd.
City Exeter NH 03833-2792
Phone 778-0591 **Fax** 772-4709
Email: jmates@exeternh.gov
Direct

Results Needed by: Preferred date ________
Notes:

Attn sampler: Auto chain of custody provided for your convenience, please review for accuracy and write in any needed changes

QC deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ PC

ReportingOptions
☐ HC
☒ EDD PDF
☒ EDD email
☒ PDF prelim, NO FAX
☐ e-mail Login Confirmation
☐ NO FAX
☐ Partial FAX
☒ PDF Invoice
☐ EQUIS

PO# 4335-309
Quote#: 1013778
Temp 20 °C
Ice Y ☒ N ☐

Samples Collected by: Andrew Tarani

Relinquished by	Date/Time	Received by
[signature]	11/7/17 1640	[signature]
[signature]	11-7-17 17:55	[signature]

4 of 4 FAX 11/9/17

Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

175643 2

EXENH

Sample IDs	Date/Time (Composites need start and stop dates/times)	Matrix	Parameters and Sample Notes	# of containers
SW-13	11/7/17 1220	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg/VNH8260CFullList/V8260SIM14DIOXANE	7
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL (HNO3) (H2SO4) NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
GMW-11	N/A	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn.Ba.Cd.Cr.Pb.Se.Ag.Hg NO YIELD	X
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
Trip Blank - 8260	11/7/17 9/22/17 1615 EAI	aqueous Grab or Comp	AqTot/VNH8260CFullList	2
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* (HCL) HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
Trip Blank - 1,4 Dioxane	11/7/17 9/18/17 8:00 EAI	aqueous Grab or Comp	AqTot/V8260SIM14DIOXANE	2
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 31
Project Name Cross Road Landfill | Nov 2017
State NH
Client (Pro Mgr) Jennifer Mates
Customer Exeter, Town of
Address Town Office, 13 Newfields Rd.
City Exeter NH 03833-2792
Phone 778-0591 **Fax** 772-4709
Email: jmates@exeternh.gov
Direct

Results Needed by: Preferred date _____
Notes:

Attn sampler: Auto chain of custody provided for your convenience, please review for accuracy and write in any needed changes

QC deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ PC

ReportingOptions
☐ HC ☐ NO FAX
☒ EDD PDF ☐ Partial FAX
☒ EDD email ☒ PDF Invoice
☒ PDF prelim, NO FAX ☐ EQUIS
☐ e-mail Login Confirmation

PO# 4335-309
Quote#: 1013778
Temp 2.0°C
Ice Y☒ N☐

Samples Collected by: ANDREW TARANI

Relinquished by	Date/Time	Received by
Andrew Tarani	11/7/17 1640	Lisa Burton
Lisa Burton	11-7-17 17:55	

Summary Letter Report

Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

5 Commerce Park North
Suite 201
Bedford, NH 03110
T: 603.623.3600
F: 603.624.9463
www.gza.com

Via Email

January 31, 2018
File No. 04.0021270.28

Ms. Jennifer Mates, Town Engineer
Town of Exeter
Exeter Public Works Department
10 Front Street
Exeter, New Hampshire 03883

Re: Summary Letter Report
Evaluation of Discharge to Exeter River
Cross Road Landfill
Exeter, New Hampshire (Site)
DES Site No. 198401081, Project No. 978

Dear Ms. Mates:

GZA GeoEnvironmental, Inc. (GZA) is pleased to provide the Town of Exeter (Town) this letter report summarizing results of the recent metals discharge evaluation associated with a groundwater seep downgradient of the Cross Road Landfill (Landfill). The objective of the evaluation was to calculate estimates of the mass of iron, manganese, and arsenic discharged to the Exeter River from the seep during 2017. Metals concentration and flow rate data at the confluence of the stream emanating from the seep and the Exeter River were used to calculate estimates of mass. The purpose of the work was to provide information needed to preliminarily understand the potential for impacts to water quality within the Exeter River, including at the Town's water supply intake, approximately 4 miles downstream from the seep.

The remainder of this letter report provides a summary of background information, the work performed, results, and GZA's conclusions and recommendations. GZA's services and this letter report are subject to the attached limitations.

BACKGROUND

Results of previously completed hydrogeologic Site investigations associated with the Landfill indicate that groundwater impacted by the Landfill potentially discharges from the groundwater seep. On August 10, 2016, GZA personnel visited the area surrounding the groundwater seep SW-14 (refer to attached **Figure**) to evaluate the condition of the riverbed of the Exeter River relative to the potential for the collection of pore water samples. During the Site visit, GZA observed groundwater seepage converging into a single small stream that discharged to the Exeter River; orange staining (likely due to the presence of iron) in the seepage area, as well as in areas of

the Exeter River downstream of the discharge; and a riverbed consisting mostly of gravel, cobbles, and boulders. Note that the Exeter River is a public water supply of the Town.

Based on these observations and the results of previous investigations indicating the presence of certain metals in the groundwater discharged from the seep at concentrations exceeding anticipated background concentrations, GZA recommended the construction of a temporary V-notch weir (weir) and collection of water quality samples to measure flow and metals concentrations within the unnamed stream immediately prior to the confluence with the Exeter River. Tasks were proposed in a Work Plan submitted to the New Hampshire Department of Environmental Services (NHDES) on March 28, 2017.[1] GZA obtained verbal authorization of the Work Plan from Mr. Peter Beblowski on April 19, 2017. Activities completed to implement the Work Plan are described below.

WEIR CONSTRUCTION

GZA installed a temporary weir on May 25, 2017 in the approximately 2-foot-wide stream channel downgradient of the groundwater seepage in the area of SW-14 (refer to the attached **Figure**). The weir was constructed of plywood with a 90^{o} V-notch, which was seated into the streambed and held in place with two metal fence posts. Once the plywood was in place, 6-millimeter polyethylene sheeting was attached to the top and bottom of the plywood. The polyethylene sheeting was also placed along the bottom of the streambed upstream of the weir extending over the stream banks and held in place by sandbags. The purpose of the polyethylene sheeting was to prevent water from flowing around or under the weir. The weir and associated materials were removed after the last samples were collected on December 8, 2017. A photo of the weir after installation and a photo of the area after weir removal are attached.

WEIR MONITORING AND ANALYTICAL DATA COLLECTION

Streamflow measurements and water quality samples were collected by GZA personnel on an approximately monthly frequency, to include potential seasonal variations in streamflow and metals concentrations within the estimate of mass discharged to the Exeter River. Monthly monitoring was initiated during June and was concluded during December 2017 and included seven monitoring rounds. For each monitoring event, GZA measured the height of the water in the notch at the weir for use in flow rate calculations. Water samples were collected from the weir for analysis of total and dissolved iron, manganese, and arsenic. The samples were submitted to ESS Laboratory in Cranston, Rhode Island, for analytical laboratory analysis under standard chain-of-custody protocol. Each of the samples were collected in accordance with the requirements of Env-Or 610.02 (e) (Sampling and Analysis). The dissolved metals samples were field-filtered using a 0.45-micron disposable groundwater filter. Sampling and monitoring results, calculated flow rates, and estimates of mass loading to the river are summarized in **Table 1**.

RESULTS

Dissolved and total iron, arsenic, and manganese were detected above the analytical laboratory reporting limits in the majority the samples. Total arsenic concentrations ranged from less than 5.0 micrograms per liter (µg/L; June sampling event) to 36.2 µg/L (August). Total iron concentrations ranged from 375 µg/L (October) to 5,410 µg/L (August) and total manganese concentrations ranged from 1,230 µg/L (December) to 1,900 µg/L

[1] *Work Plan – Evaluation of Discharge to Exeter River, Cross Road Landfill,* prepared by GZA dated March 28, 2017.

