2021 Annual Report

LRI Landfill
Graham, Washington

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

SCS ENGINEERS

04221001.02 | April 1, 2022

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April 1, 2022

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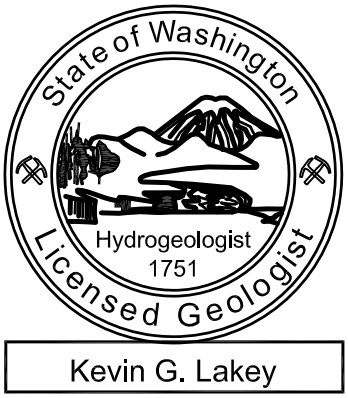

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1.0 INTRODUCTION

This document is the annual report for the LRI Landfill for 2021. 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 2021 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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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.

Ten refuse disposal cells (Cell 1, 2A, 2B, 3A, 4A, 4B, 5, 6, 7 and 8) with a combined bottom liner area of approximately 127.5 acres have been constructed to date. Each of the ten disposal cells have been used for waste disposal. The landfill began accepting waste within a 16-acre refuse disposal cell referred to as Cell 1 in December 1999. Cell 2A, a 10.6-acre disposal cell, began accepting waste in July 2001. Cell 2B, an 11.3-acre disposal cell, began accepting waste in April 2003. Cell 3A, a 10.9-acre disposal cell, began accepting waste in December 2004. Cell 4A, a 17.5-acre disposal cell, was constructed in four phases and began accepting waste in April 2006. Cell 4B, a 17.8-acre disposal cell was constructed in three phases and began accepting waste in January 2009. Cell 5, a 9.3-acre disposal cell, was constructed in two phases and began accepting waste in May 2013. Cell 6, a 12-acre disposal cell, was constructed in two phases and began accepting waste in June 2017. Cell 7, an 11.5-acre disposal cell, began taking waste in December 2019. Cell 8, a 10.4-acre disposal cell, was constructed in two phases (8A and 8B) and began taking waste in November 2020 (within the 8A portion).

Seven final closure constructions, totaling 39.2 acres (in plan-view) have been completed to date over portions of Cells 1, 2A, 2B, 4A, 4B, 5 and 6. The first phase of closure, referred to as the Phase I Closure, capped approximately 4.7 acres and was constructed during the summer of 2001. Closure construction included a foundation layer, bedding layer, geosynthetic clay liner (GCL), HDPE geomembrane, a 1-foot thick drainage layer, and a vegetative layer. In 2006, the Phase I Closure Addition was installed over an area approximately 4,500 square feet in size along the access roadway on the landfill and the perimeter roadway. The Phase IIA Closure capped approximately 13.3 acres and was completed over three construction seasons in 2006, 2007 and 2008. The Phase II Closure construction included a foundation layer, bedding layer, geosynthetic clay liner (GCL), HDPE geomembrane, a geonet composite, and a vegetative layer. The Phase III Closure

capped approximately 6.3 acres and was completed in the summer of 2011. Closure construction included a foundation layer, bedding layer, geosynthetic clay liner, HDPE geomembrane, geonet composite drainage layer, and a vegetative soil layer. The Phase IVA Closure capped approximately 6.8 acres and was completed over two construction seasons in 2018 and 2019. The Phase IVA Closure included a foundation layer, bedding layer, geosynthetic clay liner, HDPE geomembrane DrainLiner, a geotextile filter, and a vegetative soil layer. The Phase V Stage A Closure capped approximately 8.0 acres and was completed in the summer of 2021. The Phase V Stage A Closure included a foundation layer, bedding layer, HDPE geomembrane DrainLiner, a geotextile filter, and a vegetative soil layer.

1.3 2021 MONITORING AND REPORTING ACTIVITIES

Groundwater monitoring activities were conducted quarterly in March, June, September, and December 2021 following the procedures described in the *LRI Landfill Groundwater Monitoring Plan* (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 2021 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 are presented in Appendix F. Laboratory reports for the 2021 fourth quarter groundwater sampling event were submitted to the TPCHD under separate cover.

Stormwater monitoring was conducted on a weekly, monthly and quarterly schedule during 2021 as outlined in the *LRI Landfill Surface Water Monitoring Plan* (SCS July 2009), and per the facility's Industrial Stormwater General Permit (WAR002557) and Construction Stormwater General Permit (WAR002603). Summary tables of surface water monitoring results are provided in Appendix G.

Landfill gas probe monitoring was conducted monthly and on-site buildings were monitored quarterly in 2021. 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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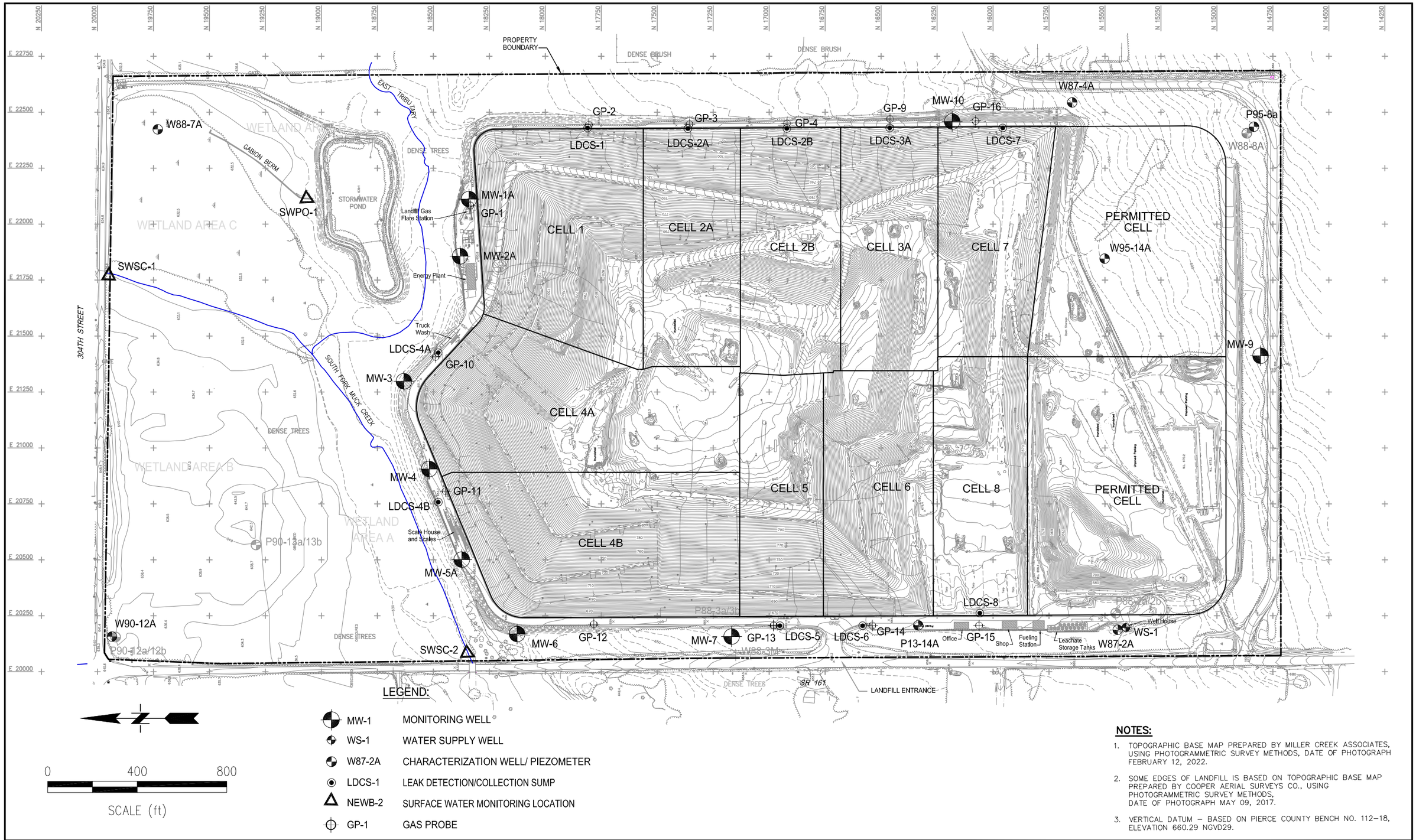
PROJECT NO. 04221001.02	DES BY LEL	SITE LOCATION MAP	DATE MARCH 2022
SCALE NOT TO SCALE	CHK BY SEG	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



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 PREPARED BY MILLER CREEK ASSOCIATES, USING PHOTOGRAMMETRIC SURVEY METHODS, DATE OF PHOTOGRAPH FEBRUARY 12, 2022.
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. 04221001.02	DES BY SEG	SITE MAP	DATE MARCH 2022
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET EAST GRAHAM, WASHINGTON	FIGURE 2
CAD FILE FIGURE 2	APP BY KGL		

2.0 2021 REPORT FORM AND FACILITY CAPACITY INFORMATION

Landfilling operations were conducted over portions of each of the landfill cells in 2021. The tonnage of waste materials landfilled at the LRI Landfill during 2021 was approximately 1,287,817 tons. The total tonnage landfilled at the LRI Landfill since opening in December 1999 through December 31, 2020 accrues to approximately 21,588,729 tons. The in-place density of combined waste placed between December 1999 and January 14, 2021 (aerial topographic survey date) is approximately 2,048 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. Based on the in-place density estimate of 2,048 lbs/CY, the volume of airspace consumed through December 31, 2021 was approximately 21.1 million cubic yards, or approximately 61 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 2021 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 each of the ten active landfill cells with depth-activated submersible pumps and pumped via forcemain to sixteen above ground storage tanks, with a combined on-site leachate storage capacity of approximately 218,400 gallons. Leachate collected in 2021 was truck-hauled to the Hidden Valley Landfill where it was pre-treated and 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 2021 leachate volumes truck-hauled off site for proper disposal is shown below on Exhibit 1.

Exhibit 1. 2021 Leachate Volume Data

Month	Leachate Production (gallons)	Monthly Rainfall (inches)
January	4,295,910	7.04
February	2,909,325	4.14
March	3,093,766	1.67
April	2,382,949	0.99
May	2,628,941	1.37
June	2,843,182	3.07
July	2,192,101	0.00
August	2,191,633	0.10
September	2,460,350	2.80
October	2,883,029	5.98
November	3,804,426	10.55
December	3,469,925	5.89
Totals	**35,155,537**	**43.60**

Notes:
Leachate was trucked 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 at each individual sump location during December 2021 with the exception of Cell 8. At disposal cells 1 through 7, leachate samples were obtained from sampling ports installed near the leachate riser pipes. LRI began filling Cell 8A with refuse on November 10, 2020. Leachate samples were collected from Cell 8A using a peristaltic pump from the temporary vertical riser pipe located within the cell on December 17, 2020, March 9, June 15, and September 15, 2021. The permanent leachate sampling pump at Cell 8B was not yet installed during the fourth

quarter monitoring event in December 2021. Therefore, the fourth quarter sample from the combined cell was collected on January 13, 2022 after the pump was installed. The collected leachate samples were submitted to Eurofins TestAmerica of Denver, Colorado and tested for the parameters listed in Appendix I and II of WAC 173-351. The results of the 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 2021 (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). 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 tested 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 2021 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 2021 groundwater monitoring event are provided in Appendix B. A copy of the groundwater database for 2021 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. 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 2021, 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. Specific activities included the following:

- The LDCS-2B conductivity probe was recalibrated on January 7, 2021. Following recalibration, conductivity values decreased to levels more consistent with historic data and readings measured in the field.

- The flowmeter at LDCS-2B did not function properly in 2021. The meter was replaced and connected to the PLC on February 8, 2022.

- LDCS-4A conductivity probe malfunctioned beginning on October 1, 2021. LRI will have an electrician check the probe connections and will recalibrate or replace the probe as needed.

- A sampling pump with new discharge tubing was deployed at LDCS-5 on March 3, 2021 by LRI and SCS personnel. The newly deployed pump was used to collect the first quarter sample on March 9, 2021.

- LDCS-5 conductivity probe values were generally greater than 1,000 µS/cm between April 1 and June 1, 2021 and between July 7 and September 18, 2021. Values above 1,000 at this location are outside of the meter range and are shown on the trend graph as blank. LRI will work with the panel programmer (Cascade Water Systems) increase the range of recorded probe values.

- The LDCS-8A flowmeter, liquid level sensor and conductivity probe were removed from the temporary sump on June 21, 2021 in order to allow for construction of Cell 8B. The leachate liquid level sensor was redeployed on July 27, 2021 and the other sensors were redeployed on September 30, 2021. No data is available from Cell 8 for the time period when the sensors were removed. In addition, the LDCS-8 conductivity probe malfunctioned beginning April 1, 2021. LRI will work with the panel programmer (Cascade Water Systems) to correct the problem.

Conductivity data from the LDCS sumps trended within typical historical ranges during 2021, except as noted below.

LDCS-4A conductivity values displayed a spike beginning on December 30, 2020. As discussed in the First Quarter Monitoring Report, a leachate leak was subsequently discovered in the single-walled leachate forcemain near LDCS-4A on January 4, 2021. LRI notified Ecology and the TPCHD on January 4, 2021. A follow up letter was submitted to Ecology on January 7, 2021. Groundwater withdrawn from LDCS-4A was routed to the leachate collection system for disposal as leachate as soon as the leak was discovered.

An investigation revealed that a pipe weld on the leachate forcemain adjacent to Cell 4A had failed. LRI staff promptly repaired the forcemain. SCS collected additional water quality samples from LDCS-4A on January 5, January 15, January 21 and January 28, 2021 (see Section 4.2). Following the discovery of the leak, groundwater withdrawn from LDCS-4A was routed to the leachate collection system for disposal as leachate and the forcemain was promptly repaired by LRI staff. The single-walled forcemain was subsequently replaced with a dual-walled forcemain in June 2021 as part of the two-year leachate forcemain improvements project.

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.

At Cell 8, water quality samples were obtained from the LDCS in March, June, August, September, October, and December 2021. The samples collected in March and June were obtained with a

peristaltic pump from a temporary HDPE sump associated with Cell 8A. The samples collected in August and September were obtained while Cell 8B was under construction as grab samples from the construction dewatering hose. The samples collected in October and December were collected from the discharge pipe of the permanent dewatering pump associated with Cell 8B. The water quality samples collected from the Cell 8 LDCS represent a combination of background water quality for the Cell 8B construction area and ongoing monitoring for the active Cell 8A waste disposal cell. See below for additional discussion regarding the sampling results at LDCS-8.

The following additional water quality samples were collected from the LDCS in 2021:

- Water quality samples were obtained from LDCS-4A on a weekly basis in January 2021 to monitor water quality changes related to a leachate forcemain leak that was discovered on January 4, 2021 (discussed previously).

- A water quality sample was obtained from LDCS-4B in April 2021 due to reported VOC detections during the first quarter monitoring event. See below for additional discussion regarding the water quality results at LDCS-4B.

- Water quality samples were obtained from LDCS-1, LDCS-2A and LDCS-2B on October 21, 2021 due to VOC detections reported during the third quarter monitoring event. See below for additional discussion regarding the water quality results at these locations.

Samples were submitted to Eurofins TestAmerica of Denver, Colorado. . Field and laboratory data results for the LDCS samples are included on the 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 2021 were generally consistent with previously measured values (see Appendix F), except as noted below.

Low-level detections of ammonia (0.68 mg/L or less) were reported during one or more quarters at LDCS-1, LDCS-2A, LDCS-2B, LDCS-3, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6, and LDCS-7. Low-level detections of ammonia were also reported in nearly all of the groundwater monitoring wells during 2021. In addition, ammonia has been detected at upgradient well MW-10 several times in the past, including during the second quarter of 2018 at 0.21 mg/L. Therefore, since ammonia has been detected in upgradient well MW-10 at a similar concentration to the downgradient monitoring wells, the ammonia concentrations appear to be due to a site-wide aquifer condition, which has also affected LDCS water quality.

Elevated concentrations of dissolved iron (up to 8.6 mg/L) and dissolved manganese (up to 14.0 mg/L) were reported at each of the LDCS locations. However, unless noted below, primary

leachate indicator parameters acetone and 2-butanone, were not detected and secondary indicator parameters ammonia and chloride were not detected or remained low. Additionally, the graphical plots of the LDCS water quality results presented on trilinear (piper) diagrams demonstrate the inherent water quality differences between the shallow groundwater from the LDCS and the leachate samples collected annually in December. Therefore, the elevated metals concentrations do not appear to be the result of impacts from the landfill. The piper diagrams are included in Appendix D.

The following VOCs were reported in LDCS samples collected in 2021:

- During the first quarter monitoring event, low-level detections of benzene and 1,4-dichlorobenzene were reported at LDCS-1 at concentrations of 0.60 µg/L and 0.73 µg/L, respectively. In addition, LDCS-4B water quality results included reported detections of primary leachate indicator parameters acetone and 2-butanone, at concentrations of 12 µg/L and 6.9 µg/L, respectively. LDCS-4B was subsequently resampled on April 26, 2021. No VOCs were reported in the resample results.

- During the second quarter monitoring event, a low-level detection of 1,4-dichlorobenzene was reported at LDCS-1 at a concentration of 0.79 µg/L.

- During the third quarter monitoring event, sample results from LDCS-1 included detections of 1-4-dichlorobenzene (1.1 µg/L) and acetone (10 µg/L), and the sample results from LDCS-2A and LDCS-2B included reported detections of acetone at concentrations of 28 µg/L and 92 µg/L, respectively. However, acetone was also reported present in the field blank at 10 µg/L and in one of the trip blanks at 36 µg/L. As noted previously, additional samples were collected from LDCS-1, LDCS-2A, and LDCS-2B on October 21, 2021 following receipt of the third quarter monitoring results. The results from the resample event included detections of 1,4-dichlorobenzene (0.93 µg/L), acetone (140 µg/L), and carbon disulfide (0.82 µg/L) at LDCS-1, and acetone (26 µg/L) and m-xylene & p-xylene (0.54 µg/L) at LDCS 2B.

- During the fourth quarter monitoring event, a low-level detection of 1,4-dichlorobenzene was reported at LDCS-1 at a concentration of 0.84 µg /L. No other VOCs were reported at the LDCS locations during the fourth quarter monitoring event.

Secondary indicator parameters ammonia and chloride remained consistent with historic results in the samples collected at LDCS-1, LDCS-2A, LDCS-2B and LDCS-4B during 2021 (see time trend plots included in Appendix F). Additionally, primary indicator parameter, 2-butanone, was not detected at any of these LDCS locations in 2021. Therefore, the reported VOC detections do not appear to be related to leachate.

As noted in the Third Quarter Monitoring Report, the LDCS connections at Cell 1, Cell 2A and Cell 2B include lateral piping to concrete vaults with vertical riser pipes. These LCRS connections are more susceptible to lateral inflow of shallow (background) groundwater and to potential contamination from maintenance activities on the perimeter road. During the third quarter monitoring event, particulate matter and bacterial growth were observed in the samples collected at LDCS-1 and LDCS-2B. On at least one previous occasion (in the fall of 2011), the vaults and vertical piping at these sumps were cleaned by power-washing. These previous efforts were successful in reducing or eliminating VOC detections. Therefore, if VOC detections continue at these locations, the vertical risers at LDCS-1, LDCS-2A and LDCS-2B may need to be cleaned by power washing.

As discussed previously, a leak in the leachate forcemain was discovered near LDCS-4A on January 4, 2021 and additional water quality samples were collected from LDCS-4A on January 5, January 15, January 21 and January 28, 2021. Water quality samples collected from LDCS-4A in January displayed elevated concentrations of ammonia (up to 36 mg/L), chloride (up to 120 mg/L), total organic carbon (up to 9.9 mg/L), dissolved sodium (130 mg/L), and potassium (26 mg/L). Subsequent samples collected from LDCS-4A displayed parameter concentrations more consistent with historic results (see time trend plots in Appendix F). The combined elevated detections of the five parameters listed above (ammonia, chloride, TOC, sodium, and potassium) provide a signature that is indicative of a leachate leak. A similar signature was recorded when a leak in the single-walled leachate forcemain occurred near Cell 5 in 2016. The single-walled forcemain was subsequently replaced with a dual-walled forcemain during a two-year project that occurred in 2020 and 2021

A low-level detection of primary leachate indictor, acetone, was reported at a concentration of 3.5 µg/L in the sample collected on January 5, 2021. The acetone detection was J-flagged since it was detected below the parameter's reporting limit of 10 µg/L. No VOCs were reported in the samples following the January 5, 2021 sample. Groundwater withdrawn from LDCS-4A continues to be routed to the leachate collection system for disposal as leachate.

LDCS-5 water quality results have displayed decreasing trends in the concentrations of ammonia, chloride, iron, manganese, sodium, potassium, TDS, and TOC since the stormwater flap along the concrete channel and the geomembrane boot surrounding the three leachate riser pipes were replaced in September of 2020. Groundwater withdrawn from LDCS-5 continues to be directed to the leachate collection system, as it has been since May of 2016, and is not being discharged through the concrete channel.

As reported previously, background water quality monitoring at LDCS-7 included detections of VOC's and elevated concentrations of inorganic parameters and metals. With the exception of the fourth quarter in 2021, carbon disulfide was reported in each of the samples collected from LDCS-7 in 2021 with concentrations ranging from 3.4 to 11 µg/L. In addition, relatively elevated concentrations continue to be reported for alkalinity, chloride, ammonia, sulfate, TDS, total organic carbon, and dissolved calcium, manganese, magnesium, and sodium. Since carbon disulfide and elevated concentrations of general chemistry parameters were detected at LDCS-7 prior to the placement of refuse in the cell, the reported detections appear to be related to background water quality. Additionally, no detections of primary leachate indicator parameters acetone and 2-butanone were reported in the samples collected during 2021. Graphical plots of LDCS-7 water quality presented on piper diagrams (see Appendix D) demonstrate inherent water quality differences between the groundwater at LDCS-7 and leachate.

Water quality results for samples collected from LDCS-8 included relatively elevated concentrations of alkalinity, chloride, nitrate, sulfate, TDS, total organic carbon, and dissolved calcium and sodium (see summary tables in Appendix B and groundwater database in Appendix C). These results are indicative of background water quality at this location.

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 the Groundwater Monitoring Plan.

5.2 WATER LEVEL MEASUREMENTS

Depth to water level measurements were collected quarterly in 2021. 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 2021 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 2021 were validated and input into a database utilizing Microsoft Office Access 2016 software, and 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 2021 groundwater monitoring event are provided in Appendix B. A copy of the groundwater database for 2021 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. For 2021, the groundwater prediction limits remained unchanged. Nitrate and total metal concentrations measured at downgradient monitoring wells were less than or equal to prediction limit values in 2021, except one detection of arsenic as noted below.

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 2. The values listed in Exhibit 2 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 criteria of 0.00005 mg/L. Therefore, all arsenic results were greater than the WAC 173 200 criteria. With the exception of the second and third quarter arsenic detections at MW-4, all reported arsenic detections were less than the Federal primary drinking water maximum contaminant level (MCL) of 0.010 mg/L.

The reported second quarter arsenic concentration of 0.0110 mg/L at MW-4 is slightly above the MCL of 0.010 mg/L. The reported third quarter arsenic concentration of 0.0120 mg/L at MW-4 is slightly above the MCL and the prediction limit (0.0110 mg/L). However, the fourth quarter result for arsenic at MW-4 of 0.0098 mg/L was below the MCL and the prediction limit. See below for additional discussion regarding the water quality at MW-4.

Exhibit 2. 2021 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	**	**	**	0.0098	0.0058	0.0074	0.0053
	Q2		**	**	**	0.0110	0.0055	0.0069	**
	Q3		**	**	**	**0.0120**	**	0.0073	0.0057
	Q4		**	**	**	0.0098	**	0.0072	0.0054
Iron, Dissolved	Q1	0.30	1.5	0.49	*	*	*	*	*
	Q2		1.4	0.52	*	*	*	*	
	Q3		1.5	0.62	*	*	*	*	*
	Q4		0.96	*	*	*	*	*	*
Manganese, Dissolved	Q1	0.05	0.24	0.28	0.42	0.23	0.19	0.18	0.25
	Q2		0.24	0.28	0.27	0.22	0.17	0.30	0.27
	Q3		0.24	0.28	0.23	0.21	0.15	0.17	0.22
	Q4		0.21	0.32	0.35	0.25	0.19	0.17	0.25

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 parameter 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 the second, third, and fourth quarter of 2021. In addition, pH values at upgradient well MW-9 were below the WAC 173-200 criterion of 6.5 during the second and fourth quarter. 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 2021 were consistent with previously measured values, except as noted below.

Ammonia was reported at a concentration of 0.95 mg/L in the sample collected from MW-4 during the second quarter. However, secondary indicator parameter, chloride, remained low and primary leachate indicator parameters, acetone and 2-butanone, were non-detect during the second quarter. Therefore, the elevated ammonia concentration at MW-4 does not appear to be related to a leachate leak. Additionally, low-level detections of ammonia (up to 0.23 mg/L) were reported at each of the other downgradient wells during one or more monitoring events in 2021. Similar low-level ammonia detections have been reported in the past; including at background well MW-10 during the second quarter 2018 monitoring event. Therefore, the low-level ammonia concentrations appear to be due to site-wide aquifer chemistry.

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 2021, cation-anion balance evaluations slightly exceeded the appropriate threshold for monitoring wells MW-3, MW-5A and MW-6 during the third quarter and MW-10 during the fourth quarter. Since MW-10 is upgradient of the landfill, these results are interpreted to reflect natural groundwater 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.

Elevated detections of primary leachate indicator parameters acetone (120 µg/L) and 2-butanone (140 µg/L) were reported in the fourth quarter sample collected at MW-4. Additionally, 4-methyl-2-pentanone (MIBK) was reported at a concentration of 9.1 µg/L. MW-4 was resampled for VOCs only on January 20, 2022. No VOCs were detected in the resample. Additionally, secondary indicator parameters, ammonia and chloride, remained low in the sample collected during the fourth quarter. No WAC 173-200 criteria are available for comparison with the three detected VOCs. Since there were no VOCs reported in the resample results and secondary leachate indicator parameters remained low during the fourth quarter, the reported VOC detections at MW-4 appear to be due to a laboratory artifact, and are not considered representative of groundwater quality.

No other VOCs were reported present in groundwater samples collected from the monitoring wells in 2021.

6.3 MONITORING WELL CONSTRUCTION/MAINTENANCE

No significant well construction or well maintenance activities occurred in 2021.

7.0 SURFACE WATER MONITORING

Surface water 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 2021. The construction stormwater treatment system is located near the southwest corner of the construction activity 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.

Construction stormwater exceeded the turbidity benchmark of 25 NTU at location C8-2 on November 12, 2021. Turbidity was measured the following day and was less than the benchmark value.

No additional benchmarks or effluent limits were exceeded in 2021. Copies of the 2021 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

Landfill gas monitoring was conducted monthly during 2021 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, or GP-13. Concentrations of methane greater than 5 percent by volume were recorded at least once at performance probes GP-1, GP-2, GP-10, GP-10P, GP-11, GP-12, GP-14, GP-15, and GP-16. Table H-1 in Appendix H provides a summary of landfill gas monitoring results for 2021.

The gas probe-monitoring network was designed to allow for the early detection of landfill gas migration before subsurface migration to the property line (point of compliance) could occur. Barhole monitoring surveys have shown that the methane levels reported above do not result in the migration of landfill gas to the property line. The most recent barhole survey was conducted by SCS on December 29, 2021 along the base of the perimeter berm adjacent to gas probes GP-2 and GP-12. This work was consistent with a Tier II subsurface gas migration study as described in the LRI Landfill Plan of Operations. Methane concentrations measured at GP-2 and GP-12 at the beginning of the survey was 6.7% and 24.7% by volume, respectively. Methane was not detected at any of the barhole locations.

8.2 ON-SITE BUILDING MONITORING

On-site buildings were monitored once per quarter in 2021. Measurements were obtained using a GasTech or Photovac MicroFID (FID). No detectable methane was reported at any of the buildings. It should be noted that the workshop formerly located next to the LRI office was demolished during the construction of Cell 8B. Therefore, the workshop is no longer monitored. For more details regarding the on-site building monitoring see Appendix H.

8.3 LANDFILL GAS EXTRACTION WELL CONSTRUCTION

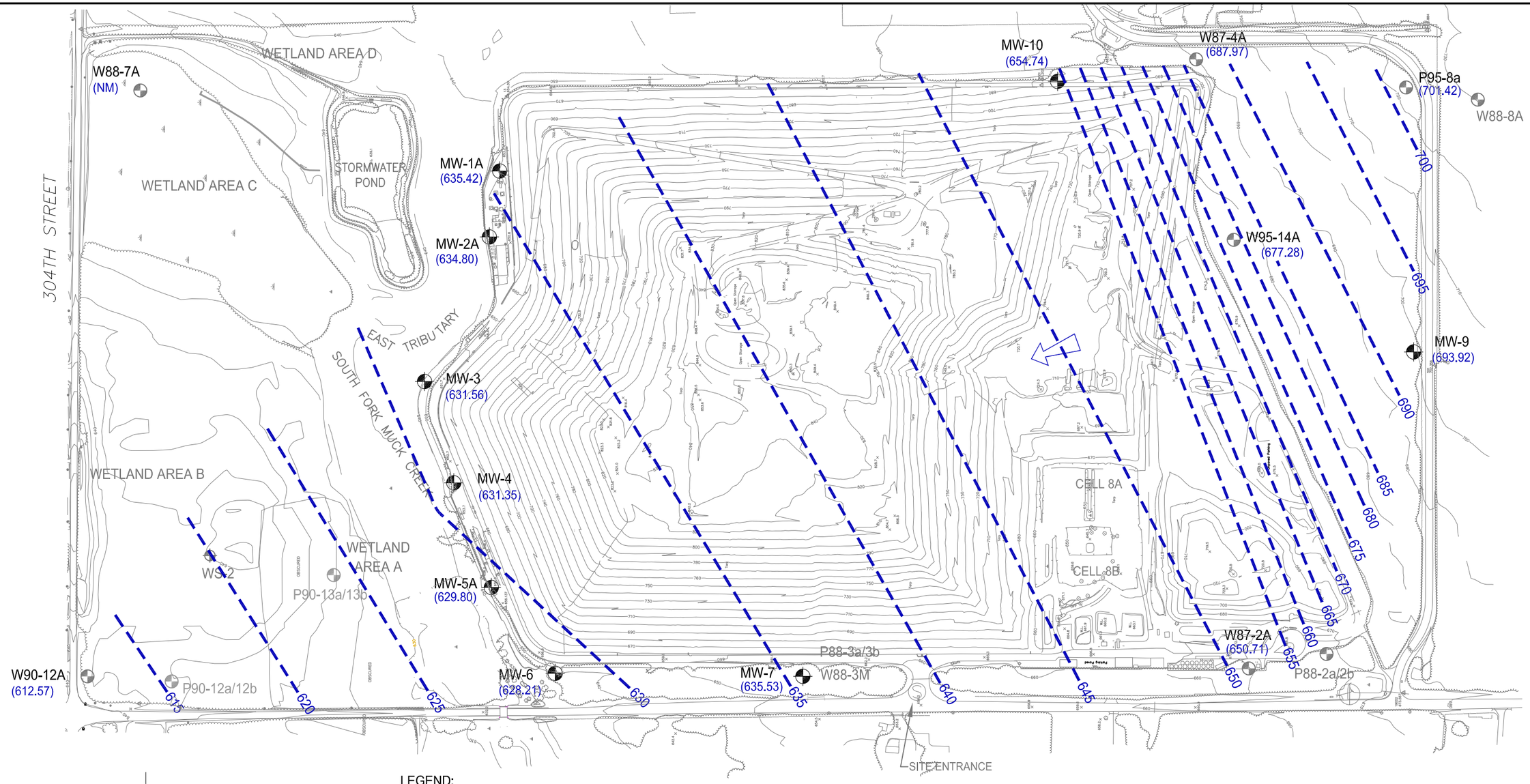
Thirteen (13) new landfill gas extraction wells (WE-281 through WE-293) were installed between March 10 and March 16, 2021 and sixteen (16) new landfill gas extraction wells (WE-295 through WE-310) were installed between June 22 and July 2, 2021. Copies of the Gas Extraction Well Installation Reports 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:

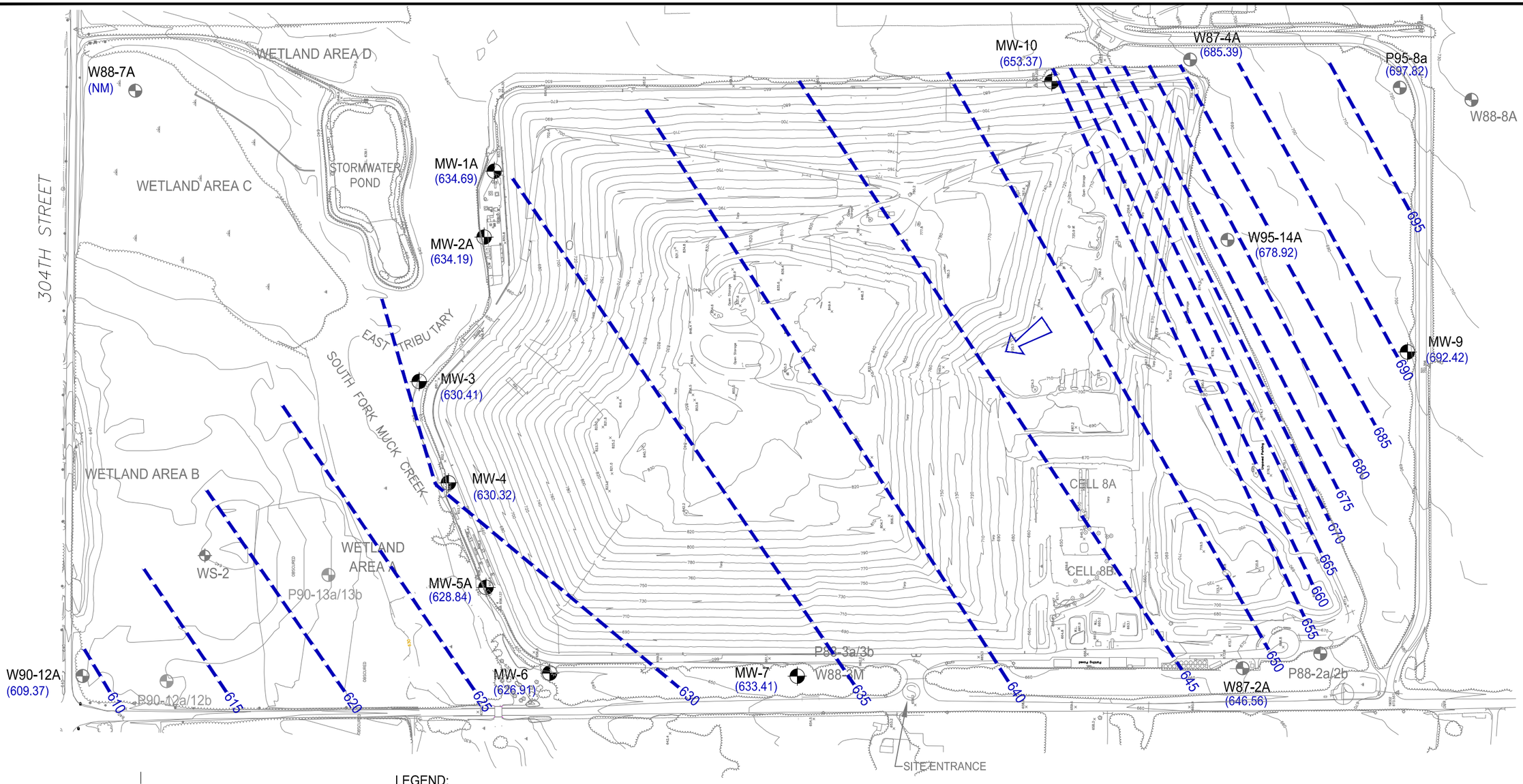
MW-1A	MONITORING WELL
W87-2A	CHARACTERIZATION WELL/ PIEZOMETER
(650.71)	GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
	INFERRED GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED

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. 04221001.02	DES BY SG	POTENTIOMETRIC SURFACE CONTOUR MAP MARCH 9, 2021	DATE JUNE 2021
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



NOTES:

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

LEGEND:

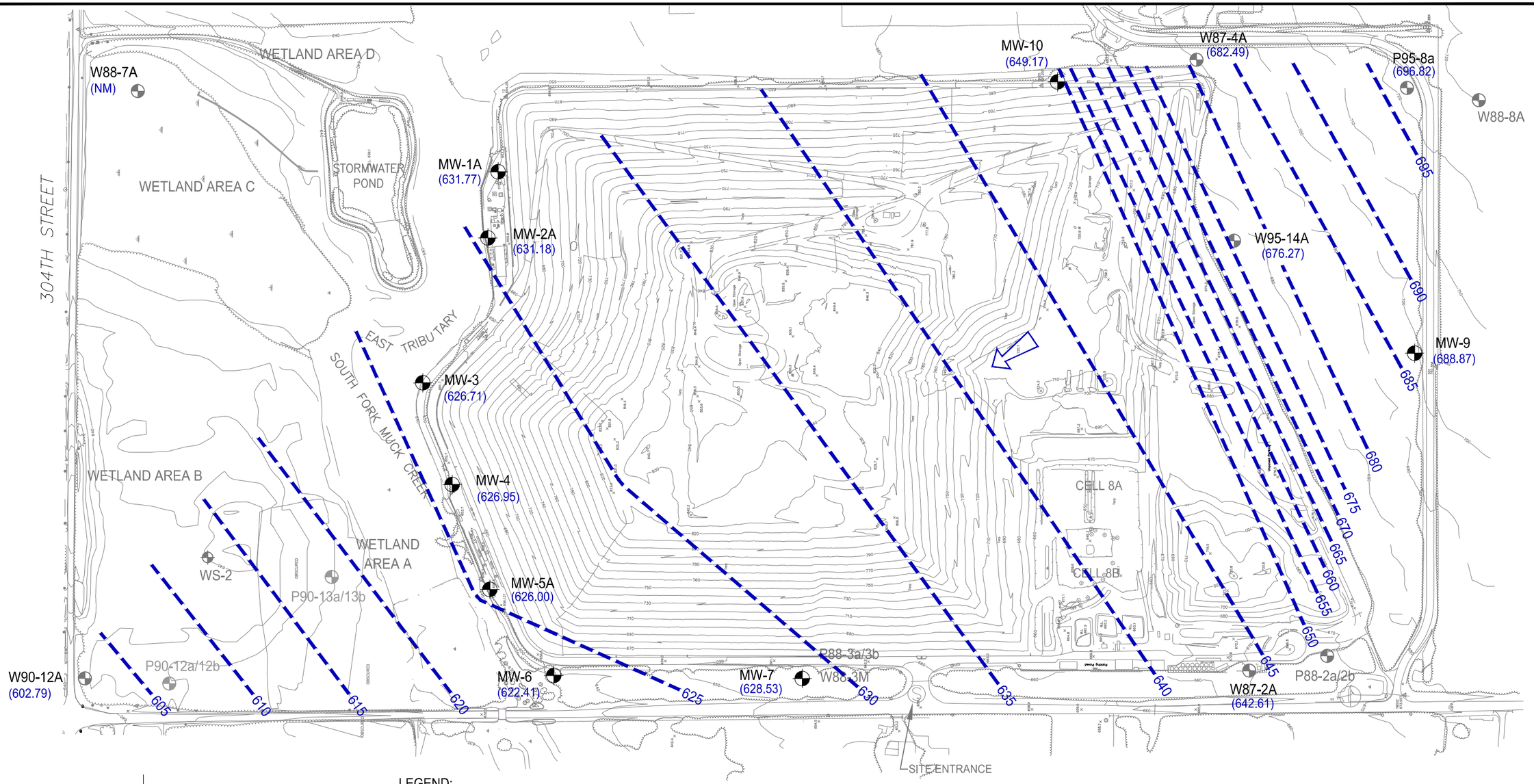
MW-1A	MONITORING WELL
W87-2A	CHARACTERIZATION WELL/ PIEZOMETER
(646.56)	GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
	INFERRED GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED

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. 04221001.02	DES BY SG	POTENTIOMETRIC SURFACE CONTOUR MAP JUNE 15, 2021	DATE SEPTEMBER 2021
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
(642.61)	GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
	INFERRED GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED

NOTES:

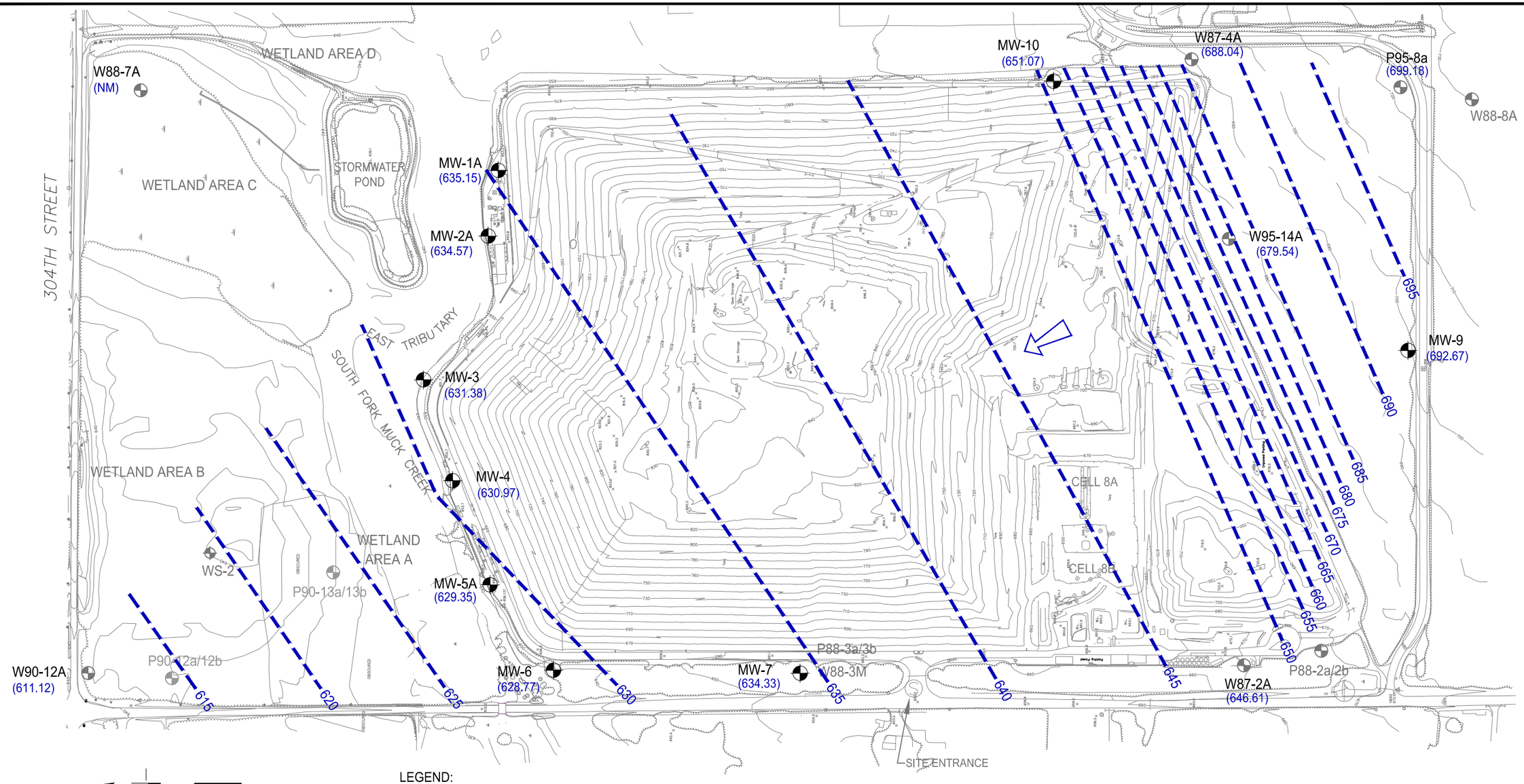
VERTICAL DATUM - BASED ON PIERCE COUNTY BENCH NO. 112-28, ELEVATION 660.29 NGVD29

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. 04221001.02	DES BY SG	POTENTIOMETRIC SURFACE CONTOUR MAP SEPTEMBER 16, 2021	DATE NOVEMBER 2021
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



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
(646.61)	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. 04221001.02	DES BY SG	POTENTIOMETRIC SURFACE CONTOUR MAP DECEMBER 15, 2021	DATE MARCH 2022
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		

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
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
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
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
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
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
W95-14A	677.60	679.50	678.15	676.97	678.57	679.94	679.37			677.28	678.92	676.27	679.54
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
GP-10													
GP-14													
GP-15													
GP-16					668.81					670.51	669.21		670.55
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
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
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

Table 1. Groundwater Level Elevations
March 9, 2021
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	13.30	650.71
W87-4A	693.29	5.32	687.97
W88-3M	658.11	11.52	646.59
W88-7A	632.51	NM*	--
W88-8M	721.05	38.60	682.45
W90-12A	640.84	28.27	612.57
W95-14A	680.49	3.21	677.28
MW-1A[a]	652.57	17.15	635.42
MW-2A[a]	651.93	17.13	634.80
MW-3[a]	637.41	5.85	631.56
MW-4	652.37	21.02	631.35
MW-5A[a]	655.55	25.75	629.80
MW-6[a]	635.71	7.50	628.21
MW-7	656.03	20.50	635.53
MW-9	701.77	7.85	693.92
MW-10	678.37	23.63	654.74
Piezometers			
P13-14A	665.96	21.20	644.76
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	11.00	645.20
P88-3B	655.98	14.55	641.43
P95-8A	722.07	20.65	701.42
P90-12A	640.79	3.96	636.83
P90-12B	640.73	2.68	638.05
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	16.20	635.80
GP-2P[b]	658.61	15.12	643.49
GP-3P[b]	658.51	7.50	651.01
GP-4P[b]	662.01	9.25	652.76
GP-9P[b]	674.03	11.05	662.98
GP-16[b]	689.51	19.00	670.51
South Creek			
SWSC-1	632.68	0.50	632.18
SWSC-2	629.98	6.15	623.83
Leak Detection System			
LDCS-1[a]	657.26	25.75	631.51
LDCS-2A[a]	659.24	28.56	630.68
LDCS-2B[a]	661.70	27.20	634.50

Notes:

