2023 Annual Report

LRI Landfill
Graham, Washington

Pierce County Recycling, Composting
& Disposal, LLC dba LRI
17925 Meridian Street East
Puyallup, Washington 98375

SCS ENGINEERS

04224001.02 | April 1, 2024

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This 2023 Annual Report for the LRI Landfill located in Graham, Washington, was prepared by Alex Deszo and Kevin Lakey, LHG and was reviewed by Travis Berndahl and Dan Venchiarutti of SCS Engineers.

April 1, 2024

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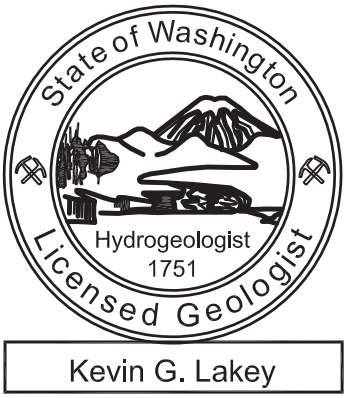

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1.0 INTRODUCTION

This document is the annual report for the LRI Landfill for 2023. The facility is a municipal solid waste landfill that operates in compliance with a *Full Permit for Solid Waste Handling* (Permit No. 27-050) issued by the Tacoma-Pierce County Health Department (TPCHD). The landfill is located approximately 15 miles south of Puyallup at 30919 Meridian East, in Graham, Washington (Figure 1). This report presents a summary of the 2023 solid waste disposal activities and monitoring results and meets the requirements of Section VI (11) of the *Full Permit for Solid Waste Handling*, and Sections 200(11) and 600(3)(ii) of Chapter 173-351 WAC*, Criteria for Municipal Solid Waste Landfills.*

1.1 FACILITY CONTACT INFORMATION

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LRI Landfill
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Graham, Washington 98338
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1.2 FACILITY DESCRIPTION

The landfill property is approximately 320 acres in size and is situated in the west half of Section 10, Township 17N, Range 4E. At completion, the landfill will encompass a footprint of approximately 169.2 acres. Figure 2 provides a site map showing the primary features of the landfill facility.

Eleven refuse disposal cells (Cells 1, 2A, 2B, 3A, 4A, 4B, 5, 6, 7, 8 and 9A/B) with a combined bottom liner area of approximately 143.4 acres (in plan-view) have been constructed to date. As of the end of 2023, each of the disposal cells, except Cell 9B which was constructed in 2023, have been used for waste disposal. A summary of cell construction information is included in Exhibit 1.

Exhibit 1. Cell Construction Information

Cell	Approximate Acreage	Year Constructed	Initial Waste Placement
Cell 1	15.83	1999	December 1999
Cell 2A	10.57	2000	July 2001
Cell 2B	11.24	2002	April 2003
Cell 3	10.81	2004	December 2004
Cell 4A[1]	17.41	2005 - 2007	April 2006
Cell 4B[2]	17.63	2008 - 2010	January 2009
Cell 5[3]	9.24	2012 - 2013	May 2013
Cell 6[4]	12.81	2015 - 2017	June 2017
Cell 7	11.54	2019	December 2019
Cell 8[5]	10.42	2020 – 2021	November 2020
Cell 9A	9.70	2022	April 2023
Cell 9B	6.15	2023	Not Active

Total Acreage:	**143.35**
Notes:	1) Cell 4A was constructed in three phases. 2) Cell 4B was constructed in three phases. 3) Cell 5 was constructed in two phases. 4) Cell 6 was constructed in two phases. 5) Cell 8 was constructed in two phases.

Nine phases of final closure construction, totaling approximately 44.0 acres (in plan-view) have been completed to date over portions of Cells 1, 2A, 2B, 4A, 4B, 5 and 6. A summary of final closure construction information is included in Exhibit 2.

Exhibit 2. Final Closure Construction Information

Cell	Approximate Acreage	Year Constructed
Phase I	4.7	2001
Phase IA	4,500 SF	2006
Phase IIA	5.2	2007
Phase IIB	3.9	2008
Phase IIC	4.2	2009
Phase III	6.3	2011
Phase IVA	6.8	2018 - 2019
Phase VA	8.0	2021
Phase VB	4.8	2022
Total Acreage:	**44.0**	

1.3 2023 MONITORING AND REPORTING ACTIVITIES

Groundwater monitoring activities were conducted quarterly in March, June, September, and December following the procedures described in the *LRI Landfill Groundwater Monitoring Plan* (GWMP, March 20, 2014). In addition to water quality sampling, water level measurements were recorded during each monitoring event and are included in Appendix A. Monitoring results are provided in summary data tables in Appendix B and in the groundwater database in Appendix C. A geochemical evaluation including trilinear diagrams is included in Appendix D and groundwater statistical calculations are provided in Appendix E. Water quality time trends for the leak detection and collection system (LDCS) are presented in Appendix F. Laboratory reports (hard copies) for the 2023 fourth quarter groundwater sampling event will be submitted to the TPCHD under separate cover.

Stormwater monitoring was performed weekly, monthly, and quarterly in accordance with the National Pollution Discharge Elimination System (NPDES) Industrial Stormwater General Permit (ISGP Permit No. WAR002557) and the NPDES Construction Stormwater General Permit (CSWGP Permit No. WAR002603). Copies of the 2023 Discharge Monitoring Reports (DMRs) for the construction and industrial permits are included in Appendix G.

Landfill gas probe monitoring was conducted monthly and on-site buildings were monitored quarterly in 2023. Summary results of landfill gas monitoring are provided in Appendix H.

1.4 FINANCIAL ASSURANCE FOR POST-CLOSURE CARE

Summary tables of estimated costs for closure activities, post-closure care, and annual environmental monitoring are included in Appendix I.

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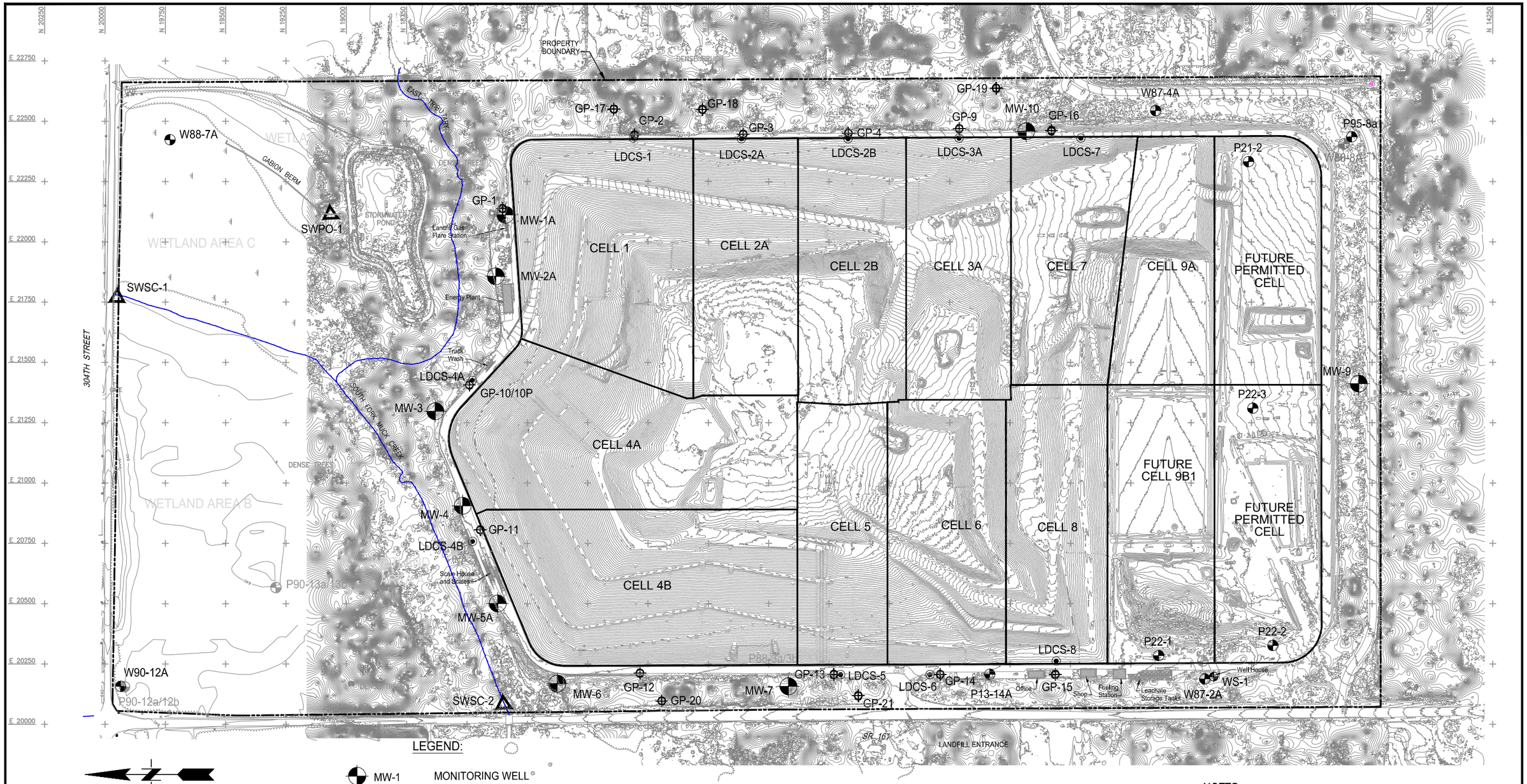
PROJECT NO. 04223001.02	DES BY LEL	SITE LOCATION MAP	DATE MARCH 2023
SCALE NOT TO SCALE	CHK BY SEG	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



LEGEND:

MW-1	MONITORING WELL
WS-1	WATER SUPPLY WELL
W87-2A	CHARACTERIZATION WELL/ PIEZOMETER
LDCS-1	LEAK DETECTION/COLLECTION SUMP
NEWB-2	SURFACE WATER MONITORING LOCATION
GP-1	GAS PROBE

0 400 800

SCALE (ft)

NOTES:

1. TOPOGRAPHIC BASE MAP PERFORMED BY PROPELLER AEROBOTICS, DATED 2023-10-01.
2. SOME EDGES OF LANDFILL IS BASED ON TOPOGRAPHIC BASE MAP PREPARED BY COOPER AERIAL SURVEYS CO., USING PHOTOGRAMMETRIC SURVEY METHODS, DATE OF PHOTOGRAPH MAY 09, 2017.
3. VERTICAL DATUM – BASED ON PIERCE COUNTY BENCH NO. 112-18, ELEVATION 660.29 NGVD29.

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PROJECT NO. 04223001.02	DES BY AMD	SITE MAP	DATE MARCH 2024
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET EAST GRAHAM, WASHINGTON	FIGURE 2
CAD FILE FIGURE 2	APP BY KGL		

G:\04223001.05 - LRI - Xcel\5 SI Landfill\2 Drawings - generic\SiteMaps\Figure 2 - Site Plan 03-01-2024.dwg Figure 2, 3/6/2024 8:46:14 AM, DWG To PDF.pc3

2.0 2023 REPORT FORM AND FACILITY CAPACITY INFORMATION

Landfilling operations were conducted over portions of each of the landfill cells in 2023. The tonnage of waste materials landfilled at the LRI Landfill during 2023 was approximately 967,379 tons. The total tonnage landfilled at the LRI Landfill since opening in December 1999 through December 31, 2023, accrues to approximately 23,700,000 tons. The in-place density of combined waste placed between December 1999 and December 31, 2023, is estimated to be approximately 2,100 pounds per cubic yard (lbs/CY). This estimate is based on the tonnage of waste landfilled and the calculated volume of fill from aerial photo topography data with an assumed allowance for ongoing densification of the waste over time. Based on the in-place density estimate of 2,100 lbs/CY, the volume of airspace consumed through December 31, 2023, was approximately 22.5 million cubic yards, or approximately 65.2 percent of the 34.6 million cubic yard total facility capacity estimate (not including volume consumed by daily and interim soil cover).

A copy of the LRI Landfill 2023 Annual Report Form for Municipal Solid Waste Landfills required by the Washington Department of Ecology (Ecology) is included in Appendix J.

3.0 LEACHATE MONITORING

3.1 LEACHATE VOLUMES

Leachate is collected from the eleven active landfill cells with depth-activated submersible pumps. Collected leachate is pumped via forcemain to sixteen above ground storage tanks, with a combined storage capacity of approximately 218,400 gallons. Leachate collected in 2023 was truck-hauled to the Hidden Valley Landfill where it was pre-treated and subsequently discharged to the Pierce County sewer system in accordance with the Pierce County Utilities Department Industrial Discharge Permit Number PC03096. In addition, leachate was truck-hauled to the City of Tacoma in Tacoma, Washington, and the City of Salem in Salem, Oregon for proper disposal. The volume of leachate produced at the landfill was measured with flow meters installed at each sump using a programmable logic controller (PLC) system, and by recorded volumes of leachate truck-hauled off-site for proper disposal. A summary of the fourth quarter leachate pumping records is included in Appendix F. A summary of 2023 leachate volumes truck-hauled off site for proper disposal is shown in Exhibit 3.

Exhibit 3. 2023 Leachate Volume Data

Month	Leachate Production (gallons)	Monthly Rainfall (inches)
January	3,132,793	2.51
February	3,419,960	2.36
March	2,842,354	2.41
April	3,424,820	4.91
May	3,078,773	0.62
June	2,614,294	1.18
July	2,511,155	0.15
August	2,522,008	0.15
September	3,082,132	2.75
October	2,752,980	2.70
November	4,417,669	5.38
December	3,729,699	8.38
Totals	**37,528,637**	**33.5**

Notes:
Leachate was truck-hauled off-site for proper disposal.
Leachate volumes were determined by trucking records kept on a daily basis.
Rainfall totals were obtained from an on-site rain gauge and from Weather Underground Station KWAGRA.

3.2 LEACHATE QUALITY

Leachate samples were collected from each individual sump location during December 2023. In addition, leachate samples were obtained from Cell 9 during the second and third quarters of 2023 (waste placement began in the second quarter and access to sump was not available in the fourth quarter). Leachate samples were obtained from sampling ports installed near the leachate riser pipes, or as grab samples. The collected leachate samples were submitted to Eurofins TestAmerica of Denver, Colorado and analyzed for the parameters listed in Appendix I and II of WAC 173-351. The

results of leachate monitoring are included on summary tables in Appendix B and with the groundwater database in Appendix C. No significant changes in leachate quality were noted in 2023 (see attached leachate database in Appendix C).

4.0 LEAK DETECTION MONITORING

The LRI Landfill includes a Leak Detection/Collection System (LDCS) that consists of a high-permeability gravel layer beneath the composite liner of each of the disposal cells. The LDCS is designed to monitor groundwater quality beneath the composite liner for early leak detection and to collect any leachate in the event a leak develops in the liner. Each landfill cell has one LDCS sump where groundwater is removed and monitored (see Figure 2 for sump locations). The PLC system is used to monitor the LDCS at each landfill cell on a daily basis for the total volume of water pumped and specific conductance (conductivity). In addition, samples are collected quarterly and analyzed for the parameters listed in Appendix I and II of WAC 173-351. Metals are analyzed as dissolved metals. Samples for laboratory testing were submitted to Eurofins TestAmerica of Denver, Colorado.

Summary tables of LDCS water quality results for each quarter are provided in Appendix B along with the groundwater monitoring results. Groundwater data generated from monitoring activities in 2023 were validated and input into a database utilizing Microsoft Office Access 2016 software. Field sampling data sheets and a data validation summary from the fourth quarter 2023 groundwater monitoring event are provided in Appendix B. A copy of the groundwater database for 2023 is included in Appendix C. Trilinear diagram plots of water quality data from the LDCS sumps are included in Appendix D.

Water quality results from the LDCS are evaluated for primary and secondary leachate indicator parameters and for landfill gas indicator parameters (see Section 12.5 of the GWMP). Primary leachate indicator parameters include acetone and 2-butanone (MEK). These constituents are consistently present in the leachate at elevated concentrations and are typically not naturally present in the groundwater. Secondary leachate indicator parameters include ammonia and chloride. These constituents are consistently present in the leachate at elevated concentrations and are naturally present in the groundwater at low concentrations. In addition, monitored increases in specific conductance (conductivity), total dissolved solids, alkalinity, sodium, potassium, and total organic carbon are further indications of potential leachate effects on water quality.

Landfill gas indicator parameters include dichlorodifluoromethane (Freon 12) and trichlorofluoromethane (Freon 11). These compounds are highly volatile, mobile, dissolve readily in water, and are not naturally present in the groundwater.

4.1 LDCS DAILY MONITORING

Groundwater is removed from the LDCS using dedicated submersible pumps that are activated by high (on) and low (off) float switches or transducers. LDCS monitoring data were uploaded from the PLC and supplemented with manually recorded data by LRI staff. Summaries of daily rainfall totals, daily discharge from the LDCS, and daily conductivity measurements for each LDCS sump are included in Appendix F. Also included are time-series plots that show the volume of water pumped, precipitation, and groundwater conductivity. The volume of water pumped from the LDCS increases during periods of sustained rainfall as illustrated by the time series plots. This correlation is believed to be the result of lateral inflow of water perched on top of the low permeability glacial till present beneath the landfill.

During 2023, operation and maintenance activities associated with the LDCS included replacing flowmeters and sampling pumps, checking electrical connections, and calibrating equipment within the vaults (pumps and meters) as needed. In addition, there were periods when the LDCS

conductivity meters incorrectly reported either zero or 1,000 µS/cm values due to equipment failures. These data points have been removed from the time series plots.

Conductivity data from the LDCS sumps generally trended within typical historical ranges during 2023.

4.2 LDCS QUARTERLY MONITORING

Groundwater samples were collected quarterly from each LDCS monitoring location. Samples were obtained from the LDCS sump riser pipes using disposable bailers at LDCS-1, LDCS-2A and LDCS-2B, and from dedicated low-flow QED bladder pumps at LDCS-3A, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6, and LDCS-7. Samples from LDCS-8 were collected as grab samples from the concrete channel discharge line. Samples from LDCS-9 were collected from the temporary Cell 9A sump during the first, second, and third quarter monitoring events, and from the discharge line of the temporary Cell 9B sump during the fourth quarter event.

Samples were submitted to Eurofins TestAmerica of Denver, Colorado. Field and laboratory data results for the LDCS samples are included on summary tables in Appendix B and in the groundwater database in Appendix C.

Time-trend plots for inorganic parameter and dissolved metal concentrations at the LDCS sumps are included in Appendix F. These plots provide a means of tracking water quality trends in the LDCS system. The following four plots are included for each leak detection sump:

- Plot 1 — nitrate, ammonia, chloride, TOC
- Plot 2 — alkalinity, sulfate, TDS
- Plot 3 — calcium, magnesium, sodium, potassium
- Plot 4 — iron, manganese, zinc, arsenic

Water quality results from the leak detection sumps during 2023 were generally consistent with previously measured values (see Appendix F), except as noted below.

Third quarter pH values were observed to be abnormally low at all LDCS locations. After further review, it was determined that there was a physical issue with the pH probe.

Ammonia was reported at concentrations up to 1.90 mg/L at each of the LDCS sumps except LDCS-8 during one or more quarters in 2023. Low-level concentrations of ammonia (up to 0.24 mg/L) were also reported in most of the groundwater monitoring wells during 2023. In addition, a low-level detection of ammonia (0.73 mg/L) was reported at upgradient well MW-10 in 2022. Therefore, low-level ammonia concentrations appear to be due to a site-wide aquifer condition, which has also affected LDCS water quality.

Chloride concentrations continue to display a general slowly increasing trend at LDCS-4A and LDCS-4B, and more recently at LDCS-2B and LDCS-6 (see the time trend plots in Attachment G). In addition, higher chloride concentrations were reported at LDCS-5 during the first, second and third quarter monitoring events. However, in each case the remaining leachate indicator parameters remained low or non-detect, therefore, the water quality trends noted above do not appear to be the result of leachate.

Dissolved iron concentrations greater than 1.0 mg/L (up to 68 mg/L) were reported at each of the LDCS locations in 2023 during at least one quarter, with the exception of LDCS-5 and LDCS-9. Dissolved manganese concentrations greater than 1.0 mg/L (up to 5.1 mg/L) were reported at each of the LDCS locations in 2023 during at least one quarter, with the exception of LDCS-9. These elevated concentrations are likely due to the presence of iron and manganese bacteria that may be present in shallow soils surrounding the landfill.

Total organic carbon results for LDCS-1, LDCS-2B, LDCS-4A, and LDCS-5 included elevated concentrations (>10 mg/L) during one or more quarterly monitoring events in 2023.

Low-level detections of 1,4-dichlorobenzene (up to 1.4 µg/L) were reported in samples collected from LDCS-1 during the second, third and fourth quarter monitoring events and from LDCS-2A during the first and second quarter monitoring events. However, as discussed above, secondary indicator parameters ammonia and chloride remained consistent with historic results (see time trend plots included in Appendix F). Additionally, primary indicator parameter, 2-butanone, was not detected at any of these LDCS locations in 2023. Therefore, the reported VOC detections do not appear to be related to leachate.

Acetone was detected at LDCS-1 during each quarterly monitoring event, including a concentration of 160 µg/L during the third quarter. However, primary leachate indicator parameter, 2-butanone, was not detected and secondary indicator parameters, ammonia and chloride, remained low during the third quarter (0.90 mg/L and 5.5 mg/L, respectively). Therefore, the acetone detections do not appear to be the result of leachate.

Benzene was detected during the second and third quarter monitoring events at LDCS-7 at concentrations of 5.4 µg/L and 9.2 µg/L, respectively. However, primary leachate indicator parameters, acetone and 2-butanone, were not detected and secondary indicator parameters, ammonia and chloride, remained at low concentrations. Therefore, the benzene detections do not appear to be the result of leachate.

No other VOCs were detected in samples collected from the LDCS in 2023.

5.0 GROUNDWATER LEVELS AND FLOW DIRECTIONS

5.1 LOCAL HYDROGEOLOGY

The LRI Landfill site is located on low-permeability glacial till and transitional till that is approximately 45 feet thick. Beneath the glacial till layer is a saturated glacial outwash deposit that forms a confined aquifer. Intermediate and deeper groundwater systems are present at the site, each of which is separated by layers of low permeability (aquitard) deposits. Summary descriptions of the individual hydrogeologic units are presented in Section 2 of the GWMP.

5.2 WATER LEVEL MEASUREMENTS

Depth to water level measurements were collected quarterly in 2023. The water level database and water level contour maps for each quarter are included in Appendix A. Groundwater flow in the confined aquifer was to the northwest during all monitoring events. Horizontal hydraulic gradients in the confined aquifer ranged from approximately 0.007 to 0.012 beneath the active area of the landfill. This flow pattern is consistent with previous data. The horizontal hydraulic conductivity of the confined aquifer is inferred to range from 1×10^{-4} centimeters per second (cm/sec) to 1×10^{-2} cm/sec. This range of values is based on rising head slug test data and on observations of groundwater discharge during drilling. The effective porosity of the aquifer is assumed to be 25 to 40 percent, based on values documented in the scientific literature (Freeze and Cherry, 1979). Based on a horizontal hydraulic gradient of 0.0125, a horizontal hydraulic conductivity of 1×10^{3} cm/sec, and a porosity of 30 percent, the horizontal flow rate of water in the confined aquifer is estimated to be approximately 43 feet per year in the area of Cell 1.

6.0 GROUNDWATER MONITORING

The groundwater monitoring network for the LRI Landfill in 2023 included two background wells (MW-9 and MW-10) and seven downgradient wells (MW-1A, MW-2A, MW-3, MW-4, MW-5A, MW-6, and MW-7). Quarterly groundwater monitoring was conducted in March, June, September, and December using micro-purge techniques and dedicated QED Well Wizard pumps, or a non-dedicated QED Sample Pro pump (MW-4). Groundwater samples were analyzed for the parameters listed in Appendix I and Appendix II of WAC 173-351. Samples were submitted to Eurofins TestAmerica of Denver, Colorado. Groundwater sampling locations are depicted in Figure 2.

Summary tables of water quality results for each quarter are provided in Appendix B. Data provided in the tables include field parameters, laboratory parameters, and duplicate samples. Groundwater data generated from monitoring activities in 2023 were validated and input into a database utilizing Microsoft Office Access 2016 software and will be uploaded into Ecology's Environmental Information Management (EIM) database system. Time trend plots, field sampling data sheets, and a data validation summary for the fourth quarter 2023 groundwater monitoring event are provided in Appendix B. A copy of the groundwater database for 2023 is included in Appendix C. Trilinear diagram plots and anion/cation balance equations are included in Appendix D. Statistical calculations performed on groundwater data are presented in Appendix E. The groundwater database was provided to the TPCHD as a Microsoft Office Access file in electronic format (on compact disk) and analytical laboratory reports were provided as paper hardcopies under a separate submittal.

6.1 BACKGROUND DATA

The background water quality data set includes a minimum of eight rounds of water quality data collected from each downgradient monitoring well prior to the placement of waste in an upgradient landfill cell. In addition, ongoing background water quality data is collected each quarter from upgradient wells MW-9 and MW-10.

Low levels of inorganic parameters including alkalinity, ammonia, chloride, nitrate, sulfate, total organic carbon, and total dissolved solids, as well as low levels of total metals including barium, calcium, magnesium, potassium, sodium, vanadium, and zinc were reported in the background groundwater samples. VOCs, with two exceptions, have not been reported in the background samples.

6.2 GROUNDWATER QUALITY EVALUATION

Consistent with the GWMP, a nonparametric inter-well prediction limit approach is used to evaluate water quality results for Appendix I parameters (15 metals plus nitrate). Using this procedure, the highest concentration of each parameter in the background data set is selected as the prediction limit for that parameter. For total metals, prediction limits for non-detected metals were set equal to the method reporting limit (MRL). If more than one MRL was used over the eight-quarter evaluation period, the higher value was selected as the prediction limit.

Prediction limits are updated when water quality changes are observed from ongoing monitoring at upgradient (background) wells MW-9 and MW-10. The groundwater prediction limits remained unchanged in 2023. Nitrate and total metal concentrations measured at downgradient monitoring wells were less than or equal to prediction limit values in 2023.

Downgradient water quality results were also compared to the groundwater quality criteria listed in WAC 173-200. Inorganic parameters and metals results measured at downgradient monitoring wells that exceeded their respective groundwater quality criteria are included below in Exhibit 4. The values listed in Exhibit 4 remained typical of previous results, are interpreted to be within natural, background variation. The MRL for arsenic is 0.005 milligrams per liter (mg/L), which is greater than the WAC 173-200 criterion of 0.00005 mg/L. Therefore, all arsenic results were greater than the WAC 173 200 criterion. With the exception of a first quarter arsenic detection at MW-4 of 0.011 mg/L, all reported arsenic detections were less than or equal to the Federal primary drinking water maximum contaminant level (MCL) of 0.010 mg/L.

Exhibit 4. 2023 Groundwater Results Greater Than WAC 173-200 Criteria

Parameter	Event	Ground-water Criteria	MW-1A	MW-2A	MW-3	MW-4	MW-5A	MW-6	MW-7
Arsenic, Total	Q1	0.00005	**	**	**	0.0110	0.0061	0.0077	0.0053
	Q2		**	**	**	0.0100	0.0061	0.0071	0.0055
	Q3		**	**	**	0.0089	**	0.0070	**
	Q4		0.0088	**	**	0.0084	0.0055	0.0084	0.0059
Iron, Dissolved	Q1	0.30	1.1	0.86	*	*	*	*	*
	Q2		*	0.65	*	*	*	*	*
	Q3		*	0.71	*	*	*	*	*
	Q4		*	0.94	*	*	*	*	*
Manganese, Dissolved	Q1	0.05	0.19	0.29	0.39	0.16	0.17	0.23	0.22
	Q2		0.09	0.29	0.37	0.12	0.19	0.28	0.28
	Q3		0.19	0.28	0.26	0.07	0.12	0.19	0.20
	Q4		*	0.34	0.29	*	0.17	0.28	0.24

Notes:
* = concentration less than WAC 173-200 criterion
** = analyte not detected at or above the MRL, but MRL is greater than the WAC 173-200-040 Groundwater Criteria
Bold value = exceeds the site-specific prediction limit in addition to the WAC 173-200-040 GW Quality Criteria

Time-trend plots for inorganic parameters and dissolved metal concentrations at the monitoring wells are included in Appendix B. The following four plots are included for each monitoring well:

- Plot 1 — nitrate, ammonia, chloride, TOC
- Plot 2 — alkalinity, sulfate, TDS
- Plot 3 — calcium, magnesium, sodium, potassium
- Plot 4 — iron, manganese, zinc, arsenic

Chloride and nitrate concentrations remain higher at upgradient well MW-10 compared to downgradient water quality. The pH values at MW-10 were below the WAC 173-200 criterion of 6.5 during each quarter in 2023, and the pH values at upgradient well MW-9 were below the WAC 173-200 criterion of 6.5 during the first quarter monitoring event. Since MW-9 and MW-10 are upgradient of the landfill, these values are interpreted to reflect background water quality conditions.

As shown on the referenced time-trend plots, downgradient dissolved metal and inorganic parameter concentrations during 2023 were consistent with previously measured values, except as noted below.

Low-level detections of ammonia (ranging between 0.10 and 0.24 mg/L) were reported at downgradient wells MW-2A, MW-3, MW-4, MW-5A, MW-6, and MW-7. However, similar ammonia detections have been reported at background well MW-10 (most recently during the third quarter of 2022). Therefore, the ammonia concentrations appear to be due to site-wide aquifer chemistry, which has also affected water quality within the LDCS.

A geochemical evaluation of Appendix II parameters was conducted quarterly at each well. This evaluation includes an examination of the cation/anion balance and the plotting of major ions on trilinear diagrams. Trilinear plots of major cations and anions are included in Appendix D. These plots demonstrate the inherent water quality difference between groundwater from the monitoring wells and LDCS system, versus leachate (see Appendix D).

The cation-anion balance evaluates the difference in the sum of cations and anions (in milliequivalents per liter [meq/L]) within a water sample to determine if it is electroneutral (balanced cation and anion charges). A threshold of ten percent difference is used if the total cation-anion sums are less than 5.0 meq/L, and a threshold of five percent difference is used if the total cation-anion sums are greater than or equal to 5.0 meq/L. During 2023, cation-anion balance evaluations exceeded the appropriate threshold at background monitoring well MW-10 during the first, second and third quarters. In addition, cation-anion balance thresholds were exceeded at downgradient monitoring wells MW-1A (third quarter), MW-2A (second quarter), MW-4 (third quarter), MW-6 (second quarter) and MW-7 (second and third quarters). These latter balances may reflect the presence of ions outside the parameter suite being analyzed, possible errors associated with analytical limitations in the measurements, or may be due to background water quality conditions (see summary tables in Appendix B).

The following statistics were performed using background groundwater quality data:

- The background mean
- The background variance
- The standard deviation of the background data
- The coefficient of variation of the background data
- The standard error of the background data

The statistical method accounted for data below the limit of detection by using a simple substitution of one-half the value of the method reporting limit. The groundwater data tables used for statistical analyses, including prediction limits, are included in Appendix E.

No VOCs were reported in groundwater samples collected from the monitoring wells in 2023.

6.3 MONITORING WELL CONSTRUCTION/MAINTENANCE

No significant well construction or well maintenance activities occurred in 2023.

7.0 STORMWATER MONITORING

Stormwater monitoring was performed weekly, monthly, and quarterly in accordance with the National Pollution Discharge Elimination System (NPDES) Industrial Stormwater General Permit (ISGP Permit No. WAR002557) and the NPDES Construction Stormwater General Permit (CSWGP Permit No. WAR002603).

Weekly monitoring per the CSWGP consisted of visual site inspections and stormwater sampling for turbidity. Monthly monitoring included visual site inspections. Quarterly monitoring per the ISGP consisted of visual site inspections and stormwater sampling for field parameters of turbidity and pH, and laboratory analyses of ammonia, biological oxygen demand (BOD), copper (total), zinc (total), total suspended solids (TSS), total petroleum hydrocarbons (TPH) as oil and grease (visual inspection), and semi-volatile organic compounds (SVOCs) including benzoic acid, alpha-terpineol, p-Cresol (4-methylphenol), and phenol. Samples for laboratory testing were submitted to Eurofins TestAmerica of Fife, Washington.

Construction stormwater and industrial stormwater were treated using Chitosan enhanced sand filtration (CESF) systems in 2023. The construction stormwater treatment system is located near the southwest corner of the future landfill footprint area. Treated construction stormwater is discharged into the concrete stormwater channel that conveys stormwater to the site's detention pond. The industrial stormwater treatment system is situated on the east side of the stormwater detention pond. Treated industrial stormwater is discharged through the outlet piping at the detention pond.

No stormwater benchmarks or water quality effluent limits were exceeded in 2023. Copies of the 2023 Discharge Monitoring Reports (DMRs) for the construction and industrial permits are included in Appendix G.

8.0 LANDFILL GAS MONITORING

8.1 GAS PROBE MONITORING

The landfill gas monitoring network consists of thirteen gas probes installed adjacent to the landfill within the perimeter berm (performance gas probes GP-1, GP-2, GP-3, GP-4, GP-9, GP-10, GP-10P, GP-11, GP-12, GP-13, GP-14, GP-15 and GP-16) and five soil probes that were installed in September of 2022 within native soils closer to the facility property boundary (compliance gas probes GP-17, GP-18, GP-19, GP-20, and GP-21).

Gas probe monitoring was conducted monthly during 2023 using a Landtec GEM 2000. Methane was not measured above the lower explosive limit of 5 percent methane by volume at performance gas probes, GP-3, GP-4, GP-9, GP-11, GP-13, GP-14, and GP-15. Concentrations of methane greater than 5 percent by volume were recorded at least once at performance probes GP-1, GP-2, GP-10A, GP-10B, and GP-12. Methane was not measured at detectable levels in any of the five compliance probes in 2023. Table H-1 in Appendix H provides a summary of landfill gas monitoring results for 2023.

The performance gas probes are designed to allow for the early detection of landfill gas before subsurface migration to the property line (point of compliance) could occur. On May 4, 2023, a barhole survey was performed for GP-1 and GP-10/10P that exhibited methane concentrations greater than 5.0%. The locations selected were immediately adjacent to the perimeter berm located within native soils. Barhole samples were taken approximately every 50-feet in either direction parallel to the perimeter berm near these performance probes. No methane was detected in any barhole reading within the native soils. This result was consistent with previous barhole monitoring surveys conducted for GP-2 and GP-12 which have shown that the methane levels reported above in the performance probes do not result in the migration of landfill gas to the property line.

8.2 ON-SITE BUILDING MONITORING

On-site buildings were monitored once per quarter in 2023. Measurements were obtained using a GasTech or Photovac MicroFID (FID). No significant levels of methane were reported at any of the buildings in 2023. For more details regarding the on-site building monitoring see Appendix H.

8.3 LANDFILL GAS EXTRACTION WELL CONSTRUCTION

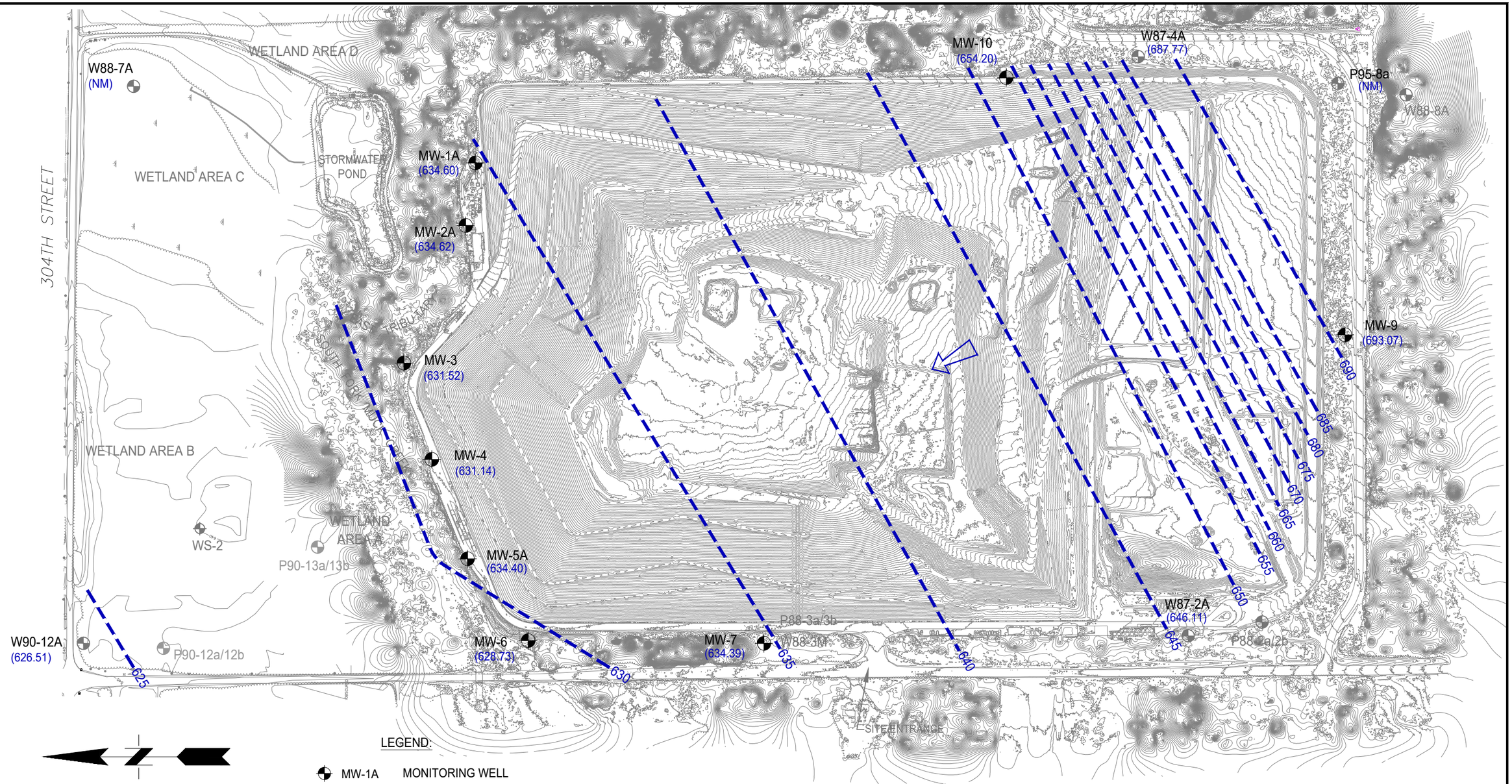
Thirty-three (33) new landfill gas extraction wells were installed in three phases at the LRI Landfill in 2023. Copies of the three Gas Extraction Well Installation Reports that summarize the work are included in Appendix H.

9.0 FINANCIAL ASSURANCE COST ESTIMATES

Cost estimates for constructing the final closure over the refuse, as well as performing annual monitoring and maintenance are included in Appendix I. As required in Chapter 173-351-600(3)(a), the estimates are in current dollars for the total cost of hiring a third party to perform the work. Costs for post-closure monitoring and maintenance are based on the most expensive costs of post-closure care during the post-closure period. The closure and post-closure cost estimates are reviewed annually and updated as appropriate.

Appendix A

Water Level Data



NOTES:

VERTICAL DATUM - BASED ON PIERCE COUNTY BENCH NO. 112-28, ELEVATION 660.29 NGVD29

LEGEND:

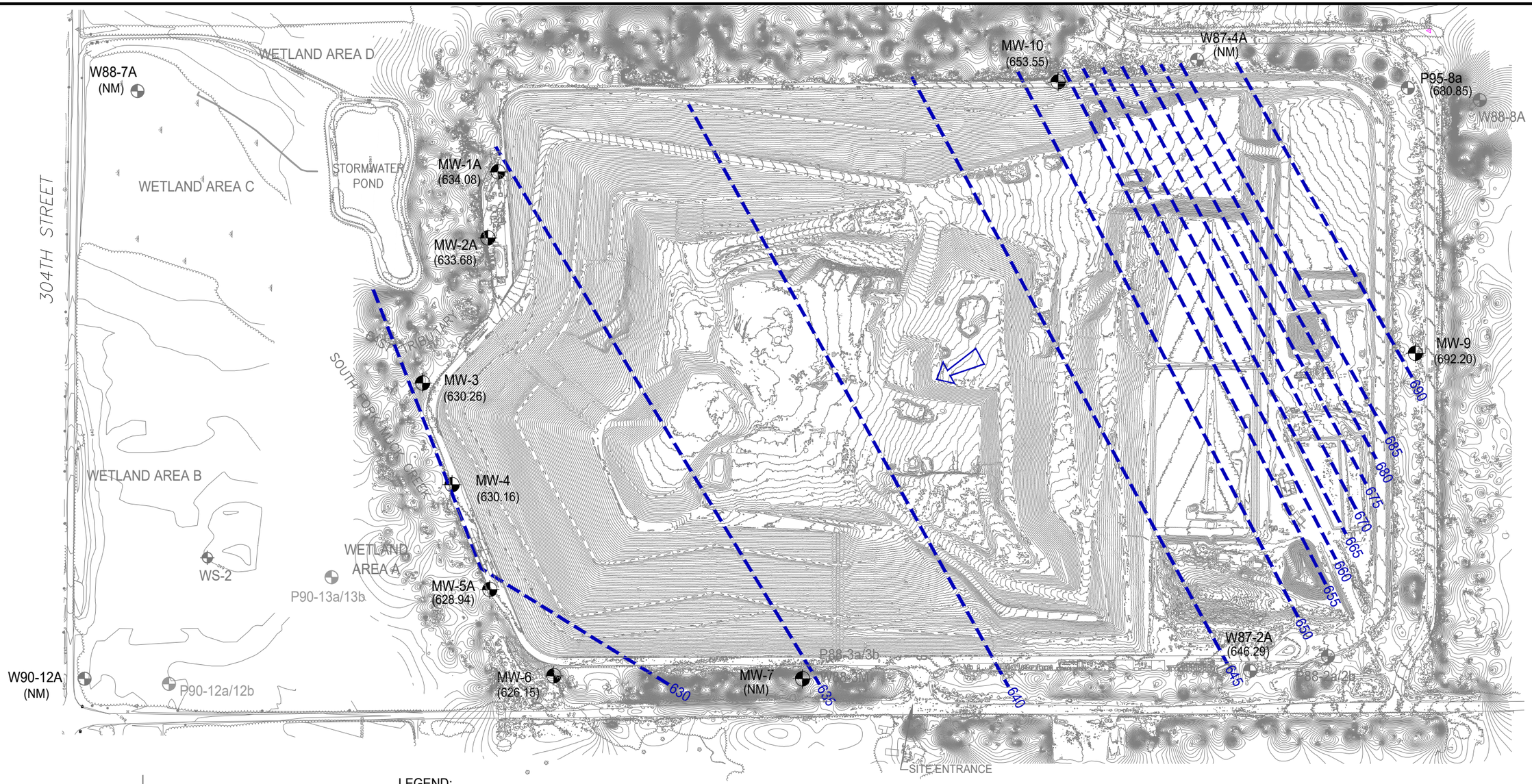
MW-1A	MONITORING WELL
W87-2A	CHARACTERIZATION WELL/ PIEZOMETER
(646.11)	GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
	INFERRED GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED

0 400 800

SCALE (ft)

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO. 04223001.02	DES BY J.E.	POTENTIOMETRIC SURFACE CONTOUR MAP MARCH 14, 2023	DATE APRIL 2023
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



LEGEND:

MW-1A	MONITORING WELL
W87-2A	CHARACTERIZATION WELL/ PIEZOMETER
(646.29)	GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
	INFERRED GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED

NOTES:

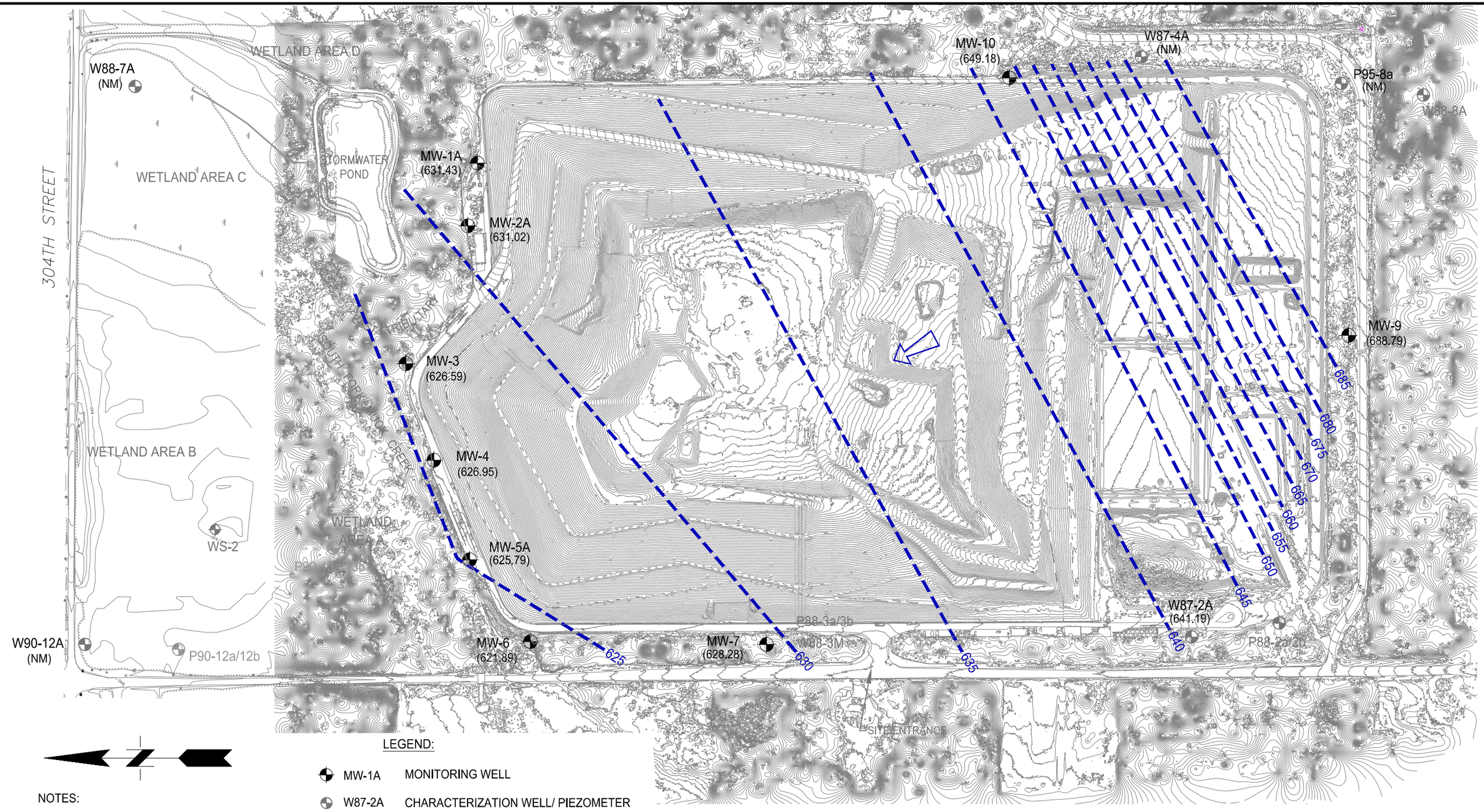
VERTICAL DATUM - BASED ON PIERCE COUNTY BENCH NO. 112-28, ELEVATION 660.29 NGVD29

0 400 800

SCALE (ft)

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO. 04223001.02	DES BY J.E.	POTENTIOMETRIC SURFACE CONTOUR MAP JUNE 7, 2023	DATE AUGUST 2023
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



LEGEND:

MW-1A	MONITORING WELL
W87-2A	CHARACTERIZATION WELL/ PIEZOMETER
(641.19)	GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
	INFERRED GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED

NOTES:

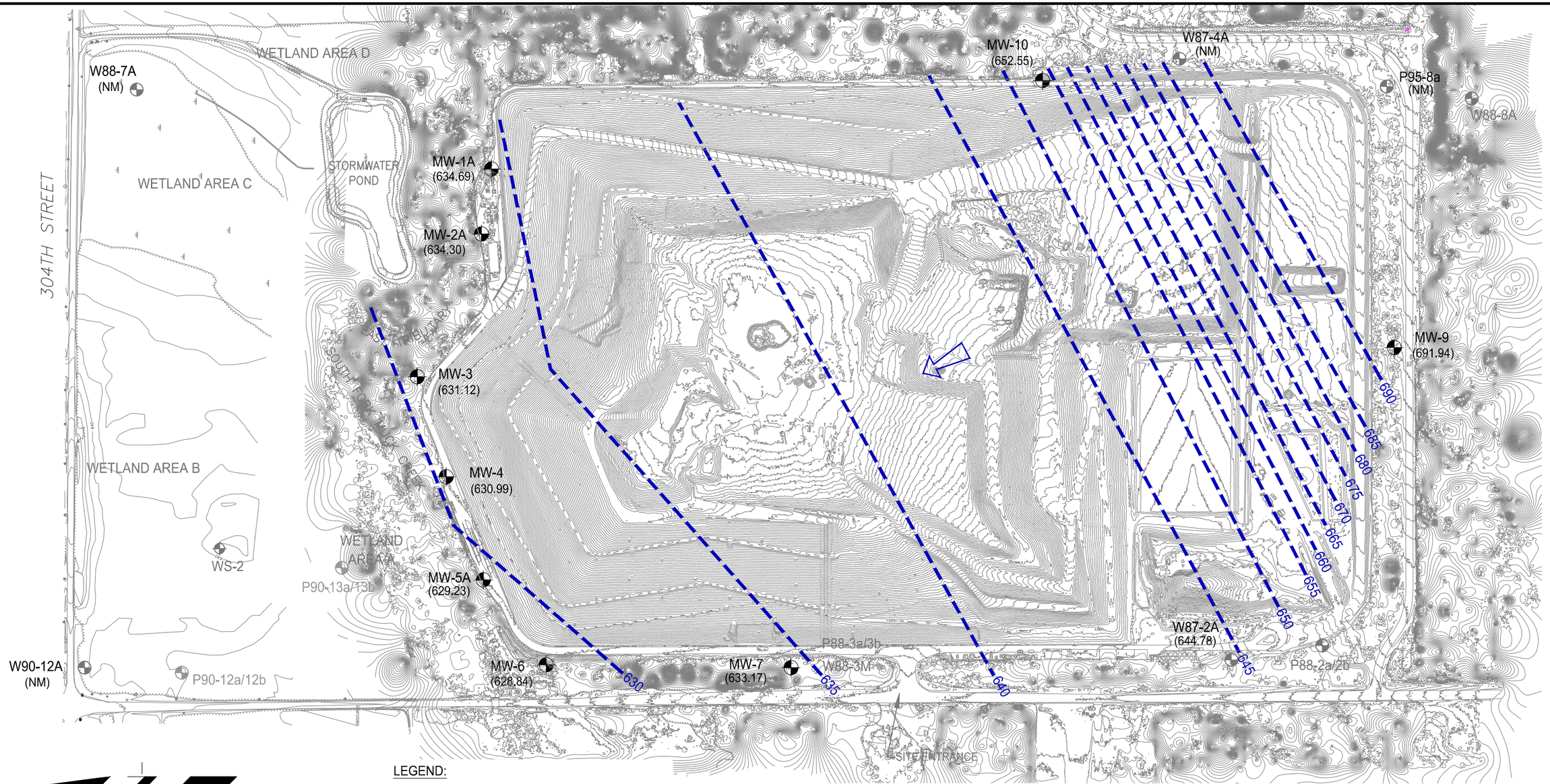
VERTICAL DATUM - BASED ON PIERCE COUNTY BENCH NO. 112-28, ELEVATION 660.29 NGVD29

0 400 800

SCALE (ft)

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO. 04223001.02	DES BY AMD	POTENTIOMETRIC SURFACE CONTOUR MAP SEPTEMBER 29, 2023	DATE NOVEMBER 2023
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



LEGEND:

MW-1A	MONITORING WELL
W87-2A	CHARACTERIZATION WELL/ PIEZOMETER
(644.78)	GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
	INFERRED GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED

NOTES:

VERTICAL DATUM - BASED ON PIERCE COUNTY BENCH NO. 112-28, ELEVATION 660.29 NGVD29

0 400 800

SCALE (ft)

SCS ENGINEERS

Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO. 04223001.02	DES BY AMD
SCALE AS SHOWN	CHK BY KGL
CAD FILE FIGURE 1	APP BY KGL

POTENTIOMETRIC SURFACE CONTOUR MAP
DECEMBER 13, 2023

LRI LANDFILL
30919 MERIDIAN STREET E.
GRAHAM, WASHINGTON

DATE MARCH 2024

FIGURE 1

G:\04223001\02 - LRI GW Monitoring\6_Charting\Water Level Maps\20231213\20231213GWTopo Figure 1 - Water Level Map_12-13-2023.aprx\Layout1, 3/13/2024 12:18:31 PM, DWG To PDF.pc3

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	WELL CASING ELEVATION	11/6/1987	7/13/1988	7/26/1988	9/8/1988	12/22/1988	1/17/1989	2/27/1989	3/21/1989	4/11/1989	5/19/1989	7/5/1989	8/21/1989	9/22/1989	10/19/1989	11/13/1989	12/4/1989	12/21/1989	1/29/1990
W87-1A	661.27	649.01	653.52	650.48	650.25	656.26	656.32	656.36	656.44	656.38	655.51	653.13	650.80	649.55	648.87	649.61	655.43	655.76	656.26
W87-2A	664.01	648.28	651.18	648.71	645.31		653.66	651.41	651.95	652.31	651.64	649.58	647.12	646.34	646.52	647.39	649.73	650.69	652.01
W88-3M	658.11						649.88		650.30	650.41	650.06	649.04	647.23	646.07	645.80	645.82	647.45	648.45	650.72
W87-4a	693.29	681.38	685.21	683.23	683.17		687.80	687.86	687.77	687.64	686.52	684.68	683.14	682.20	681.53	683.47	687.11		687.69
W88-5A	645.26						634.45	636.09	636.09	635.96	635.22	633.24	631.05	630.20	629.75	630.91	634.81	635.53	635.83
W88-6A	652.23							646.99	646.42	646.01	645.05	642.74	643.34	639.23	638.45	639.87	646.99	646.60	647.23
W88-7A	632.51							628.25	628.52	628.44	627.25	625.71		623.33	623.42	625.20	627.21	627.41	
W88-8M	721.05								684.20	684.28	683.42	682.49	681.68	681.26	681.17	681.85	682.86	683.05	683.98
W90-12A	640.84																		
W95-14A	680.49																		
MW-1	649.51																		
MW-1A	652.57																		
MW-2	639.25																		
MW-2A	651.93																		
MW-3	637.41																		
MW-4	652.37																		
MW-5	654.40																		
MW-5A	655.55																		
MW-6	635.71																		
MW-7	656.03	630.52	636.18	633.64	632.01	638.96	639.03	639.35	639.72	639.56	638.29	636.03	632.87	631.72	631.08	633.03	637.68	638.80	638.88
MW-9	701.77																		
MW-10	678.37																		
P88-1a	662.16					658.69	658.67	658.87	658.73	658.62	658.24	655.39	652.95	651.51	650.69	651.72	658.78	658.35	658.75
P88-1b	661.86					656.20	656.35	656.44	656.44	656.36	655.59	653.19	650.87	649.59	648.90	649.66	655.46	655.86	656.16
P88-2a	663.96						660.29	660.48	660.44	660.34	659.53	656.60	654.31	653.20	652.57	653.40	659.37	659.95	660.41
P88-2b	663.48						653.80	653.75	654.05	654.17	653.21	651.05	648.35	647.33	647.12	647.77	652.15	653.25	653.61
P88-3a	656.20					649.60	649.09	649.35	649.54	649.30	648.04	643.97	640.42	639.34	638.56	639.61	646.37	648.67	649.30
P88-3b	655.98					645.54	645.44	645.69	645.51	645.24	643.89	640.59	636.20	636.05	635.33	636.70	642.57	644.52	644.89
P87-4M	693.21	680.80	682.61	680.90	681.35		683.90	683.93	684.13	683.98	683.22	682.34	681.44	681.08	680.90	681.65	682.82	682.95	683.29
P88-5a	644.83						637.46	637.42	637.34	637.09	636.05	633.99	632.08	631.26	630.70	631.20	634.36	635.95	637.18
P88-5b	644.60						635.13	636.26	635.90	635.74	635.01	632.88	630.79	629.89	629.42	630.75	634.39	635.51	635.60
P95-8a	722.07																		
P88-9a	653.28							646.75	646.62	646.56	645.85	643.56	640.44	639.16	638.43	640.86	645.76	646.11	
P88-9b	652.79							641.52	641.53	641.47	640.58	638.47	635.76	634.66	634.00	634.98	639.88	640.88	641.30
P88-10a	665.70						661.33	661.68	661.60	661.45	660.00	657.45	654.46	652.77	651.59	652.13	659.04	660.27	661.42
P88-10b	665.48						655.58	655.66	655.70	655.73	654.82	652.65	649.87	648.49	647.77	648.25	653.73	654.77	654.99
P90-12a	640.79																		
P90-12b	640.73																		
P90-13a	645.19																		
P90-13b	643.63																		
P13-14A	665.96																		
GP-1P	652.00																		
GP-2P	656.61																		
GP-3P	658.51																		
GP-4P	662.01																		
GP-5P	653.59																		
GP-6P	652.39																		
GP-7P	658.12																		
GP-8P	659.18																		
GP-9P	674.03																		
GP-10	649.86																		
GP-14																			
GP-15																			
GP-16																			
WS-1	646.07	613.37	617.99		612.73				619.27	619.86	618.55	616.37	608.54	613.09	612.91	613.44	616.55	618.43	617.39
SG-1	632.79																		
SG-2	629.95																		
LDCS-1	657.26																		
LDCS-2A	659.24																		
LDCS-2B	661.70																		

Well MW-4 casing adjusted from 639.35 to approximately 643.05 in September 2005, to 652.37 in May 2006
Well MW-5 adjusted from 644.83 to 654.40 in August 2008
Well MW-10 casing adjusted from 673.87 to 678.37 in August 2019
Well W88-3M casing adjusted from 656.03 to 658.11 in September 2000
Well MW-6 was previously referred to as MW-11A
Well MW-7 was previously referred to as MW-3A
Well P13-14A was previously referred to as P13-14b

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	3/5/1990	4/17/1990	6/19/1990	9/24/1990	10/17/1990	11/19/1990	12/18/1990	1/25/1991	3/14/1991	5/2/1991	6/10/1991	7/11/1991	10/2/1991	10/23/1991	11/21/1991	12/13/1991	1/15/1992	3/25/1992	5/7/1992	6/25/1992
W87-1A	656.14	656.07	656.08	650.00	649.72	655.18	656.27	656.17	656.33	656.10	655.82	653.94	649.74	649.19	650.66	655.56	655.96	656.02	655.77	651.61
W87-2A	652.26	652.55	652.74	647.98	648.42	650.31	651.74	651.91	652.43	653.15	653.05	651.46	648.63	648.48	649.01	650.88	651.94	652.80	652.69	649.35
W88-3M	651.18	651.05	651.08	646.90	646.81	648.08	649.85	650.18	650.44	650.26	650.12	649.99	646.95	646.63	646.78	648.10	648.90	649.96	650.08	645.01
W87-4a	687.85	687.17	687.16	682.94	683.05	686.78	687.70	687.43	687.83	687.17	686.58	685.27	682.70		684.23	686.93	687.39	687.22	686.76	684.03
W88-5A	635.67	635.71	635.62	630.59	630.63	634.59	636.05	635.76	636.03	635.88	635.50	634.17	630.63		631.84	635.20	635.81	635.80	635.49	632.00
W88-6A	646.38	645.97	645.40	643.54	639.29	645.78	646.48	645.11	645.56	644.90	644.56	643.16	639.26		640.18	644.48	644.86	644.75	644.38	640.68
W88-7A	626.84	626.72		623.10	624.15	626.83	628.09	627.89		628.20	627.62	626.51	623.56		625.48	627.26	627.70	627.73	627.38	625.72
W88-8M	684.17	683.81	683.95	681.85	682.04	682.84	684.08	684.12	684.05	684.12	683.76	683.16	681.78		682.33	683.11	683.33	683.85	683.58	682.41
W90-12A					606.11	610.40	612.46	612.72	613.50	614.36	613.71	611.72	607.30		608.87	611.05	612.33	613.03	612.84	607.30
W95-14A																				
MW-1																				
MW-1A																				
MW-2																				
MW-2A																				
MW-3																				
MW-4																				
MW-5																				
MW-5A																				
MW-6					625.93	629.27	629.63	629.05	629.56	628.45	627.48	626.64	625.02		628.26	629.12	628.89	628.48	627.85	625.91
MW-7	639.03	639.23	639.16	632.12	631.13	637.87	639.92	639.03	640.00	639.61	638.98	637.23	632.27	631.85	634.62	638.34	639.18	639.54	639.21	634.34
MW-9																				
MW-10																				
P88-1a	658.41	658.45	658.27	651.73	651.32	658.76	658.86	658.49	658.91	658.54	658.17	656.22	651.37	650.60	653.93	658.49	658.65	658.55	658.02	653.81
P88-1b	656.18	656.12	656.12	650.06	649.96	655.17	656.30	656.18	656.40	656.12	655.84	653.94	649.72	649.19	650.67	655.56	655.98	656.01	655.79	651.65
P88-2a	660.19	659.84	660.18	654.10	653.40	659.51	660.47	660.26	660.22	660.44	659.98	658.31	653.99	653.46	654.98	659.49	660.33	660.29	659.88	655.75
P88-2b	653.85	653.90	654.07	648.27	648.38	652.16	653.87	653.84	654.37	654.40	654.07	652.42	648.48	648.13	649.05	652.93	653.80	654.18	653.99	650.04
P88-3a	649.03	649.20	648.99	639.84	639.52	646.95	649.66	649.20	649.77	649.41	648.66	646.02	639.73	639.13	641.39	647.69		649.34	648.65	642.02
P88-3b	644.77	644.95	644.87	636.54	636.39	643.06	645.62	645.05	645.65	645.34	644.64	642.39	636.61	636.12	638.44	643.80		645.37	644.84	638.68
P87-4M	683.95	683.61	683.78	681.52	681.90	682.59	683.63	683.87	683.63	683.69	683.48	682.85	681.54		682.18	683.01	683.23	683.63	683.51	682.07
P88-5a	636.82	634.54	634.86	631.67	631.49	634.21	637.39	636.85	636.32	637.24	636.74	635.26	631.84		632.08	637.99	637.26	637.17	636.76	633.37
P88-5b	635.39	635.35	635.23	630.21	630.21	634.35	635.75	635.42	635.87	635.49	635.08	633.72	630.23		631.64	634.90	635.47	635.42	635.02	631.67
P95-8a																				
P88-9a	646.47	646.56	646.53	639.84	639.65	645.97	646.74	646.66	646.92	646.73	646.43	644.94	639.75		641.34	646.12	646.65	646.65	645.38	642.34
P88-9b	641.25	641.29	641.24	635.15	635.05	639.87	641.36	641.38	641.77	641.49	641.10	639.58	635.20		635.99	640.50	641.30	641.37	641.10	637.02
P88-10a	660.96	660.40	660.93	653.25	652.46	659.18	661.31	661.10	661.66	661.43	660.66	658.88	652.90		653.13	659.54	661.00	661.04	660.65	656.02
P88-10b	655.60	655.39	655.48	649.02	648.67	653.60	655.45	655.48	655.66	655.66	655.26	653.84	648.89		649.25	654.43	655.30	655.48	655.28	651.28
P90-12a					636.03	638.60	638.72	638.47	638.15	638.39	637.84	636.53	634.20		638.28	638.43	638.45	638.21	637.48	635.41
P90-12b					634.03	637.13	637.36	636.99	636.60	637.02	636.62	635.23	632.58		636.51	636.94	637.02	636.79	636.21	633.78
P90-13a					632.30	639.60	640.40	639.94	640.84	640.11	639.21	637.34	632.84		633.36	639.61	640.14	639.77	639.37	635.00
P90-13b					632.23	639.42	640.31	639.74	640.50	639.85	638.91	637.11	632.65		633.73	639.40	639.91	639.56	639.11	634.78
P13-14A																				
GP-1P																				
GP-2P																				
GP-3P																				
GP-4P																				
GP-5P																				
GP-6P																				
GP-7P																				
GP-8P																				
GP-9P																				
GP-10																				
GP-14																				
GP-15																				
GP-16																				
WS-1	617.21	617.51	617.87	612.47	613.24	616.44	618.54	618.41	618.18	619.78	618.42									
SG-1								628.55	629.45	628.23	627.94	627.63	626.79		628.15	628.72	628.31	628.13		628.75
SG-2								626.21	626.76	626.12	625.95	625.72			626.38	626.59	626.32	626.19		625.33
LDCS-1																				
LDCS-2A																				
LDCS-2B																				

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	10/1/1992	10/29/1992	12/4/1992	1/15/1993	4/20/1993	6/2/1993	9/20/1993	11/3/1993	11/30/1993	1/25/1994	5/12/1994	6/21/1994	9/15/1994	10/21/1994	11/4/1994	12/13/1994	12/30/1994	1/30/1995	4/5/1995	5/24/1995
W87-1A	647.61	647.65	653.88	655.18	655.79	655.70	650.34	650.13	650.59	655.53	655.14	654.27	648.07	647.13	649.37	654.31	655.59	655.55	655.48	655.00
W87-2A	646.32	646.78	648.53	650.07	651.06	650.81	648.95	648.70	648.55	650.61	651.78	650.85	646.51	646.49	647.27	649.37	650.21	651.32	651.90	651.70
W88-3M	646.86	637.31	638.19	644.93	647.85		638.64	637.33	640.19	646.62	648.05	642.43	636.37	635.77	639.81	643.21	645.92	646.94	648.04	648.16
W87-4a	681.74	681.53	686.29	686.80	687.55	687.67	684.02	683.36	683.46	687.12	686.21	685.86	682.35	681.43	683.22	686.68	687.85	687.53	687.00	686.43
W88-5A	628.84	628.95	633.11	635.04	635.74	635.81	631.33	631.05	631.40	635.60	634.98	634.06	629.19	628.45	630.57	634.23	635.64	635.67	635.48	635.07
W88-6A	637.43	637.64	643.12	644.22	644.79	644.82	640.50	640.19	640.80	644.73	644.02	643.32	638.05	637.10	641.96	645.20	645.53	645.40	644.69	644.39
W88-7A	623.14	623.72	625.70	626.92	627.94	627.57	623.94	624.67	625.37	627.60	626.80	626.41	622.57	622.53	624.89		628.00	627.68	627.74	627.40
W88-8M	681.34	681.54	682.61	682.99	684.13	683.91	682.49	682.09	682.48	683.67	683.37	683.26	681.69	681.39	682.28	683.05	684.21	683.92	684.00	683.41
W90-12A	605.29	606.26	608.66	610.74	612.09	611.37	608.23	608.89	608.82	611.66	610.96	609.79	605.14	605.74	607.45	609.79	611.44	612.14	612.73	612.14
W95-14A																				
MW-1																				
MW-1A																				
MW-2																				
MW-2A																				
MW-3																				
MW-4																				
MW-5																				
MW-5A																				
MW-6	625.27	625.66	629.01	628.20	629.29	629.53	625.99	626.13	626.73	629.31	627.32	627.30	625.47	625.29	628.39	629.73	629.53	629.46	628.27	
MW-7	630.50	630.56	636.34	638.24	639.64	639.43	634.12	633.33	632.55	639.44	638.47	637.64	631.14	630.30	633.25	637.35	639.50	639.44	639.49	638.66
MW-9																				
MW-10																				
P88-1a	649.59	649.28	658.49	657.94	658.74	658.86	653.95	653.21	653.79	658.74	657.94	657.73	650.95	649.65	651.80	658.80	658.72	658.81	658.48	657.69
P88-1b	647.66	647.63	653.93	655.27	655.82	655.80	650.43	650.22	650.67	655.61	655.21	654.35	648.17	647.20	649.42	654.36	655.61	655.63	655.56	655.00
P88-2a	652.67	652.50	658.72	659.59	660.19			655.05	654.93	660.18	659.65	659.18	653.40	652.60	653.57	658.67	660.13	660.36	660.22	659.31
P88-2b	646.76	646.90	650.97	652.80	653.14			651.39	650.07	653.34	653.53	652.63	647.41	646.86	647.71	651.40	653.22	653.57	653.75	653.32
P88-3a	637.93	637.54	644.80	648.18	649.52	649.40		640.88	640.59	649.33	648.12	646.89	638.99	637.79	639.69	645.56	649.40	649.48	649.33	648.05
P88-3b	634.89	634.68	641.26	644.24	645.51	645.44		637.81	637.34	645.37	644.31	643.09	635.82	634.76	637.02	642.18	645.45	645.51	645.38	644.31
P87-4M	681.12	681.03	682.51	682.93	683.89	683.77	682.27	682.04	682.29	683.60	683.16	683.12	681.56	681.14	682.06	682.52	683.98	683.79	683.80	683.23
P88-5a	630.91	630.64	633.36	636.57	637.72	637.83	633.45	632.83	632.93	637.50	636.67	636.41	631.93	631.12	631.58	634.13	637.66	637.65	637.33	636.72
P88-5b	629.05	629.10	633.45	634.87	635.52	635.65	631.59	631.39	631.83	635.44	634.64	634.29	629.61	628.90	630.80	634.34	635.50	635.54	635.23	634.67
P95-8a																				
P88-9a	638.18	637.99	645.10	646.08	646.59	646.56	642.22	641.12	641.08	646.57		645.51	639.02	638.06	641.47	645.57	646.66	646.61	646.48	646.06
P88-9b	633.28	633.24	638.35	640.53	641.19	641.14	636.66	636.01	636.00	641.02		639.63	633.87	632.95	635.01	639.21	641.01	641.07	640.99	640.54
P88-10a	651.03	650.70	658.42	660.32	661.38	661.20	655.86	653.96	653.61	661.05	660.51	659.40	652.55	651.14	652.50	658.88	660.97	661.22	661.20	660.26
P88-10b	646.93	646.87	652.62	654.66	655.16	655.01	651.03	649.98	649.95	655.15	654.96	654.04	647.91	646.93	648.25	653.25	655.02	655.17	655.28	654.82
P90-12a	634.96	635.84	638.40	637.54	638.48	638.61	635.43	636.10	637.48	638.61	637.09	637.88	635.61	632.85	638.21	638.57	637.89	638.60	637.76	637.01
P90-12b	633.09	634.00	636.87	636.05	637.04	637.16	634.00	634.59	635.63	637.25	635.77	636.54	633.67	632.90	636.44	637.10	637.01	637.22	636.45	635.82
P90-13a	631.51	631.03	639.31	639.03	640.62	640.79	635.07	633.63	633.38	640.17	638.94	638.55	632.79	631.78	634.25	640.01	640.37	640.32	639.78	638.94
P90-13b	631.29	630.62	639.11	638.85	640.37	640.55	634.92	633.50	633.32	640.01	638.73	638.42	632.65	631.30	634.13	639.77	640.13	640.10	639.57	638.75
P13-14A																				
GP-1P																				
GP-2P																				
GP-3P																				
GP-4P																				
GP-5P																				
GP-6P																				
GP-7P																				
GP-8P																				
GP-9P																				
GP-10																				
GP-14																				
GP-15																				
GP-16																				
WS-1							614.40													
SG-1		628.97	629.25	629.20	629.50	630.34	629.50	628.75	628.65	629.25	628.49		628.21	628.19	628.61	632.11	631.18	629.67		
SG-2		625.53	626.53	626.08	626.78	628.13	625.28	625.63	625.88	626.78	625.81	625.86	625.25	625.41	626.43	629.45	627.93	627.01	626.22	626.01
LDCS-1																				
LDCS-2A																				
LDCS-2B																				

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	7/17/1995	7/18/1995	7/21/1995	7/24/1995	7/27/1995	10/11/1995	11/10/1995	12/13/1995	1/19/1996	4/26/1996	9/19/1996	10/18/1996	11/1/1996	12/13/1996	2/3/1997	3/24/1997	5/29/1997	6/9/1997	7/3/1997	8/27/1997
W87-1A		650.85	650.41		650.06	647.75	651.79	655.47	655.85	655.85	647.85	648.57	651.77	655.53	655.82	655.85	655.05	655.61	655.05	650.81
W87-2A			647.70			646.58	648.03	650.73	651.60	652.30	646.69	647.34	648.37	651.15	651.93	652.25	651.74		651.65	648.24
W88-3M			639.44			635.91	641.23	645.59	646.93	647.88	636.29	640.38	642.44	646.30	647.52	647.97	647.97	648.04	647.93	645.71
W87-4a		684.09	683.86			682.51	684.59	687.64	687.85	687.90	682.68		684.76	687.68	687.84	687.73	686.51		686.31	683.76
W88-5A			631.45			629.20	632.03	635.61	635.83	636.04	629.21	630.29	632.48	635.60	635.96	635.92	635.21			631.70
W88-6A			640.18			637.58	642.89	645.09	645.42	645.70	638.22	639.41	643.40	645.79	645.90	645.97	645.22		644.96	641.19
W88-7A					623.48	623.80	625.89	628.02	628.51	628.82	623.72	622.28	626.64	628.43	629.04	628.94	627.18		627.26	622.92
W88-8M		681.45	681.42			682.08	682.68	684.35	684.53	684.47	681.81	682.32	682.67	684.11	684.26	684.57	683.50		683.68	680.84
W90-12A			605.72			605.99	608.93	611.94	613.24	614.09	606.96	608.86	610.14	613.01	614.09	614.56	608.62	605.14	609.00	601.54
W95-14A			677.55	677.77	678.01	677.19	678.65			680.49	677.53	677.50	678.45	680.67	681.12		680.79		679.84	677.58
MW-1																				
MW-1A																				
MW-2																				
MW-2A																				
MW-3																				
MW-4																				
MW-5																				
MW-5A																				
MW-6			626.13			626.61	628.87	629.65	629.68	629.75	625.41	626.79	628.66	629.73	629.62	629.37	627.50	628.83	627.52	625.91
MW-7			634.07			631.34	635.77	639.82	640.18	640.15	631.36	632.34	635.76	640.13	640.27	640.21	639.12	640.04	638.85	634.08
MW-9	690.67		690.79	690.65	690.37	689.68	690.66	692.91	693.55	694.04	690.05	690.39	691.19	693.36	694.05	694.38	693.81		693.69	691.38
MW-10	657.97	657.97	657.75		657.20	655.36	657.43	660.89	661.76	662.04	655.38	655.78	657.75	661.19	662.18	662.27	661.71	661.95	661.71	659.02
P88-1a		654.06	653.70		653.27	650.59	657.05	658.58	658.69	658.85	650.26	650.41	657.45	658.62	658.92	658.69	658.36	658.55	658.03	656.27
P88-1b		650.94	650.50		650.16	647.82	651.79	655.51	655.89	655.88	647.94	648.57	651.84	653.20	655.88	656.40	655.13	655.66	655.08	650.91
P88-2a			655.43			652.82	655.78	660.00	660.50	660.38	653.26	653.01	656.73	660.20	660.50	660.42	659.54		659.38	655.23
P88-2b			649.10			647.07	649.08	653.36	653.96	654.19	647.34	647.61	649.47	653.66	654.11	654.24	653.38		653.31	649.36
P88-3a			641.74			638.21	642.30	649.28	649.76	649.72	638.81	638.69	642.47	649.44	649.84	649.71	648.35	649.41	648.15	641.45
P88-3b			638.66			635.39	639.37	645.51	645.98	645.87	635.78	636.04	639.53	645.72	646.00	645.89	644.57	645.61	644.37	638.48
P87-4M		681.49	681.23			681.89	682.28	684.28	684.21	684.37	681.63	681.83	682.69	683.87	684.11	684.50	683.35		683.44	680.75
P88-5a			633.74			631.62	632.67	637.44	637.66	638.11	632.05	631.87	632.92	637.48	636.01	635.86	635.24			631.62
P88-5b			631.70			629.75	632.23	635.47	635.65	635.80	629.72	630.32	632.51	635.62	637.82	637.65	636.75			633.31
P95-8a		697.86	697.63	697.55	697.58	697.29	697.29	700.89	702.18	700.84	697.51	697.64	697.48	701.39	702.52	702.53	722.07		700.13	698.57
P88-9a			642.21			638.69	646.35	646.64	646.84	646.82	638.95	639.13	643.58	646.74	646.87	646.80	646.21		646.07	642.02
P88-9b			636.40			633.52	636.60	640.99	641.24	641.33	633.74	634.32	637.15	641.13	641.34	641.36	640.59		640.46	636.55
P88-10a		656.20	655.86		655.33	651.55	655.66	660.99	661.40	661.39	652.42	651.75	655.76	660.88	661.38	661.33	660.14		660.19	655.84
P88-10b		651.08	650.72		650.21	647.29	650.17	655.21	655.54	655.50	647.73	647.68	650.53	655.24	655.55	655.62	654.78		654.69	650.71
P90-12a			635.95			637.46	638.20	638.68	638.68	638.47	635.80	637.29	637.94	638.59	638.39	638.10	638.29	637.67	637.65	636.69
P90-12b			634.35			635.24	636.71	637.28	637.33	637.27	634.02	635.44	636.61	637.31	637.24	636.98	636.69	636.44	636.40	634.66
P90-13a			635.06			632.11	636.97	640.24	640.56	640.96	632.89	632.51	637.91	640.20	640.79	640.44	638.98	640.41	639.48	635.15
P90-13b			635.21			632.06	636.72	640.05	640.36	640.71	632.80	632.46	637.75	639.95	640.60	640.23	638.91	640.17	639.29	634.94
P13-14A																				
GP-1P																				
GP-2P																				
GP-3P																				
GP-4P																				
GP-5P																				
GP-6P																				
GP-7P																				
GP-8P																				
GP-9P																				
GP-10																				
GP-14																				
GP-15																				
GP-16																				
WS-1																				
SG-1																	629.63		629.45	629.09
SG-2																	628.65	626.77	626.30	625.15
LDCS-1																				
LDCS-2A																				
LDCS-2B																				

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	10/13/1997	11/11/1997	1/8/1998	4/16/1998	6/19/1998	9/9/1998	10/28/1998	12/7/1998	1/28/1999	2/24/1999	3/30/1999	4/26/1999	5/26/1999	6/28/1999	7/29/1999	7/30/1999	8/6/1999	10/13/1999	11/1/1999	12/3/1999
W87-1A	651.02	654.45	655.66	655.50	653.90	647.40	646.89	653.58	655.44	655.48	655.48	655.12	655.00		651.14	651.07	650.60	647.14	648.67	654.42
W87-2A	648.89	650.46	651.50	652.27	651.38	645.83	646.19	648.80	651.28	651.79	652.01	651.68	651.56	650.23					646.83	
W88-3M	639.76	645.01	647.49	648.04		635.33	638.16	642.91	646.78	647.43	647.67	647.67	647.64	643.60			639.74			
W87-4a	684.06	685.51	687.73	687.04	685.86	682.67	681.95	687.02	687.87	687.63	687.62	686.63	686.67	685.31					682.06	
W88-5A	631.83	634.72	635.70	635.53	633.84	628.86	628.94	634.38	635.88	635.77	635.75	635.34	635.30	634.11	632.56	632.48	632.75	630.23	631.09	634.02
W88-6A	642.14	645.10	645.92	645.25	643.95	636.43	638.17	644.43	645.56	645.48	645.46	644.96	644.88	643.71	642.26	642.23		Decommissioned 7/30/99		
W88-7A	624.94	627.20	627.37	627.70	626.10	621.64	624.21	627.18	628.57	628.09	628.15	627.74	627.59	625.70	623.40	623.36				
W88-8M	682.65	683.41	684.16	684.03	683.30	681.44	681.57	683.37	684.30	684.10	684.18	683.45	683.41	682.70					681.75	
W90-12A	607.28	609.33	608.31	610.87	608.04	601.13	604.54	608.23	610.49	610.22	610.82	610.67	608.81	605.66			604.88			
W95-14A	678.60	680.29	680.49	680.49	680.49	677.20	676.81	679.72	680.49	680.49	680.49	680.49	680.41	679.46					676.85	
MW-1									636.11	636.48	636.35	636.12	636.03	635.12	633.41	633.33	634.44	632.15	632.89	635.12
MW-1A																				
MW-2									637.44	638.15	638.01	637.23	636.28	635.19	633.40	633.33	634.08			636.12
MW-2A																				
MW-3									633.75	634.02	633.45	633.02	632.89	631.81	630.16	630.04	630.01	627.95	628.70	631.46
MW-4									633.90	633.86	633.90	633.24	633.17	632.00			630.08	626.72	627.78	632.00
MW-5																				
MW-5A																				
MW-6	627.56	628.91	629.62	628.53	627.07	624.92	625.49	629.16	629.78	629.45	629.51	628.06	628.24	627.14			625.95	624.98	625.93	629.26
MW-7	634.99	638.54	640.47	640.11	638.15	630.72	630.36	638.56	640.47	640.46	640.61	639.80	639.65	637.46			633.84		630.97	637.40
MW-9	691.47	692.48	693.71	694.16	693.55	690.23	689.55	691.92	693.37	693.61	693.80	693.39	693.35	692.41					689.32	
MW-10	657.94	660.15	661.73	662.20	660.17		654.52	658.76	660.99	661.53	661.86	661.68	661.64	659.99					658.21	
P88-1a	654.37	658.66	658.87	658.58	657.52	650.55	648.81	658.59	658.93	658.82	658.78	658.39	658.20				654.43	651.64	652.36	658.21
P88-1b	651.11	657.54	655.67	655.52	653.96	647.41	646.91	653.64	655.48	655.50	655.51	655.13	655.04				650.45	647.73	648.47	654.22
P88-2a	655.05	658.72	660.42	660.24	659.02	653.17	652.12	658.94	660.42	660.55	660.46	660.14	659.75	657.93					652.04	
P88-2b	649.65	652.45	653.91	654.13	653.09	646.82	645.44	650.92	653.79	654.01	654.10	653.69	653.51	651.65					646.57	
P88-3a	642.03	645.78	649.81	649.37	647.37	638.90	637.33	646.52	649.94	649.87	649.84	649.28	648.79	645.47			641.18		637.53	646.15
P88-3b	638.96	642.68	646.02	645.58	643.63	635.52	634.42	643.17	646.07	646.06	646.06	645.00	645.05	642.18			638.21		634.86	642.62
P87-4M	682.52	683.25	683.97	683.78	683.16	681.14	681.35	683.13	684.05	683.91	683.95	683.36	683.19	682.58					681.51	
P88-5a	633.24	635.81	637.93	637.49	636.27	632.12	631.20	634.21	638.06	637.76	637.75	637.25	637.28	636.76	635.37	635.36		Decommissioned 7/30/99		
P88-5b	632.15	634.57	635.55	635.20	634.10	629.41	629.08	634.31	635.56	635.43	635.37	634.95	634.90	634.19	632.62	632.60		Decommissioned 7/30/99		
P95-8a	697.72	698.73	700.25	700.74	699.30	697.33	696.86	697.95	702.21	702.06	701.25	700.19	699.91	722.07					697.05	
P88-9a	641.88	645.85	646.84	646.50	645.50	639.11	637.98	645.70	646.75	646.75	646.74	646.35	646.31	645.20	642.94	642.86	642.78	639.46		645.03
P88-9b	636.65	640.03	641.26	641.00	639.60	633.50	632.94	639.43	641.21	641.22	641.22	640.75	640.75	639.54	637.26	637.36	637.74	633.99		637.86
P88-10a	654.97	659.85	661.39	661.07	659.71	652.94	651.02	658.79	661.11	661.50	661.40	661.01	660.67	658.27					651.10	
P88-10b	650.45	654.09	655.45	655.36	654.26	647.53	646.35	652.95	655.33	655.44	655.45	655.10	654.97	653.18					646.88	
P90-12a	638.11	638.21	638.53	638.50	638.43	637.23	637.88	638.51	638.61	638.62	638.59	638.57	638.56	638.63			636.07			
P90-12b	636.58	636.87	637.02	636.99	636.70	634.99	636.03	636.98	637.26	637.20	637.16	637.08	636.99	636.82			634.29			
P90-13a	636.92	640.22	640.75	639.91	638.37	633.04	631.61	639.63	640.86	640.61	640.24	639.38	639.64	637.57			635.32			
P90-13b	636.75	639.68	640.49	638.66	638.15	632.85	631.43	639.40	640.60	640.38	640.00	639.18	639.40	637.40			635.09			
P13-14A																				
GP-1P																				
GP-2P																				
GP-3P																				
GP-4P																				
GP-5P																				
GP-6P																				
GP-7P																				
GP-8P																				
GP-9P																				
GP-10																				
GP-14																				
GP-15																				
GP-16																				
WS-1																		602.10		
SG-1	629.86	630.04	630.79	629.88	630.33	628.52	630.24	629.82	631.55	630.69	630.56	630.46	630.06	629.97			629.95			
SG-2	626.03	626.80	627.67	626.63	625.90		625.23	627.20	628.18	626.94	626.76	626.14	626.11	625.80			625.20			
LDCS-1																				
LDCS-2A																				
LDCS-2B																				

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	3/29/2000	5/8/2000	6/14/2000	9/25/2000	10/19/2000	11/2/2000	12/14/2000	3/16/2001	4/11/2001	6/22/2001	9/21/2001	12/10/2001	3/28/2002	6/17/2002	9/24/2002	12/31/2002	3/17/2003	3/25/2003	6/24/2003	9/16/2003
W87-1A	655.35	655.35	654.32	648.65	649.10	650.32	653.45	654.27	654.61	653.14	648.69	653.74	654.46		Decommissioned 4/17/02					
W87-2A	651.56	649.56	650.76	646.23		646.73	647.61	645.76	645.43	641.60	640.28	645.34	648.25	643.90	640.46	640.38		642.44	640.36	638.33
W88-3M					640.56	641.43	644.71	648.10	648.50	642.31	636.43	641.98	645.03	640.56	635.39	641.26		645.39		634.43
W87-4a	687.54	687.37	686.91	682.57		682.89	684.46	686.86	687.97	685.39	682.94	687.57	687.56	685.49	682.09	683.75		687.61	683.49	681.08
W88-5A	634.36	634.50	633.73	630.74	632.89	632.64	633.76	632.49	632.71	631.21	628.75	632.08	632.67	631.58	628.76	632.06		633.56	631.55	628.61
W88-6A																				
W88-7A			626.45	623.31	624.06	623.85	626.04	618.04	618.16	617.26	616.01	620.05	621.94	620.96	617.59	620.89		623.48	621.18	616.90
W88-8M	684.18	683.92	683.57	681.82		681.94	682.65	683.45	684.14	682.16	681.62	683.74	684.34	683.12	681.12	682.50		683.94	682.42	680.68
W90-12A	610.84	611.39	610.81	605.31	605.84	606.71	608.14	598.04	596.58	593.64	589.90	593.97	597.94	597.79	593.61	596.69		600.87	599.19	594.34
W95-14A	680.49	680.49	680.49	677.21		677.39	678.99	679.51	679.74	679.39	676.47	679.76	680.49	679.39	676.05	677.93		679.88	678.36	675.44
MW-1	635.36	635.66	633.95	631.89	632.71	632.86	635.16	632.72	632.96	631.71		Decommissioned 6/28/01								
MW-1A											631.11	634.62	634.71	633.96	631.18	634.11		635.58	633.51	630.85
MW-2	636.67	636.75	635.48											Decommissioned 4/17/02						
MW-2A														633.17	630.89	633.58		635.14	633.24	630.64
MW-3	632.39	632.46	630.91	628.49	629.96	630.41	631.50	629.84	630.00	628.11	625.13	629.26	630.03	628.99	625.56	629.28		630.99	628.71	625.18
MW-4	634.60	632.77	632.36	628.54	629.71	630.31	631.93	629.37	629.46	627.85	624.91	629.24	630.10	629.10	625.52	629.40		631.25	628.96	625.12
MW-5					632.91	633.31	634.03	631.46	632.21	630.46	627.12	632.23	631.81	631.32	627.73	631.67		633.51	630.89	627.11
MW-5A																				
MW-6	629.16	629.46	629.36	625.65	628.53	628.66		628.84	629.77	627.11	625.05	629.14	628.90	626.48	623.74	628.76		629.14	626.11	623.17
MW-7	638.18	638.33	637.44	631.79	632.52	633.51	636.13	632.37	632.56	630.43	625.12	631.61	633.19	631.65	626.89	631.30		635.12	631.78	627.13
MW-9	693.62	695.67	693.21	689.59		689.90	690.96	691.26	691.72	691.17	688.27	691.08	692.82	691.62	688.14	690.78		691.72	689.53	687.66
MW-10	660.67	661.77	660.96	655.97	656.02	657.04	659.37	661.26	661.47	660.08	656.30	659.52	661.57	659.75	655.07	658.10		660.75	658.12	653.47
P88-1a	658.81	659.16	658.65	654.37	655.51	656.91	659.04	659.95	660.28	659.25	654.70	660.05	660.27		Decommissioned 4/17/02					
P88-1b	655.16	654.24	654.14	648.43	648.98	650.20	653.21	654.30	654.51	653.03	648.58	653.29	654.27		Decommissioned 4/17/02					
P88-2a	660.21	660.19	659.59	652.73		652.48	655.86	658.80	658.96	657.28	651.80	657.95	659.23	656.71	651.27	655.43		658.98	655.48	651.03
P88-2b	653.63	653.10	652.70	646.98		647.36	649.60	647.59	647.57	645.53	641.41	647.16	649.19	646.35	640.79	643.88		647.68	645.07	641.10
P88-3a	648.88	648.99	647.65	638.48	638.04	638.75	642.40	645.48	646.35	643.70	636.32	645.10	647.23	643.82	636.33	639.18		647.98	641.62	635.61
P88-3b	644.58	644.75	643.48	635.79	635.91	636.68	639.88	640.33	640.97	638.45	631.79	638.62	641.51	638.91	632.47	635.83		642.88	637.73	632.21
P87-4M		683.94	683.51	681.59		681.88	682.66	683.61	684.01	683.16	681.43	683.69	684.15	683.05	680.94	682.44		683.86	682.29	680.49
P88-5a																				
P88-5b																				
P95-8a	701.27	700.52	699.22	697.36		697.05	696.87	697.79	699.04	698.42	696.88	698.26	700.87	698.64	696.96	696.39		699.12	697.33	696.59
P88-9a	645.43	645.53	645.13	641.46	642.53	642.91	644.28	643.16	643.39	642.40	638.85	643.59	644.00	642.91	640.13	643.63		644.54	642.61	639.71
P88-9b		638.99	638.29	635.06	635.64	635.14	637.47	635.62	635.64	634.73	631.94	635.28	636.22	635.39	632.55	634.89		636.94	635.37	632.66
P88-10a	660.95	661.46	660.50	652.09		651.30	656.23	660.60	660.95	657.33	651.95	660.13	660.65	658.43	652.75	658.25		659.83	657.02	652.85
P88-10b		655.04	654.21	647.67		647.96	650.83	650.48	650.60	649.31	643.97	650.31	651.52	649.63	644.47	649.24		660.68	649.45	645.40
P90-12a	637.64	638.09	637.72	635.86	637.32	637.14	637.83	637.94	638.14	637.14	635.15	638.08	637.77	636.98	633.42	637.76		637.77	636.81	632.11
P90-12b	636.38	636.58	636.44	634.17	635.55	635.58	636.33	635.58	635.63	634.75	632.28	635.63	635.64	634.95	631.22	635.59		635.92	634.84	630.02
P90-13a	639.39	639.50	637.69	632.05		632.29	635.01	639.10	639.99	637.94	632.03	637.73	639.31	637.31	630.94	635.27		639.46	634.83	630.44
P90-13b	639.18	639.36	638.61	631.91		632.21	634.96	638.80	639.60	637.59	631.71	638.33	638.96	635.98	630.66	635.74		639.13	634.60	629.66
P13-14A																				
GP-1P								635.25	635.90	634.65	632.27	635.28	635.40	634.18	631.88	635.33		635.59	633.69	631.46
GP-2P								641.11	641.12	641.11	640.27	641.20	641.11	640.73	639.73	640.54		641.77	640.24	638.97
GP-3P								645.53	646.96	647.21	645.76	647.15	647.57	647.53	645.52	646.03		647.56	647.34	645.16
GP-4P																			649.59	
GP-5P																	646.11			
GP-6P																	642.76		643.38	
GP-7P																	645.50		646.92	645.49
GP-8P																	644.25		649.95	646.87
GP-9P																				
GP-10																				
GP-14																				
GP-15																				
GP-16																				
WS-1																				
SG-1		630.39	630.11	629.15	629.79	629.74	630.29	630.17	632.20	629.51	628.64	630.64	630.07	628.94	628.47	630.44		630.34	628.48	626.01
SG-2		627.00	626.74		625.50	625.60	626.35	626.36	629.40	625.85	625.19	627.50	626.72	625.56		627.35		627.06	625.03	
LDCS-1								632.01	632.06	631.51	631.88	632.19	632.65	632.92	633.08	632.41		632.31	632.11	632.29
LDCS-2A								633.64	633.04	633.14	633.19	632.94	633.16	633.21	634.67	634.58		633.74	634.73	634.61
LDCS-2B																634.28		633.71	634.16	633.60

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	12/19/2003	3/22/2004	6/22/2004	9/29/2004	12/16/2004	3/23/2005	6/29/2005	10/3/2005	12/27/2005	3/16/2006	6/12/2006	9/18/2006	12/27/2006	3/31/2007	6/18/2007	9/18/2007	12/11/2007	3/10/2008	6/5/2008	9/26/2008
W87-1A																				
W87-2A	642.70	644.97	641.4	645.02	644.15	647.47	646.90	642.38	647.85	649.76	649.59	643.06	647.96	647.93	643.90	640.76	646.17	646.58	645.82	643.38
W88-3M	641.64	645.78	638.08	637.33	644.40	646.23	641.84		645.01	646.08	641.37	634.45	643.55	646.49	639.93	635.33	641.75	645.94	639.96	634.38
W87-4a	686.02	687.07	685.08	684.88	687.69	686.42	686.08	682.74	687.67	687.34	686.67	682.02	686.77	687.76	684.36	681.67	688.51	687.14	693.29	682.01
W88-5A	633.10	636.90	632.58	632.56	634.03	633.96	633.21													
W88-6A	622.80				636.90															
W88-7A	622.80	624.20		622.02		624.75				625.82		618.89	622.58	626.26	622.85	620.73	625.00	625.80	632.51	621.19
W88-8M	683.00	683.53	682.23	682.59	684.55	683.27	683.33	681.78	683.83	683.65	683.17	680.93	684.73	684.37	682.42	680.23	682.91	683.74	683.29	681.47
W90-12A	599.63	603.09	600.15	599.74	602.83	603.92	603.95	580.33	604.41	606.25	605.02	597.06	604.97	607.92	602.98	600.02	604.70	607.13	606.66	601.32
W95-14A	679.08	679.49	678.56	678.78	679.98		679.91	677.07	680.29	680.29	680.19	676.51	680.36	680.49	678.74	676.98	679.07	680.39	680.49	676.79
MW-1																				
MW-1A	634.79	635.69	636.29	634.55	635.78	635.75	634.87	632.48	635.59	635.43	634.66	631.39	635.21	635.69	633.55	631.81	635.96	634.91	634.36	631.72
MW-2																				
MW-2A	630.63	635.40	634.23	634.39	635.43	635.26	634.72	632.39	634.97	634.76	634.13	631.06	634.08	635.03	633.17	631.51	634.34	634.59	633.68	631.44
MW-3	630.93	634.45	629.86	630.32	631.67	631.50	631.01	627.92	631.26	631.17	630.46	626.17	628.70	631.59	629.07	626.79	630.60	631.04	630.19	627.07
MW-4	633.04	631.77	630.3	630.89	632.19	631.99	631.36	623.47	630.37	626.40	629.41	624.38		632.24	629.96	627.89	631.40	631.54	630.68	627.52
MW-5	628.93	633.46	631.78	633.05	635.13	633.41	633.41	631.14	634.41	633.80	633.53	628.78		627.15	631.32	630.05	633.74	632.36	632.04	
MW-5A																				
MW-6	628.93	628.79	626.37	628.54	629.24	627.99	627.26	626.47	629.58	628.71	627.71	624.16	626.14	629.37	626.38	626.82	629.01	626.39	627.20	625.30
MW-7	633.93	635.84	632.56	633.46	637.27	636.22	635.22	630.76	636.63	636.68	635.82	629.51	636.17				636.29	636.79	635.59	630.53
MW-9		692.11	692.15	691.17	692.10	692.65	692.77	689.93	692.99	693.67	693.47	689.28	691.54	693.90	691.59	689.20	691.85	692.93	692.66	689.16
MW-10	658.05	660.21	657.95	656.84	658.79	659.94	659.25	655.42	659.52	659.85	659.14	653.63	659.57	660.47	657.39	653.94	658.46	659.93	658.66	649.60
P88-1a																				
P88-1b																				
P88-2a	658.07	659.30	656.88	657.62	659.31	659.60	659.04	653.04	659.78	659.88	659.47		659.75	659.87	655.83	652.07	658.95	659.78	659.45	654.21
P88-2b	647.11	648.99	647.25	647.83	649.16	650.17	649.67	644.68	650.77	651.40			651.55	651.06	647.40	643.98	649.81	650.61	649.71	645.42
P88-3a	642.10	648.14	642.42	640.31	647.53	648.25	645.61	639.32	647.89	648.21	646.32		647.67	648.68	642.88	643.38	648.32	648.45	646.79	638.26
P88-3b	638.67	643.23	638.4	637.53	647.06	643.46	641.46	635.79	643.47	643.67	642.05		643.45	644.08	638.96	638.07	643.57	643.80	642.16	635.58
P87-4M	682.93	686.81		682.55	683.51	683.21	683.16													
P88-5a																				
P88-5b																				
P95-8a	696.90	699.31	701.59	697.51	698.76	699.00	699.16	697.36		700.81	699.64	697.33	699.44	702.25	702.25	722.07	697.28	699.60	698.64	697.06
P88-9a	644.25	644.67	643.57	643.88	645.09	644.61	644.23		Decommissioned 8/24/05											
P88-9b	636.37	637.47	636.39	636.23	637.58	636.65	637.14		Decommissioned 8/24/05											
P88-10a	659.00	662.45	656.61	656.54																
P88-10b	650.64	651.48	649.79	649.94																
P90-12a	637.75	637.81	636.83	637.43	637.77	637.72	637.68	637.41	637.91	637.66	637.81	633.93	637.70	637.89	636.80	635.15	637.68	637.63	637.68	635.52
P90-12b	635.90	636.09	634.99	635.58	636.14	636.02	635.98	634.99	636.30	636.18	636.19	631.73	635.28	636.33	635.06	633.05	636.14	636.13	636.11	633.65
P90-13a	638.78	639.19	635.97	637.45	636.67	638.96	638.80			639.52	638.89	631.32	635.06	639.78	634.41	630.41	638.35	639.23	637.10	631.02
P90-13b	638.35	639.02	635.74	637.11	639.23	638.66	635.86			639.24	638.64	631.00	633.87	639.41	634.22	630.19	638.09	638.91	636.91	630.81
P13-14A																				
GP-1P	635.39	635.59	634.51	635.02		635.26	635.11	633.20	635.60	635.37	634.76	632.76	635.79	636.02	634.11		635.69			
GP-2P	640.80	642.30	640.41	642.18		640.73	640.85	639.94	640.61	642.16	640.80	639.42	640.72	640.72	640.11					
GP-3P	647.21	647.82	647.83	647.78		647.78	648.00	646.26	647.69	647.74	647.98	645.87	647.38	647.98	647.38		647.62			
GP-4P	652.11	652.50	651.34	652.11								648.14	652.03	652.55						
GP-5P																				
GP-6P	639.58	640.92	640.54	639.99		641.28	641.25													
GP-7P	647.87	648.27	647.46	647.35		647.97	648.03													
GP-8P	651.16	652.00	651.08	650.79		651.16	650.98			651.72	651.87	649.10	648.62	651.66	649.47					
GP-9P						664.87	664.64	662.86		665.01	664.99	659.60	661.08	665.26	662.21					
GP-10																				
GP-14																				
GP-15																				
GP-16																				
WS-1																				
SG-1	629.94						630.94	629.89	631.69	631.02	629.16	627.09	630.15							
SG-2							625.79		628.25	627.64	625.92	624.75	629.98							
LDCS-1	632.44	632.64	632.23	632.75	638.34	632.12	632.21	632.65	631.74	632.31	632.56	632.57		632.08	630.65	630.40	631.05	630.67	630.27	630.33
LDCS-2A		634.72	635.26	634.78	634.05	633.99	634.72	634.18	633.95	633.88	634.21	634.15		633.51	632.29	632.71	632.42	632.39	632.53	632.46
LDCS-2B	634.44						634.64	634.37		633.58	634.59	634.58		634.11	634.49	634.26			634.04	633.80

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	12/8/2008	3/16/2009	6/23/2009	9/11/2009	12/21/2009	3/15/2010	6/9/2010	9/17/2010	12/20/2010	3/24/2011	6/29/2011	9/12/2011	12/7/2011	2/29/2012	6/1/2012	9/20/2012	12/13/2012	3/26/2013	6/21/2013	9/24/2013
W87-1A																				
W87-2A	645.95	650.2	647.12	641.38	645.76	647.45	648.00	641.37	645.65	647.60	645.71	641.81	645.31	648.01		643.69	648.56	649.95	646.16	645.61
W88-3M	639.86	644.21	638.96	634.00	641.38	643.44	644.87	635.85	645.23	646.89	643.16	636.52	641.96	646.01	646.18	637.03	644.43	646.11	645.26	643.96
W87-4a	684.48	687.17	684.84	682.03	686.27	688.29			687.71		686.08	682.79	684.23			682.54	684.26	687.49	685.84	683.84
W88-5A																				
W88-6A																				
W88-7A	624.40	626.2	623.77	620.89	625.80	626.74		626.86												
W88-8M	682.71	683.59	687.75	681.18	682.75	683.14				684.25	683.53	681.28	682.43			681.15	663.67	684.08	683.40	682.67
W90-12A	604.47	607.69	604.80	601.14	606.12	608.70	608.89	604.19	608.64	609.99	609.83	602.93	607.91	610.45	610.54	603.92	609.33	610.96		
W95-14A	678.87	680.11	678.96	676.30	679.39	680.08	680.49		680.49	680.49	680.49	680.49	680.49	680.49		677.52	680.24	680.49	680.49	678.40
MW-1																				
MW-1A	634.51	635.96	633.49	631.27	634.48	635.31	635.31	632.19	635.57	636.02	634.54	631.97	634.64	635.48	635.32	632.00	634.37	635.57	634.88	634.74
MW-2																				
MW-2A	633.96	634.74	633.10	631.22	634.24	634.20	634.84	631.83	634.82	634.78	633.94	642.03	633.98	634.72	634.60	631.77	634.60	634.76	634.21	634.09
MW-3	630.04	631.23	629.23	626.57	630.80	631.21	631.51	627.60	631.39	631.56	630.55	612.90	630.33	631.56	631.33	627.65	631.16	631.58	630.56	630.08
MW-4	630.07	630.99	629.44	626.92	630.46	630.84	631.17		631.34	631.32	630.37	624.34	630.06	631.35	630.87	627.88	630.97	630.97	630.37	629.85
MW-5			629.08	625.72	628.79	628.96	629.36	634.80	629.41	629.41		625.21	628.10	629.48		626.27	628.74	627.95	628.38	628.00
MW-5A											628.59		627.97	629.70	628.92	626.38	628.60	629.45	628.58	628.05
MW-6	628.64	629.23	626.47	625.08	629.35	629.00	628.88	626.40	628.81	628.79	626.68	624.88	627.92	628.81	627.05	624.68	628.99	628.56	626.66	627.96
MW-7	635.02	636.66	633.79	629.97	635.35	636.39	636.90	631.10	636.61	636.82	635.41	630.99	634.43	636.76	635.69	630.70	636.03	636.68	634.68	633.41
MW-9	691.38	693.04	691.89	689.07	692.04	692.84	693.80		693.50	694.37	693.79	690.62	691.77	694.00	693.90	690.02	693.16	694.27	693.54	691.87
MW-10	652.48	655.00	651.64	647.99	649.30	650.05	651.32	649.90	654.47	655.59	664.78	650.30	652.39	648.95	657.95	649.47	650.84	663.87	658.46	656.92
P88-1a																				
P88-1b																				
P88-2a	658.62	660.31	657.20	654.03	659.08	659.76	651.29	656.87	660.12	655.39	659.69	655.67	658.90	660.65	660.19	655.45	660.44	660.98		
P88-2b	649.51	651.71	648.51	643.92	649.04	650.24	659.76	645.71	650.46	650.79	650.74	646.30	649.11	651.54	655.77	646.27	651.35	652.10		
P88-3a	643.04	647.51	643.22	638.62	643.76	647.37	647.76	637.68	647.25		644.63	639.00	640.50	646.27	643.69	638.56	642.70	647.10	642.85	639.17
P88-3b	639.62	643.18	639.34	634.95	640.15	643.89	643.36	634.48	642.97		640.84	635.61	637.80	643.07	640.02	635.26	639.85	640.83	639.48	636.77
P87-4M						683.07					683.22									
P88-5a																				
P88-5b																				
P95-8a	697.13	698.86	698.27	696.96	697.30	699.21		697.53	701.61	702.12	701.03	697.60	697.40			697.50	698.66	700.51	699.37	697.57
P88-9a																				
P88-9b																				
P88-10a																				
P88-10b																				
P90-12a	637.86	637.92	637.11	636.07	638.03	637.74	638.47	636.88	637.75	637.77		634.36	636.82	637.75	638.22	633.58	637.94	637.79		
P90-12b	636.25	636.44	635.46	634.01	636.47	636.37	636.62	635.14	636.42	636.52	636.03	632.71	635.93	636.48	636.97	631.97	636.53	636.49		
P90-13a	635.83	639.3	634.99	630.45	638.86															
P90-13b	635.64	639.22	634.76	629.98	638.35															
P13-14A																				
GP-1P							636.48	633.42					634.90						635.10	634.02
GP-2P						641.35	641.41	639.90					640.71							640.89
GP-3P						647.48	647.74	646.70					647.48	648.12					647.92	
GP-4P													651.89						652.16	651.48
GP-5P																				
GP-6P																				
GP-7P																				
GP-8P																				
GP-9P						662.57	663.15	661.27					661.48	662.62	661.40				661.79	661.80
GP-10			632.23	629.86				647.56							643.25				633.90	633.99
GP-14																				
GP-15																				
GP-16																				
WS-1																				
SG-1						631.22	631.39		631.39					631.54	632.79		632.79	632.79		632.79
SG-2						626.52			626.80	626.90	625.50			626.81	625.85		627.24			623.28
LDCS-1	630.44	630.85	630.99	631.02	630.84		630.29	630.75	630.75				630.90						630.76	630.52
LDCS-2A	632.12	632.63	630.44	632.32	632.37		632.08	637.57	632.82				652.14						634.44	634.23
LDCS-2B		634.09	634.48	634.35	633.94		641.66	634.46	634.00				633.94						636.04	637.99

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	12/11/2013	3/25/2014	6/24/2014	9/18/2014	12/17/2014	3/24/2015	6/9/2015	9/17/2015	12/14/2015	3/22/2016	6/9/2016	9/16/2016	12/8/2016	3/31/2017	6/22/2017	9/28/2017	12/13/2017	3/21/2018	6/20/2018	9/19/2018
W87-1A																				
W87-2A	647.60	649.53	646.12	644.01	647.01	649.15	645.69	643.92	649.48	651.16	648.31	642.15	649.91	649.43	648.89	645.70	649.10	650.95	646.97	643.31
W88-3M	645.98	646.11	645.21	642.96	644.56	645.92	644.71	640.86	644.49	646.46	645.22	641.74	645.28	647.21	645.30	642.09	645.25	646.94	646.07	642.41
W87-4a	687.51	687.79	685.81	683.66	687.39	687.80	685.11	680.91	687.64	687.49	684.44	682.07	687.80	688.03	686.11	682.46	687.47	687.54	685.21	682.55
W88-5A																				
W88-6A																				
W88-7A																				
W88-8M	683.99	684.57	683.4	681.05	683.65	683.95		679.53	681.85	681.75	680.35	679.43	681.69	682.48	681.52	679.71	681.90	682.47	680.79	679.69
W90-12A	608.33	611.09	609.92	607.17		612.54	609.40	603.82	610.22	612.64	608.66	605.26	610.84	613.22	611.24	608.21	610.73	613.01	609.79	604.84
W95-14A	680.49	680.49	680.49	680.49	680.49	680.49		680.49	680.19	680.49	678.84	678.06	679.79	680.49	679.28	677.01	680.49	680.49	679.21	
MW-1																				
MW-1A	635.48	635.86	634.72	632.22	635.04	635.69	634.24	631.37	613.57	604.43	634.17	632.81	635.48	635.77	635.06	632.44	635.12	634.86	634.46	632.35
MW-2																				
MW-2A	634.83	635.09	633.93	631.83	634.72	634.98	633.96	631.48	634.58	634.91	633.61	632.22	634.84	635.06	634.45	631.84	634.43	634.93	633.94	631.86
MW-3	631.19	631.87	630.41	627.61	631.41	631.90	629.84	626.92	631.23	631.71	630.01	627.99	631.49	631.93	631.04	627.33	631.21	631.66	630.42	627.58
MW-4	631.16	631.74	630.25	627.84	631.15	631.67	629.22	626.99	630.85	630.87	629.89	627.88	630.65	631.53	630.67	627.16	630.79	631.35	630.21	627.48
MW-5	629.20	629.66	628.06	625.65	628.22		627.53	624.50												
MW-5A	629.20	629.79	628.43	626.25	629.38	629.76	628.66	625.35	629.33	629.55	628.23	626.24	629.23	629.43	628.83	625.80	629.08	629.60	628.70	629.09
MW-6	628.05	628.55	626.28	623.26	628.18	628.86	625.80	622.01	628.69	628.68	625.68	622.81	628.87	629.03	626.56	622.50	627.93	627.14	625.50	623.13
MW-7	635.82	636.47	634.41	630.48	635.56	636.43	633.93	629.63	635.31	636.25	633.25	630.27	635.15	636.51	634.72	629.98	634.71	635.97	633.74	630.05
MW-9	693.94	695.17	693.53	690.67	693.47	694.55	693.36	689.76	693.22	694.47	692.49	689.84	692.97	694.57	693.59	689.88	692.87	694.42	692.84	689.55
MW-10	658.97	659.42	658.43	653.4	658.5	654.94	653.27	649.58	654.32	655.12	653.82	650.48	654.19	655.51	653.61	650.19	654.26	655.35	653.89	649.63
P88-1a																				
P88-1b																				
P88-2a																				
P88-2b																				
P88-3a	644.72	647.11	642.8	640.15		646.71	642.32	636.48	640.95	646.37	640.74	636.87	639.17	646.58	642.22	640.99	638.78	646.20	641.30	636.69
P88-3b	641.16	642.83	639.46	636.55		642.60	638.98	633.53	638.67	642.29	637.68	634.11	637.50	642.47	639.13	637.83	637.15	642.13	638.20	633.93
P87-4M																				
P88-5a																				
P88-5b																				
P95-8a	700.02	703.34	699.34	696.9	699.07	700.49		697.08	700.48		698.17	697.12	698.52	702.11	698.89	697.27	699.02	700.84	698.65	697.19
P88-9a																				
P88-9b																				
P88-10a																				
P88-10b																				
P90-12a	637.73	638.09	636.95	634		637.99	636.49	632.62	637.95	638.54	636.39	632.49	637.97	637.97	637.42	634.77	637.86	637.95	636.44	632.09
P90-12b	636.52	636.83	635.83	632.88		636.78	635.28	630.40	636.61	636.80	635.01	630.65	636.69	636.71	636.16	633.62	636.53	636.69	635.25	629.84
P90-13a	-0.59	1.02		-1.78	-1.18															
P90-13b	-12.37	-12.04		-15.31	-12.63															
P13-14A	648.19	648.506		645.79	648.19		647.36	641.59	648.88	648.60	646.14	642.58	648.09	648.56	646.94	642.75	646.55	646.78	644.32	640.96
GP-1P	635.58	635.87	624.28	633.23		634.70		632.14		635.17	634.20				635.29	631.85	635.44	635.24	634.54	632.22
GP-2P	641.26	641.97	633.87	640.25		643.00		640.28		641.23	640.28				642.09	640.54		642.82	642.33	640.03
GP-3P						647.53		645.31		647.56	647.26				647.71	645.35	647.08	647.19	647.28	645.07
GP-4P	652.58	653.26		650.11		652.74		647.90		652.71	651.00				651.92	647.86	652.60	652.74	651.87	646.90
GP-5P																				
GP-6P																				
GP-7P																				
GP-8P																				
GP-9P	662.09	663.13		660.11		662.36		659.73		663.47	661.30				661.72	659.40	663.22	662.22		658.19
GP-10	648.86	635.15	627.24	632.86																
GP-14																				
GP-15																				
GP-16																				
WS-1																				
SG-1	632.79	632.79	632.79	632.79	632.79					631.59	632.09	631.48								
SG-2	627.55	627.65	625.2	625.1	626.53	628.28	624.03			627.05	626.15		626.45							
LDCS-1	631.20	631.36	630.47	630.31	631.01	632.01	631.96	629.24	629.24	629.44	631.14	627.14	627.60	631.31	631.34	630.26	631.26	631.41	630.76	628.86
LDCS-2A	634.34	634.68	634.44	634.41	634.24		632.41	634.39	634.39	634.29	634.32	634.23	634.32	634.04	634.54	634.54	634.14	634.64	634.14	634.54
LDCS-2B	630.85	631.62	641.7	636.05	635.7	635.98	636.18	636.25	636.25	636.19	635.39	638.48	636.12	636.30	636.15	635.90	635.85	635.84	635.90	635.22

Water Level Elevation Data
LRI Landfill, Pierce County Washington

WELL NUMBER	12/5/2018	3/12/2019	6/18/2019	9/26/2019	12/11/2019	3/17/2020	6/9/2020	9/24/2020	12/16/2020	3/9/2021	6/15/2021	9/16/2021	12/15/2021	3/29/2022	6/14/2022	9/13/2022	12/28/2022	3/14/2023	6/7/2023	9/28/2023	12/13/2023
W87-1A																					
W87-2A	646.31	649.62	643.62	644.61	647.79	650.62	650.31	646.70	647.11	650.71	646.56	642.61	646.61	647.78	649.00	640.40	645.91	646.11	646.29	641.19	644.78
W88-3M	643.21	646.20	644.77	641.68	643.54	645.23	644.83	641.02	645.11	646.59	645.51	641.06	643.28	645.40	646.03	639.40	650.98	641.55			
W87-4a	684.37	687.70	684.99	684.26	685.68	688.07	686.54	683.33	687.79	687.97	685.39	682.49	688.04	687.55	688.11	681.74	678.06	687.77			
W88-5A																					
W88-6A																					
W88-7A																					
W88-8M	680.40	680.67	680.63	680.18	680.89	682.13	681.68	680.03	650.05	682.45	681.37	679.20	681.77	681.87	682.95						
W90-12A	606.63	611.38	607.49	605.17	607.84	612.03	611.22	604.18	610.83	612.57	609.37	602.79	611.12	612.30	613.15	602.75	610.41	610.53		604.23	
W95-14A	677.60	679.50	678.15	676.97	678.57	679.94	679.37			677.28	678.92	676.27	679.54	679.75	646.03						
MW-1																					
MW-1A	634.17	635.32	634.20	633.22	634.54	635.04	634.84	632.25	635.09	635.42	634.69	631.77	635.15	635.29	635.07	632.86	634.54	634.60	634.08	631.43	634.69
MW-2																					
MW-2A	633.67	634.80	633.63	632.95	634.08	634.75	634.54	631.63	634.48	634.80	634.19	631.18	634.57	633.86	634.96	632.20	639.35	634.62	633.68	631.02	634.30
MW-3	628.36	631.29	630.07	628.82	630.43	631.71	631.20	627.32	631.11	631.56	630.41	626.71	631.38	631.50	631.81	625.62	630.81	631.52		626.59	
MW-4	629.13	631.14	629.85	628.55	629.96	631.37	630.81	627.67	630.87	631.35	630.32	626.95	630.97	631.25	631.54	628.09	628.09	631.14	630.16	626.95	630.99
MW-5																					
MW-5A	626.42	629.32	628.22	627.12	628.14	629.55	629.10	626.54	629.00	629.80	628.84	626.00	629.35	629.64	629.85	627.05	629.45	634.40	628.94	625.79	629.23
MW-6	626.91	627.48	625.87	625.63	627.33	628.61	627.25	623.12	628.54	628.21	626.91	622.41	628.77	628.10	628.63	621.25	628.70	628.73	626.15	621.89	628.84
MW-7	631.52	635.15	632.87	630.54	632.11	635.46	634.61	629.93	634.32	635.53	633.41	628.53	634.33	635.19	637.71	633.90	633.12	634.39		628.28	633.17
MW-9	690.64	693.14	691.71	689.86	691.55	693.50	693.32	689.66	692.57	693.92	692.42	688.87	692.67	693.81	694.31	687.47	692.10	693.07	692.20	688.79	691.94
MW-10	651.58	653.88	652.46	645.95	652.74	654.75	654.22	650.08	653.90	654.74	653.37	649.17	651.07	653.11	653.85	642.75	652.98	654.20	653.55	649.18	652.55
P88-1a																					
P88-1b																					
P88-2a																					
P88-2b																					
P88-3a	636.10	641.26	640.17	636.39	636.69	645.23	642.35	636.46	637.68	645.20	640.48	635.50	636.99	645.62	645.59	645.59	634.41	638.88			638.88
P88-3b	634.14	638.73	637.97	633.95	635.02	641.57	639.28	633.75	636.35	641.43	637.56	632.58	635.87	641.52	641.57	641.57	631.15	635.00			
P87-4M																					
P88-5a																					
P88-5b																					
P95-8a	696.82	699.28	697.56	697.02	697.04	699.97	698.68	697.10	697.68	701.42	697.82	696.82	699.18	700.72	696.42	696.42	695.51		680.85	680.02	
P88-9a																					
P88-9b																					
P88-10a																					
P88-10b																					
P90-12a	634.83	638.09	636.56	636.54	636.33	636.98	636.74	631.24	636.81	636.83	636.37	627.89	636.80	636.78	636.94	636.94	625.98	626.46			
P90-12b	633.71	636.40	634.98	634.38	637.84	637.96	638.03	634.18	638.02	638.05	637.74	629.43	638.13	637.97	638.11	638.11	627.59	626.99			
P90-13a																					
P90-13b																					
P13-14A	642.81	646.62	643.92	642.57	644.67		645.76	641.05	643.78	644.76	644.47	639.16	643.65	644.69	646.03	646.03	638.84			638.31	
GP-1P	634.91	635.35	634.90	633.42	635.50	635.94	635.91	633.56	635.79	635.80	634.85	632.00	635.60	635.69	635.94	635.94	631.89	647.00			638.25
GP-2P	641.38	640.56	642.26	640.60	643.21	642.76	642.53	640.88	642.63	643.49	642.49	640.61	642.81	639.21	643.93	643.93	644.41	640.91	642.71		641.95
GP-3P	646.55	646.94	647.04	646.19	647.01	647.12	647.21	648.26	651.21	651.01	651.16	646.81	650.71	650.94	650.76	650.76	646.42	648.81	648.61		646.13
GP-4P	650.29	652.65	652.25	648.56	653.01	652.97	653.14	647.88	655.68	652.76	651.24	647.66	651.51	652.49	652.46	652.46	647.77	652.51	652.21		647.32
GP-5P																					
GP-6P																					
GP-7P																					
GP-8P																					
GP-9P	662.42	662.35	661.68	660.65	662.73	662.96	662.37	661.63	663.43	662.98	662.78	658.48	663.83	663.81	663.25	663.25	658.41	662.73	662.03		662.40
GP-10																					
GP-14																					
GP-15																					
GP-16					668.81					670.51	669.21		670.55	670.78	670.81	667.27	667.27				
WS-1																					
SG-1																					
SG-2																					
LDCS-1	630.31	631.68	630.56	630.21	630.84	631.36	631.16	629.31		631.51	630.96	629.81	631.36	630.90	631.21	630.16	628.77	628.07	628.79		629.46
LDCS-2A	630.01	630.10	629.93	629.44	629.80	630.24	630.12	630.05		630.68	630.26	629.56	630.09	630.42	630.04	629.76	632.02	632.37	629.14		629.43
LDCS-2B	635.12	635.62	635.09	634.55	635.23	635.30	633.55	633.80		634.50	633.87	633.50	633.95	633.70	633.73	633.74	633.34	633.25	634.05		635.89

Table 1. Groundwater Level Elevations
First Quarter, 2023
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.90	646.11
W88-3M	656.48	14.93	641.55
W87-4A	693.29	5.52	687.77
W88-7A	632.51	NM*	--
W88-8A	721.05	NM*	--
W90-12A	640.84	30.31	610.53
MW-1A	652.57	17.97	634.60
MW-2A	651.93	17.31	634.62
MW-3	637.41	5.89	631.52
MW-4	652.37	21.23	631.14
MW-5A	655.55	21.15	634.40
MW-6	635.71	6.98	628.73
MW-7	656.03	21.64	634.39
MW-9	701.77	8.70	693.07
MW-10	678.37	24.17	654.20
Piezometers			
P13-14A	665.96	24.71	641.25
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	17.32	638.88
P88-3B	655.98	20.98	635.00
P95-8A	722.07	NM*	
P90-12A	640.84	14.33	626.51
P90-12B	640.73	13.74	626.99
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P	652.00	5.00	647.00
GP-2P	658.61	15.70	642.91
GP-3P	658.51	9.70	648.81
GP-4P	662.01	9.50	652.51
GP-9P	674.03	11.30	662.70
GP-14P		11.80	
GP-15P		15.00	
GP-16P	689.51	19.60	662.70
GP-17P		8.40	
P21-2		22.98	
P22-1		30.12	
P22-2		4.89	
P22-3		13.23	
South Creek			
SWSC-1	632.68	3.38	662.70
SWSC-2	629.98	5.21	662.70
Leak Detection System			
LDCS-1	657.26	29.19	662.70
LDCS-2A	659.24	26.87	662.70
LDCS-2B	661.70	28.45	662.70

Notes:

NM = not measured

-- = not applicable

All measurements taken on March 14 & 15, 2023

Table 1. Groundwater Level Elevations
Second Quarter, 2023
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.72	646.29
W88-3M	656.48	NM*	--
W87-4A	693.29	NM*	--
W88-7A	632.51	NM*	--
W88-8A	721.05	NM*	--
W90-12A	640.84	NM*	--
MW-1A	652.57	18.49	634.08
MW-2A	651.93	18.25	633.68
MW-3	637.41	7.15	630.26
MW-4	652.37	22.21	630.16
MW-5A	655.55	26.61	628.94
MW-6	635.71	9.56	626.15
MW-7	656.03	NM*	--
MW-9	701.77	9.57	692.20
MW-10	678.37	24.82	653.55
Piezometers			
P13-14A	665.96	NM*	--
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	NM*	--
P88-3B	655.98	NM*	--
P95-8A	722.07	41.22	680.85
P90-12A	640.84	NM*	--
P90-12B	640.73	NM*	--
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P	652.00	NM*	--
GP-2P	658.61	15.90	642.71
GP-3P	658.51	9.90	648.61
GP-4P	662.01	9.80	652.21
GP-9P	674.03	12.00	662.70
GP-14P			
GP-15P			
GP-16P	689.51		
GP-17P			
P21-2			
P22-1		28.57	
P22-2		4.27	
P22-3			
South Creek			
SWSC-1	632.68	3.35	629.33
SWSC-2	629.98	3.20	626.78
Leak Detection System			
LDCS-1	657.26	28.47	628.79
LDCS-2A	659.24	30.10	629.14
LDCS-2B	661.70	27.65	634.05

Notes:

NM = not measured

-- = not applicable

All measurements taken on June 7 and 8, 2023

Table 1. Groundwater Level Elevations
Third Quarter, 2023
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	22.82	641.19
W88-3M	656.48	NM*	--
W87-4A	693.29	NM*	--
W88-7A	632.51	NM*	--
W88-8A	721.05	NM*	--
W90-12A	640.84	NM*	--
MW-1A	652.57	21.14	631.43
MW-2A	651.93	20.91	631.02
MW-3	637.41	10.82	626.59
MW-4	652.37	25.42	626.95
MW-5A	655.55	29.76	625.79
MW-6	635.71	13.82	621.89
MW-7	656.03	27.75	628.28
MW-9	701.77	12.98	688.79
MW-10	678.37	29.19	649.18
Piezometers			
P13-14A	665.96	NM*	--
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	NM*	--
P88-3B	655.98	NM*	--
P95-8A	722.07	NM*	--
P90-12A	640.84	NM*	--
P90-12B	640.73	NM*	--
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P	652.00	NM*	--
GP-2P	658.61	NM*	--
GP-3P	658.51	NM*	--
GP-4P	662.01	NM*	--
GP-9P	674.03	NM*	--
GP-14P			
GP-15P			
GP-16P	689.51		
GP-17P			
P21-2			
P22-1		33.02	
P22-2		4.20	
P22-3			
South Creek			
SWSC-1	632.68	4.20	628.48
SWSC-2	629.98	NM*	--
Leak Detection System			
LDCS-1	657.26	NM*	--
LDCS-2A	659.24	NM*	--
LDCS-2B	661.70	NM*	--

Notes:

NM = not measured

-- = not applicable

All measurements taken between September 27-29, 2023

Table 1. Groundwater Level Elevations
Fourth Quarter, 2023
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	19.23	644.78
W87-4A	693.29	NM	--
W88-3M	658.11	NM	--
W88-7A	--	--	--
W88-8M	721.05	NM	--
W90-12A	640.84	NM	--
MW-1A	652.57	17.88	634.69
MW-2A	651.93	17.63	634.30
MW-3	637.41	6.29	631.12
MW-4	652.37	21.38	630.99
MW-5A	655.55	26.32	629.23
MW-6	635.71	6.87	628.84
MW-7	656.03	22.86	633.17
MW-9	701.77	9.83	691.94
MW-10	678.37	25.82	652.55
Piezometers			
P13-14A	665.96	NM	--
P88-2A	--	--	--
P88-2B	--	--	--
P88-3A	656.20	17.32	638.88
P88-3B	655.98	NM	--
P95-8A	722.07	NM	--
P90-12A	640.79	14.81	625.98
P90-12B	640.73	13.14	627.59
P90-13A	--	--	--
P90-13B	--	--	--
GP-1P	652.00	13.75	638.25
GP-2P	658.61	16.66	641.95
GP-3P	658.51	12.38	646.13
GP-4P	662.01	14.69	647.32
GP-9P	674.03	11.63	662.40
GP-14P			
GP-15P			
GP-16P	689.51	NM	--
GP-17P			
P21-2		NM	--
P22-1		NM	--
P22-2		NM	--
P22-3		NM	--
South Creek			
SWSC-1	632.68	3.46	629.22
SWSC-2	629.98	5.35	624.63
Leak Detection System			
LDCS-1	657.26	27.80	629.46
LDCS-2A	659.24	29.81	629.43
LDCS-2B	661.70	25.81	635.89

Notes:
NM= not measured -- = not applicable
All measurements taken December 12 - 14

* = Water level wells W88-7A, P88-2A, P88-2B, P90-13A, and P90-13B cannot be located

Appendix B

Groundwater Monitoring Data

Table 1. Groundwater Level Elevations
March 14 15, 2023
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.90	644.60
W88-3M	656.48	14.93	639.87
W87-4A	693.29	5.52	686.38
W88-7A	632.51	NM*	--
W88-8A	721.05	NM*	--
W90-12A	640.84	30.31	608.29
MW-1A	652.57	17.97	635.19
MW-2A	651.93	17.31	634.89
MW-3	637.41	5.89	629.81
MW-4	652.37	21.23	631.14
MW-5A	655.55	21.15	633.25
MW-6	635.71	6.98	626.42
MW-7	656.03	21.64	633.06
MW-9	701.77	8.70	690.40
MW-10	674.17	24.17	647.33
Piezometers			
P13-14A	665.96	24.71	641.25
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	17.32	637.78
P88-3B	655.98	20.98	634.12
P95-8A	722.07	NM*	
P90-12A	640.79	14.33	624.27
P90-12B	640.73	13.74	624.86
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P	652.00	5.00	647.00
GP-2P	658.61	15.70	642.91
GP-3P	658.51	9.70	648.91
GP-4P	662.01	9.50	652.51
GP-9P	674.03	11.30	662.7+D72
GP-14P		11.80	
GP-15P		15.00	
GP-16P	689.51	19.60	669.91
GP-17P		8.40	
P21-2		22.98	
P22-1		30.12	
P22-2		4.89	
P22-3		13.23	
South Creek			
SWSC-1	632.68	3.38	629.41
SWSC-2	629.98	5.21	624.74
Leak Detection System			
LDCS-1	657.26	29.19	628.07
LDCS-2A	659.24	26.87	632.37
LDCS-2B	661.70	28.45	633.25

Notes:

NM = not measured

-- = not applicable

All measurements taken on March 14 & 15, 2023

Table 2. Field Parameters
First Quarter 2023
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Conductivity	Temperature
Units				(SU)	(µS/cm)	(°C)
WAC 173-200 Criteria				6.5-8.5	700[b]	—
Monitoring Wells						
MW-1A	304-031523-02	3/15/2023	DP	6.83	163	13.5
MW-2A	304-031423-04	3/14/2023	DP	6.98	298	12.8
MW-3	304-031423-06	3/14/2023	DP	6.92	432	10.3
MW-4	304-031523-21	3/15/2023	SP	7.19	368	13.4
MW-5A	304-031423-08	3/14/2023	DP	7.44	352	12.5
MW-6	304-031423-12	3/14/2023	DP	7.46	358	10.6
MW-7	304-031423-14	3/14/2023	DP	7.24	366	10.8
MW-9	304-031523-09	3/15/2023	DP	**5.88**	432	21.4
MW-10	304-031423-16	3/14/2023	DP	**5.91**	273	11.6
Leak Detection System						
LDCS-1	304-031423-09	3/14/2023	DB	5.88	432	21.4
LDCS-2A	304-031423-07	3/14/2023	DB	6.55	869	18.5
LDCS-2B	304-031423-05	3/14/2023	DB	6.00	913	18.3
LDCS-3A	304-031423-03	3/14/2023	DP	5.98	899	20.1
LDCS-4A	304-031423-11	3/14/2023	DP	5.73	753	17.1
LDCS-4B	304-031523-19	3/15/2023	DP	6.50	994	22.0
LDCS-5	304-031523-17	3/15/2023	DP	6.58	793	21.6
LDCS-6	304-031523-13	3/15/2023	DP	6.79	1,047	24.6
LDCS-7	304-031423-01	3/14/2023	DP	5.86	791	21.6
LDCS-8	304-031523-20	3/15/2023	GB	6.78	1,031	25.5
LDCS-9	304-031523-29	3/15/2023	GB	6.50	455	14.5

Notes:
Groundwater (monitoring well) concentrations greater than the WAC 173-200 criteria are shown in **bold**
b = Secondary Drinking Water Standard
°C = degrees celcius
DB = disposable bailer
DP = dedicated pump
GB = grab sample
SP = submersible pump
SU = standard units
µS/cm = microsiemens per centimeter

Table 3. Inorganic Parameters
First Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MRL	10	0.10	0.20	0.50	0.20	10	1.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	75	*	2.3	*	8.6	57	*	*
MW-2A	130	0.18	3.8	*	16	130	*	*
MW-3	200	0.14	4.2	*	30	180	1.3	*
MW-4	170	*	4.3	*	15	160	1	*
MW-5A	170	0.14	3.2	*	13	150	1.2	*
MW-6	180	0.14	6.1	*	7.6	150	1.2	*
MW-7	190	0.21	3.4	*	3.6	160	1	*
(BG) MW-9	68	*	1.7	*	1.1	51	*	*
(BG) MW-10	110	*	7.4	3	6.3	130	*	5.6
Leak Detection System								
LDCS-1	200	0.24	0.51	*	*	160	30	290
LDCS-2A	450	0.27	13	*	29	460	4.1	*
LDCS-2B	360	0.13	4.1	*	4.9	490	13	460
LDCS-3A	430	0.24	5.1	*	60	460	2.1	4
LDCS-4A	290	0.11	3.4	*	2.8	370	11	50
LDCS-4B	360	0.27	75	*	75	540	7.5	*
LDCS-5	250	0.4	63	*	73	430	17	*
LDCS-6	450	*	18	*	110	570	4.1	*
LDCS-7	320	*	8.4	*	92	410	5.7	4.4
LDCS-8	430	*	26	*	56	440	5.4	*
LDCS-9	200	0.17	5.6	1.9	27	220	1.8	*

Notes:

All sample units are milligrams per liter (mg/L)

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = Sample result was not reported at or above the MRL

— = Not applicable or not performed

BG = Background

B = compound was detected in the method blank and the sample

Table 4. WAC 173-351 Appendix I Metals
First Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Antimony-D	Antimony-T	Arsenic-D	Arsenic-T	Barium-D	Barium-T	Beryllium-D	Beryllium-T	Cadmium-D	Cadmium-T	Chromium-D	Chromium-T	Cobalt-D	Cobalt-T	Copper-D	Copper-T	Lead-D	Lead-T	Nickel-D	Nickel-T	Selenium-D	Selenium-T	Silver-D	Silver-T	Thallium-D	Thallium-T	Vanadium-D	Vanadium-T	Zinc-D	Zinc-T
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.05	0.05	0.005	0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.01	0.01	0.002	0.002	0.02	0.02	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.01
WAC 173-200 Criteria	—	—	—	0.00005	—	1.0	—	—	—	0.01	—	0.05	—	—	—	1.0	—	0.05	—	—	—	0.01	—	0.05	—	—	—	—	—	5.0
Prediction Limit	—	0.05	—	0.011	—	0.091	—	0.005	—	0.005	—	0.011	—	0.01	—	0.063	—	0.042	—	0.020	—	0.005	—	0.01	—	0.005	—	0.016	—	0.290
Monitoring Wells																														
MW-1A	—	*	—	*	—	0.017	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-2A	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	0.0110	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-5A	—	*	—	0.0061	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	0.0077	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	0.0053	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.017	—	*
(BG) MW-10	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
Leak Detection System																														
LDCS-1	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-2A	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-2B	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-3A	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-4A	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-4B	*	—	*	—	0.028	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-5	*	—	0.0055	—	0.046	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	*	—	0.054	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8	*	—	0.0072	—	0.041	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-9	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.012	—

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Parameter concentrations for monitoring wells are total (T) metals

Parameter concentrations for LDCS sumps are dissolved (D) metals

Parameter concentrations for leachate samples are total (T) metals

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

— = not applicable or not performed

BG = Background

Table 5. WAC 173-351 Appendix II Metals (Dissolved)
First Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.20	0.10	0.10	0.005	2.0	1.0
WAC 173-200 Criteria	—	0.30	—	0.050	—	—
Monitoring Wells						
MW-1A	14	**1.1**	7.9	**0.19**	3.6	12
MW-2A	25	**0.86**	13	**0.29**	3.9	17
MW-3	47	*	20	**0.39**	4.5	15
MW-4	35	*	20	**0.16**	6.0	14
MW-5A	30	*	12	**0.17**	4.3	28
MW-6	38	*	17	**0.23**	5.1	11
MW-7	31	0.22	21	**0.22**	5.8	15
(BG) MW-9	11	*	7.2	*	2.1	8
(BG) MW-10	26	*	12	*	2.3	13
Leak Detection System						
LDCS-1	43	7.6	18	1.8	5.3	18
LDCS-2A	100	1.9	40	3.1	9.9	31
LDCS-2B	100	45	39	1.6	7.6	21
LDCS-3A	110	2.5	46	3.6	7.0	25
LDCS-4A	69	0.23	39	0.9	6.4	29
LDCS-4B	110	0.14	49	1.1	7.0	36
LDCS-5	71	0.21	39	1.2	9.3	43
LDCS-6	92	0.30	84	2.3	7.9	25
LDCS-7	97	1.5	33	1.9	3.8	21
LDCS-8	86	2.0	73	1.7	6.3	26
LDCS-9	55	*	18	0.1	2.1	20

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

** = Reported concentrations for leachate are total metals

— = not applicable or not performed

BG = Background

Table 6. Volatile Organic Compounds (µg/L)
First Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Ethylbenzene	m-Xylene & p-Xylene	o-Xylene	Toluene
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MRL	0.50	6.0	5.0	10.0	0.50	0.63	1.0	0.50	0.50	0.50
WAC 173-200 Criteria	4.0	—	—	—	1.0	—	—	—	—	—
Monitoring Wells										
MW-1	*	*	*	*	*	*	*	*	*	*
MW-2	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*
MW-5	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*
Leak Detection System										
LDCS-1	*	*	*	12	*	*	*	*	*	*
LDCS-2A	0.68	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*
LDCS-3A	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	*	*	*	*	*
LDCS-8	*	*	*	*	*	*	*	*	*	*
LDCS-9	*	*	*	*	*	*	*	*	*	*
Quality Control Samples										
Field Blank	*	*	*	*	*	*	*	*	*	*

Notes:
All sample units are micrograms per liter (µg/L)
Analyses performed by Eurofins TestAmerica of Denver, Colorado
Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**
Method Reporting Limit (MRL) is typical and may be elevated for some samples
* = sample result was not reported at or above the MRL
— = not applicable or not performed
BG = Background

Table 7. Cation-Anion Balance
First Quarter 2023
LRI Landfill, Pierce County, Washington

Cations	mg/L					meq/L					% of Total		
	Ca	Mg	K	Na	Total	Ca	Mg	K	Na	Total	Na+K	Ca	Mg
MW-1A	14	7.9	3.6	12.0	37.5	0.70	0.65	0.08	0.52	1.95	30.9	35.8	33.3
MW-2A	25	13	3.9	17	58.9	1.25	1.07	0.09	0.74	3.14	26.3	39.7	34.0
MW-3	47	20	4.5	15	86.5	2.35	1.65	0.10	0.65	4.75	15.9	49.4	34.7
MW-4	35	20	6.0	14	75	1.75	1.65	0.14	0.61	4.14	18.0	42.2	39.8
MW-5A	30	12	4.3	28	74.3	1.50	0.99	0.10	1.22	3.80	34.6	39.4	26.0
MW-6	38	17	5.1	11.0	71.1	1.90	1.40	0.12	0.48	3.89	15.3	48.8	36.0
MW-7	31	21	5.8	15	72.8	1.55	1.73	0.13	0.65	4.06	19.3	38.1	42.6
MW-9	11	7.2	2.1	7.9	28.2	0.55	0.59	0.05	0.34	1.53	25.5	35.8	38.7
MW-10	26	12	2.3	13	53.3	1.30	0.99	0.05	0.57	2.90	21.3	44.7	34.0
LDCS-1	43	18	5.3	18	84.3	2.15	1.48	0.12	0.78	4.53	19.9	47.4	32.7
LDCS-2A	100	40	9.9	31	180.9	4.99	3.29	0.22	1.35	9.85	16.0	50.6	33.4
LDCS-2B	100	39	7.6	21	167.6	4.99	3.21	0.17	0.91	9.28	11.7	53.7	34.6
LDCS-3A	110	46	7.0	25	188.0	5.49	3.79	0.16	1.09	10.52	11.8	52.2	36.0
LDCS-4A	69	39	6.4	29	143.4	3.44	3.21	0.14	1.26	8.06	17.4	42.7	39.8
LDCS-4B	110	49	7.0	36	202	5.49	4.03	0.16	1.57	11.25	15.3	48.8	35.9
LDCS-5	71	39	9.3	43	162.3	3.54	3.21	0.21	1.87	8.83	23.6	40.1	36.3
LDCS-6	92	84	7.9	25	208.9	4.59	6.91	0.18	1.09	12.77	9.9	36.0	54.1
LDCS-7	97	33	3.8	21	154.8	4.84	2.72	0.09	0.91	8.56	11.7	56.6	31.7
LDCS-8	86	73	6.3	26	191.3	4.29	6.01	0.14	1.13	11.57	11.0	37.1	51.9
LDCS-9	55	18	2.1	20	95.1	2.74	1.48	0.05	0.87	5.14	17.8	53.4	28.8