(August). While fairly constant, the calculated volumetric flow rate of water through the weir was 36 to 52 gallons per minute (gpm). Based on the constituent concentration and measured height of the water at the weir, a mass flow rate of each constituent discharged to the Exeter River was calculated. The average calculated discharge flow rates were 0.58 pounds per day (lbs/day), 0.0050 lbs/day, and 0.69 lbs/day for iron, arsenic, and manganese, respectively. The data showed variability likely due to seasonal effects whereby detected concentrations in August were the highest for all compounds. The table below shows the range of calculated discharge flow rates.

Exhibit 1: Range of Calculated Mass Flowrates

Constituent	Minimum		Maximum	
	Discharge Flow Rate (lbs/day)	Month Flow Rate was Measured	Discharge Flow Rate (lbs/day)	Month Flow Rate was Measured
Iron	0.11	December	2.33	August
Arsenic	0.0018	December	0.016	August
Manganese	0.60	November	0.82	August

DISCUSSION/CONCLUSION

To preliminarily evaluate potential effects on surface water quality within the Exeter River at the confluence with the seep, daily mean discharge data for the Exeter River obtained from the US Geological Survey website station number 01073587,[2] for Haigh Road (located approximately 3 miles upstream). Estimates of the theoretical concentrations of iron, manganese, and arsenic within the surface water of the Exeter River were calculated and compared to the Water Quality for Toxic Substances (WQTS) surface water standards for human protection due to water and fish ingestion listed in the New Hampshire Code of Administrative Rules Chapter Env-Wq 1700 (see **Table 1**). The average theoretical concentrations for iron, arsenic, and manganese are 0.01 milligrams per liter (mg/L; 0.3 mg/L), 7.0×10^{-5} mg/L (1.8×10^{-5} mg/L), and 0.0073 mg/L (0.05 mg/L), respectively (the WQTS is shown for each constituent parenthetically). The results indicate that the average contributions of iron, arsenic, and manganese are 3.3%, 389%, and 15%, respectively.

The comparison to WQTS based on stream flow from the Haigh Road gauging station is conservative given the discharge of groundwater to the river over the reach between the gauging station and the confluence with the seep discharge. Surface water sampling completed by GZA between 2002 and 2007 did not detect arsenic in samples collected from the Exeter River, both upstream and downstream of the confluence with the seep discharge above the laboratory reporting limits (RL; 0.005 to 0.01 mg/L). The absence of arsenic at concentrations above the RL is consistent with the use of the Haigh Road gauging station as being conservative, and further suggests that effects on surface water quality are limited. The historical surface water samples were not analyzed for iron or manganese.

Based on the results of the work summarized herein, GZA recommends further evaluation of the potential effects of the seep discharge on surface water quality within the Exeter River including: stream gauging of the Exeter River at the location of the seep discharge during spring and late summer; sampling of surface water in the Exeter River immediately up and downstream of the confluence with the seep concurrent with the stream gauging; and comparison of the results to flow and water quality data at the Town's water supply intake. The recommended work considers the results of the work described herein and presence of the Town's water supply downstream of the confluence of the seep discharge with the Exeter River. A scope for the additional monitoring will be

[2] *https://waterdata.usgs.gov/nwis/dv?cb_00060=on&format=html&site_no=01073587&referred_module=sw&period=&begin_date=2017-01-18&end_date=2018-01-18*

developed and submitted for NHDES approval. Implementation will coincide with the Town's annual budget process.

GZA greatly appreciates the opportunity to provide the Town of Exeter with environmental investigation services on this project. We would be pleased to meet with you to discuss our conclusions and recommendations and answer any questions you may have. Please do not hesitate to contact the undersigned at 603-232-8740.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Dawna M. Tousignant, P.E.
Project Manager

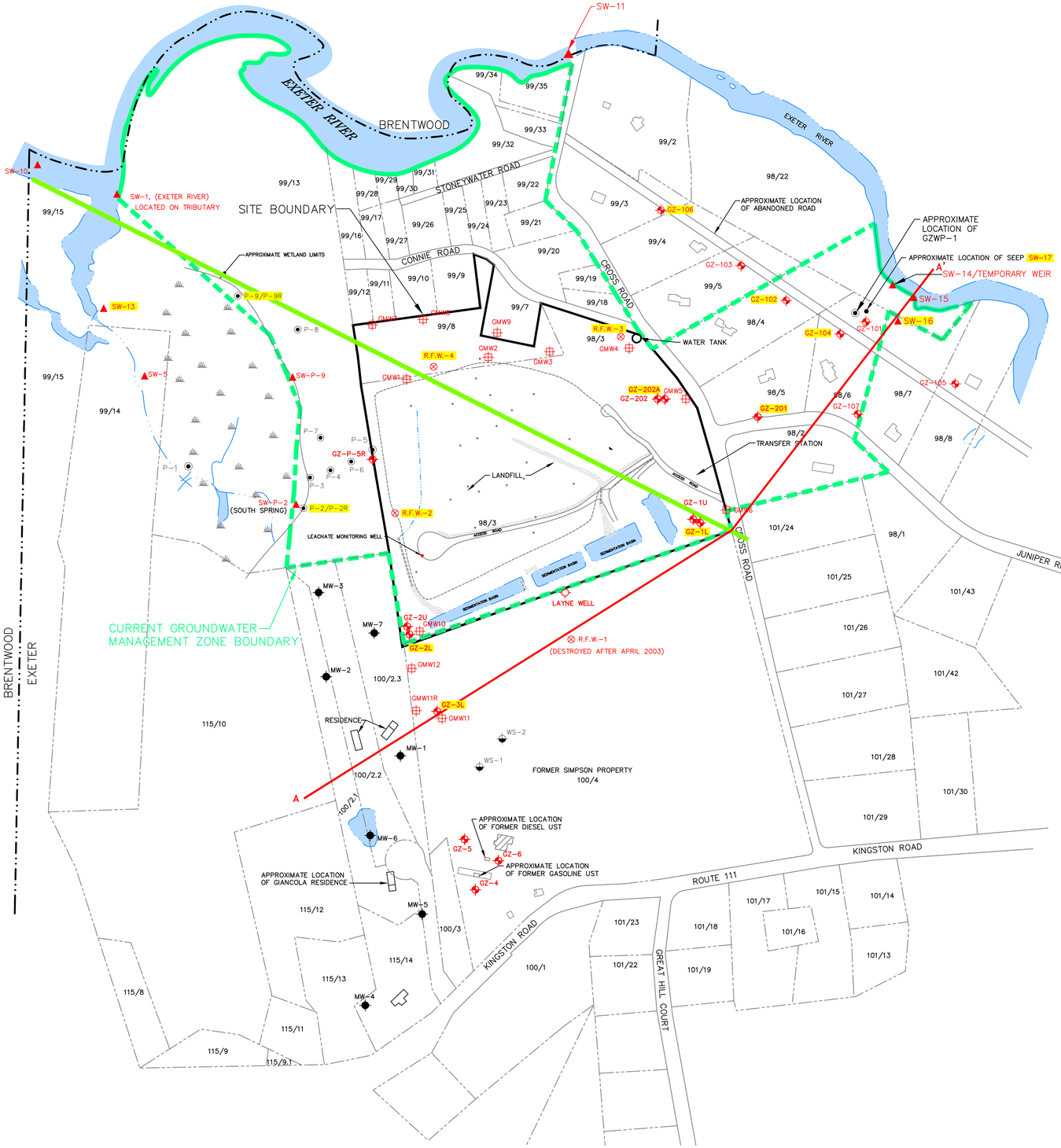
James M. Wieck, P.G.
Consultant/Reviewer

Jeffrey D. Rowell, P.E.
Associate Principal

DMT/JDR/JMW:kr
\\gzaman1\jobs\jobs\21000s\21270\04.0021270.28\report\weir summary letter\final 04.0021270.28 weir report 013118.docx