NM= not measured

-- = not applicable

Measurements taken on 3/9/2021 unless otherwise noted

a = measurements taken on 3/8/2021

b = Gas probe measurements taken on 3/8/2021

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

Table 1. Groundwater Level Elevations
June 15, 2021
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.45	646.56
W87-4A	693.29	7.90	685.39
W88-3M	658.11	12.60	645.51
W88-7A	632.51	NM*	--
W88-8M	721.05	39.68	681.37
W90-12A	640.84	31.47	609.37
W95-14A	680.49	1.57	678.92
MW-1A	652.57	17.88	634.69
MW-2A	651.93	17.74	634.19
MW-3[a]	637.41	7.00	630.41
MW-4	652.37	22.05	630.32
MW-5A	655.55	26.71	628.84
MW-6[a]	635.71	8.80	626.91
MW-7	656.03	22.62	633.41
MW-9	701.77	9.35	692.42
MW-10	678.37	25.00	653.37
Piezometers			
P13-14A	665.96	21.49	644.47
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	15.72	640.48
P88-3B	655.98	18.42	637.56
P95-8A	722.07	24.25	697.82
P90-12A	640.79	4.42	636.37
P90-12B	640.73	2.99	637.74
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	17.15	634.85
GP-2P[b]	658.61	16.12	642.49
GP-3P[b]	658.51	7.35	651.16
GP-4P[b]	662.01	10.77	651.24
GP-9P[b]	674.03	11.25	662.78
GP-16[b]	689.51	20.30	669.21
South Creek			
SWSC-1	632.68	0.92	631.76
SWSC-2	629.98	5.30	624.68
Leak Detection System			
LDCS-1[a]	657.26	26.30	630.96
LDCS-2A[a]	659.24	28.98	630.26
LDCS-2B[a]	661.70	27.83	633.87

Notes:

NM= not measured

-- = not applicable

Measurements taken on 6/15/2021 unless otherwise noted

a = measurements taken on 6/14/2021

b = Gas probe measurements taken on 6/7/2021

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

Table 1. Groundwater Level Elevations
September 16, 2021
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A[b]	664.01	21.40	642.61
W87-4A[b]	693.29	10.80	682.49
W88-3M	658.11	17.05	641.06
W88-7A	632.51	NM*	--
W88-8M	721.05	41.85	679.20
W90-12A	640.84	38.05	602.79
W95-14A	680.49	4.22	676.27
MW-1A[a]	652.57	20.80	631.77
MW-2A[a]	651.93	20.75	631.18
MW-3[a]	637.41	10.70	626.71
MW-4[b]	652.37	25.42	626.95
MW-5A[a]	655.55	29.55	626.00
MW-6[a]	635.71	13.30	622.41
MW-7[a]	656.03	27.50	628.53
MW-9[b]	701.77	12.90	688.87
MW-10[b]	678.37	29.20	649.17
Piezometers			
P13-14A[b]	665.96	26.80	639.16
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	20.70	635.50
P88-3B	655.98	23.40	632.58
P95-8A	722.07	25.25	696.82
P90-12A	640.79	12.90	627.89
P90-12B	640.73	11.30	629.43
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[c]	652.00	20.00	632.00
GP-2P[c]	658.61	18.00	640.61
GP-3P[c]	658.51	11.70	646.81
GP-4P[c]	662.01	14.35	647.66
GP-9P[c]	674.03	15.55	658.48
GP-16[c]	689.51	Dry	--
South Creek			
SWSC-1	632.68	3.40	629.28
SWSC-2	629.98	Dry	--
Leak Detection System			
LDCS-1[a]	657.26	27.45	629.81
LDCS-2A[a]	659.24	29.68	629.56
LDCS-2B[a]	661.70	28.20	633.50

Notes:

NM= not measured

-- = not applicable

Measurements taken on 9/16/2021 unless otherwise noted

a = measurements taken on 9/14/2021

b = measurement taken on 9/15/2021

c = gas probe measurements taken on 9/12/21

Dry = monitoring location dry, no water present

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

Table 1. Groundwater Level Elevations
December 15, 2021
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.40	646.61
W87-4A	693.29	5.25	688.04
W88-3M	658.11	14.83	643.28
W88-7A	632.51	NM*	--
W88-8M	721.05	39.28	681.77
W90-12A	640.84	29.72	611.12
W95-14A	680.49	0.95	679.54
MW-1A	652.57	17.42	635.15
MW-2A	651.93	17.36	634.57
MW-3	637.41	6.03	631.38
MW-4[a]	652.37	21.40	630.97
MW-5A	655.55	26.20	629.35
MW-6	635.71	6.94	628.77
MW-7	656.03	21.70	634.33
MW-9	701.77	9.10	692.67
MW-10	678.37	27.30	651.07
Piezometers			
P13-14A	665.96	22.31	643.65
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	19.21	636.99
P88-3B	655.98	20.11	635.87
P95-8A	722.07	22.89	699.18
P90-12A	640.79	3.99	636.80
P90-12B	640.73	2.60	638.13
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[c]	652.00	16.40	635.60
GP-2P[c]	658.61	15.80	642.81
GP-3P[c]	658.51	7.80	650.71
GP-4P[c]	662.01	10.50	651.51
GP-9P[c]	674.03	10.20	663.83
GP-16[c]	689.51	18.96	670.55
South Creek			
SWSC-1	632.68	0.93	631.75
SWSC-2	629.98	5.14	624.84
Leak Detection System			
LDCS-1[b]	657.26	25.90	631.36
LDCS-2A[b]	659.24	29.15	630.09
LDCS-2B[b]	661.70	27.75	633.95

Notes:

NM= not measured

-- = not applicable

Measurements taken on 12/15/2021 unless otherwise noted

a = measurements taken on 12/16/2021

b = measurement taken on 12/14/2021

c = gas probe measurements taken on 12/1/2021

* = 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 9, 2021
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	13.30	650.71
W87-4A	693.29	5.32	687.97
W88-3M	658.11	11.52	646.59
W88-7A	632.51	NM*	--
W88-8M	721.05	38.60	682.45
W90-12A	640.84	28.27	612.57
W95-14A	680.49	3.21	677.28
MW-1A[a]	652.57	17.15	635.42
MW-2A[a]	651.93	17.13	634.80
MW-3[a]	637.41	5.85	631.56
MW-4	652.37	21.02	631.35
MW-5A[a]	655.55	25.75	629.80
MW-6[a]	635.71	7.50	628.21
MW-7	656.03	20.50	635.53
MW-9	701.77	7.85	693.92
MW-10	678.37	23.63	654.74
Piezometers			
P13-14A	665.96	21.20	644.76
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	11.00	645.20
P88-3B	655.98	14.55	641.43
P95-8A	722.07	20.65	701.42
P90-12A	640.79	3.96	636.83
P90-12B	640.73	2.68	638.05
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	16.20	635.80
GP-2P[b]	658.61	15.12	643.49
GP-3P[b]	658.51	7.50	651.01
GP-4P[b]	662.01	9.25	652.76
GP-9P[b]	674.03	11.05	662.98
GP-16[b]	689.51	19.00	670.51
South Creek			
SWSC-1	632.68	0.50	632.18
SWSC-2	629.98	6.15	623.83
Leak Detection System			
LDCS-1[a]	657.26	25.75	631.51
LDCS-2A[a]	659.24	28.56	630.68
LDCS-2B[a]	661.70	27.20	634.50

Notes:

NM= not measured

-- = not applicable

Measurements taken on 3/9/2021 unless otherwise noted

a = measurements taken on 3/8/2021

b = Gas probe measurements taken on 3/8/2021

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

Table 2. Field Parameters
First Quarter 2021
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	304-030821-01	3/8/2021	DP	7.27	177	13.0
MW-2A	304-030821-03	3/8/2021	DP	7.33	240	12.7
MW-3	304-030821-05	3/8/2021	DP	7.08	427	9.9
MW-4	304-030921-14	3/9/2021	SP	7.39	338	12.7
MW-5A	304-030821-07	3/8/2021	DP	7.54	406	12.1
MW-6	304-030821-11	3/8/2021	DP	7.45	325	10.4
MW-7	304-030921-15	3/9/2021	DP	7.31	367	10.5
MW-9	304-030921-13	3/9/2021	DP	6.82	130	9.9
MW-10	304-030921-17	3/9/2021	DP	7.02	255	11.1
Leak Detection System						
LDCS-1	304-030821-10	3/8/2021	DB	5.99	428	22.1
LDCS-2A	304-030821-08	3/8/2021	DB	6.44	869	21.2
LDCS-2B	304-030821-06	3/8/2021	DB	6.16	757	20.4
LDCS-3A	304-030821-04	3/8/2021	DP	6.22	900	20.2
LDCS-4A^ (1/5/21)	304-010521-01	1/5/2021	DP	6.49	1420	15.2
LDCS-4A^ (1/15/21)	304-011521-01	1/15/2021	DP	5.95	610	18.1
LDCS-4A^ (1/21/21)	304-012121-01	1/21/2021	DP	6.06	687	17.5
LDCS-4A^ (1/28/21)	304-012821-01	1/28/2021	DP	6.21	806	16.4
LDCS-4A	304-030821-12	3/8/2021	DP	6.17	769	20.5
LDCS-4B	304-030921-16	3/9/2021	DP	6.20	824	27.9
LDCS-5	304-030921-22	3/9/2021	DP	6.36	898	20.4
LDCS-6	304-030921-18	3/9/2021	DP	6.65	879	14.8
LDCS-7	304-030821-02	3/8/2021	DP	6.04	1,076	15.9
LDCS-8A	304-030921-19	3/9/2021	PP	7.11	1,323	14.3
Leachate Collection System						
Leachate, Cell 8A	304-030921-21	3/9/2021	PP	6.70	10,622	13.0

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

PP = peristaltic pump

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

^ = Additional samples collected from LDCS-4A serve as confirmation water quality data

Table 3. Inorganic Parameters
First Quarter 2021
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	0.2-1.2	0.50	0.2-1.0	10	1.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	98	*	1.8	*	2.7	140	*	*
MW-2A	120	*	2.7	*	5.8	150	*	*
MW-3	200	0.12	3.3	*	26	260	1.2	*
MW-4	170	0.15	3.1	*	11	220	*	*
MW-5A	190	0.14	3.4	*	20	230	1.0	*
MW-6	160	0.11	4.9	*	6.8	200	*	*
MW-7	200	0.19	2.9	*	2.9	*	*	*
(BG) MW-9	68	*	1.4	*	1.4	130	*	*
(BG) MW-10	110	*	6.9	3.2	6.1	210	*	12
Leak Detection System								
LDCS-1	200	0.10	4.4	*	5.3	240	3.7	—
LDCS-2A	430	*	4.8	*	27	490	2.8	—
LDCS-2B	340	0.12	7.1	*	49	460	3.8	—
LDCS-3A	410	*	4.4	*	61	530	2.7	—
LDCS-4A^ (1/5/21)	510	36	120	0.24	36	640	—	—
LDCS-4A^ (1/15/21)	240	6.5	19	2.2 H	38	280	9.9	—
LDCS-4A^ (1/21/21)	300	7.0	18	2.0	49	400	6.0	—
LDCS-4A^ (1/28/21)	280	4.7	27	1.4	49	400	4.8	—
LDCS-4A	320	1.20	22	0.63	47	440	4.3	—
LDCS-4B	340	0.32	29	*	49	490	2.2	—
LDCS-5	390	1.2	32	*	46	540	4.1	—
LDCS-6	420	*	4.5	*	45	610	2.1	—
LDCS-7	530	0.11	18	*	36	620	3.6	—
LDCS-8A	630	*	26	*	100	830	8.8	—
Leachate Collection System								
Leachate, Cell 8A	3,500	380	870	*	450	11,000	5,800	—

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 and Tacoma, Washington

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

^ = Additional samples collected from LDCS-4A serve as confirmation water quality data

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

— = Not applicable or not performed

BG = Background

H = Sample was prepped or analyzed beyond the specified holding time

Table 4. WAC 173-351 Appendix I Metals
First Quarter 2021
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	0.005-0.02	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	—	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0098**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.014
MW-5A	—	*	—	**0.0058**	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0074**	—	0.021	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	**0.0053**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.015	—	*
(BG) MW-10	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
Leak Detection System																														
LDCS-1	*	—	0.0096	—	0.020	—	—	—	—	—	*	—	0.0011	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	0.0050	—	0.017	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	0.0130	—	0.029	—	—	—	—	—	*	—	0.0043	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3A	*	—	0.0083	—	0.021	—	—	—	—	—	*	—	0.0053	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A^ (1/5/21)	0.00088 J	—	0.0130	—	0.051	—	—	—	—	—	0.016	—	0.0061	—	0.018	—	0.00069 J	—	0.025	—	—	—	—	—	—	—	0.01 J	—	0.0098 J	—
LDCS-4A^ (1/15/21)	0.00044 J	—	0.0032	—	0.029	—	—	—	—	—	0.0032	—	0.0024	—	0.010	—	*	—	0.0073	—	—	—	—	—	—	—	0.0024 J	—	0.0032 J	—
LDCS-4A^ (1/21/21)	*	—	*	—	0.028	—	—	—	—	—	*	—	0.0025	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A^ (1/28/21)	*	—	*	—	0.026	—	—	—	—	—	*	—	0.0022	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	*	—	0.024	—	—	—	—	—	*	—	0.0022	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	0.0160	—	0.029	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	0.0097	—	0.056	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	0.0072	—	0.018	—	*	—	*	—	*	—	0.0018	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	*	—	0.036	—	*	—	*	—	*	—	0.0035	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8A	*	—	*	—	0.051	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
Leachate Collection System																														
Leachate, Cell 8A	—	*	—	0.028	—	0.83	—	*	—	*	—	0.11	—	0.23	—	0.038	—	0.015	—	0.49	—	*	—	*	—	*	—	0.055	—	4.7

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 and Tacoma, Washington

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

^ = Additional samples collected from LDCS-4A serve as confirmation water quality data

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

— = not applicable or not performed

BG = Background

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 5. WAC 173-351 Appendix II Metals (Dissolved)
First Quarter 2021
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	15	**1.5**	9.6	**0.24**	3.6	11
MW-2A	20	**0.49**	11	**0.28**	2.8	14
MW-3	45	*	20	**0.42**	4.2	15
MW-4	32	*	17	**0.23**	5.5	12
MW-5A	30	*	12	**0.19**	4.4	43
MW-6	34	*	15	**0.18**	4.8	10
MW-7	33	0.19	21	**0.25**	5.3	12
(BG) MW-9	10	*	6.5	*	2.0	7.2
(BG) MW-10	25	*	10	*	2.1	12
Leak Detection System						
LDCS-1	43	2.5	18	1.7	5.0	18
LDCS-2A	97	*	37	0.40	9.0	29
LDCS-2B	85	1.5	33	2.3	7.4	20
LDCS-3A	100	0.37	42	7.1	6.3	24
LDCS-4A^ (1/5/21)	61	0.71	27	0.84	26	130
LDCS-4A^ (1/15/21)	54	*	26	0.59	8.7	32
LDCS-4A^ (1/21/21)	65	*	26	0.75	9.8	29
LDCS-4A^ (1/28/21)	65	*	27	0.78	9.2	28
LDCS-4A	76	0.54	42	1.2	6.8	22
LDCS-4B	93	3.1	39	1.1	6.0	21
LDCS-5	85	0.75	52	1.9	8.6	25
LDCS-6	120	0.20	41	1.5	3.9	25
LDCS-7	140	0.24	44	2.4	3.6	36
LDCS-8A	140	*	79	0.90	5.5	48
Leachate Collection System**						
Leachate, Cell 8A	1200	130	250	29	310	830

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 and Tacoma, Washington

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

^ = Additional samples collected from LDCS-4A serve as confirmation water quality data

* = 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 2021
LRI Landfill, Pierce County, Washington

Parameter	1,1-Dichloroethane	1,2-Dichloroethane	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Chloroethane	Ethylbenzene	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Styrene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MRL	0.50	0.50	0.50	6.00	5.00	10	0.5	0.5-0.84	0.50	1.00	2.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
WAC 173-200 Criteria	1.0	0.50	4.0	—	—	—	1.0	—	—	—	5.0	—	—	—	0.8	—	3.0	—
Monitoring Wells																		
MW-1A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-2A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-5A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Leak Detection System																		
LDCS-1	*	*	0.73	*	*	*	0.60	*	*	*	*	*	*	*	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A^ (1/5/21)	*	*	*	*	*	3.5 J	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A^ (1/15/21)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A^ (1/21/21)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A^ (1/28/21)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	6.9	*	12	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	*	*	9.5	*	*	*	*	*	*	*	*	*	*
LDCS-8A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Leachate Collection System																		
Leachate, Cell 8A	11	61	*	6,000	200	4,400	12	11	15	21	380	68	33	13	11	210	5.0	8.7
Quality Control Samples																		
Field Blank	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Notes:
All sample units are milligrams per liter (µg/L)
Analyses performed by Eurofins TestAmerica of Denver, Colorado and Tacoma, Washingtor
Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown ir**bold**
Method Reporting Limit (MRL) is typical and may be elevated for some sample
^ = Additional samples collected from LDCS-4A serve as confirmation water quality datc
* = sample result was not reported at or above the MRL
— = not applicable or not performed
BG = Background
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

Table 7. Cation-Anion Balance
First Quarter 2021
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	15	9.6	3.6	11	39.2	0.75	0.79	0.08	0.48	2.10	27	36	38
MW-2A	20	11	2.8	14	47.8	1.00	0.91	0.06	0.61	2.58	26	39	35
MW-3	45	20	4.2	15	84.2	2.25	1.65	0.09	0.65	4.64	16	48	35
MW-4	32	17	5.5	12	66.5	1.60	1.40	0.12	0.52	3.64	18	44	38
MW-5A	30	12	4.4	43	89.4	1.50	0.99	0.10	1.87	4.45	44	34	22
MW-6	34	15	4.8	10	63.8	1.70	1.23	0.11	0.44	3.47	16	49	36
MW-7	33	21	5.3	12	71.3	1.65	1.73	0.12	0.52	4.02	16	41	43
MW-9	10.0	6.5	2.0	7.2	25.7	0.50	0.53	0.05	0.31	1.39	26	36	38
MW-10	25	10	2.1	12	49.1	1.25	0.82	0.05	0.52	2.64	22	47	31
LDCS-1	43	18	5.0	18	84	2.15	1.48	0.11	0.78	4.52	20	47	33
LDCS-2A	97	37	9.0	29	172.0	4.84	3.05	0.20	1.26	9.35	16	52	33
LDCS-2B	85	33	7.4	20	145.4	4.24	2.72	0.17	0.87	7.99	13	53	34
LDCS-3A	100	42	6.3	24	172.3	4.99	3.46	0.14	1.04	9.63	12	52	36
LDCS-4A^ (1/5/21)	61	27	26	130	244	3.04	2.22	0.59	5.66	11.51	54	26	19
LDCS-4A^ (1/15/21)	54	26	8.7	32	120.7	2.69	2.14	0.20	1.39	6.42	25	42	33
LDCS-4A^ (1/21/21)	65	26	9.8	29	129.8	3.24	2.14	0.22	1.26	6.87	22	47	31
LDCS-4A^ (1/28/21)	65	27	9.2	28	129.2	3.24	2.22	0.21	1.22	6.89	21	47	32
LDCS-4A	76	42	6.8	22	146.8	3.79	3.46	0.15	0.96	8.36	13	45	41
LDCS-4B	93	39	6.0	21	159.0	4.64	3.21	0.14	0.91	8.90	12	52	36
LDCS-5	85	52	8.6	25	170.6	4.24	4.28	0.19	1.09	9.80	13	43	44
LDCS-6	120	41	3.9	25	189.9	5.99	3.37	0.09	1.09	10.54	11	57	32
LDCS-7	140	44	3.6	36	223.6	6.99	3.62	0.08	1.57	12.25	13	57	30
LDCS-8A	140	79	5.5	48	272.5	6.99	6.50	0.12	2.09	15.70	14	44	41
Leachate, Cell 8A	1200	250	310	830	2,590	59.88	20.58	7.00	36.11	123.56	35	48	17

Anions	mg/L					meq/L					% of Total			Total Ions	Cation - Anion	Applicable	Ratio
	Alk	Cl	NO_3	SO_4	Total	Alk	Cl	NO_3	SO_4	Total	Cl	Alk	SO_4	(meq/L)	Balance	Ratio (%)	Exceedance
MW-1A	117.6	1.8	0.5	2.7	122.6	1.93	0.05	0.008	0.06	2.04	2	94	3	4.14	1.3	10	O
MW-2A	144	2.7	0.5	5.8	153	2.36	0.08	0.008	0.12	2.57	3	92	5	5.14	0.2	5	O
MW-3	240	3.3	0.5	26	269.8	3.94	0.09	0.008	0.54	4.58	2	86	12	9.22	0.7	5	O
MW-4	204	3.1	0.5	11	218.6	3.35	0.09	0.008	0.23	3.67	2	91	6	7.31	0.4	5	O
MW-5A	228	3.4	0.5	20	251.9	3.74	0.10	0.008	0.42	4.26	2	88	10	8.71	2.2	5	O
MW-6	192	4.9	0.5	6.8	204.2	3.15	0.14	0.008	0.14	3.44	4	92	4	6.91	0.6	5	O
MW-7	240	2.9	0.5	2.9	246.3	3.94	0.08	0.008	0.06	4.09	2	96	1	8.10	0.9	5	O
MW-9	81.6	1.4	0.5	1.4	84.9	1.34	0.04	0.008	0.03	1.41	3	95	2	2.81	0.8	10	O
MW-10	132	6.9	3.2	6.1	148.2	2.16	0.19	0.052	0.13	2.54	8	85	5	5.18	2.0	5	O
LDCS-1	240	4.4	0.5	5.3	250.2	3.94	0.12	0.008	0.11	4.18	3	94	3	8.70	4.0	5	O
LDCS-2A	516	4.8	0.5	27	548.3	8.46	0.14	0.008	0.56	9.17	1	92	6	18.52	1.0	5	O
LDCS-2B	408	7.1	0.5	49	464.6	6.69	0.20	0.008	1.02	7.92	3	84	13	15.91	0.5	5	O
LDCS-3A	492	4.4	0.5	61	557.9	8.07	0.12	0.008	1.27	9.47	1	85	13	19.10	0.9	5	O
LDCS-4A^ (1/5/21)	612	120	0.24	36	768	10.04	3.38	0.004	0.75	14.17	24	71	5	25.68	10.4	5	Exceeds
LDCS-4A^ (1/15/21)	288	19	2.2	38	347	4.72	0.54	0.035	0.79	6.08	9	78	13	12.51	2.7	5	O
LDCS-4A^ (1/21/21)	360	18	2.0	49	429	5.90	0.51	0.032	1.02	7.46	7	79	14	14.33	4.2	5	O
LDCS-4A^ (1/28/21)	336	27	1.4	49	413.4	5.51	0.76	0.023	1.02	7.31	10	75	14	14.20	3.0	5	O
LDCS-4A	384	22	0.63	47	454	6.30	0.62	0.010	0.98	7.91	8	80	12	16.27	2.8	5	O
LDCS-4B	408	29	0.5	49	487	6.69	0.82	0.008	1.02	8.54	10	78	12	17.44	2.1	5	O
LDCS-5	468	32	0.5	46	547	7.68	0.90	0.008	0.96	9.54	9	80	10	19.35	1.3	5	O
LDCS-6	504	4.5	0.5	45	554	8.27	0.13	0.008	0.94	9.34	1	89	10	19.87	6.0	5	Exceeds
LDCS-7	636	18	0.5	36	691	10.43	0.51	0.008	0.75	11.69	4	89	6	23.95	2.3	5	O
LDCS-8A	756	26	0.5	100	883	12.40	0.73	0.008	2.08	15.22	5	81	14	30.92	1.6	5	O
Leachate, Cell 8A	4,200	870	0.50	450	5,521	68.88	24.53	0.008	9.36	102.78	24	67	9	226.34	9.2	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
^ = Additional samples collected from LDCS-4A serve as confirmation water quality data
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 2021 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	10	190	190	0.0
Ammonia	0.1	0.14	0.14	0.0
Chloride	0.2	3.4	3.4	0.0
Sulfate	0.2	20	20	0.0
Total Dissolved Solids	10	230	250	8.3
Total Organic Carbon	1.0	1.0	1.0	0.0
Dissolved Metals (mg/L)				
Calcium	0.2	30	29	3.4
Magnesium	0.1	12	12	0.0
Manganese	0.005	0.19	0.19	0.0
Potassium	2.0	4.4	4.3	2.3
Sodium	1.0	43	41	4.8
Total Metals (mg/L)				
Arsenic	0.005	0.0058	0.0060	3.4
Barium	0.005	0.014	0.015	6.9

Notes:
Analyses performed by Eurofins TestAmerica of Denver, Colorado and Tacoma, Washington
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

Table 1. Groundwater Level Elevations
June 15, 2021
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.45	646.56
W87-4A	693.29	7.90	685.39
W88-3M	658.11	12.60	645.51
W88-7A	632.51	NM*	--
W88-8M	721.05	39.68	681.37
W90-12A	640.84	31.47	609.37
W95-14A	680.49	1.57	678.92
MW-1A	652.57	17.88	634.69
MW-2A	651.93	17.74	634.19
MW-3[a]	637.41	7.00	630.41
MW-4	652.37	22.05	630.32
MW-5A	655.55	26.71	628.84
MW-6[a]	635.71	8.80	626.91
MW-7	656.03	22.62	633.41
MW-9	701.77	9.35	692.42
MW-10	678.37	25.00	653.37
Piezometers			
P13-14A	665.96	21.49	644.47
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	15.72	640.48
P88-3B	655.98	18.42	637.56
P95-8A	722.07	24.25	697.82
P90-12A	640.79	4.42	636.37
P90-12B	640.73	2.99	637.74
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	17.15	634.85
GP-2P[b]	658.61	16.12	642.49
GP-3P[b]	658.51	7.35	651.16
GP-4P[b]	662.01	10.77	651.24
GP-9P[b]	674.03	11.25	662.78
GP-16[b]	689.51	20.30	669.21
South Creek			
SWSC-1	632.68	0.92	631.76
SWSC-2	629.98	5.30	624.68
Leak Detection System			
LDCS-1[a]	657.26	26.30	630.96
LDCS-2A[a]	659.24	28.98	630.26
LDCS-2B[a]	661.70	27.83	633.87

Notes:

NM= not measured

-- = not applicable

Measurements taken on 6/15/2021 unless otherwise noted

a = measurements taken on 6/14/2021

b = Gas probe measurements taken on 6/7/2021

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

Table 2. Field Parameters
Second Quarter 2021
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	304-061421-01	6/14/2021	DP	6.63	183	13.6
MW-2A	304-061421-03	6/14/2021	DP	7.00	240	13.2
MW-3	304-061421-05	6/14/2021	DP	7.19	343	10.6
MW-4	304-061521-18	6/15/2021	SP	7.64	304	14.2
MW-5A	304-061421-07	6/14/2021	DP	7.55	357	12.4
MW-6	304-061421-11	6/14/2021	DP	7.60	313	10.6
MW-7	304-061521-15	6/15/2021	DP	7.23	398	10.8
MW-9	304-061521-13	6/15/2021	DP	**6.44**	135	10.4
MW-10	304-061521-17	6/15/2021	DP	**6.32**	252	12.0
Leak Detection System						
LDCS-1	304-061421-10	6/14/2021	DB	6.27	426	22.5
LDCS-2A	304-061421-08	6/14/2021	DB	6.88	825	22.8
LDCS-2B	304-061421-06	6/14/2021	DB	6.71	741	20.8
LDCS-3A	304-061421-04	6/14/2021	DP	6.43	934	21.1
LDCS-4A	304-061421-12	6/14/2021	DP	6.31	669	22.4
LDCS-4B^ (4/26/21)	304-042621-01	4/26/2021	DP	6.21	792	25.5
LDCS-4B	304-061421-14	6/14/2021	DP	6.32	722	28.0
LDCS-5	304-061521-16	6/15/2021	DP	6.40	654	25.6
LDCS-6	304-061521-22	6/15/2021	DP	6.87	900	24.2
LDCS-7	304-061421-02	6/14/2021	DP	6.14	823	20.0
LDCS-8A	304-062421-21	6/24/2021	PP	6.43	746	25.0
Leachate Collection System						
Leachate, Cell 8A	304-061521-19	6/15/2021	PP	6.42	2,830	23.5

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

PP = peristaltic pump

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

^ = Additional sample collected from LDCS-4B serves as confirmation water quality data

Table 3. Inorganic Parameters
Second Quarter 2021
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	0.2-1.2	0.50	0.2-1.0	10	1.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	95	*	1.9	*	2.6	130	*	*
MW-2A	120	*	2.6	*	4.7	160	*	*
MW-3	140	0.12	3.3	*	29	210	*	*
MW-4	160	0.95	2.9	*	7.9	190	1.0	6.0
MW-5A	180	0.15	2.7	*	13	210	1.1	*
MW-6	160	*	4.9	*	6.1	180	1.0	*
MW-7	210	0.23	3.2	*	2.4	230	1.2	*
(BG) MW-9	72	*	1.5	*	1.3	120	*	*
(BG) MW-10	100	*	6.7	2.5	5.4	170	*	12
Leak Detection System								
LDCS-1	220	0.11	4.0	*	4.6	250	3.7	—
LDCS-2A	440	*	5.4	*	27	520	3.0	—
LDCS-2B	360	*	6.7	*	43	470	3.2	—
LDCS-3A	420	0.11	4.2	*	93	630	4.9	—
LDCS-4A	310	0.68	15	*	35	390	4.8	—
LDCS-4B^ (4/26/21)	310	0.20	28	*	38	530	2.7	—
LDCS-4B	310	0.30	18	*	55	450	2.4	—
LDCS-5	290	0.76	14	*	49	390	2.9	—
LDCS-6	410	0.12	5.7	*	44	480	2.4	—
LDCS-7	320	*	8.3	*	96	570	6.3	—
LDCS-8A	660	*	26	2.9	100	840	8.6	—
Leachate Collection System								
Leachate, Cell 8A	990	130	240	*	32	1,500	370	—

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

^ = Additional sample collected from LDCS-4B serves as confirmation water quality data

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

— = Not applicable or not performed

BG = Background

Table 4. WAC 173-351 Appendix I Metals
Second Quarter 2021
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	0.005-0.02	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	—	*	—	*	—	0.020	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-2A	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0110**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.022
MW-5A	—	*	—	**0.0055**	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0069**	—	0.011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	*	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.014	—	*
(BG) MW-10	—	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
Leak Detection System																														
LDCS-1	*	—	0.0086	—	0.021	—	—	—	—	—	*	—	0.0011	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	*	—	0.022	—	—	—	—	—	*	—	0.00085	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	0.0082	—	0.027	—	—	—	—	—	*	—	0.0067	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3A	*	—	0.0076	—	0.020	—	—	—	—	—	*	—	0.0170	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	*	—	0.027	—	—	—	—	—	*	—	0.0021	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B^ (4/26/21)	*	—	0.0067	—	0.030	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	0.0068	—	0.028	—	—	—	—	—	*	—	0.0007	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	*	—	0.037	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	0.0053	—	0.014	—	*	—	*	—	*	—	0.00082	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	*	—	0.030	—	*	—	*	—	*	—	0.0020	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8A	*	—	*	—	0.048	—	*	—	*	—	*	—	0.0029	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
Leachate Collection System																														
Leachate, Cell 8A	—	*	—	0.014	—	0.083	—	*	—	*	—	0.023	—	0.010	—	0.016	—	0.0043	—	0.061	—	*	—	*	—	*	—	0.019	—	1.3

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

^ = Additional sample collected from LDCS-4B serves as confirmation water quality data

* = 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 2021
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	15	**1.4**	9.8	**0.24**	3.4	14
MW-2A	18	**0.52**	10	**0.28**	2.7	13
MW-3	33	*	15	**0.27**	3.5	12
MW-4	27	*	15	**0.22**	4.9	12
MW-5A	27	*	11	**0.17**	4.2	41
MW-6	31	*	14	**0.30**	4.5	9.9
MW-7	31	0.22	23	**0.27**	5.0	15
(BG) MW-9	10	*	6.5	*	*	6.9
(BG) MW-10	21	*	9.7	*	*	11
Leak Detection System						
LDCS-1	41	0.58	18	1.6	4.7	18
LDCS-2A	94	*	38	1.6	8.4	28
LDCS-2B	83	0.42	34	3.0	6.5	19
LDCS-3A	100	0.33	44	14	5.8	23
LDCS-4A	63	1.3	35	1.6	5.9	20
LDCS-4B^ (4/26/21)	82	1.3	37	0.99	5.7	20
LDCS-4B	74	1.2	33	0.88	5.2	19
LDCS-5	61	*	31	1.0	6.0	23
LDCS-6	100	*	33	0.93	3.1	19
LDCS-7	110	0.12	32	1.3	3.8	28
LDCS-8A	140	0.17	87	2.5	6.4	48
Leachate Collection System**						
Leachate, Cell 8A	120	9.3	47	3.0	84	210

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

^ = Additional sample collected from LDCS-4B serves as confirmation water quality data

* = 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 2021
LRI Landfill, Pierce County, Washington

Parameter	1,2-Dichloroethane	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Toluene	Trichloroethene	Vinyl Chloride
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MRL	0.50	0.50	6.00	5.00	10	0.5	0.5-0.84	0.50	0.50	1.00	2.00	0.50	0.50	0.50	0.50	0.50
WAC 173-200 Criteria	0.50	4.0	—	—	—	1.0	—	7.0	—	—	5.0	—	—	—	3.0	0.02
Monitoring Wells																
MW-1A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-2A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-5A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Leak Detection System																
LDCS-1	*	0.79	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-3A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B^ (4/26/21)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	*	11	*	*	*	*	*	*	*	*	*
LDCS-8A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Leachate Collection System																
Leachate, Cell 8A	10	*	4,200	65	2,900	4.1	*	3.5	3.5	7.6	9.7	18	8.0	79	3.3	2.1
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 LDCS-4B 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
Second Quarter 2021
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	15	9.8	3.4	14	42.2	0.75	0.81	0.08	0.61	2.24	31	33	36
MW-2A	18	10	2.7	13	43.7	0.90	0.82	0.06	0.57	2.35	27	38	35
MW-3	33	15	3.5	12	63.5	1.65	1.23	0.08	0.52	3.48	17	47	35
MW-4	27	15	4.9	12	58.9	1.35	1.23	0.11	0.52	3.21	20	42	38
MW-5A	27	11	4.2	41	83.2	1.35	0.91	0.09	1.78	4.13	45	33	22
MW-6	31	14	4.5	10	59.4	1.55	1.15	0.10	0.43	3.23	16	48	36
MW-7	31	23	5.0	15	74	1.55	1.89	0.11	0.65	4.21	18	37	45
MW-9	9.5	6.5	2.0	6.9	24.9	0.47	0.53	0.05	0.30	1.35	25	35	39
MW-10	21	9.7	2.0	11	43.7	1.05	0.80	0.05	0.48	2.37	22	44	34
LDCS-1	41	18	4.7	18	81.7	2.05	1.48	0.11	0.78	4.42	20	46	34
LDCS-2A	94	38	8.4	28	168.4	4.69	3.13	0.19	1.22	9.23	15	51	34
LDCS-2B	83	34	6.5	19	142.5	4.14	2.80	0.15	0.83	7.91	12	52	35
LDCS-3A	100	44	5.8	23	172.8	4.99	3.62	0.13	1.00	9.74	12	51	37
LDCS-4A	63	35	5.9	20	123.9	3.14	2.88	0.13	0.87	7.03	14	45	41
LDCS-4B^ (4/26/21)	82	37	5.7	20	144.7	4.09	3.05	0.13	0.87	8.14	12	50	37
LDCS-4B	74	33	5.2	19	131.2	3.69	2.72	0.12	0.83	7.35	13	50	37
LDCS-5	61	31	6.0	23	121.0	3.04	2.55	0.14	1.00	6.73	17	45	38
LDCS-6	100	33	3.1	19	155.1	4.99	2.72	0.07	0.83	8.60	10	58	32
LDCS-7	110	32	3.8	28	173.8	5.49	2.63	0.09	1.22	9.43	14	58	28
LDCS-8A	140	87	6.4	48	281.4	6.99	7.16	0.14	2.09	16.38	14	43	44
Leachate, Cell 8	120	47	84	210	461	5.99	3.87	1.90	9.14	20.89	53	29	19

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	114	1.9	0.5	2.6	119	1.87	0.05	0.008	0.05	1.99	3	94	3	4.23	6.0	10	O
MW-2A	144	2.6	0.5	4.7	151.8	2.36	0.07	0.008	0.10	2.54	3	93	4	4.89	3.9	10	O
MW-3	168	3.3	0.5	29	200.8	2.76	0.09	0.008	0.60	3.46	3	80	17	6.94	0.3	5	O
MW-4	192	2.9	0.5	7.9	203.3	3.15	0.08	0.008	0.16	3.40	2	93	5	6.62	2.8	5	O
MW-5A	216	2.7	0.5	13	232.2	3.54	0.08	0.008	0.27	3.90	2	91	7	8.03	2.9	5	O
MW-6	192	4.9	0.5	6.1	203.5	3.15	0.14	0.008	0.13	3.42	4	92	4	6.65	2.9	5	O
MW-7	252	3.2	0.5	2.4	258.1	4.13	0.09	0.008	0.05	4.28	2	97	1	8.49	0.9	5	O
MW-9	86.4	1.5	0.5	1.3	89.7	1.42	0.04	0.008	0.03	1.49	3	95	2	2.85	4.9	10	O
MW-10	120	6.7	2.5	5.4	134.6	1.97	0.19	0.040	0.11	2.31	8	85	5	4.68	1.3	10	O
LDCS-1	264	4.0	0.5	4.6	273.1	4.33	0.11	0.008	0.10	4.55	2	95	2	8.96	1.4	5	O
LDCS-2A	528	5.4	0.5	27	560.9	8.66	0.15	0.008	0.56	9.38	2	92	6	18.61	0.8	5	O
LDCS-2B	432	6.7	0.5	43	482.2	7.08	0.19	0.008	0.89	8.18	2	87	11	16.09	1.6	5	O
LDCS-3A	504	4.2	0.5	93	601.7	8.27	0.12	0.008	1.93	10.33	1	80	19	20.07	2.9	5	O
LDCS-4A	372	15	0.5	35	423	6.10	0.42	0.008	0.73	7.26	6	84	10	14.29	1.6	5	O
LDCS-4B^ (4/26/21)	372	28	0.5	38	439	6.10	0.79	0.008	0.79	7.69	10	79	10	15.82	2.8	5	O
LDCS-4B	372	18	0.5	55	446	6.10	0.51	0.008	1.14	7.76	7	79	15	15.11	2.7	5	O
LDCS-5	348	14	0.5	49	412	5.71	0.39	0.008	1.02	7.13	6	80	14	13.86	2.9	5	O
LDCS-6	492	5.7	0.5	44	542	8.07	0.16	0.008	0.92	9.15	2	88	10	17.76	3.1	5	O
LDCS-7	384	8.3	0.5	96	489	6.30	0.23	0.008	2.00	8.54	3	74	23	17.96	5.0	5	O
LDCS-8A	792	26	2.9	100	921	12.99	0.73	0.047	2.08	15.85	5	82	13	32.23	1.6	5	O
Leachate, Cell 8	1,188	240	0.50	32	1,461	19.48	6.77	0.008	0.67	26.92	25	72	2	47.81	12.6	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].
^ = Additional sample collected from LDCS-4B serves as confirmation water quality data
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 2021 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	180	180	0.0
Ammonia	0.1	0.15	0.16	6.5
Chloride	0.2	2.7	2.7	0.0
Sulfate	0.2	13	13	0.0
Total Dissolved Solids	10	210	210	0.0
Total Organic Carbon	1.0	1.1	1.1	0.0
Dissolved Metals (mg/L)				
Calcium	0.2	27	25	7.7
Magnesium	0.1	11	11	0.0
Manganese	0.005	0.17	0.18	5.7
Potassium	2.0	4.2	3.9	7.4
Sodium	1.0	41	34	18.7
Total Metals (mg/L)				
Arsenic	0.005	0.0055	0.0055	0.0
Barium	0.005	0.013	0.013	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

Table 1. Groundwater Level Elevations
September 16, 2021
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A[b]	664.01	21.40	642.61
W87-4A[b]	693.29	10.80	682.49
W88-3M	658.11	17.05	641.06
W88-7A	632.51	NM*	--
W88-8M	721.05	41.85	679.20
W90-12A	640.84	38.05	602.79
W95-14A	680.49	4.22	676.27
MW-1A[a]	652.57	20.80	631.77
MW-2A[a]	651.93	20.75	631.18
MW-3[a]	637.41	10.70	626.71
MW-4[b]	652.37	25.42	626.95
MW-5A[a]	655.55	29.55	626.00
MW-6[a]	635.71	13.30	622.41
MW-7[a]	656.03	27.50	628.53
MW-9[b]	701.77	12.90	688.87
MW-10[b]	678.37	29.20	649.17
Piezometers			
P13-14A[b]	665.96	26.80	639.16
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	20.70	635.50
P88-3B	655.98	23.40	632.58
P95-8A	722.07	25.25	696.82
P90-12A	640.79	12.90	627.89
P90-12B	640.73	11.30	629.43
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[c]	652.00	20.00	632.00
GP-2P[c]	658.61	18.00	640.61
GP-3P[c]	658.51	11.70	646.81
GP-4P[c]	662.01	14.35	647.66
GP-9P[c]	674.03	15.55	658.48
GP-16[c]	689.51	Dry	--
South Creek			
SWSC-1	632.68	3.40	629.28
SWSC-2	629.98	Dry	--
Leak Detection System			
LDCS-1[a]	657.26	27.45	629.81
LDCS-2A[a]	659.24	29.68	629.56
LDCS-2B[a]	661.70	28.20	633.50

Notes:

NM= not measured

-- = not applicable

Measurements taken on 9/16/2021 unless otherwise noted

a = measurements taken on 9/14/2021

b = measurement taken on 9/15/2021

c = gas probe measurements taken on 9/12/21

Dry = monitoring location dry, no water present

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

Table 2. Field Parameters
Third Quarter 2021
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	304-091421-05	9/14/2021	DP	7.05	183	14.6
MW-2A	304-091421-01	9/14/2021	DP	7.21	274	13.2
MW-3	304-091421-03	9/14/2021	DP	7.48	336	10.9
MW-4	304-091521-14	9/15/2021	SP	7.38	319	14.6
MW-5A	304-091421-07	9/14/2021	DP	7.64	279	13.5
MW-6	304-091421-11	9/14/2021	DP	7.66	305	11.1
MW-7	304-091421-13	9/14/2021	DP	7.47	351	11.0
MW-9	304-091521-17	9/15/2021	DP	6.92	132	10.8
MW-10	304-091521-15	9/15/2021	DP	**6.42**	253	12.5
Leak Detection System						
LDCS-1	304-091421-10	9/14/2021	DB	5.84	583	21.6
LDCS-1* (10/21/21)	304-102121-01	10/21/2021	GB	6.35	736	17.8
LDCS-2A	304-091421-08	9/14/2021	DB	6.18	924	25.1
LDCS-2A* (10/21/21)	304-102121-02	10/21/2021	GB	6.61	873	20.0
LDCS-2B	304-091421-06	9/14/2021	DB	6.33	998	25.4
LDCS-2B* (10/21/21)	304-102121-03	10/21/2021	GB	6.38	887	18.4
LDCS-3A	304-091421-04	9/14/2021	DP	6.10	905	20.4
LDCS-4A	304-091421-12	9/14/2021	DP	6.26	839	23.0
LDCS-4B	304-091521-20	9/15/2021	DP	6.65	1,003	24.7
LDCS-5	304-091621-22	9/16/2021	DP	6.56	968	23.4
LDCS-6	304-091521-16	9/15/2021	DP	7.17	823	24.0
LDCS-7	304-091421-02	9/14/2021	DP	5.96	1,013	24.0
LDCS-8^ (8/19/21)	304-081921-01	8/19/2021	GB	7.40	949	NM
LDCS-8^ (9/15/21)	304-091521-19	9/15/2021	GB	6.60	1,247	19.0
LDCS-8^ (10/15/21)	304-101521-01	10/15/2021	GB	6.59	53	16.3
Leachate Collection System						
Leachate, Cell 8A	304-091521-21	9/15/2021	PP	7.41	14,245	24.0

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

NM = parameter not measured

PP = peristaltic pump

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

* = Additional samples collected serve as confirmation water quality data

^ = Additional samples collected from LDCS-8 serve as background water quality data

Table 3. Inorganic Parameters
Third Quarter 2021
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	0.2-1.2	0.50	0.2-1.0	10	1.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	100	0.15	1.9	*	2.9	150	*	*
MW-2A	130	0.18	3.1	*	12	200	*	4.0
MW-3	150	0.13	3.5	*	31	230	*	*
MW-4	160	0.14	2.7	*	7.5	200	*	6.4
MW-5A	150	*	1.9	* H	4.3	200	*	*
MW-6	160	0.13	4.5	* H	6.5	180	*	4.0
MW-7	190	0.21	2.7	* H	4.1	210	*	*
(BG) MW-9	71	*	1.5	*	1.5	120	*	*
(BG) MW-10	110	*	6.8	2.9	6.1	180	*	6.8
Leak Detection System								
LDCS-1	330	0.25	4.1	*	5.9	360	3.6	—
LDCS-2A	500	0.24	5.1	*	25	540	3.4	—
LDCS-2B	480	0.35	6.1	*	71	22	3.7	—
LDCS-3A	440	0.28	3.5	*	59	530	1.8	—
LDCS-4A	390	0.59	15	*	54	16	4.4	—
LDCS-4B	430	0.15	16	*	96	600	2.5	—
LDCS-5	460	0.88	20	*	59	420	4.6	—
LDCS-6	420	*	4.8	*	47	510	1.8	—
LDCS-7	520	0.12	11	*	34	610	7.3	—
LDCS-8^ (8/19/21)	370	*	13	*	42	450	7.3	—
LDCS-8^ (9/15/21)	610	*	24	0.69	93	770	9.1	—
LDCS-8^ (10/15/21)	34	*	2.8	*	19	75	7.4	—
Leachate Collection System								
Leachate, Cell 8A	5,300	710	1,500	2.9	27	5,100	850	—

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

^ = Additional samples collected from LDCS-8 serve as background water quality data

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

— = Not applicable or not performed

BG = Background

H = analyzed after specified holding time due to Fedex delay

Table 4. WAC 173-351 Appendix I Metals
Third Quarter 2021
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	—	*	—	*	—	0.019	—	*	—	*	—	*	—	*	—	*	—	0.0031	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.010	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0120**	—	0.017	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.021
MW-5A	—	*	—	*	—	0.011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0073**	—	0.019	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	**0.0057**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.015	—	*
(BG) MW-10	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.011
Leak Detection System																														
LDCS-1	*	—	0.0140	—	0.030	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	0.0160	—	0.045	—	—	—	—	—	*	—	0.0027	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	0.0430	—	0.054	—	—	—	—	—	*	—	0.0078	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3A	*	—	0.0140	—	0.024	—	—	—	—	—	*	—	0.0026	—	*	—	0.0045	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	0.0160	—	0.033	—	—	—	—	—	*	—	0.0019	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	0.0150	—	0.034	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	*	—	0.050	—	*	—	*	—	*	—	*	—	*	—	0.0020	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	0.0082	—	0.043	—	*	—	*	—	*	—	0.0062	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8^ (8/19/21)	*	—	*	—	0.027	—	*	—	*	—	*	—	0.0015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.048	—
LDCS-8^ (9/15/21)	*	—	*	—	0.045	—	*	—	*	—	*	—	0.0040	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8^ (10/15/21)	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
Leachate Collection System																														
Leachate, Cell 8A	—	*	—	0.100	—	0.410	—	*	—	*	—	0.250	—	0.040	—	0.046	—	0.026	—	0.310	—	*	—	*	—	*	—	0.099	—	0.370

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

^ = Additional samples collected from LDCS-8 serve as background water quality data

