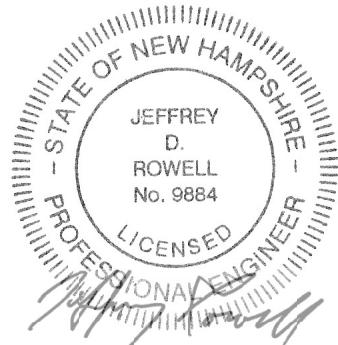


**DES Waste Management Division
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095**

**ANNUAL SUMMARY REPORT
CALENDAR YEAR 2019
CROSS ROAD LANDFILL
EXETER, NEW HAMPSHIRE
NHDES SITE # 198401081
GROUNDWATER MANAGEMENT PERMIT #198401081-E-005
PROJECT NO. 978**

Prepared For:
Town of Exeter, New Hampshire
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Exeter, New Hampshire 03833
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GZA File No.: 04.0021270.31



Date of Report: January 31, 2020

Groundwater Monitoring Report Cover Sheet

Site Name: Cross Road Landfill and Stump Dump

Town: Exeter, New Hampshire

Permit #: GWP-198401081-E-005

Type of Submittal (*Check all that apply*)

- Periodic Summary Report (*year*): 2019
 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: 1,4-Dioxane: RFW-3, GZ-102, GZ-106

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.



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January 31, 2020
File No. 04.0021270.31

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 Year 2019
Cross Road Landfill
Exeter, New Hampshire
Groundwater Management Permit No. GWP-198401081-E-005

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, New Hampshire during calendar year 2019. This report has been submitted to fulfill the requirement of an Annual Summary Report for the Landfill for calendar year 2019, as required by Condition No. 7 of the Groundwater Management Permit (Permit; GWP-198401081-E-005) issued on February 26, 2019.

This report includes GZA's conclusions and recommendations regarding the Landfill water quality monitoring completed in accordance with the Permit and includes the analytical laboratory reports from the November 2019 sampling round. The analytical laboratory reports from the April 2019 sampling were submitted to NHDES in GZA's data transmittal¹ dated June 5, 2019. GZA's work and this report are subject to the attached **Limitations**.

The following are attached:

- **Table 1** - summarizing the results of analytical laboratory analyses and field screening measurements associated with the Landfill from May 1992 through 2019;
- **Table 2** - summarizing recent and historical surface water and groundwater level elevation data;
- **Table 3** - summarizing the results of the per- and polyfluoroalkyl substances (PFAS) analyses associated with groundwater samples collected during April and November 2018;

¹ *April 2019 Data Transmittal, Cross Road Landfill, Exeter, New Hampshire*, prepared by GZA dated June 5, 2019.



- **Table 4** - summarizing the results of the recent stream flow gauging and water quality monitoring associated with metals loading evaluations to the Exeter River;
- **Plots 1A through 5D** - illustrating primary indicator water quality parameter concentration data;
- **Figure 1** - depicting Landfill and vicinity features including water quality and level monitoring locations;
- **Figure 2** - summarizing selected recent Landfill water quality data and depicting GZA's estimated groundwater hydraulic head contours and inferred direction of groundwater flow for the Landfill; and
- **Figure 3** - depicting an overburden 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**:

- Twelve groundwater monitoring wells (RFW-2, RFW-3, RFW-4, GMW-11RR, GZ-1L, GZ-2L, GZ-3L, GZ-102, GZ-104, GZ-106, GZ-201 and GZ-202A);
- 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
- Four surface water sampling locations (SW-13, SW-15, SW-16, and SW-17 [groundwater seep located proximate to the Exeter River]).

Due to low groundwater levels at monitoring well GMW-11, a replacement well (GMW-11RR) was installed during August of 2019, adjacent to GMW-11 and screened within the observed water table. A groundwater quality sample was collected from the replacement well during the November 2019 sampling round.

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, based on monitoring results.

As required by the Permit (GWP-198401081-E-005), current water quality monitoring includes sample collection and analyses for specific conductance, pH, chloride, nitrate, TKN, iron, manganese, arsenic, and 1,4-Dioxane biannually during November and April. Per the Permit, VOC and drinking water metals sampling is also included at certain locations during the 2019 and 2022 rounds. Per- and Polyfluoroalkyl Substances (PFAS) is also included at certain locations during the November 2020 and 2022 sampling rounds.

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 water and bedrock



groundwater samples collected 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.

MONITORING WELL REPLACEMENT

Due to the inconsistent presence of groundwater within monitoring well GMW-11, GZA coordinated the replacement of the well. The replacement well, designated GMW-11RR, was installed by New England Boring Contractors (NEBC) on August 9, 2019. The installation of the well was observed by GZA personnel. Monitoring well GMW-11RR was installed within approximately 10 feet from the location of GMW-11 as illustrated on **Figure 1**. The design of well GMW-11RR was selected by GZA to replace GMW-11 while being screened deeper within the observed water table. GZA's boring log and monitoring well installation diagrams for replacement well GMW-11RR are included in **Appendix B**. Monitoring well GMW-11RR was developed by purging four times the amount of standing water in the well.

METALS LOADING ANALYSIS TO THE EXETER RIVER

Following preliminary evaluation of potential effects of the groundwater seep discharge on surface water quality within the Exeter River, GZA recommended further evaluation in a letter dated January 31, 2018.² These recommendations included gauging the river during the spring and late summer months to evaluate stream flow, and corresponding samples to be collected from upstream, and downstream of the seep, as well as the seep itself.

WORK COMPLETED

To further evaluate the potential effects the groundwater seep discharge may have on the Exeter River, two rounds of stream gauging and water quality sample collection were completed. Surface water flow within the Exeter River and channel emanating from the seep were measured by GZA personnel using a Hach FH950 handheld flow meter during May and August 2019 to obtain flow rate measurements during spring and late summer (i.e., at times anticipated to be representative of high and low flow conditions). Samples of surface water were collected for analysis of total and dissolved metals from the Exeter River at locations immediately upstream and downstream of the seep and from flow emanating from the seep. The seep location includes the runoff of SW-16 prior to discharging into the River. Surface water samples were collected for total and dissolved iron, manganese, and arsenic. The May 2019 samples were submitted to ESS Laboratory in Cranston, Rhode Island and the September 2019 samples were sent to Eastern Analytical Lab in Concord, New Hampshire, 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 at the time of collection 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 4**.

RESULTS

Total and dissolved iron, manganese, and arsenic were detected above the analytical laboratory reporting limits in the majority of the samples collected. The calculated estimates of the volumetric flow rate of water discharged from the

² Evaluation of Discharge to the Exeter River, prepared by GZA dated January 31, 2018.



seep during May and September are 33 and 28 gallons per minute (gpm), respectively. The calculated estimates of the volumetric flow rate of water in the Exeter River prior to the confluence of the seep discharge during May and September are 35,628 and 14,966 gpm, respectively. Volumetric flow rate was calculated based on the measured velocity of the water and the cross section of the stream channel.

The tables below summarize the detected metals concentrations during the two sampling rounds, associated flow rates, and the concentration change in the River before and after the Seep.

May 2019

Sample Location	Dissolved Iron ($\mu\text{g/L}$)	Total Iron ($\mu\text{g/L}$)	Dissolved Manganese ($\mu\text{g/L}$)	Total Manganese ($\mu\text{g/L}$)	Dissolved Arsenic ($\mu\text{g/L}$)	Total Arsenic ($\mu\text{g/L}$)	Flow (gpm)
WQTS/SMCL Standard	300		50		0.018		--
Upstream	315	772	130	152	<5.0	1.2	35,628
Seep	876	1,150	1,460	1,510	11.0	14.8	33
Downstream	434	672	142	145	<5.0	1.3	--
Stream Concentration Change	+119	-100	+12	-7	--	+0.1	--

Note:

$\mu\text{g/L}$ - micrograms per liter

September 2019

Sample Location	Dissolved Iron ($\mu\text{g/L}$)	Total Iron ($\mu\text{g/L}$)	Dissolved Manganese ($\mu\text{g/L}$)	Total Manganese ($\mu\text{g/L}$)	Dissolved Arsenic ($\mu\text{g/L}$)	Total Arsenic ($\mu\text{g/L}$)	Flow (gpm)
WQTS Standard	300		50		0.018		--
Upstream	290	420	58	95	<1.0	1.0	14,966
Seep	730	1,200	2,000	2,100	12.0	14.0	28
Downstream	290	460	90	120	1.1	1.5	--
Stream Concentration Change	0	+40	+32	+25	+0.1	+0.5	--

Total iron, arsenic, and manganese concentrations were 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. Standards for the iron, arsenic, and manganese are 300 $\mu\text{g/L}$, 0.018 $\mu\text{g/L}$, and 50 $\mu\text{g/L}$, respectively. Bolded concentrations shown above indicate the concentration exceeds its WQTS. All of the detected concentrations of total metals for each of the three total metals (i.e., Fe, Mn, and As) exceeds its respective WQTS for the samples collected at each of the three sampling locations for both sampling rounds.



The mass transport rates of iron, arsenic, and manganese along the river from the seep to the river were calculated based on the total and dissolved metals concentrations and flow rates associated with the two sampling rounds as summarized on **Table 4**. Comparison of the mass transport rates associated with the discharge from the seep to the river and downstream mass transport rates calculated using total metals data indicate that the total iron, arsenic, and manganese arsenic discharged for the seep accounts for 0.3 percent (%), 1.4%, and 2.1% of the total mass transported in the river downstream of the seep, respectively. The variability in concentration from upstream to downstream locations ranged from 8% to 33% for total metals and 0% to 36% for dissolved metals over the two sampling events. The downstream concentrations of iron and manganese were lower than the upstream concentrations during the Spring sampling event. Dissolved metals accounted for 41% to 98% of total metals detected in both sampling rounds. The data suggests that the variability of concentrations in the stream (upstream to downstream) are greater than the amount being introduced by the seep.

REVISED CONCEPTUAL SITE MODEL

The following describes GZA's Conceptual Site Model 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 Landfill³ 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 depicted on **Figure 3**. Overburden geology includes up to 99 feet (RFW-3) of glacial outwash sand and gravel overlying a thin (about 4 feet thick) 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 were 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 [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

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



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 north-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 made during November 2019 by CEC, are summarized 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 2018 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 0.008 (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 historically 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.

Historical 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 historical constant head pumping tests of bedrock well GZ-3L, an effective hydraulic conductivity of about 2.2×10^{-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. 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 side gradient of the Landfill; and GZ-3L (bedrock) is assumed to be upgradient of the Landfill. Certain wells installed to the northeast of the Landfill are also estimated to be downgradient of the Landfill (GZ-101, GZ-102, GZ-103, GZ-104, GZ-106, and GZ-201).

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 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 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 during 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.

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.



To assess potential effects of arsenic, iron, and manganese from groundwater seepage discharging in the area of SW-14, GZA installed a temporary weir on May 25, 2017 in an approximately 2-foot-wide stream channel downgradient of the groundwater seepage in the area of SW-14 (refer to **Figure 1**). Streamflow measurements and water quality samples were collected by GZA personnel on an approximately monthly frequency between June and December 2017. Dissolved and total iron, arsenic, and manganese were detected above the analytical laboratory reporting limits in the majority of the samples. GZA personnel also gauged and sampled the Exeter River and groundwater seep during the spring and late summer of 2019. Samples collected from upstream and downstream of the seep in the Exeter River exceeded the WQTS for arsenic, iron, and manganese. The results of the sampling and gauging activities during 2019 are summarized in conclusion/discussion section of this report.

April and November 2019 total 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 north-northeastward toward the seep and also suggest a background contribution (evidenced by the presence of manganese and 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) is consistent with 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 groundwater 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 2019 Permit-related groundwater quality data are 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 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).

Historical 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 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, manganese, and 1,4-Dioxane are routinely detected in Landfill groundwater samples at concentrations exceeding AGQS (arsenic and manganese) or SMCLs (iron). Detected concentrations of the other water quality parameters have infrequently exceeded AGQS, SMCLs, or surface water quality criteria. The following table summarizes post-closure (i.e., since September 1994) exceedances of applicable water quality standards

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]).



for Landfill-related contaminants other than arsenic, manganese, iron, VOCs (including 1,4-Dioxane) and PFAS, and has been revised through year 2019.

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.

The pH field measurement for the groundwater sample collected in November 2019 from monitoring well GZ-2L was elevated, similar to the previously measured ranges at that location. The reason for the abnormally high results is not known at this time.

In accordance with the Permit, samples for VOCs were collected from groundwater or surface water monitoring locations GZ-102, GZ-106, P-2R, SW-13, SW-15, and SW-16 during November 2019. VOC concentration trends are described below. Samples were also collected for laboratory analysis of 1,4-Dioxane from each of the locations included in the November 2019 sampling round.

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

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, GZ-1L, SW-15, SW-16, and SW-17 at concentrations up to 6 µg/L. 1,4-Dioxane was detected in water quality samples collected during the November 2019 sampling round from P-2R, P-9R, RFW-3, RFW-4, GZ-102, GZ-104, GZ-106, GZ-202A, SW-15, SW-16, and SW-17. Monitoring locations from which samples have been collected with detected concentrations of 1,4-Dioxane exceeding the AGQS of 0.32 µg/L include:

- wells RFW-3, RFW-4, GZ-102, GZ-104, GZ-106, and GZ-202A;
- piezometers P-2R and P-9R; and
- surface water sampling locations SW-15, SW-16, and SW-17.

Monitoring wells RFW-3, GZ-102, and GZ-104 are screened in overburden and located downgradient of the landfill at the perimeter of the GMZ. The concentrations of 1,4-Dioxane detected in samples collected from each of these wells exceed the currently established AGQS.

Monitoring Location	1,4-Dioxane Concentration (µg/L)			
	Date	April 2014	November 2014	November 2019
GZ-106		<0.25	0.92	1.2
SW-16		<0.25	<0.25	1.3

Note:

The bolded numbers represent an exceedance of the AGQS at the time of sample collection.

Monitoring well GZ-106 and surface water SW-16 are located downgradient and beyond the boundary of the GMZ. These locations were sampled for the first time since November 2014 during the November 2019 sampling round. The concentrations of 1,4-Dioxane detected in samples collected from these locations exceed the currently established AGQS.

Due to the concentrations of 1,4-Dioxane detected in samples collected from offsite monitoring locations, the Town of Exeter sampled multiple locations downstream in the Exeter River, and prior to the water treatment facility surface water intake during 2019. The downstream sampling locations are depicted on a map provided by the Town which is included in the attached **Town of Exeter SW Sampling Locations Figure**. 1,4-Dioxane was not detected above the laboratory reporting limit (0.2 µg/L) in the three samples collected from the Exeter River by the Town. The Town also collected a sample from the water supply well located at 149 Kingston Road, owned by the Town. 1,4-Dioxane was not detected above laboratory reporting limits in the sample collected from the water supply well.

The results of the year 2019 Permit-related groundwater quality monitoring indicate exceedances of AGQS for arsenic (RFW-3, RFW-4, P-9R, GZ-104, GZ-202A, SW-13, SW-15, SW-16, and SW-17) and for manganese (RFW-2, RFW-3, RFW-4, GZ-2L, GZ-104, GZ-201, GZ-202A, P-2R, P-9R, SW-13, SW-15, SW-16, and SW-17) in water quality samples collected during one or more of the sampling rounds. Detected concentrations of iron exceeded the SMCL during one or more of the 2019 sampling events in monitoring wells RFW-3, RFW-4, GZ-1L, GZ-3L, GZ-104, GZ-201, GZ-202A, P-9R, SW-13, SW-16, and SW-17.

WATER QUALITY TREND EVALUATION

Time series charts of arsenic, iron, manganese, and chloride concentrations were prepared using data from selected water quality monitoring locations 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. During 2019 monitoring locations exhibited recent decreasing concentration trends for the primary Landfill-related groundwater contaminants.

Based on historic data an increase of site related contaminants occurred throughout onsite wells from 2011 until 2015. From 2015 through November 2019 a decrease of concentrations has occurred. The cause of the increase and decrease in contaminant concentrations is not known at this time.

Arsenic has decreased in monitoring wells GZ-202A, and GZ-104 since 2015. P-2R has been relatively stable since 2008 while slightly decreasing since 2016. Concentrations in SW-17 appear to have a possible increase since 2015 but is generally stable.

Iron has decreased in monitoring wells GZ-104, GZ-202A, and RFW-3 since 2015. Piezometer P-2R has had a recent decrease in concentration since 2017 to below laboratory reporting limits during November 2019. Piezometer P-9R has overall been stable with a recent increase but within the overall range of fluctuations. Bedrock monitoring well GZ-2L has also exhibited an increase in manganese concentration from 2013 to 2017 but has recently decreased.

Chloride concentrations on site appear to be stable, with an increase in GZ-2L during 2019. Surface water SW-17 exhibited a downward trend in historic data until 2019 when concentrations started increasing.

1,4-Dioxane concentrations onsite are relatively stable with the exception of a recent increase during 2019 at GZ-202A.

CONCLUSIONS/DISCUSSION

The following summarize our primary findings regarding the Permit-related and supplemental Landfill water quality monitoring performed in 2019.

- Data for the current reporting period are generally consistent with previously described concentration ranges and temporal trends for the water quality parameters and locations monitored in accordance with the Permit.
- Data collected during the 2019 monitoring rounds indicate that the concentrations of arsenic, manganese, and 1,4-Dioxane at certain locations downgradient of the landfill exceed their respective AGQS. The remainder of the potential Landfill-related contaminants (i.e., chloride, iron, nitrate, and TKN) included in the monitoring program were detected in one or more of the water quality samples collected during the reporting period. However, the concentrations of these parameters were below the applicable AGQS or WQCTS.
- The concentrations of 1,4-dioxane, manganese, arsenic, and iron detected in samples collected from monitoring wells RFW-3 and GZ-106 and surface water location SW-16 indicate the presence of these potential Landfill contaminants at concentrations exceeding AGQS beyond the existing downgradient GMZ boundary northeast of the Landfill. The presence and concentrations of 1,4-dioxane detected in the groundwater samples collected from the referenced locations are consistent with the results of historical monitoring prior to the establishment of the current AGQS of 0.32 µg/L. Based on our understanding of stratigraphy beneath and downgradient of the Landfill, the Exeter River north and east of the Landfill represents a convergent zone and discharge point for overburden groundwater



flow and a hydraulic barrier to overburden groundwater flow and contaminant transport toward the north and east. Therefore, further transport in groundwater beyond the Exeter River is not anticipated. Several properties are located between the downgradient GMZ boundary and the Exeter River. The recently collected data suggests that inclusion of some or all the properties within the GMZ may be appropriate.

The remainder of the Permit-monitoring and supplemental water quality data indicate compliance with Standard Management Permit Condition No. 1⁷ Permit.

- Results of sampling at monitoring well locations GZ-202A, GZ-104, and SW-17 collectively continue to suggest a potential Landfill source for groundwater contaminants detected in groundwater and surface water samples collected in the seep area located east of the Landfill. The data collected to date suggest the presence of a potential preferential groundwater flow pathway from the eastern side of the Landfill east-northeastward toward the seep.
- Results of the recent stream gauging and water quality monitoring associated with the seep located downgradient of the landfill suggests the seep discharge contributes metals to the river. However, the concentrations of iron, manganese, and arsenic exceeded prior to the confluence of the seep and the Exeter River and the variability of concentrations in the River are greater than those being discharged from the seep.

Results of recent water quality monitoring to the northeast of the Landfill including the general area of the seep (RFW-3 and GZ-104) indicate increasing contaminant concentration trends for arsenic and iron. However, water quality data for monitoring wells GZ-201 and GZ-202A, east of the Landfill collectively suggest that while concentrations fluctuate, the overall water quality trends for these locations are stable. During 2011-2012, an increase in concentration of arsenic, manganese, and iron was observed in RFW-3, GZ-2A, GZ-104, GZ-201, and GZ-202A. Concentrations continued to rise until approximately 2015 when they started to decrease. The concentrations have been continuing to slightly decrease since that time. The cause of the increase in concentration is unknown, but the differences in the concentration trends are consistent with the presence of preferential groundwater flow paths due to variations in hydraulic conductivity and stratigraphy within the overburden deposits.

- Calculated groundwater elevations for wells sampled during November 2019 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

Based on the results of the monitoring performed during 2019 and our understanding of site/Landfill hydrogeology and contaminant conditions, GZA recommends the following:

- Continued groundwater and surface water quality monitoring during 2019 as described in the Permit;
- Field analysis of all groundwater samples collected during the April and November 2020 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 observed at RFW-3, GZ-104, P-2, and P-9R;

⁷ The permittee shall not violate Ambient Groundwater Quality Standards adopted by the Department (N.H. Admin. Rules Env-Or 600) in groundwater outside the boundaries of the Groundwater Management Zone, as shown on the referenced site plan.



- Collection of samples for total and dissolved arsenic, manganese, iron, and 1,4-Dioxane from SW-14, SW-15, and directly upstream of the seep during each permit related sampling round to monitor Seep and River concentrations; and
- Based on the historical and recently detected concentrations of 1,4-Dioxane, arsenic, and manganese in samples collected from certain monitoring wells and seeps northeast of the Landfill and downgradient of the GMZ boundary, expansion of the GMZ boundary to include additional parcels located between the GMZ and Exeter River is likely appropriate. However, GZA recommends sampling monitoring wells GZ-102, GZ-103, GZ-104, GZ-105, GZ-106, and GZ-107 and surface water location SW-16, as accessible, during the April and November 2020 Permit-related monitoring rounds to confirm the results of the recent sampling and confirm the appropriate delineation of the downgradient GMZ boundary. A recommendation for expansion of the GMZ would be made in the 2020 annual summary report based on the current data and results of the proposed sampling.

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) 232-8724.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

A handwritten signature in black ink that reads "Erik B. Dyrness".

Erik B. Dyrness
Engineer I

A handwritten signature in black ink that reads "James M. Wieck, P.G.".

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

A handwritten signature in black ink that reads "Jeffrey D. Rowell".

Jeffrey D. Rowell, P.E.
Associate Principal

EBD/JDR/JMW:kr
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Attachments:

- Limitations
- Tables
- Figures
- Plots
- November 2019 Analytical Laboratory Data
- CEC Summary Letter Report
- Town of Exeter Surface Water Sampling Locations

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 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
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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4/6/1993	0.001	0.17	0.025	0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
7/1/1993	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.017	<0.005	-	-	-	-	-	-	-	-	-	
4/21/1997	-	<0.005	0.024	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.012	0.008	-	-	-	-	-	-	-	-	-	
7/22/1997	<0.005	<0.005	0.014	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005	<0.005	-	-	-	-	-	-	-	-	-	
11/11/1997	<0.005	0.011	0.04	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	<0.005	-	-	-	-	-	-	-	-	-	
4/19/1999	<0.005	<0.005	0.037	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.66	<0.005	-	-	-	-	-	-	-	-	-	
7/27/1999	<0.005	<0.005	0.026	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0.009	-	-	-	-	-	-	-	-	-	
11/18/1999	0.01	0.018	0.2	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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	<b																													

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

Arsenic (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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-	-	
4/25/2018	-	<0.001	0.017	0.14	-	-	-	-	-	-	-	0.10	-	<0.001	0.086	-	0.002	0.005	0.009	-	-	0.030	-	-	-	-	-	-	-	0.016	-	-	
11/12/2018	-	<0.001	0.014	0.14	-	-	-	-	-	-	-	0.13	-	0.0017	0.15	-	0.0051	0.0071	0.0062	-	0.0081	-	0.038	-	-	-	-	-	-	0.047	-	-	
4/24/2019	-	0.0017	0.018	0.12	-	-	-	-	-	-	-	0.014	-	0.0030	0.19	-	0.0051	0.0014	0.0076	-	-	0.065	-	-	-	-	-	-	-	0.0018	-	-	
11/4/2019	-	<0.001	0.011	0.11	-	-	-	-	-	-	<0.001	0.075	<0.001	<0.001	0.059	<0.001	0.0051	0.0025	0.0050	-	0.0056	-	0.014	-	-	-	-	-	-	0.0084	0.0021	0.016	0.32

See last page for notes.

TABLE 1
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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-	-	-	-	-	-	-	-	-	0.291	<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																																	

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

Iron (mg/L)

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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River	MW-6
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	-	-		
4/25/2018	-	0.14	16	45	-	-	-	-	-	-	-	-	14	-	0.14	29	-	0.20	1.4	15	-	-	9.1	-	-	-	-	-	-	3.7	-	-		
11/12/2018	-	0.063	18	24	-	-	-	-	-	-	-	-	17	-	0.57	38	-	0.52	0.41	5.8	-	2.3	-	-	7.8	-	-	-	-	-	9.8	-	-	
4/24/2019	-	0.16	17	41	-	-	-	-	-	-	-	-	1.6	-	1.3	77	-	0.40	0.13	7.6	-	-	32	-	-	-	-	-	-	0.084	-	-		
11/4/2019	-	0.093	3.7	34	-	-	-	-	-	-	-	<0.05	8.4	<0.05	<0.05	48	<0.05	0.41	0.21	8.5	-	<0.05	-	0.29	-	-	-	-	2.2	0.25	2.8	97	-	-

See last page for notes.

TABLE 1
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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	GW-P-5R	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River		
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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																																		

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

Manganese (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	GMW-11RR	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-15	SW-16	SW-17	Exeter River	MW-6
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	-	-			
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	-	-		
4/25/2018	-	0.90	2.0	5.7	-	-	-	-	-	-	-	1.6	-	0.52	3.9	-	0.12	2.0	0.37	-	-	1.8	-	-	-	-	-	-	-	1.1	-	-			
11/12/2018	-	0.77	1.8	4.8	-	-	-	-	-	-	-	2.2	-	1.3	3.8	-	0.080	1.1	0.16	-	1.4	-	1.2	-	-	-	-	-	-	11	-	-			
4/24/2019	-	3.0	2.0	6.0	-	-	-	-	-	-	-	0.25	-	2.9	5.5	-	0.089	0.37	0.20	-	-	3.1	-	-	-	-	-	-	-	0.14	-	-			
11/4/2019	-	0.70	0.20	4.0	-	-	-	-	-	-	-	0.11	1.5	0.58	0.53	3.8	0.055	0.065	1.7	0.32	-	2.1	-	2.7	-	-	-	-	-	0.97	1.7	3.9	17	-	-

See last page for notes.