Anions	mg/L					meq/L					% of Total			Total Ions (meq/L)	Cation - Anion Balance	Applicable Ratio (%)	Ratio Exceedance
	Alk	Cl	NO_3	SO_4	Total	Alk	Cl	NO_3	SO_4	Total	Cl	Alk	SO_4				
MW-1A	75	2.3	0.0	8.6	85.9	1.23	0.06	0.000	0.18	1.47	4.4	83.5	12.1	3.43	14.0	10	Exceeds
MW-2A	130	3.8	0.0	16.0	149.8	2.13	0.11	0.000	0.33	2.57	4.2	82.9	12.9	5.72	10.0	5	Exceeds
MW-3	200	4.2	0.0	30	234.2	3.28	0.12	0.000	0.62	4.02	2.9	81.5	15.5	8.77	8.2	5	Exceeds
MW-4	170	4.3	0.0	15	189.3	2.79	0.12	0.000	0.31	3.22	3.8	86.5	9.7	7.36	12.4	5	Exceeds
MW-5A	170	3.2	0.0	13	186.2	2.79	0.09	0.000	0.27	3.15	2.9	88.5	8.6	6.95	9.4	5	Exceeds
MW-6	180	6.1	0.0	7.6	193.7	2.95	0.17	0.000	0.16	3.28	5.2	89.9	4.8	7.17	8.5	5	Exceeds
MW-7	190	3.4	0.0	3.6	197	3.12	0.10	0.000	0.07	3.29	2.9	94.8	2.3	7.35	10.5	5	Exceeds
MW-9	68	1.7	0.0	1.1	70.8	1.12	0.05	0.000	0.02	1.19	4.0	94.0	1.9	2.72	12.7	10	Exceeds
MW-10	110	7.4	3.0	6.3	126.7	1.80	0.21	0.048	0.13	2.19	9.5	82.3	6.0	5.09	13.9	5	Exceeds
LDCS-1	200	0.5	0.0	0.0	200.51	3.28	0.01	0.000	0.00	3.29	0.4	99.6	0.0	7.82	15.8	5	Exceeds
LDCS-2A	450	13.0	0.0	29	492	7.38	0.37	0.000	0.60	8.35	4.4	88.4	7.2	18.20	8.3	5	Exceeds
LDCS-2B	360	4	0.0	5	369	5.90	0.12	0.000	0.10	6.12	1.9	96.4	1.7	15.41	20.5	5	Exceeds
LDCS-3A	430	5.1	0.0	60	495.1	7.05	0.14	0.000	1.25	8.44	1.7	83.5	14.8	18.96	10.9	5	Exceeds
LDCS-4A	290	3	0.0	3	296	4.76	0.10	0.000	0.06	4.91	2.0	96.9	1.2	12.97	24.3	5	Exceeds
LDCS-4B	360	75	0.0	75	510	5.90	2.12	0.000	1.56	9.58	22.1	61.6	16.3	20.82	8.0	5	Exceeds
LDCS-5	250	63	0.0	73	386	4.10	1.78	0.000	1.52	7.40	24.0	55.4	20.5	16.23	8.9	5	Exceeds
LDCS-6	450	18	0.0	110	578	7.38	0.51	0.000	2.29	10.18	5.0	72.5	22.5	22.95	11.3	5	Exceeds
LDCS-7	320	8.4	0.0	92	420	5.25	0.24	0.000	1.91	7.40	3.2	70.9	25.9	15.95	7.3	5	Exceeds
LDCS-8	430	26	0.0	56	512	7.05	0.73	0.000	1.16	8.95	8.2	78.8	13.0	20.52	12.8	5	Exceeds
LDCS-9	200	5.6	1.6	27	234	3.28	0.16	0.026	0.56	4.03	3.9	81.5	14.0	9.17	12.2	5	Exceeds

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
Total alkalinity concentration, reported as calcium carbonate ($CaCO_3$), is converted to the bicarbonate (HCO_3^-) ion by multiplying by a factor of 1.2
Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].
The MRL was used for analytes that were non-detect
A 10% difference threshold is used if the total cation-anion sums are < 5.0 meq/liter
A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/liter

Table 8. Duplicate Sample Results
First Quarter 2023 Monitoring Report
LRI Landfill, Pierce County, Washington

Parameter	MRL	MW-5A	MW-5A (Duplicate)	RPD (%)
Volatile Organic Compunds (µg/L)				
No Detections	-	-	-	-
Inorganic Parameters (mg/L)				
Alkalinity, Total	10	190	190	0.0
Ammonia	0.1	0.21	0.21	0.0
Chloride	0.2	3.4	3.4	0.0
Sulfate	0.2	3.6	3.6	0.0
Total Dissolved Solids	10	160	130	20.7
Total Organic Carbon	1	1	1.2	18.2
Dissolved Metals (mg/L)				
Calcium	0.2	31	31	0.0
Iron	0.1	0.22	0.24	8.7
Magnesium	0.1	21	21	0.0
Manganese	0.005	0.22	0.23	4.4
Potassium	2.0	5.8	5.9	1.7
Sodium	1.0	15	15	0.0
Total Metals (mg/L)				
Arsenic	0.005	0.0053	0.0057	7.3
Barium	0.005	0.015	0.014	6.9

Notes:
Analyses performed by Eurofins TestAmerica of Denver, Colorado
Parameters not listed were not present at concentrations exceeding the Method Reporting Limit (MRL)
RPD = relative percent difference
µg/L = micrograms per liter
mg/L = milligrams per liter
U= parameter was not detected in sample
* = sample result was not reported at or above the MRL
The MRL was used to calculate the RPD for analytes where one sample was non-detect

Table 1. Groundwater Level Elevations
June 7 and 8, 2023
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.72	646.29
W88-3M	656.48	NM*	--
W87-4A	693.29	NM*	--
W88-7A	632.51	NM*	--
W88-8A	721.05	NM*	--
W90-12A	640.84	NM*	--
MW-1A	652.57	18.49	634.08
MW-2A	651.93	18.25	633.68
MW-3	637.41	7.15	630.26
MW-4	652.37	22.21	630.16
MW-5A	655.55	26.61	628.94
MW-6	635.71	9.56	626.15
MW-7	656.03	NM*	--
MW-9	701.77	9.57	692.20
MW-10	678.37	24.82	653.55
Piezometers			
P13-14A	665.96	NM*	--
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	NM*	--
P88-3B	655.98	NM*	--
P95-8A	722.07	41.22	680.85
P90-12A	640.84	NM*	--
P90-12B	640.73	NM*	--
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P	652.00	NM*	--
GP-2P	658.61	15.90	642.71
GP-3P	658.51	9.90	648.61
GP-4P	662.01	9.80	652.21
GP-9P	674.03	12.00	662.70
GP-14P			
GP-15P			
GP-16P	689.51		
GP-17P			
P21-2			
P22-1		28.57	
P22-2		4.27	
P22-3			
South Creek			
SWSC-1	632.68	3.35	629.33
SWSC-2	629.98	3.20	626.78
Leak Detection System			
LDCS-1	657.26	28.47	628.79
LDCS-2A	659.24	30.10	629.14
LDCS-2B	661.70	27.65	634.05

Notes:

NM = not measured

-- = not applicable

All measurements taken on June 7 and 8, 2023

Table 2. Field Parameters
Second Quarter 2023
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Conductivity	Temperature
Units				(SU)	(µS/cm)	(°C)
WAC 173-200 Criteria				6.5-8.5	700[b]	—
Monitoring Wells						
MW-1A	304-060723-02	6/7/2023	DP	6.69	112	15.3
MW-2A	304-060723-04	6/7/2023	DP	6.92	260	14.2
MW-3	304-060723-06	6/7/2023	DP	6.92	383	11.3
MW-4	304-060823-21	6/8/2023	SP	6.92	341	13.9
MW-5A	304-060723-08	6/7/2023	DP	7.27	376	13.3
MW-6	304-060823-12	6/8/2023	DP	7.40	344	11.0
MW-7	304-060723-14	6/7/2023	DP	7.26	388	11.3
MW-9	304-060823-18	6/8/2023	DP	6.68	136	10.5
MW-10	304-060723-16	6/7/2023	DP	**6.20**	284	13.4
Leak Detection System						
LDCS-1	304-060723-09	6/7/2023	DB	6.00	459	26.4
LDCS-2A	304-060723-07	6/7/2023	DB	6.44	875	23.6
LDCS-2B	304-060723-05	6/7/2023	DB	6.45	891	21.5
LDCS-3A	304-060823-03	6/8/2023	DP	6.22	849	22.0
LDCS-4A	304-060723-11	6/7/2023	DP	6.13	852	23.6
LDCS-4B	304-060723-19	6/7/2023	DP	6.38	975	26.4
LDCS-5	304-060823-17	6/8/2023	DP	6.35	862	24.5
LDCS-6	304-060823-13	6/8/2023	DP	6.57	1,006	27.2
LDCS-7	304-060723-01	6/7/2023	DP	5.94	803	26.7
LDCS-8	304-060823-20	6/8/2023	GB	6.31	989	25.2
LDCS-9	304-060823-24	6/8/2023	GB	6.27	672	15.8

Notes:

Groundwater (monitoring well) concentrations greater than the WAC 173-200 criteria are shown in **bold**

b = Secondary Drinking Water Standard

°C = degrees celcius

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

Table 3. Inorganic Parameters
Second Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MRL	10	0.10	0.20	0.50	0.20	10	1.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	47	*	1.3	*	9.1	74	*	*
MW-2A	120	*	3.2	*	7.7	170	*	*
MW-3	160	0.13	4.1	*	32	220	1.0	*
MW-4	160	0.1	4.0	*	15	210	1.1	*
MW-5A	180	0.16	3.4	*	14	210	1.0	*
MW-6	160	0.14	5.6	*	6.4	210	1.1	*
MW-7	200	0.24	3.6	*	2.0	220	1.1	*
(BG) MW-9	67	*	1.7	*	1.0	130	*	*
(BG) MW-10	120	*	7.2	2.6	5.7	190	*	*
Leak Detection System								
LDCS-1	210	0.21	5.2	*	6.9	280	31	—
LDCS-2A	450	1.1	11	*	45	520	6.1	—
LDCS-2B	400	0.55	41	*	55	530	9.7	—
LDCS-3A	420	0.26	4.8	*	61	520	2.1	—
LDCS-4A	370	0.26	30	*	60	500	6.7	—
LDCS-4B	420	0.26	35	*	70	570	6.9	—
LDCS-5	370	0.46	29	*	79	550	10	—
LDCS-6	450	*	20	*	110	640	4.3	—
LDCS-7	420	0.1	6.1	*	14	490	4.7	—
LDCS-8	530	*	20	*	53	650	6.7	—
LDCS-9	300	*	7.3	1.2	54	420	2.9	—

Notes:

All sample units are milligrams per liter (mg/L)

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = Sample result was not reported at or above the MRL

— = Not applicable or not performed

BG = Background

B = compound was detected in the method blank and the sample

Table 4. WAC 173-351 Appendix I Metals
Second Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Antimony-D	Antimony-T	Arsenic-D	Arsenic-T	Barium-D	Barium-T	Beryllium-D	Beryllium-T	Cadmium-D	Cadmium-T	Chromium-D	Chromium-T	Cobalt-D	Cobalt-T	Copper-D	Copper-T	Lead-D	Lead-T	Nickel-D	Nickel-T	Selenium-D	Selenium-T	Silver-D	Silver-T	Thallium-D	Thallium-T	Vanadium-D	Vanadium-T	Zinc-D	Zinc-T
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.05	0.05	0.005	0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.01	0.01	0.002	0.002	0.02	0.02	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.01
WAC 173-200 Criteria	—	—	—	0.00005	—	1.0	—	—	—	0.01	—	0.05	—	—	—	1.0	—	0.05	—	—	—	0.01	—	0.05	—	—	—	—	—	5.0
Prediction Limit	—	0.05	—	0.011	—	0.091	—	0.005	—	0.005	—	0.011	—	0.01	—	0.063	—	0.042	—	0.020	—	0.005	—	0.01	—	0.005	—	0.016	—	0.290
Monitoring Wells																														
MW-1A	—	*	—	*	—	0.0087	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-2A	—	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0100**	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.027
MW-5A	—	*	—	**0.0061**	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0071**	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	**0.0055**	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.0073	—	*
(BG) MW-10	—	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.011
Leak Detection System																														
LDCS-1	*	—	0.032	—	0.021	—	0.021	—	—	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-2A	*	—	0.037	—	0.110	—	0.11	—	—	—	*	—	0.0022	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-2B	*	—	0.150	—	0.140	—	0.14	—	—	—	*	—	0.004	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.024	—
LDCS-3A	*	—	0.017	—	0.025	—	0.025	—	—	—	*	—	0.0022	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-4A	*	—	0.015	—	0.033	—	0.033	—	—	—	*	—	0.003	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-4B	*	—	0.016	—	0.033	—	0.033	—	—	—	*	—	0.0013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-5	*	—	*	—	0.049	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	*	—	0.047	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	0.022	—	0.041	—	*	—	*	—	*	—	0.003	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8	*	—	0.011	—	0.046	—	*	—	*	—	*	—	0.0021	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-9	*	—	*	—	0.017	—	*	—	*	—	*	—	0.0011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Parameter concentrations for monitoring wells are total (T) metals

Parameter concentrations for LDCS sumps are dissolved (D) metals

Parameter concentrations for leachate samples are total (T) metals

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

— = not applicable or not performed

BG = Background

Table 5. WAC 173-351 Appendix II Metals (Dissolved)
Second Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.20	0.10	0.10	0.005	2.0	1.0
WAC 173-200 Criteria	—	0.30	—	0.050	—	—
Monitoring Wells						
MW-1A	13	0.15	4.2	**0.09**	2.7	7.9
MW-2A	24	**0.65**	12	**0.29**	3.4	16
MW-3	43	*	17	**0.37**	4.4	15
MW-4	34	*	18	**0.12**	5.4	13
MW-5A	32	*	12	**0.19**	4.7	37
MW-6	37	*	17	**0.28**	5.1	11
MW-7	36	0.27	24	**0.28**	6.7	18
(BG) MW-9	11	0.13	7.2	*	2.2	7.6
(BG) MW-10	31	*	12	*	2.5	14
Leak Detection System						
LDCS-1	40	52	17	1.2	5.3	18
LDCS-2A	110	7.9	42	5.1	10.0	32
LDCS-2B	120	68	44	2.4	7.2	21
LDCS-3A	110	3.0	48	3.8	6.9	27
LDCS-4A	88	4.1	47	1.5	6.4	28
LDCS-4B	99	1.3	52	1.8	7.3	31
LDCS-5	87	0.18	53	1.3	8.6	39
LDCS-6	93	0.29	82	*	7.2	26
LDCS-7	97	3.9	38	3.7	4.8	29
LDCS-8	110	2.1	76	2.1	5.7	33
LDCS-9	84	*	23	0.72	2.4	28

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

** = Reported concentrations for leachate are total metals

— = not applicable or not performed

BG = Background

Table 6. Volatile Organic Compounds (µg/L)
Second Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Ethylbenzene	m-Xylene & p-Xylene	o-Xylene	Toluene
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MRL	0.50	6.0	5.0	10.0	0.50	0.63	1.0	0.50	0.50	0.50
WAC 173-200 Criteria	4.0	—	—	—	1.0	—	—	—	—	—
Monitoring Wells										
MW-1	*	*	*	*	*	*	*	*	*	*
MW-2	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*
MW-5	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*
Leak Detection System										
LDCS-1	0.76	*	*	31	*	*	*	*	*	*
LDCS-2A	0.69	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*
LDCS-3A	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	5.4	*	*	*	*	*
LDCS-8	*	*	*	*	*	*	*	*	*	*
LDCS-9	*	*	*	*	*	*	*	*	*	*
Leachate Collection System										
Leachate, Cell 9	*	*	74	*	4.2	6.2	8.4	31	17	87
Quality Control Samples										
Field Blank	*	*	*	*	*	*	*	*	*	*

Notes:

All sample units are micrograms per liter (µg/L)

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

— = not applicable or not performed

BG = Background

Table 7. Cation-Anion Balance
Second Quarter 2023
LRI Landfill, Pierce County, Washington

Cations	mg/L					meq/L					% of Total		
	Ca	Mg	K	Na	Total	Ca	Mg	K	Na	Total	Na+K	Ca	Mg
MW-1A	13	4.2	2.7	7.9	27.8	0.65	0.35	0.06	0.34	1.40	28.9	46.4	24.7
MW-2A	24	12	3.4	16	55.4	1.20	0.99	0.08	0.70	2.96	26.1	40.5	33.4
MW-3	43	17	4.4	15	79.4	2.15	1.40	0.10	0.65	4.30	17.5	49.9	32.6
MW-4	34	18	5.4	13	70.4	1.70	1.48	0.12	0.57	3.87	17.8	43.9	38.3
MW-5A	32	12	4.7	37	85.7	1.60	0.99	0.11	1.61	4.30	39.9	37.1	23.0
MW-6	37	17	5.1	11.0	70.1	1.85	1.40	0.12	0.48	3.84	15.5	48.1	36.4
MW-7	36	24	6.7	18	84.7	1.80	1.98	0.15	0.78	4.71	19.9	38.2	42.0
MW-9	11	7.2	2.2	7.6	28	0.55	0.59	0.05	0.33	1.52	25.0	36.1	38.9
MW-10	31	12	2.5	14	59.5	1.55	0.99	0.06	0.61	3.20	20.8	48.3	30.9
LDCS-1	40	17	5.3	18	80.3	2.00	1.40	0.12	0.78	4.30	21.0	46.4	32.6
LDCS-2A	110	42	10.0	32	194.0	5.49	3.46	0.23	1.39	10.56	15.3	52.0	32.7
LDCS-2B	120	44	7.2	21	192.2	5.99	3.62	0.16	0.91	10.69	10.1	56.0	33.9
LDCS-3A	110	48	6.9	27	191.9	5.49	3.95	0.16	1.17	10.77	12.4	51.0	36.7
LDCS-4A	88	47	6.4	28	169.4	4.39	3.87	0.14	1.22	9.62	14.2	45.6	40.2
LDCS-4B	99	52	7.3	31	189.3	4.94	4.28	0.16	1.35	10.73	14.1	46.0	39.9
LDCS-5	87	53	8.6	39	187.6	4.34	4.36	0.19	1.70	10.59	17.8	41.0	41.2
LDCS-6	93	82	7.2	26	208.2	4.64	6.75	0.16	1.13	12.68	10.2	36.6	53.2
LDCS-7	97	38	4.8	29	168.8	4.84	3.13	0.11	1.26	9.34	14.7	51.8	33.5
LDCS-8	110	76	5.7	33	224.7	5.49	6.25	0.13	1.44	13.31	11.8	41.2	47.0
LDCS-9	84	23	2.4	28	137.4	4.19	1.89	0.05	1.22	7.36	17.3	57.0	25.7

Anions	mg/L					meq/L					% of Total			Total Ions (meq/L)	Cation - Anion Balance	Applicable Ratio (%)	Ratio Exceedance
	Alk	Cl	NO_3	SO_4	Total	Alk	Cl	NO_3	SO_4	Total	Cl	Alk	SO_4				
MW-1A	56.4	1.3	0.0	9.1	66.8	0.92	0.04	0.000	0.19	1.15	3.2	80.4	16.4	2.55	9.7	10	O
MW-2A	144	3.2	0.0	7.7	154.9	2.36	0.09	0.000	0.16	2.61	3.5	90.4	6.1	5.57	6.2	5	Exceeds
MW-3	192	4.1	0.0	32	228.1	3.15	0.12	0.000	0.67	3.93	2.9	80.1	16.9	8.23	4.5	5	O
MW-4	192	4.0	0.0	15	211.0	3.15	0.11	0.000	0.31	3.57	3.2	88.1	8.7	7.44	3.9	5	O
MW-5A	216	3.4	0.0	14	233.4	3.54	0.10	0.000	0.29	3.93	2.4	90.1	7.4	8.23	4.5	5	O
MW-6	192	5.6	0.0	6.4	204	3.15	0.16	0.000	0.13	3.44	4.6	91.5	3.9	7.28	5.5	5	Exceeds
MW-7	240	3.6	0.0	2.0	245.6	3.94	0.10	0.000	0.04	4.08	2.5	96.5	1.0	8.79	7.1	5	Exceeds
MW-9	80.4	1.7	0.0	1.0	83.1	1.32	0.05	0.000	0.02	1.39	3.5	95.0	1.5	2.91	4.6	10	O
MW-10	144	7.2	2.6	5.7	159.5	2.36	0.20	0.042	0.12	2.73	7.5	86.7	4.4	5.93	8.0	5	Exceeds
LDCS-1	252	5.2	0.0	6.9	264.1	4.13	0.15	0.000	0.14	4.42	3.3	93.4	3.2	8.72	1.4	5	O
LDCS-2A	540	11.0	0.0	45	596	8.86	0.31	0.000	0.94	10.10	3.1	87.7	9.3	20.67	2.2	5	O
LDCS-2B	480	41	0.0	55	576	7.87	1.16	0.000	1.14	10.17	11.4	77.4	11.2	20.86	2.5	5	O
LDCS-3A	504	4.8	0.0	61	569.8	8.27	0.14	0.000	1.27	9.67	1.4	85.5	13.1	20.44	5.4	5	Exceeds
LDCS-4A	444	30	0.0	60	534	7.28	0.85	0.000	1.25	9.38	9.0	77.7	13.3	19.00	1.3	5	O
LDCS-4B	504	35	0.0	70	609	8.27	0.99	0.000	1.46	10.71	9.2	77.2	13.6	21.44	0.1	5	O
LDCS-5	444	29	0.0	79	552	7.28	0.82	0.000	1.64	9.74	8.4	74.7	16.9	20.34	4.2	5	O
LDCS-6	540	20	0.0	110	670	8.86	0.56	0.000	2.29	11.71	4.8	75.6	19.5	24.39	4.0	5	O
LDCS-7	504	6.1	0.0	14	524	8.27	0.17	0.000	0.29	8.73	2.0	94.7	3.3	18.07	3.4	5	O
LDCS-8	636	20	0.0	53	709	10.43	0.56	0.000	1.10	12.10	4.7	86.2	9.1	25.40	4.8	5	O
LDCS-9	360	7.3	1.2	54	423	5.90	0.21	0.019	1.12	7.25	2.8	81.4	15.5	14.61	0.7	5	O

Notes:

mg/L = milligrams per liter

meq/L = milliequivalents per liter

Total alkalinity concentration, reported as calcium carbonate ($CaCO_3$), is converted to the bicarbonate (HCO_3^-) ion by multiplying by a factor of 1.2

Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].

The MRL was used for analytes that were non-detect

A 10% difference threshold is used if the total cation-anion sums are < 5.0 meq/liter

A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/liter

Table 8. Duplicate Sample Results
Second Quarter 2023 Monitoring Report
LRI Landfill, Pierce County, Washington

Parameter	MRL	MW-7	MW-7 (Duplicate)	RPD (%)
Volatile Organic Compunds (µg/L)				
4-bromofluorobenzene	2	49	47	4.17
Dibromofluoromethane	2	49	51	4.0
Inorganic Parameters (mg/L)				
Alkalinity, Total	10	200	200	0.0
Ammonia	0.1	0.24	0.23	4.3
Chloride	0.2	3.6	3.5	2.8
Sulfate	0.2	2.0	2.1	4.9
Total Dissolved Solids	10	220	230	4.4
Total Organic Carbon	1.0	1.1	0	200
Dissolved Metals (mg/L)				
Calcium	0.2	36	37	2.7
Iron	0.1	0.27	0.25	7.7
Magnesium	0.1	24	23	4.3
Manganese	0.005	0.28	0.26	7.4
Potassium	2.0	6.7	6.5	3.0
Sodium	1.0	18	16	11.8
Total Metals (mg/L)				
Arsenic	0.005	0.0055	0.0054	1.8
Barium	0.005	0.014	0.015	6.9

Notes:

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Parameters not listed were not present at concentrations exceeding the Method Reporting Limit (MRL)

RPD = relative percent difference

µg/L = micrograms per liter

mg/L = milligrams per liter

U= parameter was not detected in sample

* = sample result was not reported at or above the MRL

The MRL was used to calculate the RPD for analytes where one sample was non-detect

Table 1. Groundwater Level Elevations
Third Quarter, 2023
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	22.82	641.19
W88-3M	656.48	NM*	--
W87-4A	693.29	NM*	--
W88-7A	632.51	NM*	--
W88-8A	721.05	NM*	--
W90-12A	640.84	NM*	--
MW-1A	652.57	21.14	631.43
MW-2A	651.93	20.91	631.02
MW-3	637.41	10.82	626.59
MW-4	652.37	25.42	626.95
MW-5A	655.55	29.76	625.79
MW-6	635.71	13.82	621.89
MW-7	656.03	27.75	628.28
MW-9	701.77	12.98	688.79
MW-10	678.37	29.19	649.18
Piezometers			
P13-14A	665.96	NM*	--
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	NM*	--
P88-3B	655.98	NM*	--
P95-8A	722.07	NM*	--
P90-12A	640.84	NM*	--
P90-12B	640.73	NM*	--
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P	652.00	NM*	--
GP-2P	658.61	NM*	--
GP-3P	658.51	NM*	--
GP-4P	662.01	NM*	--
GP-9P	674.03	NM*	--
GP-14P			
GP-15P			
GP-16P	689.51		
GP-17P			
P21-2			
P22-1		33.02	
P22-2		4.20	
P22-3			
South Creek			
SWSC-1	632.68	4.20	628.48
SWSC-2	629.98	NM*	--
Leak Detection System			
LDCS-1	657.26	NM*	--
LDCS-2A	659.24	NM*	--
LDCS-2B	661.70	NM*	--

Notes:

NM = not measured

-- = not applicable

All measurements taken between September 27-29, 2023

Table 2. Field Parameters
Third Quarter 2023
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Conductivity	Temperature
Units				(SU)	(µS/cm)	(°C)
WAC 173-200 Criteria				6.5-8.5	700[b]	—
Monitoring Wells						
MW-1A	304-092723-02	9/27/2023	DP	6.63	163	14.0
MW-2A	304-092723-04	9/27/2023	DP	7.03	293	13.6
MW-3	304-092723-06	9/27/2023	DP	7.32	346	10.9
MW-4	304-092823-21	9/28/2023	SP	6.69	339	13.8
MW-5A	304-092723-08	9/27/2023	DB	7.50	277	12.9
MW-6	304-092723-12	9/27/2023	DP	7.44	322	10.8
MW-7	304-092823-14	9/28/2023	DP	7.16	341	11.0
MW-9	304-092823-18	9/28/2023	DP	6.53	133	10.4
MW-10	304-092723-16	9/27/2023	DP	**5.89**	263	12.2
Leak Detection System						
LDCS-1	304-092823-09	9/28/2023	DB	4.02	560	17.4
LDCS-2A	304-092823-07	9/28/2023	DB	3.93	847	19.1
LDCS-2B	304-092823-05	9/28/2023	DB	4.13	1091	16.4
LDCS-3A	304-092723-03	9/27/2023	DP	5.56	753	20.0
LDCS-4A	304-092723-11	9/27/2023	DP	5.34	692	19.1
LDCS-4B	304-092723-19	9/27/2023	DP	5.12	764	24.3
LDCS-5	304-092723-17	9/27/2023	DP	4.92	604	27.4
LDCS-6	304-092823-13	9/28/2023	DP	3.05	1,038	24.1
LDCS-7	304-092723-01	9/27/2023	DP	4.76	614	25.9
LDCS-8	304-092823-20	9/28/2023	DB	2.92	908	26.7
LDCS-9	304-081823	8/18/2023	GB	5.89	621	21.6

Notes:
Groundwater (monitoring well) concentrations greater than the WAC 173-200 criteria are shown in **bold**

b = Secondary Drinking Water Standard

°C = degrees celcius

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

Table 3. Inorganic Parameters
Third Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MRL	10	0.10	0.20	0.50	0.20	10	1.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	80	*	2.1	*	6	130	*	*
MW-2A	140	0.18	3.6	*	15	190	*	*
MW-3	140	0.12	4.2	*	33	220	1.1	*
MW-4	140	*	4.5	*	23	220	1.1	*
MW-5A	140	0.13	2.2	*	3.7	170	*	*
MW-6	160	0.14	5.3	*	6.7	200	1	*
MW-7	170	0.21	2.9	*	4.1	200	*	*
(BG) MW-9	67	*	1.6	*	1.7	130	*	*
(BG) MW-10	110	*	7.1	2.4	5.9	180	*	*
Leak Detection System								
LDCS-1	290	0.9	5.5	*	8.6	370	200	—
LDCS-2A	440	0.52	12	*	43	520	8.8	—
LDCS-2B	430	1.9	39	*	53	570	44	—
LDCS-3A	460	0.33	4.7	*	51	570	2.1	—
LDCS-4A	360	0.29	35	*	57	510	8.4	—
LDCS-4B	410	0.42	44	*	60	560	9.2	—
LDCS-5	270	0.59	48	*	56	480	34	—
LDCS-6	470	0.3	25	*	110	690	4.7	—
LDCS-7	390	0.17	5.7	*	12	450	6.9	—
LDCS-8	450	0.1 U	21	*	55	560	6.7	—
LDCS-9	230	0.1 U	8.1	1.5	64	400	4.6	—

Notes:

All sample units are milligrams per liter (mg/L)

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = Sample result was not reported at or above the MRL

— = Not applicable or not performed

BG = Background

B = compound was detected in the method blank and the sample

Table 4. WAC 173-351 Appendix I Metals
Third Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Antimony-D	Antimony-T	Arsenic-D	Arsenic-T	Barium-D	Barium-T	Beryllium-D	Beryllium-T	Cadmium-D	Cadmium-T	Chromium-D	Chromium-T	Cobalt-D	Cobalt-T	Copper-D	Copper-T	Lead-D	Lead-T	Nickel-D	Nickel-T	Selenium-D	Selenium-T	Silver-D	Silver-T	Thallium-D	Thallium-T	Vanadium-D	Vanadium-T	Zinc-D	Zinc-T
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.05	0.05	0.005	0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.01	0.01	0.002	0.002	0.02	0.02	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.01
WAC 173-200 Criteria	—	—	—	0.00005	—	1.0	—	—	—	0.01	—	0.05	—	—	—	1.0	—	0.05	—	—	—	0.01	—	0.05	—	—	—	—	—	5.0
Prediction Limit	—	0.05	—	0.011	—	0.091	—	0.005	—	0.005	—	0.011	—	0.01	—	0.063	—	0.042	—	0.020	—	0.005	—	0.01	—	0.005	—	0.016	—	0.290
Monitoring Wells																														
MW-1A	—	*	—	*	—	0.019	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-2A	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.01	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0089**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.013
MW-5A	—	*	—	*	—	0.011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.007**	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.016	—	*
(BG) MW-10	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.015
Leak Detection System																														
LDCS-1	*	—	0.010	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-2A	*	—	0.044	—	0.079	—	*	—	*	—	*	—	0.0016	—	*	—	*	—	*	—	*	—	*	—	*	—	0.006	—	*	—
LDCS-2B	*	—	0.010	—	0.040	—	*	—	*	—	*	—	0.0075	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-3A	*	—	0.018	—	0.025	—	*	—	*	—	*	—	0.0013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-4A	*	—	0.012	—	0.026	—	*	—	*	—	*	—	0.0019	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-4B	*	—	0.022	—	0.042	—	*	—	*	—	*	—	0.0014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-5	*	—	0.0068	—	0.044	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	0.028	—	0.069	—	*	—	*	—	*	—	0.0014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	0.017	—	0.036	—	*	—	*	—	*	—	0.0034	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8	*	—	0.007	—	0.040	—	*	—	*	—	*	—	0.002	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-9	*	—	*	—	0.023	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.036	—

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Parameter concentrations for monitoring wells are total (T) metals

Parameter concentrations for LDCS sumps are dissolved (D) metals

Parameter concentrations for leachate samples are total (T) metals

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

— = not applicable or not performed

BG = Background

Table 5. WAC 173-351 Appendix II Metals (Dissolved)
Third Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.20	0.10	0.10	0.005	2.0	1.0
WAC 173-200 Criteria	—	0.30	—	0.050	—	—
Monitoring Wells						
MW-1A	62	0.1 U	25	**0.19**	2.7	8.9
MW-2A	25	**0.71**	12	**0.28**	3.8	18
MW-3	36	*	16	**0.26**	4.1	14
MW-4	36	*	15	**0.074**	5.6	15
MW-5A	28	*	12	**0.12**	4	15
MW-6	34	*	15	**0.19**	5.1	11
MW-7	30	0.25	20	**0.2**	6.1	16
(BG) MW-9	10	*	6.8	*	2.3	8.1
(BG) MW-10	26	*	11	*	2.5	13
Leak Detection System						
LDCS-1	32	6.1	18	0.79	5.3	20
LDCS-2A	110	6.8	41	2.2	10	33
LDCS-2B	120	1.4	52	3.4	8.9	25
LDCS-3A	110	4.7	46	3.3	7.5	26
LDCS-4A	85	0.88	48	1.1	7.5	39
LDCS-4B	95	1.8	49	2.2	8	41
LDCS-5	61	0.41	35	0.96	10	43
LDCS-6	110	3.4	72	2.6	8	36
LDCS-7	90	3.1	34	3.8	5	29
LDCS-8	90	*	66	1.8	5.5	28
LDCS-9	73	*	23	0.18	5	28

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

** = Reported concentrations for leachate are total metals

— = not applicable or not performed

BG = Background

Table 6. Volatile Organic Compounds (µg/L)
Third Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Ethylbenzene	m-Xylene & p-Xylene	o-Xylene	Toluene
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MRL	0.50	6.0	5.0	10.0	0.50	0.63	1.0	0.50	0.50	0.50
WAC 173-200 Criteria	4.0	—	—	—	1.0	—	—	—	—	—
Monitoring Wells										
MW-1	*	*	*	*	*	*	*	*	*	*
MW-2	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*
MW-5	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*
Leak Detection System										
LDCS-1	1.4	*	*	160	*	*	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*
LDCS-3A	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	**9.2**	*	*	*	*	*
LDCS-8	*	*	*	*	*	*	*	*	*	*
LDCS-9	*	*	*	*	*	*	*	*	*	*
Leachate Collection System										
Leachate, Cell 9	*	490	*	560	*	*	*	1.4	0.92	4.3
Quality Control Samples										
Field Blank	*	*	*	*	*	*	*	*	*	*

Notes:

All sample units are micrograms per liter (µg/L)

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

— = not applicable or not performed

BG = Background

Table 7. Cation-Anion Balance
Third Quarter 2023
LRI Landfill, Pierce County, Washington

Cations	mg/L					meq/L					% of Total		
	Ca	Mg	K	Na	Total	Ca	Mg	K	Na	Total	Na+K	Ca	Mg
MW-1A	62	25	2.7	8.9	98.6	3.09	2.06	0.06	0.39	5.60	8.0	55.3	36.7
MW-2A	25	12	3.8	18	58.8	1.25	0.99	0.09	0.78	3.10	28.0	40.2	31.8
MW-3	36	16	4.1	14	70.1	1.80	1.32	0.09	0.61	3.81	18.4	47.1	34.5
MW-4	36	15	5.6	15	71.6	1.80	1.23	0.13	0.65	3.81	20.4	47.2	32.4
MW-5A	28	12	4	15	59	1.40	0.99	0.09	0.65	3.13	23.8	44.7	31.6
MW-6	34	15	5.1	11	65.1	1.70	1.23	0.12	0.48	3.52	16.8	48.1	35.0
MW-7	30	20	6.1	16	72.1	1.50	1.65	0.14	0.70	3.98	21.0	37.6	41.4
MW-9	10	6.8	2.3	8.1	27.2	0.50	0.56	0.05	0.35	1.46	27.6	34.1	38.3
MW-10	26	11	2.5	13	52.5	1.30	0.91	0.06	0.57	2.82	22.0	45.9	32.0
LDCS-1	32	18	5.3	20	75.3	1.60	1.48	0.12	0.87	4.07	24.3	39.3	36.4
LDCS-2A	110	41	10	33	194.0	5.49	3.37	0.23	1.44	10.52	15.8	52.2	32.1
LDCS-2B	120	52	8.9	25	205.9	5.99	4.28	0.20	1.09	11.56	11.1	51.8	37.0
LDCS-3A	110	46	7.5	26	189.5	5.49	3.79	0.17	1.13	10.58	12.3	51.9	35.8
LDCS-4A	85	48	7.5	39	179.5	4.24	3.95	0.17	1.70	10.06	18.6	42.2	39.3
LDCS-4B	95	49	8	41	193	4.74	4.03	0.18	1.78	10.74	18.3	44.1	37.6
LDCS-5	61	35	10	43	149	3.04	2.88	0.23	1.87	8.02	26.1	38.0	35.9
LDCS-6	110	72	8	36	226.0	5.49	5.93	0.18	1.57	13.16	13.3	41.7	45.0
LDCS-7	90	34	5	29	158.0	4.49	2.80	0.11	1.26	8.66	15.9	51.8	32.3
LDCS-8	90	66	5.5	28	189.5	4.49	5.43	0.12	1.22	11.26	11.9	39.9	48.2
LDCS-9	73	23	5.0	28	129.0	3.64	1.89	0.11	1.22	6.87	19.4	53.1	27.6

Anions	mg/L					meq/L					% of Total			Total Ions (meq/L)	Cation - Anion Balance	Applicable Ratio (%)	Ratio Exceedance
	Alk	Cl	NO_3	SO_4	Total	Alk	Cl	NO_3	SO_4	Total	Cl	Alk	SO_4				
MW-1A	96	2.1	0.0	6	104.1	1.57	0.06	0.000	0.12	1.76	3.4	89.5	7.1	7.36	52.2	5	Exceeds
MW-2A	168	3.6	0.0	15	186.6	2.76	0.10	0.000	0.31	3.17	3.2	86.9	9.8	6.27	1.0	5	O
MW-3	168	4.2	0.0	33	205.2	2.76	0.12	0.000	0.69	3.56	3.3	77.4	19.3	7.37	3.5	5	O
MW-4	168	4.5	0.0	23	195.5	2.76	0.13	0.000	0.48	3.36	3.8	82.0	14.2	7.17	6.3	5	Exceeds
MW-5A	168	2.2	0.0	3.7	173.9	2.76	0.06	0.000	0.08	2.89	2.1	95.2	2.7	6.02	3.9	5	O
MW-6	192	5.3	0.0	6.7	204	3.15	0.15	0.000	0.14	3.44	4.3	91.6	4.1	6.96	1.3	5	O
MW-7	204	2.9	0.0	4.1	211	3.35	0.08	0.000	0.09	3.51	2.3	95.2	2.4	7.49	6.2	5	Exceeds
MW-9	80.4	1.6	0.0	1.7	83.7	1.32	0.05	0.000	0.04	1.40	3.2	94.2	2.5	2.86	2.2	10	O
MW-10	132	7.1	2.4	5.9	147.4	2.16	0.20	0.039	0.12	2.53	7.9	85.7	4.9	5.35	5.6	5	Exceeds
LDCS-1	348	5.5	0.0	8.6	362.1	5.71	0.16	0.000	0.18	6.04	2.6	94.5	3.0	10.11	19.5	5	Exceeds
LDCS-2A	528	12	0.0	43	583	8.66	0.34	0.000	0.89	9.89	3.4	87.5	9.0	20.42	3.1	5	O
LDCS-2B	516	39	0.0	53	608	8.46	1.10	0.000	1.10	10.66	10.3	79.4	10.3	22.22	4.0	5	O
LDCS-3A	552	4.7	0.0	51	607.7	9.05	0.13	0.000	1.06	10.25	1.3	88.4	10.4	20.82	1.6	5	O
LDCS-4A	432	35	0.0	57	524	7.08	0.99	0.000	1.19	9.26	10.7	76.5	12.8	19.32	4.1	5	O
LDCS-4B	492	44	0.0	60	596	8.07	1.24	0.000	1.25	10.56	11.8	76.4	11.8	21.29	0.8	5	O
LDCS-5	324	48	0.0	56	428	5.31	1.35	0.000	1.16	7.83	17.3	67.8	14.9	15.85	1.2	5	O
LDCS-6	564	25	0.0	110	699	9.25	0.71	0.000	2.29	12.24	5.8	75.6	18.7	25.40	3.6	5	O
LDCS-7	468	5.7	0.0	12	486	7.68	0.16	0.000	0.25	8.09	2.0	94.9	3.1	16.75	3.5	5	O
LDCS-8	540	21	0.0	55	616	8.86	0.59	0.000	1.14	10.59	5.6	83.6	10.8	21.86	3.1	5	O
LDCS-9	230	8.1	1.5	64	304	3.77	0.23	0.024	1.33	5.36	4.3	70.4	24.9	12.22	12.4	5	Exceeds

Notes:

mg/L = milligrams per liter

meq/L = milliequivalents per liter

Total alkalinity concentration, reported as calcium carbonate ($CaCO_3$), is converted to the bicarbonate (HCO_3) ion by multiplying by a factor of 1.2

Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].

The MRL was used for analytes that were non-detect

A 10% difference threshold is used if the total cation-anion sums are < 5.0 meq/liter

A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/liter

Table 8. Duplicate Sample Results
Third Quarter 2023 Monitoring Report
LRI Landfill, Pierce County, Washington

Parameter	MRL	MW-7	MW-7 (Duplicate)	RPD (%)
Inorganic Parameters (mg/L)				
Alkalinity, Total	10	170	170	0.0
Ammonia	0.1	0.21	0.23	9.1
Chloride	0.2	2.9	3.0	3.4
Sulfate	0.2	4.1	4.3	4.8
Total Dissolved Solids	10	200	200	0.0
Total Organic Carbon	1.0	1	1	0.0
Dissolved Metals (mg/L)				
Calcium	0.2	36	37	2.7
Iron	0.1	0.27	0.25	7.7
Magnesium	0.1	24	23	4.3
Manganese	0.005	0.28	0.26	7.4
Potassium	2.0	6.7	6.5	3.0
Sodium	1.0	18	16	11.8
Total Metals (mg/L)				
Arsenic	0.005	0.005	0.0052	3.9
Barium	0.005	0.012	0.013	8.0

Notes:

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Parameters not listed were not present at concentrations exceeding the Method Reporting Limit (MRL)

RPD = relative percent difference

µg/L = micrograms per liter

mg/L = milligrams per liter

U= parameter was not detected in sample

* = sample result was not reported at or above the MRL

The MRL was used to calculate the RPD for analytes where one sample was non-detect

Table 1. Groundwater Level Elevations
December 12-14, 2023
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	19.23	644.78
W87-4A	693.29	NM	--
W88-3M	658.11	NM	--
W88-7A	--	--	--
W88-8M	721.05	NM	--
W90-12A	640.84	NM	--
MW-1A	652.57	17.88	634.69
MW-2A	651.93	17.63	634.30
MW-3	637.41	6.29	631.12
MW-4	652.37	21.38	630.99
MW-5A	655.55	26.32	629.23
MW-6	635.71	6.87	628.84
MW-7	656.03	22.86	633.17
MW-9	701.77	9.83	691.94
MW-10	678.37	25.82	652.55
Piezometers			
P13-14A	665.96	NM	--
P88-2A	--	--	--
P88-2B	--	--	--
P88-3A	656.20	17.32	638.88
P88-3B	655.98	NM	--
P95-8A	722.07	NM	--
P90-12A	640.79	14.81	625.98
P90-12B	640.73	13.14	627.59
P90-13A	--	--	--
P90-13B	--	--	--
GP-1P	652.00	13.75	638.25
GP-2P	658.61	16.66	641.95
GP-3P	658.51	12.38	646.13
GP-4P	662.01	14.69	647.32
GP-9P	674.03	11.63	662.40
GP-14P			
GP-15P			
GP-16P	689.51	NM	--
GP-17P			
P21-2		NM	--
P22-1		NM	--
P22-2		NM	--
P22-3		NM	--
South Creek			
SWSC-1	632.68	3.46	629.22
SWSC-2	629.98	5.35	624.63
Leak Detection System			
LDCS-1	657.26	27.80	629.46
LDCS-2A	659.24	29.81	629.43
LDCS-2B	661.70	25.81	635.89

Notes:
NM= not measured
-- = not applicable

* = Water level wells W88-7A, P88-2A, P88-2B, P90-13A, and P90-13B cannot be located

Table 2. Field Parameters
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Conductivity	Temperature
Units				(SU)	(µS/cm)	(°C)
WAC 173-200 Criteria				6.5-8.5	700[b]	—
Monitoring Wells						
MW-1A	304-121223-02	12/12/2023	DP	6.86	137	13.8
MW-2A	304-121223-04	12/12/2023	DP	7.12	367	13.5
MW-3	304-121223-06	12/12/2023	GB	7.32	356	10.8
MW-4	304-121423-21	12/14/2023	SP	6.88	369	13.9
MW-5A	304-121223-08	12/12/2023	DP	7.38	309	12.7
MW-6	304-121323-12	12/13/2023	DP	7.28	386	10.8
MW-7	304-121323-14	12/13/2023	DP	7.13	327	10.7
MW-9	304-121323-18	12/13/2023	DP	6.65	127	10.2
MW-10	304-121223-16	12/12/2023	DP	**6.18**	258	12.1
Leak Detection System						
LDCS-1	304-121223-09	12/12/2023	DB	6.24	252	20.1
LDCS-2A	304-121223-07	12/12/2023	DB	6.72	422	19.5
LDCS-2B	304-121223-05	12/12/2023	DB	6.56	602	15.6
LDCS-3A	304-121223-03	12/12/2023	DP	6.24	942	18.6
LDCS-4A	304-121223-11	12/12/2023	DP	6.37	112	19.7
LDCS-4B	304-121323-19	12/13/2023	DP	6.53	704	10.6
LDCS-5	304-121323-17	12/13/2023	GB	5.97	431	21.3
LDCS-6	304-121323-13	12/13/2023	DP	6.32	1006	19.7
LDCS-7	304-121223-01	12/12/2023	DP	6.12	754	20.8
LDCS-8	304-121323-20	12/13/2023	GB	6.30	896	22.0
LDCS-9	304-121323-22	12/13/2023	DP	6.17	752	16.1
Leachate Collection System						
Leachate, Cell 1	304-121423-29	12/14/2023	GB	7.61	65747	17.1
Leachate, Cell 2A	304-121423-28	12/14/2023	GB	7.73	54691	10.9
Leachate, Cell 2B	304-121423-27	12/14/2023	GB	7.52	13551	20.0
Leachate, Cell 3A	304-121423-26	12/14/2023	GB	7.55	30722	21.4
Leachate, Cell 4A	304-121423-30	12/14/2023	GB	7.95	70626	28.7
Leachate, Cell 4B	304-121423-31	12/14/2023	GB	7.41	20540	28.3
Leachate, Cell 5	304-121423-32	12/14/2023	GB	7.95	55811	29.8
Leachate, Cell 6	304-121423-33	12/14/2023	GB	7.80	27115	24.9
Leachate, Cell 7	304-121423-25	12/14/2023	GB	6.32	27748	23.5
Leachate, Cell 8	304-121423-34	12/14/2023	GB	7.15	7344	21.9
Leachate, Cell 9	NM	--	--	--	--	--

Notes:
Groundwater (monitoring well) concentrations greater than the WAC 173-200 criteria are shown in **bold**

b = Secondary Drinking Water Standard

°C = degrees celcius

* = Additional sample collected from MW-4 serves as confirmation water quality data

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

Table 3. Inorganic Parameters
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MRL	10	0.10	0.20	0.50	0.20	10	1.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	58	*	1.4	*	9.6	95	*	220
MW-2A	140	0.23	4.6	*	38	230	1.2	*
MW-3	150	0.12	3.8	*	30	210	1.1	*
MW-4	150	*	4.0	*	41	260	1.4	8.8
MW-5A	150	0.10	2.5	*	7.9	180	*	*
MW-6	200	0.15	6.4	*	8.6	240	1.3	*
MW-7	180	0.20	2.9	*	4.8	200	*	*
(BG) MW-9	67	*	1.5	*	1.6	130	*	*
(BG) MW-10	110	*	6.5	2.5	5.9	180	*	*
Leak Detection System								
LDCS-1	200	0.41	6.1	*	12	73	81	—
LDCS-2A	420	0.39	13.0	*	36	490	6.8	—
LDCS-2B	400	0.29	36.0	*	52	370	8.3	—
LDCS-3	440	0.22	4.5	*	57	530	2.2	—
LDCS-4A	220	0.40	9.6	*	390	800	8.1	—
LDCS-4B	320	*	18.0	1.1	37	420	8.2	—
LDCS-5	180	0.15	8.9	*	41	290	20	—
LDCS-6	440	0.30	23.0	*	100	630	4.7	—
LDCS-7	250	0.62	6.1	*	130	490	5.4	—
LDCS-8	450	*	21.0	*	50	570	6.8	—
LDCS-9	350	*	5.5	0.7	64	470	2.1	—
Leachate Collection System								
Leachate, Cell 1	9300	2100	8200	*	8.2	19000	2200	—
Leachate, Cell 2A	9600	1600	3800	*	75	15000	1800	—
Leachate, Cell 2B	5800	1300	2400	*	7.7	8400	1400	—
Leachate, Cell 3	7300	1200	2700	*	1.1	11000	1300	—
Leachate, Cell 4A	12000	2600	7300	*	12	22000	3300	—
Leachate, Cell 4B	15000	2500	5800	*	13	23000	3600	—
Leachate, Cell 5	12000	2600	3800	*	11	15000	2000	—
Leachate, Cell 6	10000	2100	3800	*	13	15000	2700	—
Leachate, Cell 7	4700	660	1400	*	860	14000	6600	—
Leachate, Cell 8	2900	500	760	1.1	150	3500	510	—
Leachate, Cell 9	—	—	—	—	—	—	—	—

Notes:

All sample units are milligrams per liter (mg/L)

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = Sample result was not reported at or above the MRL

— = Not applicable or not performed

BG = Background

H = analyzed after specified holding time due

Table 4. WAC 173-351 Appendix I Metals
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Antimony-D	Antimony-T	Arsenic-D	Arsenic-T	Barium-D	Barium-T	Beryllium-D	Beryllium-T	Cadmium-D	Cadmium-T	Chromium-D	Chromium-T	Cobalt-D	Cobalt-T	Copper-D	Copper-T	Lead-D	Lead-T	Nickel-D	Nickel-T	Selenium-D	Selenium-T	Silver-D	Silver-T	Thallium-D	Thallium-T	Vanadium-D	Vanadium-T	Zinc-D	Zinc-T
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.05	0.05	0.005	0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.01	0.01	0.002	0.002	0.02	0.02	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.01
WAC 173-200 Criteria	—	—	—	0.00005	—	1.0	—	—	—	0.01	—	0.05	—	—	—	1.0	—	0.05	—	—	—	0.01	—	0.05	—	—	—	—	—	5.0
Prediction Limit	—	0.05	—	0.011	—	0.091	—	0.005	—	0.005	—	0.011	—	0.01	—	0.063	—	0.042	—	0.020	—	0.005	—	0.01	—	0.005	—	0.016	—	0.290
Monitoring Wells																														
MW-1A	—	*	—	0.0088	—	0.1	—	*	—	*	—	0.028	—	0.011	—	0.07	—	0.012	—	0.028	—	*	—	*	—	*	—	0.039	—	0.14
MW-2A	—	*	—	*	—	0.018	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	0.0084	—	0.017	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.033
MW-5A	—	*	—	0.0055	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	0.0084	—	0.018	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	0.0059	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.016	—	*
(BG) MW-10	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.013
Leak Detection System																														
LDCS-1	*	—	0.0071	—	0.017	—	—	—	—	—	*	—	0.0013	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	*	—	0.032	—	—	—	—	—	*	—	0.003	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	0.017	—	0.032	—	—	—	—	—	*	—	0.0076	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3	*	—	0.018	—	0.025	—	—	—	—	—	*	—	0.0031	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	*	—	0.026	—	—	—	—	—	*	—	0.0014	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	*	—	0.017	—	—	—	—	—	*	—	0.0011	—	0.01	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	0.0059	—	0.031	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	0.019	—	0.057	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	*	—	0.027	—	*	—	*	—	*	—	0.0014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8	*	—	*	—	0.16	—	*	—	*	—	*	—	*	—	*	—	*	—	0.033	—	*	—	*	—	*	—	*	—	*	—
LDCS-9	*	—	*	—	0.03	—	*	—	*	—	*	—	0.0019	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
Leachate Collection System																														
Leachate, Cell 1	—	0.057	—	0.15	—	1.6	—	*	—	*	—	0.5	—	0.047	—	0.01	—	0.0076	—	0.91	—	*	—	*	—	*	—	0.28	—	*
Leachate, Cell 2A	—	*	—	0.13	—	1.5	—	*	—	*	—	0.47	—	0.05	—	0.029	—	0.022	—	0.81	—	*	—	*	—	*	—	0.32	—	0.082
Leachate, Cell 2B	—	*	—	0.099	—	0.73	—	*	—	*	—	0.35	—	0.031	—	0.015	—	0.013	—	0.4	—	*	—	*	—	*	—	0.24	—	0.036
Leachate, Cell 3	—	*	—	0.056	—	1	—	*	—	*	—	0.48	—	0.039	—	0.023	—	0.019	—	0.4	—	*	—	*	—	*	—	0.2	—	0.077
Leachate, Cell 4A	—	*	—	0.23	—	1.2	—	*	—	*	—	0.56	—	0.036	—	0.035	—	0.017	—	0.5	—	*	—	*	—	*	—	0.25	—	0.052
Leachate, Cell 4B	—	*	—	0.096	—	1.3	—	*	—	*	—	0.57	—	0.036	—	0.093	—	0.017	—	0.55	—	*	—	*	—	*	—	0.12	—	0.067
Leachate, Cell 5	—	*	—	0.18	—	0.8	—	*	—	*	—	0.6	—	0.052	—	0.16	—	0.023	—	0.54	—	*	—	*	—	*	—	0.12	—	0.11
Leachate, Cell 6	—	*	—	0.14	—	0.85	—	*	—	*	—	0.57	—	0.034	—	0.11	—	0.025	—	0.39	—	*	—	*	—	*	—	0.11	—	0.18
Leachate, Cell 7	—	*	—	0.081	—	0.98	—	*	—	0.0028	—	0.28	—	0.039	—	0.69	—	0.037	—	0.31	—	*	—	*	—	*	—	0.088	—	3.6
Leachate, Cell 8	—	*	—	0.11	—	0.3	—	*	—	*	—	0.18	—	0.012	—	0.024	—	0.0076	—	0.1	—	*	—	*	—	*	—	0.09	—	0.071

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Parameter concentrations for monitoring wells are total (T) metals

Parameter concentrations for LDCS sumps are dissolved (D) metals

Parameter concentrations for leachate samples are total (T) metals

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

— = not applicable or not performed

BG = Background

Table 5. WAC 173-351 Appendix II Metals (Dissolved)
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.20	0.10	0.10	0.005	2.0	1.0
WAC 173-200 Criteria	—	0.30	—	0.050	—	—
Monitoring Wells						
MW-1A	16	*	4	0.03	2.1	6.8
MW-2A	33	**0.9**	15	**0.34**	4.3	18
MW-3	35	*	15	**0.29**	3.5	12
MW-4	42	*	15	*	5.1	13
MW-5A	28	*	12	**0.17**	3.7	19
MW-6	44	*	20	**0.28**	5.2	12
MW-7	31	0.2	20	**0.24**	5.1	11
(BG) MW-9	11	*	6.8	*	2	7.7
(BG) MW-10	24	*	11	*	2.1	12
Leak Detection System						
LDCS-1	37	13.0	18	1.4	4.8	17
LDCS-2A	100	0.1	40	2.3	9.5	29
LDCS-2B	100	2.6	46	3.2	6	19
LDCS-3	110	3.1	45	4.3	6.1	23
LDCS-4A	180	1.2	30	0.83	3.9	19
LDCS-4B	74	*	42	1.1	4	16
LDCS-5	41	0.5	23	0.97	6.9	19
LDCS-6	94	2.1	73	2.4	7.3	25
LDCS-7	94	1.3	30	1	3.1	16
LDCS-8	91	*	62	2.3	4.8	22
LDCS-9	91	*	33	0.78	4.2	33
Leachate Collection System**						
Leachate, Cell 1	34	13.0	90	0.26	1000	5900
Leachate, Cell 2A	34	16.0	55	0.17	710	3900
Leachate, Cell 2B	35	10.0	43	0.35	450	2300
Leachate, Cell 3	55	12.0	62	0.5	680	3000
Leachate, Cell 4A	23	9.1	76	0.16	1300	5200
Leachate, Cell 4B	30	7.5	120	0.15	1200	5100
Leachate, Cell 5	28	5.4	47	0.22	890	3600
Leachate, Cell 6	46	7.1	88	0.49	920	3300
Leachate, Cell 7	960	100.0	210	18	350	1000
Leachate, Cell 8	100	1.0	39	1.7	170	660

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

** = Reported concentrations for leachate are total metals

— = not applicable or not performed

BG = Background

Table 6. Volatile Organic Compounds (µg/L)
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Parameter	1,2-Dichloroethane	1,4-Dichlorobenzene	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Styrene	Toluene
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MRL	0.50	0.50	6.00		5.00	10.0	0.50	0.50	0.50	0.50	1.00		0.50	0.50	0.50	0.50
WAC 173-200 Criteria	0.50	4.0	—		—	—	1.0	—	7.0	—	—		—	—	—	—
Monitoring Wells																
MW-1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-9^	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Leak Detection System																
LDCS-1	*	1.2	*	*	*	79	*	*	*	*	*	*	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Leachate Collection System				*												
Leachate, Cell 1	*	14	360	*	500	270	21	*	4.6	*	42	*	68	33	*	45
Leachate, Cell 2A	*	4.4	29	*	5.1	47	7.5	*	*	*	17	*	24	12	*	23
Leachate, Cell 2B	4.9	*	5400	*	240	6800	*	*	19	*	37	*	54	29	*	45
Leachate, Cell 3	*	12	340	*	14	420	12	*	*	1.3	41	*	65	31	4.2	20
Leachate, Cell 4A	*	8.4	3400	*	140	5000	16	*	*	*	17	*	26	13	*	23
Leachate, Cell 4B	*	*	2600	*	*	8600	*	*	27	*	24	*	18	22	*	26
Leachate, Cell 5	*	*	3000	120	100	4600	7.1	*	4.6	*	5.3	*	7	5.9	*	15
Leachate, Cell 6	*	*	3300	190	60	7800	9.2	*	*	*	12	*	15	10	*	22
Leachate, Cell 7	28	*	11000	*	120	6900	120	*	7.8	8	67	42	40	26	7.8	120
Leachate, Cell 8	*	*	3100	*	120	3200	3.4	6.9	5.1	*	14	*	21	12	*	26
Quality Control Samples																
Field Blank	*	*	*		*	*	*	*	*	*	*		*	*	*	*

Notes:
All sample units are milligrams per liter (µg/L)
Analyses performed by Eurofins TestAmerica of Denver, Colorado
Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**
Method Reporting Limit (MRL) is typical and may be elevated for some samples
^ = Additional sample collected from MW-9 serves as confirmation water quality data
* = sample result was not reported at or above the MRL
— = not applicable or not performed
BG = Background

Table 7. Cation-Anion Balance
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Cations	mg/L					meq/L					% of Total		
	Ca	Mg	K	Na	Total	Ca	Mg	K	Na	Total	Na+K	Ca	Mg
MW-1A	16	4	2.1	6.8	28.9	0.80	0.33	0.05	0.30	1.47	23.3	54.3	22.4
MW-2A	33	15	4.3	18	70.3	1.65	1.23	0.10	0.78	3.76	23.4	43.8	32.8
MW-3	35	15	3.5	12	65.5	1.75	1.23	0.08	0.52	3.58	16.8	48.8	34.5
MW-4	42	15	5.1	13	75.1	2.10	1.23	0.12	0.57	4.01	17.0	52.3	30.8
MW-5A	28	12	3.7	19	62.7	1.40	0.99	0.08	0.83	3.29	27.6	42.4	30.0
MW-6	44	20	5.2	12	81.2	2.20	1.65	0.12	0.52	4.48	14.3	49.0	36.7
MW-7	31	20	5.1	11	67.1	1.55	1.65	0.12	0.48	3.79	15.7	40.9	43.5
MW-9	11	6.8	2	7.7	27.5	0.55	0.56	0.05	0.33	1.49	25.5	36.9	37.6
MW-10	24	11	2.1	12	49.1	1.20	0.91	0.05	0.52	2.67	21.3	44.8	33.9
LDCS-1	37	18	4.8	17	76.8	1.85	1.48	0.11	0.74	4.18	20.3	44.2	35.5
LDCS-2A	100	40	9.5	29	178.5	4.99	3.29	0.21	1.26	9.76	15.1	51.1	33.7
LDCS-2B	100	46	6	19	171	4.99	3.79	0.14	0.83	9.74	9.9	51.2	38.9
LDCS-3A	110	45	6.1	23	184.1	5.49	3.70	0.14	1.00	10.33	11.0	53.1	35.8
LDCS-4A	180	30	3.9	19	232.9	8.98	2.47	0.09	0.83	12.37	7.4	72.6	20.0
LDCS-4B	74	42	4	16	136	3.69	3.46	0.09	0.70	7.94	9.9	46.5	43.6
LDCS-5	41	23	6.9	19	89.9	2.05	1.89	0.16	0.83	4.92	20.0	41.6	38.5
LDCS-6	94	73	7.3	25	199.3	4.69	6.01	0.16	1.09	11.95	10.5	39.2	50.3
LDCS-7	94	30	3.1	16	143.1	4.69	2.47	0.07	0.70	7.93	9.7	59.2	31.2
LDCS-8	91	62	4.8	22	179.8	4.54	5.10	0.11	0.96	10.71	9.9	42.4	47.6
LDCS-9	91	33	4.2	33	161.2	4.54	2.72	0.09	1.44	8.79	17.4	51.7	30.9
Leachate, Cell 1	34	90	1000	5900	7024.0	1.70	7.41	22.58	256.65	288.33	96.8	0.6	2.6
Leachate, Cell 2A	34	55	710	3900	4699.0	1.70	4.53	16.03	169.65	191.90	96.8	0.9	2.4
Leachate, Cell 2B	35	43	450	2300	2828.0	1.75	3.54	10.16	100.05	115.50	95.4	1.5	3.1
Leachate, Cell 3A	55	62	680	3000	3797.0	2.74	5.10	15.35	130.50	153.70	94.9	1.8	3.3
Leachate, Cell 4A	23	76	1300	5200	6599.0	1.15	6.25	29.35	226.20	262.96	97.2	0.4	2.4
Leachate, Cell 4B	30	120	1200	5100	6450.0	1.50	9.88	27.10	221.85	260.32	95.6	0.6	3.8
Leachate, Cell 5	28	47	890	3600	4565.0	1.40	3.87	20.10	156.60	181.96	97.1	0.8	2.1
Leachate, Cell 6	46	88	920	3300	4354.0	2.30	7.24	20.77	143.55	173.86	94.5	1.3	4.2
Leachate, Cell 7	960	210	350	1000	2520.0	47.90	17.28	7.90	43.50	116.59	44.1	41.1	14.8
Leachate, Cell 8	100	39	170	660	969	4.99	3.21	3.84	28.71	40.75	79.9	12.2	7.9

Anions	mg/L					meq/L					% of Total			Total Ions (meq/L)	Cation - Anion Balance	Applicable Ratio (%)	Ratio Exceedance
	Alk	Cl	NO_3	SO_4	Total	Alk	Cl	NO_3	SO_4	Total	Cl	Alk	SO_4				
MW-1A	69.6	1.4	0.50	9.6	81.1	1.14	0.04	0.008	0.20	1.39	2.8	82.2	14.4	2.86	2.9	10	O
MW-2A	168	4.6	0.50	38	211.1	2.76	0.13	0.008	0.79	3.68	3.5	74.8	21.5	7.44	1.0	5	O
MW-3	180	3.8	0.50	30	214.3	2.95	0.11	0.008	0.62	3.69	2.9	80.0	16.9	7.27	1.5	5	O
MW-4	180	4	0.50	41	225.5	2.95	0.11	0.008	0.85	3.93	2.9	75.2	21.7	7.94	1.1	5	O
MW-5A	180	2.5	0.50	7.9	190.9	2.95	0.07	0.008	0.16	3.19	2.2	92.4	5.1	6.49	1.5	5	O
MW-6	240	6.4	0.50	8.6	255.5	3.94	0.18	0.008	0.18	4.30	4.2	91.5	4.2	8.78	2.0	5	O
MW-7	216	2.9	0.50	4.8	224.2	3.54	0.08	0.008	0.10	3.73	2.2	94.9	2.7	7.52	0.7	5	O
MW-9	80.4	1.5	0.50	1.6	84	1.32	0.04	0.008	0.03	1.40	3.0	94.0	2.4	2.89	3.0	10	O
MW-10	132	6.5	2.5	5.9	146.9	2.16	0.18	0.040	0.12	2.51	7.3	86.2	4.9	5.18	3.1	5	O
LDCS-1	240	6.1	0.50	12	258.6	3.94	0.17	0.008	0.25	4.37	3.9	90.2	5.7	8.54	2.2	5	O
LDCS-2A	504	13	0.50	36	553.5	8.27	0.37	0.008	0.75	9.39	3.9	88.0	8.0	19.15	1.9	5	O
LDCS-2B	480	36	0.50	52	568.5	7.87	1.02	0.008	1.08	9.98	10.2	78.9	10.8	19.71	1.2	5	O
LDCS-3A	528	4.5	0.50	57	590	8.66	0.13	0.008	1.19	9.98	1.3	86.8	11.9	20.31	1.7	5	O
LDCS-4A	264	9.6	0.50	390	664	4.33	0.27	0.008	8.11	12.72	2.1	34.0	63.8	25.09	1.4	5	O
LDCS-4B	384	18	1.10	37	440	6.30	0.51	0.018	0.77	7.59	6.7	82.9	10.1	15.53	2.2	5	O
LDCS-5	216	8.9	0.50	41	266	3.54	0.25	0.008	0.85	4.65	5.4	76.1	18.3	9.58	2.8	5	O
LDCS-6	528	23	0.50	100	652	8.66	0.65	0.008	2.08	11.40	5.7	76.0	18.3	23.35	2.4	5	O
LDCS-7	300	6.1	0.50	130	437	4.92	0.17	0.008	2.70	7.80	2.2	63.0	34.6	15.73	0.8	5	O
LDCS-8	540	21	0.50	50	612	8.86	0.59	0.008	1.04	10.50	5.6	84.4	9.9	21.21	1.0	5	O
LDCS-9	420	5.5	0.73	64	490	6.89	0.16	0.012	1.33	8.39	1.8	82.1	15.9	17.17	2.3	5	O

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
Total alkalinity concentration, reported as calcium carbonate ($CaCO_3$), is converted to the bicarbonate (HCO_3^-) ion by multiplying by a factor of 1.2
Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].
The MRL was used for analytes that were non-detect
A 10% difference threshold is used if the total cation-anion sums are < 5.0 meq/liter
A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/liter

Table 8. Duplicate Sample Results
Fourth Quarter 2023 Monitoring Report
LRI Landfill, Pierce County, Washington

Parameter	MRL	MW-7	MW-7 (Duplicate)	RPD (%)
Volatile Organic Compunds (µg/L)				
No Detections	-	-	-	-
Inorganic Parameters (mg/L)				
Alkalinity, Total	10	180	170	5.7
Ammonia	0.1	0.20	0.21	*
Chloride	0.2	2.9	2.9	0.0
Sulfate	0.2	4.8	4.8	0.0
Total Dissolved Solids	10	200	200	0.0
Total Organic Carbon	1.0	*	*	*
Dissolved Metals (mg/L)				
Calcium	0.2	31	31	0.0
Magnesium	0.1	20	20	0.0
Manganese	0.005	0.24	0.25	4.1
Potassium	2.0	5.1	5.1	0.0
Sodium	1.0	11	11	0.0
Total Metals (mg/L)				
Arsenic	0.005	0.0059	0.0059	0.0
Barium	0.005	0.014	0.014	0.0

Notes:
Analyses performed by Eurofins TestAmerica of Denver, Colorado
Parameters not listed were not present at concentrations exceeding the Method Reporting Limit (MRL)
RPD = relative percent difference
µg/L = micrograms per liter
mg/L = milligrams per liter
* = sample result was not reported at or above the MRL
The MRL was used to calculate the RPD for analytes where one sample was non-detect

FOURTH QTR. 2023 DATA VALIDATION REPORT – LRI LANDFILL

Project Details

Project No.	04223001.02	**Site Name**	LRI 304th Street LF
Data Validator	Alex Deszo	**Data Level**	Level 2
Date	3/11/24	**DV Tier**	Tier 1
QA Document	LRI Landfill Groundwater Monitoring Plan, March 10, 2014		

Sample Login Summary

Sample Group	Sample Login Comments	Analytical Lab (Primary)
280-185698-1	A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC)	TestAmerica, Denver, CO
280-185703-1	No Comment	TestAmerica, Denver, CO
280-185768-1	No Comment	TestAmerica, Denver, CO
280-185647-1	No Comment	TestAmerica, Denver, CO
280-185651-1	No Comment	TestAmerica, Denver, CO
280-185764-1	No Comment	TestAmerica, Denver, CO

Analytical Summary

Sample Group	Analyses					
	TDS/Alk/NO3	Metals	NH3/TOC	VOCs	Anions	TSS
280-185698-1	X	X_2	X	X	X	-
280-185703-1	X	X_2	X	X	X	X
280-185768-1	X	X_3	X	X	X	-
280-185647-1	X	X_2	X	X	X	X
280-185651-1	X	X_2	X	X	X	-
280-185764-1	X	X_2	X	X	X	X

Notes:

1. Dissolved metals analysis performed (field filtered)
2. Dissolved and Total metals analysis performed
3. Total Metals analysis performed

Laboratory Quality Assurance Samples

Lab QA Samples	Results	Comments
Method Blank	Acceptable.	See case narratives
LCS/LCSD	Acceptable.	See case narratives.
MS/MSD	Acceptable	See case narratives.

Lab QA Samples	Results	Comments
Metals	Acceptable.	See case narratives.
Duplicates	Acceptable.	See case narratives.
Organics	Acceptable.	See case narratives.
General Chemistry	Acceptable.	See case narratives.
General Comments	Acceptable.	See case narratives.

Field Quality Assurance Samples

Field QA Samples	Sample Group	Analytes	Notes
QC-FB		None.	
QC-FB		None.	

Lab Quality Flags

Flag	Sample Groups	Comments
4	280-185764-1, 280-185703-1, 280-185698-1, 280-185651-1	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
^+	280-185698-1, 280-185651-1, 280-185647-1	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
F1	280-185768-1, 280-185764-1, 280-185703-1, 280-185698-1, 280-185651-1, 280-185647-1	MS and/or MSD recovery exceeds control limits.
J	280-185768-1, 280-185764-1, 280-185703-1, 280-185698-1, 280-185651-1, 280-185647-1	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	280-185768-1, 280-185764-1	MS/MSD RPD exceeds control limits
H	280-185768-1	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
^3-	280-185768-1, 280-185764-1, 280-185703-1, 280-185698-1, 280-185651-1, 280-185647-1	Reporting Limit Check Standard is outside acceptance limits, low biased.
*1	280-185703-1, 280-185698-1	LCS/LCSD RPD exceeds control limits.
E	280-185698-1	Result exceeded calibration range.

Flag	Sample Groups	Comments
S1+	280-185698-1	Surrogate recovery exceeds control limits, high biased.

Duplicate Evaluation

Analyte	Units	MW-7 (304-121323-14)	MW-7 DUP (304-121323-23)	RPD (%)
Alkalinity, Total	mg/L	180	170	5.71
Ammonia	mg/L	0.2	0.21	4.88
Arsenic, Total	mg/L	0.0059	0.0059	0.00
Barium, Total	mg/L	0.014	0.014	0.00
Calcium, Dissolved	mg/L	31	31	0.00
Chloride	mg/L	2.9	2.9	0.00
Iron, Dissolved	mg/L	0.22	0.21	4.65
Magnesium, Dissolved	mg/L	20	20	0.00
Manganese, Dissolved	mg/L	0.24	0.25	4.08
Potassium, Dissolved	mg/L	5.1	5.1	0.00
Sodium, Dissolved	mg/L	11	11	0.00
Sulfate	mg/L	4.8	4.8	0.00
Total Dissolved Solids	mg/L	200	200	0.00
Total Organic Carbon	mg/L	0	0	0

U = Non-detection. Reporting limit (RL) used for calculation of RPD when necessary.

Additional Data Flags

Flag	Description
U	Not detected above the method reporting limit.

Qualified Data and Usability

Lab qualifiers are noted. All data, as qualified, are acceptable for use.

January 15, 2024
File No. 04223001.02

Subject: **Fourth Quarter 2023 Groundwater Monitoring Event**
LRI Landfill, Pierce County, Washington

NOTES/SAMPLE DECODING:

Event Dates: December 12-14, 2023
Field Staff: Jovany Estrada and Alex Deszo

- This event served as a quarterly monitoring event.
- Dedicated pumps were used for purging and sampling wells MW-1A, MW-2A, MW-3, MW-5A, MW-6, MW-7, MW-9, MW-10, and leak detection/collection system points LDCS-3A, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6, and LDCS-7.
- Disposable bailers were used to sample leak detection/collection system points LDCS-1, LDCS-2A, LDCS-2B.
- The sample from LDCS-8 and LDCS-9 was collected as a grab sample from the channel discharge spigot.
- A non-dedicated Sample Pro pump was used for purging and sampling well MW-4.
- A round of water level measurements was completed on December 14, 2023.
- Multiparameter field meters were calibrated daily, prior to sampling.
- Source water for the field blank was lab-grade deionized water (VOC-free) provided by TestAmerica in Tacoma, Washington.

Sample Number	Well Number
304-121223-01	LDCS-7
304-121223-02	MW-1A
304-121223-03	LDCS-3
304-121223-04	MW-2A
304-121223-05	LDCS-2B
304-121223-06	MW-3A
304-121223-07	LDCS-2A
304-121223-08	MW-5A
304-121223-09	LDCS-1
304-121223-11	LDCS-4A
304-121323-12	MW-6
304-121323-13	LDCS-6
304-121323-14	MW-7
304-121423-15	Field Blank
304-121223-16	MW-10

304-121323-17	LDCS-5
304-121323-18	MW-9
304-121323-19	LDCS-4B
304-121323-20	LDCS-8
304-121423-21	MW-4
304-121323-22	LDCS-9
304-121323-23	MW-7 Duplicate
304-121423-25	Leachate, Cell 7
304-121423-26	Leachate, Cell 3A
304-121423-27	Leachate, Cell 2B
304-121423-28	Leachate, Cell 2A
304-121423-29	Leachate, Cell 1
304-121423-30	Leachate, Cell 4A
304-121423-31	Leachate, Cell 4B
304-121423-32	Leachate, Cell 5
304-121423-33	Leachate, Cell 6
304-121423-34	Leachate, Cell 8

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04223001.02 | Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Site: LRI 304th | DTW | Meter: | CONTROL SETTINGS: | 1 ft water = 0.62L | 1L = 0.26 gallons

Well ID: LDCS-7 | TOS | MP-20 | Refill 11.5 | One Well Volume (liters) | Other:

Sample ID: 304-121223-D1 | Intake | YSI | Discharge 3.5 | Flow Setting:

Date: 12/12/23 | BOS | Pressure 40 | Total Volume Bailed (liters)

Weather: Cloudy | Total Depth | Flow 200 ml/min

Filtered? Y (N) | Locked? Y (N) | Water in Protector? Y (N) | Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
0920		8.6	770	4.97	6.34	2.9	5.0	
0925		15.9	747	0.45	6.57	-26.0	4.9	
0928		16.8	750	0.32	6.61	-48.3	6.0	
0931		19.1	761	0.14	6.17	-97.4	4.0	
0934		20.0	752	0.10	6.11	-109.8	3.8	
0937		20.3	751	0.07	6.11	-129.9	3.8	
0940		20.8	754	0.04	6.12	-148.3	3.9	

Notes / Observations (color, odor, anomalies, etc):

LCRS Level 40.5
LDCRS level 9.2
Cond 569

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: MW-1A
Sample ID: 304-12 12-23-02
Date: 12/12/23
Weather: (100)y

17.88 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated? | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 9
Discharge 6
Pressure 40
Flow

1 ft water = 0.62L 1L = 0.26 gallons
One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1023		13.6	170.9	6.96	7.35	267.2	653	
1028		14.6	173.1	4.22	5.93	315.6	66.00	
1031		13.9	161.9	4.19	5.99	315.5	540	
1034		13.7	141.1	4.21	6.45	303.5	935	
1037		13.9	136.2	3.85	6.74	295.1	525	
1040		13.9	136.1	3.73	6.89	298.7	475	
1043		13.8	136.7	3.50	6.86	298.5	365	

Notes / Observations (color, odor, anomalies, etc):

Well casing FULL of sand, excavated to get to well.

Heard air leaking at well cap casing very low flow.

Pulled well cap down 6" up out of casing w/ difficulty to examine. Could not re-insert well into casing - Collect inside monument.

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Deano
Printed Name

Signature

SCS ENGINEERS
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Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: LDCS-3
Sample ID: 304-12 12323-03
Date: 12/__/23
Weather:

DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 12
Discharge 3
Pressure 40
Flow 350 ml/min

1 ft water = 0.62L
1L = 0.26 gallons
One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y N
Locked? Y N
Water in Protector? Y N
Damage? Y N

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1040		14.3	962	0.78	6.26	-50.6	659.8	
1045		17.3	939	1.2	6.24	-107.6	2490.1	
1048		17.8	940	1.0	6.24	-130.1	1127.9	
1051		18.1	942	0.8	6.24	-146.2	408.3	
1054		18.3	942	0.7	6.24	-157.0	170.9	
1057		18.6	942	0.4	6.24	-168.3	115.04	
1100		18.6	942	0.3	6.24	-176.1	172.1	

Notes / Observations (color, odor, anomalies, etc):

water very turbid at beginning of purge

LDCRS level 9.88

Cond. 938

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: MW-2A
Sample ID: 304-1212 23-04
Date: 12/12/23
Weather: Cloudy

17.63 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI

CONTROL SETTINGS:
Refill: 9
Discharge: 6
Pressure: 30
Flow: 400 ml/min

1 ft water = 0.62L
1L = 0.26 gallons
One Well Volume (liters):
Other:
Flow Setting:
Total Volume Bailed (liters):

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

Notes / Observations (color, odor, anomalies, etc):

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1120		14.3	289.4	1.48	6.64	159.1	5.25	
1125		13.6	368.1	0.64	6.99	-60.7	3.28	
1128		13.6	369.1	0.62	7.05	-78.4	3.30	
1131		13.5	368.7	0.61	7.08	-88.7	3.42	
1134		13.5	367.5	0.60	7.10	-96.6	3.25	
1137		13.5	367.2	0.60	7.11	-101.2	3.25	
1140		13.5	367.0	0.59	7.12	-105.8	3.21	

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: ALX 12520
Printed Name

Signature

SCS ENGINEERS
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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: LDCS-2B
Sample ID: 304-12122-05
Date: 12/12/23
Weather: Cloudy

25.81 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1130		15.6	602	5.48	6.56	-51.1	55.0	

Notes / Observations (color, odor, anomalies, etc):

Cond. off

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: MW-3
Sample ID: 304-12122023-06
Date: 12/12/23
Weather: Cloudy

6.29 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 9
Discharge 6
Pressure 35
Flow 400 mL/min

1 ft water = 0.62L 1L = 0.26 gallons
One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? (Y) N
Locked? (Y) N
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1231		9.9	334.6	6.25	7.41	132.4	2.82	
1236		10.7	354.3	1.12	6.62	154.2	3.86	
1239		10.8	353.8	0.85	7.16	133.0	2.93	
1242		10.8	354.7	0.77	7.25	111.8	2.77	
1245		10.8	355.3	0.73	7.29	89.7	2.78	
1248		10.8	355.7	0.71	7.31	67.5	2.74	
1251		10.8	356.0	0.70	7.32	49.3	2.78	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Dezso
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: LDCS-2A
Sample ID: 304-12122307
Date: 12/12/23
Weather: Cloudy

29.81 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1200		19.5	422	4.66	6.72	-34.5	16.7	

Notes / Observations (color, odor, anomalies, etc):

Ask lab to filter diss. metals

Cond. S71

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: MW-5A
Sample ID: 304-121223-02
Date: 12/12/23
Weather: Cloudy

26.32 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 9
Discharge 6
Pressure 40
Flow 400 ml/min

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1315		13.0	278.6	2.30	6.61	98.0	7.24	
1320		12.7	305.8	0.72	6.94	89.2	13.38	
1323		12.7	303.5	0.68	7.21	75.2	8.22	
1326		12.6	303.8	0.68	7.30	63.3	6.41	
1329		12.7	305.2	0.67	7.34	48.9	6.25	
1332		12.7	307.1	0.66	7.36	32.2	5.02	
1335		12.7	308.5	0.65	7.38	9.2	4.44	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: ALEX RESZO
Printed Name

AR
Signature

SCS ENGINEERS
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Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04223001.C2
Site LR1 304th
Well ID: LDCS-1
Sample ID: 304-12223-09
Date: 12/12/23
Weather: Cloudy

27.50 DTW
TOS
Intake
BOS
Total Depth

Sampling Method : Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other :
Flow Setting :

Filtered? Y N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1300		20.1	252	5.75	6.24	5.7	24.1	

Notes / Observations (color, odor, anomalies, etc):

Ask lab to filter

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: T. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: LDCS-4A
Sample ID: 304-12 12-23-11
Date: 12/12/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 YSI

DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill 11
Discharge 4
Pressure 40
Flow 150 ml/min

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

Notes / Observations (color, odor, anomalies, etc):

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1338		14.8	836	2.83	6.52	-10.7	16.8	
1343		19.6	1088	0.10	6.35	-116.1	113.71	
1348		19.6	1109	0.06	6.36	-145.4	41.98	
1353		19.6	1115	0.03	6.37	-161.7	27.35	
1358		19.6	1116	0.01	6.37	-177.7	20.18	
1355		19.6	1118	-0.01	6.37	-188.9	21.16	
1358		19.7	1118	-0.01	6.37	-191.6	22.8	

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: MW-6
Sample ID: 304-121323-12
Date: 12/13/23
Weather: Cloudy

6.87 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI
CONTROL SETTINGS:
Refill 9
Discharge 6
Pressure 40
Flow

1 ft water = 0.62L
1L = 0.26 gallons
One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? (Y) N
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1210		10.8	306.0	3.28	6.00	111.0	3.09	
1215		10.9	386.8	0.75	7.23	72.6	3.03	
1218		10.9	386.7	0.72	7.26	60.9	2.98	
1221		10.9	386.5	0.70	7.26	50.3	2.96	
1224		10.9	386.3	0.69	7.28	41.2	2.96	
1227		10.9	386.0	0.68	7.28	29.8	2.93	
1230		10.8	385.8	0.68	7.28	23.9	2.93	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Dosze
Printed Name

AD
Signature

SCS ENGINEERS
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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: LDCS - 6
Sample ID: 304 - 121323 - 13
Date: 12 | 13 | 23
Weather: Partly Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 12
Discharge 3
Pressure 60
Flow 200 ml/min.

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1135		7.8	962	10.09	7.40	27.3	12.2	
1140		15.9	1016	7.05	6.97	52.6	5.6	
1143		15.4	1035	4.43	6.76	25.2	4.1	
1146		17.0	1044	2.91	6.61	-38.2	13.1	
1149		18.4	1014	0.55	6.34	-100.6	4.2	
1152		19.4	1006	0.46	6.32	-136.8	14.0	
1155		19.7	1006	0.29	6.32	-157.2	6.1	

Notes / Observations (color, odor, anomalies, etc):

LCRS 41.9
LDCRS 2.2
Cond 1015

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

SCS ENGINEERS
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Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: MW-7
Sample ID: 304-121323-14
Date: 12/13/23
Weather: Partly Cloudy

22.86 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 / YSI

CONTROL SETTINGS:
Refill 9
Discharge 6
Pressure 30
Flow

1 ft water = 0.62L
1L = 0.26 gallons
One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? (Y) N
Locked? (Y) N
Water in Protector? (Y) N
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1050		10.3	324.0	3.13	5.82	164.3	3.41	
1055		10.7	328.4	1.31	6.19	123.9	3.87	
1058		10.7	328.2	0.94	6.45	94.8	3.75	
1101		10.7	327.9	0.84	6.66	56.9	3.66	
1104		10.7	327.6	0.77	6.86	11.4	3.58	
1107		10.7	327.4	0.74	7.04	-32.7	3.62	
1110		10.7	327.1	0.72	7.13	-56.8	3.49	

Notes / Observations (color, odor, anomalies, etc):
304-121323-23
Dup taken @ 1120

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Deeso
Printed Name

AD
Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04122300.02
Site: LI2I 304th
Well ID: FB
Sample ID: 304-121423-15
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | (Grab) | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters):
Total Volume Bailed (liters):
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1145		11.5	11.4	8.13	7.28	146.0	0.80	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Deszo
Printed Name

AD
Signature

SCS ENGINEERS
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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: MW-10
Sample ID: 304-12123-16
Date: 12/12/23
Weather: Cloudy

25.82 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: (Dedicated) | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 (YSI)

CONTROL SETTINGS: 1 ft water = 0.62L; 1L = 0.26 gallons

Refill: 9
Discharge: 6
Pressure: 40
Flow: 200 ml/min

One Well Volume (liters):
Total Volume Bailed (liters):
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

Notes / Observations (color, odor, anomalies, etc):

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
910		13.2	255.5	2.36	5.85	348.6	3.86	
915		12.4	264.3	0.96	5.94	346.6	3.80	
918		12.3	261.2	0.86	6.02	339.7	3.87	
921		12.3	259.6	0.85	6.09	336.4	3.71	
924		12.3	258.0	0.87	6.14	333.7	3.64	
927		12.2	257.7	0.88	6.16	331.9	3.62	
930		12.1	257.7	0.88	6.18	330.6	3.64	

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Pegno
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223CC1.02
Site: LR1 304th
Well ID: LDCS-5
Sample ID: 304-121323-17
Date: 12/13/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill: 12
Discharge: 3
Pressure: 40
Flow: 150 ml/min

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters):
Total Volume Bailed (liters):
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1030		8.2	689	9.28	7.38	42.4	18.0	
1035		18.2	697	3.58	6.39	16.2	6.5	
1038		19.5	697	1.73	6.28	-82.8	7.5	
1041		20.7	634	0.72	6.17	-119.7	6.5	
1044		21.4	464	0.32	6.00	-126.5	9.3	
1047		21.3	436	0.21	5.98	-134.3	9.9	
1050		21.3	431	0.15	5.97	-141.3	10.7	

Notes / Observations (color, odor, anomalies, etc):

P1 level 8.7
P2 level 8.5
Cond. 586

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: MW-9
Sample ID: 304-121923-18
Date: 12/13/23
Weather: Cloudy

9.83 DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 9
Discharge 6
Pressure 45
Flow

1 ft water = 0.62L
1L = 0.26 gallons
One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y N
Locked? Y N
Water in Protector? Y N
Damage? Y N

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

Notes / Observations (color, odor, anomalies, etc):

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1320		9.7	130.5	5.99	6.98	158.5	3.10	
1325		10.2	127.4	4.06	6.64	175.0	2.92	
1328		10.2	127.4	4.05	6.67	177.5	2.86	
1331		10.2	127.3	4.04	6.67	182.0	2.84	
1334		10.2	127.3	4.03	6.66	188.3	2.71	
1337		10.2	127.3	4.02	6.66	193.7	2.68	
1340		10.2	127.3	4.02	6.65	198.3	2.62	

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Dezzo
Printed Name

AD
Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304A
Well ID: LDCS - 4B
Sample ID: 304 - 12/13/23 - 19
Date: 12/13/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 YSI

DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill 12
Discharge 3
Pressure 60
Flow 120 ml/min

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y N
Locked? Y N
Water in Protector? Y N
Damage? Y N

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
0940		14.6	553	4.47	6.54	70.9	17.7	
0945		18.3	707	1.46	6.49	-70.6	8.0	
0948		18.3	703	1.22	6.50	-86.6	6.3	
0951		18.4	703	0.96	6.51	-101.2	4.7	
0954		18.5	703	0.79	6.52	-106.7	4.6	
0957		18.5	703	0.66	6.53	-113.4	4.5	
1000		18.6	704	0.54	6.55	-118.9	4.9	

Notes / Observations (color, odor, anomalies, etc):

P1 level 23
P2 level 58
Cond. 697

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 0422300 1.02
Site: LRI 304th
Well ID: LDCS-5
Sample ID: 304-12|323-[illegible]20
Date: 12|13|23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1230		22.5	896	4.34	6.30	-44.0	4.0	

Notes / Observations (color, odor, anomalies, etc):

Ask lab to filter

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: CRI 364th
Well ID: MW-4
Sample ID: 304-121423-21
Date: 12/14/23
Weather: Cloudy

21.38 DTW
TOS
Intake
BOS
Total Depth

Sampling Method : Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 9
Discharge 6
Pressure 50
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other :
Flow Setting :

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

Notes / Observations (color, odor, anomalies, etc):
Casing full of sediment, well cap excavated for access.

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1047		14.1	362.3	3.09	6.77	281.5	21.22	
1052		14.3	369.0	2.34	6.74	278.7	19.48	
1055		14.2	368.9	2.23	6.79	277.4	16.33	
1058		14.1	368.9	2.16	6.83	275.9	14.01	
1101		14.0	368.9	2.11	6.85	275.0	12.89	
1104		14.0	368.9	2.06	6.87	274.3	13.06	
1107		13.9	369.1	2.03	6.88	273.5	13.86	

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Desco
Printed Name

AD
Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: LDCS-9
Sample ID: 304-12323-22
Date: 12/13/23
Weather: Partly cloudy

Sampling Method: | Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

DTW _____
TOS _____
Intake _____
BOS _____
Total Depth _____

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill _____
Discharge _____
Pressure _____
Flow _____

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters) _____
Total Volume Bailed (liters) _____
Other: _____
Flow Setting: _____

Filtered? (Y) N
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly | 500 ml Poly | 250 ml Poly | 125 ml Poly
500 ml HNO3 x2 | 500 ml H2SO4 x2 | 40 ml VOA x3 x6 | 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1320		16.1	752	4.53	6.17	65.5	1.7	

Notes / Observations (color, odor, anomalies, etc):

ASK lab to filter

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: T. Estmon
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LR1 304th
Well ID: Leachate, Cell 7
Sample ID: 304-121423-25
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | (Grab) | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y (N)
Locked? (Y) N
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1040		23.5	2745	1.81	6.32	-123.5	32.1	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: Leachate Cell 3A
Sample ID: 304-12/423-26
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L 1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y (N)
Locked? (Y) N
Water in Protector? Y N
Damage? Y N

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1055		21.4	30722	4.18	7.55	-8.4	938.9	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LR1 304th
Well ID: Leachate, Cell 2B
Sample ID: 304-121423-27
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | (Grab) | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Other:
Flow Setting:
Total Volume Bailed (liters)

Filtered? Y (N)
Locked? (Y) N
Water in Protector? Y N
Damage? Y N

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

Notes / Observations (color, odor, anomalies, etc):

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1110		22.0	13551	5.30	7.52	-62.3	3625.9	

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 324th
Well ID: Leachate, Cell 2A
Sample ID: 304-121423-28
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | (Grab) | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters):
Total Volume Bailed (liters):
Other:
Flow Setting:

Filtered? Y (N)
Locked? (Y) N
Water in Protector? Y N
Damage? Y N

Sample Containers:
1000 ml Poly | 500 ml Poly | 250 ml Poly | 125 ml Poly
500 ml HNO3 x2 | 500 ml H2SO4 x2 | 40 ml VOA x3 x6 | 1000 ml Amber
125 ml NaOH

Notes / Observations (color, odor, anomalies, etc):

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1125		10.9	5464	4.26	7.73	-89.4	1705.7	

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LR1 3044
Well ID: Leachate Cell 1
Sample ID: 304-121423-29
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y N
Locked? Y N
Water in Protector? ~~Y~~ N
Damage? ~~Y~~ N

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1155		17.1	65747	3.51	7.61	-33.8	177.2	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site LR1 304th
Well ID: Leachate, Cell 4A
Sample ID: 304-121423-30
Date: 12/14/23
Weather: Cloudy

Sampling Method : Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | (Grab) | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other :
Flow Setting :

Filtered? Y (N)
Locked? (Y) N
Water in Protector? ~~Y~~ N
Damage? ~~Y~~ N

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

Notes / Observations (color, odor, anomalies, etc):

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1250		28.7	70.626	2.74	7.45	-56.8	21.18	

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LR1 304th
Well ID: leachate, cell 4B
Sample ID: 304-121423-31
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | (Grab) | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other :
Flow Setting :

Filtered? Y (N)
Locked? (Y) N
Water in Protector? Y N
Damage? Y N

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1305		28.3	2.0 SLD	4.10	7.41	576	2400	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: T. Estrada
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04223CC1.02
Site: LRI 304th
Well ID: Leachate, Cell 5
Sample ID: 304-12123-32
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | (Grab) | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y (N)
Locked? (Y) N
Water in Protector? Y N
Damage? ~~Y~~ N

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1525		2.98	55.81L	.98	7.95	-97.8	42.9	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: J. Estracle
Printed Name

JE
Signature

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Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: Leachate Cell 6
Sample ID: 304-121423-33
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
1 ft water = 0.62L 1L = 0.26 gallons

DTW: ____
TOS: ____
Intake: ____
BOS: ____
Total Depth: ____

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill: ____
Discharge: ____
Pressure: ____
Flow: ____

One Well Volume (liters): ____
Total Volume Bailed (liters): ____
Other: ____
Flow Setting: ____

Filtered? Y (N) Locked? Y (N) Water in Protector? Y (N) Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1340		24.9	27,115	2.05	7.80	-48.8	450	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Deso
Printed Name

AD
Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 042230C1.02
Site: LDI 304th
Well ID: Leachate Cell 8
Sample ID: 304-121423-34
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
1000 ml Poly
500 ml Poly
250 ml Poly
125 ml Poly
500 ml HNO3 x2
500 ml H2SO4 x2
40 ml VOA x3 x6
1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1320		21.9	7341	4.57	7.15	-128.3	1135	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex D
Printed Name

AD
Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04223001.02
Site: LRI 304th
Well ID: Leachate Cell 9
Sample ID: 304-121123-35
Date: 12/14/23
Weather: Cloudy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1300								

Notes / Observations (color, odor, anomalies, etc):

Unable to sample, sump inaccessable

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Alex Deszo
Printed Name

AD
Signature

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	12-12-23					
Time	852					
Weather (sky or precip, temp)	Cloudy, 40°F					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1386	3.88	7.01	8.28		
Post Cal Reading	1413	4.00	7.00	8.5		
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	WMD					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	MW-10					

* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	12-13-23					
Time	1026					
Weather (sky or precip, temp)	Partly Cloudy 37° F					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1486	~~4.06~~ 3.98	7.06	8.26	—	
Post Cal Reading	1413	4.00	7.00	8.5	—	
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	AM					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	MW-7					

* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	12-14-23					
Time	1011					
Weather (sky or precip, temp)	Cloudy 38° F					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1428	4.01	6.98	8.72		
Post Cal Reading	1413	4.00	7.00	8.5		
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	AMT					
Instrument Type, ID	(YSI Pro DDS) / YSI 556 / Rental				(YSI Pro DDS) / HACH2000	
Calibration Location	MW-4					

* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	12/12/23					
Time	0900					
Weather (sky or precip, temp)	Cloudy					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1313	3.92	7.01	9.61		
Post Cal Reading	1413	4.00	7.00	8.5		
Descrepancy	None					
Calib. Successful?	Yes					
Calibration by	J. Estrada					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	URI Office					

* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	12/13/2023					
Time	0964					
Weather (sky or precip, temp)	Partly Cloudy					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1481	4.17	7.03	8.54		
Post Cal Reading	1413	4.00	7.00	8.50		
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	Jovany Estrada					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	Flare Station					

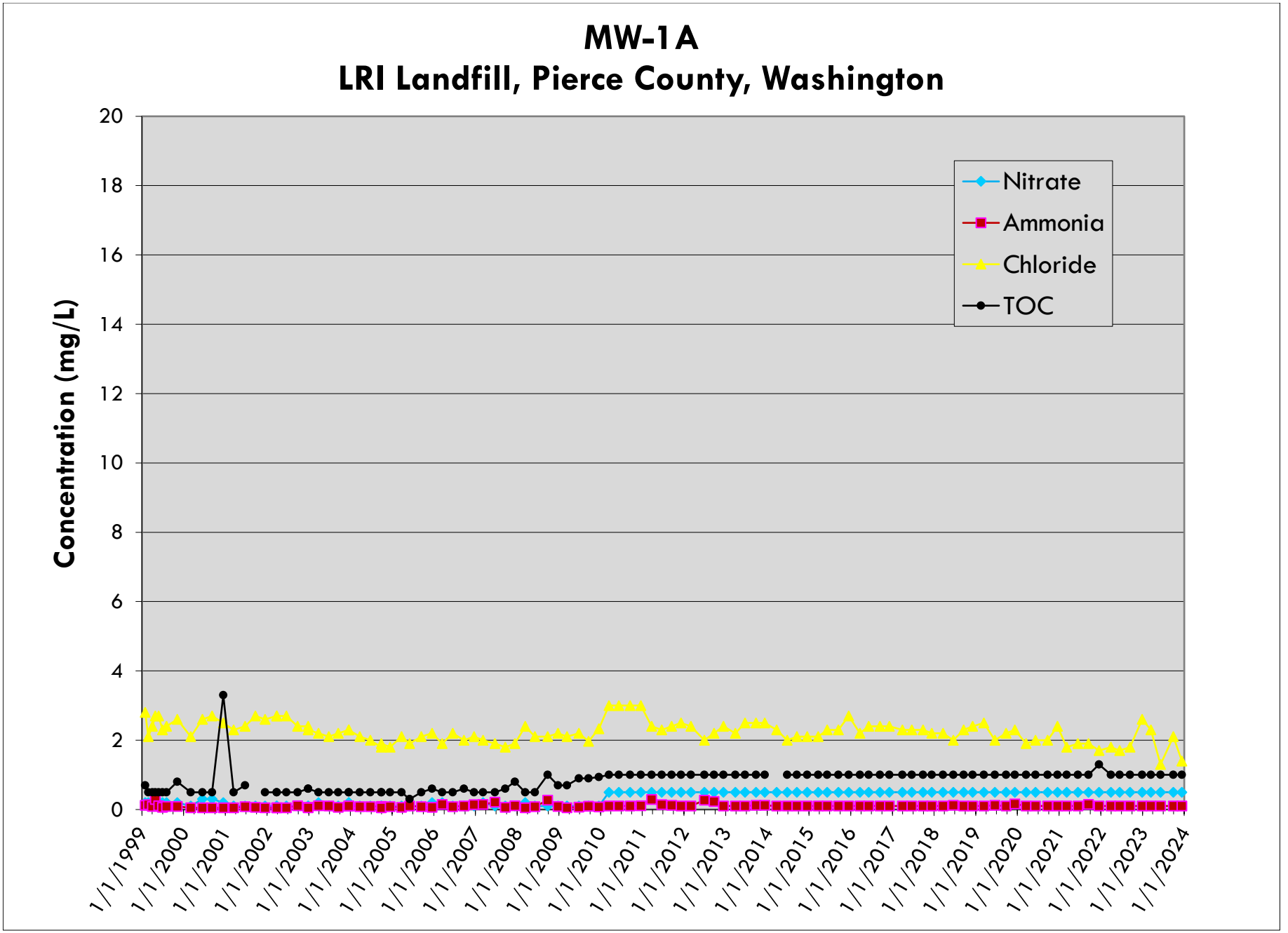
* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

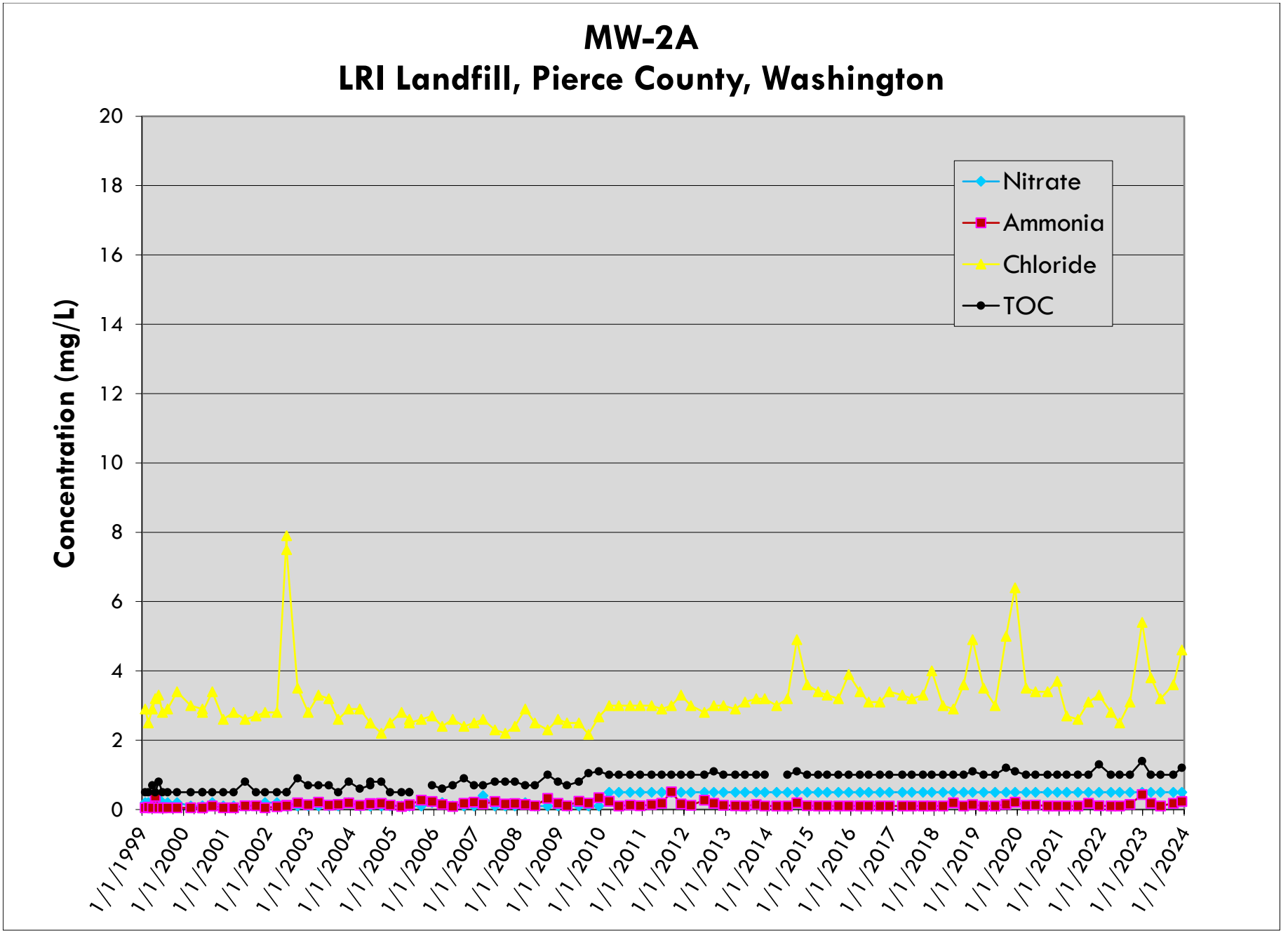
SCS ENGINEERS

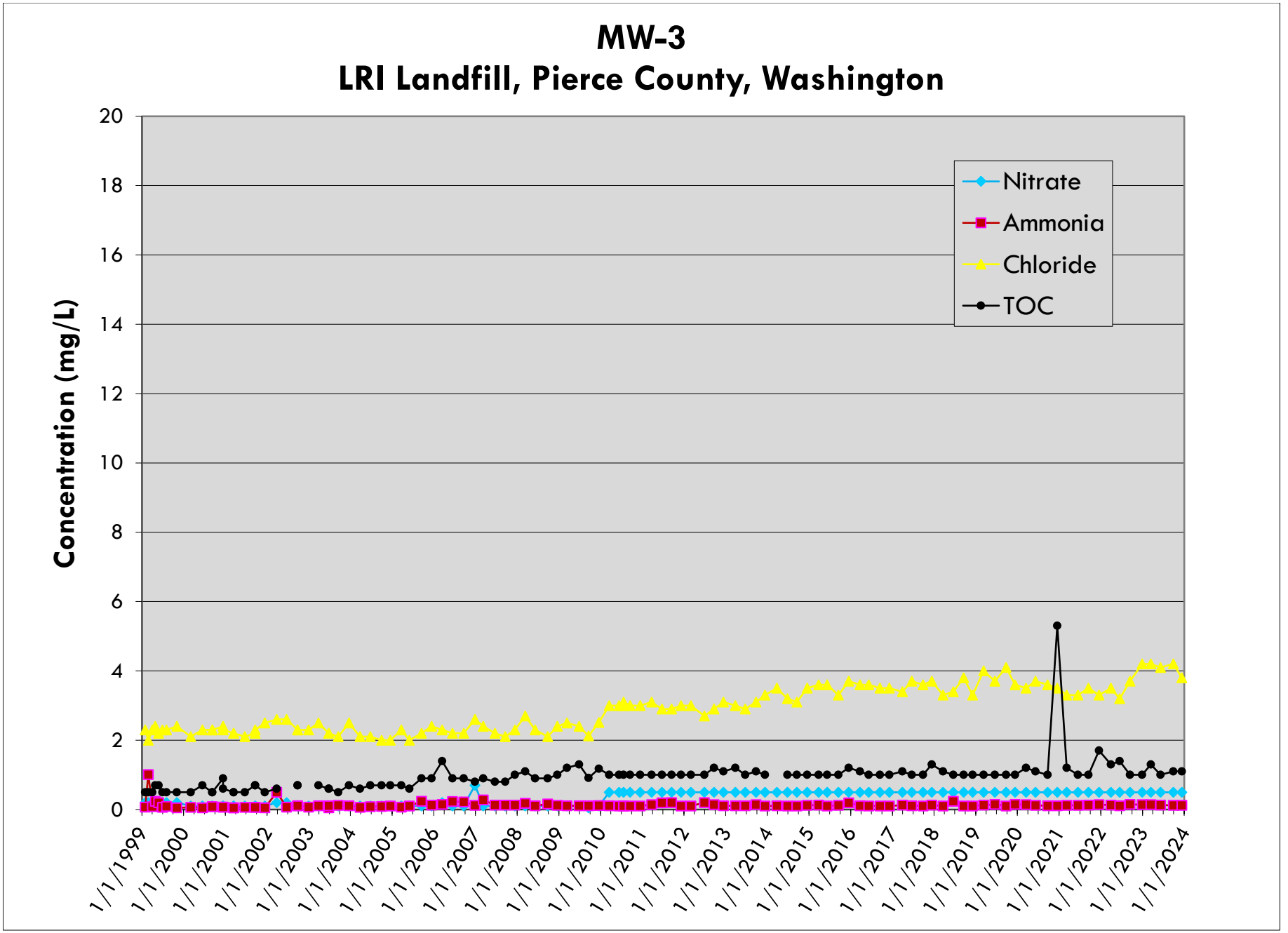
GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

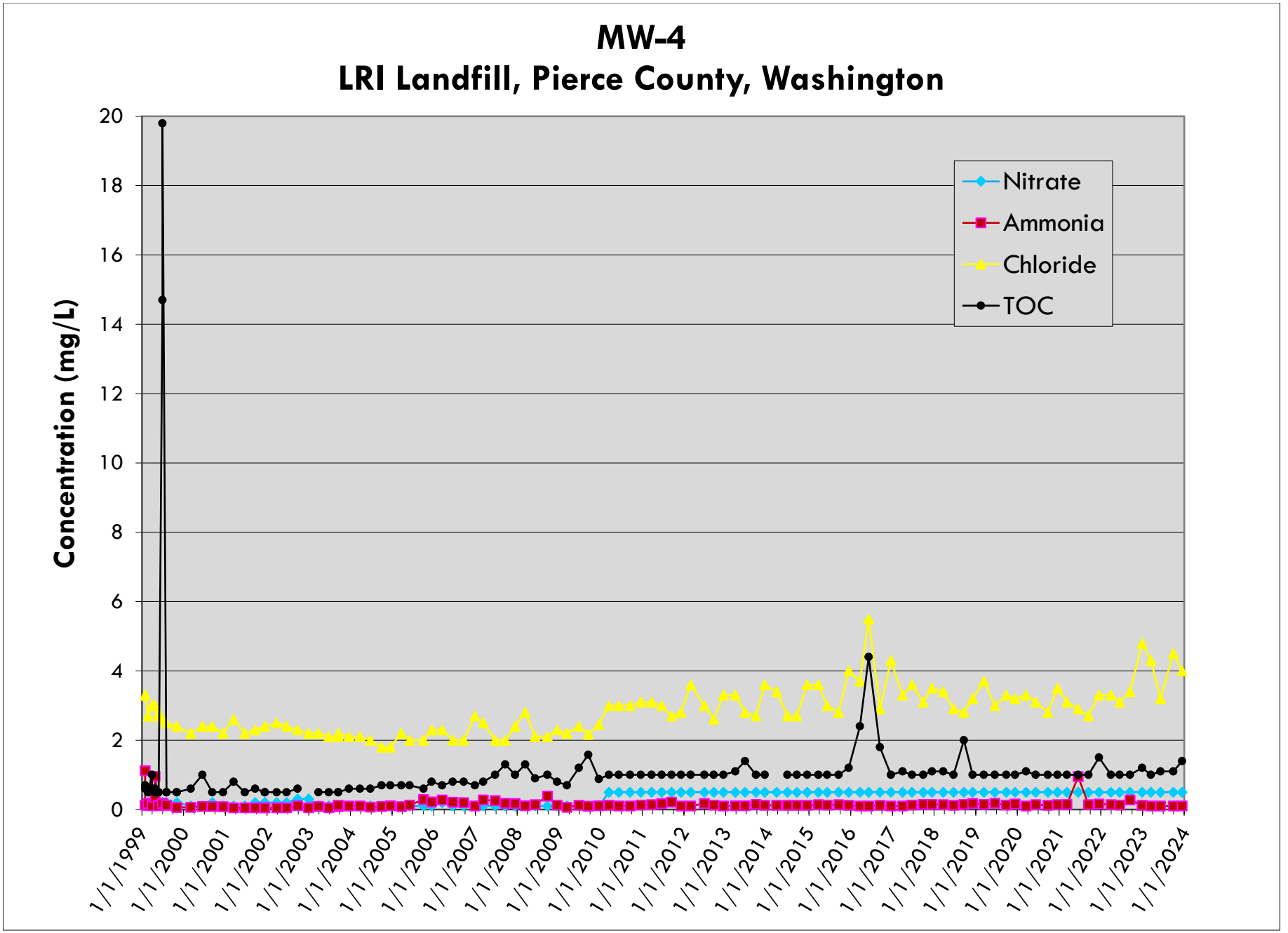
Date	12/14/23					
Time	10:27					
Weather (sky or precip, temp)	Cloudy					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	699	4.10	6.96	10.8		
Post Cal Reading	1413	4.00	7.00			
Descrepancy	No					
Calib. Successful?	yes					
Calibration by	J. Estrada					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	LDLS-7					

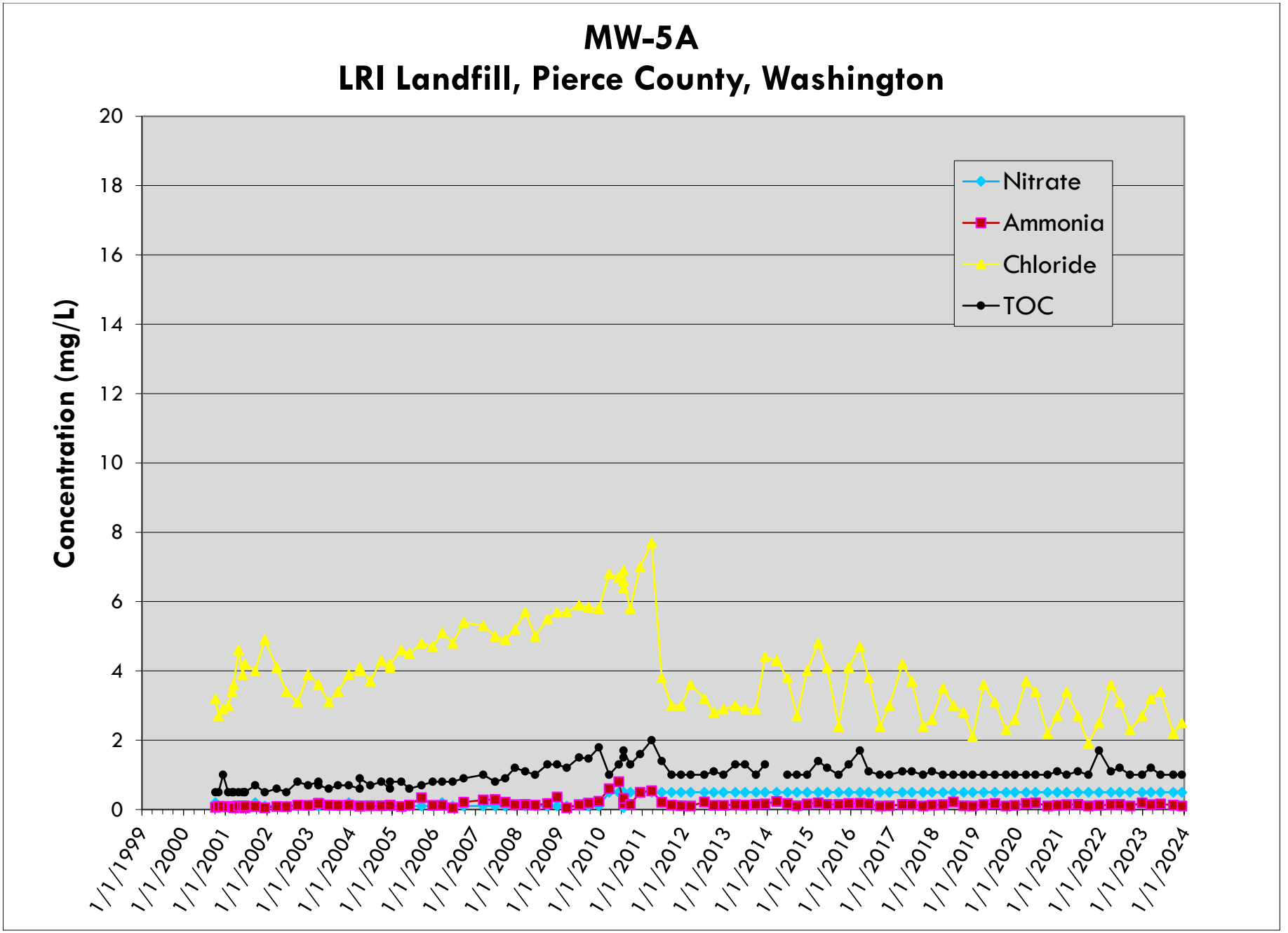
* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