Attachments: Figure
Table
Photo Log
Lab Data
Limitations

Figure



LOCUS MAP
SCALE: 1" = 2000'±

NOTES:

1. BASE MAP DEVELOPED FROM PROPERTY TAX MAPS PROVIDED BY THE TOWN OF EXETER, NEW HAMPSHIRE INCLUDING TAX MAPS 98, 99, 100 AND 101.
2. LOCUS MAP DEVELOPED FROM UNITED STATES GEOLOGIC SURVEY MAPS, KINGSTON, 1981 PHOTO REVISED 1989 AND EXETER 1985.
3. THE LOCATIONS OF SITE FEATURES INCLUDING WELLS, PIEZOMETERS, AND ROADS ARE BASED ON INFORMATION SHOWN ON PLANS TITLED "TOPOGRAPHIC PLAN OF LAND OF CROSSROAD LANDFILL, PREPARED FOR THE TOWN OF EXETER, NEW HAMPSHIRE," PREPARED BY T.F. MORAN, INC. OF BEDFORD, NEW HAMPSHIRE, DATED JANUARY 24, 1994; "GROUNDWATER ELEVATION CONTOUR MAP–26 APRIL 1990, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY ROY F. WESTON, INC. (WESTON) OF CONCORD NEW HAMPSHIRE, DATED MAY 1990; "EXPLORATION LOCATION PLAN, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY GZA GEOENVIRONMENTAL, INC. OF MANCHESTER, NEW HAMPSHIRE, DATED JULY 1997; SITE SKETCH TITLED "PARKER SURVEY" PROVIDED BY THE TOWN OF EXETER, NEW HAMPSHIRE DATED NOVEMBER 1997. THE LOCATIONS OF CERTAIN WELLS, PIEZOMETERS, AND SURFACE WATER SAMPLING LOCATIONS ARE BASED ON TAPED MEASUREMENTS FROM SITE FEATURES BY GZA AND ARE APPROXIMATE.
4. WETLAND LIMITS AND LOCATIONS OF SW–1, NORTH SPRING, SOUTH SPRING, AND P–6 WERE OBTAINED FROM FIGURE 4 OF A REPORT TITLED "REPORT OF HYDROGEOLOGIC INVESTIGATION, EXETER LANDFILL, EXETER, NEW HAMPSHIRE," PREPARED BY ROY F. WESTON, INC. OF CONCORD, NEW HAMPSHIRE, DATED JUNE 1990. THE LOCATIONS ARE APPROXIMATE.
5. THE MONITORING WELL DESIGNATED "LAYNE WELL" WAS INSTALLED BY LAYNE NEW ENGLAND AS DIRECTED BY GIDLEY LABORATORIES, INC. (GIDLAB) OF FAIRHAVEN, MASSACHUSETTS DURING OR BEFORE 1979. PIEZOMETERS P–1 THROUGH P–9 WERE INSTALLED BY GIDLAB DURING OR BEFORE 1979. MONITORING WELLS RFW–1 THROUGH RFW–4 WERE INSTALLED BY WESTON DURING MARCH 27 THROUGH APRIL 4, 1990. MONITORING WELLS MW–1 THROUGH MW–3 LOCATED ON THE BRADSHER PROPERTY WERE INSTALLED BY EXETER ENVIRONMENTAL ASSOCIATES, (EEA) ON DECEMBER 22, 2000. MONITORING WELLS MW–4 THROUGH MW–7, ALSO LOCATED ON THE BRADSHER PROPERTY WERE INSTALLED BY EEA ON MAY 15, 2001. MONITORING WELLS GZ–1U, GZ–1L, GZ–2U, GZ–2L, GZ– 3L, GZ–4, GZ–5 AND GZ–6 AND SOIL GAS MONITORING WELLS GMW10 AND GMW11 WERE INSTALLED BY CAPITAL ENVIRONMENTAL DRILLING SERVICE OF DUNBARTON, NEW HAMPSHIRE DURING JUNE 28 THROUGH JULY 6 2001. WELL POINTS P–2R AND P–3R WERE INSTALLED BY GZA DURING APRIL 2003. GZ–P–5R WAS INSTALLED BY NEW HAMPSHIRE BORING OF LONDONDERRY, NH ON APRIL 20, 2004. MONITORING WELLS GZ–201, GZ–202, AND GZ–202A WERE INSTALLED BY NEW HAMPSHIRE BORING DURING SEPTEMBER AND NOVEMBER 2012.
6. LOCATION OF PHOTO LINEAMENT SHOWN BASED ON THE UNITED STATES GEOLOGIC SURVEY MAP TITLED "LINEAMENT MAP OF AREA 1 OF THE NEW HAMPSHIRE BEDROCK AQUIFER ASSESSMENT, SOUTH EASTERN NEW HAMPSHIRE," DATED 1997.
7. LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

GZ–1L	GROUNDWATER MONITORING WELL BY GZA
R.F.W.–4	GROUNDWATER MONITORING WELL
LAYNE WELL	LAYNE WELL FORMER MONITORING WELL BY OTHERS
	MW–1 – OFFSITE OVERBURDEN MONITORING WELL BY OTHERS
WS–1	ABANDONED OVERBURDEN WATER SUPPLY WELL
SW–5	SURFACE WATER SAMPLING LOCATION
GMW4	SOIL GAS MONITORING WELL LOCATION
P–5	PIEZOMETER LOCATION
	STREAM
	OPEN SURFACE WATER
100/4	TOWN OF EXETER, NEW HAMPSHIRE PROPERTY TAX MAP NO./LOT NO.
	TOWN OF EXETER, NEW HAMPSHIRE PROPERTY LOT BOUNDARY
	APPROXIMATE LOCATION OF STRUCTURE
	APPROXIMATE LOCATION OF FORMER STRUCTURE
	CURRENT GROUNDWATER MANAGEMENT PERMIT REQUIRED SAMPLING LOCATION
	APPROXIMATE LOCATION OF PHOTO LINEAMENT IDENTIFIED BY THE UNITED STATES GEOLOGICAL SURVEY
A – A'	LOCATION OF CROSS SECTION LINE

N

0 100' 200' 400' 600'
SCALE IN FEET

2017 ANNUAL SUMMARY REPORT
CROSS ROAD LANDFILL
GWP-198401081-E-004
EXETER, NEW HAMPSHIRE

SITE/SITE VICINITY PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
5 COMMERCE PARK NORTH, SUITE 201
BEDFORD, NEW HAMPSHIRE 03110
(603) 623-3600

PREPARED FOR:
TOWN OF EXETER

PROJ MGR: DMT	REVIEWED BY: JDR	CHECKED BY: JMW	FIGURE	
DESIGNED BY: JMW	DRAWN BY: MR	SCALE: 1" = 200'		1
DATE: JANUARY 2018	PROJECT NO. 04.0021270.29	REVISION NO.		