TABLE 1
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	GMW-11RR	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-15	SW-16	SW-17	Exeter River	MW-6
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	470		
12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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	-	-	-	-	-	-	-			
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</											

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

Chloride (mg/L)

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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	GW-P-5R	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
4/25/2018	-	89	40	85	-	-	-	-	-	-	-	50	-	96	45	-	120	8.6	20	-	-	-	56	-	-	-	-	-	-	-	55	-	-	
11/12/2018	-	83	46	170	-	-	-	-	-	-	-	53	-	160	49	-	110	7.6	21	-	20	-	21	-	-	-	-	-	-	-	47	-	-	
4/24/2019	-	200	42	160	-	-	-	-	-	-	-	11	-	140	51	-	93	16	28	-	-	-	43	-	-	-	-	-	-	-	49	-	-	
11/4/2019	-	69	48	130	-	-	-	-	-	-	-	89	53	83	98	50	120	100	30	42	-	26	-	-	-	-	-	-	98	17	65	69	78	-

See last page for notes.

TABLE 1
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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-9R Southern Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	GW-P-5R	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-	-	-	-	-	-	-	-	-	-		
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	-	-	-	-	-	-	-	-	-	-		
7/23/1996	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.34	-	2.1	1.4	-	-	-	-	-	-	-		
7/22/1997	0.35	<0.05	0.06	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.05	-	-	-	-	-	-	-	-		
11/11/1997	0.89	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.05	-	-	-	-	-	-	-	-		
4/15/1998	0.46	<0.05	0.06	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-		
7/6/1998	-	<0.05	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	-	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-		
5/5/2000	2.7	0.1	0.39	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-		
7/7/2000	7	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	-	<0.05	0.06	-	-	-	-	-	-	-		
11/16/2000	2.1	0.051	0.55	<0.1	-	-	-	-</																										

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

Nitrate (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	GMW-11RR	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-15	SW-16	SW-17	Exeter River
11/2/2016	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	<0.5	-	2	<0.5	-	1	1.4	1.1	-	-	-	<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	-	-	
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	-	-		
4/25/2018	-	<0.5	0.54	<0.5	-	-	-	-	-	-	<0.5	-	0.61	<0.5	-	<0.5	<0.5	1.1	-	-	-	<0.5	-	-	-	-	-	-	-	<0.5	-	-		
11/12/2018	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	<0.5	-	1.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	-	-	-	-	-	-	<0.5	-	-		
4/24/2019	-	0.50	<0.5	<0.5	-	-	-	-	-	-	-	1.2	-	1.3	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	-	-	-	-	-	-	<0.5	-	-		
11/4/2019	-	0.79	<0.5	<0.5	-	-	-	-	-	-	<0.5	<0.5	<0.5	1.8	<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
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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/South Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-	-	-	-							

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

TKN (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	GMW-11RR	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-15	SW-16	SW-17	Exeter River
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	-	-
4/25/2018	-	<0.5	<0.5	2.3	-	-	-	-	-	-	-	<0.5	-	0.54	1.3	-	<0.5	<0.5	<0.5	-	-	<0.5	-	-	-	-	-	-	-	-	<0.5	-	-	
11/12/2018	-	<0.5	<0.5	1.1	-	-	-	-	-	-	-	<0.5	-	<0.5	1.3	-	<0.5	0.69	<0.5	-	0.65	-	0.52	-	-	-	-	-	-	-	<0.5	-	-	
4/24/2019	-	<0.5	<0.5	2.3	-	-	-	-	-	-	-	<0.5	-	<0.5	1.3	-	<0.5	0.8	<0.5	-	-	2.0	-	-	-	-	-	-	-	<0.5	-	-		
11/4/2019	-	<0.5	<0.5	2.6	-	-	-	-	-	-	-	<0.5	<0.5	0.7	1.3	<0.5	<0.5	<0.5	<0.5	-	1.4	-	0.9	-	-	-	-	-	1.1	<0.5	<0.5	0.5	-	-

See last page for notes.

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

1,4-Dioxane (mg/L)

NH AGQS = 0.32 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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R Southern Spring)	SW-P-9 (P-9/1P-9R Northern Spring)	GZ-P-5R	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-	-		
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70	-	-	-			
4/24/2019	-	<0.2	2.1	4.2	-	-	-	-	-	-	-	<0.2	-	<0.2	5.3	-	0.44	<0.2	<0.2	-	-	1.8	-	-	-	-	-	-	-	-	0.73	-	-	
11/4/2019	-	<0.2	2.0	2.9	-	-	-	-	-	-	0.89	1.4	1.2	<0.2	4.4	<0.2	<0.2	<0.2	<0.2	-	0.70	-	1.1	-	-	-	-	-	-	<0.2	1.0	1.3	0.81	-

See last page for notes.

TABLE 1
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	GMW-1RR	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-15	SW-16	SW-17	Exeter River	MW-6
5/27/1992	6.51	6.42	6.53	6.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.58	-	-	-	-	-	-	-	-	-	-	-				
11/12/1992	7.00	6.50	6.30	6.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
4/6/1993	6.95	6.41	6.51	6.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.90				
4/25/1996	6.34	7.15	6.42	6.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.84				
7/25/1996	6.48	6.67	7.05	6.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11/20/2002	6.19	6.29	6.26	6.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
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	-	-	-	-	-	-	-	-	-	-	6.71	
11/18/2008	-	5.96	5.97	6.11	6.37	-	-	-	-	-	Dry	-	6.56	-	-	-	-	7.02	6.68	-	-	-	6.44	6.80	6.77	-	-	-	-	-	-	-	-	-	6.69	
4/27/2009	-	6.00	5.89	6.08	6.26	-	-	-	-	-	6.70	-	-	-	-	-	-	6.61	-	-	6.38	6.41	6.73	6.81	-	-	-	-	-	-	-	-	-	-	6.69	
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	-	-	-	-	-	-	-	-	-	6.72	
4/20/2010	-	5.84	6.45	6.31	6.57	-</td																														

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

Specific Conductance (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	GMW-11RR	GZ-1L	GZ-2L	GZ-3L	Giancola Residence	SW-P-2 (P-2/1P-2R 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-15	SW-16	SW-17	Exeter River
5/27/1992	150	370	910	1,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	510	-	-	-	-	-	-	-	-	-	7,500			
11/12/1992	130	347	858	1,270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
4/6/1993	180	340	699	855	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,790				
7/1/1993	134	368	991	1,350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
11/5/1993	136	352	943	1,310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,830					
4/14/1994	69	350	710	958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
7/15/1994	77	335	740	1,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
11/18/1994	140	340	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	723	-	265	397	581	-	-	-	-	-		
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	-	-	-	-	-	-	155		
11/18/2008	-	341	634	871	765	-	-	-	-	-	-	417	-	-	-	-	-	-	487	677	-	-	-	255	492	249	-	-	-	-	-	-	131		
4/27/2009	-	367	636	835	712	-	-	-	-	-	-	938	-	-	-	-	-	-	625	-	-	-	317	226	502	117	-	-	-	-	-	-	248		
11/4/2009	-	350	1,062	1,070	338	-	-	-	-	-	-	607	-	-	-	-	-	-	668	554	217	-	330	264	481	-	-	-	-	-	-	262			
4/20/2010	-	347	1,071	1,019	321	-	-	-	-	-	-	618																							

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

Barium (mg/L)

NH AGQS= 2 mg/L
CTS (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)	SW-P-9 (P-9/1P-9R Northern Spring)	GZ-P-5R	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
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	-	-	-	-	-	-	-	-					
11/17/2003	-	<0.005	0.08	0.12	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	0.1	<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	-	-	-	-	-	-					
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	<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	<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	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
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	<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	<0.05	<0.05	<0.05	<0.05					
11/14/2007	-	<0.05	0.13	0.12	<0.05	-	-	-	-	-	0.06	-	-	-	-	<0.05	0.052	-	-	<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	0.12	0.17	<0.05	-	-	-	-	-	Dry	-	0.014	-	-	<0.05	<0.																

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

Barium (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-15	SW-16	SW-17	Exeter River
11/7/2017	-	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	-	-	
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11/12/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4/24/2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11/4/2019	-	-	-	-	-	-	-	-	-	-	0.014	-	0.046	-	-	-	-	-	-	0.019	-	-	-	-	-	-	-	0.023	0.018	0.039	-	-	-

See last page for notes.

TABLE 1
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-15	SW-16	SW-17	Exeter River
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	-	-	-	-	-	-	-	-	-	0.7				
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	-	-	-	-	-	-	-	-	-	-				
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	<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	-	<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	-	-	-	-																													

TABLE 1
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)	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
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	-	-		
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11/12/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4/24/2019	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	<0.001	<0.001	<0.001	-	-		
11/4/2019	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	<0.001	<0.001	<0.001	-	-		

See last page for notes.

TABLE 1
WATER QUALITY DATA SUMMARY

$\mu\text{m} (\text{mg/L})$

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

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

Chromium (mg/L)

NH AGQ5= 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)	SW-P-9 (P-9/1P-9R Northern Spring)	GW-P-5R	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-		
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11/12/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4/24/2019	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-			
11/4/2019	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	<0.001	-	0.0010	<0.001	<0.001	-	-	-	-	-	-			

See last page for notes.

TABLE 1
WATER QUALITY DATA SUMMARY

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)	SW-P-9 (P-9/1P-9R Northern Spring)	GZ-P-5R	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	
POST-CLOSURE	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		
	7/25/1996	<0.005	0.053	<0.005	0.007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-		
	11/14/1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	4/21/1997	-	0.004	0.004	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	-	-	0.012	0.003	-	-	-	-	-	-	-	-	
POST-CLOSURE	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000-2007	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	-	-	-	-	-	-	-		
	11/17/2003	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-		
2008-2015	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	-	-	-	-	-	-	-			
	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	-	-	-	-	-	-	-			
	11/8/2005	-	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	<0.01																					

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

Lead (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-15	SW-16	SW-17	Exeter River
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	-	-	
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11/12/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4/24/2019	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
11/4/2019	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	0.0017	<0.001	<0.001	-	-		

See last page for notes.

TABLE 1
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)	SW-P-9 (P-9/1P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
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	-	-	-	-	-							

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

Mercury (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-15	SW-16	SW-17	Exeter River
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	-	-		
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11/12/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4/24/2019	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	-	-	-			
11/4/2019	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	-	-	-	-	-	<0.0001	-	-	-	-	<0.0001	<0.0001	<0.0001	-	-	-			

See last page for notes.

TABLE 1
WATER QUALITY DATA SUMMARY

$\omega_m(m_0(t))$

NH AGQS = 0.05 mg/L

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

Selenium (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-15	SW-16	SW-17	Exeter River
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	-	-		
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11/12/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4/24/2019	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-			
11/4/2019	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	-	-			

See last page for notes.

TABLE 1
WATER QUALITY DATA SUMMARY

r (mg/L)

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

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

Silver (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-15	SW-16	SW-17	Exeter River
4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
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	-	-			
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11/12/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4/24/2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11/4/2019	-	-	-	-	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	<0.001	-	-	-	-	-	<0.001	<0.001	<0.001	-	-	-		

See last page for notes.

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/Z South Spring)	GZ-P-5R	SW-P-9 (P-9/P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17
PRE-CLOSURE	5/27/1992	BDL	BDL	BDL	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,122		
	11/12/1992	BDL	BDL	BDL	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	4/6/1993	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,338.6		
	7/1/1993	BDL	BDL	25.17	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	11/5/1993	BDL	BDL	BDL	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	154.6		
	4/14/1994	BDL	BDL	3.5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	7/15/1994	BDL	BDL	BDL	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	8/30/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	697.1		
	9/6/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	801.5		
	10/11/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	731.5		
	11/18/1994	BDL	BDL	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	12/23/1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,443		
	2/2/1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	283.4		
	4/12/1995	BDL	BDL	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	235.5		
	7/28/1995	BDL	BDL	DA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260.3		
	12/8/1995	BDL	BDL	4	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	201.5		
	4/26/1996	BDL	BDL	14.2	39.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,279.6		
	7/25/1996	BDL	BDL	4.1	49.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	11/14/1996	-	BDL	4.7	332.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	4/21/1997	-	BDL	2.9	24.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	7/22/1997	BDL	BDL	3	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
POST-CLOSURE	11/11/1997	4.6	BDL	BDL	26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	4/15/1998	BDL	3	BDL	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	7/6/1998	-	4	BDL	93.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	11/16/1998	DA	19.9	DA	27.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	4/19/1999	BDL	BDL	2.8	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	7/27/1999	BDL	BDL	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	11/18/1999	BDL	BDL	4.6	BDL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	5/5/2000	BDL	BDL	10.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	7/7/2000	BDL	BDL	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	11/16/2000	BDL	BDL	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	4/25/2001	BDL	BDL	2.1	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	7/25/2001	BDL	BDL	10	BDL	-	-	BDL	BDL	BDL	-	-	-	-	-	-	-	17	BDL	BDL	-	-	-	-	-	-	-	-	-	-			
	8/9/2001	-	-	-	-	BDL	-	-	BDL	BDL	BDL	-	-	-	-	-	-	-	3.1	2	BDL	-	-	-	-	-	-	-	-	-			
	11/28/2001	BDL	BDL	6	-	-	-</td																										

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

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-Z) South Spring	GZ-P-5R	SW-P-9 (P-9/P-9R Northern Spring)	SW-1	SW-5	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16	SW-17	Exeter River
4/24/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11/7/2017	-	BDL	1	BDL	-	-	-	-	-	-	-	BDL	-	BDL	1	BDL	BDL	BDL	-	BDL	-	66	-	-	-	-	-	10	-	-	BDL	-	-
4/25/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11/12/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4/24/2019	-	-	-	-	-	-	-	-	-	-	-	BDL	-	BDL	-	-	-	-	-	BDL	-	-	-	-	-	-	-	-	-	-	-	-	
11/4/2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

See last page for notes.

TABLE 1
WATER QUALITY DATA SUMMARY

um (mg/L)

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

See last page for notes.

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

04.0021270.31
Page 33 of 33

NOTES:

1. Concentrations are in milligrams per liter (mg/L) or micrograms per liter ($\mu\text{g}/\text{L}$) as indicated.
2. "-" indicates that measurements 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) at time of sampling 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. " $\mu\text{S}/\text{cm}$ " 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 historical 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.

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	Reference 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-11RR	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	-	72.11	-	-	-	-	-	-	-	-	-	-	-	-
GZ-102	77.0	-	80	-	-	-	-	-	-	-	-	-	-	-	-
GZ-103	78.3	-	81.39	-	-	-	-	-	-	-	-	-	-	-	-
GZ-104	72.4	-	75.02	-	-	-	-	-	-	-	-	-	-	-	-
GZ-105	65.4	-	67.89	-	-	-	-	-	-	-	-	-	-	-	-
GZ-106	73.5	-	76.13	-	-	-	-	-	-	-	-	-	-	-	-
GZ-107	108.7	-	103.66	-	-	-	-	-	-	-	-	-	-	-	-
GZ-201	123.3		122.85	-	-	-	-	-	-	-	-	-	-	-	-
GZ-202A	121.1		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	915.91	-	61.65	-	-	-	-	-	-	-	-	-	-	-	-
SW-14	-	-	40.47	-	-	-	-	-	-	-	-	-	-	-	-
Bridge	917.07	-	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	Reference 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-11RR	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	-	72.11	-	-	-	-	-	-	-	-	-	-	-	-
GZ-102	77.0	-	80	-	-	-	-	-	-	-	-	-	-	-	-
GZ-103	78.3	-	81.39	-	-	-	-	-	-	-	-	-	-	-	-
GZ-104	72.4	-	75.02	-	-	-	-	-	-	-	-	-	-	-	-
GZ-105	65.4	-	67.89	-	-	-	-	-	-	-	-	-	-	-	-
GZ-106	73.5	-	76.13	-	-	-	-	-	-	-	-	-	-	-	-
GZ-107	108.7	-	103.66	-	-	-	-	-	-	-	-	-	-	-	-
GZ-201	123.3		122.85	-	-	-	-	-	-	-	-	-	-	-	-
GZ-202A	121.1		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	915.91	-	61.65	-	-	-	-	-	-	-	-	-	-	-	-
SW-14	-	-	40.47	-	-	-	-	-	-	-	-	-	-	-	-
Bridge	917.07	-	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	Reference Elevation	Depth-to-Water	Groundwater Surface Elevation											
				04/28/05	11/08/05	04/17/06	11/20/06			05/20/07			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-11RR	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	-	72.11	-	-	-	-	-	-	-	-	-	-	11.0	61.1	
GZ-102	77.0	-	80	-	-	-	-	-	-	-	-	-	-	16.5	63.5	
GZ-103	78.3	-	81.39	-	-	-	-	-	-	-	-	-	-	17.8	63.6	
GZ-104	72.4	-	75.02	-	-	-	-	-	-	-	-	-	-	12.7	62.3	
GZ-105	65.4	-	67.89	-	-	-	-	-	-	-	-	-	-	11.1	56.8	
GZ-106	73.5	-	76.13	-	-	-	-	-	-	-	-	-	-	12.3	63.9	
GZ-107	108.7	-	103.66	-	-	-	-	-	-	-	-	-	-	37.1	66.6	
GZ-201	123.3		122.85	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-202A	121.1		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	915.91	-	61.65	-	-	-	-	-	-	-	-	-	-	3.8	57.9	
SW-14	-	-	40.47	-	-	-	-	-	-	-	-	-	-	2.9	37.6	
Bridge	917.07	-	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	Reference 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-11RR	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	-	72.11	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-102	77.0	-	80	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-103	78.3	-	81.39	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-104	72.4	-	75.02	-	-	12.3	62.7	-	-	12.40	62.6	8.94	66.1	12.40	62.6	
GZ-105	65.4	-	67.89	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-106	73.5	-	76.13	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-107	108.7	-	103.66	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-201	123.3	-	122.85	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-202A	121.1	-	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	915.91	-	61.65	-	-	-	-	-	-	-	-	-	-	-	-	
SW-14	-	-	40.47	-	-	-	-	-	-	-	-	-	-	-	-	
Bridge	917.07	-	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	Reference 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-11RR	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	-	72.11	-	-	-	-	-	-	-	-	-	11.50	60.6	-	-	-	-
GZ-102	77.0	-	80	-	-	-	-	-	-	-	-	-	17.05	63.0	17.85	62.2	18.18	61.8
GZ-103	78.3	-	81.39	-	-	-	-	-	-	-	-	-	18.20	63.2	-	-	-	-
GZ-104	72.4	-	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	-	67.89	-	-	-	-	-	-	-	-	11.48	56.4	-	-	-	-	-
GZ-106	73.5	-	76.13	-	-	-	-	-	-	-	-	14.15	62.0	-	-	13.53	62.6	
GZ-107	108.7	-	103.66	-	-	-	-	-	-	-	-	38.21	65.5	-	-	-	-	-
GZ-201	123.3	-	122.85	-	-	-	-	-	-	51.68	71.2	51.12	71.7	51.94	70.9	52.23	70.6	
GZ-202A	121.1	-	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	915.91	-	61.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW-14	-	-	40.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge	917.07	-	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	Reference Elevation	Depth-to-Water	Groundwater Surface Elevation																	
				11/17/15	04/14/16	11/02/16	04/24/17	11/07/17	04/25/18	11/12&13/2018	04/24/19	11/05/19										
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	20.65	78.8	20.22	79.2	27.70	71.7	26.60	72.8	
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	32.96	84.2	33.62	83.5	33.92	83.2	34.74	82.4	
GMW-11RR	93.8	-	96.32	-	-	-	-	-	-	dry	-	10.82	85.29									
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	10.43	86.9	11.46	85.9	8.91	88.4	13.80	83.5	
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	-	72.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-102	77.0	-	80	18.18	61.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.90	63.10	
GZ-103	78.3	-	81.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-104	72.4	-	75.02	14.32	60.7	13.62	61.4	14.60	60.4	13.3	61.7	13.53	61.5	12.95	62.1	12.97	62.1	11.80	63.2	13.01	62.0	
GZ-105	65.4	-	67.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-106	73.5	-	76.13	13.53	62.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.35	63.78	
GZ-107	108.7	-	103.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GZ-201	123.3	-	122.85	52.45	70.4	51.95	70.9	53.15	69.7	51.37	71.5	51.27	71.6	50.91	71.9	50.93	71.9	48.37	74.5	50.51	72.3	
GZ-202A	121.1	-	123.99	52.95	71.0	52.40	71.6	53.58	70.4	51.83	72.2	51.69	72.3	51.34	72.7	51.28	72.7	48.76	75.2	50.93	73.1	
P-1	64.5	-	67.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
P-2 / P-2R	68.3	-	69.18	3.7	65.5	-	-	-	-	-	-	-	3.04	66.14	-	-	3.81	65.4	-	-	4.08	65.1
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	2.71	65.6	2.75	65.6	2.73	65.6	2.73	65.6	
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	42.75	77.0	42.32	77.4	41.18	78.5	43.11	76.6	
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	74.13	69.4	74.08	69.4	71.72	71.8	73.82	69.7	
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	46.23	72.5	46.34	72.4	44.59	74.1	46.51	72.2	
WS-1	102	-	102.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WS-2	93	-	93.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW-17/Seep	915.91	-	61.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW-14	-	-	40.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bridge	917.07	-	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 of 1929.
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.
11. GMW-11RR was replaced on 8/6/19, new PVC reference elevation is 96.32'.

TABLE 3
SUMMARY OF DETECTED COMPOUNDS - PFAS IN GROUNDWATER
Cross Road Landfill - Exeter, New Hampshire
NH DES No. 198401081

Stratigraphic Unit	Monitoring Well ID	Sample Date	Carboxylic Acids ³						Sulfonates ³			Calculated Parameters				
			Perfluorobutanoic acid (PFBA) [4]	Perfluoropentanoic Acid (PFPeA) [5]	Perfluoroheptanoic Acid (PFHxA) [6]	Perfluoroheptanoic Acid (PFHpA) [7]	Perfluoro-n-Octanoic Acid (PFOA) [8]	Perfluorononanoic Acid (PFNA) [9]	Perfluorobutane Sulfonate (PFBS) [4]	Perfluorohexane Sulfonate (PFHxS) [6]	Perfluorooctane Sulfonate (PFOS) [8]	PFOA and PFOS Combined Total	Total Measured ² PFAS	% PFOA vs. Total PFOA+PFOS	% PFOS+PFOA vs. Total PFAS	
		AGQS (ng/L)	na	na	na	na	70 ¹	na	na	na	70 ¹	70 ¹	na	na	na	
Overburden	RFW-3	11/12/2018	<4.42	<4.42	6.62	<4.42	4.47	<4.42	<4.42	<4.42	<4.42	4.5	11.1	100.0%	40.3%	
	RFW-4	4/25/2018	<4.11	<4.11	5.07	<4.11	7.53	<4.11	<4.11	<4.11	<4.11	7.04	14.6	19.6	51.7%	74.2%
		11/12/2018	<4.45	<4.45	<4.45	<4.45	<4.45	<4.45	<4.45	<4.45	<4.45	ND	ND	N/A	N/A	
	GZ-202A	4/25/2018	<4.10	<4.10	5.54	<4.10	<4.10	<4.10	<4.10	<4.10	<4.10	ND	5.5	N/A	N/A	
		11/12/2018	<4.42	<4.42	5.61	<4.42	<4.42	<4.42	<4.42	<4.42	<4.42	ND	5.6	N/A	N/A	
Groundwater Seep	P-2R	11/12/2018	<4.33	<4.33	<4.33	<4.33	<4.33	<4.33	<4.33	<4.33	<4.33	ND	ND	N/A	N/A	

TABLE KEY:

PFAS = per- and polyfluoroalkyl substances

AGQS = Ambient Groundwater Quality Standards included in Env-Or 600 - Contaminated Site Management (Env-Or 603.03)

na = no current standard available

N/A = not applicable

< = analyte not detected above the laboratory reporting limit

ng/L = nanograms per liter

GENERAL NOTES:

- * Civil & Environmental Consultants collected the groundwater samples for PFAS analysis and submitted the samples to Eastern Analytical who subcontracted the analysis to Vista Analytical Laboratory of El Dorado Hills, California.

- * All concentrations reported in nanograms per liter.

- * **Bold** indicates that the concentration was detected above the laboratory reporting detection limit. Shading indicates that concentration exceeds the AGQS.

- * The analytical test method for PFAS samples analyzed during 2018 is Modified EPA Method 537.

SPECIFIC NOTES:

1. The AGQS of 70 nanograms per liter (equivalent to parts per trillion) has been established for Perfluoro-n-Octanoic Acid (PFOA), Perfluorooctanesulfonic Acid (PFOS), and the total combined concentration of PFOA and PFOS.
2. A total of nine PFAS compounds were measured by the analyses. Other PFAS compounds may or may not be present.
3. The number within the brackets indicates the number of fluorinated carbon chains.