* = 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 2021
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	**1.5**	8.9	**0.24**	3.4	12
MW-2A	22	**0.62**	12	**0.28**	3.2	16
MW-3	32	*	14	**0.23**	3.4	12
MW-4	27	*	14	**0.21**	5.0	12
MW-5A	25	*	10	**0.15**	3.4	15
MW-6	29	*	13	**0.17**	4.2	9.6
MW-7	27	0.18	19	**0.22**	4.9	13
(BG) MW-9	9.6	*	6.4	*	*	7.1
(BG) MW-10	23	*	10	*	*	12
Leak Detection System						
LDCS-1	63	2.9	28	2.2	6.0	20
LDCS-2A	100	3.2	40	5.3	9.3	29
LDCS-2B	100	8.6	41	5.8	8.1	21
LDCS-3A	96	1.6	43	3.2	6.5	23
LDCS-4A	74	4.2	49	2.2	6.4	22
LDCS-4B	100	2.0	51	1.0	7.0	23
LDCS-5	86	*	58	1.2	8.4	27
LDCS-6	100	*	54	0.07	4.8	21
LDCS-7	120	0.78	41	3.8	3.9	32
LDCS-8^ (8/19/21)	69	1.5	40	1.2	4.2	30
LDCS-8^ (9/15/21)	130	0.11	59	1.8	4.9	54
LDCS-8^ (10/15/21)	10	*	3.1	0.12	*	4.7
Leachate Collection System**						
Leachate, Cell 8A	140	4.5	210	1.2	420	1,600

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

^ = Additional samples collected from LDCS-8 serve as background water quality data

* = 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 2021
LRI Landfill, Pierce County, Washington

Parameter	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Chloromethane	cis-1,2-Dichloroethene	Ethylbenzene	m-Xylene & p-Xylene	o-Xylene	Toluene	Vinyl Chloride
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MRL	0.50	6.00	5.00	10	0.5	0.5-0.84	3.0	0.50	1.00	0.50	0.50	0.50	0.50
WAC 173-200 Criteria	4.0	—	—	—	1.0	—	—	—	—	—	—	—	0.02
Monitoring Wells													
MW-1A	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-2A	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-5A	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*	*	*	*
Leak Detection System													
LDCS-1	1.1	*	*	10	*	*	*	*	*	*	*	*	*
LDCS-1** (10/21/21)	0.93	*	*	140	*	0.82	*	*	*	*	*	*	*
LDCS-2A	*	*	*	28	*	*	*	*	*	*	*	*	*
LDCS-2A** (10/21/21)	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	92	*	*	*	*	*	*	*	*	*
LDCS-2B** (10/21/21)	*	*	*	26	*	*	*	*	*	0.54	*	*	*
LDCS-3A	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	3.4	*	*	*	*	*	*	*
LDCS-8^ (8/19/21)	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8^ (9/15/21)	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8^ (10/15/21)	*	*	*	*	*	*	*	*	*	*	*	*	*
Leachate Collection System													
Leachate, Cell 8A	*	69	130	*	3.9	*	4.5	1.6	7.3	16	9.1	44	60
Quality Control Samples													
Trip Blank (280-153032-5)	*	*	*	36	*	*	*	*	*	*	*	*	*
Field Blank	*	*	*	10	*	*	*	*	*	*	*	*	*
Field Blank (10/21/21)	*	*	*	*	*	*	*	*	*	*	*	*	*

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 samples collected from LDCS-8 serve as background water quality data
** = Additional samples collected serve 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
Third Quarter 2021
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	8.9	3.4	12	38.3	0.70	0.73	0.08	0.52	2.03	29	34	36
MW-2A	22	12	3.2	16	53.2	1.10	0.99	0.07	0.70	2.85	27	38	35
MW-3	32	14	3.4	12	61.4	1.60	1.15	0.08	0.52	3.35	18	48	34
MW-4	27	14	5.0	12	58	1.35	1.15	0.11	0.52	3.13	20	43	37
MW-5A	25	10	3.4	15	53.4	1.25	0.82	0.08	0.65	2.80	26	45	29
MW-6	29	13	4.2	9.6	55.8	1.45	1.07	0.09	0.42	3.03	17	48	35
MW-7	27	19	4.9	13	63.9	1.35	1.56	0.11	0.57	3.59	19	38	44
MW-9	9.6	6.4	2.0	7.1	25.1	0.48	0.53	0.05	0.31	1.36	26	35	39
MW-10	23	10	2.0	12	47.0	1.15	0.82	0.05	0.52	2.54	22	45	32
LDCS-1	63	28	6.0	20	117	3.14	2.30	0.14	0.87	6.45	16	49	36
LDCS-2A	100	40	9.3	29	178.3	4.99	3.29	0.21	1.26	9.75	15	51	34
LDCS-2B	100	41	8.1	21	170.1	4.99	3.37	0.18	0.91	9.46	12	53	36
LDCS-3A	96	43	6.5	23	168.5	4.79	3.54	0.15	1.00	9.48	12	51	37
LDCS-4A	74	49	6.4	22	151.4	3.69	4.03	0.14	0.96	8.83	12	42	46
LDCS-4B	100	51	7.0	23	181	4.99	4.20	0.16	1.00	10.35	11	48	41
LDCS-5	86	58	8.4	27	179.4	4.29	4.77	0.19	1.17	10.43	13	41	46
LDCS-6	100	54	4.8	21	179.8	4.99	4.44	0.11	0.91	10.46	10	48	43
LDCS-7	120	41	3.9	32	196.9	5.99	3.37	0.09	1.39	10.84	14	55	31
LDCS-8^ (8/19/21)	69	40	4.2	30	143.2	3.44	3.29	0.09	1.31	8.13	17	42	40
LDCS-8^ (9/15/21)	130	59	4.9	54	247.9	6.49	4.86	0.11	2.35	13.80	18	47	35
LDCS-8^ (10/15/21)	10	3.1	2.0	4.7	19.8	0.50	0.26	0.05	0.20	1.00	25	50	25
Leachate, Cell 8A	140	210	420	1,600	2,370	6.99	17.28	9.48	69.60	103.35	77	7	17

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	120	1.9	0.5	2.9	125.3	1.97	0.05	0.008	0.06	2.09	3	94	3	4.12	1.5	10	O
MW-2A	156	3.1	0.5	12	171.6	2.56	0.09	0.008	0.25	2.90	3	88	9	5.76	0.9	5	O
MW-3	180	3.5	0.5	31	215	2.95	0.10	0.008	0.64	3.70	3	80	17	7.05	5.05	5	Exceeds
MW-4	192	2.7	0.5	7.5	202.7	3.15	0.08	0.008	0.16	3.39	2	93	5	6.52	3.9	5	O
MW-5A	180	1.9	0.5	4.3	186.7	2.95	0.05	0.008	0.09	3.10	2	95	3	5.90	5.1	5	Exceeds
MW-6	192	4.5	0.5	6.5	203.5	3.15	0.13	0.008	0.14	3.42	4	92	4	6.45	6.0	5	Exceeds
MW-7	228	2.7	0.5	4.1	235.3	3.74	0.08	0.008	0.09	3.91	2	96	2	7.50	4.3	5	O
MW-9	85.2	1.5	0.5	1.5	88.7	1.40	0.04	0.008	0.03	1.48	3	94	2	2.84	4.2	10	O
MW-10	132	6.8	2.9	6.1	147.8	2.16	0.19	0.047	0.13	2.53	8	86	5	5.07	0.2	5	O
LDCS-1	396	4.1	0.5	5.9	406.5	6.49	0.12	0.008	0.12	6.74	2	96	2	13.19	2.2	5	O
LDCS-2A	600	5.1	0.5	25	630.6	9.84	0.14	0.008	0.52	10.51	1	94	5	20.27	3.7	5	O
LDCS-2B	576	6.1	0.5	71	653.6	9.45	0.17	0.008	1.48	11.10	2	85	13	20.56	8.0	5	Exceeds
LDCS-3A	528	3.5	0.5	59	591	8.66	0.10	0.008	1.23	9.99	1	87	12	18.82	6.2	5	Exceeds
LDCS-4A	468	15	0.5	54	538	7.68	0.42	0.008	1.12	9.23	5	83	12	19.58	5.7	5	Exceeds
LDCS-4B	516	16	0.5	96	629	8.46	0.45	0.008	2.00	10.92	4	78	18	21.35	2.3	5	O
LDCS-5	552	20	0.5	59	632	9.05	0.56	0.008	1.23	10.85	5	83	11	21.31	1.9	5	O
LDCS-6	504	4.8	0.5	47	556	8.27	0.14	0.008	0.98	9.39	1	88	10	20.23	7.2	5	Exceeds
LDCS-7	624	11	0.5	34	670	10.23	0.31	0.008	0.71	11.26	3	91	6	19.39	16.1	5	Exceeds
LDCS-8^ (8/19/21)	444	13	0.5	42	500	7.28	0.37	0.008	0.87	8.53	4	85	10	22.33	23.6	5	Exceeds
LDCS-8^ (9/15/21)	732	24	0.69	93	850	12.00	0.68	0.011	1.93	14.63	5	82	13	15.63	87.2	5	Exceeds
LDCS-8^ (10/15/21)	40.8	2.8	0.5	19	63	0.67	0.08	0.008	0.40	1.15	7	58	34	2.16	6.8	10	O
Leachate, Cell 8A	6,360	1,500	2.9	27	7,890	104.30	42.30	0.047	0.56	147.21	29	71	0	250.56	17.5	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].
^ = Additional samples collected from LDCS-8 serve as background water quality data
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 2021 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	150	150	0.0
Ammonia	0.1	*	0.13	26.1
Chloride	0.2	1.9	2.0	5.1
Sulfate	0.2	4.3	4.4	2.3
Total Dissolved Solids	10	200	170	16.2
Dissolved Metals (mg/L)				
Calcium	0.2	25	25	0.0
Magnesium	0.1	10	10	0.0
Manganese	0.005	0.15	0.15	0.0
Potassium	2.0	3.4	3.4	0.0
Sodium	1.0	15	15	0.0
Total Metals (mg/L)				
Barium	0.005	0.011	0.011	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

Table 1. Groundwater Level Elevations
December 15, 2021
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.40	646.61
W87-4A	693.29	5.25	688.04
W88-3M	658.11	14.83	643.28
W88-7A	632.51	NM*	--
W88-8M	721.05	39.28	681.77
W90-12A	640.84	29.72	611.12
W95-14A	680.49	0.95	679.54
MW-1A	652.57	17.42	635.15
MW-2A	651.93	17.36	634.57
MW-3	637.41	6.03	631.38
MW-4[a]	652.37	21.40	630.97
MW-5A	655.55	26.20	629.35
MW-6	635.71	6.94	628.77
MW-7	656.03	21.70	634.33
MW-9	701.77	9.10	692.67
MW-10	678.37	27.30	651.07
Piezometers			
P13-14A	665.96	22.31	643.65
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	19.21	636.99
P88-3B	655.98	20.11	635.87
P95-8A	722.07	22.89	699.18
P90-12A	640.79	3.99	636.80
P90-12B	640.73	2.60	638.13
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[c]	652.00	16.40	635.60
GP-2P[c]	658.61	15.80	642.81
GP-3P[c]	658.51	7.80	650.71
GP-4P[c]	662.01	10.50	651.51
GP-9P[c]	674.03	10.20	663.83
GP-16[c]	689.51	18.96	670.55
South Creek			
SWSC-1	632.68	0.93	631.75
SWSC-2	629.98	5.14	624.84
Leak Detection System			
LDCS-1[b]	657.26	25.90	631.36
LDCS-2A[b]	659.24	29.15	630.09
LDCS-2B[b]	661.70	27.75	633.95

Notes:

NM= not measured

-- = not applicable

Measurements taken on 12/15/2021 unless otherwise noted

a = measurements taken on 12/16/2021

b = measurement taken on 12/14/2021

c = gas probe measurements taken on 12/1/2021

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

Table 2. Field Parameters
Fourth Quarter 2021
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	304-121521-08	12/15/2021	DP	6.98	178	13.4
MW-2A	304-121521-10	12/15/2021	DP	7.17	284	12.8
MW-3	304-121521-18	12/15/2021	DP	7.37	414	10.5
MW-4	304-121621-21	12/16/2021	SP	7.59	371	12.6
MW-4* (1/20/22)	304-012022-01	1/20/2022	SP	7.60	375	12.8
MW-5A	304-121521-12	12/15/2021	DP	7.66	340	12.3
MW-6	304-121521-16	12/15/2021	DP	7.63	364	10.6
MW-7	304-121521-20	12/15/2021	DP	7.63	360	10.6
MW-9	304-121521-09	12/15/2021	DP	**6.36**	137	9.9
MW-10	304-121521-11	12/15/2021	DP	**6.42**	269	10.8
Leak Detection System						
LDCS-1	304-121421-05	12/14/2021	DB	6.16	407	17.2
LDCS-2A	304-121421-04	12/14/2021	DB	7.39	831	15.6
LDCS-2B	304-121421-03	12/14/2021	DB	7.03	766	14.0
LDCS-3A	304-121421-02	12/14/2021	DP	6.62	963	18.0
LDCS-4A	304-121421-06	12/14/2021	DP	6.27	682	19.6
LDCS-4B	304-121621-22	12/16/2021	DP	6.36	903	24.7
LDCS-5	304-121521-17	12/15/2021	DP	6.28	631	18.0
LDCS-6	304-121521-13	12/15/2021	DP	6.77	992	9.3
LDCS-7	304-121421-01	12/14/2021	DP	6.99	1,029	12.4
LDCS-8	304-121421-07	12/14/2021	GB	6.43	1,192	13.7
Leachate Collection System						
Leachate, Cell 1	304-122221-28	12/22/2021	GB	7.62	38,863	10.6
Leachate, Cell 2A	304-122221-27	12/22/2021	GB	7.65	39,074	8.9
Leachate, Cell 2B	304-122221-26	12/22/2021	GB	7.50	14,526	7.7
Leachate, Cell 3A	304-122221-25	12/22/2021	GB	7.54	21,059	9.4
Leachate, Cell 4A	304-122221-29	12/22/2021	GB	7.86	31,558	10.5
Leachate, Cell 4B	304-121621-23	12/16/2021	GB	7.99	32,911	23.2
Leachate, Cell 5	304-122221-30	12/22/2021	GB	8.06	32,211	8.9
Leachate, Cell 6	304-121621-19	12/16/2021	GB	8.04	23,890	19.7
Leachate, Cell 7	304-122221-24	12/22/2021	GB	7.05	4,050	16.5
Leachate, Cell 8	304-0121-31	1/13/2022	GB	6.86	12,130	15.2

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 2021
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	91	*	1.7	*	2.8	160	1.3	*
MW-2A	130	0.11	3.3	*	15	220	1.3	*
MW-3	200	0.14	3.3	*	26	250	1.7	*
MW-4	160	0.16	3.3	*	15	220	1.5	*
MW-5A	170	0.12	2.5	*	11	210	1.7	*
MW-6	190	0.12	5.4	*	7.4	220	1.8	*
MW-7	200	0.21	2.7	*	3.9	210	1.5	*
(BG) MW-9	69	*	1.4	*	1.5	120	1.1	*
(BG) MW-10	110	*	6.8	3.0	6.0	190	1.2	5.6
Leak Detection System								
LDCS-1	220	0.12	4.4	*	5.3	250	4.4	—
LDCS-2A	450	*	5.6	*	28	510	4.4	—
LDCS-2B	360	0.21	8.7	*	49	450	4.3	—
LDCS-3	450	0.68	3.0	*	99	590	3.9	—
LDCS-4A	300	0.34	19	*	39	400	6.8	—
LDCS-4B	350	0.18	24	*	76	520	5.1	—
LDCS-5	260	1.7	13	*	45	380	9.4	—
LDCS-6	440	0.19	13	*	82	560	4.6	—
LDCS-7	550	0.58	12	*	31	600	25	—
LDCS-8	630	*	15	*	63	690	7.4	—
Leachate Collection System								
Leachate, Cell 1	10000	1900	8400	*	20	21000	2000	—
Leachate, Cell 2A	10000	1800	8100	*	16	23000	2000	—
Leachate, Cell 2B	5100	1000	1700	*	4.2	4500	700	—
Leachate, Cell 3	7700	1000	2500	*	4.7	11000	900	—
Leachate, Cell 4A	12000	1600	4400	*	20	17000	1800	—
Leachate, Cell 4B	2300 H	2400	4000	*	10	16000	1600	—
Leachate, Cell 5	2300 H	2200	4000	*	19	19000	2100	—
Leachate, Cell 6	10000	1700	2400	*	7.8	12000	1700	—
Leachate, Cell 7	1600	210	340	*	48	1700	160	—
Leachate, Cell 8	3400	380	870	0.56	780	12000	6000	—

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 2021
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	—	*	—	*	—	0.020	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-2A	—	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0098**	—	0.017	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-5A	—	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0072**	—	0.018	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	**0.0054**	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.015	—	*
(BG) MW-10	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.011
Leak Detection System																														
LDCS-1	*	—	0.0072	—	0.020	—	—	—	—	—	*	—	0.0012	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	*	—	0.017	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	0.010	—	0.027	—	—	—	—	—	*	—	0.0088	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3	*	—	0.0063	—	0.018	—	—	—	—	—	*	—	0.0041	—	0.040	—	*	—	*	—	—	—	—	—	—	—	*	—	0.029	—
LDCS-4A	*	—	0.010	—	0.023	—	—	—	—	—	*	—	0.0027	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	*	—	0.026	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	*	—	0.035	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	0.0088	—	0.018	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8	*	—	*	—	0.043	—	*	—	*	—	*	—	0.0042	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
Leachate Collection System																														
Leachate, Cell 1	—	*	—	0.13	—	1.7	—	*	—	*	—	0.58	—	0.050	—	0.030	—	0.012	—	1.0	—	*	—	*	—	*	—	0.36	—	0.059
Leachate, Cell 2A	—	*	—	0.13	—	1.8	—	*	—	*	—	0.55	—	0.048	—	0.028	—	0.013	—	1.1	—	*	—	*	—	*	—	0.34	—	0.044
Leachate, Cell 2B	—	0.11	—	0.20	—	0.39	—	*	—	*	—	0.15	—	0.019	—	*	—	0.005	—	0.18	—	*	—	*	—	*	—	0.13	—	0.42
Leachate, Cell 3	—	*	—	0.053	—	1.0	—	*	—	*	—	0.41	—	0.035	—	0.015	—	0.016	—	0.34	—	*	—	*	—	*	—	0.17	—	0.083
Leachate, Cell 4A	—	*	—	0.18	—	1.1	—	*	—	*	—	0.62	—	0.043	—	0.016	—	0.013	—	0.45	—	*	—	*	—	*	—	0.26	—	0.087
Leachate, Cell 4B	—	*	—	0.087	—	1.4	—	*	—	*	—	0.73	—	0.041	—	0.086	—	0.025	—	0.62	—	*	—	*	—	*	—	0.12	—	0.095
Leachate, Cell 5	—	*	—	0.19	—	1.2	—	*	—	*	—	0.78	—	0.064	—	0.083	—	0.027	—	0.65	—	*	—	*	—	*	—	0.14	—	0.20
Leachate, Cell 6	—	*	—	0.24	—	1.2	—	*	—	*	—	0.68	—	0.031	—	0.054	—	0.027	—	0.37	—	*	—	*	—	*	—	0.14	—	0.26
Leachate, Cell 7	—	*	—	0.086	—	0.16	—	*	—	*	—	0.10	—	0.0063	—	0.015	—	0.0052	—	0.044	—	*	—	*	—	*	—	0.049	—	0.036
Leachate, Cell 8	—	*	—	0.049	—	1.1	—	*	—	0.0015	—	0.13	—	0.140	—	0.062	—	0.027	—	0.30	—	*	—	*	—	*	—	0.071	—	3.4

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 2021
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	**0.96**	8.0	**0.21**	3.3	11
MW-2A	24	0.19	12	**0.32**	3.4	17
MW-3	43	*	19	**0.35**	4.1	15
MW-4	34	*	19	**0.25**	5.5	12
MW-5A	30	*	12	**0.19**	4.0	25
MW-6	38	*	17	**0.17**	5.2	12
MW-7	31	*	21	**0.25**	5.2	12
(BG) MW-9	10	*	6.8	*	2.0	7.8
(BG) MW-10	26	*	11	*	2.2	13
Leak Detection System						
LDCS-1	41	0.45	17	2.0	4.8	18
LDCS-2A	98	*	38	0.24	9.2	31
LDCS-2B	87	*	34	3.2	6.3	18
LDCS-3	110	*	44	2.5	6.1	25
LDCS-4A	63	1.5	36	2.1	5.7	21
LDCS-4B	100	*	42	1.1	5.8	24
LDCS-5	56	0.13	29	1.5	6.8	27
LDCS-6	100	*	52	1.1	5.2	25
LDCS-7	120	*	42	1.3	3.9	34
LDCS-8	120	*	70	1.8	5.1	51
Leachate Collection System**						
Leachate, Cell 1	35	13	97	0.29	1000	5900
Leachate, Cell 2A	38	13	100	0.27	1000	6100
Leachate, Cell 2B	13	5.5	15	0.10	180	940
Leachate, Cell 3	59	10	64	0.58	600	2700
Leachate, Cell 4A	37	9.3	61	0.41	1100	4300
Leachate, Cell 4B	33	8.7	52	0.30	1100	4700
Leachate, Cell 5	46	11	74	0.32	1200	4400
Leachate, Cell 6	68	4.2	87	0.73	1000	3300
Leachate, Cell 7	76	3.8	25	1.5	120	360
Leachate, Cell 8	1200	81	220	19	310	910

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 2021
LRI Landfill, Pierce County, Washington

Parameter	1,1-Dichloroethane	1,2-Dichloroethane	1,2-Dichloropropane	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Styrene	Tetrachloroethene	Toluene	Trichlorofluoromethane	Vinyl chloride
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	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MRL	0.50	0.50	0.50	0.50	6.00	5.00	10.0	0.50	0.50	0.50	0.50	0.50	0.50	1.00	2.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
WAC 173-200 Criteria	1.0	0.50	0.60	4.0	—	—	—	1.0	—	—	—	7.0	—	—	5.00	—	—	—	0.80	—	—	0.02
Monitoring Wells																						
MW-1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	140	9.1	120	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-4^ (1/20/22)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Leak Detection System																						
LDCS-1	*	*	*	0.84	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Leachate Collection System																						
Leachate, Cell 1	*	*	*	13	2600	95	2800	18	2.1	3.1	*	*	*	52	*	100	44	*	*	53	*	*
Leachate, Cell 2A	*	*	*	15	3900	130	4300	21	*	*	*	6.4	*	58	*	110	49	*	*	65	*	*
Leachate, Cell 2B	*	*	*	*	27000	900	31000	*	25	*	*	26	*	22	*	58	47	*	*	100	*	*
Leachate, Cell 3	*	*	*	11	900	29	1000	12	0.77	1.8	*	*	0.97	47	*	65	30	*	*	18	*	*
Leachate, Cell 4A	*	*	*	10	2200	54	3500	31	*	*	*	2.7	*	37	*	56	27	*	*	66	*	*
Leachate, Cell 4B	*	*	*	8.6	500	37	710	20	*	*	*	*	2.9	32	*	48	25	3.4	*	48	*	*
Leachate, Cell 5	*	*	*	1.7	770	20	980	13	*	*	*	*	*	10	*	15	9.8	*	*	18	*	*
Leachate, Cell 6	*	*	*	1.8	460	22	660	4.7	*	*	*	*	2.3	9.7	*	13	10	*	*	24	*	*
Leachate, Cell 7	1.5	4.1	1.4	2.2	*	12	110	11	2.4	0.63	1.0	*	1.2	44	*	73	31	*	*	76	*	4.3
Leachate, Cell 8	*	35	*	*	1,600	87	780	8.4	*	*	*	1.6	*	28	120	64	28	15	6.3	200	5.8	*
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-4 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 2021
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	8.0	3.3	11	36.3	0.70	0.66	0.07	0.48	1.91	29.0	36.6	34.5
MW-2A	24	12	3.4	17	56.4	1.20	0.99	0.08	0.74	3.00	27.2	39.9	32.9
MW-3	43	19	4.1	15	81.1	2.15	1.56	0.09	0.65	4.45	16.7	48.2	35.1
MW-4	34	19	5.5	12	70.5	1.70	1.56	0.12	0.52	3.91	16.5	43.4	40.0
MW-5A	30	12	4.0	25	71	1.50	0.99	0.09	1.09	3.66	32.2	40.9	27.0
MW-6	38	17	5.2	12	72.2	1.90	1.40	0.12	0.52	3.93	16.3	48.2	35.6
MW-7	31	21	5.2	12	69.2	1.55	1.73	0.12	0.52	3.91	16.3	39.5	44.1
MW-9	10.0	6.8	2.0	7.8	26.6	0.50	0.56	0.05	0.34	1.44	26.6	34.6	38.8
MW-10	26	11	2.2	13	52.2	1.30	0.91	0.05	0.57	2.82	21.8	46.0	32.1
LDCS-1	41	17	4.8	18	80.8	2.05	1.40	0.11	0.78	4.34	20.6	47.2	32.3
LDCS-2A	98	38	9.2	31	176.2	4.89	3.13	0.21	1.35	9.57	16.3	51.1	32.7
LDCS-2B	87	34	6.3	18	145.3	4.34	2.80	0.14	0.78	8.06	11.5	53.8	34.7
LDCS-3A	110	44	6.1	25	185.1	5.49	3.62	0.14	1.09	10.34	11.9	53.1	35.0
LDCS-4A	63	36	5.7	21	125.7	3.14	2.96	0.13	0.91	7.15	14.6	44.0	41.4
LDCS-4B	100	42	5.8	24	171.8	4.99	3.46	0.13	1.04	9.62	12.2	51.9	35.9
LDCS-5	56	29	6.8	27	118.8	2.79	2.39	0.15	1.17	6.51	20.4	42.9	36.7
LDCS-6	100	52	5.2	25	182.2	4.99	4.28	0.12	1.09	10.47	11.5	47.6	40.9
LDCS-7	120	42	3.9	34	199.9	5.99	3.46	0.09	1.48	11.01	14.2	54.4	31.4
LDCS-8	120	70	5.1	51	246.1	5.99	5.76	0.12	2.22	14.08	16.6	42.5	40.9
Leachate, Cell 1	35	97	1000	5900	7032.0	1.75	7.98	22.58	256.65	288.96	96.6	0.6	2.8
Leachate, Cell 2A	38	100	1000	6100	7238.0	1.90	8.23	22.58	265.35	298.06	96.6	0.6	2.8
Leachate, Cell 2B	13	15	180	940	1148.0	0.65	1.23	4.06	40.89	46.84	96.0	1.4	2.6
Leachate, Cell 3A	59	64	600	2700	3423.0	2.94	5.27	13.55	117.45	139.21	94.1	2.1	3.8
Leachate, Cell 4A	37	61	1100	4300	5498.0	1.85	5.02	24.84	187.05	218.75	96.9	0.8	2.3
Leachate, Cell 4B	33	52	1100	4700	5885.0	1.65	4.28	24.84	204.45	235.21	97.5	0.7	1.8
Leachate, Cell 5	46	74	1200	4400	5720.0	2.30	6.09	27.10	191.40	226.88	96.3	1.0	2.7
Leachate, Cell 6	68	87	1000	3300	4455.0	3.39	7.16	22.58	143.55	176.68	94.0	1.9	4.1
Leachate, Cell 7	76	25	120	360	581.0	3.79	2.06	2.71	15.66	24.22	75.8	15.7	8.5
Leachate, Cell 8	1200	220	310	910	2,640	59.88	18.11	7.00	39.59	124.57	37.4	48.1	14.5

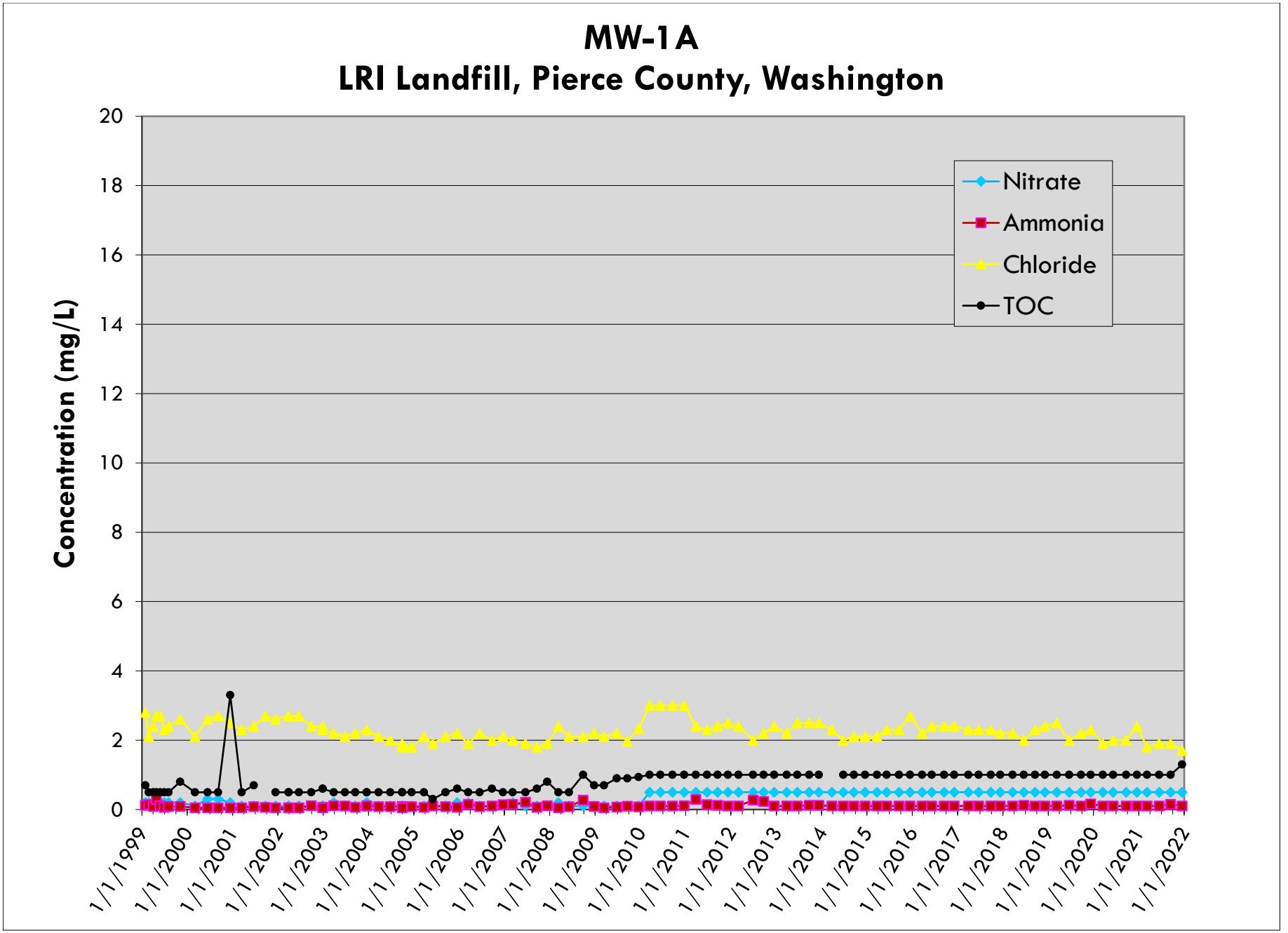
Anions	mg/L					meq/L					% of Total			Total Ions	Cation - Anion	Applicable	Ratio
	Alk	Cl	NO_3	SO_4	Total	Alk	Cl	NO_3	SO_4	Total	Cl	Alk	SO_4	(meq/L)	Balance	Ratio (%)	Exceedance
MW-1A	109.2	1.7	0.50	2.8	114.2	1.79	0.05	0.008	0.06	1.91	2.5	94.0	3.1	3.82	0.1	10	O
MW-2A	156	3.3	0.50	15	174.8	2.56	0.09	0.008	0.31	2.97	3.1	86.1	10.5	5.97	0.5	5	O
MW-3	240	3.3	0.50	26	269.8	3.94	0.09	0.008	0.54	4.58	2.0	86.0	11.8	9.03	1.4	5	O
MW-4	192	3.3	0.50	15	210.8	3.15	0.09	0.008	0.31	3.56	2.6	88.4	8.8	7.47	4.6	5	O
MW-5A	204	2.5	0.50	11	218	3.35	0.07	0.008	0.23	3.65	1.9	91.6	6.3	7.32	0.1	5	O
MW-6	228	5.4	0.50	7.4	241.3	3.74	0.15	0.008	0.15	4.05	3.8	92.2	3.8	7.99	1.5	5	O
MW-7	240	2.7	0.50	3.9	247.1	3.94	0.08	0.008	0.08	4.10	1.9	96.0	2.0	8.02	2.3	5	O
MW-9	82.8	1.4	0.50	1.5	86.2	1.36	0.04	0.008	0.03	1.44	2.7	94.5	2.2	2.88	0.2	10	O
MW-10	132	6.8	3.0	6.0	147.8	2.16	0.19	0.048	0.12	2.53	7.6	85.6	4.9	5.35	5.4	5	Exceeds
LDCS-1	264	4.4	0.50	5.3	274.2	4.33	0.12	0.008	0.11	4.57	2.7	94.7	2.4	8.91	2.6	5	O
LDCS-2A	540	5.6	0.50	28	574.1	8.86	0.16	0.008	0.58	9.60	1.6	92.2	6.1	19.18	0.2	5	O
LDCS-2B	432	8.7	0.50	49	490.2	7.08	0.25	0.008	1.02	8.36	2.9	84.8	12.2	16.42	1.8	5	O
LDCS-3A	540	3.0	0.50	99	642.5	8.86	0.08	0.008	2.06	11.01	0.8	80.5	18.7	21.34	3.2	5	O
LDCS-4A	360	19	0.50	39	419	5.90	0.54	0.008	0.81	7.26	7.4	81.3	11.2	14.41	0.8	5	O
LDCS-4B	420	24	0.50	76	521	6.89	0.68	0.008	1.58	9.15	7.4	75.2	17.3	18.78	2.5	5	O
LDCS-5	312	13	0.50	45	371	5.12	0.37	0.008	0.94	6.43	5.7	79.6	14.6	12.94	0.6	5	O
LDCS-6	528	13	0.50	82	624	8.66	0.37	0.008	1.71	10.74	3.4	80.6	15.9	21.21	1.2	5	O
LDCS-7	660	12	0.50	31	704	10.82	0.34	0.008	0.64	11.82	2.9	91.6	5.5	22.83	3.5	5	O
LDCS-8	756	15	0.50	63	835	12.40	0.42	0.008	1.31	14.14	3.0	87.7	9.3	28.22	0.2	5	O
Leachate, Cell 1	12000	8400	0.50	20	20421	196.80	236.88	0.008	0.42	434.10	54.6	45.3	0.1	723.06	20.1	5	Exceeds
Leachate, Cell 2A	12000	8100	0.50	16	20117	196.80	228.42	0.008	0.33	425.56	53.7	46.2	0.1	723.62	17.6	5	Exceeds
Leachate, Cell 2B	6120	1700	0.50	4.2	7825	100.37	47.94	0.008	0.09	148.40	32.3	67.6	0.1	195.24	52.0	5	Exceeds
Leachate, Cell 3A	9240	2500	0.50	4.7	11745	151.54	70.50	0.008	0.10	222.14	31.7	68.2	0.0	361.35	23.0	5	Exceeds
Leachate, Cell 4A	14400	4400	0.50	20	18821	236.16	124.08	0.008	0.42	360.66	34.4	65.5	0.1	579.42	24.5	5	Exceeds
Leachate, Cell 4B	2760	4000	0.50	10	6771	45.26	112.80	0.008	0.21	158.28	71.3	28.6	0.1	393.49	19.6	5	Exceeds
Leachate, Cell 5	2760	4000	0.50	19	6780	45.26	112.80	0.008	0.40	158.47	71.2	28.6	0.2	385.35	17.8	5	Exceeds
Leachate, Cell 6	12000	2400	0.50	7.8	14408	196.80	67.68	0.008	0.16	264.65	25.6	74.4	0.1	441.33	19.9	5	Exceeds
Leachate, Cell 7	1920	340	0.50	48	2309	31.49	9.59	0.008	1.00	42.08	22.8	74.8	2.4	66.30	26.9	5	Exceeds
Leachate, Cell 8	4,080	870	0.56	780	5,731	66.91	24.53	0.009	16.22	107.68	22.8	62.1	15.1	232.25	7.3	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
Fourth Quarter 2021 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	170	170	0.0
Ammonia	0.1	0.12	0.13	8.0
Chloride	0.2	2.5	2.5	0.0
Sulfate	0.2	11	11	0.0
Total Dissolved Solids	10	210	250	17.4
Total Organic Carbon	1.0	1.7	1.5	12.5
Dissolved Metals (mg/L)				
Calcium	0.2	30	30	0.0
Magnesium	0.1	12	12	0.0
Manganese	0.005	0.19	0.19	0.0
Potassium	2.0	4.0	4.0	0.0
Sodium	1.0	25	25	0.0
Total Metals (mg/L)				
Arsenic	0.005	*	0.005	0.0
Barium	0.005	0.012	0.012	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


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
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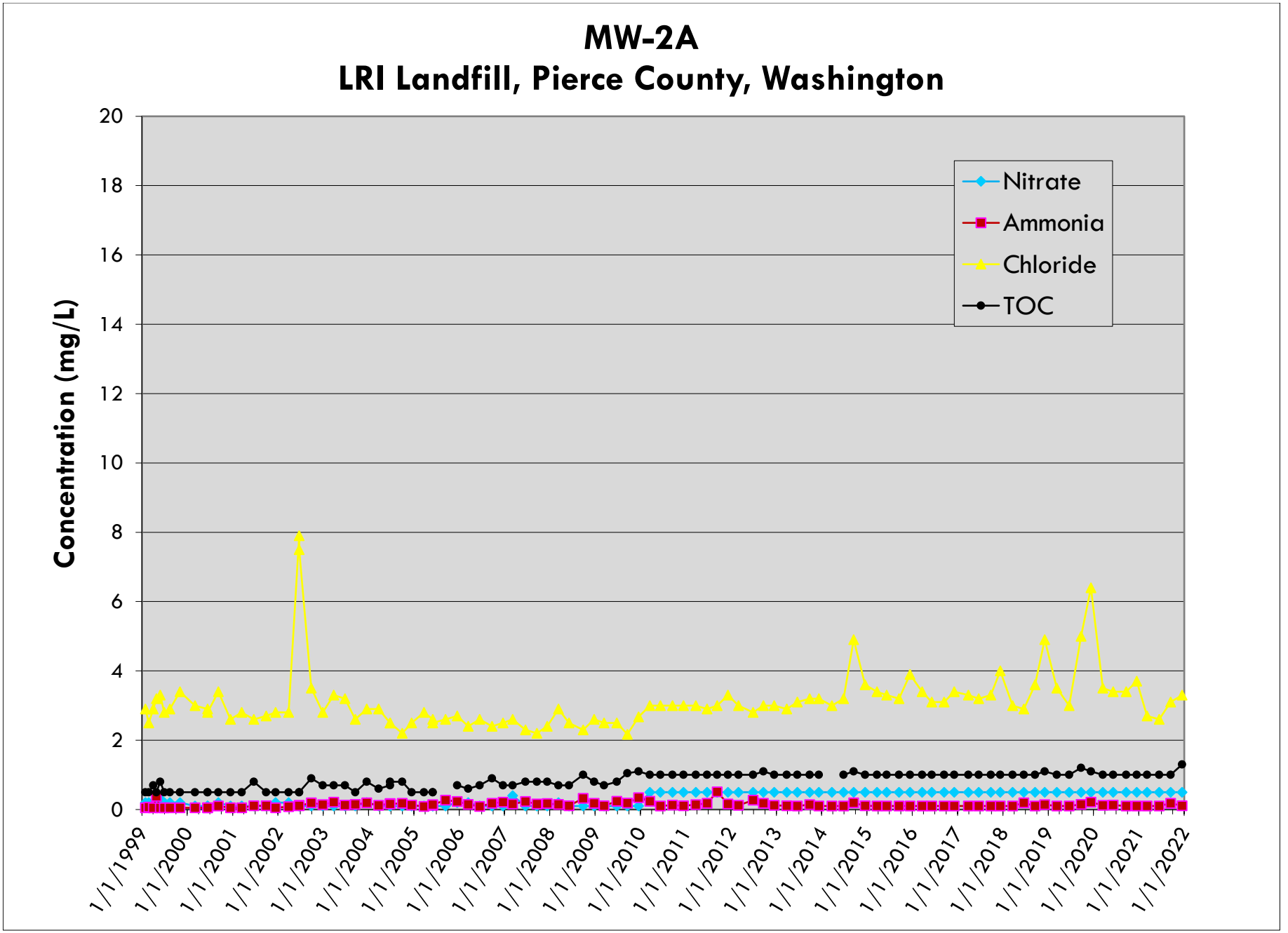
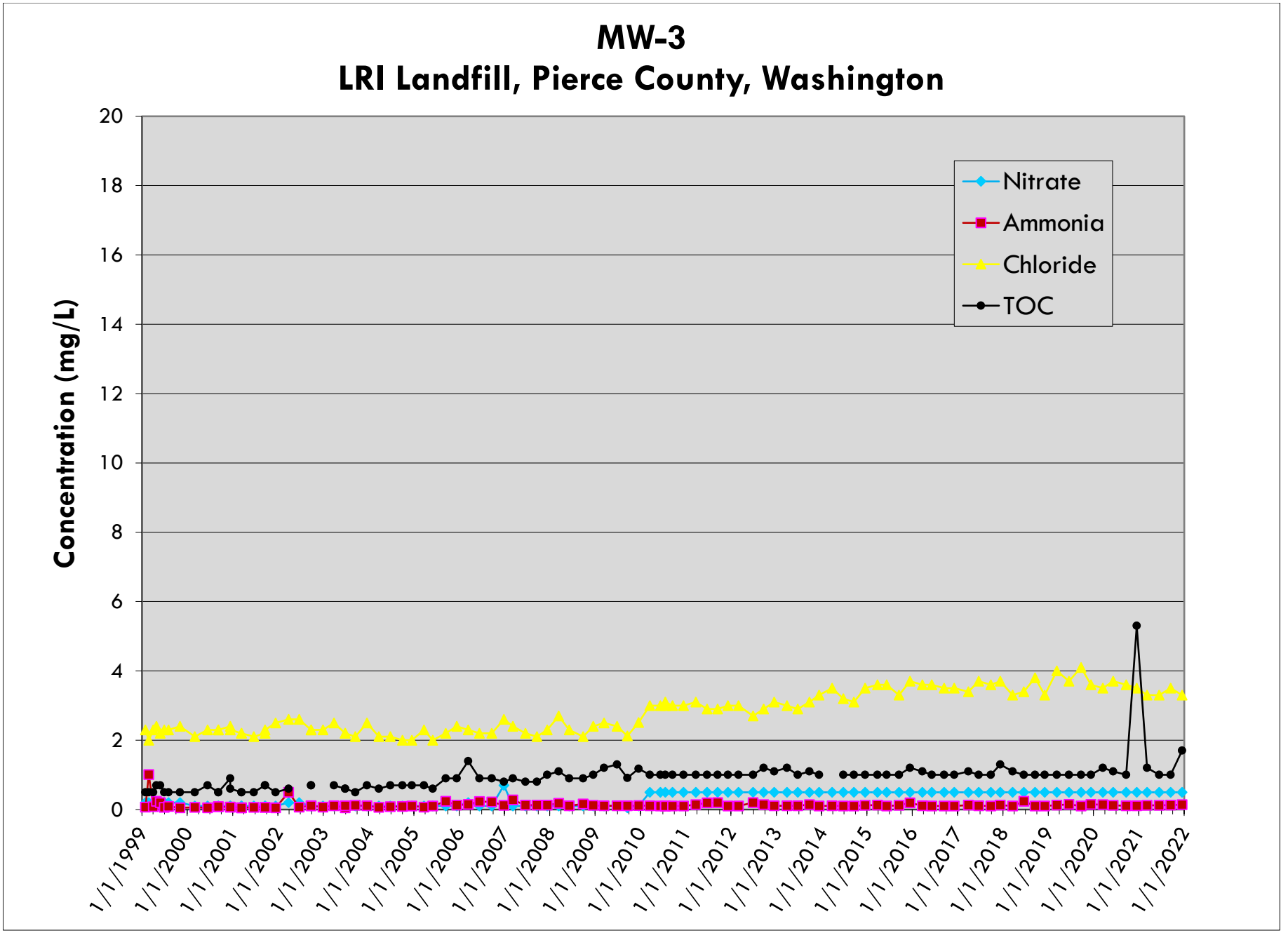
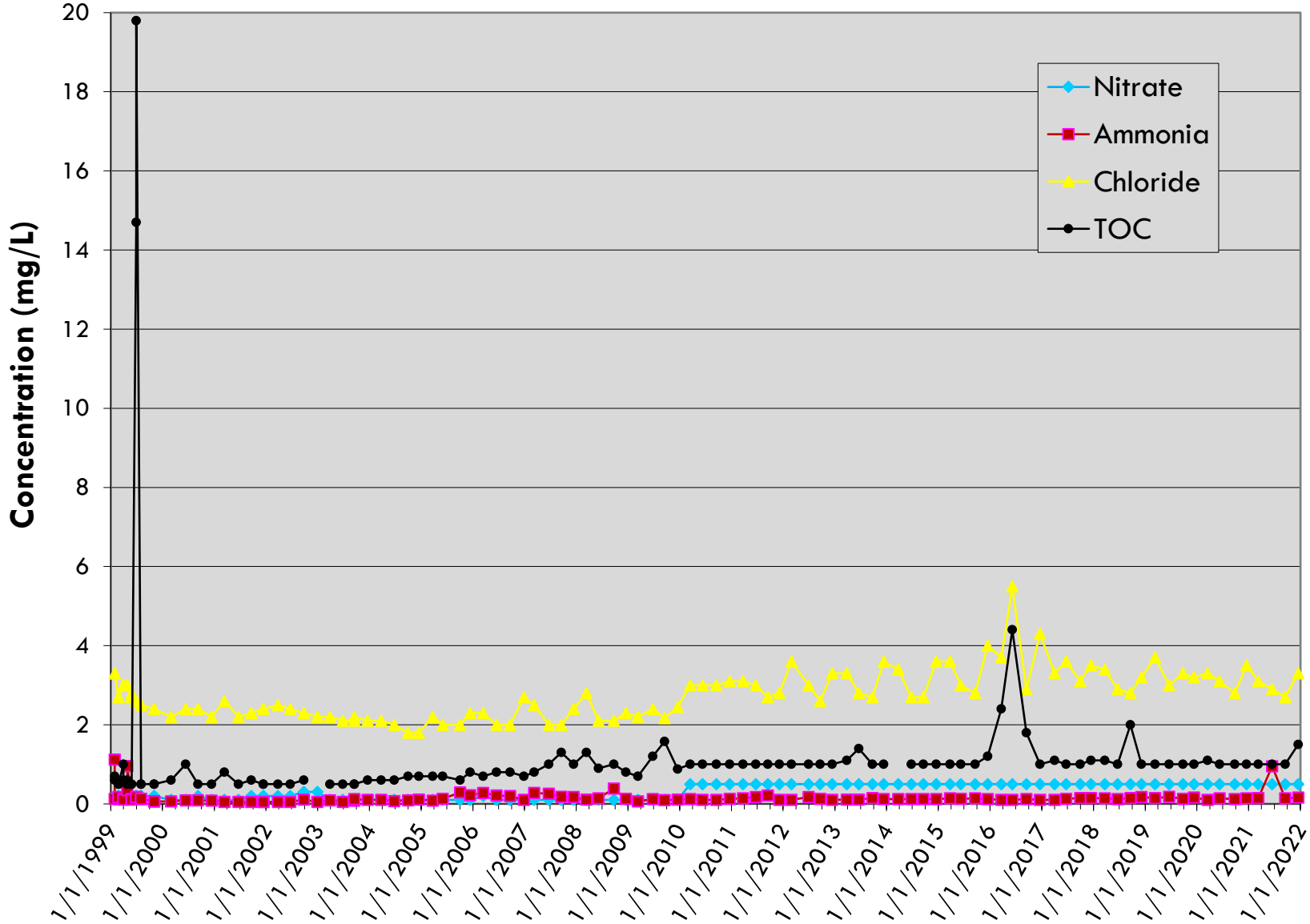
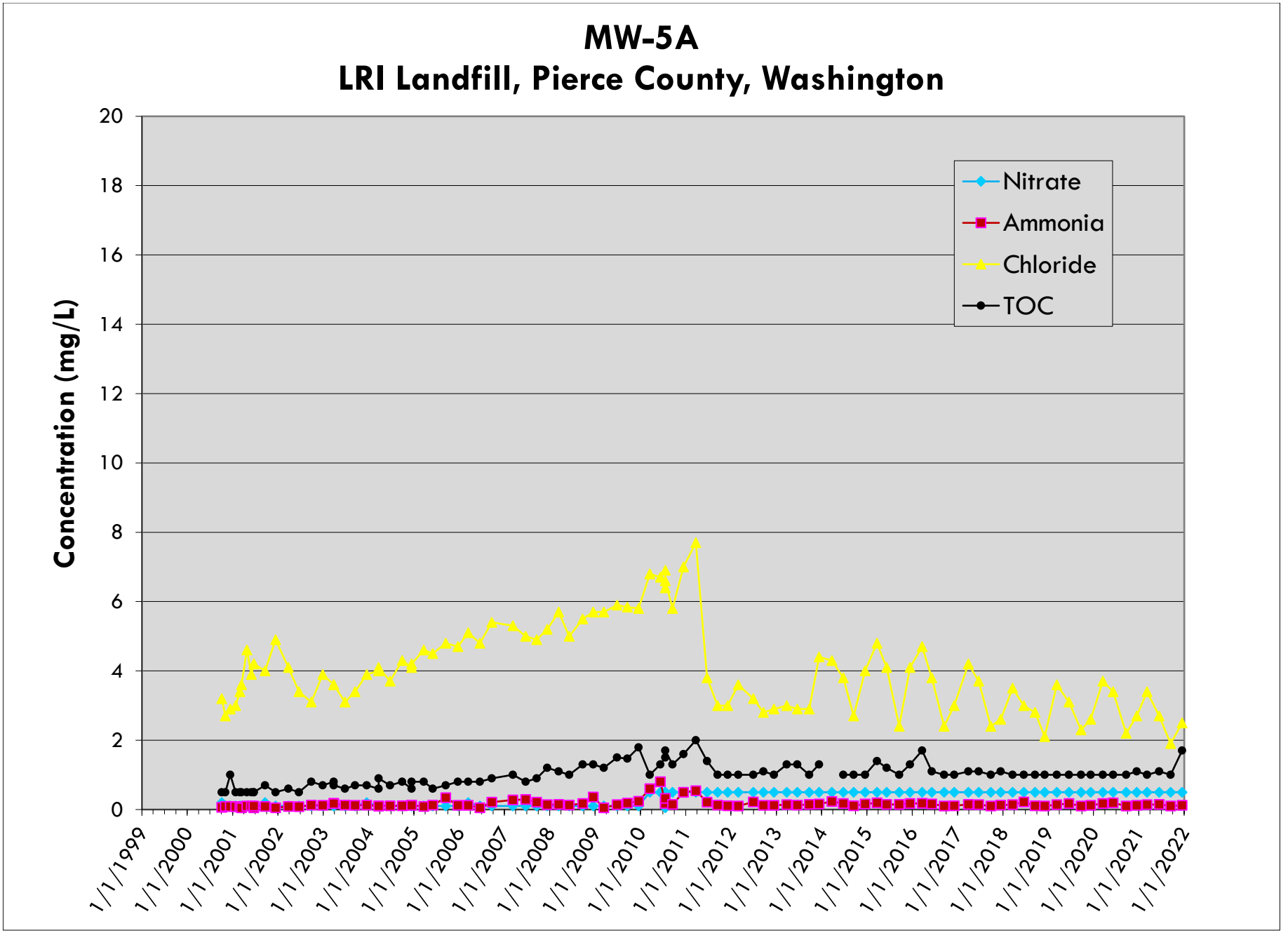
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022