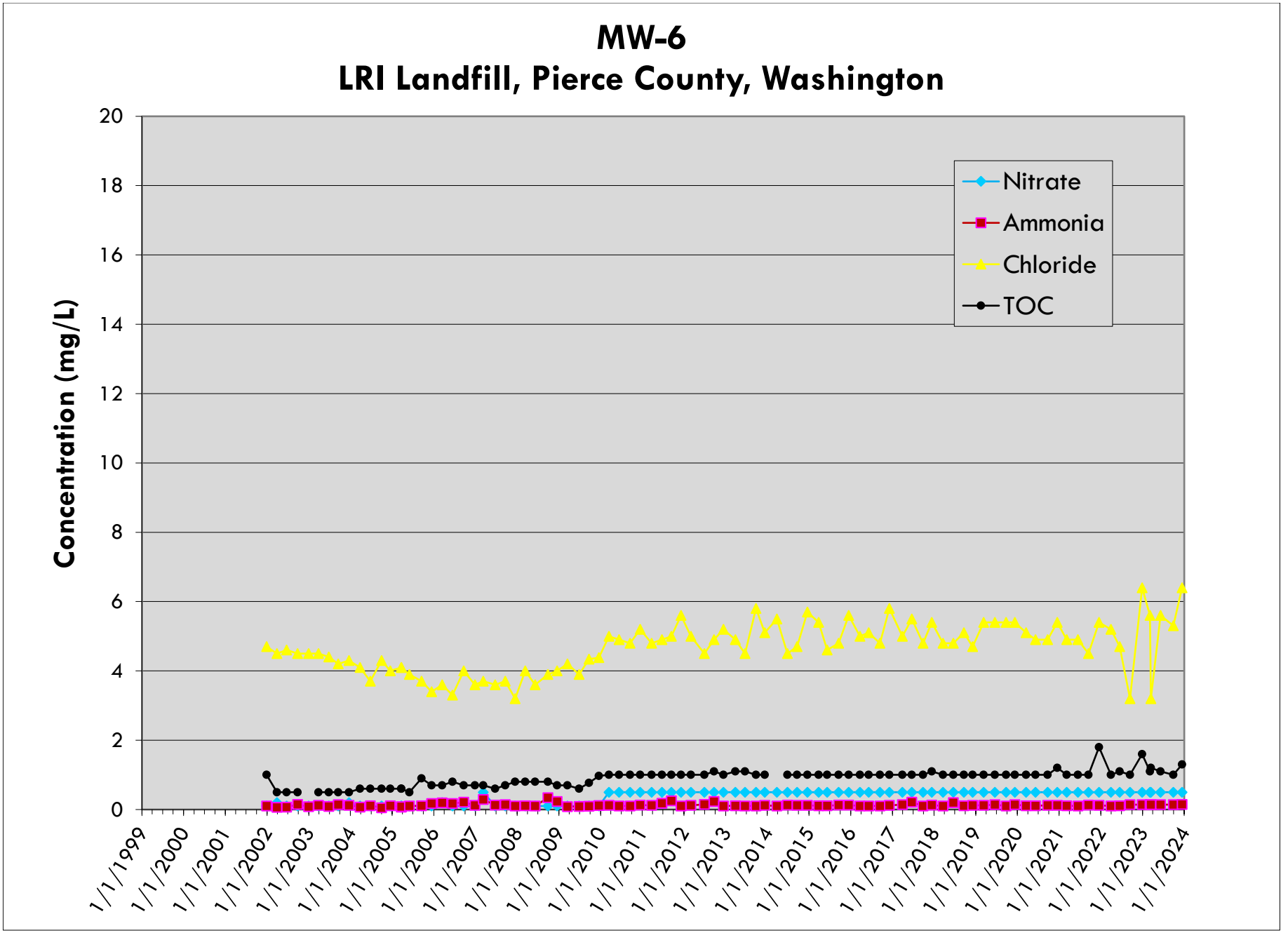

MW-1A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

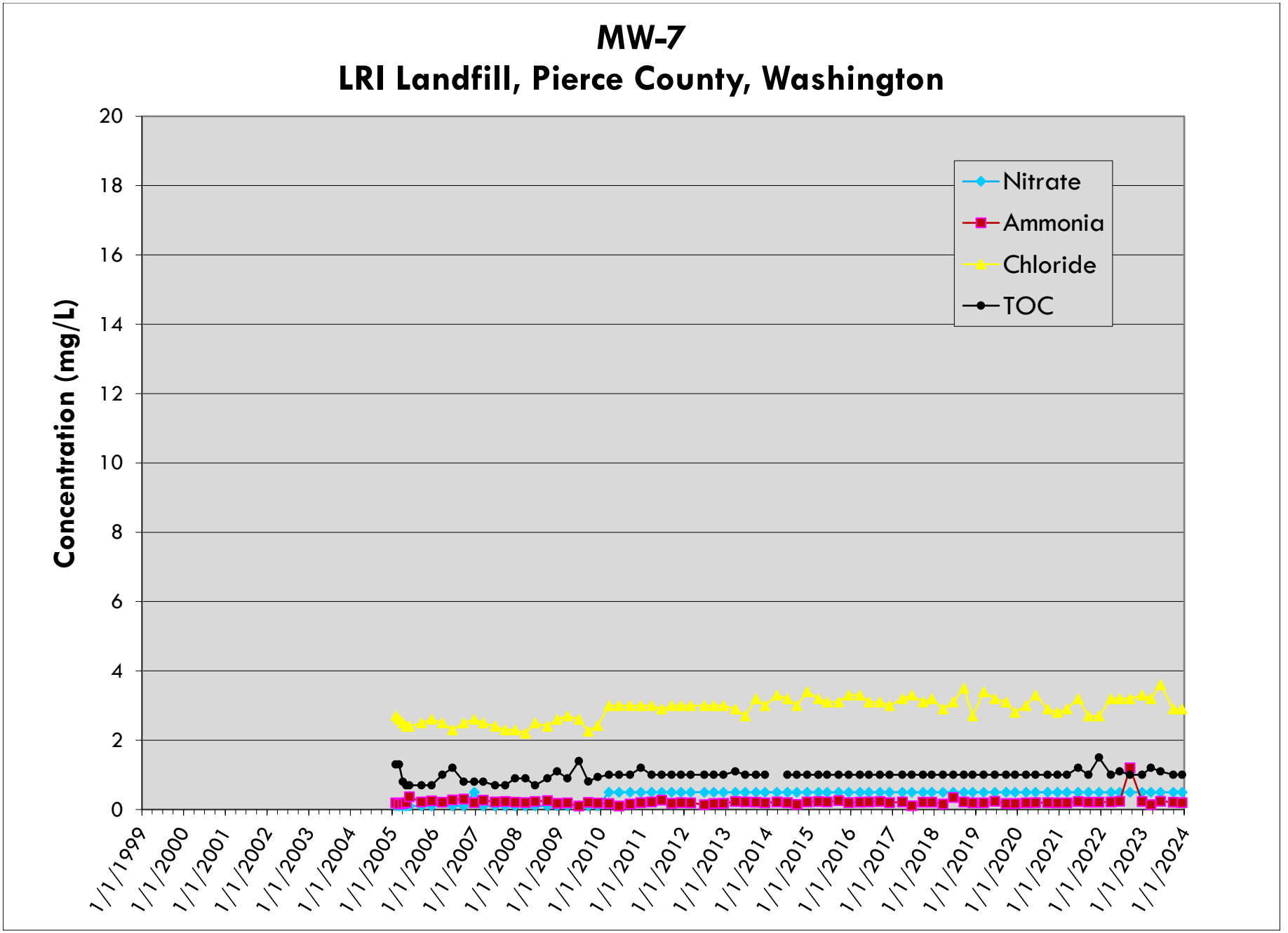

MW-2A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

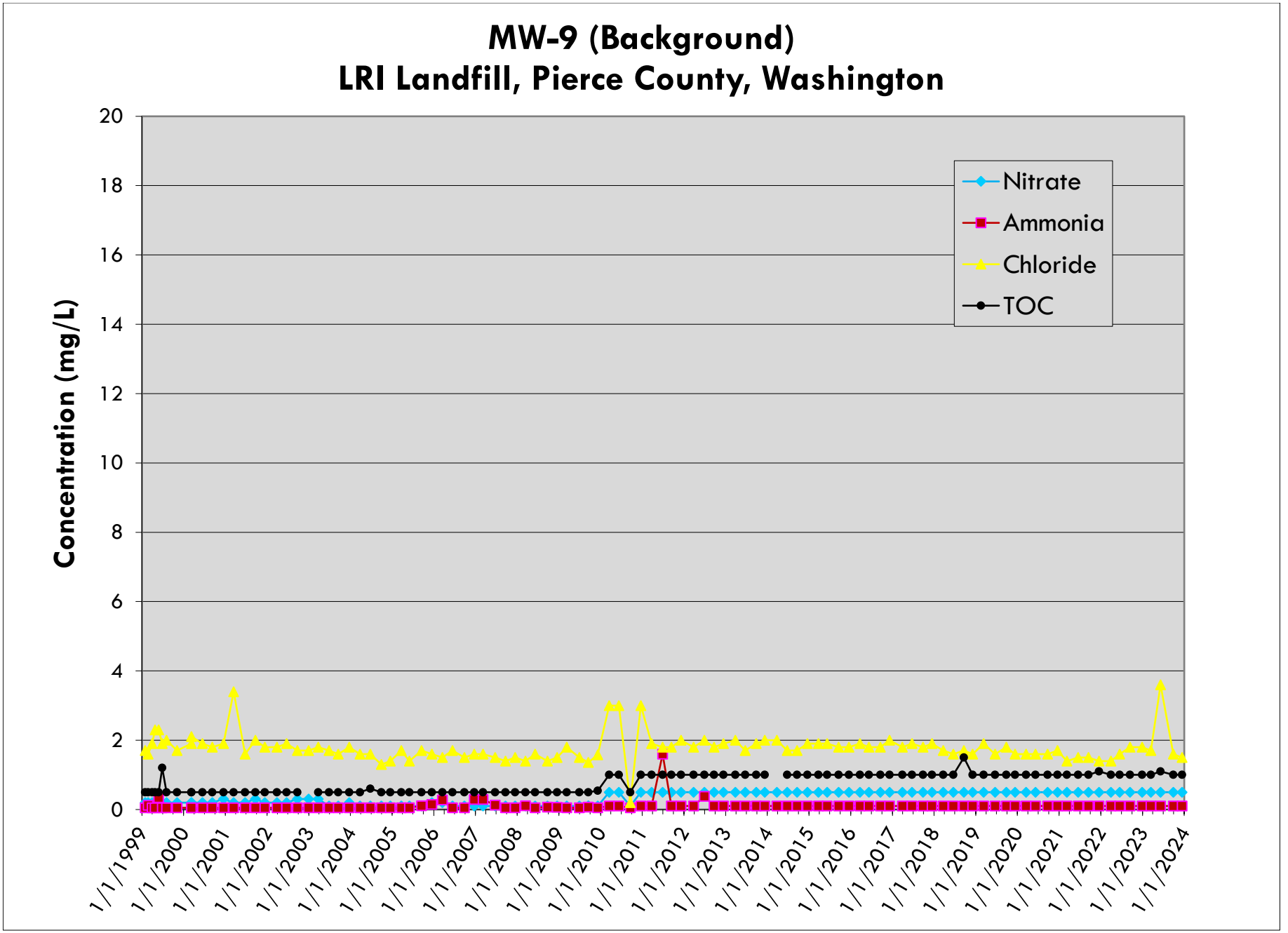

MW-3
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

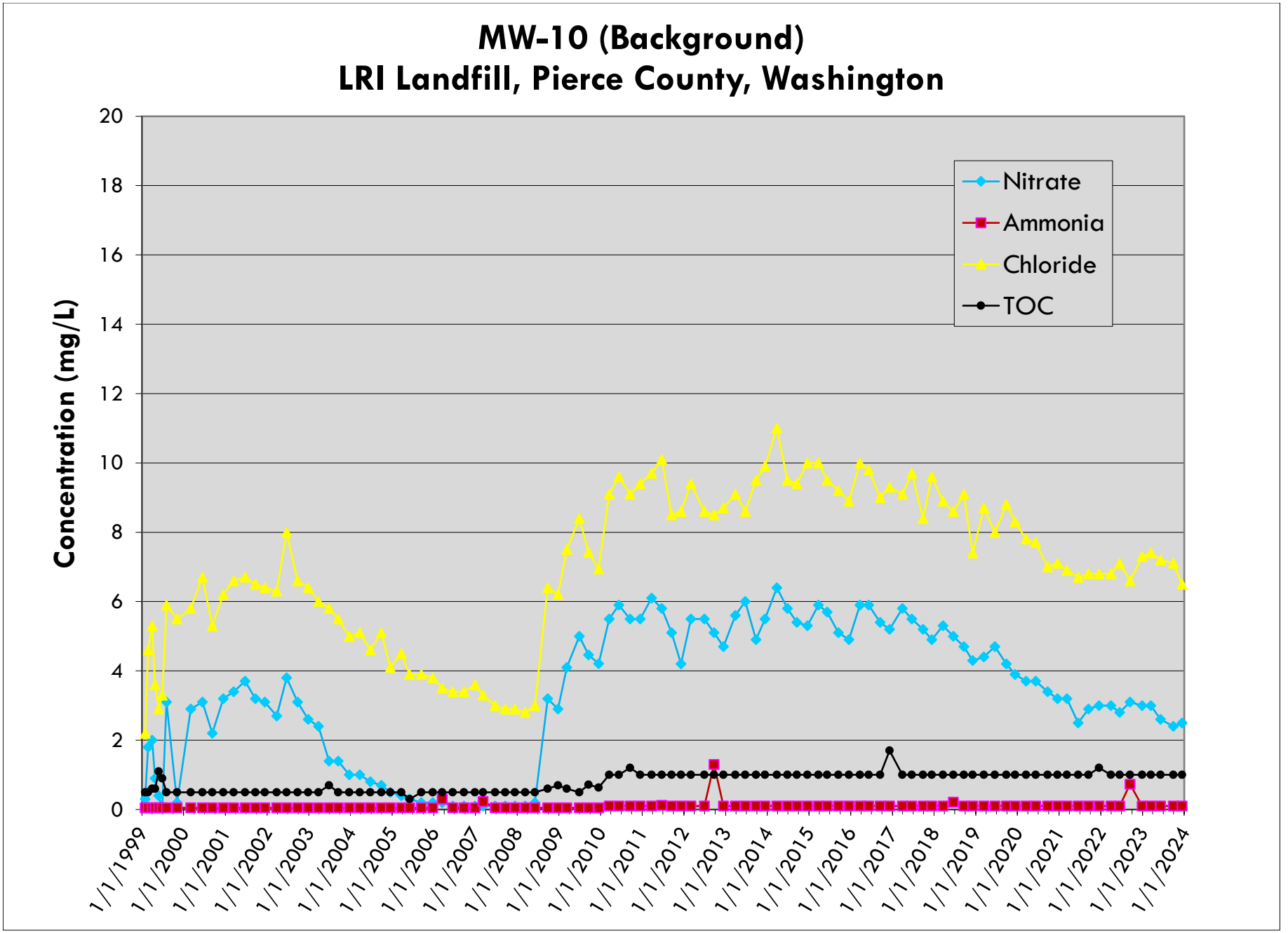

MW-4
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

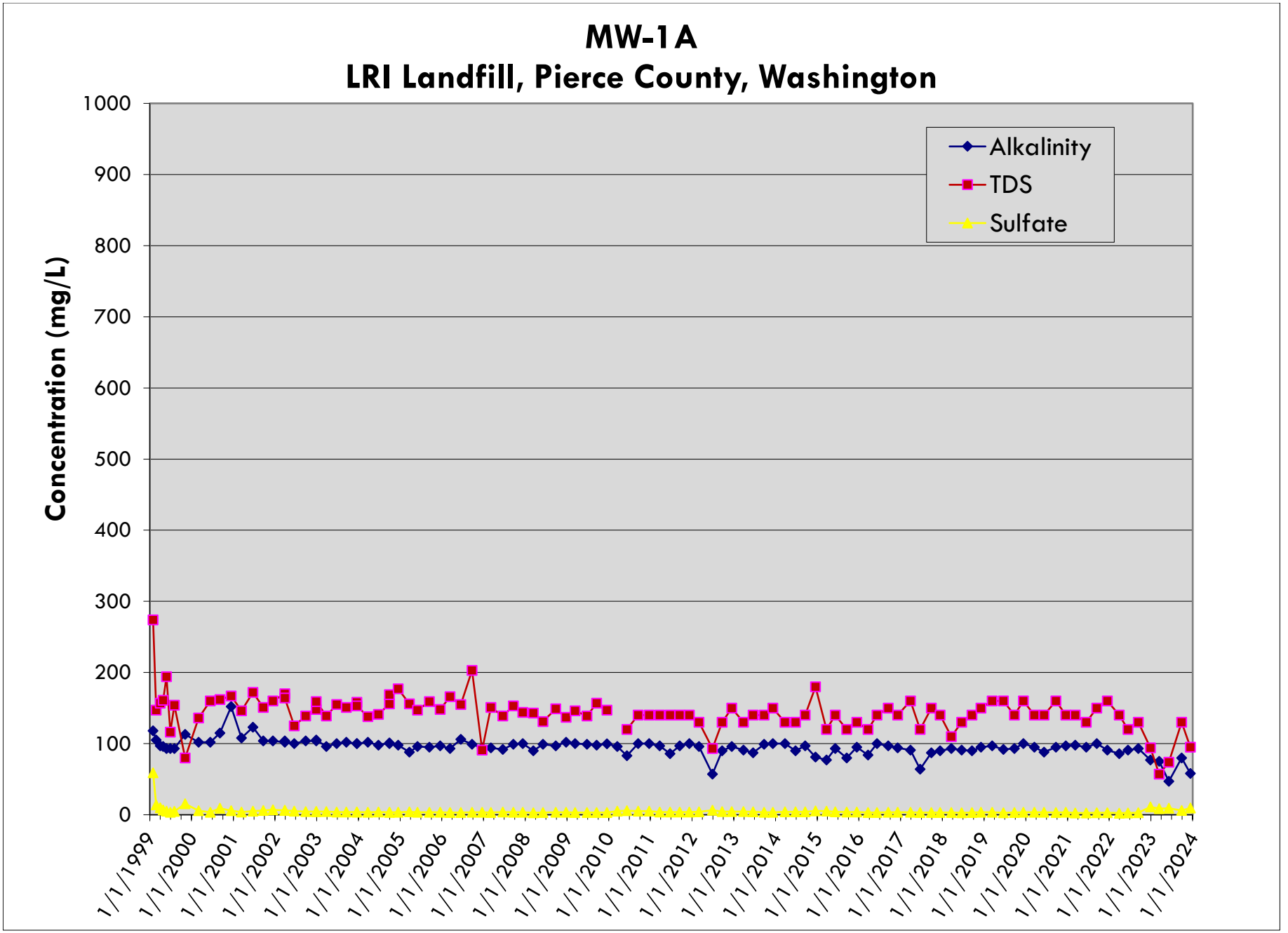

MW-5A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

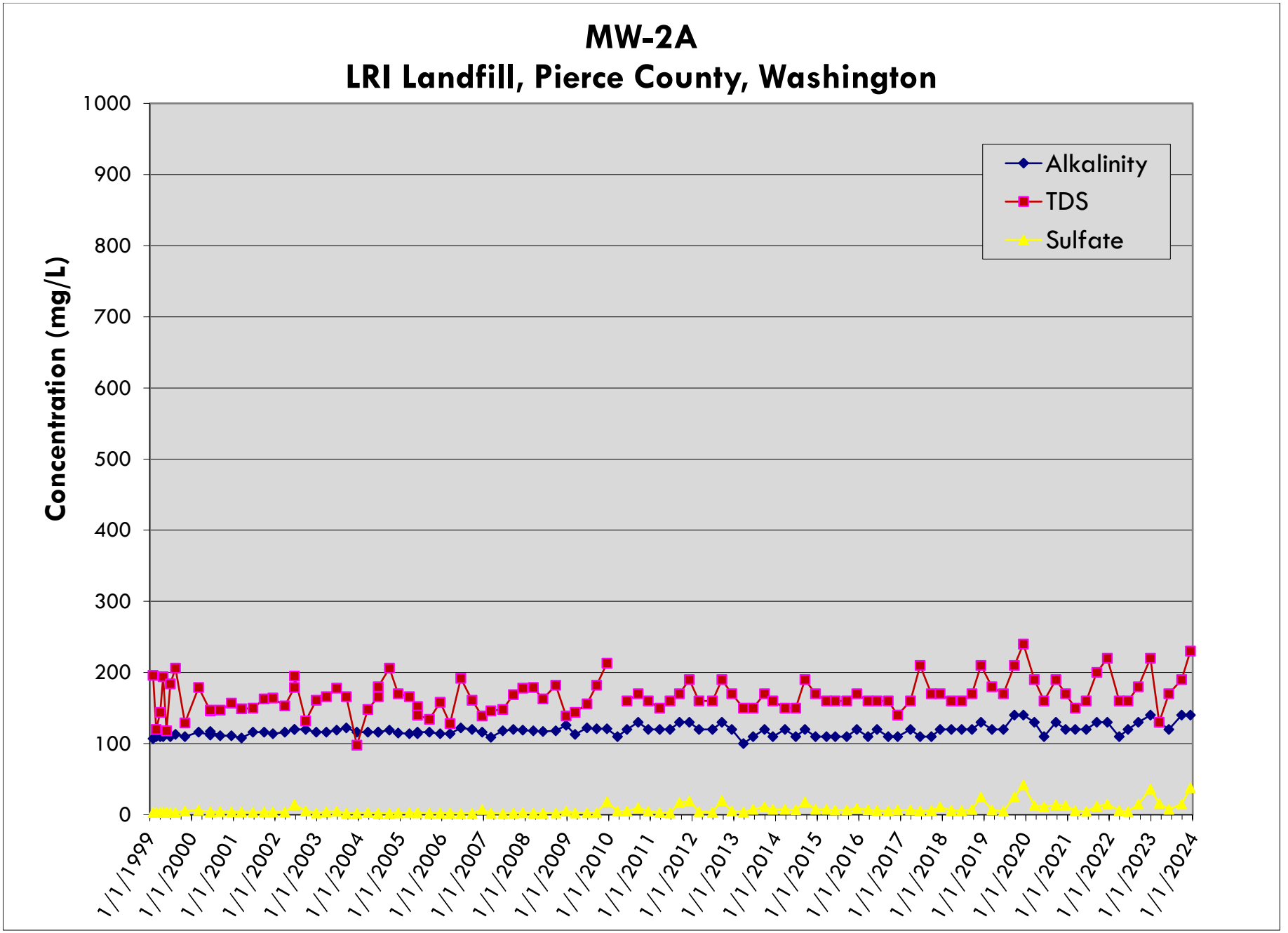

MW-6
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-7
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-9 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-10 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-1A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-2A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
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1/1/2010
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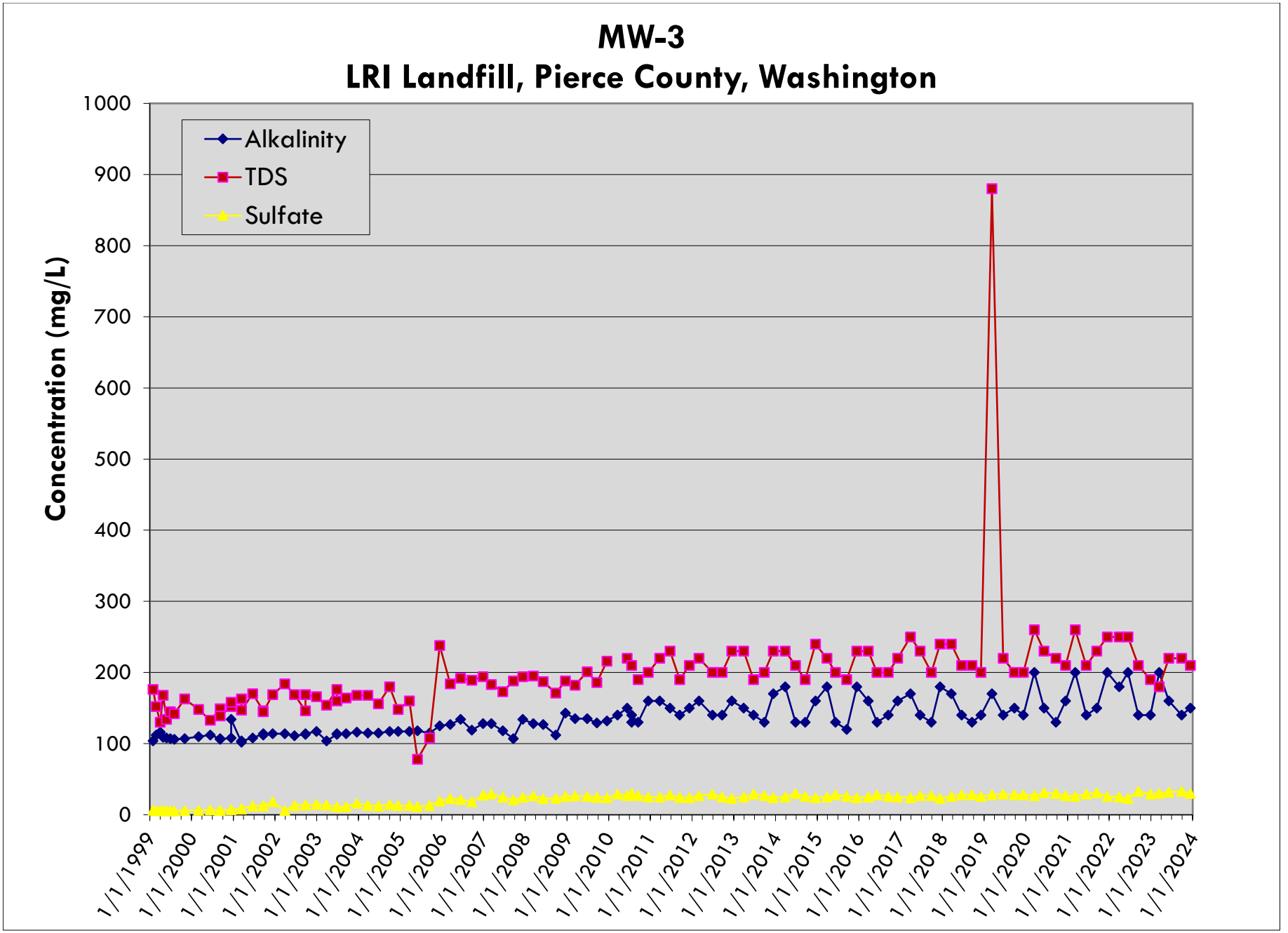
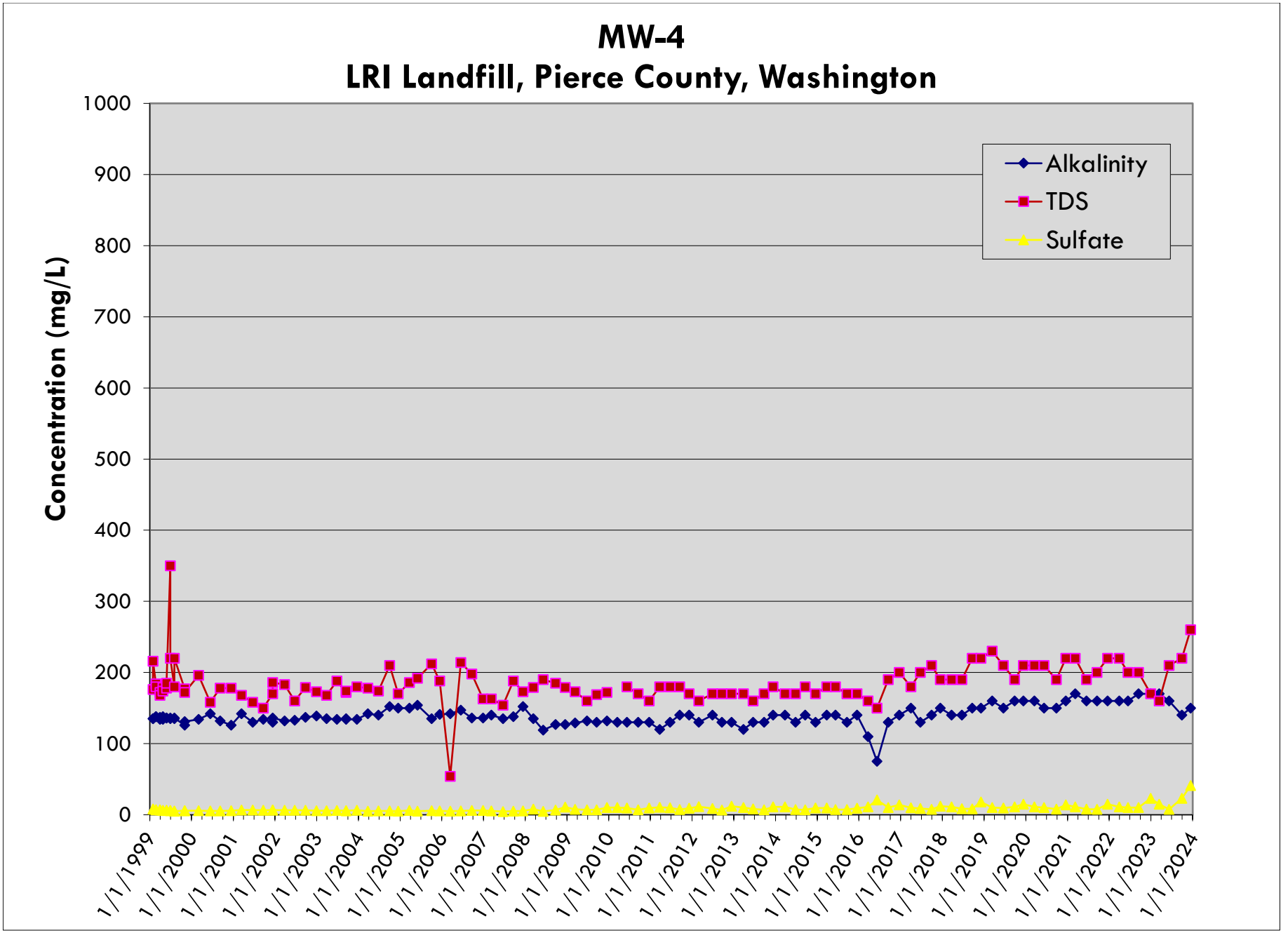
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-3
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-4
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
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1/1/2014
1/1/2015
1/1/2016
1/1/2017
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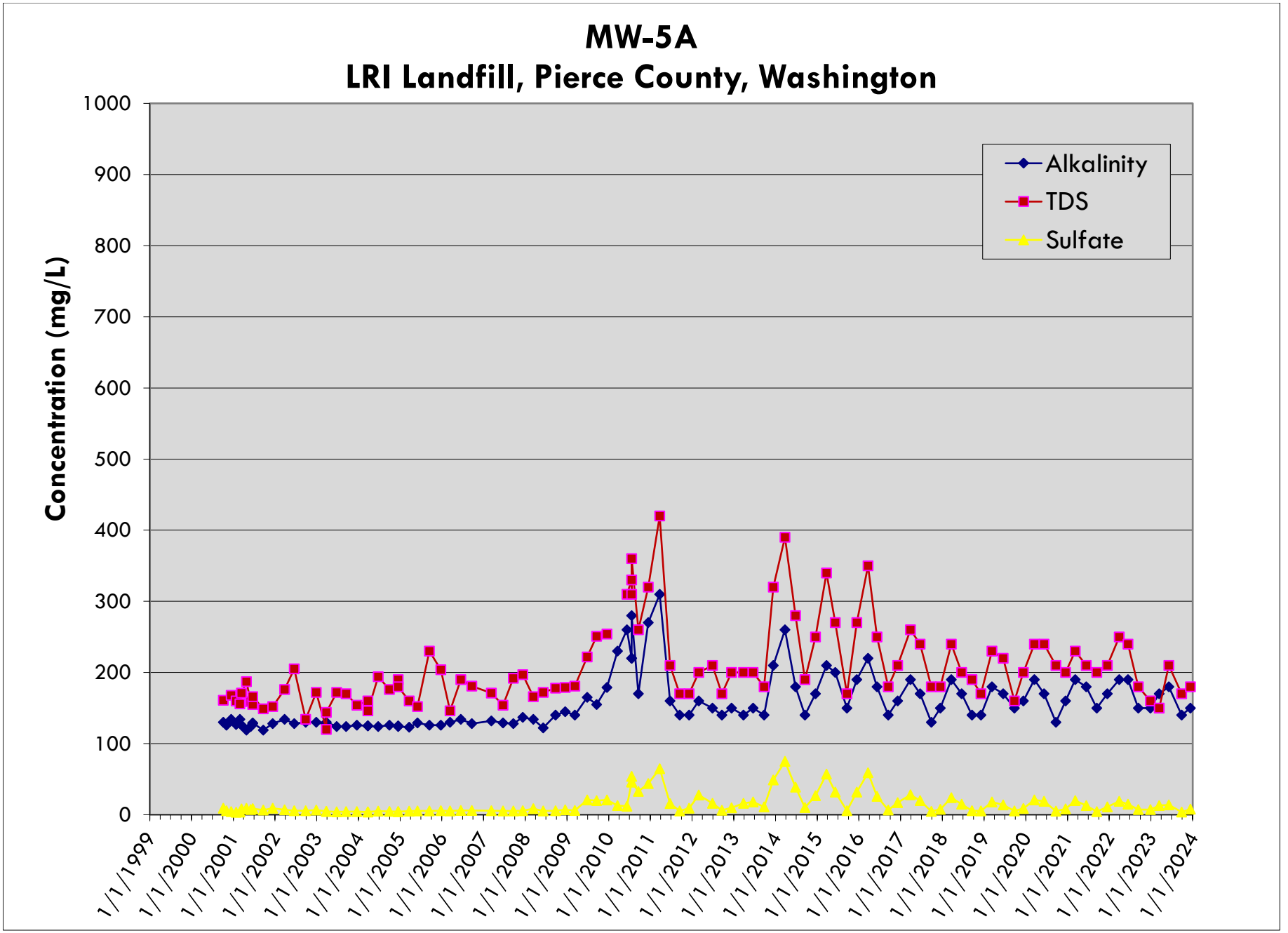
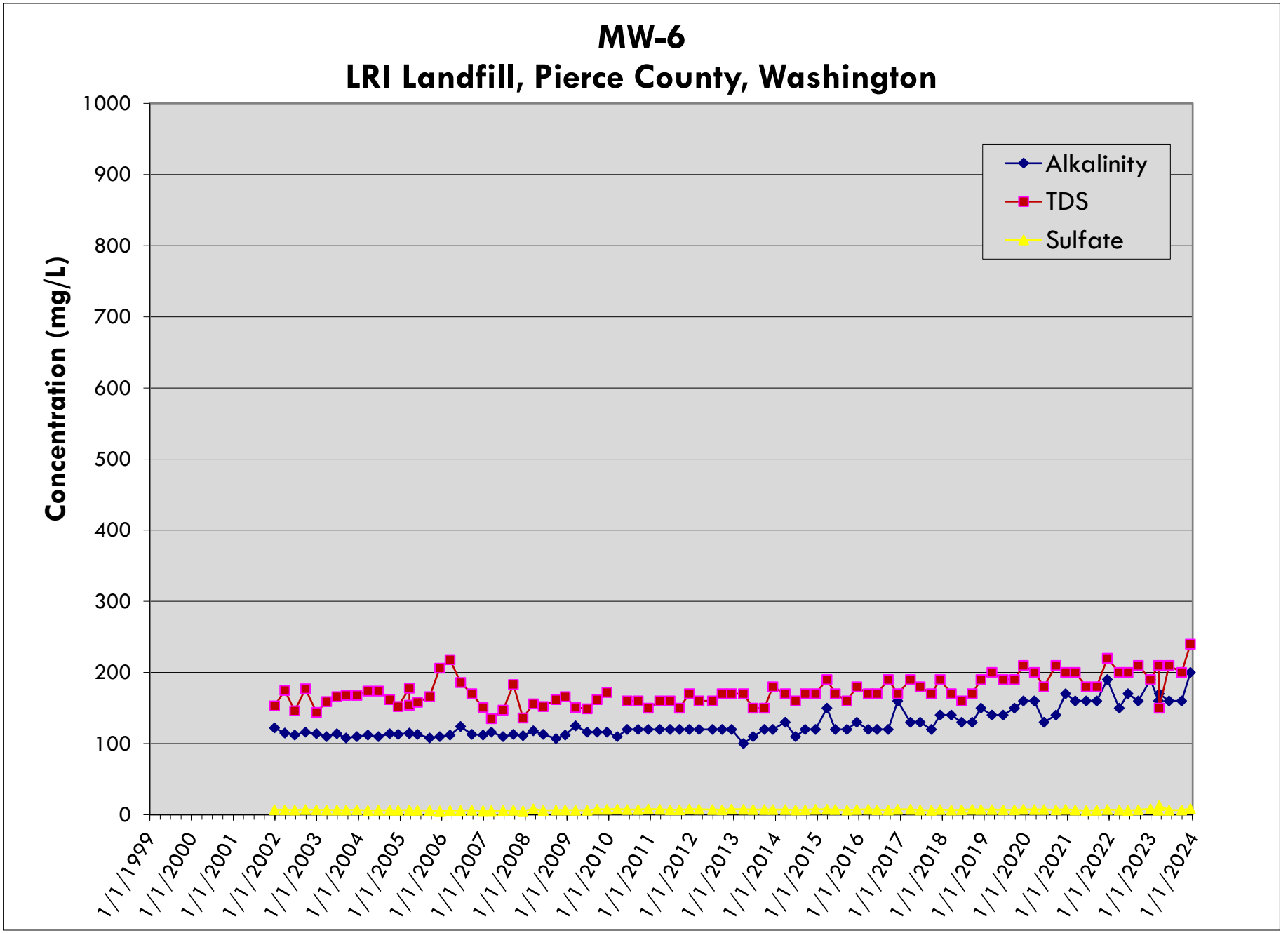
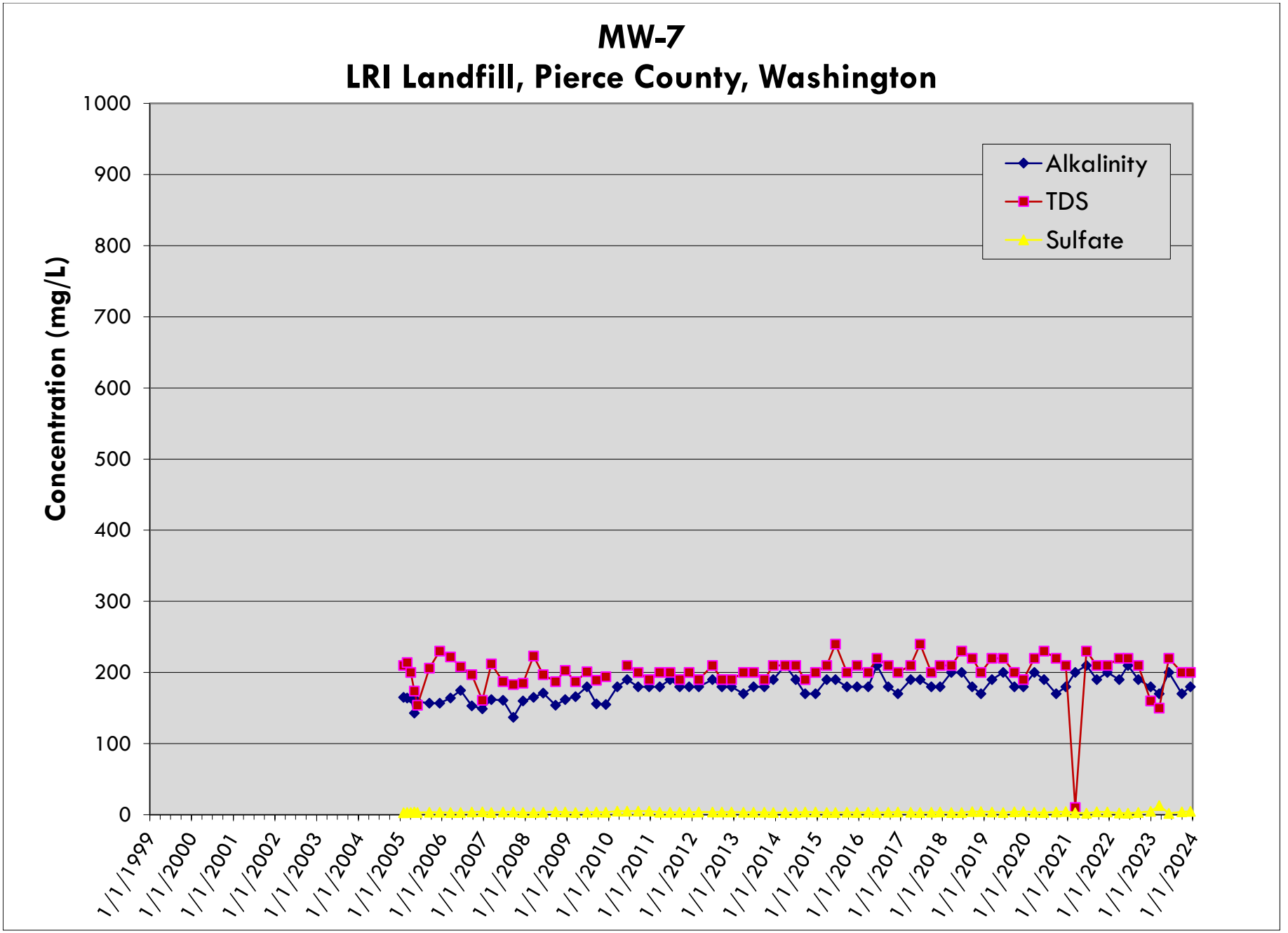
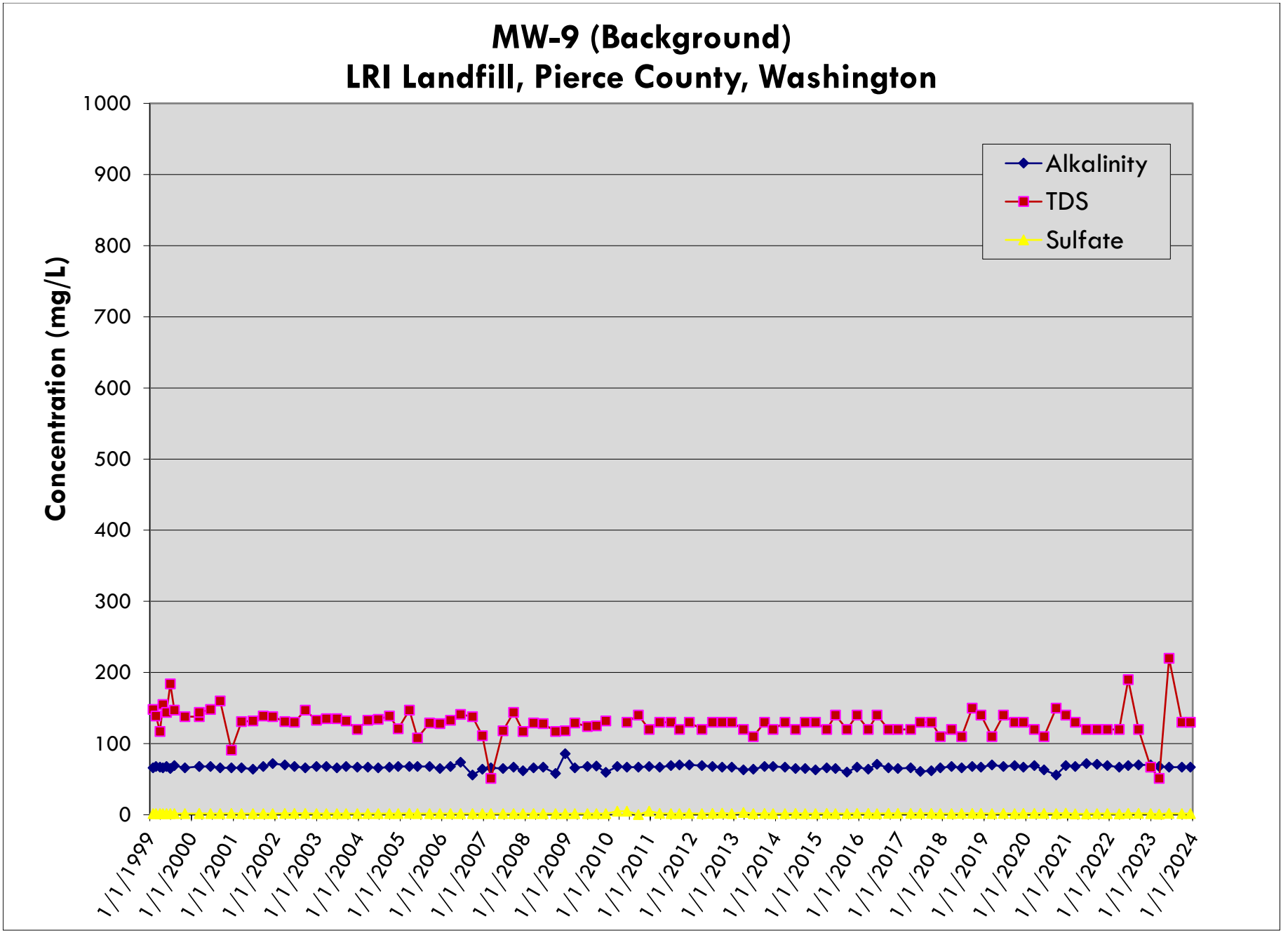
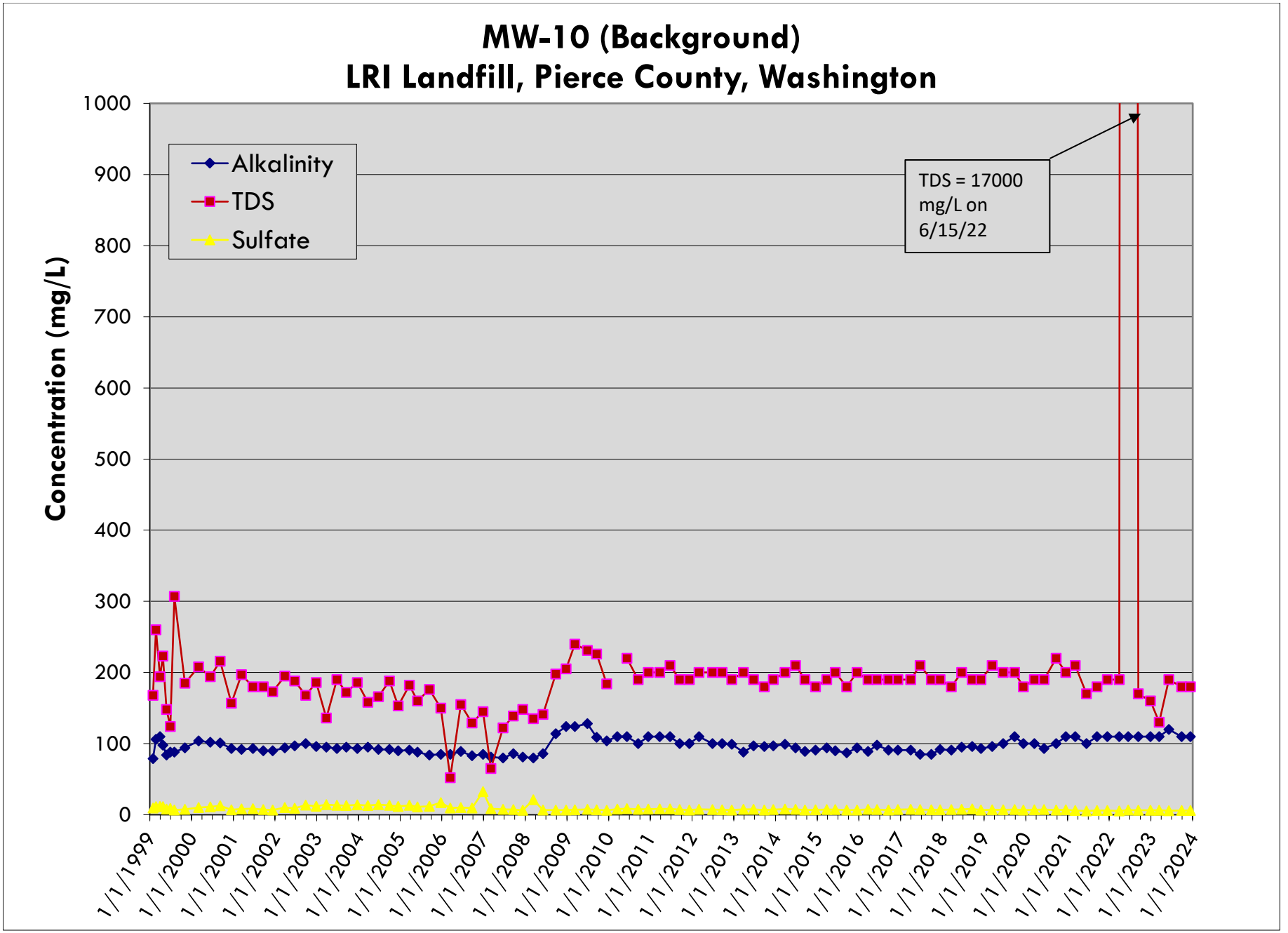
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

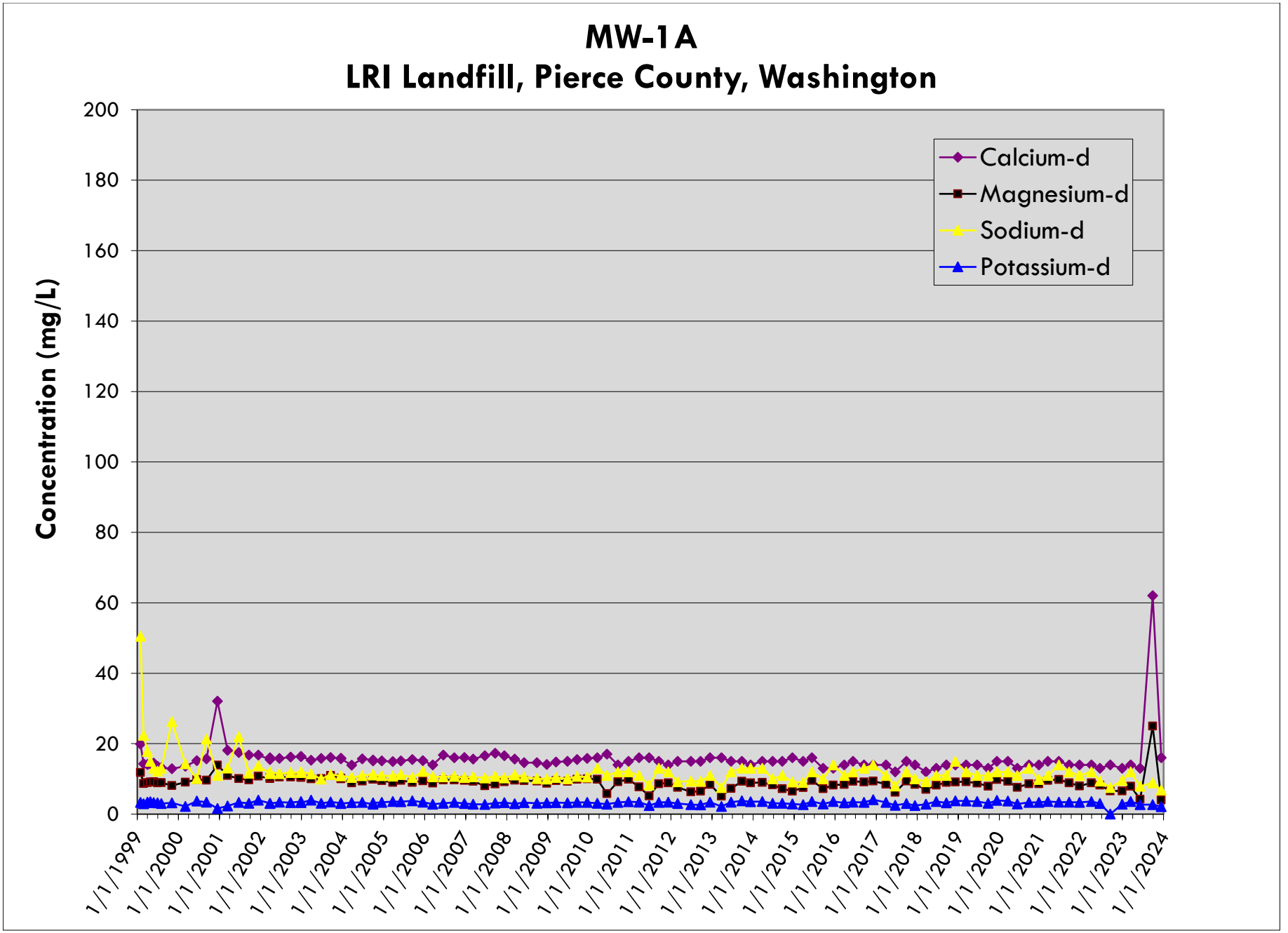

MW-5A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

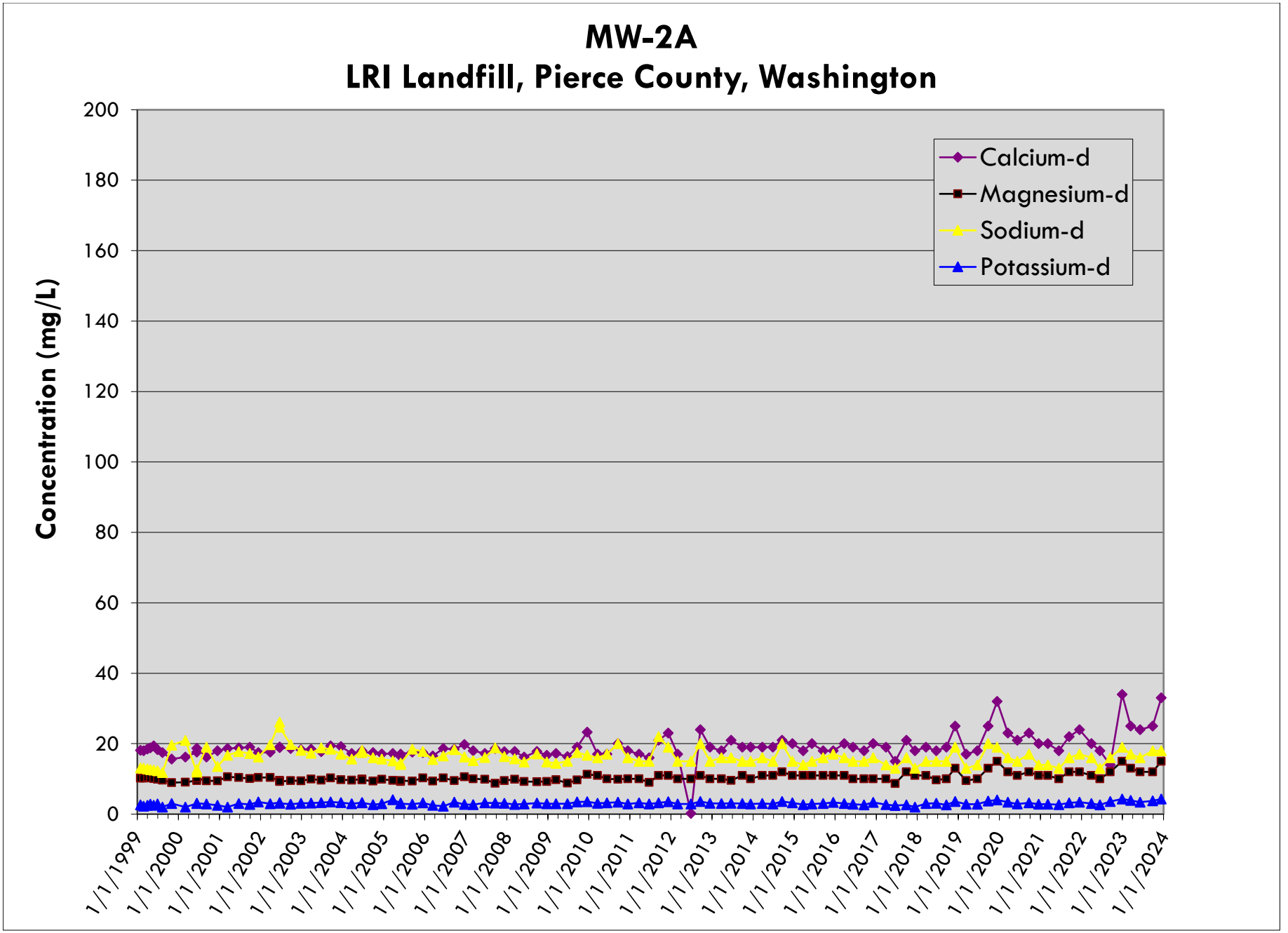

MW-6
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

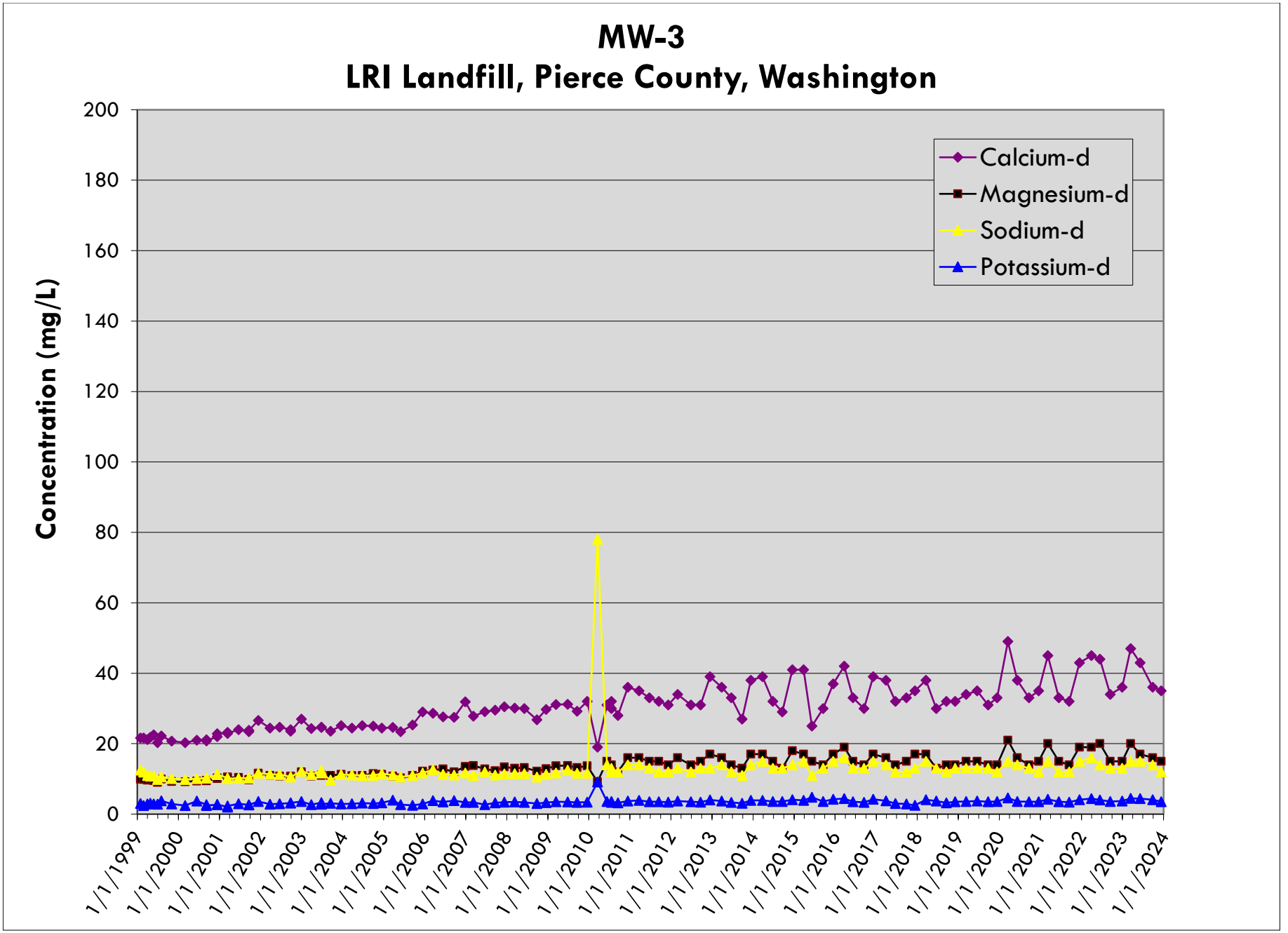

MW-7
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-9 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

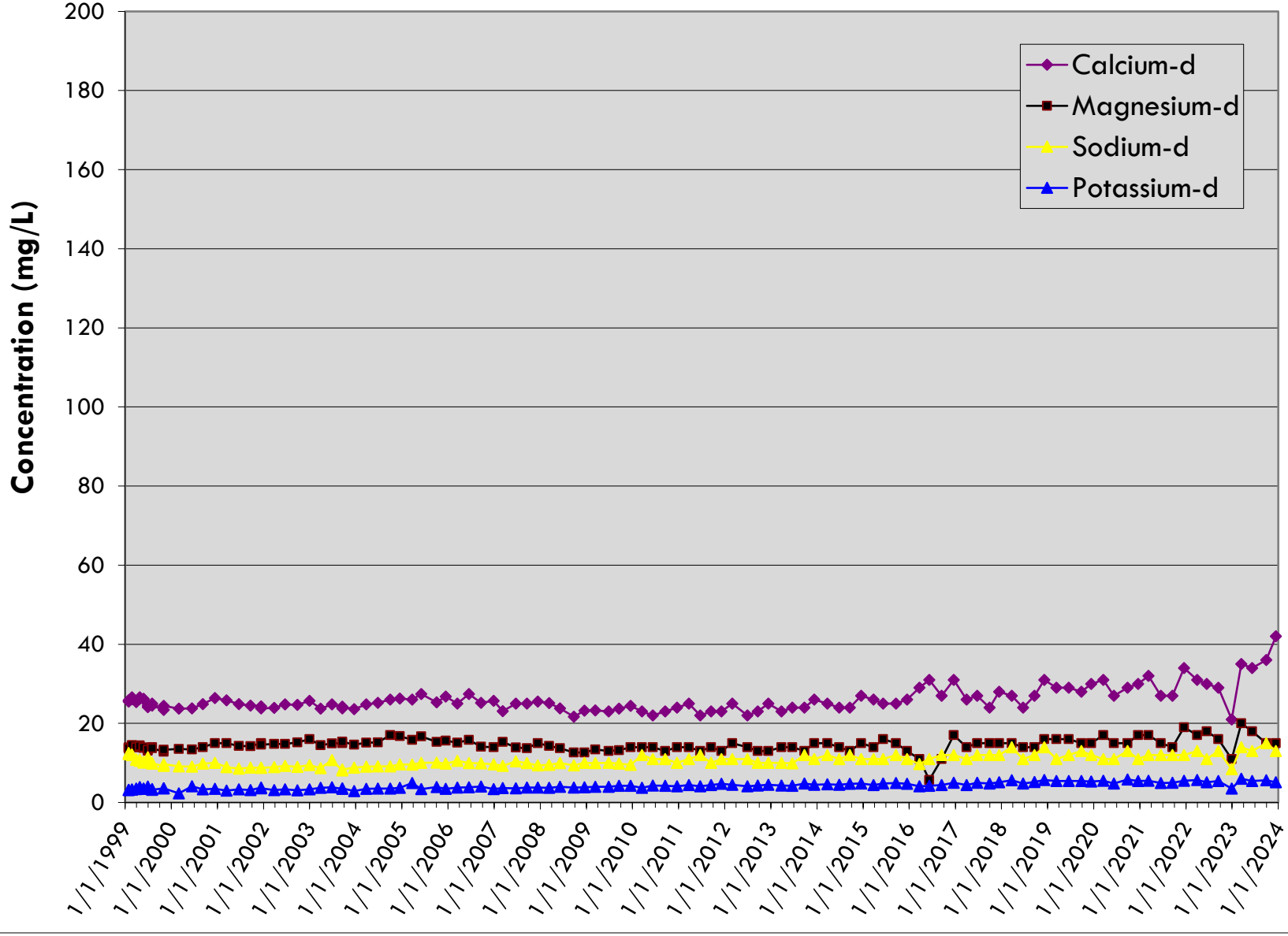

MW-10 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
TDS = 17000 mg/L on 6/15/22
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

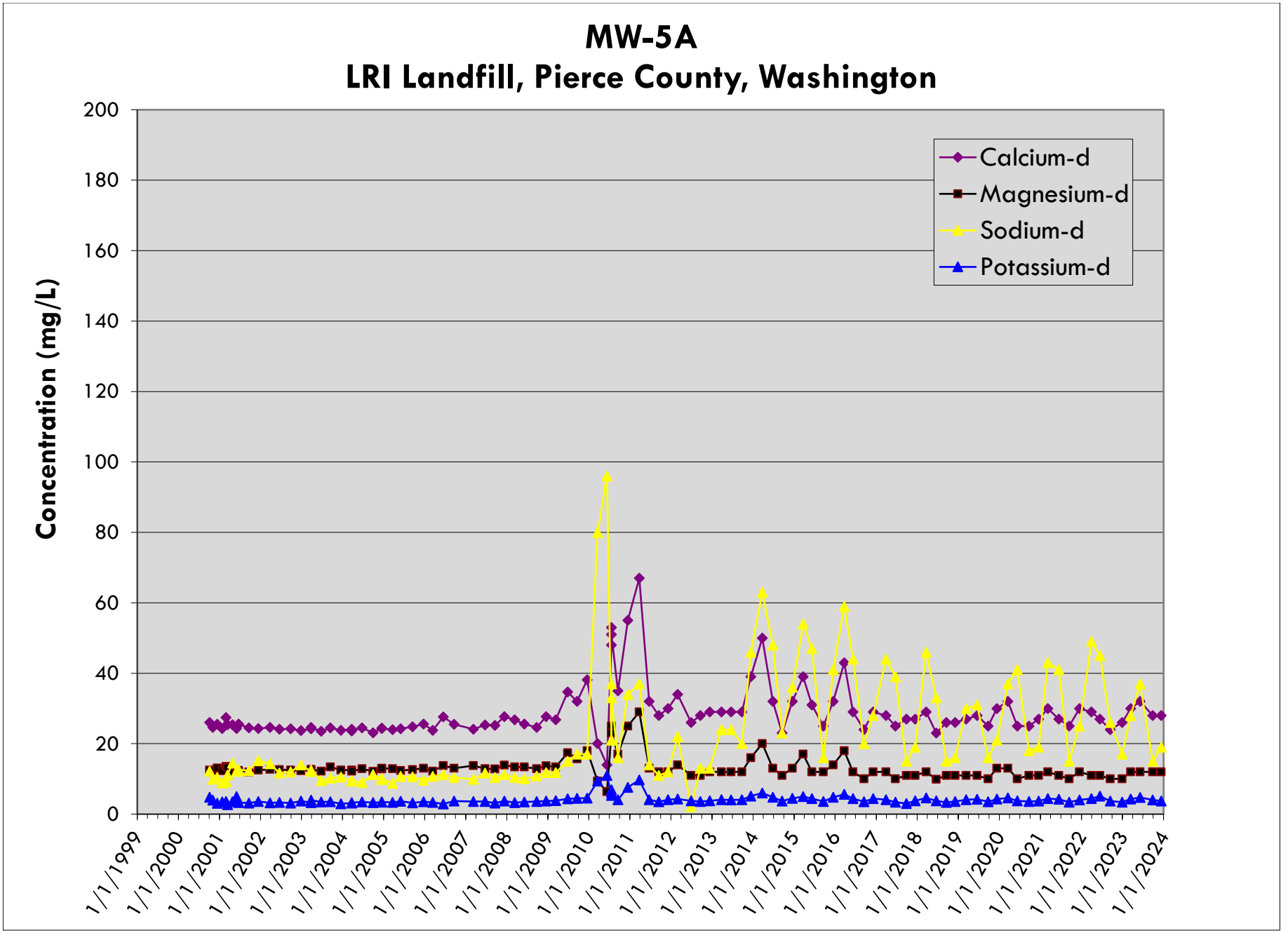

MW-1A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

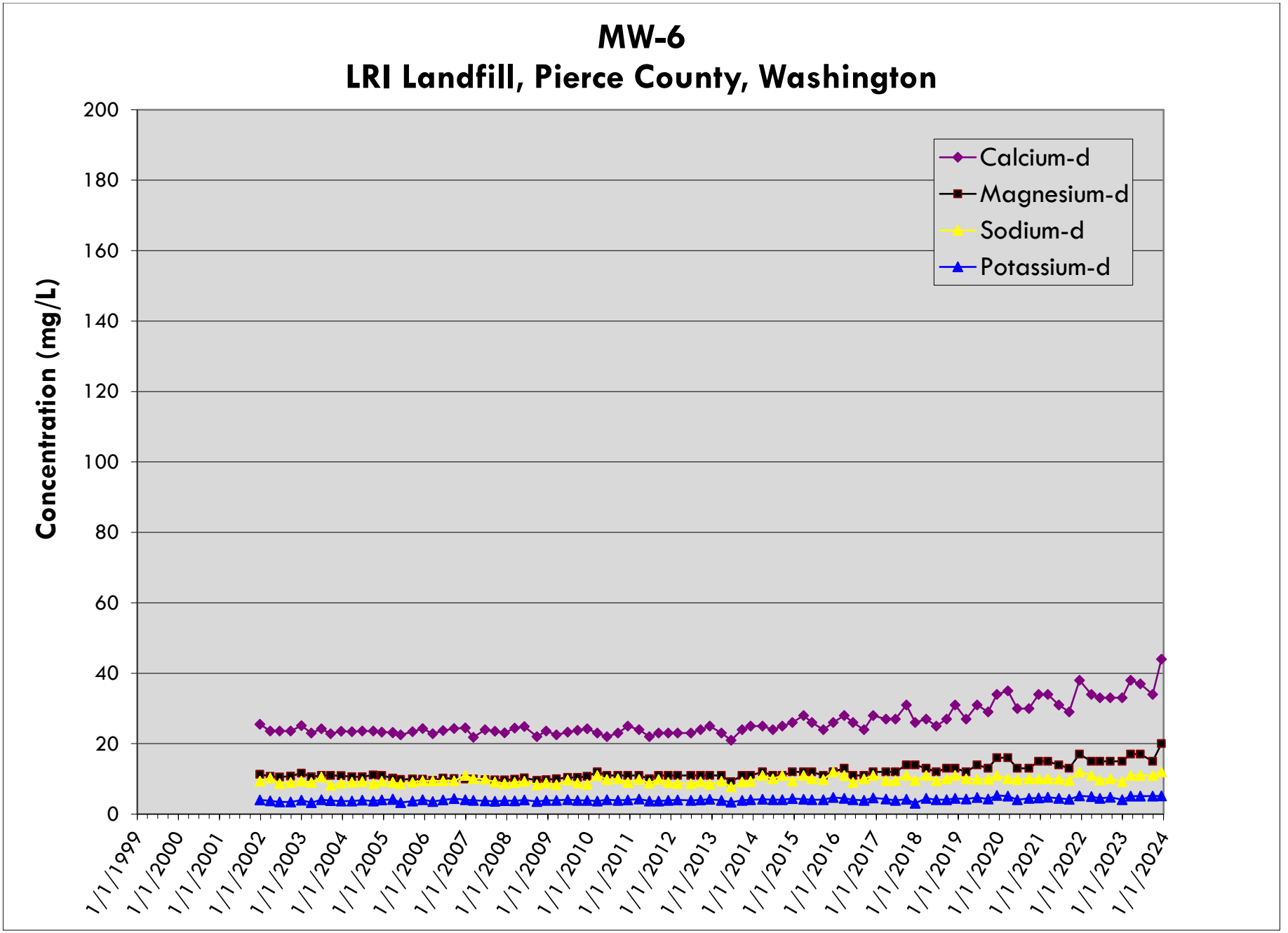

MW-2A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-3
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

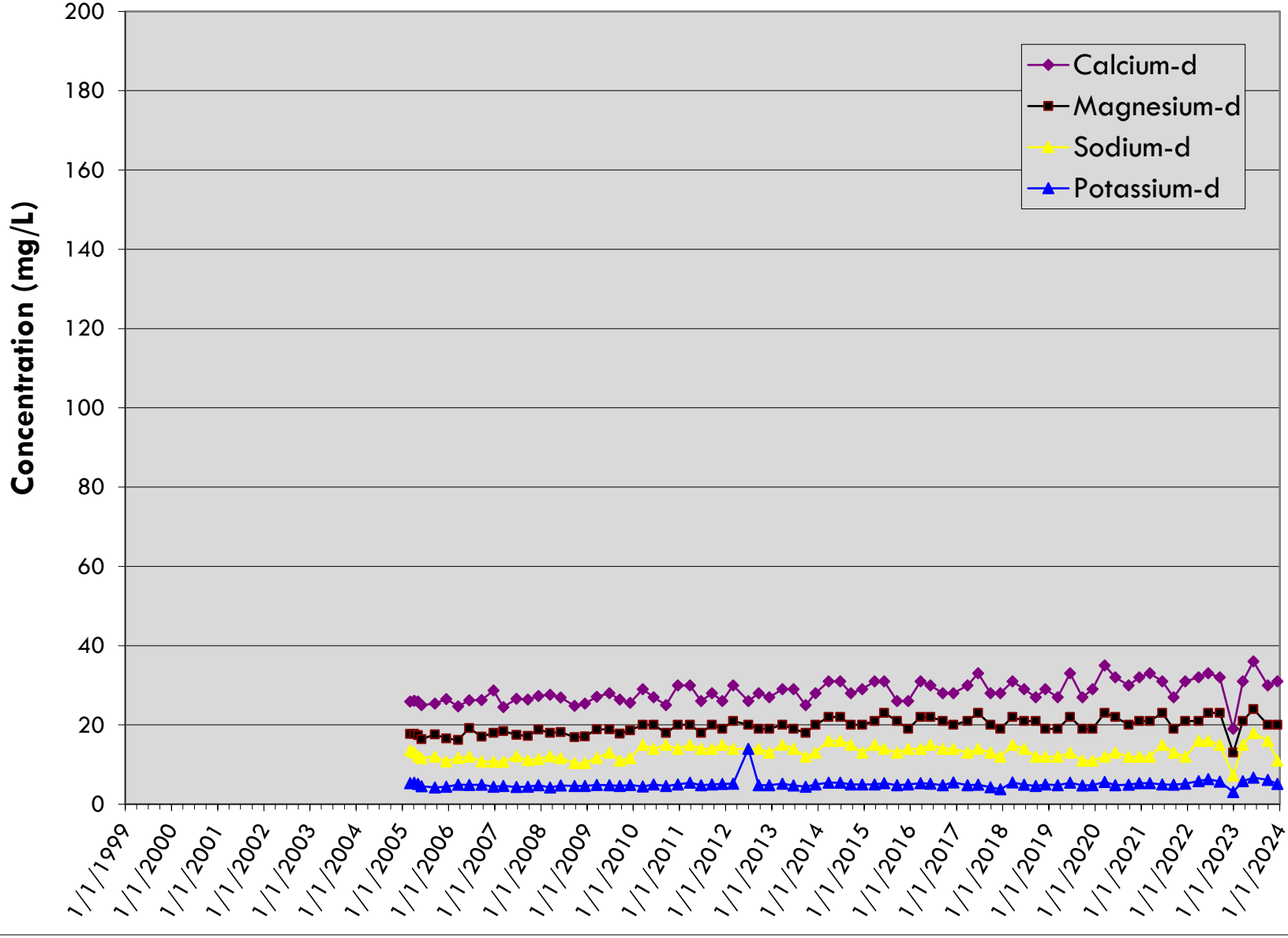
MW-4
LRI Landfill, Pierce County, Washington

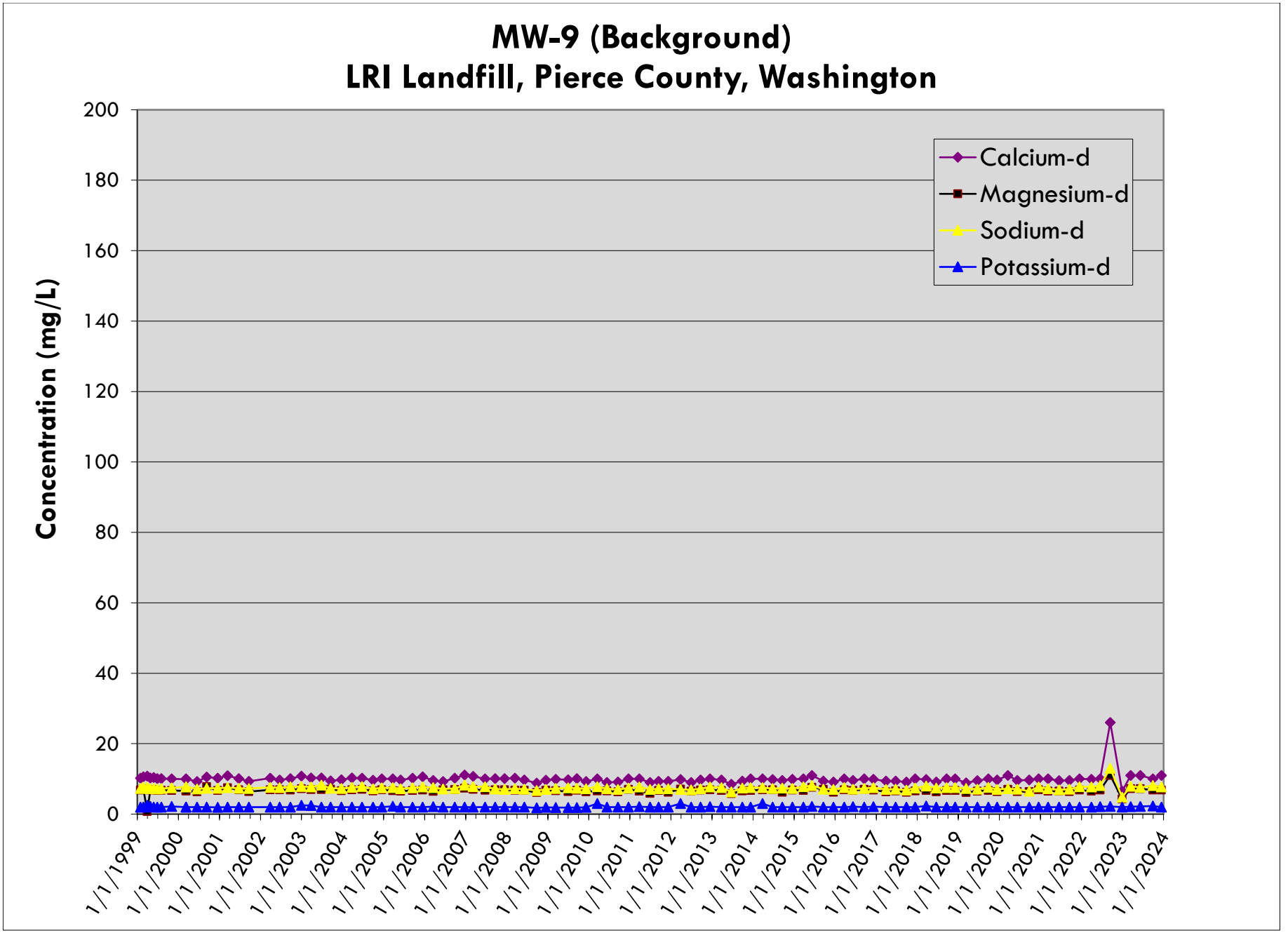


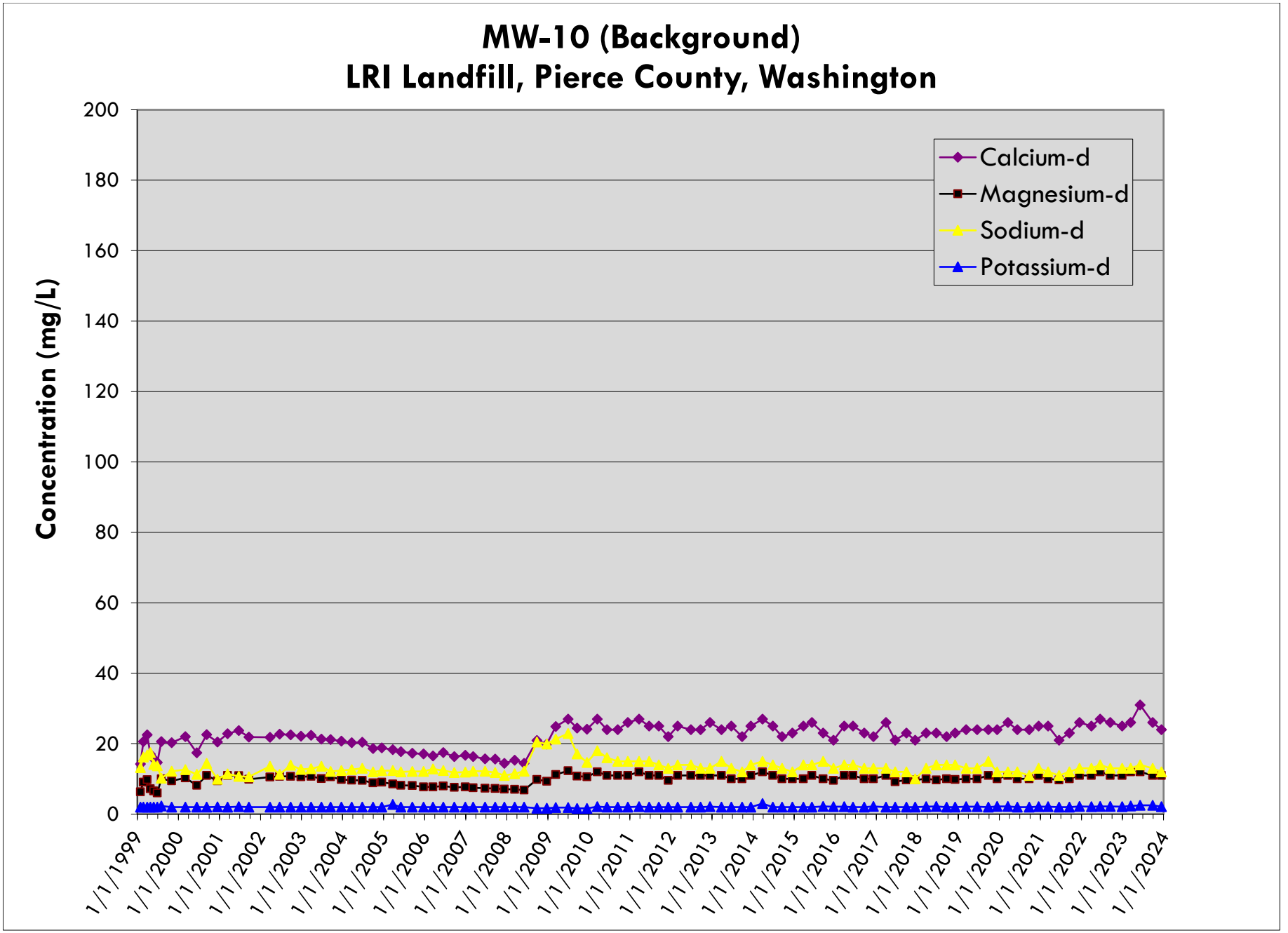

MW-5A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-6
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

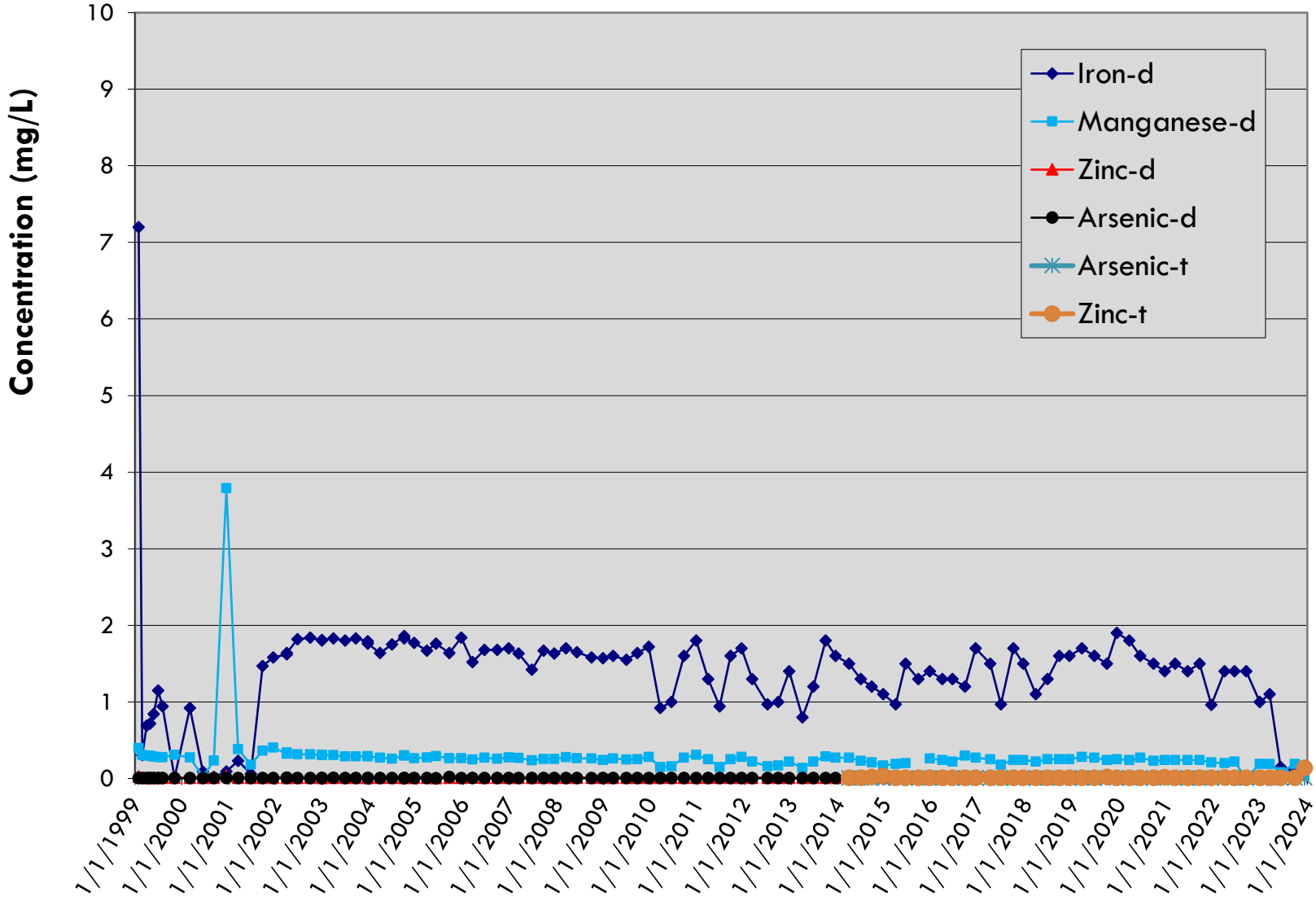
MW-7
LRI Landfill, Pierce County, Washington



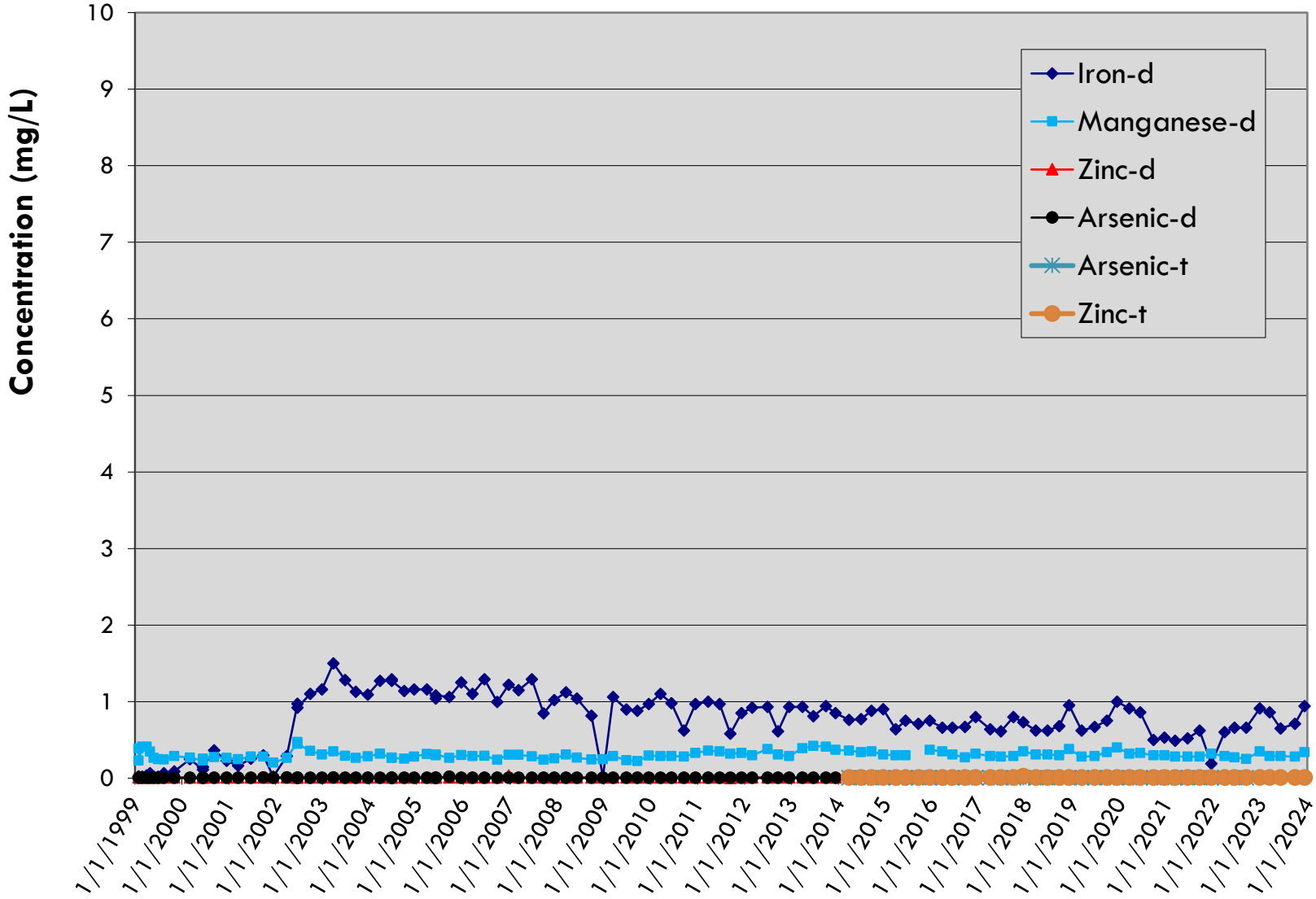

MW-9 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


MW-10 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

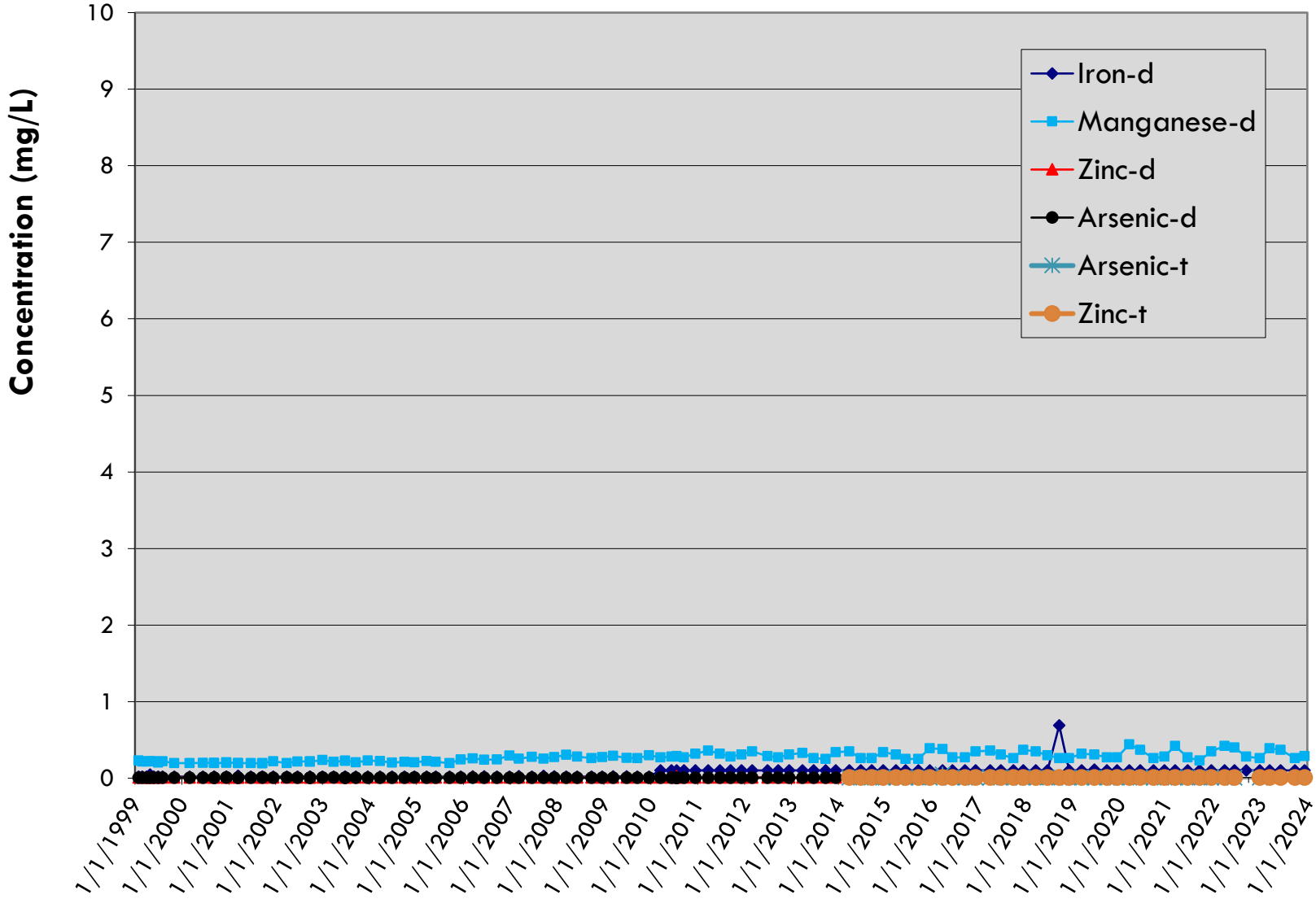
MW-1A
LRI Landfill, Pierce County, Washington



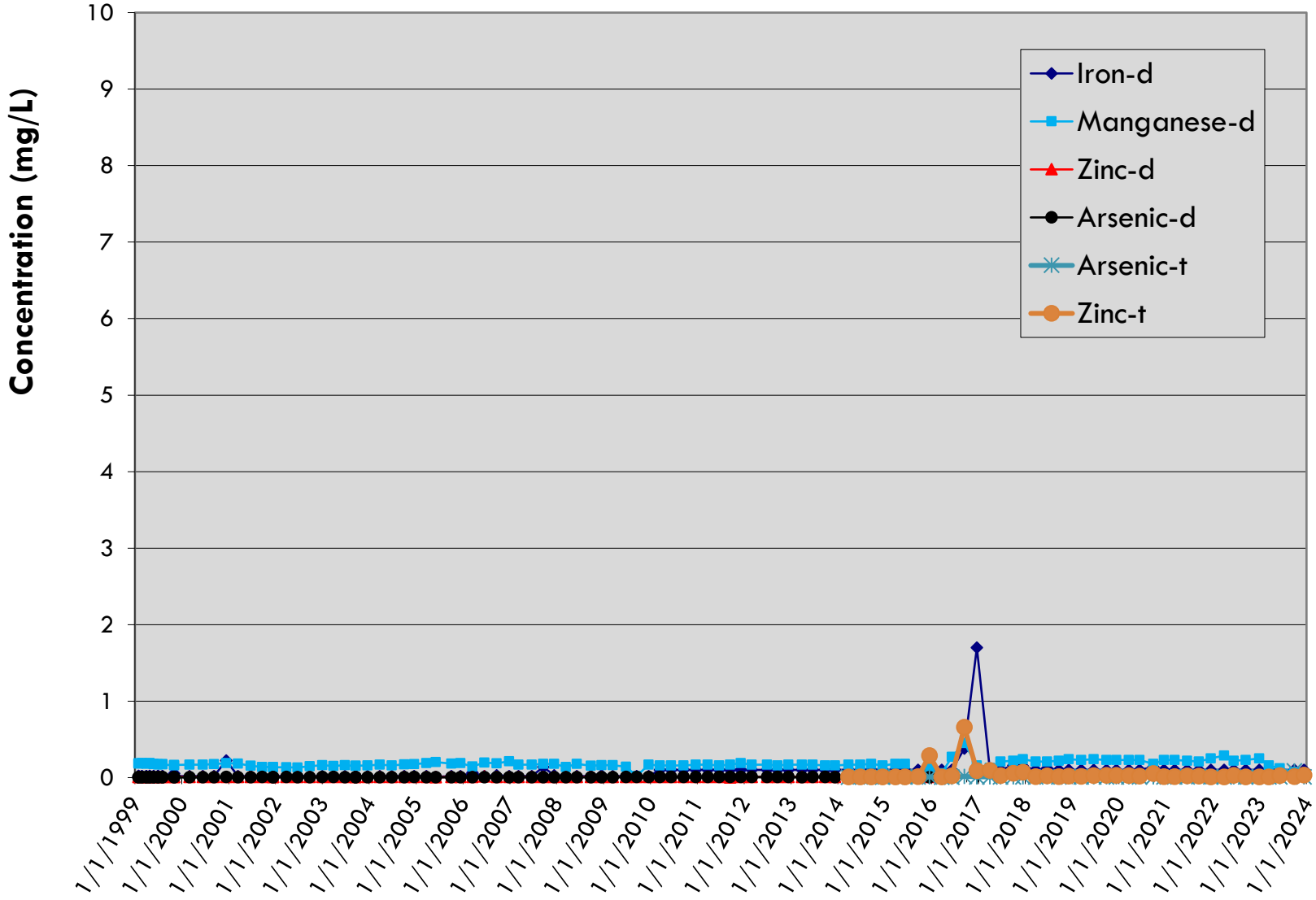
MW-2A
LRI Landfill, Pierce County, Washington



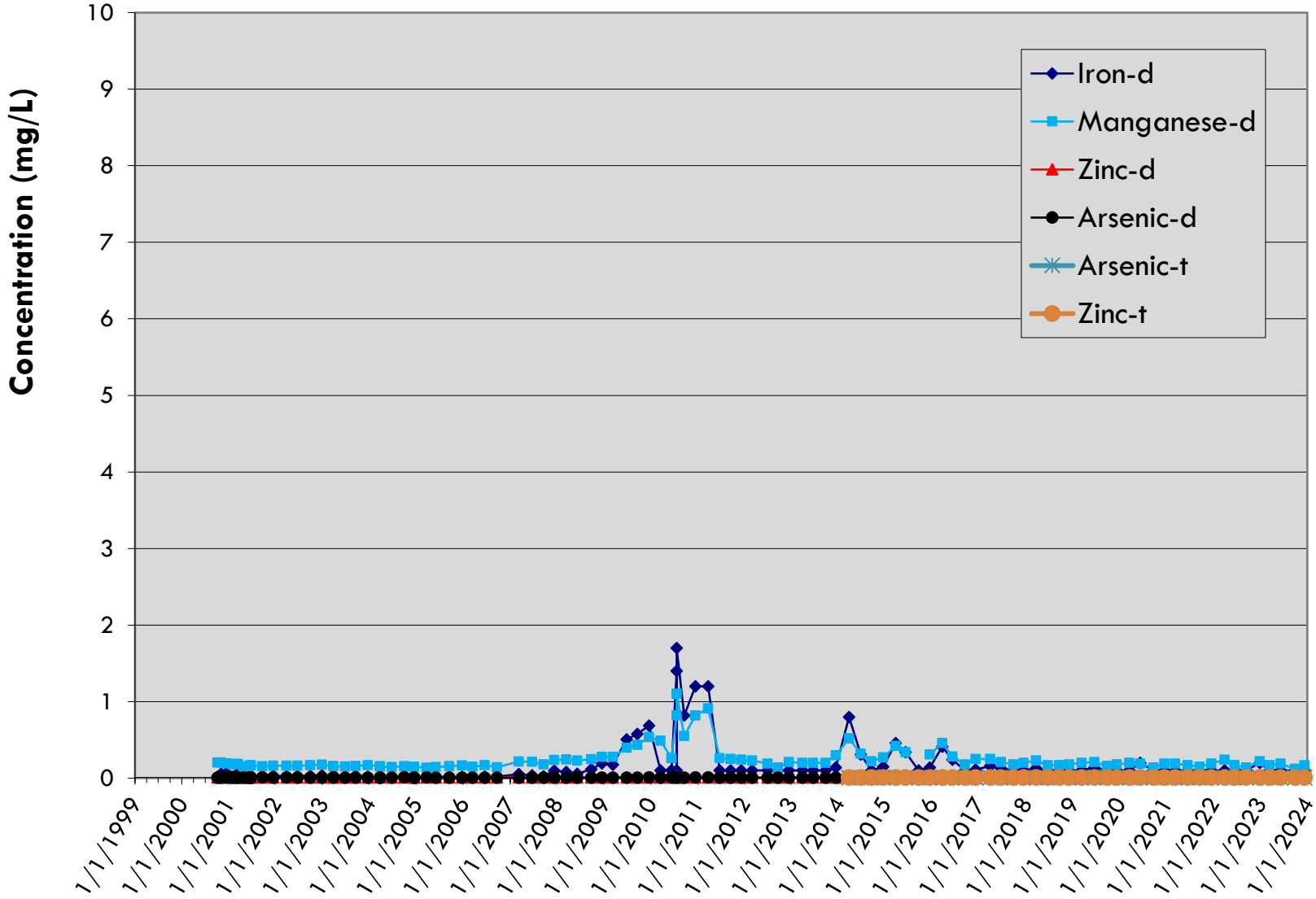
MW-3
LRI Landfill, Pierce County, Washington



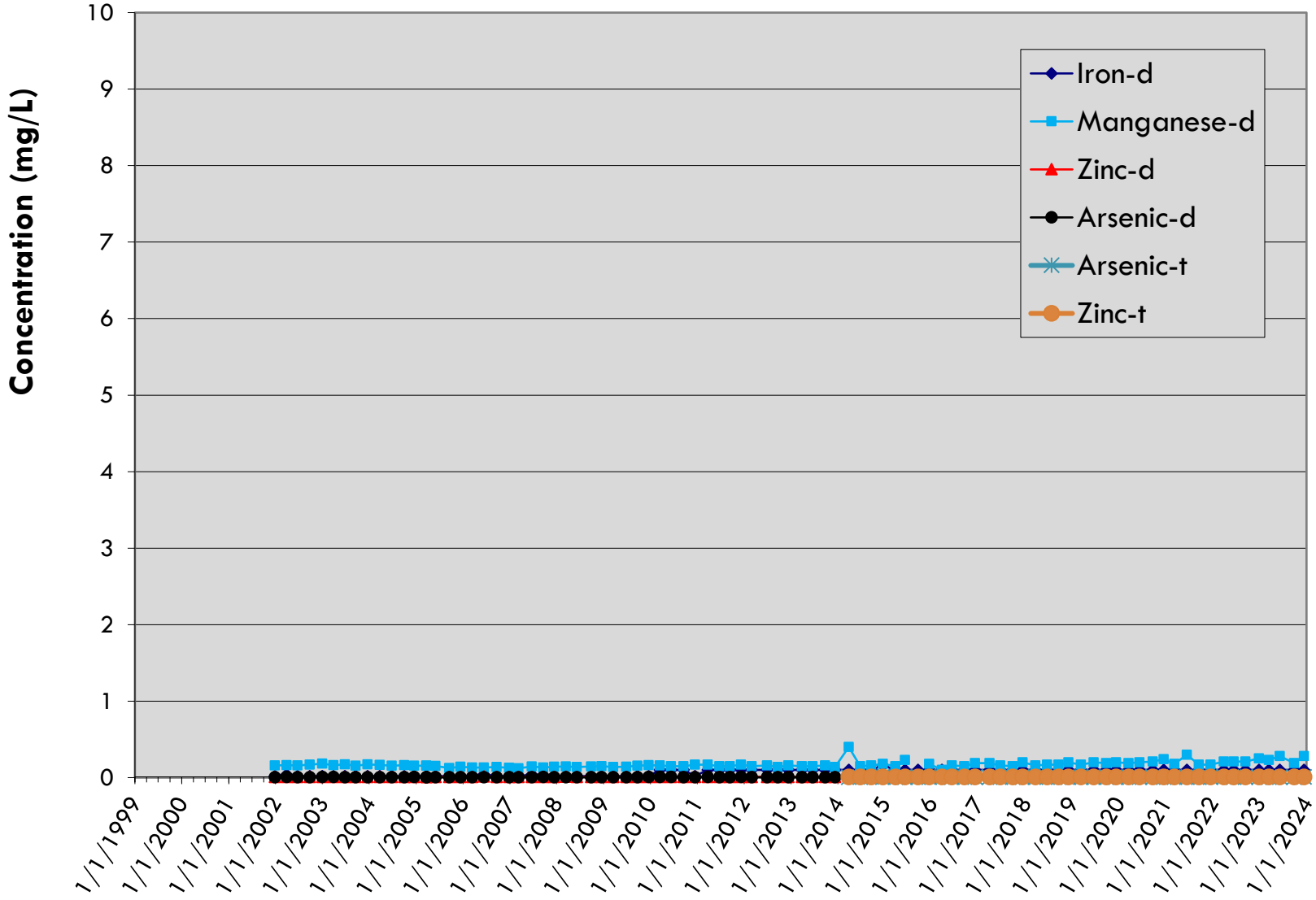
MW-4
LRI Landfill, Pierce County, Washington



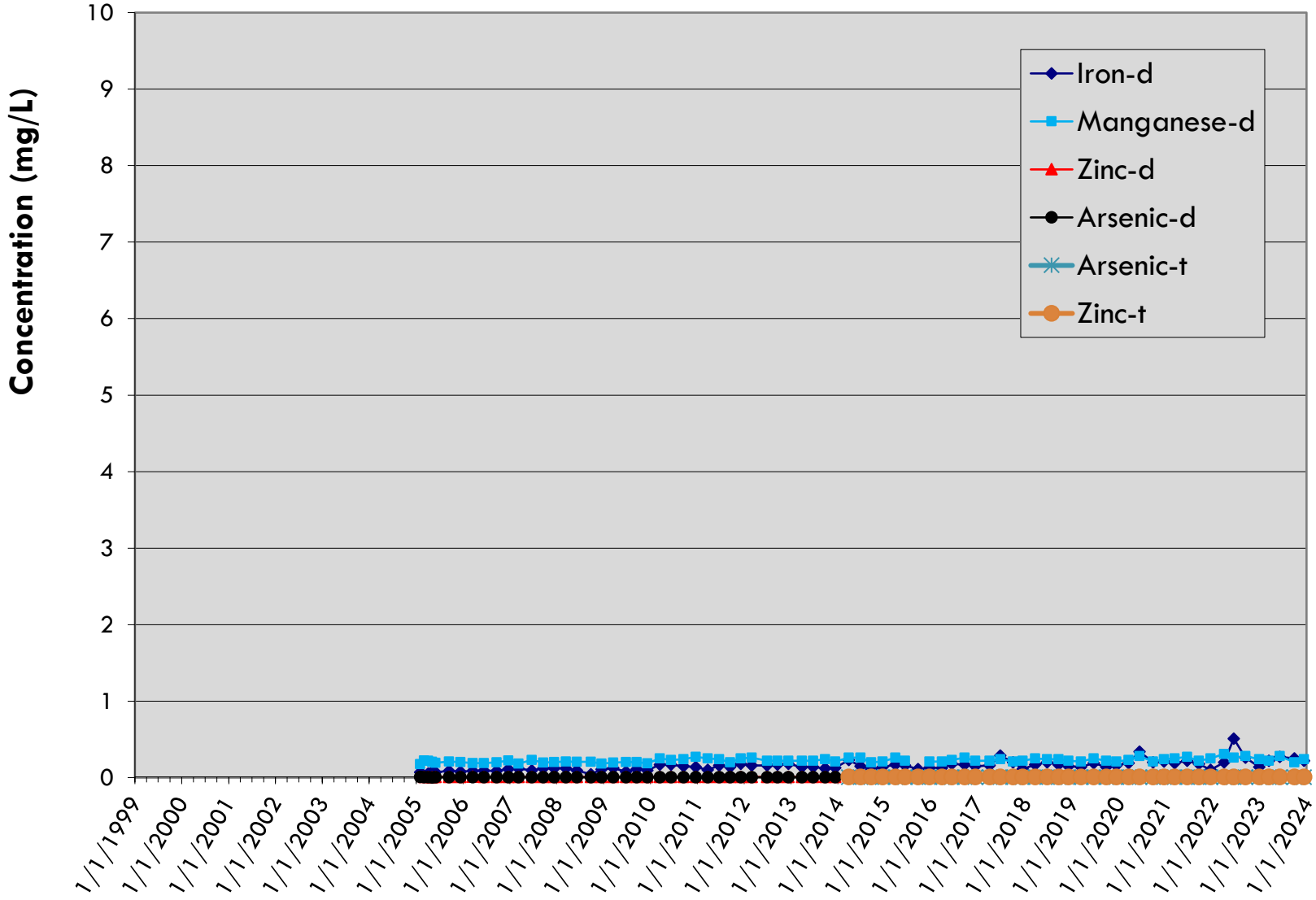
MW-5A
LRI Landfill, Pierce County, Washington

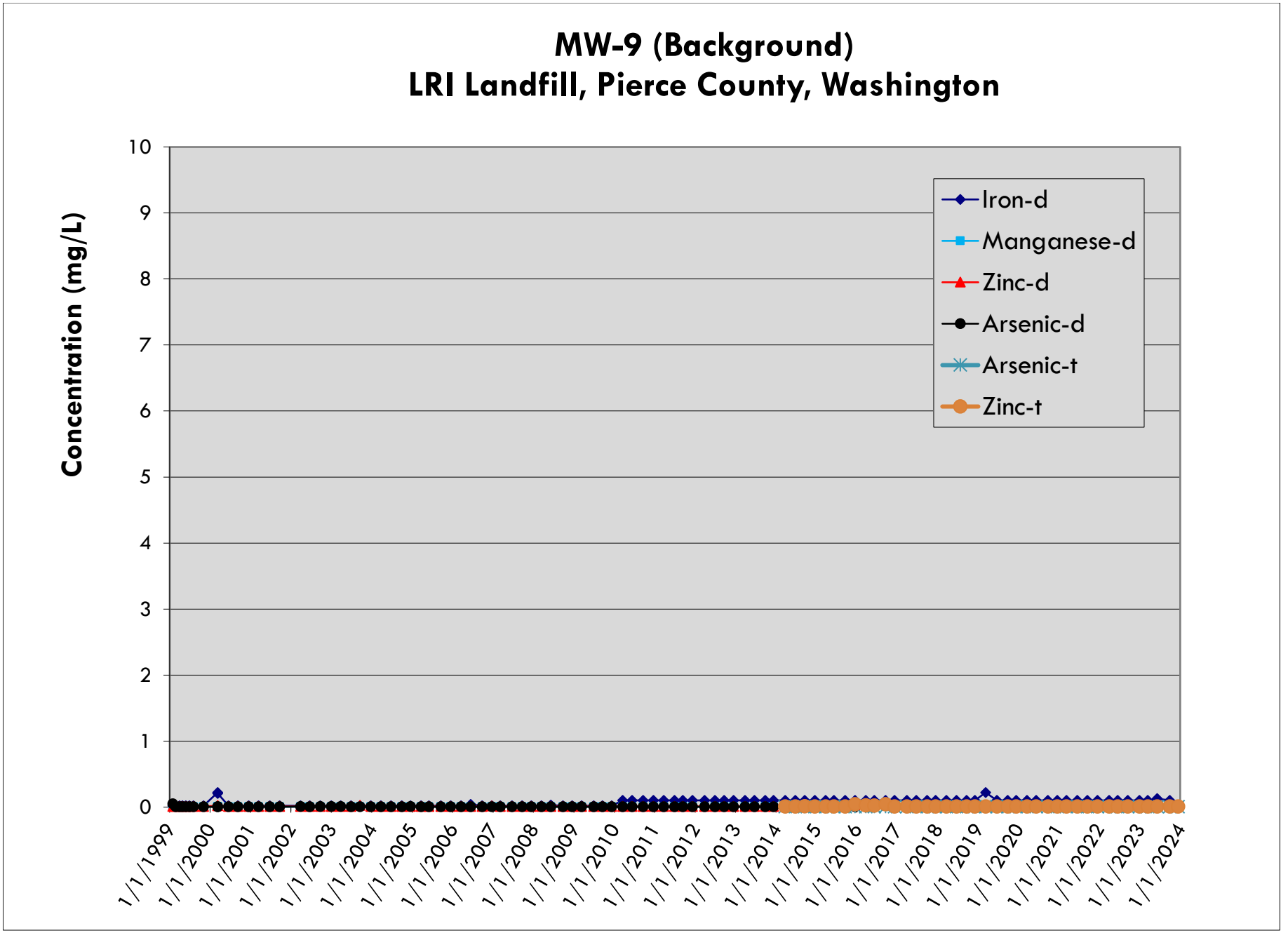


MW-6
LRI Landfill, Pierce County, Washington

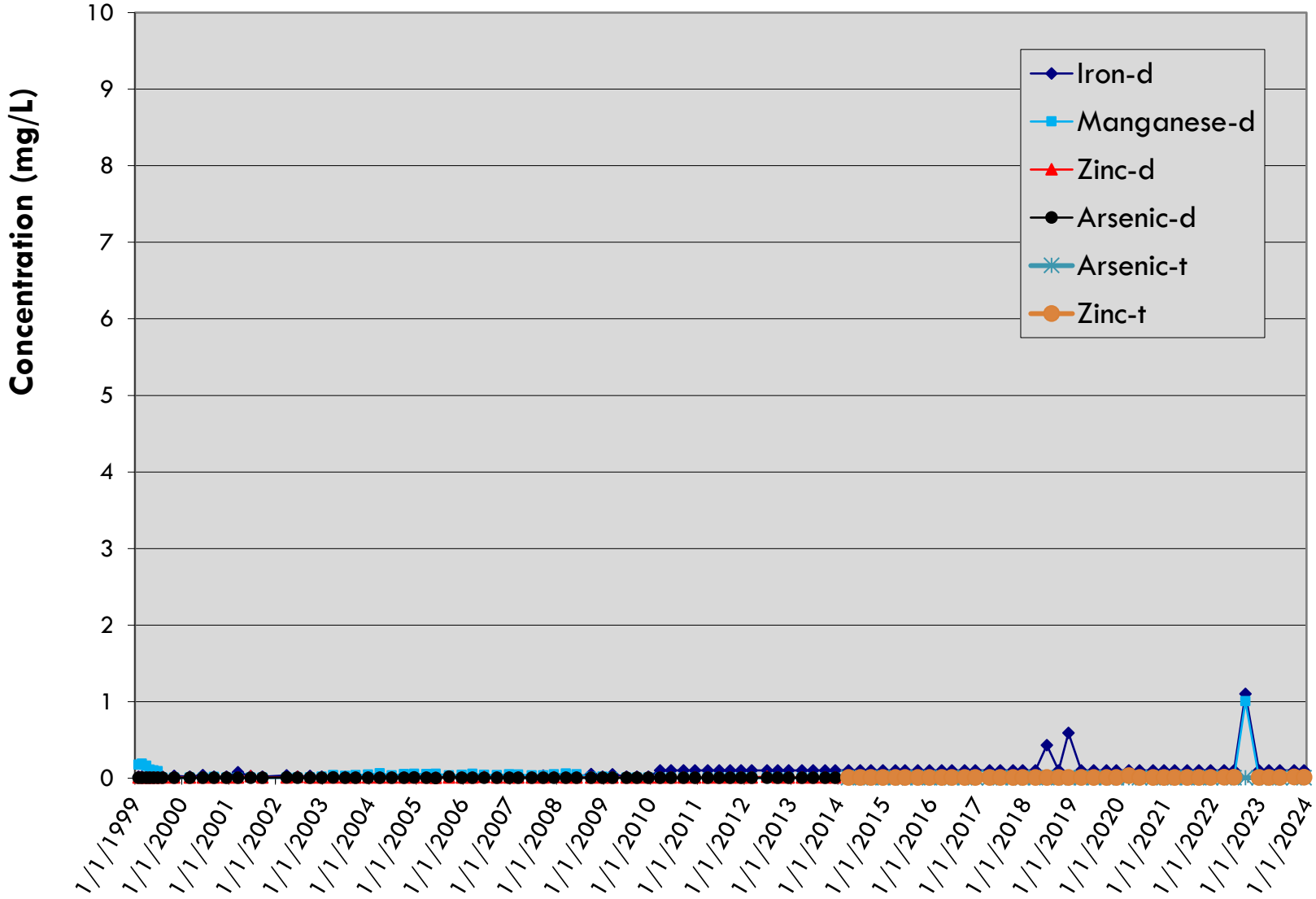


MW-7
LRI Landfill, Pierce County, Washington




MW-9 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
10
9
8
7
6
5
4
3
2
1
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024
Iron-d
Manganese-d
Zinc-d
Arsenic-d
Arsenic-t
Zinc-t

MW-10 (Background)
LRI Landfill, Pierce County, Washington



Appendix C

Groundwater Database

Groundwater Database - Waterlevels
2023 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Field_Date	Well Casing Elevation	Depth-To-Water	Water Level Elevation	Notes
Monitoring Well						
MW-1A	304-031523-02	3/15/2023	652.57	17.97	634.60	
	304-060723-02	6/7/2023	652.57	18.49	634.08	
	304-092723-02	9/27/2023	652.57	21.14	631.43	
	304-121223-02	12/12/2023	652.57	17.88	634.69	
MW-2A	304-031423-04	3/14/2023	651.93	17.31	634.62	
	304-060723-04	6/7/2023	651.93	18.25	633.68	
	304-092723-04	9/27/2023	651.93	20.91	631.02	
	304-121223-04	12/12/2023	651.93	17.63	634.30	
MW-3	304-031423-06	3/14/2023	637.41	5.89	631.52	
	304-060723-06	**6/7/2023**	637.41	7.15	630.26	
	304-092723-06	9/27/2023	637.41	10.82	626.59	
	304-121223-06	12/12/2023	637.41	6.29	631.12	
MW-4	304-031523-21	3/14/2023	652.37	21.23	631.14	
	304-060823-21	6/8/2023	652.37	22.21	630.16	
	304-092823-21	9/28/2023	652.37	25.42	626.95	
	304-121423-21	12/14/2023	652.37	21.38	630.99	
MW-5A	304-031423-08	3/14/2023	655.55	21.15	634.40	
	304-060723-08	6/7/2023	655.55	26.61	628.94	
	304-092723-08	9/27/2023	655.55	29.76	625.79	
	304-121223-08	12/12/2023	655.55	26.32	629.23	
MW-6	304-031423-12	3/14/2023	635.71	6.98	628.73	
	304-060823-12	6/8/2023	635.71	9.56	626.15	
	304-092723-12	9/27/2023	635.71	13.82	621.89	
	304-121323-12	12/13/2023	635.71	6.87	628.84	
MW-7	304-031423-14	3/14/2023	656.03	21.64	634.39	
	304-060723-14	6/7/2023	656.03	NM	--	
	304-092823-14	9/28/2023	656.03	27.75	628.28	
	304-121323-14	12/13/2023	656.03	22.86	633.17	
MW-9	304-031523-09	3/14/2023	701.77	8.70	693.07	
	304-060823-18	6/8/2023	701.77	9.57	692.20	
	304-092823-18	9/28/2023	701.77	12.98	688.79	
	304-121323-18	12/13/2023	701.77	9.83	691.94	
MW-10	304-031423-16	3/14/2023	678.37	24.17	654.20	
	304-060723-16	6/7/2023	678.37	24.82	653.55	
	304-092723-16	9/27/2023	678.37	29.19	649.18	
	304-121223-16	12/12/2023	678.37	25.82	652.55	
Leak Detection System						
LDCS-1	304-031423-09	3/14/2023	657.26	29.19	628.07	
	304-060723-09	6/7/2023	657.26	28.47	628.79	
	304-092823-09	9/28/2023	657.26	NM	--	
	304-121223-09	12/12/2023	657.26	27.80	629.46	
LDCS-2A	304-031423-07	3/14/2023	659.24	26.87	632.37	
	304-060723-07	6/7/2023	659.24	30.10	629.14	
	304-092823-07	9/28/2023	659.24	NM	--	
	304-121223-07	12/12/2023	659.24	29.81	629.43	
LDCS-2B	304-031423-05	3/14/2023	661.70	28.45	633.25	
	304-060723-05	6/7/2023	661.70	27.65	634.05	
	304-092823-05	9/28/2023	661.70	NM	--	
	304-121223-05	12/12/2023	661.70	25.81	635.89	

"NM" = Not Measured

Groundwater Database - Field Parameters
2023 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Monitoring Well						
MW-1A	304-031523-02	3/15/2023	DP	6.83	163	13.50
	304-060723-02	6/7/2023	DP	6.69	112	15.30
	304-092723-02	9/27/2023	DP	6.63	163	14.00
	304-121223-02	12/12/2023	DP	6.86	137	13.80
MW-2A	304-031423-04	3/14/2023	DP	6.98	298	12.80
	304-060723-04	6/7/2023	DB	6.92	260	14.20
	304-092723-04	9/27/2023	DB	7.03	293	13.60
	304-121223-04	12/12/2023	DP	7.12	367	13.50
MW-3	304-031423-06	3/14/2023	DP	6.98	432	10.30
	304-060723-06	6/7/2023	DB	6.92	383	11.30
	304-092723-06	9/27/2023	DB	7.32	346	10.90
	304-121223-06	12/12/2023	DP	7.32	356	10.80
MW-4	304-031523-21	3/15/2023	SP	7.19	368	13.40
	304-060823-21	6/8/2023	SP	6.92	341	13.90
	304-092823-21	9/28/2023	SP	6.69	339	13.80
	304-121423-21	12/14/2023	SP	6.88	369	13.90
MW-5A	304-031423-08	3/14/2023	DP	7.44	352	12.50
	304-060723-08	6/7/2023	DP	7.27	376	13.30
	304-092723-08	9/27/2023	DP	7.50	277	12.90
	304-121223-08	12/12/2023	DP	7.38	309	12.70
MW-6	304-031423-12	3/14/2023	DP	7.46	358	10.60
	304-060823-12	6/8/2023	DP	7.40	344	11.00
	304-092723-12	9/27/2023	DP	7.44	322	10.80
	304-121323-12	12/13/2023	DP	7.28	386	10.80
MW-7	304-031423-14	3/14/2023	DP	7.24	366	10.80
	304-060723-14	6/7/2023	DP	7.26	388	11.30
	304-092823-14	9/28/2023	DP	7.16	341	11.00
	304-121323-14	12/13/2023	DP	7.13	327	10.70
MW-9	304-031523-09	3/15/2023	DP	5.88	432	9.80
	304-060823-18	6/8/2023	DP	6.68	136	10.50
	304-092823-18	9/28/2023	DP	6.53	133	10.40
	304-121323-18	12/13/2023	DP	6.65	127	10.20
MW-10	304-031423-16	3/14/2023	DP	5.91	273	11.60
	304-060723-16	6/7/2023	DP	6.20	284	13.40
	304-092723-16	9/27/2023	DP	5.89	263	12.20
	304-121223-16	12/12/2023	DP	6.18	258	12.10

Groundwater Database - Field Parameters
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Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Leak Detection System						
LDCS-1	304-031423-09	3/14/2023	DB	5.88	432	21.44
	304-060723-09	6/7/2023	DB	6.00	459	26.40
	304-092823-09	9/28/2023	DB	4.02	560	17.40
	304-121223-09	12/12/2023	DB	6.24	252	20.10
LDCS-2A	304-031423-07	3/14/2023	DB	6.55	869	18.45
	304-060723-07	6/7/2023	DB	6.44	875	23.60
	304-092823-07	9/28/2023	DB	3.93	847	19.10
	304-121223-07	12/12/2023	DB	6.72	422	19.50
LDCS-2B	304-031423-05	3/14/2023	DB	6.00	913	18.25
	304-060723-05	6/7/2023	DB	6.45	891	21.50
	304-092823-05	9/28/2023	DB	4.13	1,091	16.40
	304-121223-05	12/12/2023	DB	6.56	602	15.60
LDCS-3A	304-031423-03	3/14/2023	DP	5.98	899	20.13
	304-060823-03	6/8/2023	DP	6.22	849	22.00
	304-092723-03	9/27/2023	DP	5.56	753	20.00
	304-121223-03	12/12/2023	DP	6.24	942	18.60
LDCS-4A	304-031423-11	3/14/2023	DP	5.73	753	17.06
	304-060723-11	6/7/2023	DP	6.13	852	23.60
	304-092723-11	9/27/2023	DP	5.34	692	19.10
	304-121223-11	12/12/2023	DP	6.37	112	19.70
LDCS-4B	304-031523-19	3/15/2023	DP	6.50	994	22.04
	304-060723-19	6/7/2023	DP	6.38	975	26.40
	304-092723-19	9/27/2023	DP	5.12	764	24.31
	304-121323-19	12/13/2023	DP	6.53	704	10.60
LDCS-5	304-031523-17	3/15/2023	DP	6.58	793	21.60
	304-060823-17	6/8/2023	DP	6.35	862	24.50
	304-092723-17	9/27/2023	DP	4.92	604	27.40
	304-121323-17	12/13/2023	DP	5.97	431	21.30
LDCS-6	304-031523-13	3/15/2023	DP	6.79	1,047	24.56
	304-060823-13	6/8/2023	GB	6.57	1,006	27.20
	304-092823-13	9/28/2023	GB	3.05	1,038	24.10
	304-121323-13	12/13/2023	DP	6.32	1,006	19.70
LDCS-7	304-031423-01	3/14/2023	DP	5.86	791	21.57
	304-060723-01	6/7/2023	DP	5.94	803	26.70
	304-092723-01	9/27/2023	DP	4.76	614	25.90
	304-121223-01	12/12/2023	DP	6.12	754	20.80
LDCS-8	304-031523-20	3/15/2023	GB	6.78	1,031	25.45
	304-060823-20	6/8/2023	DP	6.31	989	25.20
	304-092823-20	9/28/2023	DP	2.92	908	26.70
	304-121323-20	12/13/2023	GB	6.30	896	22.00
LDCS-9	304-031523-29	3/15/2023	GB	6.50	455	14.54
	304-060823-24	6/8/2023	GB	6.27	672	15.80
	304-121323-22	12/13/2023	GB	6.17	752	16.10

Groundwater Database - Field Parameters
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Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Leachate						
Leachate, Cell 1	304-121423-29	12/14/2023	GB	7.61	65,747	17.10
Leachate, Cell 2A	304-121423-28	12/14/2023	GB	7.73	54,691	10.90
Leachate, Cell 2B	304-121423-27	12/14/2023	GB	7.52	13,551	20.00
Leachate, Cell 3A	304-121423-26	12/14/2023	GB	7.55	30,722	21.40
Leachate, Cell 4A	304-121423-30	12/14/2023	GB	7.95	70,626	28.70
Leachate, Cell 4B	304-121423-31	12/14/2023	GB	7.41	20,540	28.30
Leachate, Cell 5	304-121423-32	12/14/2023	GB	7.95	55,811	29.80
Leachate, Cell 6	304-121423-33	12/14/2023	GB	7.80	27,115	24.90
Leachate, Cell 7	304-121423-25	12/14/2023	GB	6.32	27,748	23.50
Leachate, Cell 8	304-121423-34	12/14/2023	GB	7.15	7,344	21.90
Leachate, Cell 9	304-060823-25	6/8/2023	GB	5.78	1,692	19.80
Leachate, Cell 9	304-092823-25	9/28/2023	GB	5.83	199	17.60

Notes:
DB = Dedicated bailer
DP = Dedicated pump
GB = Grab sample
NM = Not measured
SP = Submersible pump
PP = Peristaltic Pump

Groundwater Database - Inorganic Parameters
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Location	Sample ID	Sample Date	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
Monitoring Well										
MW-1A	304-031523-02	3/15/2023	75	0.1 U	2.3	0.5 U	8.6	57	1 U	-
	304-060723-02	6/7/2023	47	0.1 U	1.3	0.5 U	9.1	74	1 U	4 U
	304-092723-02	9/27/2023	80	0.1 U	2.1	0.5 U	6	130	1 U	4.4
	304-121223-02	12/12/2023	58	0.1 U	1.4	0.5 U	9.6	95	1 U	220
MW-2A	304-031423-04	3/14/2023	130	0.18	3.8	0.5 U	16	130	1 U	4 U
	304-060723-04	6/7/2023	120	0.1 U	3.2	0.5 U	7.7	170	1 U	4 U
	304-092723-04	9/27/2023	140	0.18	3.6	0.5 U	15	190	1 U	4 U
	304-121223-04	12/12/2023	140	0.23	4.6	0.5 U	38	230	1.2	4 U
MW-3	304-031423-06	3/14/2023	200	0.14	4.2	0.5 U	30	180	1.3	4 U
	304-060723-06	6/7/2023	160	0.13	4.1	0.5 U	32	220	1 U	4 U
	304-092723-06	9/27/2023	140	0.12	4.2	0.5 U	33	220	1.1	4 U
	304-121223-06	12/12/2023	150	0.12	3.8	0.5 U	30	210	1.1	4 U
MW-4	304-031523-21	3/15/2023	170	0.1 U	4.3	0.5 U	15	160	1 U	-
	304-060823-21	6/8/2023	160	0.1 U	4.0	0.5 U	15	210	1.1	4 U
	304-092823-21	9/28/2023	140	0.1 U	4.5	0.5 U	23	220	1.1	4 U
	304-121423-21	12/14/2023	150	0.1 U	4	0.5 U	41	260	1.4	8.8
MW-5A	304-031423-08	3/14/2023	170	0.14	3.2	0.5 U	13	150	1.2	4 U
	304-060723-08	6/7/2023	180	0.16	3.4	0.5 U	14	210	1 U	4 U
	304-092723-08	9/27/2023	140	0.13	2.2	0.5 U	3.7	170	1 U	4 U
	304-121223-08	12/12/2023	150	0.1 U	2.5	0.5 U	7.9	180	1 U	4 U
MW-6	304-031423-12	3/14/2023	180	0.14	6.1	0.5 U	7.6	150	1.2	4 U
	304-060823-12	6/8/2023	160	0.14	5.6	0.5 U	6.4	210	1.1	4 U
	304-092723-12	9/27/2023	160	0.14	5.3	0.5 U	6.7	200	1 U	4 U
	304-121323-12	12/13/2023	200	0.15	6.4	0.5 U	8.6	240	1.3	4 U

Groundwater Database - Inorganic Parameters
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Location	Sample ID	Sample Date	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MW-7	304-031423-14	3/14/2023	190	0.21	3.4	0.5 U	3.6	160	1 U	4 U
Duplicate	304-031423-10	3/14/2023	190	0.21	3.4	0.5 U	3.6	130	1.2	4 U
	304-060723-14	6/7/2023	200	0.24	3.6	0.5 U	2	220	1.1	4 U
Duplicate	304-060723-23	6/7/2023	200	0.23	3.5	0.5 U	2.1	230	1.1	4 U
	304-092823-14	9/28/2023	170	0.21	2.9	0.5 U	4.1	200	1 U	4 U
Duplicate	304-092823-23	9/28/2023	170	0.23	3	0.5 U	4.3	200	1 U	4 U
	304-121323-14	12/13/2023	180	0.2	2.9	0.5 U	4.8	200	1 U	4 U
Duplicate	304-121323-23	12/13/2023	170	0.21	2.9	0.5 U	4.8	200	1 U	4 U
MW-9	304-031523-09	3/15/2023	68	0.1 U	1.7	0.5 U	1.1	51	1 U	-
	304-060823-18	6/8/2023	67	0.1 U	1.7	0.5 U	1	130	1 U	4 U
	304-092823-18	9/28/2023	67	0.1 U	1.6	0.5 U	1.7	130	1 U	4 U
	304-121323-18	12/13/2023	67	0.1 U	1.5	0.5 U	1.6	130	1 U	4 U
MW-10	304-031423-16	3/14/2023	110	0.1 U	7.4	3	6.3	130	1 U	5.6
	304-060723-16	6/7/2023	120	0.1 U	7.2	2.6	5.7	190	1 U	4 U
	304-092723-16	9/27/2023	110	0.1 U	7.1	2.4	5.9	180	1 U	4 U
	304-121223-16	12/12/2023	110	0.1 U	6.5	2.5	5.9	180	1 U	4 U
Leak Detection System										
LDCS-1	304-031423-09	3/14/2023	200	0.24	0.51	0.5 U	0.5	160	30	290
	304-060723-09	6/7/2023	210	0.21	5.2	0.5 U	6.9	280	31	-
	304-092823-09	9/28/2023	290	0.9	5.5	0.5 U	8.6	370	200	-
	304-121223-09	12/12/2023	200	0.41	6.1	0.5 U	12	73	81	-
LDCS-2A	304-031423-07	3/14/2023	450	0.27	13	0.5 U	29	460	4.1	4 U
	304-060723-07	6/7/2023	450	1.1	11.0	0.5 U	45	520	6.1	-
	304-092823-07	9/28/2023	440	0.52	12.0	0.5 U	43	520	8.8	-
	304-121223-07	12/12/2023	420	0.39	13	0.5 U	36	490	6.8	-
LDCS-2B	304-031423-05	3/14/2023	360	0.13	4.1	0.5 U	4.9	490	13	460
	304-060723-05	6/7/2023	400	0.55	41	0.5 U	55	530	9.7	-
	304-092823-05	9/28/2023	430	1.90	39	0.5 U	53	570	44	-
	304-121223-05	12/12/2023	400	0.29	36	0.5 U	52	370	8.3	-

Groundwater Database - Inorganic Parameters
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Location	Sample ID	Sample Date	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
LDCS-3A	304-031423-03	3/14/2023	430	0.24	5.1	0.5 U	60	460	2.1	4 U
	304-060823-03	6/8/2023	420	0.26	4.8	0.5 U	61	520	2.1	-
	304-092723-03	9/27/2023	460	0.33	4.7	0.5 U	51	570	2.1	-
	304-121223-03	12/12/2023	440	0.22	4.5	0.5 U	57	530	2.2	-
LDCS-4A	304-031423-11	3/14/2023	290	0.11	3.4	0.5 U	2.8	370	11	50
	304-060723-11	6/7/2023	370	0.26	30	0.5 U	60	500	6.7	-
	304-092723-11	9/27/2023	360	0.3	35	0.5 U	57	510	8.4	-
	304-121223-11	12/12/2023	220	0.4	9.6	0.5 U	390	800	8.1	-
LDCS-4B	304-031523-19	3/15/2023	360	0.27	75	0.5 U	75	540	7.5	-
	304-060723-19	6/7/2023	420	0.26	35	0.5 U	70	570	6.9	-
	304-092723-19	9/27/2023	410	0.42	44	0.5 U	60	560	9.2	-
	304-121323-19	12/13/2023	320	0.1 U	18	1.1	37	420	8.2	-
LDCS-5	304-031523-17	3/15/2023	250	0.4	63	0.5 U	73	430	17	-
	304-060823-17	6/8/2023	370	0.46	29	0.5 U	79	550	10	-
	304-092723-17	9/27/2023	270	0.59	48	0.5 U	56	480	34	-
	304-121323-17	12/13/2023	180	0.15	8.9	0.5 U	41	290	20	-
LDCS-6	304-031523-13	3/15/2023	450	0.1 U	18	0.5 U	110	570	4.1	-
	304-060823-13	6/8/2023	450	0.1 U	20	0.5 U	110	640	4.3	-
	304-092823-13	9/28/2023	470	0.3	25	0.5 U	110	690	4.7	-
	304-121323-13	12/13/2023	440	0.3	23	0.5 U	100	630	4.7	-

Groundwater Database - Inorganic Parameters
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Location	Sample ID	Sample Date	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
LDCS-7	304-031423-01	3/14/2023	320	0.1 U	8.4	0.5 U	92	410	5.7	4.4
	304-060723-01	6/7/2023	420	0.1 U	6.1	0.5 U	14	490	4.7	-
	304-092723-01	9/27/2023	390	0.17	5.7	0.5 U	12	450	6.9	-
	304-121223-01	12/12/2023	250	0.62	6.1	0.5 U	130	490	5.4	-
LDCS-8	304-031523-20	3/15/2023	430	0.1 U	26	0.5 U	56	440	5.4	-
	304-060823-20	6/8/2023	530	0.1 U	20	0.5 U	53	650	6.7	-
	304-092823-20	9/28/2023	450	0.1 U	21	0.5 U	55	560	6.7	-
	304-121323-20	12/13/2023	450	0.1 U	21	0.5 U	50	570	6.8	-
LDCS-9	304-031523-29	3/15/2023	200	0.17	5.6	1.9	27	220	1.8	
	304-060823-24	6/8/2023	300	0.1 U	7.3	1.2	54	420	2.9	
	304-121323-22	12/13/2023	350	0.1 U	5.5	0.73	64	470	2.1	
Leachate										
Leachate, Cell 1	304-121423-29	12/14/2023	9300	2100	8200	0.5 U	8.2	19000	2200	—
Leachate, Cell 2A	304-121423-28	12/14/2023	9600	1600	3800	0.5 U	75	15000	1800	—
Leachate, Cell 2B	304-121423-27	12/14/2023	5800	1300	2400	0.5 U	7.7	8400	1400	—
Leachate, Cell 3A	304-121423-26	12/14/2023	7300	1200	2700	0.5 U	1.1	11000	1300	—
Leachate, Cell 4A	304-121423-30	12/14/2023	12000	2600	7300	0.5 U	12	22000	3300	—
Leachate, Cell 4B	304-121423-31	12/14/2023	15000	2500	5800	0.5 U	13	23000	3600	—
Leachate, Cell 5	304-121423-32	12/14/2023	12000	2600	3800	0.5 U	11	15000	2000	—
Leachate, Cell 6	304-121423-33	12/14/2023	10000	2100	3800	0.5 U	13	15000	2700	—
Leachate, Cell 7	304-121423-25	12/14/2023	4700	660	1400	0.5 U	860	14000	6600	—
Leachate, Cell 8	304-121423-34	12/14/2023	2900	500	760	1.1	150	3500	510	—
Leachate, Cell 9	304-060823-25	6/8/2023	630	49	51	0.5 U	0.77	1,200	580	—
Leachate, Cell 9	304-092823-25	9/28/2023	64	3.1	17	0.5 U	13	140	41	—

Groundwater Database - Inorganic Parameters
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Location	Sample ID	Sample Date	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
Quality Control										
QC, FB	304-031523-15	3/15/2023	10 U	0.1 U	0.2 U	0.5 U	0.5 U	10 U	1 U	—
	304-060823-15	6/8/2023	10 U	0.1 U	0.2 U	0.5 U	0.5 U	10 U	1 U	4 U
	304-092823-15	9/28/2023	10 U	0.1 U	0.2 U	0.5 U	0.5 U	10 U	1 U	4 U
	304-121423-15	12/14/2023	10 U	0.1 U	0.2 U	0.5 U	0.5 U	10 U	1 U	4 U

Notes:
H = Sample was prepped or analyzed beyond the specified holding time
U = Sample result was not reported at or above the MRL
- = Not analyzed

Groundwater Database - Appendix I Metals
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Location	Sample Number	Sample Date	Antimony, Dissolved	Antimony, Total	Arsenic, Dissolved	Arsenic, Total	Barium, Dissolved	Barium, Total	Beryllium, Dissolved	Beryllium, Total	Cadmium, Dissolved	Cadmium, Total
Monitoring Well												
MW-1A	304-031523-02	3/15/2023	0.05 U	0.05 U	0.005 U	0.005 U	0.018	0.017	0.001 U	0.001 U	0.001 U	0.001 U
	304-060723-02	6/7/2023		0.05 U		0.005 U		0.0087		0.001 U		0.001 U
	304-092723-02	9/27/2023		0.05 U		0.005 U		0.019		0.001 U		0.001 U
	304-121223-02	12/12/2023		0.05 U		0.0088		0.1		0.001 U		0.001 U
MW-2A	304-031423-04	3/14/2023		0.05 U		0.005 U		0.014		0.001 U		0.001 U
	304-060723-04	6/7/2023		0.05 U		0.005 U		0.012		0.001 U		0.001 U
	304-092723-04	9/27/2023		0.05 U		0.005 U		0.015		0.001 U		0.001 U
	304-121223-04	12/12/2023		0.05 U		0.005 U		0.018		0.001 U		0.001 U
MW-3	304-031423-06	3/14/2023		0.05 U		0.005 U		0.015		0.001 U		0.001 U
	304-060723-06	6/7/2023		0.05 U		0.005 U		0.012		0.001 U		0.001 U
	304-092723-06	9/27/2023		0.05 U		0.005 U		0.01		0.001 U		0.001 U
	304-121223-06	12/12/2023		0.05 U		0.005 U		0.012		0.001 U		0.001 U
MW-4	304-031523-21	3/15/2023	0.05 U	0.05 U	0.01	0.011	0.014	0.015	0.001 U	0.001 U	0.001 U	0.001 U
	304-060823-21	6/8/2023		0.05 U		0.01		0.015		0.001 U		0.001 U
	304-092823-21	9/28/2023		0.05 U		0.0089		0.016		0.001 U		0.001 U
	304-121423-21	12/14/2023		0.05 U		0.0084		0.017		0.001 U		0.001 U
MW-5A	304-031423-08	3/14/2023		0.05 U		0.0061		0.012		0.001 U		0.001 U
	304-060723-08	6/7/2023		0.05 U		0.0061		0.013		0.001 U		0.001 U
	304-092723-08	9/27/2023		0.05 U		0.005 U		0.011		0.001 U		0.001 U
	304-121223-08	12/12/2023		0.05 U		0.0055		0.012		0.001 U		0.001 U
MW-6	304-031423-12	3/14/2023		0.05 U		0.0077		0.015		0.001 U		0.001 U
	304-060823-12	6/8/2023		0.05 U		0.0071		0.012		0.001 U		0.001 U
	304-092723-12	9/27/2023		0.05 U		0.007		0.012		0.001 U		0.001 U
	304-121323-12	12/13/2023		0.05 U		0.0084		0.018		0.001 U		0.001 U
MW-7	304-031423-14	3/14/2023		0.05 U		0.0053		0.015		0.001 U		0.001 U
Duplicate	304-031423-10	3/14/2023		0.05 U		0.0057		0.014		0.001 U		0.001 U
	304-060723-14	6/7/2023		0.05 U		0.0055		0.014		0.001 U		0.001 U
Duplicate	304-060723-23	6/7/2023		0.05 U		0.0054		0.015		0.001 U		0.001 U
	304-092823-14	9/28/2023		0.05 U		0.005 U		0.012		0.001 U		0.001 U
Duplicate	304-092823-23	9/28/2023		0.05 U		0.0052		0.013		0.001 U		0.001 U
	304-121323-14	12/13/2023		0.05 U		0.0059		0.014		0.001 U		0.001 U
Duplicate	304-121323-23	12/13/2023		0.05 U		0.0059		0.014		0.001 U		0.001 U
MW-9	304-031523-09	3/15/2023	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U
	304-060823-18	6/8/2023		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-092823-18	9/28/2023		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-121323-18	12/13/2023		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U

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Location	Sample Number	Sample Date	Chromium, Dissolved	Chromium, Total	Cobalt, Dissolved	Cobalt, Total	Copper, Dissolved	Copper, Total	Lead, Dissolved	Lead, Total	Nickel, Dissolved	Nickel, Total
Monitoring Well												
MW-1A	304-031523-02	3/15/2023	0.005 U	0.005 U	0.001 U	0.001 U	0.01 U	0.01 U	0.002 U	0.002 U	0.02 U	0.02 U
	304-060723-02	6/7/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092723-02	9/27/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121223-02	12/12/2023		0.028		0.011		0.07		0.012		0.028
MW-2A	304-031423-04	3/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060723-04	6/7/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092723-04	9/27/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121223-04	12/12/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-3	304-031423-06	3/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060723-06	6/7/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092723-06	9/27/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121223-06	12/12/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-4	304-031523-21	3/15/2023	0.005 U	0.005 U	0.001 U	0.001 U	0.01 U	0.01 U	0.002 U	0.002 U	0.02 U	0.02 U
	304-060823-21	6/8/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092823-21	9/28/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121423-21	12/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-5A	304-031423-08	3/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060723-08	6/7/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092723-08	9/27/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121223-08	12/12/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-6	304-031423-12	3/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060823-12	6/8/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092723-12	9/27/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121323-12	12/13/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-7	304-031423-14	3/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Duplicate	304-031423-10	3/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060723-14	6/7/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Duplicate	304-060723-23	6/7/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092823-14	9/28/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Duplicate	304-092823-23	9/28/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121323-14	12/13/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Duplicate	304-121323-23	12/13/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-9	304-031523-09	3/15/2023	0.005 U	0.005 U	0.001 U	0.001 U	0.01 U	0.01 U	0.002 U	0.002 U	0.02 U	0.02 U
	304-060823-18	6/8/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092823-18	9/28/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121323-18	12/13/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U

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Location	Sample Number	Sample Date	Selenium, Dissolved	Selenium, Total	Silver, Dissolved	Silver, Total	Thallium, Dissolved	Thallium, Total	Vanadium, Dissolved	Vanadium, Total	Zinc, Dissolved	Zinc, Total
Monitoring Well												
MW-1A	304-031523-02	3/15/2023	0.005 U	0.005 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U
	304-060723-02	6/7/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-092723-02	9/27/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-121223-02	12/12/2023		0.005 U		0.001 U		0.005 U		0.039		0.14
MW-2A	304-031423-04	3/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-060723-04	6/7/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-092723-04	9/27/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-121223-04	12/12/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
MW-3	304-031423-06	3/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-060723-06	6/7/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-092723-06	9/27/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-121223-06	12/12/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
MW-4	304-031523-21	3/15/2023	0.005 U	0.005 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U
	304-060823-21	6/8/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.027
	304-092823-21	9/28/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.013
	304-121423-21	12/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.033
MW-5A	304-031423-08	3/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-060723-08	6/7/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-092723-08	9/27/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-121223-08	12/12/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
MW-6	304-031423-12	3/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-060823-12	6/8/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-092723-12	9/27/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-121323-12	12/13/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
MW-7	304-031423-14	3/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
Duplicate	304-031423-10	3/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-060723-14	6/7/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
Duplicate	304-060723-23	6/7/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-092823-14	9/28/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
Duplicate	304-092823-23	9/28/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-121323-14	12/13/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
Duplicate	304-121323-23	12/13/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
MW-9	304-031523-09	3/15/2023	0.005 U	0.005 U	0.001 U	0.001 U	0.005 U	0.005 U	0.015	0.017	0.01 U	0.01 U
	304-060823-18	6/8/2023		0.005 U		0.001 U		0.005 U		0.0073		0.01 U
	304-092823-18	9/28/2023		0.005 U		0.001 U		0.005 U		0.016		0.01 U
	304-121323-18	12/13/2023		0.005 U		0.001 U		0.005 U		0.016		0.01 U

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Location	Sample Number	Sample Date	Antimony, Dissolved	Antimony, Total	Arsenic, Dissolved	Arsenic, Total	Barium, Dissolved	Barium, Total	Beryllium, Dissolved	Beryllium, Total	Cadmium, Dissolved	Cadmium, Total
MW-10	304-031423-16	3/14/2023		0.05 U		0.005 U		0.014		0.001 U		0.001 U
	304-060723-16	6/7/2023		0.05 U		0.005 U		0.013		0.001 U		0.001 U
	304-092723-16	9/27/2023		0.05 U		0.005 U		0.014		0.001 U		0.001 U
	304-121223-16	12/12/2023		0.05 U		0.005 U		0.014		0.001 U		0.001 U
Leak Detection System												
LDCS-1	304-031423-09	3/14/2023										
	304-060723-09	6/7/2023	0.05 U		0.032		0.021					
	304-092823-09	9/28/2023	0.05 U		0.01		0.012		0.001 U		0.001 U	
	304-121223-09	12/12/2023	0.05 U		0.0071		0.017					
LDCS-2A	304-031423-07	3/14/2023										
	304-060723-07	6/7/2023	0.05 U		0.037		0.11					
	304-092823-07	9/28/2023	0.05 U		0.044		0.079		0.001 U		0.001 U	
	304-121223-07	12/12/2023	0.05 U		0.005 U		0.032					
LDCS-2B	304-031423-05	3/14/2023										
	304-060723-05	6/7/2023	0.05 U		0.15		0.14					
	304-092823-05	9/28/2023	0.05 U		0.0099		0.04		0.001 U		0.001 U	
	304-121223-05	12/12/2023	0.05 U		0.017		0.032					
LDCS-3A	304-031423-03	3/14/2023										
	304-060823-03	6/8/2023	0.05 U		0.017		0.025					
	304-092723-03	9/27/2023	0.05 U		0.018		0.025		0.001 U		0.001 U	
	304-121223-03	12/12/2023	0.05 U		0.018		0.025					
LDCS-4A	304-031423-11	3/14/2023										
	304-060723-11	6/7/2023	0.05 U		0.015		0.033					
	304-092723-11	9/27/2023	0.05 U		0.012		0.026		0.001 U		0.001 U	
	304-121223-11	12/12/2023	0.05 U		0.005 U		0.026					
LDCS-4B	304-031523-19	3/15/2023	0.05 U		0.005 U		0.028		0.001 U		0.001 U	
	304-060723-19	6/7/2023	0.05 U		0.016		0.033					
	304-092723-19	9/27/2023	0.05 U		0.022		0.042		0.001 U		0.001 U	
	304-121323-19	12/13/2023	0.05 U		0.005 U		0.017					
LDCS-5	304-031523-17	3/15/2023	0.05 U		0.0055		0.046		0.001 U		0.001 U	
	304-060823-17	6/8/2023	0.05 U		0.005 U		0.049		0.001 U		0.001 U	
	304-092723-17	9/27/2023	0.05 U		0.0068		0.044		0.001 U		0.001 U	
	304-121323-17	12/13/2023	0.05 U		0.0059		0.031		0.001 U		0.001 U	

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Location	Sample Number	Sample Date	Chromium, Dissolved	Chromium, Total	Cobalt, Dissolved	Cobalt, Total	Copper, Dissolved	Copper, Total	Lead, Dissolved	Lead, Total	Nickel, Dissolved	Nickel, Total
MW-10	304-031423-16	3/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060723-16	6/7/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092723-16	9/27/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121223-16	12/12/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Leak Detection System												
LDCS-1	304-031423-09	3/14/2023										
	304-060723-09	6/7/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092823-09	9/28/2023	0.005 U		0.001 U				0.002 U		0.02 U	
	304-121223-09	12/12/2023	0.005 U		0.0013		0.01 U		0.002 U		0.02 U	
LDCS-2A	304-031423-07	3/14/2023										
	304-060723-07	6/7/2023	0.005 U		0.0022		0.01 U		0.002 U		0.02 U	
	304-092823-07	9/28/2023	0.005 U		0.0016		0.01 U		0.002 U		0.02 U	
	304-121223-07	12/12/2023	0.005 U		0.003		0.01 U		0.002 U		0.02 U	
LDCS-2B	304-031423-05	3/14/2023										
	304-060723-05	6/7/2023	0.005 U		0.004		0.01 U		0.002 U		0.02 U	
	304-092823-05	9/28/2023	0.005 U		0.0075		0.01 U		0.002 U		0.02 U	
	304-121223-05	12/12/2023	0.005 U		0.0076		0.01 U		0.002 U		0.02 U	
LDCS-3A	304-031423-03	3/14/2023										
	304-060823-03	6/8/2023	0.005 U		0.0022		0.01 U		0.002 U		0.02 U	
	304-092723-03	9/27/2023	0.005 U		0.0013		0.01 U		0.002 U		0.02 U	
	304-121223-03	12/12/2023	0.005 U		0.0031		0.01 U		0.002 U		0.02 U	
LDCS-4A	304-031423-11	3/14/2023										
	304-060723-11	6/7/2023	0.005 U		0.003		0.01 U		0.002 U		0.02 U	
	304-092723-11	9/27/2023	0.005 U		0.0019		0.01 U		0.002 U		0.02 U	
	304-121223-11	12/12/2023	0.005 U		0.0014		0.01 U		0.002 U		0.02 U	
LDCS-4B	304-031523-19	3/15/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060723-19	6/7/2023	0.005 U		0.0013		0.01 U		0.002 U		0.02 U	
	304-092723-19	9/27/2023	0.005 U		0.0014		0.01 U		0.002 U		0.02 U	
	304-121323-19	12/13/2023	0.005 U		0.0011		0.01		0.002 U		0.02 U	
LDCS-5	304-031523-17	3/15/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060823-17	6/8/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092723-17	9/27/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121323-17	12/13/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	

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Location	Sample Number	Sample Date	Selenium, Dissolved	Selenium, Total	Silver, Dissolved	Silver, Total	Thallium, Dissolved	Thallium, Total	Vanadium, Dissolved	Vanadium, Total	Zinc, Dissolved	Zinc, Total
MW-10	304-031423-16	3/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
	304-060723-16	6/7/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.011
	304-092723-16	9/27/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.015
	304-121223-16	12/12/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.013
Leak Detection System												
LDCS-1	304-031423-09	3/14/2023										
	304-060723-09	6/7/2023							0.005 U		0.01 U	
	304-092823-09	9/28/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121223-09	12/12/2023							0.005 U		0.01 U	
LDCS-2A	304-031423-07	3/14/2023										
	304-060723-07	6/7/2023							0.005 U		0.01 U	
	304-092823-07	9/28/2023	0.005 U		0.001 U		0.005 U		0.006		0.01 U	
	304-121223-07	12/12/2023							0.005 U		0.01 U	
LDCS-2B	304-031423-05	3/14/2023										
	304-060723-05	6/7/2023							0.005 U		0.024	
	304-092823-05	9/28/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121223-05	12/12/2023							0.005 U		0.01 U	
LDCS-3A	304-031423-03	3/14/2023										
	304-060823-03	6/8/2023							0.005 U		0.01 U	
	304-092723-03	9/27/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121223-03	12/12/2023							0.005 U		0.01 U	
LDCS-4A	304-031423-11	3/14/2023										
	304-060723-11	6/7/2023							0.005 U		0.01 U	
	304-092723-11	9/27/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121223-11	12/12/2023							0.005 U		0.01 U	
LDCS-4B	304-031523-19	3/15/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-060723-19	6/7/2023							0.005 U		0.01 U	
	304-092723-19	9/27/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121323-19	12/13/2023							0.005 U		0.01 U	
LDCS-5	304-031523-17	3/15/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-060823-17	6/8/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-092723-17	9/27/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121323-17	12/13/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	

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Location	Sample Number	Sample Date	Antimony, Dissolved	Antimony, Total	Arsenic, Dissolved	Arsenic, Total	Barium, Dissolved	Barium, Total	Beryllium, Dissolved	Beryllium, Total	Cadmium, Dissolved	Cadmium, Total
LDCS-6	304-031523-13	3/15/2023	0.05 U		0.005 U		0.054		0.001 U		0.001 U	
	304-060823-13	6/8/2023	0.05 U		0.005 U		0.047		0.001 U		0.001 U	
	304-092823-13	9/28/2023	0.05 U		0.028		0.069		0.001 U		0.001 U	
	304-121323-13	12/13/2023	0.05 U		0.019		0.057		0.001 U		0.001 U	
LDCS-7	304-031423-01	3/14/2023										
	304-060723-01	6/7/2023	0.05 U		0.022		0.041		0.001 U		0.001 U	
	304-092723-01	9/27/2023	0.05 U		0.017		0.036		0.001 U		0.001 U	
	304-121223-01	12/12/2023	0.05 U		0.005 U		0.027		0.001 U		0.001 U	
LDCS-8	304-031523-20	3/15/2023	0.05 U		0.0072		0.041		0.001 U		0.001 U	
	304-060823-20	6/8/2023	0.05 U		0.011		0.046		0.001 U		0.001 U	
	304-092823-20	9/28/2023	0.05 U		0.0065		0.04		0.001 U		0.001 U	
	304-121323-20	12/13/2023	0.05 U		0.005 U		0.16		0.001 U		0.001 U	
LDCS-9	304-031523-29	3/15/2023	0.05 U		0.005 U		0.012		0.001 U		0.001 U	
	304-060823-24	6/8/2023	0.05 U		0.005 U		0.017		0.001 U		0.001 U	
	304-121323-22	12/13/2023	0.05 U		0.005 U		0.03		0.001 U		0.001 U	
Leachate												
Leachate, Cell 1	304-121423-29	12/14/2023		0.057		0.15		1.6		0.003 U		0.0019 U
Leachate, Cell 2A	304-121423-28	12/14/2023		0.05 U		0.13		1.5		0.003 U		0.0019 U
Leachate, Cell 2B	304-121423-27	12/14/2023		0.05 U		0.099		0.73		0.003 U		0.0019 U
Leachate, Cell 3A	304-121423-26	12/14/2023		0.05 U		0.056		1		0.003 U		0.0019 U
Leachate, Cell 4A	304-121423-30	12/14/2023		0.05 U		0.23		1.2		0.003 U		0.0019 U
Leachate, Cell 4B	304-121423-31	12/14/2023		0.05 U		0.096		1.3		0.003 U		0.0019 U
Leachate, Cell 5	304-121423-32	12/14/2023		0.05 U		0.18		0.8		0.003 U		0.0019 U
Leachate, Cell 6	304-121423-33	12/14/2023		0.05 U		0.14		0.85		0.003 U		0.0019 U
Leachate, Cell 7	304-121423-25	12/14/2023		0.05 U		0.081		0.98		0.003 U		0.0028
Leachate, Cell 8	304-121423-34	12/14/2023		0.05 U		0.11		0.3		0.003 U		0.0019 U
Leachate, Cell 9	304-060823-25	6/8/2023		0.05 U		0.012		0.24		0.001 U		0.001 U
Leachate, Cell 9	304-092823-25	9/28/2023		0.05 U		0.005 U		0.021		0.001 U		0.001 U
Quality Control												
QC, FB	304-031523-15	3/15/2023	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U
QC, FB	304-060823-15	6/8/2023		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
QC, FB	304-092823-15	9/28/2023		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
QC, FB	304-121423-15	12/14/2023		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U

Notes:
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Location	Sample Number	Sample Date	Chromium, Dissolved	Chromium, Total	Cobalt, Dissolved	Cobalt, Total	Copper, Dissolved	Copper, Total	Lead, Dissolved	Lead, Total	Nickel, Dissolved	Nickel, Total
LDCS-6	304-031523-13	3/15/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060823-13	6/8/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092823-13	9/28/2023	0.005 U		0.0014		0.01 U		0.002 U		0.02 U	
	304-121323-13	12/13/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
LDCS-7	304-031423-01	3/14/2023										
	304-060723-01	6/7/2023	0.005 U		0.003		0.01 U		0.002 U		0.02 U	
	304-092723-01	9/27/2023	0.005 U		0.0034		0.01 U		0.002 U		0.02 U	
	304-121223-01	12/12/2023	0.005 U		0.0014		0.01 U		0.002 U		0.02 U	
LDCS-8	304-031523-20	3/15/2023	0.005 U		0.0018		0.01 U		0.002 U		0.02 U	
	304-060823-20	6/8/2023	0.005 U		0.0021		0.01 U		0.002 U		0.02 U	
	304-092823-20	9/28/2023	0.005 U		0.002				0.002 U		0.02 U	
	304-121323-20	12/13/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.033	
LDCS-9	304-031523-29	3/15/2023	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060823-24	6/8/2023	0.005 U		0.0011		0.01 U		0.002 U		0.02 U	
	304-121323-22	12/13/2023	0.005 U		0.0019		0.01 U		0.002 U		0.02 U	
Leachate												
Leachate, Cell 1	304-121423-29	12/14/2023		0.5		0.047		0.01		0.0076		0.91
Leachate, Cell 2A	304-121423-28	12/14/2023		0.47		0.05		0.029		0.022		0.81
Leachate, Cell 2B	304-121423-27	12/14/2023		0.35		0.031		0.015		0.013		0.4
Leachate, Cell 3A	304-121423-26	12/14/2023		0.48		0.039		0.023		0.019		0.4
Leachate, Cell 4A	304-121423-30	12/14/2023		0.56		0.036		0.035		0.017		0.5
Leachate, Cell 4B	304-121423-31	12/14/2023		0.57		0.036		0.093		0.017		0.55
Leachate, Cell 5	304-121423-32	12/14/2023		0.6		0.052		0.16		0.023		0.54
Leachate, Cell 6	304-121423-33	12/14/2023		0.57		0.034		0.11		0.025		0.39
Leachate, Cell 7	304-121423-25	12/14/2023		0.28		0.039		0.69		0.037		0.31
Leachate, Cell 8	304-121423-34	12/14/2023		0.18		0.012		0.024		0.0076		0.1
Leachate, Cell 9	304-060823-25	6/8/2023		0.008		0.091		0.01 U		0.002 U		0.066
Leachate, Cell 9	304-092823-25	9/28/2023		0.005 U		0.0041		0.01 U		0.002 U		0.02 U
Quality Control												
QC, FB	304-031523-15	3/15/2023	0.005 U	0.005 U	0.001 U	0.001 U	0.01 U	0.01 U	0.002 U	0.002 U	0.02 U	0.02 U
QC, FB	304-060823-15	6/8/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
QC, FB	304-092823-15	9/28/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
QC, FB	304-121423-15	12/14/2023		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U

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Location	Sample Number	Sample Date	Selenium, Dissolved	Selenium, Total	Silver, Dissolved	Silver, Total	Thallium, Dissolved	Thallium, Total	Vanadium, Dissolved	Vanadium, Total	Zinc, Dissolved	Zinc, Total
LDCS-6	304-031523-13	3/15/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-060823-13	6/8/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-092823-13	9/28/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121323-13	12/13/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
LDCS-7	304-031423-01	3/14/2023										
	304-060723-01	6/7/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-092723-01	9/27/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121223-01	12/12/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
LDCS-8	304-031523-20	3/15/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-060823-20	6/8/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-092823-20	9/28/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121323-20	12/13/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
LDCS-9	304-031523-29	3/15/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.012	
	304-060823-24	6/8/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
	304-121323-22	12/13/2023	0.005 U		0.001 U		0.005 U		0.005 U		0.01 U	
Leachate												
Leachate, Cell 1	304-121423-29	12/14/2023		0.01 U		0.001 U		0.005 U		0.28		0.02 U
Leachate, Cell 2A	304-121423-28	12/14/2023		0.01 U		0.001 U		0.005 U		0.32		0.082
Leachate, Cell 2B	304-121423-27	12/14/2023		0.01 U		0.001 U		0.005 U		0.24		0.036
Leachate, Cell 3A	304-121423-26	12/14/2023		0.01 U		0.001 U		0.005 U		0.2		0.077
Leachate, Cell 4A	304-121423-30	12/14/2023		0.01 U		0.001 U		0.005 U		0.25		0.052
Leachate, Cell 4B	304-121423-31	12/14/2023		0.01 U		0.001 U		0.005 U		0.12		0.067
Leachate, Cell 5	304-121423-32	12/14/2023		0.01 U		0.001 U		0.005 U		0.12		0.11
Leachate, Cell 6	304-121423-33	12/14/2023		0.01 U		0.001 U		0.005 U		0.11		0.18
Leachate, Cell 7	304-121423-25	12/14/2023		0.01 U		0.001 U		0.005 U		0.088		3.6
Leachate, Cell 8	304-121423-34	12/14/2023		0.01 U		0.001 U		0.005 U		0.09		0.071
Leachate, Cell 9	304-060823-25	6/8/2023		0.005 U		0.001 U		0.005 U		0.016		0.89
Leachate, Cell 9	304-092823-25	9/28/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.054
Quality Control												
QC, FB	304-031523-15	3/15/2023	0.005 U	0.005 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U
QC, FB	304-060823-15	6/8/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
QC, FB	304-092823-15	9/28/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U
QC, FB	304-121423-15	12/14/2023		0.005 U		0.001 U		0.005 U		0.005 U		0.01 U