TABLE 4
SUMMARY OF MASS TRANSPORT
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081

04.0021270.31
Page 1 of 1

Date	Spring Flow Rate (gpm) ⁴	River Flow Rate (gpm) ⁴	River - Upstream						River - Down Stream			Seep Discharge			Iron Transport Rate - Seep (lb/day)		Iron Transport Rate - Upstream (lb/day)		Iron Transport Rate - Downstream (lb/day)		Percent Contribution from Seep to River	
			Iron ($\mu\text{g/L}$)			Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	(Total)		
			Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total			
5/30/2019	33	35,628	772	315	672	434	1150	876	0.46	0.35	330.54	134.87	287.72	185.82	0.16%							
9/5/2019	28	14,966	420	290	460	290	1200	730	0.40	0.25	75.54	52.16	82.73	52.16	0.49%	average				0.3%		

Date	Spring Flow Rate (gpm) ⁴	River Flow Rate (gpm) ⁴	River - Upstream						River - Down Stream			Seep Discharge			Arsenic Transport Rate - Seep (lb/day)		Arsenic Transport Rate - Upstream (lb/day)		Arsenic Transport Rate - Downstream (lb/day)		Percent Contribution from Seep to River	
			Arsenic ($\mu\text{g/L}$)			Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	(Total)		
			Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total			
5/30/2019	33	35,628	1.2	<5.0	1.3	<5.0	14.8	11.0	0.0059	0.0044	0.5138	-	0.56	-	0.56	-	0.56	-	1.05%			
9/5/2019	28	14,966	1.0	<1.0	1.5	1.1	14.0	12.0	0.0047	0.0040	0.1799	-	0.27	0.20	0.27	0.20	0.27	0.20	1.75%			
																			average	1.4%		

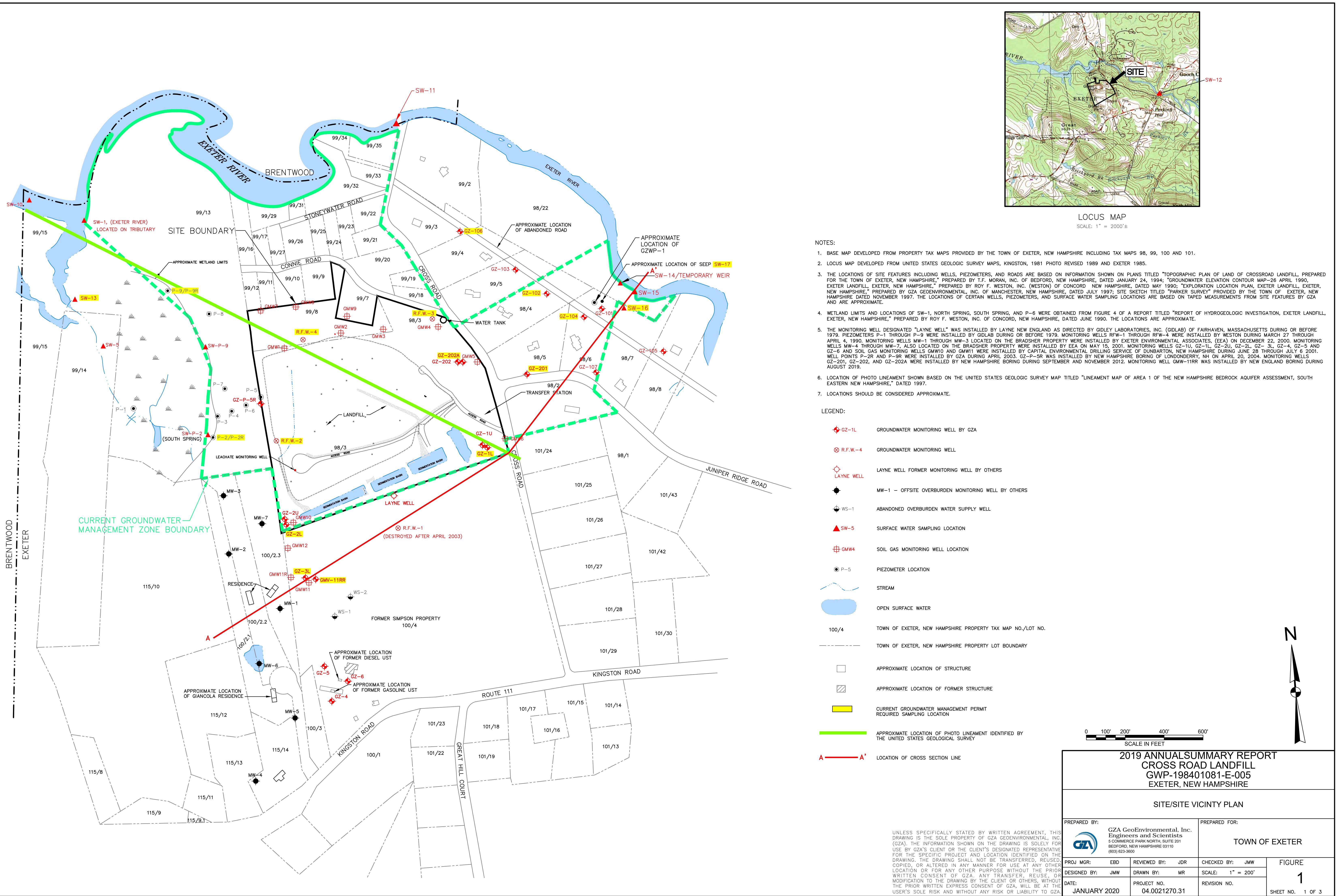
Date	Spring Flow Rate (gpm) ⁴	River Flow Rate (gpm) ⁴	River - Upstream						River - Down Stream			Seep Discharge			Manganese Transport Rate - Spring (lb/day)		Manganese Transport Rate - Upstream (lb/day)		Manganese Transport Rate - Downstream (lb/day)		Percent Contribution from Seep to River	
			Manganese ($\mu\text{g/L}$)			Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	(Total)		
			Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total			
5/30/2019	33	35,628	152	130	145	142	1510	1460	0.60	0.58	65.08	55.66	62.08	60.80	62.08	60.80	62.08	60.80	62.08	0.96%		
9/5/2019	28	14,966	95	58	120	90	2100	2000	0.71	0.67	17.09	10.43	21.58	16.19	21.58	16.19	21.58	16.19	21.58	3.27%		
																			average	2.1%		

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 and Spring flow rate were determined in the field by GZA, utilizing a Hach FH950 Handheld Flow Meter. River measurements were obtained just upgradient of where the Spring discharges into the Exeter River, and the Spring measurements were obtained prior to the discharge into the Exeter River.



Figures





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 4, 2019 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. MONITORING WELL GMW-11RR WAS INSTALLED BY NEW ENGLAND BORING DURING AUGUST 2019.
 8. WATER QUALITY DATA SHOWN HEREON SUMMARIZE THE RESULTS OF WATER QUALITY MONITORING FOR ARSENIC, IRON, AND MANGANESE FROM SAMPLES COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DURING APRIL AND NOVEMBER 2018.

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)
- <0.02 INDICATES 1,4-DIOXANE CONCENTRATION IN MICROGRAMS PER LITER ($\mu\text{g}/\text{L}$)
- (82.6) INDICATES ESTIMATED OVERBURDEN GROUNDWATER SURFACE ELEVATION IN FEET BASED ON DEPTH TO GROUNDWATER MEASUREMENTS DURING NOVEMBER 2019 (SEE NOTE 4).
-  ESTIMATED OVERBURDEN GROUNDWATER SURFACE ELEVATION CONTOUR IN FEET BASED ON DEPTH TO GROUNDWATER MEASUREMENTS DURING NOVEMBER 2019 (SEE NOTE 4).
-  INFERRED DIRECTION OF OVERBURDEN GROUNDWATER FLOW
-  CURRENT GROUNDWATER MANAGEMENT PERMIT REQUIRED SAMPLING LOCATION

BOLD PRINT INDICATES EXCEDENCE OF NH AGQS OR SMCL

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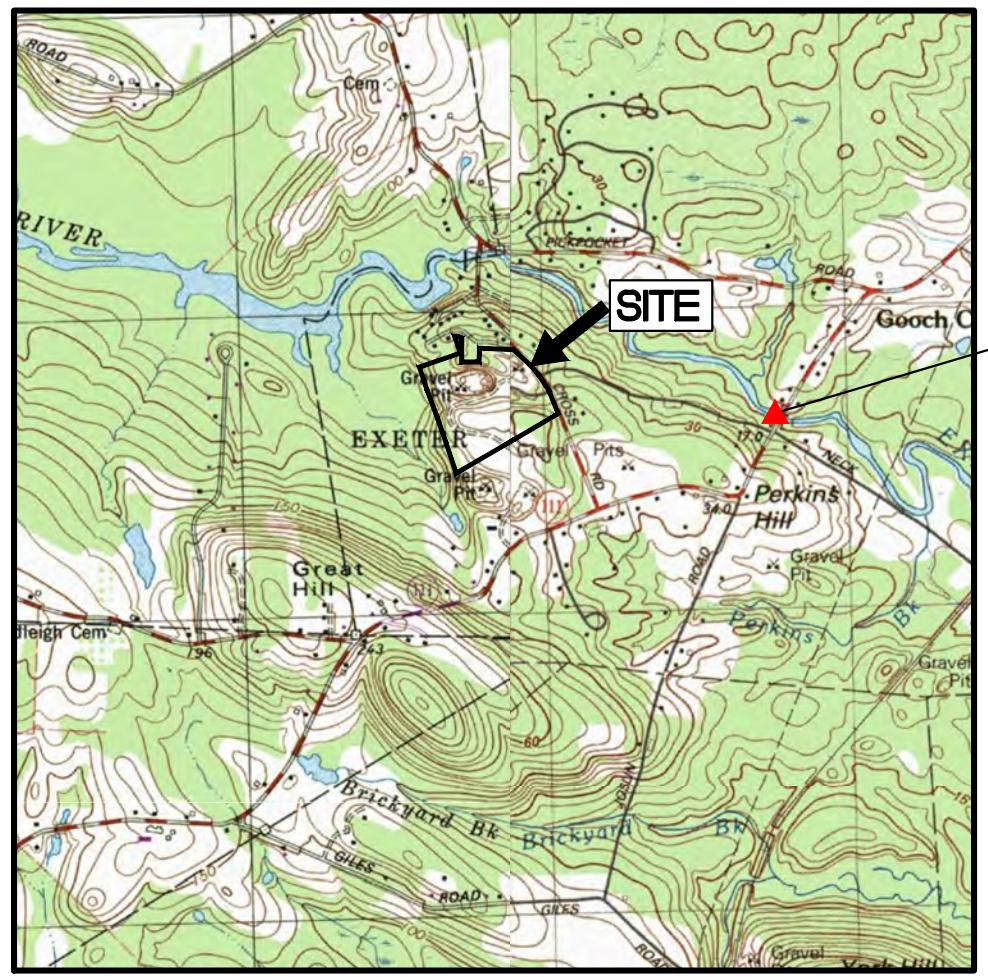
PREPARED BY

PROJ MGR:
DESIGNED BY:
DATE:
JANUARY

SCALE IN FEET

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:	EBD	REVIEWED BY:	JDR	CHECKED BY: JMW
DESIGNED BY:	JMW	DRAWN BY:	MR	SCALE: 1" = 200'
DATE: JANUARY 2020	PROJECT NO. 04.0021270.31		REVISION NO.	
				FIGURE 2 SHEET NO. 2 OF 3



LOCUS MAP

SCALE: 1" = 2000'+

N

0 100' 200' 400' 600'

SCALE IN FEET

2019 ANNUAL SUMMARY REPORT

CROSS ROAD LANDFILL

GWP-198401081-E-005
EXETER, NEW HAMPSHIRE

EXETER, NEW HAMPSHIRE

QUALITY AND ELEVATION DATA SUMMARY

Digitized by srujanika@gmail.com

Environmental, Inc. PREPARED FOR:

TOWN OF EXETER

/ HAMPSHIRE 03110

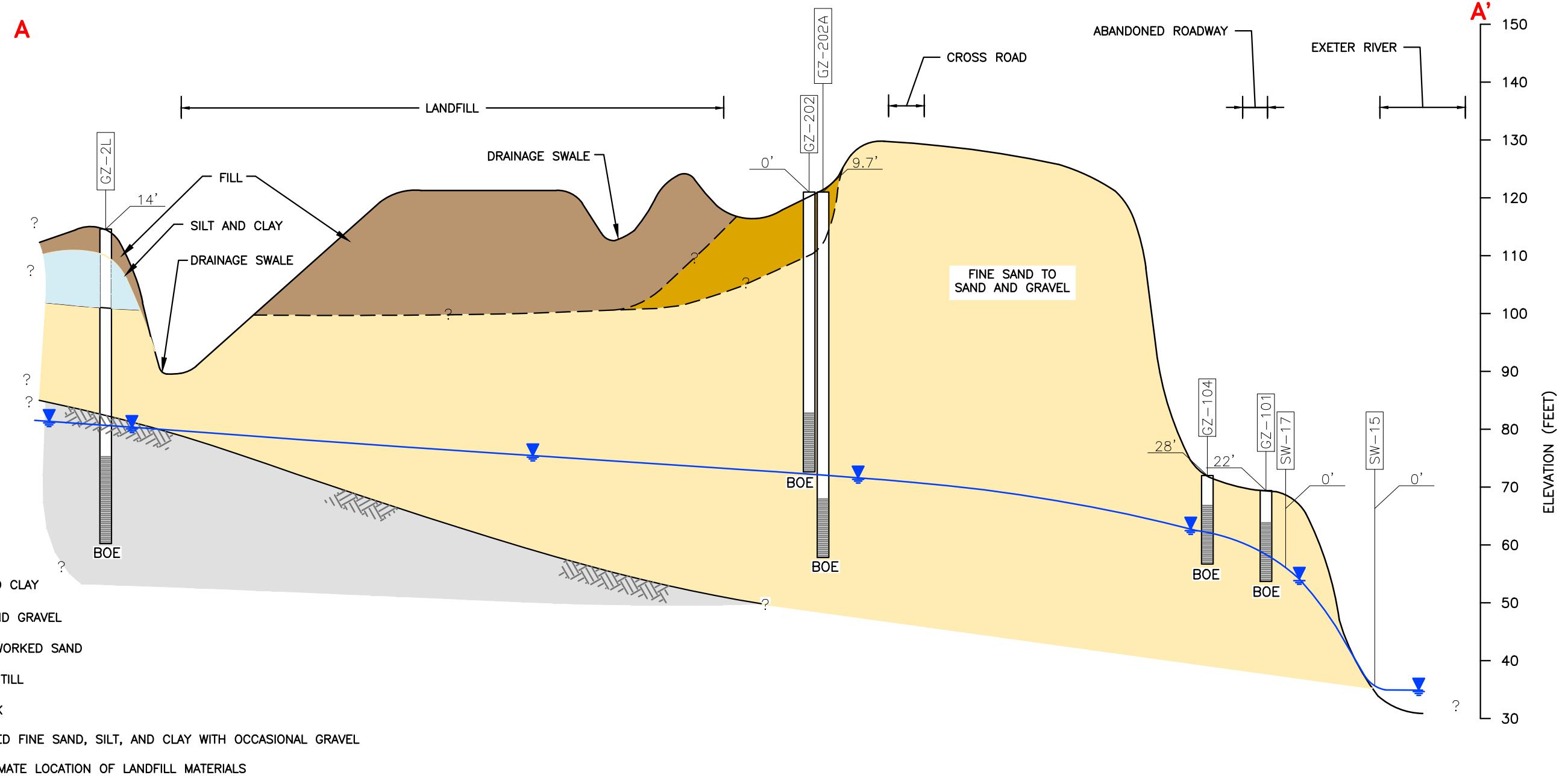
REVIEWED BY: JDR CHECKED BY: JMW FIG

DRAWN BY: MR SCALE: 1" = 200'

PROJECT NO. REVISION NO. SHEET 1

PAGE 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 GRAVE
 - APPROXIMATE LOCATION OF LANDFILL MATERIALS

TEST BORING/MONITORING WELL AND NUMBER

30'SE OFFSET FROM CROSS SECTION LINE

INDICATES APPROXIMATE GROUNDWATER ELEVATION

- INDICATES APPROXIMATE STRATUM CHANGE

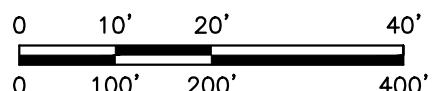
INDICATES BENTONITE

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.

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VERTICAL SCALE: 1" = 20'



HORIZONTAL SCALE: 1" = 200'

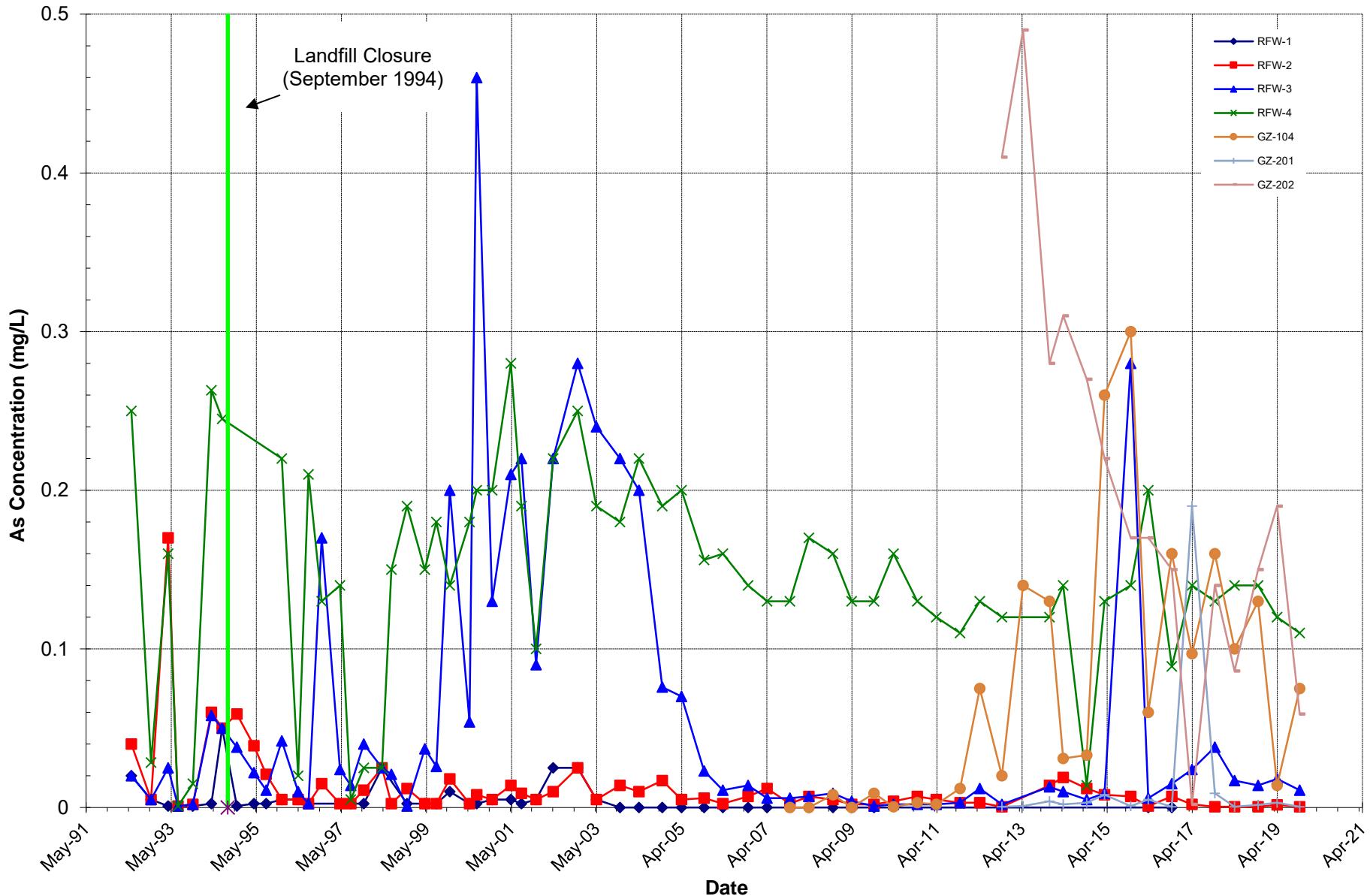
2019 ANNUAL SUMMARY REPORT
CROSS ROAD LANDFILL
GWP-198401081-E-005
EXETER, NEW HAMPSHIRE

HYDROGEOLOGIC CROSS SECTION

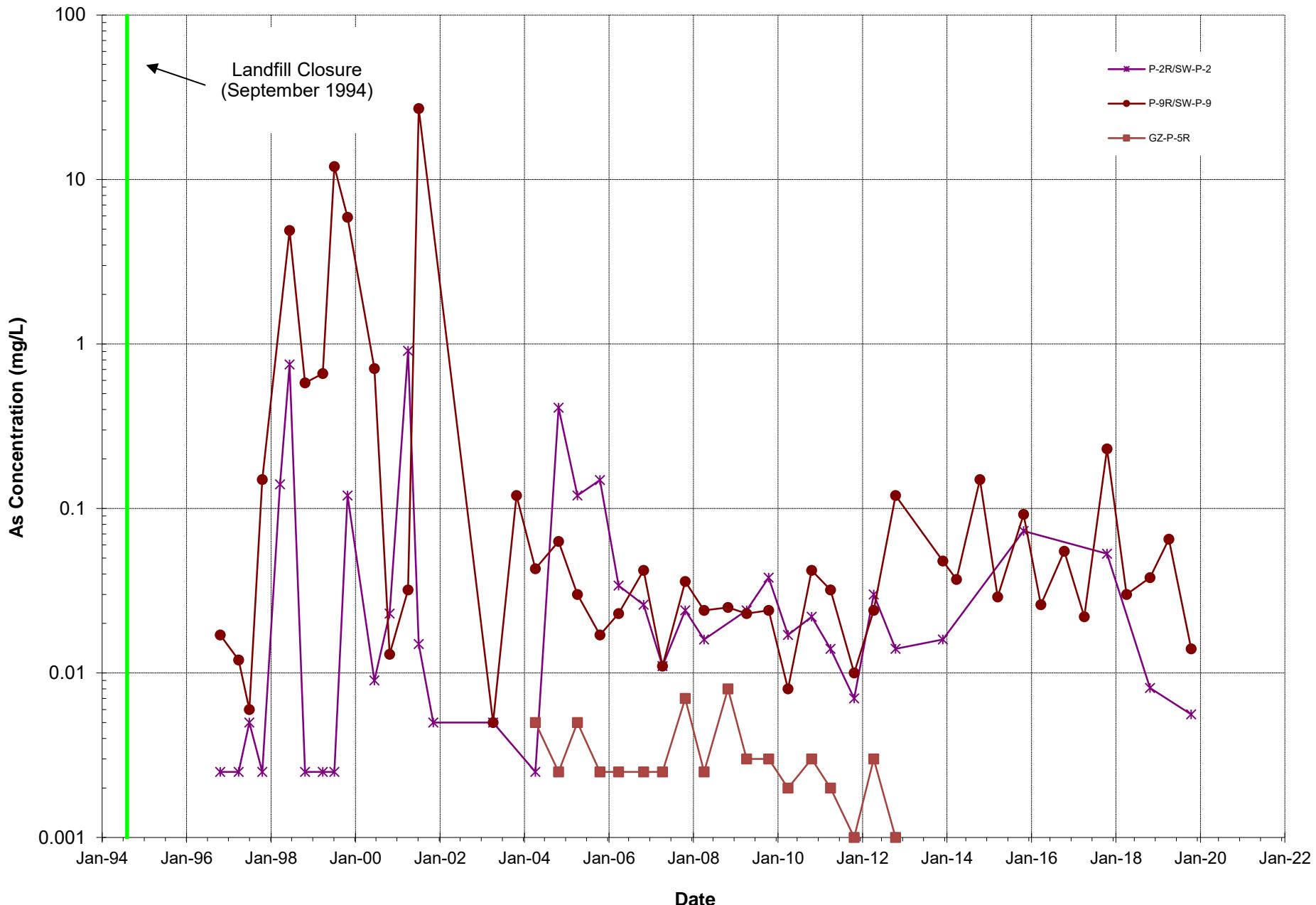


Plots

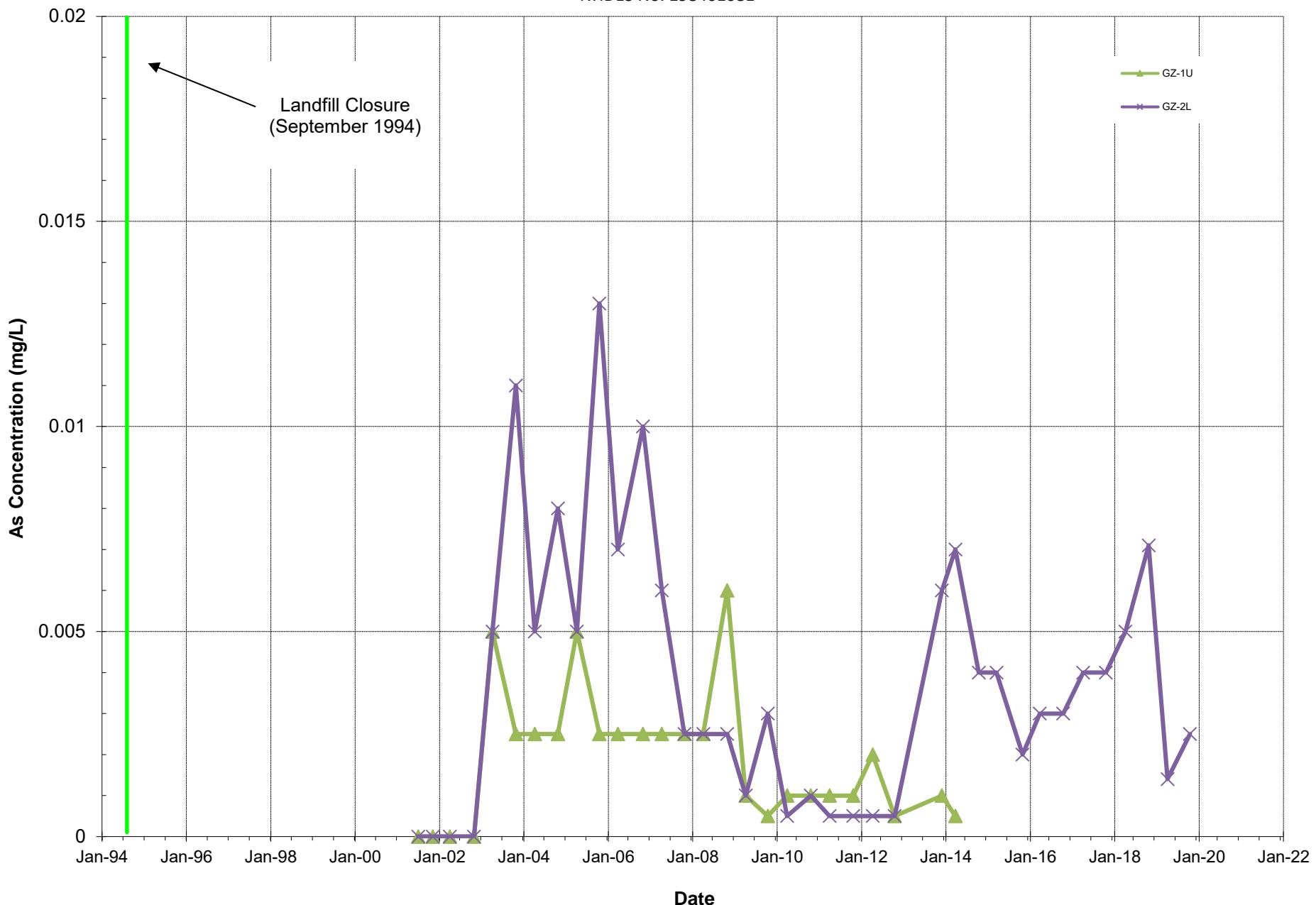
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Groundwater Sampling Locations
 Cross Road Landfill - Exeter, New Hampshire
 NHDES No. 198401081