Table

TABLE 1 -WATER QUALITY DATA SUMMARY
Cross Road Landfill
Exeter, New Hampshire
DES Site No. 198401081, Project No. 978

	Water Height (in)	Stream Flow Rate (gpm)	River Flow Rate (gpm)[4]	Iron (µg/L)		Iron Loading Rate (lb/day)		Concentration in River Due to Discharge (mg/L) WQTS: 0.3 mg/L	Percentage of Surface Water Standard Due to Discharge
Date	Upstream			Total	Dissolved	Total	Dissolved	(Total)	(%)
6/7/2017	3.0	36	105,482	**743**	**641**	0.32	0.28	2.5E-04	0.08%
7/3/2017	3.0	36	21,007	**747**	**643**	0.32	0.28	1.3E-03	0.42%
8/7/2017	3.0	36	3,586	**5,410**	**1,120**	2.33	0.48	5.4E-02	18%
9/5/2017	3.0	36	7,361	**1,080**	**933**	0.46	0.40	5.3E-03	1.8%
10/2/2017	3.0	36	3,169	**780**	**843**	0.34	0.36	8.8E-03	2.9%
11/6/2017	3.0	36	34,787	**375**	<100	0.16	-	3.9E-04	0.13%
12/8/2017	3.5	52	30,343	**180**	**325**	0.11	0.20	3.1E-04	0.10%
							average	**1.0E-02**	3.3%

	Water Height (in)	Stream Flow Rate (gpm)	River Flow Rate (gpm)[4]	Arsenic (µg/L)		Arsenic Loading Rate (lb/day)		Concentration in River Due to Discharge (mg/L) WQTS: 1.8E-5 mg/L	Percentage of Surface Water Standard Due to Discharge
Date	Upstream			Total	Dissolved	Total	Dissolved	Total	(%)
6/7/2017	3.0	36	105,482	<5.0	**5.3**	-	0.0023	1.8E-06	10%
7/3/2017	3.0	36	21,007	**10.7**	**9.3**	0.0046	0.0040	1.8E-05	101%
8/7/2017	3.0	36	3,586	**36.2**	**15.7**	0.016	0.0068	3.6E-04	2009%
9/5/2017	3.0	36	7,361	**8.6**	**7.0**	0.0037	0.0030	4.2E-05	233%
10/2/2017	3.0	36	3,169	**5.1**	**5.9**	0.0022	0.0025	5.8E-05	320%
11/6/2017	3.0	36	34,787	**4.4**	<5.0	0.0019	-	4.5E-06	25%
12/8/2017	3.5	52	30,343	**2.8**	<5.0	0.0018	-	4.8E-06	27%
							average	**7.0E-05**	389%

	Water Height (in)	Stream Flow Rate (gpm)	River Flow Rate (gpm)[4]	Manganese (µg/L)		Manganese Loading Rate (lb/day)		Concentration in River Due to Discharge (mg/L) WQTS: 0.05 mg/L	Percentage of Surface Water Standard Due to Discharge
Date	Upstream			Total	Dissolved	Total	Dissolved	Total	(%)
6/7/2017	3.0	36	105,482	**1,280**	**1,420**	0.55	0.61	4.3E-04	0.87%
7/3/2017	3.0	36	21,007	**1,500**	**1,530**	0.65	0.66	2.6E-03	5.1%
8/7/2017	3.0	36	3,586	**1,900**	**1,750**	0.82	0.75	1.9E-02	38%
9/5/2017	3.0	36	7,361	**1,740**	**1,940**	0.75	0.83	8.5E-03	17%
10/2/2017	3.0	36	3,169	**1,540**	**1,840**	0.66	0.79	1.7E-02	35%
11/6/2017	3.0	36	34,787	**1,400**	**1,210**	0.60	0.52	1.4E-03	2.9%
12/8/2017	3.5	52	30,343	**1,230**	**1,360**	0.77	0.86	2.1E-03	4.2%
							average	**7.3E-03**	15%

Abbreviations: gpm - gallons per minute; µg/L - micrograms per liter; lb/day - pounds per day; mg/L - milligrams per liter.

Notes

1. **Bold** Indicates concentration was detected above the laboratory reporting limit (RL)
2. < Indicates constituent was not detected above the RL
3. - Indicates values could not be calculated from the lab data
4. River Flow Rate is the Daily Mean Discharge of the Exeter River at Haigh Road obtained from the US Geological Survey website station number 01073587, https://waterdata.usgs.gov/nwis/dv?cb_00060=on&format=html&site_no=01073587&referred_module=sw&period=&begin_date=2017-01-18&end_date=2018-01-18
5. Concentration in River Due to Discharge is the concentration of the metal in the River assuming the discharge from the weir is diluted by the River and the River does not contain the metal prior to the weir discharge point. In general, total metals concentrations were used unless the total concentration was below the laboratory detection limit, in which case the dissolved concentration was used (arsenic, 6/7/17)
6. The percentage of Surface Water Standard Due to Discharge is equal to the concentration due to the discharge from the weir divided by the surface water standard for Human Protection due to Water & Fish Ingestion listed in the New Hampshire Code of Administrative Rules Chapter Env-Wq 1700.

Photo Log

GZA GeoEnvironmental, Inc.

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Town of Exeter Public Works	Cross Road Landfill, Exeter, New Hampshire	04.0021270.28

Photo No.:	Date:
1	5/25/17

Description:
Photo of weir after installation.

Photo No.:	Date:
2	12/8/17

Description:
Photo of weir area after weir removal.

Lab Data

CERTIFICATE OF ANALYSIS

Christopher Melby
GZA GeoEnvironmental, Inc.
5 Commerce Park North
Bedford, NH 03110

RE: Cross Road Landfill (04.0021270.28)
ESS Laboratory Work Order Number: 1706216

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 5:11 pm, Jun 15, 2017

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1706216

SAMPLE RECEIPT

The following samples were received on June 08, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1706216-01	Weir - 01	Surface Water	6010C, 7010

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1706216

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1706216

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill
Client Sample ID: Weir - 01
Date Sampled: 06/07/17 08:05
Percent Solids: N/A

ESS Laboratory Work Order: 1706216
ESS Laboratory Sample ID: 1706216-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 200.7/6010BNoDigest

Dissolved Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.3** (5.0)		7010		1	KJK	06/14/17 19:31	10	10	CF70837
Iron	**641** (100)		6010C		1	KJK	06/09/17 19:52	10	10	CF70837
Manganese	**1420** (20.0)		6010C		1	KJK	06/09/17 19:52	10	10	CF70837

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill
Client Sample ID: Weir - 01
Date Sampled: 06/07/17 08:05
Percent Solids: N/A

ESS Laboratory Work Order: 1706216
ESS Laboratory Sample ID: 1706216-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	ND (5.0)		6010C		1	KJK	06/09/17 18:30	100	10	CF70852
Iron	**743** (10.0)		6010C		1	KJK	06/09/17 18:30	100	10	CF70852
Manganese	**1280** (2.0)		6010C		1	KJK	06/09/17 18:30	100	10	CF70852

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1706216

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals										
Batch CF70837 - 200.7/6010BNoDigest										
Blank										
Arsenic	ND	5.0	ug/L							
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
LCS										
Iron	2.4		mg/L	2.500		96	80-120			
Manganese	0.5		mg/L	0.5000		98	80-120			
LCS										
Arsenic	24.6		ug/L	25.00		98	80-120			
Total Metals										
Batch CF70852 - 3005A										
Blank										
Arsenic	ND	5.0	ug/L							
Iron	ND	10.0	ug/L							
Manganese	ND	2.0	ug/L							
LCS										
Arsenic	51.6	5.0	ug/L	50.00		103	80-120			
Iron	231	10.0	ug/L	250.0		93	80-120			
Manganese	54.7	2.0	ug/L	50.00		109	80-120			
LCS Dup										
Arsenic	50.1	5.0	ug/L	50.00		100	80-120	3	20	
Iron	226	10.0	ug/L	250.0		90	80-120	3	20	
Manganese	45.6	2.0	ug/L	50.00		91	80-120	18	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill ESS Laboratory Work Order: 1706216

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1706216

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

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

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Bedford, NH - GZA/HDM

Shipped/Delivered Via: ESS Courier

ESS Project ID: 1706216
Date Received: 6/8/2017
Project Due Date: 6/15/2017
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? Yes
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 1.0 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	139312	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
01	139313	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	

2nd Review
Are barcode labels on correct containers? Yes / No

Completed By: Date & Time: 6/8/17 2004
Reviewed By: Date & Time: 6/8/17 2119
Delivered By: 6/8/17 2119