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Location	Sample Number	Sample Date	Calcium, Dissolved	Calcium, Total	Iron, Dissolved	Iron, Total	Magnesium, Dissolved	Magnesium, Total	Manganese, Dissolved	Manganese, Total	Potassium, Dissolved	Potassium, Total	Sodium, Dissolved	Sodium, Total
Monitoring Well														
MW-1A	304-031523-02	3/15/2023	14	15	1.1	0.45	7.9	6.2	0.19	0.14	3.6	3	12	10
	304-060723-02	6/7/2023	13		0.15		4.2		0.089		2.7		7.9	
	304-092723-02	9/27/2023	62		0.1 U		25		0.19		2.7		8.9	
	304-121223-02	12/12/2023	16		0.1 U		4		0.031		2.1		6.8	
MW-2A	304-031423-04	3/14/2023	25		0.86		13		0.29		3.9		17	
	304-060723-04	6/7/2023	24		0.65		12		0.29		3.4		16	
	304-092723-04	9/27/2023	25		0.71		12		0.28		3.8		18	
	304-121223-04	12/12/2023	33		0.94		15		0.34		4.3		18	
MW-3	304-031423-06	3/14/2023	47		0.1 U		20		0.39		4.5		15	
	304-060723-06	6/7/2023	43		0.1 U		17		0.37		4.4		15	
	304-092723-06	9/27/2023	36		0.1 U		16		0.26		4.1		14	
	304-121223-06	12/12/2023	35		0.1 U		15		0.29		3.5		12	
MW-4	304-031523-21	3/15/2023	35	36	0.1 U	0.1 U	20	20	0.16	0.2	6	6	14	13
	304-060823-21	6/8/2023	34		0.1 U		18		0.12		5.4		13	
	304-092823-21	9/28/2023	36		0.1 U		15		0.074		5.6		15	
	304-121423-21	12/14/2023	42		0.1 U		15		0.005 U		5.1		13	
MW-5A	304-031423-08	3/14/2023	30		0.1 U		12		0.17		4.3		28	
	304-060723-08	6/7/2023	32		0.1 U		12		0.19		4.7		37	
	304-092723-08	9/27/2023	28		0.1 U		12		0.12		4		15	
	304-121223-08	12/12/2023	28		0.1 U		12		0.17		3.7		19	
MW-6	304-031423-12	3/14/2023	38		0.1 U		17		0.23		5.1		11	
	304-060823-12	6/8/2023	37		0.1 U		17		0.28		5.1		11	
	304-092723-12	9/27/2023	34		0.1 U		15		0.19		5.1		11	
	304-121323-12	12/13/2023	44		0.1 U		20		0.28		5.2		12	
MW-7	304-031423-14	3/14/2023	31		0.22		21		0.22		5.8		15	
Duplicate	304-031423-10	3/14/2023	31		0.24		21		0.23		5.9		15	
	304-060723-14	6/7/2023	36		0.27		24		0.28		6.7		18	
Duplicate	304-060723-23	6/7/2023	37		0.25		23		0.26		6.5		16	
	304-092823-14	9/28/2023	30		0.25		20		0.2		6.1		16	
Duplicate	304-092823-23	9/28/2023	30		0.25		20		0.21		5.8		14	
	304-121323-14	12/13/2023	31		0.22		20		0.24		5.1		11	
Duplicate	304-121323-23	12/13/2023	31		0.21		20		0.25		5.1		11	
MW-9	304-031523-09	3/15/2023	11	11	0.1 U	0.1 U	7.2	7.3	0.005 U	0.005 U	2.1	2.1	7.9	7.6
	304-060823-18	6/8/2023	11		0.13		7.2		0.005 U		2.2		7.6	
	304-092823-18	9/28/2023	10		0.1 U		6.8		0.005 U		2.3		8.1	
	304-121323-18	12/13/2023	11		0.1 U		6.8		0.005 U		2		7.7	
MW-10	304-031423-16	3/14/2023	26		0.1 U		12		0.005 U		2.3		13	
	304-060723-16	6/7/2023	31		0.1 U		12		0.005 U		2.5		14	
	304-092723-16	9/27/2023	26		0.1 U		11		0.005 U		2.5		13	
	304-121223-16	12/12/2023	24		0.1 U		11		0.005 U		2.1		12	

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Location	Sample Number	Sample Date	Calcium, Dissolved	Calcium, Total	Iron, Dissolved	Iron, Total	Magnesium, Dissolved	Magnesium, Total	Manganese, Dissolved	Manganese, Total	Potassium, Dissolved	Potassium, Total	Sodium, Dissolved	Sodium, Total
Leak Detection System														
LDCS-1	304-031423-09	3/14/2023	43		7.6		18		1.8		5.3		18	
	304-060723-09	6/7/2023	40		52		17		1.2		5.3		18	
	304-092823-09	9/28/2023	32		6.1		18		0.79		5.3		20	
	304-121223-09	12/12/2023	37		13		18		1.4		4.8		17	
LDCS-2A	304-031423-07	3/14/2023	100		1.9		40		3.1		9.9		31	
	304-060723-07	6/7/2023	110		7.9		42		5.1		10		32	
	304-092823-07	9/28/2023	110		6.8		41		2.2		10		33	
	304-121223-07	12/12/2023	100		0.1		40		2.3		9.5		29	
LDCS-2B	304-031423-05	3/14/2023	100		45		39		1.6		7.6		21	
	304-060723-05	6/7/2023	120		68		44		2.4		7.2		21	
	304-092823-05	9/28/2023	120		1.4		52		3.4		8.9		25	
	304-121223-05	12/12/2023	100		2.6		46		3.2		6		19	
LDCS-3A	304-031423-03	3/14/2023	110		2.5		46		3.6		7		25	
	304-060823-03	6/8/2023	110		3		48		3.8		6.9		27	
	304-092723-03	9/27/2023	110		4.7		46		3.3		7.5		26	
	304-121223-03	12/12/2023	110		3.1		45		4.3		6.1		23	
LDCS-4A	304-031423-11	3/14/2023	69		0.23		39		0.94		6.4		29	
	304-060723-11	6/7/2023	88		4.1		47		1.5		6.4		28	
	304-092723-11	9/27/2023	85		0.88		48		1.1		7.5		39	
	304-121223-11	12/12/2023	180		1.2		30		0.83		3.9		19	
LDCS-4B	304-031523-19	3/15/2023	110		0.14		49		1.1		7		36	
	304-060723-19	6/7/2023	99		1.3		52		1.8		7.3		31	
	304-092723-19	9/27/2023	95		1.8		49		2.2		8		41	
	304-121323-19	12/13/2023	74		0.1 U		42		1.1		4		16	
LDCS-5	304-031523-17	3/15/2023	71		0.21		39		1.2		9.3		43	
	304-060823-17	6/8/2023	87		0.18		53		1.3		8.6		39	
	304-092723-17	9/27/2023	61		0.41		35		0.96		10		43	
	304-121323-17	12/13/2023	41		0.54		23		0.97		6.9		19	
LDCS-6	304-031523-13	3/15/2023	92		0.3		84		2.3		7.9		25	
	304-060823-13	6/8/2023	93		0.29		82		0.005 U		7.2		26	
	304-092823-13	9/28/2023	110		3.4		72		2.6		8		36	
	304-121323-13	12/13/2023	94		2.1		73		2.4		7.3		25	
LDCS-7	304-031423-01	3/14/2023	97		1.5		33		1.9		3.8		21	
	304-060723-01	6/7/2023	97		3.9		38		3.7		4.8		29	
	304-092723-01	9/27/2023	90		3.1		34		3.8		5		29	
	304-121223-01	12/12/2023	94		1.3		30		1		3.1		16	
LDCS-8	304-031523-20	3/15/2023	86		2		73		1.7		6.3		26	
	304-060823-20	6/8/2023	110		2.1		76		2.1		5.7		33	
	304-092823-20	9/28/2023	90		0.1 U		66		1.8		5.5		28	
	304-121323-20	12/13/2023	91		0.1 U		62		2.3		4.8		22	
LDCS-9	304-031523-29	3/15/2023	55		0.1 U		18		0.1		2.1		20	
	304-060823-24	6/8/2023	84		0.1 U		23		0.72		2.4		28	
	304-121323-22	12/13/2023	91		0.1 U		33		0.78		4.2		33	

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Location	Sample Number	Sample Date	Calcium, Dissolved	Calcium, Total	Iron, Dissolved	Iron, Total	Magnesium, Dissolved	Magnesium, Total	Manganese, Dissolved	Manganese, Total	Potassium, Dissolved	Potassium, Total	Sodium, Dissolved	Sodium, Total
Leachate														
Leachate, Cell 1	304-121423-29	12/14/2023		34		13		90		0.26		1000		5900
Leachate, Cell 2A	304-121423-28	12/14/2023		34		16		55		0.17		710		3900
Leachate, Cell 2B	304-121423-27	12/14/2023		35		10		43		0.35		450		2300
Leachate, Cell 3A	304-121423-26	12/14/2023		55		12		62		0.5		680		3000
Leachate, Cell 4A	304-121423-30	12/14/2023		23		9.1		76		0.16		1300		5200
Leachate, Cell 4B	304-121423-31	12/14/2023		30		7.5		120		0.15		1200		5100
Leachate, Cell 5	304-121423-32	12/14/2023		28		5.4		47		0.22		890		3600
Leachate, Cell 6	304-121423-33	12/14/2023		46		7.1		88		0.49		920		3300
Leachate, Cell 7	304-121423-25	12/14/2023		960		100		210		18		350		1000
Leachate, Cell 8	304-121423-34	12/14/2023		100		0.96		39		1.7		170		660
Leachate, Cell 9	304-060823-25	6/8/2023		170		65		48		14		20		52
Leachate, Cell 9	304-092823-25	9/28/2023		14		2.2		4.6		0.63		7.5		11
Quality Control														
QC, FB	304-031523-15	3/15/2023	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.005 U	0.005 U	2 U	2 U	1 U	1 U
	304-060823-15	6/8/2023												
	304-092823-15	9/28/2023												
	304-121423-15	12/14/2023	0.2 U		0.1 U		0.1 U		0.005 U		2 U		1 U	

Notes:
U = Sample result was not reported at or above the MRL

Groundwater Database - Appendix I VOCs
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Location	Sample Number	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,4-Dichlorobenzene
Monitoring Well															
MW-1A	304-031523-02	3/15/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-02	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-02	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-02	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
MW-2A	304-031423-04	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-04	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-04	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-04	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
MW-3	304-031423-06	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-06	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-06	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-06	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
MW-4	304-031523-21	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060823-21	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092823-21	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121423-21	12/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
MW-5A	304-031423-08	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-08	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-08	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-08	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
MW-6	304-031423-12	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060823-12	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-12	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121323-12	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
MW-7	304-031423-14	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
Duplicate	304-031423-10	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-14	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
Duplicate	304-060723-23	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092823-14	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
Duplicate	304-092823-23	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121323-14	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
Duplicate	304-121323-23	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U

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Location	Sample Number	Sample Date	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Acrylonitrile	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene
Monitoring Well																				
MW-1A	304-031523-02	3/15/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-02	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-02	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-02	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
MW-2A	304-031423-04	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-04	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-04	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-04	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
MW-3	304-031423-06	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-06	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-06	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-06	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
MW-4	304-031523-21	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060823-21	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092823-21	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121423-21	12/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
MW-5A	304-031423-08	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-08	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-08	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-08	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
MW-6	304-031423-12	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060823-12	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-12	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121323-12	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
MW-7	304-031423-14	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
Duplicate	304-031423-10	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-14	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
Duplicate	304-060723-23	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092823-14	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
Duplicate	304-092823-23	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121323-14	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
Duplicate	304-121323-23	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U

Groundwater Database - Appendix I VOCs
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Location	Sample Number	Sample Date	Dibromochloromethane	Dibromomethane	Ethylbenzene	Iodomethane	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
Monitoring Well																			
MW-1A	304-031523-02	3/15/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-02	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-02	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-02	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
MW-2A	304-031423-04	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-04	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-04	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-04	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
MW-3	304-031423-06	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-06	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-06	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-06	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
MW-4	304-031523-21	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060823-21	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092823-21	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121423-21	12/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
MW-5A	304-031423-08	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-08	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-08	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-08	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
MW-6	304-031423-12	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060823-12	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-12	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121323-12	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
MW-7	304-031423-14	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
Duplicate	304-031423-10	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-14	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
Duplicate	304-060723-23	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092823-14	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
Duplicate	304-092823-23	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121323-14	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
Duplicate	304-121323-23	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U

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Location	Sample Number	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,4-Dichlorobenzene
MW-9	304-031523-09	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060823-18	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092823-18	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121323-18	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
MW-10	304-031423-16	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-16	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-16	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-16	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
Leak Detection System															
LDCS-1	304-031423-09	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-09	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.76
	304-092823-09	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	1.4
	304-121223-09	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	1.2
LDCS-2A	304-031423-07	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.68
	304-060723-07	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.69
	304-092823-07	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-07	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
LDCS-2B	304-031423-05	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-05	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092823-05	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-05	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
LDCS-3A	304-031423-03	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060823-03	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-03	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-03	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U

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Location	Sample Number	Sample Date	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Acrylonitrile	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene
MW-9	304-031523-09	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060823-18	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092823-18	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121323-18	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
MW-10	304-031423-16	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-16	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-16	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-16	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
Leak Detection System																				
LDCS-1	304-031423-09	3/14/2023	6 U	5 U	5 U	12	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-09	6/7/2023	6 U	5 U	5 U	31	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092823-09	9/28/2023	6 U	5 U	5 U	160	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-09	12/12/2023	6 U	5 U	5 U	79	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
LDCS-2A	304-031423-07	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-07	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092823-07	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-07	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
LDCS-2B	304-031423-05	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-05	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092823-05	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-05	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
LDCS-3A	304-031423-03	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060823-03	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-03	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-03	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U

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Location	Sample Number	Sample Date	Dibromochloromethane	Dibromomethane	Ethylbenzene	Iodomethane	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
MW-9	304-031523-09	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060823-18	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092823-18	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121323-18	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
MW-10	304-031423-16	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-16	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-16	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-16	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
Leak Detection System																			
LDCS-1	304-031423-09	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-09	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092823-09	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-09	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
LDCS-2A	304-031423-07	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-07	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092823-07	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-07	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
LDCS-2B	304-031423-05	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-05	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092823-05	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-05	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
LDCS-3A	304-031423-03	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060823-03	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-03	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-03	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U

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Location	Sample Number	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,4-Dichlorobenzene
LDCS-4A	304-031423-11	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-11	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-11	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-11	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
LDCS-4B	304-031523-19	3/15/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-19	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-19	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121323-19	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
LDCS-5	304-031523-17	3/15/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060823-17	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-17	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121323-17	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
LDCS-6	304-031523-13	3/15/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060823-13	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092823-13	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121323-13	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
LDCS-7	304-031423-01	3/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060723-01	6/7/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092723-01	9/27/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121223-01	12/12/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
LDCS-8	304-031523-20	3/15/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060823-20	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-092823-20	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121323-20	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U

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Location	Sample Number	Sample Date	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Acrylonitrile	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene
LDCS-4A	304-031423-11	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-11	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-11	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-11	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
LDCS-4B	304-031523-19	3/15/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-19	6/7/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-19	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121323-19	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
LDCS-5	304-031523-17	3/15/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060823-17	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-17	9/27/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121323-17	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
LDCS-6	304-031523-13	3/15/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060823-13	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092823-13	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121323-13	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
LDCS-7	304-031423-01	3/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060723-01	6/7/2023	6 U	5 U	5 U	10 U	5 U	5.4	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092723-01	9/27/2023	6 U	5 U	5 U	10 U	5 U	9.2	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121223-01	12/12/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
LDCS-8	304-031523-20	3/15/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060823-20	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-092823-20	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121323-20	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U

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Location	Sample Number	Sample Date	Dibromochloromethane	Dibromomethane	Ethylbenzene	Iodomethane	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
LDCS-4A	304-031423-11	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-11	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-11	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-11	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
LDCS-4B	304-031523-19	3/15/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-19	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-19	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121323-19	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
LDCS-5	304-031523-17	3/15/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060823-17	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-17	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121323-17	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
LDCS-6	304-031523-13	3/15/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060823-13	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092823-13	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121323-13	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
LDCS-7	304-031423-01	3/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060723-01	6/7/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092723-01	9/27/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121223-01	12/12/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
LDCS-8	304-031523-20	3/15/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060823-20	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-092823-20	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121323-20	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U

Groundwater Database - Appendix I VOCs
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Location	Sample Number	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,4-Dichlorobenzene
LDCS-9	304-031523-29	3/15/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-060823-24	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-081823-01	8/18/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
	304-121323-22	12/13/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
Leachate															
Leachate, Cell 1	304-121423-29	12/14/2023	5.8 U	3.9 U	2.1 U	2.7 U	2.2 U	2.3 U	8.6 U	18 U	4 U	3.7 U	5.4 U	5.2 U	14
Leachate, Cell 2A	304-121423-28	12/14/2023	2.3 U	1.6 U	0.84 U	1.1 U	0.88 U	0.92 U	3.4 U	7 U	1.6 U	1.5 U	2.2 U	2.1 U	4.4
Leachate, Cell 2B	304-121423-27	12/14/2023	29 U	20 U	11 U	14 U	11 U	12 U	43 U	88 U	20 U	19 U	27 U	26 U	19 U
Leachate, Cell 3A	304-121423-26	12/14/2023	2.3 U	1.6 U	0.84 U	1.1 U	0.88 U	0.92 U	3.4 U	7 U	1.6 U	1.5 U	2.2 U	2.1 U	12
Leachate, Cell 4A	304-121423-30	12/14/2023	12 U	7.8 U	4.2 U	5.4 U	4.4 U	4.6 U	17 U	35 U	8.1 U	7.4 U	11 U	10 U	8.4
Leachate, Cell 4B	304-121423-31	12/14/2023	29 U	20 U	11 U	14 U	11 U	12 U	43 U	88 U	20 U	19 U	27 U	26 U	19 U
Leachate, Cell 5	304-121423-32	12/14/2023	5.8 U	3.9 U	2.1 U	2.7 U	2.2 U	2.3 U	8.6 U	18 U	4 U	3.7 U	5.4 U	5.2 U	3.9 U
Leachate, Cell 6	304-121423-33	12/14/2023	12 U	7.8 U	4.2 U	5.4 U	4.4 U	4.6 U	17 U	35 U	8.1 U	7.4 U	11 U	10 U	7.8 U
Leachate, Cell 7	304-121423-25	12/14/2023	12 U	7.8 U	4.2 U	5.4 U	4.4 U	4.6 U	17 U	35 U	8.1 U	7.4 U	28	10 U	7.8 U
Leachate, Cell 8	304-121423-34	12/14/2023	5.8 U	3.9 U	2.1 U	2.7 U	2.2 U	2.3 U	8.6 U	18 U	4 U	3.7 U	5.4 U	5.2 U	3.9 U
Leachate, Cell 9	304-060823-25	6/8/2023	0.58 U	2.7	0.5 U	0.5 U	2.6	0.5 U	1 U	2 U	1 U	0.5 U	24	0.52 U	0.5 U
Leachate, Cell 9	304-092823-25	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	2.8	0.52 U	0.5 U
Quality Control															
QC, FB	304-031523-15	3/15/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
QC, FB	304-060823-15	6/8/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
QC, FB	304-092823-15	9/28/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U
QC, FB	304-121423-15	12/14/2023	0.58 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.54 U	0.52 U	0.5 U

Notes:
U = Sample result was not reported at or above the MRL

Groundwater Database - Appendix I VOCs
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Location	Sample Number	Sample Date	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Acrylonitrile	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene
LDCS-9	304-031523-29	3/15/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-060823-24	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-081823-01	8/18/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
	304-121323-22	12/13/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
Leachate																				
Leachate, Cell 1	304-121423-29	12/14/2023	360	17 U	500	270	45 U	21	4 U	3.9 U	12 U	24 U	6.3 U	5.7 U	4.2 U	14 U	4.6	7.5 U	3.2 U	6.3 U
Leachate, Cell 2A	304-121423-28	12/14/2023	29	6.8 U	5.1	47	18 U	7.5	1.6 U	1.5 U	4.8 U	10 U	2.5 U	2.3 U	1.7 U	5.5 U	1.4 U	3 U	1.3 U	2.5 U
Leachate, Cell 2B	304-121423-27	12/14/2023	5400	85 U	240	6800	220 U	15 U	20 U	19 U	61 U	120 U	32 U	28 U	21 U	69 U	19	38 U	16 U	31 U
Leachate, Cell 3A	304-121423-26	12/14/2023	340	6.8 U	14	420	18 U	12	1.6 U	1.5 U	4.8 U	10 U	2.5 U	2.3 U	1.7 U	5.5 U	1.4 U	3 U	1.3	2.5 U
Leachate, Cell 4A	304-121423-30	12/14/2023	3400	34 U	140	5000	89 U	16	8.1 U	7.7 U	24 U	47 U	13 U	11 U	8.4 U	27 U	7.2 U	15 U	6.4 U	13 U
Leachate, Cell 4B	304-121423-31	12/14/2023	2600	85 U	49 U	8600	220 U	15 U	20 U	19 U	61 U	120 U	32 U	28 U	21 U	69 U	27	38 U	16 U	31 U
Leachate, Cell 5	304-121423-32	12/14/2023	3000	120	100	4600	45 U	7.1	4 U	3.9 U	12 U	24 U	6.3 U	5.7 U	4.2 U	14 U	4.6	7.5 U	3.2 U	6.3 U
Leachate, Cell 6	304-121423-33	12/14/2023	3300	190	60	7800	89 U	9.2	8.1 U	7.7 U	24 U	47 U	13 U	11 U	8.4 U	27 U	7.2 U	15 U	6.4 U	13 U
Leachate, Cell 7	304-121423-25	12/14/2023	11000	34 U	120	6900	89 U	120	8.1 U	7.7 U	24 U	47 U	13 U	11 U	8.4 U	27 U	7.8	15 U	8	13 U
Leachate, Cell 8	304-121423-34	12/14/2023	3100	17 U	120	3200	45 U	3.4	4 U	3.9 U	12 U	24 U	6.9	5.7 U	4.2 U	14 U	5.1	7.5 U	3.2 U	6.3 U
Leachate, Cell 9	304-060823-25	6/8/2023	2300	67	74	2000	5 U	4.2	0.5 U	0.5 U	2 U	10 U	6.2	0.57 U	0.5 U	3.5	7	8.9	0.5 U	0.63 U
Leachate, Cell 9	304-092823-25	9/28/2023	490	14	5 U	560	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
Quality Control																				
QC, FB	304-031523-15	3/15/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
QC, FB	304-060823-15	6/8/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
QC, FB	304-092823-15	9/28/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U
QC, FB	304-121423-15	12/14/2023	6 U	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	2 U	10 U	0.63 U	0.57 U	0.5 U	1.4 U	0.5 U	2 U	0.5 U	0.63 U

Notes:
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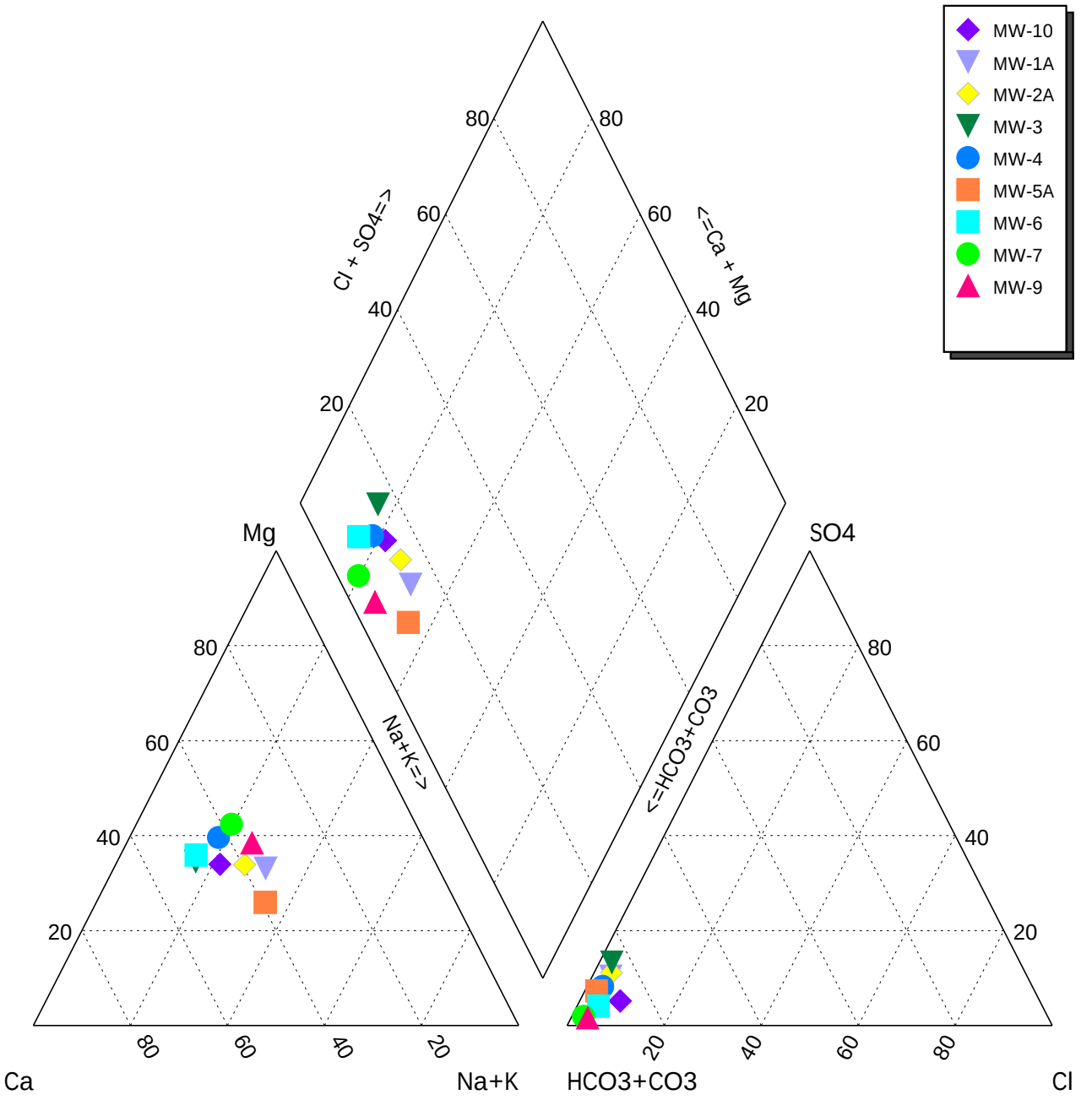
Location	Sample Number	Sample Date	Dibromochloromethane	Dibromomethane	Ethylbenzene	Iodomethane	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
LDCS-9	304-031523-29	3/15/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-060823-24	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-081823-01	8/18/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
	304-121323-22	12/13/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
Leachate																			
Leachate, Cell 1	304-121423-29	12/14/2023	6.2 U	3.4 U	42	26 U	9.4 U	68	33	3.6 U	4 U	45	3.7 U	6.5 U	14 U	3 U	5.7 U	9.4 U	5.1 U
Leachate, Cell 2A	304-121423-28	12/14/2023	2.5 U	1.4 U	17	10 U	3.8 U	24	12	1.4 U	1.6 U	23	1.5 U	2.6 U	5.5 U	1.2 U	2.3 U	3.8 U	2 U
Leachate, Cell 2B	304-121423-27	12/14/2023	31 U	17 U	37	130 U	47 U	54	29	18 U	20 U	45	18 U	32 U	69 U	15 U	28 U	47 U	25 U
Leachate, Cell 3A	304-121423-26	12/14/2023	2.5 U	1.4 U	41	10 U	3.8 U	65	31	4.2	1.6 U	20	1.5 U	2.6 U	5.5 U	1.2 U	2.3 U	3.8 U	2 U
Leachate, Cell 4A	304-121423-30	12/14/2023	12 U	6.9 U	17	52 U	19 U	26	13	7.1 U	8.1 U	23	7.4 U	13 U	28 U	6 U	11 U	19 U	10 U
Leachate, Cell 4B	304-121423-31	12/14/2023	31 U	17 U	24	130 U	47 U	18	22	18 U	20 U	26	18 U	32 U	69 U	15 U	28 U	47 U	25 U
Leachate, Cell 5	304-121423-32	12/14/2023	6.2 U	3.4 U	5.3	26 U	9.4 U	7	5.9	3.6 U	4 U	15	3.7 U	6.5 U	14 U	3 U	5.7 U	9.4 U	5.1 U
Leachate, Cell 6	304-121423-33	12/14/2023	12 U	6.9 U	12	52 U	19 U	15	10	7.1 U	8.1 U	22	7.4 U	13 U	28 U	6 U	11 U	19 U	10 U
Leachate, Cell 7	304-121423-25	12/14/2023	12 U	6.9 U	67	52 U	42	40	26	7.8	8.1 U	120	7.4 U	13 U	28 U	6 U	11 U	19 U	10 U
Leachate, Cell 8	304-121423-34	12/14/2023	6.2 U	3.4 U	14	26 U	9.4 U	21	12	3.6 U	4 U	26	3.7 U	6.5 U	14 U	3 U	5.7 U	9.4 U	5.1 U
Leachate, Cell 9	304-060823-25	6/8/2023	0.62 U	0.5 U	8.4	2.6 U	160	31	17	10	6.2	87	2.9	0.65 U	3 U	2	14	3 U	0.51 U
Leachate, Cell 9	304-092823-25	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	4.7	1.4	0.92	0.5 U	0.86	4.3	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
Quality Control																			
QC, FB	304-031523-15	3/15/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
QC, FB	304-060823-15	6/8/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
QC, FB	304-092823-15	9/28/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U
QC, FB	304-121423-15	12/14/2023	0.62 U	0.5 U	1 U	2.6 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 U	3 U	0.5 U	0.57 U	3 U	0.51 U

Notes:
U = Sample result was not reported at or above the MRL

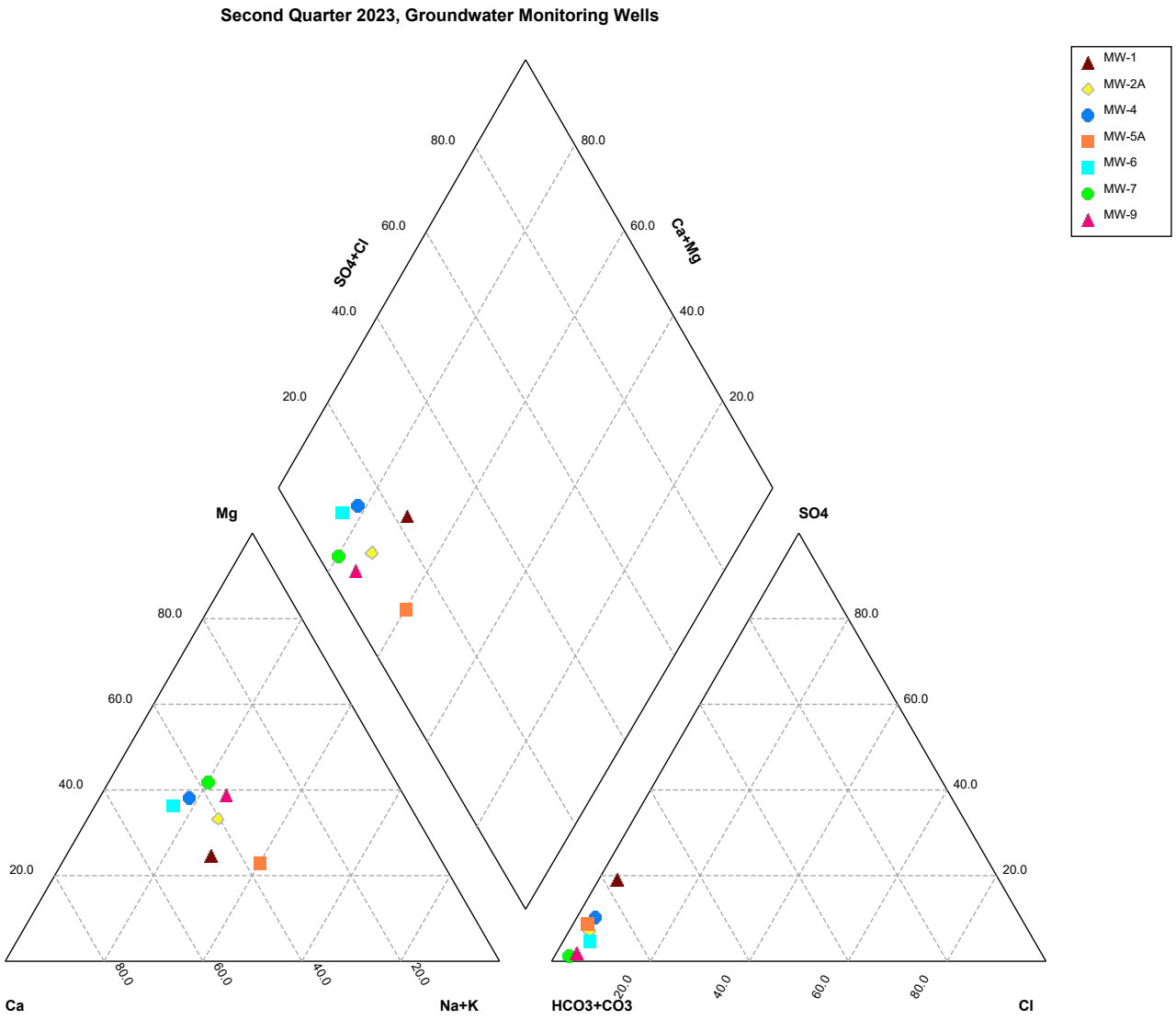
Appendix D

Geochemical Evaluation

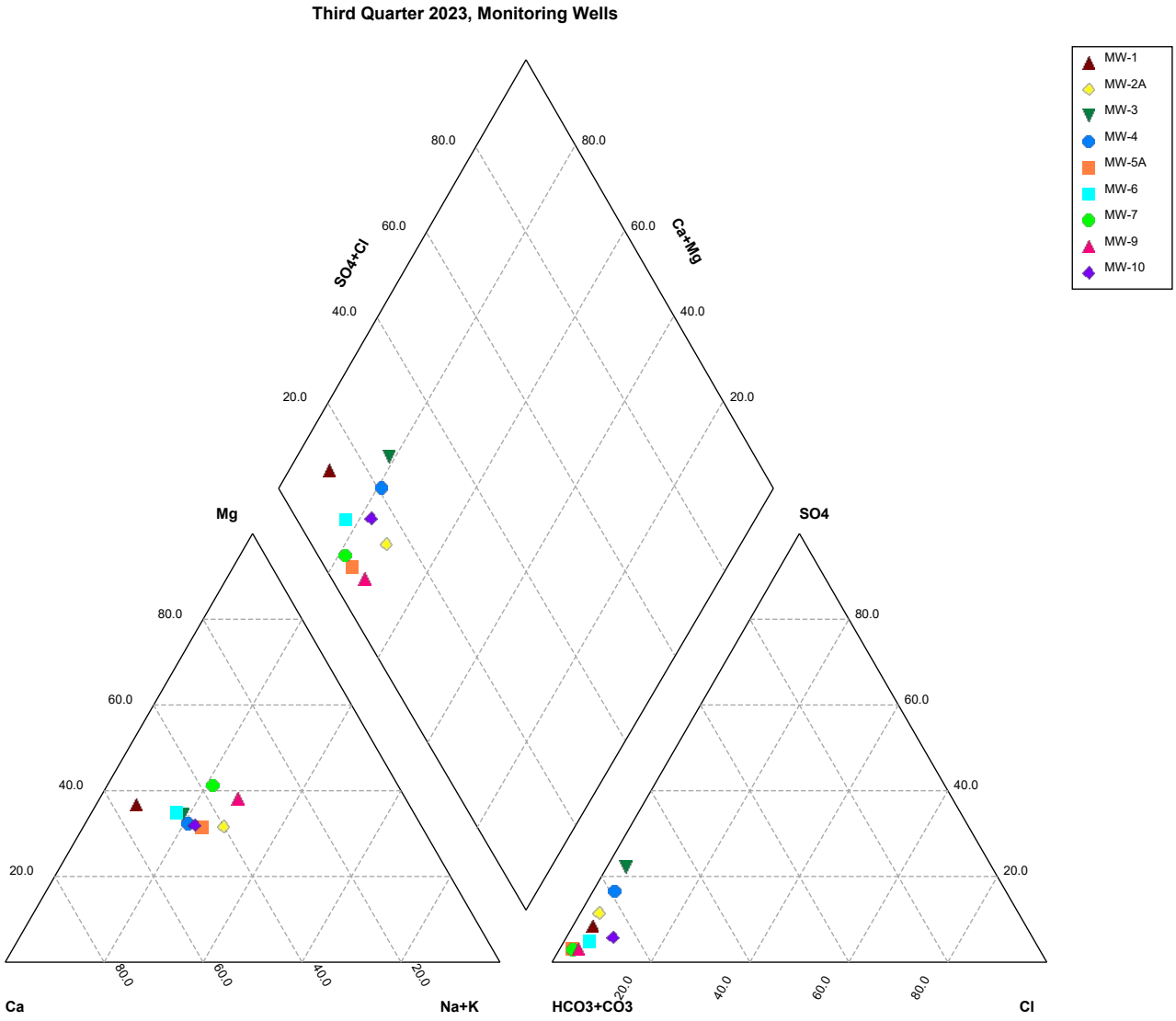
First Quarter 2023, Groundwater Monitoring Wells



DESCRIPTION: Piper Diagram - 1Q23 Groundwater		
	PROJECT: LRI Landfill	PROJECT NO: 04223001.02
	CLIENT: LRI, Inc.	DATE: April 2023



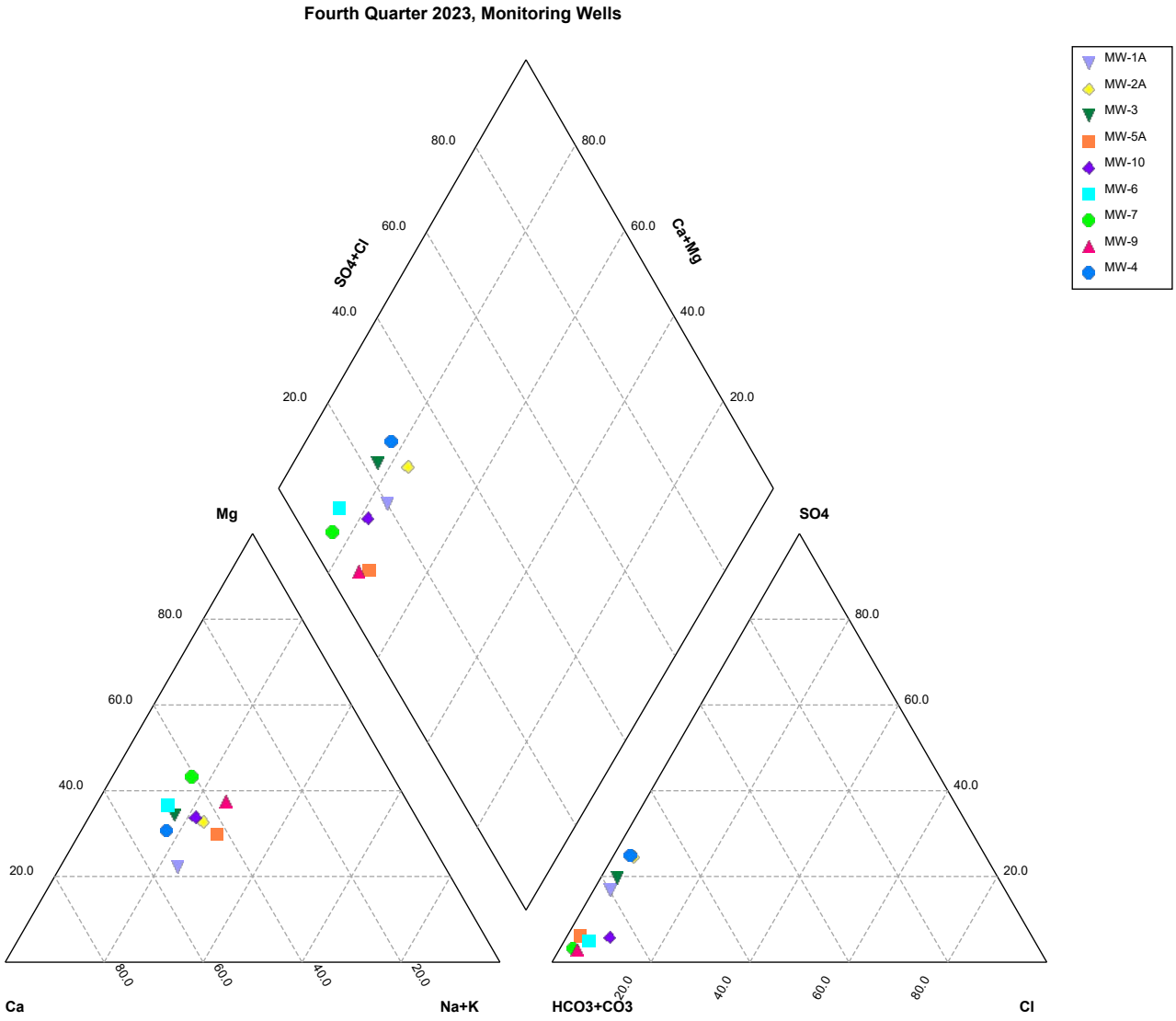
LRI Landfill Piper Diagram – 2Q23	LRI, Inc. 04223001.02 July 11, 2023



LRI Landfill

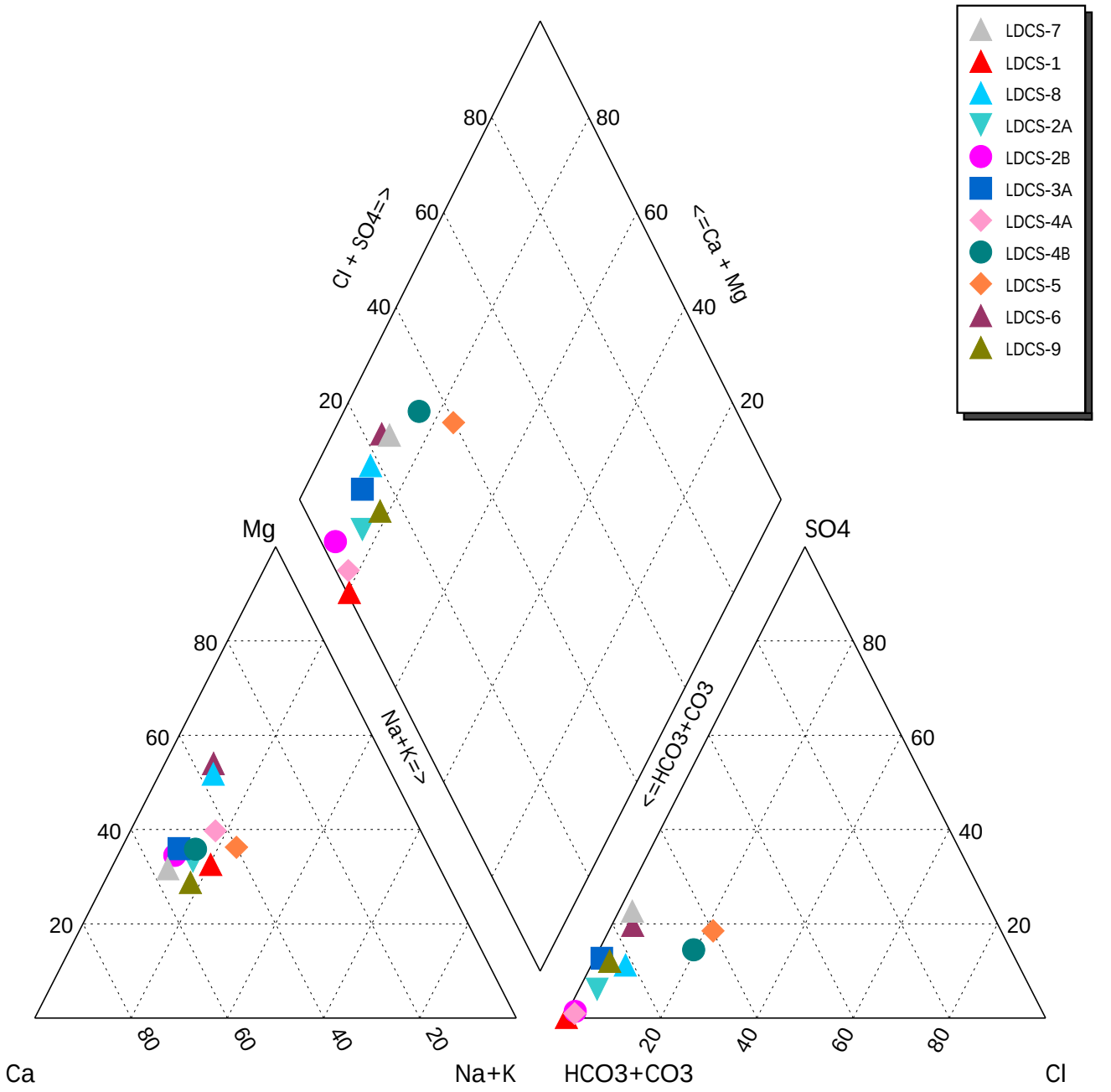
Piper Diagram – 3Q23

LRI Inc.
04223001.02
November 10, 2023



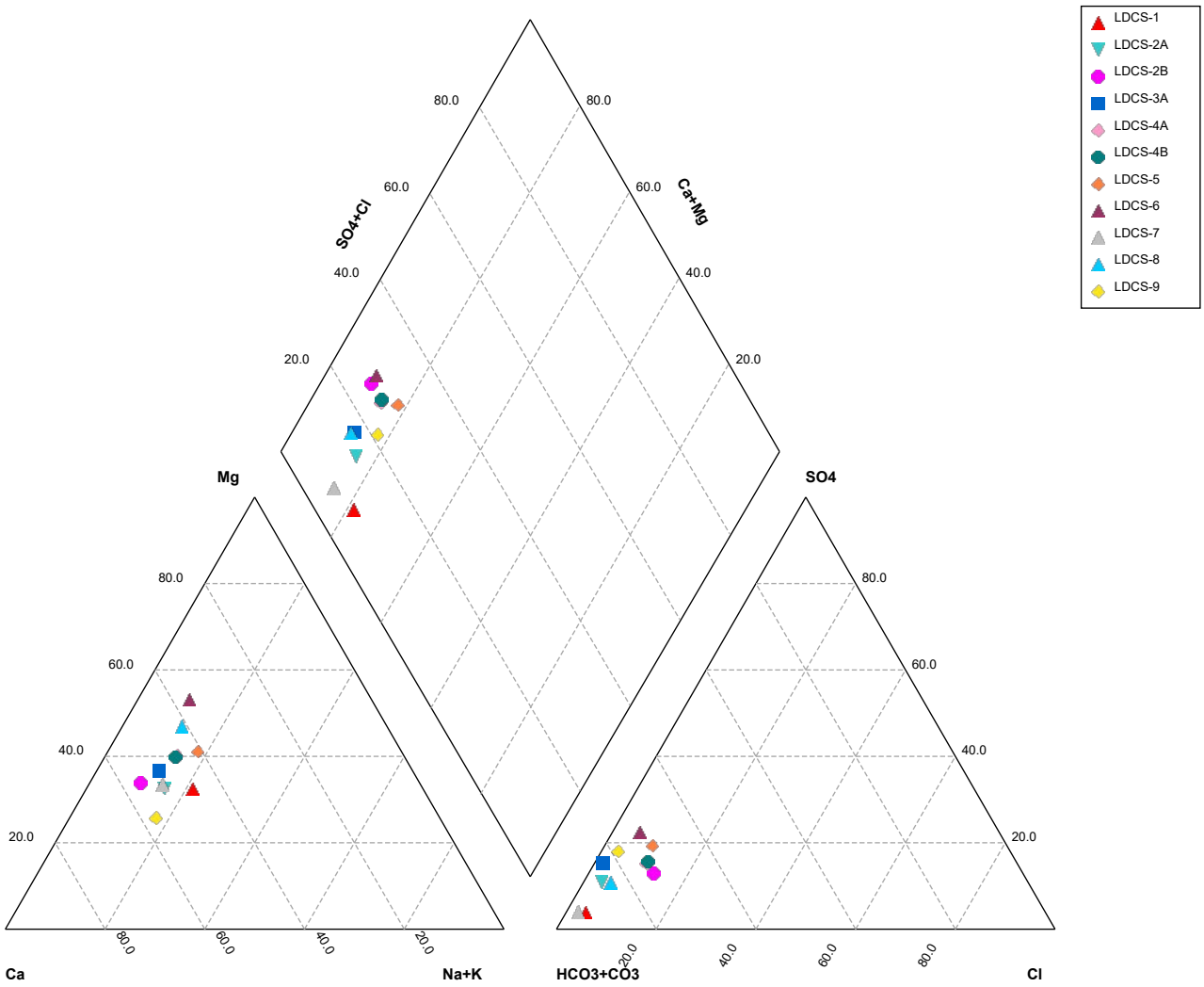
LRI Landfill Piper Diagram – 4Q23	**LRI Inc.** 04224001.02 March 22, 2024

First Quarter 2023, Leak Detection Collection Recovery System



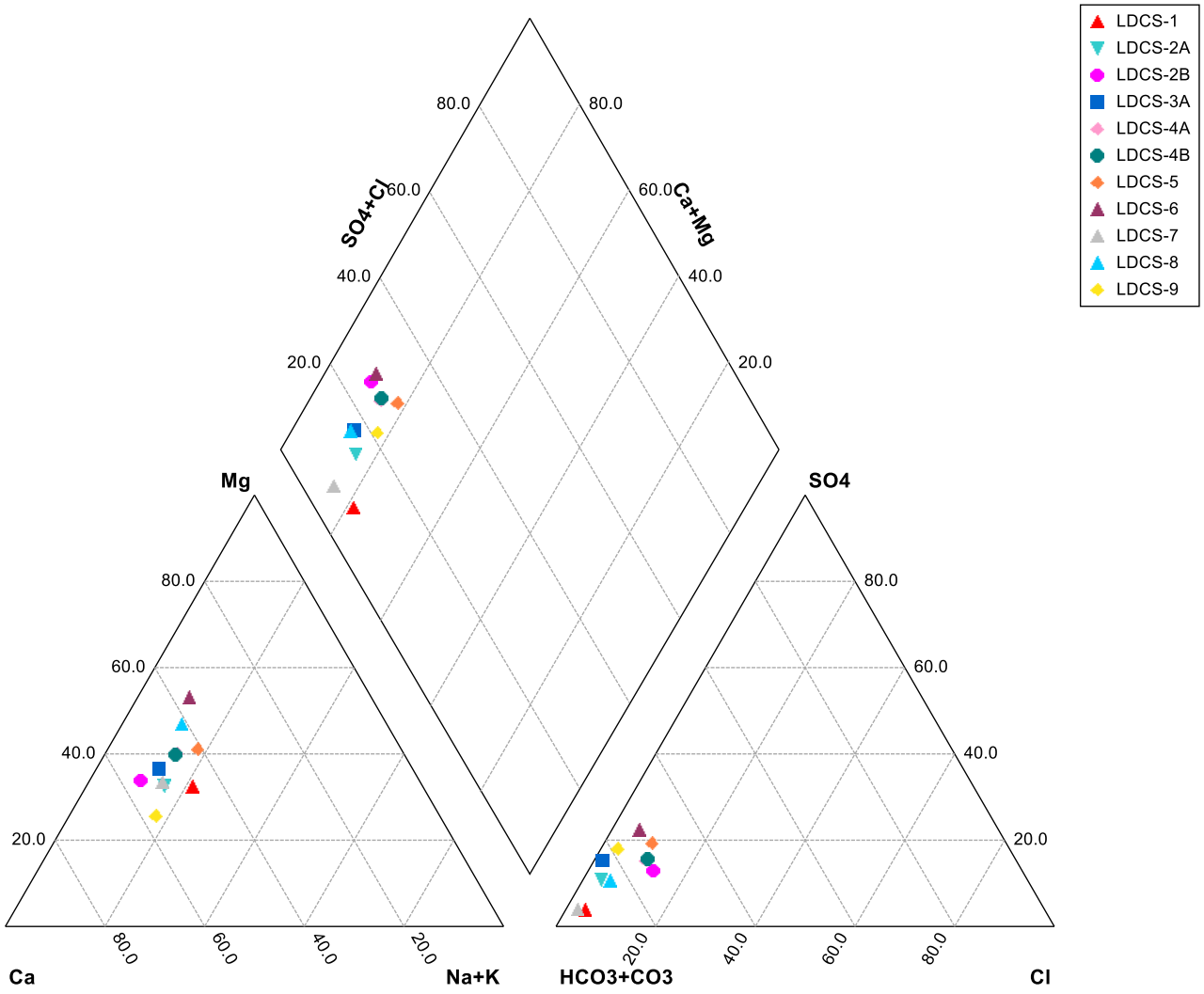
DESCRIPTION: Piper Diagram - 1Q23 LDCRS		
	PROJECT: LRI Landfill	PROJECT NO: 04223001.02
	CLIENT: LRI, Inc.	DATE: April 2023

Second Quarter 2023, Leak Detection Collection Recovery System



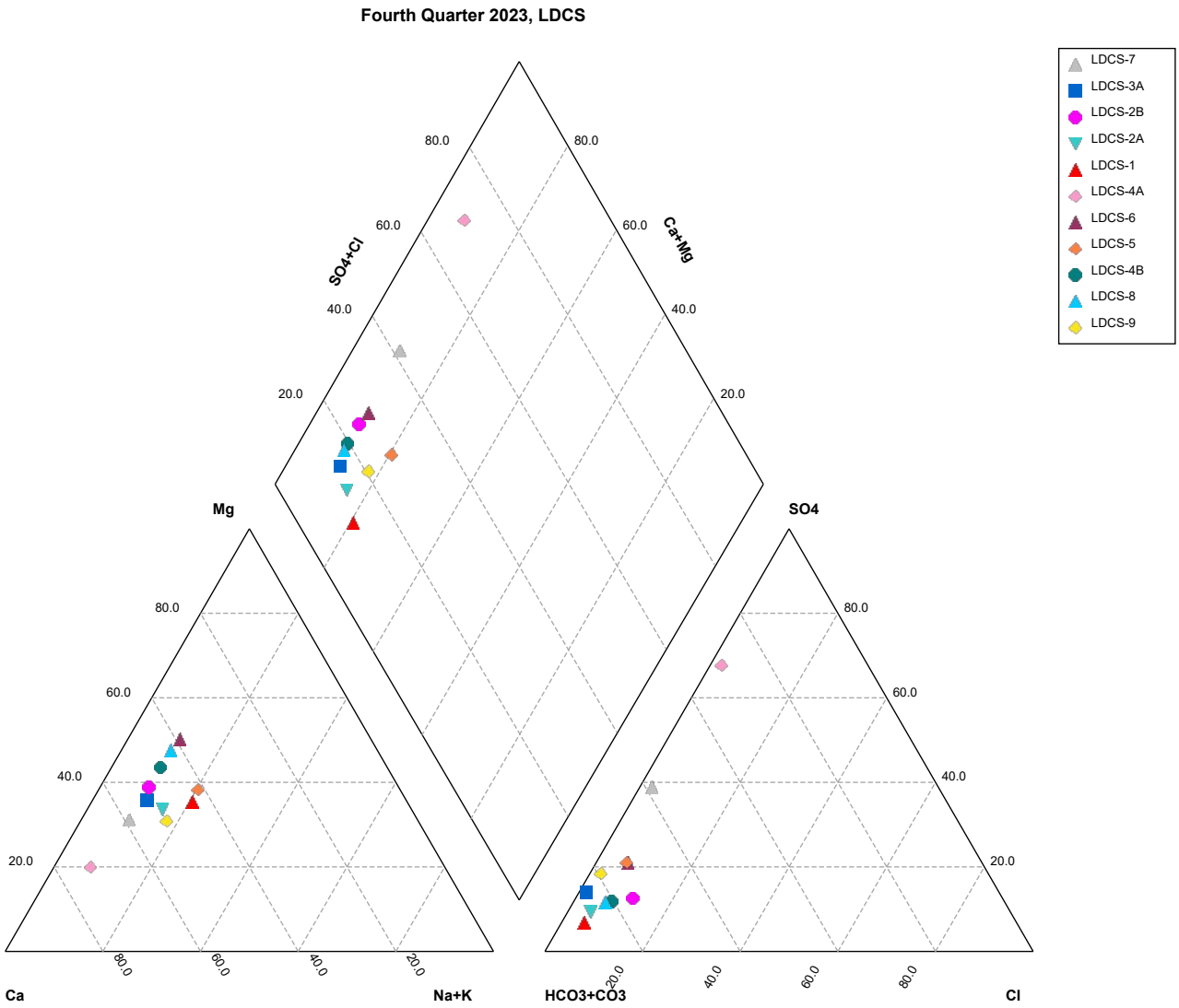
LRI Landfill 2Q23 – LCDRS	**LRI, Inc.** 04223001.02 July 11, 2023

Third Quarter 2023, LDCS

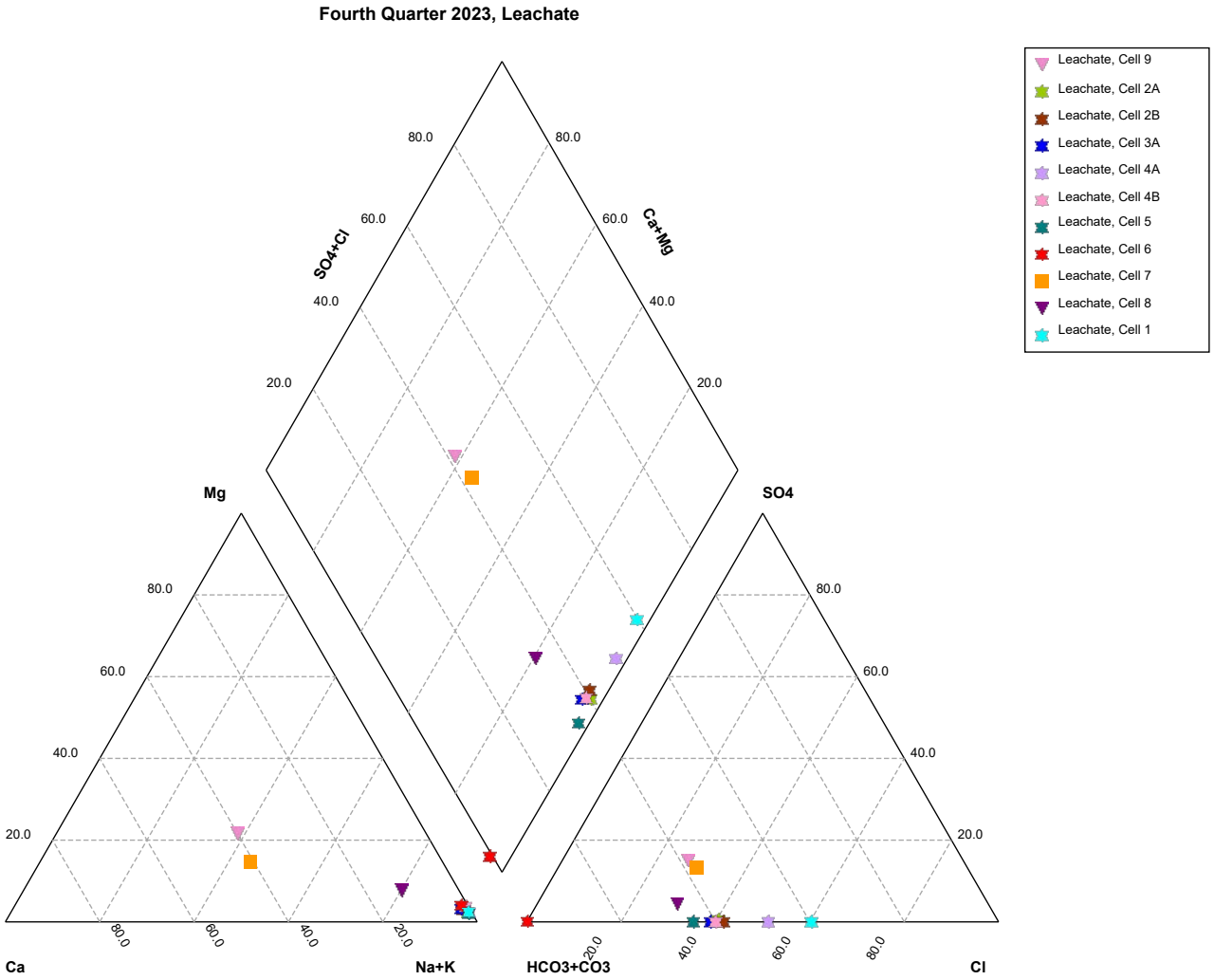


LRI Landfill
Piper Diagram – 3Q23

LRI, Inc
04223001.02
November 10, 2023



LRI Landfill Piper Diagram – 4Q23	**LRI Inc.** 04224001.02 March 22, 2024



LRI Landfill Piper Diagram – 4Q23	**LRI Inc.** 04224001.02 March 22, 2024

Appendix E

Statistical Calculations

Groundwater Prediction Limits (mg/L)
Appendix I Parameters, Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

	MRL (typical)	Prediction Limit	MW-1/ MW-1A	MW-2/ MW-2A	MW-3	MW-4	MW-5/ MW-5A	MW-6	MW-7	MW-9	MW-10
Antimony	0.050	**0.050 L**	**0.050 L**	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L
Arsenic	0.005	**0.011**	0.005 L	0.005 L	0.005 L	**0.011**	0.008	0.008	0.006	0.005 L	0.005 L
Barium	0.005	**0.091**	0.030	0.018	0.015	**0.091**	0.036	0.014	0.016	0.0057	0.016
Beryllium	0.005	**0.005 L**	**0.005 L**	0.005 L	0.005 L	0.005 L	0.005 L	0.001 L	0.005 L	0.001 L	0.005 L
Cadmium	0.005	**0.005 L**	**0.005 L**	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L
Chromium	0.005	**0.011**	0.005 L	0.005 L	0.005 L	**0.011**	0.005	0.005 L	0.005 L	0.005 L	0.005 L
Cobalt	0.010	**0.010 L**	**0.010 L**	0.010 L	0.010 L	0.004	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L
Copper	0.010	**0.063**	0.010 L	0.010 L	0.010 L	**0.063**	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L
Lead	0.002	**0.042**	0.002 L	0.002 L	0.002 L	**0.042**	0.002 L	0.002 L	0.002 L	0.002 L	0.002 L
Nickel	0.020	**0.020 L**	**0.020 L**	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L
Selenium	0.005	**0.005 L**	**0.005 L**	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L
Silver	0.010	**0.010 L**	**0.010 L**	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L
Thallium	0.005	**0.005 L**	**0.005 L**	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L
Vanadium	0.010	**0.017**	0.010 L	0.010 L	0.010 L	0.014	0.010 L	0.010 L	0.010 L	**0.017**	0.010 L
Zinc	0.01	**0.290**	0.032	0.010 L	0.010 L	**0.290**	0.010	0.010 L	0.010 L	0.043	0.034
Nitrate as Nitrogen	0.50	**6.40**	0.500 L	0.500 L	0.500 L	0.500 L	0.500 L	0.500 L	0.500 L	0.500 L	**6.40**

Notes:

Prediction Limits are shown in bold.

Prediction Limits for metals are for total metals.

L = not reported at or above the MRL (Method Reporting Limit).

mg/L = milligrams per liter.

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Location ID	Antimony (Sb)		Arsenic (As)		Barium (Ba)		Beryllium (Be)		Cadmium (Cd)		Chromium (Cr)		Cobalt (Co)		Copper (Cu)		Lead (Pb)		Nickel (Ni)		Selenium (Se)		Silver (Ag)		Thallium (Tl)		Vanadium (V)		Zinc (Zn)		Nitrate (NO_3)	
Monitoring Date	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-1																																
3/24/2014	0.002	L 0.001	0.005	L 0.0025	0.022	0.022	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
6/24/2014	0.002	L 0.001	0.005	L 0.0025	0.02	0.02	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
9/17/2014	0.05	L 0.025	0.005	L 0.0025	0.024	0.024	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.01	L 0.005	0.005	L 0.0025	0.01	L 0.005	0.02	0.02	0.5	L 0.25
12/16/2014	0.05	L 0.025	0.005	L 0.0025	0.03	0.03	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.032	0.032	0.5	L 0.25
3/23/2015	0.05	L 0.025	0.005	L 0.0025	0.02	0.02	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
6/8/2015	0.05	L 0.025	0.005	L 0.0025	0.022	0.022	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
9/16/2015	0.05	L 0.025	0.005	L 0.0025	0.021	0.021	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
12/14/2015	0.05	L 0.025	0.005	L 0.0025	0.024	0.024	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
Number Analyzed	8		8		8		8		8		8		8		8		8		8		8		8		8		8		8		8	
Number Detected	0		0		8		0		0		0		0		0		0		0		0		0		0		2		0			
Minimum Concentration		0.001		0.0025		0.02		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		0.25
Maximum Concentration		0.025		0.0025		0.03		0.0025		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.005		0.032		0.25
Average Concentration		NC		NC		0.02288		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Variance		NC		NC		1.1E-05		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		NC		0.0033		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Coefficient of Variation (%)		NC		NC		14.2974		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		NC		0.00116		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
MW-2																																
3/24/2014	0.002	L 0.001	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
6/26/2014	0.002	L 0.001	0.005	L 0.0025	0.015	0.015	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
9/16/2014	0.05	L 0.025	0.005	L 0.0025	0.018	0.018	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.01	L 0.005	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
12/16/2014	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
3/23/2015	0.05	L 0.025	0.005	L 0.0025	0.012	0.012	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
6/8/2015	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
9/16/2015	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
12/14/2015	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.5	L 0.25
Number Analyzed	8		8		8		8		8		8		8		8		8		8		8		8		8		8		8		8	
Number Detected	0		0		8		0		0		0		0		0		0		0		0		0		0		0		0			
Minimum Concentration		0.001		0.0025		0.012		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		0.25
Maximum Concentration		0.025		0.0025		0.018		0.0025		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.005		0.005		0.25
Average Concentration		NC		NC		0.01413		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Variance		NC		NC		3.3E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		NC		0.00181		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Coefficient of Variation (%)		NC		NC		12.798		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		NC		0.00064		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
MW-3																																
3/26/2014	0.002	L 0.001	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
6/25/2014	0.002	L 0.001	0.005	L 0.0025	0.011	0.011	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
9/17/2014	0.05	L 0.025	0.005	L 0.0025	0.01	0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.01	L 0.005	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
12/16/2014	0.05	L 0.025	0.005	L 0.0025	0.012	0.012	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
3/26/2015	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
6/9/2015	0.05	L 0.025	0.005	L 0.0025	0.011	0.011	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
9/16/2015	0.05	L 0.025	0.005	L 0.0025	0.01	0.01	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
12/14/2015	0.05	L 0.025	0.005	L 0.0025	0.015	0.015	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
Number Analyzed	8		8		8		8		8		8		8		8		8		8		8		8		8		8		8		8	
Number Detected	0		0		8		0		0		0		0		0		0		0		0		0		0		0		0			
Minimum Concentration		0.001		0.0025		0.01		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		0.25
Maximum Concentration		0.025		0.0025		0.015		0.0025		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.005		0.005		0.25
Average Concentration		NC		NC		0.012		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Variance		NC		NC		3.4E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		NC		0.00185		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Coefficient of Variation (%)		NC		NC		15.4303		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		NC		0.00065		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
MW-4																																
3/24/2014	0.002	L 0.001	0.0074	0.0074	0.012	0.012	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
6/25/2014	0.002	L 0.001	0.0086	0.0086	0.012	0.012	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
9/17/2014	0.05	L 0.025	0.0099	0.0099	0.013	0.013	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.01	L 0.005	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
12/16/2014	0.05	L 0.025	0.0076	0.0076	0.011	0.011	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
3/24/2015	0.05	L 0.025	0.0079	0.0079	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
6/9/2015	0.05	L 0.025	0.0094	0.0094	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
9/18/2015	0.05	L 0.025	0.0094	0.0094	0.017	0.017	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.5	L 0.25
12/15/2015	0.05	L 0.025	0.011	0.011	0.091	0.091	0.001	L 0.0005	0.001	L 0.0005	0.011	0.011	0.0039	0.0039	0.063	0.063	0.042	0.042	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.29	0.29	0.5	L 0.25
Number Analyzed	8		8		8		8		8		8		8		8		8		8		8		8		8		8		8		8	
Number Detected	0		8		8		0		0		1		1		1		1		0		0		0		0		1		2		0	
Minimum Concentration		0.001		0.0074		0.011		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		0.25
Maximum Concentration		0.025		0.011		0.091		0.0025		0.0025		0.011		0.005		0.063		0.042		0.01		0.0025		0.005		0.0025		0.014		0.29		0.25
Average Concentration		NC		0.0089		0.02275		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Variance		NC		1.6E-06		0.00076		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		0.00125		0.02763		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Coefficient of Variation (%)		NC		14.0465		121.469		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		0.00044		0.00977		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Location ID	Antimony (Sb)		Arsenic (As)		Barium (Ba)		Beryllium (Be)		Cadmium (Cd)		Chromium (Cr)		Cobalt (Co)		Copper (Cu)		Lead (Pb)		Nickel (Ni)		Selenium (Se)		Silver (Ag)		Thallium (Tl)		Vanadium (V)		Zinc (Zn)		Nitrate (NO_3)	
Monitoring Date	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-5																																
3/24/2014	0.002	L 0.001	0.0072	0.0072	0.032	0.032	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
6/25/2014	0.002	L 0.001	0.0067	0.0067	0.033	0.033	0.001	L 0.0005	0.005	L 0.0025	0.0036	0.0036	0.01	L 0.005	0.0061	0.0061	0.001	L 0.0005	0.0043	0.0043	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
9/16/2014	0.05	L 0.025	0.0059	0.0059	0.036	0.036	0.005	L 0.0025	0.005	L 0.0025	0.0051	0.0051	0.01	L 0.005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.01	L 0.005	0.005	L 0.0025	0.01	L 0.005	0.01	0.01	0.5	L 0.25
12/16/2014	0.05	L 0.025	0.0055	0.0055	0.022	0.022	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
3/23/2015	0.05	L 0.025	0.008	0.008	0.03	0.03	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
6/8/2015	0.05	L 0.025	0.0075	0.0075	0.02	0.02	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
9/18/2015	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
12/14/2015	0.05	L 0.025	0.0072	0.0072	0.021	0.021	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
Number Analyzed	8		8		8		8		8		8		8		8		8		8		8		8		8		8		8		8	
Number Detected	0		7		8		0		0		2		0		1		0		1		0		0		0		1		0			
Minimum Concentration		0.001		0.0025		0.014		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		0.25
Maximum Concentration		0.025		0.008		0.036		0.0025		0.0025		0.0051		0.005		0.0061		0.001		0.01		0.0025		0.005		0.0025		0.005		0.01		0.25
Average Concentration		NC		0.00631		0.026		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Variance		NC		3E-06		6E-05		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		0.00175		0.00776		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Coefficient of Variation (%)		NC		27.6653		29.863		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		0.00062		0.00275		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
MW-6																																
3/26/2014	0.002	L 0.001	0.0075	0.0075	0.014	0.014	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
6/25/2014	0.002	L 0.001	0.0065	0.0065	0.011	0.011	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
9/18/2014	0.002	L 0.001	0.0078	0.0078	0.01	0.01	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
12/17/2014	0.05	L 0.025	0.0068	0.0068	0.012	0.012	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
3/26/2015	0.05	L 0.025	0.0068	0.0068	0.01	0.01	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
6/8/2015	0.05	L 0.025	0.0075	0.0075	0.01	0.01	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
9/17/2015	0.05	L 0.025	0.0069	0.0069	0.011	0.011	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
12/14/2015	0.05	L 0.025	0.0074	0.0074	0.011	0.011	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
Number Analyzed	8		8		8		8		8		8		8		8		8		8		8		8		8		8		8		8	
Number Detected	0		8		8		0		0		0		0		0		0		0		0		0		0		0		0			
Minimum Concentration		0.001		0.0065		0.01		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		0.25
Maximum Concentration		0.025		0.0078		0.014		0.0005		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.005		0.005		0.25
Average Concentration		NC		0.00715		0.01113		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Variance		NC		2.1E-07		1.8E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		0.00046		0.00136		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Coefficient of Variation (%)		NC		6.38736		12.1906		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		0.00016		0.00048		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
MW-7																																
3/24/2014	0.002	L 0.001	0.0054	0.0054	0.016	0.016	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
6/26/2014	0.002	L 0.001	0.0053	0.0053	0.016	0.016	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
9/17/2014	0.05	L 0.025	0.0052	0.0052	0.015	0.015	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.01	L 0.005	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.5	L 0.25
12/16/2014	0.05	L 0.025	0.005	0.005	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
3/24/2015	0.05	L 0.025	0.005	L 0.0025	0.015	0.015	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
6/9/2015	0.05	L 0.025	0.0054	0.0054	0.015	0.015	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
9/17/2015	0.05	L 0.025	0.005	L 0.0025	0.012	0.012	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
12/15/2015	0.05	L 0.025	0.0055	0.0055	0.016	0.016	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
Number Analyzed	8		8		8		8		8		8		8		8		8		8		8		8		8		8		8		8	
Number Detected	0		6		8		0		0		0		0		0		0		0		0		0		0		0		0			
Minimum Concentration		0.001		0.0025		0.012		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		0.25
Maximum Concentration		0.025		0.0055		0.016		0.0025		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.005		0.005		0.25
Average Concentration		NC		0.0046		0.01488		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Variance		NC		1.7E-06		1.8E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		0.0013		0.00136		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Coefficient of Variation (%)		NC		28.3682		9.11733		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		0.00046		0.00048		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Location ID	Antimony (Sb)		Arsenic (As)		Barium (Ba)		Beryllium (Be)		Cadmium (Cd)		Chromium (Cr)		Cobalt (Co)		Copper (Cu)		Lead (Pb)		Nickel (Ni)		Selenium (Se)		Silver (Ag)		Thallium (Tl)		Vanadium (V)		Zinc (Zn)		Nitrate (NO_3)	
Monitoring Date	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-9																																
3/25/2014	0.002	L 0.001	0.005	L 0.0025	0.0047	0.0047	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.016	0.016	0.01	0.01	0.5	L 0.25
6/24/2014	0.002	L 0.001	0.005	L 0.0025	0.0045	0.0045	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.016	0.016	0.01	L 0.005	0.5	L 0.25
9/18/2014	0.002	L 0.001	0.005	L 0.0025	0.0057	0.0057	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.014	0.014	0.014	0.014	0.5	L 0.25
12/17/2014	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
3/24/2015	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.013	0.013	0.01	L 0.005	0.5	L 0.25
6/9/2015	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
9/18/2015	0.05	L 0.025	0.005	L 0.0025	0.005	0.005	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
12/16/2015	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.042	0.042	0.5	L 0.25
3/22/2016	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.028	0.028	0.5	L 0.25
6/8/2016	0.05	L 0.025	0.005	L 0.0025	0.005	0.005	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.023	0.023	0.5	L 0.25
9/16/2016	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.015	0.015	0.043	0.043	0.5	L 0.25
12/6/2016	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
3/29/2017	0.05	L 0.025	0.005	L 0.0025	0.0056	0.0056	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
6/22/2017	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
9/26/2017	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.012	0.012	0.01	L 0.005	0.5	L 0.25
12/13/2017	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.013	0.013	0.01	L 0.005	0.5	L 0.25
3/21/2018	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.016	0.016	0.01	L 0.005	0.5	L 0.25
6/19/2018	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.013	0.013	0.01	L 0.005	0.5	L 0.25
9/19/2018	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.013	0.013	0.01	L 0.005	0.5	L 0.25
12/4/2018	0.05	L 0.025	0.005	L 0.0025	0.0051	0.0051	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
3/11/2019	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
6/19/2019	0.05	L 0.025	0.005	L 0.0025	0.0051	0.0051	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.013	0.013	0.01	L 0.005	0.5	L 0.25
9/26/2019	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
12/11/2019	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.016	0.016	0.01	L 0.005	0.5	L 0.25
3/17/2020	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.015	0.015	0.01	L 0.005	0.5	L 0.25
6/8/2020	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
9/22/2020	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.016	0.016	0.01	L 0.005	0.5	L 0.25
12/16/2020	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
3/9/2021	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.015	0.015	0.01	L 0.005	0.5	L 0.25
6/15/2021	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
9/15/2021	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.015	0.015	0.01	L 0.005	0.5	L 0.25
12/15/2021	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.015	0.015	0.01	L 0.005	0.5	L 0.25
3/30/2022	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.015	0.015	0.01	L 0.005	0.5	L 0.25
6/15/2022	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
9/14/2022	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.016	0.016	0.01	L 0.005	0.5	L 0.25
12/29/2022	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.01	L 0.005	0.5	L 0.25
3/15/2023	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.017	0.017	0.01	L 0.005	0.5	L 0.25
6/8/2023	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.0073	0.0073	0.01	L 0.005	0.5	L 0.25
9/28/2023	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.016	0.016	0.01	L 0.005	0.5	L 0.25
12/13/2023	0.05	L 0.025	0.005	L 0.0025	0.005	L 0.0025	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.016	0.016	0.01	L 0.005	0.5	L 0.25
Number Analyzed	36		36		36		36		36		36		36		36		36		36		36		36		36		36		36		36	
Number Detected	0		0		8		0		0		0		0		0		0		0		0		0		0		36		6		0	
Minimum Concentration		0.001		0.0025		0.0025		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0073		0.005		0.25
Maximum Concentration		0.025		0.0025		0.0057		0.0005		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.017		0.043		0.25
Average Concentration		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.01431		NC		NC
Variance		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		1E-06		NC		NC
Standard Deviation		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.00101		NC		NC
Coefficient of Variation (%)		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		7.0538		NC		NC
Standard Error		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.00017		NC		NC

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Location ID	Antimony (Sb)		Arsenic (As)		Barium (Ba)		Beryllium (Be)		Cadmium (Cd)		Chromium (Cr)		Cobalt (Co)		Copper (Cu)		Lead (Pb)		Nickel (Ni)		Selenium (Se)		Silver (Ag)		Thallium (Tl)		Vanadium (V)		Zinc (Zn)		Nitrate (NO_3)	
Monitoring Date	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-10																																
3/25/2014	0.002	L 0.001	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	L 0.005	6.4	6.4
6/25/2014	0.002	L 0.001	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.005	L 0.0025	0.002	L 0.001	0.01	L 0.005	0.002	L 0.001	0.001	L 0.0005	0.002	L 0.001	0.005	L 0.0025	0.01	L 0.005	0.001	L 0.0005	0.01	L 0.005	0.01	0.01	5.8	5.8
9/16/2014	0.05	L 0.025	0.005	L 0.0025	0.015	0.015	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.01	L 0.005	0.005	L 0.0025	0.01	L 0.005	0.011	0.011	5.4	5.4
12/17/2014	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	0.01	L 0.005	5.3	5.3
3/25/2015	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.9	5.9
6/8/2015	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.7	5.7
9/15/2015	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.1	5.1
12/16/2015	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	4.9	4.9
3/21/2016	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.9	5.9
6/6/2016	0.05	L 0.025	0.005	L 0.0025	0.012	0.012	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.9	5.9
9/15/2016	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.4	5.4
12/6/2016	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.2	5.2
3/29/2017	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.8	5.8
6/19/2017	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.5	5.5
9/26/2017	0.05	L 0.025	0.005	L 0.0025	0.012	0.012	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.2	5.2
12/12/2017	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	4.9	4.9
3/20/2018	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.3	5.3
6/18/2018	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	5.0	5.0
9/18/2018	0.05	L 0.025	0.005	L 0.0025	0.016	0.016	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	4.7	4.7
12/4/2018	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	4.3	4.3
3/12/2019	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	4.4	4.4
6/17/2019	0.05	L 0.025	0.005	L 0.0025	0.015	0.015	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	4.7	4.7
9/25/2019	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	4.2	4.2
12/11/2019	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	3.9	3.9
3/17/2020	0.05	L 0.025	0.005	L 0.0025	0.015	0.015	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.034	0.034	3.7	3.7
6/9/2020	0.05	L 0.025	0.005	L 0.0025	0.016	0.016	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	3.7	3.7
9/22/2020	0.05	L 0.025	0.005	L 0.0025	0.015	0.015	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.011	0.011	3.4	3.4
12/16/2020	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	3.2	3.2
3/9/2021	0.05	L 0.025	0.005	L 0.0025	0.015	if	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	3.2	3.2
6/15/2021	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.005	2.5	2.5
9/15/2021	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.011	0.011	2.9	2.9
12/15/2021	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.011	0.011	3.0	3.0
3/30/2022	0.05	L 0.025	0.005	L 0.0025	0.015	0.015	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.013	0.013	3.0	3.0
6/15/2022	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.013	0.013	2.8	2.8
9/14/2022	0.05	L 0.025	0.005	L 0.0025	0.016	0.016	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.019	0.019	3.1	3.1
12/29/2022	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.01	3.0	3.0
3/14/2023	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.01	L 0.01	3.0	3.0
6/7/2023	0.05	L 0.025	0.005	L 0.0025	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.011	0.011	2.6	2.6
9/27/2023	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.015	0.015	2.4	2.4
12/12/2023	0.05	L 0.025	0.005	L 0.0025	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.013	0.013	2.5	2.5
Number Analyzed	36		36		40		36		36		36		36		36		36		36		36		36		36		36		36		40	
Number Detected	0		0		40		0		0		0		0		0		0		0		0		0		0		0		9		40	
Minimum Concentration		0.001		0.0025		0.012		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		2.4
Maximum Concentration		0.025		0.0025		0.016		0.0025		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.005		0.034		6.4
Average Concentration		NC		NC		0.01377		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		4.508333
Variance		NC		NC		1.1E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		1.277929
Standard Deviation		NC		NC		0.00106		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		1.130455
Coefficient of Variation (%)		NC		NC		7.69397		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		25.07479
Standard Error		NC		NC		0.00017		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.178741

Notes: Metals results are for total metals.
mg/L = milligrams per liter.
L = not reported at or above the MRL (Method Reporting Limit).
One-half the MRL value used for statistical calculations when concentrations not reported at or above the MRL.
NC = not calculated due to insufficient number of reported detections.

Appendix F

Leak Detection System Data and Leachate Pump Records

Summary of LDCS Volumes Pumped and Conductivity Data
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

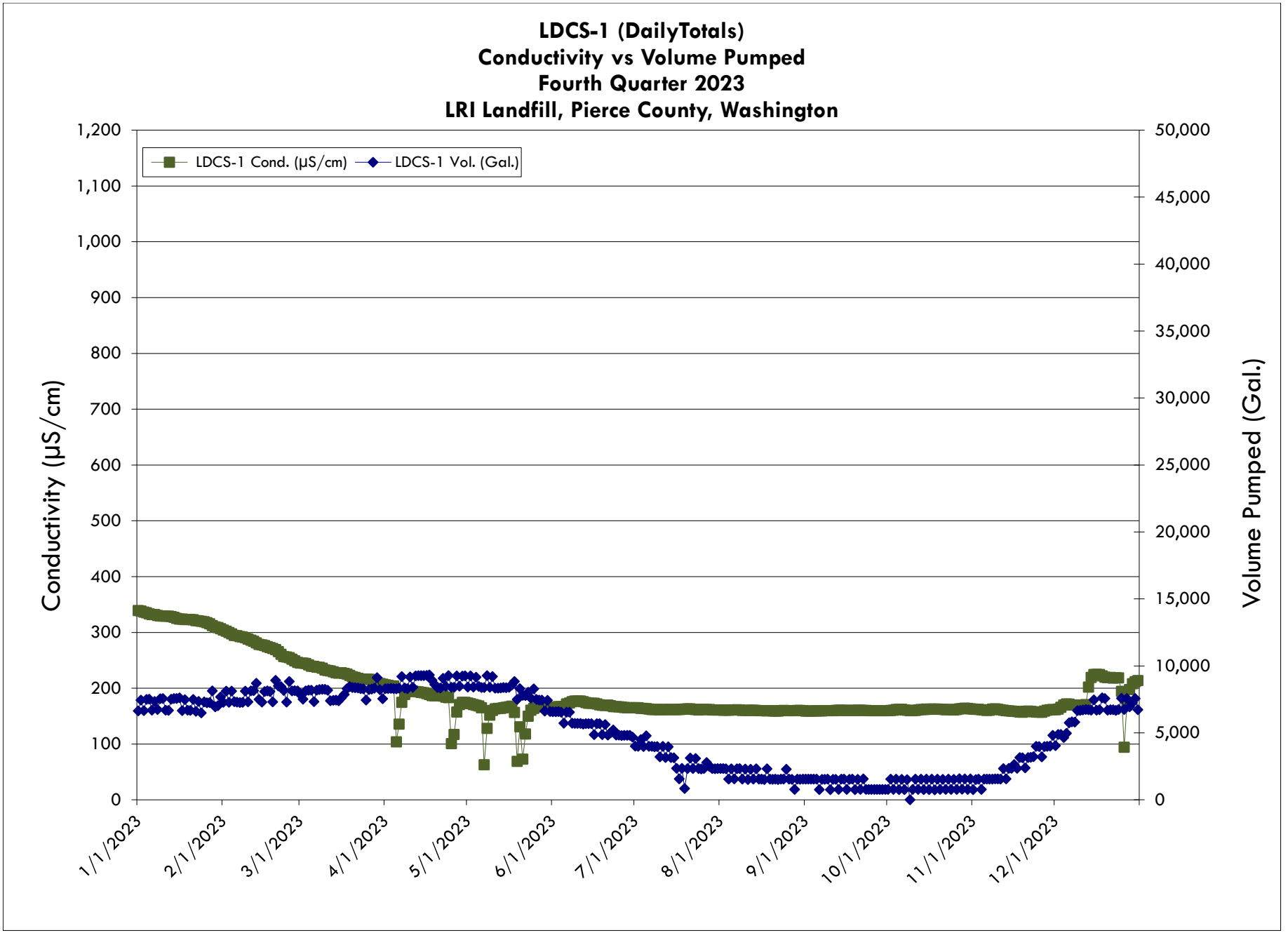
Date	Rainfall	LDCS-1 Vol. (Gal.)	LDCS-1 Cond. (µS/cm)	LDCS-2A Vol. (Gal)	LDCS-2A Cond. (µS/cm)	LDCS-2B Vol. (Gal)	LDCS-2B Cond. (µS/cm)	LDCS-3A Vol. (Gal)	LDCS-3A Cond. (µS/cm)	LDCS-4A Vol. (Gal)	LDCS-4A Cond. (µS/cm)*	LDCS-4B Vol. (Gal)	LDCS-4B Cond. (µS/cm)	LDCS-5 Vol. (Gal)	LDCS-5 Cond. (µS/cm)	LDCS-6 Vol. (Gal)	LDCS-6 Cond. (µS/cm)	LDCS-7 Vol. (Gal)	LDCS-7 Cond. (µS/cm)	LDCS-8 Vol. (Gal)	LDCS-8 Cond. (µS/cm)*	LDCS-9 Vol. (Gal)	LDCS-9 Cond. (µS/cm)*
10/1/2023	0.00	770	160	0	966	0	990	0	995	780	0	1,702	1,127	62	1,000	0	1,068	3,049	-	536	-	-	-
10/2/2023	0.00	1,550	160	0	956	0	990	0	996	1,990	0	7,172	1,085	530	948	1	1,066	2,050	-	1,074	-	-	-
10/3/2023	0.00	770	161	0	937	0	0	0	1,000	4,700	737	12,156	977	3,130	789	0	1,066	0	-	1,628	-	-	-
10/4/2023	0.00	1,550	162	0	942	0	0	0	1,000	2,390	740	12,770	956	589	751	0	1,065	0	-	1,076	-	-	-
10/5/2023	0.00	760	162	0	930	0	0	0	1,000	1,970	653	10,954	948	388	774	0	1,062	0	-	1,075	-	-	-
10/6/2023	0.00	1,530	162	0	923	0	0	0	1,000	1,880	689	9,208	950	385	784	0	1,060	5,086	-	1,070	-	-	-
10/7/2023	0.00	760	161	0	935	0	0	0	1,000	1,630	526	7,964	958	320	797	0	1,057	0	-	1,066	-	-	-
10/8/2023	0.00	1,520	161	415	952	154	0	214	1,000	1,720	503	6,698	967	319	808	0	1,056	0	-	437	-	-	-
10/9/2023	0.00	0	160	635	961	511	0	561	1,000	130	710	960	973	63	813	0	1,055	0	-	0	-	-	-
10/10/2023	0.00	770	160	315	973	101	0	37	995	1,760	685	4,904	984	255	827	0	1,054	1,015	-	2,867	-	-	-
10/11/2023	0.00	1,540	160	527	986	918	0	169	989	2,850	608	7,920	979	1,606	833	0	1,054	4,125	-	1,632	-	-	-
10/12/2023	0.00	780	161	430	981	69	0	0	992	2,300	501	10,404	940	722	774	0	1,053	0	-	1,076	-	-	-
10/13/2023	0.00	1,540	162	947	962	448	0	0	997	2,050	501	9,416	915	388	765	0	1,052	0	-	1,073	-	-	-
10/14/2023	0.00	760	162	0	948	0	0	0	999	2,110	716	8,946	912	453	778	0	1,052	0	-	1,079	-	-	-
10/15/2023	0.00	1,540	163	531	937	314	0	0	996	2,300	716	9,136	909	453	781	0	1,053	5,050	-	1,347	-	-	-
10/16/2023	0.00	760	162	0	925	0	0	1,317	540	2,790	716	9,440	902	2,216	780	0	1,054	30	-	1,351	-	-	-
10/17/2023	0.00	1,540	163	850	923	464	0	0	613	5,150	716	13,536	861	1,647	745	0	1,054	0	-	1,346	-	-	-
10/18/2023	0.00	750	163	629	919	1,667	205	318	826	3,040	680	13,798	829	656	734	0	1,053	0	-	1,075	-	-	-
10/19/2023	0.00	1,540	162	329	922	13	602	245	907	2,920	718	12,282	820	388	747	0	1,052	4,021	-	1,071	-	-	-
10/20/2023	0.00	770	162	0	931	0	764	183	940	3,220	667	11,252	820	388	760	12	1,053	1,073	-	1,346	-	-	-
10/21/2023	0.00	1,530	162	0	944	0	906	0	951	2,990	667	10,536	819	387	768	0	1,054	0	-	1,074	-	-	-
10/22/2023	0.00	770	162	1,429	960	119	894	607	956	2,880	667	9,786	818	385	773	0	1,054	0	-	1,075	-	-	-
10/23/2023	0.00	1,540	162	0	974	0	736	0	960	2,710	878	8,674	815	321	776	0	1,054	0	-	1,072	-	-	-
10/24/2023	0.00	770	162	852	976	891	710	363	958	3,130	878	7,208	819	320	776	0	1,052	5,071	-	1,341	-	-	-
10/25/2023	0.20	1,530	161	548	966	1,172	874	242	953	5,540	514	10,826	815	2,813	763	3,671	1,026	0	-	1,349	-	-	-
10/26/2023	0.71	780	162	442	953	6	938	180	952	5,790	742	12,950	799	1,358	733	0	1,034	0	-	1,077	-	-	-
10/27/2023	0.65	1,580	163	0	930	0	963	0	956	3,010	681	12,672	793	521	726	0	1,060	243	-	1,077	-	-	-
10/28/2023	0.70	800	164	0	905	0	986	0	964	2,910	684	11,146	791	452	739	0	1,064	4,827	-	1,081	-	-	-
10/29/2023	0.45	1,570	164	1,300	891	429	995	543	969	2,860	684	9,328	797	321	755	0	1,062	0	-	1,075	-	-	-
10/30/2023	0.04	780	164	432	904	431	998	181	971	2,770	499	8,118	807	321	767	0	1,059	0	-	1,077	-	-	-
10/31/2023	0.00	1,560	163	0	929	0	999	0	970	2,820	410	6,900	818	320	780	10	1,056	0	-	805	-	-	-
11/1/2023	0.83	760	163	0	949	251	1,000	1,810	968	3,140	436	6,660	831	319	791	2,464	1,053	3,894	-	1,072	-	-	-
11/2/2023	0.45	1,520	162	969	966	378	1,000	2,420	962	7,370	444	12,286	833	5,177	773	2,169	966	1,278	-	1,629	-	-	-
11/3/2023	0.49	1,550	162	435	976	4,654	1,000	1,810	953	7,500	623	18,362	807	2,027	724	384	566	0	-	1,349	-	-	-
11/4/2023	0.98	780	162	437	966	81	989	1,830	946	7,470	832	21,756	799	6,920	706	0	825	6,612	-	1,894	-	-	-
11/5/2023	0.31	1,540	161	0	954	247	972	3,030	946	7,630	690	25,372	798	1,919	683	0	971	0	-	1,346	-	-	-
11/6/2023	1.03	1,550	160	1,087	944	0	990	2,430	954	7,170	690	23,124	802	4,318	673	2,063	919	1,903	-	1,616	-	-	-
11/7/2023	0.00	1,540	161	538	942	735	996	1,820	957	7,200	822	33,228	785	4,893	643	593	761	4,193	-	1,351	-	-	-
11/8/2023	0.00	1,550	163	0	934	0	997	2,400	955	7,040	822	28,268	804	991	629	0	825	0	-	1,343	-	-	-
11/9/2023	0.14	1,560	163	1,091	922	970	997	2,420	958	6,870	516	22,932	806	522	645	1,139	855	0	-	1,075	-	-	-
11/10/2023	0.14	1,560	162	538	926	4	999	1,800	961	6,740	419	19,860	803	452	676	0	883	2,810	-	1,340	-	-	-
11/11/2023	0.41	1,550	161	0	929	0	990	2,410	963	6,670	419	19,776	795	7,361	679	0	963	2,350	-	2,180	-	-	-
11/12/2023	0.31	2,330	161	0	926	0	993	2,400	958	6,610	419	22,698	765	2,385	620	0	1,001	0	-	1,610	-	-	-
11/13/2023	0.00	1,560	160	1,921	921	2,772	992	3,020	956	6,610	457	27,314	749	5,441	595	0	1,013	5,670	-	1,890	-	-	-
11/14/2023	0.00	2,350	160	1,532	908	1,736	993	2,420	958	6,630	427	26,350	746	1,411	583	0	1,020	0	-	1,343	-	-	-
11/15/2023	0.00	2,350	159	0	906	0	997	3,010	963	6,640	427	27,164	756	860	592	0	1,026	0	-	1,611	-	-	-
11/16/2023	0.00	2,630	159	1,211	913	0	999	2,410	965	6,510	427	21,950	773	455	618	0	1,031	313	-	1,340	-	-	-
11/17/2023	0.00	2,360	158	0	908	933	1,000	2,410	967	6,430	479	17,080	782	387	650	0	1,033	4,851	-	1,605	-	-	-
11/18/2023	0.00	3,160	157	0	523	28	1,000	2,410	966	6,420	456	14,980	794	388	677	0	1,035	0	-	1,338	-	-	-
11/19/2023	0.27	3,140	157	739	585	1,405	1,000	2,410	960	6,410	456	17,228	788	2,518	667	0	1,038	0	-	1,613	-	-	-
11/20/2023	0.00	2,390	159	0	784	0	995	2,410	944	6,440	303	15,494	782	787	633	2,670	915	1,234	-	1,539	-	-	-
11/21/2023	0.00	3,150	159	1,531	851	1,363	995	2,410	937	6,430	651	13,794	777	520	641	0	886	3,817	-	1,337	-	-	-
11/22/2023	0.28	3,180	158	756	883	62	998	3,010	939	6,410	583	14,756	773	2,882	643	0	969	0	-	1,607	-	-	-
11/23/2023	0.00	3,220	158	754	886	209	999	2,400	946	6,420	424	15,824	749	1,156	621	0	1,005	0	-	1,607	-	-	-
11/24/2023	0.00	3,990	157	0	881	0	1,000	3,010	953	6,400	424	13,322	750	603	641	0	1,018	3,113	-	1,338	-	-	-
11/25/2023	0.00	3,980	157	1,532	881	951	1,000	3,020	960	6,390	453	11,532	755	454	652	2,841	857	2,032	-	1,340	-	-	-
11/26/2023	0.00	3,200	157	761	885	0	1,000	2,420	962	6,390	453	10,254	757	388	667	1,323	350	0	-	1,604	-	-	-
11/27/2023	0.00	3,980	159	0	895	180	1,000	2,410	961	6,350	446	9,090	760	451	681	349	195	0	-	1,308	-	-	-
11/28/2023	0.00	3,990	161	1,622	902	0	1,000	3,010	956	6,330	424	8,468	765	386	691	0	607	3,378	-	1,605	-	-	-
11/29/2023	0.00	4,010	162	1,642	903	0	1,000	2,480	952	6,270	351	7,606	770	322	701	0	862	1,795	-	1,336	-	-	-
11/30/2023	0.00	4,820	162	766	907	0	1,000	2,410	952	5,380	398	7,386	770	385	708	0	965	0	-	1,545	-	-	-

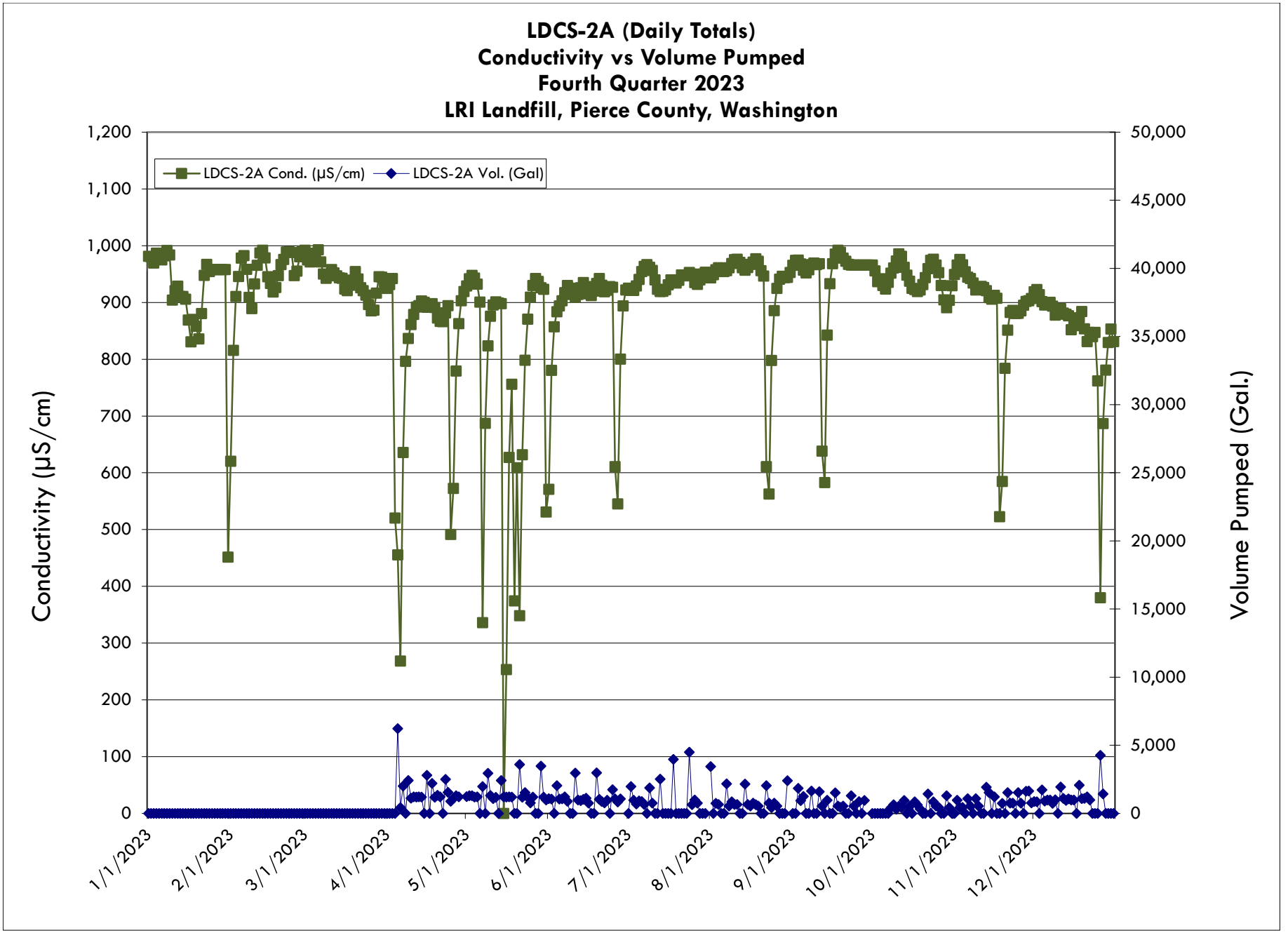
Summary of LDCS Volumes Pumped and Conductivity Data
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

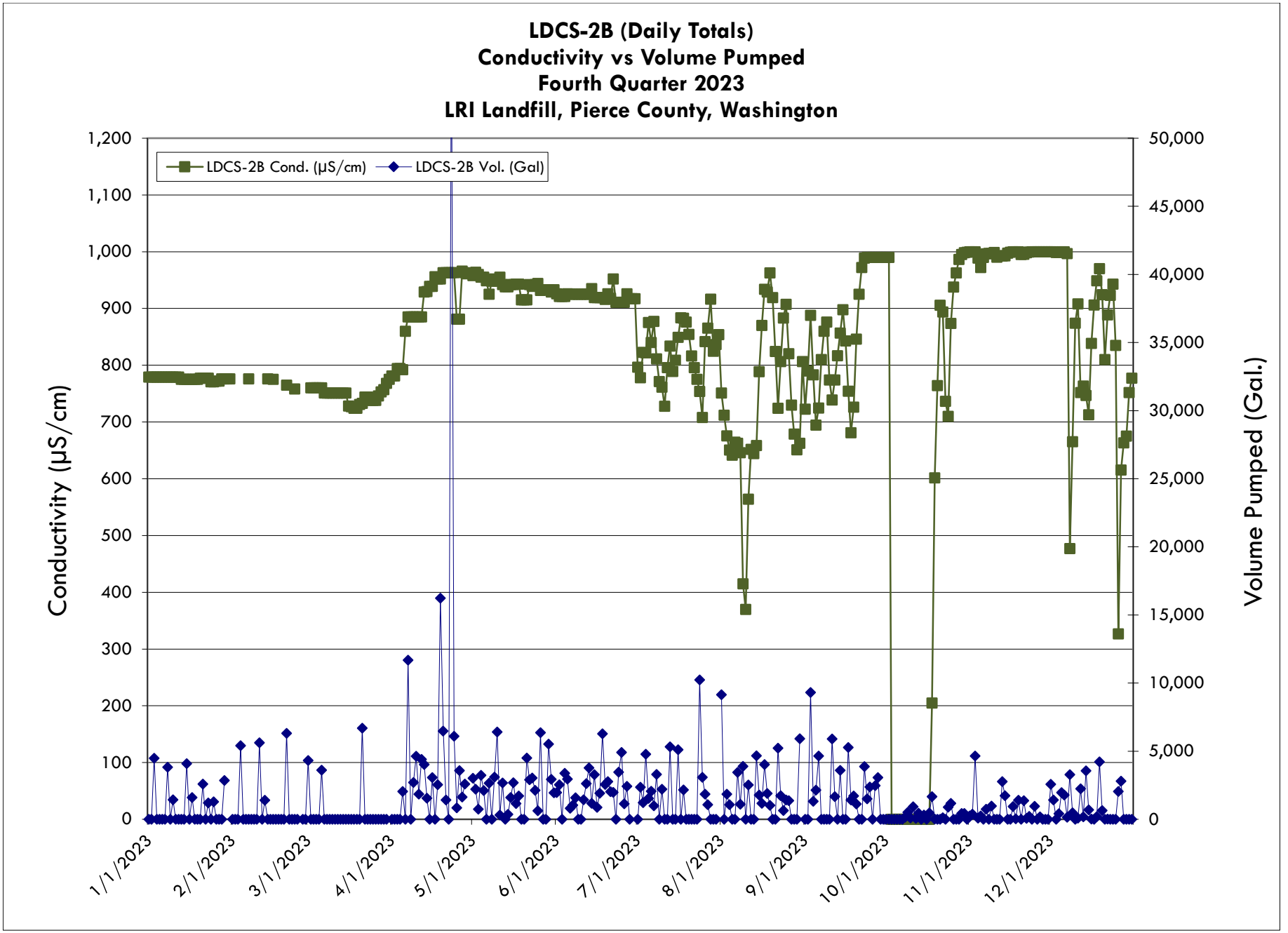
Date	Rainfall	LDCS-1 Vol. (Gal.)	LDCS-1 Cond. (µS/cm)	LDCS-2A Vol. (Gal)	LDCS-2A Cond. (µS/cm)	LDCS-2B Vol. (Gal)	LDCS-2B Cond. (µS/cm)	LDCS-3A Vol. (Gal)	LDCS-3A Cond. (µS/cm)	LDCS-4A Vol. (Gal)	LDCS-4A Cond. (µS/cm)*	LDCS-4B Vol. (Gal)	LDCS-4B Cond. (µS/cm)	LDCS-5 Vol. (Gal)	LDCS-5 Cond. (µS/cm)	LDCS-6 Vol. (Gal)	LDCS-6 Cond. (µS/cm)	LDCS-7 Vol. (Gal)	LDCS-7 Cond. (µS/cm)	LDCS-8 Vol. (Gal)	LDCS-8 Cond. (µS/cm)*	LDCS-9 Vol. (Gal)	LDCS-9 Cond. (µS/cm)*
12/1/2023	0.22	4,040	161	871	919	2,570	1,000	3,000	951	6,000	389.9	8,370	767	2,733	720	0	1,002	0	633	2,156	-	-	-
12/2/2023	0.87	4,880	162	856	923	1,422	1,000	3,610	950	5,970	400.4	15,210	754	8,225	671	2,061	841	6,849	633	2,452	-	-	-
12/3/2023	0.11	4,880	166	0	914	0	999	3,020	955	5,980	0	16,976	734	4,800	608	1,164	341	0	633	2,156	-	-	-
12/4/2023	0.22	4,650	170	1,732	901	410	999	3,610	948	5,990	588.1	19,760	724	4,136	578	318	208	949	633	2,151	-	-	-
12/5/2023	1.83	4,960	172	904	896	1,965	1,000	3,640	949	6,020	685.4	27,566	717	16,242	555	0	621	5,035	633	4,185	-	-	-
12/6/2023	2.00	5,750	171	984	896	1,786	1,000	3,620	952	6,040	725.9	38,766	719	9,549	497	0	864	7,481	633	4,144	-	-	-
12/7/2023	0.30	5,820	170	982	900	152	997	4,220	954	6,070	719.7	7,516	743	5,928	469	0	960	0	633	2,998	-	-	-
12/8/2023	0.30	5,800	170	736	893	3,273	477	3,610	951	6,060	568.7	1,274	737	2,356	471	0	999	3,386	219	2,422	-	-	-
12/9/2023	0.00	6,660	170	997	878	472	665	3,610	955	6,090	703.8	1,306	702	5,870	496	2,143	886	2,043	100	2,689	-	-	-
12/10/2023	0.72	6,680	168	0	883	0	874	3,610	957	6,080	0	1,226	686	8,604	481	0	861	4,316	383	2,707	-	-	-
12/11/2023	0.10	6,710	167	1,942	889	77	908	3,610	954	6,070	947.3	1,256	684	2,060	472	0	926	1,619	501	2,401	-	-	-
12/12/2023	0.00	6,740	171	1,099	881	2,238	752	4,200	949	6,070	865.3	1,206	687	1,269	500	0	967	0	544	800	-	-	-
12/13/2023	0.00	6,720	202	961	879	183	763	3,610	946	6,060	691.7	1,234	689	790	540	0	993	0	560	3,676	-	-	-
12/14/2023	0.00	6,700	219	1,074	876	3,555	747	3,610	940	6,030	686.2	1,282	694	996	577	1	1,008	5,409	566	2,293	-	-	-
12/15/2023	0.14	7,470	225	989	852	692	713	3,620	936	6,000	549.6	1,258	705	924	592	0	1,017	0	568	2,141	-	-	-
12/16/2023	0.00	6,700	225	980	859	11	838	3,610	932	5,970	543	1,384	720	786	602	0	1,023	0	569	1,881	-	-	-
12/17/2023	0.00	6,730	225	0	862	0	906	3,600	929	5,930	0	1,460	739	588	617	0	1,030	5,141	569	1,878	-	-	-
12/18/2023	0.00	7,610	222	2,077	873	192	949	3,600	922	5,920	337.1	1,422	763	521	645	2,396	1,014	0	569	2,137	-	-	-
12/19/2023	0.05	7,570	220	1,092	884	4,218	970	3,610	914	5,900	461.7	1,408	790	1,951	664	6	971	0	569	2,420	-	-	-
12/20/2023	0.12	6,700	219	1,097	854	636	924	3,130	911	5,890	435.4	1,354	816	1,475	631	0	967	3,923	569	1,876	-	-	-
12/21/2023	0.00	6,730	219	1,214	831	7	810	3,610	916	5,890	433.5	1,250	841	855	620	0	977	1,232	358	2,138	-	-	-
12/22/2023	0.00	6,720	218	989	847	11	889	3,590	915	5,860	419.2	1,194	860	1,863	630	2,504	852	0	0	2,151	-	-	-
12/23/2023	0.60	6,680	219	0	840	0	923	3,600	913	5,830	0	1,296	864	1,334	615	0	826	0	0	1,877	-	-	-
12/24/2023	0.00	6,750	219	0	847	0	943	3,600	915	5,820	0	1,284	854	786	621	0	942	5,089	0	1,876	-	-	-
12/25/2023	0.00	7,580	194	0	762	0	835	3,720	810	5,790	0	1,172	835	790	647	0	822	0	0	2,140	-	-	-
12/26/2023	0.50	6,740	94	4,263	380	2,042	327	3,610	373	5,790	597.1	1,368	815	2,599	660	0	-81	0	75	2,421	-	-	-
12/27/2023	0.05	7,570	170	1,438	687	2,809	616	3,620	696	5,800	605.3	17,074	790	1,058	636	0	532	5,183	436	72	-	-	-
12/28/2023	0.12	6,950	198	0	781	0	663	3,590	824	5,800	0	36,598	830	788	648	0	869	0	630	0	-	-	-
12/29/2023	0.03	7,240	208	0	830	0	675	3,610	878	5,790	0	37,780	1,007	654	667	0	996	16	286	0	-	-	-
12/30/2023	0.00	7,570	212	0	853	0	752	4,210	898	5,770	0	35,910	1,179	1,325	684	0	1,045	334	0	7,838	-	-	-
12/31/2023	0.10	6,730	214	0	831	0	777	3,590	902	5,760	0	32,760	1,244	2,207	660	0	1,065	4,849	0	2,433	-	-	-

Notes:

— = Data not available due to equipment malfunction or meter out of range


LDCS-1 (DailyTotals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-1 Cond. (µS/cm)
LDCS-1 Vol. (Gal.)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023


LDCS-2A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-2A Cond. (µS/cm)
LDCS-2A Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023


LDCS-2B (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-2B Cond. (µS/cm)
LDCS-2B Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
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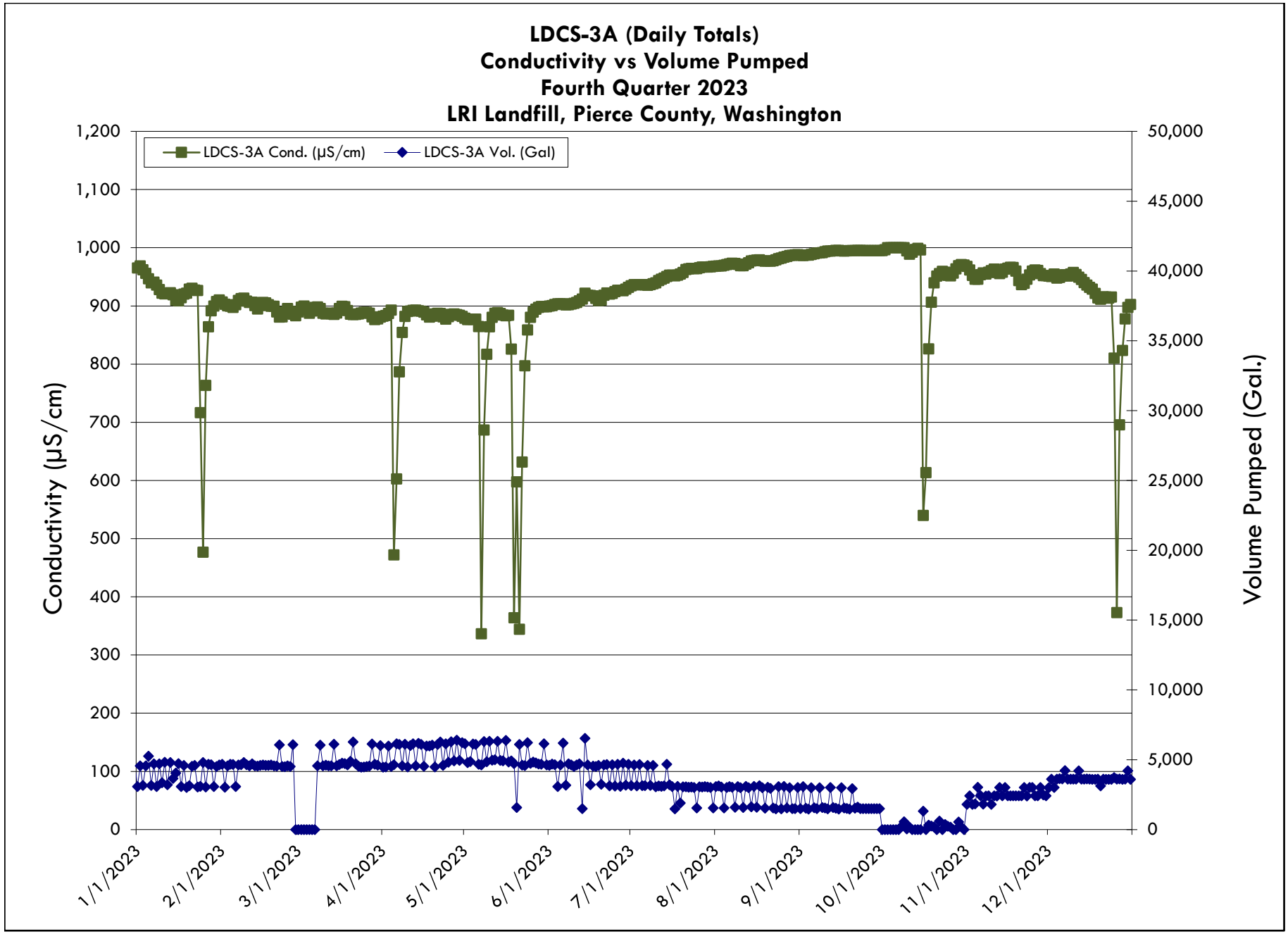
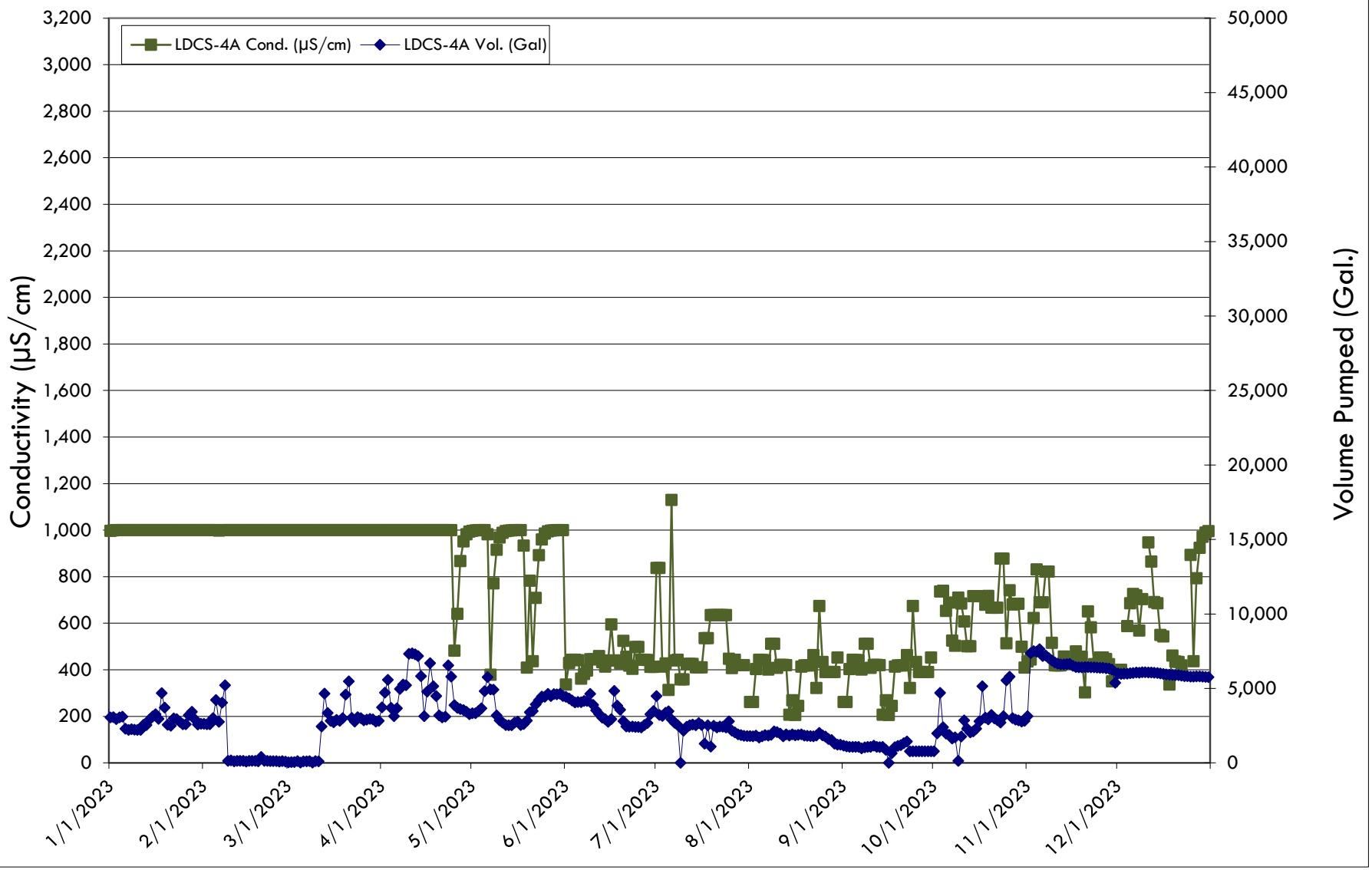
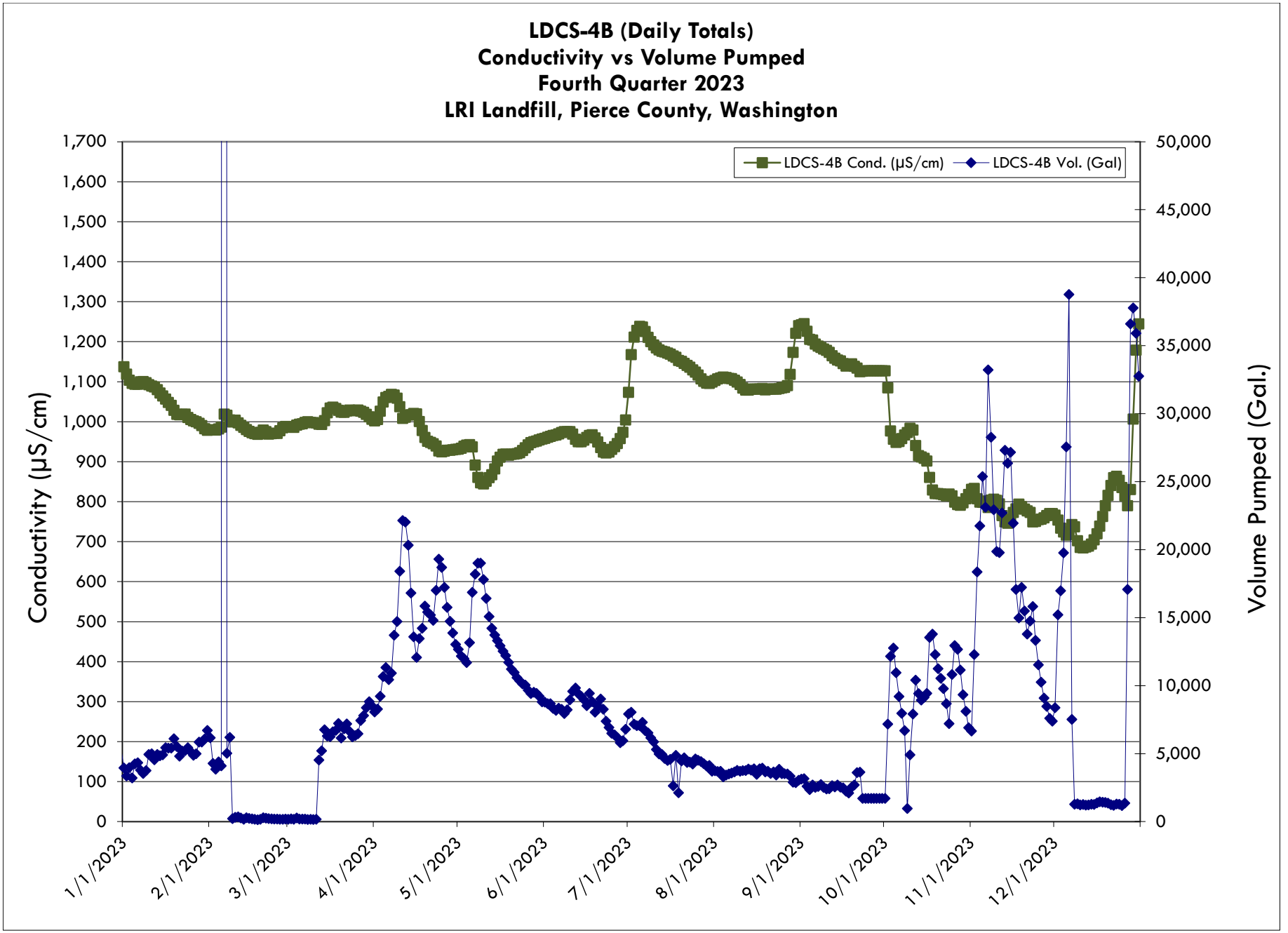
12/1/2023


LDCS-3A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-3A Cond. (µS/cm)
LDCS-3A Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

LDCS-4A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington




LDCS-4B (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-4B Cond. (µS/cm)
LDCS-4B Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
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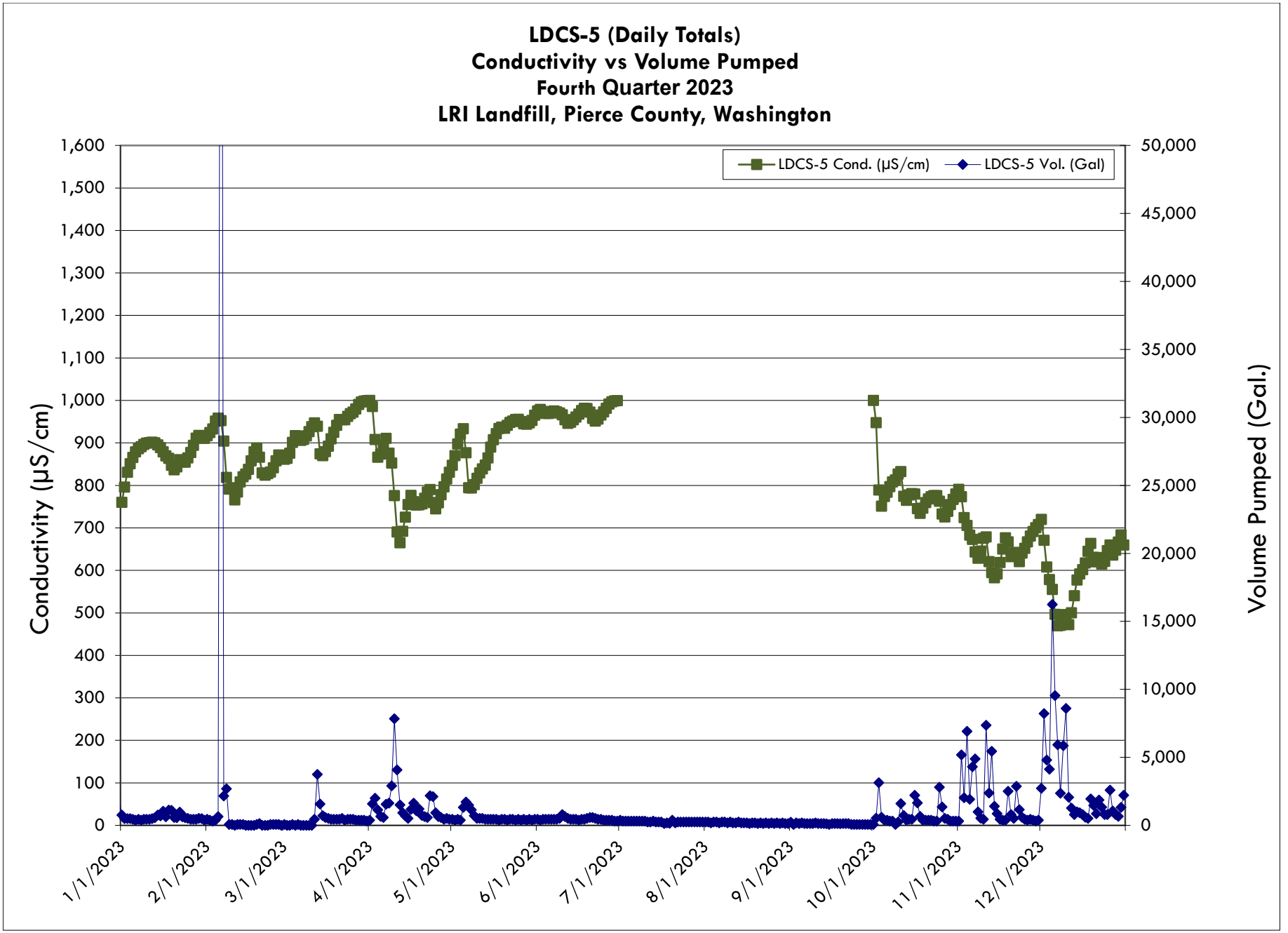
12/1/2023


LDCS-5 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-5 Cond. (µS/cm)
LDCS-5 Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
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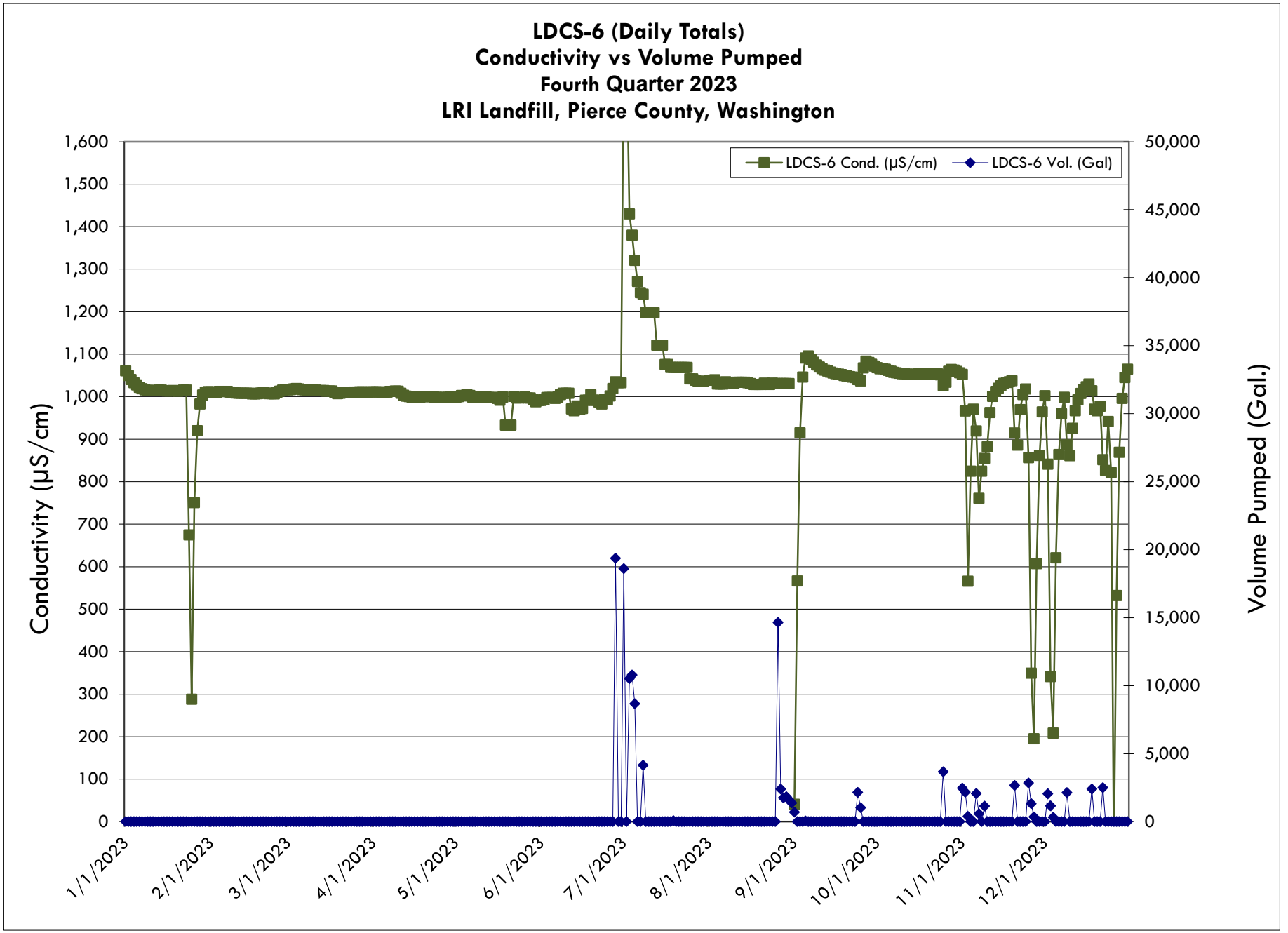
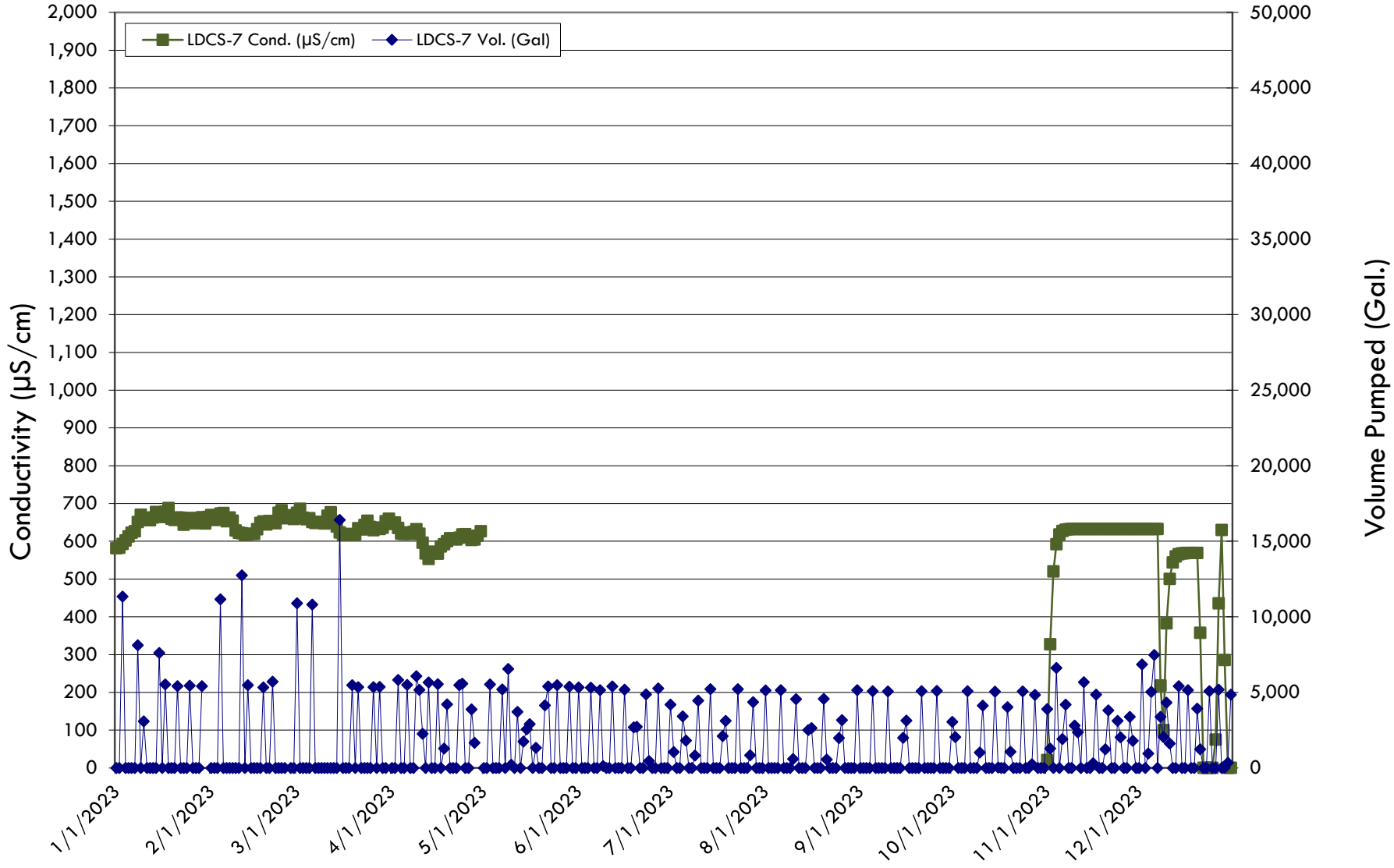
12/1/2023


LDCS-6 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-6 Cond. (µS/cm)
LDCS-6 Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

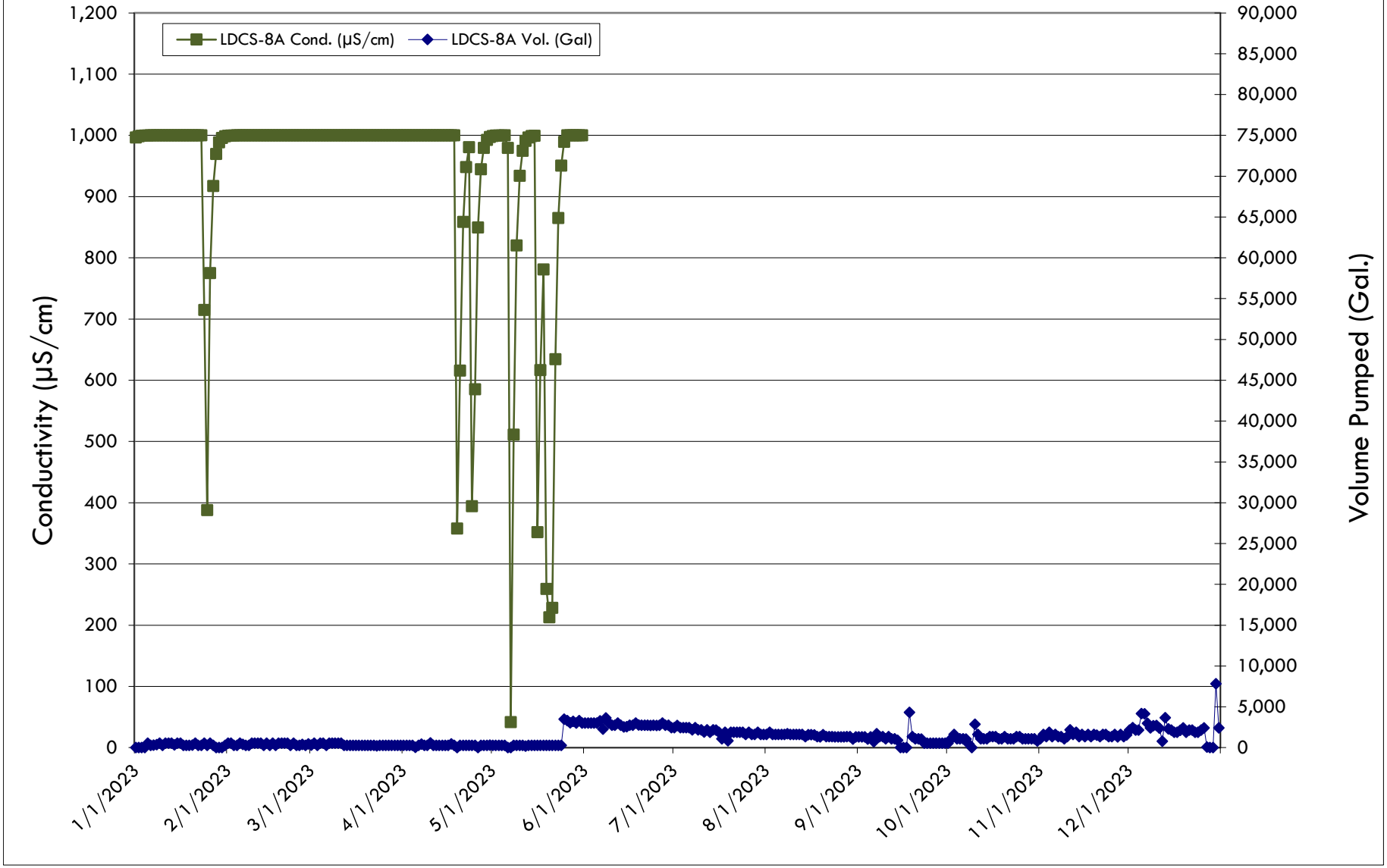
LDCS-7 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

*Conductivity Probe malfunction May through November



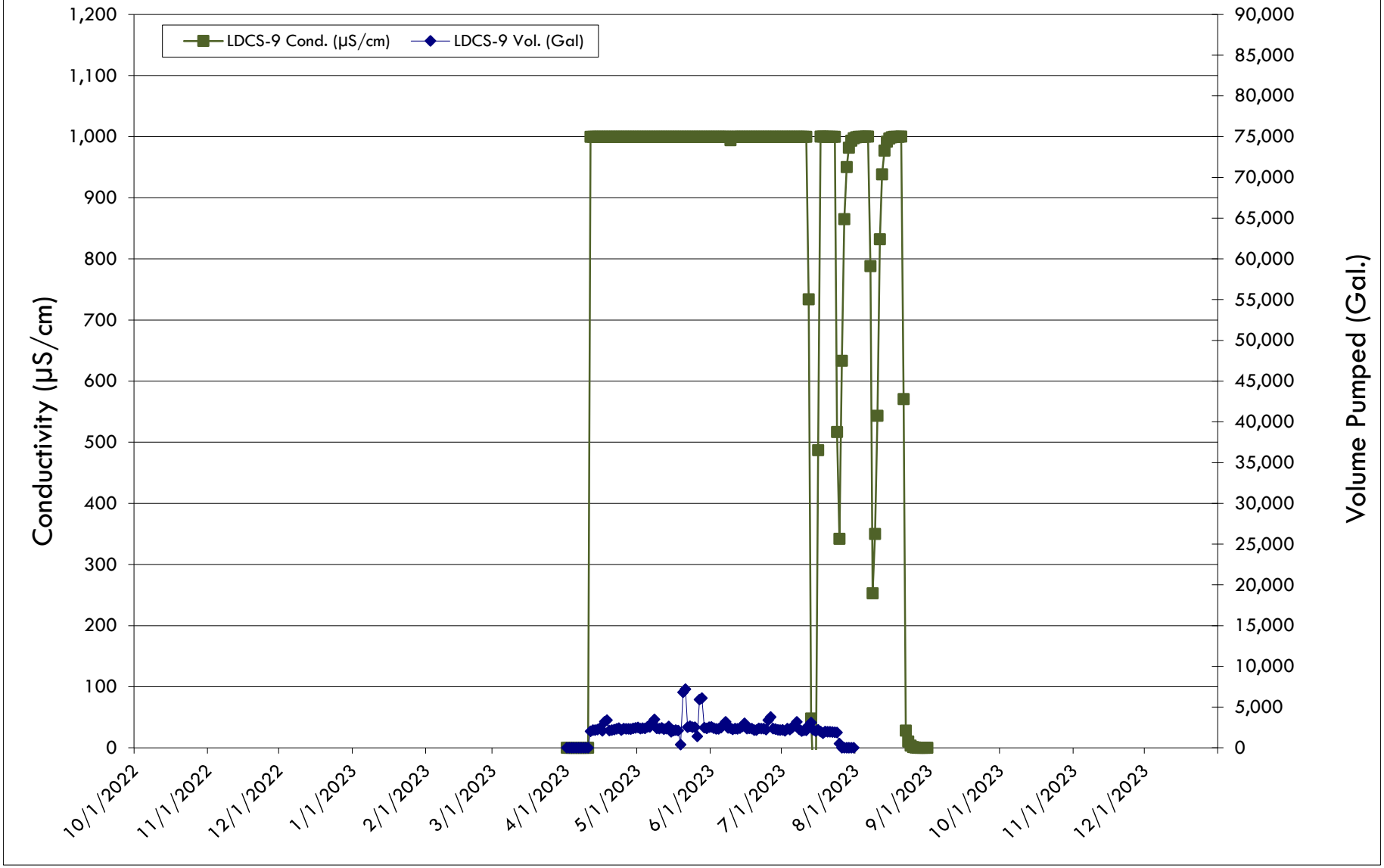
LDCS-8 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