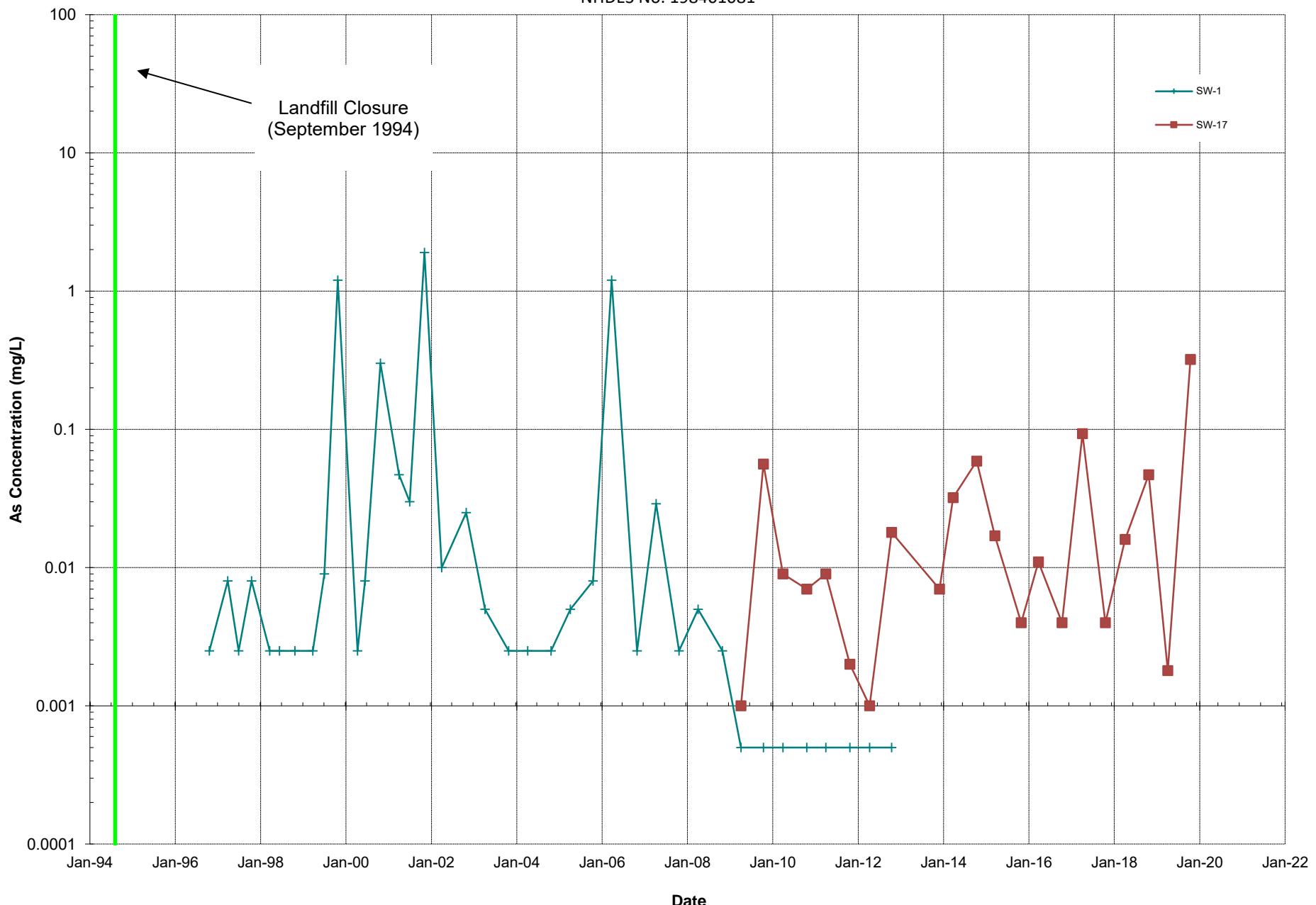
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SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
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 NHDES No. 198401081



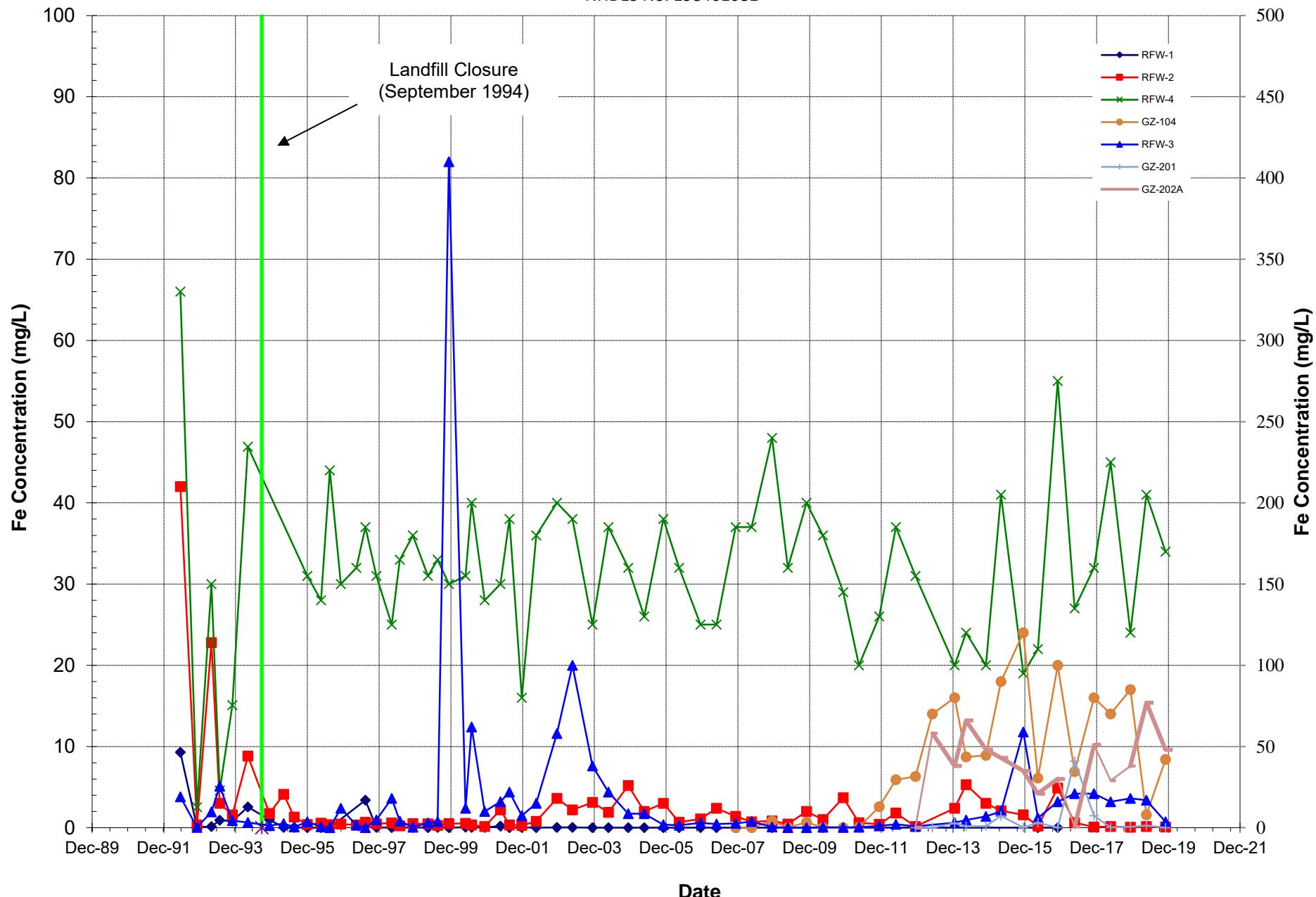
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NHDES No. 198401081



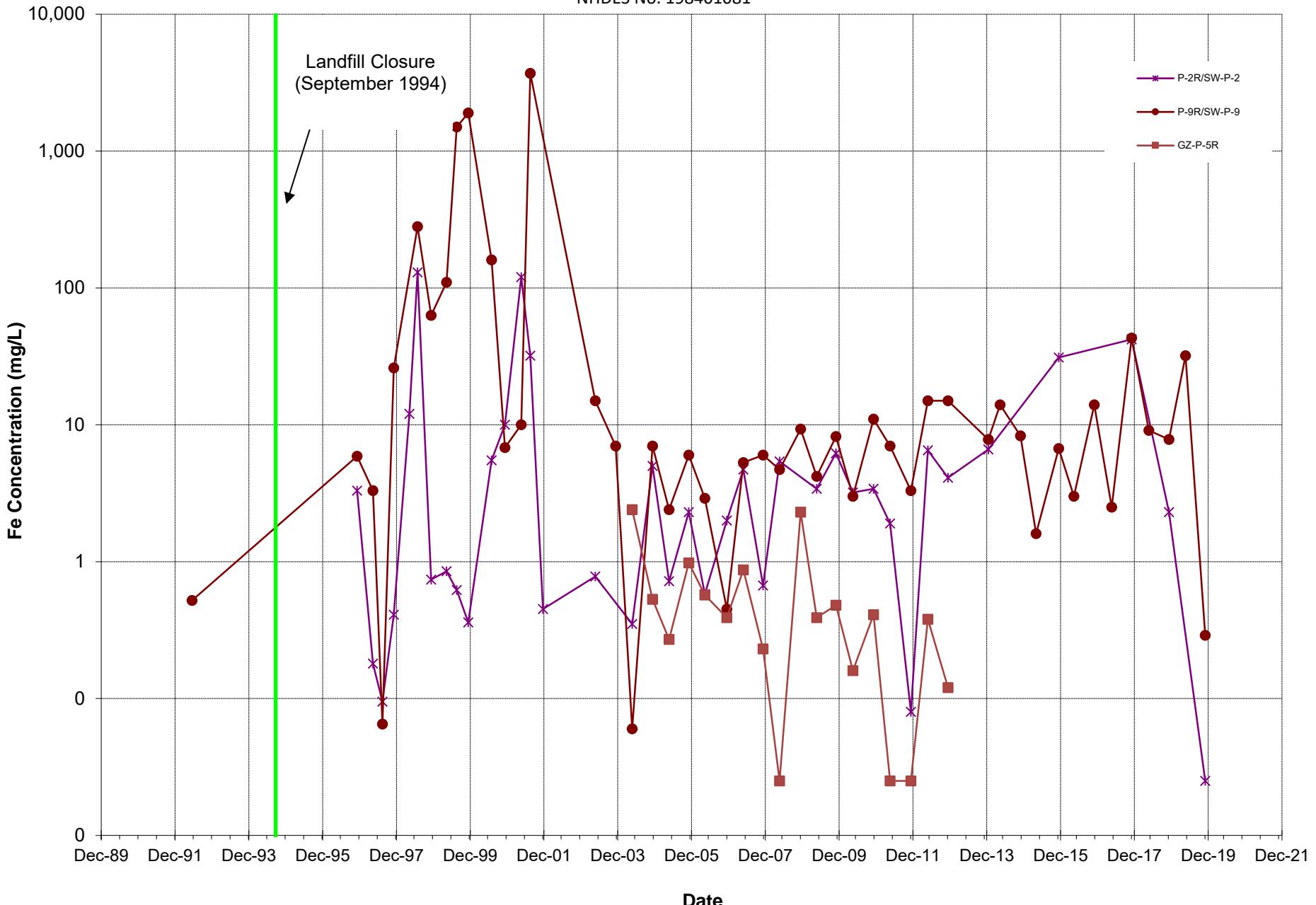
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Groundwater Sampling Locations
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 NHDES No. 198401081



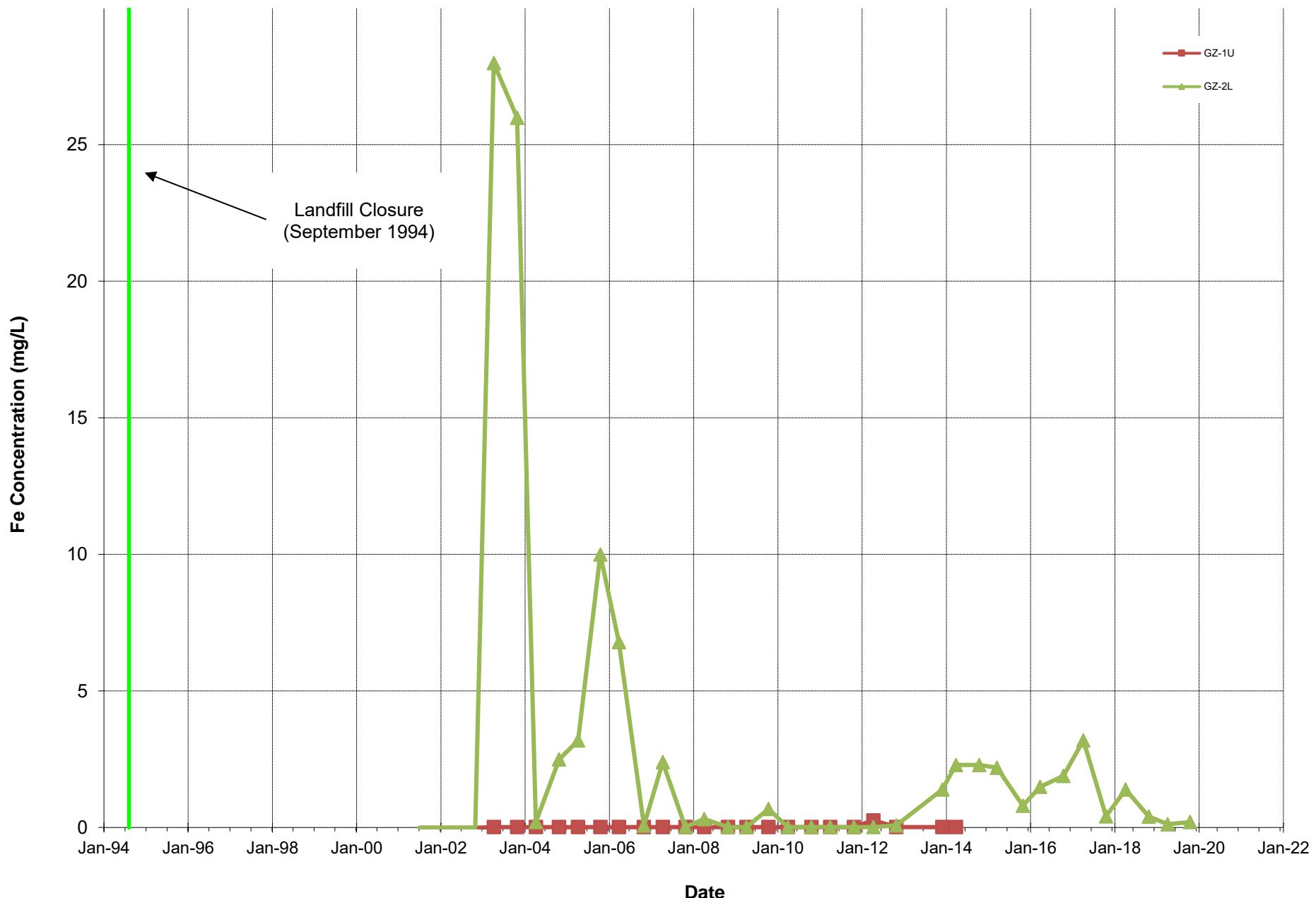
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Groundwater Sampling Locations
 Cross Road Landfill - Exeter, New Hampshire
 NHDES No. 198401081



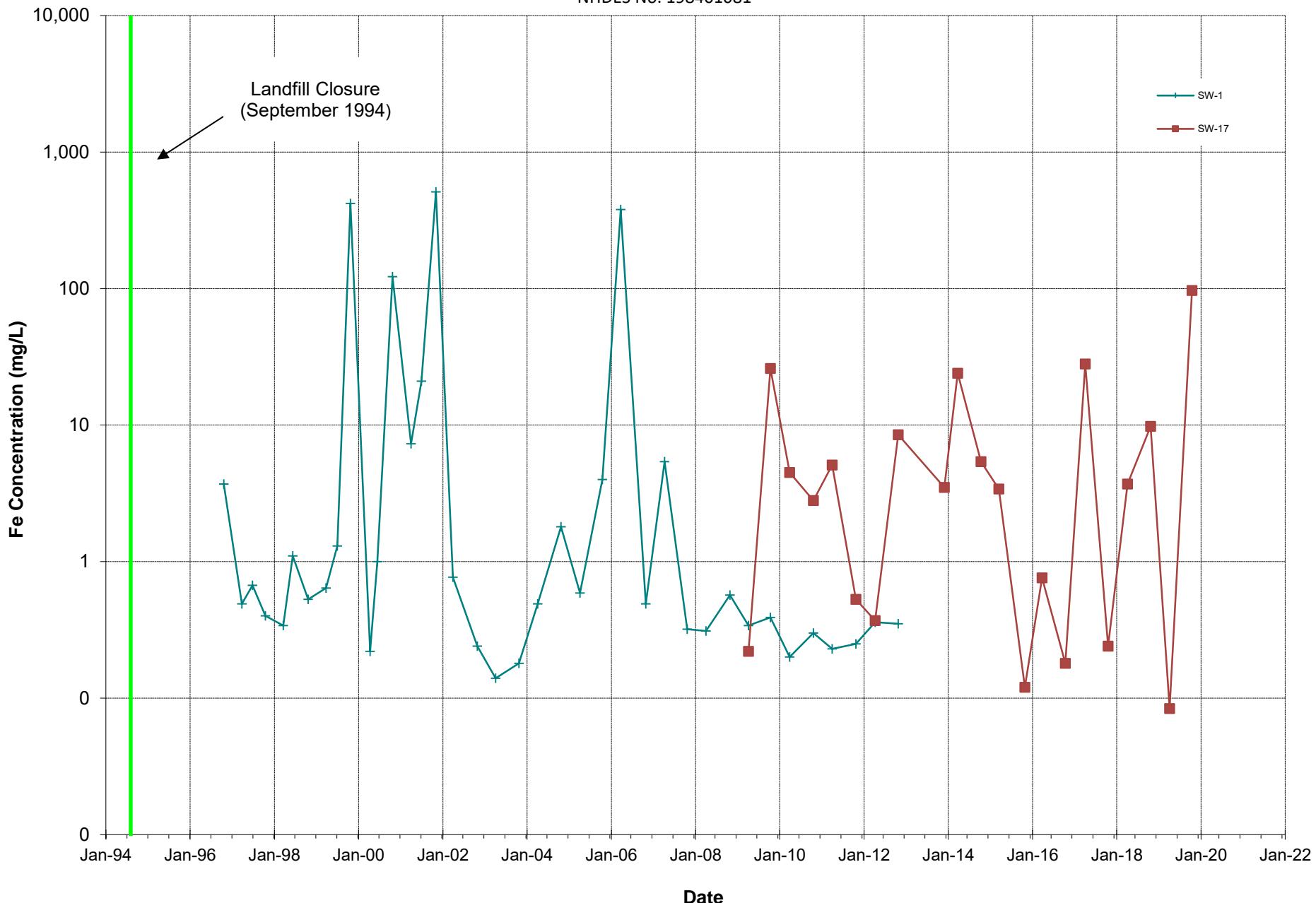
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 NHDES No. 198401081



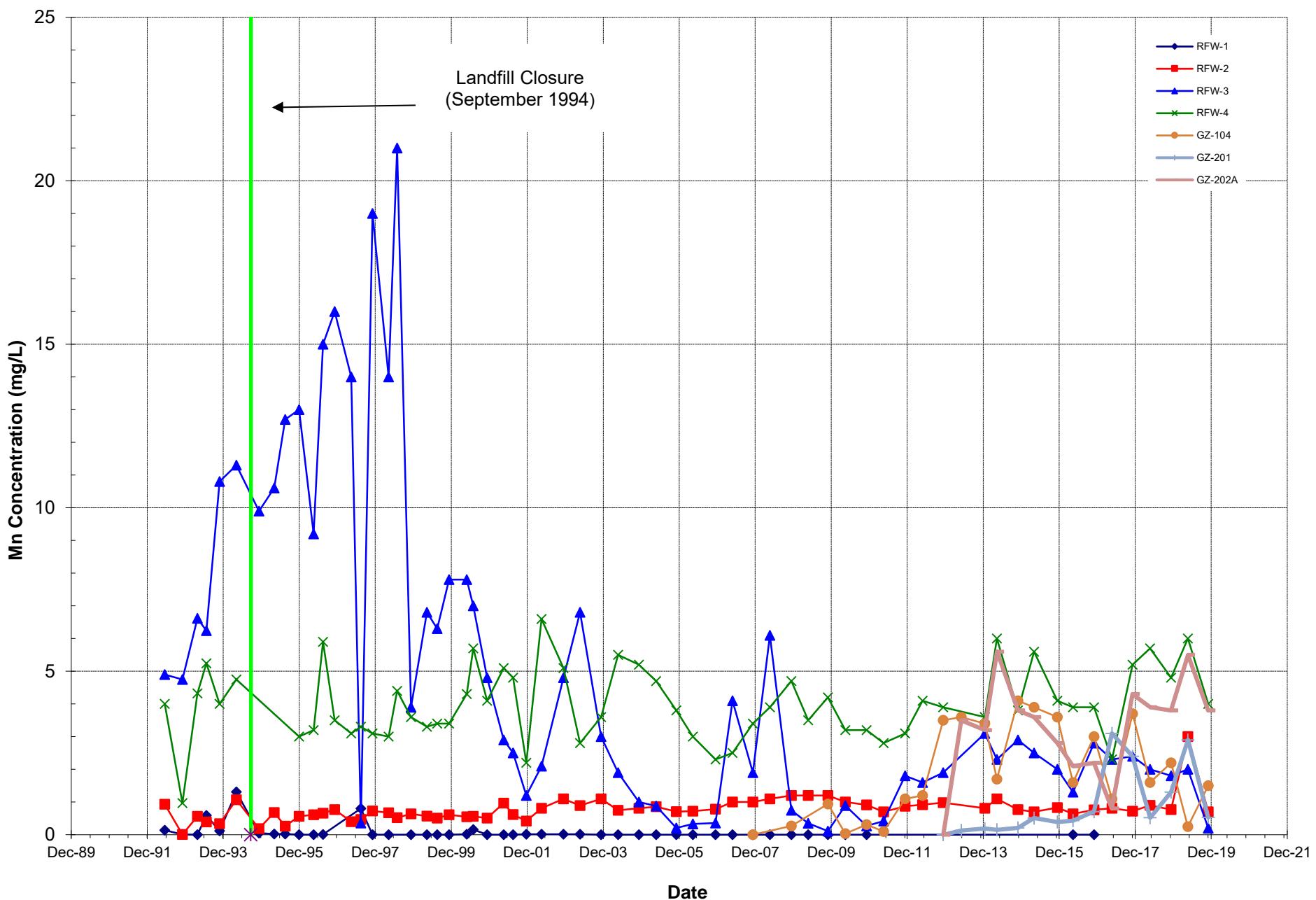
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Groundwater Sampling Locations
Cross Road Landfill - Exeter, New Hampshire
NHDES No. 198401081