CUSTODY SEAL QEC Qualvironmental Containers 800-3950 • 304-255-3900
DATE 6/7/2017
SIGNATURE Sean Kilfoyle

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

CHAIN OF CUSTODY

ESS Lab #	1706216
Turn Time	(5-Day) Rush
Regulatory State	
Reporting Limits	NH AGQS
Is this project for any of the following?:	○CT RCP ○MA MCP ○RGP
Electonic Deliverables	☐Limit Checker ☑Standard Excel ☐Other (Please Specify →)

Company Name	GZA GeoEnvironmental
Project #	04.0021270.28
Project Name	Cross Road Landfill
Contact Person	Christopher Melby
Address	5 Commerce Park North
City	Bedford
State	NH
Zip Code	03110
PO #	
Telephone Number	603-493-3863
FAX Number	
Email Address	Christopher.Melby@GZA.com

Analysis:

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Total Fe	Total Mn	Total As	Dissolved Fe	Dissolved Mn	Dissolved As
1	6/7/2017	08:05	grab	Surface Water	WEIR-01	/	/	/	/	/	/
	~~6/7/2017~~ SK										
Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial						P					
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*						3					
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*						4					
Number of Containers per Sample:						1	—	—	1	—	—

Laboratory Use Only

Cooler Present: ✓
Seals Intact:
Cooler Temperature: / °C

Sampled by : Sean Kellarsen

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

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
Sean Kellarsen 6/7/2017 09:15	GZA Fridge w/ custody seal 6/7/2017 09:15	CS 6-8-17 1110	[signature] 6-8-17 1110
Relinquished by: (Signature, Date & Time)	**Received By: (Signature, Date & Time)**	**Relinquished By: (Signature, Date & Time)**	**Received By: (Signature, Date & Time)**
[signature] 6-8-17 1700	[signature] 6/8/17 2001		

CERTIFICATE OF ANALYSIS

Christopher Melby
GZA GeoEnvironmental, Inc.
5 Commerce Park North
Bedford, NH 03110

RE: Cross Road Landfill (04.0021270.28)
ESS Laboratory Work Order Number: 1707013

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 12:11 pm, Jul 12, 2017

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1707013

SAMPLE RECEIPT

The following samples were received on July 05, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1707013-01	WEIR-01	Surface Water	6010C, 7010

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill ESS Laboratory Work Order: 1707013

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1707013

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill
Client Sample ID: WEIR-01
Date Sampled: 07/03/17 08:35
Percent Solids: N/A

ESS Laboratory Work Order: 1707013
ESS Laboratory Sample ID: 1707013-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 200.7/6010BNoDigest

Dissolved Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**9.3** (5.0)		7010		1	KJK	07/06/17 17:48	10	10	CG70613
Iron	**643** (100)		6010C		1	KJK	07/06/17 11:26	10	10	CG70613
Manganese	**1530** (20.0)		6010C		1	KJK	07/06/17 11:26	10	10	CG70613

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill
Client Sample ID: WEIR-01
Date Sampled: 07/03/17 08:35
Percent Solids: N/A

ESS Laboratory Work Order: 1707013
ESS Laboratory Sample ID: 1707013-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**10.7** (2.5)		7010		5	KJK	07/07/17 19:18	200	20	CG70619
Iron	**747** (10.0)		6010C		1	KJK	07/07/17 11:11	200	20	CG70619
Manganese	**1500** (2.0)		6010C		1	KJK	07/07/17 11:11	200	20	CG70619

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1707013

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals										
Batch CG70613 - 200.7/6010BNoDigest										
Blank										
Arsenic	ND	5.0	ug/L							
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
Blank										
Arsenic	ND	5.0	ug/L							
LCS										
Iron	2.4		mg/L	2.500		97	80-120			
Manganese	0.5		mg/L	0.5000		100	80-120			
LCS										
Arsenic	26.8		ug/L	25.00		107	80-120			
Total Metals										
Batch CG70619 - 3005A										
Blank										
Arsenic	ND	0.5	ug/L							
Iron	ND	10.0	ug/L							
Manganese	ND	2.0	ug/L							
LCS										
Arsenic	53.2	12.5	ug/L	50.00		106	80-120			
Iron	245	10.0	ug/L	250.0		98	80-120			
Manganese	53.1	2.0	ug/L	50.00		106	80-120			
LCS Dup										
Arsenic	52.7	12.5	ug/L	50.00		105	80-120	1	20	
Iron	250	10.0	ug/L	250.0		100	80-120	2	20	
Manganese	51.7	2.0	ug/L	50.00		103	80-120	3	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill ESS Laboratory Work Order: 1707013

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1707013

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

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

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Bedford, NH - GZA/HDM

Shipped/Delivered Via: ESS Courier

ESS Project ID: 1707013
Date Received: 7/5/2017
Project Due Date: 7/12/2017
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 1.9 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No / (NA)
    b. Does methanol cover soil completely? Yes / No / (NA)

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	145725	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
01	145726	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	

2nd Review
Are barcode labels on correct containers? (Yes) / No

Completed By: Date & Time: 7/5/17 1839
Reviewed By: Date & Time: 7/5/17 1842
Delivered By: 7/5/17 1842

CUSTODY SEAL
DATE 7/3/201
SIGNATURE
QEC Quality Environmental Containers 800-255-3950 • 304-255-3900

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

CHAIN OF CUSTODY

ESS Lab # 707013

Turn Time: (5-Day) Rush
Regulatory State
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP

Reporting Limits: NH AGQS

Electonic Deliverables: ☐Limit Checker ☒Standard Excel ☒Other (Please Specify →) PDF

Company Name	Project #	Project Name
GZA GeoEnvironmental	04.0021270.28	Cross Road Landfill
Contact Person	**Address**	
Christopher Melby	5 Commerce Park North	
City	**State**	**Zip Code** / **PO #**
Bedford	NH	03110
Telephone Number	**FAX Number**	**Email Address**

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: total Fe	total Mn	total As	dissolved Fe	dissolved Mn	dissolved As
1	7/3/2017	08:35	grab	Surface Waters	WEIR-01	X	X	X	X	X	X

Container Type:	AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer	G - Glass	O-Other	P-Poly	S-Sterile	V-Vial	P	P	P	P	P	P
Container Volume:	1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2 oz	9-4 oz	10-8 oz	11-Other*	5	→	5	→		
Preservation Code:	1-Non Preserved	2-HCl	3-H2SO4	4-HNO3	5-NaOH	6-Methanol	7-Na2S2O3	8-ZnAce, NaOH	9-NH4Cl	10-DI H2O	11-Other*	4	→	4	→		
											Number of Containers per Sample:	1	→	1	→		

Laboratory Use Only
Cooler Present: ✓
Seals Intact: N/A
Cooler Temperature: 1.9 °C ICE

Sampled by : Sean Kellarson

Comments: Please specify "Other" preservative and containers types in this space
· Dissolved metal sample was filtered

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
Sean Kellarson 7/3/2017 10:00	GZA fridge w/ custody seal 7/3/2017 10:00	fridge 7-5-17 1100	7-5-17 1100
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
7-5-17 1830	7/5/17 1835		

CERTIFICATE OF ANALYSIS

Dawna Tousignant
GZA GeoEnvironmental, Inc.
5 Commerce Park North
Bedford, NH 03110

RE: Exeter Landfill (04.0021270.28)
ESS Laboratory Work Order Number: 1708173

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:20 pm, Aug 16, 2017

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1708173

SAMPLE RECEIPT

The following samples were received on August 08, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1708173-01	Weir - 1	Surface Water	6010C, 7010

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1708173

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1708173

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill
Client Sample ID: Weir - 1
Date Sampled: 08/07/17 11:55
Percent Solids: N/A