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

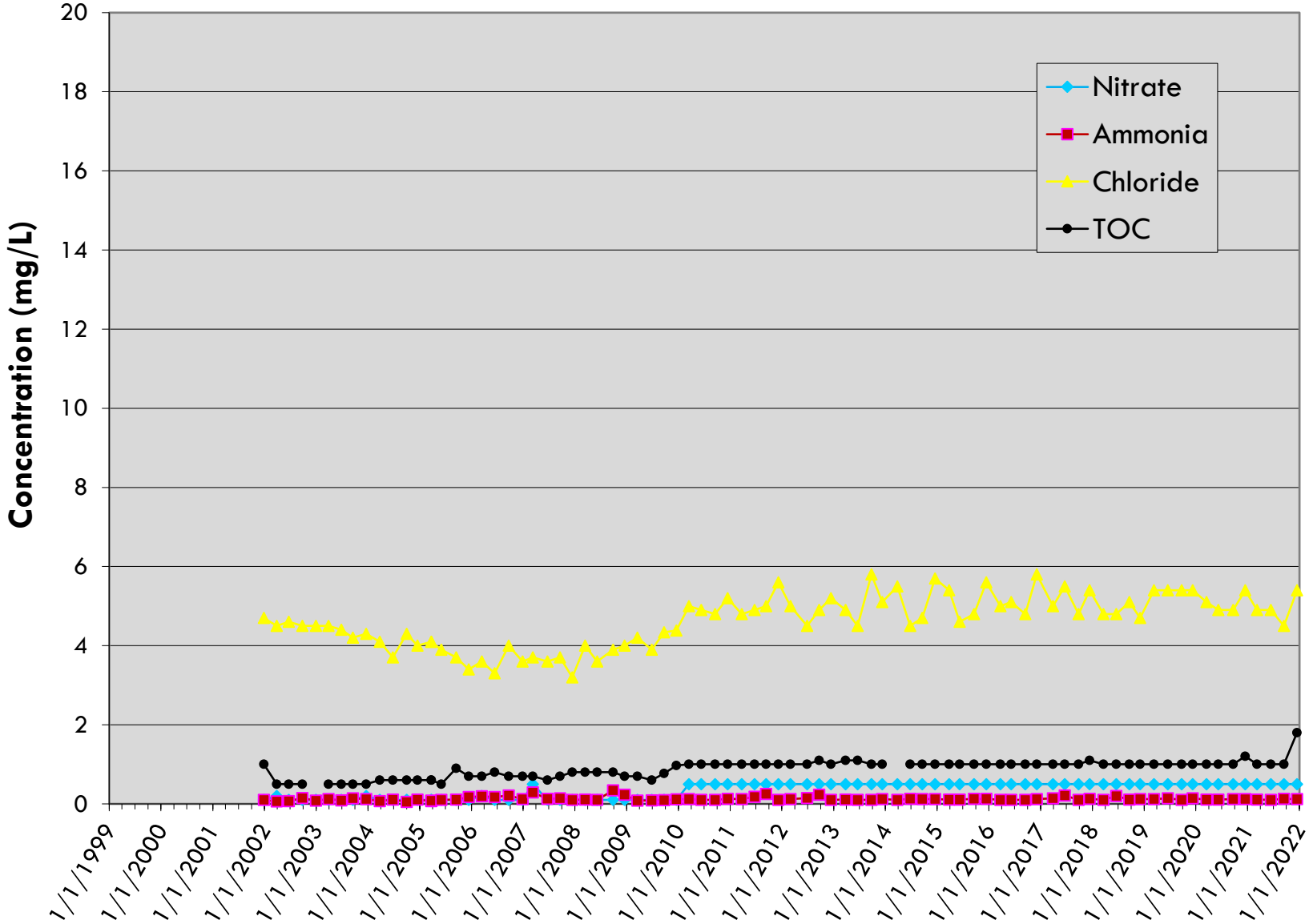

MW-3
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018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

MW-4
LRI Landfill, Pierce County, Washington




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

MW-6
LRI Landfill, Pierce County, Washington



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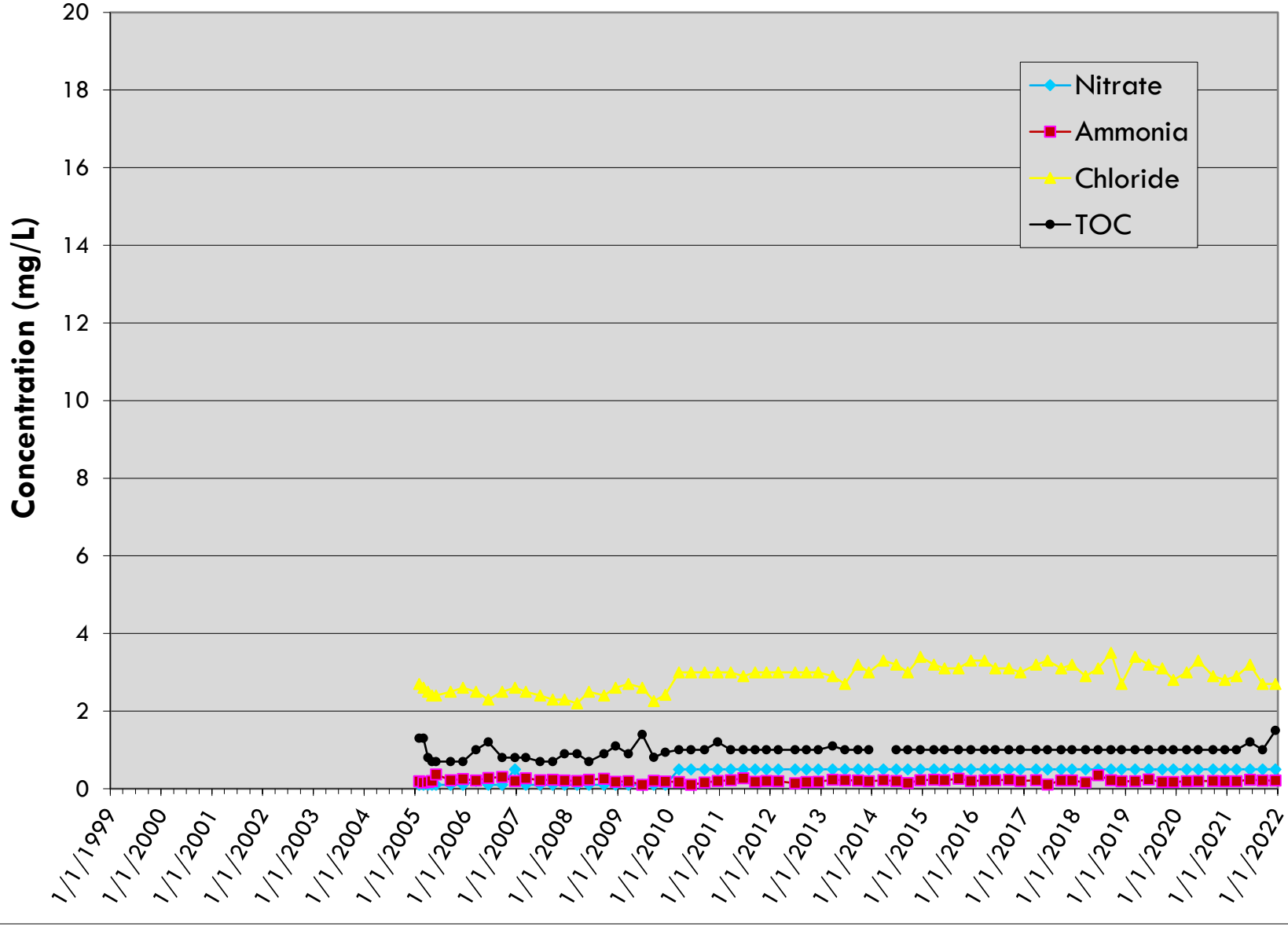
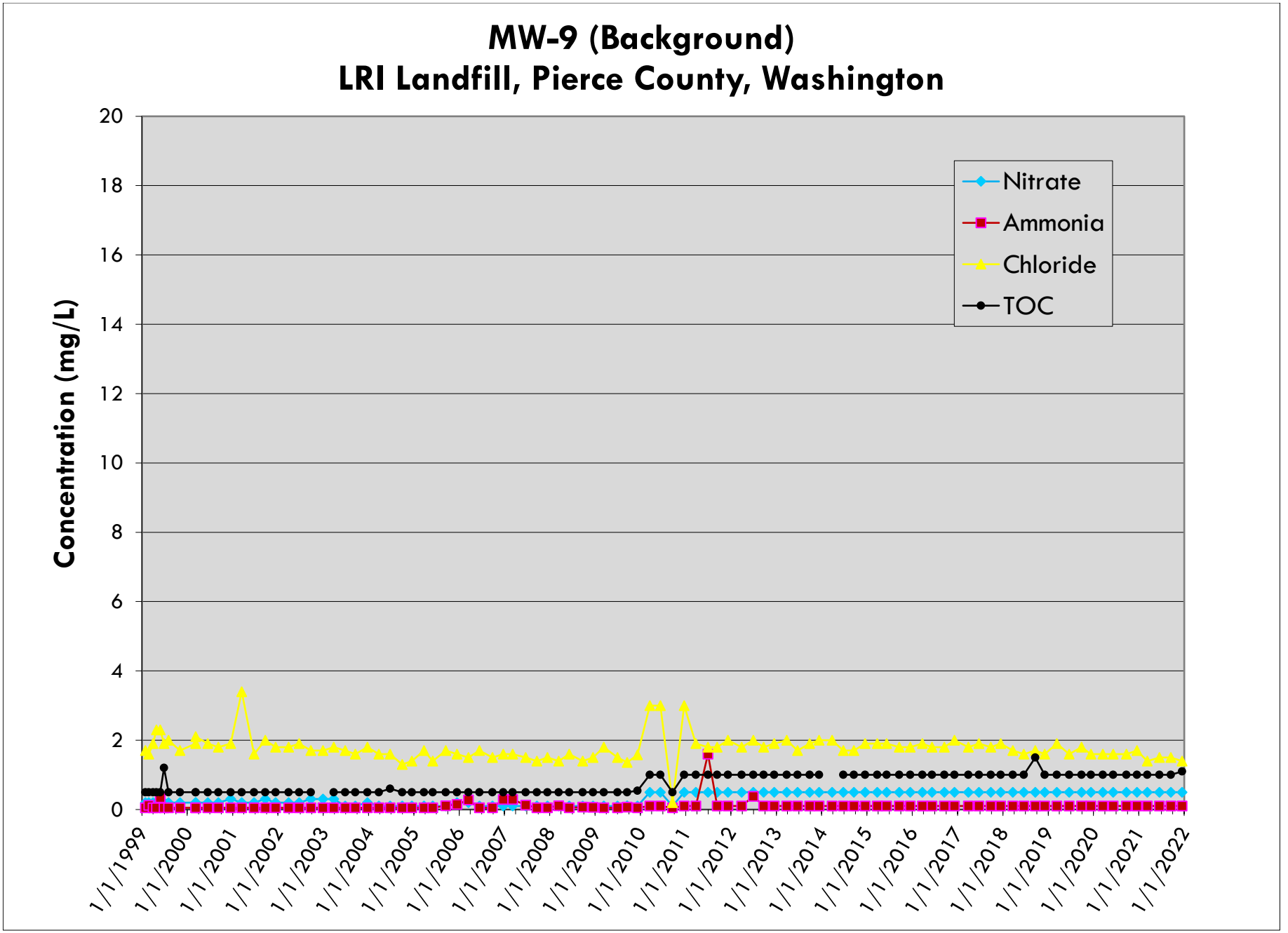
LRI Landfill, Pierce County, Washington




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
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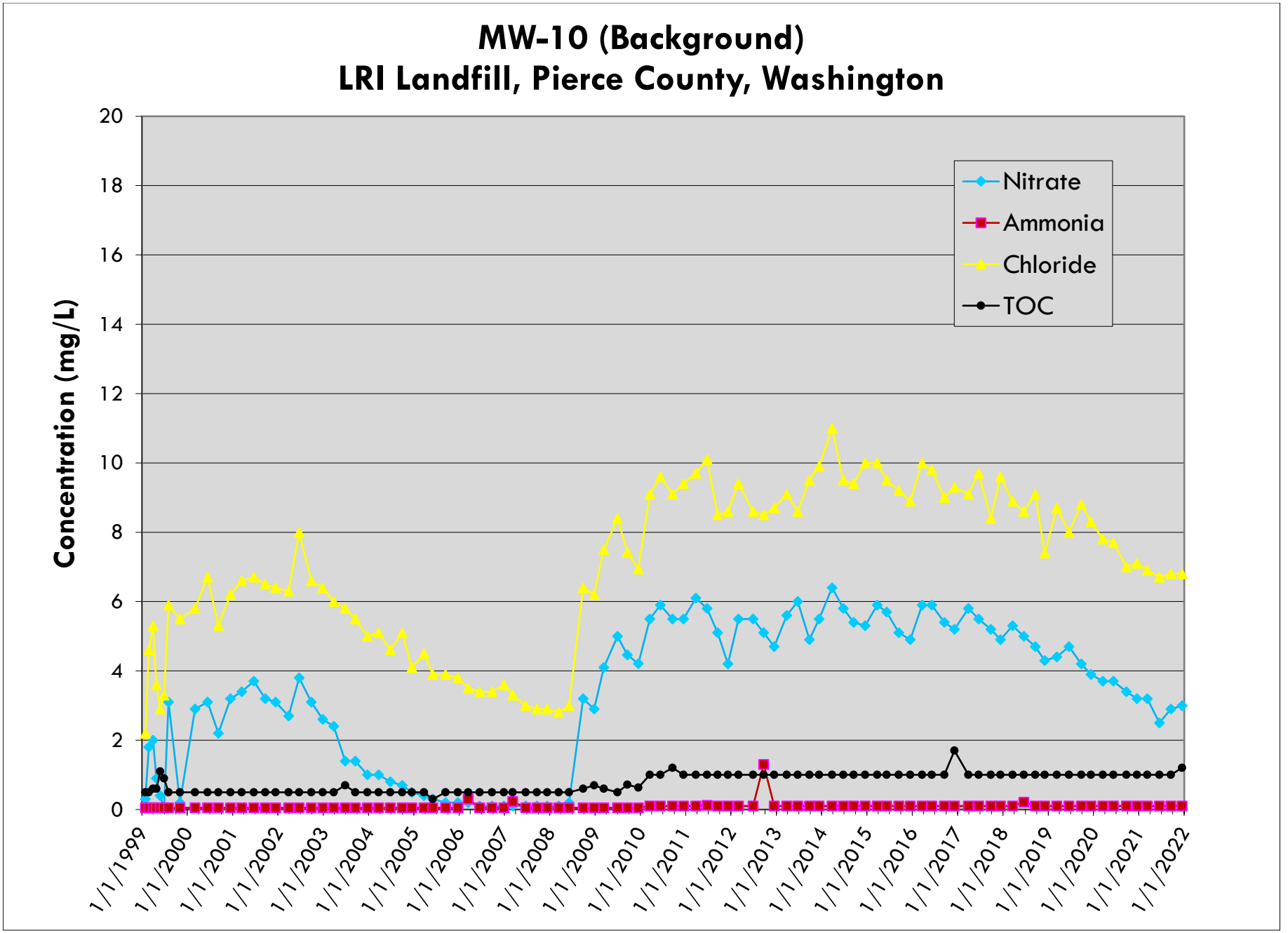
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022


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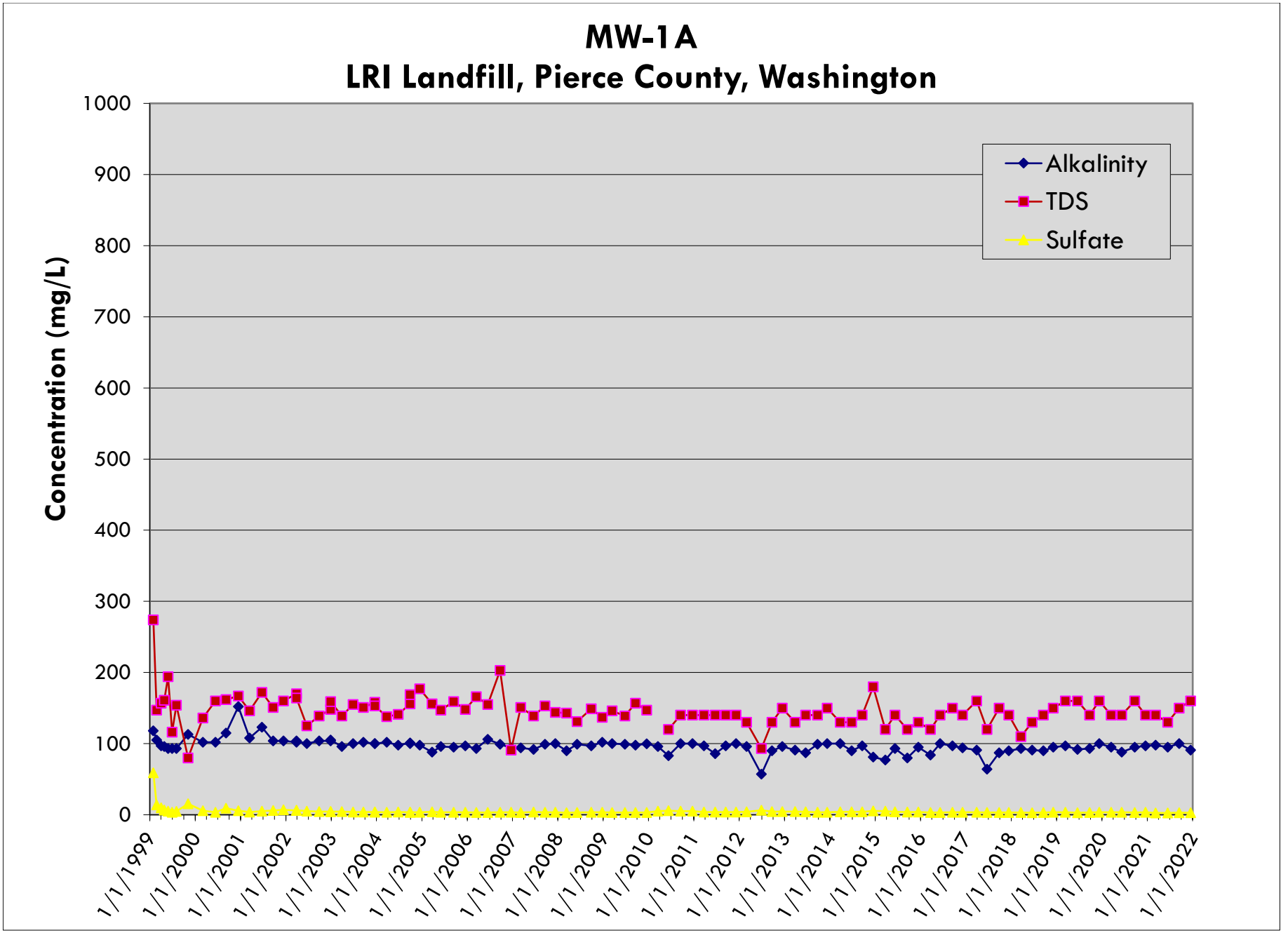
MW-1A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
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1/1/2013
1/1/2014
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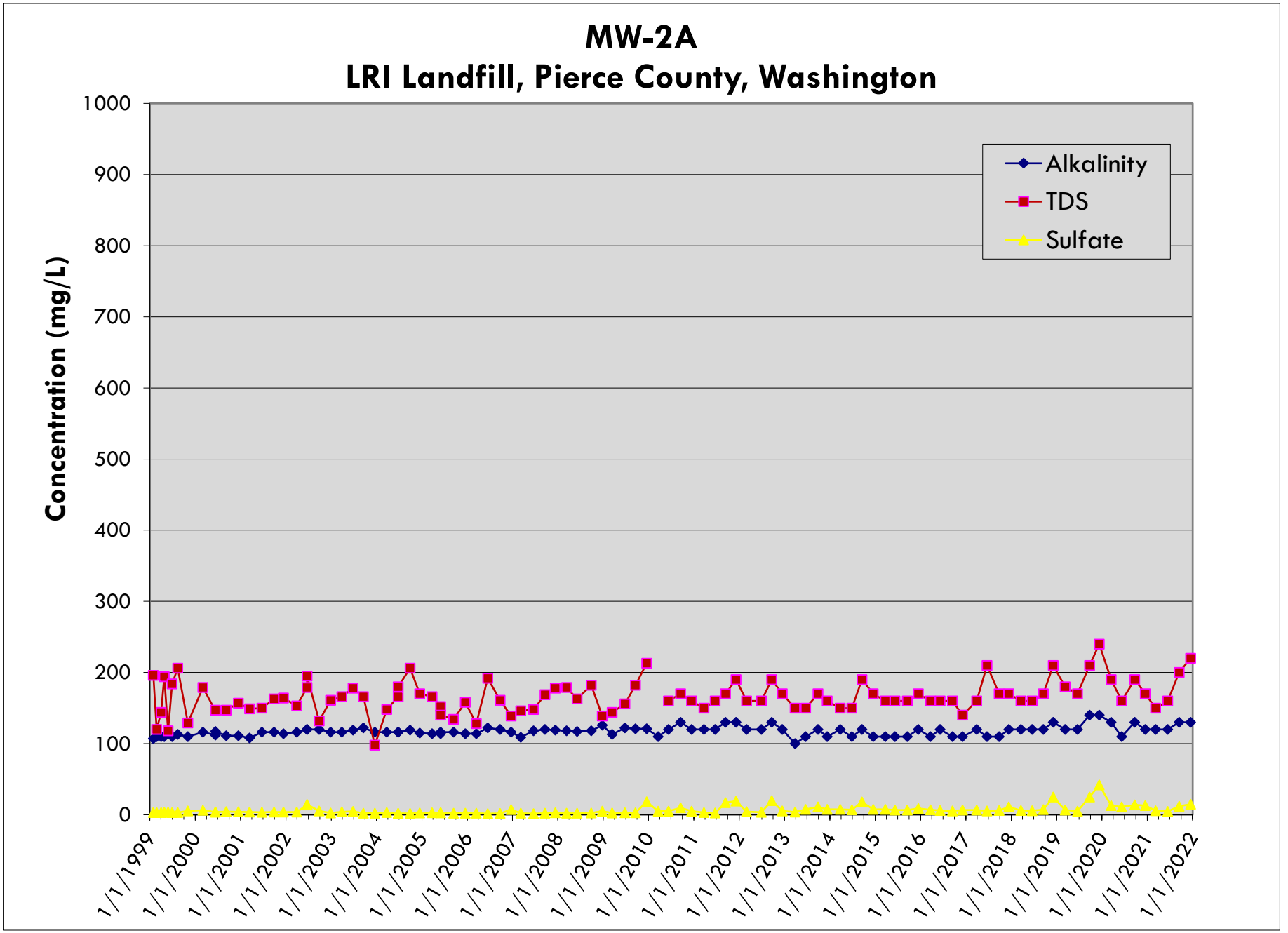
1/1/2020
1/1/2021
1/1/2022


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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1/1/2013
1/1/2014
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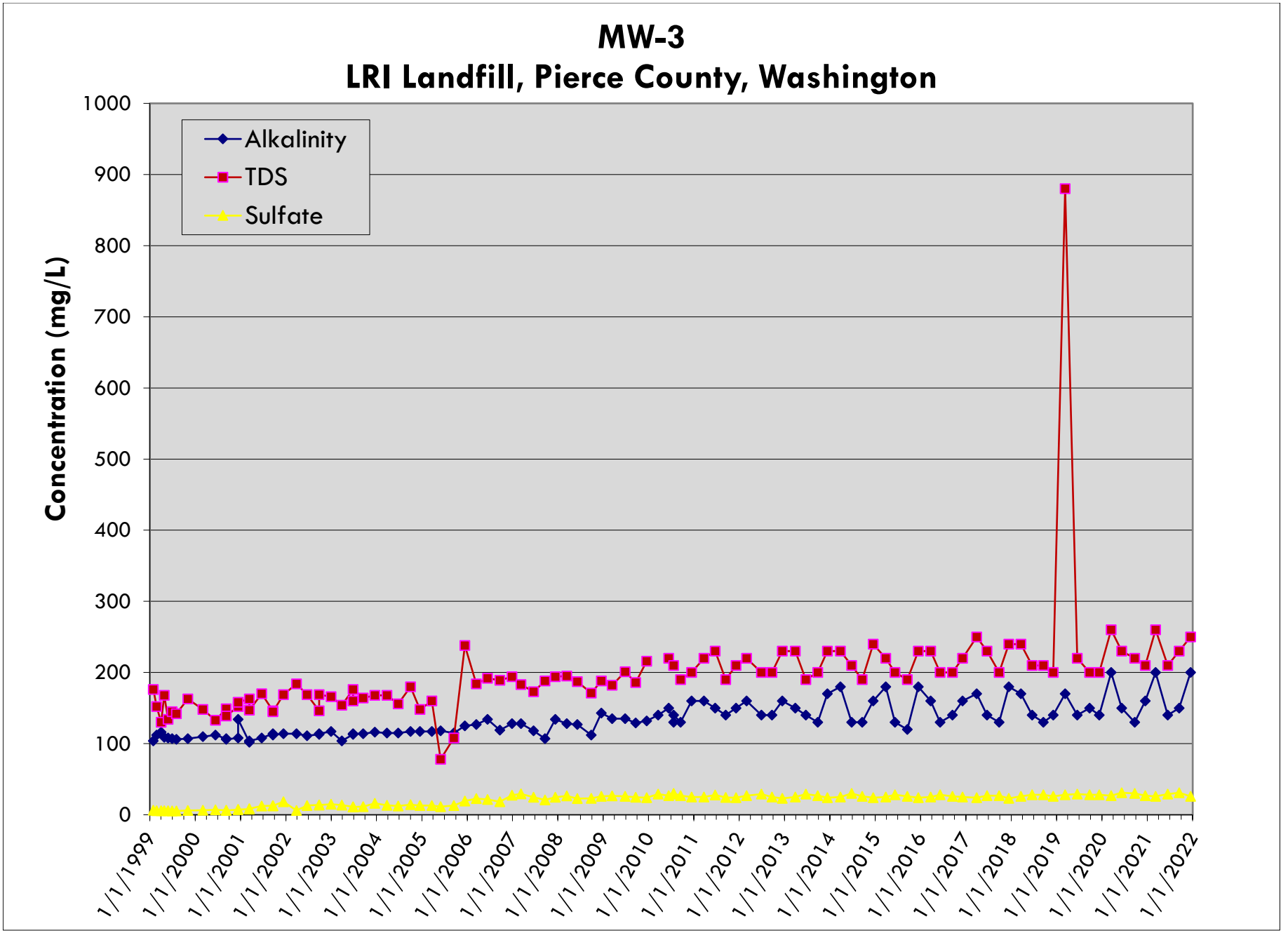
MW-3
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
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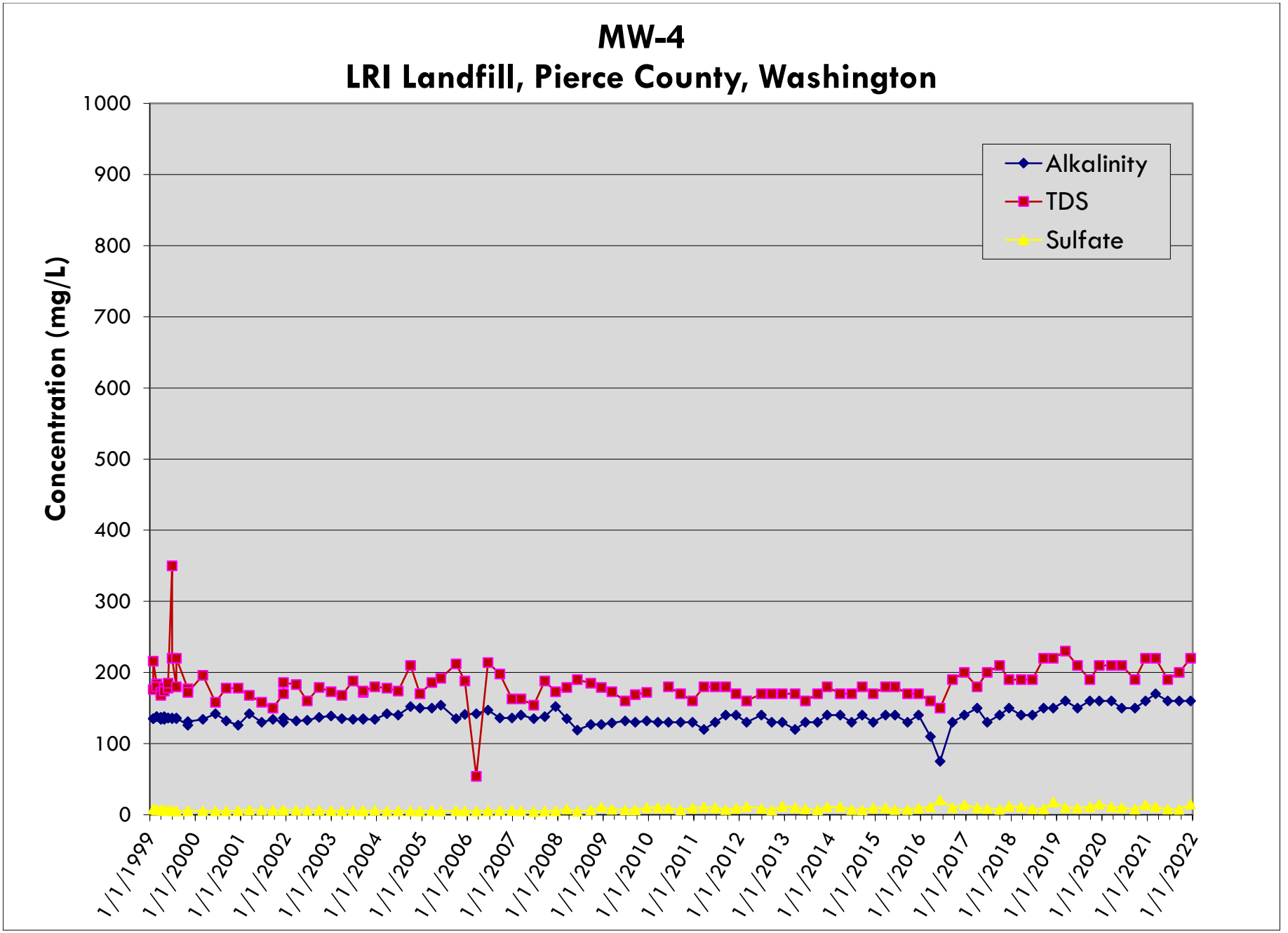
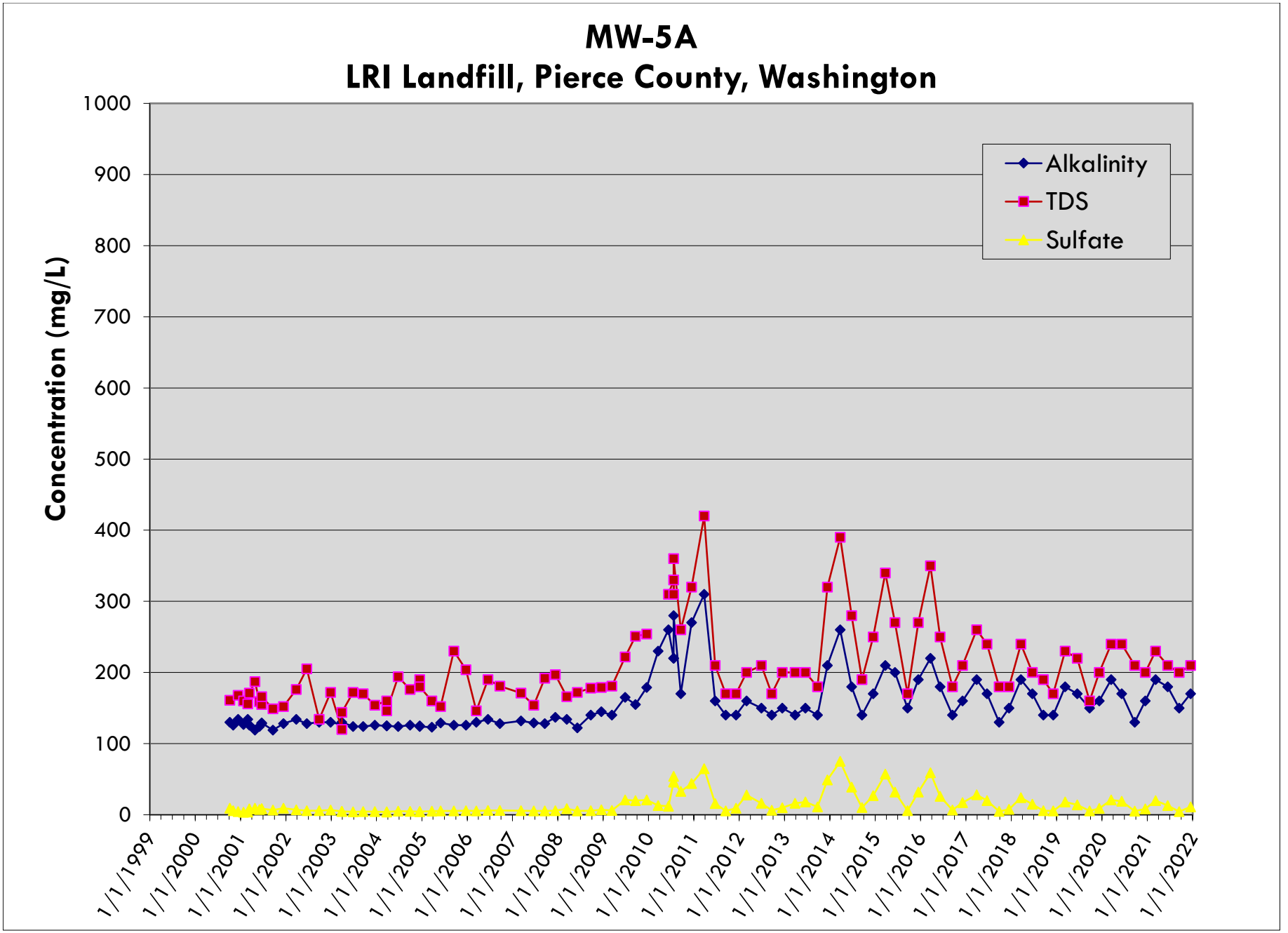
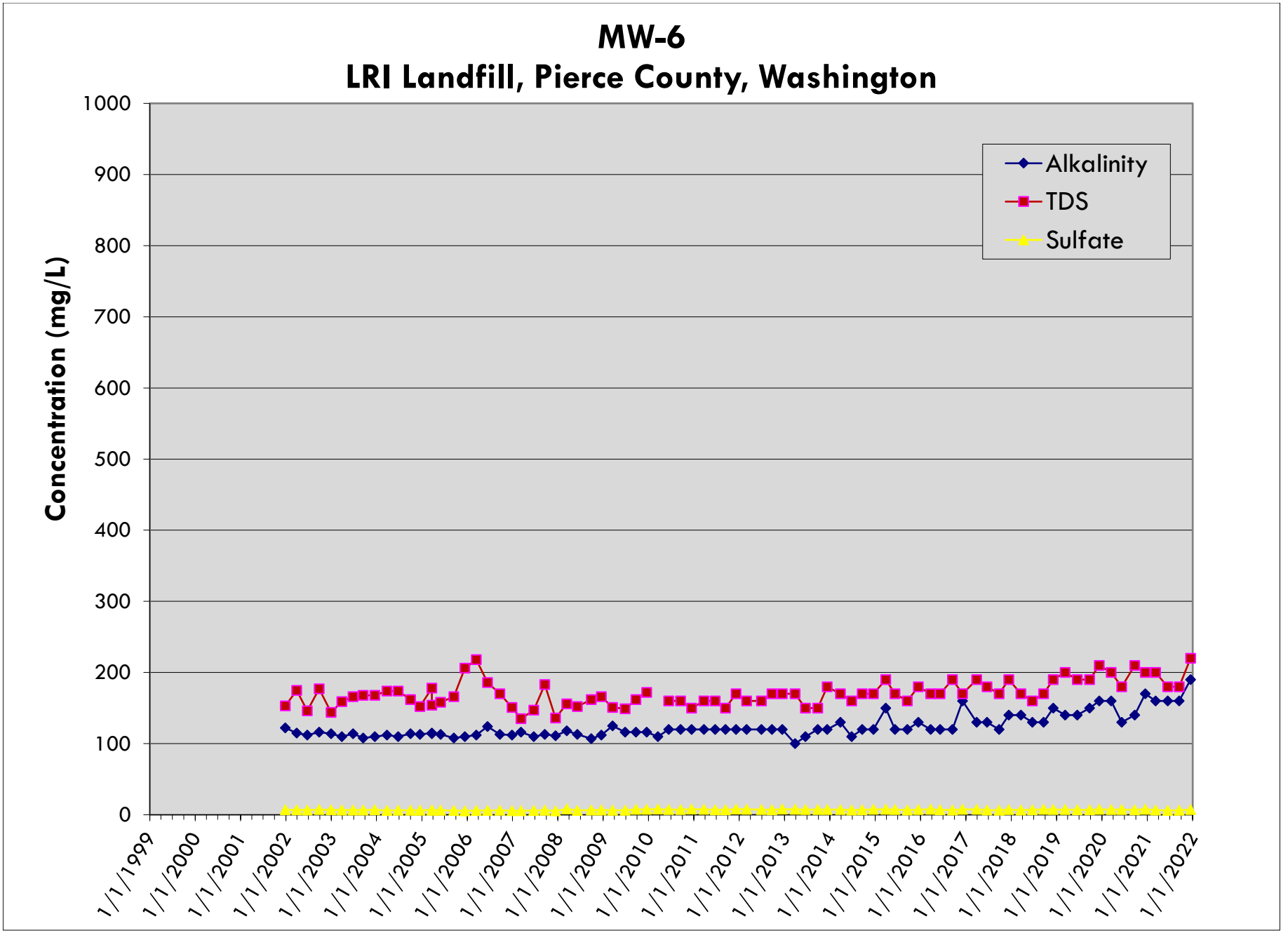
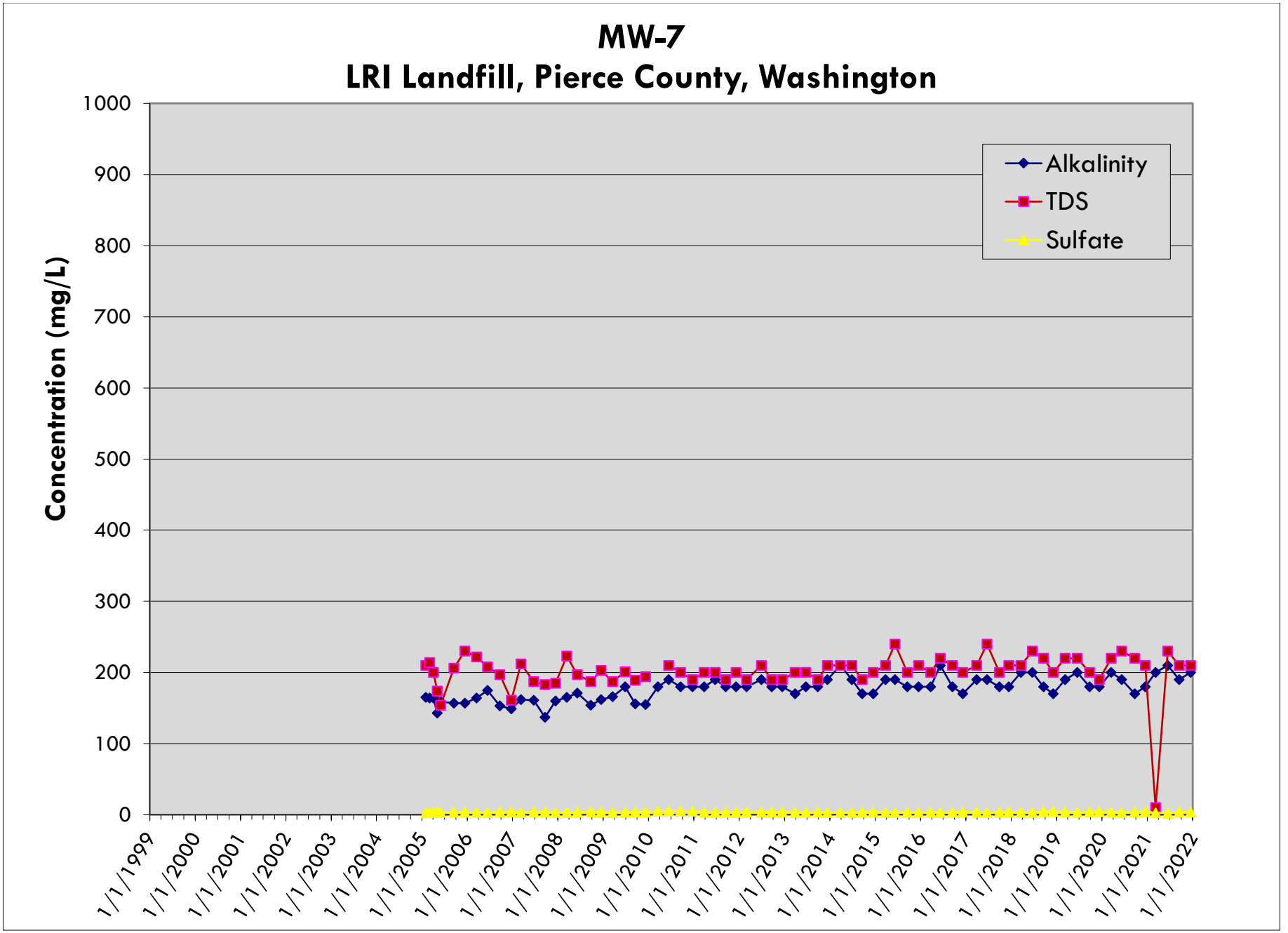
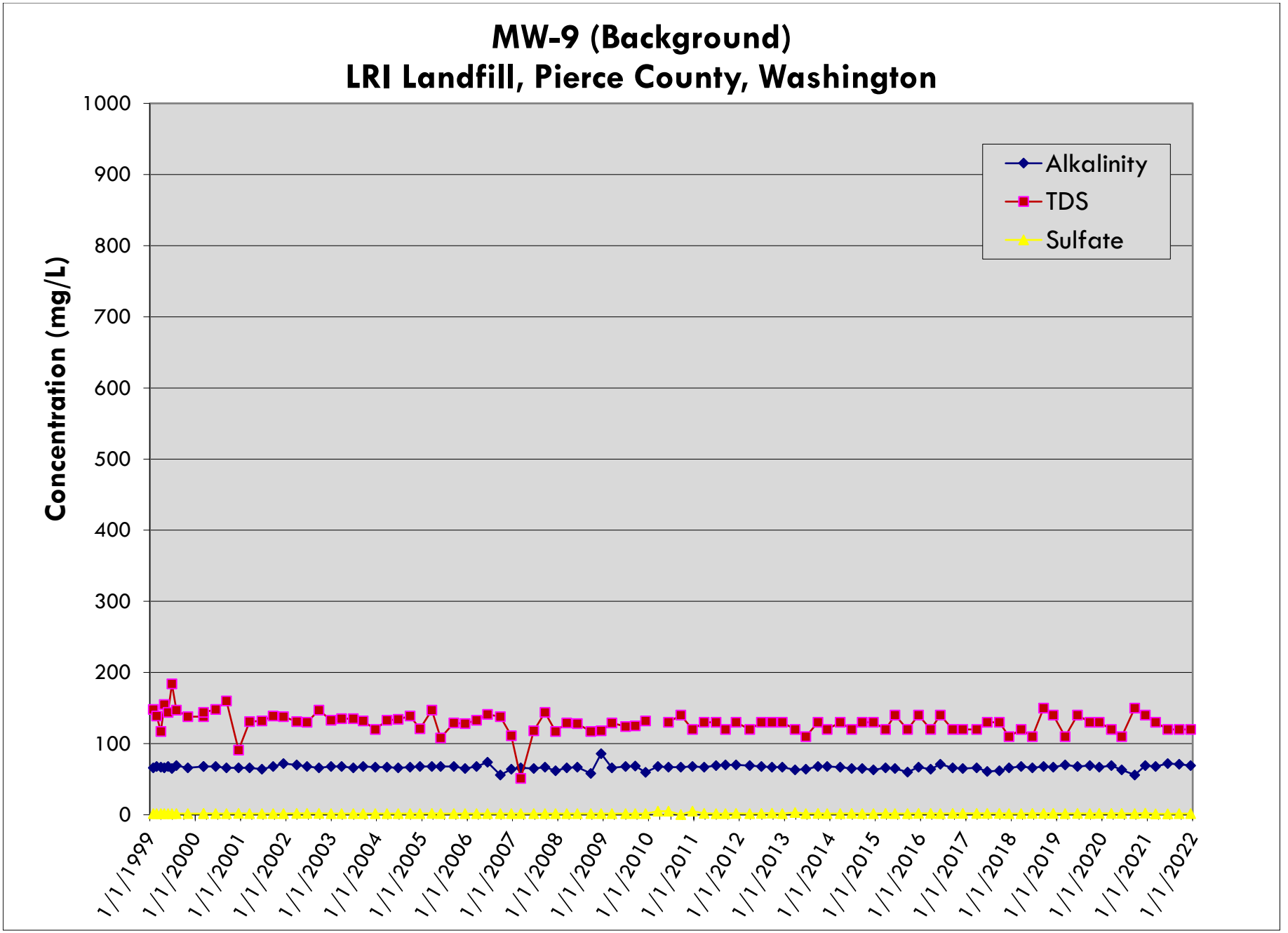
1/1/2021
1/1/2022