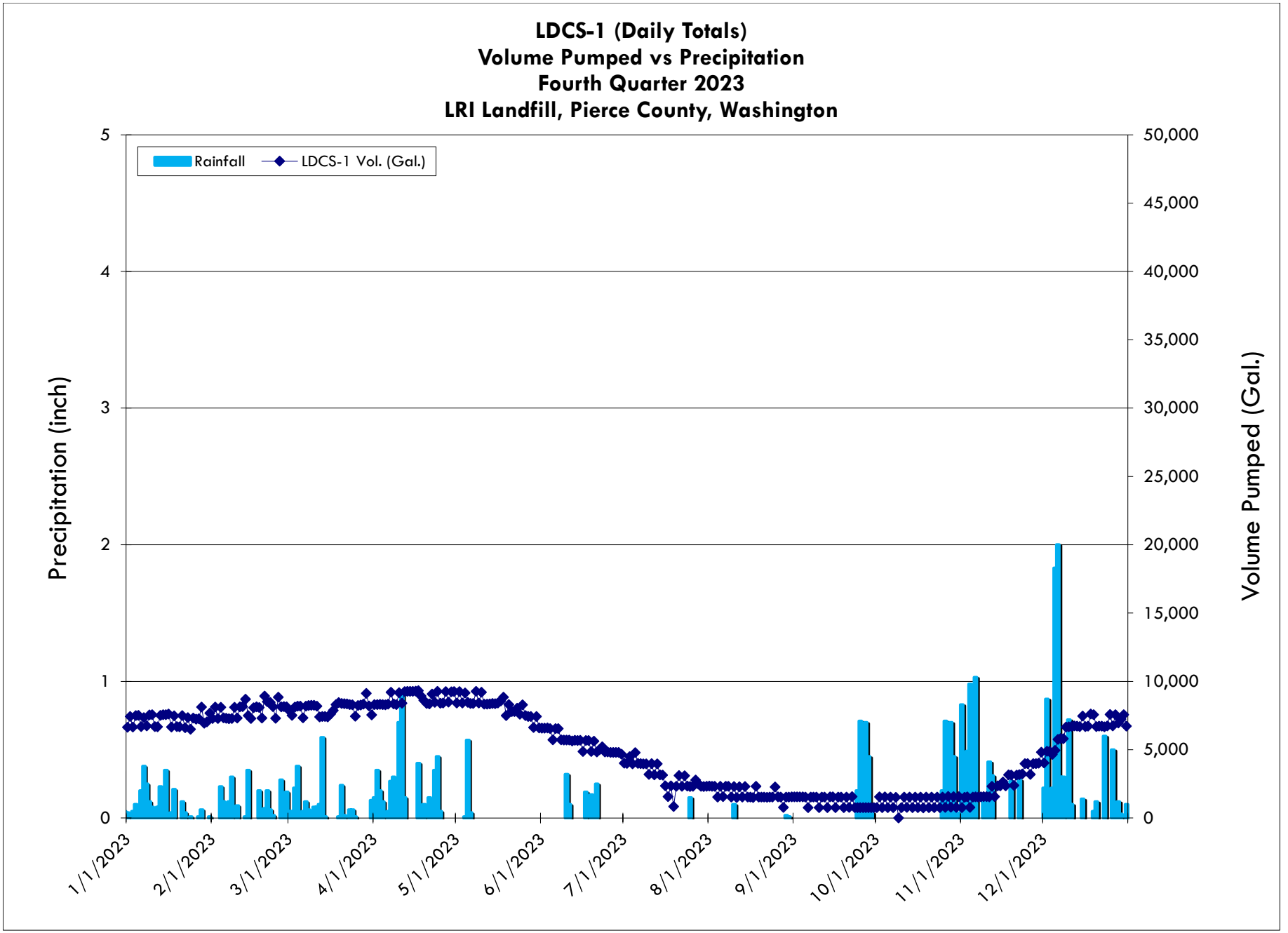
*Conductivity Probe malfunction June through December

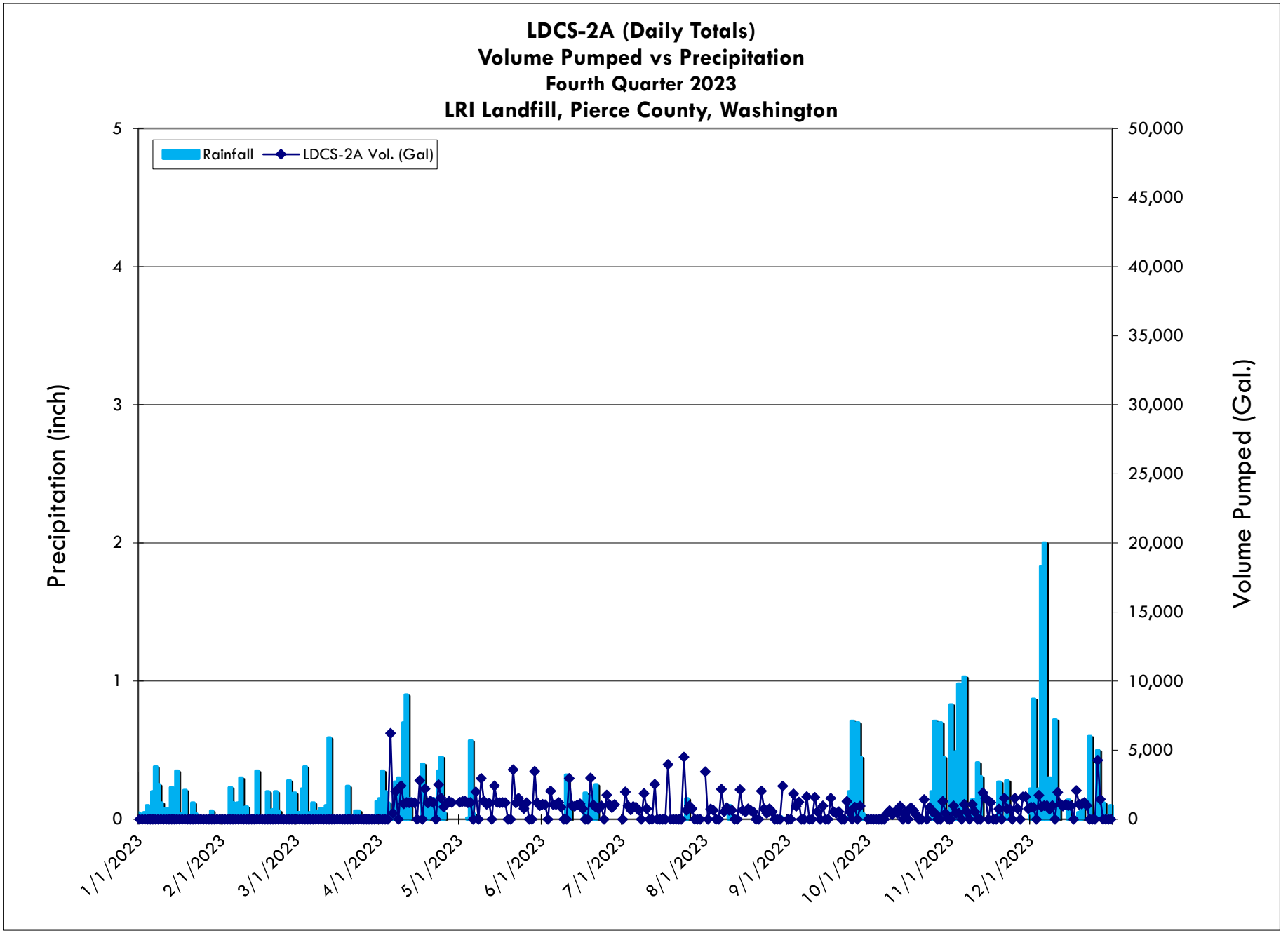


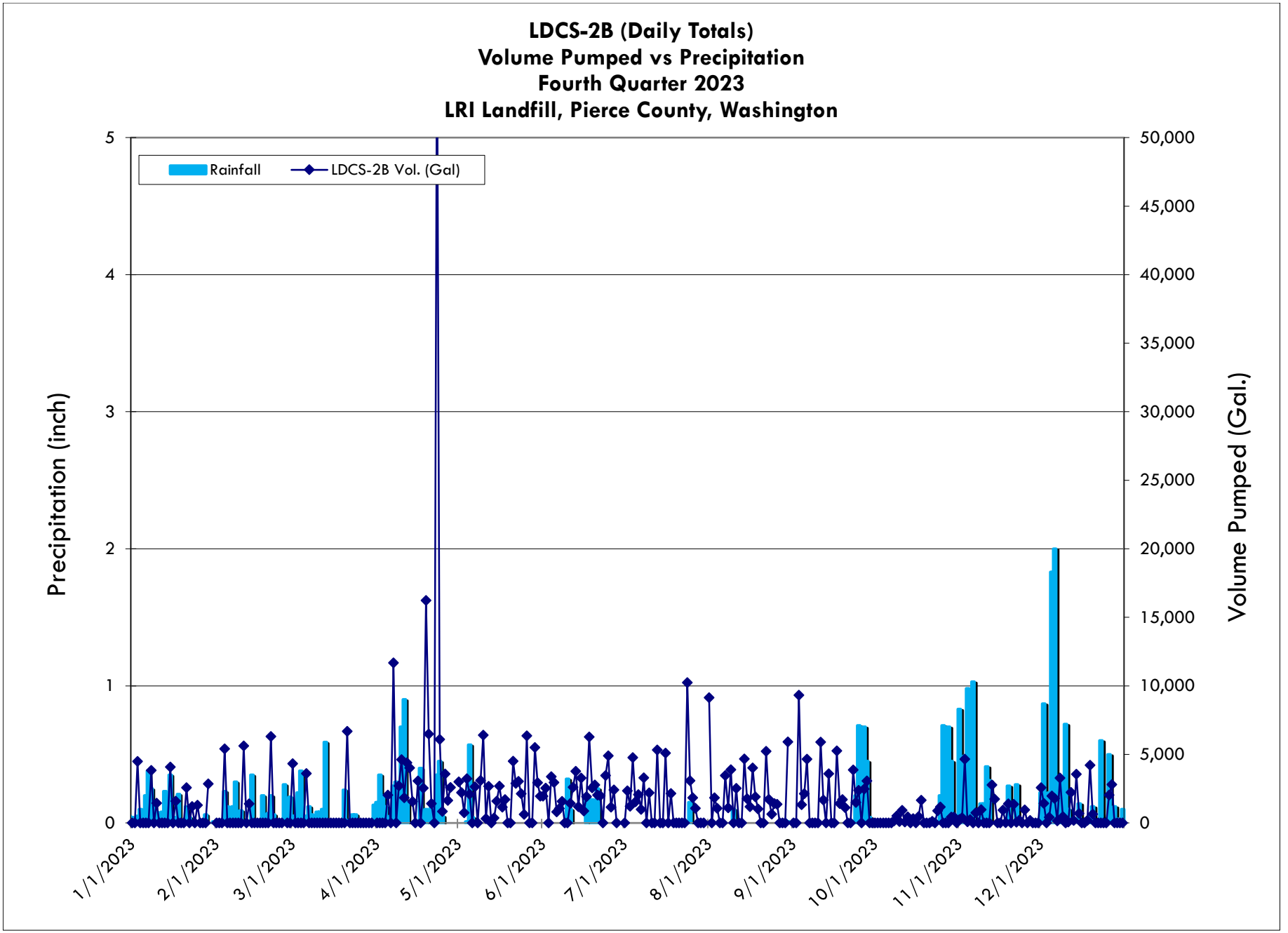
LDCS-9 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

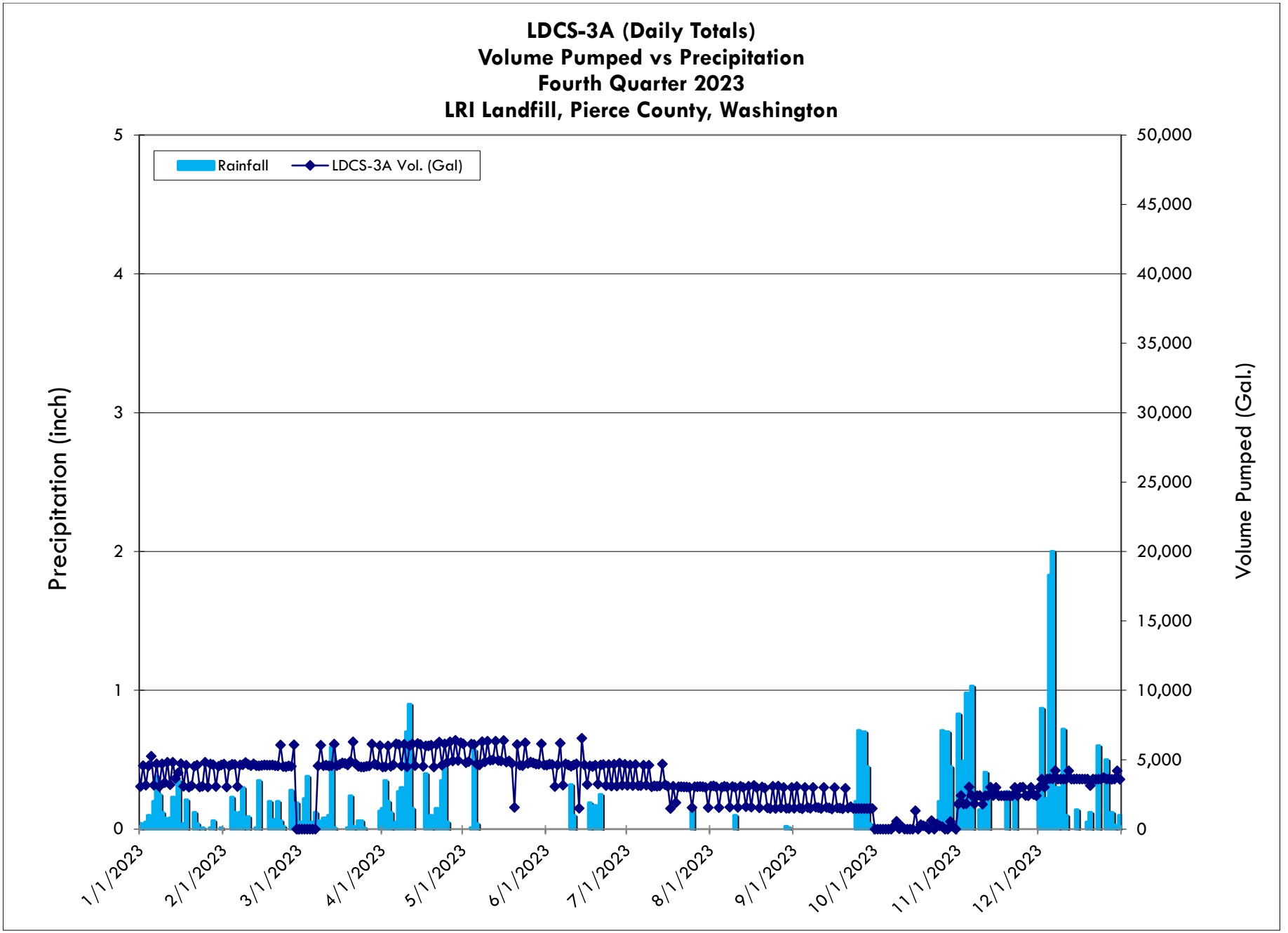
*Conductivity Probe and pump malfunction August through December

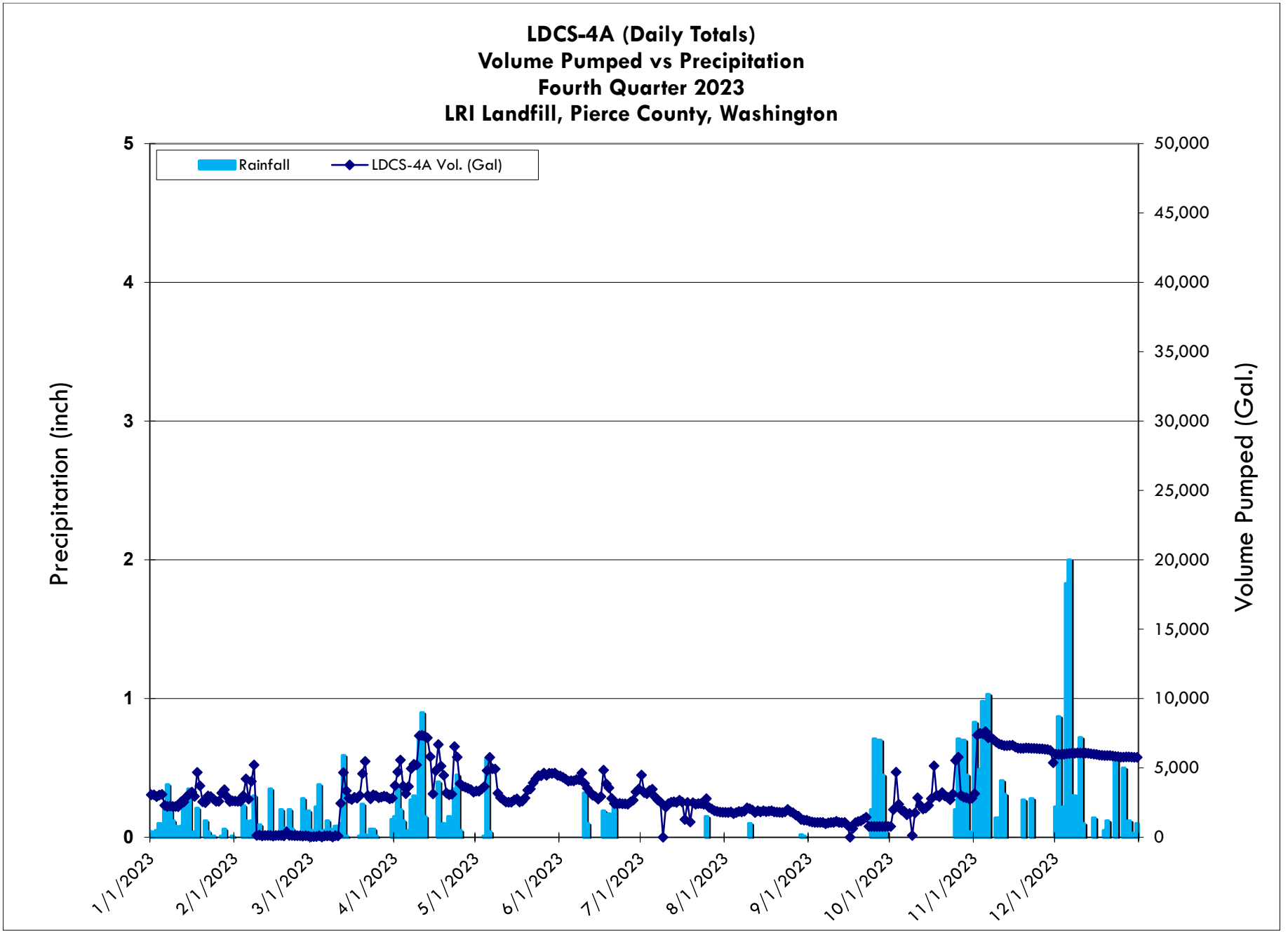


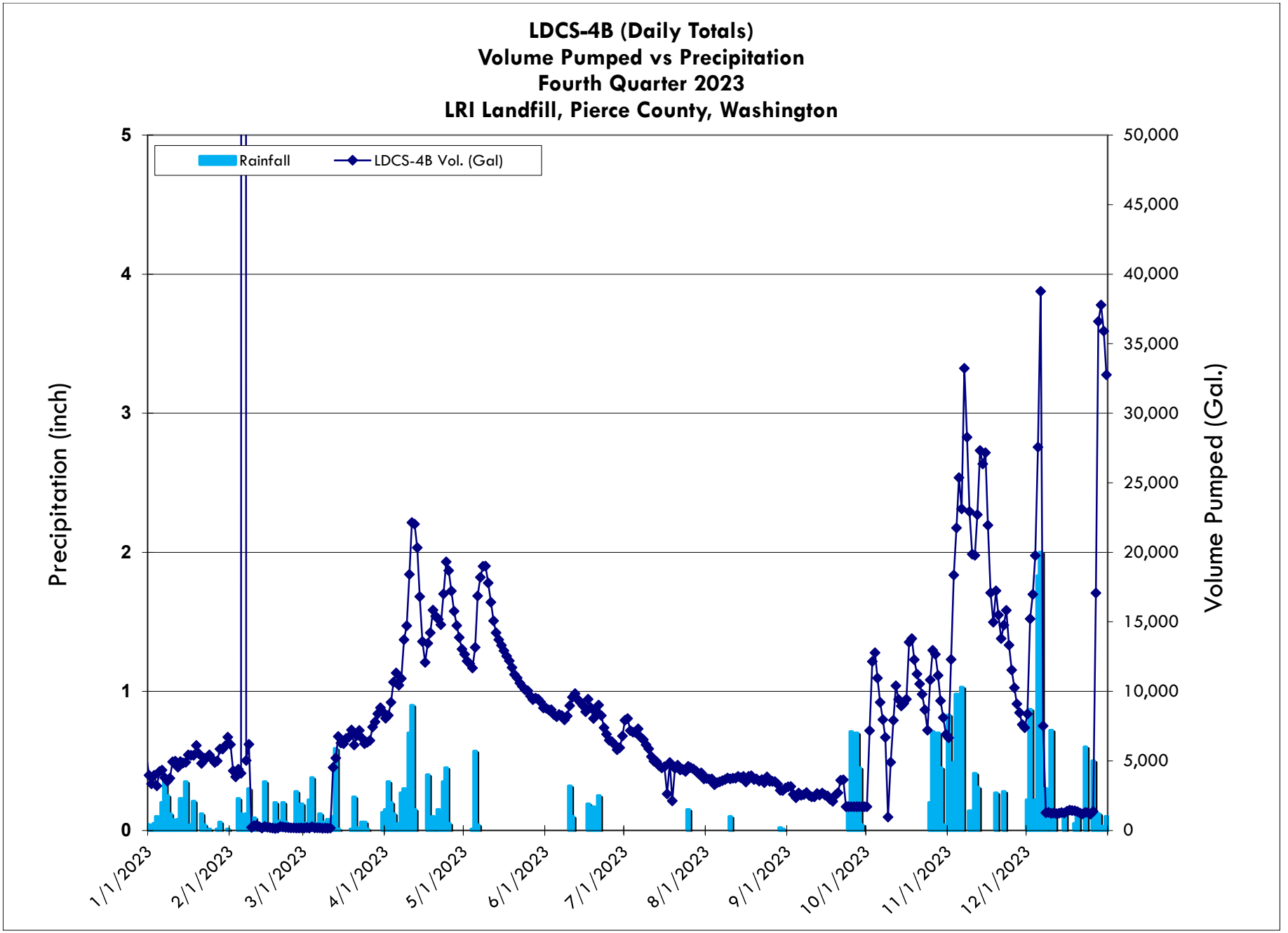

LDCS-1 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-1 Vol. (Gal.)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

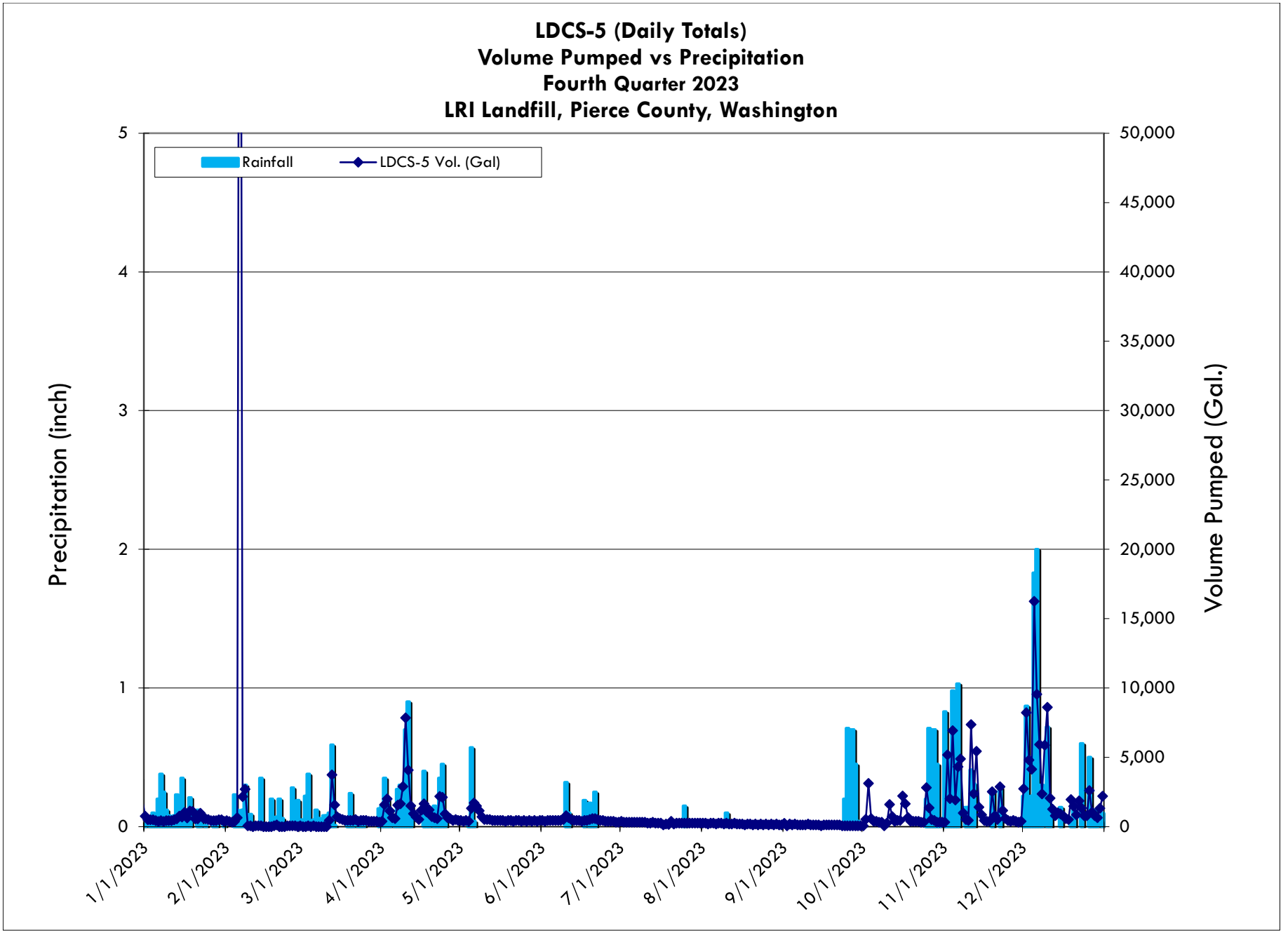

LDCS-2A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-2A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

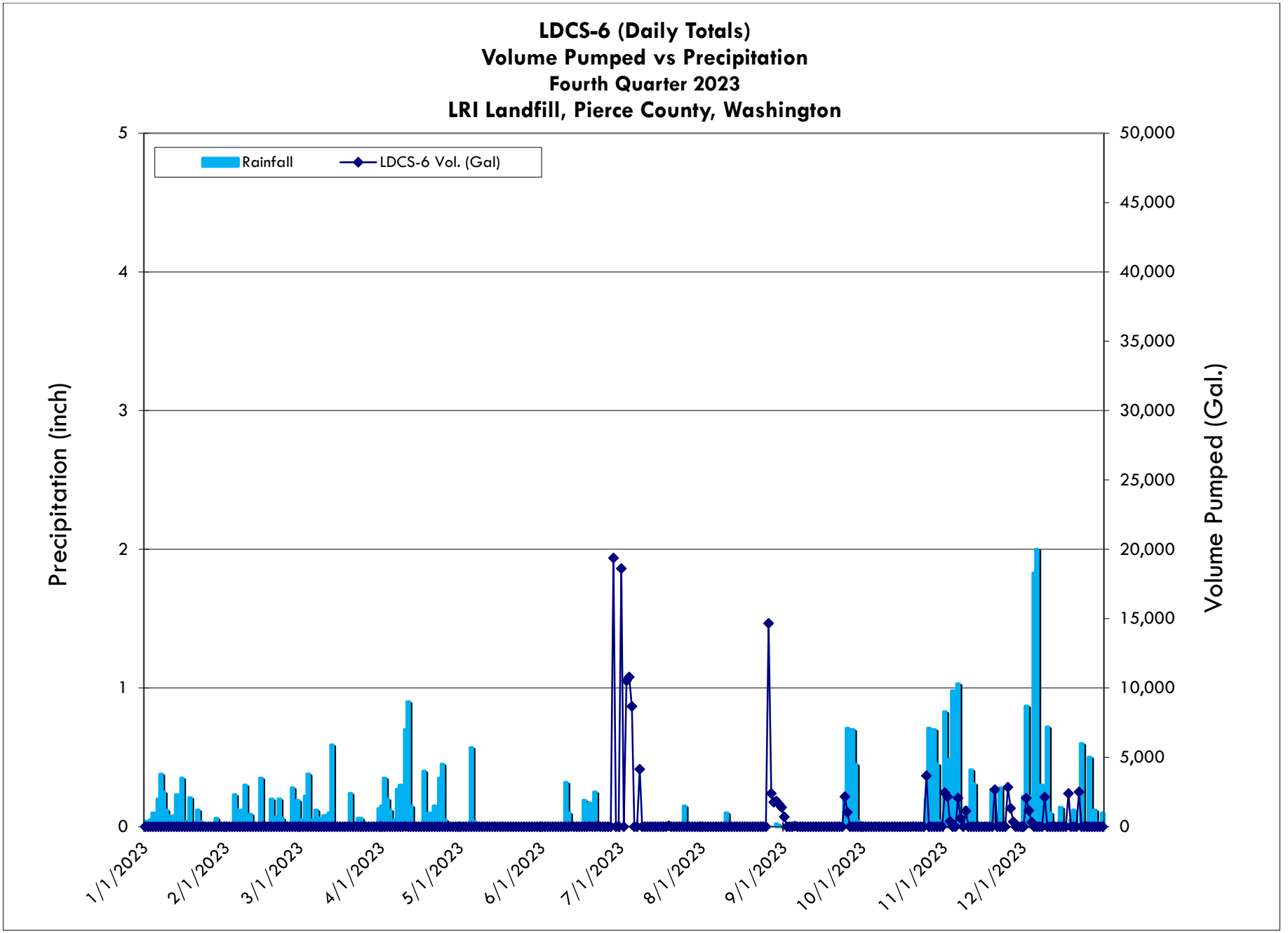

LDCS-2B (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-2B Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

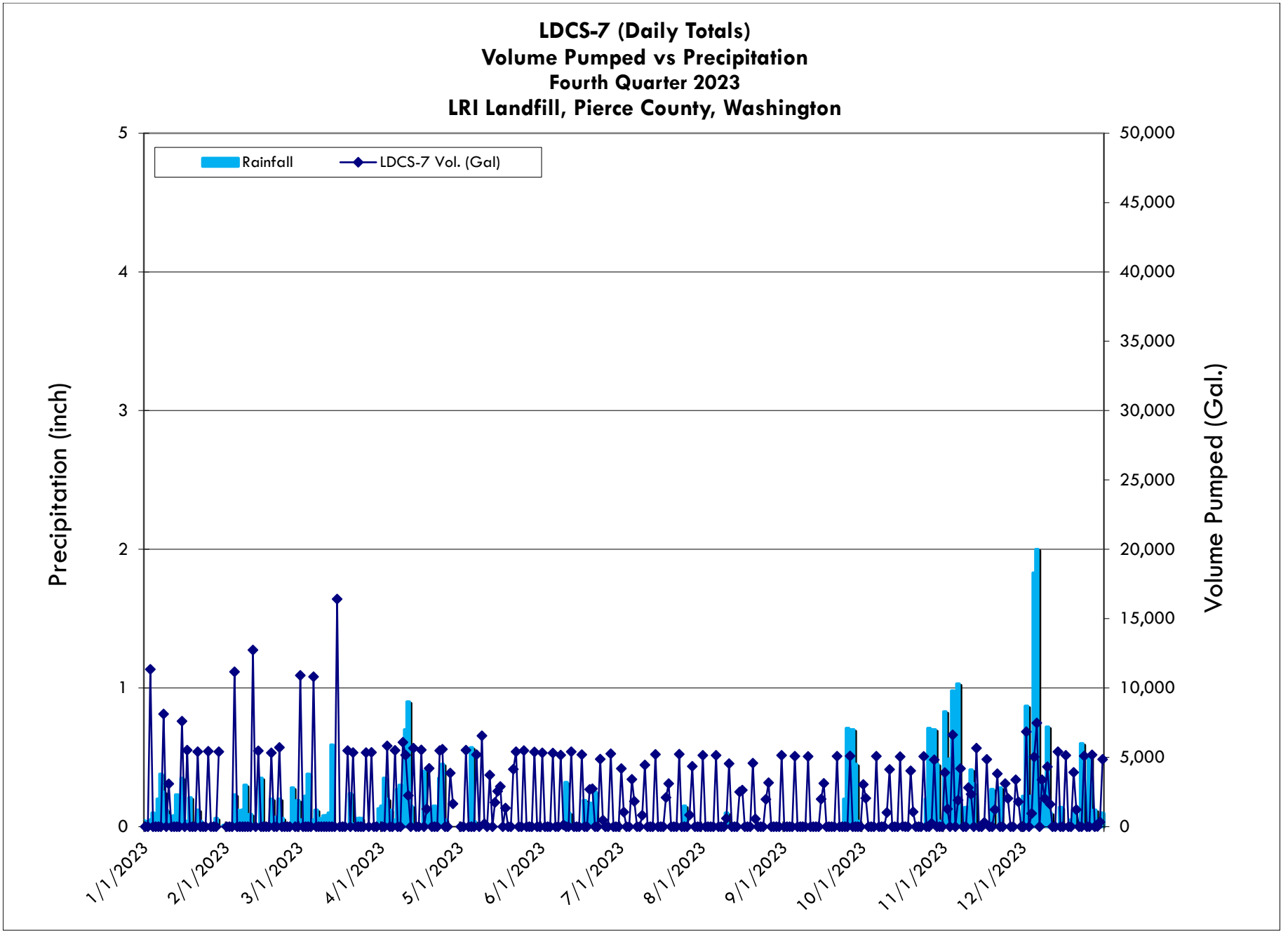

LDCS-3A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-3A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

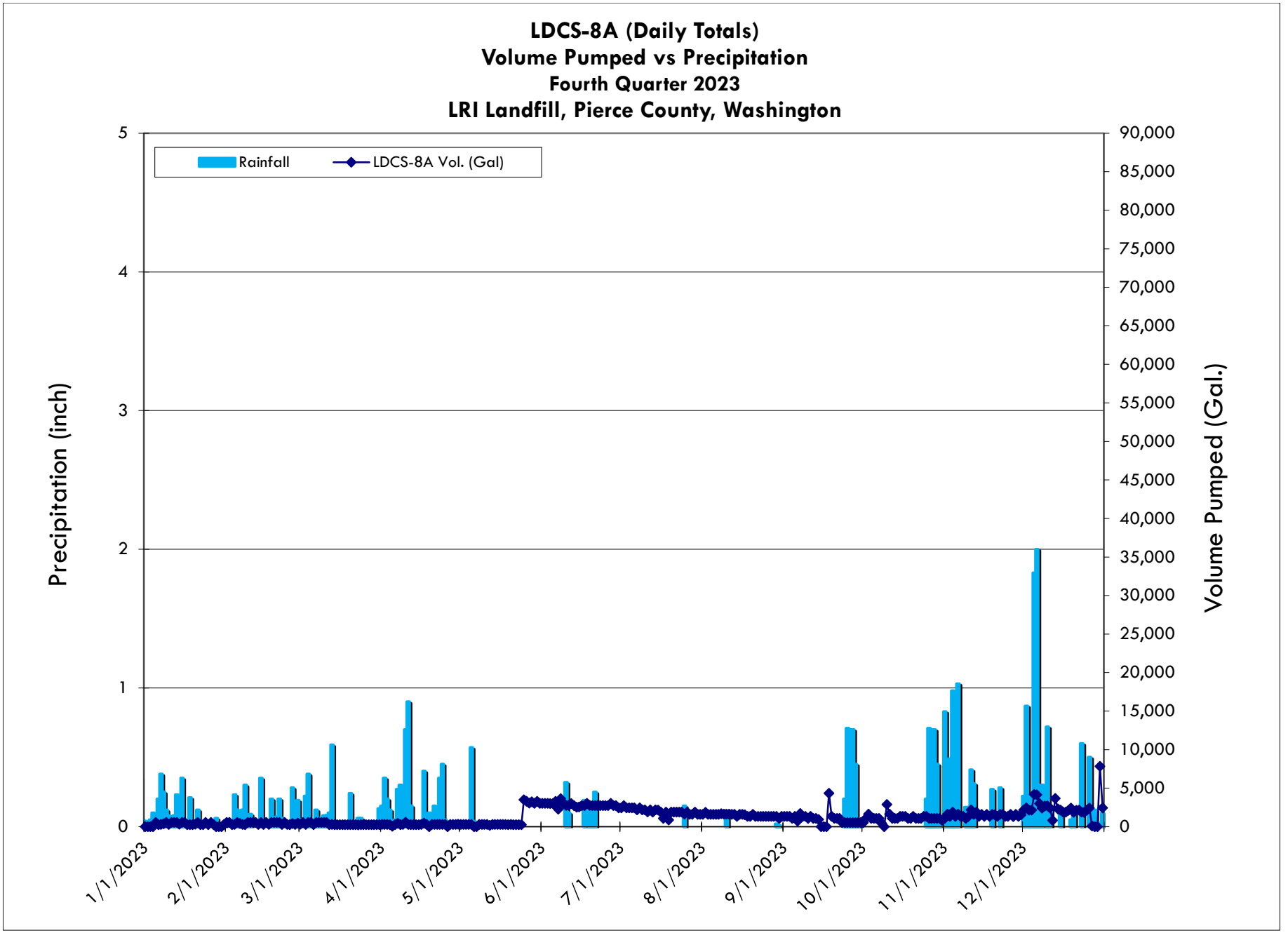

LDCS-4A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-4A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
5
4
3
2
1
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

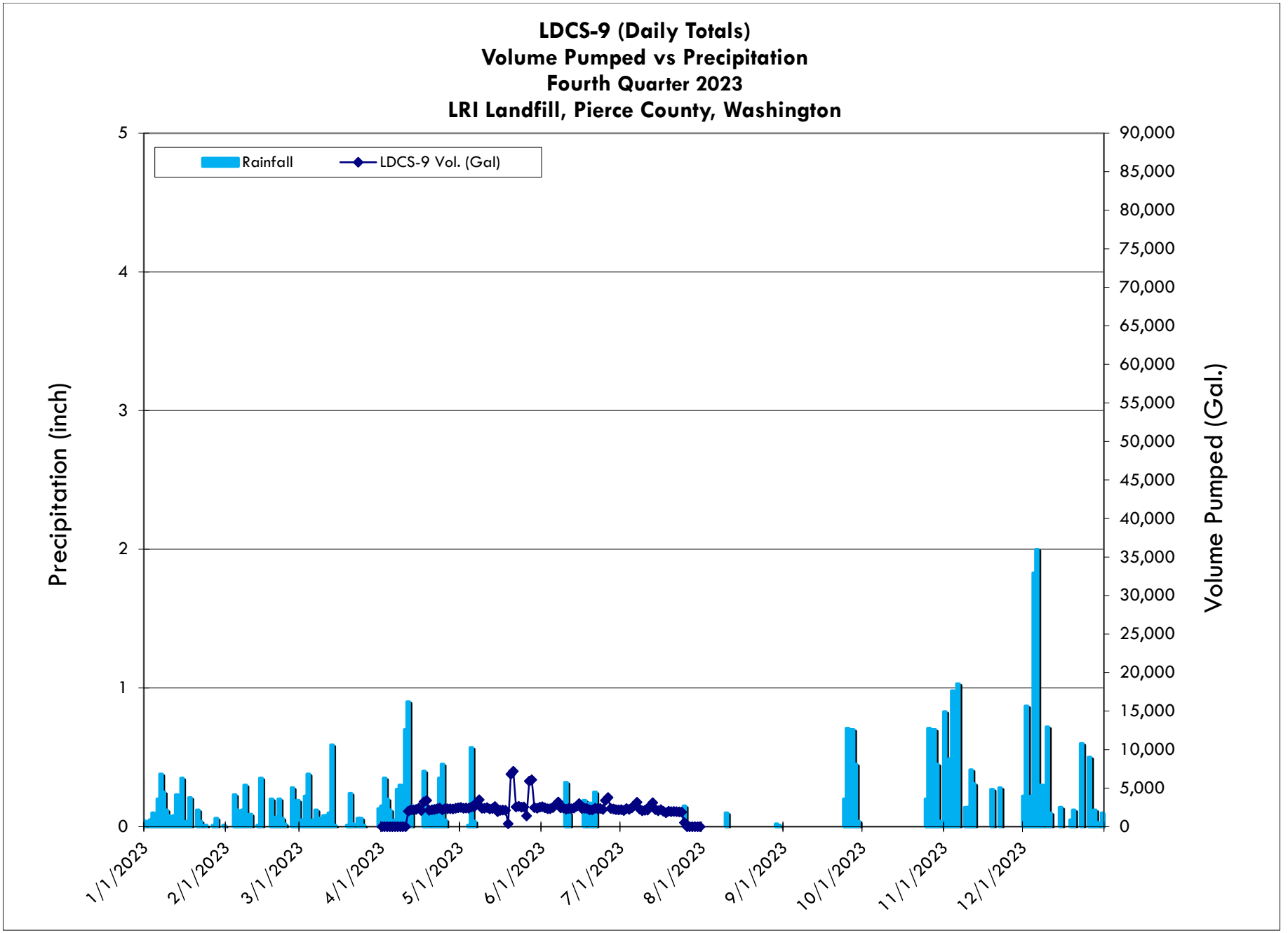

LDCS-4B (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-4B Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

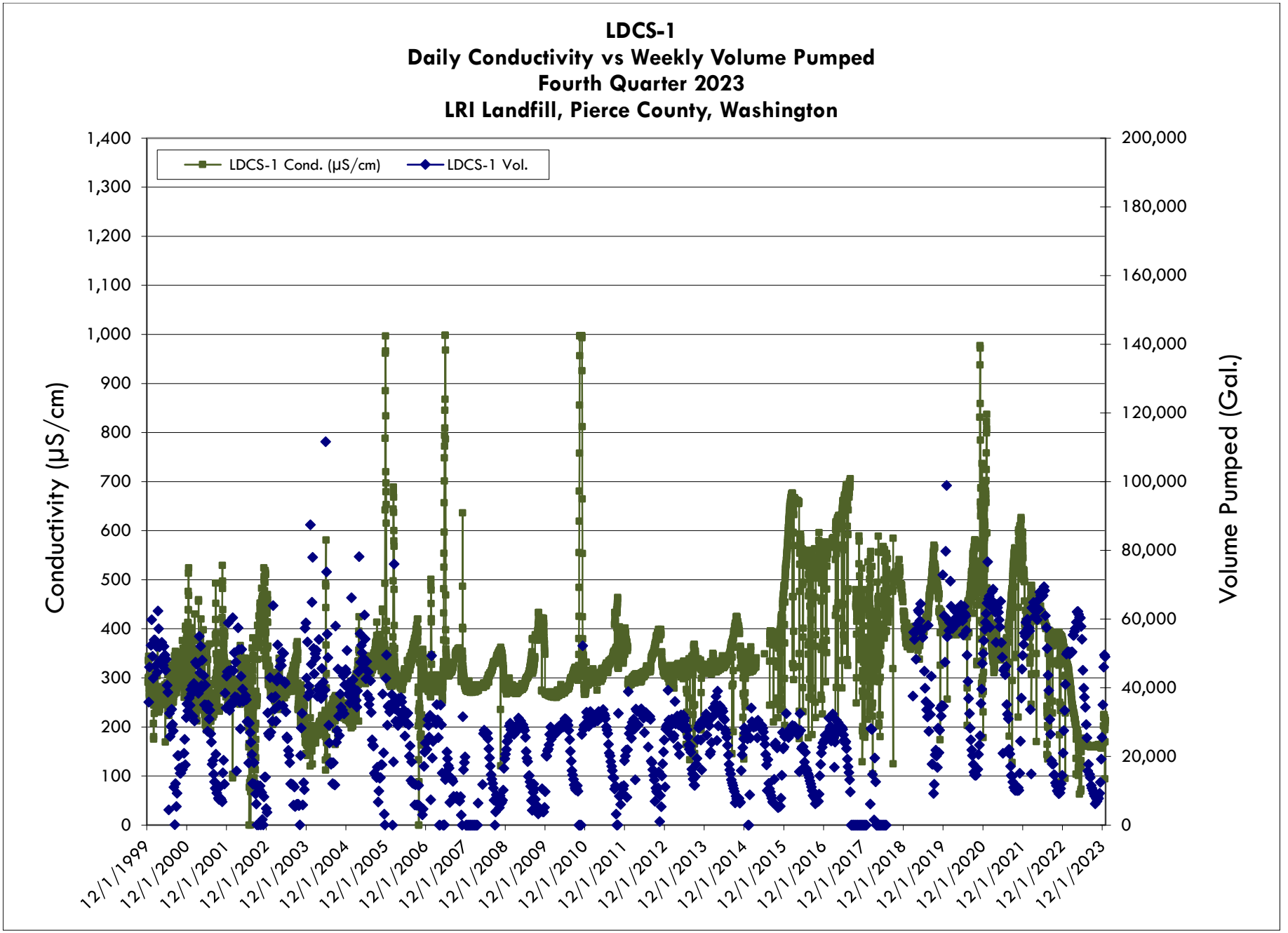

LDCS-5 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-5 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023


LDCS-6 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-6 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

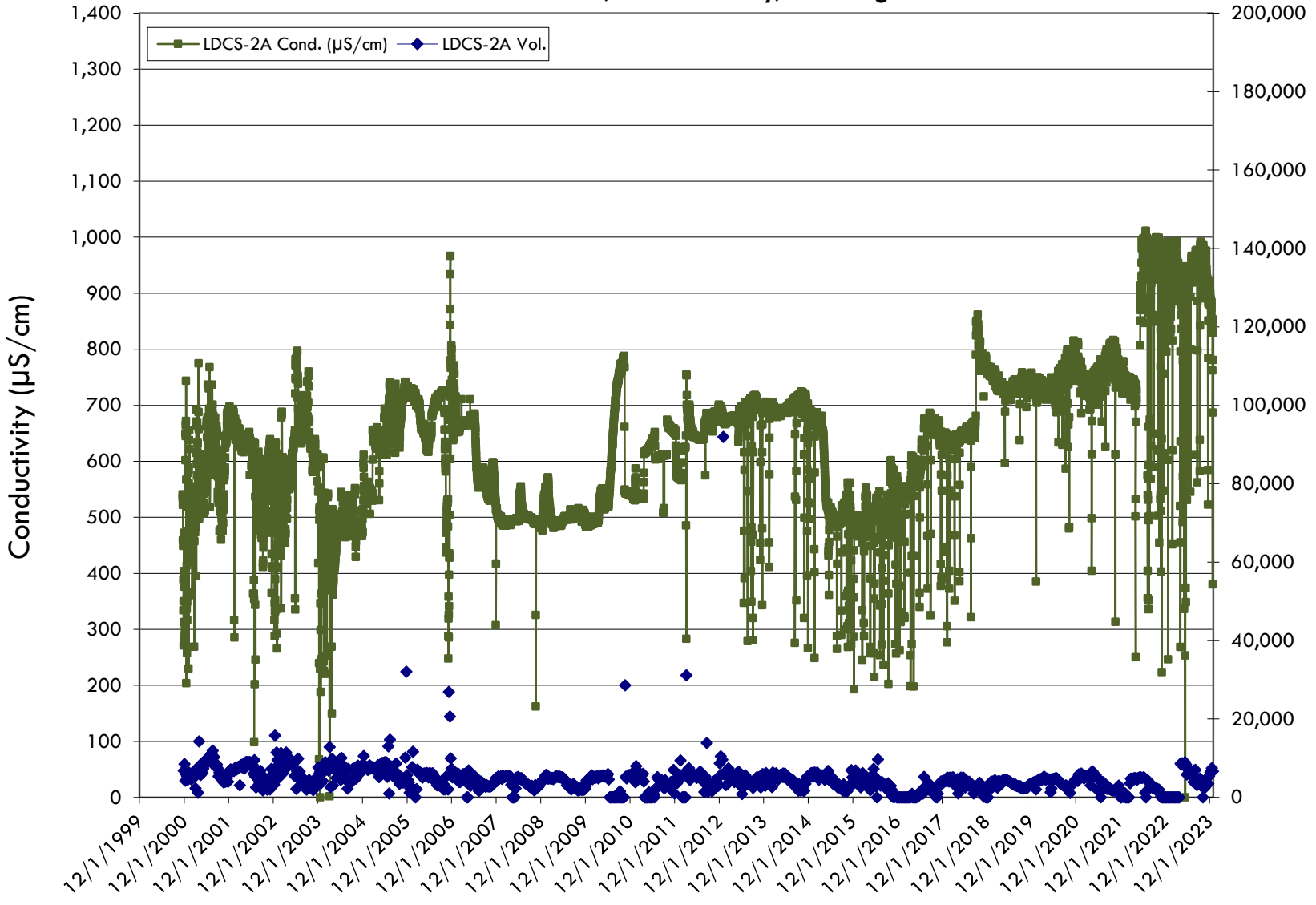

LDCS-7 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-7 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

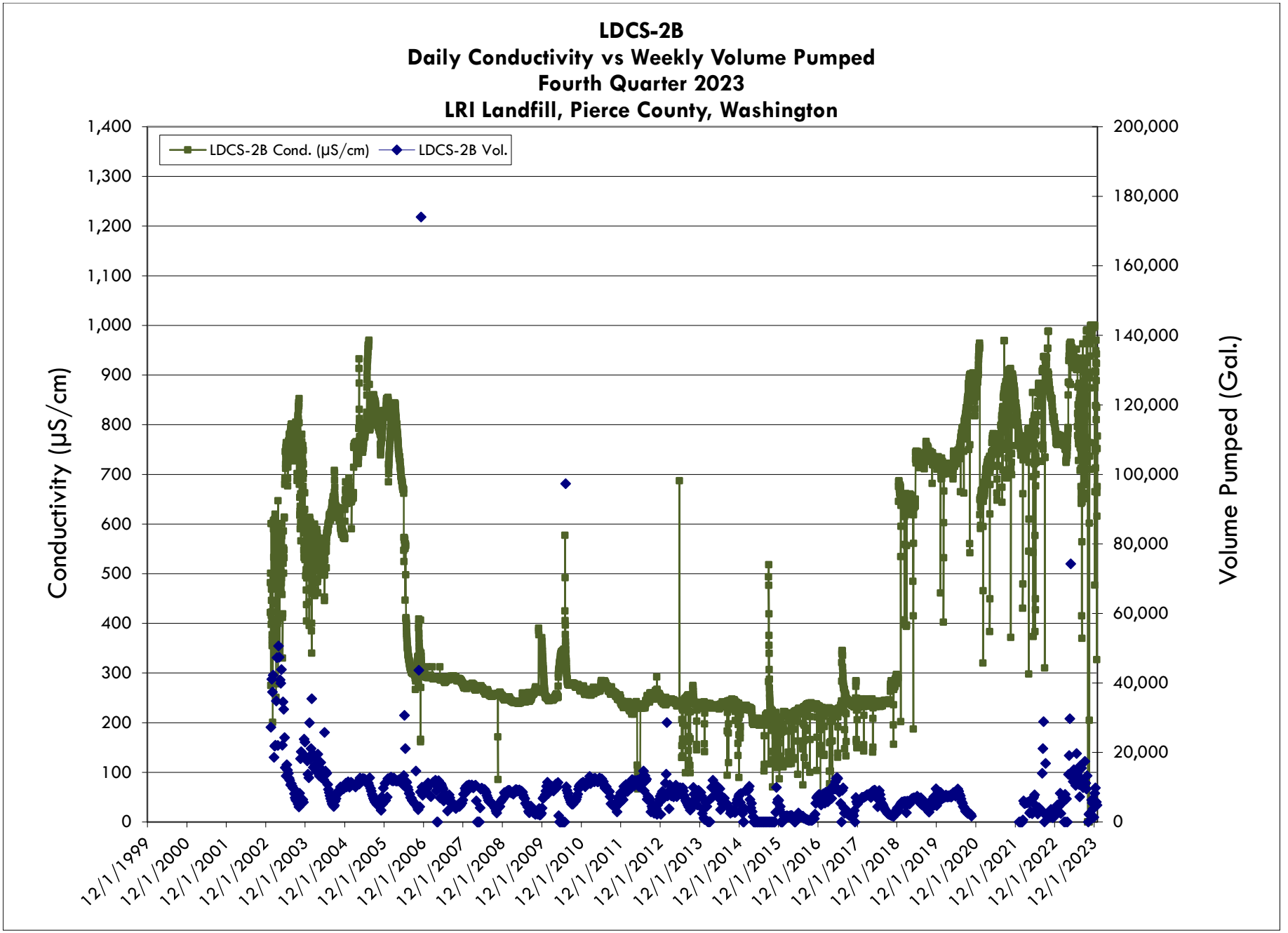

LDCS-8A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-8A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
55,000
60,000
65,000
70,000
75,000
80,000
85,000
90,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023

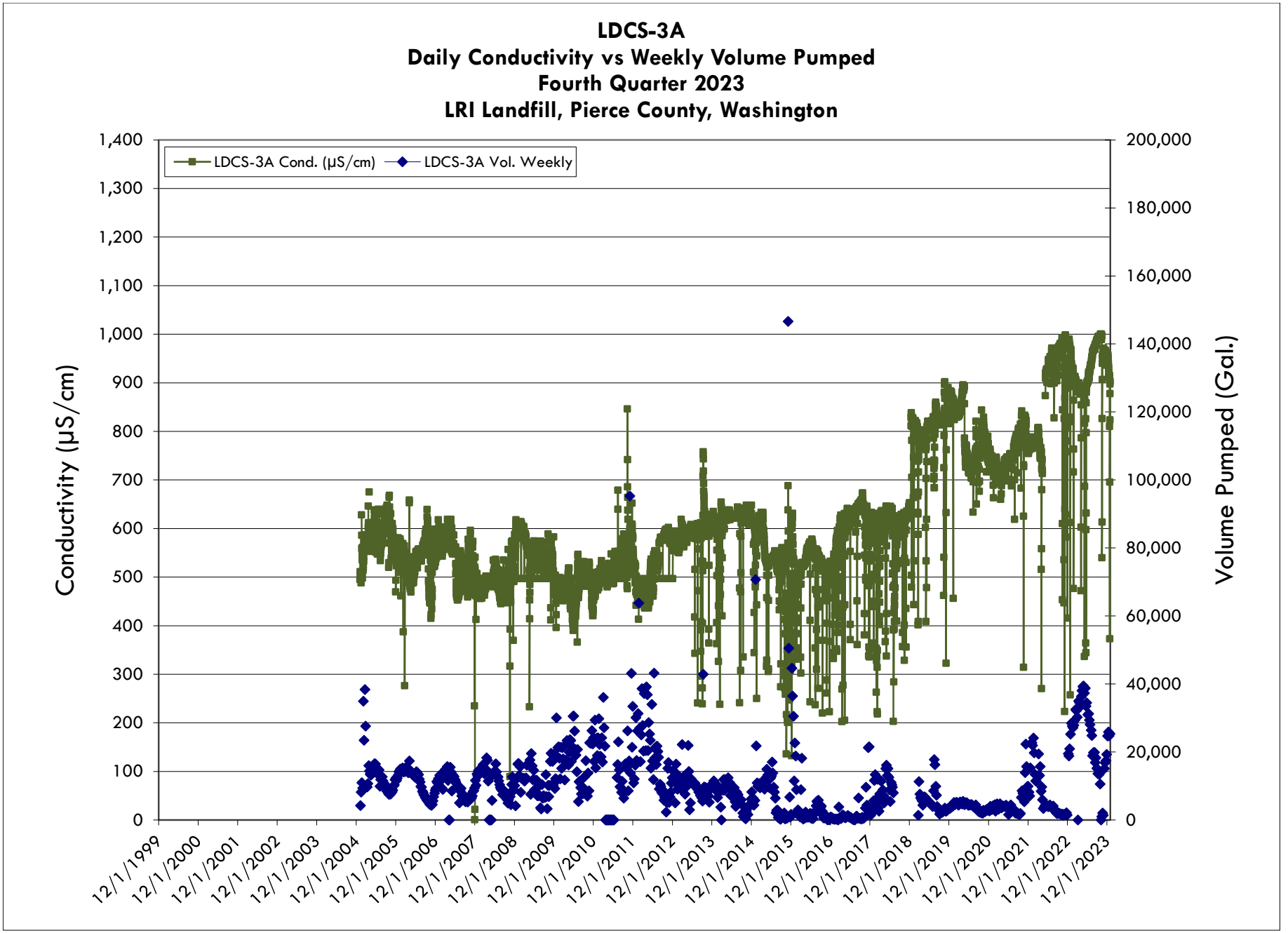

LDCS-9 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-9 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
55,000
60,000
65,000
70,000
75,000
80,000
85,000
90,000
1/1/2023
2/1/2023
3/1/2023
4/1/2023
5/1/2023
6/1/2023
7/1/2023
8/1/2023
9/1/2023
10/1/2023
11/1/2023
12/1/2023


LDCS-1
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-1 Cond. (µS/cm)
LDCS-1 Vol.
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023

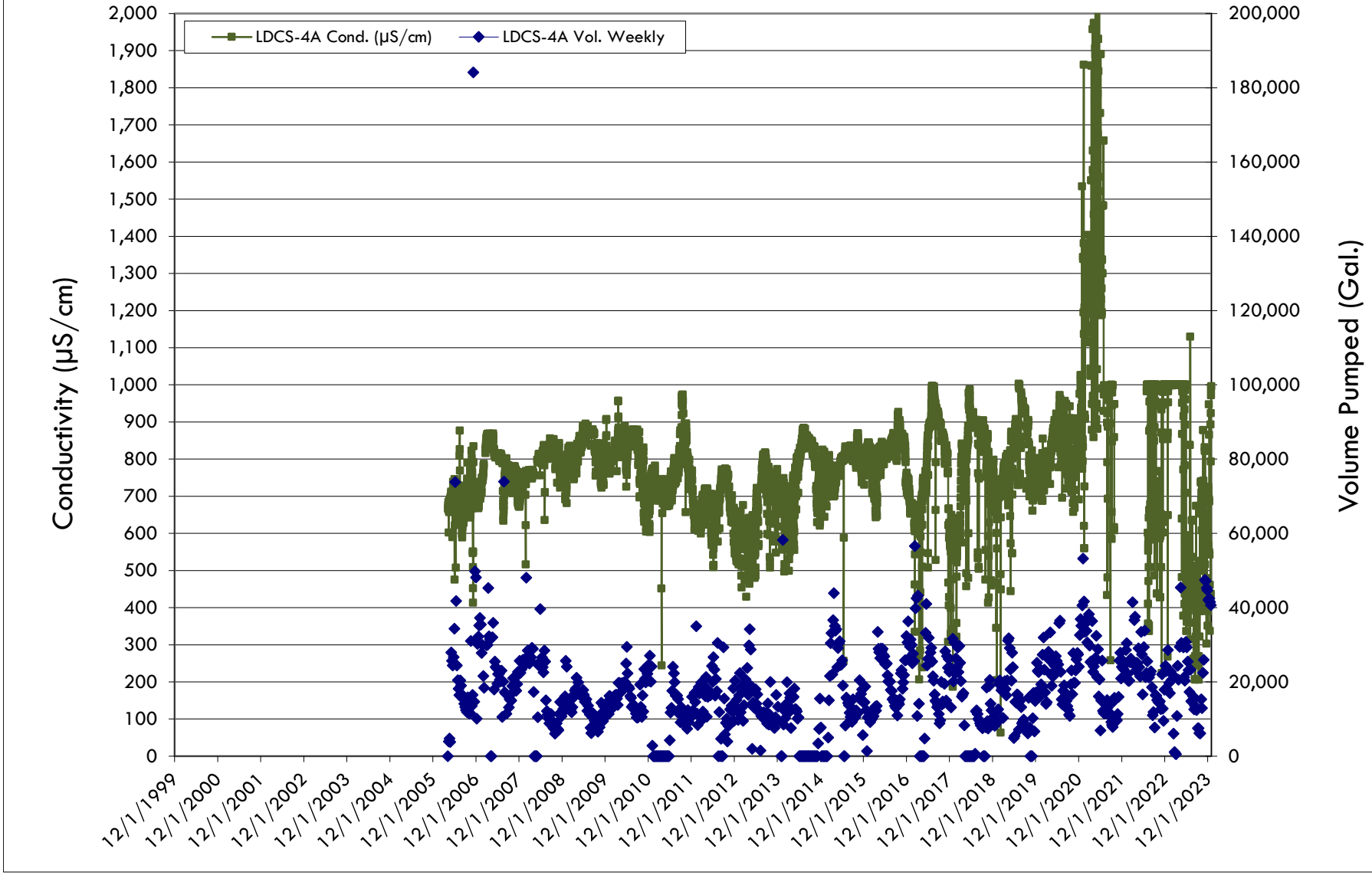
LDCS-2A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

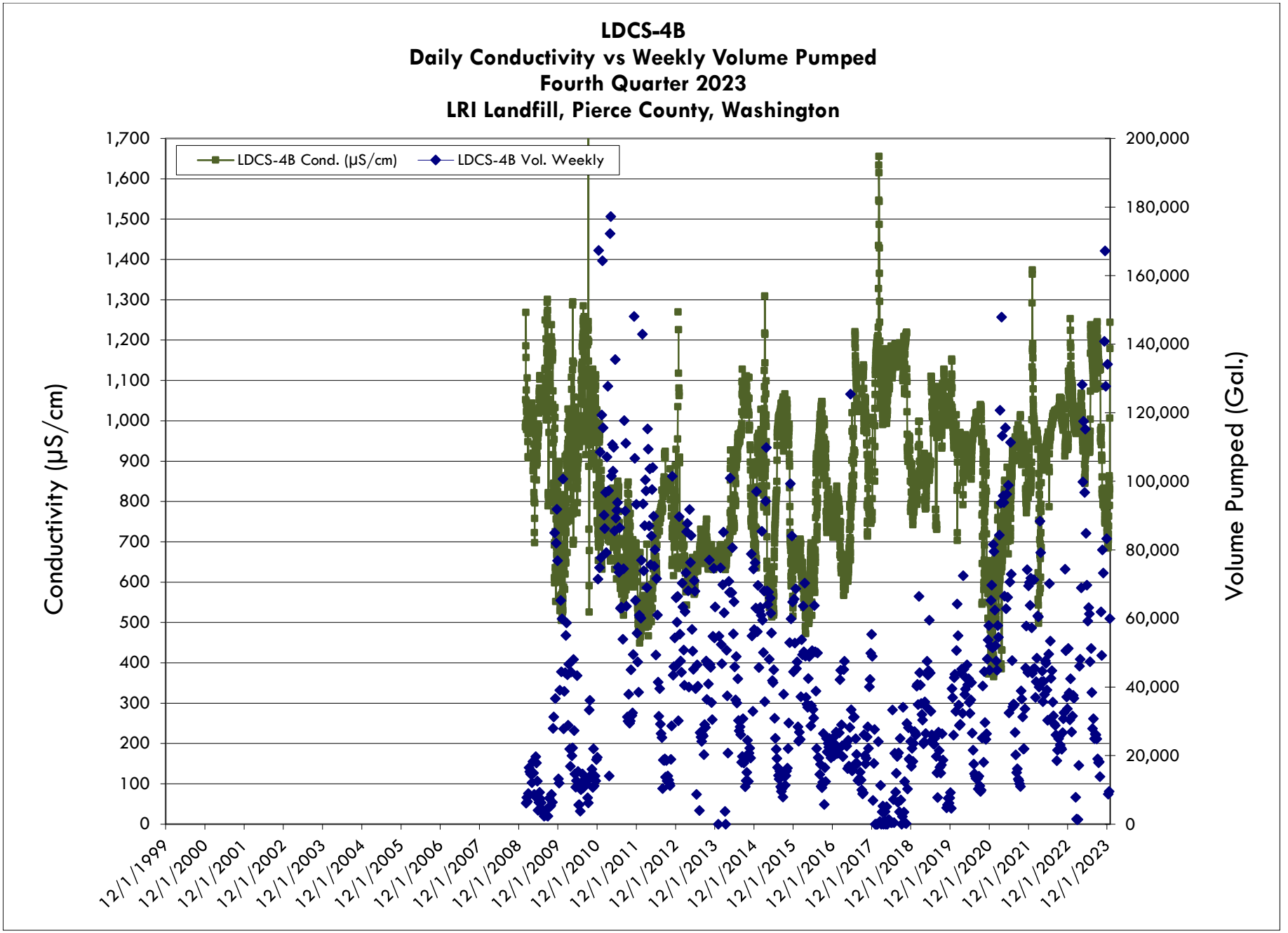


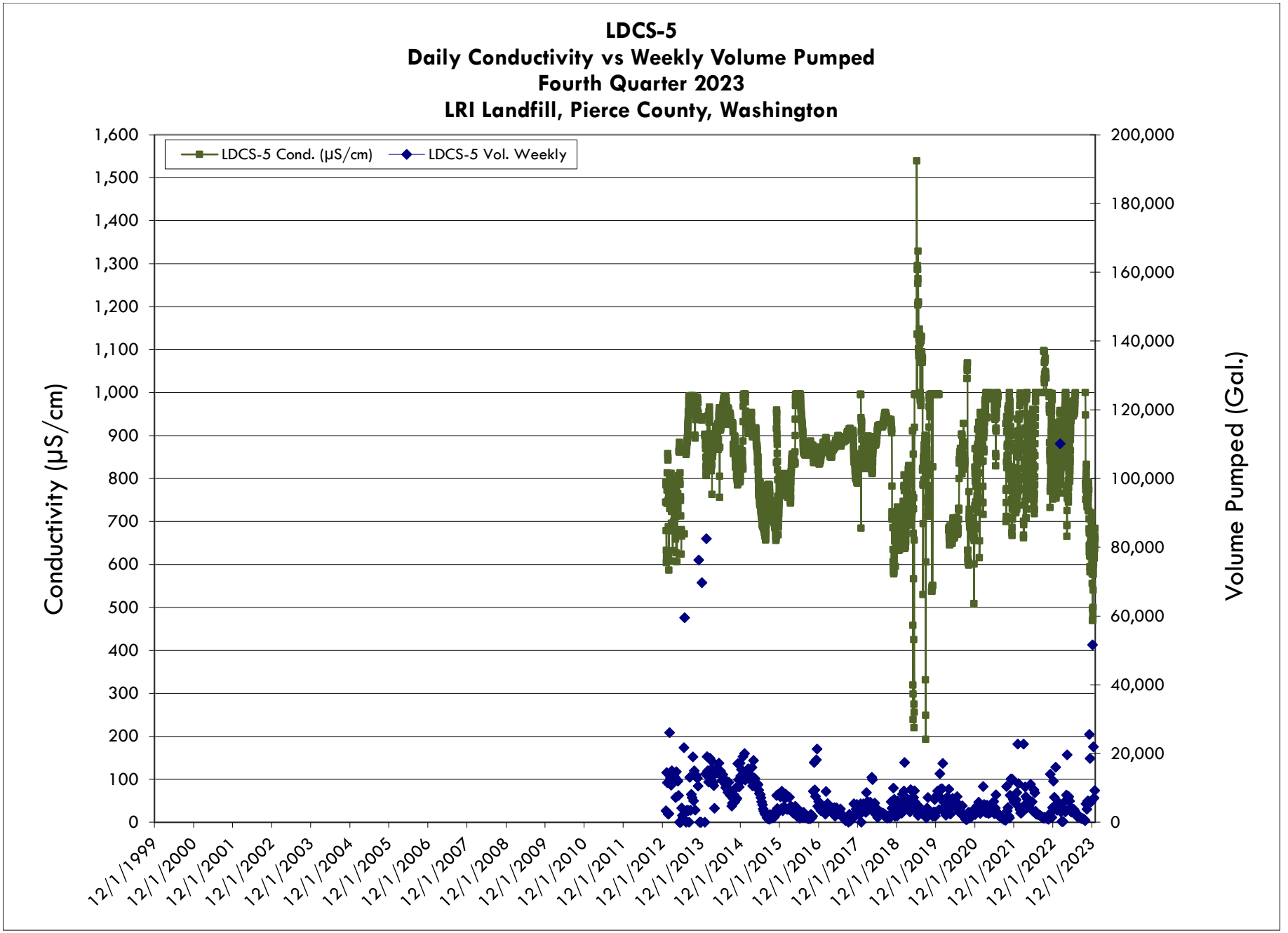

LDCS-2B
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-2B Cond. (µS/cm)
LDCS-2B Vol.
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023

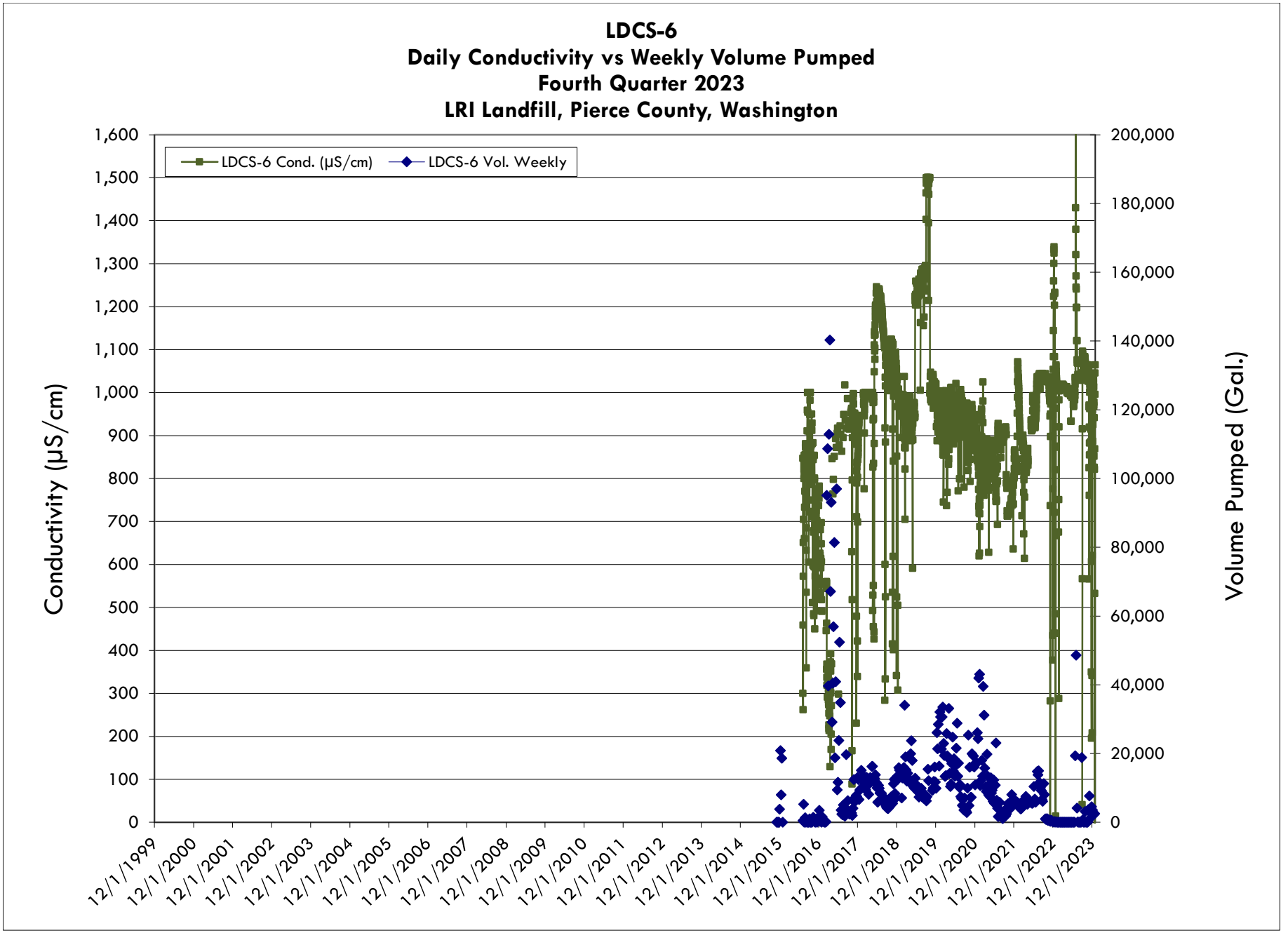

LDCS-3A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-3A Cond. (µS/cm)
LDCS-3A Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023

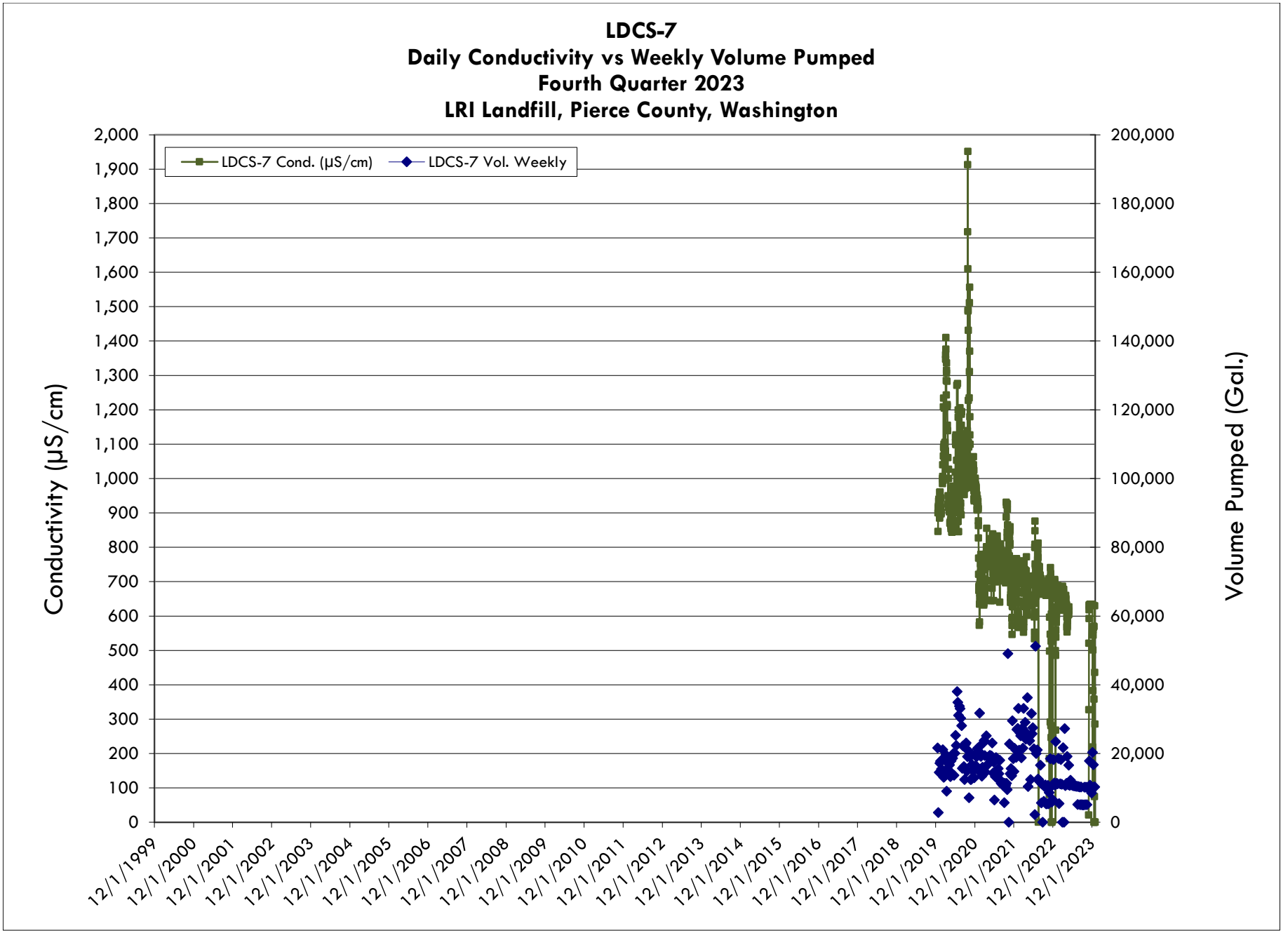
LDCS-4A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

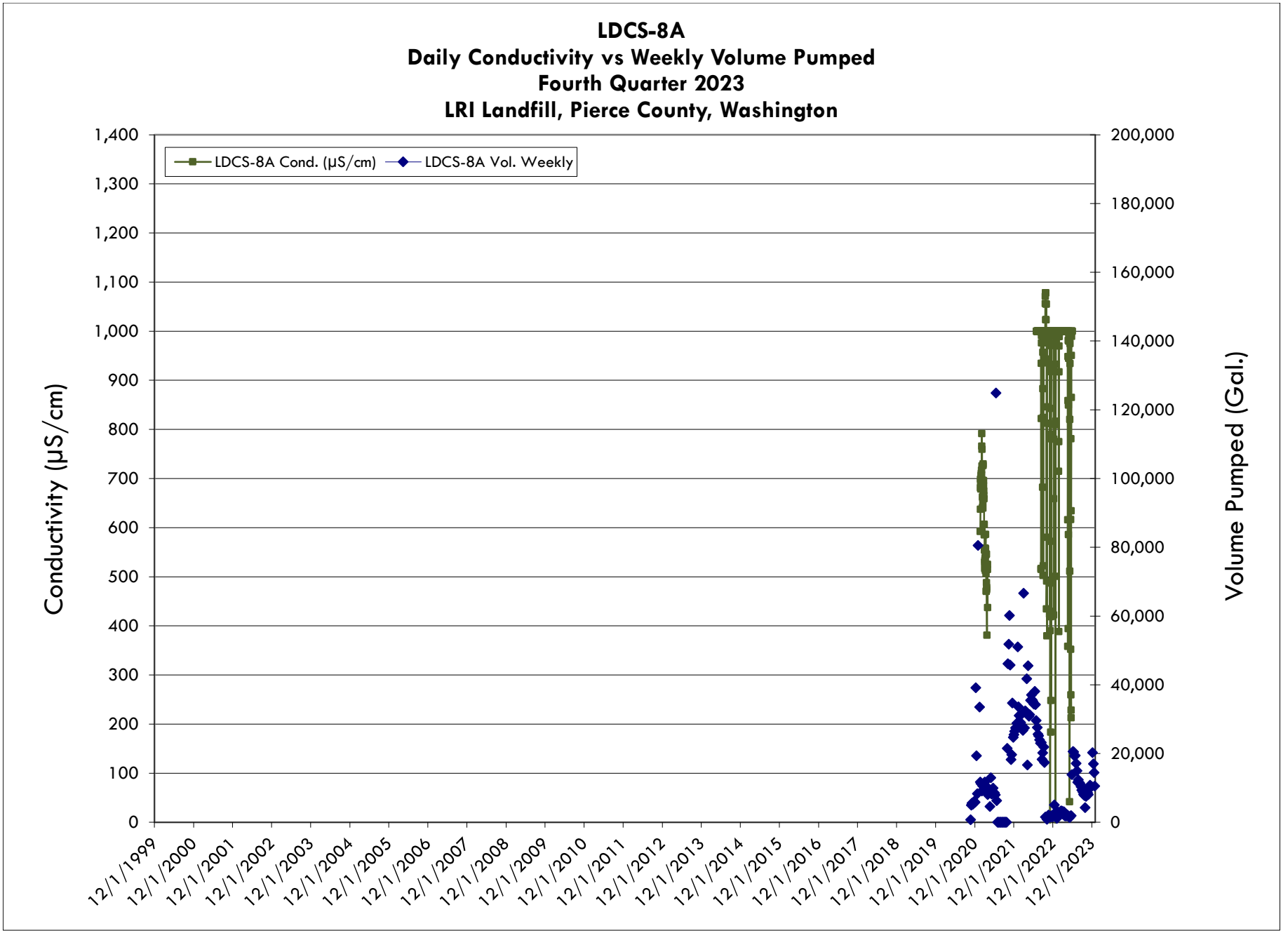


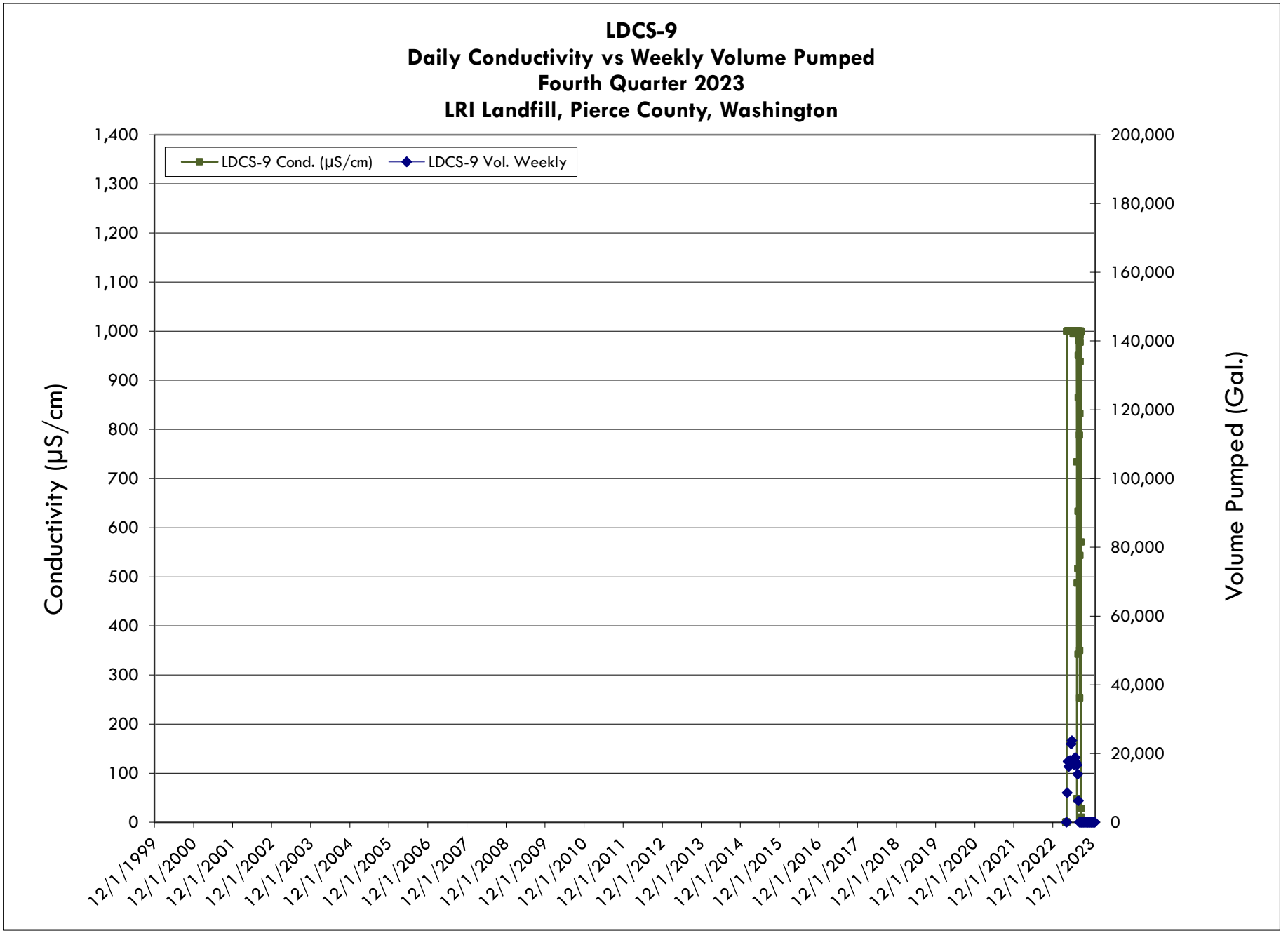

LDCS-4B
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-4B Cond. (µS/cm)
LDCS-4B Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023


LDCS-5
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-5 Cond. (µS/cm)
LDCS-5 Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023


LDCS-6
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-6 Cond. (µS/cm)
LDCS-6 Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023

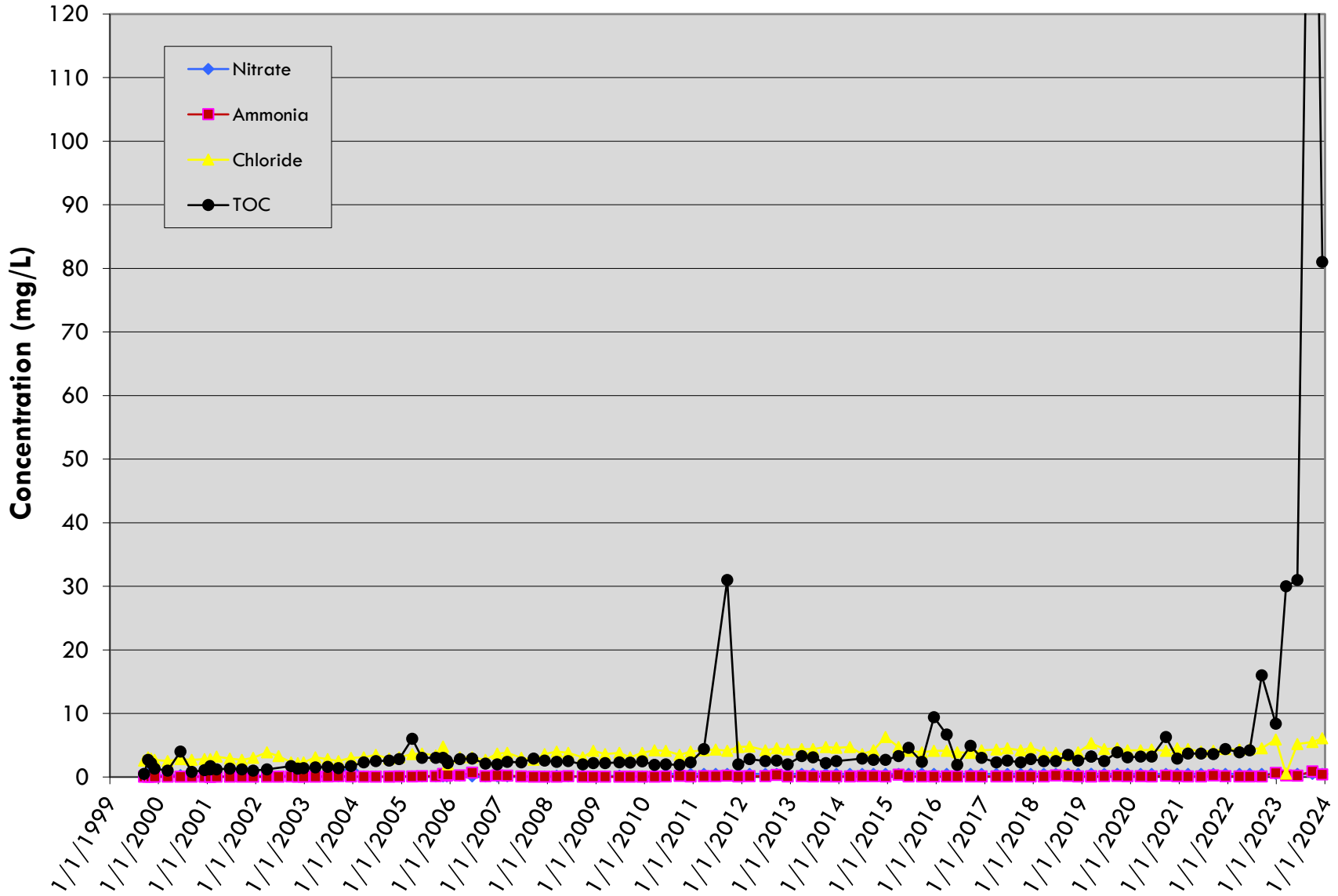

LDCS-7
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-7 Cond. (µS/cm)
LDCS-7 Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
2,000
1,900
1,800
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023


LDCS-8A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-8A Cond. (µS/cm)
LDCS-8A Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023

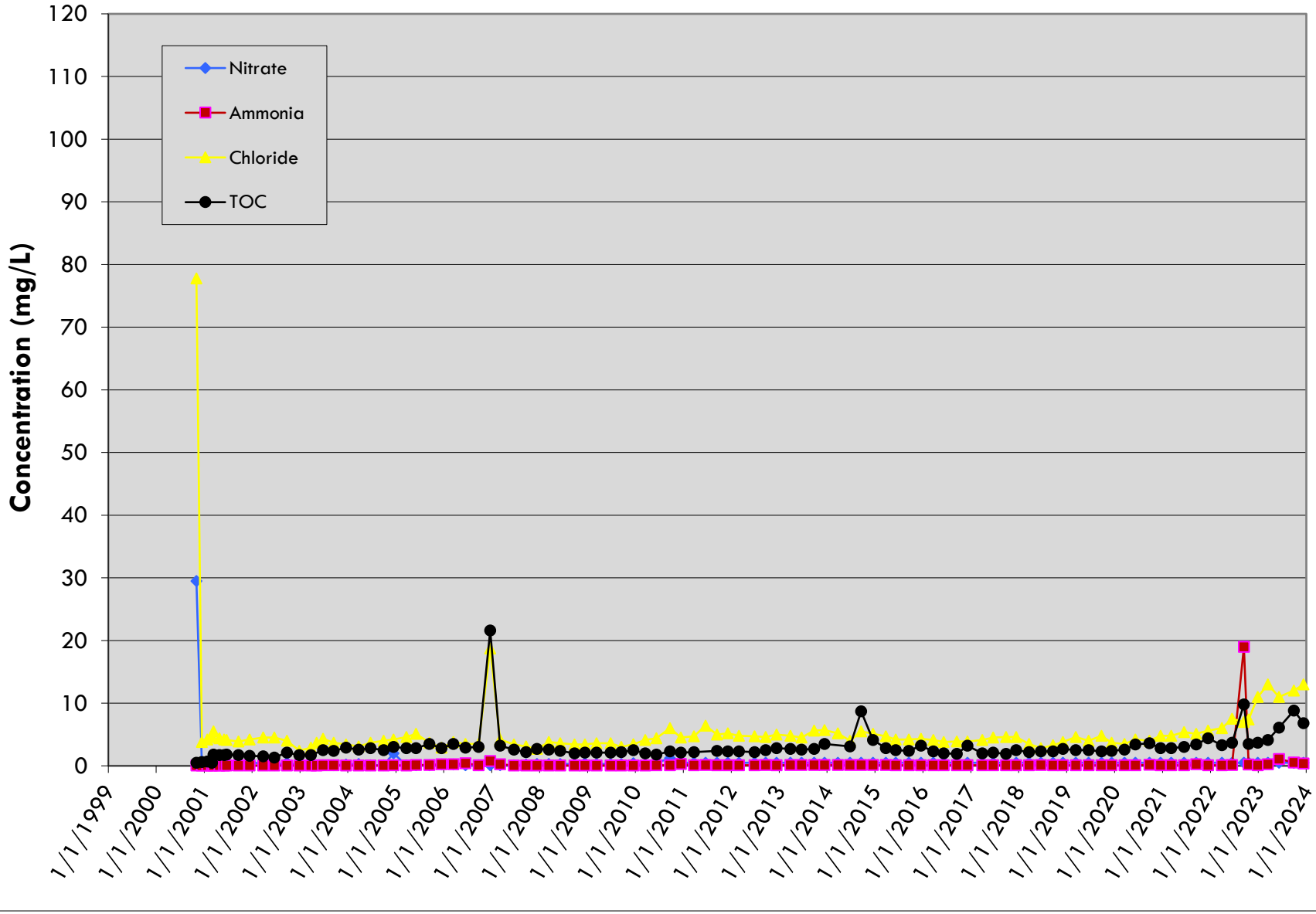

LDCS-9
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington
LDCS-9 Cond. (µS/cm)
LDCS-9 Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/1/1999
12/1/2000
12/1/2001
12/1/2002
12/1/2003
12/1/2004
12/1/2005
12/1/2006
12/1/2007
12/1/2008
12/1/2009
12/1/2010
12/1/2011
12/1/2012
12/1/2013
12/1/2014
12/1/2015
12/1/2016
12/1/2017
12/1/2018
12/1/2019
12/1/2020
12/1/2021
12/1/2022
12/1/2023

LDCS-1

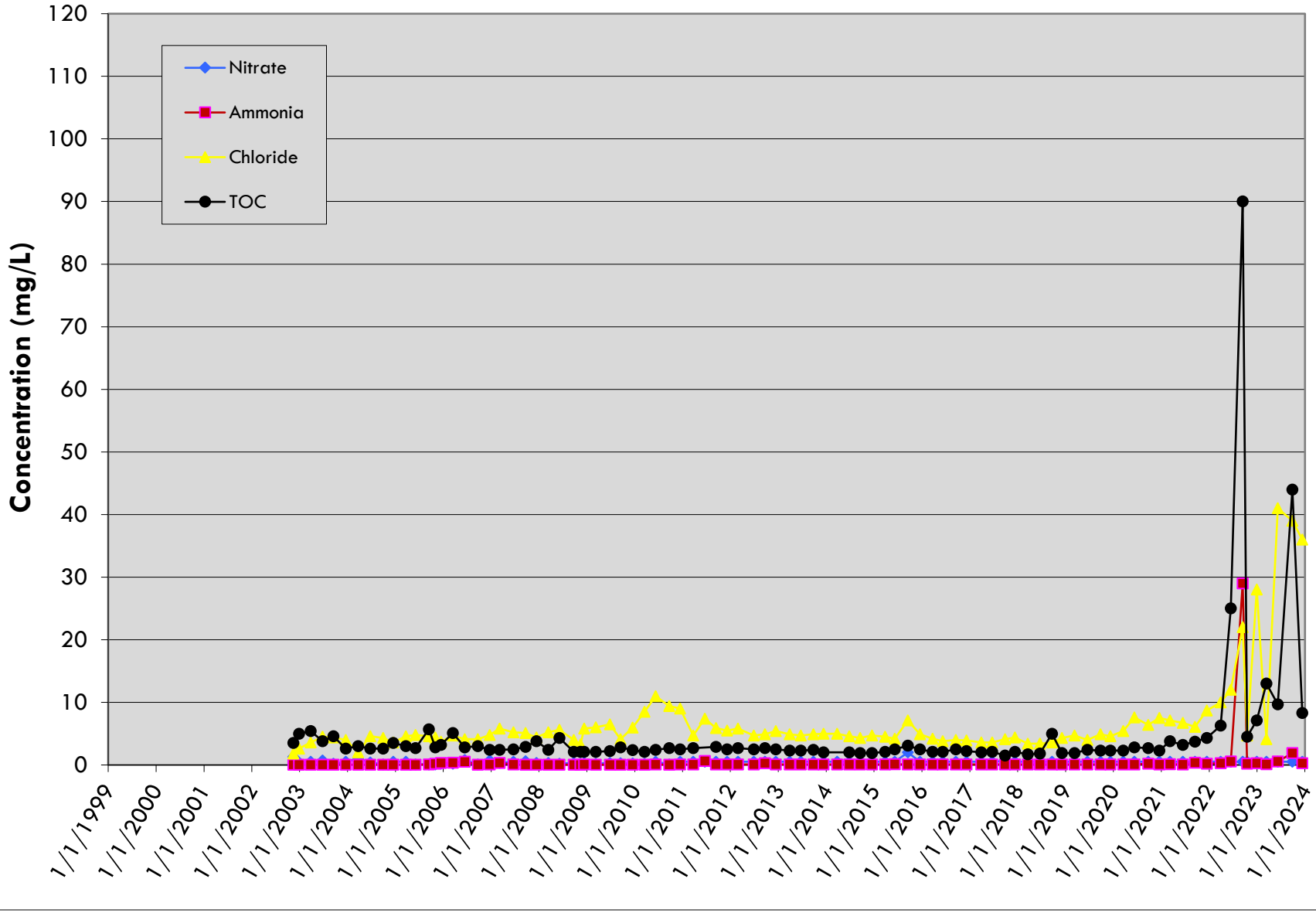
LRI Landfill, Pierce County, Washington



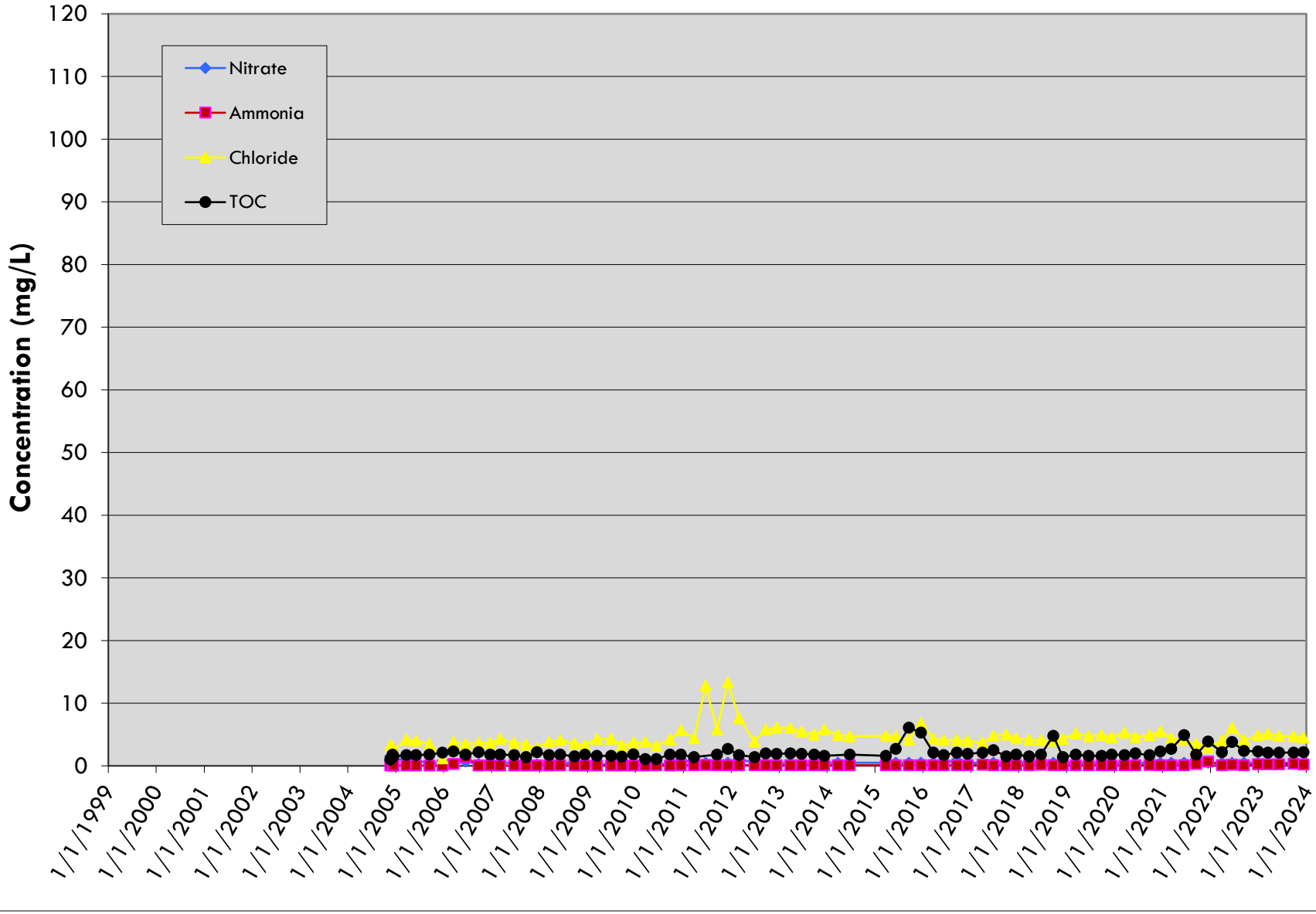
LDCS-2A
LRI Landfill, Pierce County, Washington



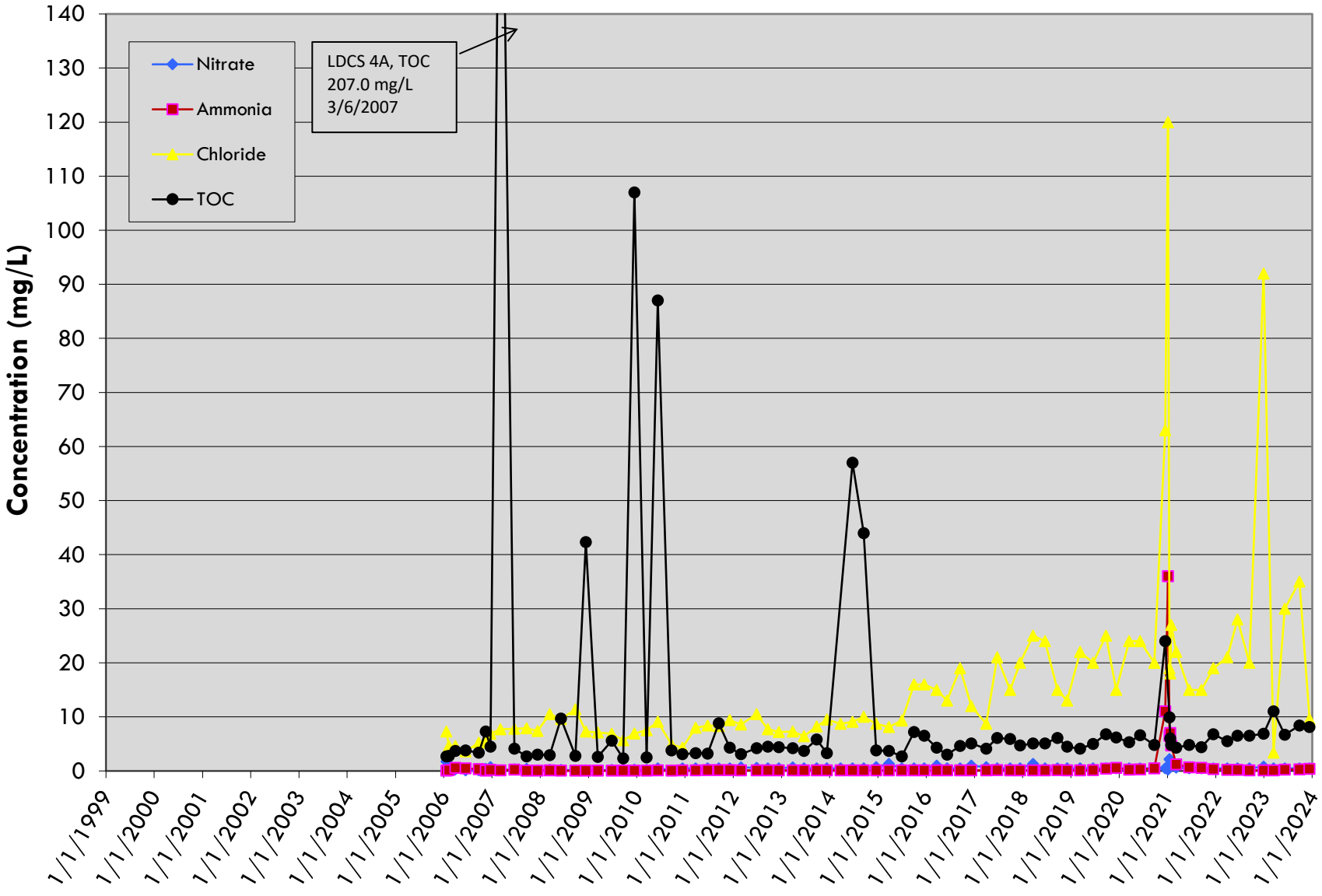
LDCS-2B
LRI Landfill, Pierce County, Washington



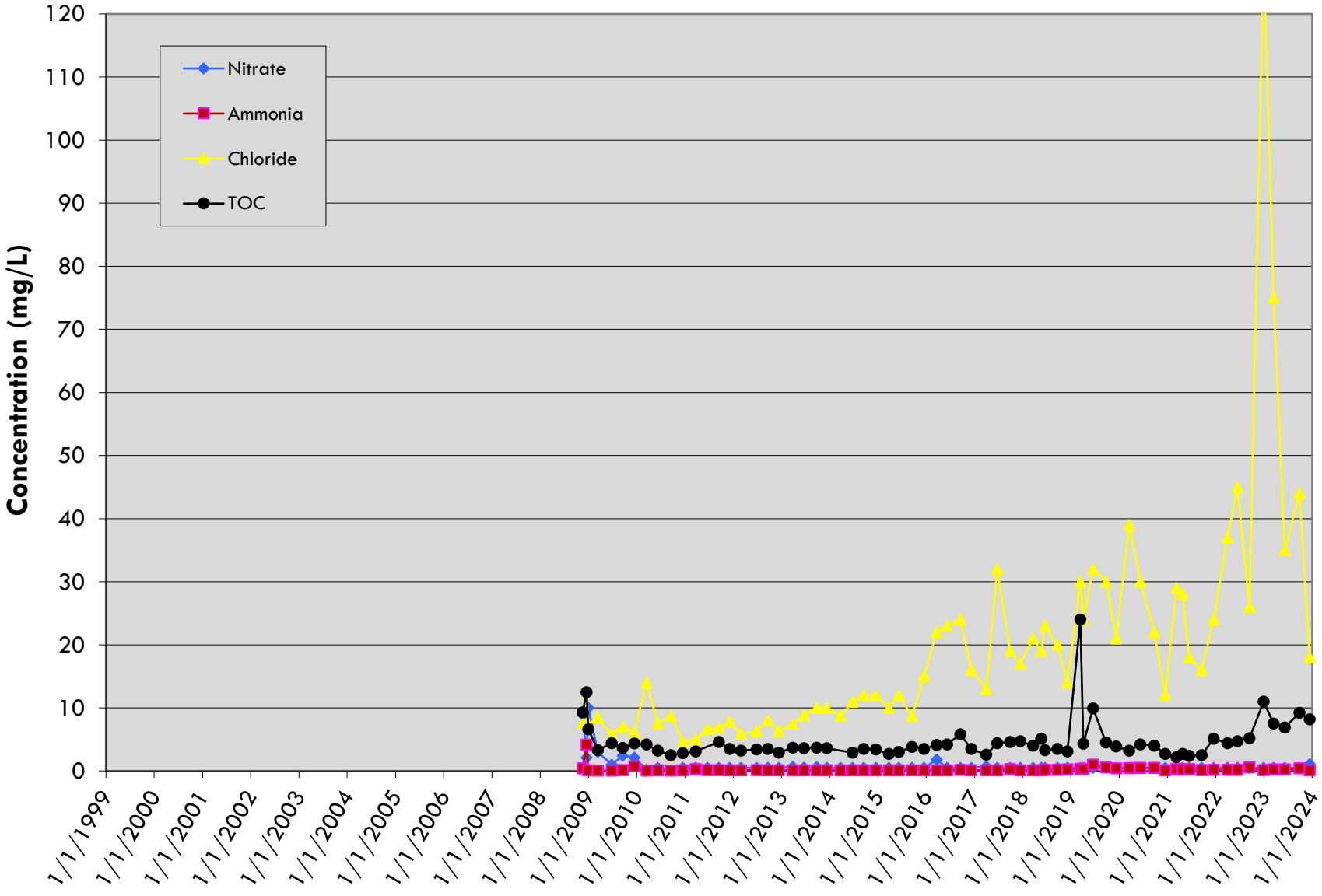
LDCS-3A
LRI Landfill, Pierce County, Washington



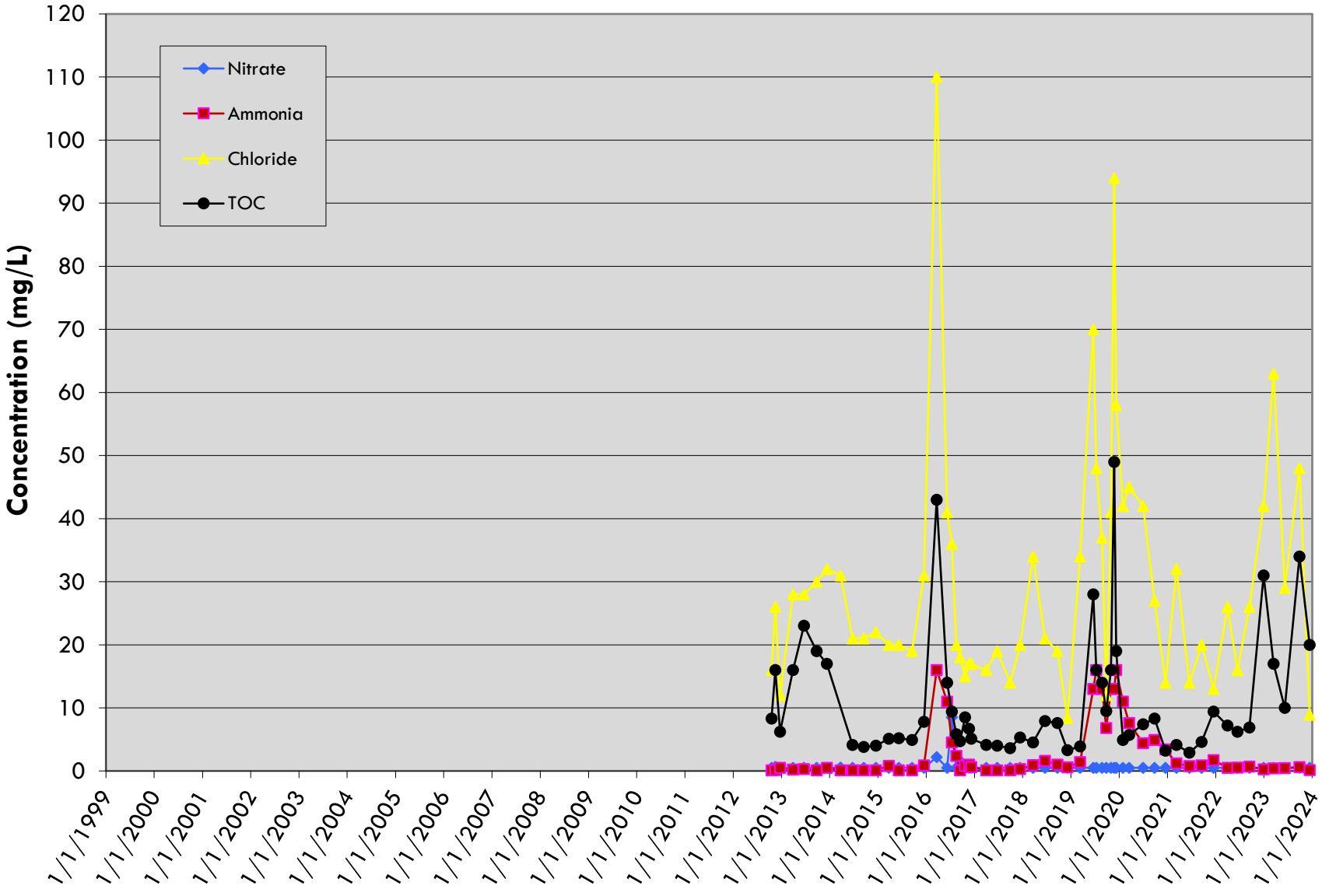
LDCS-4A
LRI Landfill, Pierce County, Washington



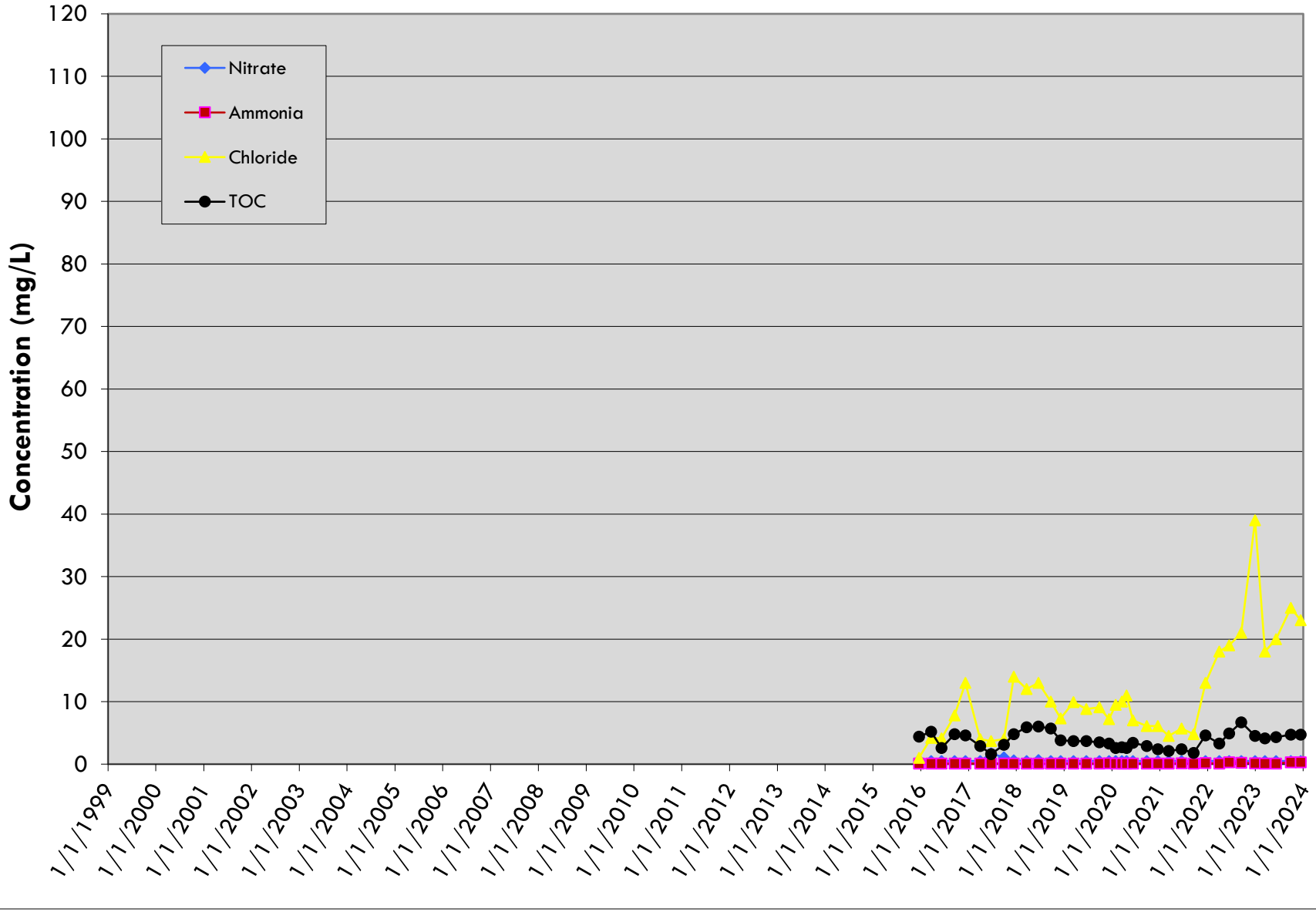
LDCS-4B
LRI Landfill, Pierce County, Washington

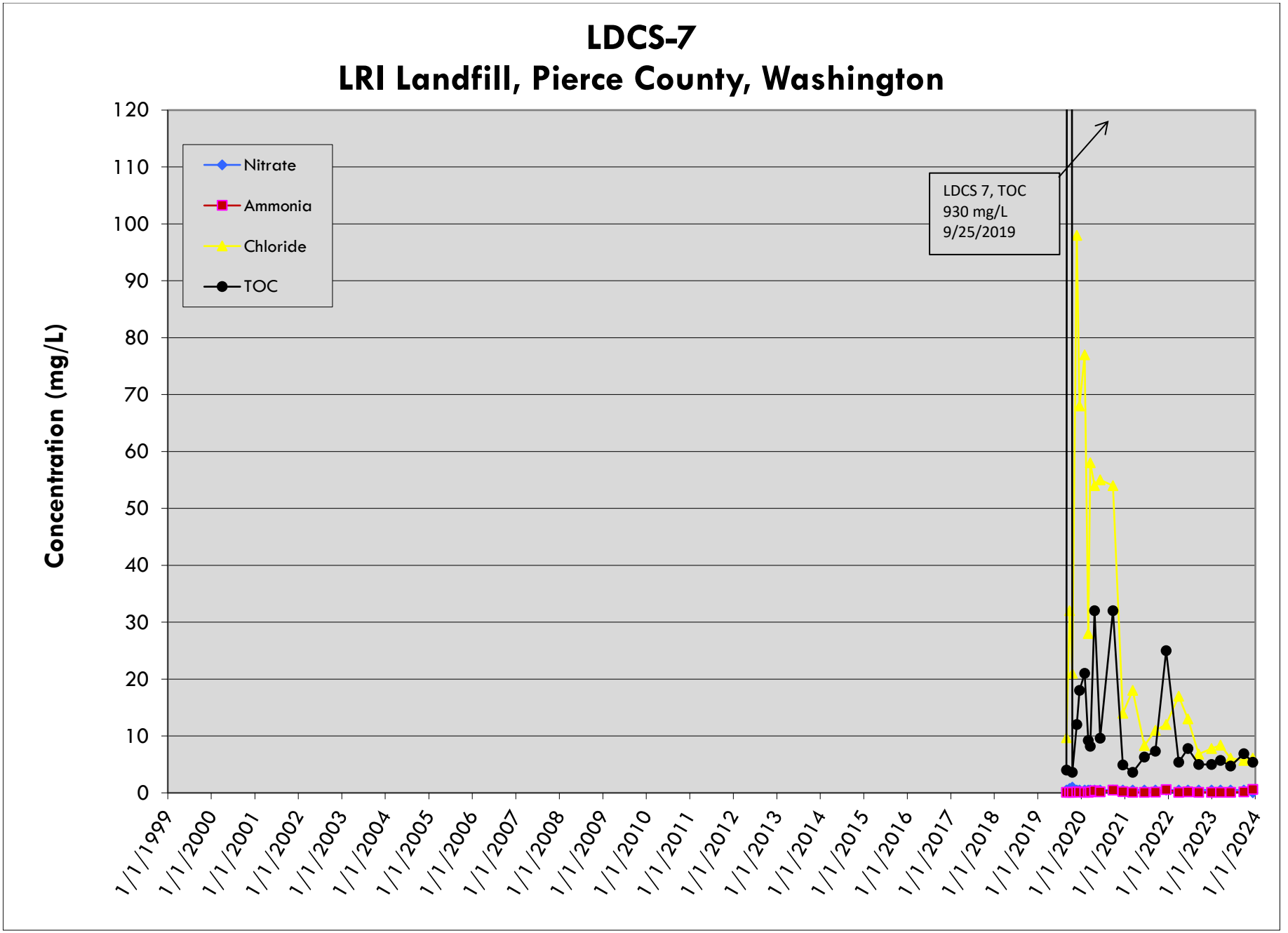


LDCS-5
LRI Landfill, Pierce County, Washington

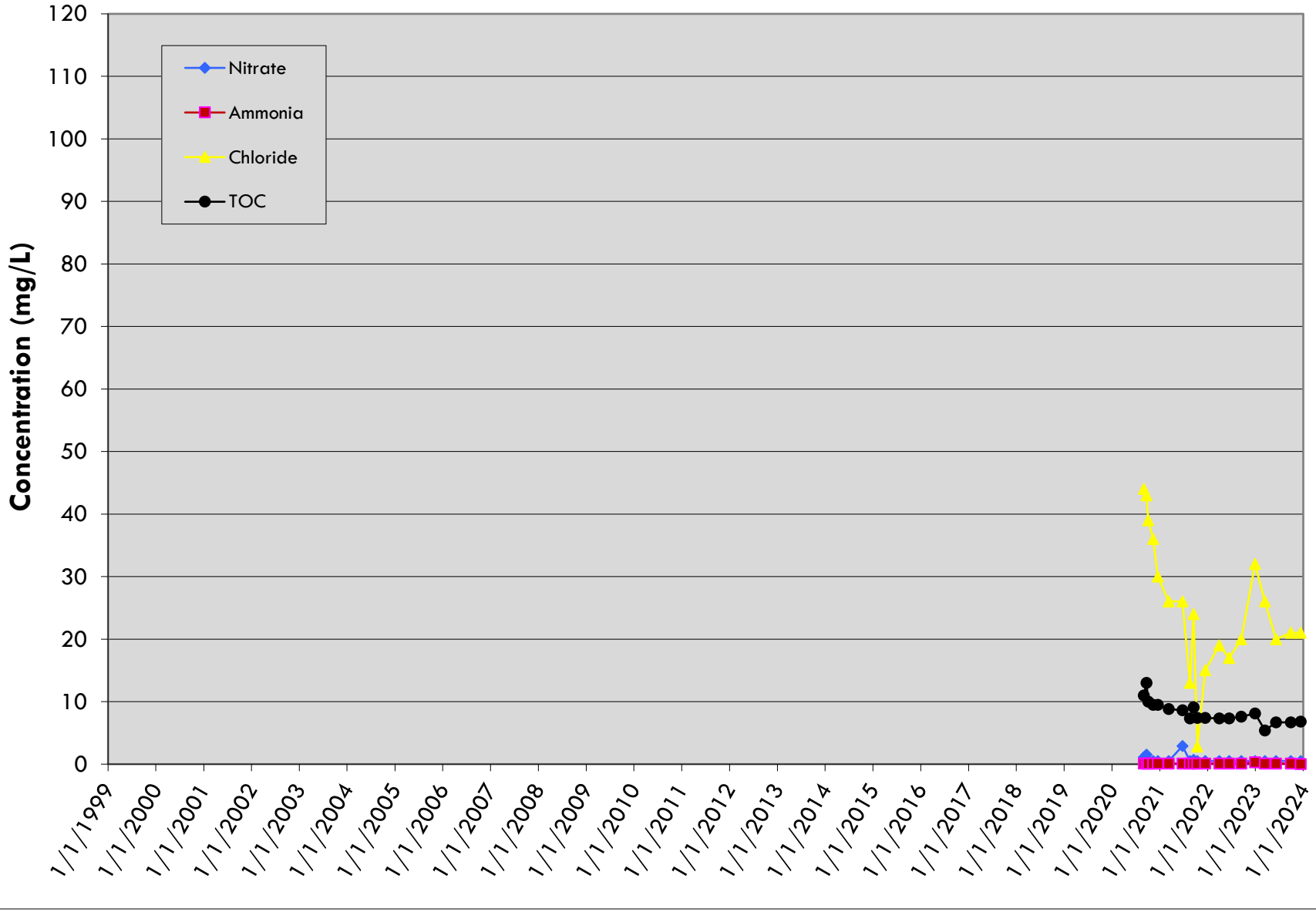


LDCS-6A
LRI Landfill, Pierce County, Washington

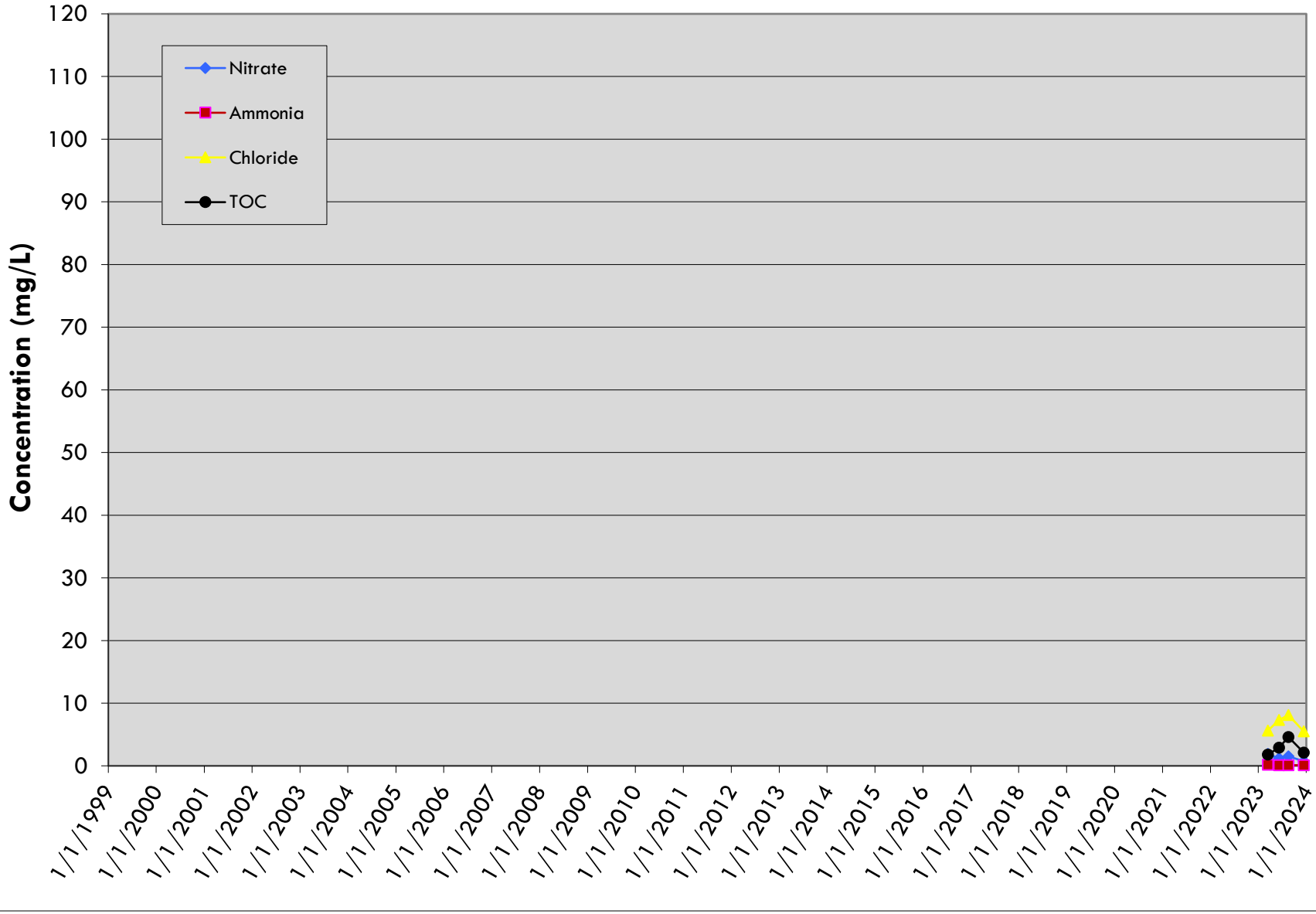


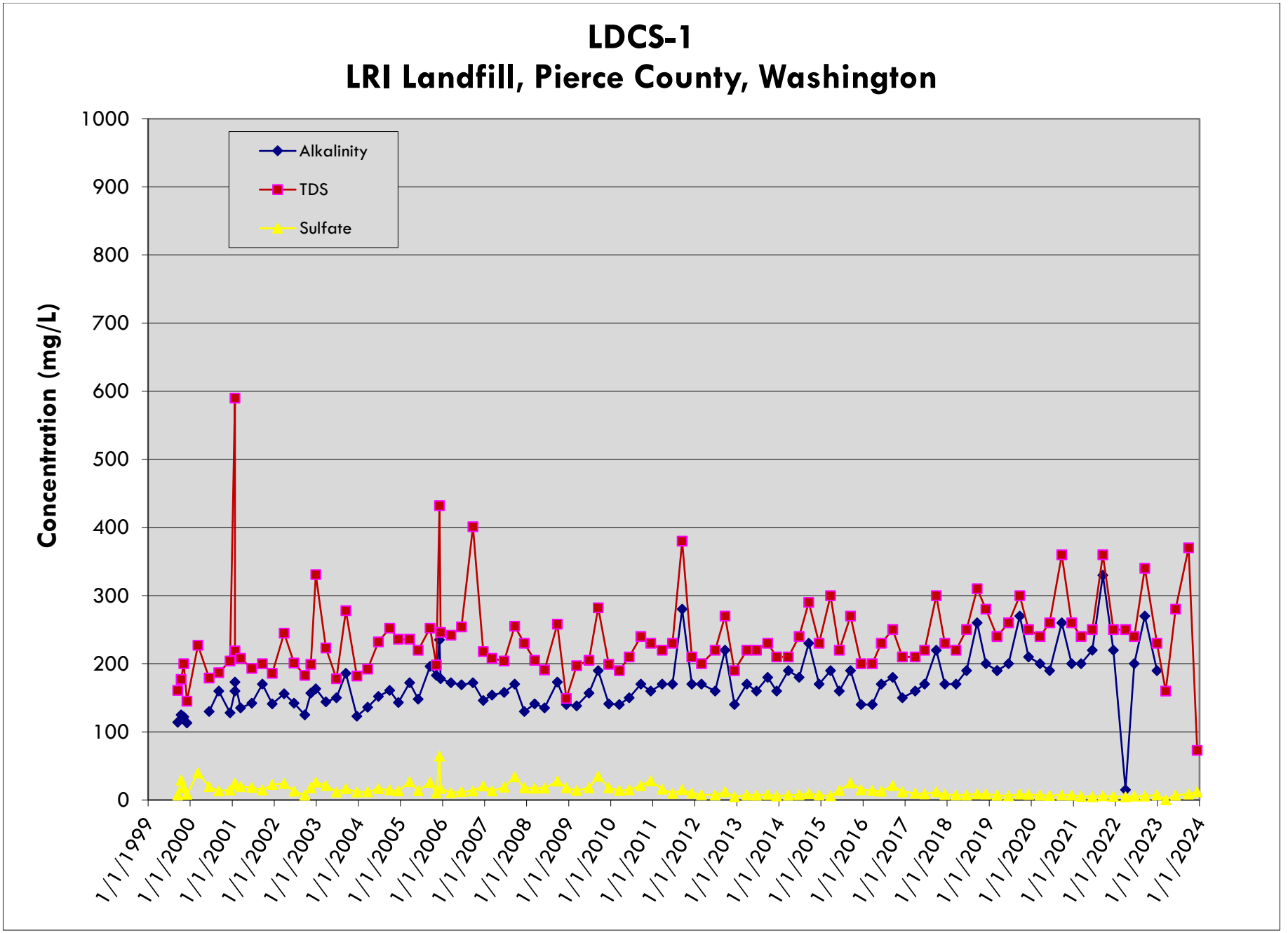

LDCS-7
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
120
110
100
90
80
70
60
50
40
30
20
10
0
Nitrate
Ammonia
Chloride
TOC
LDCS 7, TOC
930 mg/L
9/25/2019
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

LDCS-8
LRI Landfill, Pierce County, Washington

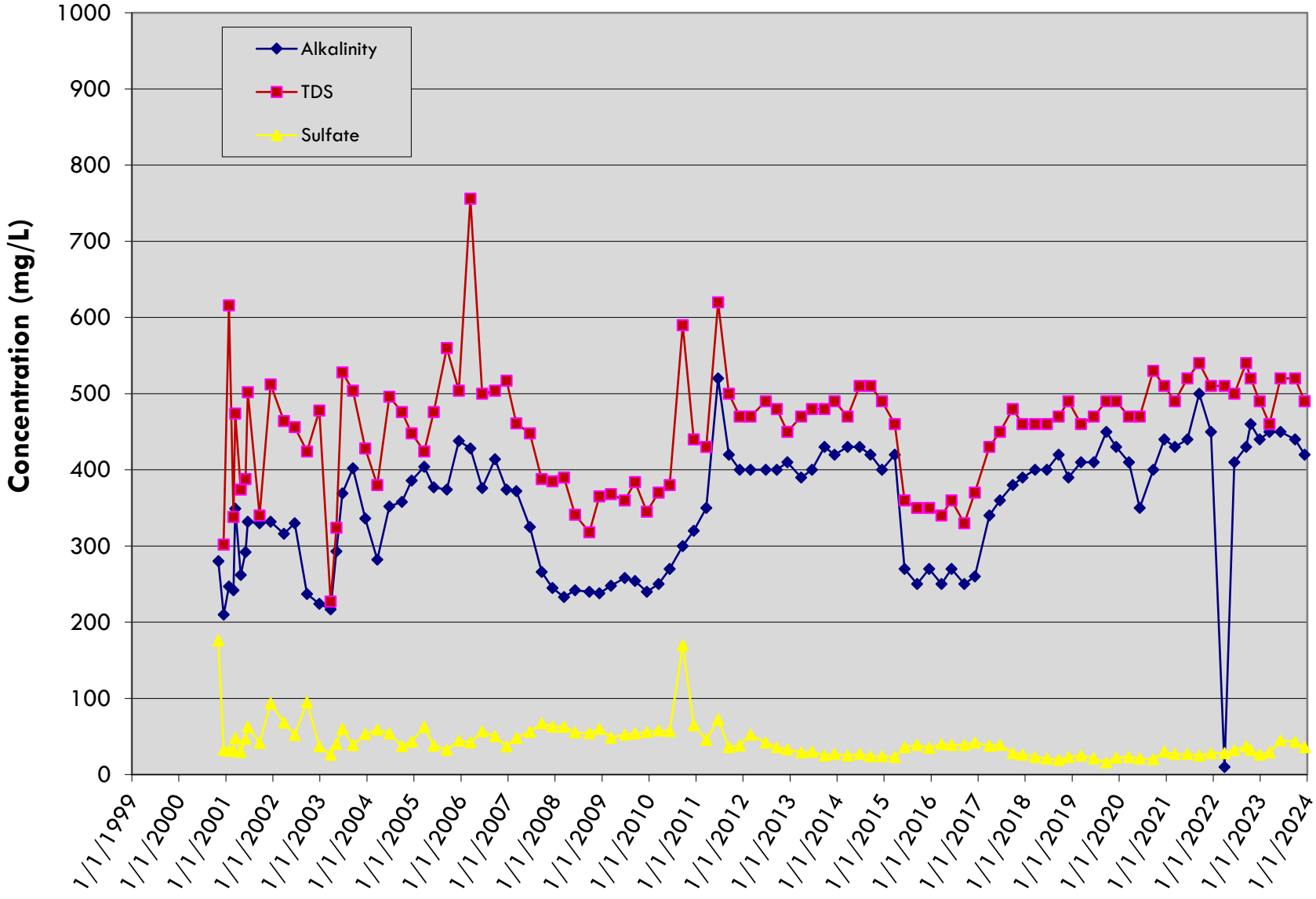


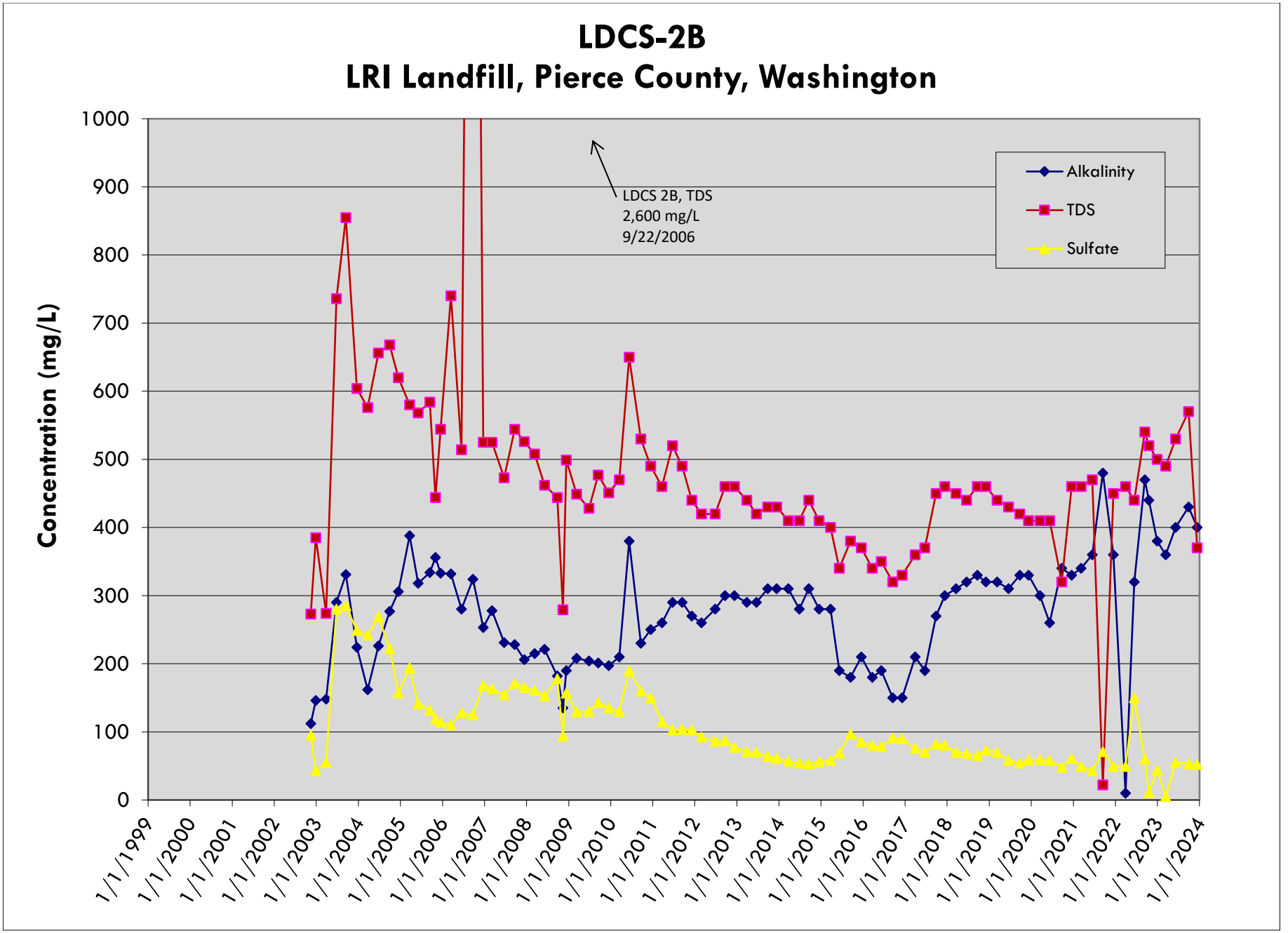
LDCS-9
LRI Landfill, Pierce County, Washington