ESS Laboratory Work Order: 1708173
ESS Laboratory Sample ID: 1708173-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 200.7/6010BNoDigest

Dissolved Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**15.7** (5.0)		7010		1	KJK	08/12/17 21:47	10	10	CH70919
Iron	**1120** (100)		6010C		1	KJK	08/09/17 19:37	10	10	CH70919
Manganese	**1750** (20.0)		6010C		1	KJK	08/09/17 19:37	10	10	CH70919

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill
Client Sample ID: Weir - 1
Date Sampled: 08/07/17 11:55
Percent Solids: N/A

ESS Laboratory Work Order: 1708173
ESS Laboratory Sample ID: 1708173-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**36.2** (5.0)		7010		10	KJK	08/10/17 23:47	200	20	CH70835
Iron	**5410** (10.0)		6010C		1	KJK	08/10/17 17:00	200	20	CH70835
Manganese	**1900** (2.0)		6010C		1	KJK	08/10/17 17:00	200	20	CH70835

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1708173

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals										
Batch CH70919 - 200.7/6010BNoDigest										
Blank										
Arsenic	ND	5.0	ug/L							
Blank										
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
Blank										
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
LCS										
Iron	2.5		mg/L	2.500		99	80-120			
Manganese	0.5		mg/L	0.5000		98	80-120			
LCS										
Arsenic	24.6		ug/L	25.00		98	80-120			
Total Metals										
Batch CH70835 - 3005A										
Blank										
Arsenic	ND	0.5	ug/L							
Iron	ND	10.0	ug/L							
Manganese	ND	2.0	ug/L							
LCS										
Arsenic	46.8	12.5	ug/L	50.00		94	80-120			
Iron	231	10.0	ug/L	250.0		92	80-120			
Manganese	50.2	2.0	ug/L	50.00		100	80-120			
LCS Dup										
Arsenic	45.4	12.5	ug/L	50.00		91	80-120	3	20	
Iron	230	10.0	ug/L	250.0		92	80-120	0.4	20	
Manganese	50.7	2.0	ug/L	50.00		101	80-120	0.9	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill ESS Laboratory Work Order: 1708173

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1708173

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

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

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Bedford, NH - GZA/HDM

Shipped/Delivered Via: ESS Courier

ESS Project ID: 1708173
Date Received: 8/8/2017
Project Due Date: 8/16/2017
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? Yes
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / (NA)

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	152981	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
01	152982	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	

2nd Review
Are barcode labels on correct containers? (Yes) / No

Completed By: Date & Time: 8/8/17 1703
Reviewed By: Date & Time: 8/8/17 1717
Delivered By: 8/8/17 1717

CUSTODY SEAL QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900
DATE 8/7/17
SIGNATURE

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

CHAIN OF CUSTODY

ESS Lab # 1708173

Turn Time: 5-Day Rush
Regulatory State
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP
Reporting Limits: NHAGQS
Electonic Deliverables: ☒Limit Checker ☐Standard Excel ☒Other (Please Specify →) pdf

Company Name	Project #	Project Name
GZA GeoEnvironmental	21270.28	Exeter Landfill

Contact Person	Address
Dawna Tousignant	5 Commerce Park N.

City	State	Zip Code	PO #
Bedford	NH	03110	

Telephone Number	FAX Number	Email Address
603-232-8740		dawna.tousignant@gza.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: Total Metals	Analysis: Dissolved Metals
1	8/7/17	1155	Grab	SW	Weir-1	X	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial — P | P
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 5 | 5
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 4 | 4
Number of Containers per Sample: 1 | 1

Laboratory Use Only
Cooler Present: ✓
Seals Intact:
Cooler Temperature: 3.1 °C Ice

Sampled by :

Comments: Please specify "Other" preservative and containers types in this space
Total Metals: Fe, Mn, As
Dissolved Metals: Fe, Mn, As (Field Filtered)

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
8/7/17 1325	Custody Seal Fridge 8/7/17 1325	fridge 8-8-17 1110	8-8-17 1110
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
8-5-17 1610	8/8/17 1701		

CERTIFICATE OF ANALYSIS

Dawna Tousignant
GZA GeoEnvironmental, Inc.
5 Commerce Park North
Bedford, NH 03110

RE: Exeter Landfill (04.0021270.28)
ESS Laboratory Work Order Number: 1709082

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:11 pm, Sep 14, 2017

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1709082

SAMPLE RECEIPT

The following samples were received on September 06, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1709082-01	Weir-1	Surface Water	6010C, 7010

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1709082

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1709082

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill
Client Sample ID: Weir-1
Date Sampled: 09/05/17 08:25
Percent Solids: N/A

ESS Laboratory Work Order: 1709082
ESS Laboratory Sample ID: 1709082-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 200.7/6010BNoDigest

Dissolved Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**7.0** (5.0)		7010		1	KJK	09/13/17 14:58	10	10	CI70702
Iron	**933** (100)		6010C		1	KJK	09/07/17 12:32	10	10	CI70702
Manganese	**1940** (20.0)		6010C		1	KJK	09/07/17 12:32	10	10	CI70702

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill
Client Sample ID: Weir-1
Date Sampled: 09/05/17 08:25
Percent Solids: N/A

ESS Laboratory Work Order: 1709082
ESS Laboratory Sample ID: 1709082-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**8.6** (2.5)		7010		5	KJK	09/13/17 14:47	100	10	CI70655
Iron	**1080** (10.0)		6010C		1	BJV	09/08/17 21:40	100	10	CI70655
Manganese	**1740** (2.0)		6010C		1	BJV	09/08/17 21:40	100	10	CI70655

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1709082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals										
Batch CI70702 - 200.7/6010BNoDigest										
Blank										
Arsenic	ND	5.0	ug/L							
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
LCS										
Iron	2.5		mg/L	2.500		100	80-120			
Manganese	0.5		mg/L	0.5000		98	80-120			
LCS										
Arsenic	25.9		ug/L	25.00		104	80-120			
Total Metals										
Batch CI70655 - 3005A										
Blank										
Arsenic	ND	0.5	ug/L							
Iron	ND	10.0	ug/L							
Manganese	ND	2.0	ug/L							
LCS										
Arsenic	49.5	12.5	ug/L	50.00		99	80-120			
Iron	230	10.0	ug/L	250.0		92	80-120			
Manganese	52.3	2.0	ug/L	50.00		105	80-120			
LCS Dup										
Arsenic	49.8	12.5	ug/L	50.00		100	80-120	0.7	20	
Iron	231	10.0	ug/L	250.0		92	80-120	0.2	20	
Manganese	52.0	2.0	ug/L	50.00		104	80-120	0.7	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill ESS Laboratory Work Order: 1709082

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1709082

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

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

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory

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

CHAIN OF CUSTODY

ESS Lab # 709082

Turn Time: 5-Day Rush
Regulatory State: NH
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP
Project # 04.0021270.28
Reporting Limits
Electonic Deliverables: ☐Limit Checker ☐Standard Excel ☒Other (Please Specify →) pdf

Company Name	Project #	Project Name
GZA GeoEnvironmental	~~34.6190~~	Exeter LF

Contact Person	Address
Dawna Tousignant	5 Commerce Park N.