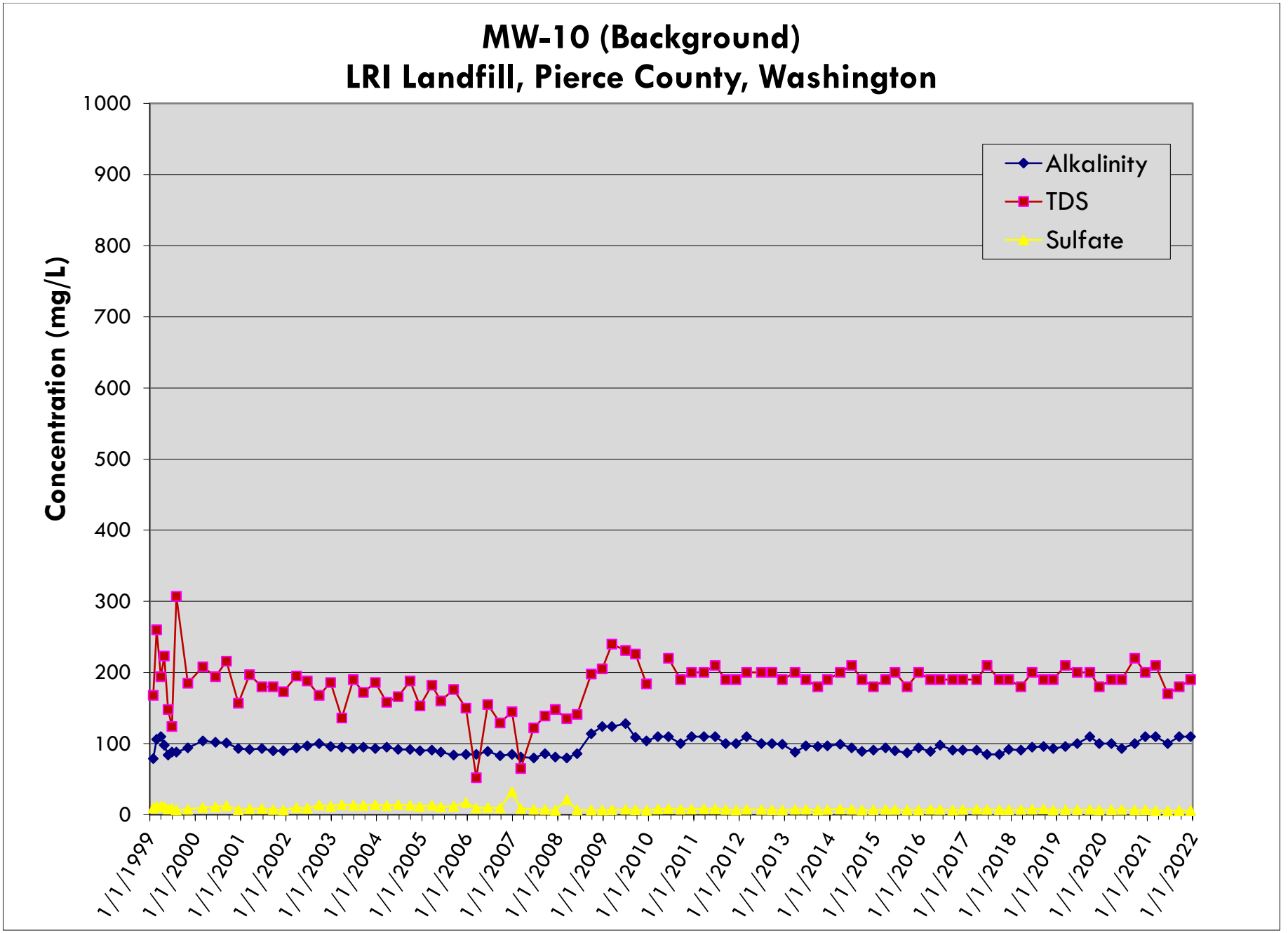

MW-4
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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

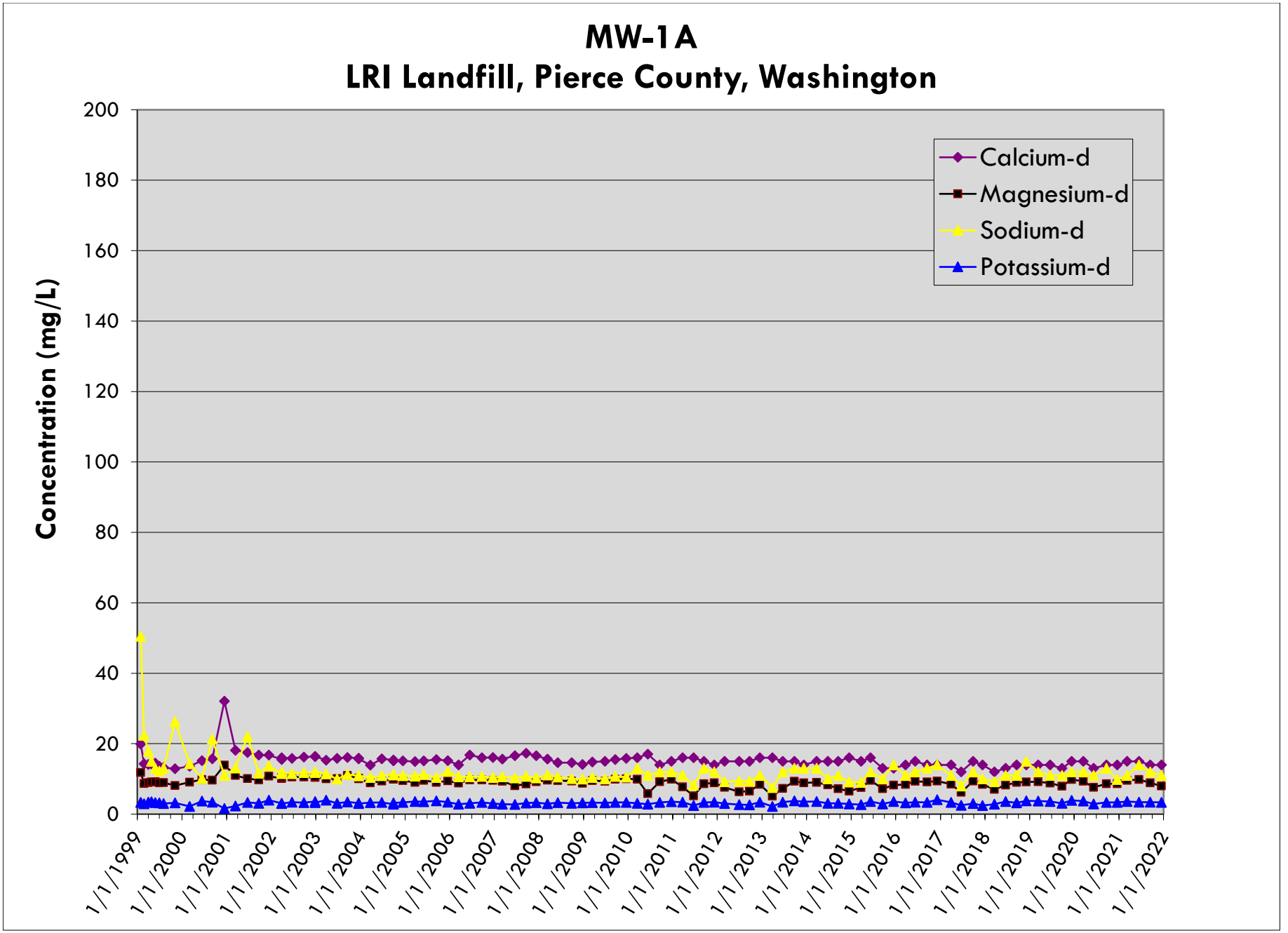

MW-5A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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

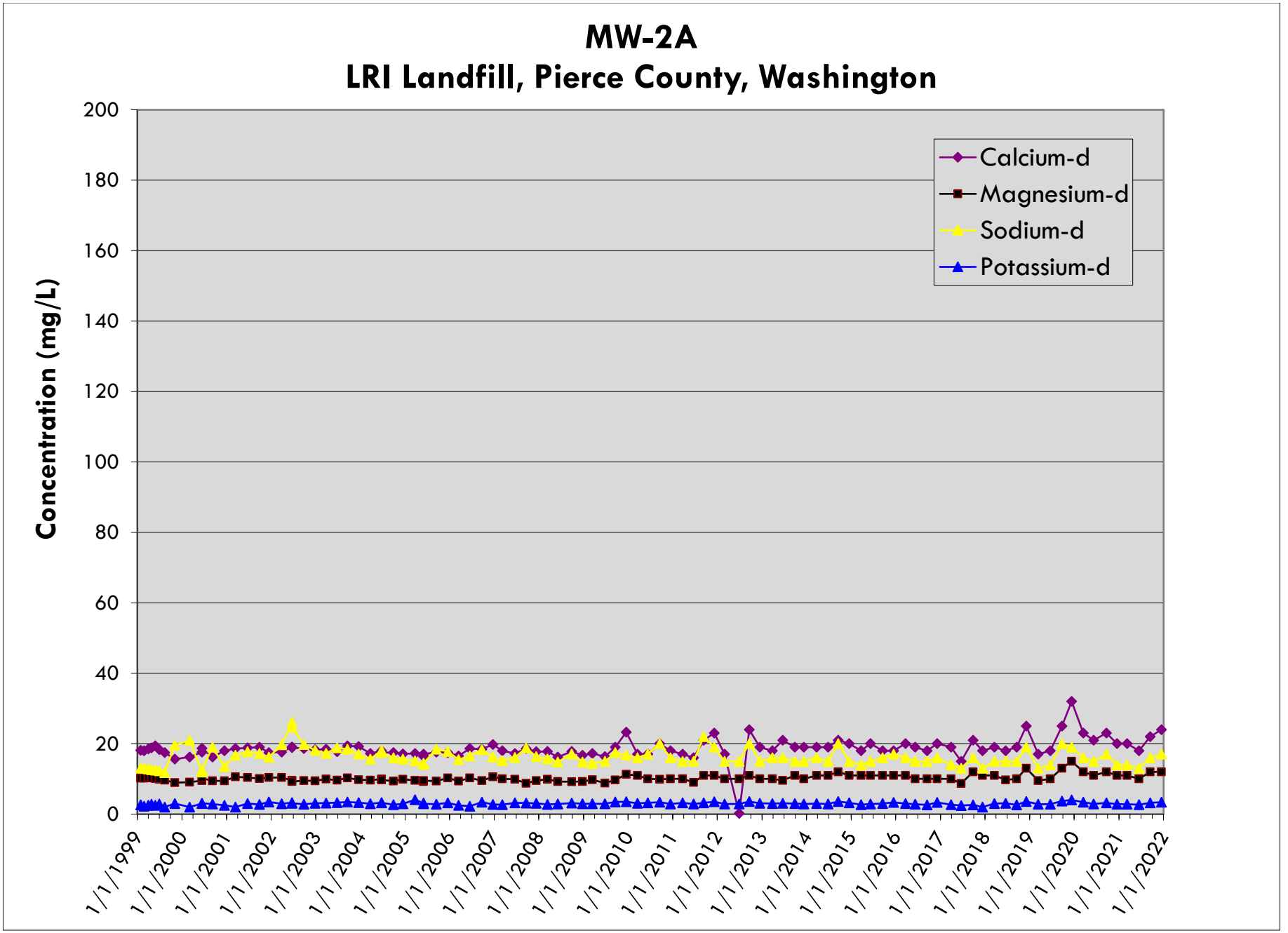

MW-6
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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

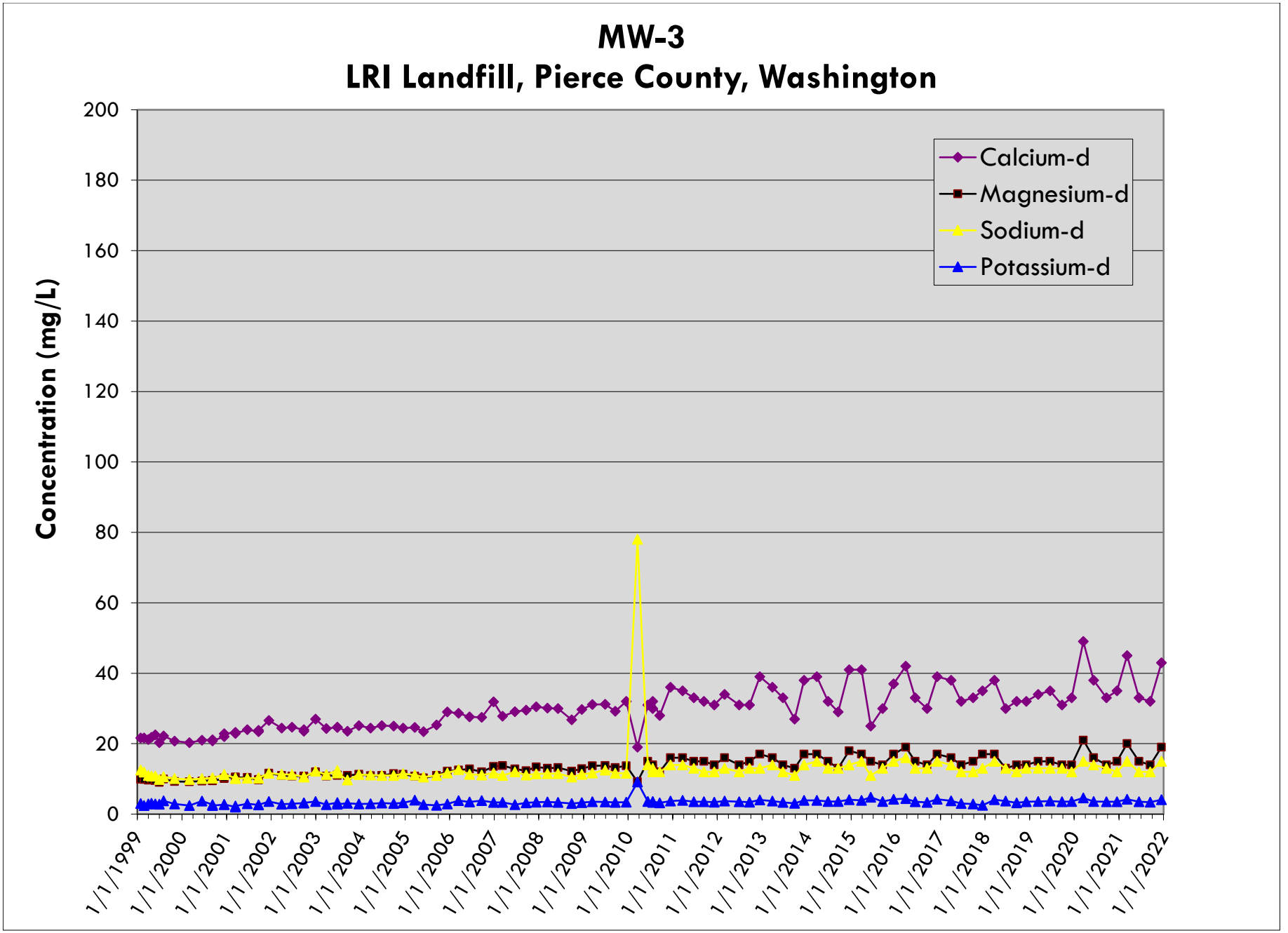

MW-7
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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


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

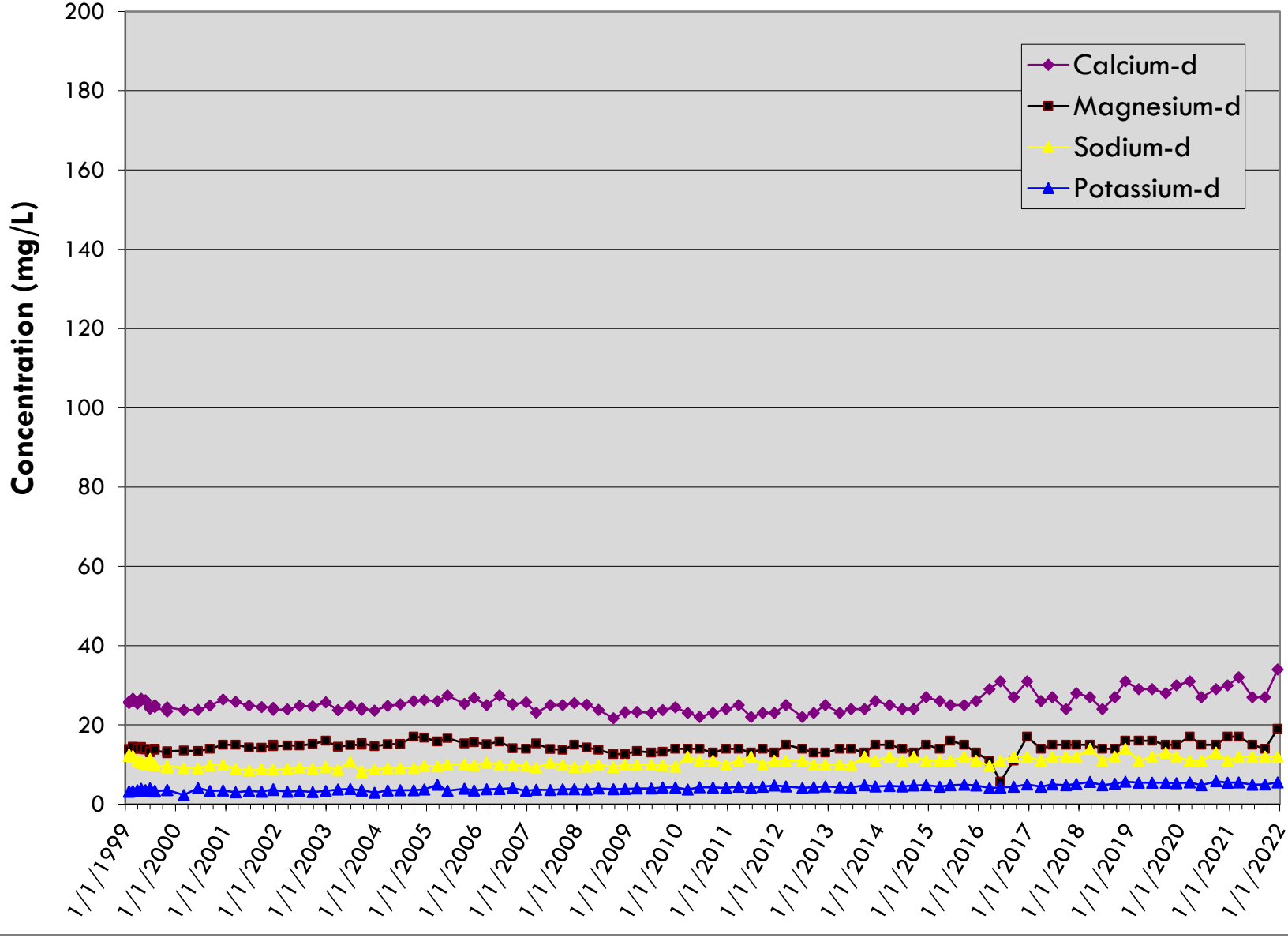

MW-10 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016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

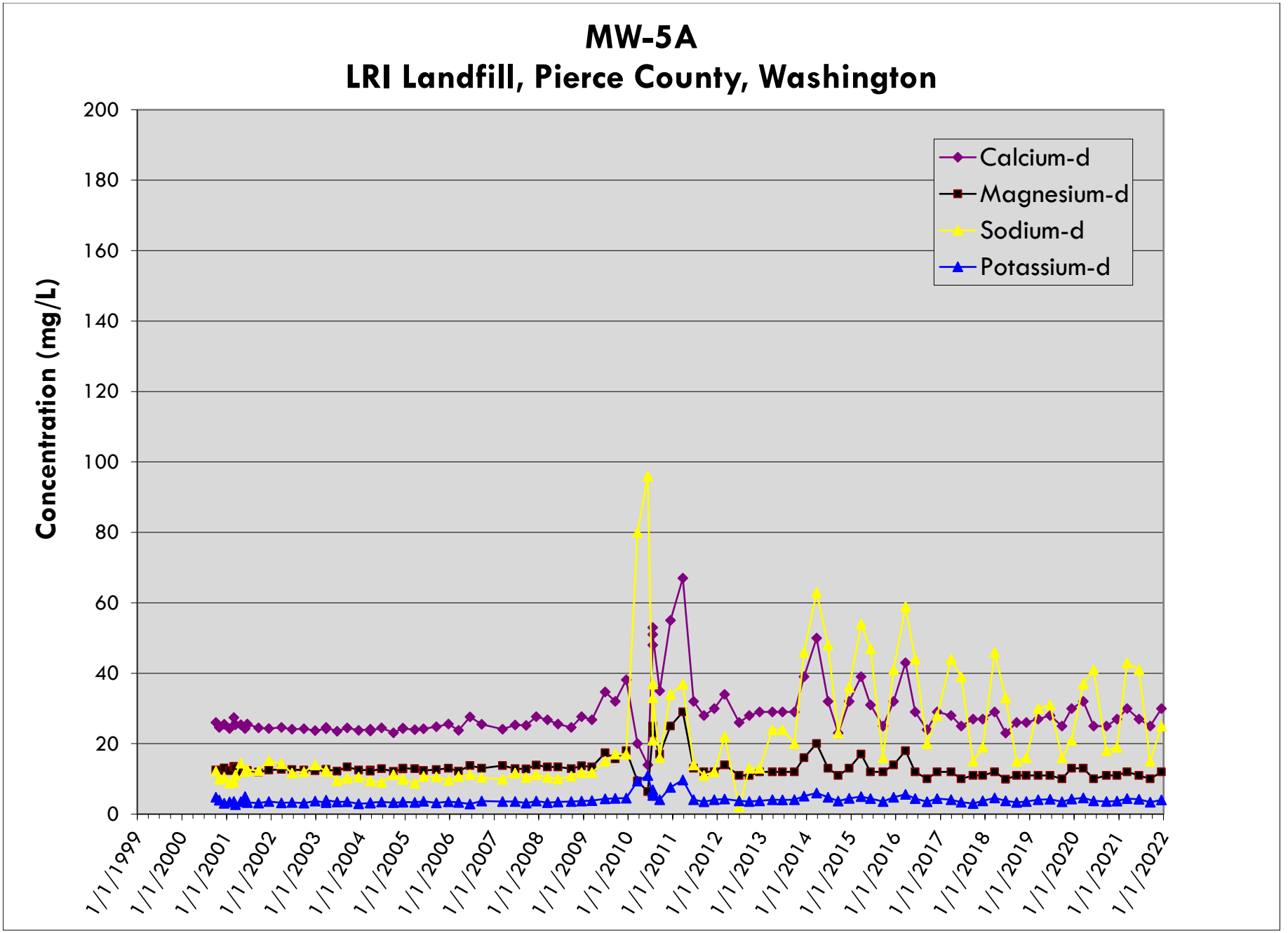

MW-1A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015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

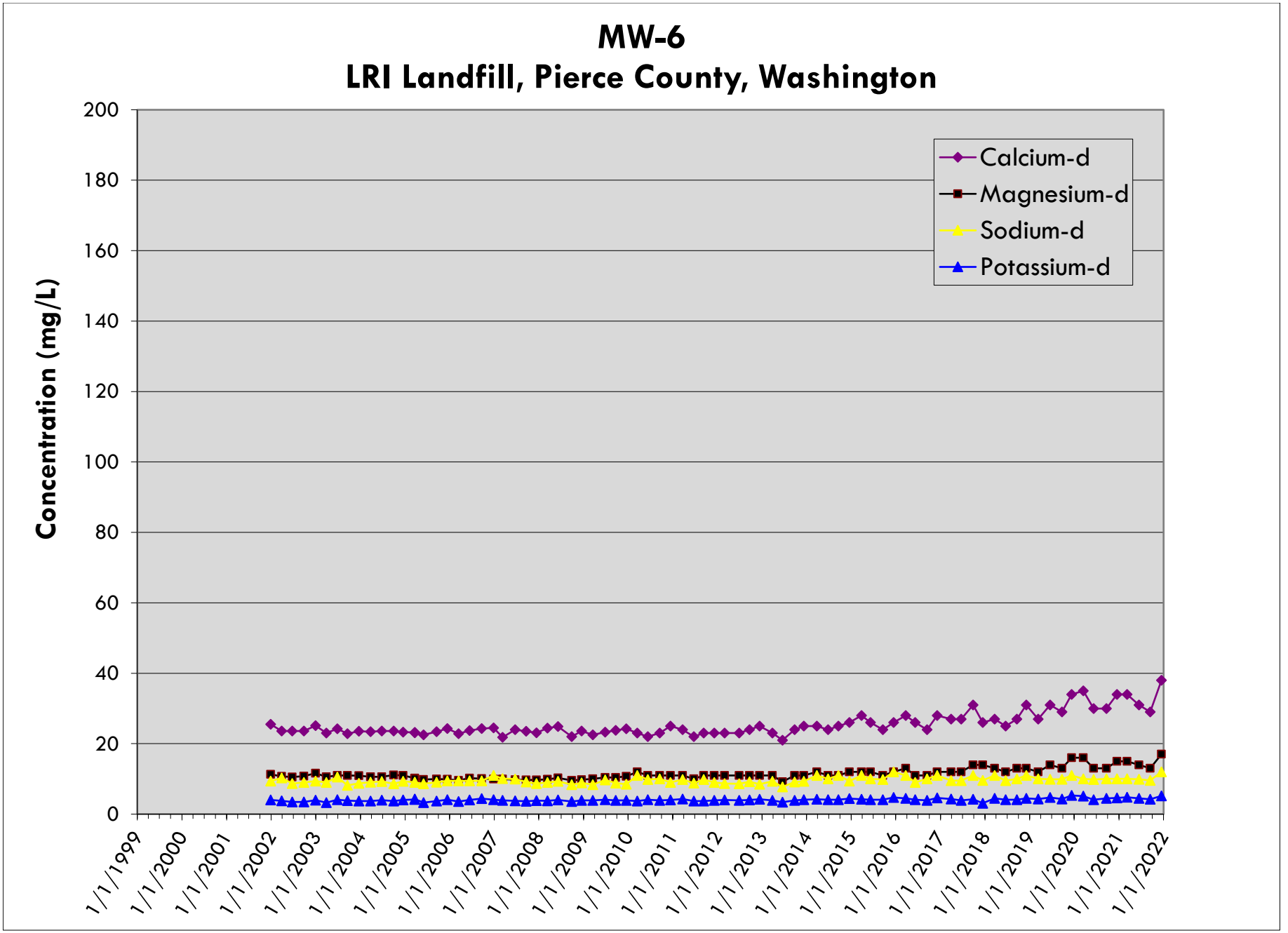

MW-2A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015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

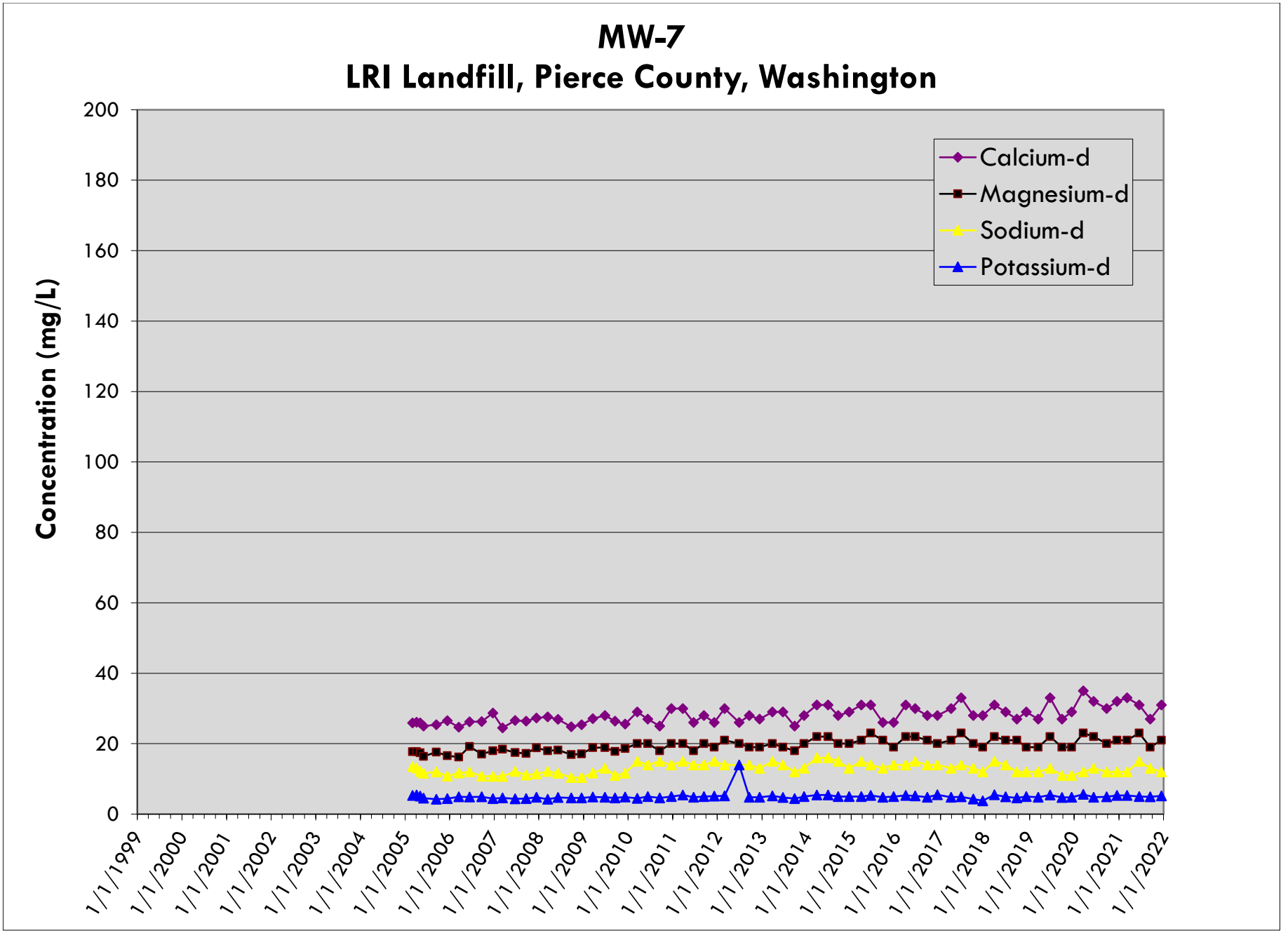

MW-3
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016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

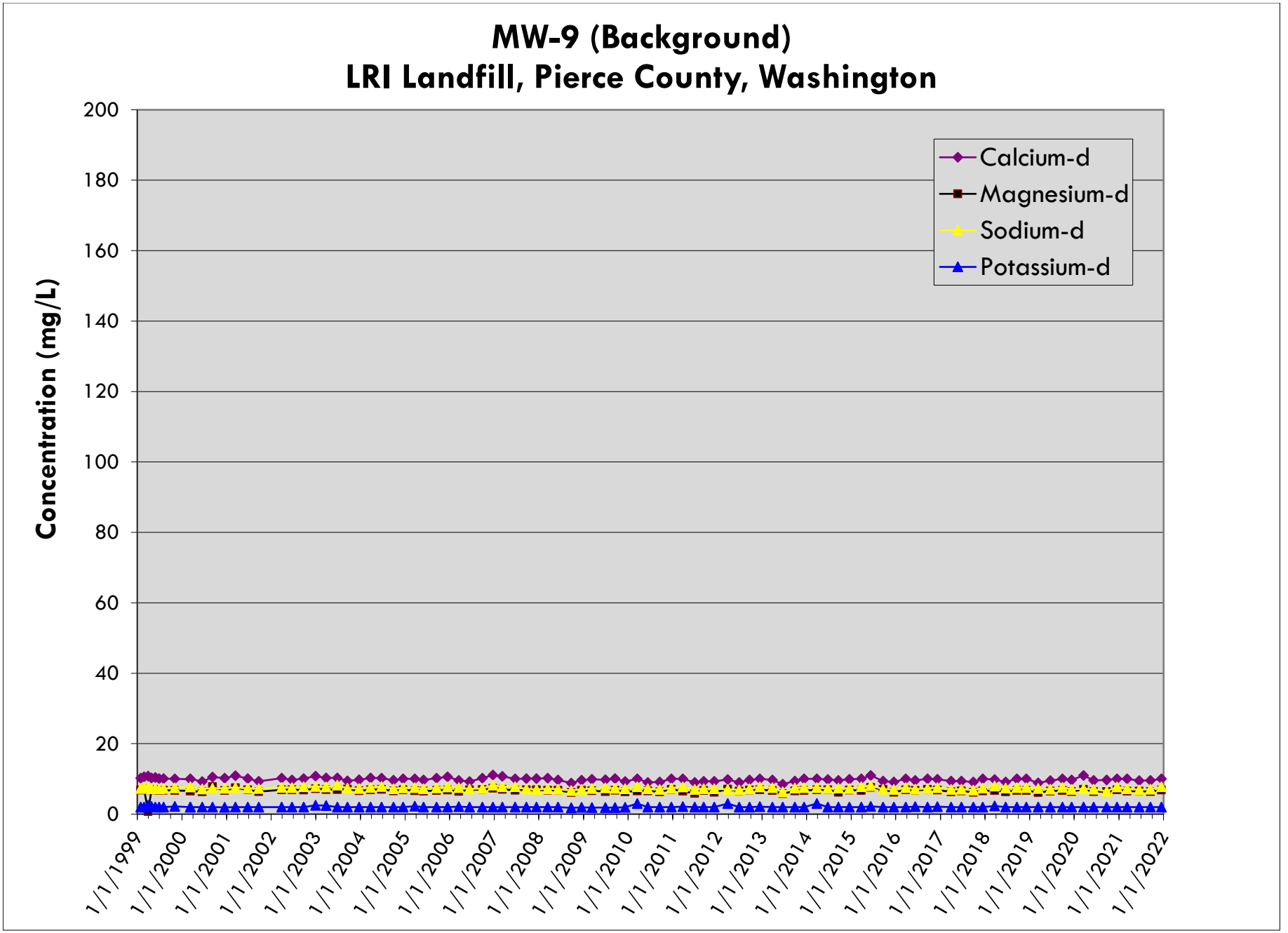
MW-4
LRI Landfill, Pierce County, Washington

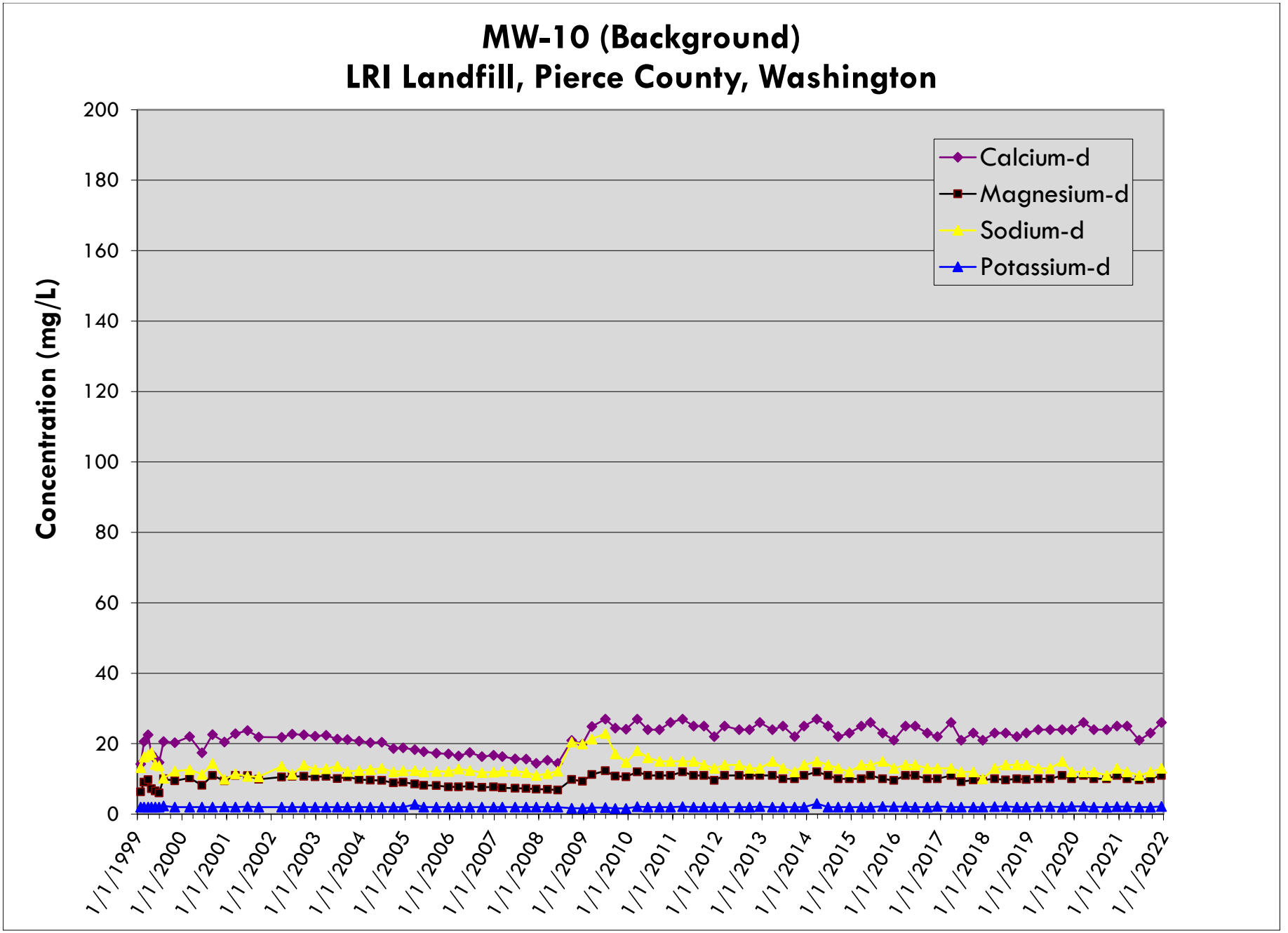



MW-5A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015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

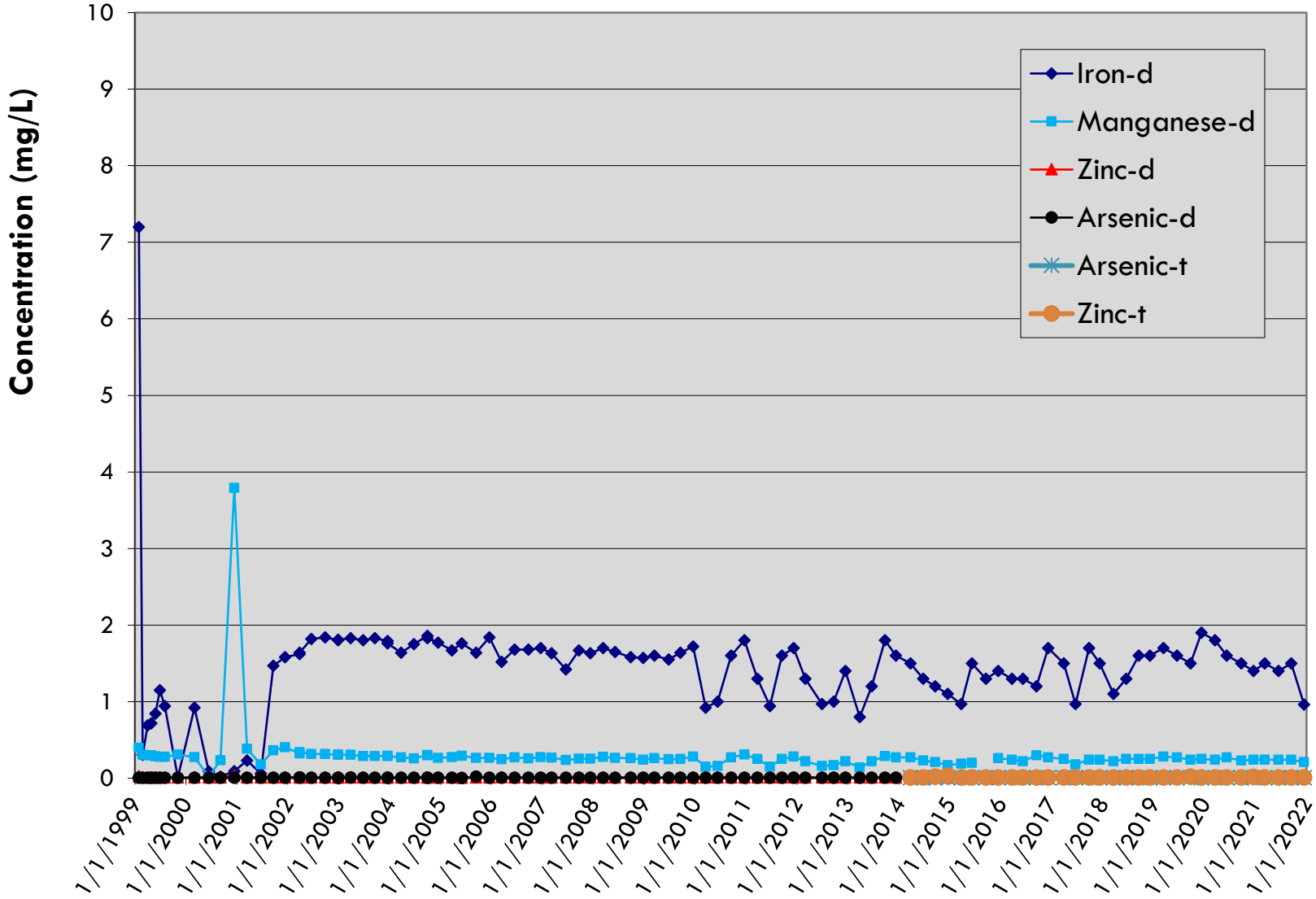

MW-6
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016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