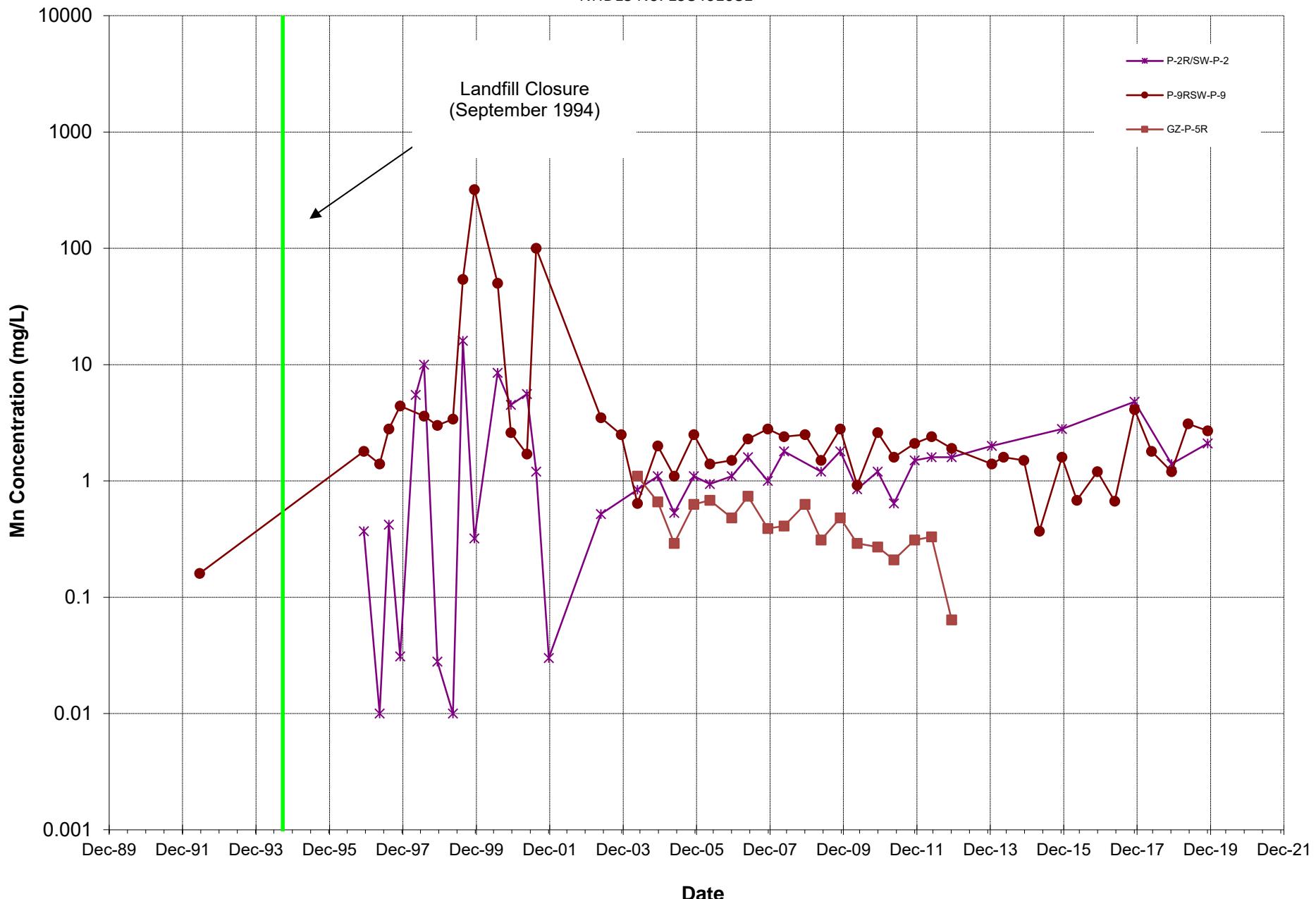
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Groundwater Sampling Locations
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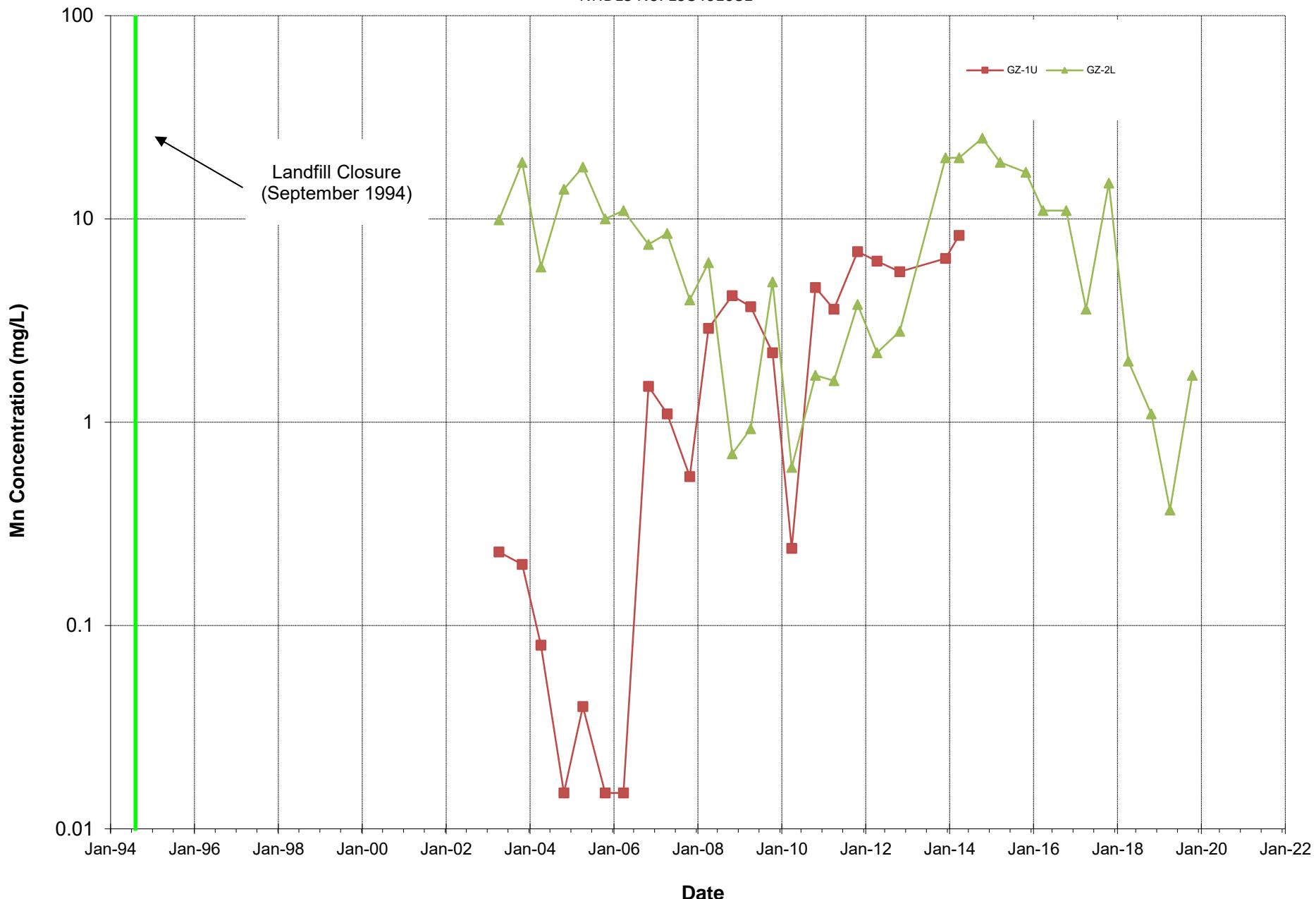
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Groundwater Sampling Locations
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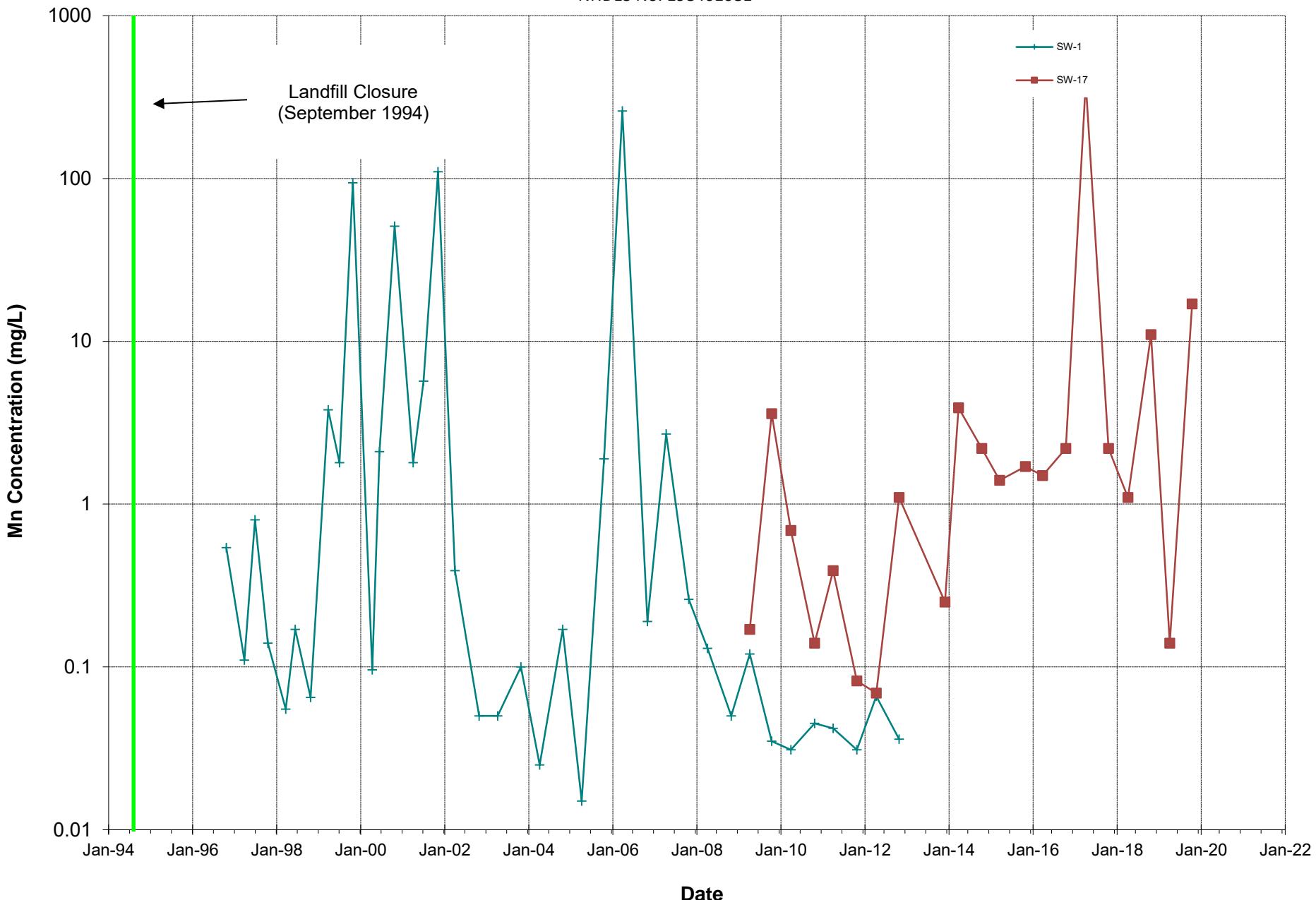
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Groundwater Sampling Locations
 Cross Road Landfill - Exeter, New Hampshire
 NHDES No. 198401081



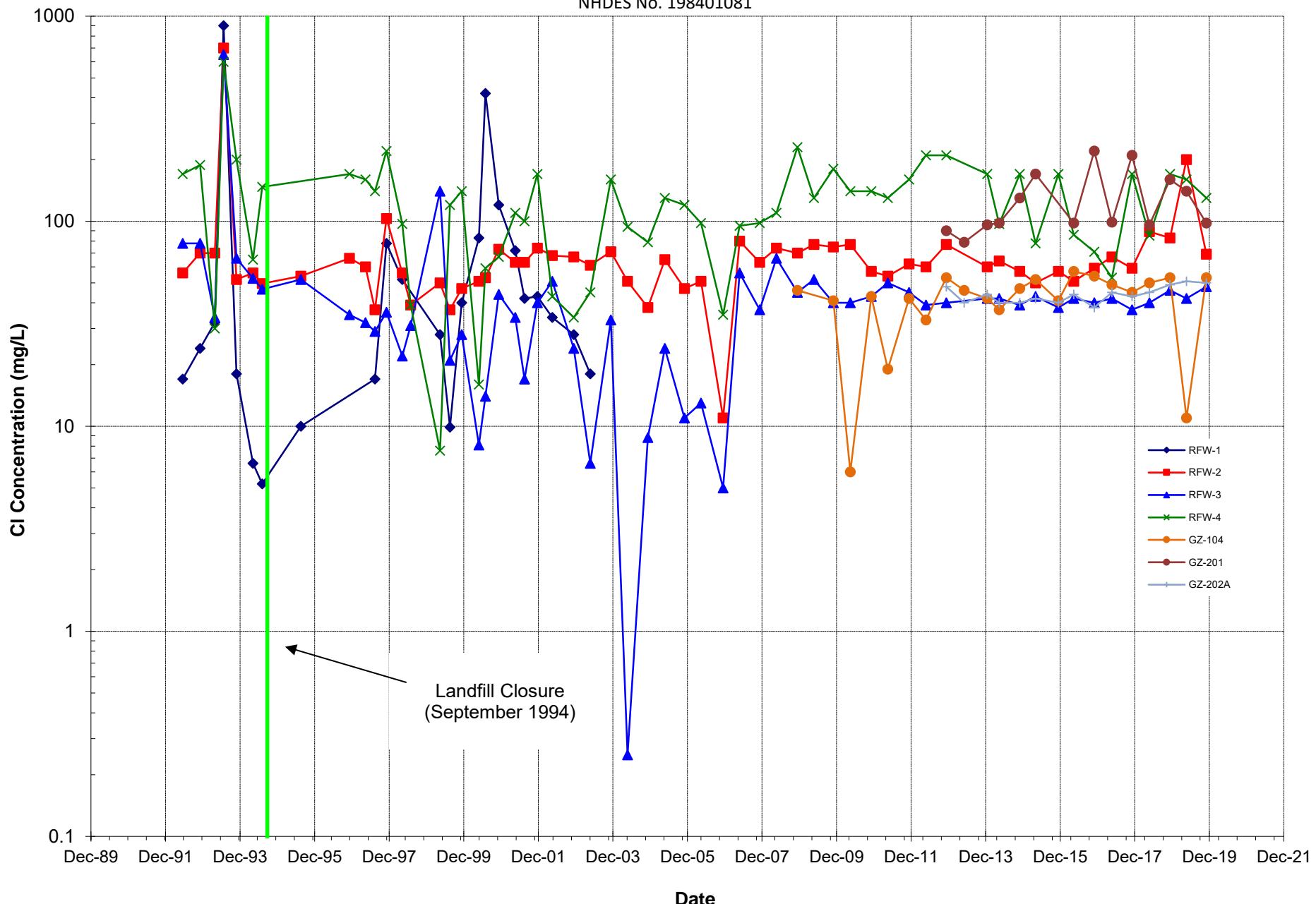
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Groundwater Sampling Locations
 Cross Road Landfill - Exeter, New Hampshire
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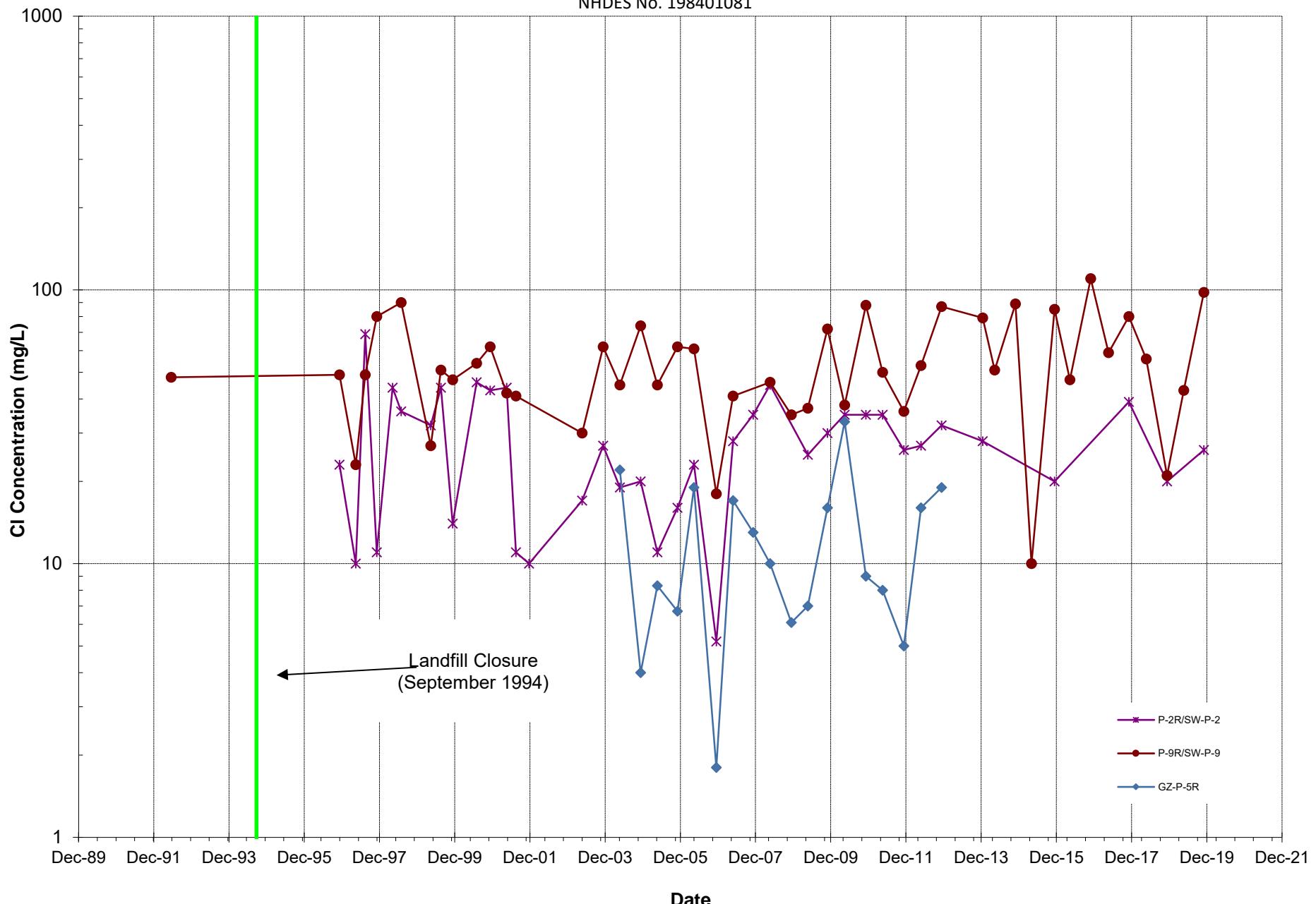
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Groundwater Sampling Locations
 Cross Road Landfill - Exeter, New Hampshire
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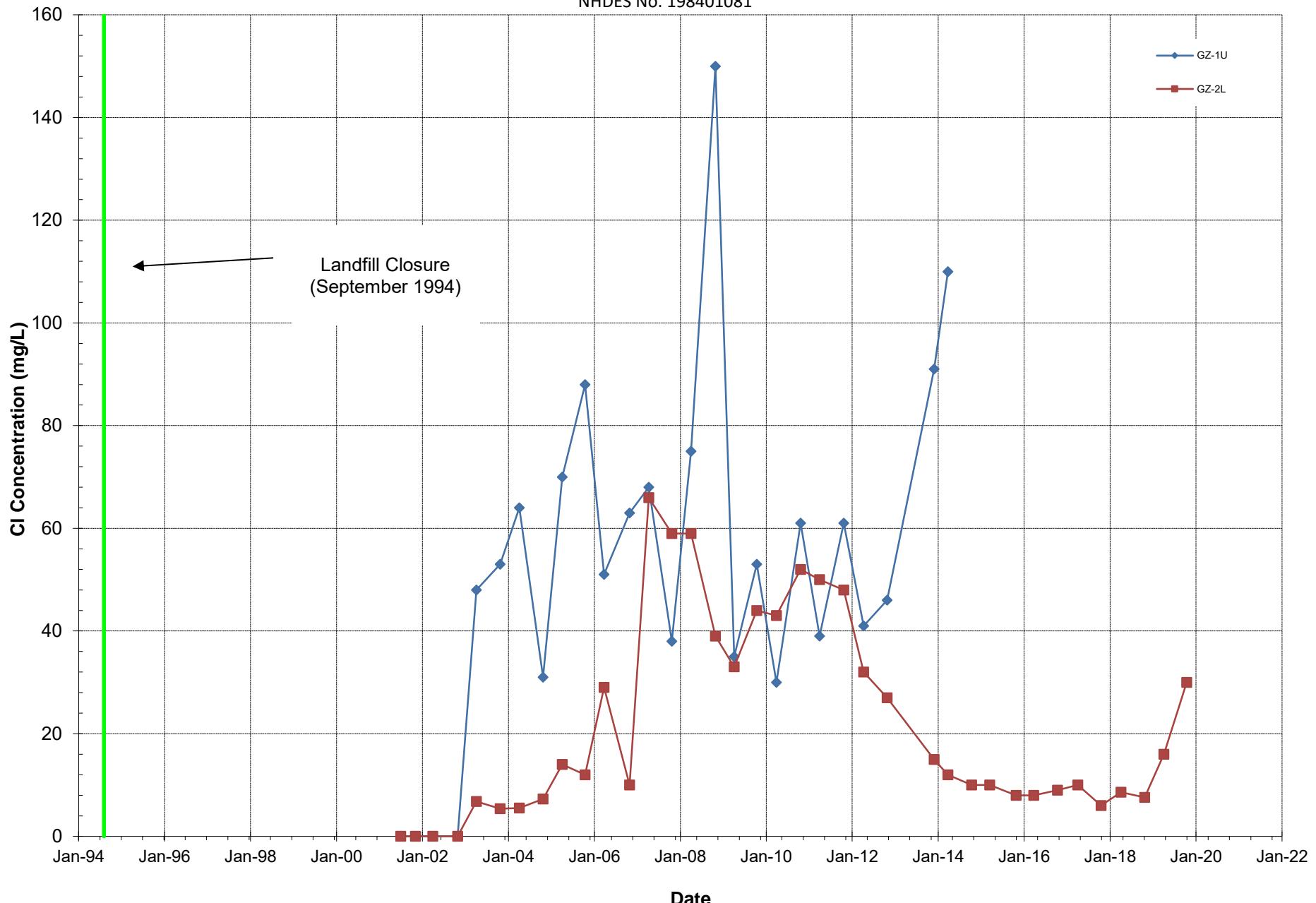
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SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
 Cross Road Landfill - Exeter, New Hampshire
 NHDES No. 198401081



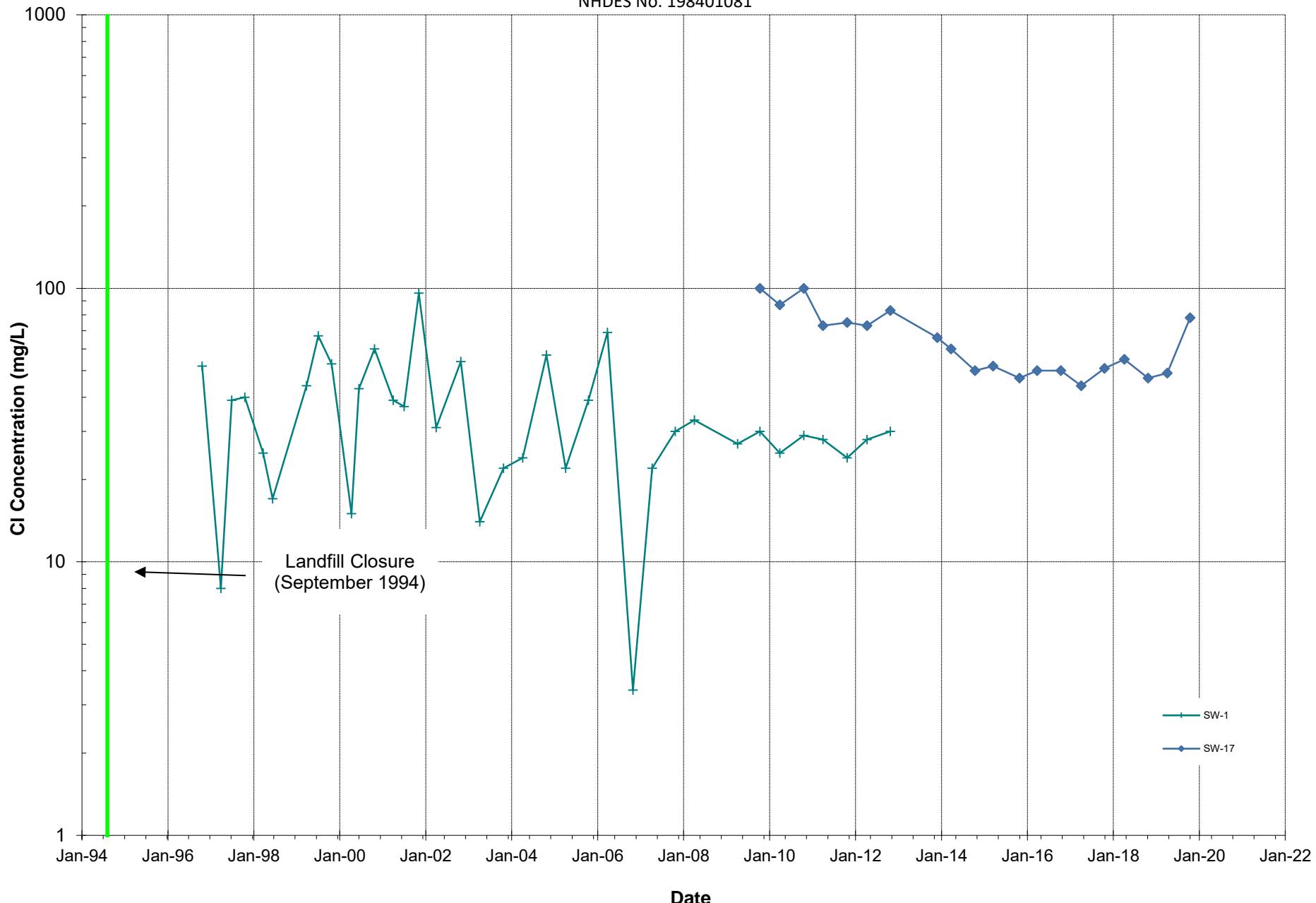
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Groundwater Sampling Locations
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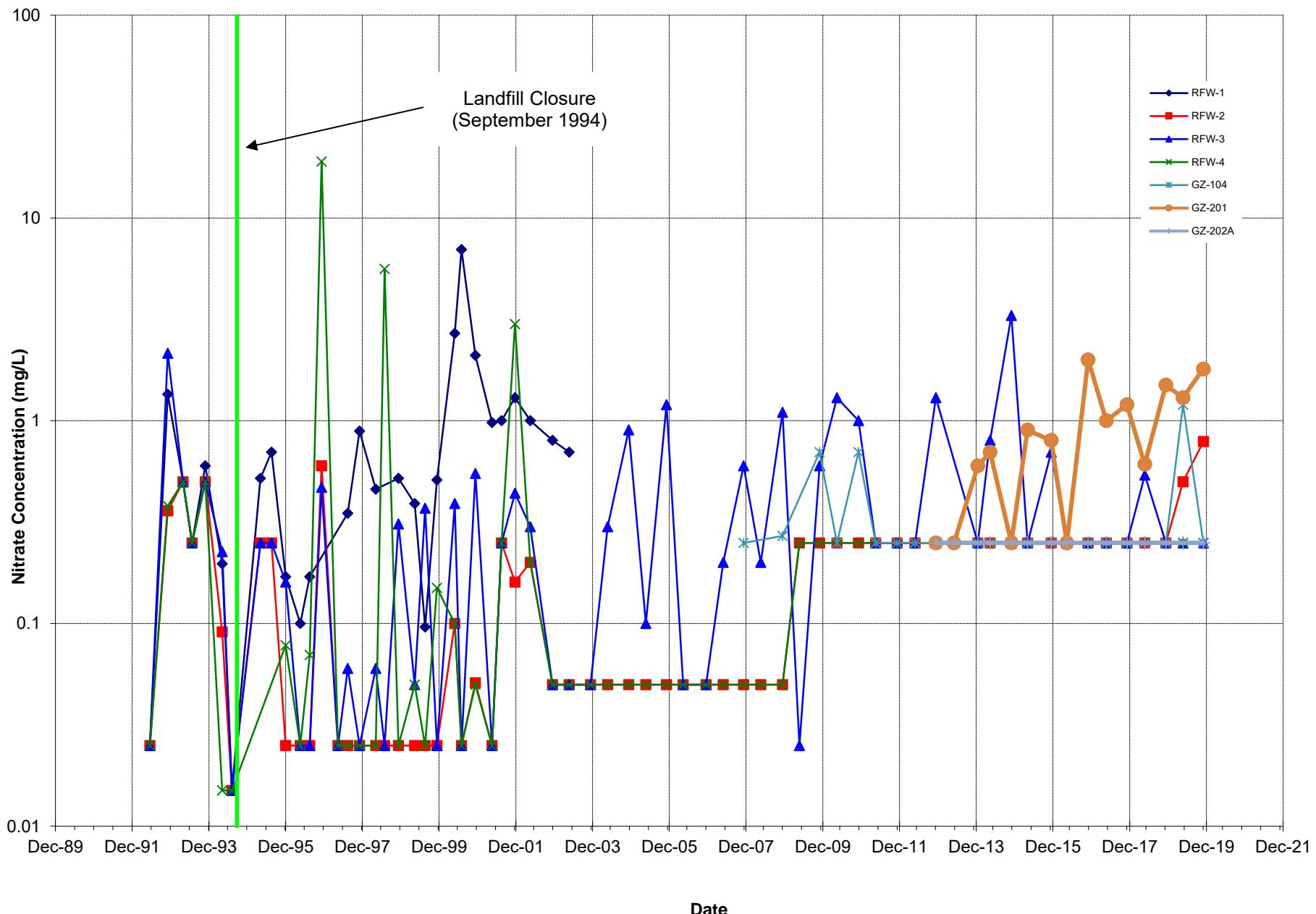
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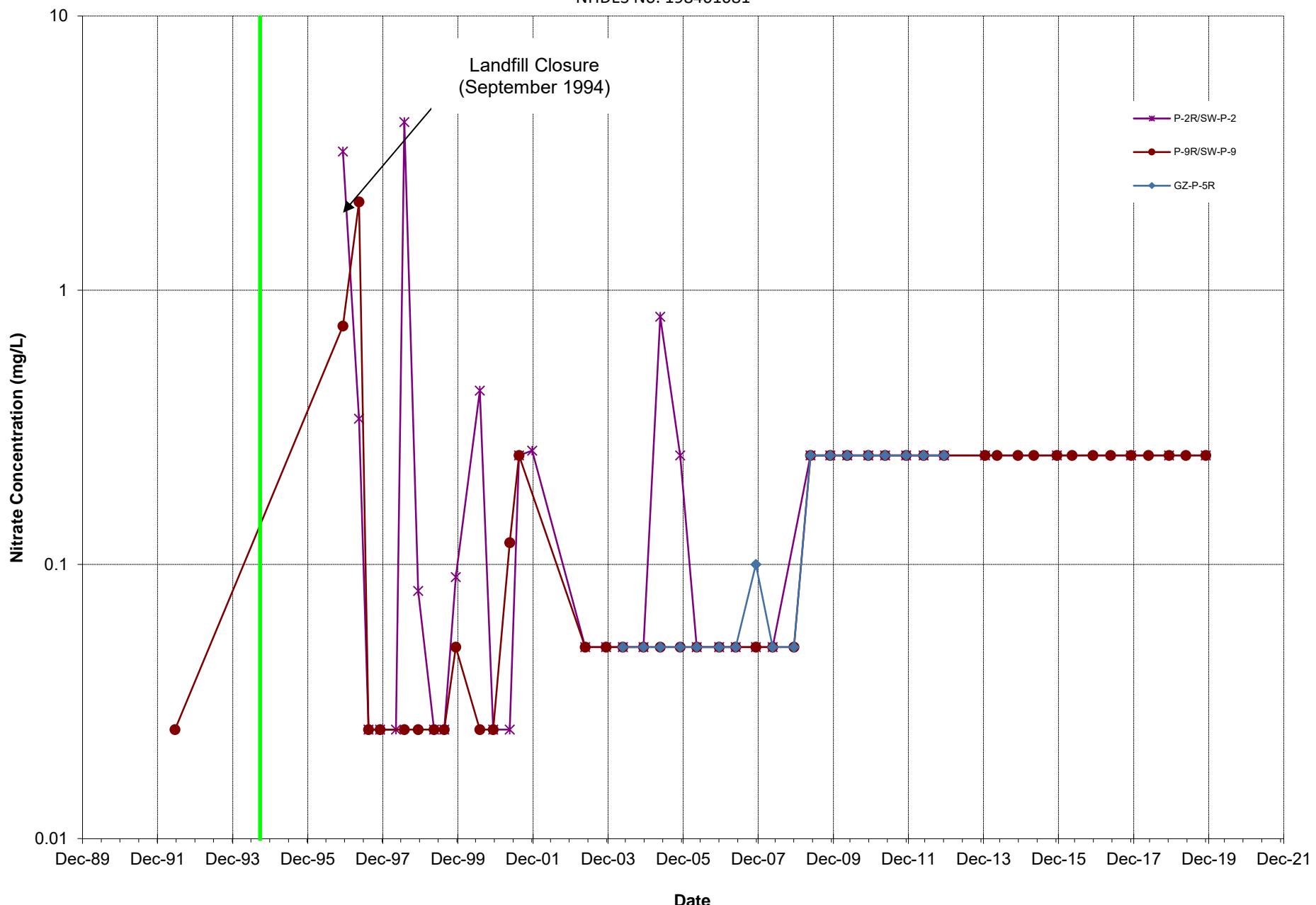
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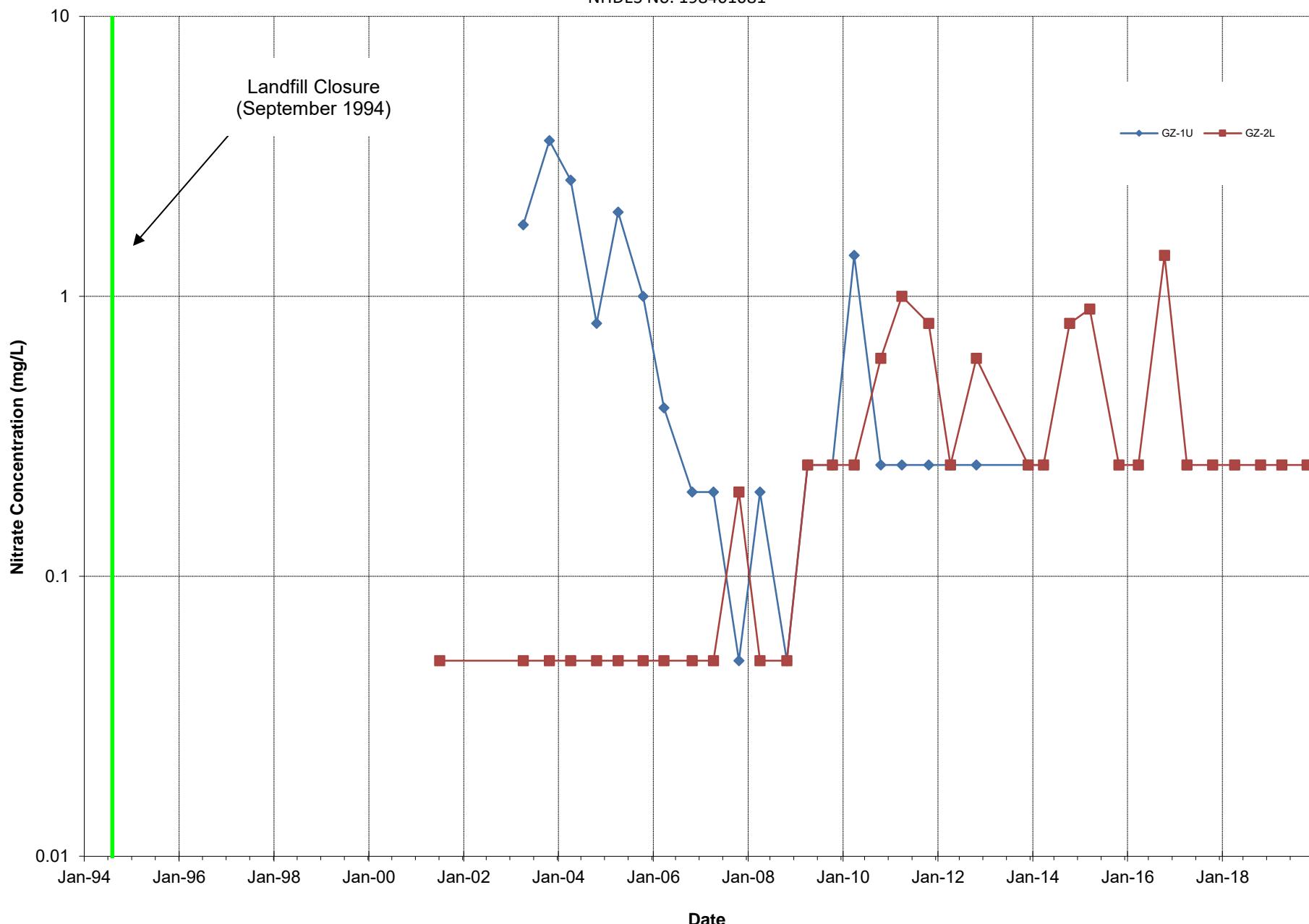
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SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
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 NHDES No. 198401081