City	State	Zip Code	PO #
Bedford	NH	03310	

Telephone Number	FAX Number	Email Address
603-232-8740		dawna.tousignant@gza.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: Total Metals	Analysis: Diss. Metals
1	9/5/17	0825	G	SW	Weir-1	X	X
	~~9/5/17~~	~~0825~~	~~G~~	~~SW~~ EBD			

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial — 8 | 8
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 3 | 3
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 4 | 4
Number of Containers per Sample: 1 | 1

Laboratory Use Only
Cooler Present: ✓
Seals Intact: NN
Cooler Temperature: 4C °C

Sampled by: E. Dyrness

Comments: Please specify "Other" preservative and containers types in this space
- Metals = Fe, Mn, As
- Diss. Metals Sidd filtered

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
E. Dyrness 9/5/17 5:15 pm	Custody Seal 9/5/17 5:15 pm	9/6/17 12:45	9/6/17 12:45
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
9/6/17 1741	9/6/17 1756		

CERTIFICATE OF ANALYSIS

Dawna Tousignant
GZA GeoEnvironmental, Inc.
5 Commerce Park North
Bedford, NH 03110

RE: Cross Road Landfill (04.0021270.28)
ESS Laboratory Work Order Number: 1710037

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:32 pm, Oct 11, 2017

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1710037

SAMPLE RECEIPT

The following samples were received on October 03, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1710037-01	Weir-1	Surface Water	6010C, 7010

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1710037

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1710037

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill
Client Sample ID: Weir-1
Date Sampled: 10/02/17 11:30
Percent Solids: N/A

ESS Laboratory Work Order: 1710037
ESS Laboratory Sample ID: 1710037-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 200.7/6010BNoDigest

Dissolved Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.9** (5.0)		7010		1	KJK	10/05/17 9:22	10	10	CJ70416
Iron	**843** (100)		6010C		1	KJK	10/04/17 22:55	10	10	CJ70416
Manganese	**1840** (20.0)		6010C		1	KJK	10/04/17 22:55	10	10	CJ70416

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill
Client Sample ID: Weir-1
Date Sampled: 10/02/17 11:30
Percent Solids: N/A

ESS Laboratory Work Order: 1710037
ESS Laboratory Sample ID: 1710037-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.1** (2.5)		7010		5	KJK	10/05/17 11:23	100	10	CJ70345
Iron	**780** (20.0)		6010C		1	KJK	10/05/17 10:49	100	10	CJ70345
Manganese	**1540** (2.0)		6010C		1	KJK	10/05/17 10:49	100	10	CJ70345

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1710037

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals										
Batch CJ70416 - 200.7/6010BNoDigest										
Blank										
Arsenic	ND	5.0	ug/L							
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
LCS										
Iron	2.5		mg/L	2.500		99	80-120			
Manganese	0.5		mg/L	0.5000		101	80-120			
LCS										
Arsenic	24.8		ug/L	25.00		99	80-120			
Total Metals										
Batch CJ70345 - 3005A/200.7										
Blank										
Arsenic	ND	0.5	ug/L							
Iron	ND	20.0	ug/L							
Manganese	ND	2.0	ug/L							
LCS										
Arsenic	52.2	12.5	ug/L	50.00		104	80-120			
Iron	213	20.0	ug/L	250.0		85	80-120			
Manganese	46.0	2.0	ug/L	50.00		92	80-120			
LCS Dup										
Arsenic	51.7	12.5	ug/L	50.00		103	80-120	1	20	
Iron	222	20.0	ug/L	250.0		89	80-120	4	20	
Manganese	46.5	2.0	ug/L	50.00		93	80-120	1	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill ESS Laboratory Work Order: 1710037

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Cross Road Landfill

ESS Laboratory Work Order: 1710037

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

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

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Bedford, NH - GZA/HDM

Shipped/Delivered Via: ESS Courier

ESS Project ID: 1710037
Date Received: 10/3/2017
Project Due Date: 10/11/2017
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3.7 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	169388	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
01	169389	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	

2nd Review
Are barcode labels on correct containers? (Yes) / No

Completed By: Date & Time: 10/3/17 1740
Reviewed By: Date & Time: 10/3/17 1747
Delivered By: 10/3/17 1747

ESS Laboratory
Division of Thielsch Engineering, Inc.
106 South Street, Hopkinton, MA 01748
Tel. (508) 435-9244 Fax (508) 435-9912
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 1710037

Turn Time	5	Days
Regulatory State	New Hampshire	
Is this project for any of the following?:	○CT RCP ○MA MCP ○RGP	

Reporting Limits

Electonic Deliverables ☐Data Checker ☑Excel ☑Other (Please Specify →) PDF

Company Name	Project #	Project Name
GZA - Bedford, NH	04.0021270.28	Cross Road Landfill

Contact Person	Address
Dawna Tousignant	5 Commerce Park North

City	State	Zip Code	PO #
Bedford	NH	03110	

Telephone Number	FAX Number	Email Address
603-232-8740	(603) 624-9463	dawna.tousignant@gza.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: Total Metals (See below)	Analysis: Dissolved Metals (See below)
01	10-2-17	1130	Grab	Surface Water	Weir-1	X	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — P P

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 5 5

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

Number of Containers per Sample: 1 1

Laboratory Use Only

Cooler Present: ✓ ○Drop Off
Seals Intact: — ○Pickup
Cooler Temperature: Tracer 3.7 °C 10/3/17 12:14

Sampled by : Matt Bergen

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

Total metals= Fe, Mn, and As

Dissolved Metals= Fe, Mn, and As (Field Filtered)

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
10-2-17/1240	Custody Seal 10-2-17/1240	Fridge 10/3/17 12:05	10/3/17 12:05
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
10/3/17 17:11	10/3/17 1739		

CERTIFICATE OF ANALYSIS

Dawna Tousignant
GZA GeoEnvironmental, Inc.
5 Commerce Park North
Bedford, NH 03110

RE: Exeter Landfill (04.0021270.28)
ESS Laboratory Work Order Number: 1711187

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 4:40 pm, Nov 14, 2017

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1711187

SAMPLE RECEIPT

The following samples were received on November 07, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1711187-01	Weir-1	Surface Water	6010C, 7010

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1711187

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1711187

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill
Client Sample ID: Weir-1
Date Sampled: 11/06/17 08:30
Percent Solids: N/A

ESS Laboratory Work Order: 1711187
ESS Laboratory Sample ID: 1711187-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 200.7/6010BNoDigest

Dissolved Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	ND (5.0)		7010		1	KJK	11/09/17 0:34	10	10	CK70803
Iron	ND (100)		6010C		1	KJK	11/08/17 14:33	10	10	CK70803
Manganese	**1210** (20.0)		6010C		1	KJK	11/08/17 14:33	10	10	CK70803

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill
Client Sample ID: Weir-1
Date Sampled: 11/06/17 08:30
Percent Solids: N/A

ESS Laboratory Work Order: 1711187
ESS Laboratory Sample ID: 1711187-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**4.4** (0.5)		7010		1	KJK	11/09/17 17:40	100	10	CK70726
Iron	**375** (10.0)		6010C		1	KJK	11/08/17 20:52	100	10	CK70726
Manganese	**1400** (2.0)		6010C		1	KJK	11/08/17 20:52	100	10	CK70726

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1711187

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals										
Batch CK70803 - 200.7/6010BNoDigest										
Blank										
Arsenic	ND	5.0	ug/L							
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
Blank										
Arsenic	ND	5.0	ug/L							
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
LCS										
Iron	2.4		mg/L	2.500		95	80-120			
Manganese	0.5		mg/L	0.5000		98	80-120			
LCS										
Arsenic	25.4		ug/L	25.00		102	80-120			
Total Metals										
Batch CK70726 - 3005A/200.7										
Blank										
Arsenic	ND	0.5	ug/L							
Iron	ND	10.0	ug/L							
Manganese	ND	2.0	ug/L							
LCS										
Arsenic	46.3	12.5	ug/L	50.00		93	80-120			
Iron	228	10.0	ug/L	250.0		91	80-120			
Manganese	50.6	2.0	ug/L	50.00		101	80-120			
LCS Dup										
Arsenic	48.2	12.5	ug/L	50.00		96	80-120	4	20	
Iron	225	10.0	ug/L	250.0		90	80-120	1	20	
Manganese	49.8	2.0	ug/L	50.00		100	80-120	2	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1711187

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1711187

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

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

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Bedford, NH - GZA/DS

Shipped/Delivered Via: ESS Courier

ESS Project ID: 1711187
Date Received: 11/7/2017
Project Due Date: 11/14/2017
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 1.6 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	179839	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
01	179840	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	

2nd Review
Are barcode labels on correct containers? Yes / No

Completed By: Date & Time: 11/7/17 1917
Reviewed By: Date & Time: 11/7/17 1923
Delivered By: 11/7/17 1923

ESS Laboratory

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

CHAIN OF CUSTODY

ESS Lab # 171187

Turn Time: 5-Day (circled) Rush
Regulatory State: NH
Reporting Limits:
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP
Electonic Deliverables: ☐Limit Checker ☒Standard Excel ☒Other (Please Specify →) pdf

Company Name	Project #	Project Name
GZA GeoEnvironmental	04.0021270.28	Exeter LF

Contact Person	Address
Dawna Tousignant	5 Commerce Park N.