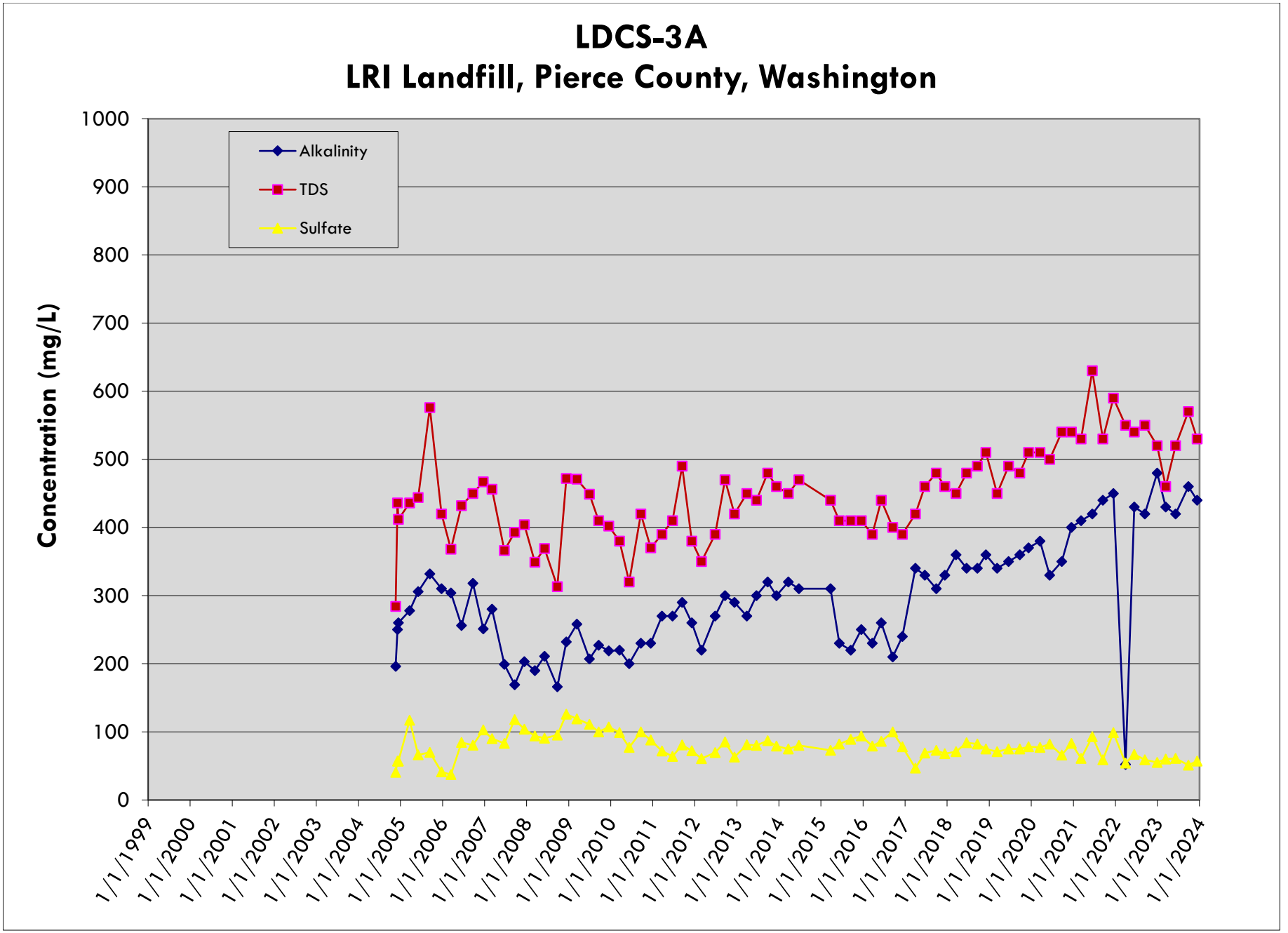


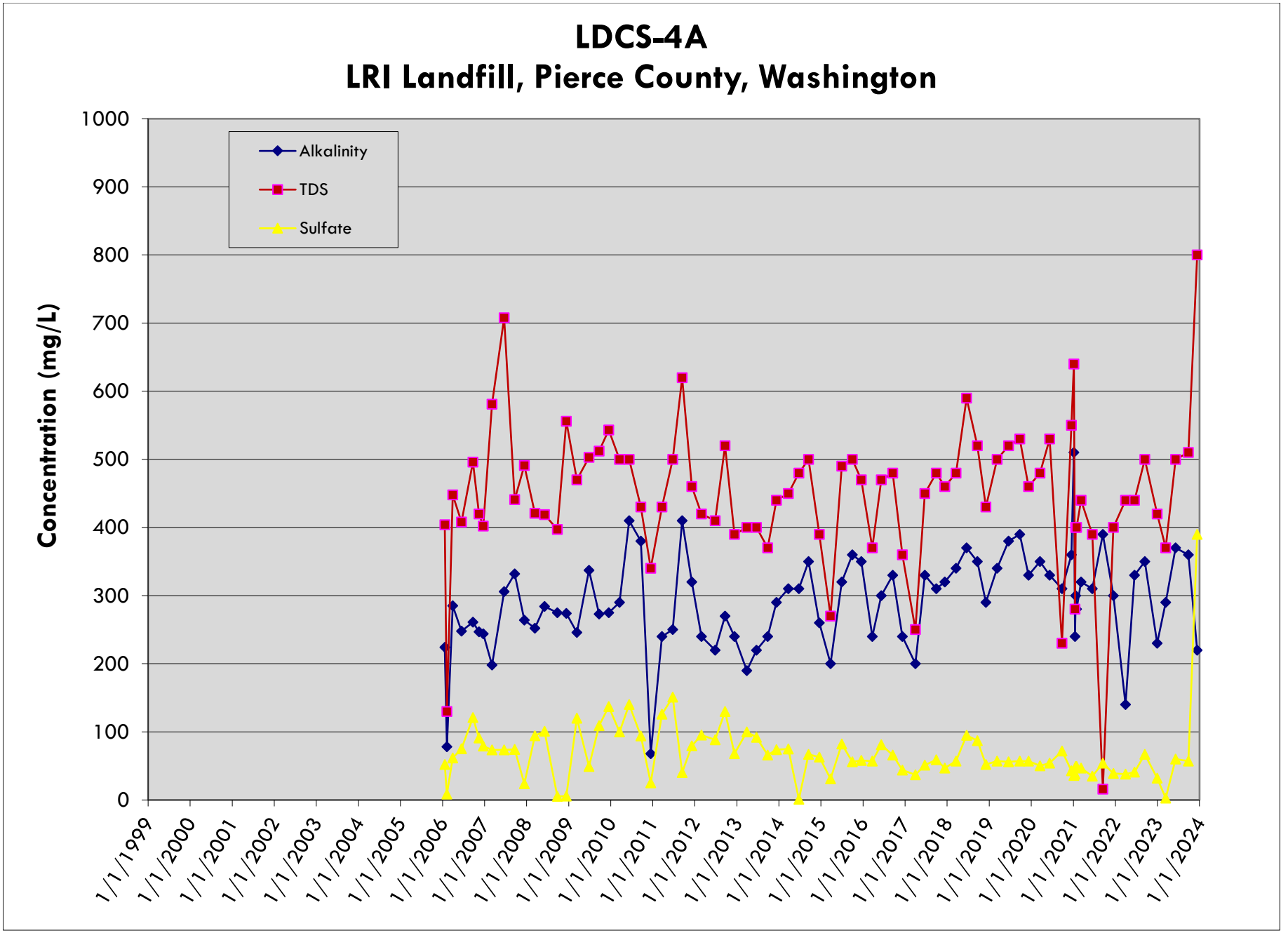

LDCS-1
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

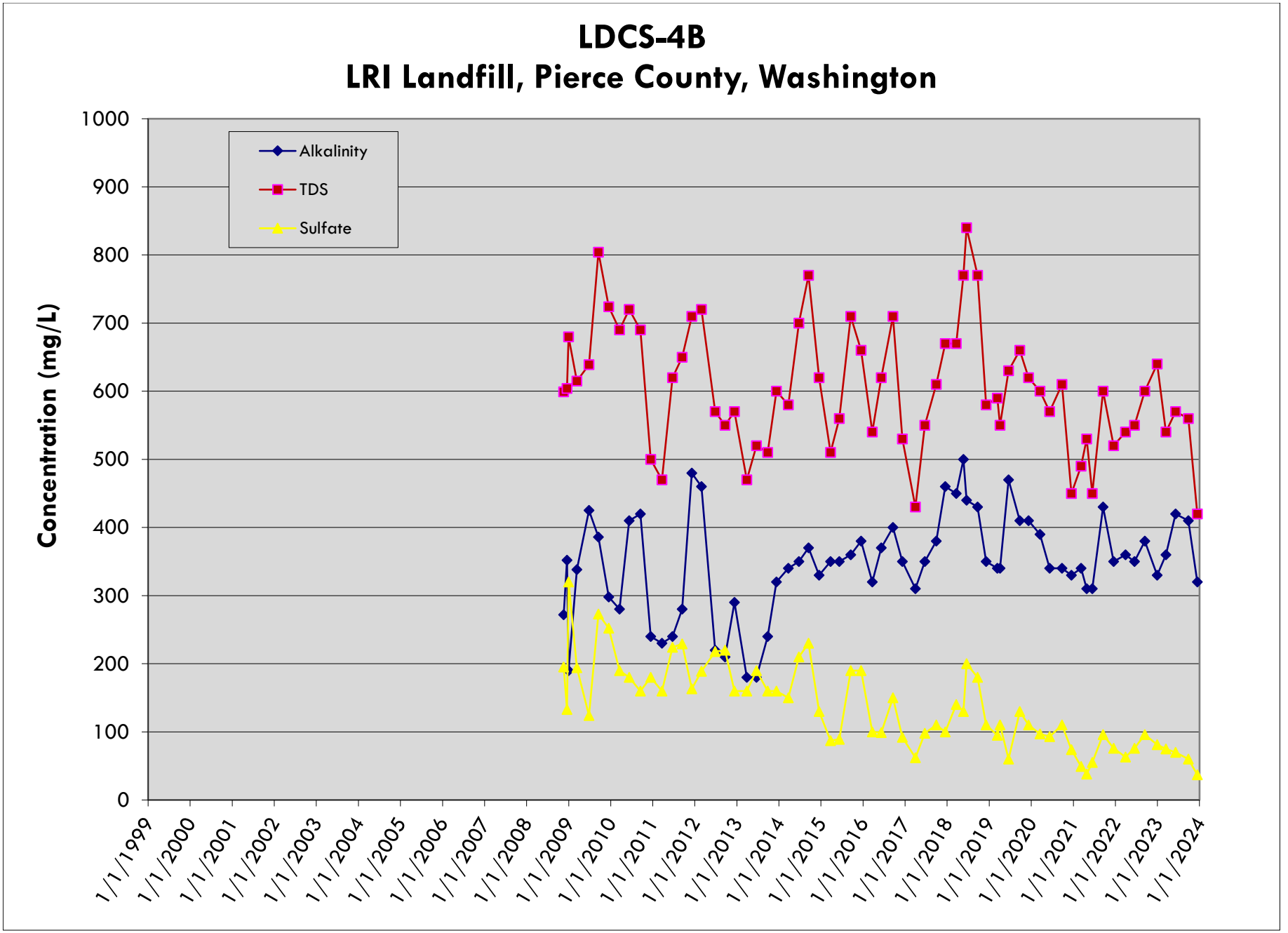
LDCS-2A
LRI Landfill, Pierce County, Washington




LDCS-2B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
LDCS 2B, TDS
2,600 mg/L
9/22/2006
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


LDCS-3A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


LDCS-4A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024


LDCS-4B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
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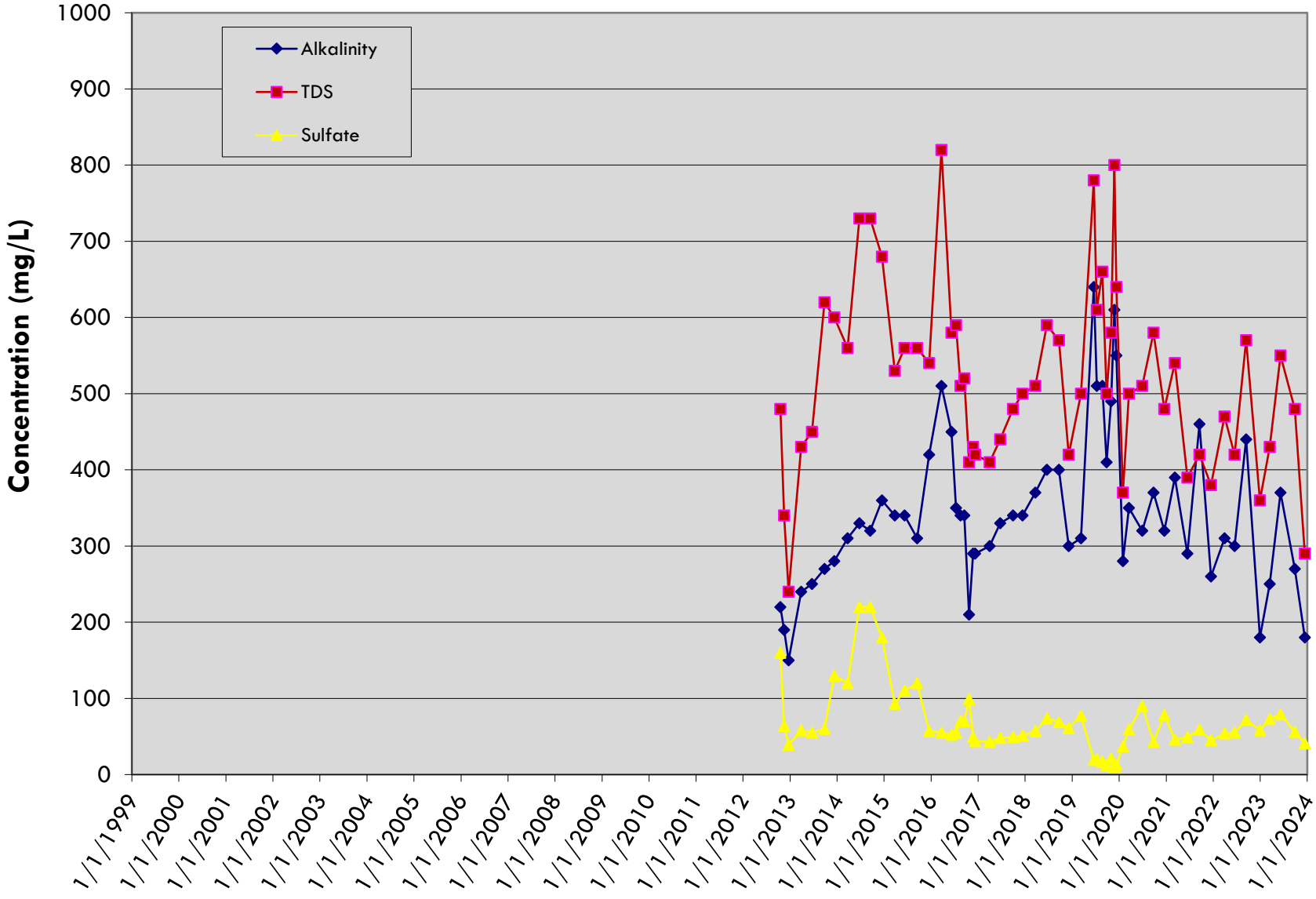
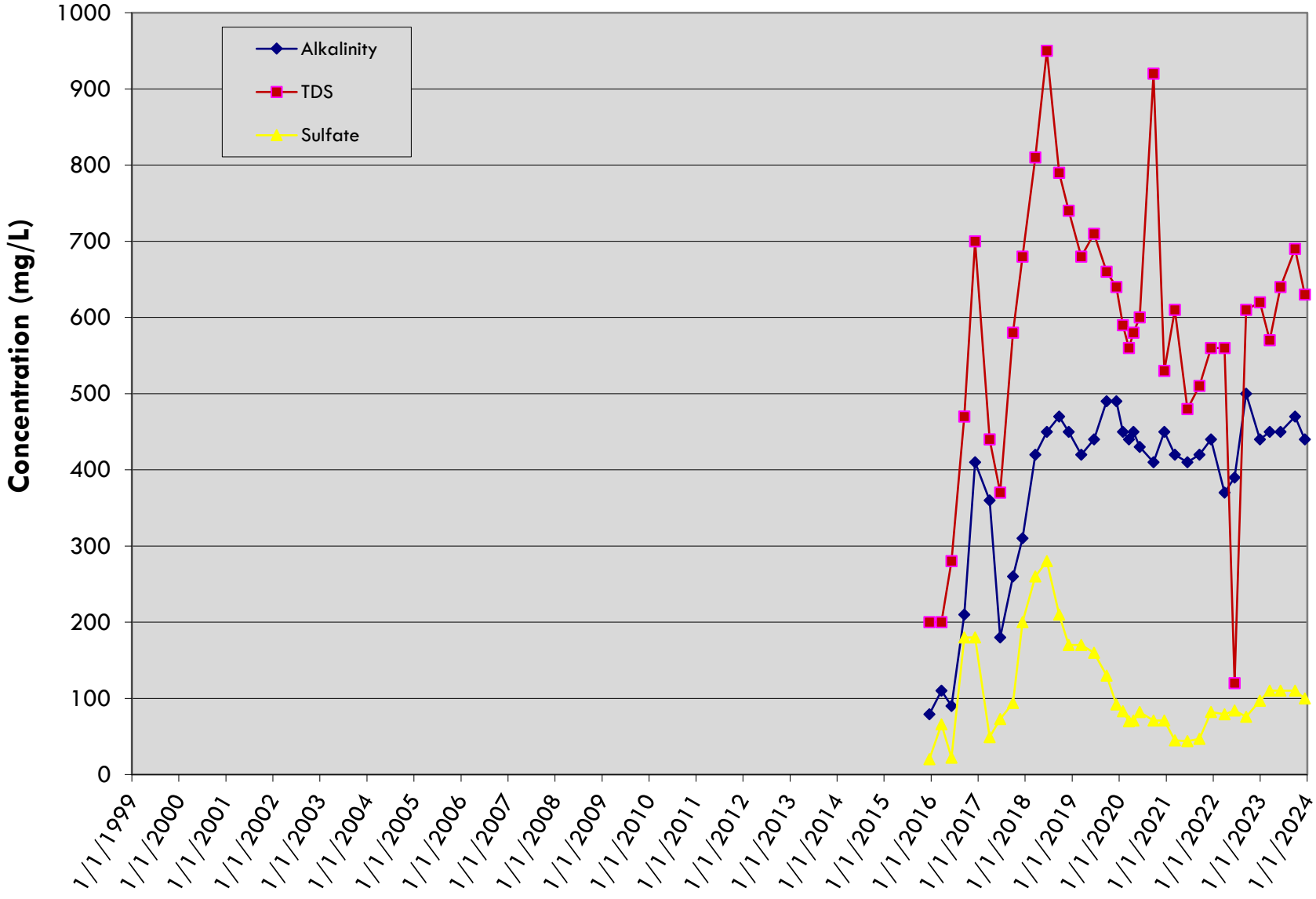
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022
1/1/2023
1/1/2024

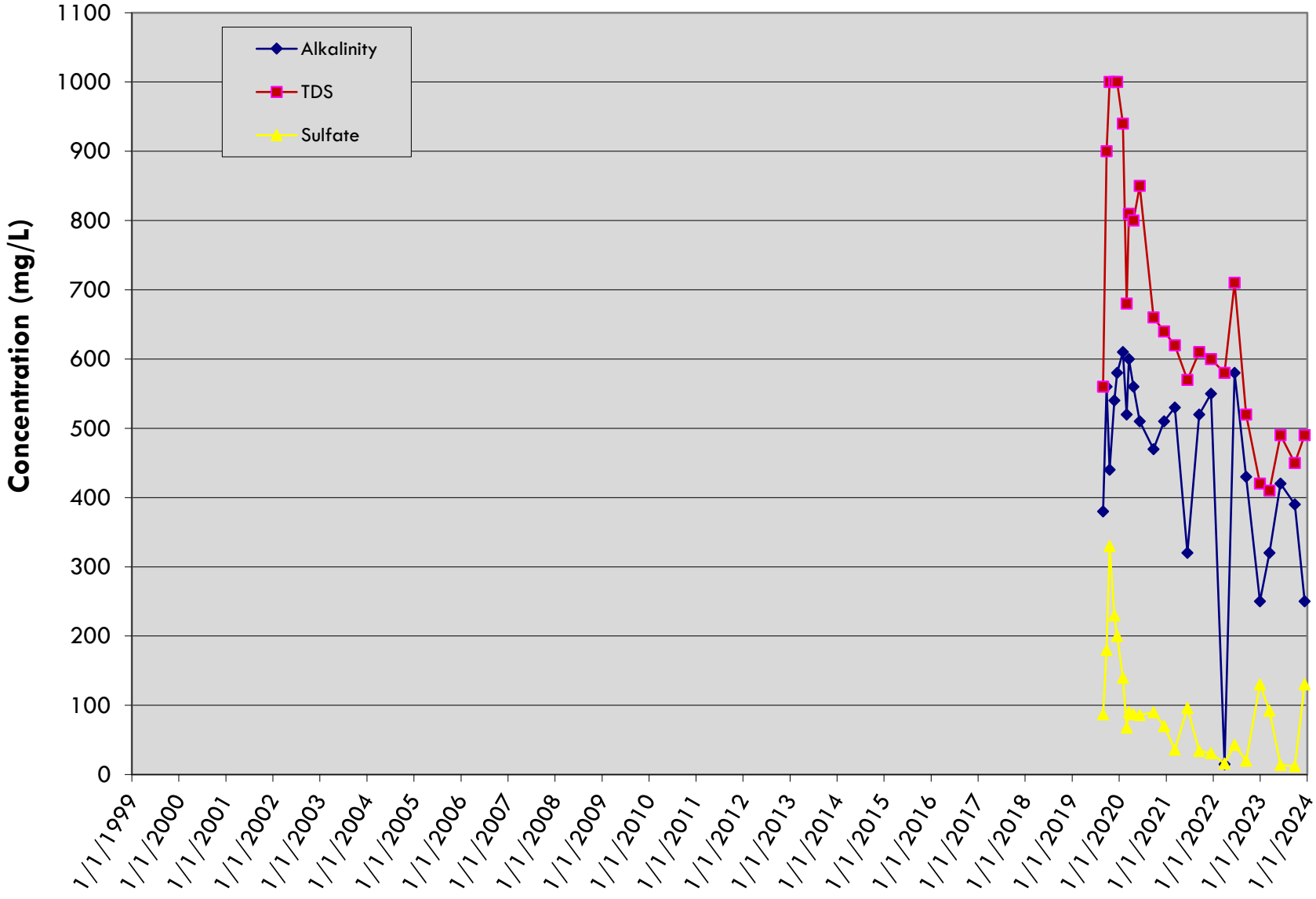
LDCS-5
LRI Landfill, Pierce County, Washington



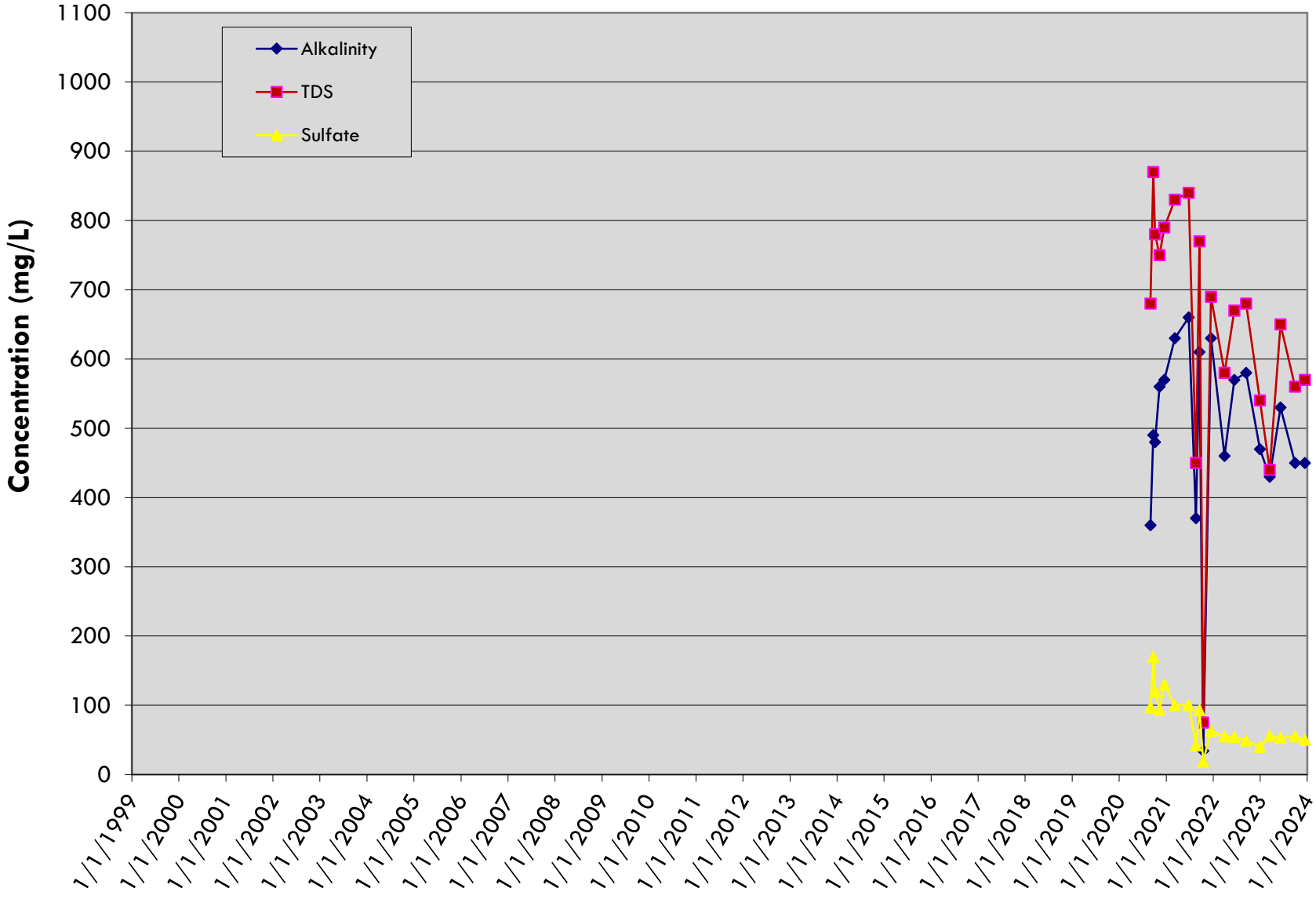
LDCS-6A
LRI Landfill, Pierce County, Washington



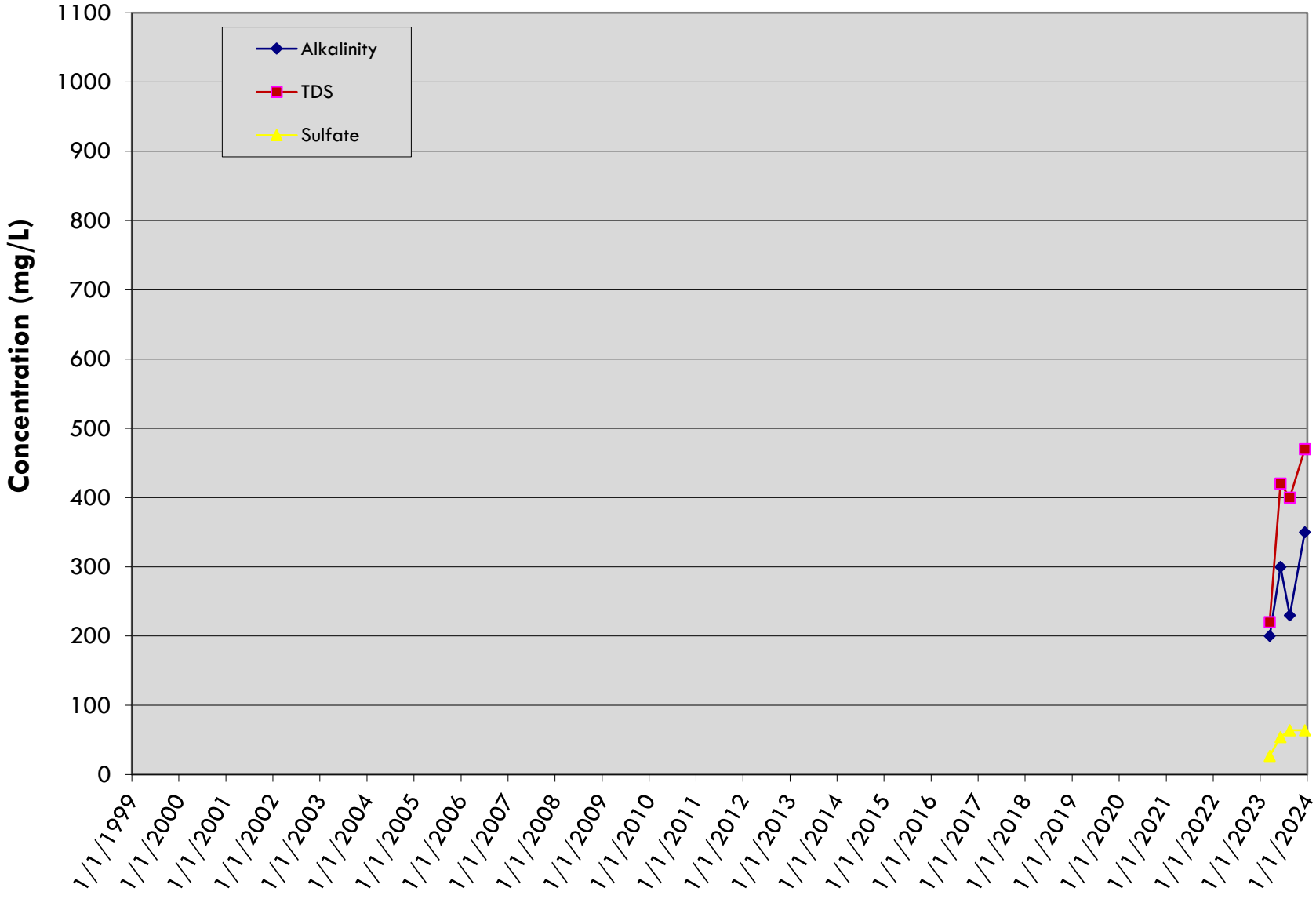
LDCS-7
LRI Landfill, Pierce County, Washington



LDCS-8
LRI Landfill, Pierce County, Washington

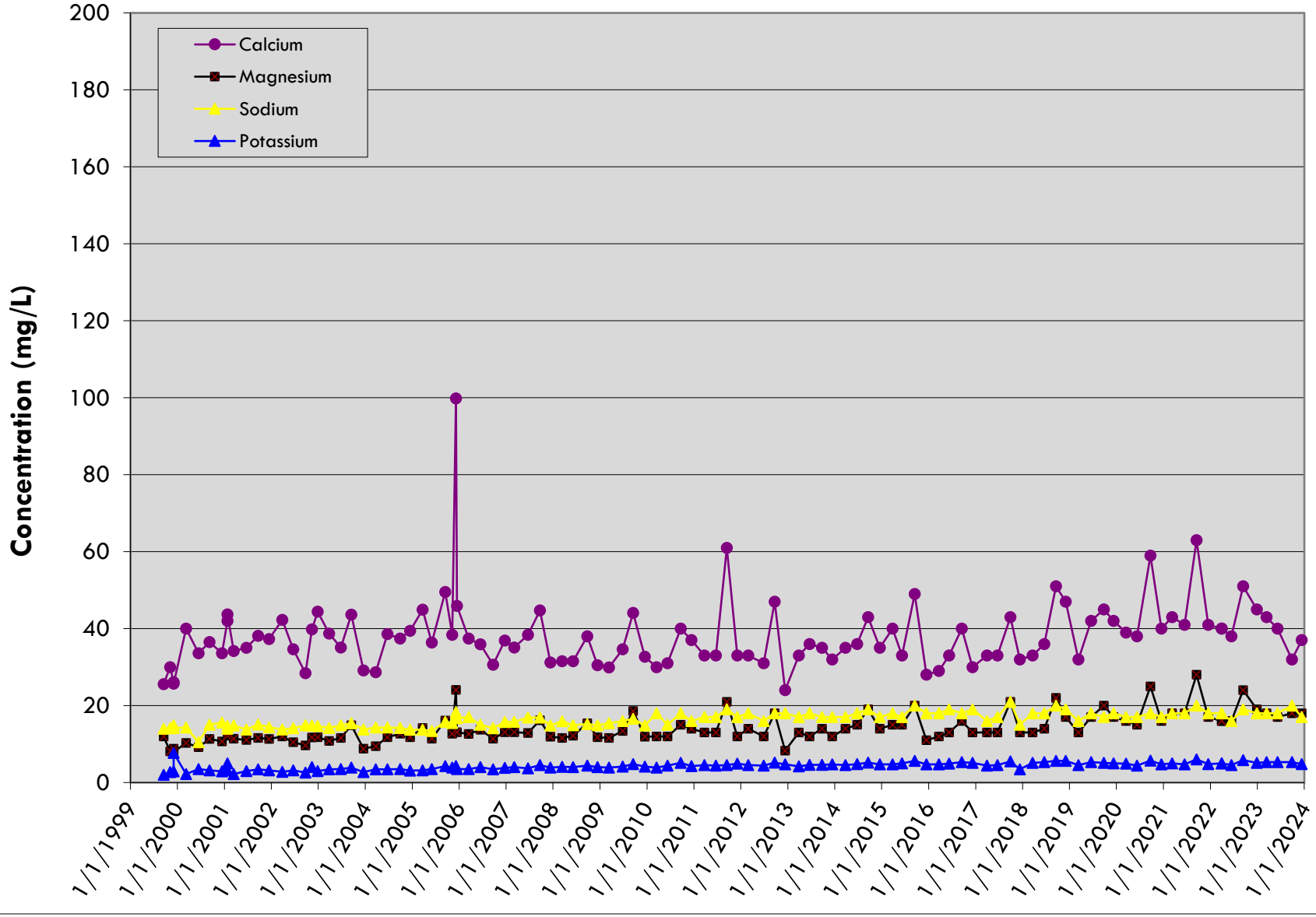


LDCS-9
LRI Landfill, Pierce County, Washington

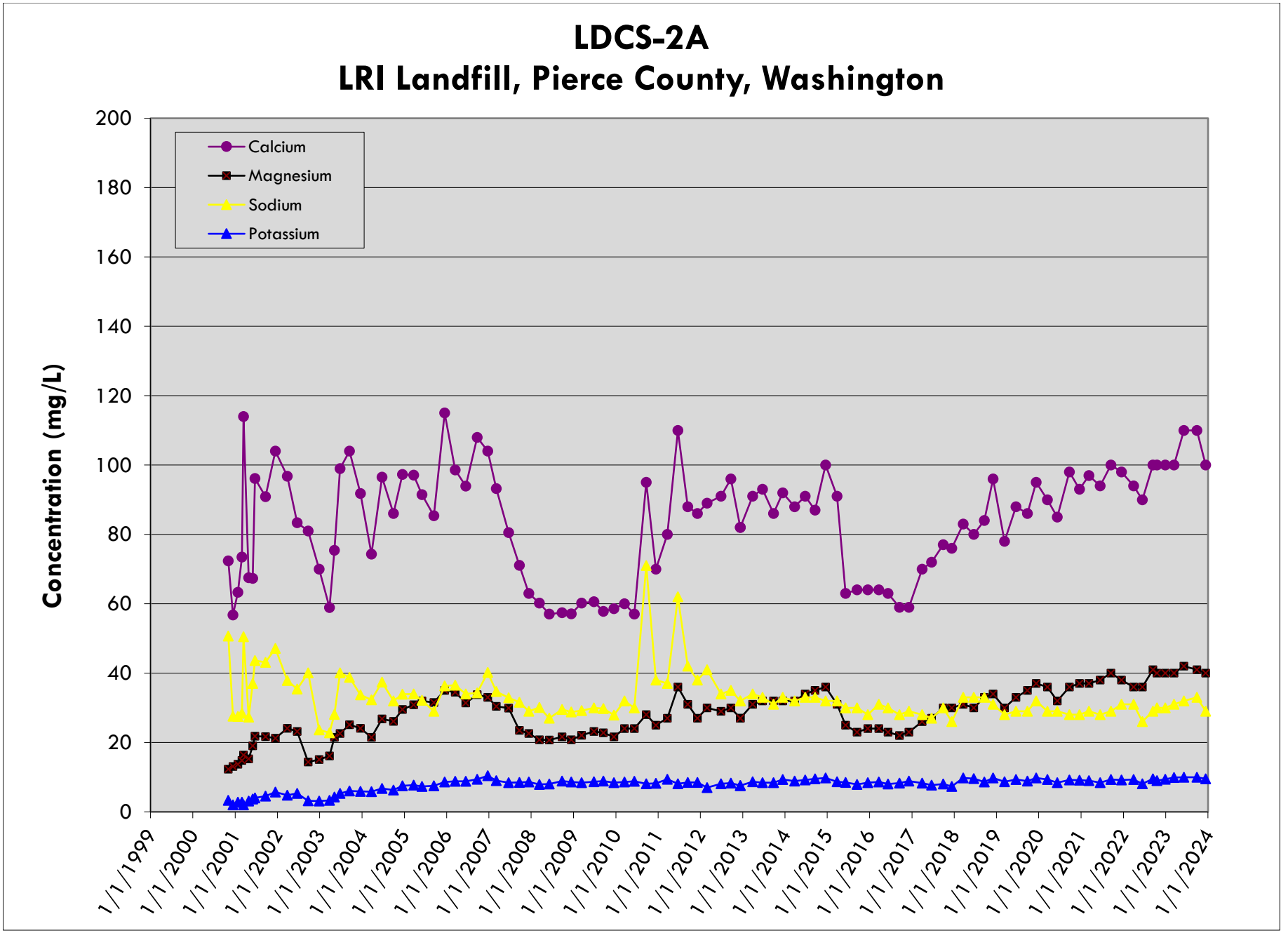


LDCS-1

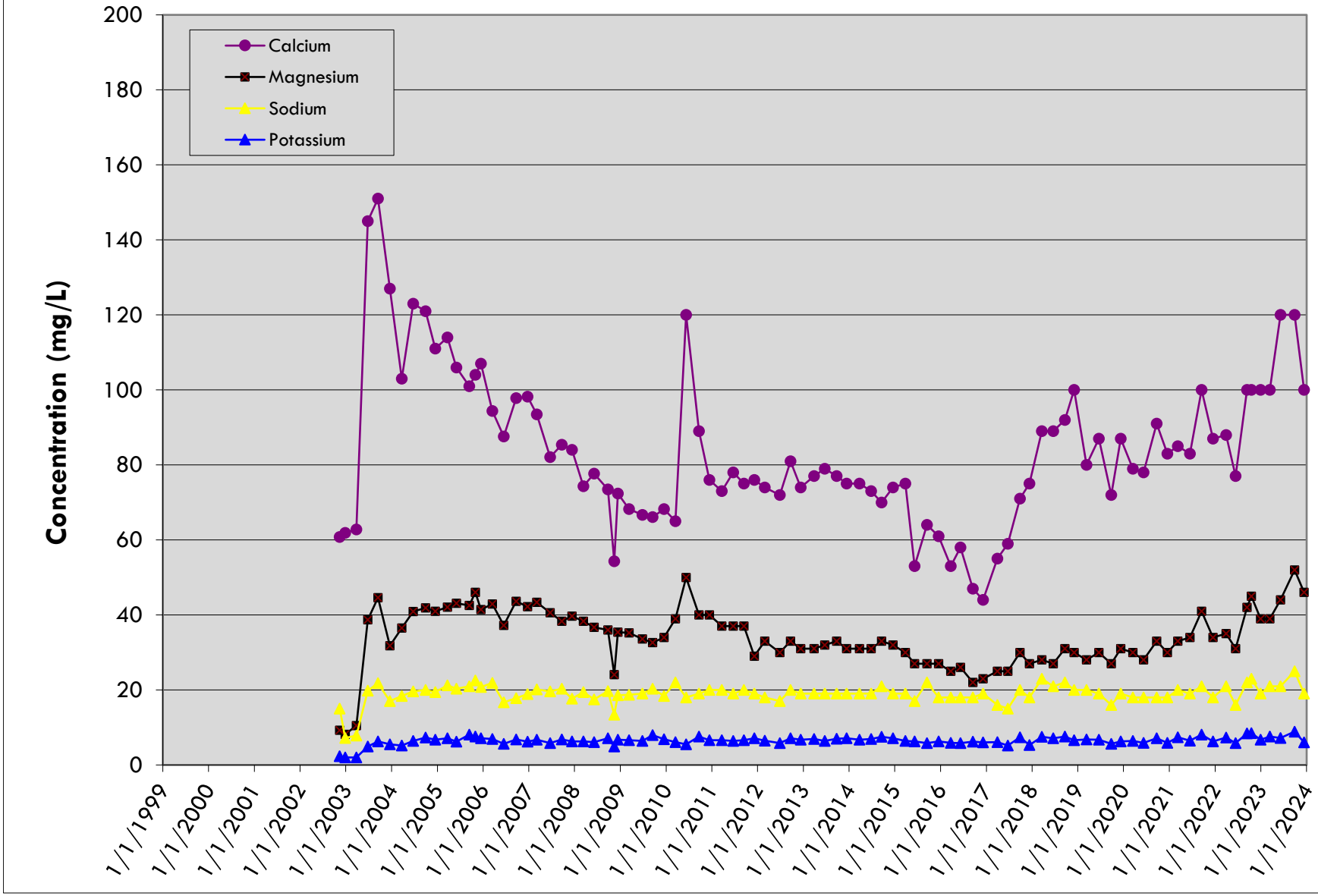
LRI Landfill, Pierce County, Washington



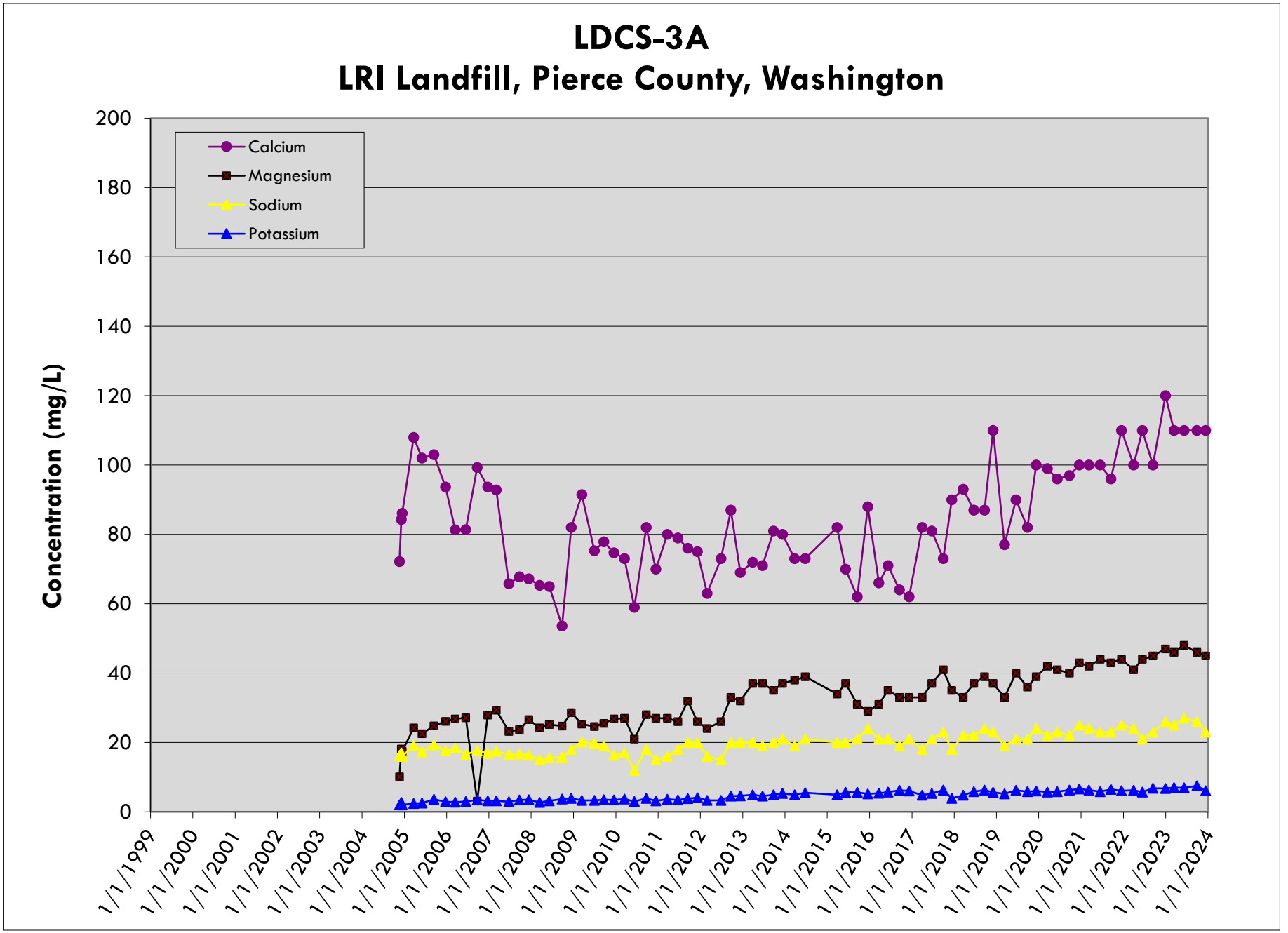
LDCS-2A
LRI Landfill, Pierce County, Washington



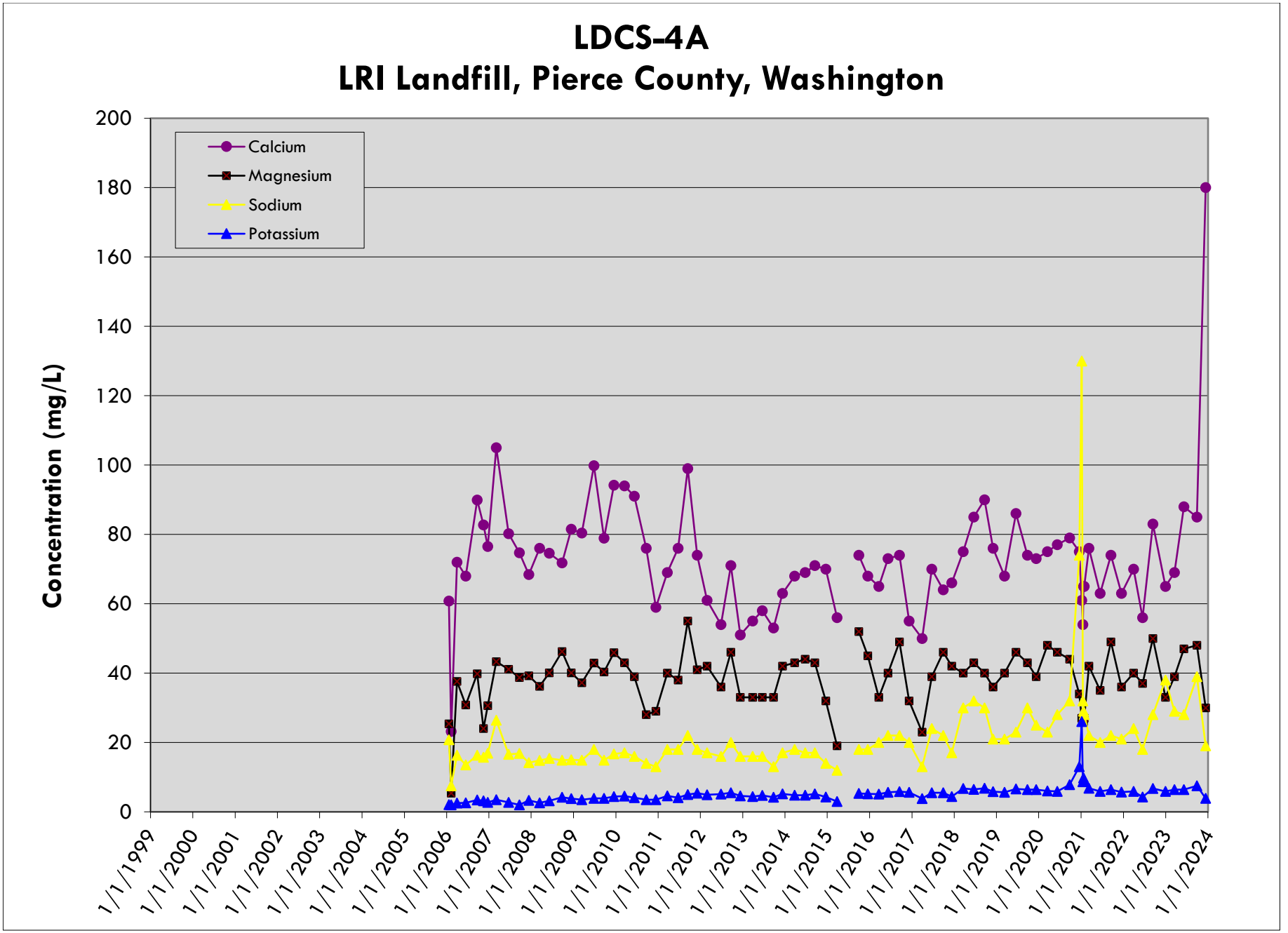
LDCS-2B
LRI Landfill, Pierce County, Washington



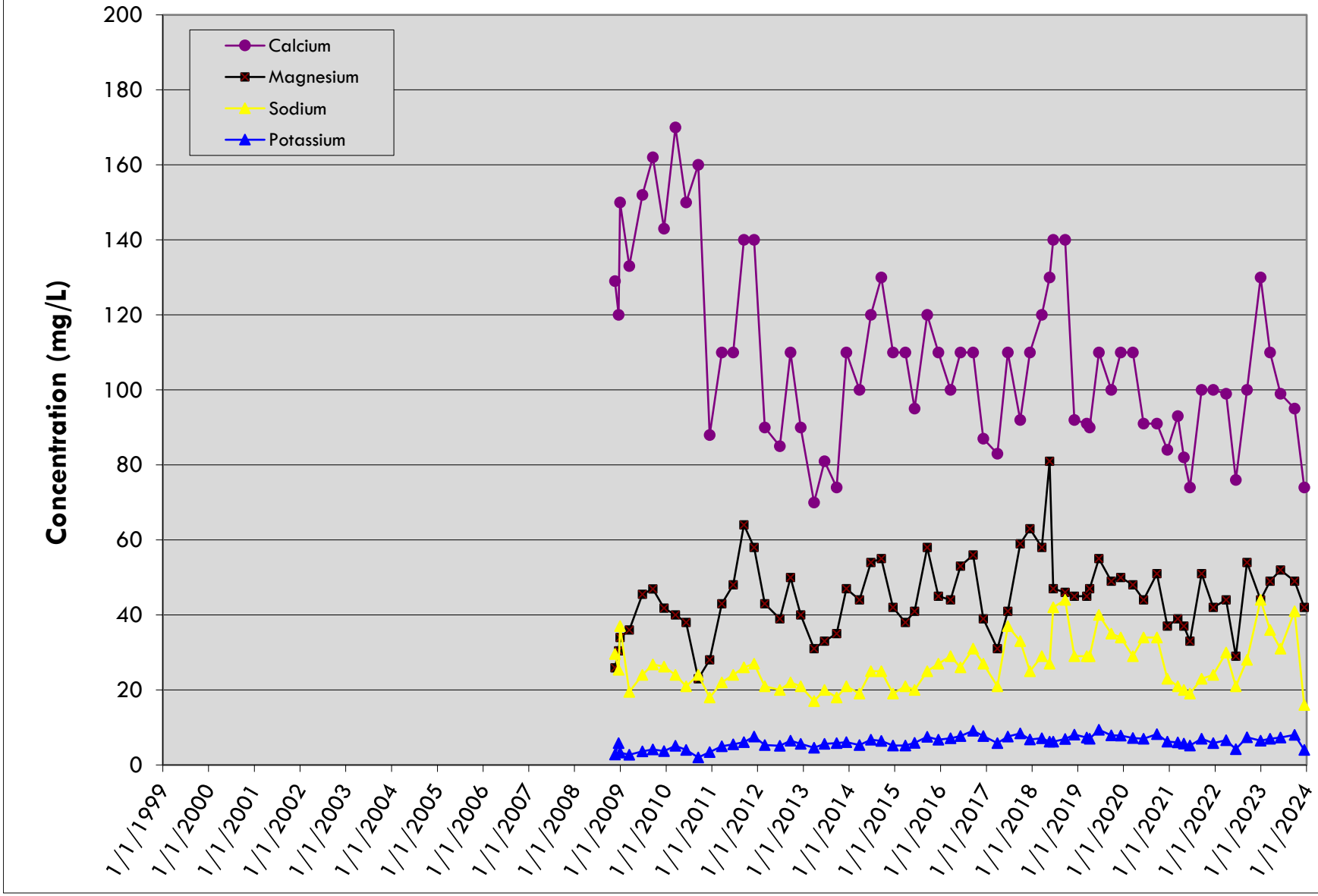
LDCS-3A
LRI Landfill, Pierce County, Washington



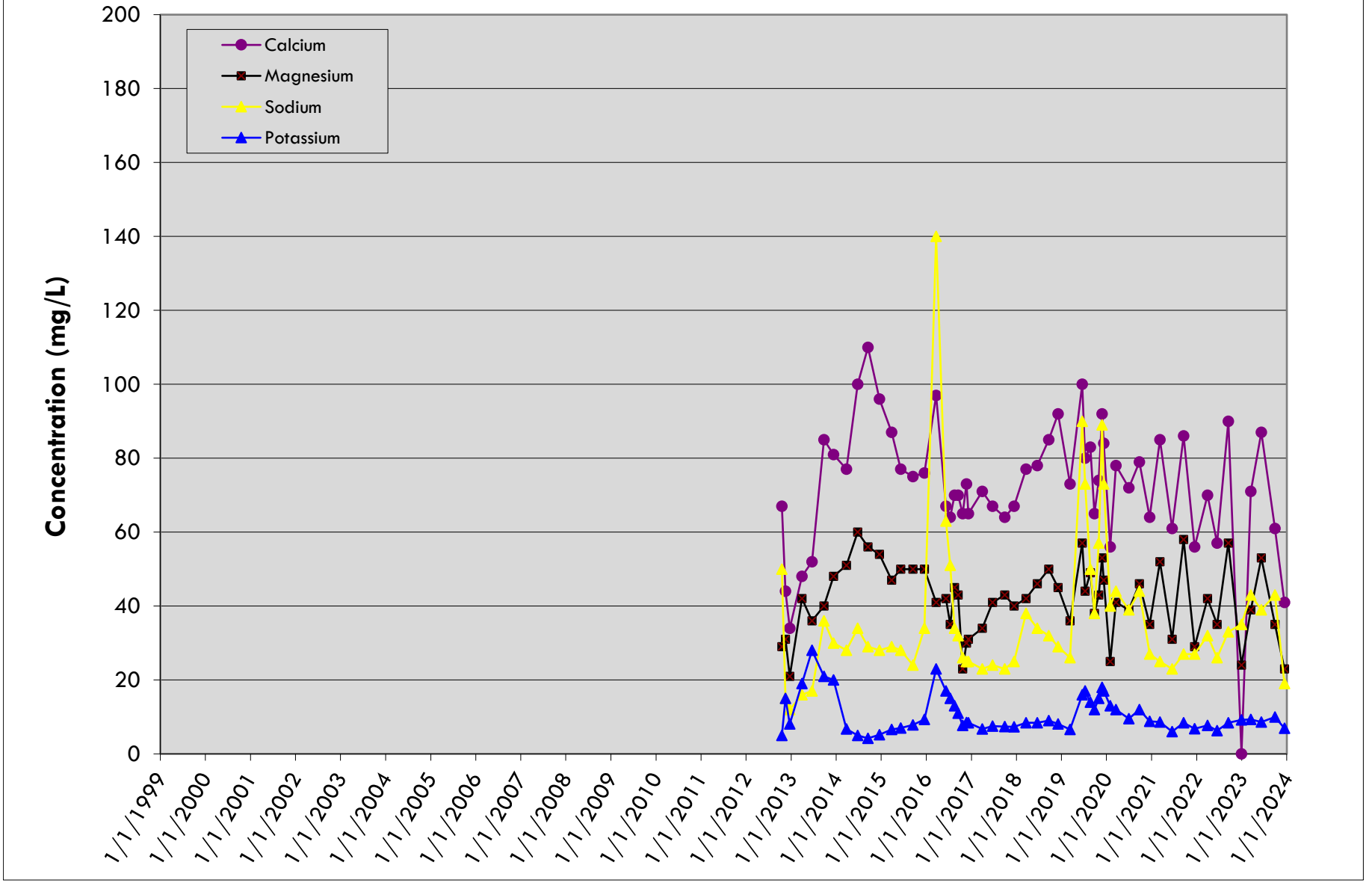
LDCS-4A
LRI Landfill, Pierce County, Washington



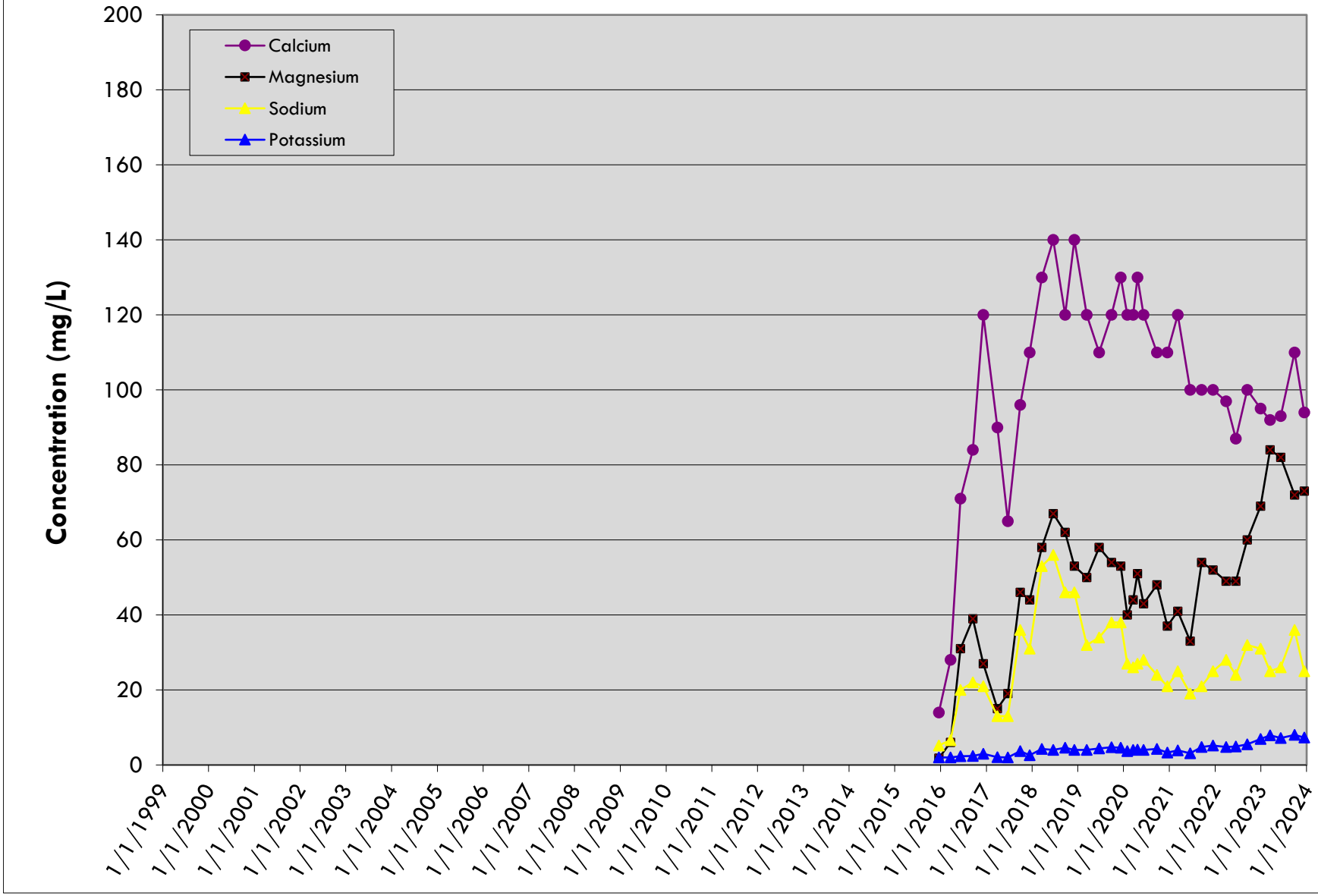
LDCS-4B
LRI Landfill, Pierce County, Washington



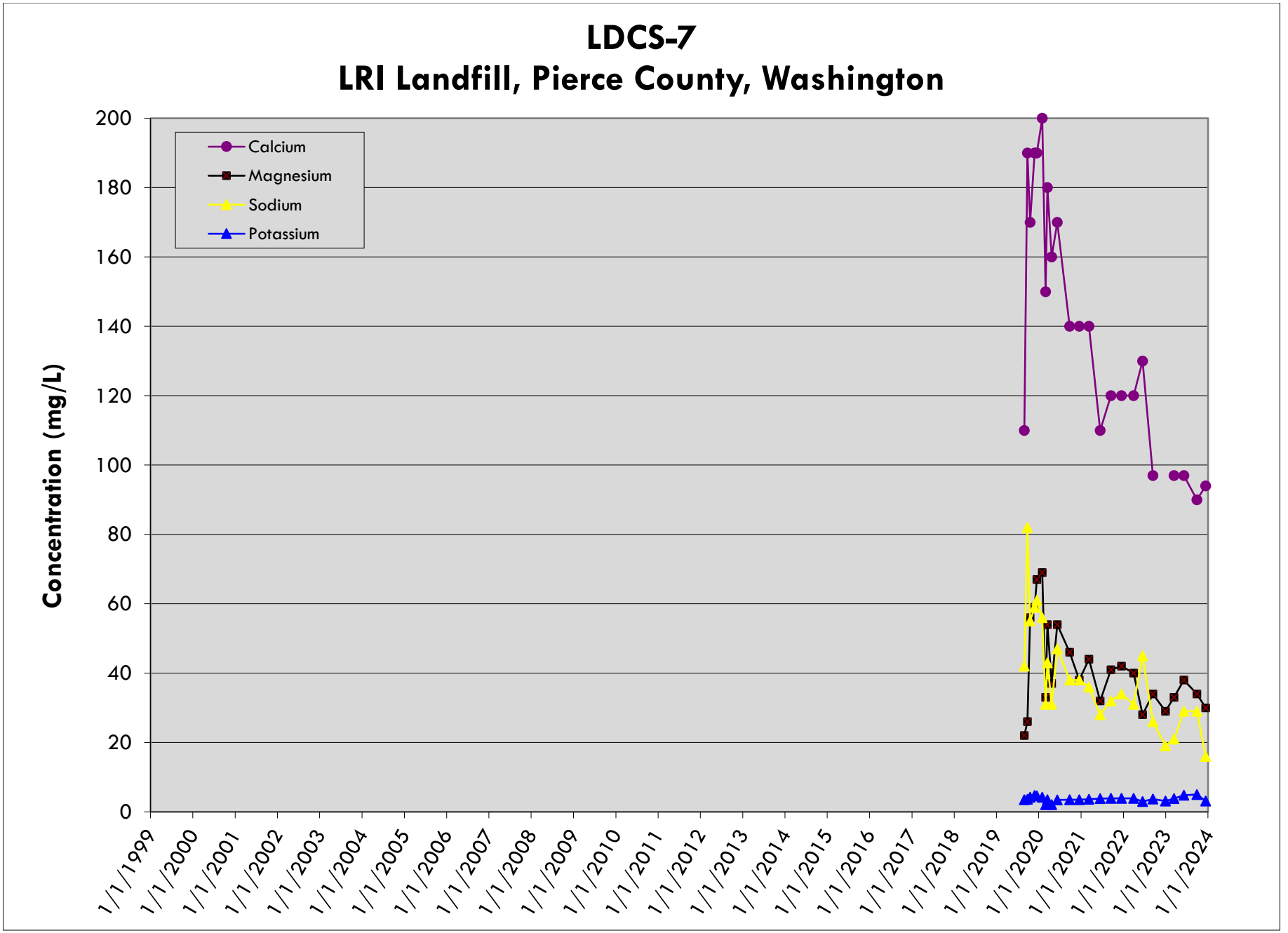
LDCS-5
LRI Landfill, Pierce County, Washington



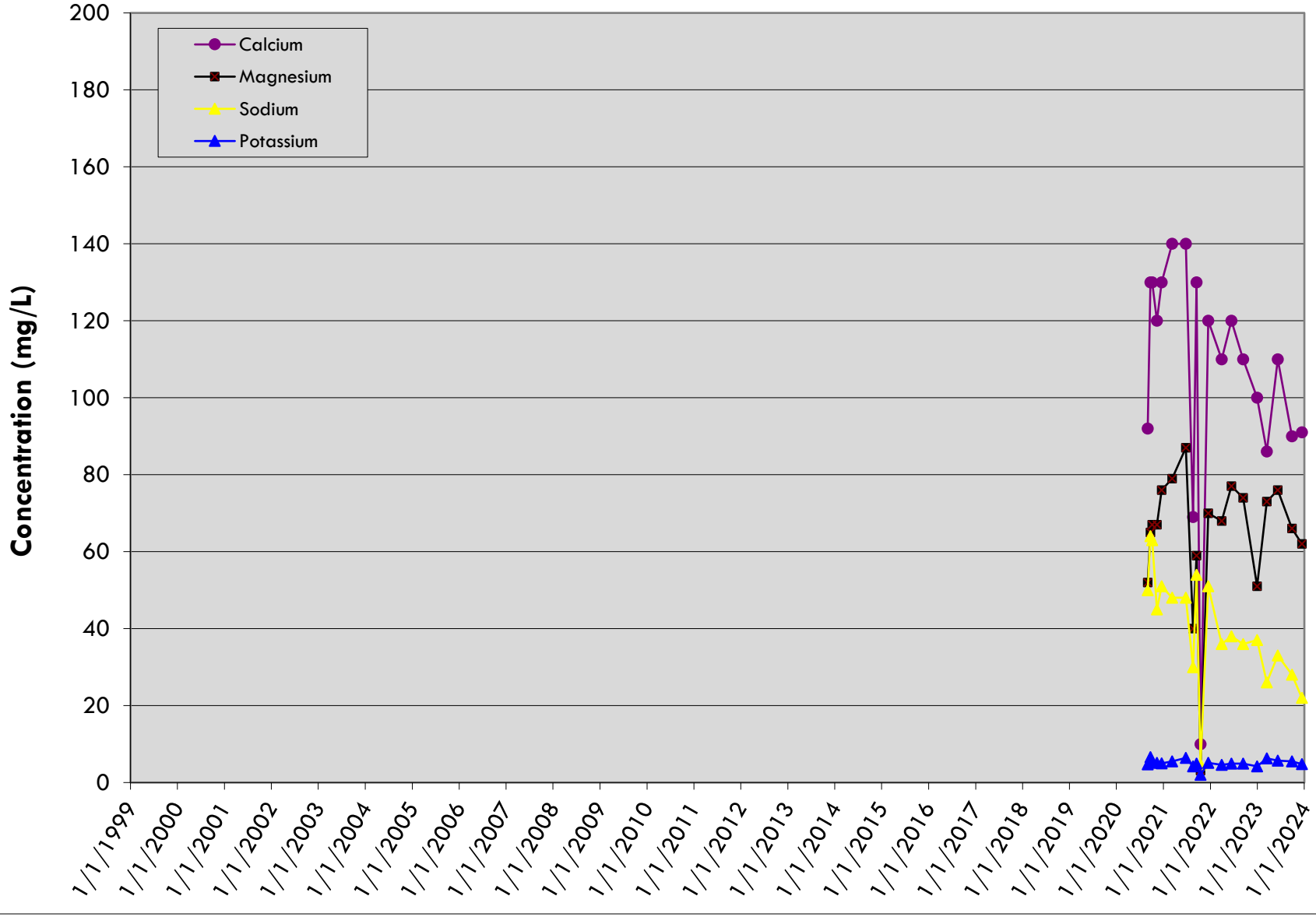
LDCS-6A
LRI Landfill, Pierce County, Washington



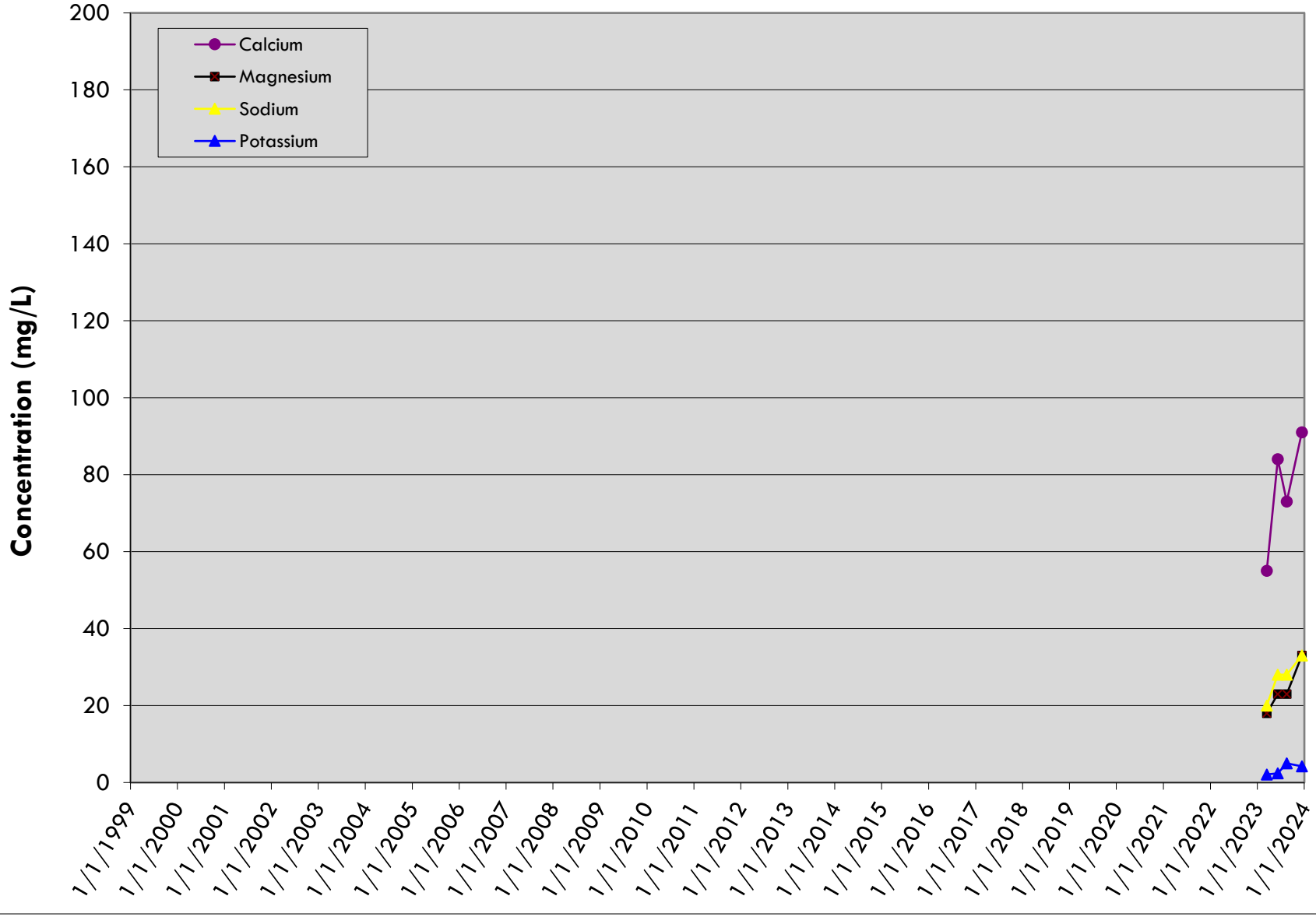
LDCS-7
LRI Landfill, Pierce County, Washington

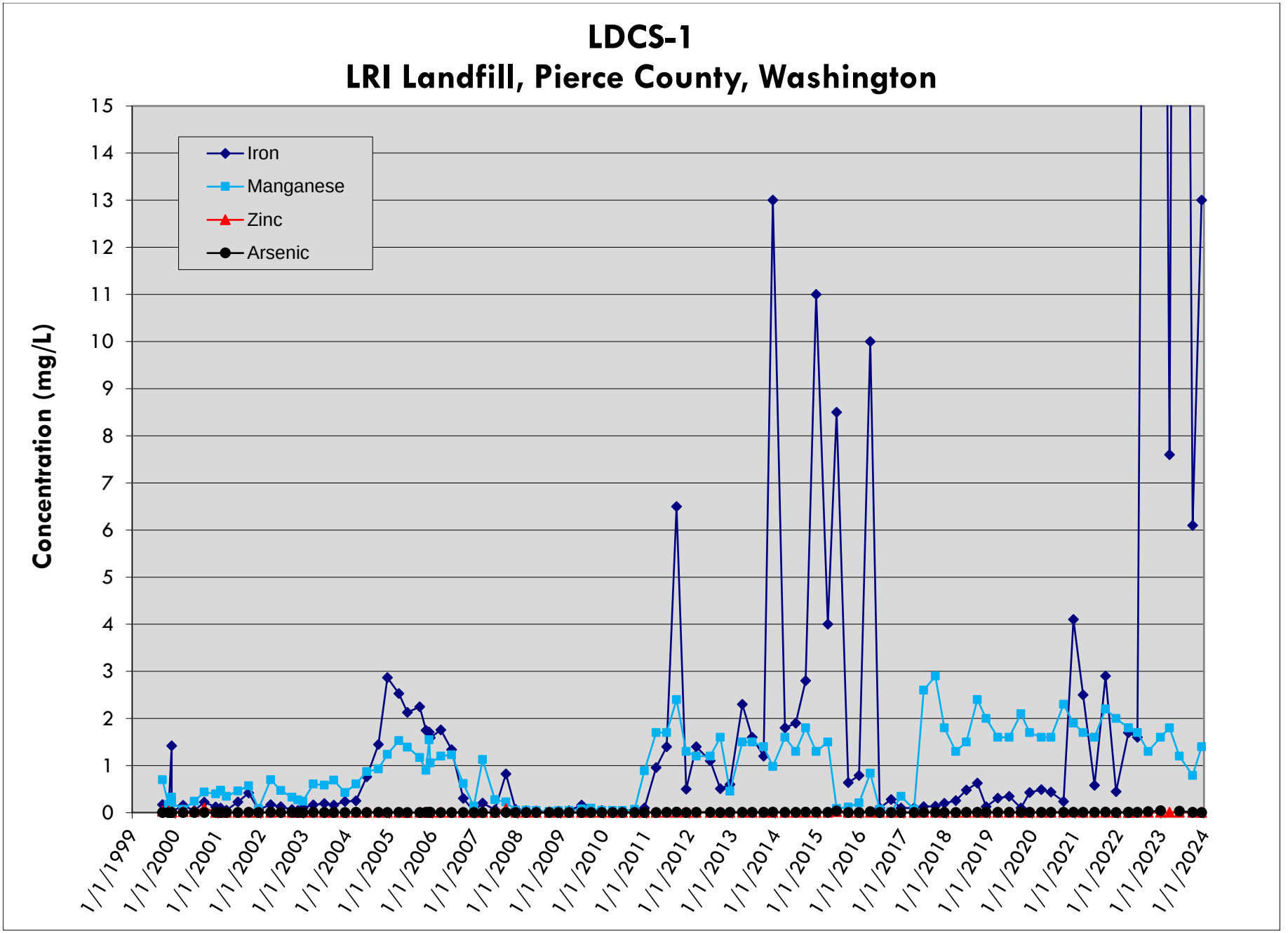


LDCS-8
LRI Landfill, Pierce County, Washington



LDCS-9
LRI Landfill, Pierce County, Washington




LDCS-1
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
1/1/1999
1/1/2000
1/1/2001
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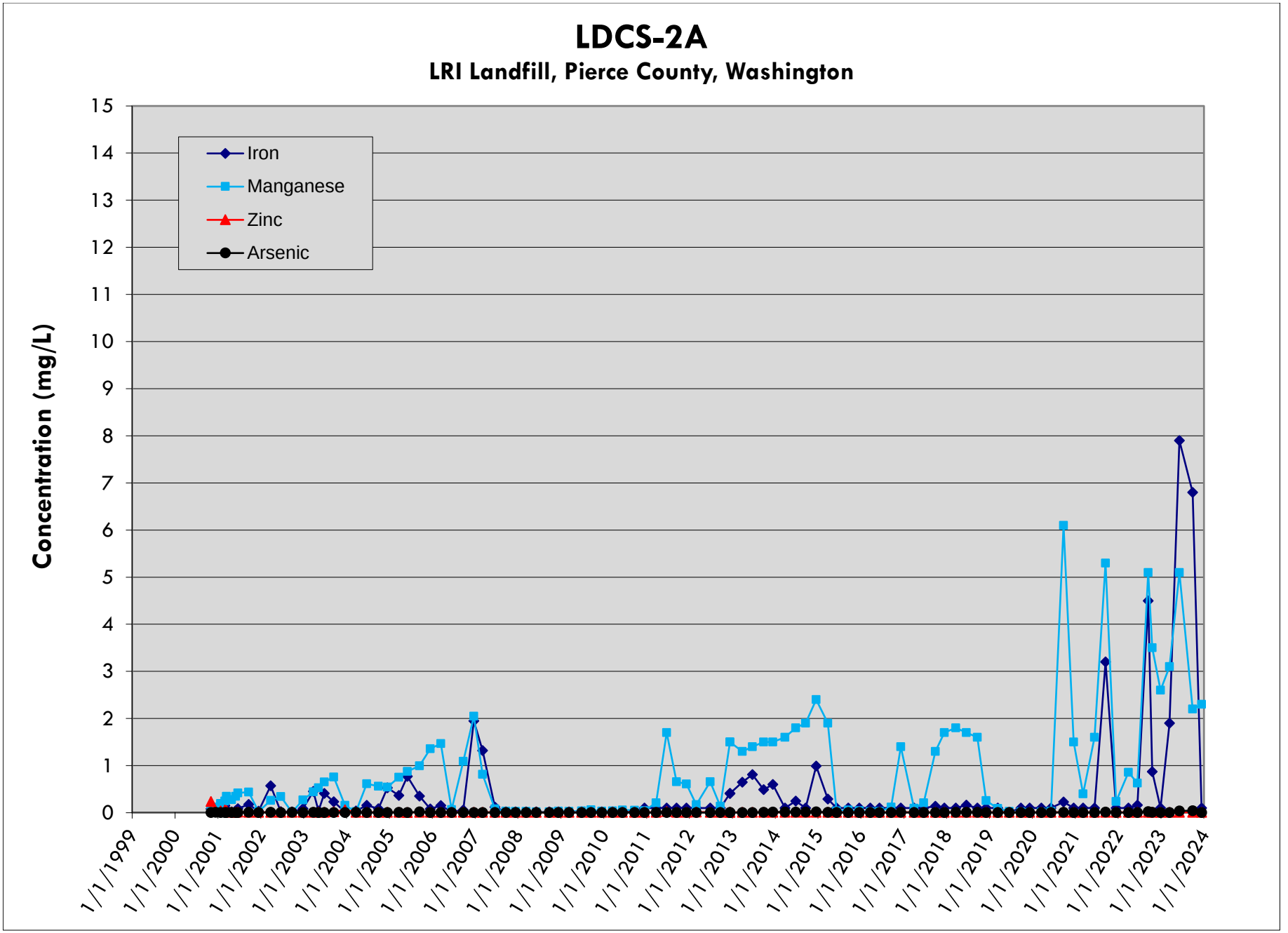
1/1/2023
1/1/2024


LDCS-2A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
1
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1/1/1999
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1/1/2023
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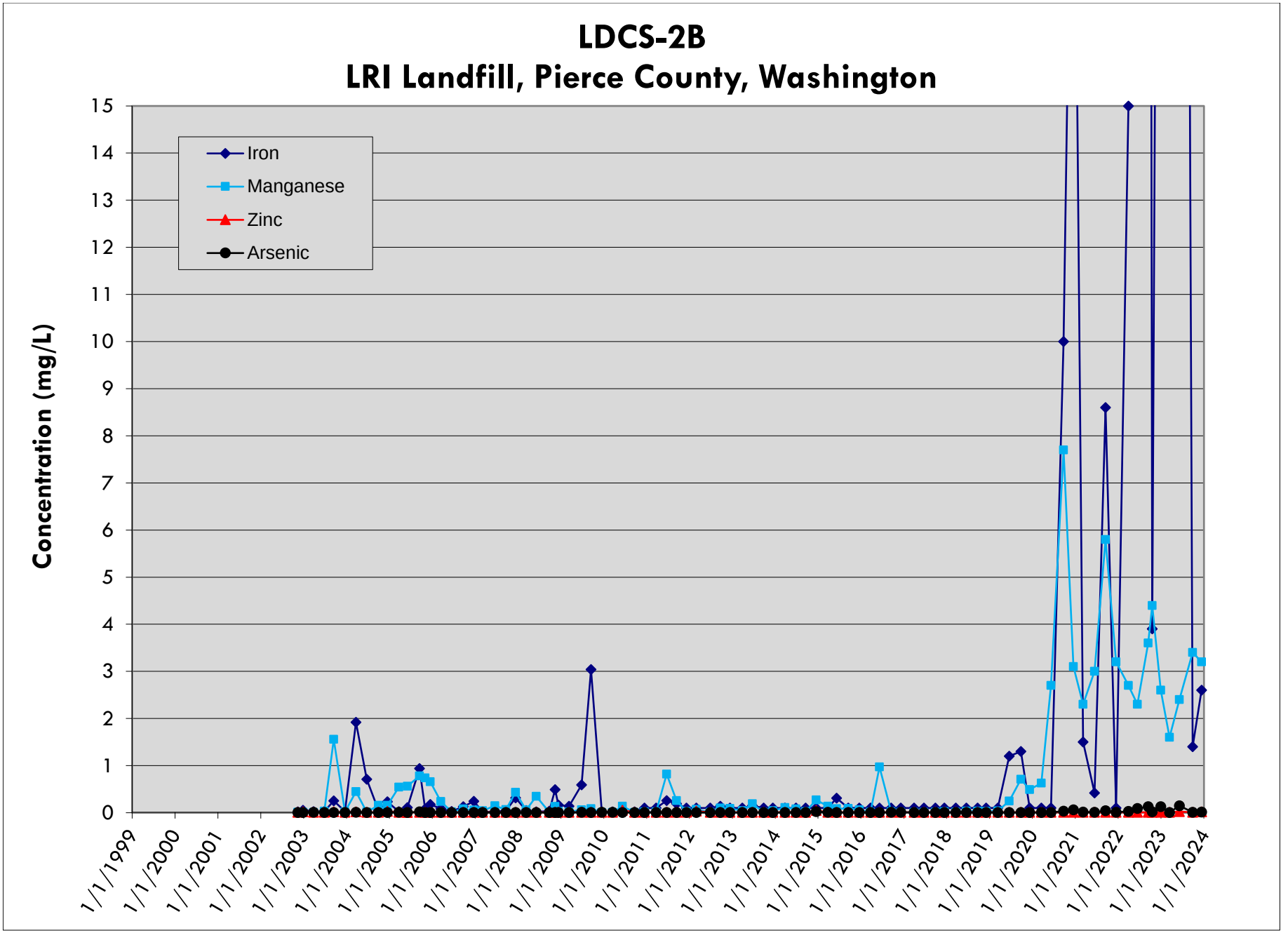
LDCS-2B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
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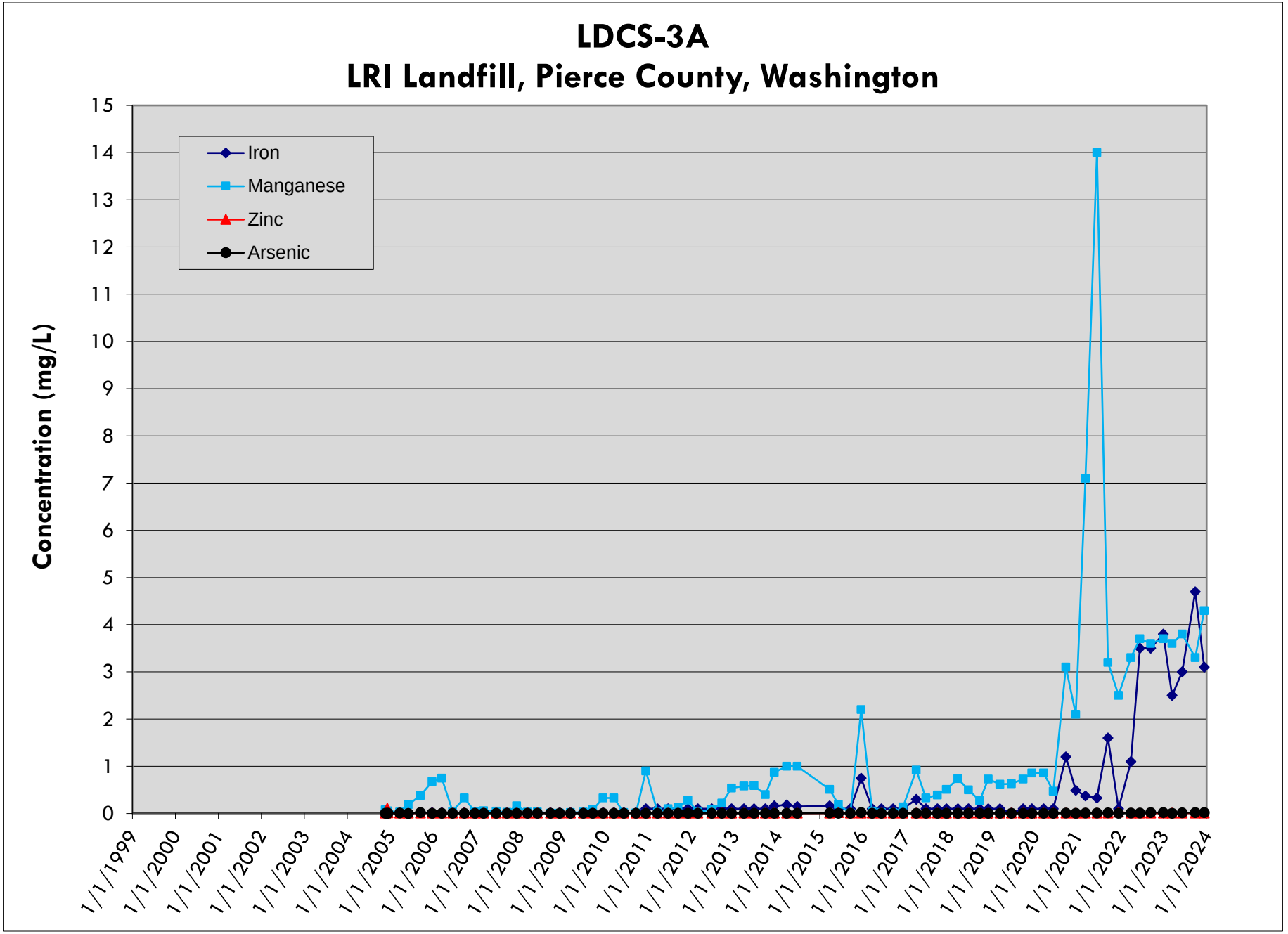
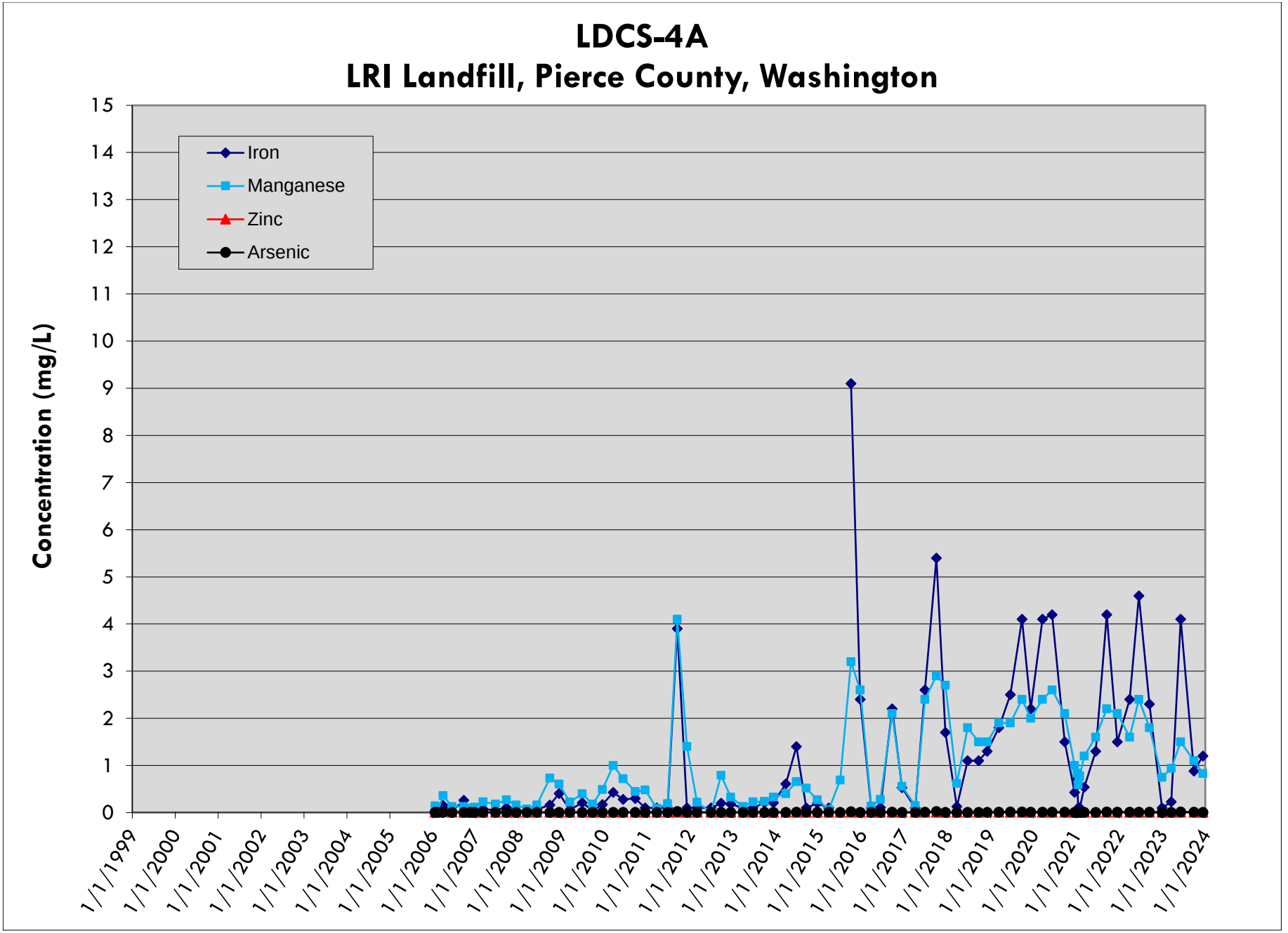
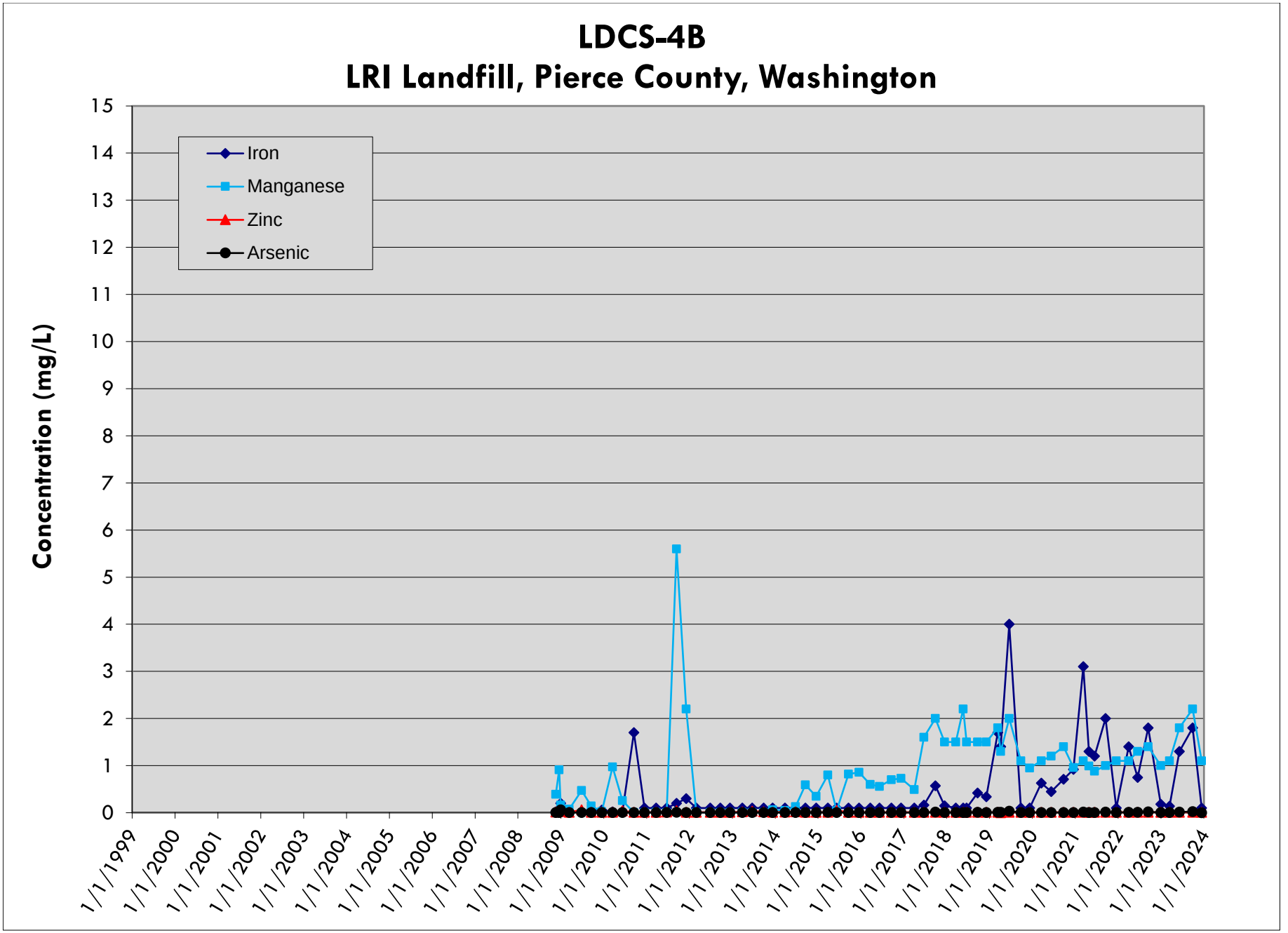
LDCS-3A
LRI Landfill, Pierce County, Washington



LDCS-4A
LRI Landfill, Pierce County, Washington




LDCS-4B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
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1/1/2022
1/1/2023
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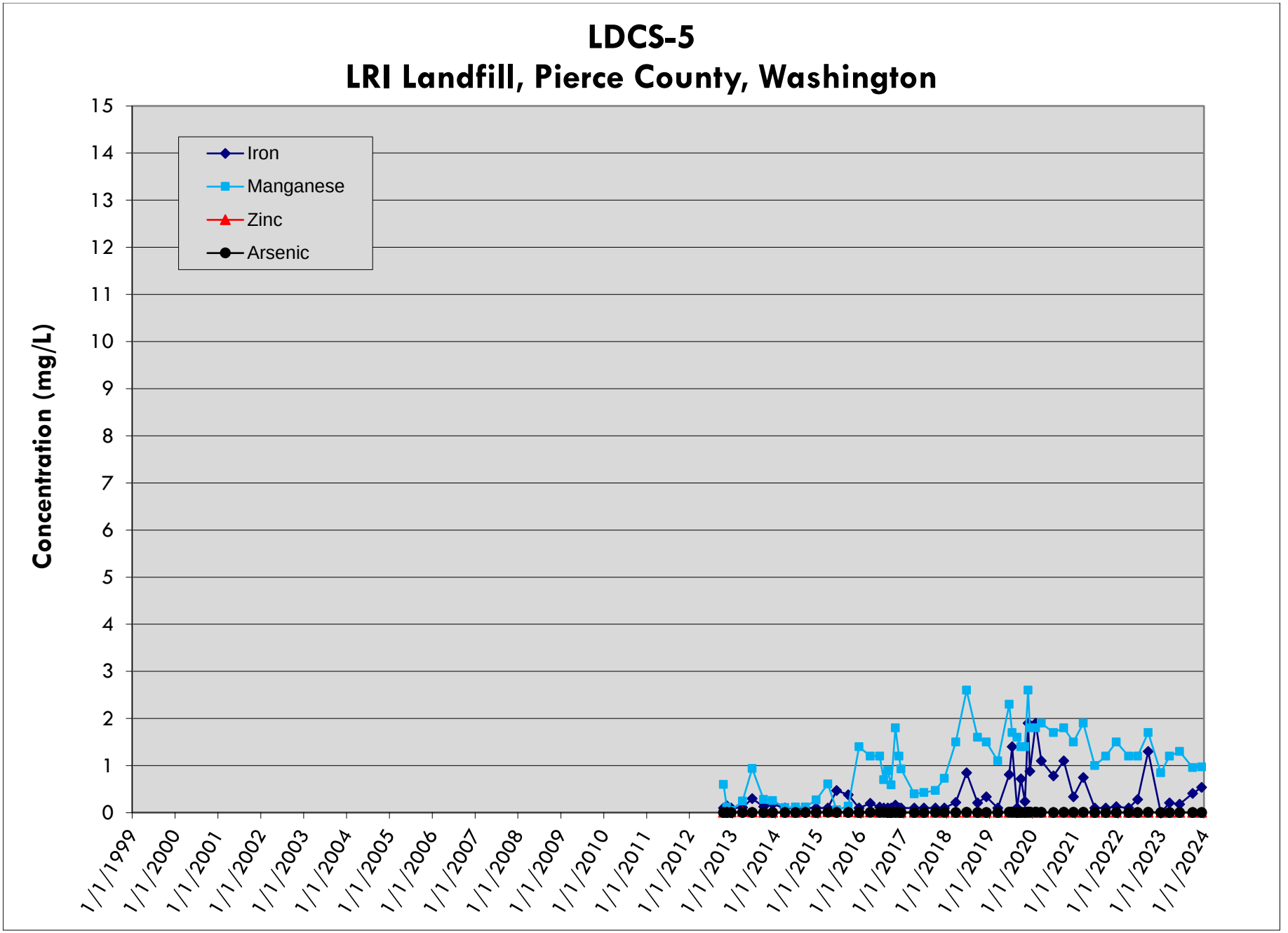
LDCS-5
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
15
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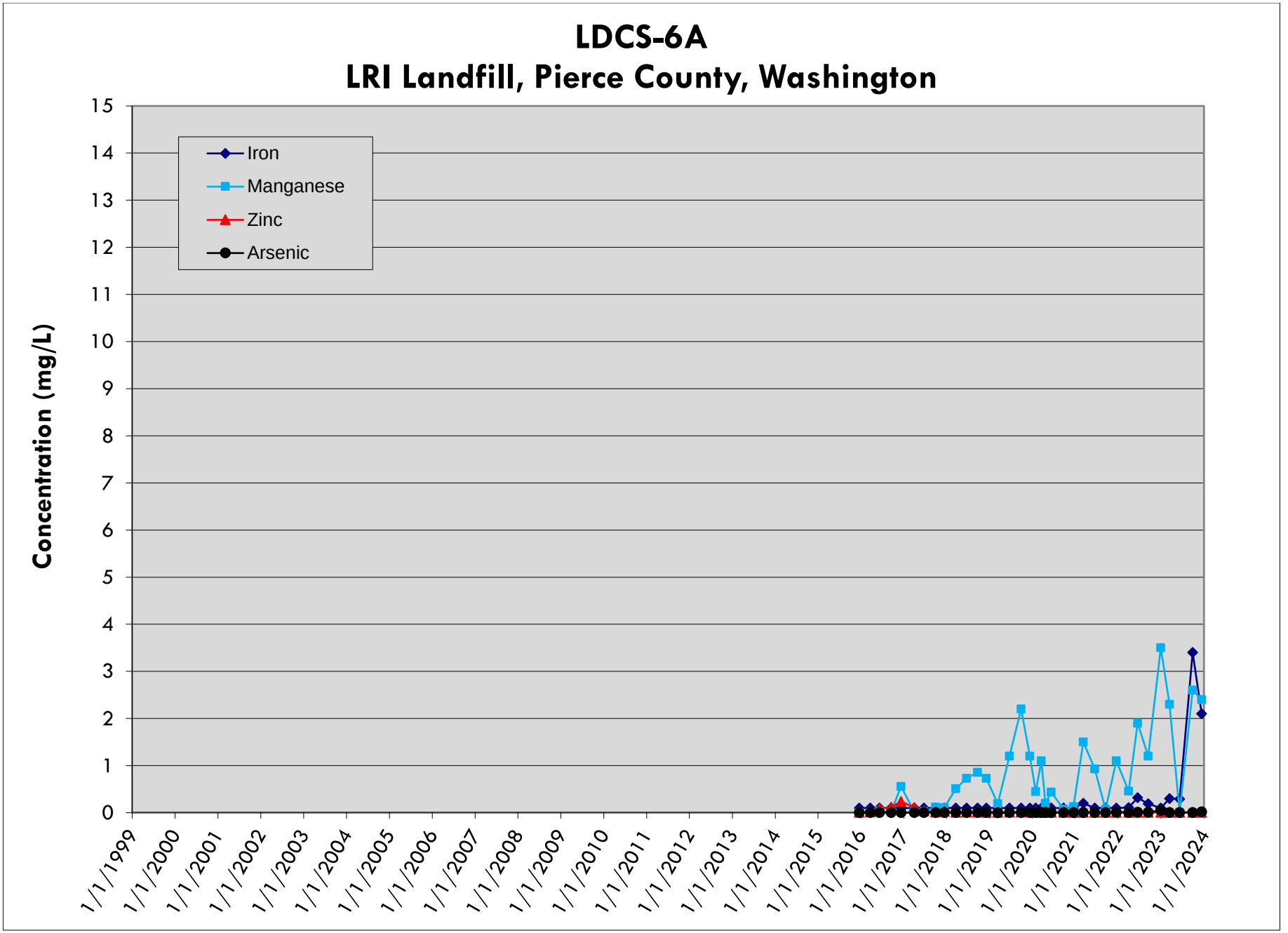
LDCS-6A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
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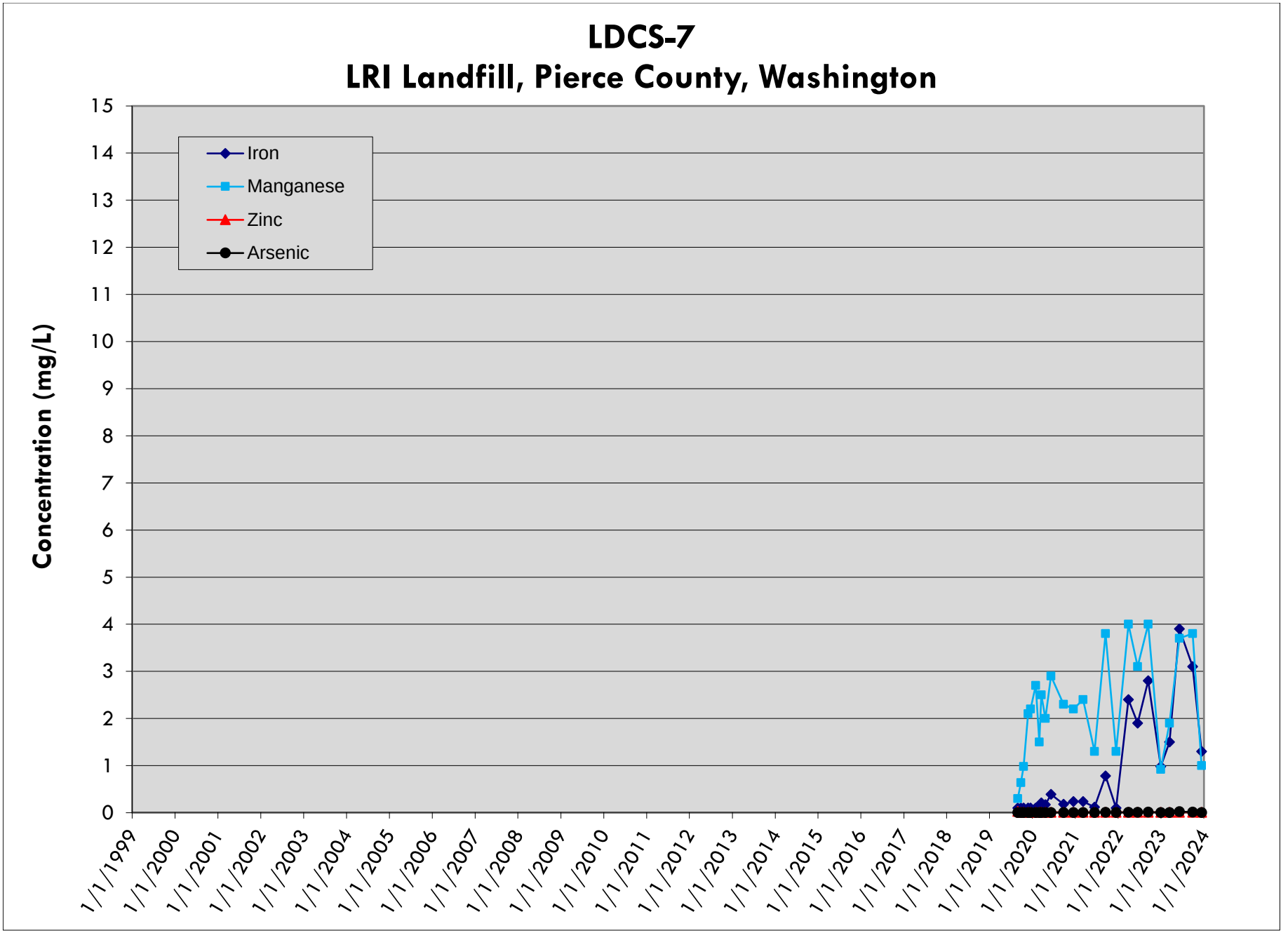
LDCS-7
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
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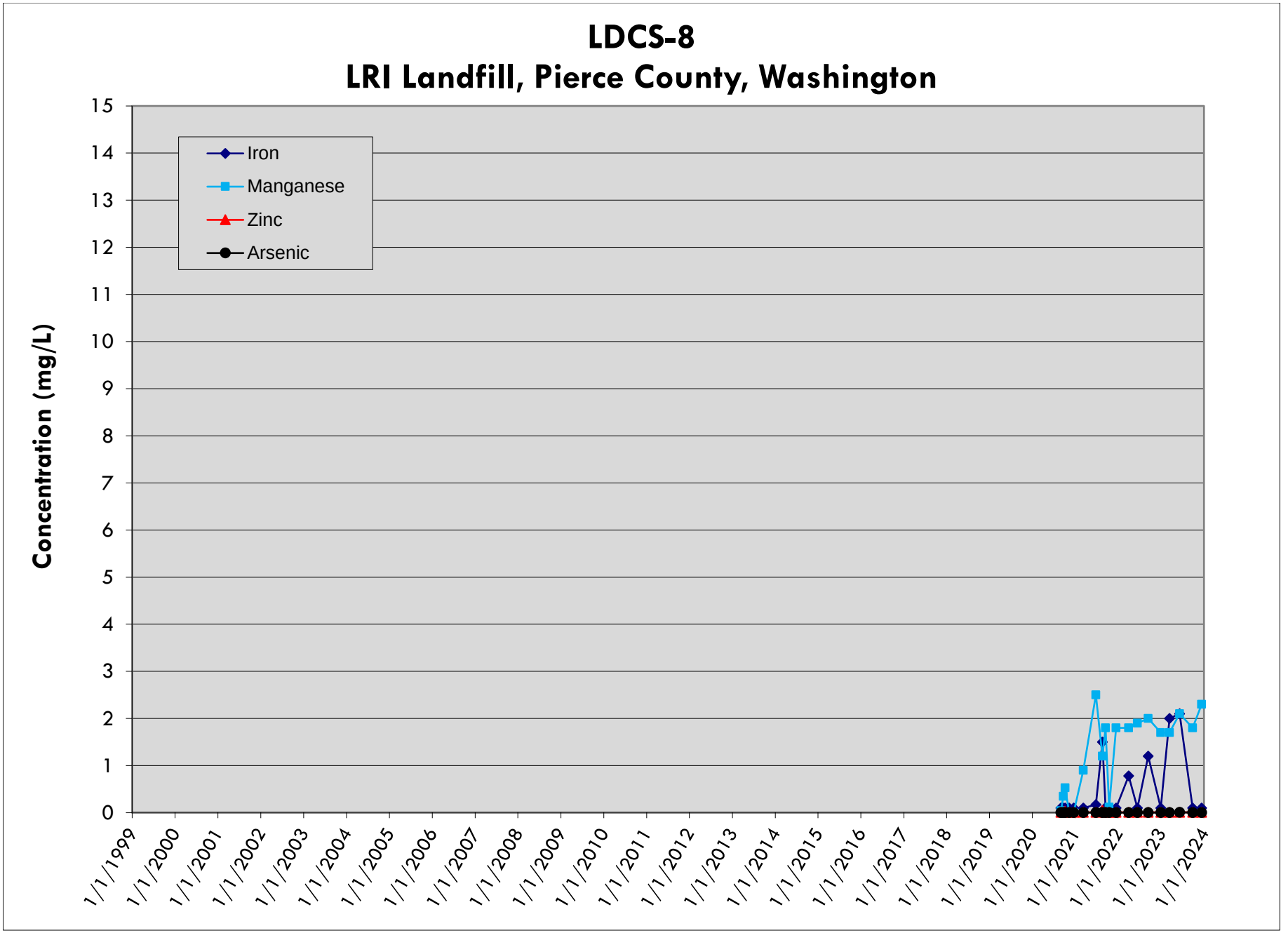
LDCS-8
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
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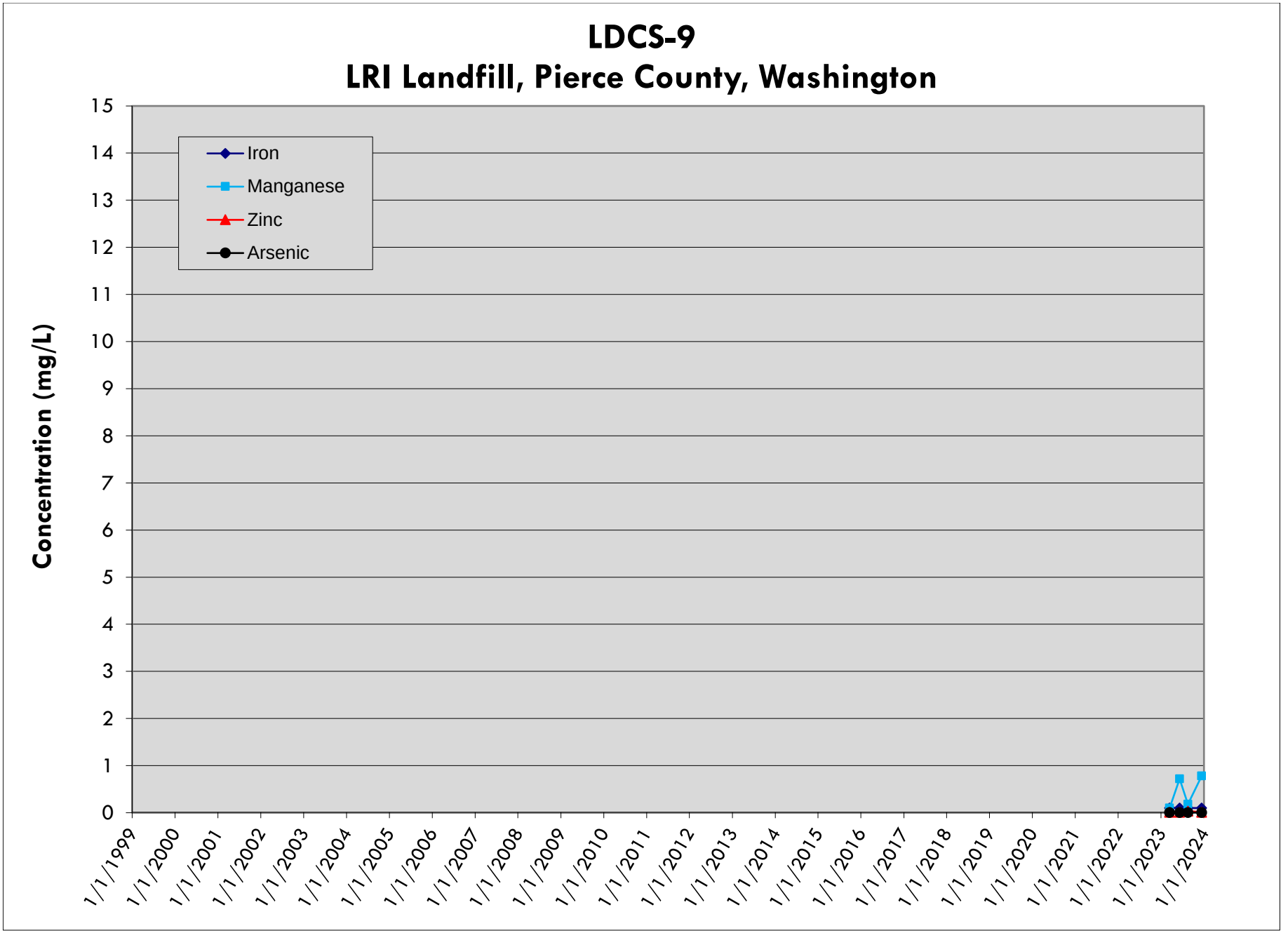
LDCS-9
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
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0
Iron
Manganese
Zinc
Arsenic
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1/1/2023
1/1/2024

Summary of Leachate Volume and Depth Data
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Date	Cell 1 Leachate Volume (GPD)	Cell 1 Leachate Level (in.)	Cell 2A Leachate Volume (GPD)	Cell 2A Leachate Level (in.)	Cell 2B Leachate Volume (GPD)	Cell 2B Leachate Level (in.)	Cell 3A Leachate Volume (GPD)	Cell 3A Leachate Level (in.)	Cell 4A Leachate Volume (GPD)	Cell 4A Leachate Level (in.)	Cell 4B Leachate Volume (GPD)	Cell 4B Leachate Level (in.)	Cell 5 Leachate Volume (GPD)	Cell 5 Leachate Level (in.)	Cell 6 Leachate Volume (GPD)	Cell 6 Leachate Level (in.)	Cell 7 Leachate Volume (GPD)	Cell 7 Leachate Level (in.)	Cell 8A Leachate Volume (GPD)	Cell 8A Leachate Level (in.)	Cell 9A Leachate Volume (GPD)	Cell 9A Leachate Level (in.)
10/1/2023	1,805	11.0	0	7.0	2,445	10.0	4,967	10.0	0	12.0	5,730	9.0	1,805	9.0	37,996	19.4	6,235	11.2	10,707	11.8	23,851	27.8
10/2/2023	3,177	10.9	0	6.8	2,445	10.0	23,376	11.5	10,724	11.6	10,538	9.2	3,402	9.5	37,996	18.9	11,369	10.9	10,707	13.2	23,851	8.8
10/3/2023	1,355	11.0	0	6.8	0	0.0	27,579	11.3	11,603	7.4	7,570	10.5	3,547	10.7	37,996	19.0	10,785	11.1	10,707	28.6	23,851	10.4
10/4/2023	1,456	11.1	0	7.9	0	0.0	31,691	9.8	8,916	9.3	8,062	10.6	3,144	10.7	37,838	19.3	7,538	11.2	10,707	11.3	1,753	14.1
10/5/2023	2,698	10.8	0	9.0	0	0.0	35,950	11.1	10,727	9.6	9,604	10.2	3,152	10.6	53,762	19.3	6,373	11.1	10,707	18.8	1,753	8.3
10/6/2023	3,240	10.8	0	9.9	0	0.0	41,495	12.9	9,946	8.4	6,205	10.5	3,367	10.5	34,192	19.1	6,053	11.2	10,707	16.5	1,753	8.4
10/7/2023	3,253	10.8	0	10.6	0	0.0	46,393	12.9	9,208	9.0	10,491	10.0	3,587	10.4	34,192	19.1	7,396	11.1	15,996	10.5	1,753	8.4
10/8/2023	3,318	10.9	7,808	9.8	0	0.0	52,374	12.7	13,818	8.1	9,881	10.2	3,710	10.4	38,488	18.6	6,128	11.2	15,996	10.4	1,225	9.7
10/9/2023	0	11.9	0	6.9	0	0.0	53,506	15.0	0	11.0	0	10.9	460	11.8	46,162	19.8	7,913	11.1	15,996	11.5	3,925	10.4
10/10/2023	1,769	11.3	0	7.8	0	0.0	65,957	14.4	11,408	9.8	8,417	10.5	3,828	10.9	33,488	18.7	9,150	11.0	39,668	10.6	22,469	11.8
10/11/2023	1,804	10.9	0	9.0	0	0.0	72,141	11.7	12,759	9.2	10,433	10.1	3,822	10.3	40,792	18.7	13,304	10.7	39,668	11.9	12,504	12.5
10/12/2023	1,570	11.2	0	9.7	0	0.0	77,404	8.6	9,543	9.0	10,729	10.4	3,619	10.4	32,190	19.2	6,814	11.1	39,668	9.9	2,572	12.0
10/13/2023	3,262	10.7	6,579	7.4	0	0.0	82,899	10.8	12,314	8.3	6,502	10.2	3,522	10.4	69,758	19.7	7,767	11.1	49,564	9.9	7,064	12.5
10/14/2023	1,557	11.1	0	7.0	0	0.0	87,576	9.1	11,090	8.9	10,157	10.3	3,479	10.4	30,231	18.9	9,331	10.9	29,940	9.5	1,350	12.6
10/15/2023	2,834	10.8	0	8.3	0	0.0	93,227	9.0	11,041	8.2	5,617	10.3	3,307	10.5	30,231	19.1	8,196	11.0	29,940	9.8	1,350	11.5
10/16/2023	1,603	11.3	0	9.0	0	0.0	94,920	12.4	7,625	8.7	10,452	10.2	3,619	10.4	42,793	18.6	15,140	10.7	29,940	14.4	25,993	12.2
10/17/2023	2,931	10.9	0	10.4	0	0.0	101,488	12.2	7,433	8.9	6,033	10.3	3,511	10.4	42,793	19.1	8,155	11.1	29,940	13.3	25,993	12.6
10/18/2023	3,178	10.8	0	11.0	2,797	9.3	107,038	8.6	6,389	9.2	9,677	10.1	3,422	10.4	43,292	19.2	8,227	11.1	29,940	9.9	2,543	12.7
10/19/2023	2,970	10.8	7,928	9.6	4,527	9.3	7,162	10.8	6,927	9.3	6,887	10.4	3,382	10.5	27,726	18.8	7,481	11.2	13,884	9.7	1,394	13.1
10/20/2023	3,085	11.0	0	7.3	4,825	9.3	7,290	12.8	26,320	7.9	9,790	10.2	3,461	10.5	42,618	19.1	8,668	11.1	18,445	9.7	9,752	13.1
10/21/2023	1,555	11.0	0	8.5	4,899	9.4	4,967	13.2	7,397	8.7	8,988	10.4	3,550	10.4	42,618	19.2	8,315	11.1	18,445	9.8	9,752	13.3
10/22/2023	3,089	10.8	0	9.3	4,679	9.4	5,381	10.6	6,869	9.2	6,247	10.2	3,663	10.3	42,618	19.0	8,179	11.1	18,445	9.9	9,752	13.9
10/23/2023	1,647	11.0	0	10.3	4,726	9.4	5,104	10.0	6,892	9.0	9,567	10.1	3,369	10.4	40,954	18.8	6,995	11.2	40,230	9.8	9,752	13.9
10/24/2023	3,880	10.8	7,959	9.2	8,137	17.0	6,417	13.3	6,911	9.3	9,585	10.3	3,586	10.3	40,954	19.1	12,789	10.8	40,230	10.1	11,070	11.4
10/25/2023	1,458	11.0	0	6.6	17,464	22.3	9,659	10.6	7,036	9.3	5,760	10.4	3,873	10.2	44,956	18.8	11,748	10.9	40,230	14.4	1,842	7.7
10/26/2023	2,523	10.7	2,493	7.5	5,449	9.3	7,849	7.4	10,375	9.7	10,286	10.0	3,451	10.4	40,776	19.3	7,575	11.1	14,086	9.7	1,130	8.9
10/27/2023	1,193	10.8	7,405	8.3	5,060	9.4	3,788	8.8	10,537	8.5	5,939	10.5	3,330	10.5	35,356	19.2	8,105	11.1	19,836	9.8	1,130	8.9
10/28/2023	1,457	11.1	742	10.2	4,799	9.4	1,851	14.0	6,634	9.3	9,249	10.0	3,130	10.5	35,356	19.0	7,807	11.2	19,836	9.9	1,130	8.9
10/29/2023	3,125	10.9	1,339	10.3	4,827	9.4	3,484	14.0	7,645	8.9	6,360	10.4	3,207	10.5	35,356	19.6	8,590	11.1	39,672	9.9	649	1.3
10/30/2023	1,557	11.1	1,377	9.2	4,709	9.4	5,316	13.4	7,751	9.1	9,218	10.1	3,286	10.5	29,310	19.0	8,647	11.1	12,312	9.9	10	13.9
10/31/2023	3,270	10.7	761	6.5	4,821	9.4	3,669	13.7	9,900	9.3	6,238	10.4	3,406	10.4	0	18.9	8,241	11.1	0	10.0	0	13.9
11/1/2023	3,366	10.9	0	3.2	5,069	9.4	6,529	12.2	17,005	8.0	9,898	10.1	3,515	10.3	23,922	19.5	10,073	11.0	14,292	10.0	898	6.0
11/2/2023	1,985	10.9	0	3.7	13,773	18.2	8,740	8.5	7,031	9.3	9,867	10.1	4,017	10.1	23,922	18.7	18,640	10.7	37,646	25.9	22,355	7.0
11/3/2023	3,090	11.1	0	5.2	5,564	12.5	4,245	10.1	20,394	8.8	7,595	10.5	3,699	10.6	38,102	19.1	9,849	11.2	79,230	13.6	8,281	14.0
11/4/2023	1,513	11.1	1	6.0	5,362	11.8	5,719	14.1	12,250	7.7	9,851	10.5	4,016	10.5	37,474	18.7	16,883	11.0	50,836	29.7	9,788	42.0
11/5/2023	4,271	11.0	0	7.4	5,923	24.4	8,209	13.2	15,501	10.7	11,346	10.8	4,130	11.4	30,348	21.9	10,359	11.7	56,741	38.6	10,750	42.0
11/6/2023	1,687	11.0	0	8.8	6,459	23.8	9,172	13.4	12,241	9.3	7,826	10.7	4,349	11.2	30,348	21.1	14,762	11.4	56,741	40.1	10,750	38.0
11/7/2023	0	11.0	1	8.6	6,867	25.7	2,403	11.7	1,036	16.3	10,264	11.0	4,150	11.1	40,132	20.4	11,432	11.8	58,380	49.5	10,136	38.0
11/8/2023	2,645	11.3	6,009	7.6	5,355	10.0	2,430	14.3	23,551	15.9	9,749	10.1	3,059	10.7	39,220	19.2	7,000	11.3	82,439	31.7	10,136	38.0
11/9/2023	3,757	10.9	3,859	7.6	6,004	25.5	8,509	11.8	25,297	12.6	8,746	10.7	3,805	11.4	39,220	21.2	9,090	11.7	82,439	17.6	10,136	14.0
11/10/2023	3,153	11.1	0	6.6	6,079	18.5	4,190	10.1	20,882	8.6	5,462	10.4	3,625	10.9	35,009	20.3	9,788	11.5	33,476	11.1	5,395	13.0
11/11/2023	1,866	11.1	1,259	7.1	11,528	13.1	3,880	13.5	21,686	7.4	10,364	10.2	3,403	10.5	35,009	19.8	20,516	10.7	33,476	33.8	26,019	13.0
11/12/2023	3,922	11.1	0	7.8	6,037	28.6	4,234	13.7	11,582	10.1	8,769	10.6	4,048	11.7	35,009	21.8	10,848	12.1	33,476	54.3	26,019	13.0
11/13/2023	2,028	11.0	2,365	8.3	8,314	31.1	7,634	11.3	14,100	9.4	8,967	10.6	3,758	11.5	35,009	20.8	13,946	12.3	33,476	60.8	26,019	58.0
11/14/2023	3,011	11.0	10,361	11.0	5,930	25.7	7,301	13.5	11,307	9.1	8,930	10.6	3,760	11.3	74,342	21.5	9,334	11.7	33,476	58.6	37,802	7.0
11/15/2023	3,988	11.0	2,594	5.0	6,271	22.0	8,065	13.1	18,114	10.4	8,181	10.6	4,197	11.1	14,855	20.2	9,512	11.5	138,748	52.4	3,599	7.0
11/16/2023	1,921	10.9	850	8.0	4,368	17.7	5,684	11.2	8,406	9.5	8,441	10.3	2,747	11.3	14,855	20.6	6,560	11.7	100,550	41.1	3,599	7.0
11/17/2023	3,526	11.0	1,970	6.6	5,671	35.2	6,547	12.1	4,648	13.1	9,352	11.3	3,792	13.0	14,855	26.1	9,177	12.4	22,419	29.2	3,599	15.0
11/18/2023	3,988	11.0	1,898	4.9	4,393	30.1	6,769	14.1	11,614	10.8	8,346	10.5	3,458	12.0	29,344	23.2	7,293	12.0	22,419	15.0	5,915	13.0
11/19/2023	0	11.0	0	2.9	5,529	40.1	2,629	11.0	9,184	10.1	5,980	11.2	3,333	12.8	31,599	20.0	11,249	12.9	22,419	30.0	8,990	13.0
11/20/2023	3,091	10.9	2,142	8.6	5,369	38.1	4,887	14.1	10,734	11.0	10,810	10.9	3,927	12.5	31,599	20.7	8,277	12.8	24,867	23.8	8,990	9.0
11/21/2023	3,070	10.9	3,274	5.2	6,346	29.9	4,387	12.6	11,862	10.2	7,527	10.5	4,238	11.5	11,480	21.2	10,042	11.7	24,867	12.9	3,935	9.0
11/22/2023	2,039	11.1	471	3.1	6,530	16.8	4,215	14.4	10,119	9.7	7,571	10.6	3,436	11.0	48,074	20.9	10,601	11.4	33,588	21.9	10,939	15.0
11/23/2023	2,511	11.0	4,361	6.6	5,099	20.2	3,267	13.6	12,601	10.4	6,333	10.6	3,467	11.1	68,016	20.3	7,849	11.6	25,404	12.2	5,387	14.0
11/24/2023	2,347	11.1	2,133	11.3	5,193	21.6	3,262	13.4	13,406	9.8	9,148	10.7	3,696	11.3	31,578	21.0	8,301	11.7	35,428	11.6	5,387	10.0
11/25/2023	2,726	10.8	1,448	11.8	5,359	9.4	5,977	12.9	14,159	8.7	8,620	10.2	3,800	10.4	31,578	19.0	8,268	11.2	35,428	10.8	4,371	11.0
11/26/2023	3,374	10.8	1,969	11.8	5,151	9.4	5,598	9.2	9,246	8.4	9,412	10.4	3,792	10.4	31,578	19.1	7,166	11.2	17,414	10.6	3,458	14.0
11/27/2023	3,379	10.9	1,831	12.0	5,014	9.4	3,666	12.9	14,025	8.9	6,633	10.3	3,778	10.4	31,578	19.2	7,983	11.2	23,078	10.5	3,458	14.0
11/28/2023	1,860	10.9	2,190	12.6	5,208	9.4	3,715	13.5	11,373	9.4	8,916	10.2	3,743	10.4	39,414	19.3	7,073	11.2	40,712	10.4	6,915	14.0
11/29/2023	3,675	10.8	1,497	9.6	5,163	9.4	3,694	13.1	10,279	8.4	9,561	10.2	3,765	10.4	33,506	18.8	7,513	11.2	17,634	10.4	6,024	14.0
11/30/2023	3,432	10.9	933	6.5	5,004	9.8	3,926	15.6	9,262	7.9	10,755	10.0	4,217	11.4	40,725	19.2	9,365	11.1	13,346	9.7	3,208	14.0

Summary of Leachate Volume and Depth Data
Fourth Quarter 2023
LRI Landfill, Pierce County, Washington

Date	Cell 1 Leachate Volume (GPD)	Cell 1 Leachate Level (in.)	Cell 2A Leachate Volume (GPD)	Cell 2A Leachate Level (in.)	Cell 2B Leachate Volume (GPD)	Cell 2B Leachate Level (in.)	Cell 3A Leachate Volume (GPD)	Cell 3A Leachate Level (in.)	Cell 4A Leachate Volume (GPD)	Cell 4A Leachate Level (in.)	Cell 4B Leachate Volume (GPD)	Cell 4B Leachate Level (in.)	Cell 5 Leachate Volume (GPD)	Cell 5 Leachate Level (in.)	Cell 6 Leachate Volume (GPD)	Cell 6 Leachate Level (in.)	Cell 7 Leachate Volume (GPD)	Cell 7 Leachate Level (in.)	Cell 8A Leachate Volume (GPD)	Cell 8A Leachate Level (in.)	Cell 9A Leachate Volume (GPD)	Cell 9A Leachate Level (in.)
12/1/2023	2,600	11.1	0	5.1	0	9.9	7,726	17.7	24,626	6.4	9,768	10.0	4,259	11.6	92,460	21.6	12,440	11.7	36,696	10.9	9,250	13.3
12/2/2023	1,396	11.5	1	4.3	1	51.9	3,983	11.7	3,393	10.5	4,741	11.0	3,511	13.1	0	33.1	14,470	15.2	53,028	41.3	17,331	66.0
12/3/2023	2,920	0.0	0	0.0	0	0.0	7,933	0.0	10,727	0.0	11,221	0.0	4,422	0.0	0	0.0	14,331	0.0	0	0.0	0	0.0
12/4/2023	2,737	7.0	0	7.6	0	57.7	7,199	12.5	10,040	11.3	10,351	12.0	3,845	15.5	70,924	34.6	11,471	10.8	74,480	48.9	40,796	36.0
12/5/2023	2,617	9.5	1	8.8	1	57.1	1,077	9.5	546	10.4	986	11.0	471	10.4	47,710	38.5	2,645	12.6	50,050	59.2	18,166	49.1
12/6/2023	0	12.3	0	11.4	0	6.4	5,957	23.5	0	15.5	0	15.0	5,733	23.0	56,570	40.3	13,965	27.1	57,152	71.9	53,032	127.9
12/7/2023	0	12.3	0	13.6	0	9.5	4,431	6.7	2	16.9	1	19.0	5,550	18.6	43,434	36.6	18,404	26.2	44,128	73.3	60,292	133.0
12/8/2023	0	12.1	1,838	13.1	1,838	6.3	1,946	19.3	405	17.6	905	21.0	1,803	11.9	38,068	32.5	5	30.3	38,404	73.7	54,550	134.4
12/9/2023	0	12.6	4,652	10.7	4,652	46.5	4,622	7.9	1,330	17.8	3,659	21.0	0	20.9	21,968	33.2	2,614	40.5	23,650	73.9	28,422	119.6
12/10/2023	1	0.0	0	0.0	0	0.0	4,291	0.0	1,577	0.0	5,145	0.0	0	0.0	20,974	0.0	9,237	0.0	21,670	0.0	29,567	0.0
12/11/2023	0	12.6	0	13.1	0	107.8	2,956	7.2	2,326	18.9	7,409	24.0	7,042	30.9	20,974	43.6	10,383	45.7	21,670	80.3	29,567	159.6
12/12/2023	0	12.8	0	14.5	0	5.8	5,846	24.9	324	19.5	8,320	24.0	7,303	18.8	18,474	44.3	8,702	40.6	20,524	80.2	27,968	156.9
12/13/2023	0	13.0	0	18.1	0	6.1	3,883	8.1	0	20.4	7,517	24.0	4,694	7.0	24,776	44.6	8,665	42.2	26,468	80.3	28,861	149.7
12/14/2023	1	13.0	0	16.8	0	6.2	5,594	22.0	2,258	20.7	8,852	24.0	4,440	9.7	19,164	46.9	8,351	45.8	19,128	80.9	35,807	139.1
12/15/2023	0	12.8	0	17.0	0	8.6	3,728	13.6	3,248	19.6	8,548	24.0	3,528	7.9	0	45.0	10,883	45.5	26,262	80.0	41,082	122.1
12/16/2023	2	13.1	1,773	21.1	1,773	41.8	3,832	9.1	1,215	20.3	2,719	25.0	1,682	15.1	33,996	49.3	3,525	49.7	22,998	76.0	23,312	109.6
12/17/2023	2	0.0	4,434	0.0	4,434	0.0	4,350	0.0	1,123	0.0	2,172	0.0	2,118	0.0	0	0.0	8	0.0	0	0.0	0	0.0
12/18/2023	7	13.5	16,408	11.6	16,408	40.0	3,285	8.0	2,273	20.9	7,300	28.0	6,020	6.2	28,532	55.7	27	51.6	15,168	75.7	28,878	101.1
12/19/2023	3	13.6	1,554	6.1	1,554	11.1	7,433	22.8	3,301	20.6	11,134	29.0	5,702	12.2	22,500	59.0	2	52.4	21,154	76.2	32,258	92.7
12/20/2023	17	13.2	6,833	4.8	6,833	11.4	8,074	8.2	5,405	21.3	13,252	29.0	4,020	11.7	25,304	60.0	4,108	53.1	30,096	76.3	45,024	31.0
12/21/2023	0	13.5	719	4.3	719	10.6	5,276	9.8	4,291	20.5	12,658	28.0	3,548	9.9	51,740	54.7	22,497	101.2	55,858	74.2	19,722	8.5
12/22/2023	6,864	13.5	1,346	5.4	1,346	9.1	6,088	17.3	4,284	20.1	12,147	28.0	3,637	7.6	18,716	55.7	13,980	138.6	19,884	74.0	17,968	12.2
12/23/2023	4,699	0.0	5,998	0.0	5,998	0.0	5,475	0.0	2,676	0.0	7,234	0.0	3,129	0.0	0	0.0	10,204	0.0	0	0.0	0	0.0
12/24/2023	3,713	0.0	2,135	0.0	2,135	0.0	2,102	0.0	967	0.0	2,137	0.0	1,415	0.0	0	0.0	2,935	0.0	0	0.0	0	0.0
12/25/2023	31	0.0	0	0.0	0	0.0	26	0.0	51	0.0	10	0.0	19	0.0	0	0.0	14	0.0	0	0.0	0	0.0
12/26/2023	8,861	11.4	4	8.7	4	13.0	11,806	7.6	13,975	20.8	13,264	32.0	9,633	9.0	63,022	63.3	7,221	138.6	84,432	76.3	6,360	122.8
12/27/2023	3,020	11.6	0	7.0	0	9.1	10,947	15.5	26,307	11.5	20,792	0.0	4,501	11.9	4,450	69.8	8,779	53.3	42,070	75.6	19,084	123.5
12/28/2023	3,841	0.0	0	0.0	0	0.0	10,187	0.0	31,263	0.0	26,084	0.0	3,716	0.0	0	0.0	119	0.0	0	0.0	0	0.0
12/29/2023	4,218	0.0	0	0.0	0	0.0	9,626	0.0	17,850	0.0	29,892	0.0	3,779	0.0	0	0.0	0	0.0	0	0.0	0	0.0
12/30/2023	1,892	0.0	0	0.0	0	0.0	8,177	0.0	5,310	0.0	17,253	0.0	3,453	0.0	0	0.0	0	0.0	0	0.0	0	0.0
12/31/2023	1,525	0.0	7,300	0.0	7,300	0.0	6,932	0.0	3,603	0.0	11,551	0.0	3,257	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Appendix G

Stormwater Monitoring Data

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 01/01/2023 - 01/31/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab C8-1	pH Standard Units Weekly Grab C8-1	Turbidity (NTU) Measured NTU Weekly Grab C8-2	pH Standard Units Weekly Grab C8-2	Turbidity (NTU) Measured NTU Weekly Grab C9-1	pH Standard Units Weekly Grab C9-1
1-T	**1/3/23**			C	C	C	C
1-Th	**1/5/23**	2.3	M				
2-W	**1/11/23**			12	M	6	M
2-Th	**1/12/23**	6.6	M				
3-T	**1/17/23**			8	M	7	M
3-W	**1/18/23**	5.5	M				
4-T	**1/24/23**	C	C	C	C	5	M
5-T	**1/31/23**	C	C	C	C	10	M
Minimum			M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		6.6	M	12	M	10	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

George Duvendack

Signature

2/8/2023 6:46:53 AM

Date

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 02/01/2023 - 02/28/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-Th	**2/2/23**	C	C	C	C	5	M
2-Su	**2/5/23**	2.7	M				
2-T	**2/7/23**	8.0	M				
2-W	**2/8/23**	19.7	M	5	M	8	M
2-F	**2/10/23**	17.1	M				
3-Su	**2/12/23**	9.8	M				
3-T	**2/14/23**			7	M	6	M
3-W	**2/15/23**	14.4	M				
4-M	**2/20/23**	19.7	M				
4-T	**2/21/23**			9	M	5	M
Minimum			M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		19.7	M	9	M	8	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

George Duvendack
Signature

3/14/2023 9:58:54 PM
Date

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 03/01/2023 - 03/31/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-Sa	**3/4/23**	15.0	M				
2-W	**3/8/23**	C	C	6	M	8	M
3-M	**3/13/23**	15.5	M				
3-Th	**3/16/23**			8	M	5	M
4-M	**3/20/23**	6.8	M				
4-T	**3/21/23**	12.0	M	4	M	6	M
5-W	**3/29/23**	C	C	C	C	4	M
Minimum			M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		15.5	M	8	M	8	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

George Duvendack

Signature

4/13/2023 3:10:20 PM

Date

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 04/01/2023 - 04/30/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
2-M	**4/3/23**	13.4	M				
2-T	**4/4/23**			8	M	13	M
2-Sa	**4/8/23**	15.7	M				
3-M	**4/10/23**	12.8	M				
3-T	**4/11/23**	12.5	M	14	M	11	M
3-W	**4/12/23**	12.5	M				
4-M	**4/17/23**	8.9	M				
4-T	**4/18/23**	10.9	M	4	M	6	M
5-Su	**4/23/23**	14.2	M				
5-T	**4/25/23**			9	M	7	M
Minimum			M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		15.7	M	14	M	13	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Temporary Sediment Pond
C9-1		Check Dams
C9-1		Other
C9-1		Temporary Sediment Pond

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

George Duvendack
Signature

5/15/2023 11:07:27 AM
Date

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 05/01/2023 - 05/31/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-W	**5/3/23**	C	C	C	C	C	C
1-Sa	**5/6/23**	13.1	M				
2-Su	**5/7/23**	14.2	M				
2-M	**5/8/23**	9.9	M				
2-Th	**5/11/23**	C	C	C	C	C	C
3-Th	**5/18/23**	C	C	C	C	C	C
4-T	**5/23/23**	C	C	C	C	C	C
5-T	**5/30/23**	C	C	C	C	C	C
Minimum			C		C		C
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		14.2	C	C	C	C	C
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

Overall DMR Notes/Comment

Construction stormwater treatment was performed using Chitosan Enhanced Sand Filtration (CESF) prior to discharge to C8-1.The averaged turbidity value is reported for each day that a discharge occurred .