MW-7
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

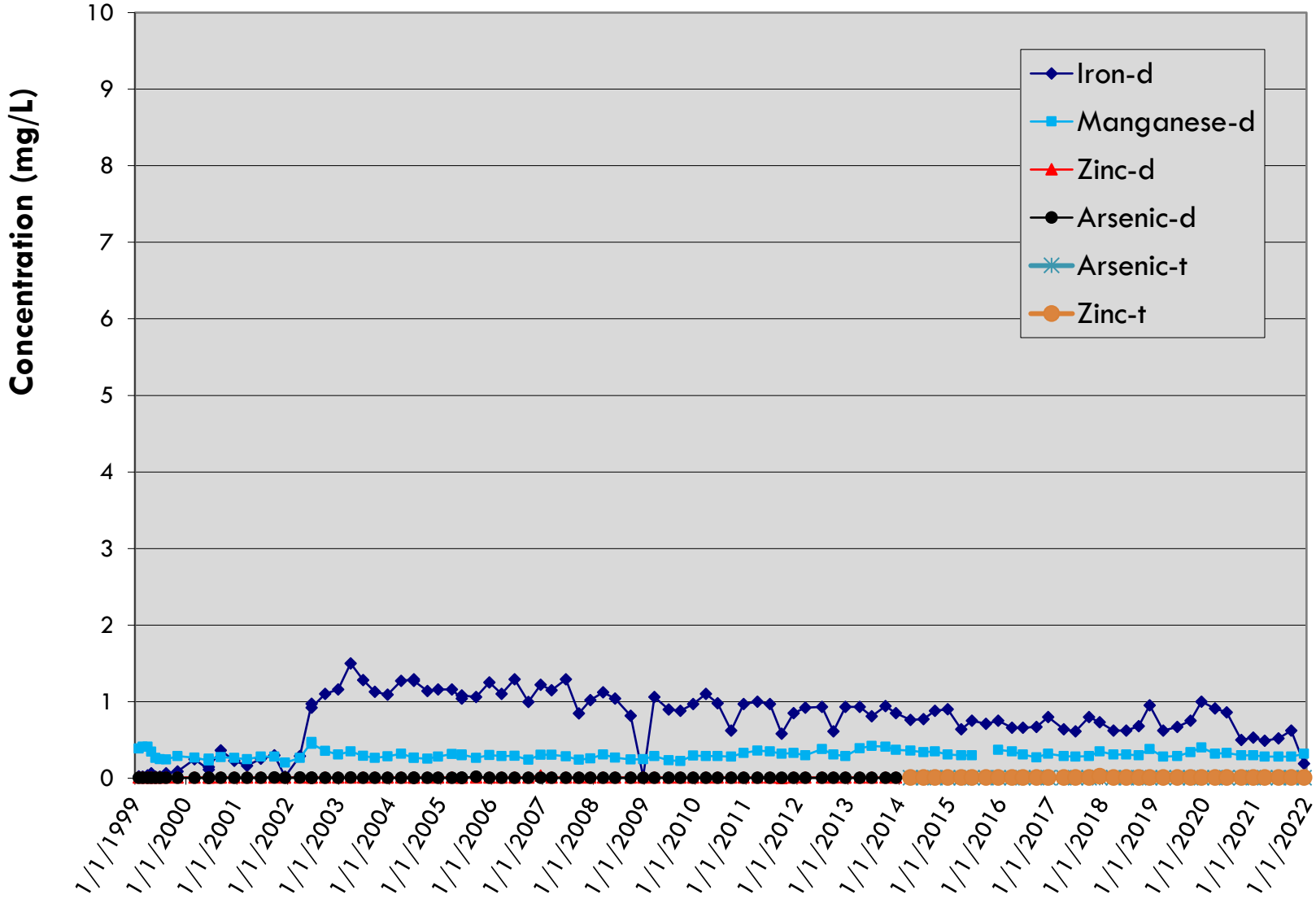

MW-9 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014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


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

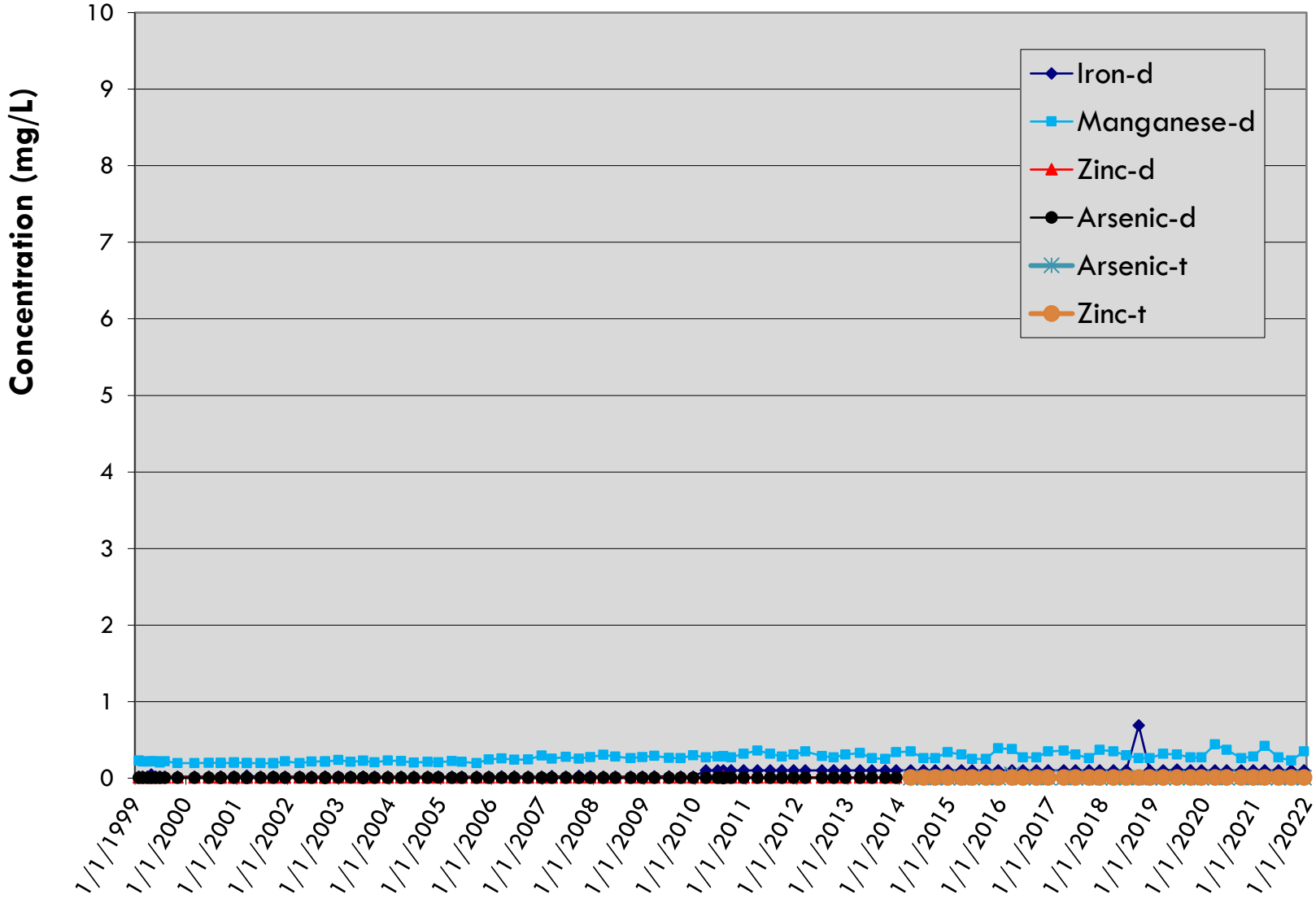
MW-1A
LRI Landfill, Pierce County, Washington



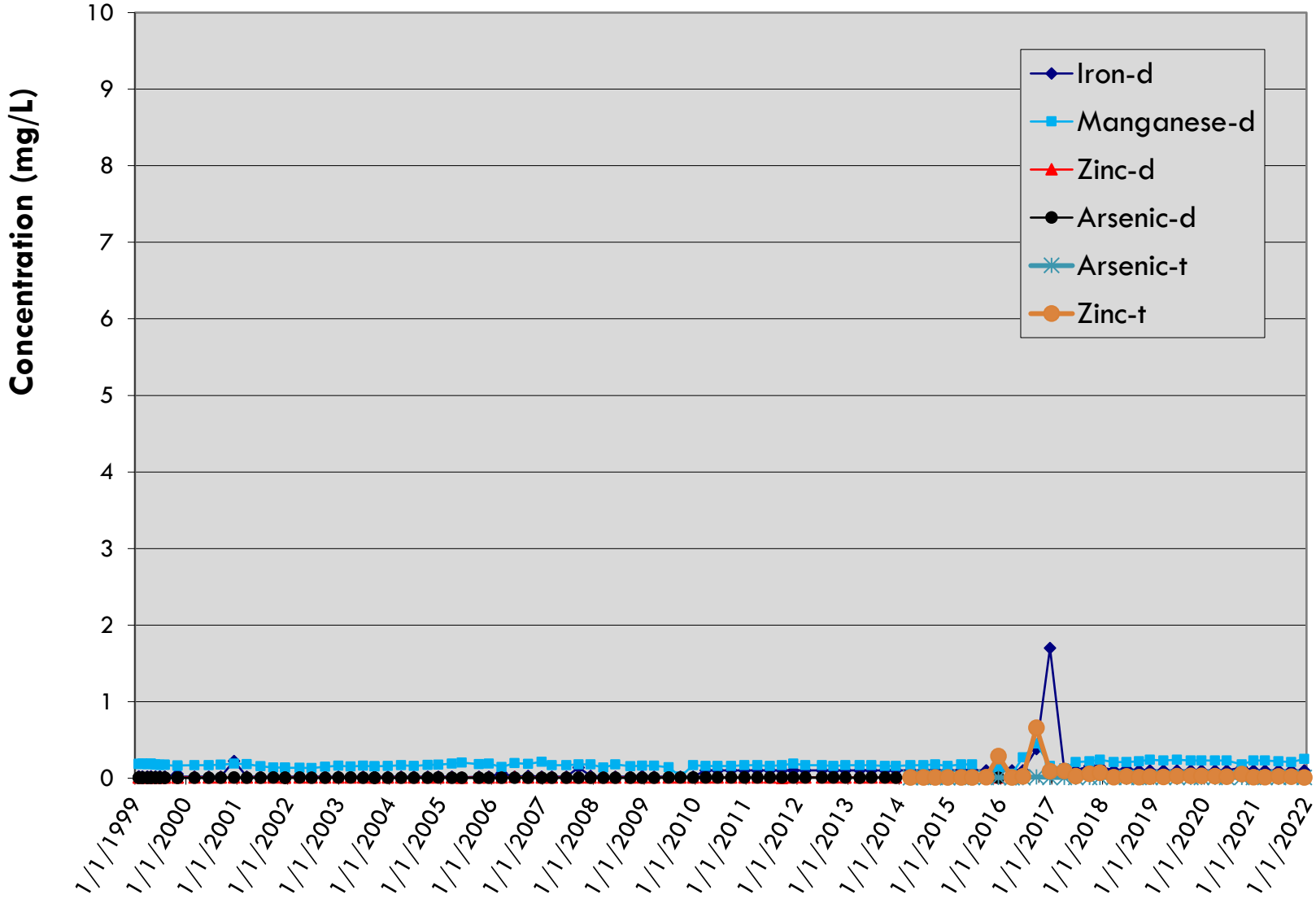
MW-2A
LRI Landfill, Pierce County, Washington



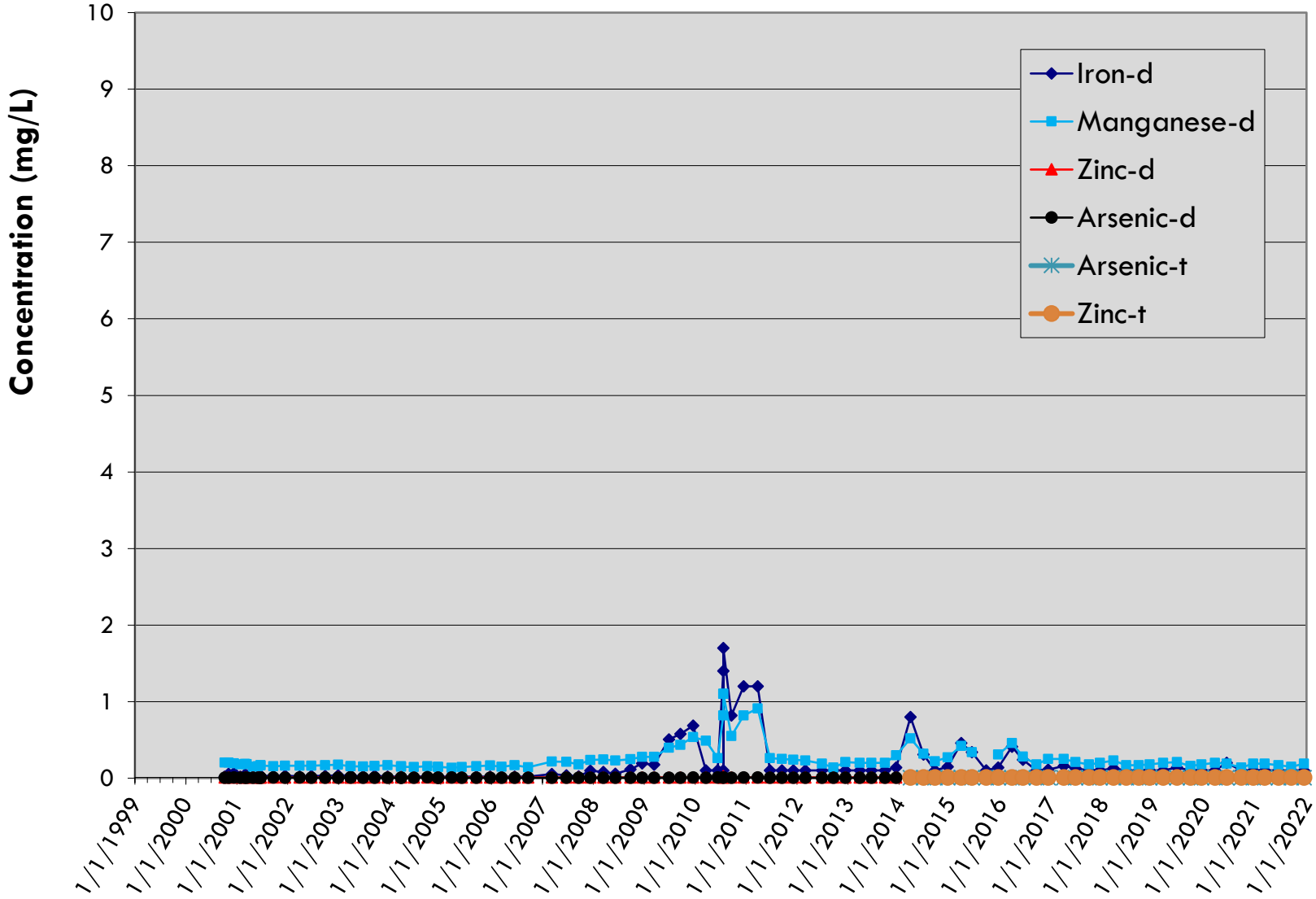
MW-3
LRI Landfill, Pierce County, Washington



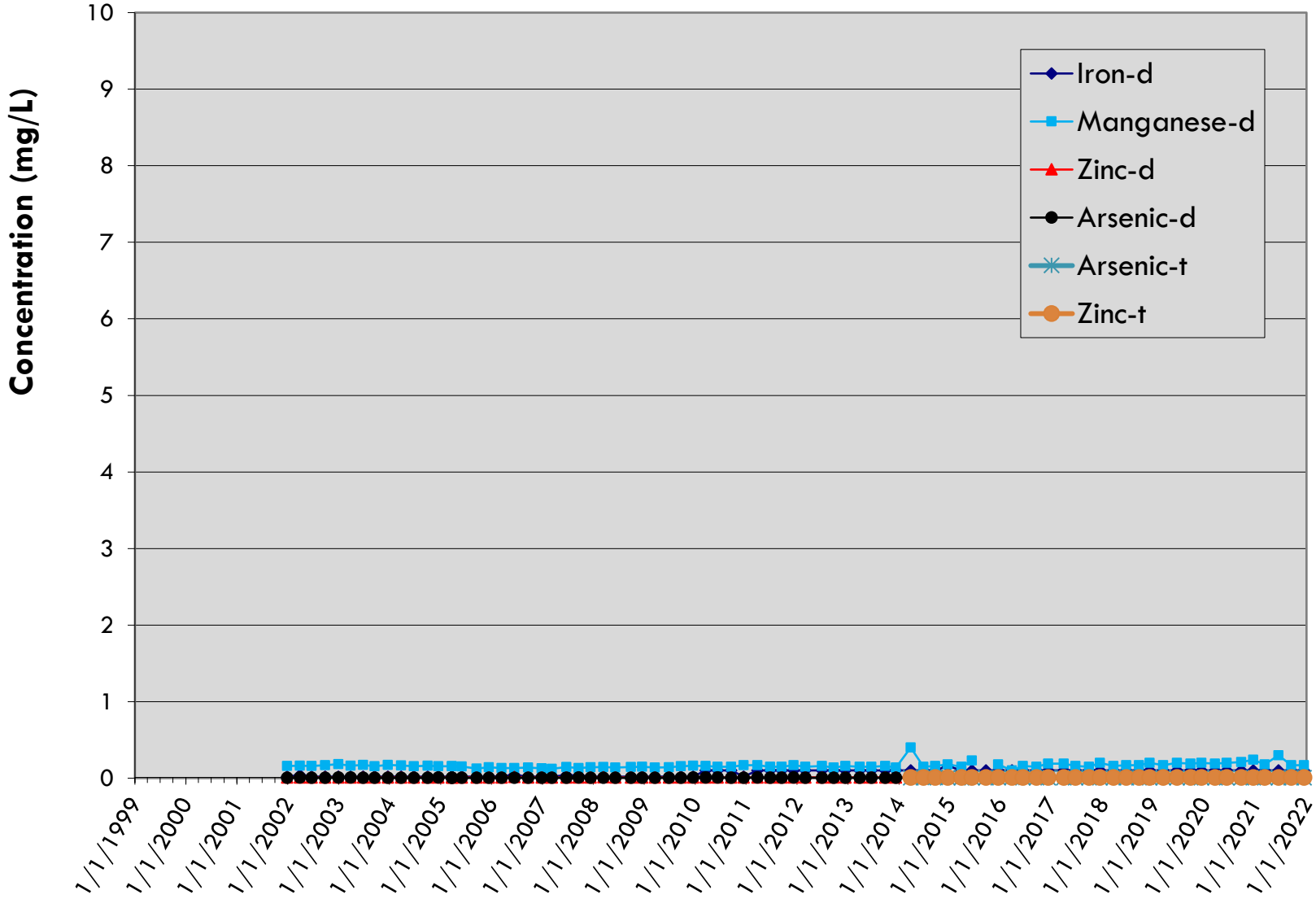
MW-4
LRI Landfill, Pierce County, Washington



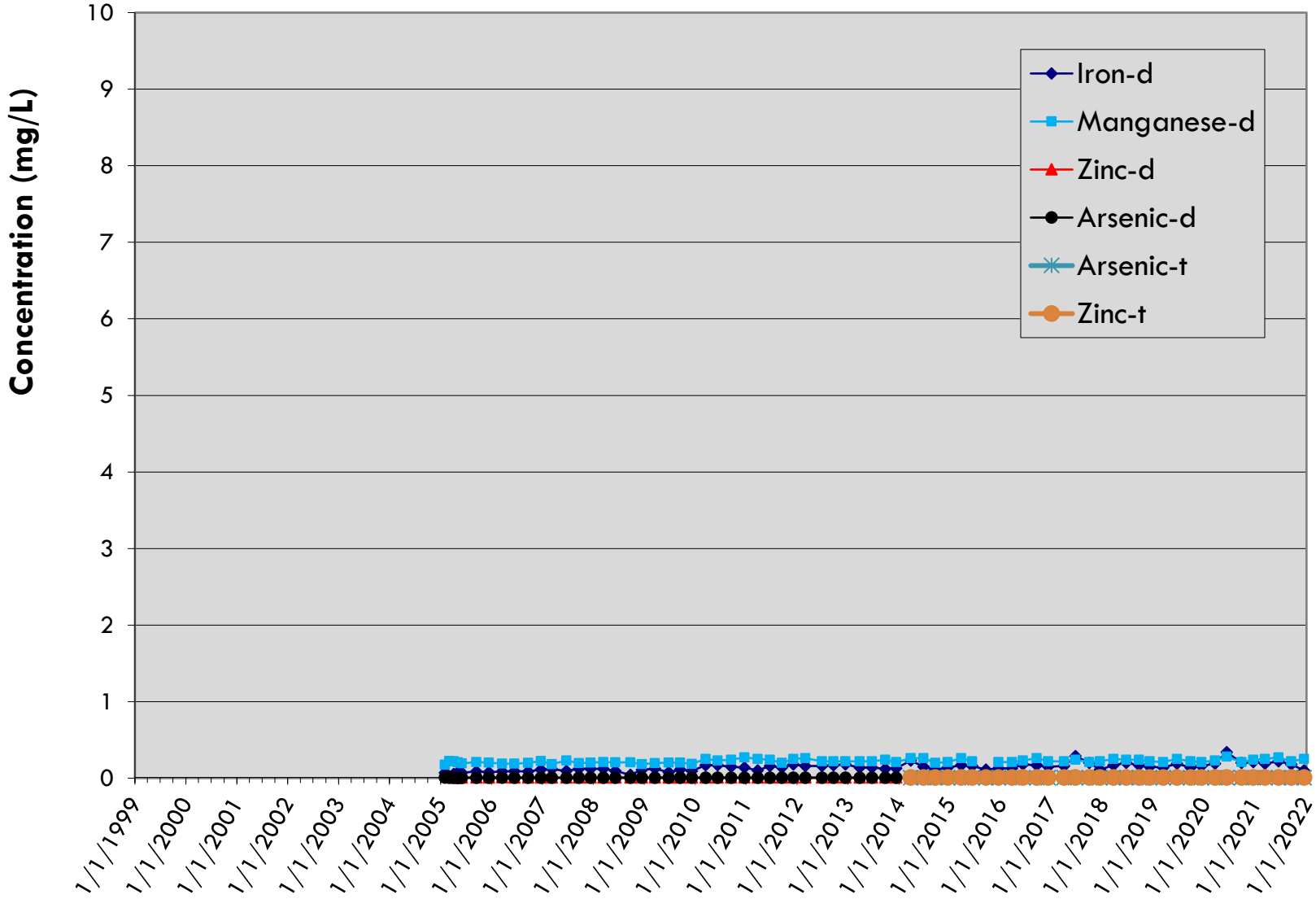
MW-5A
LRI Landfill, Pierce County, Washington

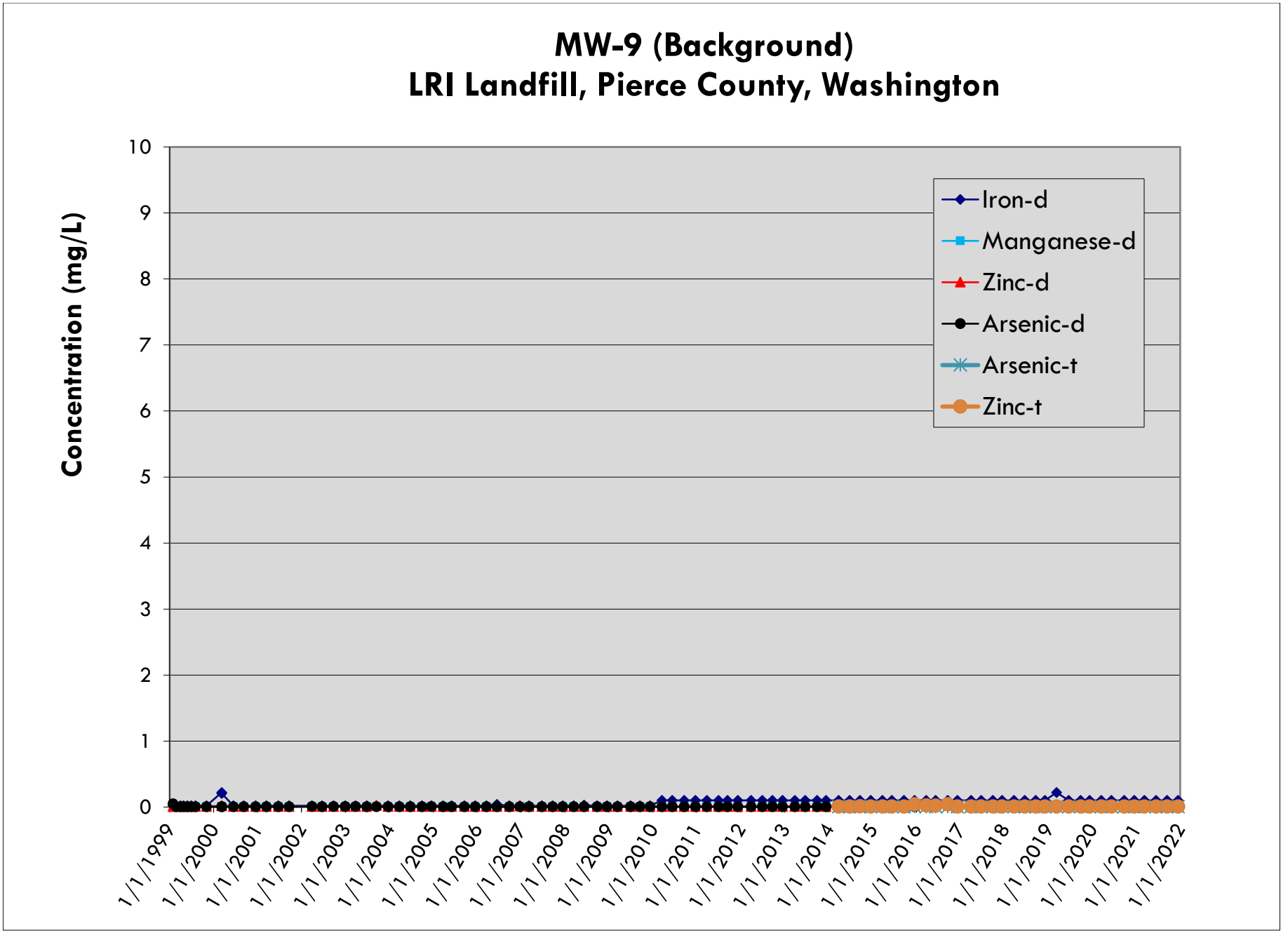


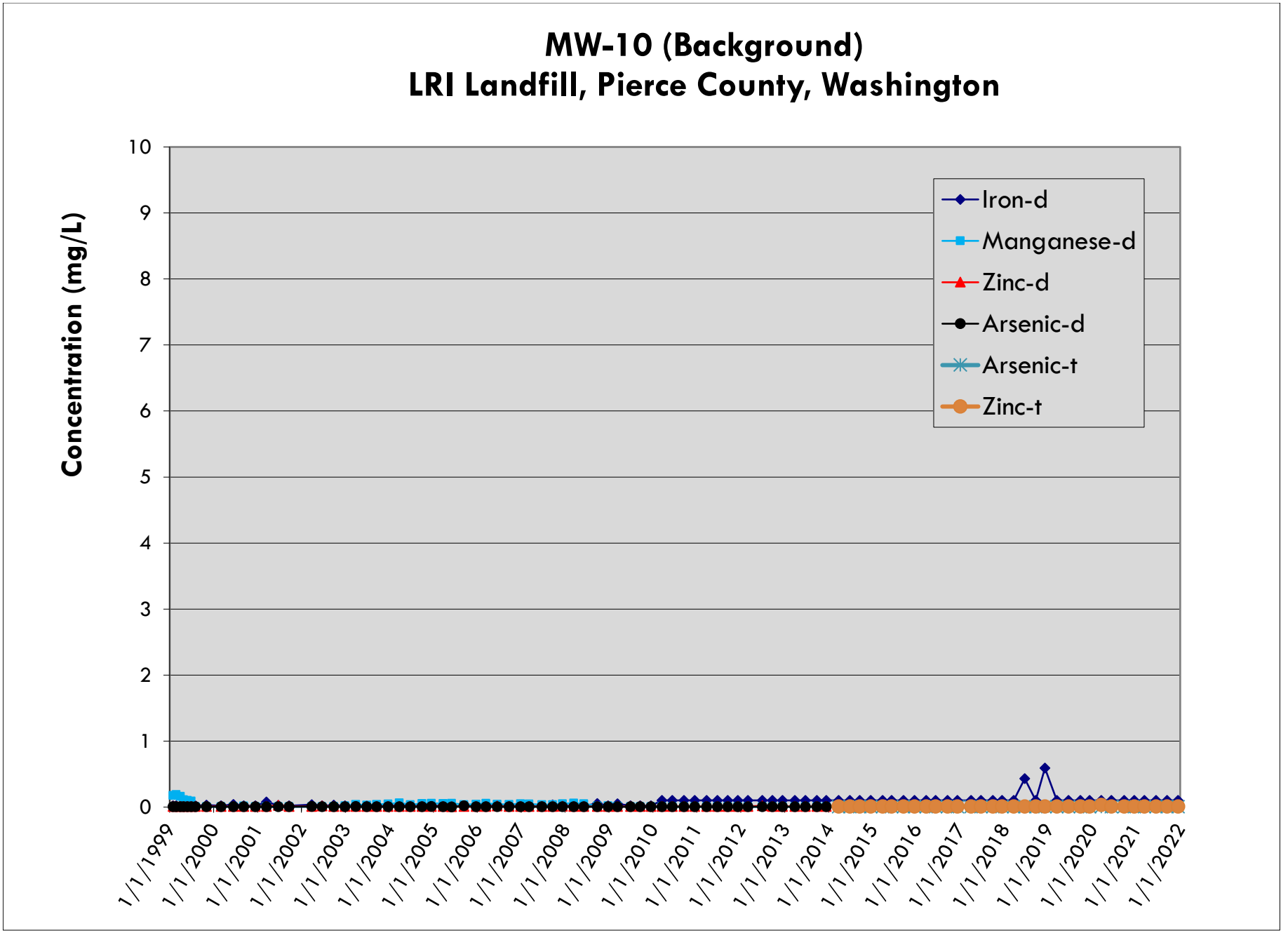
MW-6
LRI Landfill, Pierce County, Washington



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
Iron-d
Manganese-d
Zinc-d
Arsenic-d
Arsenic-t
Zinc-t


MW-10 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
10
9
8
7
6
5
4
3
2
1
0
Iron-d
Manganese-d
Zinc-d
Arsenic-d
Arsenic-t
Zinc-t
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

FOURTH QTR. 2021 DATA VALIDATION REPORT – LRI LANDFILL

Project Details

Project No.	04222001.02	**Site Name**	LRI 304th Street LF
Data Validator	Ruben Martinez	**Data Level**	Level 2
Date	3/2/21	**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)
280-156836-1	One of three hydrochloric acid preserved VOA vials for the sample 304-121421-01 was broken in transit, however sufficient volume remained to proceed with the analysis. The client was notified.	TestAmerica, Denver, CO
280-156900-1	None.	TestAmerica, Denver, CO
280-156905-1	None.	TestAmerica, Denver, CO
280-156969-1	None.	TestAmerica, Denver, CO
280-156971-1	Alkalinity analyses performed outside of holding time for sample "-23".	TestAmerica, Denver, CO
280-156973-1	None.	TestAmerica, Denver, CO
280-157177-1	Due to an anomalous concentration relative to historical Alkalinity in the sample "-30", reanalysis was performed outside the holding time. The reanalysis result reflected the historical Alkalinity result for this sample, and therefore the reanalysis results is reported in this submission.	TestAmerica, Denver, CO
280-157721-1	The container labels for the following sample did not match the information listed on the Chain-of-Custody (COC): 304-0121-31 (280-157721-1). The sample collection times were different on each individual container. The sample was logged per the time listed on the COC.	TestAmerica, Denver, CO
280-157984-1	None.	TestAmerica, Denver, CO

Analytical Summary

Sample Group	Analyses					
	TDS/Alk/NO3	Metals	NH3/TOC	VOCs	Anions	TSS
280-156836-1	X	X[1]	X	X	X	-

280-156900-1	X	X[1]	X	X	X	-
280-156905-1	X	X[2]	X	X	X	X
280-156969-1	X	X[2]	X	X	X	X
280-156971-1	X	X[3]	X	X	X	-
280-156973-1	X	X[1]	X	X	X	-
280-157177-1	X	X[3]	X	X	X	-
280-157721-1	X	X[3]	X	X	X	-
280-157984-1	-	-	-	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.
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-TB	280-156836-1	None.	
QC-TB	280-156900-1	None.	
QC-TB	280-156905-1	None.	
QC-FB	280-156905-1	None.	
QC-TB	280-157984-2	None.	

Lab Quality Flags

Flag	Sample Groups	Comments
^2	280-156971-1, 280-157721-1	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
4	280-156836-1, 280-156900-1, 280-156905-1, 280-156969-1,	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike

	280-156971-1, 280-156973-1, 280-157177-1, 280-157721-1	concentration; therefore, control limits are not applicable.
F1	280-156836-1, 280-156971-1, 280-156973-1, 280-157177-1, 280-157721-1	MS and/or MSD recovery exceeds control limits.
F2	280-156969-1, 280-156971-1, 280-156973-1, 280-157721-1	MS/MSD RPD exceeds control limits
F3	280-156905-1	Duplicate RPD exceeds the control limit
F5	280-156905-1	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
E	280-157721-1	Result exceeded calibration range.
H	280-156971-1, 280-157177-1	Sample was prepped or analyzed beyond the specified holding time
J	280-156836-1, 280-156900-1, 280-156905-1, 280-156969-1, 280-156971-1, 280-156973-1, 280-157177-1, 280-157721-1	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*+	280-157721-1	LCS and/or LCSD is outside acceptance limits, high biased.

Duplicate Evaluation

Analyte	Units	MW-5A (304-121521-12)	MW-5A DUP (304-121521-14)	RPD (%)
Alkalinity, Total	mg/L	170	170	0.0
Ammonia	mg/L	0.12	0.13	8.0
Arsenic, Total	mg/L	0.005 U	0.005	0
Barium, Total	mg/L	0.012	0.012	0.0
Calcium, Dissolved	mg/L	30	30	0.0
Chloride	mg/L	2.5	2.5	0.0
Magnesium, Dissolved	mg/L	12	12	0.0
Manganese, Dissolved	mg/L	0.19	0.19	0.0
Potassium, Dissolved	mg/L	4	4	0.0
Sodium, Dissolved	mg/L	25	25	0.0
Sulfate	mg/L	11	11	0.0
Total Dissolved Solids	mg/L	210	250	17.4
Total Organic Carbon	mg/L	1.7	1.5	12.5

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.

December 17, 2021
File No. 04221001.02

Subject: **Fourth Quarter 2021 Groundwater Monitoring Event**
LRI Landfill, Pierce County, Washington

NOTES/SAMPLE DECODING:

Event Dates: December 14-16, & 22 2021 & January 13 & 20, 2022
Field Staff: Sam Graber & Travis Berndahl

- Dedicated pumps were used for purging and sampling MW-1A, MW-2A, MW-3, MW-5A, MW-6, MW-7, MW-9, MW-10, LDCS-3A, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6, and LDCS-7.
- Disposable bailers were used to sample LDCS-1, LDCS-2A, and LDCS-2B.
- The sample from LDCS-8 was collected as a grab sample from the 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 15, 2021.
- Multi-parameter field meters were calibrated daily, prior to sampling.
- The leachate sample from Cell 8 was sampled on 1/13/22.
- MW-4 was resampled on 1/20/22 for VOCs.
- Source water for the field blank was lab-grade deionized water (VOC-free) provided by TestAmerica in Tacoma, Washington.

Sample Number	Well Number
304-121421-01	LDCS-7
304-121421-02	LDCS-3
304-121421-03	LDCS-2B
304-121421-04	LDCS-2A
304-121421-05	LDCS-1
304-121421-06	LDCS-4A
304-121421-07	LDCS-8
304-121521-08	MW-1A
304-121521-09	MW-9
304-121521-10	MW-2A
304-121521-11	MW-10
304-121521-12	MW-5A
304-121521-13	LDCS-6
304-121521-14	MW-5A (Duplicate)
304-121521-15	Field Blank
304-121521-16	MW-6
304-121521-17	LDCS-5
304-121521-18	MW-3
304-121621-19	Leachate, Cell 6
304-121521-20	MW-7
304-121621-21	MW-4
304-121621-22	LDCS-4B
304-121621-23	Leachate, Cell 4B

304-122221-24	Leachate, Cell 7
304-122221-25	Leachate, Cell 3
304-122221-26	Leachate, Cell 2B
304-122221-27	Leachate, Cell 2A
304-122221-28	Leachate, Cell 1
304-122221-29	Leachate, Cell 4A
304-122221-30	Leachate, Cell 5
304-0121-31	Leachate, Cell 8

Additional Samples

Sample Number	Well Number
304-012022-01*	MW-4

* = additional sample serves as confirmation water quality data. Only VOCs analyzed.

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS-7
Sample ID: 304-12 14 21- 01
Date: 12/ 14 /21
Weather: partly sunny

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 45
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			

spc panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q/Vol.
940		9.3	990	2.01	6.54	136.4	4.89	774
945		10.5	1011	1.02	6.61	159.3	4.99	
948		11.5	1020	0.43	6.75	147.3	5.81	754
951		11.9	1024	0.42	6.82	129.7	6.21	
954		12.2	1025	0.42	6.93	116.6	6.93	
957		12.3	1026	0.40	6.95	110.9	6.90	
1000		12.4	1029	0.39	6.99	101.2	6.93	735

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

level at 10.1, water right away.

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS-3
Sample ID: 304-12 14 21- 02
Date: 12/ 14 /21
Weather: Cloudy

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: 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	SPE Channel Q / Vol.
1055		12.8	851	1.35	6.52	100.8	4.69	
1100		16.2	881	0.37	6.35	68.0	5.93	751
1103		16.8	891	0.32	6.32	31.2	5.41	
1106		17.4	897	0.29	6.30	20.1	5.31	
1109		17.5	922	0.29	6.36	19.9	6.81	
1112		17.7	945	0.48	6.48	29.9	6.79	
1115		17.9	958	0.67	6.60	39.8	6.76	
1118		18.0	963	0.80	6.62	54.5	6.88	754

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

level at 9.25

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS - 2B
Sample ID: 304-12 14 21-03
Date: 12/ 14 /21
Weather: Cloudy

27.75 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

spc pump

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	~~Q~~ Vol.
1210		14.0	766	5.06	7.03	6.3	12.90	82

Notes / Observations (color, odor, anomalies, etc):
Moderate to heavy black + brown particulates in sample.

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS-2A
Sample ID: 304-12 14 21-04
Date: 12/ 14 /21
Weather: cloudy

29.15 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

spc panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	~~Q~~ Vol.
1300		15.6	831	5.41	7.39	63.4	1.35	705

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

slight to moderate amount of orange particulates. White slime on reel.

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS - 1
Sample ID: 304-12 14 21- 05
Date: 12/ 14 /21
Weather: cloudy

25.90 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			

spc panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q/Vol.
1340		17.2	407	3.17	6.16	88.4	10.33	526

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

Clear sample. White slime on reel.

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS-4A
Sample ID: 304-12 14 21-06
Date: 12/ 14 /21
Weather: Cloudy

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			

SPC panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1405		13.3	804	1.71	6.59	102.7	6.82	
1410		16.9	821	0.82	6.36	37.1	13.50	
1413		17.8	722	0.49	6.32	10.8	13.71	
1416		18.5	697	0.36	6.29	-9.7	13.95	972
1419		19.3	681	0.30	6.27	-12.0	8.67	
1422		19.5	681	0.29	6.27	-16.5	7.41	
1425		19.6	682	0.27	6.27	-19.6	7.22	1222

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

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS-8
Sample ID: 304-12|4 21- 07
Date: 12/14/21
Weather: cloudy

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

Meter: MP-20 YSI

CONTROL SETTINGS:

DTW
TOS
Intake
BOS
Total Depth

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			

spc panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q/Vol.
1500		13.7	1192	1.10	6.43	653	0.51	1000 *

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

grab sample from spigot

* mixed out

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-1A
Sample ID: 304-12 15 21- 08
Date: 12/ 15 /21
Weather: Overcast

17.42 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 36
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.
908		13.65	197	~~7.370~~	6.75	191.0		
913		13.48	67	3.72	6.50	128.8		
916		13.38	77	3.58	6.47	128.1		
919		13.34	134	2.25	6.75	19.1		
922		13.41	152	1.84	~~4.184~~ 6.36	-23.0		
925		13.36	171	1.64	6.94	-43.0		
928		13.36	178	1.51	6.98	-59.2	4.33	

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

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

SAMPLER: Travis Berndahl
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-9
Sample ID: 304-12 15 21- 09
Date: 12/ 15 /21
Weather: Cloudy

9.10 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 10
Discharge 5
Pressure 40
Flow 250 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			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
935		9.6	137	4.71	5.81	213.8	3.96	
940		9.9	137	3.98	6.00	203.8	3.70	
943		9.8	137	3.92	6.11	197.5	3.70	
946		9.8	137	3.88	6.21	192.2	3.70	
949		9.8	137	3.86	6.30	185.2	3.79	
952		9.8	137	3.85	6.33	181.2	3.69	
955	9.28	9.9	137	3.83	6.36	177.8	3.67	

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

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

SAMPLER: Sam Baker
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-2A
Sample ID: 304-12 15 21-10
Date: 12/ 15 /21
Weather: Overcast

12.36 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 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.
950		13.65	235	5.35	7.05	10.4		
955		13.03	292	1.08	7.10	-58.8		
958		12.95	289	1.07	7.17	-71.3		
1001		12.91	285	1.01	7.19	-76.2		
1004		12.96	285	0.86	7.19	-78.4		
1007		12.86	285	0.78	7.19	-79.0		
1010		12.84	284	0.77	7.17	-81.1	3.35	

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

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

SAMPLER: Travis Berndahl
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-10
Sample ID: 304-12 15 21- 11
Date: 12/ 15 /21
Weather: cloudy

27.30 DTW
TOS
Intake
BOS
Total Depth

Sampling Method : Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI
CONTROL SETTINGS:
Refill 4.5
Discharge 5.5
Pressure 40
Flow 250 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.
1120		11.4	258	1.09	6.06	155.1	4.60	
1125		11.0	273	0.83	6.19	155.9	5.63	
1128		11.0	269	0.62	6.44	147.1	6.31	
1131	31.20	11.0	268	0.60	6.42	145.9	6.28	
1134		10.9	267	0.58	6.41	144.8	6.23	
1137		10.9	268	0.59	6.42	143.8	6.19	
1140		10.8	269	0.61	6.42	142.6	6.02	

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

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

SAMPLER: Sam Gruber
Printed Name

Signature

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

Groundwater Sampling Data Sheet

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

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-5A
Sample ID: 304-12 15 21-12
Date: 12/ 15 /21
Weather: Overcast

26.2 DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill: 9
Discharge: 6
Pressure: 40
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			

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

Dup taken @ 1110
304-12 15 21-14

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1042		12.36	294	5.70	7.22	-39.2		
1047		12.31	349	0.74	7.67	-56.8		
1050		12.35	342	0.72	7.67	-60.5		
1053		12.28	341	0.72	7.66	-63.9		
1056		12.27	341	0.71	7.67	-66.1		
1059		12.26	340	0.74	7.66	-66.8		
1102		12.27	340	0.74	7.66	-67.7	6.14	

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

SAMPLER: Travis Bernhardt
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS-6
Sample ID: 304-12 15 21-13
Date: 12/ 15 /21
Weather: Cloudy

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 12
Discharge 3
Pressure 50
Flow 100 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			

spc panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q ~~Vol.~~
1225		7.6	1004	8.09	7.47	135.2	7.15	
1230		7.5	1022	8.00	7.49	130.2	7.25	
1235		7.4	1043	7.92	7.49	124.7	7.53	
1240		7.5	1027	7.18	7.27	125.0	8.54	
1243								
1246		8.1	999	3.93	6.93	131.7	7.24	346
1251		8.7	994	3.00	6.74	132.5	5.07	
1256		9.0	993	2.54	6.74	130.6	6.42	
~~1255~~ 1301		9.3	992	2.27	6.76	127.9	4.15	
~~1255~~ 1304		9.3	992	2.22	6.77	126.6	8.66	346
~~1301~~								
~~1304~~								

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

level at 22.0 to start

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

SAMPLER: Sam Graber
Printed Name

Signature

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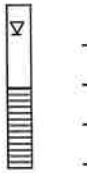
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Field blank
Sample ID: 304-12 15 21- 15
Date: 12/ 15 /21
Weather: cloudy



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 (NA)
Water in Protector? Y N (NA)
Damage? Y N (NA)

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.
1245		8.6	3.0	2.34	7.68	89.3	0.46	

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

Collected by LDCS-6

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-6
Sample ID: 304-12 15 21-16
Date: 12/15/21
Weather: Overcast

6.94 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 25
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.
1142		10.35	311	2.16	2.20	27.1		
1147		10.62	363	1.25	2.31	-37.9		
1150		10.61	364	0.71	7.58	-37.7		
1153		10.62	363	0.67	7.61	-38.8		
1156		10.52	364	0.67	7.63	-37.4		
1159		10.53	364	0.64	7.63	-35.8		
1202		10.56	364	0.63	7.63	-35.0	4.64	

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

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

SAMPLER: Travis Berndahl
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDCS-5
Sample ID: 304-12 15 21- 17
Date: 12/ 15 /21
Weather: Cloudy

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

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 11.5
Discharge 3.5
Pressure 40
Flow 125 mL/min

1 ft water = 0.62L
1L = 0.26 gallons

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

DTW
TOS
Intake
BOS
Total Depth

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

Spc panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1400		17.0	965	0.78	6.65	135.0		
1405		19.2	942	0.67	6.60	-13.9		
* 1408		19.2	745	0.66	6.42	12.8	15.55	773
1411		19.4	651	0.40	6.31	35.4	17.30	
1414		19.3	642	0.36	6.30	39.1		
1417		19.2	636	0.32	6.28	48.1	16.96	
1420		18.0	631	0.31	6.28	54.9	17.26	774

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

level at 16.5 to begin, water right away

alarm at ≈ 14.0?

* run pump to level of 12.0 from 1400 to 1408.