City	State	Zip Code	PO #
Bedford	NH	03110	

Telephone Number	FAX Number	Email Address
603-232-8740		dawna.tousignant@gza.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: Total Fe, Mn, As	Analysis: Diss. Fe, Mn, As
1	11/6/17	0830	G	SW	Weir-1	X	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial — P P
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 3 3
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 4 4
Number of Containers per Sample: 1 1

Laboratory Use Only
Cooler Present: Yes
Seals Intact: NP
Cooler Temperature: °C ice temp: 1.6

Sampled by: E. Dymess

Comments: Please specify "Other" preservative and containers types in this space
Diss. Metals field filtered

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
11/6/17 1235	Custody Seal fridge 11/6/17 1235	GZA fridge JAP 11/7/17 11:43	11/7/17 11:43
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
11/7/17 19:00	11/7/17 1910		

CERTIFICATE OF ANALYSIS

Dawna Tousignant
GZA GeoEnvironmental, Inc.
5 Commerce Park North
Bedford, NH 03110

RE: Exeter Landfill (04.0021270.28)
ESS Laboratory Work Order Number: 1712242

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 5:50 pm, Dec 19, 2017

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1712242

SAMPLE RECEIPT

The following samples were received on December 11, 2017 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1712242-01	Weir-1	Surface Water	6010C, 7010

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1712242

PROJECT NARRATIVE

Total Metals
CL71328-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Iron (22% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1712242

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill
Client Sample ID: Weir-1
Date Sampled: 12/08/17 09:35
Percent Solids: N/A

ESS Laboratory Work Order: 1712242
ESS Laboratory Sample ID: 1712242-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 200.7/6010BNoDigest

Dissolved Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	ND (5.0)		7010		1	KJK	12/13/17 17:29	10	10	CL71243
Iron	**325** (100)		6010C		1	KJK	12/19/17 13:08	10	10	CL71243
Manganese	**1360** (20.0)		6010C		1	BJV	12/18/17 12:56	10	10	CL71243

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill
Client Sample ID: Weir-1
Date Sampled: 12/08/17 09:35
Percent Solids: N/A

ESS Laboratory Work Order: 1712242
ESS Laboratory Sample ID: 1712242-01
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**2.8** (0.5)		7010		1	KJK	12/15/17 1:43	100	10	CL71328
Iron	**180** (20.0)		6010C		2	KJK	12/16/17 3:05	100	10	CL71328
Manganese	**1230** (2.0)		6010C		1	KJK	12/15/17 1:56	100	10	CL71328

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1712242

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals										
Batch CL71243 - 200.7/6010BNoDigest										
Blank										
Arsenic	ND	5.0	ug/L							
Iron	ND	100	ug/L							
Manganese	ND	20.0	ug/L							
LCS										
Iron	2.5		mg/L	2.500		101	80-120			
Manganese	0.5		mg/L	0.5000		100	80-120			
LCS										
Arsenic	25.8		ug/L	25.00		103	80-120			
Total Metals										
Batch CL71328 - 3005A/200.7										
Blank										
Arsenic	ND	0.5	ug/L							
Iron	ND	10.0	ug/L							
Manganese	ND	2.0	ug/L							
LCS										
Arsenic	50.8	12.5	ug/L	50.00		102	80-120			
Iron	256	10.0	ug/L	250.0		102	80-120			
Manganese	42.3	2.0	ug/L	50.00		85	80-120			
LCS Dup										
Arsenic	46.7	12.5	ug/L	50.00		93	80-120	8	20	
Iron	206	10.0	ug/L	250.0		82	80-120	22	20	D+
Manganese	51.3	2.0	ug/L	50.00		103	80-120	19	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill ESS Laboratory Work Order: 1712242

Notes and Definitions

U	Analyte included in the analysis, but not detected
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1712242

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

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

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Bedford, NH - GZA/DS

Shipped/Delivered Via: ESS Courier

ESS Project ID: 1712242
Date Received: 12/11/2017
Project Due Date: 12/18/2017
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? Yes
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 1.9 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	189671	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
01	189672	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	

2nd Review
Are barcode labels on correct containers? Yes / No

Completed By: Date & Time: 12/11/17 KGS
Reviewed By: Date & Time: 12/11/17 1832
Delivered By: 12/11/17 1832

ESS Laboratory

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

CHAIN OF CUSTODY

ESS Lab # D1242

Turn Time: 5-Day Rush
Regulatory State: NH
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP
Reporting Limits:
Electonic Deliverables: ☐Limit Checker ☑Standard Excel ☒Other (Please Specify →) pdf

Company Name	Project #	Project Name
GZA GeoEnvironmental	04.0021270.28	Exeter LF

Contact Person	Address
Dawna Tousignant	5 Commerce Park N.

City	State	Zip Code	PO #
Bedford	NH	03110	

Telephone Number	FAX Number	Email Address
603-232-8740		dawna.tousignant@gza.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: Dissolved Metals	Analysis: Total Metals
1	12/8/17	0935	G	SW	Weir-1	X	X

Container Type:	AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer	G - Glass	O-Other	P-Poly	S-Sterile	V-Vial	P	P
Container Volume:	1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2 oz	9-4 oz	10-8 oz	11-Other*	3	3
Preservation Code:	1-Non Preserved	2-HCl	3-H2SO4	4-HNO3	5-NaOH	6-Methanol	7-Na2S2O3	8-ZnAce, NaOH	9-NH4Cl	10-DI H2O	11-Other*	4	4
										Number of Containers per Sample:		1	1

Laboratory Use Only

Cooler Present: Y ~~N~~
Seals Intact: Y ~~N~~
Cooler Temperature: °C ice temp: 1.9

Sampled by: E. Dyrness, M. Bergen

Comments: Please specify "Other" preservative and containers types in this space
Metals = Iron, Arsenic, Manganese

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
Erik Dyrness 12/8/17 1220	Custody Seal Fridge 12/8/17 1220	GZA fridge 12/11/17 11:23	12/11/17 11:23
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
12/11/17 17:59	12/11/17 1821		

Limitations

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

SUBSURFACE CONDITIONS

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

COMPLIANCE WITH CODES AND REGULATIONS

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

SCREENING AND ANALYTICAL TESTING

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.

9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.

10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

INTERPRETATION OF DATA

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

ADDITIONAL INFORMATION

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

CONCEPTUAL SITE MODEL

14. Our opinions were developed, in part, based upon a comparison of site data to conditions anticipated within our Conceptual Site Model (CSM). The CSM is based on available information, and professional judgment. There are rarely sufficient data to develop a unique CSM. Therefore observations over time, and/or space, may vary from those depicted in the CSM provided in this report. In addition, the CSM should be evaluated and refined (as appropriate) whenever significant new information and/or data is obtained.