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Silt Fence

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

George Duvendack — **Signature**

6/14/2023 9:12:22 AM — **Date**

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 06/01/2023 - 06/30/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-Th	**6/1/23**	C	C	C	C	C	C
2-Su	**6/4/23**	C	C	C	C	C	C
3-Su	**6/11/23**	C	C	C	C	C	C
4-Su	**6/18/23**	C	C	C	C	C	C
5-Su	**6/25/23**	C	C	C	C	C	C
Minimum							
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum							
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Silt Fence

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George Duvendack — **Signature**

7/14/2023 4:44:38 PM — **Date**

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 07/01/2023 - 07/31/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
2-W	**7/5/23**	C	C	C	C	C	C
3-Th	**7/13/23**	C	C	C	C	C	C
4-T	**7/18/23**	C	C	C	C	C	C
5-W	**7/26/23**	C	C	C	C	C	C
Minimum							
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum							
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

Outfall: 001 - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C8-2	All Parameters		C	
C9-1	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Silt Fence

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George Duvendack

Signature

8/8/2023 11:38:53 AM

Date

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 08/01/2023 - 08/31/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-Th	**8/3/23**	C	C	C	C	C	C
2-W	**8/9/23**	C	C	C	C	C	C
3-T	**8/15/23**	C	C	C	C	C	C
4-W	**8/23/23**	C	C	C	C	C	C
5-W	**8/30/23**	C	C	C	C	C	C
Minimum			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

No construction stormwater discharge for the month of August 2023

Outfall: 001 - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C8-1	All Parameters		C	
C8-2	All Parameters		C	
C9-1	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Silt Fence

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Kevin Green
Signature

9/7/2023 6:36:27 AM
Date

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 09/01/2023 - 09/30/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
2-Th	**9/7/23**	C	C	C	C	C	C
3-W	**9/13/23**	C	C	C	C	C	C
4-W	**9/20/23**	C	C	C	C	C	C
5-M	**9/25/23**	C	C	C	C	C	C
Minimum							
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum							
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

Outfall: 001 - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C8-1	All Parameters		C	
C8-2	All Parameters		C	
C9-1	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Silt Fence

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Kevin Green — **Signature**

10/3/2023 6:21:04 PM — **Date**

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 10/01/2023 - 10/31/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-Su	**10/1/23**	C	C	C	C	C	C
2-Su	**10/8/23**	C	C	C	C	C	C
3-T	**10/17/23**	6.54	M	C	C	C	C
4-W	**10/25/23**	6.29	M	C	C	C	C
5-Su	**10/29/23**	C	C	C	C	C	C
Minimum			M		C		C
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		6.54	M	C	C	C	C
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

Overall DMR Notes/Comment

Construction stormwater treatment was performed using Chitosan Enhanced Sand Filtration (CESF) prior to discharge to C8-1.The averaged turbidity is reported for day that discharge occured

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

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Kevin Green — **Signature**

11/16/2023 1:31:14 PM — **Date**

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 11/01/2023 - 11/30/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-W	**11/1/23**	C	C	C	C	C	C
2-Su	**11/5/23**	C	C	C	C	C	C
3-T	**11/14/23**	5.08	M	C	C	C	C
3-W	**11/15/23**	C	C	C	C	8	M
4-T	**11/21/23**	C	C	C	C	9	M
4-Sa	**11/25/23**	9.98	M	C	C	C	C
5-Su	**11/26/23**	12.17	M	C	C	C	C
5-T	**11/28/23**	C	C	C	C	C	C
Minimum			M		C		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		12.17	M	C	C	9	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

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Kevin Green — **Signature**

12/14/2023 9:33:07 AM — **Date**

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002603 **Permittee:** LRI 304th Street Landfill

Facility County: Pierce **Receiving Waterbody:** NEWB 2

Monitoring Period: 12/01/2023 - 12/31/2023 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-F	**12/1/23**	C	C	C	C	C	C
2-M	**12/4/23**	8	M	16	M	18	M
3-W	**12/13/23**	9	M	C	C	C	C
4-W	**12/20/23**	C	C	C	C	C	C
5-T	**12/26/23**	C	C	C	C	C	C
6-Su	**12/31/23**	C	C	C	C	C	C
Minimum			M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		9	M	16	M	18	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Kevin Green
Signature

1/15/2024 4:07:16 PM
Date

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002557 **Permittee:** Pierce County Recycling - 304th Street L

Facility County: Pierce **Receiving Waterbody:**

Monitoring Period: 01/01/2023 - 03/31/2023 **Outfall:** SWPO - Discharge from SW pond **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	pH Standard Units Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper Total Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	Total BOD5 Total Milligrams/L (mg/L) Quarterly Grab	Solids (Residue) Total suspended (TSS) Milligrams/L (mg/L) Quarterly Grab	Ammonia Total Milligrams/L (mg/L) Quarterly Grab	Alpha-terpineol (3-Cyclohexene-1-methanol.,.alpha.,alpha.,trimethyl-) Micrograms/L (ug/L) Quarterly Grab	Benzoic Acid Micrograms/L (ug/L) Quarterly Grab	p-Cresol (4-methylphenol) Micrograms/L (ug/L) Quarterly Grab
		SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO
	Limit Set	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-T	**1/31/23**	4.0	6.90	No	J|6.6	J|17	4.8	4.2	B|0.5	B|9.5*	B|50	B|10
Minimum			6.9									
			BM: >= 5.0 (RO)									
Average		4			J|6.6	J|17						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			6.9									
			BM: <= 9.0 (RO)									
Month 1 Average							4.8	4.2	B|0.5	B|9.5	B|50	B|10
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							4.8	4.2	B|0.5	B|9.5	B|50	B|10
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							4.8	4.2	B|0.5	B|9.5	B|50	B|10
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14

Reporting Codes Used: B - Below Detection Limit/No Detection, J - Estimated Value/Below Quantitation Limit

Outfall: SWPO - Discharge from SW pond

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
SWPO	Alpha-terpineol (3-Cyclohexene-1-methanol.,.alpha.,alpha.,trimethyl-) Micrograms/L (ug/L)	1/31/2023	B|9.5	Alpha-terpineol was evaluated by the laboratory as a tentatively identified compound (TIC) with a detection limit of 9.5 micrograms per liter. No presence of alpha-terpineol was indicated.

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

George Duvendack — **Signature**

5/23/2023 9:38:34 AM — **Date**

Week	Monitoring Point	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	pH Standard Units Quarterly Grab
		SWPO	SWPO	SWPO
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-T	1/31/23	B|4	J|17	6.9
Minimum				6.9
				>= 6.0 (RO)
Average				
Maximum				6.9
				<= 9.0 (RO)
Month 1 Average		B|4	J|17	
		<= 15	<= 110	
Month 2 Average		B|4	J|17	
		<= 15	<= 110	
Month 3 Average		B|4	J|17	
		<= 15	<= 110	

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002557 **Permittee:** Pierce County Recycling - 304th Street L

Facility County: Pierce **Receiving Waterbody:**

Monitoring Period: 04/01/2023 - 06/30/2023 **Outfall:** SWPO - Discharge from SW pond **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	pH Standard Units Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper Total Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	Total BOD5 Total Milligrams/L (mg/L) Quarterly Grab	Solids (Residue) Total suspended (TSS) Milligrams/L (mg/L) Quarterly Grab	Ammonia Total Milligrams/L (mg/L) Quarterly Grab	Alpha-terpineol (3-Cyclohexene-1-methanol,.alpha.,alpha.,trimethyl-) Micrograms/L (ug/L) Quarterly Grab	Benzoic Acid Micrograms/L (ug/L) Quarterly Grab	p-Cresol (4-methylphenol) Micrograms/L (ug/L) Quarterly Grab
		SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO
Limit Set		ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
4-T	**4/18/23**	1	6.5	No	5	J|6.6	B|2.0	B|2.0	B|0.5	B|9.5	B|5.2	B|10
Minimum			6.5									
			BM: >= 5.0 (RO)									
Average		1			5	J|6.6						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			6.5									
			BM: <= 9.0 (RO)									
Month 1 Average							2.0	2.0	0.5	9.5	5.2	7.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							B|2.0	B|2.0	B|0.5	B|9.5	J|5.2	B|7.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							B|2.0	B|2.0	B|0.5	B|9.5	J|5.2	B|7.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14

Reporting Codes Used: B - Below Detection Limit/No Detection, J - Estimated Value/Below Quantitation Limit

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

George Duvendack
Signature

8/8/2023 11:41:40 AM
Date

Week	Monitoring Point	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	pH Standard Units Quarterly Grab
		SWPO	SWPO	SWPO
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
4-T	**4/18/23**	B|7.6	J|6.6	6.5
Minimum				6.5
				>= 6.0 (RO)
Average				
Maximum				6.5
				<= 9.0 (RO)
Month 1 Average		6.6	6.6	
		<= 15	<= 110	
Month 2 Average		B|10	J|6.6	
		<= 15	<= 110	
Month 3 Average		B|10	J|6.6	
		<= 15	<= 110	

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002557 **Permittee:** Pierce County Recycling - 304th Street L

Facility County: Pierce **Receiving Waterbody:**

Monitoring Period: 07/01/2023 - 09/30/2023 **Outfall:** SWPO - Discharge from SW pond **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	pH Standard Units Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper Total Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	Total BOD5 Total Milligrams/L (mg/L) Quarterly Grab	Solids (Residue) Total suspended (TSS) Milligrams/L (mg/L) Quarterly Grab	Ammonia Total Milligrams/L (mg/L) Quarterly Grab	Alpha-terpineol (3-Cyclohexene-1-methanol,.alpha.,alpha.,trimethyl-) Micrograms/L (ug/L) Quarterly Grab	Benzoic Acid Micrograms/L (ug/L) Quarterly Grab	p-Cresol (4-methylphenol) Micrograms/L (ug/L) Quarterly Grab
		SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO
Limit Set		ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
Minimum												
			BM: >= 5.0 (RO)									
Average												
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum												
			BM: <= 9.0 (RO)									
Month 1 Average												
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average												
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average												
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Kevin Green — **Signature**

10/3/2023 6:18:42 PM — **Date**

Week	Monitoring Point	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	pH Standard Units Quarterly Grab
		SWPO	SWPO	SWPO
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
Minimum				
				>= 6.0 (RO)
Average				
Maximum				
				<= 9.0 (RO)
Month 1 Average				
		<= 15	<= 110	
Month 2 Average				
		<= 15	<= 110	
Month 3 Average				
		<= 15	<= 110	

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR002557 **Permittee:** Pierce County Recycling - 304th Street L

Facility County: Pierce **Receiving Waterbody:**

Monitoring Period: 10/01/2023 - 12/31/2023 **Outfall:** SWPO - Discharge from SW pond **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	pH Standard Units Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper Total Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	Total BOD5 Total Milligrams/L (mg/L) Quarterly Grab	Solids (Residue) Total suspended (TSS) Milligrams/L (mg/L) Quarterly Grab	Ammonia Total Milligrams/L (mg/L) Quarterly Grab	Alpha-terpineol (3-Cyclohexene-1-methanol, .alpha.,.alpha.,4-trimethyl-) Micrograms/L (ug/L) Quarterly Grab	Benzoic Acid Micrograms/L (ug/L) Quarterly Grab	p-Cresol (4-methylphenol) Micrograms/L (ug/L) Quarterly Grab
		SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO
Limit Set		ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
3-M	**10/16/23**	3	6.98	No	3.4	J|3.2	3.8	5.6	B|0.3	B|9.8	J|40	B|10*
8-M	**11/20/23**											B|9.7
Minimum			6.98									
			BM: >= 5.0 (RO)									
Average		3			3.4	3.2						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			6.98									
			BM: <= 9.0 (RO)									
Month 1 Average							3.8	5.6	B|0.3	B|9.8	J|40	B|9.8
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							3.8	5.6	B|0.3	B|9.8	J|40	B|9.8
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							3.8	5.6	B|0.3	B|9.8	J|40	B|9.8
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14

Reporting Codes Used: B - Below Detection Limit/No Detection, J - Estimated Value/Below Quantitation Limit

Outfall: SWPO - Discharge from SW pond

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
SWPO	p-Cresol (4-methylphenol) Micrograms/L (ug/L)	10/16/2023	B|10	sample analyzed beyond holding time .

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Kevin Green — **Signature**

1/18/2024 7:09:53 AM — **Date**

Week	Monitoring Point	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	pH Standard Units Quarterly Grab
		SWPO	SWPO	SWPO
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
3-M	**10/16/23**	B|7.9	3.2	7.0
8-M	**11/20/23**			
Minimum				7
				>= 6.0 (RO)
Average				
Maximum				7
				<= 9.0 (RO)
Month 1 Average		B|7.9	3.2	
		<= 15	<= 110	
Month 2 Average		B|7.9	3.2	
		<= 15	<= 110	
Month 3 Average		B|7.9	3.2	
		<= 15	<= 110	

Appendix H

Landfill Gas Monitoring Data

Table H-1. 2023 Landfill Gas Probe Monitoring Summary
Methane (% vol.)
LRI Landfill, Pierce County, Washington

Gas Probe ID	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
LRI-GP01	4.0	3.2	15.0	17.0	0.0	14.7	4.7	9.8	10.6	12.4	9.1	37.3
LRI-GP02	6.0	3.2	2.7	0.8	0.2	0.0	0.0	0.0	0.6	2.5	4.0	3.7
LRI-GP03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP10B	0.0	0.0	0.0	13.4	6.8	15.3	6.7	0.0	0.0	0.0	12.3	0.0
LRI-GP10A	15.6	8.7	16.4	0.8	15.4	0.0	7.2	2.2	1.6	17.2	27.0	33.1
LRI-GP11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP12	12.7	12.0	15.2	14.5	17.0	19.9	24.1	15.3	3.7	2.4	3.9	0.0
LRI-GP13	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP15	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	4.1	4.2	0.0
LRI-GP16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
LRI-GP20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LRI-GP21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

January-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*: CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)	Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3* (ft)	Exposed Portion of Perforations - *Note 3* (%)	Comments
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.00	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	1/19/2023	12:35	N/A	--	4.0	3.7	10.3	82.0	16.9	21.9	100.0	
GP-2	1/19/2023	12:19	N/A	--	6.0	15.9	0.0	78.1	15.9	0.0	0.0	
GP-3	1/19/2023	12:13	N/A	--	0.0	6.1	12.3	81.6	10.2	5.3	100.0	
GP-4	1/19/2023	12:07	N/A	--	0.0	5.0	14.3	80.7	10.0	0.2	3.6	
GP-9	1/19/2023	12:00	N/A	--	0.0	9.4	7.0	83.6	11.3	0.0	0.0	
GP-10	1/19/2023	12:48	N/A	--	0.0	3.5	17.0	79.5				
GP-10P	1/19/2023	12:45	N/A	18.6	15.6	32.9	0.0	51.5				
GP-11	1/19/2023	13:02	N/A	--	0.0	5.4	16.6	78.0				
GP-12	1/19/2023	14:05	N/A	15.7	12.7	47.9	0.0	39.4				
GP-13	1/19/2023	13:10	N/A	--	0.0	22.5	1.6	75.9				
GP-14	1/19/2023	13:54	N/A	--	0.0	0.7	20.3	79.0	12.0	0.0	0.0	
GP-15	1/19/2023	13:47	N/A	--	2.3	25.0	6.1	66.6	16.6	0.9	18.8	
GP-16	1/19/2023	11:51	N/A	--	0.0	0.2	20.8	79.0	20.0	12.6	84.1	
GP-17	1/19/2023	12:26	N/A	--	0.0	0.4	20.7	78.9	5.9	0.0	100.0	
GP-18	1/19/2023	11:40	N/A	--	0.0	0.2	20.7	79.1	3.7	0.0	0.0	
GP-19	1/19/2023	14:18	N/A	--	0.0	0.9	20.1	79.0	8.0	0.0	0.0	
GP-20	1/19/2023	13:25	N/A	--	0.0	0.2	20.7	79.1	6.9	0.0	0.0	
GP-21	1/19/2023	13:16	N/A	--	0.0	0.7	20.1	79.2	13.8	0.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	40	42	41
Wind Speed (mph):	5	5	5
Wind Direction:	202.5	180	191.25
Barometric Pressure, P (in Hg):	29.91	29.93	29.92
24hr Baro.Trend (rising / falling / steady / unsteady)	Rising		

Starting Date:	1/19/2023
Starting Time:	11:40
Finishing Date:	1/19/2023
Finishing Time:	14:18
Monitored by:	J. Faille
Instruments:	GEM 2000
Calibration Date:	1/19/2023

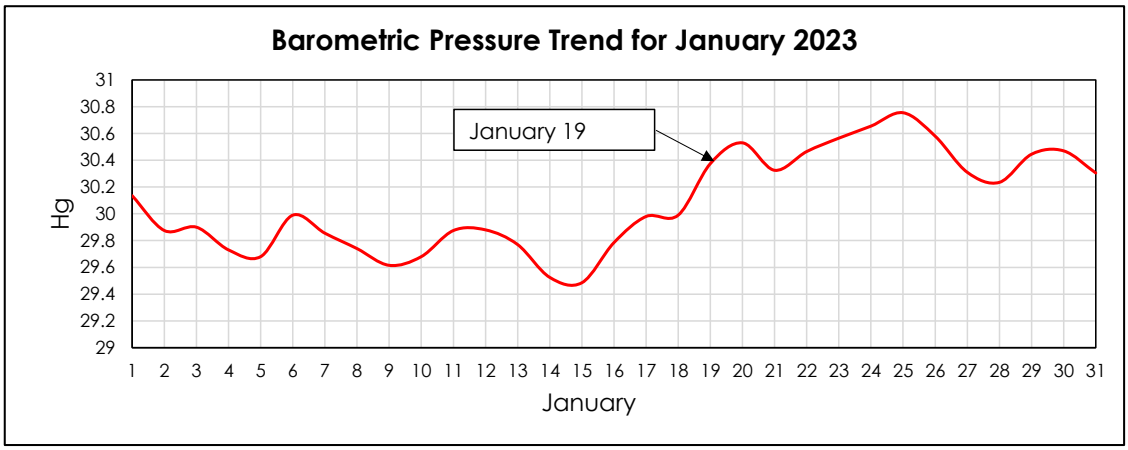
Headings:

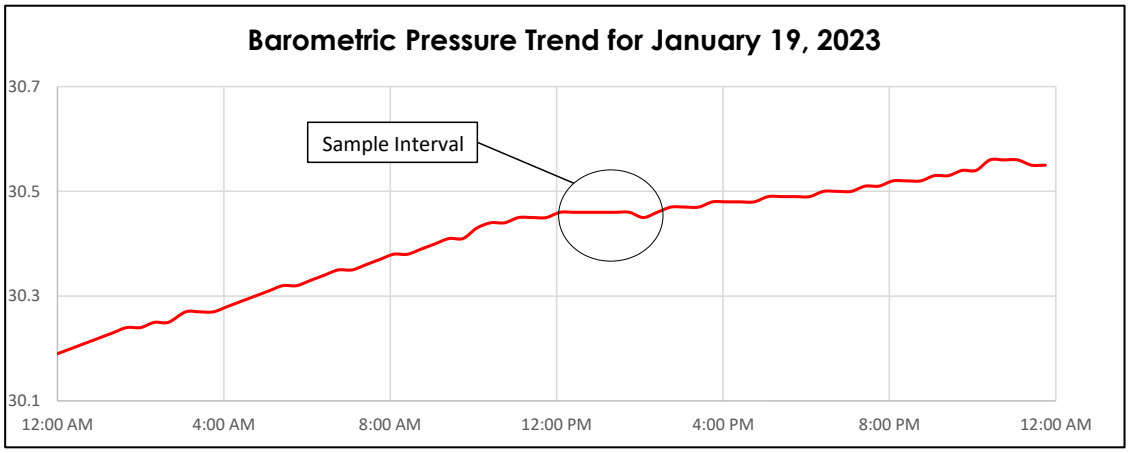
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - January 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-01-22/2023-01-22/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-01-19/2023-01-19/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

February-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1 and 4*: CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)	Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3* (ft)	(%)	Comments
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.00	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	2/15/2023	11:28	N/A	--	3.2	11.5	14.2	71.1	15.0	5.0	100.0	
GP-2	2/15/2023	11:12	N/A	--	3.2	15.3	<<<<	N/A	15.5	0.0	0.0	
GP-3	2/15/2023	10:56	N/A	--	0.0	6.4	11.3	82.3	9.1	4.2	83.2	
GP-4	2/15/2023	10:49	N/A	--	0.0	5.2	14.5	80.3	8.9	0.0	0.0	
GP-9	2/15/2023	10:43	N/A	--	0.0	9.0	6.3	84.7	10.4	0.0	0.0	
GP-10	2/15/2023	11:40	N/A	--	0.0	6.9	15.2	77.9				
GP-10P	2/15/2023	11:47	N/A	18.6	8.7	34.4	<<<<	N/A				
GP-11	2/15/2023	11:58	N/A	--	0.0	7.8	9.6	82.6				
GP-12	2/15/2023	12:08	N/A	15.7	12.0	50.7	<<<<	N/A				
GP-13	2/15/2023	12:16	N/A	--	0.0	25.5	0.0	74.5				
GP-14	2/15/2023	12:42	N/A	--	0.0	0.4	21.0	78.6	11.4	0.0	0.0	
GP-15	2/15/2023	12:49	N/A	--	0.0	0.1	21.0	78.9	15.1	0.0	0.0	
GP-16	2/15/2023	10:26	N/A	--	0.0	0.8	20.9	78.3	19.2	11.9	79.0	
GP-17	2/15/2023	11:19	N/A	--	0.0	0.6	21.2	78.2	5.2	0.0	100.0	
GP-18	2/15/2023	11:02	N/A	--	0.0	0.8	21.3	77.9	3.6	0.0	0.0	
GP-19	2/15/2023	13:04	N/A	--	0.0	0.4	20.4	79.2	5.4	0.0	0.0	
GP-20	2/15/2023	12:29	N/A	--	0.0	0.1	21.1	78.8	5.2	0.0	0.0	
GP-21	2/15/2023	12:21	N/A	--	0.0	0.6	20.4	79.0	9.0	0.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	36	43	39.5
Wind Speed (mph):	5	8	6.5
Wind Direction:	157.5	225	191.25
Barometric Pressure, P (in Hg):	29.11	29.05	29.08
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling		

Starting Date:	2/15/2023
Starting Time:	10:26
Finishing Date:	2/15/2023
Finishing Time:	13:04
Monitored by:	J. Faille
Instruments:	GEM 2000
Calibration Date:	2/15/2023

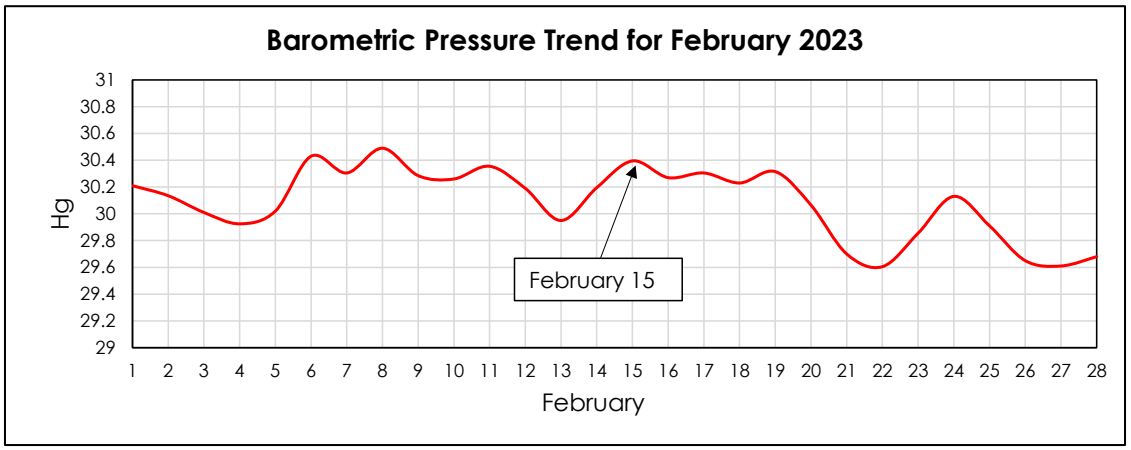
Headings:

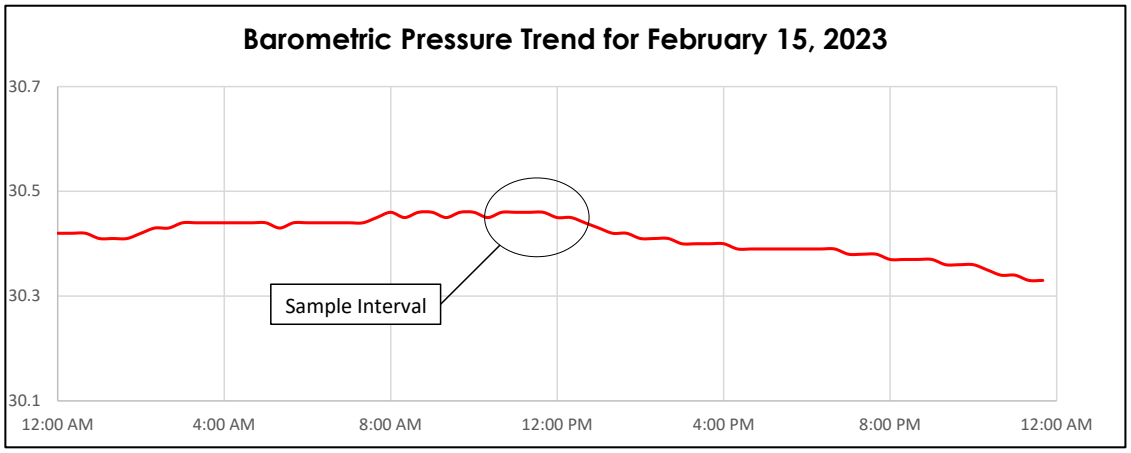
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.
4. Rental GEM unit used for February 2023 monitoring. Some oxygen readings were not taken due to unknown error.

Barometric Pressure Trend - February 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-02-22/2023-02-22/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-02-15/2023-02-15/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

March-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*					Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3*		Comments
				CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)		(ft)	(%)	
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.42	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	3/23/2023	10:45	0.06	16.1	15.0	23.3	12.9	48.8	5.0	10.0	100.0	
GP-2	3/23/2023	10:29	0.07	--	2.7	14.1	0.7	82.5	15.7	0.0	0.0	
GP-3	3/23/2023	8:05	0.05	--	0.0	0.3	21.5	78.2	9.7	4.8	95.2	
GP-4	3/23/2023	7:59	0.06	--	0.0	6.2	12.0	81.8	9.5	0.0	0.0	
GP-9	3/23/2023	7:54	0.05	--	0.0	7.2	10.8	82.0	11.3	0.0	0.0	
GP-10	3/23/2023	9:23	0.04	--	0.0	10.5	13.9	75.6				
GP-10P	3/23/2023	9:28	0.07	--	16.4	30.5	0.3	52.8				
GP-11	3/23/2023	9:36	0.03	--	0.0	10.3	13.4	76.3				
GP-12	3/23/2023	9:45	0.10	16.2	15.2	47.0	0.5	37.3				
GP-13	3/23/2023	10:10	0.05	--	0.1	18.1	6.6	75.2				
GP-14	3/23/2023	10:56	0.05	--	0.0	0.3	21.2	78.5	11.8	0.0	0.0	
GP-15	3/23/2023	11:02	-0.81	--	0.0	0.1	21.3	78.6	15.0	0.0	0.0	
GP-16	3/23/2023	7:46	0.42	--	0.0	0.4	21.1	78.5	19.6	12.3	81.8	
GP-17	3/23/2023	10:33	0.1	--	0.0	0.5	21.2	78.3	8.4	0.0	100.0	
GP-18	3/23/2023	10:21	0.0	--	0.0	0.3	21.3	78.4	3.9	0.0	0.0	
GP-19	3/23/2023	11:16	0.0	--	0.0	0.4	20.9	78.7	6.1	0.0	0.0	
GP-20	3/23/2023	10:00	0.0	--	0.0	0.2	21.1	78.7	8.7	0.0	0.0	
GP-21	3/23/2023	9:51	0.1	--	0.0	0.4	21.1	78.5	5.2	0.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	44	48	46
Wind Speed (mph):	10	13	11.5
Wind Direction:	202.5	202.5	202.5
Barometric Pressure, P (in Hg):	29.46	29.43	29.45
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	3/23/2023
Starting Time:	7:46
Finishing Date:	3/23/2023
Finishing Time:	11:16
Monitored by:	J. Faille
Instruments:	GEM 2000
Calibration Date:	3/23/2023

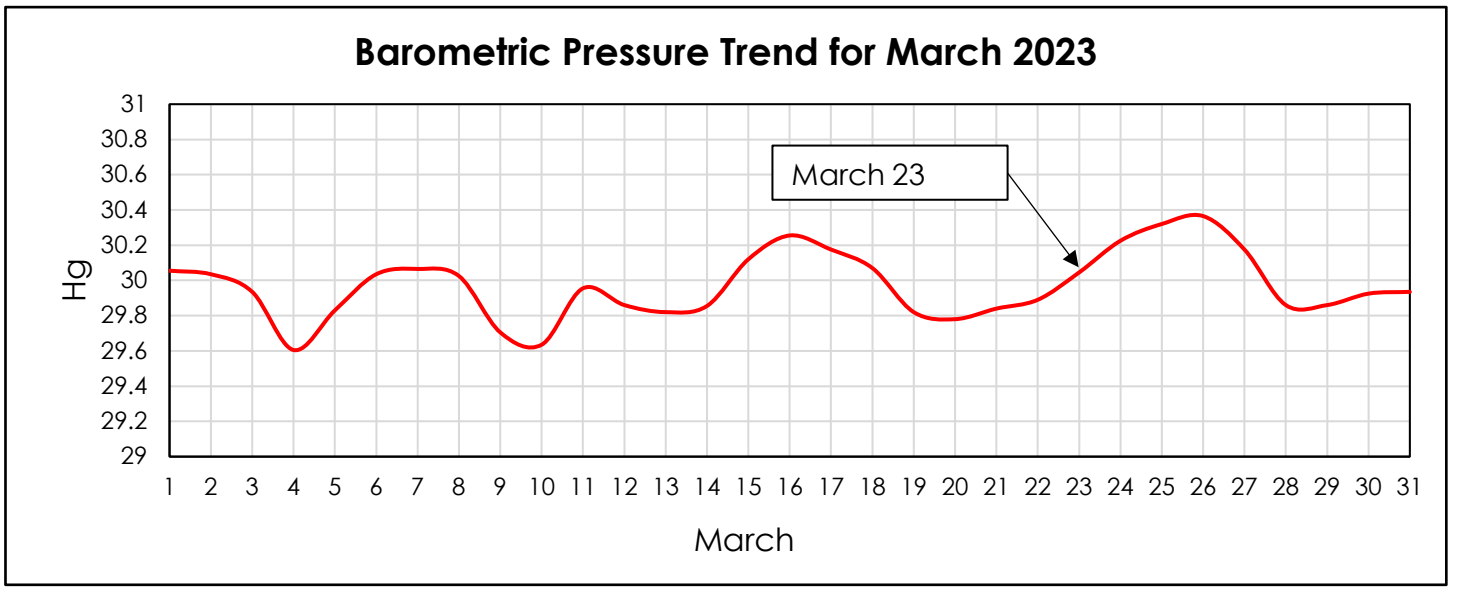
Headings:

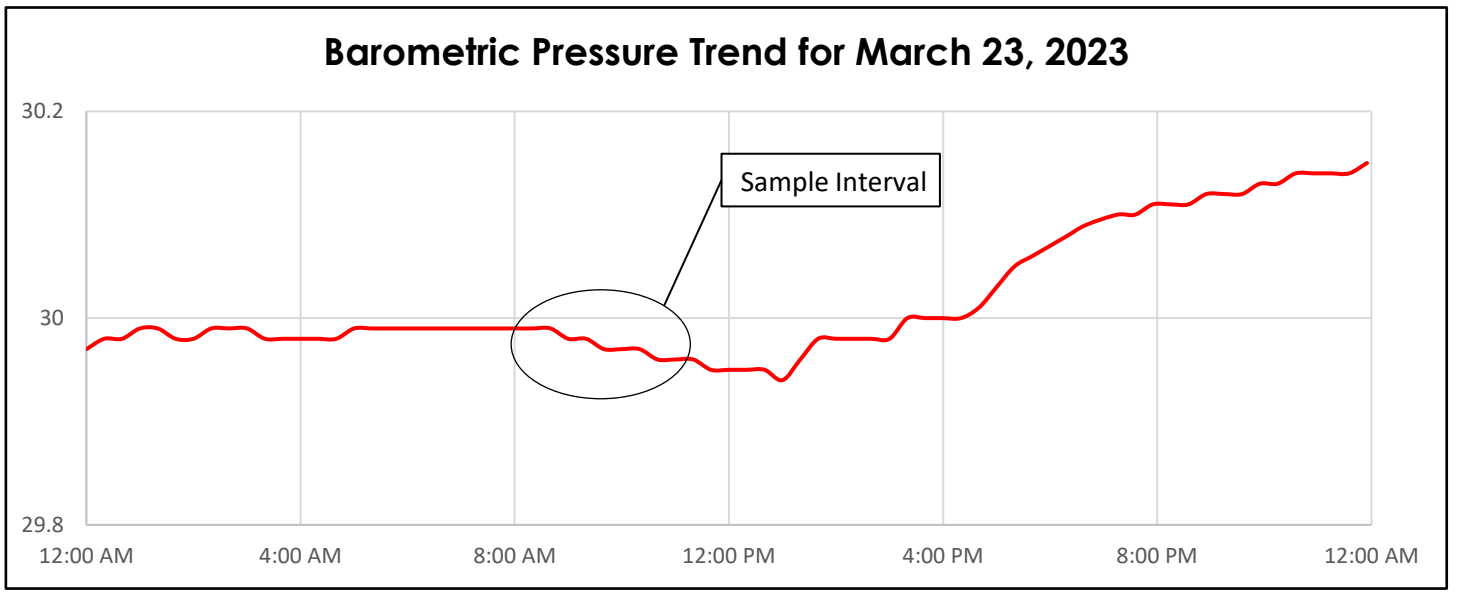
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - March 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (Graham, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-03-23/2023-03-23/monthly

Daily Data Source: Wunderground.com (Graham, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-03-23/2023-03-23/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

April-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*					Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3*		Comments
				CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)		(ft)	(%)	
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			1.51	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	4/27/2023	11:02	-0.02	19.6	17.0	23.8	10.6	48.6	15.0	5.0	100.0	
GP-2	4/27/2023	12:05	-0.11	--	0.8	13.6	0.2	85.4	15.7	0.0	0.0	
GP-3	4/27/2023	11:49	-0.31	--	0.0	4.2	12.7	83.1	10.2	15.2	100.0	
GP-4	4/27/2023	11:42	-0.14	--	0.0	3.2	15.5	81.3	9.3	0.0	0.0	
GP-9	4/27/2023	11:36	-0.04	--	0.0	8.5	9.1	82.4	11.1	0.0	0.0	
GP-10	4/27/2023	12:46	0.36	--	13.4	26.9	2.4	57.3				
GP-10P	4/27/2023	12:50	1.51	--	0.8	15.9	5.3	78.0				
GP-11	4/27/2023	12:57	0.93	--	0.0	11.8	8.0	80.2				
GP-12	4/27/2023	13:12	0.40	--	14.5	44.2	0.2	41.1				
GP-13	4/27/2023	13:19	-0.10	--	0.0	3.9	17.3	78.8				
GP-14	4/27/2023	13:46	-0.09	--	0.0	0.0	21.5	78.5	6.1	0.0	0.0	
GP-15	4/27/2023	13:58	-0.11	--	0.0	0.0	21.3	78.7	14.2	0.0	0.0	
GP-16	4/27/2023	11:26	-0.07	--	0.0	0.6	20.8	78.6	19.0	11.7	77.8	
GP-17	4/27/2023	12:11	-0.1	--	0.0	0.2	21.9	77.9	5.6	0.0	100.0	
GP-18	4/27/2023	11:55	-0.1	--	0.0	0.1	21.5	78.4	3.7	0.0	0.0	
GP-19	4/27/2023	14:15	-0.1	--	0.0	0.5	20.7	78.8	5.8	0.0	0.0	
GP-20	4/27/2023	13:34	-0.1	--	0.0	0.0	21.3	78.7	4.7	0.0	0.0	
GP-21	4/27/2023	13:24	-0.1	--	0.0	0.1	20.8	79.1	4.7	0.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Sunny	Sunny	Sunny
Temperature, T (deg F):	59	67	63
Wind Speed (mph):	2	2	2
Wind Direction:	90	360	225
Barometric Pressure, P (in Hg):	30.27	30.23	30.25
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling		

Starting Date:	4/27/2023
Starting Time:	11:02
Finishing Date:	4/27/2023
Finishing Time:	14:15
Monitored by:	L. Walker
Instruments:	GEM 2000
Calibration Date:	4/27/2023

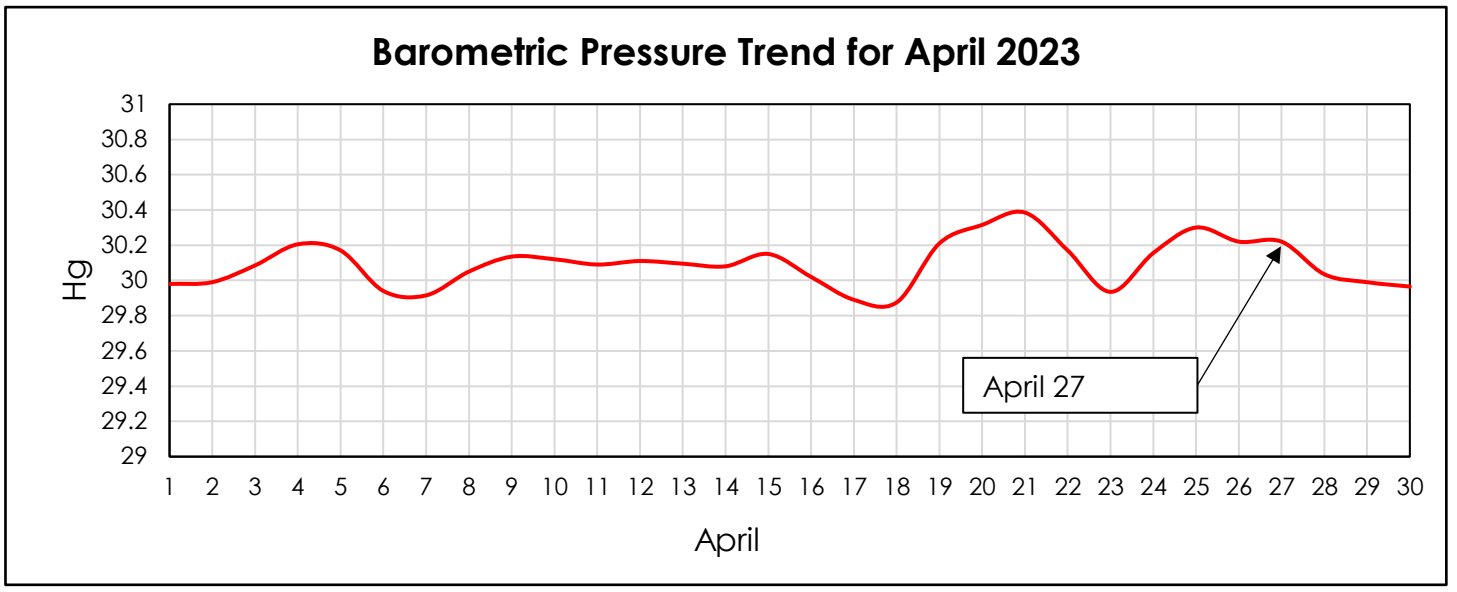
Headings:

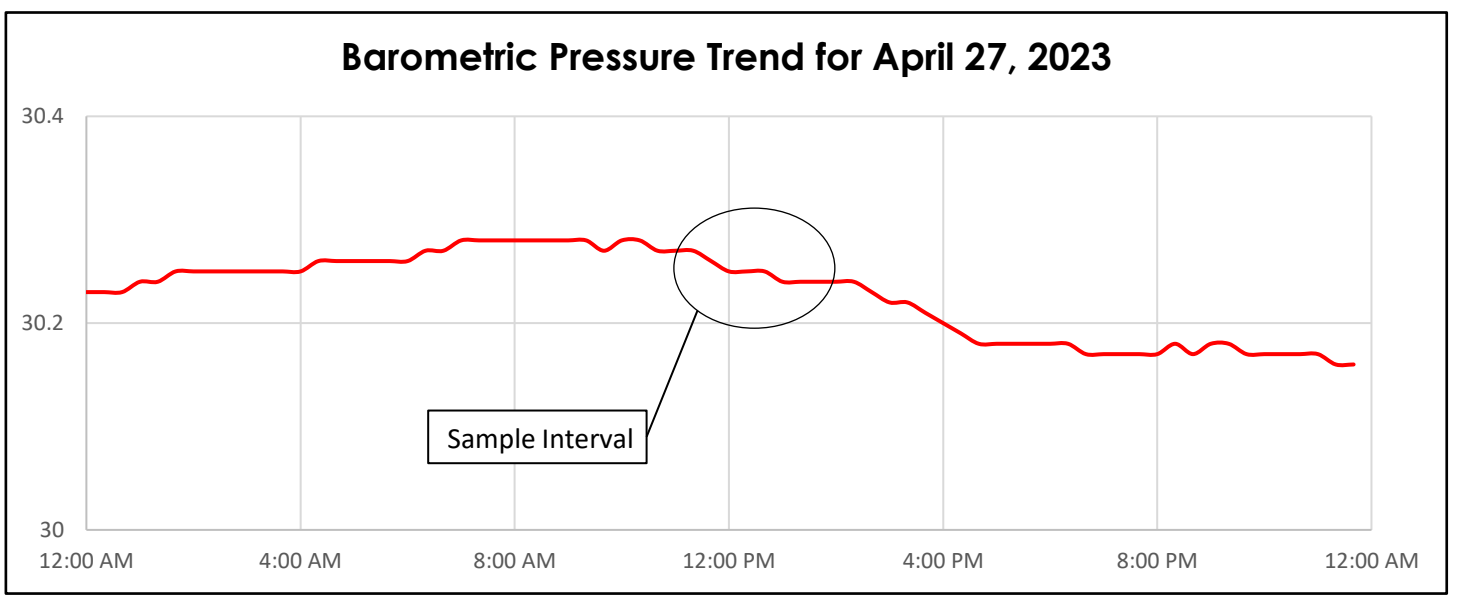
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - April 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-04-27/2023-04-27/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-04-27/2023-04-27/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

May-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*: CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)	Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3* (ft)	Exposed Portion of Perforations - *Note 3* (%)	Comments
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			1.18	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	5/24/2023	11:19	-0.64	--	0.0	0.0	20.7	79.3	15.0	5.0	100.0	
GP-2	5/24/2023	11:03	-0.01	--	0.2	14.6	0.1	85.1	15.9	0.0	0.0	
GP-3	5/24/2023	10:40	1.18	--	0.0	6.2	10.9	82.9	9.9	14.9	100.0	
GP-4	5/24/2023	10:34	-0.10	--	0.0	7.6	9.7	82.7	9.8	0.0	0.0	
GP-9	5/24/2023	10:27	0.05	--	0.0	9.6	7.5	82.9	12.0	0.0	0.0	
GP-10	5/24/2023	11:43	0.23	--	6.8	25.7	0.3	67.2				
GP-10P	5/24/2023	11:40	-0.50	--	15.4	26.5	2.6	55.5				
GP-11	5/24/2023	11:56	0.14	--	0.0	20.0	0.2	79.8				
GP-12	5/24/2023	12:06	-0.49	--	17.0	48.3	0.2	34.5				
GP-13	5/24/2023	12:18	-0.37	4.9	0.0	19.3	4.1	76.6				
GP-14	5/24/2023	12:47	0.07	--	0.0	0.2	20.8	79.0	12.4	0.0	0.0	
GP-15	5/24/2023	12:55	-2.02	--	0.0	0.1	20.7	79.2	15.3	0.0	0.0	
GP-16	5/24/2023	10:00	0.00	--	0.0	0.3	20.8	78.9	19.9	12.6	83.7	
GP-17	5/24/2023	10:56	0.0	--	0.0	0.1	21.2	78.7	7.2	0.0	100.0	
GP-18	5/24/2023	10:46	0.0	--	0.0	0.1	21.1	78.8	5.0	0.0	0.0	
GP-19	5/24/2023	13:18	0.0	--	0.0	0.6	20.0	79.4	7.8	0.0	0.0	
GP-20	5/24/2023	12:39	-0.1	--	0.0	0.4	19.8	79.8	7.9	0.0	0.0	
GP-21	5/24/2023	12:24	0.0	--	0.0	0.6	19.1	80.3	7.2	0.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Sunny	Sunny	Sunny
Temperature, T (deg F):	62	69	65.5
Wind Speed (mph):	5	10	7.5
Wind Direction:	292.5	315	303.75
Barometric Pressure, P (in Hg):	29.62	29.61	29.62
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling		

Starting Date:	5/24/2023
Starting Time:	10:00
Finishing Date:	5/24/2023
Finishing Time:	13:18
Monitored by:	L. Walker
Instruments:	GEM 2000
Calibration Date:	5/24/2023

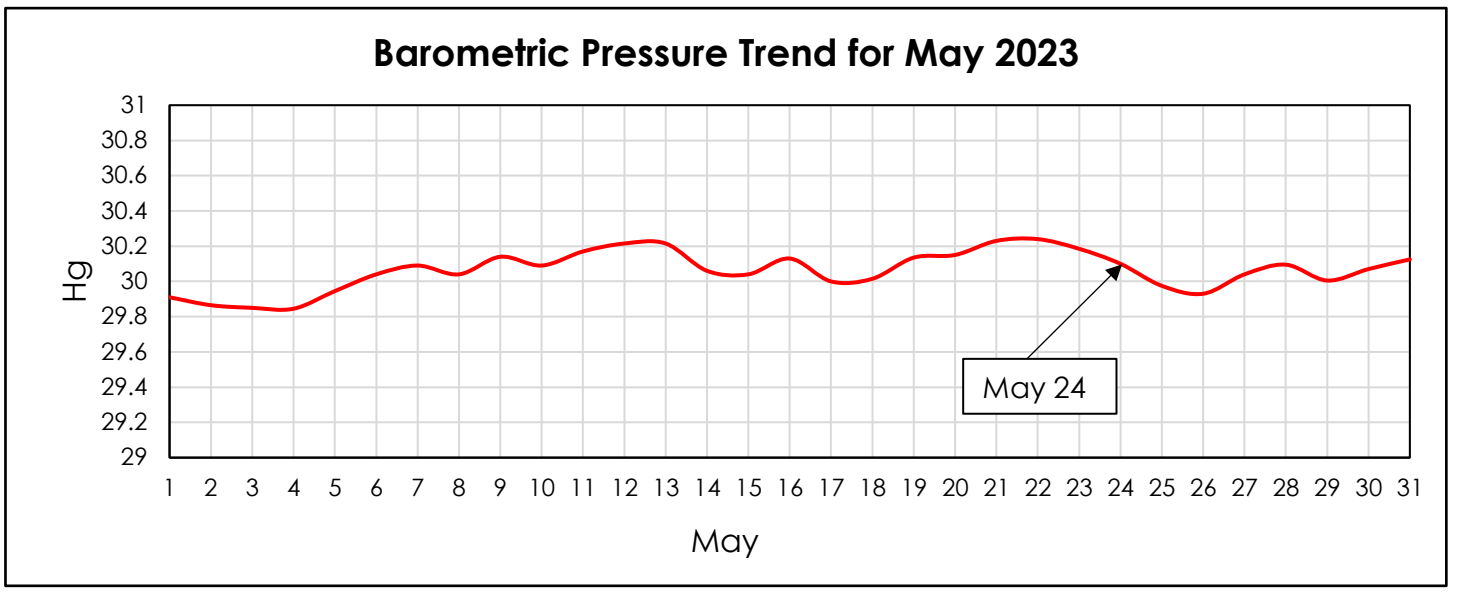
Headings:

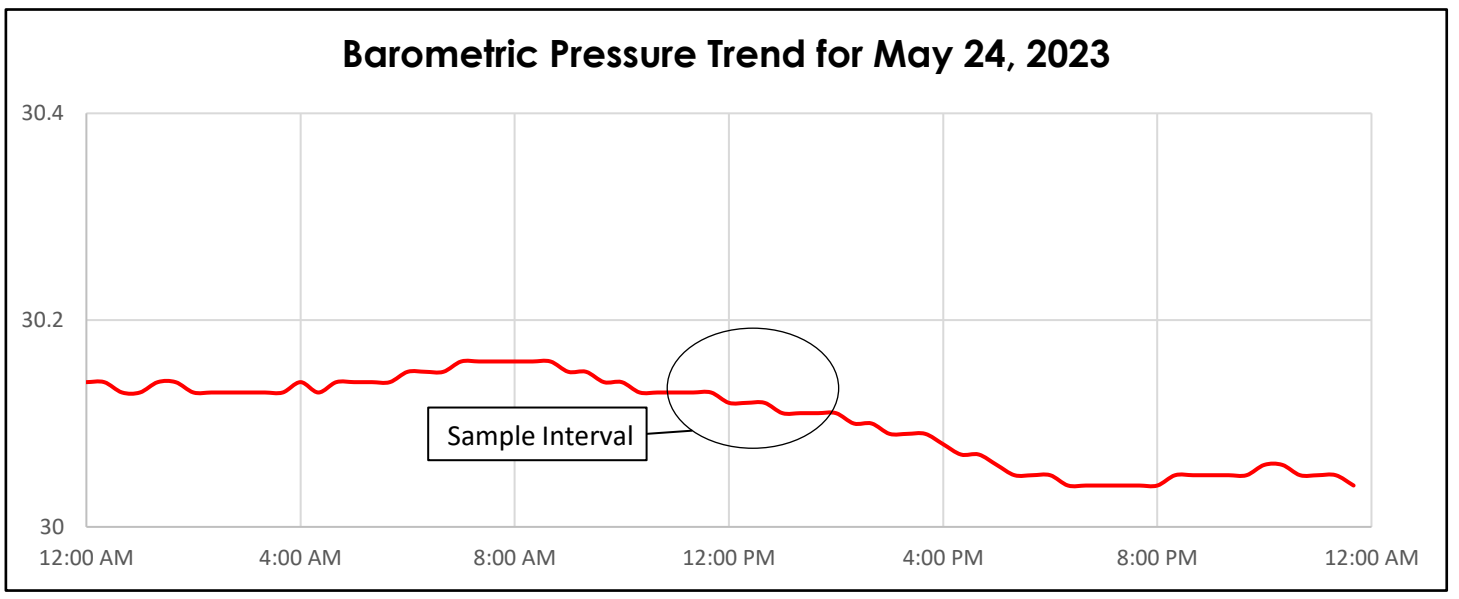
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - May 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-05-27/2023-05-27/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-05-24/2023-05-24/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

June-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*					Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3*		Comments
				CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)		(ft)	(%)	
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.10	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	6/21/2023	11:17	-0.02	46.5	14.7	23.3	12.8	49.2	0.0	0.0	0.0	
GP-2	6/21/2023	10:59	-0.06	--	0.0	14.1	2.1	83.8	16.4	0.0	0.0	
GP-3	6/21/2023	10:45	-1.08	--	0.0	5.6	12.4	82.0	10.2	15.2	100.0	
GP-4	6/21/2023	10:40	-0.06	--	0.0	9.3	7.7	83.0	11.8	2.0	39.0	
GP-9	6/21/2023	10:34	-0.05	--	0.0	9.6	6.7	83.7	11.5	0.0	0.0	
GP-10	6/21/2023	11:33	-0.16	--	15.3	26.9	2.2	55.6				
GP-10P	6/21/2023	11:37	-0.09	--	0.0	2.9	16.7	80.4				
GP-11	6/21/2023	11:46	-0.17	--	0.0	20.1	2.7	77.2				
GP-12	6/21/2023	13:20	-0.10	24.5	19.9	50.7	1.1	28.3				
GP-13	6/21/2023	13:28	-0.11	--	0.0	24.5	1.5	74.0				
GP-14	6/21/2023	15:13	-0.12	--	0.0	0.1	20.3	79.6	14.3	0.0	0.0	
GP-15	6/21/2023	15:21	0.10	--	0.0	10.0	13.5	76.5	17.2	1.6	31.4	
GP-16	6/21/2023	10:26	0.00	--	0.0	0.3	20.4	79.3	21.1	13.7	91.6	
GP-17	6/21/2023	11:05	0.0	--	0.0	0.3	19.0	80.7	8.8	0.0	100.0	
GP-18	6/21/2023	10:50	0.0	--	0.0	0.2	20.1	79.7	8.9	0.0	0.0	
GP-19	6/21/2023	15:52	-0.1	--	0.0	0.7	20.6	78.7	9.7	0.0	0.0	
GP-20	6/21/2023	13:45	-0.1	--	0.0	0.1	21.0	78.9	8.6	0.0	0.0	
GP-21	6/21/2023	13:33	-0.1	--	0.0	0.6	20.2	79.2	12.2	0.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Sunny	Sunny	Sunny
Temperature, T (deg F):	60.4	68.5	64.45
Wind Speed (mph):	0	2	1
Wind Direction:	360	360	360
Barometric Pressure, P (in Hg):	30.27	30.22	30.25
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling		

Starting Date:	6/21/2023
Starting Time:	10:26
Finishing Date:	6/21/2023
Finishing Time:	15:52
Monitored by:	J. Faille
Instruments:	GEM 2000
Calibration Date:	6/21/2023

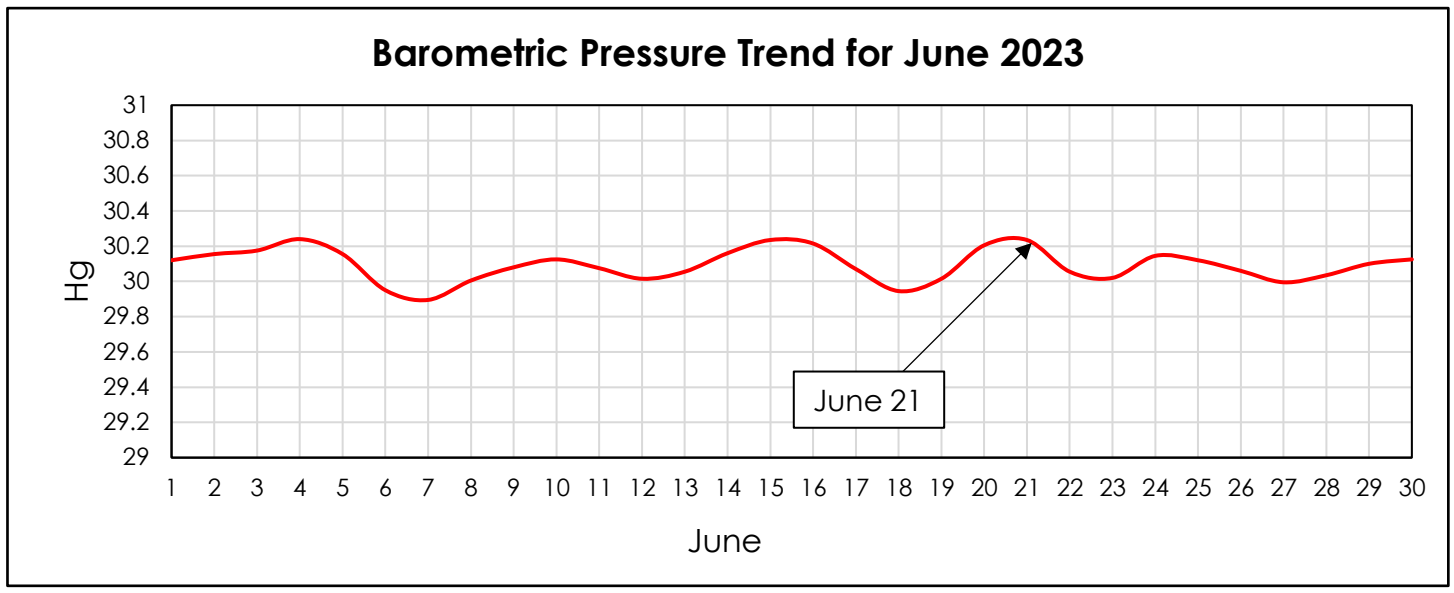
Headings:

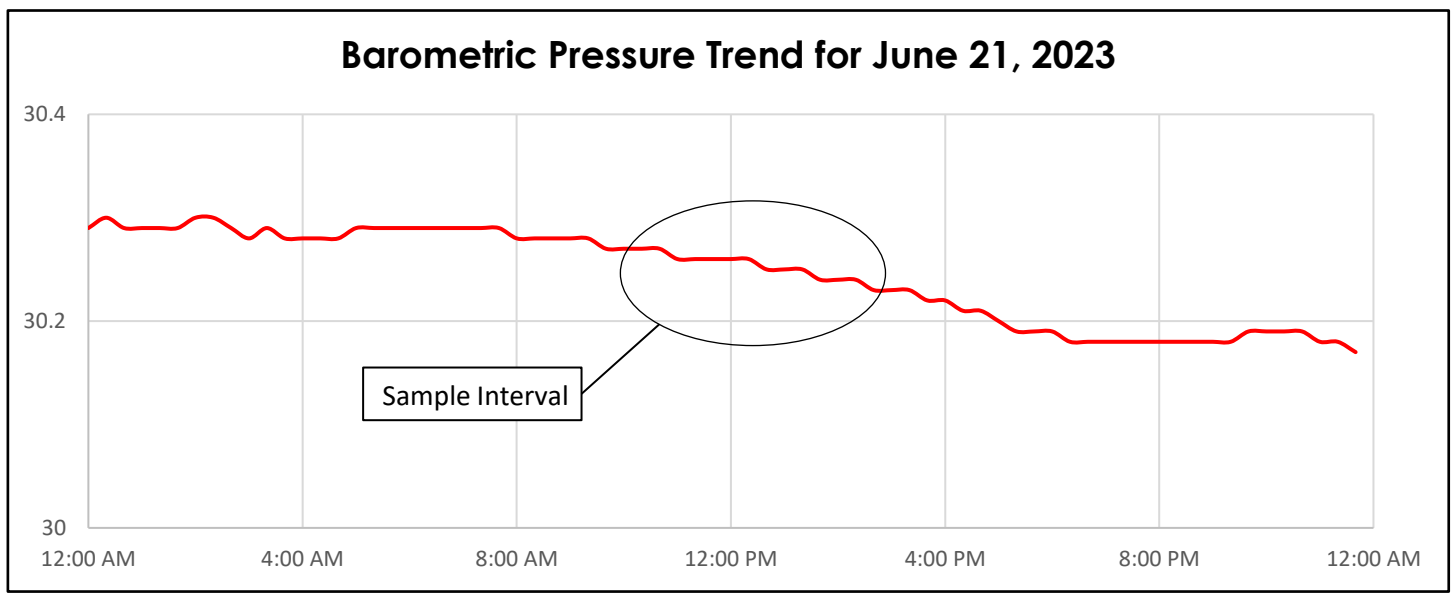
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - June 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-06-21/2023-06-21/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-06-21/2023-06-21/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

July-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*: CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)	Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3* (ft)	Exposed Portion of Perforations - *Note 3* (%)	Comments
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.07	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	7/25/2023	12:01	-0.06	--	4.7	18.3	7.6	69.4	15.0	5.0	100.0	
GP-2	7/25/2023	11:28	-0.13	--	0.0	16.7	0.2	83.1	16.3	0.0	0.0	
GP-3	7/25/2023	11:15	0.05	--	0.0	7.4	13.4	79.2	10.0	15.0	100.0	
GP-4	7/25/2023	11:09	-0.43	--	0.0	7.9	16.3	75.8	10.8	1.0	20.2	
GP-9	7/25/2023	11:02	-0.01	--	0.0	10.0	7.5	82.5	11.0	0.0	0.0	
GP-10	7/25/2023	12:04	-0.08	--	6.7	25.0	2.3	66.0				
GP-10P	7/25/2023	12:08	-0.08	--	7.2	27.6	0.1	65.1				
GP-11	7/25/2023	12:15	-0.08	--	0.0	23.2	2.9	73.9				
GP-12	7/25/2023	12:28	-0.04	--	24.1	59.7	0.2	16.0				
GP-13	7/25/2023	12:38	-0.61	--	0.0	9.6	11.4	79.0				
GP-14	7/25/2023	12:57	-0.03	--	0.0	0.1	22.4	77.5	14.3	0.0	0.0	
GP-15	7/25/2023	13:05	0.05	--	0.0	2.8	18.6	78.6	17.2	1.6	31.4	
GP-16	7/25/2023	10:48	-0.43	--	0.0	0.3	22.3	77.4	19.8	12.4	82.7	
GP-17	7/25/2023	11:34	-0.1	--	0.0	0.3	21.3	78.4	5.0	0.0	100.0	
GP-18	7/25/2023	11:21	0.0	--	0.0	0.2	22.2	77.6	3.3	0.0	0.0	
GP-19	8/2/2023	11:37	0.1	--	0.0	0.7	18.8	80.5	12.0	0.0	0.0	
GP-20	7/25/2023	12:50	-0.1	--	0.0	0.3	21.5	78.2	8.6	0.0	0.0	
GP-21	7/25/2023	12:44	-0.4	--	0.0	0.4	21.5	78.1	12.2	0.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	66	70.4	68.2
Wind Speed (mph):	1	1	1
Wind Direction:	360	135	247.5
Barometric Pressure, P (in Hg):	30.24	30.24	30.24
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	7/25/2023
Starting Time:	10:48
Finishing Date:	8/2/2023
Finishing Time:	11:37
Monitored by:	L. Walker
Instruments:	GEM 2000
Calibration Date:	7/25/2023

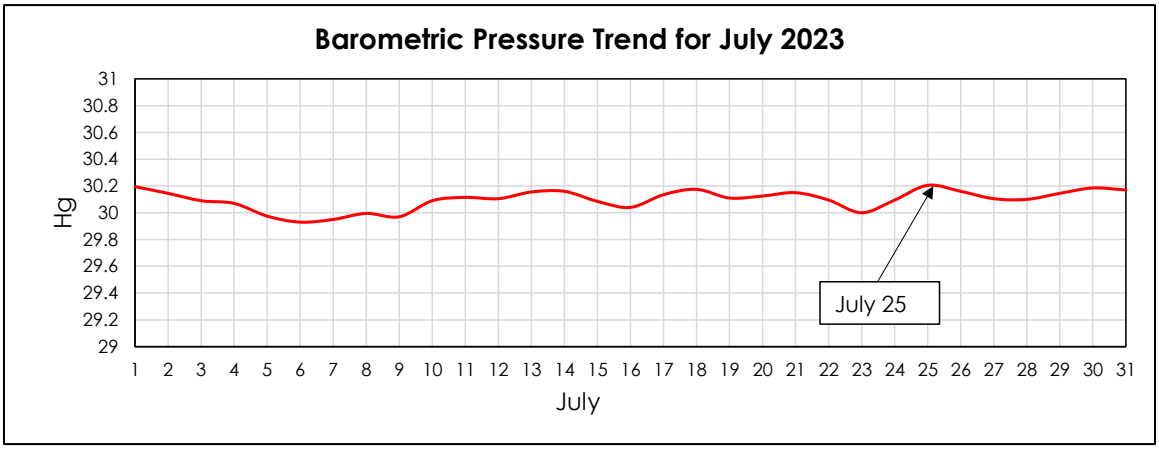
Headings:

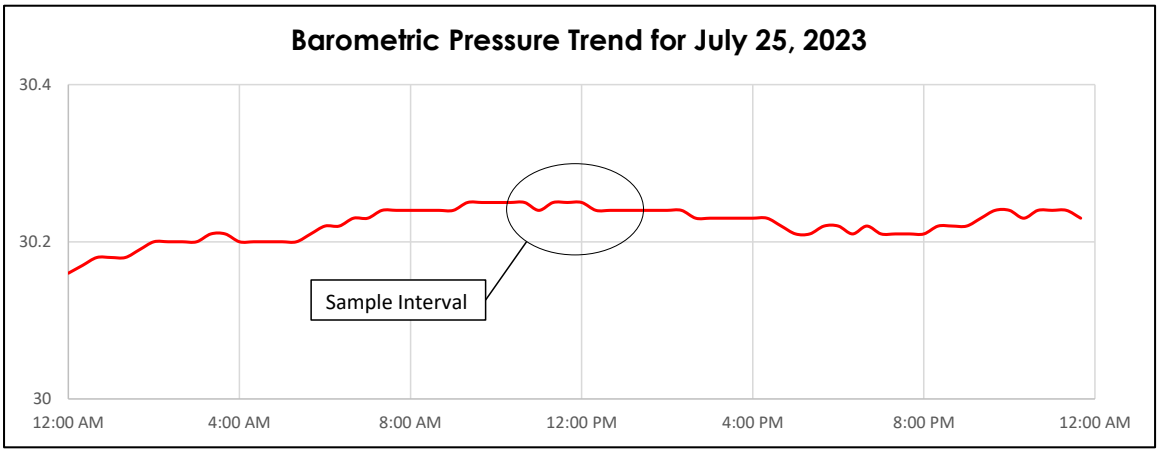
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - July 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-07-25/2023-07-25/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-07-25/2023-07-25/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

August-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*: CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)	Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3* (ft)	Exposed Portion of Perforations - *Note 3* (%)	Comments
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.08	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	8/22/2023	14:03	0.08	34.6	9.8	31.8	12.3	46.1	12.6	2.6	52.0	
GP-2	8/22/2023	13:47	-0.12	--	0.0	17.4	0.3	82.3	17.6	0.0	0.0	
GP-3	8/22/2023	13:34	-0.11	--	0.0	7.3	13.8	78.9	11.8	16.8	100.0	
GP-4	8/22/2023	13:27	-0.10	--	0.0	8.9	13.7	77.4	14.0	4.2	84.6	
GP-9	8/22/2023	13:19	-0.14	--	0.0	10.0	8.0	82.0	15.6	2.4	47.0	
GP-10	8/22/2023	14:14	-0.06	--	0.0	9.2	12.1	78.7				
GP-10P	8/22/2023	14:18	-0.08	--	2.2	14.0	10.0	73.8				
GP-11	8/22/2023	14:37	-0.10	--	0.0	22.6	3.5	73.9				
GP-12	8/22/2023	14:45	-0.13	15.7	15.3	57.0	0.3	27.4				
GP-13	8/22/2023	14:53	-0.12	--	0.0	23.4	2.6	74.0				
GP-14	8/22/2023	14:59	-0.14	--	0.0	1.2	18.9	79.9	17.1	1.9	37.0	
GP-15	8/22/2023	15:09	-0.09	--	0.0	4.8	16.2	79.0	20.4	4.8	95.6	
GP-16	8/22/2023	13:12	-0.11	--	0.0	0.2	20.3	79.5	22.3	15.0	99.8	
GP-17	8/22/2023	13:54	-0.1	--	0.0	0.3	19.8	79.9	12.9	0.0	100.0	
GP-18	8/22/2023	13:39	-0.1	--	0.0	0.2	20.4	79.4	8.7	0.0	0.0	
GP-19	8/22/2023	15:48	-0.1	--	0.0	0.7	18.9	80.4	13.3	0.0	0.0	
GP-20	8/22/2023	15:29	-0.1	--	0.0	1.2	16.2	82.6	12.3	0.0	0.0	
GP-21	8/22/2023	15:19	-0.1	--	0.0	0.5	19.5	80.0	17.5	2.5	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	67.6	70.8	69.2
Wind Speed (mph):	2	2	2
Wind Direction:	67.5	22.5	45
Barometric Pressure, P (in Hg):	30.08	30.06	30.07
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	8/22/2023
Starting Time:	13:12
Finishing Date:	8/22/2023
Finishing Time:	15:48
Monitored by:	J. Faille
Instruments:	GEM 2000
Calibration Date:	8/22/2023

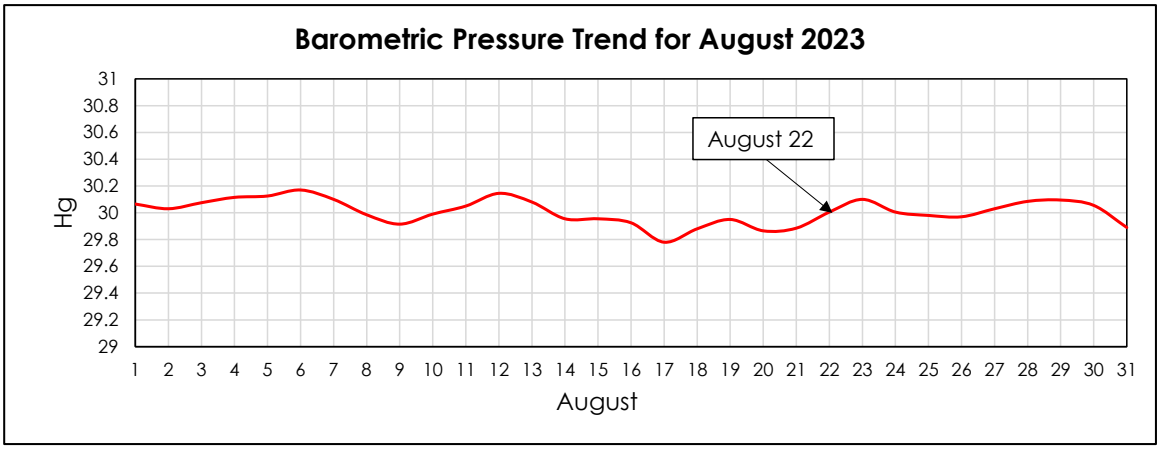
Headings:

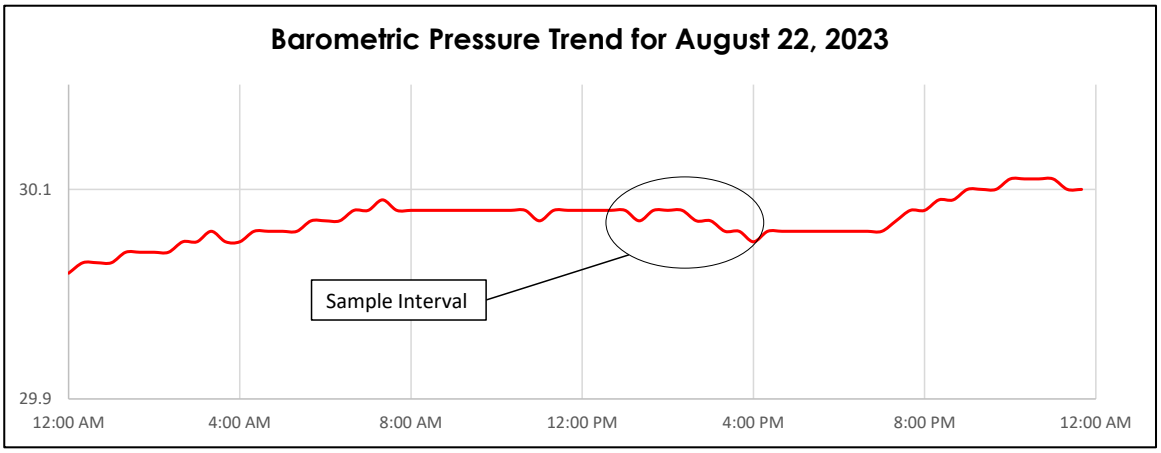
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - August 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-08-22/2023-08-22/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-08-22/2023-08-22/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

September-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*					Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3*		Comments
				CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)		(ft)	(%)	
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.59	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	9/29/2023	11:07	0.55	22.0	10.6	52.4	6.8	30.2	13.3	3.3	66.6	
GP-2	9/29/2023	10:51	0.11	--	0.6	17.3	1.0	81.1	18.5	0.0	0.0	
GP-3	9/29/2023	10:38	0.05	--	0.0	7.4	15.4	77.2	12.9	17.9	100.0	
GP-4	9/29/2023	10:33	0.04	--	0.0	8.0	14.9	77.1	14.5	4.7	94.2	
GP-9	9/29/2023	10:27	0.07	--	0.0	10.0	9.3	80.7	13.7	0.4	8.8	
GP-10	9/29/2023	11:21	0.02	--	0.0	8.8	6.5	84.7				
GP-10P	9/29/2023	11:17	0.02	--	1.6	13.0	10.5	74.9				
GP-11	9/29/2023	11:28	0.42	--	0.0	20.2	4.6	75.2				
GP-12	9/29/2023	11:39	-0.22	--	3.7	39.7	0.2	56.4				
GP-13	9/29/2023	11:47	0.07	--	0.0	22.8	3.3	73.9				
GP-14	9/29/2023	12:14	0.00	--	0.0	18.9	3.4	77.7	18.7	3.4	68.2	
GP-15	9/29/2023	12:25	0.08	3.5	3.5	44.3	0.1	52.1	20.6	5.0	99.6	
GP-16	9/29/2023	10:20	0.59	0.1	0.0	3.5	18.8	77.7	22.3	15.0	99.8	
GP-17	9/29/2023	10:56	0.04	--	0.0	0.4	20.1	79.5	15.5	0.5	100.0	
GP-18	9/29/2023	10:43	0.05	--	0.0	0.2	20.2	79.6	9.9	0.0	9.2	
GP-19	9/29/2023	12:44	-0.01	--	0.0	2.1	17.8	80.1	15.2	0.2	0.0	
GP-20	9/29/2023	12:02	-0.02	--	0.0	1.5	17.3	81.2	13.4	0.0	3.8	
GP-21	9/29/2023	11:52	-0.02	--	0.0	1.5	18.7	79.8	17.9	2.9	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Drizzle	Cloudy	Cloudy
Temperature, T (deg F):	50.4	56.9	53.65
Wind Speed (mph):	0	4	2
Wind Direction:	360	22.5	191.25
Barometric Pressure, P (in Hg):	29.99	29.98	29.99
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling		

Starting Date:	9/29/2023
Starting Time:	10:20
Finishing Date:	9/29/2023
Finishing Time:	12:44
Monitored by:	J. Faille
Instruments:	GEM 2000
Calibration Date:	9/29/2023

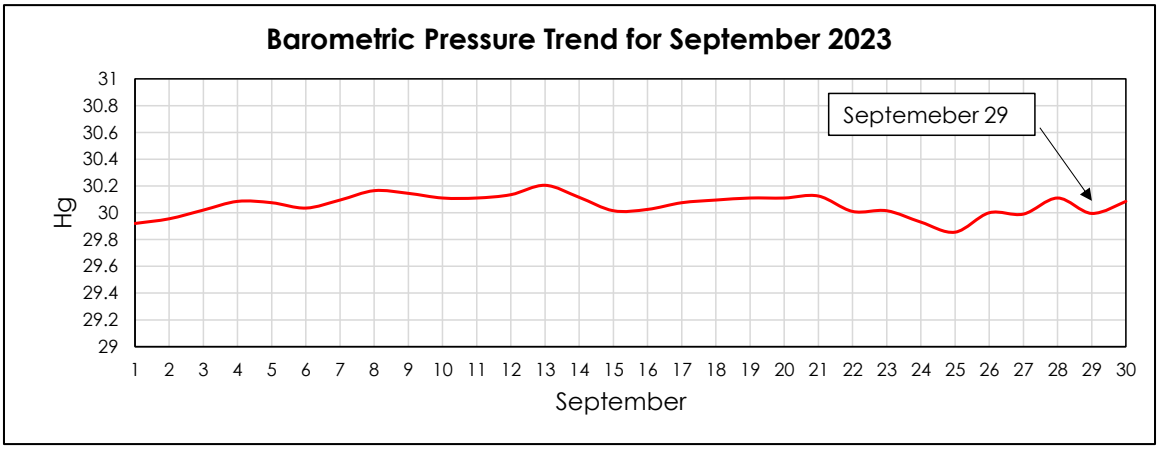
Headings:

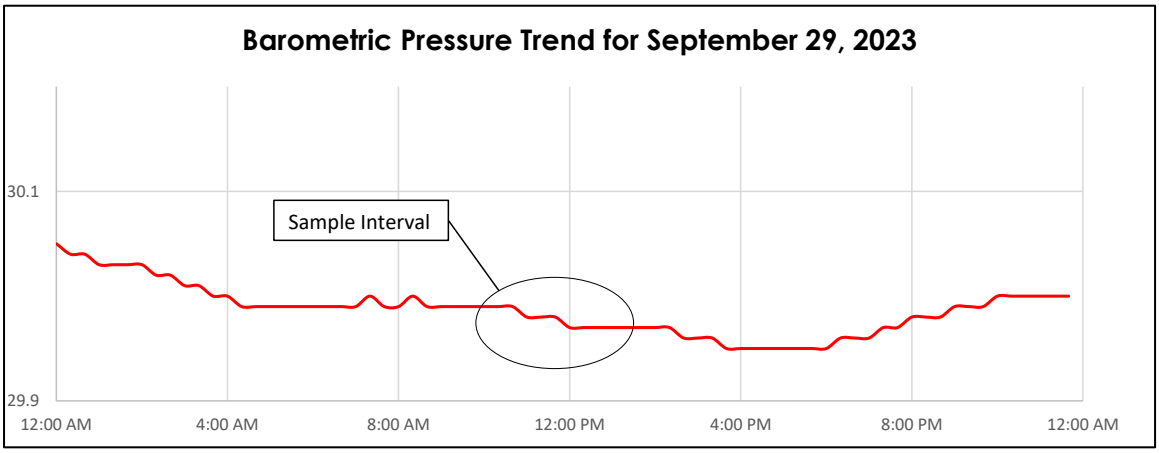
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - September 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-09-22/2023-09-22/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-09-29/2023-09-29/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

October-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*					Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3*		Comments
				CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)		(ft)	(%)	
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.98	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	10/26/2023	11:03	0.58	14.3	12.4	33.0	11.2	43.4	13.2	3.2	64.8	
GP-2	10/26/2023	10:48	0.16	--	2.5	17.9	0.1	79.5	17.6	0.0	0.0	
GP-3	10/26/2023	10:32	0.98	--	0.0	7.5	14.9	77.6	12.8	17.8	100.0	
GP-4	10/26/2023	10:27	0.15	--	0.0	7.4	14.1	78.5	14.6	4.8	96.6	
GP-9	10/26/2023	10:21	0.16	--	0.0	10.5	7.7	81.8	12.2	0.0	0.0	
GP-10	10/26/2023	11:20	0.26	--	0.0	9.4	8.4	82.2				
GP-10P	10/26/2023	11:17	0.17	17.4	17.2	29.0	0.4	53.4				
GP-11	10/26/2023	11:32	-0.59	--	0.0	11.8	11.8	76.4				
GP-12	10/26/2023	11:42	0.38	3.8	2.4	37.8	0.5	59.3				
GP-13	10/26/2023	11:51	0.22	--	0.0	17.2	6.9	75.9				
GP-14	10/26/2023	12:18	0.21	--	0.0	23.0	0.4	76.6	18.5	3.2	64.0	
GP-15	10/26/2023	12:26	0.20	4.6	4.1	44.1	0.1	51.7	20.6	5.0	100.0	
GP-16	10/26/2023	10:07	0.20	--	0.0	0.5	21.0	78.5	22.4	15.0	100.0	
GP-17	10/26/2023	10:52	0.43	--	0.0	0.5	19.9	79.6	15.7	0.7	100.0	
GP-18	10/26/2023	10:37	0.16	--	0.0	0.3	20.3	79.4	9.9	0.0	13.0	
GP-19	10/26/2023	12:42	0.16	--	0.0	1.7	18.9	79.4	15.5	0.5	0.0	
GP-20	10/26/2023	12:06	0.31	--	0.0	1.2	17.8	81.0	13.0	0.0	10.0	
GP-21	10/26/2023	11:56	0.13	--	0.0	0.8	20.1	79.1	18.0	3.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Drizzle	Cloudy	Cloudy
Temperature, T (deg F):	41.2	48.3	44.75
Wind Speed (mph):	1	1	1
Wind Direction:	112.5	157.5	135
Barometric Pressure, P (in Hg):	30.28	30.30	30.29
24hr Baro.Trend (rising / falling / steady / unsteady)	Rising		

Starting Date:	10/26/2023
Starting Time:	10:07
Finishing Date:	10/26/2023
Finishing Time:	12:42
Monitored by:	J. Faille
Instruments:	GEM 2000
Calibration Date:	10/26/2023

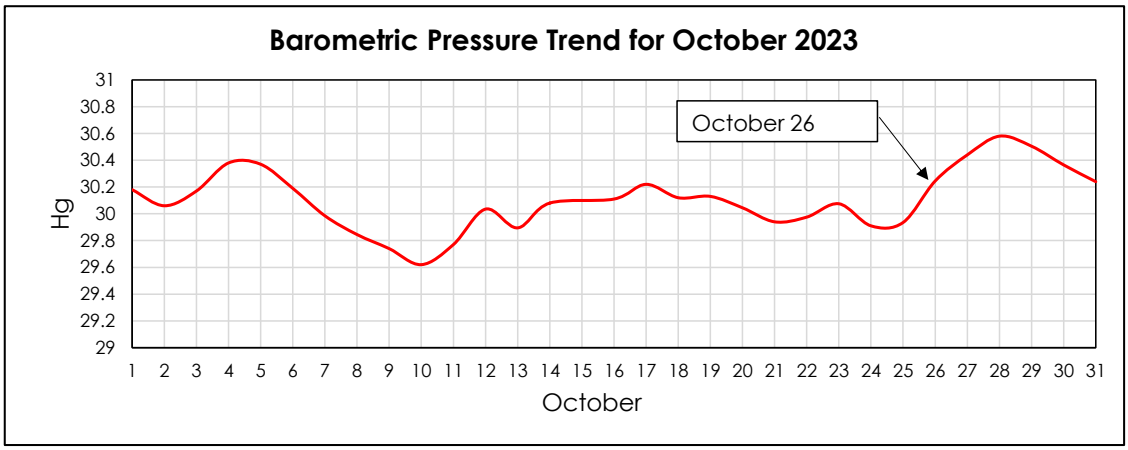
Headings:

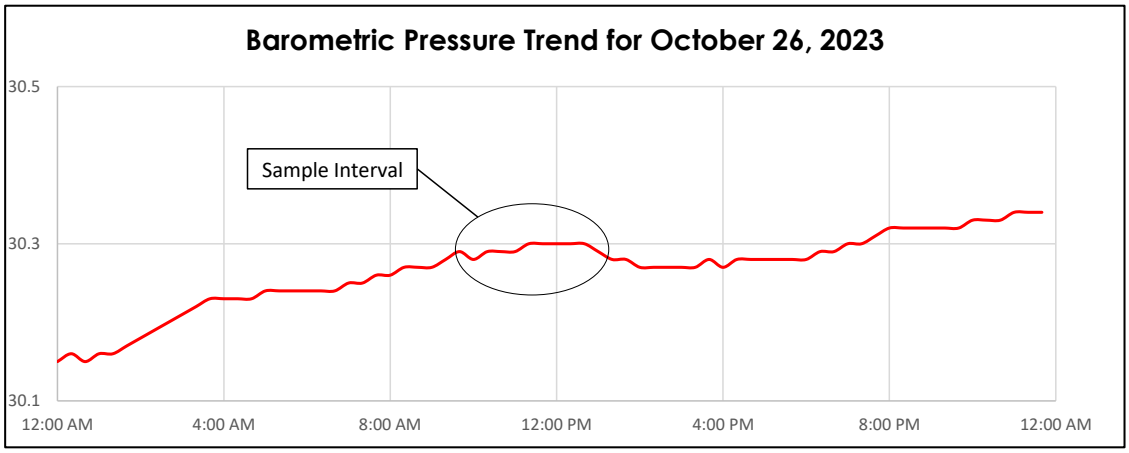
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - October 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-10-22/2023-10-22/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-10-26/2023-10-26/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring — **SCS Engineers**

Landfill Gas Control System — 04223001.04

LRI Landfill

November-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*: CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)	Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3*: (ft)	(%)	Comments
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.38	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	11/15/2023	12:34	0.18	34.3	9.1	19.5	15.5	55.9	13.8	3.8	75.0	
GP-2	11/15/2023	12:22	0.16	--	4.0	16.8	1.0	78.2	16.7	0.0	0.0	
GP-3	11/15/2023	11:55	0.16	--	0.0	6.9	14.9	78.2	12.4	17.4	100.0	
GP-4	11/15/2023	11:47	0.19	--	0.0	9.4	10.3	80.3	14.7	4.9	97.8	
GP-9	11/15/2023	11:38	0.17	--	0.0	10.0	7.5	82.5	11.6	0.0	0.0	
GP-10	11/15/2023	12:59	0.12	13.9	12.3	13.4	1.7	72.6				
GP-10P	11/15/2023	12:54	0.16	27.2	27.0	24.7	1.7	46.6				
GP-11	11/15/2023	13:09	0.12	--	0.0	12.9	10.6	76.5				
GP-12	11/15/2023	13:19	0.38	4.2	3.9	38.6	0.7	56.8				
GP-13	11/15/2023	13:27	0.17	--	0.0	21.2	5.5	73.3				
GP-14	11/15/2023	13:55	0.13	--	0.0	4.4	17.6	78.0	14.7	0.0	0.0	
GP-15	11/15/2023	14:04	0.11	4.8	4.2	43.9	0.8	51.1				
GP-16	11/15/2023	11:29	0.14	--	0.0	2.8	19.8	77.4	21.4	14.1	93.7	
GP-17	11/15/2023	12:16	0.17	--	0.0	0.1	21.3	78.6	8.6	0.0	100.0	
GP-18	11/15/2023	12:07	0.17	--	0.0	0.3	21.3	78.4	5.0	0.0	0.0	
GP-19	11/15/2023	14:24	0.17	--	0.0	1.2	19.8	79.0	10.2	0.0	0.0	
GP-20	11/15/2023	13:42	0.18	--	0.0	0.5	20.5	79.0	10.2	0.0	0.0	
GP-21	11/15/2023	13:32	0.18	--	0.0	1.3	20.5	78.2			0.0	

General Data:

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	50.9	56.7	53.8
Wind Speed (mph):	2	3	2.5
Wind Direction:	360	360	360
Barometric Pressure, P (in Hg):	29.98	29.97	29.98
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling		

Starting Date:	11/15/2023
Starting Time:	11:29
Finishing Date:	11/15/2023
Finishing Time:	14:24
Monitored by:	A. Deszo
Instruments:	GEM 2000
Calibration Date:	11/15/2023

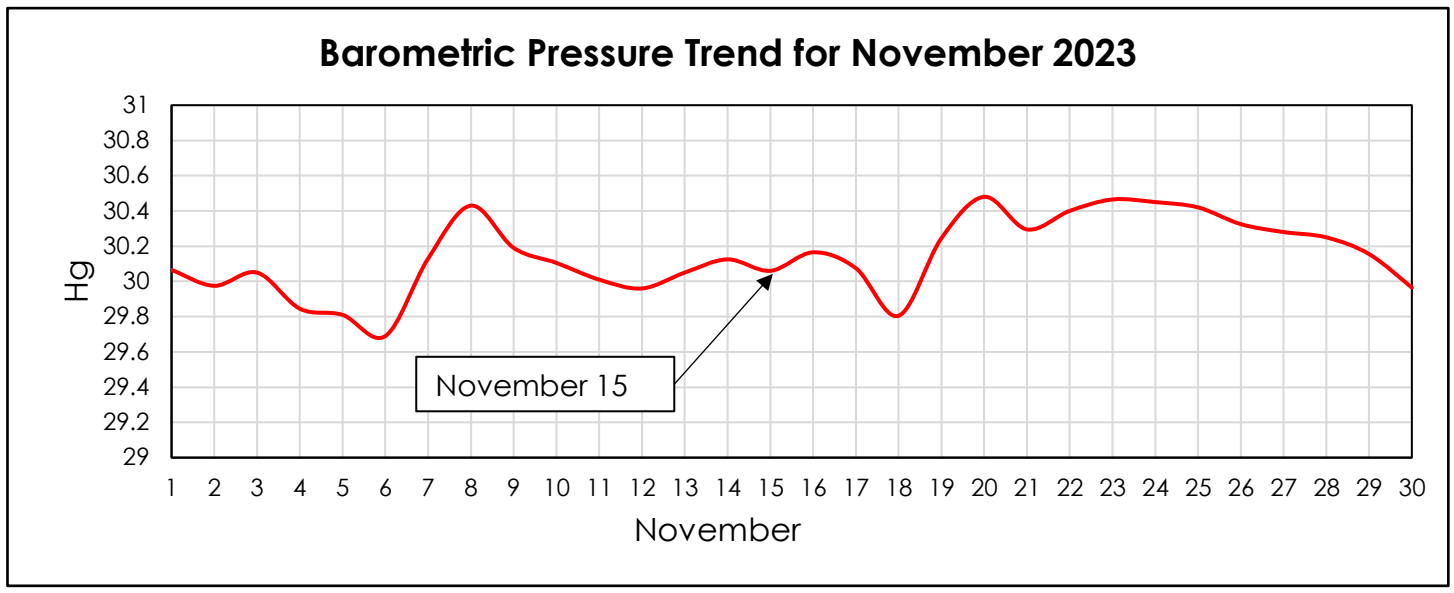
Headings:

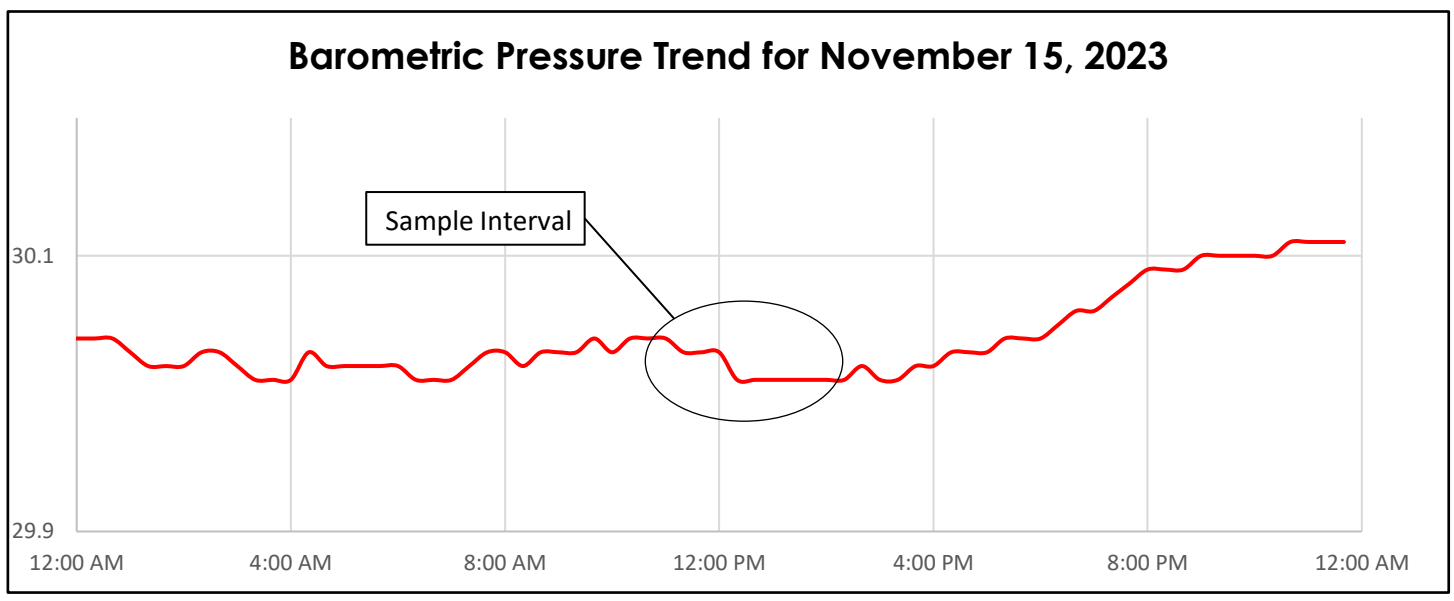
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - November 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-11-15/2023-11-15/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-11-15/2023-11-15/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04223001.04

LRI Landfill

December-23

Location Refer *Design.*	Date	Time	$P_{(well)}$ (in W.C.)	Gas Composition - *Note 1*					Depth to Water *Note 2* (ft-TOC)	Exposed Portion of Perforations - *Note 3*		Comments
				CH_4 Spike (% by vol.)	CH_4 (% by vol.)	CO_2 (% by vol.)	O_2 (% by vol.)	Balance (N_2 & H_2O) (% by vol.)		(ft)	(%)	
Normal Operating Rage:												
(min)			-	-	0.3	-	-				20.0	
(max)			1.41	-	5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1A	12/20/2023	10:13	1.41	38.0	37.3	62.6	0.0	0.1	14.3	4.3	86.4	
GP-2	12/20/2023	9:53	0.19	5.0	3.7	12.1	5.9	78.3	11.8	0.0	0.0	
GP-3	12/20/2023	9:24	0.23	--	0.0	4.5	16.5	79.0	10.2	15.2	100.0	
GP-4	12/20/2023	9:31	0.15	--	0.0	7.4	9.9	82.7	9.4	0.0	0.0	
GP-9	12/20/2023	9:37	0.12	--	0.0	9.3	7.1	83.6	11.4	0.0	0.0	
GP-10	12/20/2023	9:43	0.20	--	0.0	7.6	14.2	78.2				
GP-10P	12/20/2023	9:53	0.20	35.8	33.1	36.2	0.0	30.7				
GP-11	12/20/2023	9:58	0.21	--	0.0	0.1	21.4	78.5				
GP-12	12/20/2023	10:13	0.19	--	0.0	0.0	21.6	78.4				
GP-13	12/20/2023	10:25	0.17	--	0.0	22.9	4.5	72.6				
GP-14	12/20/2023	10:30	-1.45	--	0.0	0.9	20.7	78.4	11.9	0.0	0.0	
GP-15	12/20/2023	11:04	0.08	--	0.0	10.0	15.5	74.5	16.7	1.1	22.2	
GP-16	12/20/2023	11:10	0.12	--	0.0	0.4	21.0	78.6	18.8	11.5	76.4	
GP-17	12/20/2023	11:17	0.19	--	0.0	0.1	21.9	78.0	5.3	0.0	100.0	
GP-18	12/20/2023	11:27	0.17	--	0.0	0.1	21.7	78.2	3.6	0.0	0.0	
GP-19	12/20/2023	14:10	0.24	0.4	0.4	0.6	20.6	78.4	5.6	0.0	0.0	
GP-20	12/29/2023	9:24	0.21	--	0.0	0.4	20.8	78.8	5.3	0.0	0.0	
GP-21	12/29/2023	9:33	0.18	--	0.0	2.7	18.1	79.2	12.1	0.0	0.0	

General Data:

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	34.2	47.6	40.9
Wind Speed (mph):	1	1	1
Wind Direction:	90	90	90
Barometric Pressure, P (in Hg):	29.99	29.98	29.99
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	12/20/2023
Starting Time:	9:17
Finishing Date:	12/29/2023
Finishing Time:	9:48
Monitored by:	T. Hanrahan
Instruments:	GEM 2000
Calibration Date:	12/20/2023

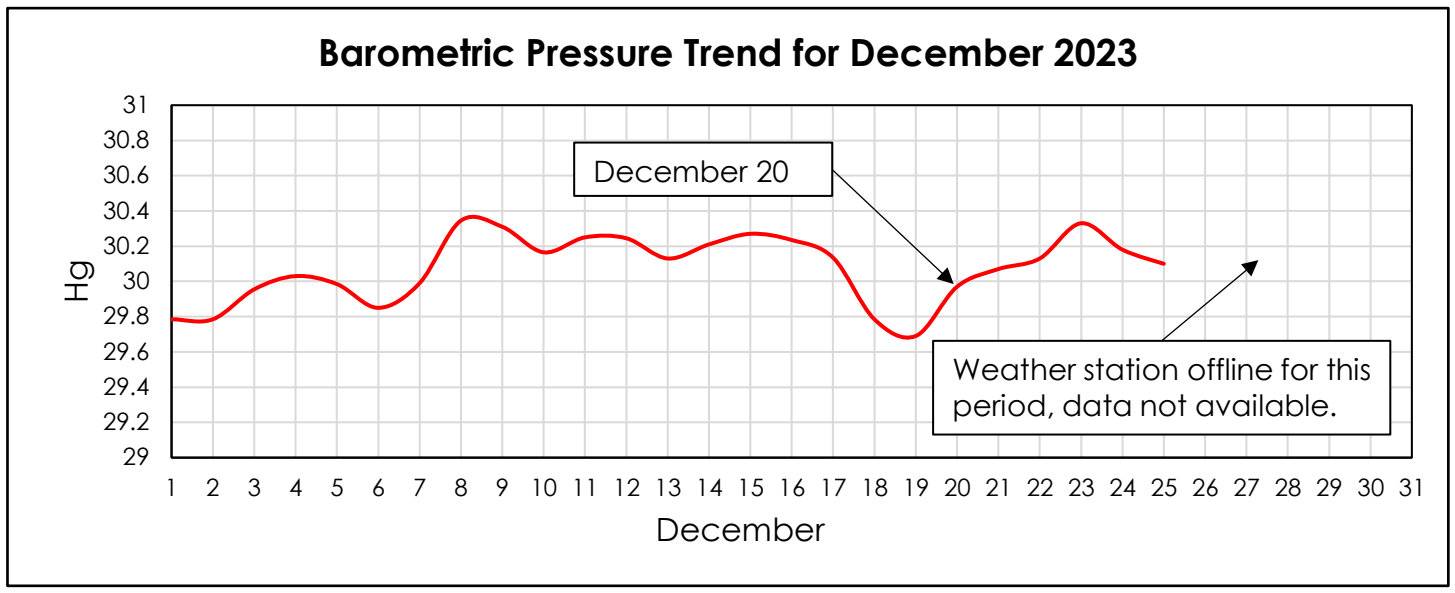
Headings:

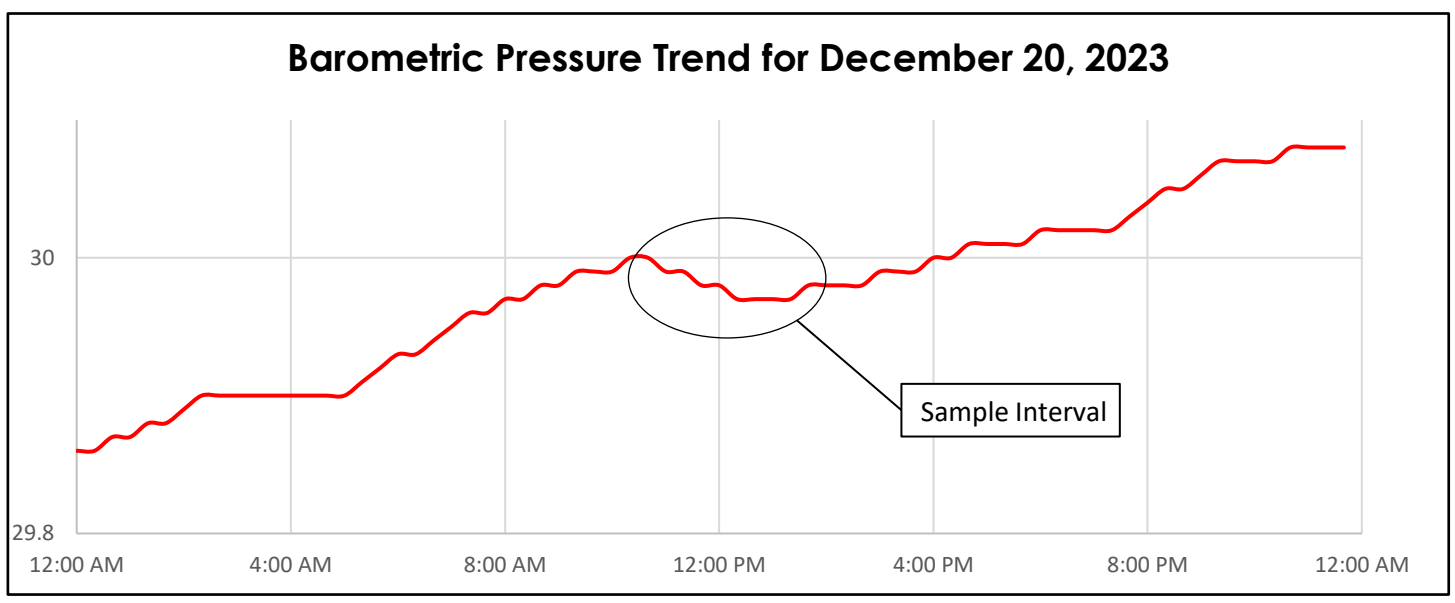
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.

Barometric Pressure Trend - December 2023
LRI Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-12-20/2023-12-20/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2023-12-20/2023-12-20/daily

LRI 304th Street Landfill
Landfill Gas Monitoring of On-site Buildings

Date: 3-23-23
Weather Conditions: Cloudy / windy
Instrument: micro FID
Measured By: JTF

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:

- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

0.2 ppm Max

- ☐ Main Office - individual office spaces, storage areas and within open crawl-space area.
- ☑ Repair Shop – survey atmosphere conditions throughout (lower height levels).
- ☑ Pay/Scale Booth – interior of building.

Background Concentrations:

Upwind 0 ppm
Downwind 0 ppm

Signature

LRI 304th Street Landfill
Landfill Gas Monitoring of On-site Buildings

Date: ~~5/25/2023~~ 9/31/23
Weather Conditions: overcast, slight breeze
Instrument: FID
Measured By: JTF

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

- [x] Main Office - individual office spaces, storage areas and within open crawl-space area.
- [x] Repair Shop – survey atmosphere conditions throughout (lower height levels).
- [x] Pay/Scale Booth – interior of building.

Background Concentrations:
Upwind 0 ppm
Downwind 0 ppm

Signature

LRI 304th Street Landfill
Landfill Gas Monitoring of On-site Buildings

Project Number: 04223001.04

Date: 9/27/2023
Weather Conditions: Overcast
Instrument: MicroFID
Measured By: JTF

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

2 PPM	☐	Main Office - individual office spaces, storage areas and within open crawl-space area.
12 ppm	☐	Repair Shop – survey atmosphere conditions throughout (lower height levels).
	☑	Pay/Scale Booth – interior of building.
	☑	Work Shop - interior of shed adjacent to stormwater ponds.
	☑	Energy Plant - occupied spaces of building adjacent to blower flare station.

Signature

LRI 304th Street Landfill
Landfill Gas Monitoring of On-site Buildings

Project Number: 04223001.04

Date: 11-15-23
Weather Conditions: Overcast
Instrument: Micro FID
Measured By: JTF

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

8 ppm max ☐ Main Office - individual office spaces, storage areas and within open crawl-space area.

13.7 ppm ☒ max Repair Shop – survey atmosphere conditions throughout (lower height levels).

1.6 ppm ☒ max Pay/Scale Booth – interior of building.

2.8 ppm ☐ max Work Shop - interior of shed adjacent to stormwater ponds.

2.3 ppm ☐ max Energy Plant - occupied spaces of building adjacent to blower flare station.

1.8 ppm upwind
2.0 ppm downwind

Signature

May 15, 2023
File No. 04223001.15

Mr. George Duvendack
Region Engineer
Pierce County Recycling, Composting and Disposal, LLC dba LRI
17925 Meridian Street East
Puyallup, Washington 98375

Subject: **2023 Phase 1 Gas System Expansion Well Installation Report**
LRI Landfill, Graham, Washington

Dear George:

This letter report presents a summary of field activities performed by SCS Engineers (SCS) during the installation of 8 new interim landfill gas (LFG) wells at the LRI Landfill located in Graham, Washington. The LFG extraction wells were installed in general accordance with the 2023 Gas System Expansion design plans, approved well construction variance, and well completion schedule issued by SCS on April 6th, 2023. Following completion of the well installation work, each well was given a standard well designation consistent with LRI naming convention as shown in Table 1.

Summary

SCS personnel were onsite from April 11, 2023 through April 13, 2023 to observe and document drilling and installation of 8 new interim LFG extraction wells performed by DBM Contractors, Inc. (DBM). Observations of the cuttings from well drilling were logged for each boring and are included on the attached boring and construction logs prepared by SCS. The following table presents a summary of the completed well installation data.

Table 1: Summary of Well Completion

Well ID	Design ID	Surface Elevation (ft-msl)(1)	Well Material	ECY Well Tag(2)	Design Depth (ft)	Installed Depth (ft)	Length of Screen (ft)
WE-360	IW-01	711.1	HDPE	BLP 700	40	40	20
WE-361	IW-02	719.3	HDPE	BLP 699	40	41	20
WE-362	IW-03	731.2	HDPE	BLP 698	40	41	20
WE-363	IW-04	751.6	HDPE	BLP 693	40	43	20
WE-364	IW-05	753.3	HDPE	BLP 697	40	41	20
WE-365	IW-06	772.3	HDPE	BLP 696	40	41.5	20
WE-366	IW-07	785.2	HDPE	BLP 695	40	40.5	20
WE-367	IW-08	799.9	HDPE	BLP 694	40	41	20

Notes:
1. Survey data provided by HRK prior to drilling and installation. Elevations are for the original staked locations and do not account for minor relocation at time of installation.
2. ECY Well Tags were provided by DBM upon completion of each well.

LFG Extraction Well Drilling and Installation

The borings for the LFG extraction wells were drilled using an IMT AF250 drill rig with a 10 foot long, 36-inch diameter core barrel. For each of the extraction wells, the borings were advanced to the design depths and over drilled up to 3-feet based on drilling conditions. The extraction wells were then constructed using 6-inch diameter SDR11 high density polyethylene (HDPE) pipe and fittings. Backfill was completed with 2-inch minus round rock, bentonite chips and granules, and clean soil as shown on the attached well construction logs. All construction materials were provided by DBM and verified by SCS prior to use, with the exception of clean soil backfill which was obtained from onsite sources. Drilling and installation of each well was completed in one day. No boreholes were left open overnight.

The wells were completed with approximately 5 feet of pipe stickup above the ground surface to allow for grading, landfill cover/closure, and connection to the existing LFG collection system. Upon completion, each well was issued a Washington State Department of Ecology (ECY) Well Tag in accordance with state regulations and connected to the existing gas collection and control system (GCCS).

Closing

If you have any questions regarding the information presented in this letter or the attached boring logs, please do not hesitate to contact us.

Sincerely,

John Faille, EIT
Staff Professional II
SCS Engineers

Karam Singh, P.E.
Senior Project Engineer
SCS Engineers

cc: Olivier Moi, LRI
Kevin Green, LRI
Samantha Winkle, LRI
Keith Johnston, TPCHD
Trevor Priestley, TPCHD
Bill Harris, Ecology
Derek Rockett, Ecology

Attachments:

2023 LFG Well Completion Logs
2023 GCCS Improvements Phase 1 March – Existing Grades

LEGEND

PROPOSED	EXISTING
WE-1 or E-1	VERTICAL GAS WELL
OCE-1	ODOR CONTROL WELL
HE-01 △	HORIZONTAL GAS COLLECTOR
LP4AN	LEACHATE PIPE CONNECTION
TW-68	TEMPORARY VERTICAL GAS WELL
WE-365	PROPOSED INTERIM VERTICAL GAS WELL (MARCH 2023)

E 22,500
E 22,000
E 21,500
E 21,000
E 20,500
N 18,500
N 18,000
N 17,500
N 17,000
N 16,500
N 16,000
N 15,500

EXISTING LANDFILL FOOTPRINT

GRAPHICAL REPRESENTATION OF WELL DISTRIBUTION

WE-367
WE-366
WE-365
WE-364
WE-363
WE-362
WE-361
WE-360

VERTICAL GAS WELL (TYP IW-01 THRU TW-08) SEE DETAIL

SEE PROFILE

C3
C4
C5 & C6

FUTURE CELL 9B1

FACILITY ENTRANCE

NOTES:
1. EXISTING TOPOGRAPHY PERFORMED BY PROPELLER AEROBOTICS, DATED 2023-03-27.
2. HORIZONTAL DATUM: ASSUMED LOCAL COORDINATE SYSTEM
   VERTICAL DATUM: BASED ON PIERCE COUNTY BENCH No 112-28, ELEVATION 660.29 NGVD 1929
3. LFG WELL LOCATIONS AND GCCS BASED ON INFORMATION PROVIDED BY LRI. UPDATED DECEMBER, 2021.

0 120 240
SCALE (ft)

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	03/01/2023
B	ISSUED FOR CONSTRUCTION	03/06/2023
C	ISSUED FOR REVISION	04/07/2023

SHEET TITLE
2023 GCCS IMPROVEMENTS PHASE 1
MARCH - EXISTING GRADES

PROJECT TITLE
2023 GAS SYSTEM EXPANSION
PHASE 1 OF 3
LRI LANDFILL
GRAHAM, WASHINGTON

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (503) 684-6948

PROJ. NO.	04223001.14
DSN. BY:	JTF
DWN. BY:	GDB/LEL
CHK. BY:	TAB
ACAD FILE:	
APP. BY:	KGL

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO.
C1

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-360

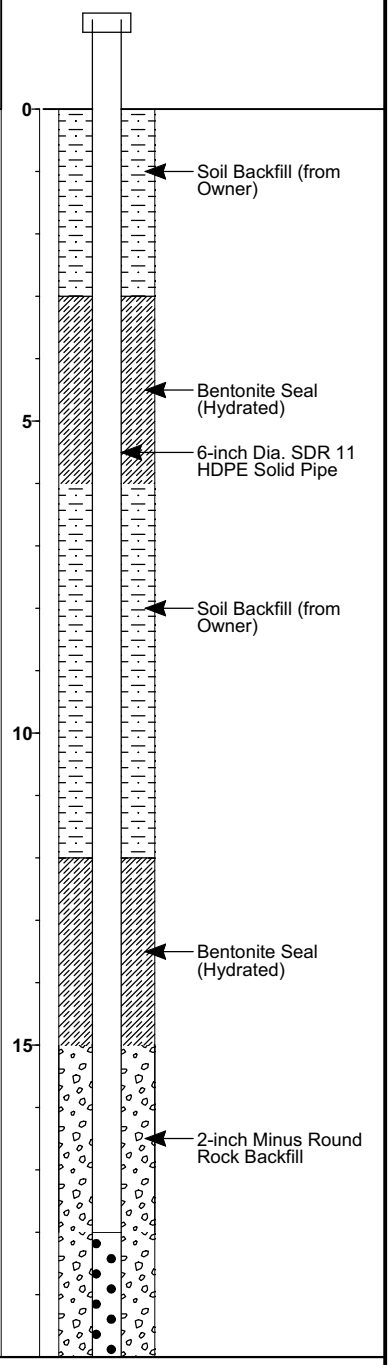
2023 GCCS Expansion Phase 1 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-700. Drawing ID: 2023-C5. IW-01

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil Cover
	1							
	2							08:30 Fresh waste.
1	3							
	4							
	5							
	6					REFUSE		
2	7							
	8							08:40 Mixed refuse (plastic, soils, textiles, rubber, wire). Moist, blacks and greys with many colors, light decomposition.
	9							
3	10							
	11							
	12							
4	13							08:45 Temperature =94°F.
	14							
	15							
5	16							08:49 Depth of 16' reached.
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **J. Faille**

Date Started: **4/11/23**
Date Ended: **4/11/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **08:15**
Time Ended: **13:00**
Total Depth: **40.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

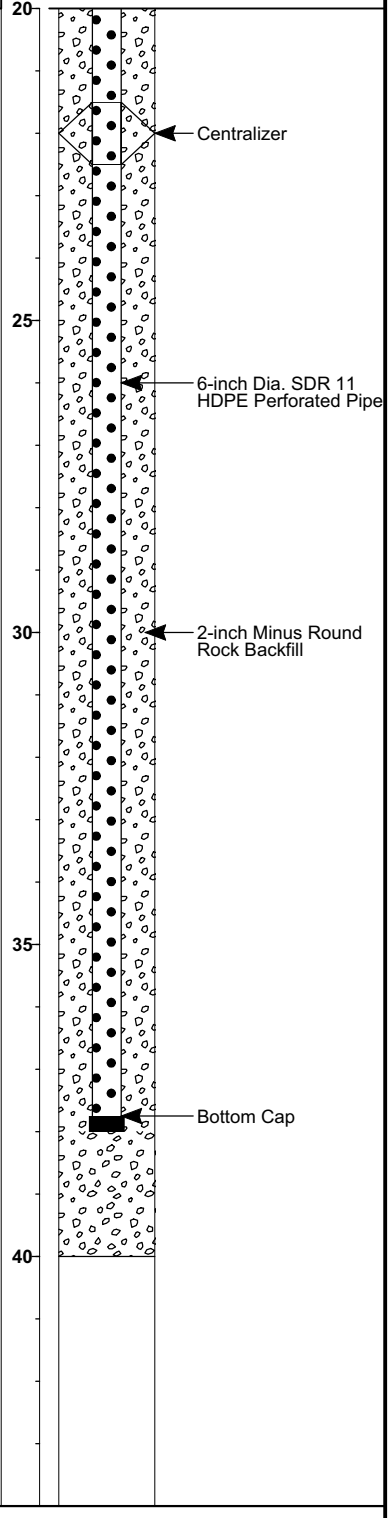
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-360

2023 GCCS Expansion Phase 1 - LRI Landfill | **JOB NUMBER: 04223001.15**

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		
	21							
	22							08:55 Mixed refuse (plastic, soils, textiles, rubber, wire). Moist/very moist, blacks and greys with many colors, light/medium decomposition.
7	23							
	24							
	25							
8	26							
	27							
	28							09:00 Mixed refuse (plastic, soils, textiles, rubber, wire). Moist/very moist, blacks and greys with many colors, light/medium decomposition.
	29							
9	30							
	31							09:02 Temperature =104°F.
	32							
10	33							
	34							
	35							09:15 Mixed refuse (plastic, textiles). Very moist/wet, blacks with many colors, medium decomposition.
11	36							
	37							
	38					REFUSE		09:21 Temperature =102°F.
12	39							
	40							09:29 40' depth taped, boring complete.
	41							
	42							
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-361

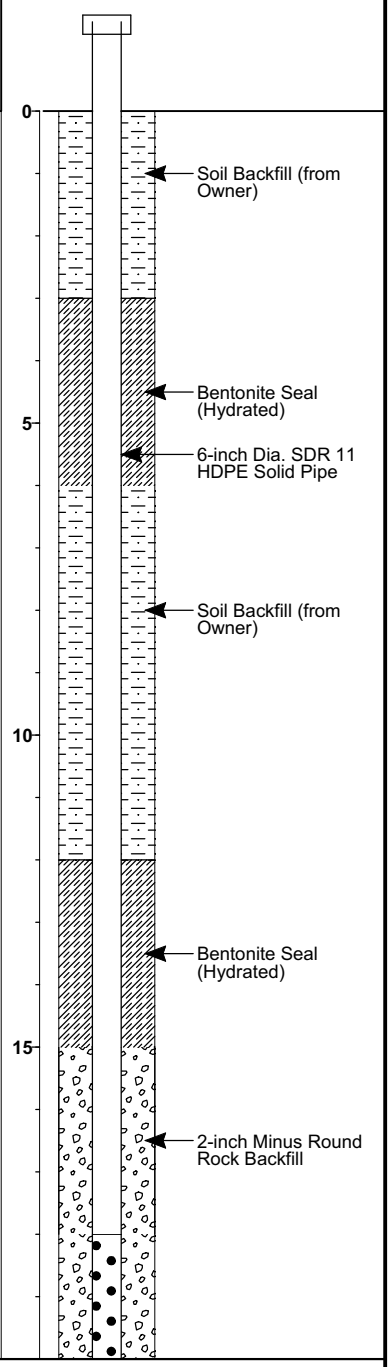
2023 GCCS Expansion Phase 1 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-699. Drawing ID: 2023-C5. IW-02

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil Cover
	1							
	2							
1	3							13:35 Mixed refuse (plastic, soils, textiles, rubber, wire, wood debris). Moist, blacks and greys with many colors, light decomposition.
	4							
	5							
2	6					REFUSE		
	7							
	8							
3	9							
	10							13:40 Temperature =110°F.
	11							
	12							
4	13							
	14							Mixed refuse (plastic, textiles, rubber). Moist, blacks and greys with many colors, medium decomposition.
	15							
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **J. Faille**

Date Started: **4/11/23**
Date Ended: **4/11/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **13:30**
Time Ended: **15:30**
Total Depth: **41.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

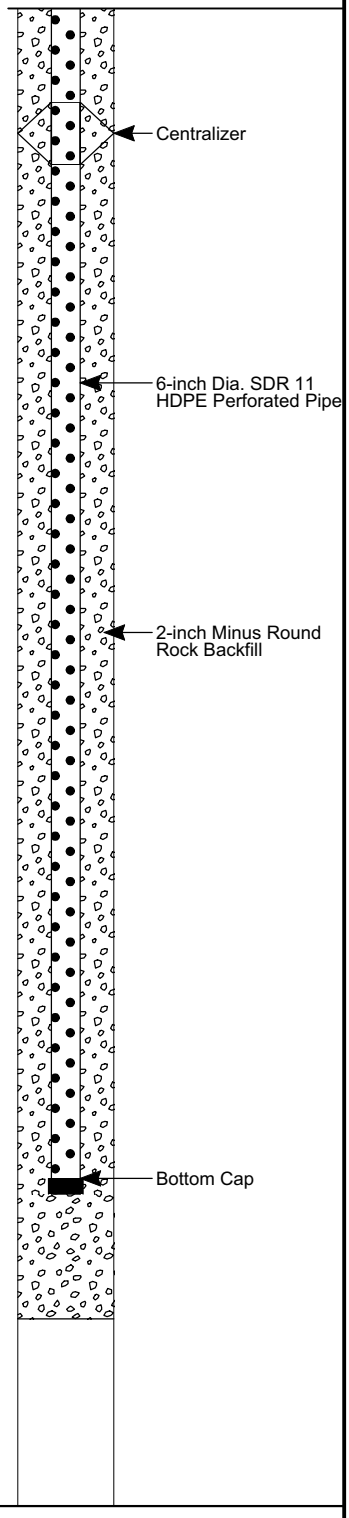
BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-361

2023 GCCS Expansion Phase 1 - LRI Landfill | **JOB NUMBER: 04223001.15**

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		13:45 Temperature =102°F.
	21							
	22							
7	23							
	24							Increase in moisture level, now very moist/slightly wet.
	25							
8	26							
	27							13:56 Temperature =113°F.
	28							
	29							
9	30							
	31							
	32							Mixed refuse (plastic, textiles). Very moist/wet, blacks and browns with some colors, medium decomposition.
10	33							
	34							
	35							
11	36							
	37							
	38					REFUSE		14:20 Temperature =105°F.
12	39							
	40							
	41							14:27 41' depth taped, boring complete.
	42							
13	43							
	44							



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-362

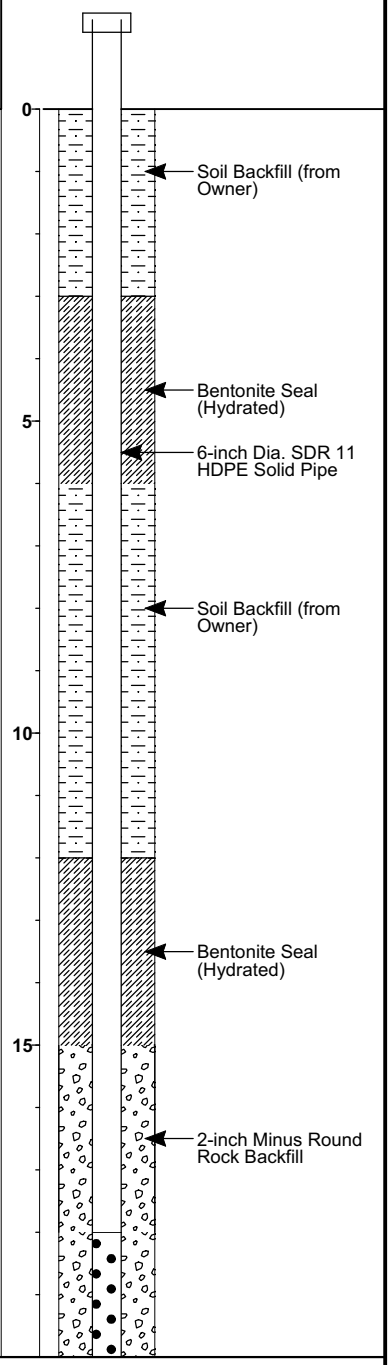
2023 GCCS Expansion Phase 1 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-698. Drawing ID: 2023-C5. IW-03

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil Cover
	1							
	2							
1	3							Mixed refuse, plastics, dry, light decomposition.
	4							
	5							
	6					REFUSE		
2	7							
	8							
	9							
3	10							Mixed refuse, plastics and soils, darks with many colors.
	11							
	12							
4	13							
	14							Temperature =66°F.
	15							
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **L.Walker**

Date Started: **4/12/23**
Date Ended: **4/12/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **08:04**
Time Ended: **12:15**
Total Depth: **41.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

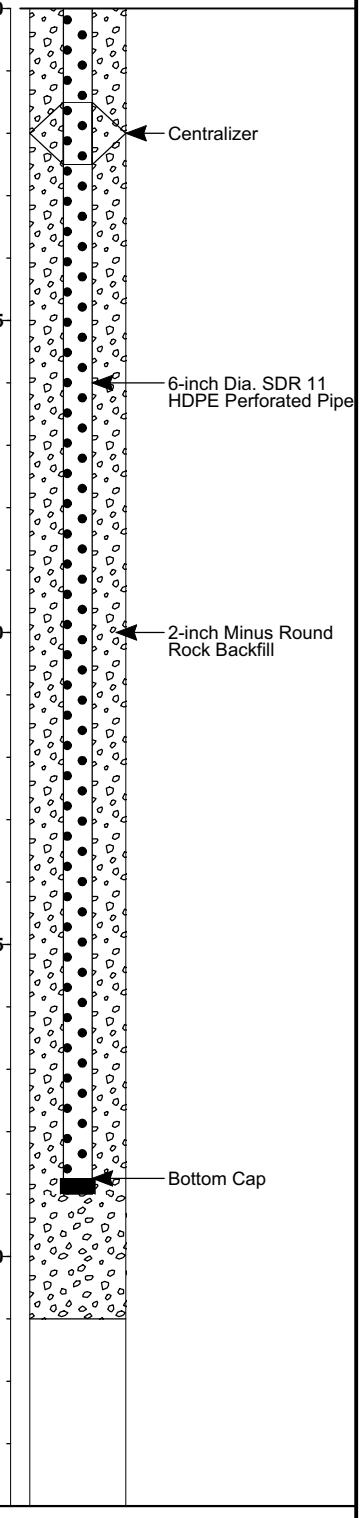
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-362

2023 GCCS Expansion Phase 1 - LRI Landfill | **JOB NUMBER: 04223001.15**

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		
	21							
	22							
7	23							08:25 Temperature =84°F.
	24							
	25							Mixed refuse, plastics and soils, dark with grey plastics, moist, light decomposition.
8	26							
	27							
	28							Mixed refuse, increased portion of soils, dark browns and blacks, moist, light decomposition.
	29							
9	30							08:41 Temperature =97°F.
	31							
	32							
10	33							
	34							
	35							
11	36							
	37							Mixed refuse, soils and plastics, less soils than above, many colors, moist, light decomposition.
	38					REFUSE		
	39							
12	40							
	41							09:02 Temperature =90°F. Depth of 41' taped, boring complete.
	42							
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-363

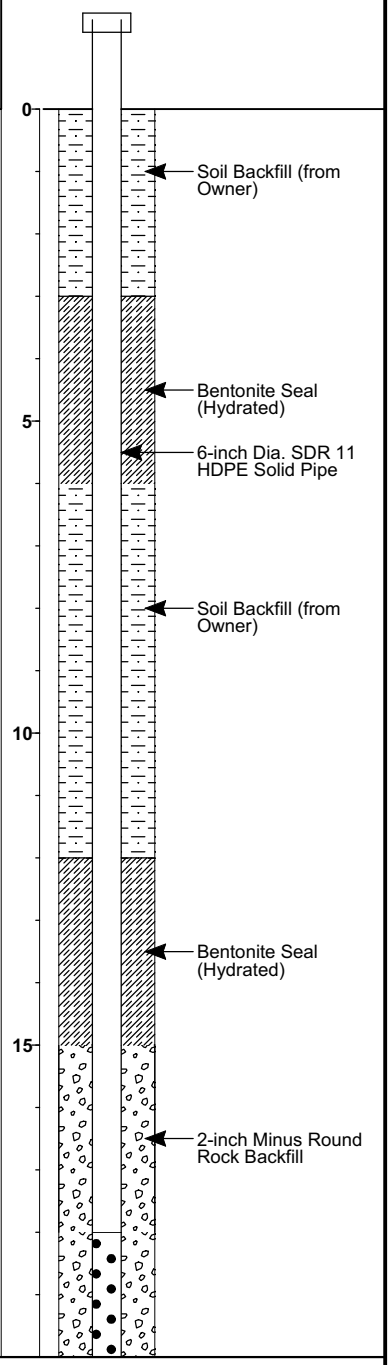
2023 GCCS Expansion Phase 1 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-693. Drawing ID: 2023-C5. IW-04

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil Cover
	1							
	2							
1	3							Mixed refuse, plastics, soils, wood pallets, many colors, dry, light decomposition.
	4							
	5							
	6					REFUSE		
2	7							
	8							
	9							
3	10							Mixed refuse, plastics and soils, darks with many colors.
	11							12:44 Temperature =62°F.
	12							
4	13							Mixed refuse, plastics and soils, many colors, moist, light decomposition.
	14							
	15							Increased portion of metals encountered, possibly aluminum.
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **L.Walker**

Date Started: **4/13/23**
Date Ended: **4/13/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **12:35**
Time Ended: **13:26**
Total Depth: **43.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

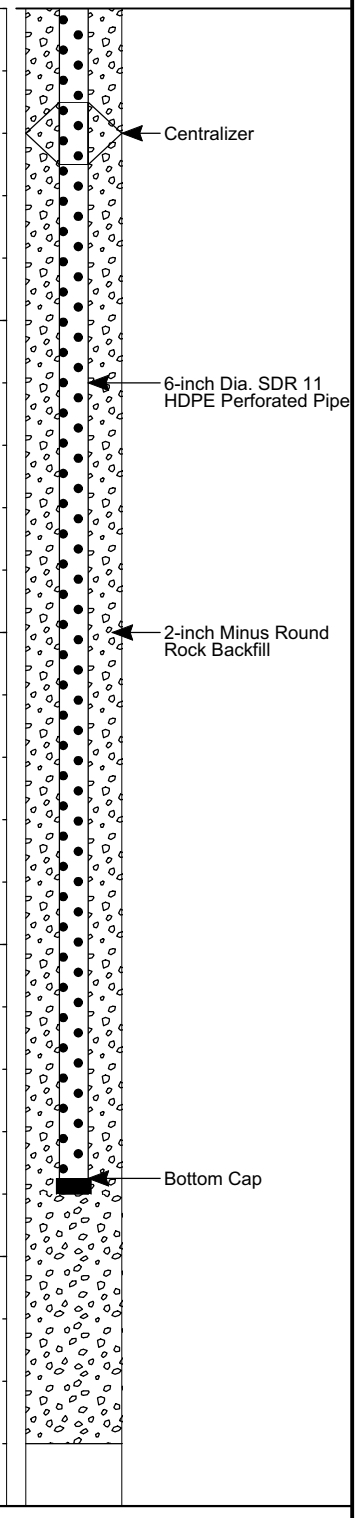
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-363

2023 GCCS Expansion Phase 1 - LRI Landfill | **JOB NUMBER: 04223001.15**

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		
	21							
	22							
7	23							12:59 Temperature =85°F.
	24							
	25							Mixed refuse (soils and plastics), many colors.
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							13:13 Temperature =88°F.
	34							
	35							
11	36							
	37							Mixed refuse (soils, plastics, textiles, wood debris), blacks with many colors, moist, light decomposition.
	38					REFUSE		
	39							
12	40							
	41							
	42							
13	43							13:26 Depth of 43' taped, boring complete.
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-364

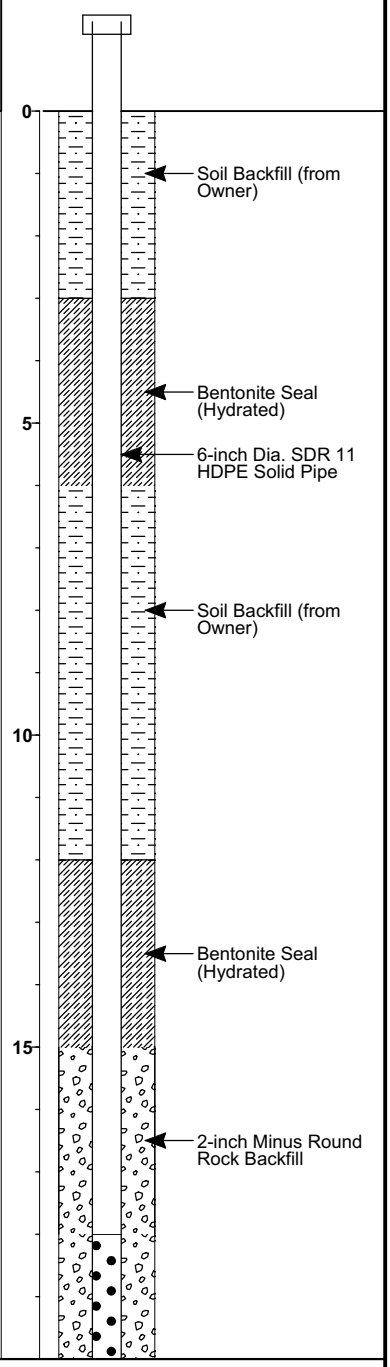
2023 GCCS Expansion Phase 1 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-697. Drawing ID: 2023-C5. IW-05

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil Cover
	1							
	2							
	3							Mixed refuse (plastics and tarps), many colors, fresh waste.
1	4							
	5							
	6					REFUSE		
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							10:58 Temperature =72°F.
5	16							
	17							Mixed refuse, many colors, light soil portion, slightly moist.
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **L.Walker**

Date Started: **4/12/23**
Date Ended: **4/12/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **10:43**
Time Ended: **11:35**
Total Depth: **41.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

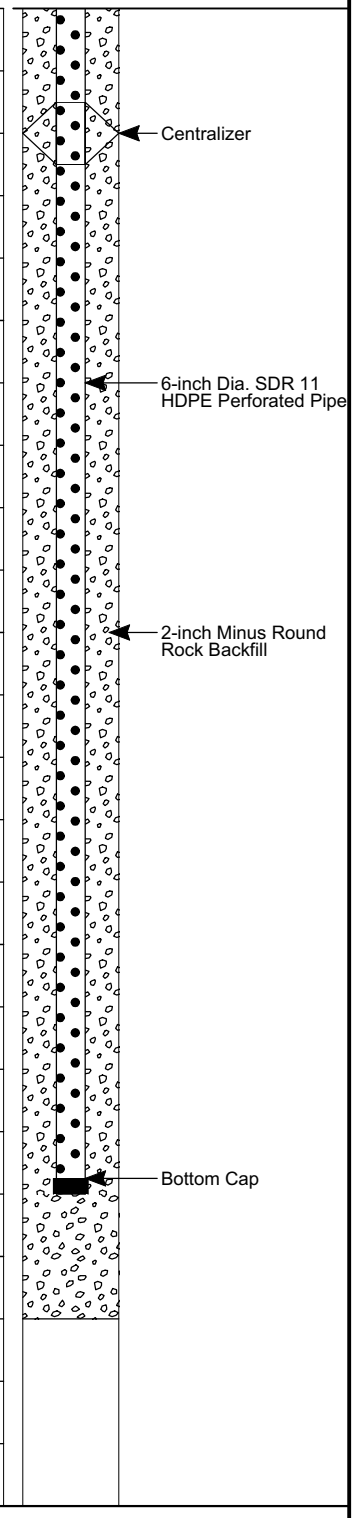
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-364

2023 GCCS Expansion Phase 1 - LRI Landfill | **JOB NUMBER: 04223001.15**

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		Increase in soil portion.
	21							
	22							
7	23							
	24							11:10 Temperature =81°F.
	25							
8	26							
	27							Mixed refuse (plastics and soils), many colors, slightly moist, light decomposition.
	28							
	29							
9	30							
	31							
	32							
10	33							11:22 Temperature =81°F.
	34							
	35							
11	36							Mixed refuse, soils and plastics, many colors, moist, light decomposition.
	37							
	38					REFUSE		
	39							
12	40							
	41							11:35 Temperature =81°F. Depth of 41' taped, boring complete.
	42							
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-365

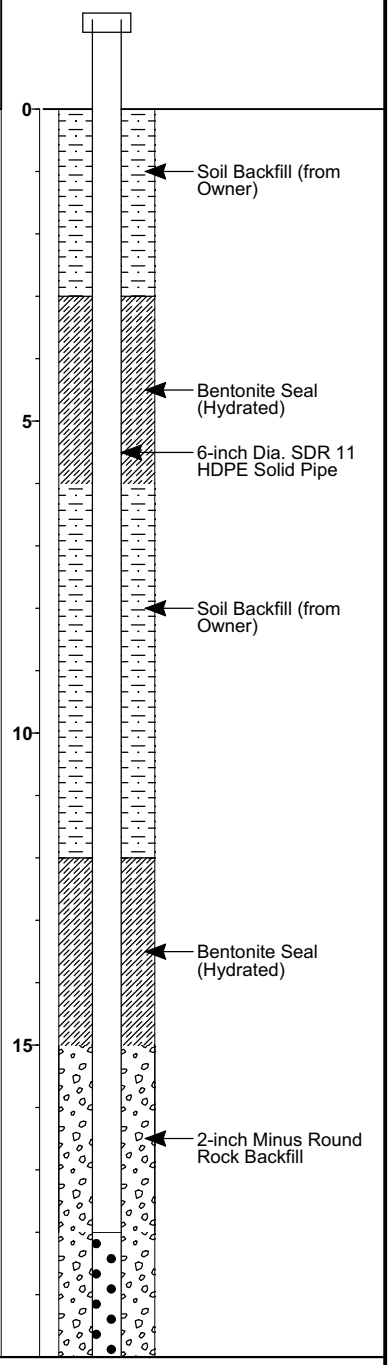
2023 GCCS Expansion Phase 1 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-696. Drawing ID: 2023-C5. IW-06

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil Cover
	1							
	2							
1	3							
	4							
	5							Mixed refuse (plastics, woody debris and tarps), many colors, dry, fresh waste.
	6					REFUSE		
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							13:18 Temperature =77°F.
	15							
	16							
5	17							Mixed refuse (mattresses and foam), browns and many colors, light soil portion, slightly moist.
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **L.Walker**

Date Started: **4/12/23**
Date Ended: **4/12/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **13:07**
Time Ended: **14:04**
Total Depth: **41.5 ft.**

STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

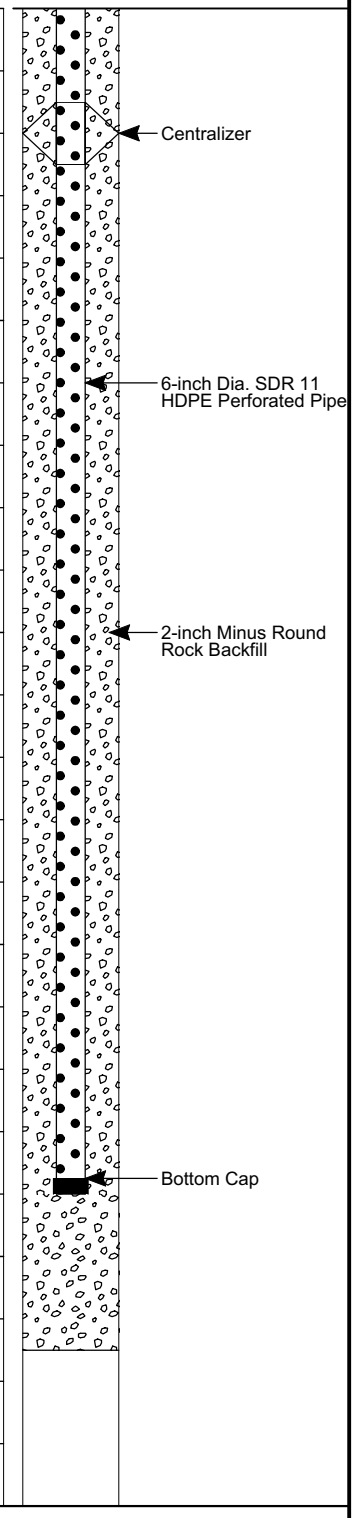
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-365

2023 GCCS Expansion Phase 1 - LRI Landfill | **JOB NUMBER: 04223001.15**

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		13:25 Temperature =77°F.
	21							
	22							
7	23							
	24							
	25							Mixed refuse (soils, plastics, textiles), many colors, light decomposition, slightly moist.
8	26							
	27							
	28							
	29							
9	30							13:37 Temperature =80°F.
	31							
	32							
10	33							
	34							
	35							
11	36							13:53 Temperature =82°F.
	37							
	38					REFUSE		Mixed refuse (soils, metals, shredded rubber, plastics), many colors, moist, light decomposition.
12	39							
	40							
	41							
	42							14:04 Depth of 41.5' taped, boring completed.
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-366

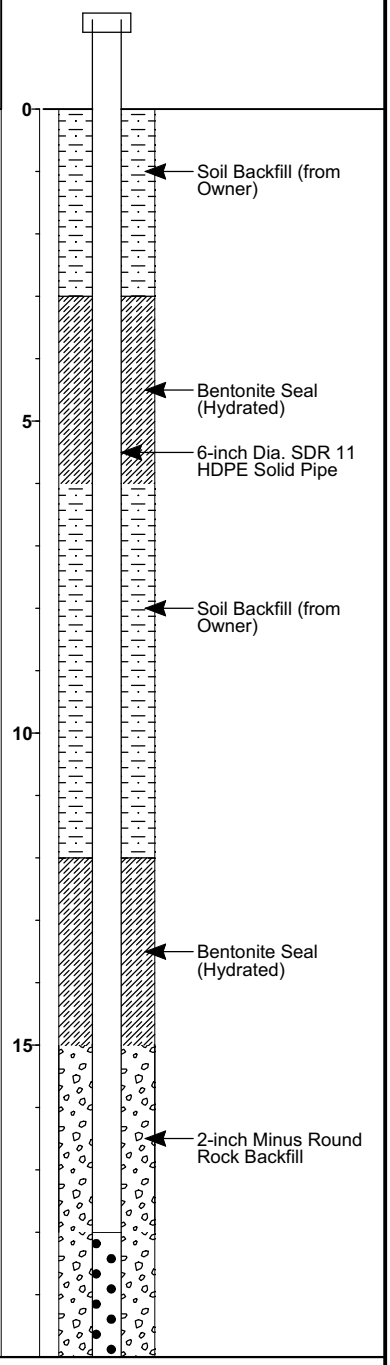
2023 GCCS Expansion Phase 1 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-695. Drawing ID: 2023-C5. IW-07

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil Cover
	1							
	2							
1	3							
	4							
	5							Mixed refuse (mainly plastics), many colors, dry, fresh waste.
	6					REFUSE		
2	7							
	8							
	9							
3	10							08:09 Temperature =71°F.
	11							
	12							Mixed refuse (mattresses and foam), browns and many colors, light soil portion, dry, fresh waste.
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							08:21 Temperature =66°F.
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **L.Walker**

Date Started: **4/13/23**
Date Ended: **4/13/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **07:59**
Time Ended: **09:02**
Total Depth: **40.5 ft.**

STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

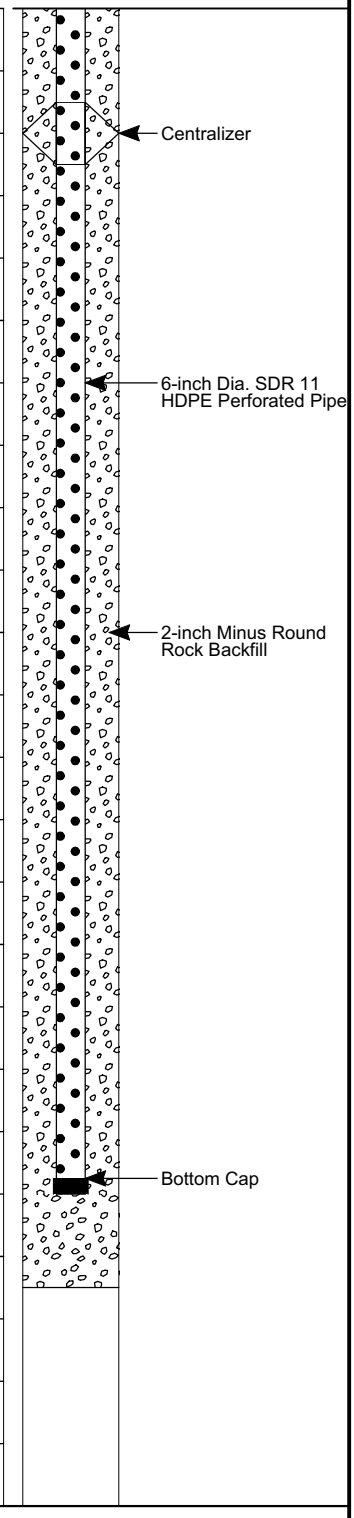
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-366

2023 GCCS Expansion Phase 1 - LRI Landfill | **JOB NUMBER: 04223001.15**

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		
	21							
	22							
7	23							
	24							
	25							Mixed refuse (soils and plastics), many colors, light decomposition, slightly moist.
8	26							
	27							
	28							
	29							
9	30							
	31							08:48 Temperature =63°F.
	32							
10	33							
	34							
	35							
11	36							Mixed refuse, increase in soil portion, many colors, slightly moist, light decomposition.
	37							
	38					REFUSE		
12	39							
	40							09:02 Depth of 40.5' taped, boring completed.
	41							
	42							
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-367

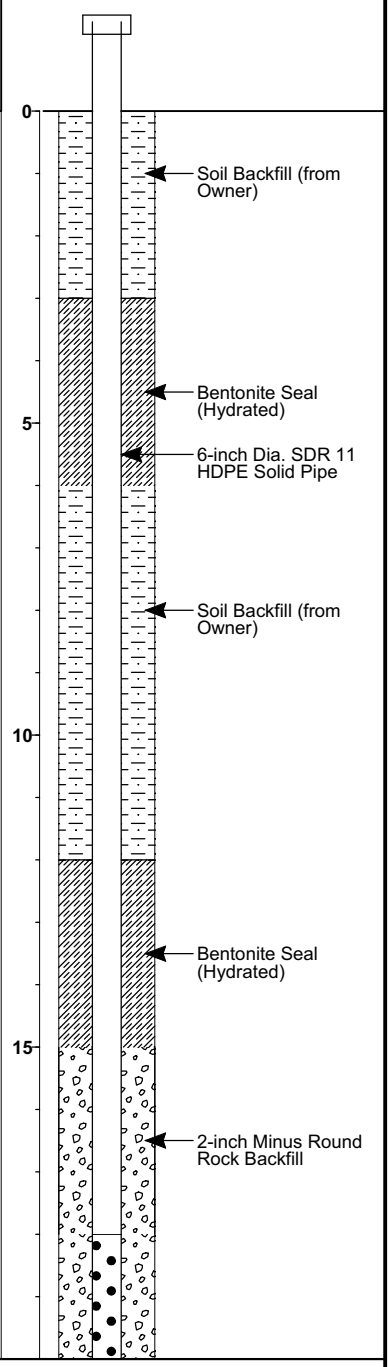
2023 GCCS Expansion Phase 1 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-694. Drawing ID: 2023-C6. IW-08

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil Cover
	1							
	2							
1	3							
	4							
	5							Mixed refuse (mainly plastics), many colors, moist soil, fresh waste.
2	6					REFUSE		
	7							10:22 Temperature =73°F.
	8							
3	9							
	10							
	11							
	12							Mixed refuse (rubber tire encountered), many colors, moist soil, fresh waste.
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **L.Walker**

Date Started: **4/13/23**
Date Ended: **4/13/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **10:13**
Time Ended: **11:05**
Total Depth: **41.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

SCS ENGINEERS

BORING LOG

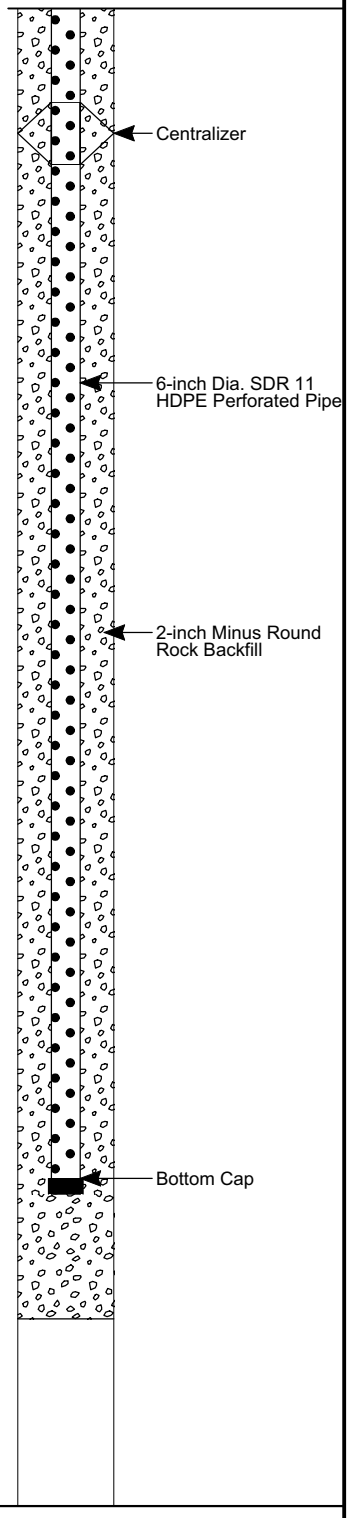
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-367

2023 GCCS Expansion Phase 1 - LRI Landfill | **JOB NUMBER: 04223001.15**

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		10:35 Temperature =70°F.
	21							
	22							
7	23							
	24							Mixed refuse (soils and plastics), many colors, light decomposition, slightly moist.
	25							10:47 Temperature =82°F.
8	26							
	27							
	28							
	29							
9	30							Mixed refuse, increase in soil portion, many colors, dry, light decomposition.
	31							
	32							
10	33							
	34							
	35							Mixed refuse, many colors, moist soil, light decomposition.
11	36							
	37							
	38					REFUSE		
12	39							
	40							
	41							11:05 Depth of 41' taped, boring completed.
	42							
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 GAS WELLS APRIL 2023.GPJ STD_LOG.GDT 5/10/23

September 19, 2023
File No. 04223001.15

Mr. George Duvendack
Region Engineer
Pierce County Recycling, Composting and Disposal, LLC dba LRI
17925 Meridian Street East
Puyallup, Washington 98375

Subject: **2023 Phase 2 Gas System Expansion Well Installation Report**
LRI Landfill, Graham, Washington

Dear George:

This letter report presents a summary of field activities performed by SCS Engineers (SCS) during the installation of 8 new interim landfill gas (LFG) wells at the LRI Landfill located in Graham, Washington. The LFG extraction wells were installed in general accordance with the 2023 Gas System Expansion design plans, approved well construction variance, and well completion schedule issued by SCS on July 14, 2023. Following completion of the well installation work, each well was given a standard well designation consistent with LRI naming convention as shown in Table 1.