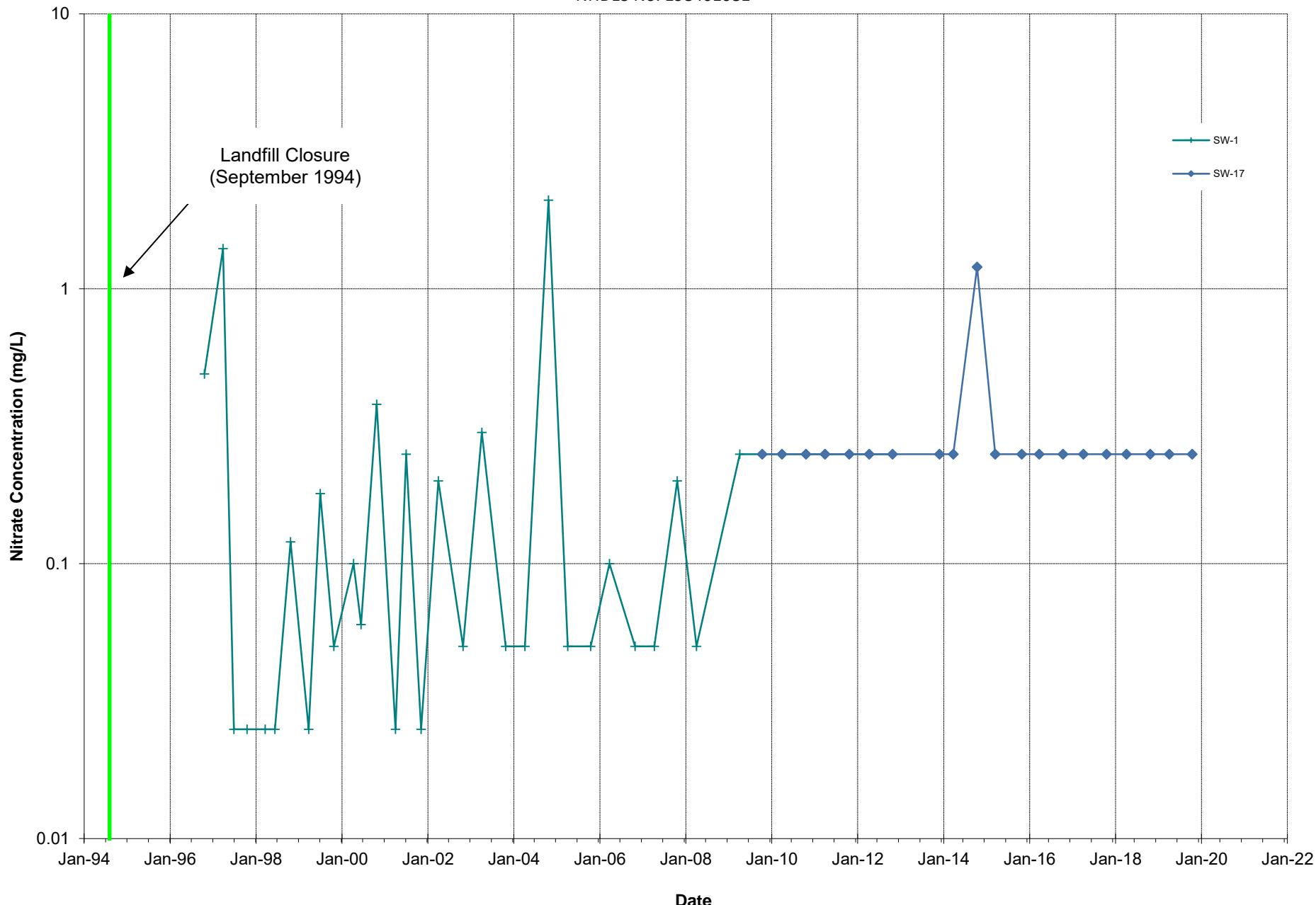
PLOT 5B
SUMMARY OF CONCENTRATION DATA
Groundwater Sampling Locations
 Cross Road Landfill - Exeter, New Hampshire
 NHDES No. 198401081



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 2019 Analytical Laboratory Data



CERTIFICATE OF ANALYSIS

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

RE: Exeter Landfill (04.0021270.30)
ESS Laboratory Work Order Number: 1906015

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 5:53 pm, Jun 12, 2019

Analytical Summary

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

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



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1906015

SAMPLE RECEIPT

The following samples were received on May 31, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1906015-01	Seep - Non-Filtered	Surface Water	6010C, 7010
1906015-02	DownGradient - Filtered	Surface Water	6010C, 7010
1906015-03	UpGradient - Non-Filtered	Surface Water	6010C, 7010
1906015-04	UpGradient - Filtered	Surface Water	6010C, 7010
1906015-05	Seep - Filtered	Surface Water	6010C, 7010
1906015-06	DownGradient - Non-Filtered	Surface Water	6010C, 7010



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1906015

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: 1906015

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

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

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



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

Client Sample ID: Seep - Non-Filtered

Date Sampled: 05/30/19 09:35

Percent Solids: N/A

ESS Laboratory Work Order: 1906015

ESS Laboratory Sample ID: 1906015-01

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	14.8 (2.5)		7010		5	KJK	06/04/19 20:26	100	10	CF90347
Iron	1150 (100)		6010C		10	KJK	06/11/19 21:51	100	10	CF90347
Manganese	1510 (20.0)		6010C		10	KJK	06/11/19 21:51	100	10	CF90347



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

Client Sample ID: DownGradient - Filtered

Date Sampled: 05/30/19 10:20

Percent Solids: N/A

ESS Laboratory Work Order: 1906015

ESS Laboratory Sample ID: 1906015-02

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	7010	1	KJK	06/04/19 17:58	10	10	10	CF90302
Iron	434 (100)	6010C	6010C	1	KJK	06/11/19 21:09	10	10	10	CF90302
Manganese	142 (20.0)	6010C	6010C	1	KJK	06/08/19 6:10	10	10	10	CF90302



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

Client Sample ID: UpGradient - Non-Filtered

Date Sampled: 05/30/19 10:00

Percent Solids: N/A

ESS Laboratory Work Order: 1906015

ESS Laboratory Sample ID: 1906015-03

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	1.2 (0.5)		7010		1	KJK	06/04/19 20:32	100	10	CF90347
Iron	772 (100)		6010C		10	KJK	06/11/19 21:56	100	10	CF90347
Manganese	152 (2.0)		6010C		1	KJK	06/08/19 7:20	100	10	CF90347



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

Client Sample ID: UpGradient - Filtered

Date Sampled: 05/30/19 10:00

Percent Solids: N/A

ESS Laboratory Work Order: 1906015

ESS Laboratory Sample ID: 1906015-04

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	7010		1	KJK	06/04/19 18:04	10	10	CF90302
Iron	315 (100)		6010C		1	KJK	06/11/19 21:25	10	10	CF90302
Manganese	130 (20.0)		6010C		1	KJK	06/08/19 6:14	10	10	CF90302



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

Client Sample ID: Seep - Filtered

Date Sampled: 05/30/19 09:35

Percent Solids: N/A

ESS Laboratory Work Order: 1906015

ESS Laboratory Sample ID: 1906015-05

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	11.0 (5.0)		7010		1	KJK	06/04/19 18:21	10	10	CF90302
Iron	876 (100)		6010C		1	KJK	06/11/19 21:30	10	10	CF90302
Manganese	1460 (20.0)		6010C		1	KJK	06/08/19 6:18	10	10	CF90302



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

Client Sample ID: DownGradient - Non-Filtered

Date Sampled: 05/30/19 10:20

Percent Solids: N/A

ESS Laboratory Work Order: 1906015

ESS Laboratory Sample ID: 1906015-06

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	1.3 (0.5)		7010		1	KJK	06/04/19 20:38	100	10	CF90347
Iron	672 (100)		6010C		10	KJK	06/11/19 22:36	100	10	CF90347
Manganese	145 (2.0)		6010C		1	KJK	06/08/19 7:25	100	10	CF90347



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1906015

Quality Control Data

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

Batch CF90302 - 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	102	80-120

LCS

Arsenic	24.6	ug/L	25.00	99	80-120
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Total Metals

Batch CF90347 - 3005A/200.7

Blank

Arsenic	ND	0.5	ug/L
Iron	ND	20.0	ug/L
Manganese	ND	2.0	ug/L

LCS

Arsenic	49.5	12.5	ug/L	50.00	99	80-120
Iron	267	20.0	ug/L	250.0	107	80-120
Manganese	46.1	2.0	ug/L	50.00	92	80-120

LCS Dup

Arsenic	50.8	12.5	ug/L	50.00	102	80-120	2	20
Iron	270	20.0	ug/L	250.0	108	80-120	1	20
Manganese	48.3	2.0	ug/L	50.00	97	80-120	5	20



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Exeter Landfill

ESS Laboratory Work Order: 1906015

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
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 1906015

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: <u>GZA - Bedford, NH - GZA/DS</u>	ESS Project ID: <u>1906015</u>						
Shipped/Delivered Via: <u>ESS Courier</u>	Date Received: <u>5/31/2019</u>						
	Project Due Date: <u>6/7/2019</u>						
	Days for Project: <u>5 Day</u>						
1. Air bill manifest present? Air No.: <u>787571387052</u>	<input type="checkbox"/> Yes	6. Does COC match bottles?	<input type="checkbox"/> Yes				
2. Were custody seals present?	<input type="checkbox"/> No	7. Is COC complete and correct?	<input type="checkbox"/> Yes				
3. Is radiation count <100 CPM?	<input type="checkbox"/> Yes	8. Were samples received intact?	<input type="checkbox"/> Yes				
4. Is a Cooler Present? Temp: <u>5.9</u> Iced with: <u>Ice</u>	<input type="checkbox"/> Yes	9. Were labs informed about <u>short holds & rushes</u> ?	<input type="checkbox"/> Yes / No <u>NA</u>				
5. Was COC signed and dated by client?	<input type="checkbox"/> Yes	10. Were any analyses received outside of hold time?	<input type="checkbox"/> Yes <u>No</u>				
 <hr/>							
11. Any Subcontracting needed? ESS Sample IDs: Analysis: _____ TAT: _____	<input type="checkbox"/> Yes <u>NO</u>	12. Were VOAs received? a. Air bubbles in aqueous VOAs? b. Does methanol cover soil completely?	<input type="checkbox"/> Yes / <u>NO</u> <input type="checkbox"/> Yes / No <input type="checkbox"/> Yes / No / NA				
13. Are the samples properly preserved? a. If metals preserved upon receipt: b. Low Level VOA vials frozen:	<input checked="" type="checkbox"/> Yes / <u>No</u> <input type="checkbox"/> Date: _____ <input type="checkbox"/> Date: _____	Time: _____ By: _____ Time: _____ By: _____					
Sample Receiving Notes: <hr/> <hr/> <hr/>							
14. Was there a need to contact Project Manager? a. Was there a need to contact the client?	<input type="checkbox"/> Yes / <u>NO</u> <input type="checkbox"/> Yes / No	Who was contacted? _____ Date: _____ Time: _____ By: _____					
<hr/> <hr/> <hr/>							
Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	351308	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
02	351307	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
03	351306	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
04	351305	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
05	351304	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
06	351303	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	

2nd Review

Were all containers scanned into storage/lab? Initials ul

Are barcode labels on correct containers? YES / NO

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? YES / NO / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [Signature] Date & Time: 5/31/19 1648

Reviewed By: [Signature] Date & Time: 5/31/19 17:23

Delivered By: [Signature] Date & Time: 5/31/19 17:23

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 #

1906015

		Turn Time	5	Days					
		Regulatory State			Reporting Limits				
		Is this project for any of the following?							
		<input type="radio"/> CT RCP	<input type="radio"/> MA MCP	<input type="radio"/> RGP	Electronic Deliverables	<input type="checkbox"/> Data Checker	<input type="checkbox"/> Excel	<input type="checkbox"/> Other (Please Specify →)	
Company Name GZA NH		Project # 040021270.30	Project Name 2019 LANDFILL SERVICES			Analysis <i>NOT METALS DISSESSED LIQUID</i>			
Contact Person Dawn Tousignant		Address 5 COMMERCE PARK N, SUITE 201							
City Bedford		State NH	Zip Code 03110	PO #					
Telephone Number 603-321-0878		FAX Number		Email Address dawn.tousignant@gza.com					
ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID				
1	5/30/19	0935	GRAB	SW	SEEP - NON FILTERED	X			
2	5/30/19	1020	GRAB	SW	DOWNGRADIENT - FILTERED	X			
3	5/30/19	1000	GRAB	SW	UPGRADIENT - NON FILTERED	X			
4	5/30/19	1000	GRAB	SW	UPGRADIENT - FILTERED	X			
5	5/30/19	0935	GRAB	SW	SEEP - FILTERED	X			
6	5/30/19	1020	GRAB	SW	DOWNGRADIENT - NON FILTERED	X			
Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial									
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*									
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAc, NaOH 9-NH4Cl 10-DI H2O 11-Other*									
Number of Containers per Sample: 3 3									
Laboratory Use Only				Sampled by: RYAN CLASSE					
Cooler Present:	yes	<input type="radio"/> Drop Off	<input type="radio"/> Pickup	Comments: Please specify "Other" preservative and containers types in this space					
Seals Intact:				Project Name: Exeter Landfill T. & Diss Metals: As, Fe, Mn					
Cooler Temperature:	°C 18			jjs 6/5/19					
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)			Relinquished By: (Signature, Date & Time)			Received By: (Signature, Date & Time)		
<i>[Signature]</i> 5/30/19 1130	<i>[Signature]</i> 5/30/19 1408								
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)			Relinquished By: (Signature, Date & Time)			Received By: (Signature, Date & Time)		
	Fedex			Fedex			<i>[Signature]</i> 5/30/19 1408		



Eastern Analytical, Inc.

professional laboratory and drilling services

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



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 202905

Client Identification: Cross Road Landfill | Nov 2019

Date Received: 11/5/2019

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.easternanalytical.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), Vermont (VT1012) and New York (12072).

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 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
Lorraine Olashaw, Lab Director

11.15.19
Date

24

of pages (excluding cover letter)



SAMPLE CONDITIONS PAGE

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Temperature upon receipt (°C): 1.9

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)
202905.01	RFW-2	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.02	RFW-3	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.03	RFW-4	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.04	GMW-11RR	11/5/19	11/5/19	aqueous		Adheres to Sample Acceptance Policy
202905.05	GZ-1L	11/5/19	11/5/19	aqueous		Adheres to Sample Acceptance Policy
202905.06	GZ-2L	11/5/19	11/5/19	aqueous		Adheres to Sample Acceptance Policy
202905.07	GZ-3L	11/5/19	11/5/19	aqueous		Adheres to Sample Acceptance Policy
202905.08	GZ-104	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.09	GZ-201	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.1	GZ-202A	11/5/19	11/5/19	aqueous		Adheres to Sample Acceptance Policy
202905.11	P-9R	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.12	SW-17	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.13	GZ-102	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.14	GZ-106	11/5/19	11/5/19	aqueous		Adheres to Sample Acceptance Policy
202905.15	P-2R	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.16	SW-13	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.17	SW-15	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.18	SW-16	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.19	Trip Blank-8260	11/5/19	11/4/19	aqueous		Adheres to Sample Acceptance Policy
202905.2	Trip Blank - 1,4 diox	11/5/19	11/4/19	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, 21st, 22nd & 23rd Edition or noted Revision year.
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 4th edition, 1992



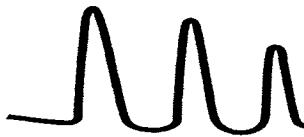
LABORATORY REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	GZ-102	GZ-106	P-2R	SW-13	SW-15	SW-16	Trip Blank -8260
Lab Sample ID:	202905.13	202905.14	202905.15	202905.16	202905.17	202905.18	202905.19
Matrix:	aqueous						
Date Sampled:	11/4/19	11/5/19	11/4/19	11/4/19	11/4/19	11/4/19	11/4/19
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19
Units:	ug/L						
Date of Analysis:	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19
Analyst:	VG						
Method:	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



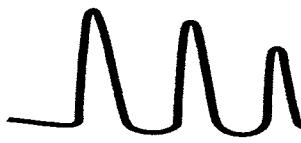
LABORATORY REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	GZ-102	GZ-106	P-2R	SW-13	SW-15	SW-16	Trip Blank -8260
Lab Sample ID:	202905.13	202905.14	202905.15	202905.16	202905.17	202905.18	202905.19
Matrix:	aqueous						
Date Sampled:	11/4/19	11/5/19	11/4/19	11/4/19	11/4/19	11/4/19	11/4/19
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19
Units:	ug/L						
Date of Analysis:	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19
Analyst:	VG						
Method:	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)	94 %R	92 %R	94 %R				
1,2-Dichlorobenzene-d4 (surr)	97 %R	100 %R	98 %R	97 %R	100 %R	100 %R	100 %R
Toluene-d8 (surr)	100 %R	99 %R	100 %R	101 %R	100 %R	100 %R	101 %R
1,2-Dichloroethane-d4 (surr)	102 %R	104 %R	102 %R	106 %R	107 %R	104 %R	105 %R



QC REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 5	19 (97 %R)	18 (91 %R) (6 RPD)	11/7/2019	ug/L	40 - 160	20	8260C
Chloromethane	< 2	18 (90 %R)	17 (86 %R) (5 RPD)	11/7/2019	ug/L	40 - 160	20	8260C
Vinyl chloride	< 2	19 (96 %R)	18 (91 %R) (6 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Bromomethane	< 2	13 (66 %R)	14 (69 %R) (4 RPD)	11/7/2019	ug/L	40 - 160	20	8260C
Chloroethane	< 5	23 (117 %R)	21 (106 %R) (10 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Trichlorofluoromethane	< 5	26 (129 %R)	24 (121 %R) (6 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Diethyl Ether	< 5	24 (118 %R)	23 (117 %R) (1 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Acetone	< 10	17 (86 %R)	18 (90 %R) (5 RPD)	11/7/2019	ug/L	40 - 160	20	8260C
1,1-Dichloroethene	< 1	22 (112 %R)	21 (107 %R) (5 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
tert-Butyl Alcohol (TBA)	< 30	89 (89 %R)	88 (88 %R) (1 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Methylene chloride	< 5	23 (113 %R)	22 (111 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Carbon disulfide	< 2	22 (110 %R)	21 (105 %R) (5 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Methyl-t-butyl ether(MTBE)	< 1	22 (110 %R)	22 (110 %R) (1 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Ethyl-t-butyl ether(ETBE)	< 5	20 (100 %R)	20 (100 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Isopropyl ether(DIPE)	< 5	21 (104 %R)	21 (104 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
tert-amyl methyl ether(TAME)	< 5	19 (96 %R)	19 (96 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
trans-1,2-Dichloroethene	< 1	22 (110 %R)	22 (108 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,1-Dichloroethane	< 1	20 (101 %R)	20 (99 %R) (1 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
2,2-Dichloropropane	< 1	18 (88 %R)	17 (85 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
cis-1,2-Dichloroethene	< 1	21 (103 %R)	20 (100 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
2-Butanone(MEK)	< 10	19 (93 %R)	19 (96 %R) (3 RPD)	11/7/2019	ug/L	40 - 160	20	8260C
Bromochloromethane	< 1	22 (109 %R)	21 (106 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Tetrahydrofuran(THF)	< 10	20 (102 %R)	21 (105 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Chloroform	< 1	21 (107 %R)	21 (104 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,1,1-Trichloroethane	< 1	24 (122 %R)	23 (117 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Carbon tetrachloride	< 1	25 (127 %R)	25 (123 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,1-Dichloropropene	< 1	22 (108 %R)	21 (104 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Benzene	< 1	22 (110 %R)	21 (107 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2-Dichloroethane	< 1	21 (103 %R)	21 (103 %R) (1 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Trichloroethene	< 1	22 (111 %R)	21 (107 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2-Dichloropropane	< 1	22 (108 %R)	21 (105 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Dibromomethane	< 1	21 (107 %R)	21 (105 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Bromodichloromethane	< 0.5	24 (121 %R)	24 (119 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,4-Dioxane	< 50	< 50 (116 %R)	< 50 (108 %R) (7 RPD)	11/7/2019	ug/L	40 - 160	20	8260C
4-Methyl-2-pentanone(MIBK)	< 10	21 (106 %R)	21 (105 %R) (0 RPD)	11/7/2019	ug/L	40 - 160	20	8260C
cis-1,3-Dichloropropene	< 0.5	23 (117 %R)	23 (115 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Toluene	< 1	22 (110 %R)	21 (107 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
trans-1,3-Dichloropropene	< 0.5	19 (97 %R)	19 (96 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,1,2-Trichloroethane	< 1	21 (107 %R)	21 (107 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
2-Hexanone	< 10	19 (96 %R)	20 (99 %R) (3 RPD)	11/7/2019	ug/L	40 - 160	20	8260C
Tetrachloroethene	< 1	21 (103 %R)	20 (100 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,3-Dichloropropane	< 1	21 (104 %R)	21 (106 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Dibromochloromethane	< 1	21 (107 %R)	21 (107 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2-Dibromoethane(EDB)	< 2	22 (111 %R)	23 (113 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Chlorobenzene	< 1	21 (105 %R)	21 (106 %R) (1 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,1,1,2-Tetrachloroethane	< 1	24 (120 %R)	24 (120 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C