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

SAMPLER: Sam Graber
Printed Name

Signature

SCS ENGINEERS
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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-13
Sample ID: 304-12 15 21- 18
Date: 12/ 15 /21
Weather: Overcast

6.03 DTW
TOS
Intake
BOS
Total Depth

Sampling Method : Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI
CONTROL SETTINGS:
Refill WO 9
Discharge WO 6
Pressure WO 35
Flow 300 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.
12 42		10.43	344	7.71	7.29	59.0		
1245		10.55	406	1.11	7.28	24.5		
1250		10.55	409	0.89	7.33	11.2		
1253		10.53	410	0.79	7.35	0.0		
1256		10.54	413	0.71	7.36	-7.1		
1259		10.53	414	0.66	7.37	-11.6		
1302		10.53	414	0.65	7.37	-15.6	3.15	

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

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

SAMPLER: Travis Berndahl
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate, Cell 6
Sample ID: 304-12 16 21- 19
Date: 12/ 16 /21
Weather: cloudy

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

Meter: MP-20 YSI

CONTROL SETTINGS:

DTW
TOS
Intake
BOS
Total Depth

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 (NA)
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		19.7	23890	1.46	8.04	17.0	65.18	

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

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

SAMPLER: Sam Brown
Printed Name

Signature

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Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-7
Sample ID: 304-12 15 21- 20
Date: 12/15 /21
Weather: Overcast

21.70 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 25
Flow 300 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):

DTW
P88a = 19.21 (3a)
P88b = 20.11 (3b)
W88-3M = 14.83

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1340		10.15	359	6.90	7.13	-35.0		
1345		10.57	362	1.75	6.96	-18.4		
1348		10.58	361	0.92	7.39	-57.7		
1351		10.59	361	0.78	7.50	-72.1		
1354		10.59	360	0.63	7.62	-93.4		
1357		10.57	360	0.60	7.63	-98.1		
1400		10.58	360	0.59	7.63	-100.9	3.62	

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

SAMPLER: Travis Berndahl
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: MW-4
Sample ID: 304-12 16 21-21
Date: 12/16/21
Weather: Partly sunny

21.40 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 250 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):

21.40

* Should be cleaned out

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1155		12.6	362	2.13	7.52	58.2	9.31	
1200		12.8	371	0.68	7.55	32.0	12.01	
1210		12.7	370	0.43	7.58	-48.8	6.45	
1215		12.7	371	0.40	7.58	-61.4	5.49	
1218		12.6	371	0.38	7.58	-64.7	5.02	
1221		12.5	371	0.36	7.59	-67.8	4.98	
1224		12.5	370	0.35	7.59	-70.4	4.92	
1227		12.6	371	0.34	7.59	-72.0	4.77	
1230								

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

SAMPLER: Sam Gruber
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: LDGS-4B
Sample ID: 304-12 16 21-22
Date: 12/16/21
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:
1 ft water = 0.62L
1L = 0.26 gallons

Refill: 12
Discharge: 3
Pressure: 50
Flow: 150 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

spc panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1312	begun pumping							
1323		20.7	904	0.61	6.41	-56.5	4.47	
1328		23.4	898	0.29	6.38	-32.5	3.96	
1331		23.6	899	0.27	6.37	-31.2	3.92	
1334		23.9	899	0.26	6.37	-30.7	3.88	
1337		24.1	901	0.24	6.36	-30.9	3.81	
1340		24.4	902	0.23	6.36	-31.3	3.86	
1343		24.7	903	0.22	6.36	-31.9	3.85	844
1350								

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

level at 20 to begin

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

SAMPLER: Sam Gabor
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate, Cell 4B
Sample ID: 304-12 16 21- 23
Date: 12/ 16 /21
Weather: Cloudy

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)
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			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1430		23.2	~~32990~~ 32911	1.87	7.99	8.7	14.39	

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

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

SAMPLER: Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate Cell 7
Sample ID: 304-1222 21- 24
Date: 12/22/21
Weather: cloudy

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

Meter: MP-20 YSI

CONTROL SETTINGS:

DTW
TOS
Intake
BOS
Total Depth

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			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
910		16.50	4050	1.35	7.05	211.0	153	

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

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

SAMPLER: Sam Erber
Printed Name

Signature

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Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate, Cell 3
Sample ID: 304-1222 21- 25
Date: 12/22/21
Weather: Cloudy

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.
1000		9.35	21059	4.21	7.54	-120.3	10.5	

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

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

SAMPLER: Sam Graber
Printed Name

Signature

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Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate, Cell 2B
Sample ID: 304-12 22 21-26
Date: 12/ 22 /21
Weather: Cloudy

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			

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

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1040		7.71	14526	4.96	7.50	-202.2	30.5	

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

SAMPLER: Sam Gruber
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate, Cell 2A
Sample ID: 304-12 22 21- 27
Date: 12/ 22 /21
Weather: Cloudy

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			

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

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1115		8.85	39074	4.00	7.65	-74.9	8.83	

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

SAMPLER: Sam Graber
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate, Cell 1
Sample ID: 304-12 22 21- 28
Date: 12/22/21
Weather: cloudy

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.
1150		10.57	33863	4.41	7.62	-38.6	7.81	

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

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

SAMPLER: Sam Graber
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate, Cell 4A
Sample ID: 304-12 22 21- 29
Date: 12/ 22 /21
Weather: rainy

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

Meter: MP-20 YSI

CONTROL SETTINGS:

DTW
TOS
Intake
BOS
Total Depth

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			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1230		10.50	3/558	3.45	7.86	-62.8	7.20	

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

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

SAMPLER: Sam Baker
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04221001.02
Site: LRI 304th
Well ID: Leachate Cell 5
Sample ID: 304-12 22 21- 30
Date: 12/ 22 /21
Weather: rainy

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

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1330		8.90	32211	4.51	8.06	-56.2	19.6	

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

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

SAMPLER: Sam Baker
Printed Name

Signature

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	12/14/21					
Time	900					
Weather (sky or precip, temp)	partly cloudy					
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	4.01	6.98	8.23	—	
Post Cal Reading	1413	4.00	7.00	8.5	—	
Descrepancy	No					
Calib. Successful?	yes					
Calibration by	SE					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	South					

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

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	12/15/21					
Time	830					
Weather (sky or precip, temp)	Cloudy					
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	1421	4.02	7.05	7.91	—	
Post Cal Reading	1413	4.00	7.00	8.5	—	
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	JTB					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	LRI 304m					

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

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	12/15/21					
Time	830					
Weather (sky or precip, temp)	cloudy					
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	1435	4.01	6.95	9.61	—	
Post Cal Reading	1413	4.00	7.00	8.5	—	
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	SEB					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	CRT Booth					

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

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	12/16/21					
Time	900					
Weather (sky or precip, temp)	cloudy					
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	1430	4.00	7.01	9.4	—	
Post Cal Reading	1413	4.00	7.00	8.5	—	
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	SEG					
Instrument Type, ID	(YSI Pro DDS) / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	LRI 304m					

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

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	12/22/21					
Time	830					
Weather (sky or precip, temp)	Cloudy					
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	1418	4.05	6.94	8.60	—	
Post Cal Reading	1413	4.00	7.00	8.50	—	
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	SZ					
Instrument Type, ID	YSI Pro DDS / (YSI 556) / Rental				YSI Pro DDS / (HACH2000)	
Calibration Location	LRI 304th					

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

LRI Landfill
Water Level Data

Date: 12/15/21
Measured by: TAB

	Ground Elevation	PVC Elevation	Total Depth	Depth to Water	Water Level Elevation	Time	Comments
Wells							
W87-2A	662.5	664.01		17.40	664.01		
W88-3M	654.8	656.48		14.83	656.48		
W87-4a	691.9	693.29		5.25	693.29	9.95 in 1" well	
W88-7A	631.3	632.51		Lost	632.51		
W88-8M	719.7	721.05		39.28	721.05		
W90-12A	638.6	640.84		29.72	640.84		
W95-14A	678.6	680.49		0.95	680.49		
MW-1A	653.2	652.57	75.7	17.42	652.57		
MW-2A	652.2	651.93	67.2	17.36	651.93		
MW-3	635.7	637.41	70.4	6.03	637.41		
MW-4		652.37		21.40	652.37		
MW-5		654.40		abandoned	654.40		
MW-5A		655.55		26.20	655.55		
MW-6	633.4	635.71	52.4	6.94	635.71		
MW-7	654.7	656.03	58.0	21.70	656.03		
MW-9	699.1	701.77	76.8	9.10	701.77		
MW-10	671.5	674.17		27.30	674.17		
Piezometers							
P88-2a	633.0	663.96		Lost			
P88-2b	633.0	663.48		Lost			
P88-3a	655.1	656.20	27.4	19.21	656.20		
P88-3b	655.1	655.98	39.8	20.11	655.98		
P95-8a	721.2	722.07		22.89	722.07		
P90-12a	638.6	640.79		3.99			
P90-12b	638.6	640.73		2.60			
P90-13a	643.5	645.19		Lost			
P90-13b	643.5	643.63		Lost			
P13-14A				22.31			
GP-1P		652.00			652.00		
GP-2P		656.61			656.61		
GP-3P		658.51			658.51		
GP-4P		662.01			662.01		
GP-9P		674.03			674.03		
GP-10P		649.86			649.86		
GP-11P							
GP-12P							
GP-13P							
South Creek		Head Wall					
SWSC-1		632.79		0.93		From top of Concrete	
SWSC-2		629.95		5.14	629.95		
Leak Detection System							
LDCS-1		657.26		25.90	657.26		
LDCS-2A		659.24		29.15	659.24		
LDCS-2B		661.70		27.75	661.70		

P21-1 6.22
P21-2 20.25
P21-3 5.34

Appendix C

Groundwater Database

Groundwater Database - Waterlevels
2021 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	304-030821-01	3/8/2021	652.57	17.15	635.42	
	304-030821-02	6/15/2021	652.57	17.88	634.69	
	304-030821-03	9/14/2021	652.57	20.80	631.77	
	304-030821-05	12/15/2021	652.57	17.42	635.15	
MW-2A	304-030821-04	3/8/2021	651.93	17.13	634.80	
	304-030821-07	6/15/2021	651.93	17.74	634.19	
	304-030821-09	9/14/2021	651.93	20.75	631.18	
	304-030821-06	12/15/2021	651.93	17.36	634.57	
MW-3	304-030821-11	3/8/2021	637.41	5.85	631.56	
	304-030821-08	6/14/2021	637.41	7.00	630.41	
	304-030921-13	9/14/2021	637.41	10.70	626.71	
	304-030821-10	12/15/2021	637.41	6.03	631.38	
MW-4	304-030821-12	3/9/2021	652.37	21.02	631.35	
	304-030921-14	6/15/2021	652.37	22.05	630.32	
	304-030921-15	9/15/2021	652.37	25.42	626.95	
	304-030921-16	12/16/2021	652.37	21.40	630.97	
MW-5A	304-030921-17	3/8/2021	655.55	25.75	629.80	
	304-030921-18	6/15/2021	655.55	26.71	628.84	
	304-030921-19	9/14/2021	655.55	29.55	626.00	
	304-030921-20	12/15/2021	655.55	26.20	629.35	
MW-6	304-030921-21	3/8/2021	635.71	7.50	628.21	
	304-030921-22	6/14/2021	635.71	8.80	626.91	
	304-010521-01	9/14/2021	635.71	13.30	622.41	
	304-011521-01	12/15/2021	635.71	6.94	628.77	
MW-7	304-042621-01	3/9/2021	656.03	20.50	635.53	
	304-061421-01	6/15/2021	656.03	22.62	633.41	
	304-061421-02	9/14/2021	656.03	27.50	628.53	
	304-061421-03	12/15/2021	656.03	21.70	634.33	
MW-9	304-061421-04	3/9/2021	701.77	7.85	693.92	
	304-061421-05	6/15/2021	701.77	9.35	692.42	
	304-061421-06	9/15/2021	701.77	12.90	688.87	
	304-061421-07	12/15/2021	701.77	9.10	692.67	
MW-10	304-061421-08	3/9/2021	678.37	23.63	654.74	
	304-061421-09	6/15/2021	678.37	25.00	653.37	
	304-061421-10	9/15/2021	678.37	29.20	649.17	
	304-061421-11	12/15/2021	678.37	27.30	651.07	
Leak Detection System						
LDCS-1	304-030821-10	3/8/2021	657.26	25.75	631.51	
	304-061421-12	6/14/2021	657.26	26.30	630.96	
	304-061521-13	9/14/2021	657.26	27.45	629.81	
	304-061421-14	12/14/2021	657.26	25.90	631.36	
LDCS-2A	304-030821-08	3/8/2021	659.24	28.56	630.68	
	304-061521-15	6/14/2021	659.24	28.98	630.26	
	304-061521-16	9/14/2021	659.24	29.68	629.56	
	304-061521-17	12/14/2021	659.24	29.15	630.09	
LDCS-2B	304-030821-06	3/8/2021	661.70	27.20	634.50	
	304-061521-18	6/14/2021	661.70	27.83	633.87	
	304-061521-19	9/14/2021	661.70	28.20	633.50	
	304-061521-20	12/14/2021	661.70	27.75	633.95	

Groundwater Database - Field Parameters
2021 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Monitoring Well						
MW-1A	304-030821-01	3/8/2021	DP	7.27	177	13.01
	304-061421-01	6/14/2021	DP	6.63	183	13.60
	304-091421-05	9/14/2021	DP	7.05	183	14.62
	304-121521-08	12/15/2021	DP	6.98	178	13.36
MW-2A	304-030821-03	3/8/2021	DP	7.33	240	12.74
	304-061421-03	6/14/2021	DP	7.00	240	13.20
	304-091421-01	9/14/2021	DP	7.21	274	13.23
	304-121521-10	12/15/2021	DP	7.17	284	12.84
MW-3	304-030821-05	3/8/2021	DP	7.08	427	9.85
	304-061421-05	6/14/2021	DP	7.19	343	10.60
	304-091421-03	9/14/2021	DP	7.48	336	10.85
	304-121521-18	12/15/2021	DP	7.37	4	10.53
MW-4	304-030921-14	3/9/2021	SP	7.39	338	12.70
	304-061521-18	6/15/2021	SP	7.64	304	14.16
	304-091521-14	9/15/2021	SP	7.38	319	14.60
	304-121621-21	12/16/2021	SP	7.59	371	12.60
	304-012022-01	1/20/2022	SP	7.60	375	12.80
MW-5A	304-030821-07	3/8/2021	DP	7.54	406	12.08
	304-061421-07	6/14/2021	DP	7.55	357	12.40
	304-091421-07	9/14/2021	DP	7.64	279	13.45
	304-121521-12	12/15/2021	DP	7.66	340	12.27
MW-6	304-030821-11	3/8/2021	DP	7.45	325	10.43
	304-061421-11	6/14/2021	DP	7.60	313	10.60
	304-091421-11	9/14/2021	DP	7.66	305	11.05
	304-121521-16	12/15/2021	DP	7.63	364	10.56
MW-7	304-030921-15	3/9/2021	DP	7.31	367	10.52
	304-061521-15	6/15/2021	DP	7.23	398	10.80
	304-091421-13	9/14/2021	DP	7.47	351	10.99
	304-121521-20	12/15/2021	DP	7.63	360	10.58
MW-9	304-030921-13	3/9/2021	DP	6.82	130	9.89
	304-061521-13	6/15/2021	DP	6.44	135	10.40
	304-091521-17	9/15/2021	DP	6.92	132	10.80
	304-121521-09	12/15/2021	DP	6.36	137	9.90
MW-10	304-030921-17	3/9/2021	DP	7.02	255	11.13
	304-061521-17	6/15/2021	DP	6.32	252	12.00
	304-091521-15	9/15/2021	DP	6.42	253	12.53
	304-121521-11	12/15/2021	DP	6.42	269	10.80

Groundwater Database - Field Parameters
2021 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Leak Detection System						
LDCS-1	304-030821-10	3/8/2021	DB	5.99	428	22.10
	304-061421-10	6/14/2021	DB	6.27	426	22.51
	304-091421-10	9/14/2021	DB	5.84	583	21.60
	304-102121-01	10/21/2021	DB	6.35	736	17.80
	304-121421-05	12/14/2021	DB	6.16	407	17.20
LDCS-2A	304-030821-08	3/8/2021	DB	6.44	869	21.20
	304-061421-08	6/14/2021	DB	6.88	825	22.80
	304-091421-08	9/14/2021	DB	6.18	924	25.10
	304-102121-02	10/21/2021	DB	6.61	873	20.00
	304-121421-04	12/14/2021	DB	7.39	831	15.60
LDCS-2B	304-030821-06	3/8/2021	DB	6.16	757	20.40
	304-061421-06	6/14/2021	DB	6.71	741	20.84
	304-091421-06	9/14/2021	DB	6.33	998	25.40
	304-102121-03	10/21/2021	DB	6.38	887	18.40
	304-121421-03	12/14/2021	DB	7.03	766	14.00
LDCS-3A	304-030821-04	3/8/2021	DP	6.22	900	20.20
	304-061421-04	6/14/2021	DP	6.43	934	21.14
	304-091421-04	9/14/2021	DP	6.10	905	20.40
	304-121421-02	12/14/2021	DP	6.62	963	18.00
LDCS-4A	304-010521-01	1/5/2021	DP	6.49	1,420	15.20
	304-011521-01	1/15/2021	DP	5.95	610	18.10
	304-012121-01	1/21/2021	DP	6.06	687	17.50
	304-012821-01	1/28/2021	DP	6.21	806	16.40
	304-030821-12	3/8/2021	DP	6.17	769	20.50
	304-061421-12	6/14/2021	DP	6.31	669	22.39
	304-091421-12	9/14/2021	DP	6.26	839	23.00
	304-121421-06	12/14/2021	DP	6.27	682	19.60
LDCS-4B	304-030921-16	3/9/2021	DP	6.20	824	27.90
	304-042621-01	4/26/2021	DP	6.21	792	25.50
	304-061421-14	6/14/2021	DP	6.32	722	27.95
	304-091521-20	9/15/2021	DP	6.65	1,003	24.70
	304-121621-22	12/16/2021	DP	6.36	903	24.70
LDCS-5	304-030921-22	3/9/2021	DP	6.36	898	20.40
	304-061521-16	6/15/2021	DP	6.40	654	25.57
	304-091621-22	9/16/2021	DP	6.56	968	23.39
	304-121521-17	12/15/2021	DP	6.28	631	18.00
LDCS-6	304-030921-18	3/9/2021	DP	6.65	879	14.80
	304-061521-22	6/15/2021	DP	6.87	900	24.19
	304-091521-16	9/15/2021	DP	7.17	823	24.00
	304-121521-13	12/15/2021	DP	6.77	992	9.30
LDCS-7	304-030821-02	3/8/2021	DP	6.04	1,076	15.90
	304-061421-02	6/14/2021	DP	6.14	823	19.98
	304-091421-02	9/14/2021	DP	5.96	1,013	24.00
	304-121421-01	12/14/2021	DP	6.99	1,029	12.40
LDCS-8	304-030921-19	3/9/2021	PP	7.11	1,323	14.29
	304-062421-21	6/24/2021	PP	6.43	746	25.00
	304-081921-01	8/19/2021	GB	7.40	949	NM
	304-091521-19	9/15/2021	GB	6.60	1,247	19.02
	304-101521-01	10/15/2021	GB	6.59	53	16.30
	304-121421-07	12/14/2021	GB	6.43	1,192	13.70

Groundwater Database - Field Parameters
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Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Leachate						
Leachate, Cell 1	304-122221-28	12/22/2021	GB	7.62	38,863	10.57
Leachate, Cell 2A	304-122221-27	12/22/2021	GB	7.65	39,074	8.85
Leachate, Cell 2B	304-122221-26	12/22/2021	GB	7.50	14,526	7.71
Leachate, Cell 3A	304-122221-25	12/22/2021	GB	7.54	21,059	9.35
Leachate, Cell 4A	304-122221-29	12/22/2021	GB	7.86	31,558	10.50
Leachate, Cell 4B	304-121621-23	12/16/2021	GB	7.99	32,911	23.20
Leachate, Cell 5	304-122221-30	12/22/2021	GB	8.06	32,211	8.90
Leachate, Cell 6	304-121621-19	12/16/2021	GB	8.04	23,890	19.70
Leachate, Cell 7	304-122221-24	12/22/2021	GB	7.05	4,050	16.50
Leachate, Cell 8	304-030921-21	3/9/2021	PP	6.70	10,622	13.01
Leachate, Cell 8	304-061521-19	6/15/2021	PP	6.42	2,830	23.50
Leachate, Cell 8	304-091521-21	9/15/2021	PP	7.41	14,245	23.97
Leachate, Cell 8	304-0121-31	1/13/2022	GB	6.86	12,130	15.18

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	304-030821-01	3/8/2021	98	0.1 U	1.8	0.5 U	2.7	140	1 U	4 U
	304-061421-01	6/14/2021	95	0.1 U	1.9	0.5 U	2.6	130	1 U	4 U
	304-091421-05	9/14/2021	100	0.15	1.9	0.5 U	2.9	150	1 U	4 U
	304-121521-08	12/15/2021	91	0.1 U	1.7	0.5 U	2.8	160	1.3	4 U
MW-2A	304-030821-03	3/8/2021	120	0.1 U	2.7	0.5 U	5.8	150	1 U	4 U
	304-061421-03	6/14/2021	120	0.1 U	2.6	0.5 U	4.7	160	1 U	4 U
	304-091421-01	9/14/2021	130	0.18	3.1	0.5 U	12	200	1 U	4
	304-121521-10	12/15/2021	130	0.11	3.3	0.5 U	15	220	1.3	4 U
MW-3	304-030821-05	3/8/2021	200	0.12	3.3	0.5 U	26	260	1.2	4 U
	304-061421-05	6/14/2021	140	0.12	3.3	0.5 U	29	210	1 U	4 U
	304-091421-03	9/14/2021	150	0.13	3.5	0.5 U	31	230	1 U	4 U
	304-121521-18	12/15/2021	200	0.14	3.3	0.5 U	26	250	1.7	4 U
MW-4	304-030921-14	3/9/2021	170	0.15	3.1	0.5 U	11	220	1 U	4 U
	304-061521-18	6/15/2021	160	0.95	2.9	0.5 U	7.9	190	1	6
	304-091521-14	9/15/2021	160	0.14	2.7	0.5 U	7.5	200	1 U	6.4
	304-121621-21	12/16/2021	160	0.16	3.3	0.5 U	15	220	1.5	4 U
MW-5A	304-030821-07	3/8/2021	190	0.14	3.4	0.5 U	20	230	1.0	4 U
Duplicate	304-030821-09	3/8/2021	190	0.14	3.4	0.5 U	20	250	1.0	4 U
	304-061421-07	6/14/2021	180	0.15	2.7	0.5 U	13	210	1.1	4 U
Duplicate	304-061421-09	6/14/2021	180	0.16	2.7	0.5 U	13	210	1.1	4 U
	304-091421-07	9/14/2021	150	0.1 U	1.9	0.5 U H	4.3	200	1 U	4 U
Duplicate	304-091421-09	9/14/2021	150	0.13	2	0.5 U H	4.4	170	1 U	4 U
	304-121521-12	12/15/2021	170	0.12	2.5	0.5 U	11	210	1.7	4 U
Duplicate	304-121521-14	12/15/2021	170	0.13	2.5	0.5 U	11	250	1.5	4 U
MW-6	304-030821-11	3/8/2021	160	0.11	4.9	0.5 U	6.8	200	1 U	4 U
	304-061421-11	6/14/2021	160	0.1 U	4.9	0.5 U	6.1	180	1	4 U
	304-091421-11	9/14/2021	160	0.13	4.5	0.5 U H	6.5	180	1 U	4
	304-121521-16	12/15/2021	190	0.12	5.4	0.5 U	7.4	220	1.8	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	304-030921-15	3/9/2021	200	0.19	2.9	0.5 U	2.9	10 U	1 U	4 U
	304-061521-15	6/15/2021	210	0.23	3.2	0.5 U	2.4	230	1.2	4 U
	304-091421-13	9/14/2021	190	0.21	2.7	0.5 U H	4.1	210	1 U	4 U
	304-121521-20	12/15/2021	200	0.21	2.7	0.5 U	3.9	210	1.5	4 U
MW-9	304-030921-13	3/9/2021	68	0.1 U	1.4	0.5 U	1.4	130	1 U	4 U
	304-061521-13	6/15/2021	72	0.1 U	1.5	0.5 U	1.3	120	1 U	4 U
	304-091521-17	9/15/2021	71	0.1 U	1.5	0.5 U	1.5	120	1 U	4 U
	304-121521-09	12/15/2021	69	0.1 U	1.4	0.5 U	1.5	120	1.1	4 U
MW-10	304-030921-17	3/9/2021	110	0.1 U	6.9	3.2	6.1	210	1 U	12
	304-061521-17	6/15/2021	100	0.1 U	6.7	2.5	5.4	170	1 U	12.0
	304-091521-15	9/15/2021	110	0.1 U	6.8	2.9	6.1	180	1 U	6.8
	304-121521-11	12/15/2021	110	0.1 U	6.8	3	6	190	1.2	5.6
Leak Detection System										
LDCS-1	304-030821-10	3/8/2021	200	0.1	4.4	0.5 U	5.3	240	3.7	-
	304-061421-10	6/14/2021	220	0.11	4	0.5 U	4.6	250	3.7	-
	304-091421-10	9/14/2021	330	0.25	4.1	0.5 U	5.9	360	3.6	-
	304-121421-05	12/14/2021	220	0.12	4.4	0.5 U	5.3	250	4.4	-
LDCS-2A	304-030821-08	3/8/2021	430	0.1 U	4.8	0.5 U	27	490	2.8	-
	304-061421-08	6/14/2021	440	0.1 U	5.4	0.5 U	27	520	3	-
	304-091421-08	9/14/2021	500	0.24	5.1	0.5 U	25	540	3.4	-
	304-121421-04	12/14/2021	450	0.1 U	5.6	0.5 U	28	510	4.4	-
LDCS-2B	304-030821-06	3/8/2021	340	0.12	7.1	0.5 U	49	460	3.8	-
	304-061421-06	6/14/2021	360	0.1 U	6.7	0.5 U	43	470	3.2	-
	304-091421-06	9/14/2021	480	0.35	6.1	0.5 U	71	22	3.7	-
	304-121421-03	12/14/2021	360	0.21	8.7	0.5 U	49	450	4.3	-

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	304-030821-04	3/8/2021	410	0.1 U	4.4	0.5 U	61	530	2.7	-
	304-061421-04	6/14/2021	420	0.11	4.2	0.5 U	93	630	4.9	-
	304-091421-04	9/14/2021	440	0.28	3.5	0.5 U	59	530	1.8	-
	304-121421-02	12/14/2021	450	0.68	3	0.5 U	99	590	3.9	-
LDCS-4A	304-010521-01	1/5/2021	510	36	120	0.24	36	640	--	-
	304-011521-01	1/15/2021	240	6.5	19	2.2	38	280	9.9	-
	304-012121-01	1/21/2021	300	7	18	2	49	400	6	-
	304-012821-01	1/28/2021	280	4.7	27	1.4	49	400	4.8	-
	304-030821-12	3/8/2021	320	1.2	22	0.63	47	440	4.3	-
	304-061421-12	6/14/2021	310	0.68	15	0.5 U	35	390	4.8	-
	304-091421-12	9/14/2021	390	0.59	15	0.5 U	54	16	4.4	-
	304-121421-06	12/14/2021	300	0.34	19	0.5 U	39	400	6.8	-
LDCS-4B	304-030921-16	3/9/2021	340	0.32	29	0.5 U	49	490	2.2	-
	304-042621-01	4/26/2021	310	0.2	28	0.5 U	38	530	2.7	-
	304-061421-14	6/14/2021	310	0.30	18	0.5 U	55	450	2.4	-
	304-091521-20	9/15/2021	430	0.15	16	0.5 U	96	600	2.5	-
	304-121621-22	12/16/2021	350	0.18	24	0.5 U	76	520	5.1	-
LDCS-5	304-030921-22	3/9/2021	390	1.2	32	0.5 U	46	540	4.1	-
	304-061521-16	6/15/2021	290	0.76	14	0.5 U	49	390	2.9	-
	304-091621-22	9/16/2021	460	0.88	20	0.5 U	59	420	4.6	-
	304-121521-17	12/15/2021	260	1.7	13	0.5 U	45	380	9.4	-
LDCS-6	304-030921-18	3/9/2021	420	0.1 U	4.5	0.5 U	45	610	2.1	-
	304-061521-22	6/15/2021	410	0.12	5.7	0.5 U	44	480	2.4	-
	304-091521-16	9/15/2021	420	0.1 U	4.8	0.5 U	47	510	1.8	-
	304-121521-13	12/15/2021	440	0.19	13.0	0.5 U	82	560	4.6	-

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	304-030821-02	3/8/2021	530	0.11	18	0.5 U	36	620	3.6	-
	304-061421-02	6/14/2021	320	0.1 U	8.3	0.5 U	96	570	6.3	-
	304-091421-02	9/14/2021	520	0.12	11	0.5 U	34	610	7.3	-
	304-121421-01	12/14/2021	550	0.58	12	0.5 U	31	600	25	-
LDCS-8	304-030921-19	3/9/2021	630	0.1 U	26	0.5 U	100	830	8.8	-
	304-062421-21	6/24/2021	660	0.1 U	26	2.9	100	840	8.6	-
	304-081921-01	8/19/2021	370	0.1 U	13	0.5 U	42	450	7.3	-
	304-091521-19	9/15/2021	610	0.1 U	24	0.69	93	770	9.1	-
	304-101521-01	10/15/2021	34	0.1 U	2.8	0.5 U	19	75	7.4	-
	304-121421-07	12/14/2021	630	0.1 U	15	0.5 U	63	690	7.4	-
Leachate										
Leachate, Cell 1	304-122221-28	12/22/2021	10,000	1,900	8,400	0.5 U	20	21,000	2,000	-
Leachate, Cell 2A	304-122221-27	12/22/2021	10,000	1,800	8,100	0.5 U	16	23,000	2,000	-
Leachate, Cell 2B	304-122221-26	12/22/2021	5,100	1,000	1,700	0.5 U	4.2	4,500	700	-
Leachate, Cell 3A	304-122221-25	12/22/2021	7,700	1,000	2,500	0.5 U	4.7	11,000	900	-
Leachate, Cell 4A	304-122221-29	12/22/2021	12,000	1,600	4,400	0.5 U	20	17,000	1,800	-
Leachate, Cell 4B	304-121621-23	12/16/2021	2300 H	2,400	4,000	0.5 U	10	16,000	1,600	-
Leachate, Cell 5	304-122221-30	12/22/2021	2300 H	2,200	4,000	0.5 U	19	19,000	2,100	-
Leachate, Cell 6	304-121621-19	12/16/2021	10,000	1,700	2,400	0.5 U	7.8	12,000	1,700	-
Leachate, Cell 7	304-122221-24	12/22/2021	1,600	210	340	0.5 U	48	1,700	160	-
Leachate, Cell 7	304-122221-24	12/22/2021	1,600	210	340	0.5 U	48	1,700	160	-
Leachate, Cell 7	304-122221-24	12/22/2021	1,600	210	340	0.5 U	48	1,700	160	-
Leachate, Cell 8	304-030921-21	3/9/2021	3,500	380	870	0.5 U	450	11,000	5,800	-
Leachate, Cell 8	304-061521-19	6/15/2021	990	130	240	0.5 U	32	1,500	370	-
Leachate, Cell 8	304-091521-21	9/15/2021	5,300	710	1,500	2.9	27	5,100	850	-
Leachate, Cell 8	304-0121-31	1/13/2022	3,400	380	870	0.6	780	12,000	6,000	-

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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	304-030921-20	3/9/2021	10 U	0.1 U	0.2 U	0.5 U	0.5 U	13	1 U	4 U
	304-061521-20	6/15/2021	10 U	0.1 U	0.2 U	0.5 U	0.5 U	10 U	1 U	4 U
	304-091521-18	9/15/2021	10 U	0.1 U	0.2 U	0.5 U	0.5 U	10 U	1 U	4 U
	304-121521-15	12/15/2021	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	304-030821-01	3/8/2021		0.05 U		0.005 U		0.019		0.001 U		0.001 U
	304-061421-01	6/14/2021		0.05 U		0.005 U		0.020		0.001 U		0.001 U
	304-091421-05	9/14/2021		0.05 U		0.005 U		0.019		0.001 U		0.001 U
	304-121521-08	12/15/2021		0.05 U		0.005 U		0.020		0.001 U		0.001 U
MW-2A	304-030821-03	3/8/2021		0.05 U		0.005 U		0.012		0.001 U		0.001 U
	304-061421-03	6/14/2021		0.05 U		0.005 U		0.014		0.001 U		0.001 U
	304-091421-01	9/14/2021		0.05 U		0.005 U		0.019		0.001 U		0.001 U
	304-121521-10	12/15/2021		0.05 U		0.005 U		0.013		0.001 U		0.001 U
MW-3	304-030821-05	3/8/2021		0.05 U		0.005 U		0.016		0.001 U		0.001 U
	304-061421-05	6/14/2021		0.05 U		0.005 U		0.012		0.001 U		0.001 U
	304-091421-03	9/14/2021		0.05 U		0.005 U		0.010		0.001 U		0.001 U
	304-121521-18	12/15/2021		0.05 U		0.005 U		0.013		0.001 U		0.001 U
MW-4	304-030921-14	3/9/2021		0.05 U		0.0098		0.016		0.001 U		0.001 U
	304-061521-18	6/15/2021		0.05 U		0.0110		0.016		0.001 U		0.001 U
	304-091521-14	9/15/2021		0.05 U		0.0120		0.017		0.001 U		0.001 U
	304-121621-21	12/16/2021		0.05 U		0.0098		0.017		0.001 U		0.001 U
MW-5A	304-030821-07	3/8/2021		0.05 U		0.0058		0.014		0.001 U		0.001 U
Duplicate	304-030821-09	3/8/2021		0.05 U		0.0060		0.015		0.001 U		0.001 U
	304-061421-07	6/14/2021		0.05 U		0.0055		0.013		0.001 U		0.001 U
Duplicate	304-061421-09	6/14/2021		0.05 U		0.0055		0.013		0.001 U		0.001 U
	304-091421-07	9/14/2021		0.05 U		0.005 U		0.011		0.001 U		0.001 U
Duplicate	304-091421-09	9/14/2021		0.05 U		0.005 U		0.011		0.001 U		0.001 U
	304-121521-12	12/15/2021		0.05 U		0.005 U		0.012		0.001 U		0.001 U
Duplicate	304-121521-14	12/15/2021		0.05 U		0.0050		0.012		0.001 U		0.001 U
MW-6	304-030821-11	3/8/2021		0.05 U		0.0074		0.021		0.001 U		0.001 U
	304-061421-11	6/14/2021		0.05 U		0.0069		0.011		0.001 U		0.001 U
	304-091421-11	9/14/2021		0.05 U		0.0073		0.019		0.001 U		0.001 U
	304-121521-16	12/15/2021		0.05 U		0.0072		0.018		0.001 U		0.001 U
MW-7	304-030921-15	3/9/2021		0.05 U		0.0053		0.016		0.001 U		0.001 U
	304-061521-15	6/15/2021		0.05 U		0.005 U		0.016		0.001 U		0.001 U
	304-091421-13	9/14/2021		0.05 U		0.0057		0.016		0.001 U		0.001 U
	304-121521-20	12/15/2021		0.05 U		0.0054		0.014		0.001 U		0.001 U
MW-9	304-030921-13	3/9/2021		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-061521-13	6/15/2021		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-091521-17	9/15/2021		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-121521-09	12/15/2021		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	304-030821-01	3/8/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061421-01	6/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091421-05	9/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121521-08	12/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-2A	304-030821-03	3/8/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061421-03	6/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091421-01	9/14/2021		0.005 U		0.001 U		0.01 U		0.0031		0.02 U
	304-121521-10	12/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-3	304-030821-05	3/8/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061421-05	6/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091421-03	9/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121521-18	12/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-4	304-030921-14	3/9/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061521-18	6/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091521-14	9/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121621-21	12/16/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-5A	304-030821-07	3/8/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Duplicate	304-030821-09	3/8/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061421-07	6/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Duplicate	304-061421-09	6/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091421-07	9/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Duplicate	304-091421-09	9/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121521-12	12/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Duplicate	304-121521-14	12/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-6	304-030821-11	3/8/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061421-11	6/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091421-11	9/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121521-16	12/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-7	304-030921-15	3/9/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061521-15	6/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091421-13	9/14/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121521-20	12/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-9	304-030921-13	3/9/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061521-13	6/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091521-17	9/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121521-09	12/15/2021		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	304-030821-01	3/8/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-061421-01	6/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-091421-05	9/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121521-08	12/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-2A	304-030821-03	3/8/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-061421-03	6/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-091421-01	9/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121521-10	12/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-3	304-030821-05	3/8/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-061421-05	6/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-091421-03	9/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121521-18	12/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-4	304-030921-14	3/9/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.014
	304-061521-18	6/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.022
	304-091521-14	9/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.021
	304-121621-21	12/16/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-5A	304-030821-07	3/8/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
Duplicate	304-030821-09	3/8/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-061421-07	6/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
Duplicate	304-061421-09	6/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-091421-07	9/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
Duplicate	304-091421-09	9/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121521-12	12/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
Duplicate	304-121521-14	12/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-6	304-030821-11	3/8/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-061421-11	6/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-091421-11	9/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121521-16	12/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-7	304-030921-15	3/9/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-061521-15	6/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-091421-13	9/14/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121521-20	12/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-9	304-030921-13	3/9/2021		0.005 U		0.005 U		0.005 U		0.015		0.01 U
	304-061521-13	6/15/2021		0.005 U		0.005 U		0.005 U		0.014		0.01 U
	304-091521-17	9/15/2021		0.005 U		0.005 U		0.005 U		0.015		0.01 U
	304-121521-09	12/15/2021		0.005 U		0.005 U		0.005 U		0.015		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	304-030921-17	3/9/2021		0.05 U		0.005 U		0.015		0.001 U		0.001 U
	304-061521-17	6/15/2021		0.05 U		0.005 U		0.013		0.001 U		0.001 U
	304-091521-15	9/15/2021		0.05 U		0.005 U		0.014		0.001 U		0.001 U
	304-121521-11	12/15/2021		0.05 U		0.005 U		0.014		0.001 U		0.001 U
Leak Detection System												
LDCS-1	304-030821-10	3/8/2021	0.05 U		0.0096		0.020					
	304-061421-10	6/14/2021	0.05 U		0.0086		0.021					
	304-091421-10	9/14/2021	0.05 U		0.0140		0.030					
	304-121421-05	12/14/2021	0.05 U		0.0072		0.020					
LDCS-2A	304-030821-08	3/8/2021	0.05 U		0.005		0.017					
	304-061421-08	6/14/2021	0.05 U		0.005 U		0.022					
	304-091421-08	9/14/2021	0.05 U		0.016		0.045					
	304-121421-04	12/14/2021	0.05 U		0.005 U		0.017					
LDCS-2B	304-030821-06	3/8/2021	0.05 U		0.0130		0.029					
	304-061421-06	6/14/2021	0.05 U		0.0082		0.027					
	304-091421-06	9/14/2021	0.05 U		0.0430		0.054					
	304-121421-03	12/14/2021	0.05 U		0.0100		0.027					
LDCS-3A	304-030821-04	3/8/2021	0.05 U		0.0083		0.021					
	304-061421-04	6/14/2021	0.05 U		0.0076		0.02					
	304-091421-04	9/14/2021	0.05 U		0.0140		0.024					
	304-121421-02	12/14/2021	0.05 U		0.0063		0.018					
LDCS-4A	304-010521-01	1/5/2021	0.00088		0.0130		0.051					
	304-011521-01	1/15/2021	0.00044		0.0032		0.029					
	304-012121-01	1/21/2021	0.05 U		0.005 U		0.028					
	304-012821-01	1/28/2021	0.05 U		0.005 U		0.026					
	304-030821-12	3/8/2021	0.05 U		0.005 U		0.024					
	304-061421-12	6/14/2021	0.05 U		0.005 U		0.027					
	304-091421-12	9/14/2021	0.05 U		0.0160		0.033					
	304-121421-06	12/14/2021	0.05 U		0.0100		0.023					
LDCS-4B	304-030921-16	3/9/2021	0.05 U		0.0160		0.029					
	304-042621-01	4/26/2021	0.05 U		0.0067		0.03					
	304-061421-14	6/14/2021	0.05 U		0.0068		0.028					
	304-091521-20	9/15/2021	0.05 U		0.0150		0.034					
	304-121621-22	12/16/2021	0.05 U		0.005 U		0.026					
LDCS-5	304-030921-22	3/9/2021	0.05 U		0.0097		0.056		0.001 U		0.001 U	
	304-061521-16	6/15/2021	0.05 U		0.005 U		0.037		0.0005 U		0.0005 U	
	304-091621-22	9/16/2021	0.05 U		0.005 U		0.050		0.001 U		0.001 U	
	304-121521-17	12/15/2021	0.05 U		0.005 U		0.035		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	304-030921-17	3/9/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-061521-17	6/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-091521-15	9/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121521-11	12/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Leak Detection System												
LDCS-1	304-030821-10	3/8/2021	0.005 U		0.0011		0.01 U		0.002 U		0.02 U	
	304-061421-10	6/14/2021	0.005 U		0.0011		0.01 U		0.002 U		0.02 U	
	304-091421-10	9/14/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121421-05	12/14/2021	0.005 U		0.0012		0.01 U		0.002 U		0.02 U	
LDCS-2A	304-030821-08	3/8/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-061421-08	6/14/2021	0.005 U		0.00085		0.01 U		0.002 U		0.02 U	
	304-091421-08	9/14/2021	0.005 U		0.0027		0.01 U		0.002 U		0.02 U	
	304-121421-04	12/14/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
LDCS-2B	304-030821-06	3/8/2021	0.005 U		0.0043		0.01 U		0.002 U		0.02 U	
	304-061421-06	6/14/2021	0.005 U		0.0067		0.01 U		0.002 U		0.02 U	
	304-091421-06	9/14/2021	0.005 U		0.0078		0.01 U		0.002 U		0.02 U	
	304-121421-03	12/14/2021	0.005 U		0.0088		0.01 U		0.002 U		0.02 U	
LDCS-3A	304-030821-04	3/8/2021	0.005 U		0.0053		0.01 U		0.002 U		0.02 U	
	304-061421-04	6/14/2021	0.005 U		0.0170		0.01 U		0.002 U		0.02 U	
	304-091421-04	9/14/2021	0.005 U		0.0026		0.01 U		0.0045		0.02 U	
	304-121421-02	12/14/2021	0.005 U		0.0041		0.040		0.002 U		0.02 U	
LDCS-4A	304-010521-01	1/5/2021	0.016		0.0061		0.018		0.00069		0.025	
	304-011521-01	1/15/2021	0.0032		0.0024		0.010		0.0008 U		0.0073	
	304-012121-01	1/21/2021	0.005 U		0.0025		0.01 U		0.002 U		0.02 U	
	304-012821-01	1/28/2021	0.005 U		0.0022		0.01 U		0.002 U		0.02 U	
	304-030821-12	3/8/2021	0.005 U		0.0022		0.01 U		0.002 U		0.02 U	
	304-061421-12	6/14/2021	0.005 U		0.0021		0.01 U		0.002 U		0.02 U	
	304-091421-12	9/14/2021	0.005 U		0.0019		0.01 U		0.002 U		0.02 U	
	304-121421-06	12/14/2021	0.005 U		0.0027		0.01 U		0.002 U		0.02 U	
LDCS-4B	304-030921-16	3/9/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-042621-01	4/26/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-061421-14	6/14/2021	0.005 U		0.0007		0.01 U		0.002 U		0.02 U	
	304-091521-20	9/15/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121621-22	12/16/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
LDCS-5	304-030921-22	3/9/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-061521-16	6/15/2021	0.005 U		0.0005 U		0.01 U		0.002 U		0.02 U	
	304-091621-22	9/16/2021	0.005 U		0.001 U		0.01 U		0.002		0.02 U	
	304-121521-17	12/15/2021	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	304-030921-17	3/9/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-061521-17	6/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-091521-15	9/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.011
	304-121521-11	12/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.011
Leak Detection System												
LDCS-1	304-030821-10	3/8/2021							0.005 U		0.01 U	
	304-061421-10	6/14/2021							0.004 U		0.01 U	
	304-091421-10	9/14/2021							0.005 U		0.01 U	
	304-121421-05	12/14/2021							0.005 U		0.01 U	
LDCS-2A	304-030821-08	3/8/2021							0.005 U		0.01 U	
	304-061421-08	6/14/2021							0.004 U		0.01 U	
	304-091421-08	9/14/2021							0.005 U		0.01 U	
	304-121421-04	12/14/2021							0.005 U		0.01 U	
LDCS-2B	304-030821-06	3/8/2021							0.005 U		0.01 U	
	304-061421-06	6/14/2021							0.004 U		0.01 U	
	304-091421-06	9/14/2021							0.005 U		0.01 U	
	304-121421-03	12/14/2021							0.005 U		0.01 U	
LDCS-3A	304-030821-04	3/8/2021							0.005 U		0.01 U	
	304-061421-04	6/14/2021							0.004 U		0.01 U	
	304-091421-04	9/14/2021							0.005 U		0.01 U	
	304-121421-02	12/14/2021							0.005 U		0.029	
LDCS-4A	304-010521-01	1/5/2021							0.010		0.0098	
	304-011521-01	1/15/2021							0.0024		0.0032	
	304-012121-01	1/21/2021							0.005 U		0.01 U	
	304-012821-01	1/28/2021							0.005 U		0.01 U	
	304-030821-12	3/8/2021							0.005 U		0.01 U	
	304-061421-12	6/14/2021							0.004 U		0.01 U	
	304-091421-12	9/14/2021							0.005 U		0.01 U	
	304-121421-06	12/14/2021							0.005 U		0.01 U	
LDCS-4B	304-030921-16	3/9/2021							0.005 U		0.01 U	
	304-042621-01	4/26/2021							0.005 U		0.01 U	
	304-061421-14	6/14/2021							0.004 U		0.01 U	
	304-091521-20	9/15/2021							0.005 U		0.01 U	
	304-121621-22	12/16/2021							0.005 U		0.01 U	
LDCS-5	304-030921-22	3/9/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-061521-16	6/15/2021	0.005 U		0.0005 U		0.005 U		0.004 U		0.01 U	
	304-091621-22	9/16/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-121521-17	12/15/2021	0.005 U		0.005 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	304-030921-18	3/9/2021	0.05 U		0.0072		0.018		0.001 U		0.001 U	
	304-061521-22	6/15/2021	0.05 U		0.0053		0.014		0.0005 U		0.0005 U	
	304-091521-16	9/15/2021	0.05 U		0.005 U		0.012		0.001 U		0.001 U	
	304-121521-13	12/15/2021	0.05 U		0.0088		0.018		0.001 U		0.001 U	
LDCS-7	304-030821-02	3/8/2021	0.05 U		0.005 U		0.036		0.001 U		0.001 U	
	304-061421-02	6/14/2021	0.05 U		0.005 U		0.030		0.0005 U		0.0005 U	
	304-091421-02	9/14/2021	0.05 U		0.0082		0.043		0.001 U		0.001 U	
	304-121421-01	12/14/2021	0.05 U		0.005 U		0.013		0.001 U		0.001 U	
LDCS-8	304-030921-19	3/9/2021	0.05 U		0.005 U		0.051		0.001 U		0.001 U	
	304-062421-21	6/24/2021	0.05 U		0.005 U		0.048		0.001 U		0.001 U	
	304-081921-01	8/19/2021	0.05 U		0.005 U		0.027		0.001 U		0.001 U	
	304-091521-19	9/15/2021	0.05 U		0.005 U		0.045		0.001 U		0.001 U	
	304-101521-01	10/15/2021	0.05 U		0.005 U		0.005 U		0.001 U		0.001 U	
	304-121421-07	12/14/2021	0.05 U		0.005 U		0.043		0.001 U		0.001 U	
Leachate												
Leachate, Cell 1	304-122221-28	12/22/2021		0.05 U		0.130		1.7		0.001 U		0.001 U
Leachate, Cell 2A	304-122221-27	12/22/2021		0.05 U		0.130		1.8		0.001 U		0.001 U
Leachate, Cell 2B	304-122221-26	12/22/2021		0.110		0.200		0.39		0.001 U		0.001 U
Leachate, Cell 3A	304-122221-25	12/22/2021		0.05 U		0.053		1.0		0.001 U		0.001 U
Leachate, Cell 4A	304-122221-29	12/22/2021		0.05 U		0.180		1.1		0.001 U		0.001 U
Leachate, Cell 4B	304-121621-23	12/16/2021		0.05 U		0.087		1.4		0.001 U		0.001 U
Leachate, Cell 5	304-122221-30	12/22/2021		0.05 U		0.190		1.2		0.001 U		0.0013 U
Leachate, Cell 6	304-121621-19	12/16/2021		0.05 U		0.240		1.2		0.001 U		0.001 U
Leachate, Cell 7	304-122221-24	12/22/2021		0.05 U		0.086		0.16		0.001 U		0.001 U
Leachate, Cell 7	304-122221-24	12/22/2021		0.05 U		0.086		0.16		0.001 U		0.001 U
Leachate, Cell 7	304-122221-24	12/22/2021		0.05 U		0.086		0.16		0.001 U		0.001 U
Leachate, Cell 8	304-030921-21	3/9/2021		0.05 U		0.028		0.83		0.001 U		0.001 U
Leachate, Cell 8	304-061521-19	6/15/2021		0.05 U		0.014		0.083		0.001 U		0.001 U
Leachate, Cell 8	304-091521-21	9/15/2021		0.05 U		0.100		0.41		0.001 U		0.001 U
Leachate, Cell 8	304-0121-31	1/13/2022		0.05 U		0.049		1.1		0.001 U		0.0015
Quality Control												
QC, FB	304-030921-20	3/9/2021		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
QC, FB	304-061521-20	6/15/2021		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
QC, FB	304-091521-18	9/15/2021		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
QC, FB	304-121521-15	12/15/2021		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
LDCS-6	304-030921-18	3/9/2021	0.005 U		0.0018		0.01 U		0.002 U		0.02 U	
	304-061521-22	6/15/2021	0.005 U		0.00082		0.01 U		0.002 U		0.02 U	
	304-091521-16	9/15/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121521-13	12/15/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
LDCS-7	304-030821-02	3/8/2021	0.005 U		0.0035		0.01 U		0.002 U		0.02 U	
	304-061421-02	6/14/2021	0.005 U		0.0020		0.01 U		0.002 U		0.02 U	
	304-091421-02	9/14/2021	0.005 U		0.0062		0.01 U		0.002 U		0.02 U	
	304-121421-01	12/14/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
LDCS-8	304-030921-19	3/9/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-062421-21	6/24/2021	0.005 U		0.0029		0.01 U		0.002 U		0.02 U	
	304-081921-01	8/19/2021	0.005 U		0.0015		0.01 U		0.002 U		0.02 U	
	304-091521-19	9/15/2021	0.005 U		0.0040		0.01 U		0.002 U		0.02 U	
	304-101521-01	10/15/2021	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121421-07	12/14/2021	0.005 U		0.0042		0.01 U		0.002 U		0.02 U	
Leachate												
Leachate, Cell 1	304-122221-28	12/22/2021		0.58		0.050		0.030		0.012		1.0
Leachate, Cell 2A	304-122221-27	12/22/2021		0.55		0.048		0.028		0.013		1.1
Leachate, Cell 2B	304-122221-26	12/22/2021		0.15		0.019		0.01 U		0.005		0.18
Leachate, Cell 3A	304-122221-25	12/22/2021		0.41		0.035		0.015		0.016		0.34
Leachate, Cell 4A	304-122221-29	12/22/2021		0.62		0.043		0.016		0.013		0.45
Leachate, Cell 4B	304-121621-23	12/16/2021		0.73		0.041		0.086		0.025		0.62
Leachate, Cell 5	304-122221-30	12/22/2021		0.78		0.064		0.083		0.027		0.65
Leachate, Cell 6	304-121621-19	12/16/2021		0.68		0.031		0.054		0.027		0.37
Leachate, Cell 7	304-122221-24	12/22/2021		0.10		0.0063		0.015		0.0052		0.044
Leachate, Cell 7	304-122221-24	12/22/2021		0.10		0.0063		0.015		0.0052		0.044
Leachate, Cell 7	304-122221-24	12/22/2021		0.10		0.0063		0.015		0.0052		0.044
Leachate, Cell 8	304-030921-21	3/9/2021		0.11		0.230		0.038		0.015		0.49
Leachate, Cell 8	304-061521-19	6/15/2021		0.023		0.010		0.016		0.0043		0.061
Leachate, Cell 8	304-091521-21	9/15/2021		0.25		0.040		0.046		0.026		0.31
Leachate, Cell 8	304-0121-31	1/13/2022		0.13		0.140		0.062		0.027		0.30
Quality Control												
QC, FB	304-030921-20	3/9/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
QC, FB	304-061521-20	6/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
QC, FB	304-091521-18	9/15/2021		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
QC, FB	304-121521-15	12/15/2021		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	304-030921-18	3/9/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-061521-22	6/15/2021	0.005 U		0.0005 U		0.005 U		0.004 U		0.01 U	
	304-091521-16	9/15/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-121521-13	12/15/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
LDCS-7	304-030821-02	3/8/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-061421-02	6/14/2021	0.005 U		0.0005 U		0.005 U		0.004 U		0.01 U	
	304-091421-02	9/14/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-121421-01	12/14/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
LDCS-8	304-030921-19	3/9/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-062421-21	6/24/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-081921-01	8/19/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.048	
	304-091521-19	9/15/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-101521-01	10/15/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-121421-07	12/14/2021	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
Leachate												
Leachate, Cell 1	304-122221-28	12/22/2021		0.005 U		0.005 U		0.005 U		0.360		0.059
Leachate, Cell 2A	304-122221-27	12/22/2021		0.005 U		0.005 U		0.005 U		0.340		0.044
Leachate, Cell 2B	304-122221-26	12/22/2021		0.005 U		0.005 U		0.005 U		0.130		0.420
Leachate, Cell 3A	304-122221-25	12/22/2021		0.005 U		0.005 U		0.005 U		0.170		0.083
Leachate, Cell 4A	304-122221-29	12/22/2021		0.005 U		0.005 U		0.005 U		0.260		0.087
Leachate, Cell 4B	304-121621-23	12/16/2021		0.005 U		0.005 U		0.005 U		0.120		0.095
Leachate, Cell 5	304-122221-30	12/22/2021		0.005 U		0.005 U		0.005 U		0.140		0.200
Leachate, Cell 6	304-121621-19	12/16/2021		0.005 U		0.005 U		0.005 U		0.140		0.260
Leachate, Cell 7	304-122221-24	12/22/2021		0.005 U		0.005 U		0.005 U		0.049		0.036
Leachate, Cell 7	304-122221-24	12/22/2021		0.005 U		0.005 U		0.005 U		0.049		0.036
Leachate, Cell 7	304-122221-24	12/22/2021		0.005 U		0.005 U		0.005 U		0.049		0.036
Leachate, Cell 8	304-030921-21	3/9/2021		0.005 U		0.005 U		0.005 U		0.055		4.70
Leachate, Cell 8	304-061521-19	6/15/2021		0.005 U		0.005 U		0.005 U		0.019		1.30
Leachate, Cell 8	304-091521-21	9/15/2021		0.005 U		0.005 U		0.005 U		0.099		0.370
Leachate, Cell 8	304-0121-31	1/13/2022		0.005 U		0.005 U		0.005 U		0.071		3.40
Quality Control												
QC, FB	304-030921-20	3/9/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
QC, FB	304-061521-20	6/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
QC, FB	304-091521-18	9/15/2021		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
QC, FB	304-121521-15	12/15/2021		0.005 U		0.005 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	304-030821-01	3/8/2021	15		1.5		9.6		0.24		3.6		11	
	304-061421-01	6/14/2021	15		1.4		9.8		0.24		3.4		14	
	304-091421-05	9/14/2021	14		1.5		8.9		0.24		3.4		12	
	304-121521-08	12/15/2021	14		0.96		8.0		0.21		3.3		11	
MW-2A	304-030821-03	3/8/2021	20		0.49		11		0.28		2.8		14	
	304-061421-03	6/14/2021	18		0.52		10		0.28		2.7		13	
	304-091421-01	9/14/2021	22		0.62		12		0.28		3.2		16	
	304-121521-10	12/15/2021	24		0.19		12		0.32		3.4		17	
MW-3	304-030821-05	3/8/2021	45		0.1 U		20		0.42		4.2		15	
	304-061421-05	6/14/2021	33		0.1 U		15		0.27		3.5		12	
	304-091421-03	9/14/2021	32		0.1 U		14		0.23		3.4		12	
	304-121521-18	12/15/2021	43		0.1 U		19		0.35		4.1		15	
MW-4	304-030921-14	3/9/2021	32		0.1 U		17		0.23		5.5		12	
	304-061521-18	6/15/2021	27		0.1 U		15		0.22		4.9		12	
	304-091521-14	9/15/2021	27		0.1 U		14		0.21		5.0		12	
	304-121621-21	12/16/2021	34		0.1 U		19		0.25		5.5		12	
MW-5A	304-030821-07	3/8/2021	30		0.1 U		12		0.19		4.4		43	
Duplicate	304-030821-09	3/8/2021	29		0.1 U		12		0.19		4.3		41	
	304-061421-07	6/14/2021	27		0.1 U		11		0.17		4.2		41	
Duplicate	304-061421-09	6/14/2021	25		0.1 U		11		0.18		3.9		34	
	304-091421-07	9/14/2021	25		0.1 U		10		0.15		3.4		15	
Duplicate	304-091421-09	9/14/2021	25		0.1 U		10		0.15		3.4		15	
	304-121521-12	12/15/2021	30		0.1 U		12		0.19		4.0		25	
Duplicate	304-121521-14	12/15/2021	30		0.1 U		12		0.19		4.0		25	
MW-6	304-030821-11	3/8/2021	34		0.1 U		15		0.18		4.8		10	
	304-061421-11	6/14/2021	31		0.1 U		14		0.30		4.5		9.9	
	304-091421-11	9/14/2021	29		0.1 U		13		0.17		4.2		9.6	
	304-121521-16	12/15/2021	38		0.1 U		17		0.17		5.2		12	
MW-7	304-030921-15	3/9/2021	33		0.19		21		0.25		5.3		12	
	304-061521-15	6/15/2021	31		0.22		23		0.27		5.0		15	
	304-091421-13	9/14/2021	27		0.18		19		0.22		4.9		13	
	304-121521-20	12/15/2021	31		0.1 U		21		0.25		5.2		12	
MW-9	304-030921-13	3/9/2021	10		0.1 U		6.5		0.005 U		2.0		7.2	
	304-061521-13	6/15/2021	9.5		0.1 U		6.5		0.005 U		2 U		6.9	
	304-091521-17	9/15/2021	9.6		0.1 U		6.4		0.005 U		2 U		7.1	
	304-121521-09	12/15/2021	10		0.1 U		6.8		0.005 U		2.0		7.8	
MW-10	304-030921-17	3/9/2021	25		0.1 U		10		0.005 U		2.1		12	
	304-061521-17	6/15/2021	21		0.1 U		9.7		0.005 U		2 U		11	
	304-091521-15	9/15/2021	23		0.1 U		10		0.005 U		2 U		12	
	304-121521-11	12/15/2021	26		0.1 U		11		0.005 U		2.2		13	