Summary

SCS personnel were onsite from July 31, 2023 through August 10, 2023 to observe and document drilling and installation of 8 new interim LFG extraction wells and 4 new vertical LFG extraction wells performed by DBM Contractors, Inc. (DBM). Observations of the cuttings from well drilling were logged for each boring and are included on the attached boring and construction logs prepared by SCS. The following table presents a summary of the completed well installation data.

Table 1: Summary of Well Completion

Well ID	Design ID	Surface Elevation (ft-msl)(1)	Well Material	ECY Well Tag(2)	Design Depth (ft)	Installed Depth (ft)	Length of Screen (ft)
WE-368	IW-05	724.2	HDPE	BLP-685	40	42	20
WE-369	IW-06	715.4	HDPE	BLP-686	40	40	20
WE-370	IW-07	709.8	HDPE	BLP-687	40	41	20
WE-371	IW-08	707.09	HDPE	BLP-688	40	39.8	20
WE-372	IW-01	787.51	HDPE	BLP-692	40	41	20
WE-373	IW-02	780.89	HDPE	BLP-691	40	43	20
WE-374	IW-03	773.46	HDPE	BLP-690	40	40	20
WE-375	IW-04	765.41	HDPE	BLP-689	40	41	20
WE-376	VW-01	843.12	PVC	BLP-684	70	74	50
WE-377	VW-02	814.80	PVC	BLP-683	70	74	50
WE-378	VW-03	818.90	PVC	BLP-682	70	71	50
WE-379	VW-06	828.94	PVC	BLP-681	143	141	110
-	VW-04	Not Installed					
-	VW-05	855.52	Well not Installed–Drainage rock backfilled to a depth of 73-feet				

Notes:
1. Survey data provided by HRK prior to drilling and installation. Elevations are for the original staked locations and do not account for minor relocation at time of installation.
2. ECY Well Tags were provided by DBM upon completion of each well.

LFG Extraction Well Drilling and Installation

The borings for the LFG extraction wells were drilled using an IMT AF250 drill rig with a 10 foot long, 36-inch diameter core barrel. For each of the extraction wells, the borings were advanced to the design depths and over drilled up to 3-feet based on drilling conditions. Some drilling locations were located within the soil stockpile on top of the landfill, so for these locations the depths were adjusted to account for the extra soil placed on top of the original surface. The extraction wells were then constructed using 6-inch diameter SDR11 high density polyethylene (HDPE) pipe and fittings. Backfill was completed with 2-inch minus round rock, bentonite chips and granules, and clean soil as shown on the attached well construction logs. All construction materials were provided by DBM and verified by SCS prior to use. Drilling and installation of each well was completed in one day. A single borehole was left overnight, although this well was ultimately not installed and backfilled with drainage aggregate due to the high liquid level.

The wells were completed with approximately 5 feet of pipe stickup above the ground surface to allow for grading, landfill cover/closure, and connection to the existing LFG collection system. Additional 6-inch piping was used for well VW-06 to account for the additional soil stockpiled on the landfill surface. Upon completion, each well was issued a Washington State Department of Ecology (ECY) Well Tag in accordance with state regulations and connected to the existing gas collection and control system (GCCS).

The following variations to design were completed in conjunction with the well installations. Borings that were completed to within 4.0 feet of the design depth are not included on the following list.

- IW-08: This well was moved approximately 50-feet north and resurveyed by a licensed surveying prior to drilling. This extended the depth of boring to 40-feet.

- VW-05: Significant liquid was encountered at this location during the initial day of drilling. The approximate depth reached at the end of Day 1 was 110-feet and the hole was covered and left overnight. Upon returning to the boring the next day, the approximate depth of boring was 45-feet due to sluffing. Additional liquid was encountered when re-drilling at this location so a total depth of only 73-feet was achieved and no well was installed. Instead the boring was backfilled with a drainage aggregate to promote this liquid to drain back into the landfill over time.

- VW-04: It was determined that this boring would not be drilled and this well would not be installed after encountering the significant liquid issues at VW-05.

Closing

If you have any questions regarding the information presented in this letter or the attached boring logs, please do not hesitate to contact us.

Sincerely,

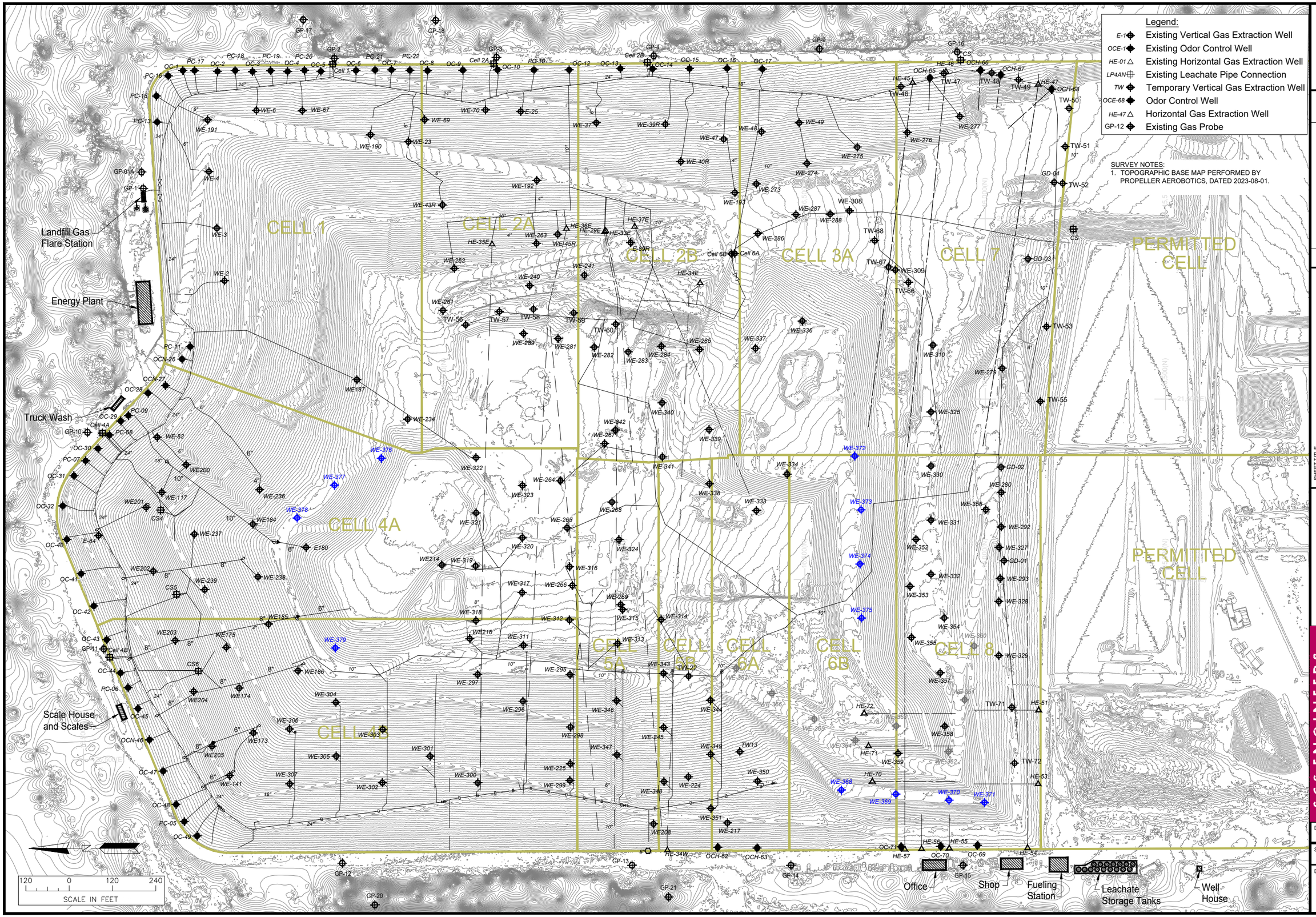
Travis Berndahl, EIT
Project Engineer
SCS Engineers

Karam Singh, P.E.
Senior Project Engineer
SCS Engineers

cc: Olivier Moi, LRI
Kevin Green, LRI
Samantha Winkle, LRI
Keith Johnston, TPCHD
Trevor Priestley, TPCHD
Bill Harris, Ecology
Derek Rockett, Ecology

Attachments:

2023 GCCS Improvements Phase 2 July – Existing Grades
2023 LFG Well Completion Logs



NO.	REVISION	DATE

SHEET TITLE: GCCS SITE PLAN

PROJECT TITLE: GCCS SITE PLAN
LRI LANDFILL
GRAHAM, WASHINGTON

LANDFILLING & RECYCLING

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (503) 684-6948

PROJ. NO.	04215001.00
DSN. BY:	GDB
DWN. BY:	GDB / LEL
CHK. BY:	TAB
APP. BY:	KGL
ACAD FILE:	2023-08-24-GCCS SITE PLAN

DATE: SEPTEMBER 2023

SCALE: AS SHOWN

DRAWING NO. 1

LEGEND

PROPOSED EXISTING

- WE-1 or E-1 — VERTICAL GAS WELL
- OCE-1 — ODOR CONTROL WELL
- HE-01 — HORIZONTAL GAS COLLECTOR
- LP4AN — LEACHATE PIPE CONNECTION
- TW-68 — TEMPORARY VERTICAL GAS WELL
- IW-06 — PROPOSED INTERIM VERTICAL GAS WELL (JULY 2023)
- VW-04 — PROPOSED VERTICAL GAS WELL (JULY 2023)

VERTICAL GAS WELL (TYP VW-01 THRU VW-14) SEE DETAIL

SEE PROFILE

WE-376

WE-377

WE-378

WE-379

GRAPHICAL REPRESENTATION OF WELL DISTRIBUTION

EXISTING LANDFILL FOOTPRINT

WE-372

WE-373

WE-374

WE-375

WE-368

WE-369

WE-370

WE-371

VERTICAL GAS WELL (TYP IW-01 THRU IW-04) SEE DETAIL

SEE PROFILE

FUTURE CELL 9B1

FACILITY ENTRANCE

0 120 240

SCALE (ft)

NOTES:

1. EXISTING TOPOGRAPHY PERFORMED BY PROPELLER AEROBOTICS, DATED 2023-08-01.
2. HORIZONTAL DATUM: ASSUMED LOCAL COORDINATE SYSTEM
   VERTICAL DATUM: BASED ON PIERCE COUNTY BENCH No 112-28, ELEVATION 660.29 NGVD 1929
3. LFG WELL LOCATIONS AND GCCS BASED ON INFORMATION PROVIDED BY LRI. UPDATED DECEMBER, 2021.

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	05/24/2023
B	ISSUED FOR CONSTRUCTION	06/23/2023
A	ISSUED FOR REVISION	07/14/2023
A	RECORD DRAWINGS	09/19/2023

SHEET TITLE: 2023 GCCS IMPROVEMENTS PHASE 2 JULY - OPERATIONS LAYER GRADES

PROJECT TITLE: 2023 GAS SYSTEM EXPANSION
PHASE 2 OF 3
LRI LANDFILL
GRAHAM, WASHINGTON

LANDFILLING & RECYCLING

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (503) 684-6948

ACAD FILE: W:\GCCS Expan Ph2 2023 v0.0
APP. BY: KGL
DWN. BY: GDB/JEL
CHK. BY: TAB
PROJ. NO. 0422001.14
DSN. BY: JTF

DATE: SEPTEMBER 2023

SCALE: AS SHOWN

FIGURE NO. C2

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-368

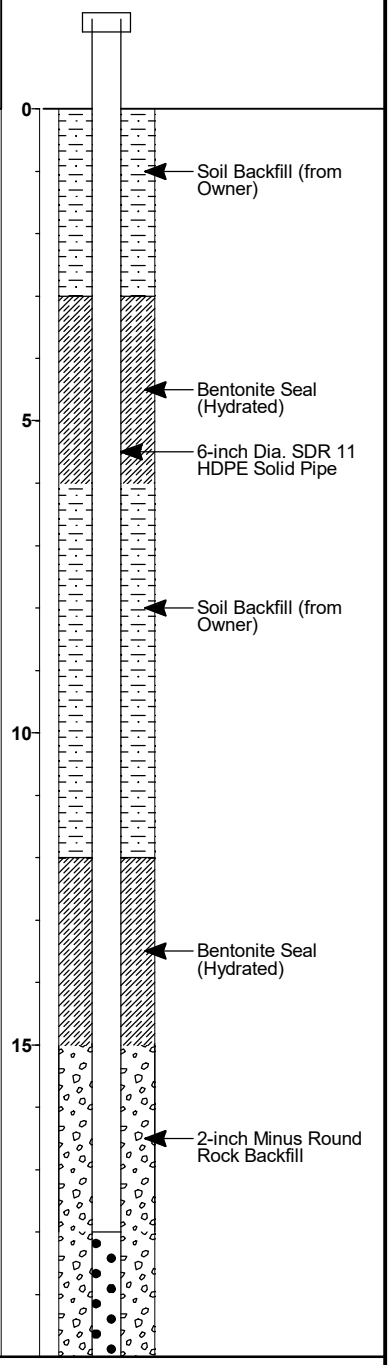
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-685. Drawing ID: 2023-C6. IW-05

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					Soil		Soil Cover
3	10					REFUSE		8:42: Mixed refuse, (plastics, rubber, textiles, soil), light decomposition, slightly moist. Temperature = 102°F
5	17					REFUSE		8:46 Mixed refuse, light decomposition, black, brown, many colors, slightly moist.

Completion Detail



Drilling Company:	**DBM Contractors, Inc.**	Date Started:	**7/31/23**
Drilling Method:	**Core Barrel**	Date Ended:	**7/31/23**
Logged By:	**A. Deszo**	Boring Diameter:	**36-inch**
		Well Diameter:	**6-Inch**
		Time Started:	**08:30**
		Time Ended:	**10:30**
		Elevation:	**724.2 ft.**
		Total Depth:	**42.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

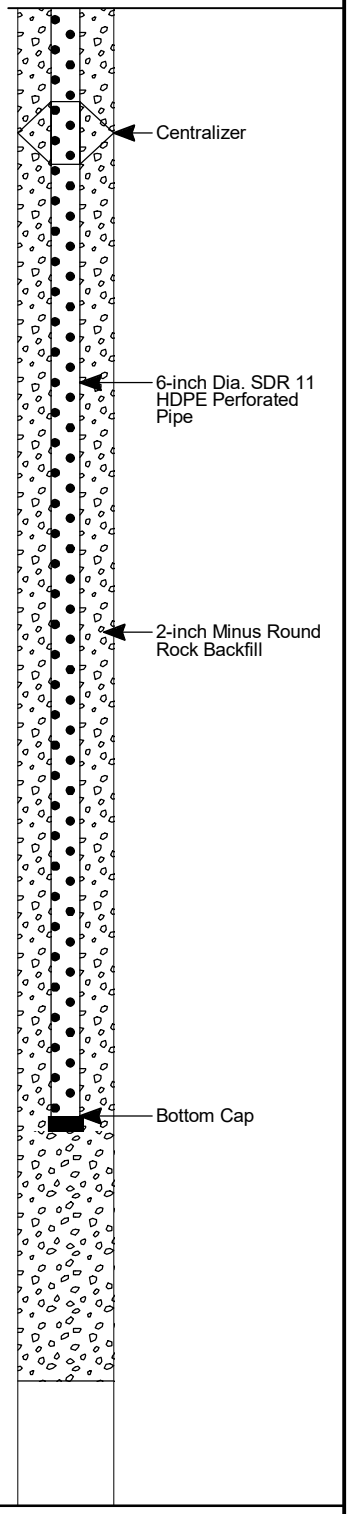
Well ID: WE-368

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							8:52: Temperature =99°F.
	22							
7	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30					REFUSE		Mixed refuse, moderate decomposition, black/brown, few colors, semi-moist. Temperature =108°F.
	31							
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
12	39							
	40					REFUSE		
	41							
	42							42' depth taped, boring complete.
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-369

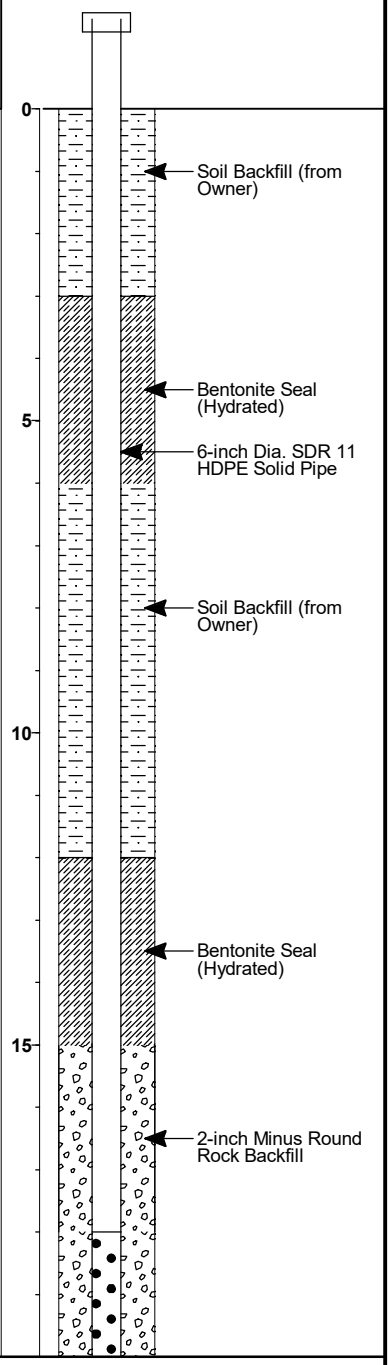
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-686. Drawing ID: 2023-C6. IW-06

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
	1							
	2							
1	3							Soil Cover
	4							
	5					Soil		
	6							
2	7					REFUSE		
	8							Mixed refuse (plastics, soils, rubber, textiles), light decomposition, browns and many colors, dry.
	9							
3	10							
	11							
	12							7:40: Temperature = 112°F
4	13							
	14							
	15							
5	16							
	17							
	18							
	19					REFUSE		Mixed refuse (soils, plastics, textiles, rubbers, wood debris), light decomposition, browns and many colors, slightly moist.
6	20							

Completion Detail



Drilling Company:	**DBM Contractors, Inc.**	Date Started:	**8/2/23**
Drilling Method:	**Core Barrel**	Date Ended:	**8/2/23**
Logged By:	**J. Faille**	Boring Diameter:	**36-inch**
		Well Diameter:	**6-inch**
		Time Started:	**07:30**
		Time Ended:	**12:50**
		Elevation:	**715.4 ft.**
		Total Depth:	**40.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

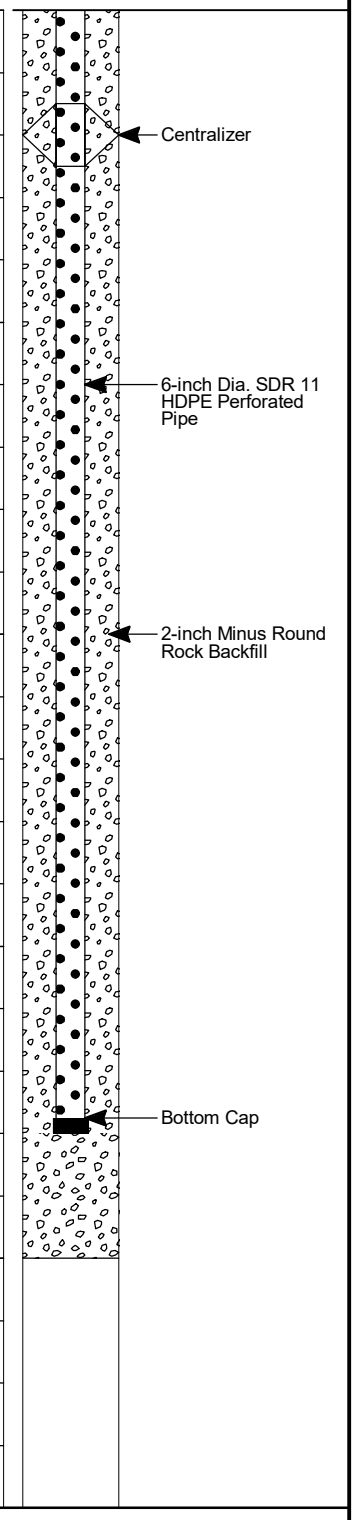
Well ID: WE-369

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							
	22							
7	23							
	24							
	25							
8	26					REFUSE		8:00: Temperature =111°F.
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							Mixed refuse (plastics, textiles, soils), light to medium decomposition, dark browns and other colors, moist.
11	36							
	37							
	38							8:28: Temperature = 112°F.
	39					REFUSE		
12	40							8:30: 40' depth taped, boring complete.
	41							
	42							
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-370

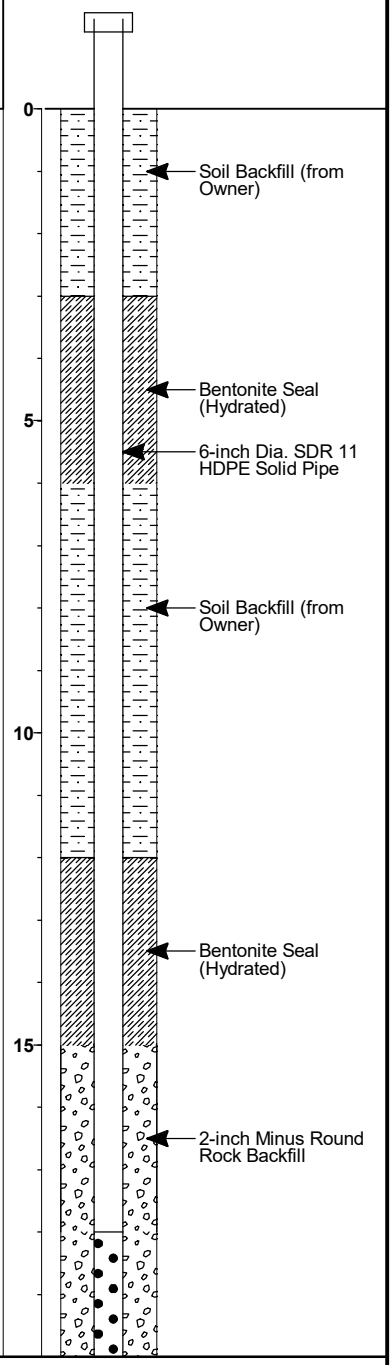
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-687. Drawing ID: 2023-C6. IW-07

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
	1							
	2							
	3							Soil Cover
1	4							
	5					Soil		
	6							
2	7							Mixed refuse (soils, organics, plastics), black, brown and several other colors.
	8					REFUSE		
	9							
3	10							
	11							Temperature = 111°F
	12							
4	13							
	14							
	15					REFUSE		
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company:	**DBM Contractors, inc.**	Date Started:	**8/1/23**
Drilling Method:	**Core Barrel**	Date Ended:	**8/1/23**
Logged By:	**A. Deszo**	Boring Diameter:	**36-inch**
		Well Diameter:	**6-inch**
		Time Started:	**10:20**
		Time Ended:	**12:30**
		Elevation:	**709.8 ft.**
		Total Depth:	**41.0 ft.**

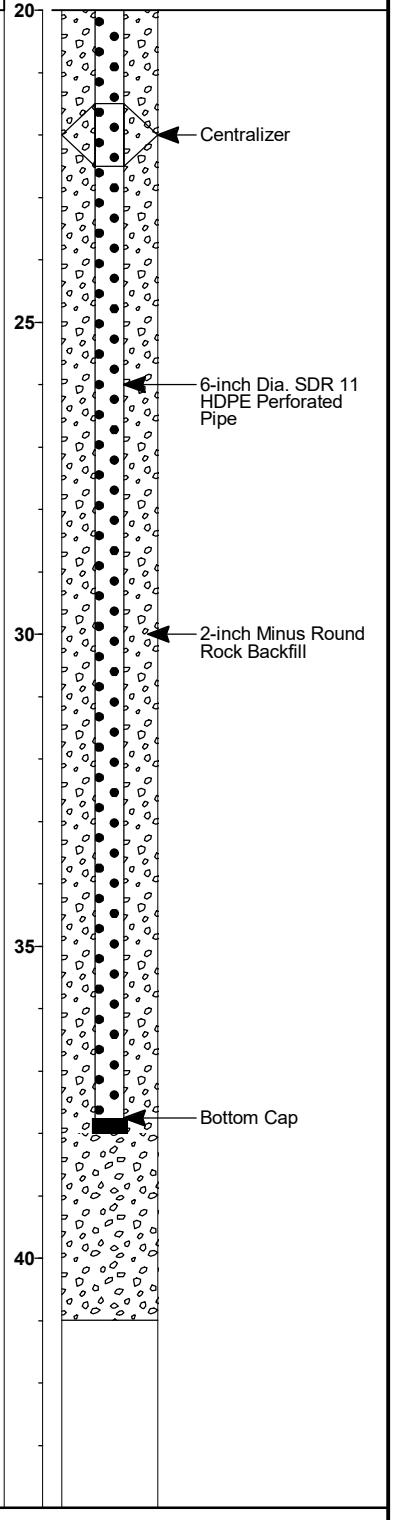
STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							
	22							
7	23					REFUSE		
	24							
	25							
8	26							Temperature =119°F. Mixed refuse (plastic), moderate decomposition, brown with few colors, slightly moist.
	27							
	28							
	29							
9	30					REFUSE		
	31							
	32							10:54: Temperature =118°F. Mixed refuse (plastic, rubbers, soils, organics), moderate decomposition, black and few colors, moist to dry.
10	33							
	34							
	35							
11	36							
	37							
	38							
	39							
12	40					REFUSE		
	41							Temperature =117°F. 11:06: 41' depth taped, boring complete.
	42							
13	43							
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-371

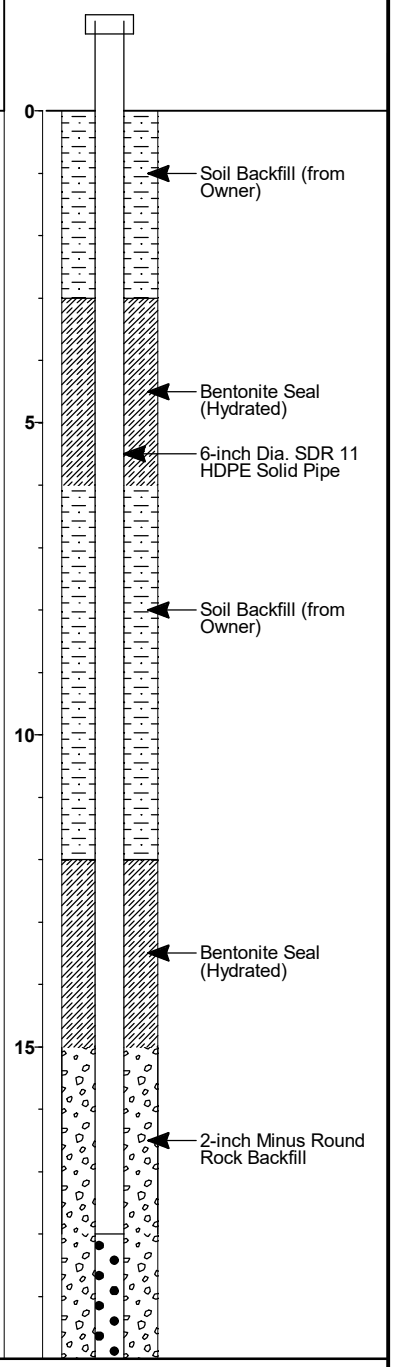
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-687. Drawing ID: 2023-C6. IW-08

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
	1							
	2							
1	3							Soil Cover
	4							
	5					Soil		
	6							
2	7							Mixed refuse (plastics, textiles), mild decomposition, many colors, black/brown soil.
	8							
	9							
3	10					REFUSE		
	11							
	12							Temperature = 84°F. Mixed refuse (wires, textiles) many colors, dry.
4	13							
	14							
	15					REFUSE		7:42: Slightly more decomposition.
5	16							
	17							
	18							Temperature = 102°F. Mixed refuse, less colors, brown.
6	19							
	20							

Completion Detail



Drilling Company:	**DBM Contractors, inc.**	Date Started:	**8/1/23**
Drilling Method:	**Core Barrel**	Date Ended:	**8/1/23**
Logged By:	**A. Deszo**	Boring Diameter:	**36-inch**
		Well Diameter:	**6-inch**
		Time Started:	**07:30**
		Time Ended:	**09:50**
		Elevation:	**707.1 ft.**
		Total Depth:	**40.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

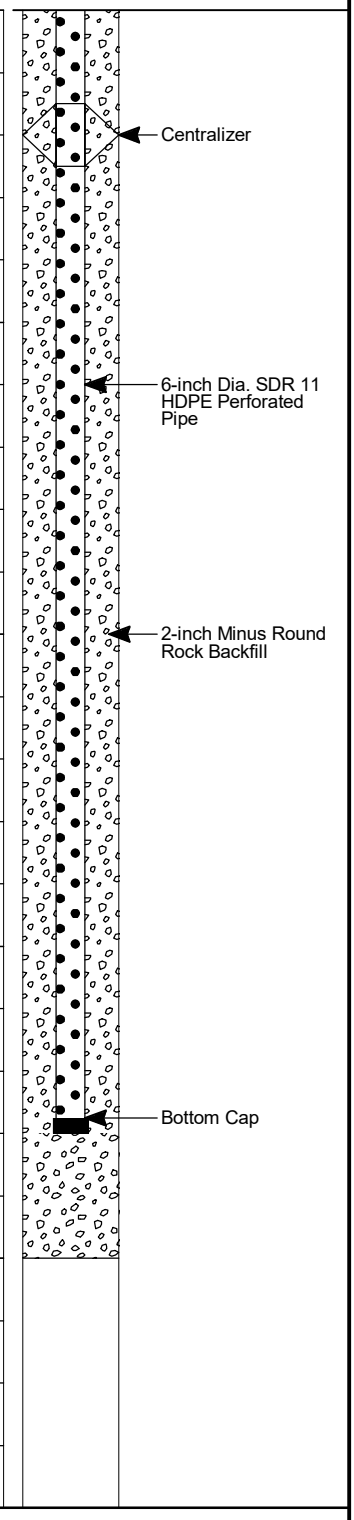
Well ID: WE-371

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							Mixed refuse (plastics), moderate decomposition, brown.
	22							
7	23							
	24							
	25							7:59: Temperature = 107°F. Mixed refuse, brown (less colors), dry.
8	26					REFUSE		
	27							Mixed refuse (plastics, textile, wire), moderate decomposition, slightly moist.
	28							
	29							
9	30							
	31							
	32							8:08: Temperature = 104°F. Mixed refuse, plastic, brown/black
10	33							
	34							
	35							Mixed refuse (plastics), moderate decomposition, black with a few colors, slightly moist.
11	36							
	37							
	38					REFUSE		
12	39							Temperature = 109°F. Mixed refuse, moderate decomposition, black with few colors, slightly moist.
	40							8:30: 40' depth taped. Boring complete.
	41							
	42							
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-372

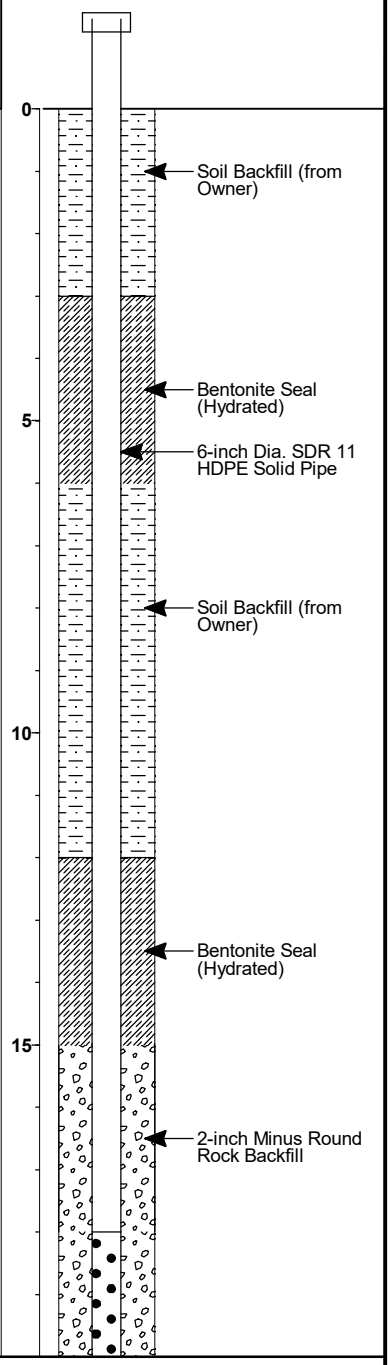
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-692. Drawing ID: 2023-C6. IW-01

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
	1							
	2							
1	3							Soil Cover
	4							
	5							
	6							
2	7							
	8					Soil		
	9							
3	10					REFUSE		Mixed refuse in dark, wet soil.
	11							
	12							
4	13							
	14							
	15							Temperature = 85°F
5	16							
	17							
	18					REFUSE		Mixed refuse (colored plastic, soils), wet.
	19							
6	20							

Completion Detail



Drilling Company:	**DBM Contractors, Inc**	Date Started:	**7/28/23**
Drilling Method:	**Core Barrel**	Date Ended:	**7/28/23**
Logged By:	**L. Walker**	Boring Diameter:	**36-inch**
		Well Diameter:	**6-inch**
		Time Started:	**10:00**
		Time Ended:	**12:00**
		Elevation:	**787.5 ft.**
		Total Depth:	**41.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

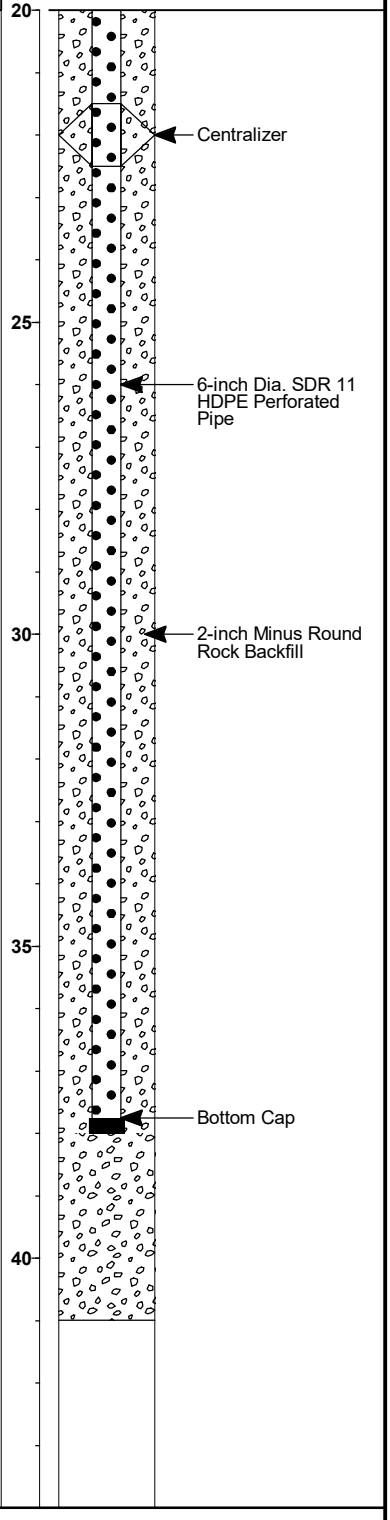
Well ID: WE-372

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							
	22					REFUSE		Mixed plastic refuse, heavy dark soil.
7	23							
	24							
	25							Temperature =85°F.
8	26							
	27							
	28							
	29							
9	30							
	31					REFUSE		Mixed plastic refuse, heavy, dark soil, wet.
	32							
10	33							
	34							
	35							Temperature =101°F.
11	36							
	37							
	38							
	39							
12	40					REFUSE		Wire, dark soil. Temperature =99°F.
	41							41' depth taped, boring complete.
	42							
13	43							
	44							

Completion Detail



STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-373

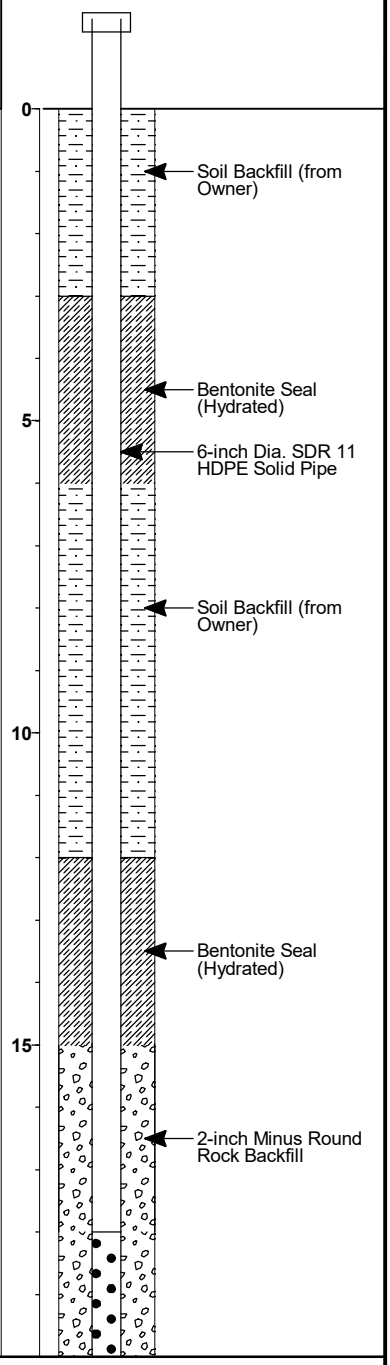
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-691. Drawing ID: 2023-C6. IW-02

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
	1							
	2							
1	3							Soil Cover
	4							
	5					Soil		
	6							
2	7							
	8					REFUSE		Mixed refuse (colored plastic) with dark soil.
	9							
3	10							
	11							
	12							Temperature = 100.3°F
4	13							
	14							
	15							
5	16					REFUSE		Mixed refuse (colored plastic) with dark soil.
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company:	**DBM Contractors, inc**	Date Started:	**7/27/23**
Drilling Method:	**Core Barrel**	Date Ended:	**7/27/23**
Logged By:	**L. Walker**	Boring Diameter:	**36-inch**
		Well Diameter:	**6-inch**
		Time Started:	**10:30**
		Time Ended:	**13:00**
		Elevation:	**780.9 ft.**
		Total Depth:	**43.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

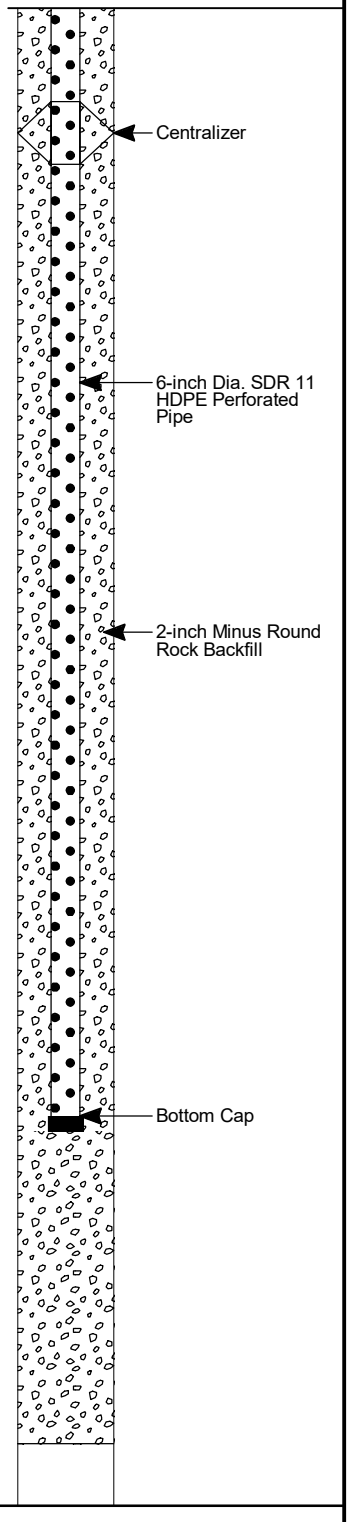
Well ID: WE-373

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							
	22							
7	23							Temperature =113°F.
	24							
	25					REFUSE		Tire refuse with light brown soil.
8	26							
	27							
	28							Temperature =116°F.
9	29							
	30							
	31							Mixed plastic refuse, tarps with dark brown soil.
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
12	39							Temperature =112°F.
	40					REFUSE		
	41							
	42							
13	43							43' depth taped, boring complete.
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-374

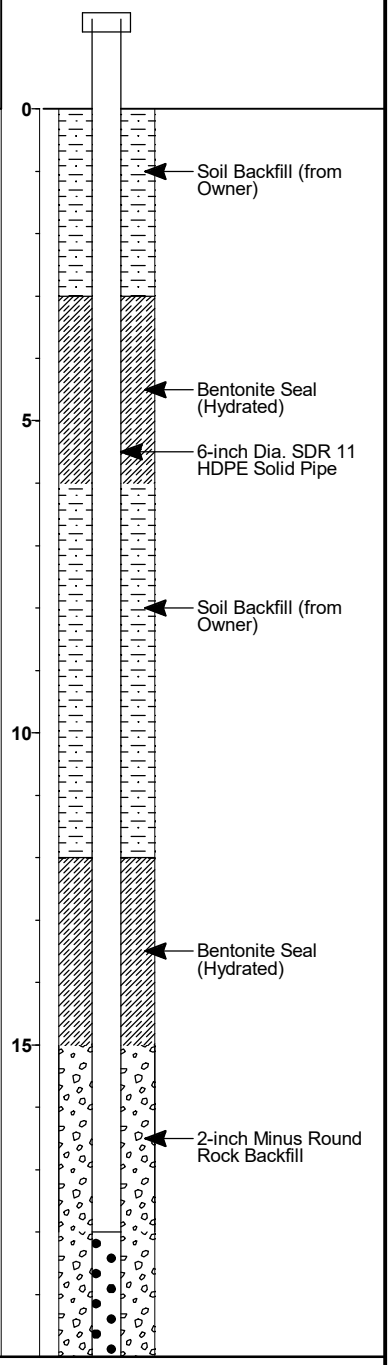
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-690. Drawing ID: 2023-C6. IW-03

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							Mixed refuse.
	1					REFUSE		
	2							
1	3							Soil.
	4					SOIL		
	5							
	6							Mixed refuse.
2	7							
	8					REFUSE		Temperature = 63°F
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16					REFUSE		Mixed refuse (plastic) with dark soil.
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **L. Walker**

Date Started: **7/27/23**
Date Ended: **7/27/23**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **07:30**
Time Ended: **10:00**
Elevation: **773.5 ft.**
Total Depth: **40.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

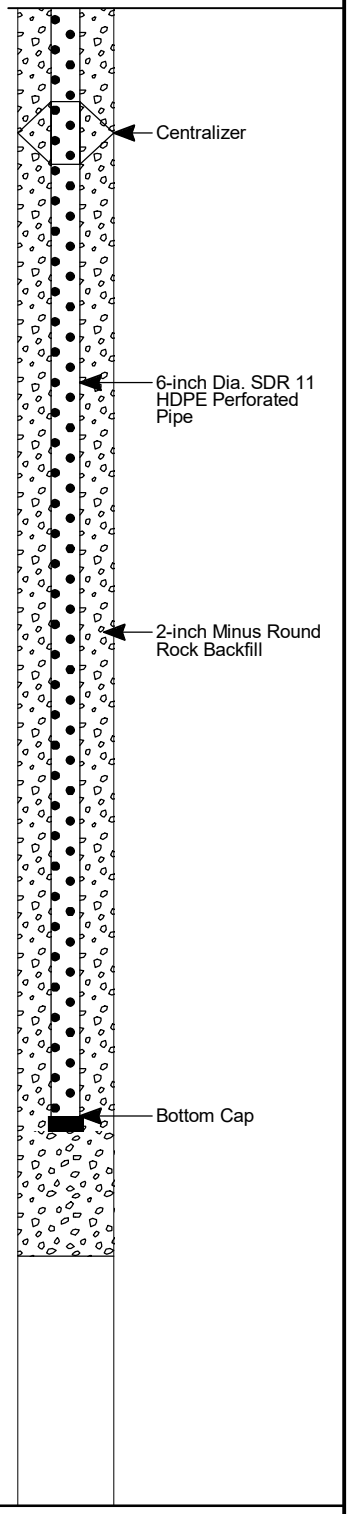
Well ID: WE-374

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Description
	20						
	21						Temperature =78°F.
	22						
7	23						
	24						
	25					REFUSE	Mixed plastic refuse with light brown soil, dry.
8	26						
	27						
	28						
	29						
9	30						
	31					REFUSE	Mixed plastic refuse with dark soil, moist.
	32						
10	33						Temperature =86°F.
	34						
	35						
11	36						
	37						
	38					REFUSE	Mixed refuse (colored plastic, tarp) with black soil, wet.
12	39						
	40						Temperature =97°F. 40' depth taped, boring complete.
	41						
	42						
13	43						
	44						

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-375

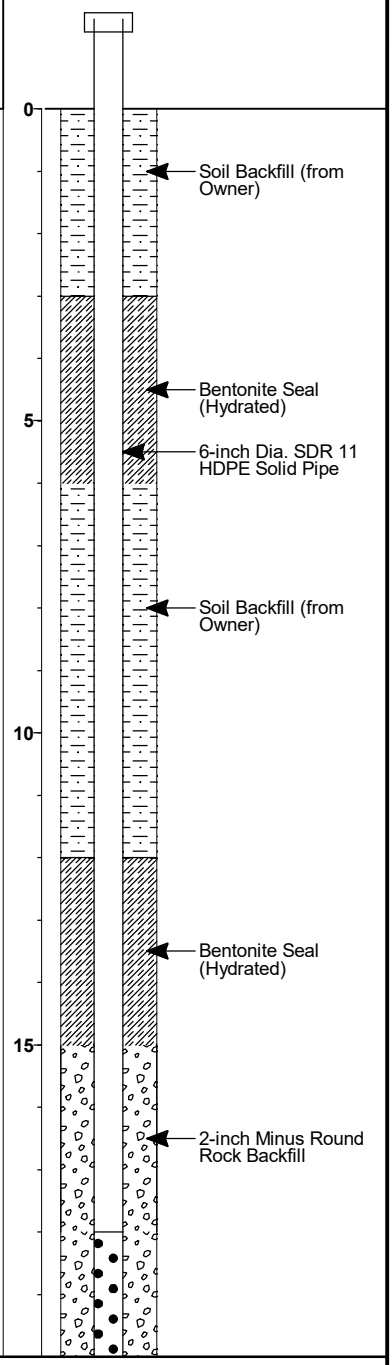
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-689. Drawing ID: 2023-C6. IW-04

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					Soil		Soil Cover
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							Temperature = 91°F
	9							
3	10							
	11							
	12					REFUSE		Mixed refuse (plastic) with dark soil, wet.
4	13							
	14							
	15							
5	16							
	17							Temperature =90°F.
	18							
	19							
6	20							

Completion Detail



Drilling Company:	**DBM Contractors, Inc.**	Date Started:	**7/26/23**
Drilling Method:	**Core Barrel**	Date Ended:	**7/26/23**
Logged By:	**L. Walker**	Boring Diameter:	**36-inch**
		Well Diameter:	**6-inch**
		Time Started:	**10:00**
		Time Ended:	**12:30**
		Elevation:	**765.4 ft.**
		Total Depth:	**41.0 ft.**

STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

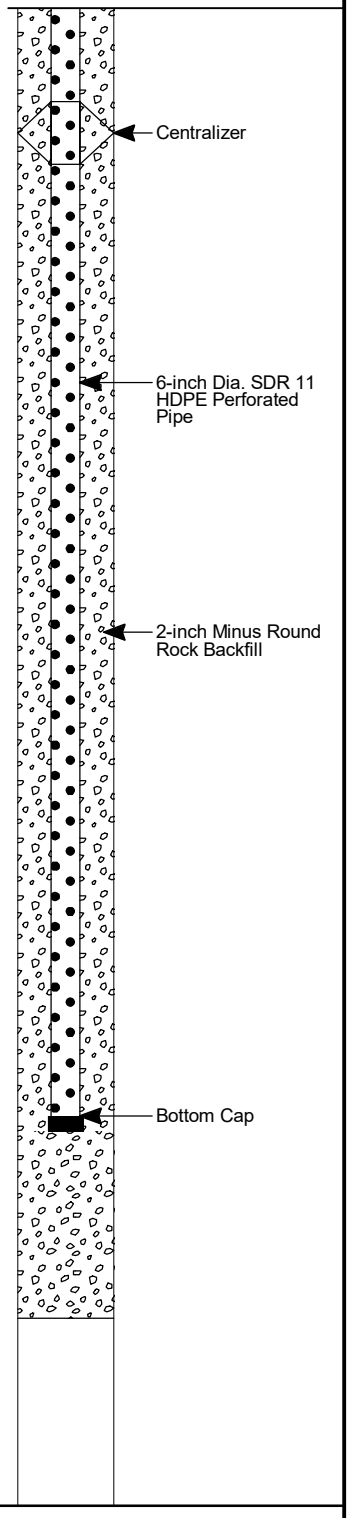
Well ID: WE-375

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		Mixed refuse (plastic) with dark soil.
	21							
	22							Temperature =88°F.
7	23							
	24							
	25							
8	26					REFUSE		Mixed refuse (plastic) with light brown soil.
	27							
	28							
	29							
9	30							
	31							
	32							Temperature =98°F.
10	33							
	34							
	35							
11	36							
	37							
	38							Mixed refuse (plastic) with dark soil.
12	39					REFUSE		Mixed refuse (plastic) with black soil, wet. Temperature =109°F.
	40							
	41							41' depth taped, boring complete.
13	42							
	43							
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-376

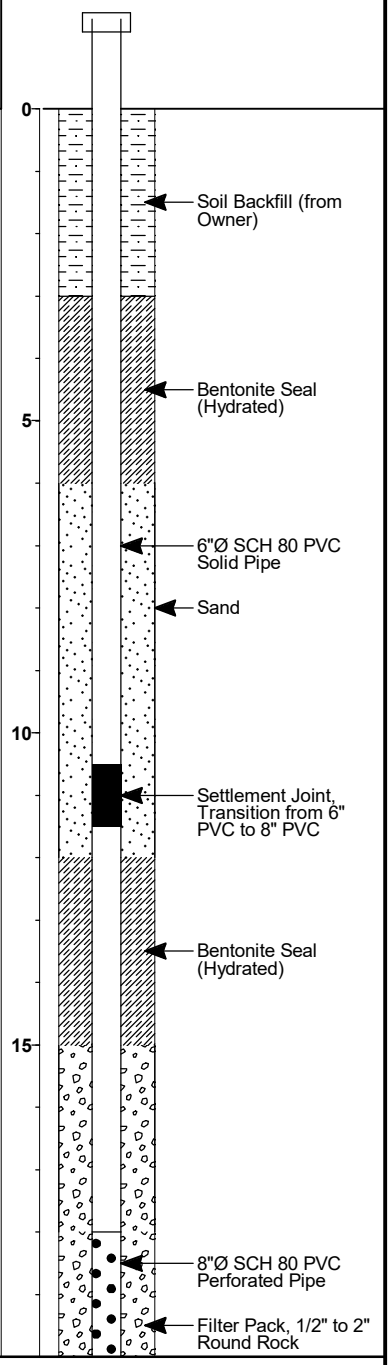
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-684. Drawing ID: 2023-C5. VW-01

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Cover soil.
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
6	19							
	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **A. Deszo**

Date Started: **8/7/23**
Date Ended: **8/7/23**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **08:00**
Time Ended: **12:00**
Elevation: **843.1 ft.**
Total Depth: **74.0 ft.**

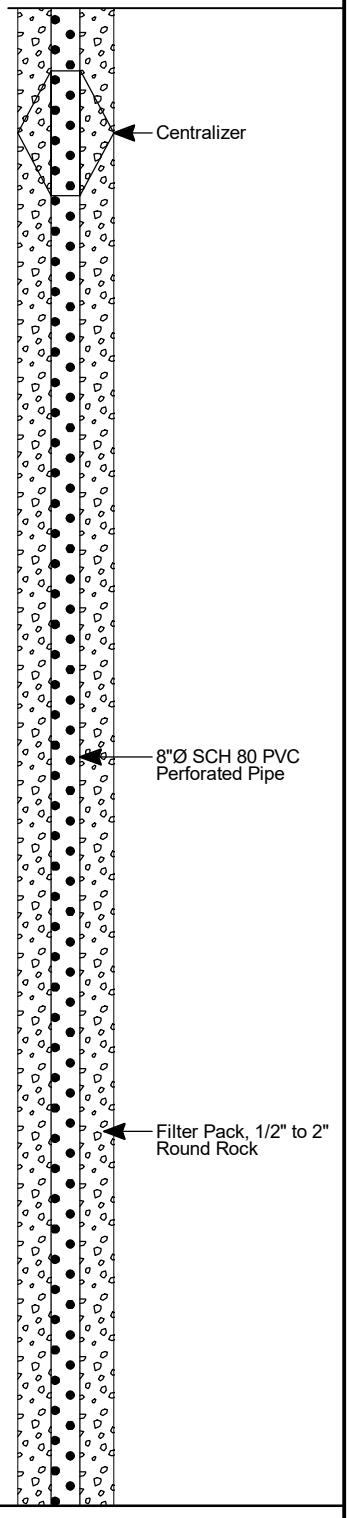
STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							
	22							
7	23							
	24							
	25					SM-GM		
8	26							
	27							
	28							
	29							
9	30							
	31					REFUSE		Mixed refuse (organics, plastic), moderate decomposition, black, brown, few colors, dry.
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
	39							
12	40					REFUSE		
	41							
	42							
13	43							
	44							

Completion Detail

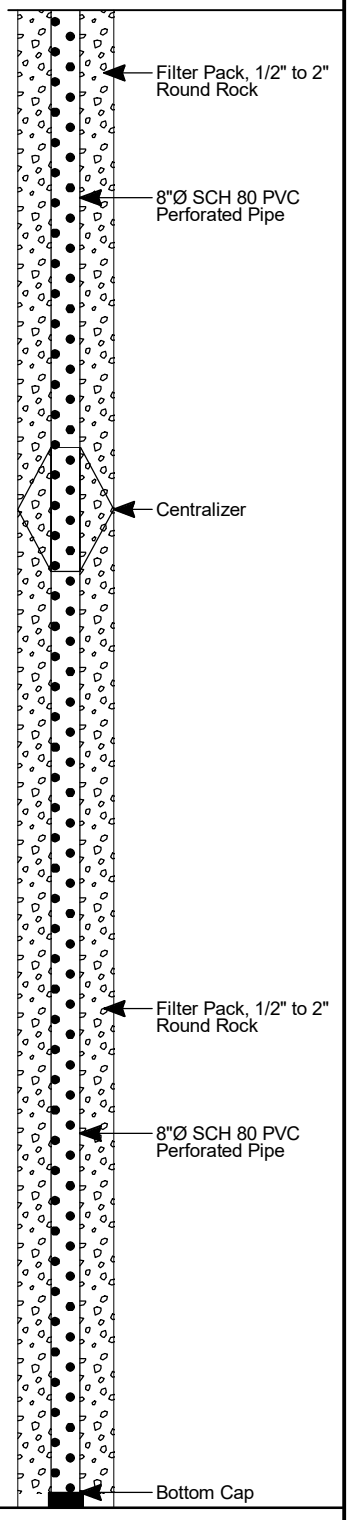


2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							8:24: Temperature = 91°F. Mixed refuse (plastics, organics, heavy soil), moderate decomposition, few colors.
14	46							
	47							
	48					REFUSE		
15	49							
	50							
	51							8:34: Temperature = 96°F.
16	52							
	53							
	54							
	55							
17	56							
	57							
	58							
18	59							
	60					REFUSE		
	61							
19	62							8:58: Temperature = 100°F. Mixed refuse (plastics), heavy decomposition, black, few colors, dry.
	63							
	64							
	65							
20	66							Mixed refuse (plastics), heavy decomposition, black, grey, slightly moist.
	67							
	68							

Completion Detail

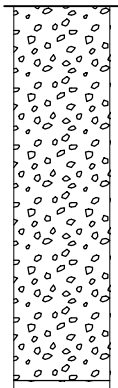


2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	68							Encountered road and drilled through to trash below.
21	69							
	70					REFUSE		
	71							
22	72							Mixed refuse (plastics), heavy decomposition, black, few colors.
	73							
	74							9:22: Temperature = 108°F 9:22: Boring complete; 74 foot depth verified with sounding tape.
	75							
23	76							
	77							
	78							
24	79							
	80							
	81							
25	82							
	83							
	84							
26	85							
	86							
	87							
	88							
27	89							
	90							
	91							
28	92							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-377

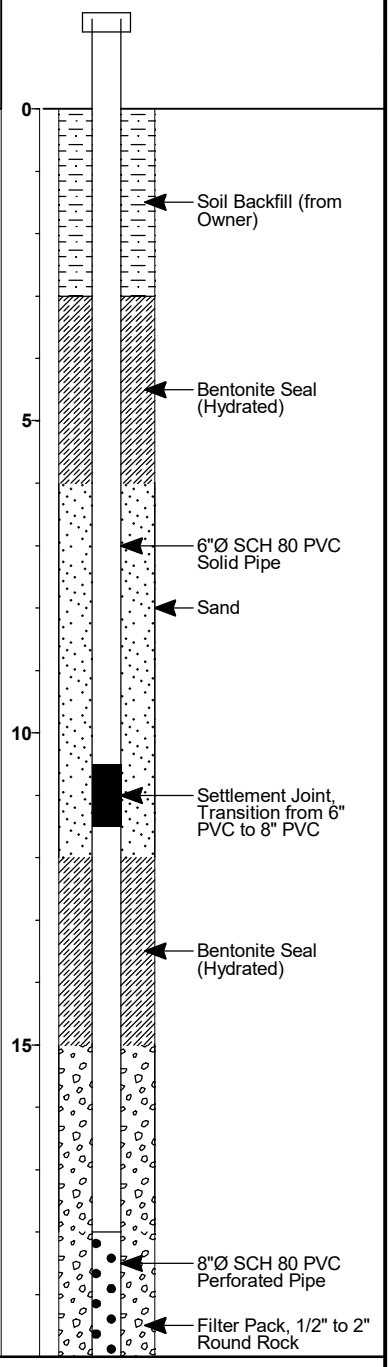
2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-683. Drawing ID: 2023-C5. VW-02

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Cover soil.
	15					REFUSE		7:46: Temperature = 87°F Mixed refuse (organics, plastic), moderate to heavy decomposition, black, brown, few colors, slightly moist.

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **A. Deszo**

Date Started: **8/8/23**
Date Ended: **8/8/23**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**
Time Started: **07:35**
Time Ended: **11:00**
Total Depth: **74.0 ft.**

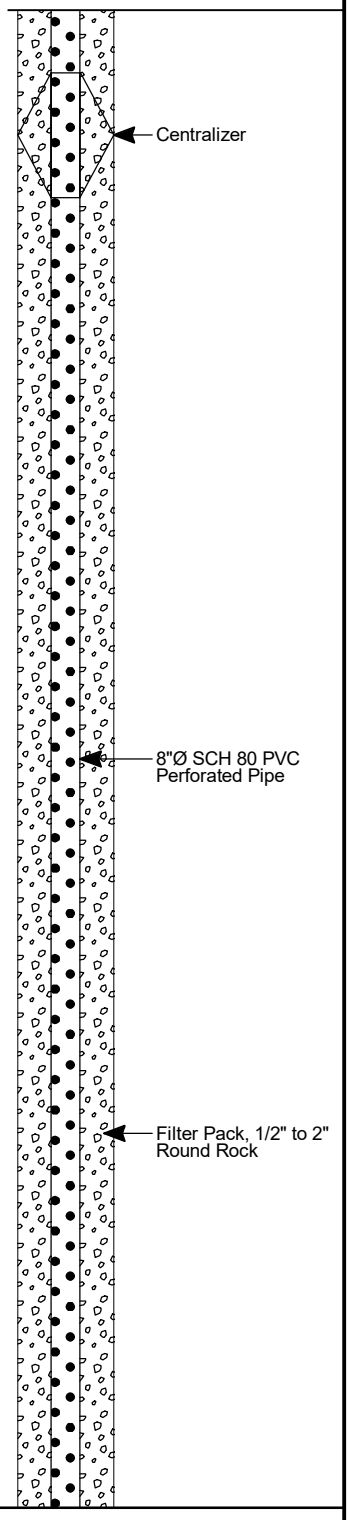
STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							
	22							
7	23							
	24							
	25					REFUSE		Increase in moisture content.
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							8:14: Temperature 99°F.
11	36							Mixed refuse (organics, plastics), moderate to heavy decomposition, black, few colors, moist.
	37							
	38							
	39							
12	40					REFUSE		
	41							
	42							
13	43							
	44							

Completion Detail

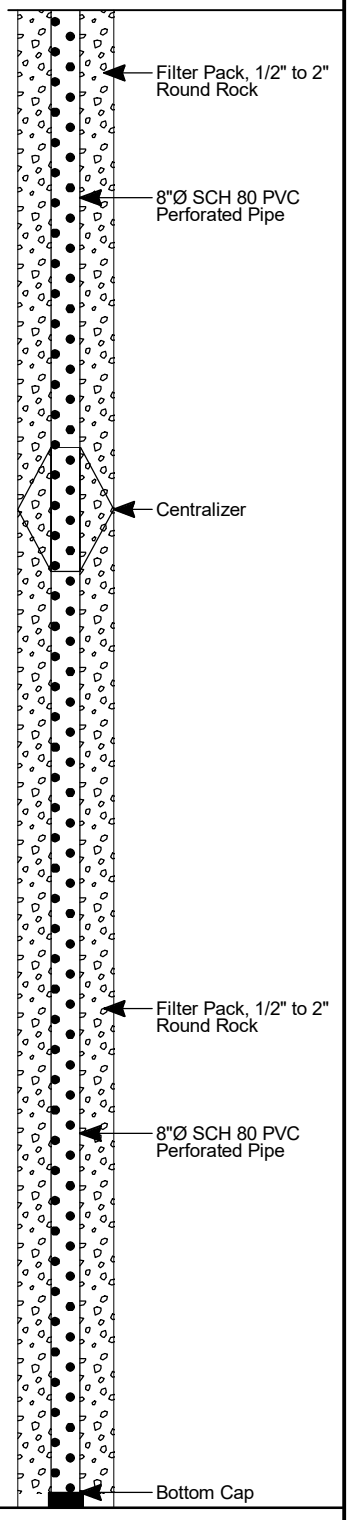


2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							
14	46					REFUSE		8:37: Temperature = 106°F. Mixed refuse (plastics, organics), moderate to heavy decomposition, black, few colors, moist, heavy odors.
	47							
	48							
15	49							
	50							
	51							
16	52							
	53							
	54							
	55							
17	56							
	57							
	58							
18	59							
	60					REFUSE		
	61							8:58: Temperature = 115°F. Mixed refuse (some plastics), heavy decomposition, black, brown, few colors, slightly moist, odors.
19	62							
	63							
	64							
	65							
20	66							Increasing moisture content, moist to wet.
	67							
	68							

Completion Detail



2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description	Completion Detail
21	68								
	69							Temperature = 117°F.	
	70					REFUSE			70
22	71								
	72								
	73								
	74							Encountered road bed, and went through black soil, plastic, heavy decomposition, moist to wet. 9:26: Boring complete; 74 foot depth verified with sounding tape.	
23	75								75
	76								
	77								
	78								
24	79								
	80								80
	81								
25	82								
	83								
	84								
26	85								85
	86								
	87								
	88								
27	89								
	90								90
	91								
28	92								

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

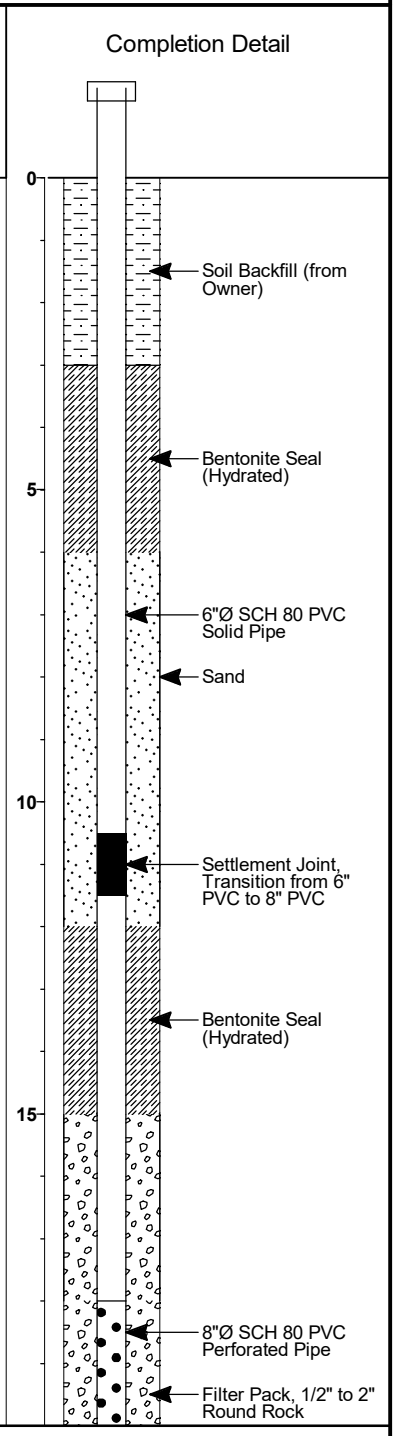
Well ID: WE-378

2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-682. Drawing ID: 2023-C5. VW-03

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Cover soil.
	17					REFUSE		



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **Core Barrel**
Logged By: **J. Faille**

Date Started: **8/9/23**
Date Ended: **8/9/23**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **07:30**
Time Ended: **10:30**
Elevation: **818.9 ft.**
Total Depth: **71.0 ft.**

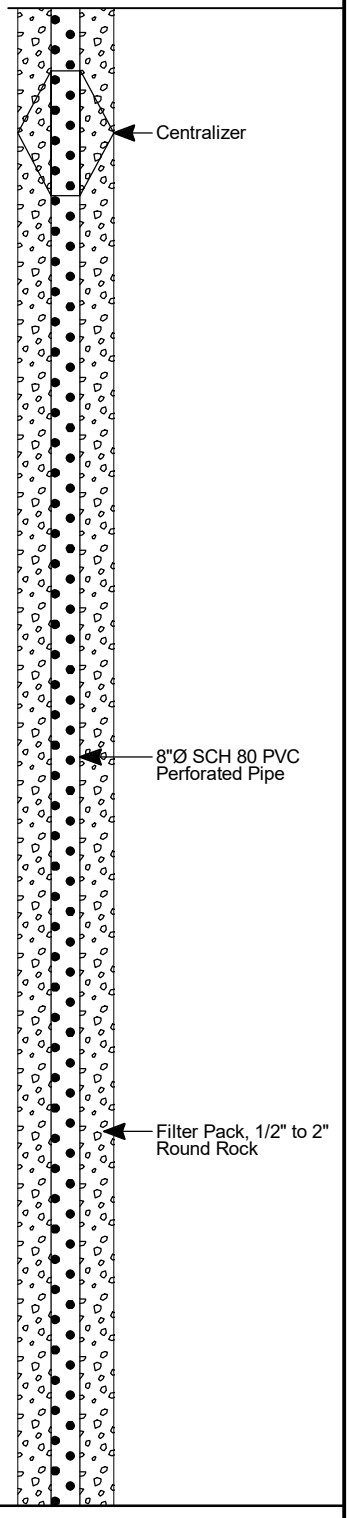
STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							Mixed refuse (plastics, rubber, shredded textiles, soil), moderate to heavy decomposition, black and some colors, moist.
	21							
	22							
7	23							
	24							
	25					REFUSE		
8	26							
	27							8:00: Temperature = 76°F.
	28							
	29							
9	30							
	31							
	32							Mixed refuse (plastics, textiles, wire), moderate to heavy decomposition, black, few colors, moist.
10	33							8: 08: Temperature = 88°F.
	34							
	35							
11	36							
	37							
	38							
	39							8:12: Encountered construction debris, plywood, increased moisture content to very moist.
12	40					REFUSE		
	41							
	42							
13	43							8:20: Temperature = 101°F.
	44							

Completion Detail



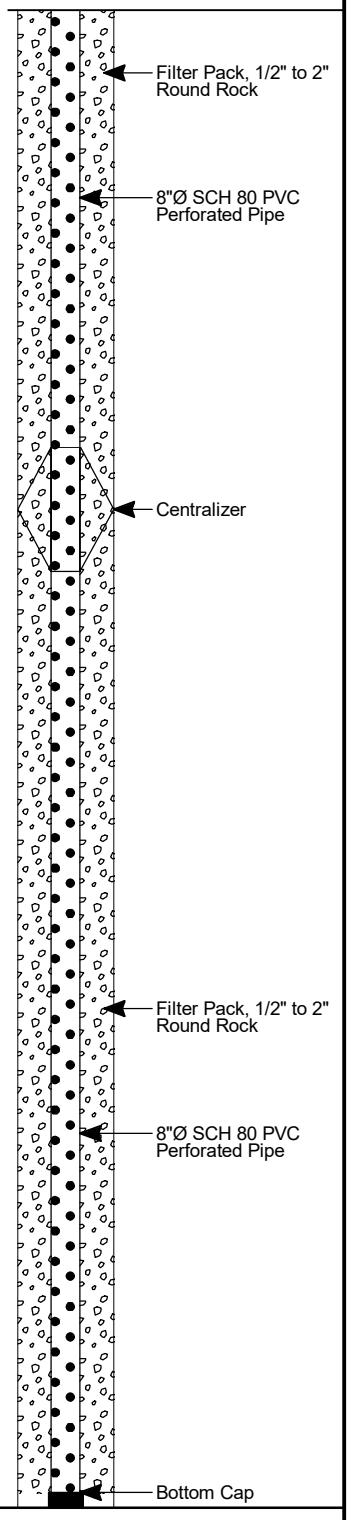
STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							Mixed refuse (plastics, textiles, rubber, rope, wood debris), mild decomposition, black, brown, many colors, moist.
14	46							
	47							
	48							
15	49							
	50							
	51							
	52							8:30: Temperature = 111°F.
16	53							
	54							Mixed refuse (plastics, wood, textiles, soil, foam), moderate decomposition, brown, many colors, moist.
	55							
17	56							
	57							
	58							
18	59							8:46: Temperature = 120°F
	60					REFUSE		
	61							
19	62							
	63							
	64							
	65							9:01: Temperature = 116°F
20	66							Mixed refuse (plastics, foam, rubber, textiles), moderate decomposition, black, brown, many colors, moist.
	67							
	68							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-378

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth		Sample Information					Graphic Log	Description	Completion Detail
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.			
21	68								
	69								
	70					REFUSE			70
	71							9:07: Boring complete; 71 foot depth verified with sounding tape.	
22	72								
	73								
	74								
	75								75
23	76								
	77								
	78								
24	79								
	80								80
	81								
25	82								
	83								
	84								
26	85								85
	86								
	87								
	88								
27	89								
	90								90
	91								
28	92								

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

Well ID: WE-379

2023 GCCS Expansion Phase 2 - LRI Landfill
30919 Meridian East
Graham, Washington

JOB NUMBER: 04223001.15

REMARKS:
Ecology Tag BLP-681. Drawing ID: 2023-C5. VW-06

Depth		Sample Information							
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description	Completion Detail
0	0					SM-GM		Cover soil.	0
	1								
	2								
1	3								
	4								
	5								5
	6								
2	7								
	8								
	9								
3	10								10
	11								
	12								
4	13								
	14								
	15								15
5	16								
	17								
	18								
	19								
6	20								

Completion Detail:
- Soil Backfill (from Owner)
- 6"Ø SCH 80 PVC Solid Pipe
- Bentonite Seal (Hydrated)
- Sand

Drilling Company:	**DBM Contractors, Inc.**	Date Started:	**8/10/23**
Drilling Method:	**Core Barrel**	Date Ended:	**8/10/23**
Logged By:	**A. Deszo**	Boring Diameter:	**36-inch**
		Well Diameter:	**8-inch**
		Time Started:	**07:30**
		Time Ended:	**15:40**
		Elevation:	**828.5 ft.**
		Total Depth:	**141.0 ft.**

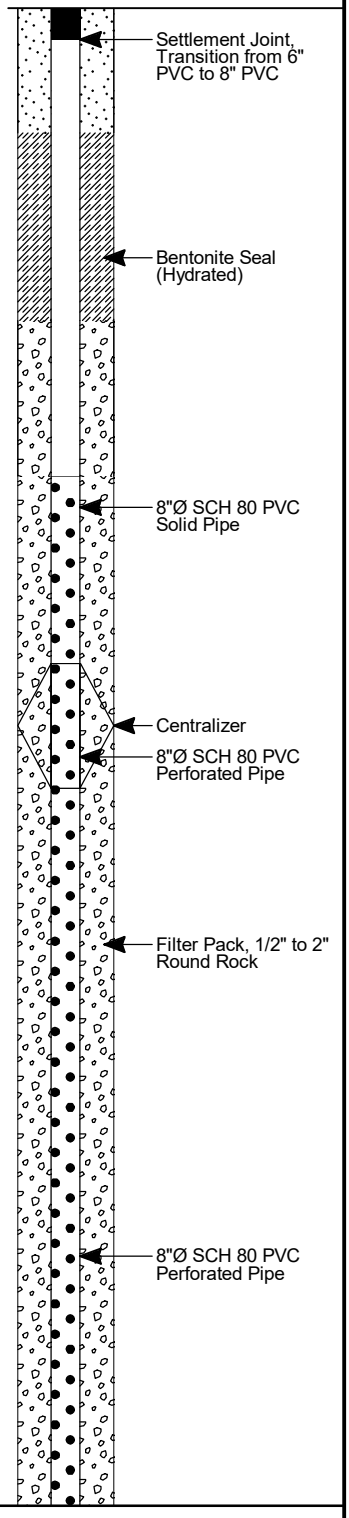
STANDARD_LOG 04223001.15 - LRI 304 PHASE 2 WELLS.GPJ STD_LOG.GDT 9/1/23

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							
	22							
7	23							
	24							
	25					SM-GM		Cover soil.
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35					REFUSE		7:35: Temperature = 80°F. Mixed refuse (plastics), heavy decomposition, black, brown, few colors, dry.
11	36							
	37							
	38							
	39							
12	40					REFUSE		7:54: Temperature = 90°F. Mixed refuse (plastics, organics), heavy decomposition, black, few colors, dry.
	41							
	42							
13	43							
	44							

Completion Detail

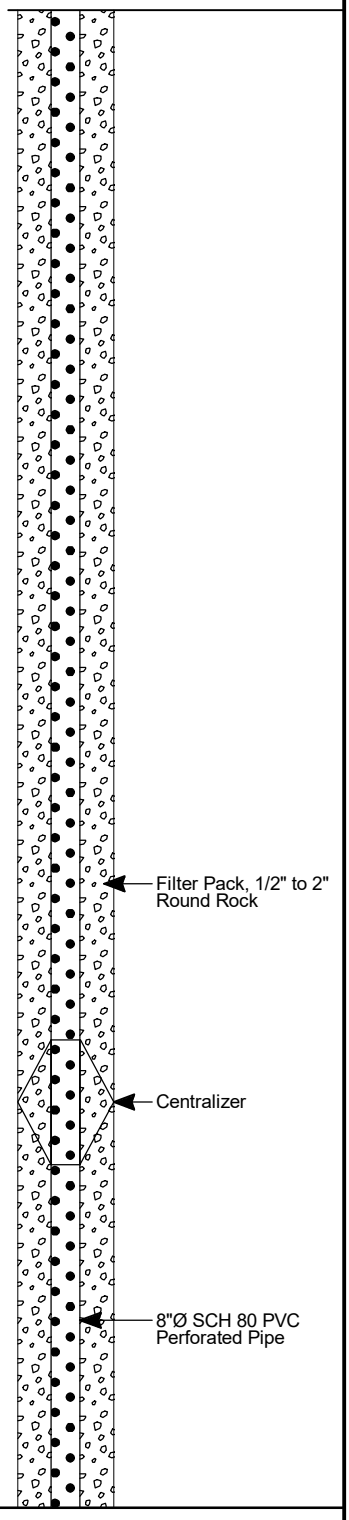


2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							Temperature = 99°F. Mixed refuse (plastic), heavy decomposition, black, no color, slightly moist.
14	46							
	47							
	48					REFUSE		
	49							Mixed refuse (plastic), heavy decomposition, black, no color, slightly moist.
15	50							
	51							
	52							
16	53							
	54							8:28: Mixed refuse.
	55							
17	56							
	57							Temperature = 100°F.
	58							
18	59							
	60					REFUSE		
	61							
19	62							
	63							
	64							
	65							
20	66							
	67							9:04: Temperature = 103°F. Mixed refuse (plastics), heavy decomposition, black, few colors.
	68							

Completion Detail

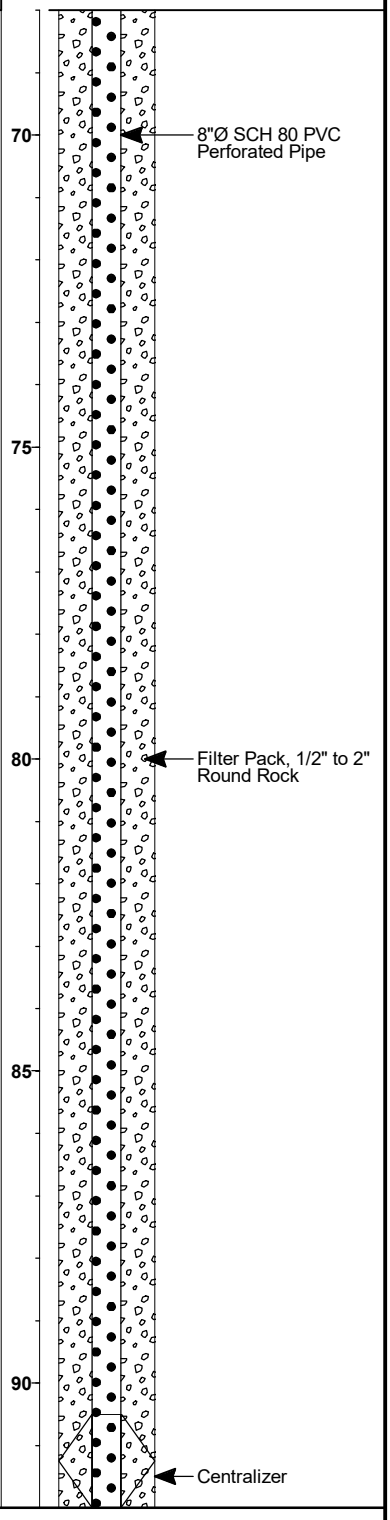


2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
21	68							
	69							
	70					REFUSE		
	71							
22	72							Mixed refuse (organics, plastics), heavy decomposition, black, slightly moist, steam and odors present.
	73							
	74							
	75							
23	76							9:32: Temperature = 114°F
	77							
	78							Mixed refuse (textiles, plastics), black, brown, few colors, slightly moist, steam and odors present.
24	79							
	80					REFUSE		
	81							
25	82							
	83							
	84							10:04: Temperature = 115°F
	85							
26	86							Mixed refuse (textiles, plastics, organics), heavy decomposition, black, brown, some colors, steam and odors present.
	87							
	88							
27	89							
	90					REFUSE		
	91							
28	92							

Completion Detail

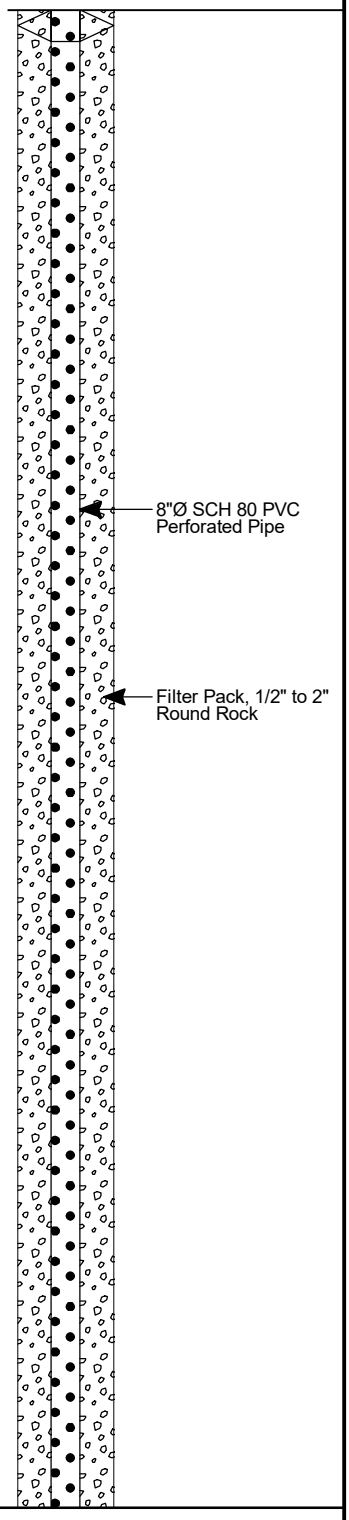


2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	92							
	93							
	94							
29	95							
	96							
	97							
	98							
30	99							
	100					REFUSE		
	101							
31	102							
	103							
	104							10:46: Temperature = 116°F. Mixed refuse (plastics), heavy decomposition, black, few colors, moist to dry, steam and odors present.
32	105							
	106							Black refuse, soil, organics, heavy decomposition.
	107							
33	108							
	109							
	110							11:37: Temperature = 135°F. Decomposed black organics, little moisture, steam and odors present.
34	111							
	112							
	113							
	114							
35	115					REFUSE		
	116							

Completion Detail



2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description	Completion Detail
	116								
	117								
36	118							Increase in moisture content, saturated.	
	119								
	120					REFUSE		12:09: Temperature 124°F.	120 — Filter Pack, 1/2" to 2" Round Rock
37	121								Centralizer
	122								8"Ø SCH 80 PVC Perforated Pipe
	123								
	124								
38	125							Mixed refuse (plastics, organics), heavy decomposition, black, some colors, moist to dry.	125
	126								
	127								
39	128								Filter Pack, 1/2" to 2" Round Rock
	129								
	130					REFUSE			130
40	131								
	132								
	133								
	134								
41	135							12:47: Temperature 131°F. Mixed refuse (plastics, organics), heavy decomposition, black with few colors.	135
	136								
	137								Bottom Cap
42	138								
	139								
	140								

2023 GCCS Expansion Phase 2 - LRI Landfill

JOB NUMBER: 04223001.15

Depth (meters)	Depth (feet)	Sample Information: Sample Location	Sample Information: Sample Number	Sample Information: Blow Counts	Sample Information: OVM (ppm)	Sample Information: USCS Soil Class.	Graphic Log	Description	Completion Detail
	140								140
43	141							13:20: Boring complete; 141 foot depth verified with sounding tape.	
	142								
	143								
	144								
44	145								145
	146								
	147								
45	148								
	149								
	150								150
46	151								
	152								
	153								
47	154								
	155								155
	156								
	157								
48	158								
	159								
	160								160
49	161								
	162								
	163								
	164								

December 29, 2023
File No. 04223001.15

Mr. George Duvendack
Region Engineer
Pierce County Recycling, Composting and Disposal, LLC dba LRI
17925 Meridian Street East
Puyallup, Washington 98375

Subject: **2023 Phase 3 Gas System Expansion Well Installation Report**
LRI Landfill, Graham, Washington

Dear George:

This letter report presents a summary of field activities performed by SCS Engineers (SCS) during the installation of 13 new interim landfill gas (LFG) wells at the LRI Landfill located in Graham, Washington. The LFG extraction wells were installed in general accordance with the 2023 Gas System Expansion design plans, approved well construction variance, and well completion schedule issued by SCS on November 17, 2023. Following completion of the well installation work, each well was given a standard well designation consistent with LRI naming convention as shown in Table 1.

Summary

SCS personnel were onsite from December 7, 2023, through December 14, 2023 to observe and document drilling and installation of 13 new interim LFG extraction wells performed by DBM Contractors, Inc. (DBM). Observations of the cuttings from well drilling were logged for each boring and are included on the attached boring and construction logs prepared by SCS. The following table presents a summary of the completed well installation data.

Table 1: Summary of Well Completion

Well ID	Design ID	Surface Elevation (ft-msl)(1)	Well Material	ECY Well Tag(2)	Design Depth (ft)	Installed Depth (ft)	Length of Screen (ft)
WE-387	IW-01	738.51	HDPE	BLP-672	40	42	20
WE-388	IW-02	733.54	HDPE	BLP-671	40	42	20
WE-389	IW-03	726,84	HDPE	BLP-670	40	44	20
WE-390	IW-04	723.05	HDPE	BLP-669	32	35	12
WE-391	IW-05	718.86	HDPE	BLP-668	32	32	12
WE-392	IW-06	715.33	HDPE	BLP-667	30	33	10
WE-380	IW-07	809.09	HDPE	BLP-674	40	42	20
WE-381	IW-08	803.80	HDPE	BLP-675	40	43	20
WE-382	IW-09	797.84	HDPE	BLP-676	40	45	20
WE-384	IW-10	813.95	HDPE	BLP-673	40	41	20
WE-383	IW-11	809.69	HDPE	BLP-677	40	41	20
WE-385	IW-12	827.16	HDPE	BLP-679	40	41.5	20
WE-386	IW-13	822.91	HDPE	BLP-678	40	43	20

Notes:
1. Survey data provided by HRK prior to drilling and installation. Elevations are for the original staked locations and do not account for minor relocation at time of installation.
2. ECY Well Tags were provided by DBM upon completion of each well.
3. Well ID's were not assigned in 2023. ID's will be assigned in early 2024 when the wells are put into commission.

LFG Extraction Well Drilling and Installation

The borings for the LFG extraction wells were drilled using an IMT AF250 drill rig with a 10 foot long, 36-inch diameter core barrel. For each of the extraction wells, the borings were advanced to the design depths and over drilled up to 5-feet based on drilling conditions. The extraction wells were then constructed using 6-inch diameter SDR11 high density polyethylene (HDPE) pipe and fittings. Backfill was completed with 2-inch minus round rock, bentonite chips and granules, and clean soil as shown on the attached well construction logs. All construction materials were provided by DBM and verified by SCS prior to use. Drilling and installation of each well was completed on the day it was started.

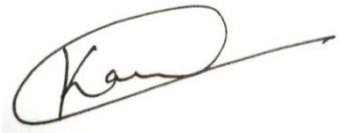
The wells were completed with approximately 5 feet of pipe stickup above the ground surface to allow for grading, landfill cover/closure, and connection to the existing LFG collection system. Upon completion, each well was issued a Washington State Department of Ecology (ECY) Well Tag in accordance with state regulations and connected to the existing gas collection and control system (GCCS).

Closing

If you have any questions regarding the information presented in this letter or the attached boring logs, please do not hesitate to contact us.

Sincerely,

Travis Berndahl, EIT
Project Engineer
SCS Engineers



Karam Singh, P.E.
Senior Project Engineer
SCS Engineers

cc: Olivier Moi, LRI
Kevin Green, LRI
Samantha Winkle, LRI
Ryan Roth, LRI
Keith Johnston, TPCHD
Trevor Priestley, TPCHD
Bill Harris, Ecology
Derek Rockett, Ecology

Attachments:

2023 GCCS Improvements Phase 3 December – Existing Grades
2023 LFG Well Completion Logs

SURVEY NOTES:
1. TOPOGRAPHIC BASE MAP PERFORMED BY PROPELLER AEROBOTICS, DATED 2023-10-01.

CELL 1
CELL 2A
CELL 2B
CELL 3A
CELL 7
CELL 9A
PERMITTED CELL
CELL 4A
CELL 4B
CELL 5A
CELL 5B
CELL 6A
CELL 6B
CELL 8
FUTURE CELL 9B1
PERMITTED CELL

Landfill Gas Flare Station
Energy Plant
Truck Wash
Scale House and Scales
Office
Shop
Fueling Station
Leachate Storage Tanks
Well House

Legend:
- E-1 Existing Vertical Gas Extraction Well
- OCE-1 Existing Odor Control Well
- HE-01 Existing Horizontal Gas Extraction Well
- LP4AN Existing Leachate Pipe Connection
- TW Temporary Vertical Gas Extraction Well
- OCE-68 Odor Control Well
- HE-47 Horizontal Gas Extraction Well
- GP-12 Existing Gas Probe

120 0 120 240
SCALE IN FEET

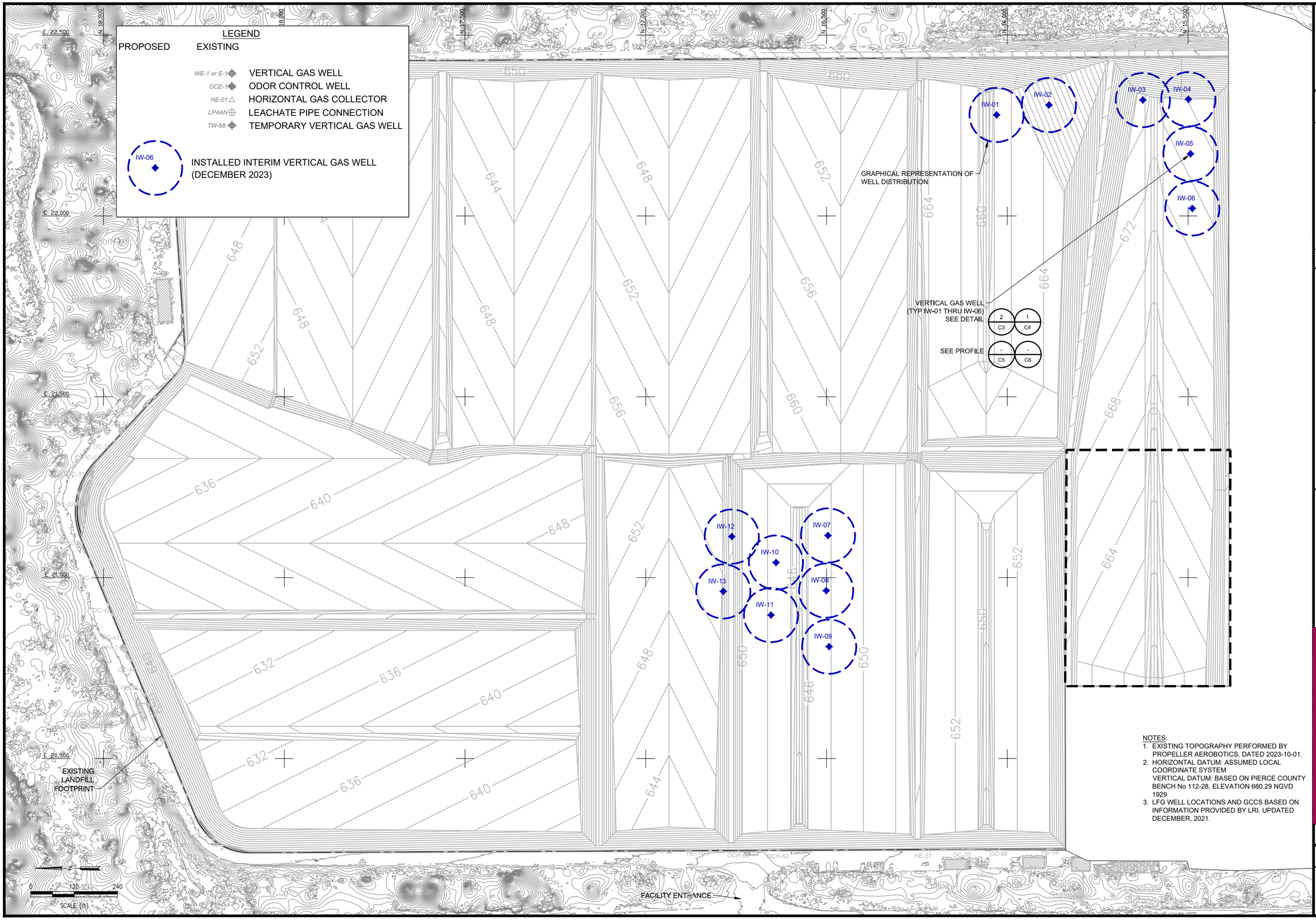
NO.	REVISION	DATE

SHEET TITLE: GCCS SITE PLAN
PROJECT TITLE: GCCS SITE PLAN
LRI LANDFILL
GRAHAM, WASHINGTON

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (503) 684-6948

ACAD FILE:	2023-12-21 GCCS SITE PLAN
APP BY:	KGL
DWN. BY:	GDB / LEL
CHK. BY:	TAB
PROJ. NO.	042150100
DSN. BY:	GDB

DATE: DECEMBER 2023
SCALE: AS SHOWN
DRAWING NO. 1



NOTES:
1. EXISTING TOPOGRAPHY PERFORMED BY PROPELLER AEROBOTICS, DATED 2023-10-01.
2. HORIZONTAL DATUM: ASSUMED LOCAL COORDINATE SYSTEM
   VERTICAL DATUM: BASED ON PIERCE COUNTY BENCH No 112-28, ELEVATION 660.29 NGVD 1929
3. LFG WELL LOCATIONS AND GCCS BASED ON INFORMATION PROVIDED BY LRI. UPDATED DECEMBER, 2021.

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	11/03/2023
B	ISSUED FOR CONSTRUCTION	11/10/2023
C	ISSUED FOR REVISIONS	11/17/2023

SHEET TITLE
2023 GCCS IMPROVEMENTS PHASE 2
JULY - OPERATIONS LAYER GRADES

PROJECT TITLE
2023 GAS SYSTEM EXPANSION
PHASE 3 OF 3
LRI LANDFILL
GRAHAM, WASHINGTON

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (503) 684-6948

ACAD FILE:	G:\PROJECTS\2023\04223001.14\GIS
APP. BY:	KGL
DWN. BY:	GDB/JEL
CHK. BY:	TAB
PROJ. NO.	04223001.14
DSN. BY:	AMD

DATE: NOVEMBER 2023

SCALE: AS SHOWN

FIGURE NO.
C2

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-01

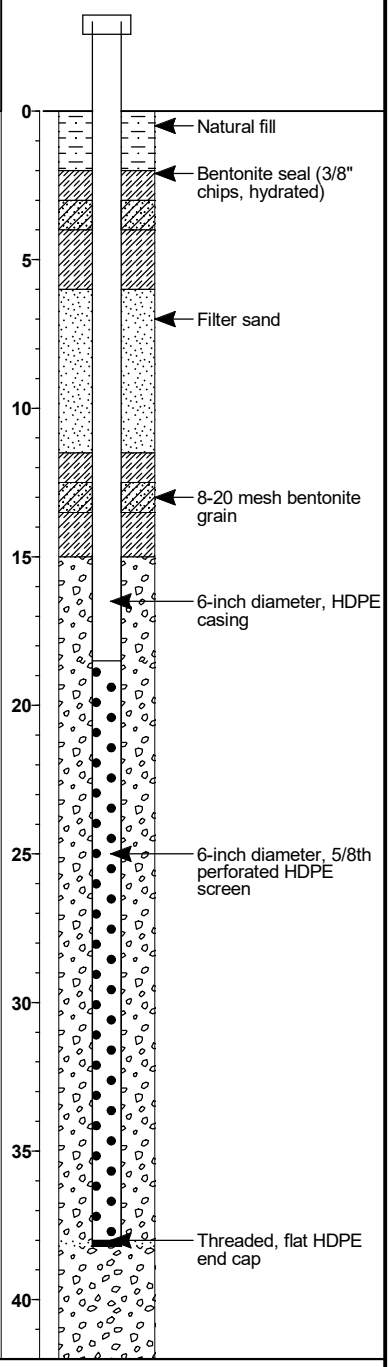
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							DIRT, no garbage.
1	5							DIRT brought up, no garbage.
2								
3	10							No garbage.
4								
5	15							
6	20							DIRT, with decomposed plastic. 68°F
7								DIRT, with decomposed plastic. 71°F
8	25							
9								Larger WOOD material, PLASTIC.
10	30							Decomposed PLASTICS, cardboard. 86°F
11	35							
12								Decomposed PLASTICS, WOOD material, cardboard. 77°F
	40							End of Boring at 42 feet.

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel**
Logged By: **Thomas Hanrahan**

Date Started: **12/14/23**
Date Ended: **12/14/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **42.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-02

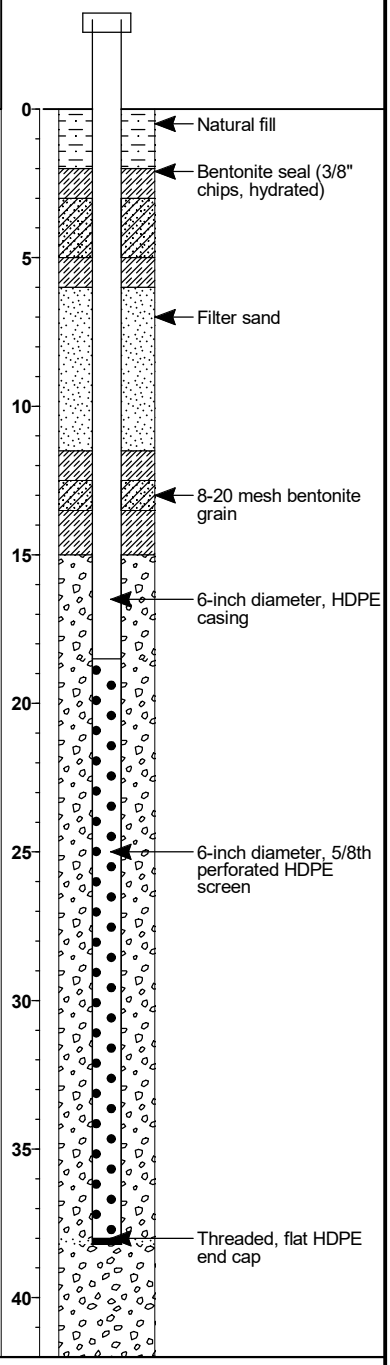
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
1	5							First barrel - Primarily DIRT.
2								
3	10							DIRT, minimal trash.
4								
5	15							DIRT, with minimal PLASTIC. 57°F
								Decomposed PLASTIC.
6	20							
7								Decomposed PLASTICS mixed with various metal wiring. 71°F
8	25							Decomposed PLASTICS mixed with various metal wiring.
								Blackish material mixed with PLASTICS. Moderately decomposed.
9	30							Very decomposed PLASTICS mixed with blackish material, some metal wiring.
10								
11	35							
12	40							Very black decomposed material. Wet, ammonia scent. End of Boring at 42 feet.

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel**
Logged By: **Thomas Hanrahan**

Date Started: **12/14/23**
Date Ended: **12/14/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **42.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

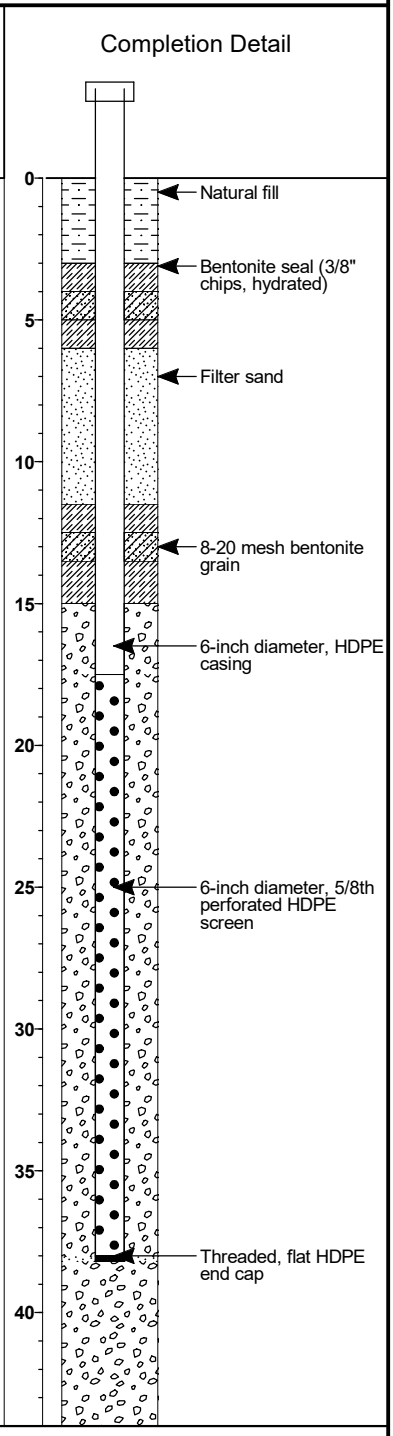
BORING NUMBER: IW-03

LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
1	5							Primarily decomposed PLASTICS.
2								
3	10							Decomposed TEXTILE, PLASTIC, compostables. 72°F
4								
5	15							Decomposed PLASTIC.
6	20							Decomposed PLASTIC, TEXTILES. 79°F
7								
8	25							
9								Decomposed PLASTIC. 89°F
10	30							
11	35							
12								Decomposed PLASTIC. 78°F
13	40							End of Boring at 44 feet.



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel**
Logged By: **Thomas Hanrahan**

Date Started: **12/13/23**
Date Ended: **12/13/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **44.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-04

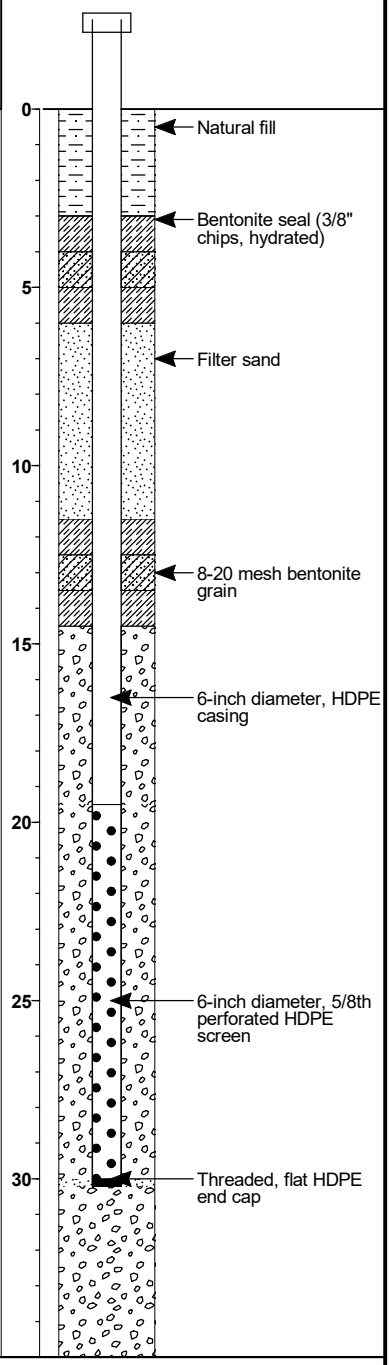
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
1								First waste pull-up - DIRT, PLASTIC, cardboard. Moderately decomposed.
	5							
2								
3	10							Wiring, moderately decomposed PLASTIC, compostable material. 70°F
4								TEXTILE like material, PLASTIC.
	15							
5								Wires and PLASTIC. 60°F
6	20							Compostable material, PLASTIC.
7								
	25							
8								Moderately decomposed, homogenous mixture of PLASTIC, wood material, few compostables. 77°F
								Lots of wires in pulled-up garbage.
9	30							
10								
	35							End of Boring at 35 feet.

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel**
Logged By: **Thomas Hanrahan**

Date Started: **12/13/23**
Date Ended: **12/13/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **35.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-05

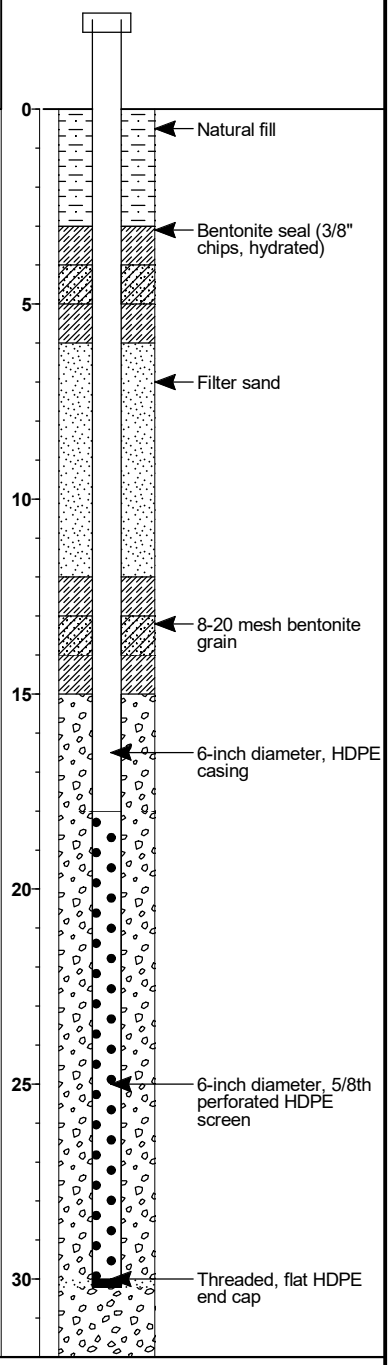
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
1	5							
2								
3	10							Decomposed waste, PLASTIC, and some composted material.
4								
5	15							Homogenous, decomposed PLASTIC. 88°F
6	20							
7								
8	25							Decomposed PLASTIC, DIRT. 94°F
9	30							Decomposed PLASTIC. 69°F End of Boring at 32 feet.

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel**
Logged By: **Thomas Hanrahan**

Date Started: **12/12/23**
Date Ended: **12/12/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **32.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-06

LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth		Sample Information						Description	Completion Detail
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log		
0	0					SM			Natural fill
1	5								Bentonite seal (3/8" chips, hydrated)
2									
3	10								Filter sand
4									
5	15								8-20 mesh bentonite grain
6	20							Decomposed PLASTIC. 71°F	6-inch diameter, HDPE casing
7								Decomposed PLASTIC.	
8	25							Decomposed mixture of PLASTIC, composted waste, little moisture. 81°F Decomposed PLASTIC. 69°F Large rug-like material.	6-inch diameter, 5/8th perforated HDPE screen
9						CH			Threaded, flat HDPE end cap
10	30					SP		End of Boring at 33 feet.	

Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel**
Logged By: **Thomas Hanrahan**

Date Started: **12/12/23**
Date Ended: **12/12/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **33.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-07

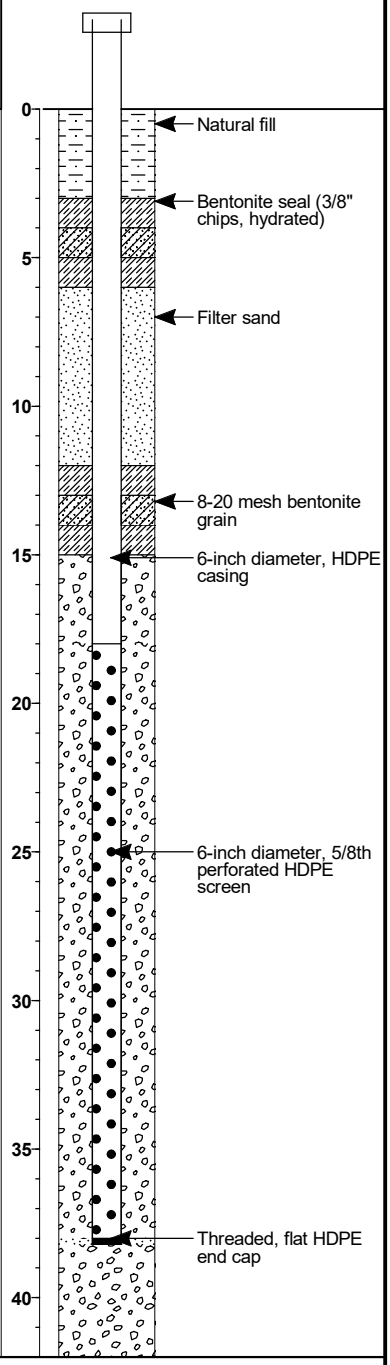
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SW		
1	5					SM		Mildly decomposed waste, PLASTIC, wire, TEXTILE. Blue/white PLASTIC. 78°F
2								
3	10					SW		
4								
5	15							Dry, mild decomposition. PLASTIC, wire, TEXTILE. Brown SOIL mix.
6	20					SM		
7								
8	25							87°F
								Abundant mixed SOIL.
9	30							
10								
11	35							SOIL, mixed PLASTIC, TEXTILES. Dry waste. Blue/white & browns. 86°F
12	40							End of Boring at 42 feet. 101°F

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel/Kelly Bar**
Logged By: **Alex Deszo**

Date Started: **12/11/23**
Date Ended: **12/11/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **42.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-08

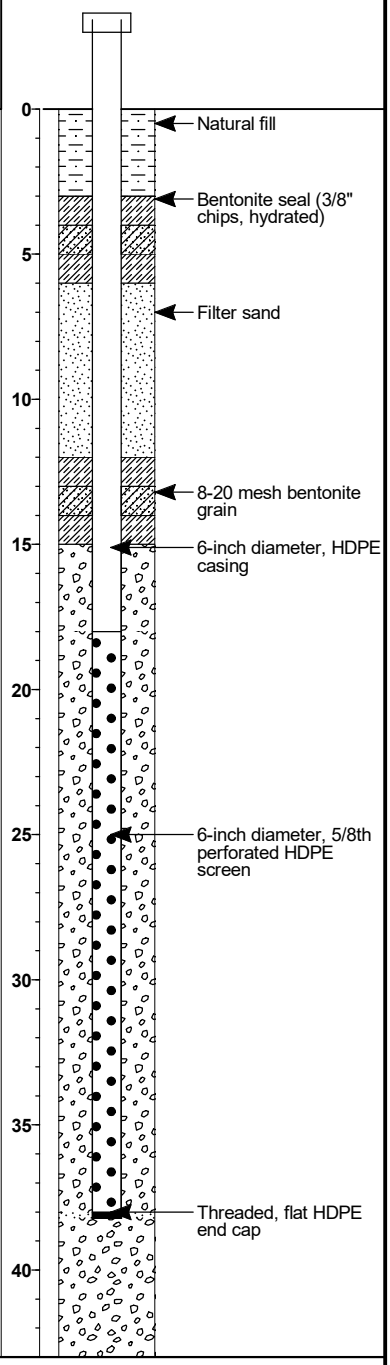
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM		2' Natural SOIL before waste
1	5							Two bucklets partially full. Black waste, hog fuel/WOOD particulate.
2								Looks as if it has combusted.
3	10							PLASTIC/TEXTILES. Blue, white, green. Abundant black WOOD particulate/hog fuel. Very dry. 86°F
4								Lots of mixed PLASTIC/TEXTILES, various colors. Less-to-no hog fuel/black WOOD particulate.
5	15							95°F
6	20							Some wires. PLASTIC/TEXTILES. Mild decomposition. Mild moisture.
7								94°F
8	25							Mild decomposition. Lots of PLASTIC/TEXTILES. White, green, blue. Some wires
9	30							Little mixed SOIL/hog fuel. Little/no moisture.
10								
11	35							94°F
12	40							Rubber/tire tubing. Little/no moisture. 104°F
13								Moderate decomposition. Brown, white, blacks. End of Boring at 43 feet.

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel/Kelly Bar**
Logged By: **Alex Deszo**

Date Started: **12/8/23**
Date Ended: **12/8/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **43.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-09

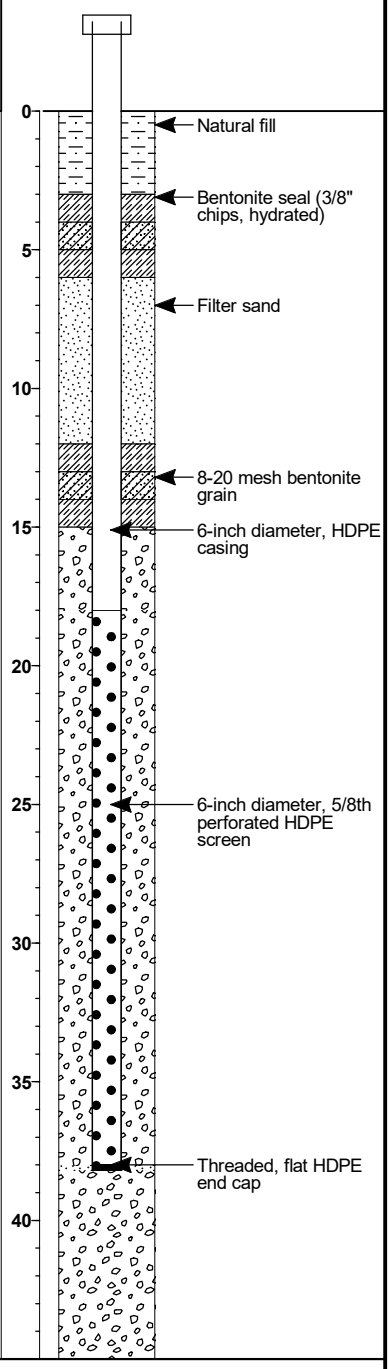
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					ML		1' Natural SOIL before waste
1	5					SM		Mixed waste, low decomposition. TEXTILE, PLASTIC, wire. Brown/white.
2								Moisture-laden waste.
								TEXTILES, mostly PLASTICS. Mild decomposition.
3	10					ML		117°F
4								Colored PLASTIC. Blue, white, red, green.
5	15							SOIL, WOOD waste. Brown waste. 134°F
6	20							
7								
8	25							Hog fuel/WOOD particulate. Brown. Some PLASTICS/TEXTILES.
								131°F
9	30							Plentiful hog fuel/WOOD waste. Mixed waste. PLASTIC, TEXTILES, wires. Mostly gray, brown. Saturated/muddy.
10								
11	35							117°F
								Homogenous waste, less SOIL/hog fuel/WOOD particulate. Mild decomposition. Saturated. Various colors. White, black, brown, blue.
12	40							
13								
	45							End of Boring at 44 feet.

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel/Kelly Bar**
Logged By: **Alex Deszo**

Date Started: **12/7/23**
Date Ended: **12/7/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **45.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-10

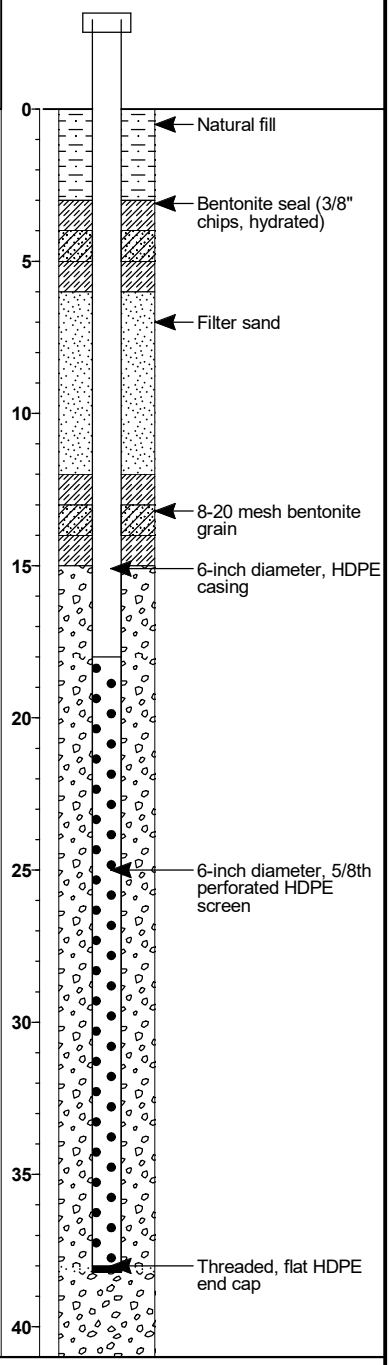
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							First barrel - Mixed waste, PLASTIC. Little moisture, various colors.
1	5							
2								
3	10							Mixed, decomposed waste, wires. Dry. 87°F
4								Moist waste. Little H2O content
5	15							
6	20							Moist, homogenous, partly decomposed PLASTIC, wires. 87°F
7								
8	25							
9	30							Decomposed PLASTIC, homogenous waste. 85°F
10								
11	35							98°F Black hog fuel, mixed SOIL/WOOD waste.
12	40							End of Boring at 41 feet.

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel**
Logged By: **Alex Deszo**

Date Started: **12/11/23**
Date Ended: **12/11/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **41.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-11

LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Description
0	0	1' Natural SOIL before waste.
1	5	Mixed waste, little decomposition. Various colored PLASTIC, TEXTILES.
2		
3	10	126°F
4		Mildly decomposed SOILS, Less TEXTILES, PLASTICS. Brown, green, & black. Saturated waste.
15		Lots of hog fuel. Brown.
5		Mildly decomposed mixed waste with SOILS/hog fuel. Brown. Mild moisture. PLASTIC/TEXTILES/wires.
6	20	137°F
7		
25		Mildly decomposed mixed waste, PLASTIC/TEXTILES & wire. Mild moisture. Brown, white, blue.
8		SOIL/Hog fuel mixture.
9	30	
10		
35		140°F
11		PLASTIC/TEXTILES. Few colors.
		More waste/hog fuel. Brown.
12	40	124°F End of Boring at 41 feet.

Completion Detail

- Natural fill
- Bentonite seal (3/8" chips, hydrated)
- Filter sand
- 8-20 mesh bentonite grain
- 6-inch diameter, HDPE casing
- 6-inch diameter, 5/8th perforated HDPE screen
- Threaded, flat HDPE end cap

Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel/Kelly Bar**
Logged By: **Alex Deszo**

Date Started: **12/7/23**
Date Ended: **12/7/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **41.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-12

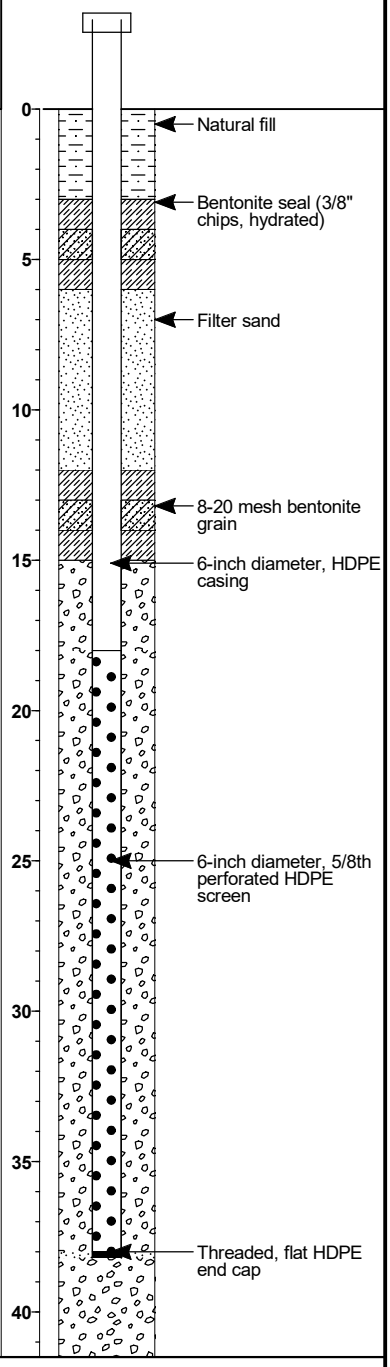
LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

REMARKS:

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0							
1	5							Slightly decomposed PLASTIC. Homogenous mixture of PLASTIC, SOILS.
2								
3	10							Decomposed PLASTIC. 58°F
4								
5	15							Waste - PLASTIC, SOIL, few wiring. Mattress material.
6	20							DIRT/SOILS, decomposed PLASTIC. 62°F
7								Homogenous assortment of partly decomposed PLASTIC. Few rubber items, WOOD debris.
8	25							Moderately decomposed PLASTIC. 66°F
9	30							Blackish material, decomposed PLASTIC.
10								
11	35							Blackish waste. 67°F
12	40							End of Boring at 41.5 feet.

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel**
Logged By: **Thomas Hanrahan**

Date Started: **12/12/23**
Date Ended: **12/12/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **41.5 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

SCS ENGINEERS

BORING LOG

14945 SW Sequoia Parkway, Suite 180
Portland, OR 97224

BORING NUMBER: IW-13

LRI GCCS
Pierce County 304th Landfill
Graham, WA 98338

JOB NUMBER: 04222014.00

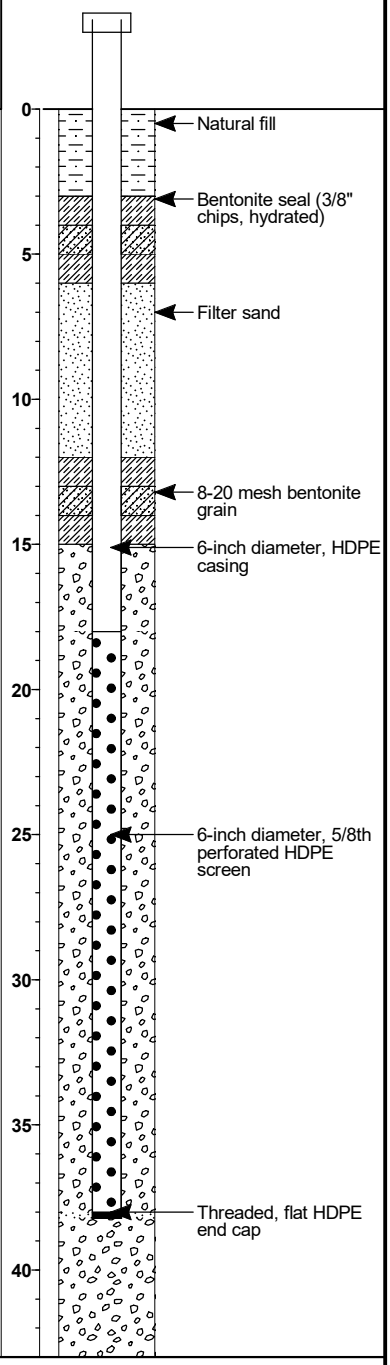
REMARKS:

Depth (meters)	Depth (feet)	Description
0	0	4' Natural SOIL cover before waste.
1	5	Mildly decomposed waste. Lots of PLASTIC, TEXTILES. Minor amount of mixed SOILS/hog fuel. Various colors. Very little to no moisture.
2		
3	10	92°F
4		
5	15	Mildly decomposed waste, colored PLASTIC, some TEXTILES, mixed SOILS. Very little moisture. Brown, black & various PLASTIC colors (white, blue, gree, yellow).
6	20	100°F
7		
8	25	More black decomposed waste. Less PLASTIC & colors. More TEXTILES, some wire. Mixed SOILS/hog fuel. Very little moisture.
9	30	
10		
11	35	105°F
12	40	Similar to above. More plastic.
13		107°F End of Boring at 43 feet.

Sample Information: Sample Location; Sample Number; Blow Counts; OVM (ppm); USCS Soil Class.

Graphic Log

Completion Detail



Drilling Company: **DBM Contractors**
Drilling Method: **Core Barrel/Kelly Bar**
Logged By: **Alex Deszo**

Date Started: **12/8/23**
Date Ended: **12/8/23**
Boring Diameter: **36 in**
Well Diameter: **6 in**
Total Depth: **43.0 ft.**

STANDARD_LOG LRI_304_04223001.15.GPJ STD_LOG.GDT 12/22/23

Appendix I

Financial Assurance Cost Estimates

Table 1
Estimated Closure Costs
LRI Landfill, Pierce County, Washington
November 14, 2023 Update

Total Acreage at Full Build-Out:	169.20	Acres
Remaining Closure at Full Build-Out:	125.23	Acres
Remaining Closure at Full Build-Out:	5,455,019	SF

Item	Description	Unit	Unit Price	Quantity	Cost
1	Subgrade Preparation	SF	$ 0.11	5,455,019	$ 574,958.98
2	Bedding Layer (6-inch layer)	SF	$ 0.75	5,455,019	$ 4,082,208.77
3	Geosynthetic Clay Liner	SF	$ -	-	$ -
4	Geomembrane - Micro DrainLiner	SF	$ 1.23	5,455,019	$ 6,731,493.20
5	Geotextile Filter	SF	$ 0.34	5,455,019	$ 1,876,526.47
6	Vegetative / Topsoil Layer (14-inch layer)	SF	$ 1.28	5,455,019	$ 6,956,293.85
7	Erosion Control Blanket	SF	$ 0.37	5,455,019	$ 2,012,356.44
8	Hydroseed	acre	$ 3,455.00	125.2	$ 432,669.65
9	Access Road (24 ft wide w/ 3-in asphalt layer)	LF	$ 133.36	1,060	$ 141,364.38
10	Storwater Ditches	LF	$ 53.75	11,024	$ 592,584.10
11	4-inch gas collection piping	LF	$ -	-	$ -
12	6-inch gas collection piping	LF	$ 49.05	18,652	$ 914,880.60
13	8-inch gas collection piping	LF	$ 80.75	1,157	$ 93,427.75
14	12-inch gas header piping	LF	$ 93.25	1,919	$ 178,946.75
15	18-inch gas header piping	LF	$ 92.80	3,000	$ 278,400.00
16	Condensate Sumps	EA	$ 16,679.55	5	$ 83,397.75
17	Vertical Gas Extraction Wells (avg. depth = 84 ft.)	EA	$ 9,164.00	89	$ 815,596.00
	Subtotal				$ 25,765,105
	Mobilization @	5.0%			$ 1,288,255
	Sales Tax @	7.9%			$ 2,035,443
	Engineering and Construction Management @	7.5%			$ 1,932,383
				Estimated Closure Cost:	**$ 31,021,186**
	Total Acreage at Full Build-Out:	169.20			
	Acreage with Final Closure through 2023:	43.97			
	Acres Remaining to be Closed at Full Build-Out:	125.23			
				Estimated Per Acre Unit Cost:	**$ 247,713.70**
	Constructed Acreage through 2023:	143.35			
	Acreage Closed through 2023:	43.97			
	Remaining Acres to be Closed as of January 1, 2024:	99.38			
				Estimated 2023 Closure Cost:	**$ 24,617,787**

Note: Closure and constructed acreages are plan-view.

Table 2

Estimated Annual Post-Closure Costs

LRI Landfill, Pierce County, Washington

November 14, 2023 Update

Total Acreage at Full Build-Out: 169.20
Constructed Acreage through 2023: 143.35

Description	Frequency	Quantity	Unit Cost	Total Cost
LDCRS Monitoring (11 sumps)				
sample collection	quarter	4	$ 2,033.00	$ 8,132.00
laboratory testing	quarter	4	$ 3,673.00	$ 14,692.00
data analysis and reporting	quarter	4	$ 2,711.00	$ 10,844.00
Groundwater Monitoring				
sample collection	quarter	4	$ 8,132.00	$ 32,528.00
laboratory testing	quarter	4	$ 8,149.00	$ 32,596.00
data analysis and reporting	quarter	4	$ 10,842.00	$ 43,368.00
Surface Water Monitoring				
sample collection	quarter	4	$ 745.00	$ 2,980.00
laboratory analysis	quarter	4	$ 689.00	$ 2,756.00
data analysis and reporting	quarter	4	$ 2,033.00	$ 8,132.00
Gas System Monitoring				
surface emission monitoring	quarterly	4	$ 1,355.00	$ 5,420.00
probe monitoring	month	12	$ 1,694.00	$ 20,328.00
data analysis and reporting	annual	1	$ 27,105.00	$ 27,105.00
General Facility Maintenance				
gas system maintenance	annual	1	$ 3,247.00	$ 3,247.00
gas flare replacement, 30 year amortization	annual	1	$ 14,523.00	$ 14,523.00
gas system operation	annual	1	$ 16,238.00	$ 16,238.00
cover maintenance	acre	143.35	$ 376.00	$ 53,899.60
cover replacement & repair	annual	1	$ 3,247.00	$ 3,247.00
sedimentation basin	annual	1	$ 3,754.00	$ 3,754.00
ditch / erosion maintenance	annual	1	$ 1,624.00	$ 1,624.00
buildings	month	12	$ 376.00	$ 4,512.00
equipment	month	12	$ 376.00	$ 4,512.00
General Operating Expenses				
administration	month	12	$ 1,502.00	$ 18,024.00
support services / accounting	month	12	$ 1,502.00	$ 18,024.00
real estate taxes	year	1	$ 60,075.00	$ 60,075.00
electricity	month	12	$ 1,458.00	$ 17,496.00
legal	year	1	$ 1,502.00	$ 1,502.00
engineering	year	1	$ 1,502.00	$ 1,502.00
Leachate System Operation & Maintenance				
pumps	year	2	$ 4,986.00	$ 9,972.00
collection pipe and force main	year	1	$ 3,115.00	$ 3,115.00
storage and load facility	year	1	$ 3,115.00	$ 3,115.00
trucking	gal	1,200,000	0.03	$ 36,000
treatment	gal	1,200,000	0.04	$ 48,000
			Estimated Annual Cost:	**$ 531,263**

Notes: 1) LDCRS monitoring costs assume sample collection, lab testing, and reporting for 10 sumps (LDCRS-1, 2A, 2B, 3A, 4A, 4B, 5, 6, 7, 8, and 9A).
2) Groundwater monitoring costs include sample collection, lab testing, and reporting for 9 wells (MW-1, 2, 3, 4, 5, 6, 7, 9, and 10) and 11 leachate sumps (LCRS-1, 2A, 2B, 3A, 4A, 4B, 5, 6, 7, 8, and 9A).
3) Surface water monitoring costs assume samples will be collected by LRI staff.

Appendix J

LRI Landfill 2023 Tonnage Report Form

DEPARTMENT OF ECOLOGY
State of Washington

ANNUAL REPORT
MUNICIPAL SOLID WASTE LANDFILL

FACILITY NAME: **LRI Landfill**	CALENDAR YEAR OF REPORT: **2023**	PERMIT NUMBER: **27-050**	FACILITY ID: **1948**
FACILITY LOCATION (street address): **30919 Meridian E. Graham, WA 98338**	COUNTY: **Pierce**		
FACILITY CONTACT (name): **George Duvendack**	FACILITY PHONE: **(253) 847-7555**		
FACILITY CONTACT MAILING ADDRESS (if different): **Same**	FACILITY CONTACT PHONE (if different): **Same**	FACILITY CONTACT EMAIL: **George.duvendack@wasteconnections.com**	

Did you operate in 2023 ?

☒ Yes ***If yes***, proceed to next section and complete the form.

☐No ***If no***, answer the following questions, sign and date the last page, and submit. This completes your reporting obligations.

When did you stop operations? _____

Do you plan to restart? ☐ No ☐ Yes When? _____

AMOUNTS AND TYPES OF WASTE DISPOSED PER YEAR

PLEASE CHECK IF DISPOSED	AMOUNT DISPOSED Please check: ☐Cubic Yards or ☒Tons
☒ Municipal/Commercial Solid Waste	659,527
☒ Construction/Demolition Waste	19,142
☒ Yard Waste (disposed)	61
☐ Food Processing Waste (disposed)	0
☐ Landclearing Debris	0
☒ Industrial Waste	48,627
☐ Inert Waste	0
☒ Wood Waste	729
☒ Ash (other than special incinerator ash)	16,628
☐ Dredged Materials	0
☐ Sewage Sludge	0
☒ Asbestos	776
☐ Petroleum Contaminated Soils	0
☒ Other Contaminated Soils	64,428
☐ Tires (disposed)	0
☐ Medical Waste	
☒ Other (specify):Auto Fluff	134,404
☒ Other (specify):Saw Dust	6
☒ Other (specify): Compost Overs	23,006
☒ Other (specify): Manure	35
Total	**967,379**

DID YOU RECEIVE MATERIALS FOR RECYCLING? ☐ Yes (Please specify on pages 3-4.) ☒ No

ADDITIONAL INFORMATION (please check if attached):

☐ Attach results of ground water monitoring in accordance with WAC 173-351-415(1)

☐ Attach applicable financial assurance information in accordance with WAC 173-351-600

☐ For landfills with RD&D allowances, attach report showing progress toward project goals and a summary of monitoring and test results in accordance with WAC 173-351-710(3)(e)

Are you open to the public? ☐ Yes ☒ No

Tip fees (Attach schedule if available): $177.39 per ton

REMAINING PERMITTED CAPACITY:

In tons: 12,306,918

Estimated Date of Closure: 2036

Are you planning an expansion this year?

☐ Yes ☒ No

ENERGY RECOVERY FROM LANDFILL:

Power Produced Annually 34,241,988 kilowatt hours

During the reporting year, were there any changes in your management practices that would impact your operations?

☒ No ☐ Yes (specify) _____

Are there any new solid waste activities planned at your site for this calendar year? ☒ No ☐ Yes (specify) _____

_____

Planned start date: _____

DID YOU RECEIVE MATERIALS FOR DISPOSAL FROM:	WHERE FROM	TYPE OF WASTE	ESTIMATE AMOUNT ☒Tons or ☐Cubic Yards
Out of County? ☐ Yes ☒ No			
Out of State? ☐ Yes ☒ No			
Out of Country? ☐ Yes ☒ No			

NOTE: Please ONLY fill in this chart if you collected materials for RECYCLING or COMPOSTING

AMOUNTS AND TYPES OF MATERIALS COLLECTED FOR RECYCLING OR COMPOSTING

PLEASE CHECK IF RECEIVED FOR RECYCLING or COMPOSTING	COMMERCIAL Please check: ☐ Cubic Yards/Year or ☐ Scaled Tons/Year	RESIDENTIAL Please check: ☐ Cubic Yards/Year or ☐ Scaled Tons/Year	TOTAL AMOUNT RECEIVED Please check: ☐ Cubic Yards/Year or ☐ Scaled Tons/Year
☐ Newspaper			
☐ Corrugated Paper			
☐ Mixed Waste Paper			
☐ Container Glass			
☐ PET Plastics			
☐ HDPE Plastics			
☐ LDPE Plastics			
☐ Other Recyclable Plastics			
☐ Aluminum Cans			
☐ Tin Cans			
☐ Ferrous Metals (iron, steel)			
☐ Nonferrous Metals (excluding aluminum cans)			
☐ Appliances (white goods)			
☐ Electronics (computers, CPUs, hard drives)			
☐ Electronics (monitors, TVs)			
☐ Tires (collected)			
☐ Asphalt			
☐ Concrete			
☐ Construction/Demolition			
☐ Wood Waste			
☐ Landclearing Debris			
☐ Yard Debris			
☐ Food/Food Scraps			
☐ Textiles (rags, clothing)			
☐ Co-Mingled Recyclables (specify):			
☐ Other (specify):			
Total			

NOTE: Please ONLY fill in this chart if you collected materials for RECYCLING or COMPOSTING

DESTINATION AND FINAL USE OF OUTGOING MATERIALS COLLECTED FOR RECYCLING or COMPOSTING

MATERIAL	OUTGOING AMOUNT Please specify tons or cubic yards.	DESTINATION FACILITY Please specify name, city, state.	FINAL USE Please specify: disposed, recycled, reused, composted, treated, burned for energy, stockpiled, etc.

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