QC REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Ethylbenzene	< 1	22 (111 %R)	22 (108 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
mp-Xylene	< 1	45 (112 %R)	43 (108 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
o-Xylene	< 1	22 (108 %R)	21 (107 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Styrene	< 1	22 (112 %R)	22 (110 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Bromoform	< 2	24 (122 %R)	25 (123 %R) (1 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
IsoPropylbenzene	< 1	23 (116 %R)	23 (114 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Bromobenzene	< 1	22 (109 %R)	21 (106 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,1,2,2-Tetrachloroethane	< 1	22 (108 %R)	21 (106 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2,3-Trichloropropane	< 0.5	21 (103 %R)	21 (105 %R) (1 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
n-Propylbenzene	< 1	23 (113 %R)	21 (107 %R) (5 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
2-Chlorotoluene	< 1	20 (102 %R)	20 (100 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
4-Chlorotoluene	< 1	21 (106 %R)	20 (102 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,3,5-Trimethylbenzene	< 1	23 (113 %R)	22 (109 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
tert-Butylbenzene	< 1	23 (113 %R)	22 (109 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2,4-Trimethylbenzene	< 1	22 (111 %R)	21 (107 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
sec-Butylbenzene	< 1	23 (115 %R)	22 (109 %R) (6 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,3-Dichlorobenzene	< 1	22 (111 %R)	22 (108 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
p-Isopropyltoluene	< 1	23 (114 %R)	22 (109 %R) (5 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,4-Dichlorobenzene	< 1	22 (109 %R)	22 (108 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2-Dichlorobenzene	< 1	22 (111 %R)	21 (107 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
n-Butylbenzene	< 1	22 (108 %R)	21 (103 %R) (5 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2-Dibromo-3-chloropropane	< 2	23 (114 %R)	23 (114 %R) (0 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,3,5-Trichlorobenzene	< 1	23 (113 %R)	22 (108 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2,4-Trichlorobenzene	< 1	20 (99 %R)	19 (96 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Hexachlorobutadiene	< 0.5	18 (92 %R)	18 (88 %R) (4 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
Naphthalene	< 5	18 (89 %R)	17 (87 %R) (3 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
1,2,3-Trichlorobenzene	< 1	20 (100 %R)	20 (98 %R) (2 RPD)	11/7/2019	ug/L	70 - 130	20	8260C
4-Bromofluorobenzene (surr)	93 %R	95 %R	96 %R	11/7/2019	% Rec	70 - 130	20	8260C
1,2-Dichlorobenzene-d4 (surr)	98 %R	101 %R	101 %R	11/7/2019	% Rec	70 - 130	20	8260C
Toluene-d8 (surr)	100 %R	97 %R	99 %R	11/7/2019	% Rec	70 - 130	20	8260C
1,2-Dichloroethane-d4 (surr)	102 %R	95 %R	94 %R	11/7/2019	% 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#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	RFW-2	RFW-3	RFW-4	GMW-11RR	GZ-1L	GZ-2L	GZ-3L
Lab Sample ID:	202905.01	202905.02	202905.03	202905.04	202905.05	202905.06	202905.07
Matrix:	aqueous						
Date Sampled:	11/4/19	11/4/19	11/4/19	11/5/19	11/5/19	11/5/19	11/5/19
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19
Units:	ug/L						
Date of Analysis:	11/6/19	11/6/19	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19
Analyst:	VG						
Method:	8260B SIM						
Dilution Factor:	1	1	1	1	1	1	1
1,4-Dioxane	< 0.2	2.0	2.9	< 0.2	< 0.2	< 0.2	< 0.2
4-Bromofluorobenzene (surr)	107 %R	108 %R	109 %R				
Toluene-d8 (surr)	101 %R						



LABORATORY REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	GZ-104	GZ-201	GZ-202A	P-9R	SW-17	GZ-102	GZ-106
Lab Sample ID:	202905.08	202905.09	202905.1	202905.11	202905.12	202905.13	202905.14
Matrix:	aqueous						
Date Sampled:	11/4/19	11/4/19	11/5/19	11/4/19	11/4/19	11/4/19	11/5/19
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19
Units:	ug/L						
Date of Analysis:	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19
Analyst:	VG						
Method:	8260B SIM						
Dilution Factor:	1	1	1	1	1	1	1
1,4-Dioxane	1.4	< 0.2	4.4	1.1	0.81	0.89	1.2
4-Bromofluorobenzene (surr)	108 %R	108 %R	109 %R	109 %R	108 %R	107 %R	108 %R
Toluene-d8 (surr)	101 %R						



LABORATORY REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	P-2R	SW-13	SW-15	SW-16	Trip Blank - 1,4 diox
Lab Sample ID:	202905.15	202905.16	202905.17	202905.18	202905.2
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/4/19	11/4/19	11/4/19	11/4/19	11/4/19
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19	11/5/19
Units:	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/7/19	11/7/19	11/7/19	11/7/19	11/7/19
Analyst:	VG	VG	VG	VG	VG
Method:	8260B SIM				
Dilution Factor:	1	1	1	1	1
1,4-Dioxane	0.70	< 0.2	1.0	1.3	< 0.2
4-Bromofluorobenzene (surrogate)	107 %R	108 %R	107 %R	108 %R	107 %R
Toluene-d8 (surrogate)	101 %R				



QC REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Parameter Name	Blank	LCS	LCSD	Date of Analysis		Limits	RPD	Method
				Units	Date			
1,4-Dioxane	< 0.2	4.9 (97 %R)	4.7 (94 %R) (3 RPD)	ug/L	11/6/19	70 - 130	20	8260B SIM
4-Bromofluorobenzene (surr)	107 %R	110 %R	109 %R	% Rec	11/6/19	70 - 130	50	8260B SIM
Toluene-d8 (surr)	101 %R	102 %R	101 %R	% Rec	11/6/19	70 - 130	50	8260B SIM

Samples were analyzed within holding times unless noted on the sample results page.

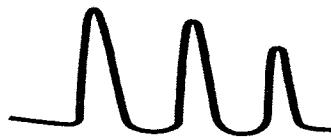
Instrumentation was calibrated in accordance with the method requirements.

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.



QC REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
1,4-Dioxane	< 0.2	4.7 (94 %R)	4.7 (94 %R) (1 RPD)	ug/L	11/7/19	70 - 130	20	8260B SIM
4-Bromofluorobenzene (surr)	107 %R	110 %R	110 %R	% Rec	11/7/19	70 - 130	50	8260B SIM
Toluene-d8 (surr)	101 %R	101 %R	102 %R	% Rec	11/7/19	70 - 130	50	8260B SIM

Samples were analyzed within holding times unless noted on the sample results page.

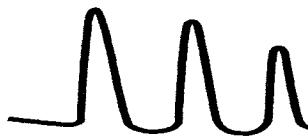
Instrumentation was calibrated in accordance with the method requirements.

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#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	RFW-2	RFW-3	RFW-4	GMW-11RR					
Lab Sample ID:	202905.01	202905.02	202905.03	202905.04	Analysis	Date	Time	Method	Analyst
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	11/4/19	11/4/19	11/4/19	11/5/19					
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19					
Chloride	69	48	130	120					
Chloride	69	48	130	120	mg/L	11/06/19	8:53	4500CLE-11	KD
Nitrate-N	0.79	< 0.5	< 0.5	< 0.5	mg/L	11/06/19	8:53	353.2	KD
TKN	< 0.5	< 0.5	2.6	< 0.5	mg/L	11/11/19	11:51	4500N _{org} C/N	SEL

Sample ID:	GZ-1L	GZ-2L	GZ-3L	GZ-104					
Lab Sample ID:	202905.05	202905.06	202905.07	202905.08	Analysis	Date	Time	Method	Analyst
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	11/5/19	11/5/19	11/5/19	11/4/19					
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19					
Chloride	100	30	42	53	mg/L	11/06/19	11:45	4500CLE-11	KD
Chloride	100	30	42	53	mg/L	11/06/19	8:58	353.2	KD
Nitrate-N	< 0.5	< 0.5	< 0.5	< 0.5	mg/L	11/11/19	12:02	4500N _{org} C/N	SEL
TKN	< 0.5	< 0.5	< 0.5	< 0.5	mg/L				



LABORATORY REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	GZ-201	GZ-202A	P-9R	SW-17					
Lab Sample ID:	202905.09	202905.1	202905.11	202905.12	Analysis				
Matrix:	aqueous	aqueous	aqueous	aqueous	Date	Time	Method	Analyst	
Date Sampled:	11/4/19	11/5/19	11/4/19	11/4/19					
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19	Units				
Chloride	98	50	98	78	mg/L	11/06/19	9:04	4500CLE-11	KD
Nitrate-N	1.8	< 0.5	< 0.5	< 0.5	mg/L	11/06/19	9:04	353.2	KD
TKN	0.7	1.3	0.9	0.5	mg/L	11/11/19	12:13	4500N _{org} C/N	SEL

Sample ID:	GZ-102	GZ-106	P-2R	SW-13					
Lab Sample ID:	202905.13	202905.14	202905.15	202905.16	Analysis				
Matrix:	aqueous	aqueous	aqueous	aqueous	Date	Time	Method	Analyst	
Date Sampled:	11/4/19	11/5/19	11/4/19	11/4/19					
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19	Units				
Chloride	89	83	26	17	mg/L	11/06/19	9:23	4500CLE-11	KD
Nitrate-N	< 0.5	< 0.5	< 0.5	< 0.5	mg/L	11/06/19	9:23	353.2	KD
TKN	< 0.5	< 0.5	1.4	1.1	mg/L	11/11/19	12:37	4500N _{org} C/N	SEL



LABORATORY REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID: SW-15 SW-16

Lab Sample ID: 202905.17 202905.18

Matrix: aqueous aqueous

Date Sampled: 11/4/19 11/4/19

Date Received: 11/5/19 11/5/19

			Analysis				
			Units	Date	Time	Method	Analyst
Chloride	65	69	mg/L	11/06/19	9:29	4500CLE-11	KD
Nitrate-N	< 0.5	< 0.5	mg/L	11/06/19	9:29	353.2	KD
TKN	< 0.5	< 0.5	mg/L	11/11/19	12:48	4500N _{org} C/N	SEL



QC REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Parameter Name	Blank	LCS	LCSD	Date of Analysis		Limits	RPD	Method
				Units	Date			
Chloride	< 1	25 (101 %R)	27 (108 %R) (7 RPD)	mg/L	11/6/19	90 - 110	20	4500CLE-11
Nitrate-N	< 0.5	5.1 (102 %R)	5.0 (100 %R) (2 RPD)	mg/L	11/6/19	90 - 110	20	353.2
TKN	< 0.5	9.2 (92 %R)	10 (103 %R) (11 RPD)	mg/L	11/11/19	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

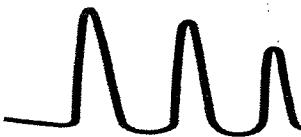
EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	RFW-2	RFW-3	RFW-4	GMW-11RR						
Lab Sample ID:	202905.01	202905.02	202905.03	202905.04						
Matrix:	aqueous	aqueous	aqueous	aqueous						
Date Sampled:	11/4/19	11/4/19	11/4/19	11/5/19	Analytical Matrix	Units	Date of Analysis	Method	Analyst	
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19						
Arsenic	< 0.001	0.011	0.11	< 0.001	AqDis	mg/L	11/7/19	200.8	DS	
Iron	0.093	3.7	34	< 0.05	AqDis	mg/L	11/7/19	200.8	DS	
Manganese	0.70	0.20	4.0	0.055	AqDis	mg/L	11/7/19	200.8	DS	

Sample ID:	GZ-104	GZ-201	GZ-202A	P-9R						
Lab Sample ID:	202905.08	202905.09	202905.1	202905.11						
Matrix:	aqueous	aqueous	aqueous	aqueous						
Date Sampled:	11/4/19	11/4/19	11/5/19	11/4/19	Analytical Matrix	Units	Date of Analysis	Method	Analyst	
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19						
Arsenic	0.075	< 0.001	0.059	0.014	AqDis	mg/L	11/7/19	200.8	DS	
Iron	8.4	< 0.05	48	0.29	AqDis	mg/L	11/7/19	200.8	DS	
Manganese	1.5	0.53	3.8	2.7	AqDis	mg/L	11/7/19	200.8	DS	



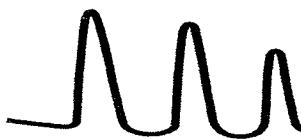
LABORATORY REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	GZ-1L	GZ-2L	GZ-3L	SW-17							
Lab Sample ID:	202905.05	202905.06	202905.07	202905.12							
Matrix:	aqueous	aqueous	aqueous	aqueous							
Date Sampled:	11/5/19	11/5/19	11/5/19	11/4/19	Analytical						
Date Received:	11/5/19	11/5/19	11/5/19	11/5/19	Matrix	Units	Date of Analysis	Method	Analyst		
Arsenic	0.0051	0.0025	0.0050	0.32	AqTot	mg/L	11/7/19	200.8	DS		
Iron	0.41	0.21	8.5	97	AqTot	mg/L	11/7/19	200.8	DS		
Manganese	0.065	1.7	0.32	17	AqTot	mg/L	11/7/19	200.8	DS		



LABORATORY REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Sample ID:	GZ-102	GZ-106	P-2R					
Lab Sample ID:	202905.13	202905.14	202905.15	Analytical Matrix	Units	Date of Analysis	Method	Analyst
Matrix:	aqueous	aqueous	aqueous					
Date Sampled:	11/4/19	11/5/19	11/4/19					
Date Received:	11/5/19	11/5/19	11/5/19					
Arsenic	< 0.001	< 0.001	0.0056	AqDis	mg/L	11/7/19	200.8	DS
Barium	0.014	0.046	0.019	AqDis	mg/L	11/7/19	200.8	DS
Cadmium	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/7/19	200.8	DS
Chromium	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/7/19	200.8	DS
Iron	< 0.05	< 0.05	< 0.05	AqDis	mg/L	11/7/19	200.8	DS
Lead	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/7/19	200.8	DS
Manganese	0.11	0.58	2.1	AqDis	mg/L	11/7/19	200.8	DS
Mercury	< 0.0001	< 0.0001	< 0.0001	AqDis	mg/L	11/7/19	200.8	DS
Selenium	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/7/19	200.8	DS
Silver	< 0.001	< 0.001	< 0.001	AqDis	mg/L	11/7/19	200.8	DS
Sample ID:	SW-13	SW-15	SW-16					
Lab Sample ID:	202905.16	202905.17	202905.18	Analytical Matrix	Units	Date of Analysis	Method	Analyst
Matrix:	aqueous	aqueous	aqueous					
Date Sampled:	11/4/19	11/4/19	11/4/19					
Date Received:	11/5/19	11/5/19	11/5/19					
Arsenic	0.0084	0.0021	0.016	AqTot	mg/L	11/7/19	200.8	DS
Barium	0.023	0.018	0.039	AqTot	mg/L	11/7/19	200.8	DS
Cadmium	< 0.001	< 0.001	< 0.001	AqTot	mg/L	11/7/19	200.8	DS
Chromium	0.0010	< 0.001	< 0.001	AqTot	mg/L	11/7/19	200.8	DS
Iron	2.2	0.25	2.8	AqTot	mg/L	11/7/19	200.8	DS
Lead	0.0017	< 0.001	< 0.001	AqTot	mg/L	11/7/19	200.8	DS
Manganese	0.97	1.7	3.9	AqTot	mg/L	11/7/19	200.8	DS
Mercury	< 0.0001	< 0.0001	< 0.0001	AqTot	mg/L	11/7/19	200.8	DS
Selenium	< 0.001	< 0.001	< 0.001	AqTot	mg/L	11/7/19	200.8	DS
Silver	< 0.001	< 0.001	< 0.001	AqTot	mg/L	11/7/19	200.8	DS



QC REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Parameter Name	Blank	LCS	LCSD	Date of Analysis		Limits	RPD	Method
				Units	Date			
Arsenic	< 0.001	0.21 (106 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Barium	< 0.001	0.21 (106 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Cadmium	< 0.001	0.20 (102 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Chromium	< 0.001	0.20 (102 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Iron	< 0.05	10 (102 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Lead	< 0.001	0.20 (99 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Manganese	< 0.005	0.21 (104 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Mercury	< 0.0001	0.00099 (99 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Selenium	< 0.001	0.20 (100 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8
Silver	< 0.001	0.20 (100 %R)		NA	mg/L 11/7/19	85 - 115	20	200.8

Aqueous Dissolved Metals

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.



QC REPORT

EAI ID#: 202905

Client: Exeter, Town of

Client Designation: Cross Road Landfill | Nov 2019

Parameter Name	Blank	LCS	LCSD	Date of Analysis	Units	Limits	RPD	Method	
Arsenic	< 0.001	1.1 (107 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Barium	< 0.001	1.1 (112 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Cadmium	< 0.001	1.1 (109 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Chromium	< 0.001	1.0 (103 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Iron	< 0.05	12 (105 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Lead	< 0.001	1.0 (101 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Manganese	< 0.005	1.1 (105 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Mercury	< 0.0001	0.0011 (109 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Selenium	< 0.001	1.0 (101 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8
Silver	< 0.001	0.011 (109 %R)		NA	mg/L	11/7/19	85 - 115	20	200.8

Aqueous Total Metals

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.



Sample IDs	Date/Time Composites need start and stop dates/times	Matrix Grab or Comp	Parameters and Sample Notes	# of containers
RFW-2	11/4/19 1150	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 11.6 °C pH - 6.06 s.u. Sp. Cond. - 360 µS/cm Dissolved Sample Field Filtered <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE	5
RFW-3	11/4/19 1215	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 13.9 °C pH - 6.24 s.u. Sp. Cond. - 575 µS/cm Dissolved Sample Field Filtered <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE	5
RFW-4	11/4/19 1440	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 12.1 °C pH - 6.58 s.u. Sp. Cond. - 735 µS/cm Dissolved Sample Field Filtered <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE	5
GMAW-11 ACT 11/5/19 GMAW-11 RR	11/5/19 1115	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 13.5 °C pH - 6.38 s.u. Sp. Cond. - 513 µS/cm Dissolved Sample Field Filtered <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE	5

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309
Quote#: 1014801

Temp 19 °C

Ice Y N

Samples Collected by: *Amber Taras* Date/Time: *11/5/19 13:05* Relinquished by: *Exeter* Received by: *Exeter*

Date/Time: *11-5-19 14:05* Relinquished by: *Exeter* Received by: *Exeter*



202905

2

Date/Time

Composites need start
and stop dates/times

Matrix

Parameters and Sample Notes

②
of containers
6-16/6/19

Sample IDs	Date/Time	Matrix	Parameters and Sample Notes	Temp - 14.1 °C	# of containers
GZ-1L	11/5/19 1000	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn/V8260SIM14DIOXANE	pH - 8.24 s.u. Sp. Cond. - 541 µS/cm	5
			<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate	Dissolved Sample Field Filtered	<input checked="" type="checkbox"/> ACT 11/5/19
GZ-2L	11/5/19 0945	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn/V8260SIM14DIOXANE	Temp - 10.9 °C pH - 9.05 s.u. Sp. Cond. - 398 µS/cm	5
			<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate	Dissolved Sample Field Filtered	<input type="checkbox"/>
GZ-3L	11/5/19 1030	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn/V8260SIM14DIOXANE	Temp - 13.2 °C pH - 7.04 s.u. Sp. Cond. - 349 µS/cm	5
			<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate	Dissolved Sample Field Filtered	<input type="checkbox"/>
GZ-104	11/4/19 1615	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 10.9 °C pH - 6.40 s.u. Sp. Cond. - 562 µS/cm	5
			<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate	Dissolved Sample Field Filtered	<input checked="" type="checkbox"/>

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309

Quote#: 1014801

Temp 19 °C

Ice Y N

Samples Collected by: Andrew Taranis
 11/5/19 1305 Signatures

Relinquished by Date/Time Received by

11/5/19 14:05 Signatures

Relinquished by Date/Time Received by



202905

2

(3) Ps
4/6/19
of containers

Sample IDs	Date/Time Composites need start and stop dates/times	Matrix	Parameters and Sample Notes	Temp - 13.3 °C pH - 6.52 s.u. Sp. Cond. - 599 μS/cm	# of containers
GZ-201	11/4/19 1105	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	5
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCl (HNO ₃ , H ₂ SO ₄) NaOH MEOH Na,S,O, (ICE)		
GZ-202A	11/5/19 0905	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 12.3 °C pH - 6.54 s.u. Sp. Cond. - 521 μS/cm	5
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCl (HNO ₃ , H ₂ SO ₄) NaOH MEOH Na,S,O, (ICE)	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	
P-9R	11/4/19 1330	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 11.6 °C pH - 6.71 s.u. Sp. Cond. - 614 μS/cm	5
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCl (HNO ₃ , H ₂ SO ₄) NaOH MEOH Na,S,O, (ICE)	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	
SW-17	11/4/19 1625	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn/V8260SIM14DIOXANE	Temp - 9.9 °C pH - 6.68 s.u. Sp. Cond. - 547 μS/cm	5
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCl (HNO ₃ , H ₂ SO ₄) NaOH MEOH Na,S,O, (ICE)	Dissolved Sample Field Filtered <input type="checkbox"/>	

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309
Quote#: 1014801

Temp 19 °C

Ice Y N

Samples Collected by: Andrew Takaw
 Relinquished by Date/Time Received by
 Relinquished by Date/Time Received by
 Relinquished by Date/Time Received by

202903

23

EXENH

4

PA
24/12/19

of containers

Sample IDs	Date/Time Composites need start and stop dates/times	Matrix Grab or Comp	Parameters and Sample Notes	Temp - 10.9 °C pH - 6.38 s.v. Sp. Cond. - 619 µS/cm	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>
GZ-102	11/4/19 1655	aqueous Grab or Comp	AqTot/CI/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn		
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: <input checked="" type="checkbox"/> HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE		
GZ-106	11/5/19 1145	aqueous Grab or Comp	AqTot/CI/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn	Temp - 13.0 °C pH - 6.67 s.v. Sp. Cond. - 539 µS/cm	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: <input checked="" type="checkbox"/> HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE		Dissolved Sample Field Filtered <input checked="" type="checkbox"/>
P-2R	11/4/19 1410	aqueous Grab or Comp	AqTot/CI/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn	Temp - 8.6 °C pH - 7.22 s.v. Sp. Cond. - 294 µS/cm	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: <input checked="" type="checkbox"/> HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE		Dissolved Sample Field Filtered <input checked="" type="checkbox"/>
SW-13	11/4/19 1305	aqueous Grab or Comp	AqTot/CI/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn	Temp - 11.7 °C pH - 6.97 s.v. Sp. Cond. - 198 µS/cm	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: <input checked="" type="checkbox"/> HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE		Dissolved Sample Field Filtered <input type="checkbox"/>

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

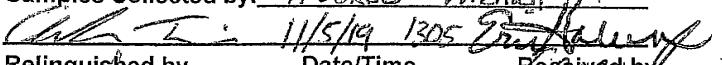
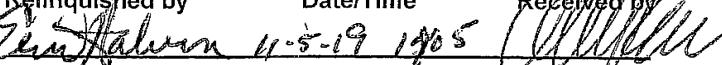
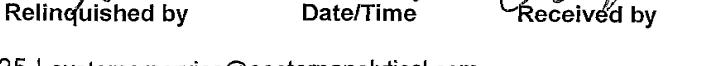
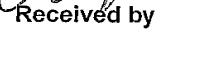
- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309
Quote#: 1014801

Temp 1.9 °C

Ice Y N

Samples Collected by: Andrew Tammie

 Relinquished by 
 Date/Time 11/5/19 1305
 Received by 
 Date/Time 11/5/19 1305
 Relinquished by 
 Received by 



202905

EXENH

24

Sample IDs	Date/Time Composites need start and stop dates/times	Matrix	Parameters and Sample Notes	# of containers
SW-15	11/4/19 1650	aqueous Grab or Comp	AqTot/CI/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn Temp = 8.7 °C pH = 7.33 S.U. Sp. Cond. = 536 µS/cm	Dissolved Sample Field Filtered <input type="checkbox"/> 7
			<input checked="" type="checkbox"/> 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
SW-16	11/4/19 1635	aqueous Grab or Comp	AqTot/CI/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn Temp = 9.3 °C pH = 6.87 S.U. Sp. Cond. = 525 µS/cm	Dissolved Sample Field Filtered <input type="checkbox"/> 7
			<input checked="" type="checkbox"/> 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
Trip Elkank-8260		aqueous Grab or Comp	AqTot/VNH8260CFullList	2
			<input type="checkbox"/> 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
Trip Blank - 1,4 diox		aqueous Grab or Comp	AqTot/V8260SIM14DIOXANE	2
			<input type="checkbox"/> 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

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

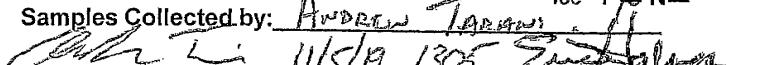
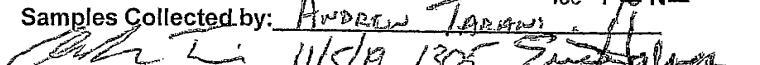
- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

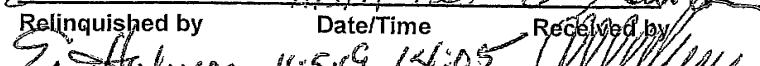
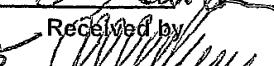
- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309
Quote#: 1014801

Temp 1.4 °C

Ice Y N

Samples Collected by: Andrew Tappas

 Relinquished by  Date/Time 11/5/19 1305

Received by  Date/Time 11/5/19 14:05
 Relinquished by  Date/Time
 Received by 



Eastern Analytical, Inc.

professional laboratory and drilling services

Dawna Tousignant
GZA GeoEnvironmental, Inc. (NH)
5 Commerce Park North, Suite 201
Bedford , NH 03110



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 200002

Client Identification: Exeter River

Date Received: 9/5/2019

Dear Ms. Tousignant :

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.easternanalytical.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), Vermont (VT1012) and New York (12072).

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 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

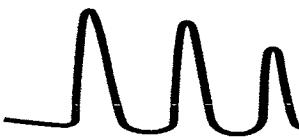
Lorraine Olashaw, Lab Director

9.13.19

Date

5

of pages (excluding cover letter)



SAMPLE CONDITIONS PAGE

EAI ID#: 200002

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Exeter River

Temperature upon receipt (°C): 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)
200002.01	Exeter River - Up Gradient	9/5/19	9/5/19	aqueous		Adheres to Sample Acceptance Policy
200002.02	Exeter River - Down Gradient	9/5/19	9/5/19	aqueous		Adheres to Sample Acceptance Policy
200002.03	Exeter Spring	9/5/19	9/5/19	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, 21st, 22nd & 23rd Edition or noted Revision year.
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 4th edition, 1992



LABORATORY REPORT

EAI ID#: 200002

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Exeter River

Sample ID:	Exeter River - Up Gradient	Exeter River - Down Gradient	Exeter Spring
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Lab Sample ID:	200002.01	200002.02	200002.03
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Matrix:	aqueous	aqueous	aqueous
---------	---------	---------	---------

Date Sampled:	9/5/19	9/5/19	9/5/19
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Date Received:	9/5/19	9/5/19	9/5/19
----------------	--------	--------	--------

				RL	Analytical Matrix	Units	Analysis Date	Method	Analyst
Arsenic	< 0.001	0.0011	0.012	0.001	AqDis	mg/L	9/06/19	200.8	DS
Arsenic	0.0010	0.0015	0.014	0.001	AqTot	mg/L	9/06/19	200.8	DS
Iron	0.29	0.29	0.73	0.05	AqDis	mg/L	9/06/19	200.8	DS
Iron	0.42	0.46	1.2	0.05	AqTot	mg/L	9/06/19	200.8	DS
Manganese	0.058	0.090	2.0	0.005	AqDis	mg/L	9/06/19	200.8	DS
Manganese	0.095	0.12	2.1	0.005	AqTot	mg/L	9/06/19	200.8	DS



QC REPORT

EAI ID#: 200002

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Exeter River

Parameter Name	Blank	LCS	LCSD	Date of Analysis	Units	Limits	RPD	Method	
Arsenic	< 0.001	1.1 (106 %R)		NA	mg/L	9/6/19	85 - 115	20	200.8
Iron	< 0.05	11 (97 %R)		NA	mg/L	9/6/19	85 - 115	20	200.8
Manganese	< 0.005	1.0 (103 %R)		NA	mg/L	9/6/19	85 - 115	20	200.8

Aqueous Total Metals

Samples were analyzed within holding times unless noted on the sample results page.

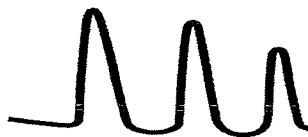
Instrumentation was calibrated in accordance with the method requirements.

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.



QC REPORT

EAI ID#: 200002

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Exeter River

Parameter Name	Blank	LCS	LCSD	Date of Units Analysis	Limits	RPD	Method
Arsenic	< 0.001	0.21 (104 %R)		NA mg/L 9/6/19	85 - 115	20	200.8
Iron	< 0.05	9.5 (93 %R)		NA mg/L 9/6/19	85 - 115	20	200.8
Manganese	< 0.005	0.20 (101 %R)		NA mg/L 9/6/19	85 - 115	20	200.8

Aqueous Dissolved Metals

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.



CEC Summary Letter Report

November 14, 2019

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

Subject: November 2019 Semi Annual Groundwater Monitoring
Cross Road Landfill – Exeter, NH
NHDES GWP-198401081-E-005
CEC Project Number 184-033

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 on November 4 and 5, 2019.

Civil & Environmental Consultants, Inc. (CEC) was contracted to collect samples from 14 groundwater monitoring wells identified as RFW-2, RFW-3, RFW-4, **GMW-11RR**, GZ-1L, GZ-2L, GZ-3L, GZ-102, GZ-104, GZ-106, GZ-201, GZ-202A, P-2R, P-9R, and 4 surface water points, SW-13, SW-15, SW-16, and SW-17.

Following 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. 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 were 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 abandoned and replaced with a new groundwater monitoring well, GMW-11RR, which has subsequently been added to the monitoring permit. All wells were capped and those that had locks were secured prior to leaving the site.

FIELD ANALYSIS

An Oakton Multi-parameter PCTS 50 was calibrated and functioning properly during all field chemistry analysis. There was also an Oakton Multi-parameter Tester 35 that was also calibrated and functioning properly, used as a backup. There were no onsite conditions (weather, construction, etc.) that would adversely impact the quality or integrity of the sample data.

The result for pH at monitoring location GZ-2L continued to have field results for pH above historical values with a post purge value of 12.43 s.u. CEC undertook steps to confirm the results and took multiple field readings both before and after purging with two different pH measuring devices.

Groundwater samples noted as ‘dissolved metals’ were field filtered using a 0.45 micron filter apparatus prior to preservation. Field filter QA/QC data is provided as an attachment to this summary.

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 2020.

Thank you for your continued utilization of our groundwater permit management services. Please do not hesitate to contact either of us with any questions or comments regarding the work performed.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.



Andrew Tarani
Staff Scientist



Thomas E. Walker
Senior Project Manager

Attachments: November 2019 Field Summary Table
Eastern Analytical Chain of Custody Documents
US Environmental 0.45 micron field filter QA/QC data

cc: Jeffrey Rowell – GZA GeoEnvironmental

November 2019 Groundwater Field Data Summary Table

Project Location: Exeter, NH – Cross Road Landfill

Field Personnel: Dylan Lundgren & Andrew Tarani

Date: November 4 – 5, 2019

Weather: Clear 35-55°F / Overcast 40-48°F

Well ID	Depth To Water	Depth To Bottom	Purge Volume	pH	Specific Conductance	Temperature
	ft	ft	gal	s.u.	$\mu\text{S}/\text{cm}$	°C
RFW-2	43.11	71.97	14.5	6.06	360	11.6
RFW-3	73.82	98.24	12	6.24	575	13.9
RFW-4	46.51	66.09	10	6.58	735	12.1
GMW-11RR	10.82	18.15	4	6.38	513	13.5
GZ-1L	26.60	76.87	TD(8)	8.24	541	14.1
GZ-2L	34.74	56.61	TD(3)	9.05	398	10.9
GZ-3L	13.80	38.87	12.5	7.04	349	13.2
GZ-102	16.90	23.10	TD(1.5)	6.38	619	10.9
GZ-104	13.01	16.70	2	6.40	552	10.9
GZ-106	12.35	16.11	TD(0.25)	6.67	539	13.0
GZ-201	50.51	57.55	3.5	6.52	599	13.3
GZ-202A	50.93	66.51	7.5	6.54	521	12.3
P-2R	4.08	7.99	2	7.22	294	8.6
P-9R	2.73	7.46	2.5	6.71	614	11.6
SW-13	-	-	-	6.97	198	11.7
SW-15	-	-	-	7.33	536	8.7
SW-16	-	-	-	6.87	575	9.3
SW-17	-	-	-	6.68	547	9.9

NOTES:

- **TD** = Well purged until dry
- Dissolved metals samples were field filtered using 0.45 micron filter prior to preservation with HNO₃.
- 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 PCTS 50.



Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

202905

Sample IDs	Date/Time Composites need start and stop dates/times	Matrix <i>(Grab or Comp)</i>	Parameters and Sample Notes	Temp - 11.6 °C pH - 6.06 S.U. Sp. Cond. - 360 µS/cm	# of containers <i>5</i>
RFW-2	11/4/19 1150	aqueous <i>(Grab or Comp)</i>	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCL <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE		
RFW-3	11/4/19 1215	aqueous <i>(Grab or Comp)</i>	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 13.9 °C pH - 6.24 S.U. Sp. Cond. - 515 µS/cm	<input checked="" type="checkbox"/> <i>5</i>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCL <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	
RFW-4	11/4/19 1440	aqueous <i>(Grab or Comp)</i>	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 12.1 °C pH - 6.58 S.U. Sp. Cond. - 735 µS/cm	<input checked="" type="checkbox"/> <i>5</i>
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCL <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	
<i>GMAW-IT ACT 11/5/19</i>	11/5/19	aqueous <i>(Grab or Comp)</i>	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Temp - 13.5 °C pH - 6.38 S.U. Sp. Cond. - 513 µS/cm	<input checked="" type="checkbox"/> <i>5</i>
<i>GMAW-IRR</i>	11/5	<i>(Grab or Comp)</i>			
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate			Circle preservative/s: HCL <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309

Quote#: 1014801

Temp 19 °CIce Y N

Samples Collected by: Andrew Jaramillo
John Li 11/5/19 13:05 Exeter
 Relinquished by Exeter Date/Time 11-5-19 14:05 Received by John Li
 Relinquished by Exeter Date/Time 11-5-19 14:05 Received by John Li



Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

202905

Sample IDs	Date/Time Composites need start and stop dates/times	Matrix	Parameters and Sample Notes	② <i>bt-11/6/19</i> # of containers
GZ-1L	11/5/19 1000	aqueous <i>Grab or Comp</i>	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn/V8260SIM14DIOXANE <input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate Circle preservative/s: HCl <i>HNO3</i> <i>H2SO4</i> NaOH MEOH Na,S,O, ICE	Temp - 14.1 °C pH - 8.24 s.u. Sp. Cond. - 541 μ S/cm Dissolved Sample Field Filtered <input checked="" type="checkbox"/> ACT <i>11/5/19</i> 5
GZ-2L	11/5/19 0945	aqueous <i>Grab or Comp</i>	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn/V8260SIM14DIOXANE <input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate Circle preservative/s: HCl <i>HNO3</i> <i>H2SO4</i> NaOH MEOH Na,S,O, ICE	Temp - 10.9 °C pH - 9.05 s.u. Sp. Cond. - 398 μ S/cm Dissolved Sample Field Filtered <input type="checkbox"/> 5
GZ-3L	11/5/19 1030	aqueous <i>Grab or Comp</i>	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn/V8260SIM14DIOXANE <input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate Circle preservative/s: HCl <i>HNO3</i> <i>H2SO4</i> NaOH MEOH Na,S,O, ICE	Temp - 13.2 °C pH - 7.04 s.u. Sp. Cond. - 349 μ S/cm Dissolved Sample Field Filtered <input type="checkbox"/> 5
GZ-104	11/4/19 1615	aqueous <i>Grab or Comp</i>	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn <input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate Circle preservative/s: HCl <i>HNO3</i> <i>H2SO4</i> NaOH MEOH Na,S,O, ICE	Temp - 10.9 °C pH - 6.40 s.u. Sp. Cond. - 552 μ S/cm Dissolved Sample Field Filtered <input checked="" type="checkbox"/> 5

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309
Quote#: 1014801Temp *19* °C
Ice Y N Samples Collected by: *Andrew Tapani*Relinquished by *Exeter* Date/Time *11/5/19 10:05* Received by *Exeter*Relinquished by *Exeter* Date/Time *11/5/19 14:05* Received by *Exeter*



Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

202905

(3) PA MFG
of containers

Sample IDs	Date/Time Composites need start and stop dates/times	Matrix <i>(Grab or Comp)</i>	Parameters and Sample Notes	Temp - 13.3 °C pH - 6.52 s.u. Sp. Cond. - 599 μS/cm	# of containers 5
GZ-201	11/4/19 1105	aqueous <i>(Grab or Comp)</i>	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate	Circle preservative/s: HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE				
GZ-202A	11/5/19 0905	aqueous <i>(Grab or Comp)</i>	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	5
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate	Circle preservative/s: HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE				
P-9R	11/4/19 1330	aqueous <i>(Grab or Comp)</i>	AqTot/Cl/NO3/TKN/V8260SIM14DIOXANE AqDis/ICPMets.As.Fe.Mn	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	5
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate	Circle preservative/s: HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE				
SW-17	11/4/19 1625	aqueous <i>(Grab or Comp)</i>	AqTot/Cl/NO3/TKN/ICPMets.As.Fe.Mn/V8260SIM14DIOXANE	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	5
<input checked="" type="checkbox"/> Sampler confirms ID and parameters are accurate	Circle preservative/s: HCl <input checked="" type="checkbox"/> HNO ₃ <input checked="" type="checkbox"/> H ₂ SO ₄ <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> MEOH <input checked="" type="checkbox"/> Na ₂ S ₂ O ₃ <input checked="" type="checkbox"/> ICE				

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

- HC
 EDD PDF
 EDD email
 PDF prelim, NO FAX
 e-mail Login Confirmation

- NO FAX
 Partial FAX
 PDF Invoice
 EQUIS

PO# 4335-309
Quote#: 1014801

Temp 19 °C

Ice Y N Samples Collected by: Anderson TAKAWI
John T. 11/5/19 1305 Exeter, NHRelinquished by Exeter Date/Time 11/5/19 14:05 Received by Mates

Relinquished by

Date/Time

Received by



Eastern Analytical, Inc.

CHAIN-OF-CUSTODY RECORD

202905

EXENH

4

P.b.
2/6/19
of containers

Sample IDs	Date/Time Composites need start and stop dates/times	Matrix Grab or Comp	Parameters and Sample Notes	Temp - 10.9 °C pH - 6.38 s.u. Sp. Cond. - 619 μS/cm	7
GZ-102	11/4/19 1655	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	
GZ-106	11/5/19 1145	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn	Temp - 13.0 °C pH - 6.67 s.u. Sp. Cond. - 539 μS/cm	7
P-2R	11/4/19 1410	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE AqDis/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn	Temp - 8.6 °C pH - 7.22 s.u. Sp. Cond. - 294 μS/cm	7
SW-13	11/4/19 1305	aqueous Grab or Comp	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn	Dissolved Sample Field Filtered <input checked="" type="checkbox"/>	
				Temp - 11.7 °C pH - 6.97 s.u. Sp. Cond. - 198 μS/cm	7
				Dissolved Sample Field Filtered <input type="checkbox"/>	

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309
Quote#: 1014801

Temp 1.9 °C
Ice Y N

Samples Collected by: Andrew Tammie
Andrew Tammie 11/5/19 1305 Exeter NH
 Relinquished by Date/Time Received by
Exeter NH 11-5-19 1305 *Exeter NH*
 Relinquished by Date/Time Received by
Exeter NH 11-5-19 1305 *Exeter NH*



202905

EXENH

(5) PA-n16 pg
of containers

Sample IDs	Date/Time Composites need start and stop dates/times	Matrix <i>Grab or Comp</i>	Parameters and Sample Notes
SW-15	11/4/19 1650	aqueous	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn <i>Temp = 8.7 °C</i> <i>pH = 7.33 S.U.</i> <i>Sp. Cond. = 536 µS/cm</i> <i>Dissolved Sample Field Filtered</i> <input type="checkbox"/>
			<input checked="" type="checkbox"/> 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
SW-16	11/4/19 1635	aqueous <i>Grab or Comp</i>	AqTot/Cl/NO3/TKN/VNH8260CFullList/V8260SIM14DIOXANE/ICPMets.As.Ba.Cd.Cr.Pb.Se.Ag.Hg.Fe.Mn <i>Temp = 9.3 °C</i> <i>pH = 6.87 S.U.</i> <i>Sp. Cond. = 525 µS/cm</i> <i>Dissolved Sample Field Filtered</i> <input type="checkbox"/>
			<input checked="" type="checkbox"/> 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
Trip Blank-8260		aqueous <i>Grab or Comp</i>	AqTot/VNH8260CFullList <input type="checkbox"/>
			<input type="checkbox"/> 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 <input type="checkbox"/>
Trip Blank - 1,4 diox		aqueous <i>Grab or Comp</i>	AqTot/V8260SIM14DIOXANE <input type="checkbox"/>
			<input type="checkbox"/> 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 <input type="checkbox"/>

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 2019

State NH

Client (Pro Mgr) Jennifer Mates

Customer Exeter, Town of

Address Town Office, 13 Newfields Road

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 MA MCP

Reporting Options

- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation

- NO FAX
- Partial FAX
- PDF Invoice
- EQUIS

PO# 4335-309
Quote#: 1014801

Temp 1.4 °C

Ice Y N

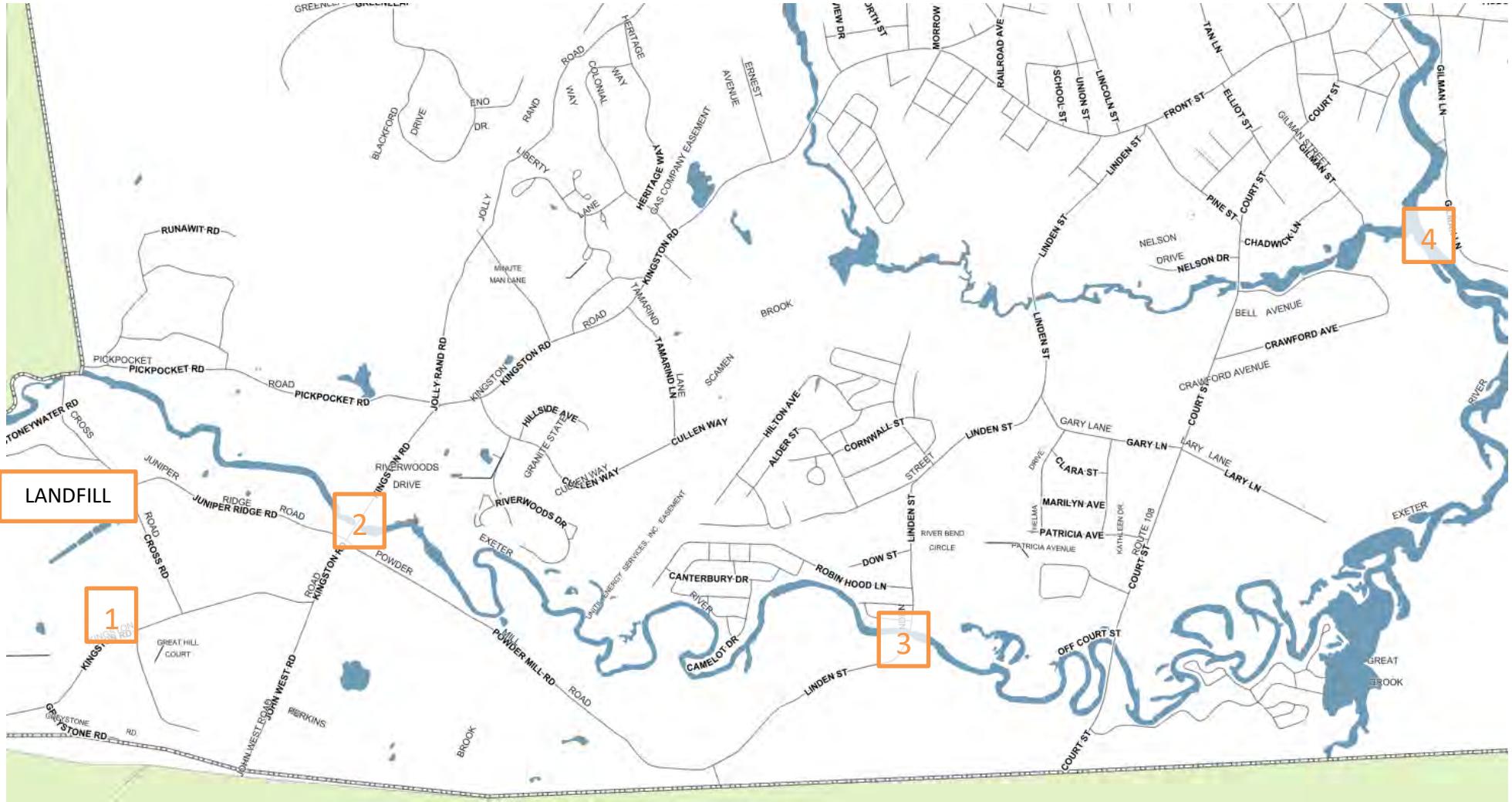
Samples Collected by: *Andrew Tarnas* Relinquished by *Zenith Mates* Received by *Exeter*
11/5/19 1305 Date/Time *11-5-19 14:05* Received by *Mates*
Relinquished by Date/Time *Received by*

CERTIFICATION: High Capacity, Groundwater Capsules are validated for 67 metals and 2 anions. Each manufacturing lot is verified against the original manufacturing process validation. All validation tests performed by an independent laboratory using EPA test method levels of detection under Class 100 clean room conditions for metals and under Class 10,000 conditions for anions.

Element Name Common Name	PPM LOD (mg/L)	Reference Element Common Name	PPM LOD (mg/L)	Concentration Component	PPM LOD (mg/L)
Chloride (Cl ⁻)	50.00	Hafnium (Hf)	0.06	Rubidium (Rb)	0.10
Sulfate (SO ₄ ²⁻)	10.00	Holmium (Ho)	0.01	Ruthenium (Ru)	0.05
Aluminum (Al)	0.20	Indium (In)	0.02	Samarium (Sm)	0.04
Antimony (Sb)	0.10	Iridium (Ir)	0.06	Scandium (Sc)	0.20
Arsenic (As)	0.20	Iron (Fe)	1.00	Selenium (Se)	7.00
Barium (Ba)	0.10	Lanthanum (La)	0.01	Silver (Ag)	0.03
Beryllium (Be)	0.04	Lead (Pb)	0.50	Sodium (Na)	25.00
Bismuth (Bi)	0.04	Lithium (Li)	0.30	Strontium (Sr)	0.20
Boron (B)	5.00	Lutetium (Lu)	0.01	Tantalum (Ta)	0.02
Cadmium (Cd)	0.03	Magnesium (Mg)	10.00	Tellurium (Te)	0.04
Calcium (Ca)	25.00	Manganese (Mn)	0.30	Terbium (Tb)	0.02
Cerium (Ce)	0.01	Mercury (Hg)	0.05	Thallium (Tl)	0.05
Cesium (Cs)	0.02	Molybdenum (Mo)	0.05	Thorium (Th)	0.02
Chromium (Cr)	0.03	Neodymium (Nd)	0.02	Thulium (Tm)	0.01
Cobalt (Co)	0.02	Nickel (Ni)	0.50	Tin (Sn)	0.20
Copper (Cu)	0.50	Niobium (Nb)	0.02	Titanium (Ti)	0.05
Dysprosium (Dy)	0.04	Osmium (Os)	0.02	Tungsten (W)	0.20
Erbium (Er)	0.02	Palladium (Pd)	0.03	Uranium (U)	0.02
Europium (Eu)	0.02	Platinum (Pt)	0.08	Vanadium (V)	0.03
Gadolinium (Gd)	0.04	Potassium (K)	25.00	Ytterbium (Yb)	0.03
Gallium (Ga)	0.04	Praseodymium (Pr)	0.01	Yttrium (Y)	0.02
Germanium (Ge)	0.05	Rhenium (Re)	0.06	Zinc (Zn)	1.00
Gold (Au)	0.05	Rhodium (Rh)	0.02	Zirconium (Zr)	0.05



Town of Exeter Surface Water Sampling Locations



1. 149 Kingston Rd, bedrock well (residential)
 2. Kingston Rd bridge, surface water
 3. Linden St bridge, surface water
 4. Exeter River PWS intake, surface water



professional laboratory and drilling services

PRELIMINARY ANALYTICAL RESULTS ATTACHED

The attached .pdf file contains results that have not been subjected to a final QA/QC review. If you have any questions, please contact us at customerservice@easternanalytical.com or call 1-800-287-0525.

Holiday Hours

Please keep the following dates in mind when planning your sample collection schedule especially when parameters with immediate or short hold times are needed.

- | | |
|------------------|--------------------------------------|
| • Christmas Eve | Tuesday, December 24 th |
| • Christmas Day | Wednesday, December 25 th |
| • New Year's Day | Wednesday, January 1 st |

Call us at 1-800-287-0525 or email customerservice@easternanalytical.com, if you have questions or need to make special arrangements. We wish you a happy holiday season!

Earn CEUs by Attending EAI's *free* Nuts & Bolts Training Seminars

We invite you to attend our free informal and informative laboratory and sample collection training session this winter. Training offers a variety of material including pre-project planning, sample collection, sample delivery and analyses, final reporting, available resources, and more. Training is held at our laboratory in Concord, NH. Sessions begin at 9:00 a.m. and ends at noon.

Tuesday, January 7th

Public Water System Operators (0.2 CEUs)

In addition to the nuts and bolts training, guest speaker **Harrison "Chip" Mackey**, with the NHDES Drinking Water and Groundwater Bureau, will present information regarding **PFAS and Arsenic** for the Chemical Monitoring Program.

Tuesday, January 14th

Wastewater Operators (0.2 CEUs)

In addition to the nuts and bolts training, a guest speaker with the NHDES Wastewater Engineering Bureau will be presenting (subject matter to be determined).

Wednesday, February 5th

Environmental Consultants (3 TCH)

or

Wednesday, February 12th

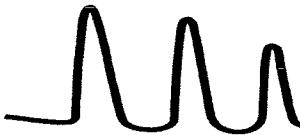
In addition to the nuts and bolts training, guest speaker **Brandon Kernen**, with the NHDES Drinking Water and Groundwater Bureau, will be presenting (subject matter to be determined). Training material and speaker are the same for both dates.

Date tbd

Industrial (0.2 CEUs)

Training will cover regulatory sampling for discharges; NPDES, RGP, CGP Stormwater and MS4.

To register, email customerservice@easternanalytical.com or call us at 1-800-287-0525 today!



LABORATORY REPORT

EAI ID#: 204594

Client: Exeter, Town of

Client Designation: None

Sample ID:	149 Kingston Rd	Kingston Rd Bridge	Linden St	River Station	Trip Blank
Lab Sample ID:	204594.01	204594.02	204594.03	204594.04	204594.05
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	12/10/19	12/10/19	12/10/19	12/10/19	12/10/19
Date Received:	12/11/19	12/11/19	12/11/19	12/11/19	12/11/19
Units:	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	12/17/19	12/17/19	12/17/19	12/17/19	12/17/19
Analyst:	VG	VG	VG	VG	VG
Method:	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM
Dilution Factor:	1	1	1	1	1
1,4-Dioxane	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Bromofluorobenzene (surr)	100 %R	100 %R	99 %R	99 %R	101 %R
Toluene-d8 (surr)	99 %R	99 %R	99 %R	99 %R	99 %R