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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	304-030821-10	3/8/2021	43		2.5		18		1.7		5.0		18	
	304-061421-10	6/14/2021	41		0.58		18		1.6		4.7		18	
	304-091421-10	9/14/2021	63		2.9		28		2.2		6.0		20	
	304-121421-05	12/14/2021	41		0.45		17		2.0		4.8		18	
LDCS-2A	304-030821-08	3/8/2021	97		0.1 U		37		0.40		9.0		29	
	304-061421-08	6/14/2021	94		0.1 U		38		1.6		8.4		28	
	304-091421-08	9/14/2021	100		3.2		40		5.3		9.3		29	
	304-121421-04	12/14/2021	98		0.1 U		38		0.24		9.2		31	
LDCS-2B	304-030821-06	3/8/2021	85		1.5		33		2.3		7.4		20	
	304-061421-06	6/14/2021	83		0.42		34		3.0		6.5		19	
	304-091421-06	9/14/2021	100		8.6		41		5.8		8.1		21	
	304-121421-03	12/14/2021	87		0.1 U		34		3.2		6.3		18	
LDCS-3A	304-030821-04	3/8/2021	100		0.37		42		7.1		6.3		24	
	304-061421-04	6/14/2021	100		0.33		44		14		5.8		23	
	304-091421-04	9/14/2021	96		1.6		43		3.2		6.5		23	
	304-121421-02	12/14/2021	110		0.1 U		44		2.5		6.1		25	
LDCS-4A	304-010521-01	1/5/2021	61		0.71		27		0.84		26		130	
	304-011521-01	1/15/2021	54		0.5 U		26		0.59		8.7		32	
	304-012121-01	1/21/2021	65		0.1 U		26		0.75		9.8		29	
	304-012821-01	1/28/2021	65		0.1 U		27		0.78		9.2		28	
	304-030821-12	3/8/2021	76		0.54		42		1.2		6.8		22	
	304-061421-12	6/14/2021	63		1.3		35		1.6		5.9		20	
	304-091421-12	9/14/2021	74		4.2		49		2.2		6.4		22	
	304-121421-06	12/14/2021	63		1.5		36		2.1		5.7		21	
LDCS-4B	304-030921-16	3/9/2021	93		3.1		39		1.1		6.0		21	
	304-042621-01	4/26/2021	82		1.3		37		0.99		5.7		20	
	304-061421-14	6/14/2021	74		1.2		33		0.88		5.2		19	
	304-091521-20	9/15/2021	100		2.0		51		1.0		7.0		23	
	304-121621-22	12/16/2021	100		0.1 U		42		1.1		5.8		24	
LDCS-5	304-030921-22	3/9/2021	85		0.75		52		1.9		8.6		25	
	304-061521-16	6/15/2021	61		0.1 U		31		1.0		6.0		23	
	304-091621-22	9/16/2021	86		0.1 U		58		1.2		8.4		27	
	304-121521-17	12/15/2021	56		0.13		29		1.5		6.8		27	
LDCS-6	304-030921-18	3/9/2021	120		0.20		41		1.5		3.9		25	
	304-061521-22	6/15/2021	100		0.1 U		33		0.93		3.1		19	
	304-091521-16	9/15/2021	100		0.1 U		54		0.07		4.8		21	
	304-121521-13	12/15/2021	100		0.1 U		52		1.1		5.2		25	
LDCS-7	304-030821-02	3/8/2021	140		0.24		44		2.4		3.6		36	
	304-061421-02	6/14/2021	110		0.12		32		1.3		3.8		28	
	304-091421-02	9/14/2021	120		0.78		41		3.8		3.9		32	
	304-121421-01	12/14/2021	120		0.1 U		42		1.3		3.9		34	
LDCS-8	304-030921-19	3/9/2021	140		0.1 U		79		0.90		5.5		48	
	304-062421-21	6/24/2021	140		0.17		87		2.5		6.4		48	
	304-081921-01	8/19/2021	69		1.5		40		1.2		4.2		30	
	304-091521-19	9/15/2021	130		0.11		59		1.8		4.9		54	
	304-101521-01	10/15/2021	10		0.1 U		3.1		0.12		2 U		4.7	
	304-121421-07	12/14/2021	120		0.1 U		70		1.8		5.1		51	

Groundwater Database - Appendix II Metals
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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	304-122221-28	12/22/2021		35		13		97		0.29		1,000		5,900
Leachate, Cell 2A	304-122221-27	12/22/2021		38		13		100		0.27		1,000		6,100
Leachate, Cell 2B	304-122221-26	12/22/2021		13		5.5		15		0.10		180		940
Leachate, Cell 3A	304-122221-25	12/22/2021		59		10		64		0.58		600		2,700
Leachate, Cell 4A	304-122221-29	12/22/2021		37		9.3		61		0.41		1,100		4,300
Leachate, Cell 4B	304-121621-23	12/16/2021		33		8.7		52		0.30		1,100		4,700
Leachate, Cell 5	304-122221-30	12/22/2021		46		11		74		0.32		1,200		4,400
Leachate, Cell 6	304-121621-19	12/16/2021		68		4.2		87		0.73		1,000		3,300
Leachate, Cell 7	304-122221-24	12/22/2021		76		3.8		25		1.5		120		360
Leachate, Cell 7	304-122221-24	12/22/2021		76		3.8		25		1.5		120		360
Leachate, Cell 7	304-122221-24	12/22/2021		76		3.8		25		1.5		120		360
Leachate, Cell 8	304-030921-21	3/9/2021		1200		130		250		29		310		830
Leachate, Cell 8	304-061521-19	6/15/2021		120		9.3		47		3.0		84		210
Leachate, Cell 8	304-091521-21	9/15/2021		140		4.5		210		1.2		420		1,600
Leachate, Cell 8	304-0121-31	1/13/2022		1200		81		220		19		310		910
Quality Control														
QC, FB	304-030921-20	3/9/2021	0.2 U		0.1 U		0.1 U		0.005 U		2 U		1 U	
	304-061521-20	6/15/2021	0.2 U		0.1 U		0.1 U		0.005 U		2 U		1 U	
	304-091521-18	9/15/2021	0.2 U		0.1 U		0.1 U		0.005 U		2 U		1 U	
	304-121521-15	12/15/2021	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
2021 Annual Monitoring Report
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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	2-Butanone (MEK)
Monitoring Well																
MW-1A	304-030821-01	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-01	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-05	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-08	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
MW-2A	304-030821-03	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-03	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-01	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-10	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
MW-3	304-030821-05	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-05	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-03	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-18	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
MW-4	304-030921-14	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061521-18	6/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091521-14	9/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121621-21	12/16/2021	0.5 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	0.5 U	0.5 U	0.5 U	140
	304-012022-01	1/20/2022	0.5 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	0.5 U	0.5 U	0.5 U	6 U
MW-5A	304-030821-07	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
Duplicate	304-030821-09	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-07	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
Duplicate	304-061421-09	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-07	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
Duplicate	304-091421-09	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-12	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
Duplicate	304-121521-14	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
MW-6	304-030821-11	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-11	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-11	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-16	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
MW-7	304-030921-15	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061521-15	6/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-13	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-20	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U

Groundwater Database - Appendix I VOCs
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Location	Sample Number	Sample Date	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Acrylonitrile	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
Monitoring Well																	
MW-1A	304-030821-01	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-01	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-05	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-08	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2A	304-030821-03	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-03	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-01	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-10	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	304-030821-05	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-05	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-03	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-18	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	304-030921-14	3/9/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061521-18	6/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091521-14	9/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121621-21	12/16/2021	5 U	9.1	120	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-012022-01	1/20/2022	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5A	304-030821-07	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Duplicate	304-030821-09	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-07	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Duplicate	304-061421-09	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-07	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Duplicate	304-091421-09	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-12	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Duplicate	304-121521-14	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	304-030821-11	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-11	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-11	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-16	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	304-030921-15	3/9/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061521-15	6/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-13	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-20	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

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Location	Sample Number	Sample Date	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	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
Monitoring Well																	
MW-1A	304-030821-01	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-01	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-05	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-08	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
MW-2A	304-030821-03	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-03	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-01	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-10	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
MW-3	304-030821-05	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-05	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-03	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-18	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
MW-4	304-030921-14	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061521-18	6/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091521-14	9/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121621-21	12/16/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-012022-01	1/20/2022	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
MW-5A	304-030821-07	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
Duplicate	304-030821-09	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-07	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
Duplicate	304-061421-09	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-07	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
Duplicate	304-091421-09	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-12	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
Duplicate	304-121521-14	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
MW-6	304-030821-11	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-11	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-11	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-16	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
MW-7	304-030921-15	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061521-15	6/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-13	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-20	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U

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Location	Sample Number	Sample Date	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
Monitoring Well						
MW-1A	304-030821-01	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-01	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-05	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-08	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
MW-2A	304-030821-03	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-03	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-01	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-10	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
MW-3	304-030821-05	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-05	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-03	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-18	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
MW-4	304-030921-14	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061521-18	6/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091521-14	9/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121621-21	12/16/2021	0.5 U	0.5 U	3 U	0.5 U
	304-012022-01	1/20/2022	0.5 U	0.5 U	3 U	0.5 U
MW-5A	304-030821-07	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
Duplicate	304-030821-09	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-07	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
Duplicate	304-061421-09	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-07	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
Duplicate	304-091421-09	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-12	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
Duplicate	304-121521-14	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
MW-6	304-030821-11	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-11	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-11	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-16	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
MW-7	304-030921-15	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061521-15	6/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-13	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-20	12/15/2021	0.5 U	0.5 U	3 U	0.5 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	2-Butanone (MEK)
MW-9	304-030921-13	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061521-13	6/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091521-17	9/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-09	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
MW-10	304-030921-17	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061521-17	6/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091521-15	9/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-11	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
Leak Detection System																
LDCS-1	304-030821-10	3/8/2021	0.5 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	0.5 U	0.5 U	0.73	6 U
	304-061421-10	6/14/2021	0.5 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	0.5 U	0.5 U	0.79	6 U
	304-091421-10	9/14/2021	0.5 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	0.5 U	0.5 U	1.1	6 U
	304-102121-01	10/21/2021	0.5 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	0.5 U	0.5 U	0.93	6 U
	304-121421-05	12/14/2021	0.5 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	0.5 U	0.5 U	0.84	6 U
LDCS-2A	304-030821-08	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-08	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-08	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-102121-02	10/21/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121421-04	12/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
LDCS-2B	304-030821-06	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-06	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-06	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-102121-03	10/21/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121421-03	12/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
LDCS-3A	304-030821-04	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-04	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-04	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121421-02	12/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U

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Location	Sample Number	Sample Date	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Acrylonitrile	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
MW-9	304-030921-13	3/9/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061521-13	6/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091521-17	9/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-09	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	304-030921-17	3/9/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061521-17	6/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091521-15	9/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-11	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Leak Detection System																	
LDCS-1	304-030821-10	3/8/2021	5 U	5 U	10 U	5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-10	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-10	9/14/2021	5 U	5 U	10	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-102121-01	10/21/2021	5 U	5 U	140	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.82	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121421-05	12/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LDCS-2A	304-030821-08	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-08	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-08	9/14/2021	5 U	5 U	28	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-102121-02	10/21/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121421-04	12/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LDCS-2B	304-030821-06	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-06	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-06	9/14/2021	5 U	5 U	92	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-102121-03	10/21/2021	5 U	5 U	26	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121421-03	12/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LDCS-3A	304-030821-04	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-04	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-04	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121421-02	12/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

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Location	Sample Number	Sample Date	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	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
MW-9	304-030921-13	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061521-13	6/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091521-17	9/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-09	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
MW-10	304-030921-17	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061521-17	6/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091521-15	9/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-11	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
Leak Detection System																	
LDCS-1	304-030821-10	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-10	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-10	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-102121-01	10/21/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121421-05	12/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
LDCS-2A	304-030821-08	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-08	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-08	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-102121-02	10/21/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121421-04	12/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
LDCS-2B	304-030821-06	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-06	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-06	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-102121-03	10/21/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.54	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121421-03	12/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
LDCS-3A	304-030821-04	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-04	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-04	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121421-02	12/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U

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Location	Sample Number	Sample Date	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
MW-9	304-030921-13	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061521-13	6/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091521-17	9/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-09	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
MW-10	304-030921-17	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061521-17	6/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091521-15	9/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-11	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
Leak Detection System						
LDCS-1	304-030821-10	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-10	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-10	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-102121-01	10/21/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121421-05	12/14/2021	0.5 U	0.5 U	3 U	0.5 U
LDCS-2A	304-030821-08	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-08	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-08	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-102121-02	10/21/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121421-04	12/14/2021	0.5 U	0.5 U	3 U	0.5 U
LDCS-2B	304-030821-06	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-06	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-06	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-102121-03	10/21/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121421-03	12/14/2021	0.5 U	0.5 U	3 U	0.5 U
LDCS-3A	304-030821-04	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-04	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-04	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121421-02	12/14/2021	0.5 U	0.5 U	3 U	0.5 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	2-Butanone (MEK)
LDCS-4A	304-010521-01	1/5/2021	0.5 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	0.5 U	0.5 U	0.5 U	10 U
	304-011521-01	1/15/2021	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	0.1 U	0.3 U	0.2 U	0.2 U	0.3 U	10 U
	304-012121-01	1/21/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-012821-01	1/28/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-030821-12	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-12	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-12	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121421-06	12/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
LDCS-4B	304-030921-16	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6.9
	304-042621-01	4/26/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-14	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091521-20	9/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121621-22	12/16/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
LDCS-5	304-030921-22	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061521-16	6/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091621-22	9/16/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-17	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
LDCS-6	304-030921-18	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061521-22	6/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091521-16	9/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121521-13	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
LDCS-7	304-030821-02	3/8/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-061421-02	6/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091421-02	9/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121421-01	12/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U

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Location	Sample Number	Sample Date	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Acrylonitrile	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
LDCS-4A	304-010521-01	1/5/2021	5 U	5 U	3.5	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-011521-01	1/15/2021					0.2 U		0.2 U	0.5 U	0.5 U		0.2 U	0.2 U	0.5 U	0.2 U	0.5 U
	304-012121-01	1/21/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-012821-01	1/28/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-030821-12	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-12	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-12	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121421-06	12/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LDCS-4B	304-030921-16	3/9/2021	5 U	5 U	12	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-042621-01	4/26/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-14	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091521-20	9/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121621-22	12/16/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LDCS-5	304-030921-22	3/9/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061521-16	6/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091621-22	9/16/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-17	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LDCS-6	304-030921-18	3/9/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061521-22	6/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091521-16	9/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121521-13	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LDCS-7	304-030821-02	3/8/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	9.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-061421-02	6/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091421-02	9/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121421-01	12/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

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Location	Sample Number	Sample Date	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	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
LDCS-4A	304-010521-01	1/5/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-011521-01	1/15/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		5 U	0.5 U	0.5 U	1 U	0.5 U	0.2 U	0.2 U	0.2 U	
	304-012121-01	1/21/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-012821-01	1/28/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-030821-12	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-12	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-12	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121421-06	12/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
LDCS-4B	304-030921-16	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-042621-01	4/26/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-14	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091521-20	9/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121621-22	12/16/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
LDCS-5	304-030921-22	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061521-16	6/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091621-22	9/16/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-17	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
LDCS-6	304-030921-18	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061521-22	6/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091521-16	9/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121521-13	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
LDCS-7	304-030821-02	3/8/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-061421-02	6/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091421-02	9/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121421-01	12/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U

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Location	Sample Number	Sample Date	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
LDCS-4A	304-010521-01	1/5/2021	0.5 U	0.5 U	3 U	0.5 U
	304-011521-01	1/15/2021	0.2 U	0.5 U		0.02 U
	304-012121-01	1/21/2021	0.5 U	0.5 U	3 U	0.5 U
	304-012821-01	1/28/2021	0.5 U	0.5 U	3 U	0.5 U
	304-030821-12	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-12	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-12	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121421-06	12/14/2021	0.5 U	0.5 U	3 U	0.5 U
LDCS-4B	304-030921-16	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
	304-042621-01	4/26/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-14	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091521-20	9/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121621-22	12/16/2021	0.5 U	0.5 U	3 U	0.5 U
LDCS-5	304-030921-22	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061521-16	6/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091621-22	9/16/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-17	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
LDCS-6	304-030921-18	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061521-22	6/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091521-16	9/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121521-13	12/15/2021	0.5 U	0.5 U	3 U	0.5 U
LDCS-7	304-030821-02	3/8/2021	0.5 U	0.5 U	3 U	0.5 U
	304-061421-02	6/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091421-02	9/14/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121421-01	12/14/2021	0.5 U	0.5 U	3 U	0.5 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	2-Butanone (MEK)
LDCS-8	304-030921-19	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-062421-21	6/24/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-081921-01	8/19/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-091521-19	9/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-101521-01	10/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
	304-121421-07	12/14/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
Leachate																
Leachate, Cell 1	304-122221-28	12/22/2021	2.1 U	1.6 U	2.1 U	2.7 U	2.2 U	2.3 U	3.3 U	4.7 U	1.8 U	1.5 U	1.3 U	1.8 U	13	2600
Leachate, Cell 2A	304-122221-27	12/22/2021	4.2 U	3.2 U	4.2 U	5.4 U	4.4 U	4.6 U	6.6 U	9.4 U	3.6 U	3 U	2.6 U	3.6 U	15	3900
Leachate, Cell 2B	304-122221-26	12/22/2021	21 U	16 U	21 U	27 U	22 U	23 U	33 U	47 U	18 U	15 U	13 U	18 U	16 U	27000
Leachate, Cell 3A	304-122221-25	12/22/2021	0.84 U	0.64 U	0.84 U	1.1 U	0.88 U	0.92 U	1.3 U	2 U	1 U	0.6 U	0.52 U	0.72 U	11	900
Leachate, Cell 4A	304-122221-29	12/22/2021	2.1 U	1.6 U	2.1 U	2.7 U	2.2 U	2.3 U	3.3 U	4.7 U	1.8 U	1.5 U	1.3 U	1.8 U	10	2200
Leachate, Cell 4B	304-121621-23	12/16/2021	0.84 U	0.64 U	0.84 U	1.1 U	0.88 U	0.92 U	1.3 U	2 U	1 U	0.6 U	0.52 U	0.72 U	8.6	500
Leachate, Cell 5	304-122221-30	12/22/2021	1.1 U	0.8 U	1.1 U	1.4 U	1.1 U	1.2 U	1.7 U	2.4 U	1 U	0.75 U	0.65 U	0.9 U	1.7	770
Leachate, Cell 6	304-121621-19	12/16/2021	0.84 U	0.64 U	0.84 U	1.1 U	0.88 U	0.92 U	1.3 U	2 U	1 U	0.6 U	0.52 U	0.72 U	1.8	460
Leachate, Cell 7	304-122221-24	12/22/2021	0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U	1 U	2 U	1 U	0.5 U	4.1	1.4	2.2	6 U
Leachate, Cell 8	304-030921-21	3/9/2021	1.1 U	0.8 U	1.1 U	1.4 U	11	1.2 U	1.7 U	2.4 U	1 U	0.75 U	61	0.9 U	0.8 U	6000
Leachate, Cell 8	304-061521-19	6/15/2021	2.1 U	1.6 U	2.1 U	2.7 U	2.2 U	2.3 U	3.3 U	4.7 U	1.8 U	1.5 U	10	1.8 U	1.6 U	4200
Leachate, Cell 8	304-091521-21	9/15/2021	2.1 U	1.6 U	2.1 U	2.7 U	2.2 U	2.3 U	3.3 U	4.7 U	1.8 U	1.5 U	1.3 U	1.8 U	1.6 U	69
Leachate, Cell 8	304-0121-31	1/13/2022	2.1 U	1.6 U	2.1 U	2.7 U	2.2 U	2.3 U	3.3 U	4.7 U	1.8 U	1.5 U	35	1.8 U	1.6 U	1600
Quality Control																
QC, FB	304-030921-20	3/9/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
QC, FB	304-061521-20	6/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
QC, FB	304-091521-18	9/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
QC, FB	304-102121-04	10/21/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U
QC, FB	304-121521-15	12/15/2021	0.5 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	0.5 U	0.5 U	0.5 U	6 U

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

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Location	Sample Number	Sample Date	2-Hexanone	4-Methyl-2-pentanone (MIBK)	Acetone	Acrylonitrile	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
LDCS-8	304-030921-19	3/9/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-062421-21	6/24/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-081921-01	8/19/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-091521-19	9/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-101521-01	10/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121421-07	12/14/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Leachate																	
Leachate, Cell 1	304-122221-28	12/22/2021	17 U	95	2800	14 U	18	1 U	1.7 U	4.6 U	2.1 U	2.1	1.9 U	3.1	4.1 U	1.6 U	3 U
Leachate, Cell 2A	304-122221-27	12/22/2021	34 U	130	4300	28 U	21	2 U	3.4 U	9.2 U	4.2 U	3.3 U	3.8 U	3.4 U	8.2 U	6.4	6 U
Leachate, Cell 2B	304-122221-26	12/22/2021	170 U	900	31000	140 U	16 U	10 U	17 U	46 U	21 U	25	19 U	17 U	41 U	26	30 U
Leachate, Cell 3A	304-122221-25	12/22/2021	6.8 U	29	1000	5.6 U	12	0.5 U	0.68 U	1.8 U	0.84 U	0.77	0.76 U	1.8	1.6 U	0.64 U	1.2 U
Leachate, Cell 4A	304-122221-29	12/22/2021	17 U	54	3500	14 U	31	1 U	1.7 U	4.6 U	2.1 U	1.7 U	1.9 U	1.7 U	4.1 U	2.7	3 U
Leachate, Cell 4B	304-121621-23	12/16/2021	6.8 U	37	710	5.6 U	20	0.5 U	0.68 U	1.8 U	0.84 U	0.67 U	0.76 U	0.68 U	1.6 U	0.64 U	1.2 U
Leachate, Cell 5	304-122221-30	12/22/2021	8.5 U	20	980	7 U	13	0.5 U	0.85 U	2.3 U	1.1 U	0.84 U	0.95 U	0.85 U	2.1 U	0.8 U	1.5 U
Leachate, Cell 6	304-121621-19	12/16/2021	6.8 U	22	660	5.6 U	4.7	0.5 U	0.68 U	1.8 U	0.84 U	0.67 U	0.76 U	0.68 U	1.6 U	0.64 U	1.2 U
Leachate, Cell 7	304-122221-24	12/22/2021	5 U	12	110	5 U	11	0.5 U	0.5 U	0.5 U	0.5 U	2.4	0.5 U	0.63	1.0	0.5 U	0.5 U
Leachate, Cell 8	304-030921-21	3/9/2021	8.5 U	200	4400	7 U	12	0.5 U	0.85 U	2.3 U	1.1 U	11	0.95 U	0.85 U	15	0.8 U	1.5 U
Leachate, Cell 8	304-061521-19	6/15/2021	17 U	65	2900	14 U	4.1	1 U	1.7 U	4.6 U	2.1 U	1.7 U	1.9 U	1.7 U	4.1 U	3.5	3 U
Leachate, Cell 8	304-091521-21	9/15/2021	17 U	130	19 U	14 U	3.9	1 U	1.7 U	4.6 U	2.1 U	1.7 U	1.9 U	1.7 U	4.1 U	1.6 U	4.5
Leachate, Cell 8	304-0121-31	1/13/2022	17 U	87	780	14 U	8.4	1 U	1.7 U	4.6 U	2.1 U	1.7 U	1.9 U	1.7 U	4.1 U	1.6	3 U
Quality Control																	
QC, FB	304-030921-20	3/9/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
QC, FB	304-061521-20	6/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
QC, FB	304-091521-18	9/15/2021	5 U	5 U	10	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
QC, FB	304-102121-04	10/21/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
QC, FB	304-121521-15	12/15/2021	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

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

Groundwater Database - Appendix I VOCs
2021 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	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
LDCS-8	304-030921-19	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-062421-21	6/24/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-081921-01	8/19/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-091521-19	9/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-101521-01	10/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-121421-07	12/14/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
Leachate																	
Leachate, Cell 1	304-122221-28	12/22/2021	1.5 U	1.6 U	1.7 U	1.7 U	52	2.3 U	9.4 U	100	44	3.6 U	2 U	53	1.5 U	1.9 U	8 U
Leachate, Cell 2A	304-122221-27	12/22/2021	3 U	3.2 U	3.4 U	3.4 U	58	4.6 U	19 U	110	49	7.1 U	4 U	65	3 U	3.8 U	16 U
Leachate, Cell 2B	304-122221-26	12/22/2021	15 U	16 U	17 U	17 U	22	23 U	94 U	58	47	36 U	20 U	100	15 U	19 U	80 U
Leachate, Cell 3A	304-122221-25	12/22/2021	0.97	0.64 U	0.68 U	0.68 U	47	1 U	3.8 U	65	30	1.4 U	0.8 U	18	0.6 U	0.76 U	3.2 U
Leachate, Cell 4A	304-122221-29	12/22/2021	1.5 U	1.6 U	1.7 U	1.7 U	37	2.3 U	9.4 U	56	27	3.6 U	2 U	66	1.5 U	1.9 U	8 U
Leachate, Cell 4B	304-121621-23	12/16/2021	2.9	0.64 U	0.68 U	0.68 U	32	1 U	3.8 U	48	25	3.4	0.8 U	48	0.6 U	0.76 U	3.2 U
Leachate, Cell 5	304-122221-30	12/22/2021	0.75 U	0.8 U	0.85 U	0.85 U	10	1.2 U	4.7 U	15	9.8	1.8 U	1 U	18	0.75 U	0.95 U	4 U
Leachate, Cell 6	304-121621-19	12/16/2021	2.3	0.64 U	0.68 U	0.68 U	9.7	1 U	3.8 U	13	10	1.4 U	0.8 U	24	0.6 U	0.76 U	3.2 U
Leachate, Cell 7	304-122221-24	12/22/2021	1.2	0.5 U	0.5 U	0.5 U	44	1 U	2 U	73	31	0.5 U	0.5 U	76	0.5 U	0.5 U	3 U
Leachate, Cell 8	304-030921-21	3/9/2021	0.75 U	0.8 U	0.85 U	0.85 U	21	1.2 U	380	68	33	13	11	210	0.75 U	0.95 U	4 U
Leachate, Cell 8	304-061521-19	6/15/2021	3.5	1.6 U	1.7 U	1.7 U	7.6	2.3 U	9.7	18	8.0	3.6 U	2 U	79	1.5 U	1.9 U	8 U
Leachate, Cell 8	304-091521-21	9/15/2021	1.6	1.6 U	1.7 U	1.7 U	7.3	2.3 U	9.4 U	16	9.1	3.6 U	2 U	44	1.5 U	1.9 U	8 U
Leachate, Cell 8	304-0121-31	1/13/2022	1.5 U	1.6 U	1.7 U	1.7 U	28	2.3 U	120	64	28	15	6.3	200	1.5 U	1.9 U	8 U
Quality Control																	
QC, FB	304-030921-20	3/9/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
QC, FB	304-061521-20	6/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
QC, FB	304-091521-18	9/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
QC, FB	304-102121-04	10/21/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
QC, FB	304-121521-15	12/15/2021	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U

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

Groundwater Database - Appendix I VOCs
2021 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

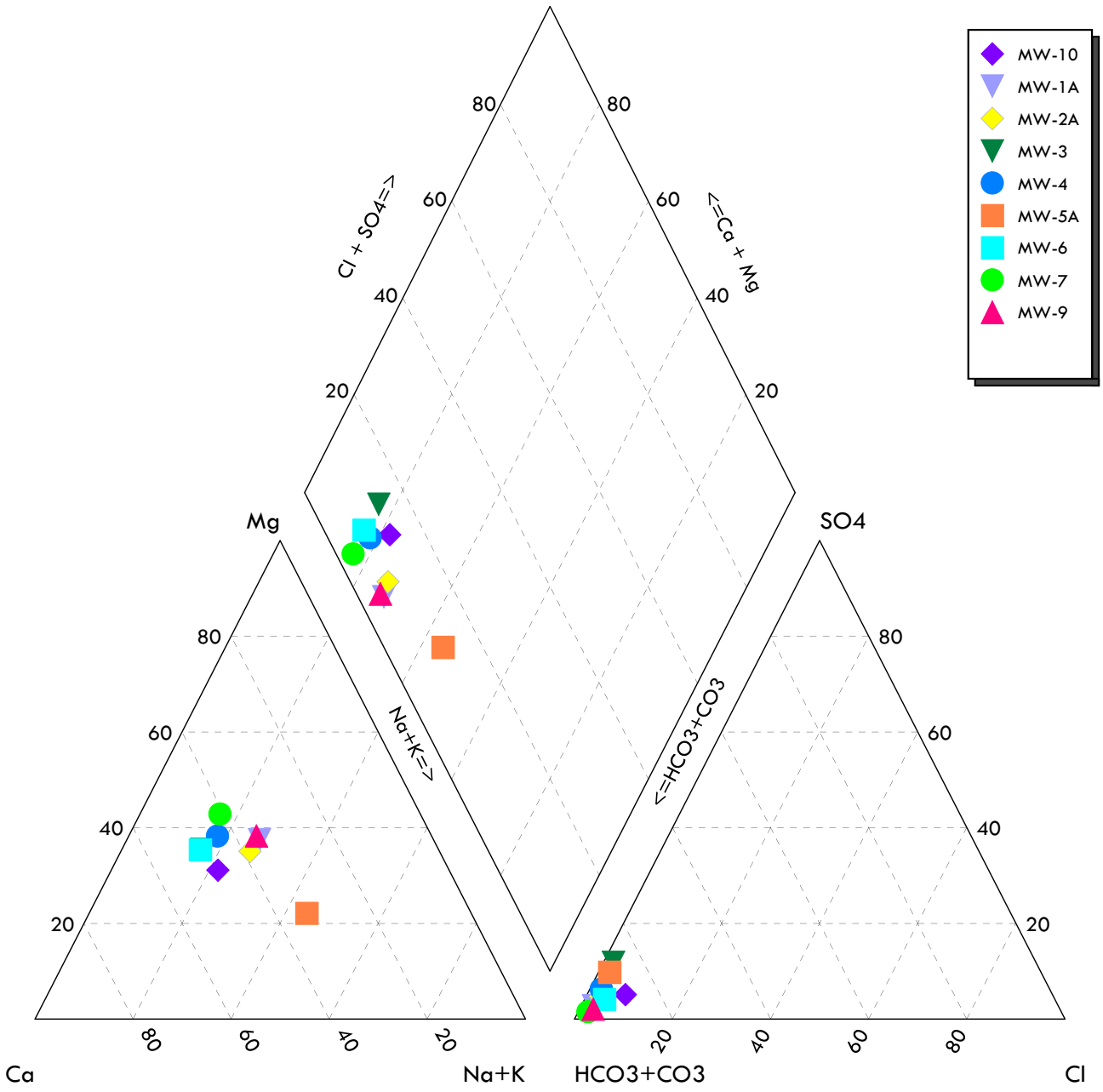
Location	Sample Number	Sample Date	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
LDCS-8	304-030921-19	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
	304-062421-21	6/24/2021	0.5 U	0.5 U	3 U	0.5 U
	304-081921-01	8/19/2021	0.5 U	0.5 U	3 U	0.5 U
	304-091521-19	9/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-101521-01	10/15/2021	0.5 U	0.5 U	3 U	0.5 U
	304-121421-07	12/14/2021	0.5 U	0.5 U	3 U	0.5 U
Leachate						
Leachate, Cell 1	304-122221-28	12/22/2021	1.6 U	2.9 U	9.4 U	1 U
Leachate, Cell 2A	304-122221-27	12/22/2021	3.2 U	5.8 U	19 U	2 U
Leachate, Cell 2B	304-122221-26	12/22/2021	16 U	29 U	94 U	10 U
Leachate, Cell 3A	304-122221-25	12/22/2021	0.64 U	1.2 U	3.8 U	0.5 U
Leachate, Cell 4A	304-122221-29	12/22/2021	1.6 U	2.9 U	9.4 U	1 U
Leachate, Cell 4B	304-121621-23	12/16/2021	0.64 U	1.2 U	3.8 U	0.5 U
Leachate, Cell 5	304-122221-30	12/22/2021	0.8 U	1.5 U	4.7 U	0.5 U
Leachate, Cell 6	304-121621-19	12/16/2021	0.64 U	1.2 U	3.8 U	0.5 U
Leachate, Cell 7	304-122221-24	12/22/2021	0.5 U	0.5 U	3 U	4.3
Leachate, Cell 8	304-030921-21	3/9/2021	5.0	8.7	4.7 U	0.5 U
Leachate, Cell 8	304-061521-19	6/15/2021	3.3	2.9 U	9.4 U	2.1
Leachate, Cell 8	304-091521-21	9/15/2021	1.6 U	2.9 U	9.4 U	60
Leachate, Cell 8	304-0121-31	1/13/2022	1.6 U	5.8	9.4 U	1 U
Quality Control						
QC, FB	304-030921-20	3/9/2021	0.5 U	0.5 U	3 U	0.5 U
QC, FB	304-061521-20	6/15/2021	0.5 U	0.5 U	3 U	0.5 U
QC, FB	304-091521-18	9/15/2021	0.5 U	0.5 U	3 U	0.5 U
QC, FB	304-102121-04	10/21/2021	0.5 U	0.5 U	3 U	0.5 U
QC, FB	304-121521-15	12/15/2021	0.5 U	0.5 U	3 U	0.5 U

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

Appendix D

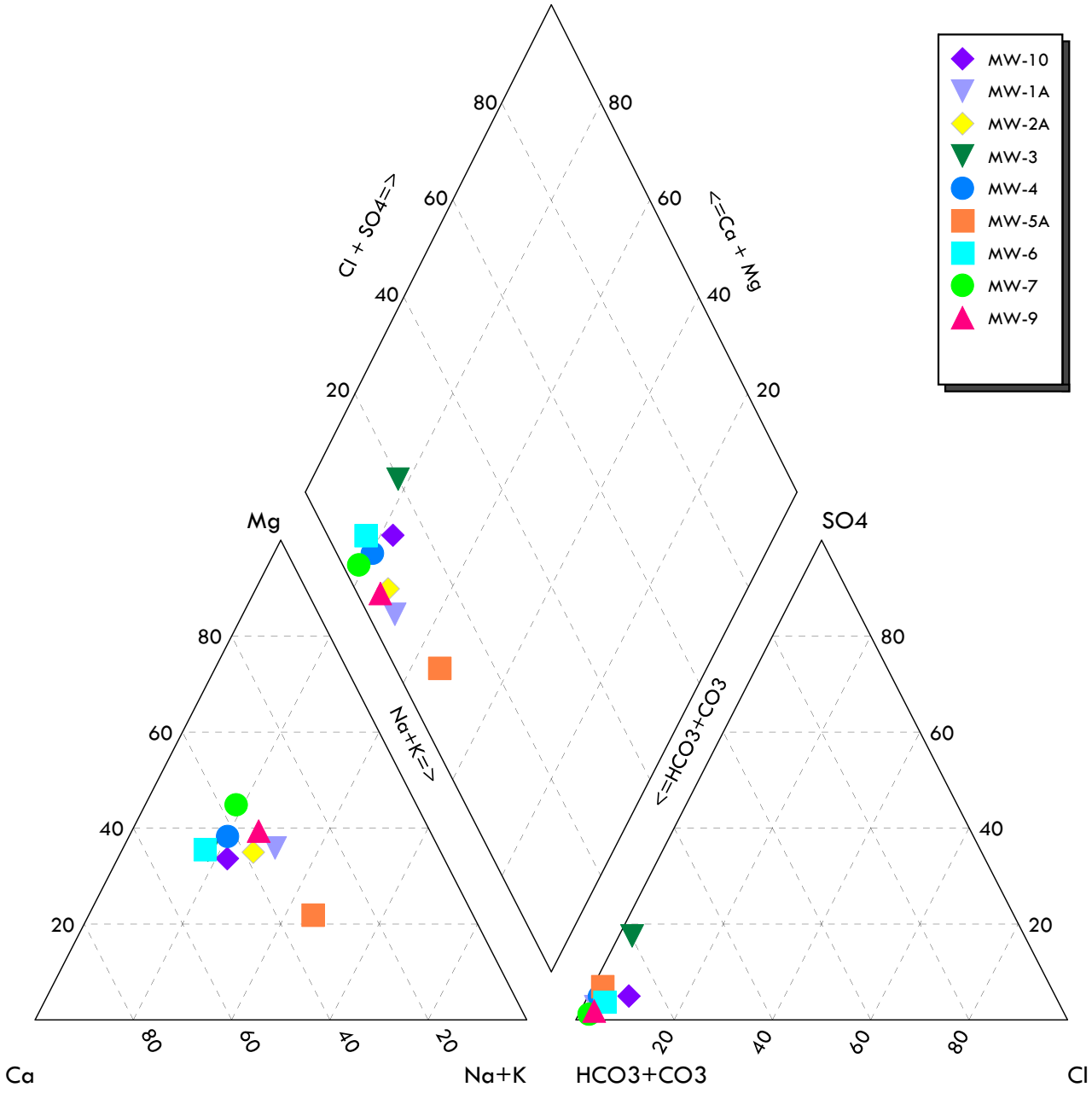
Geochemical Evaluation

First Quarter 2021, Groundwater Monitoring Wells



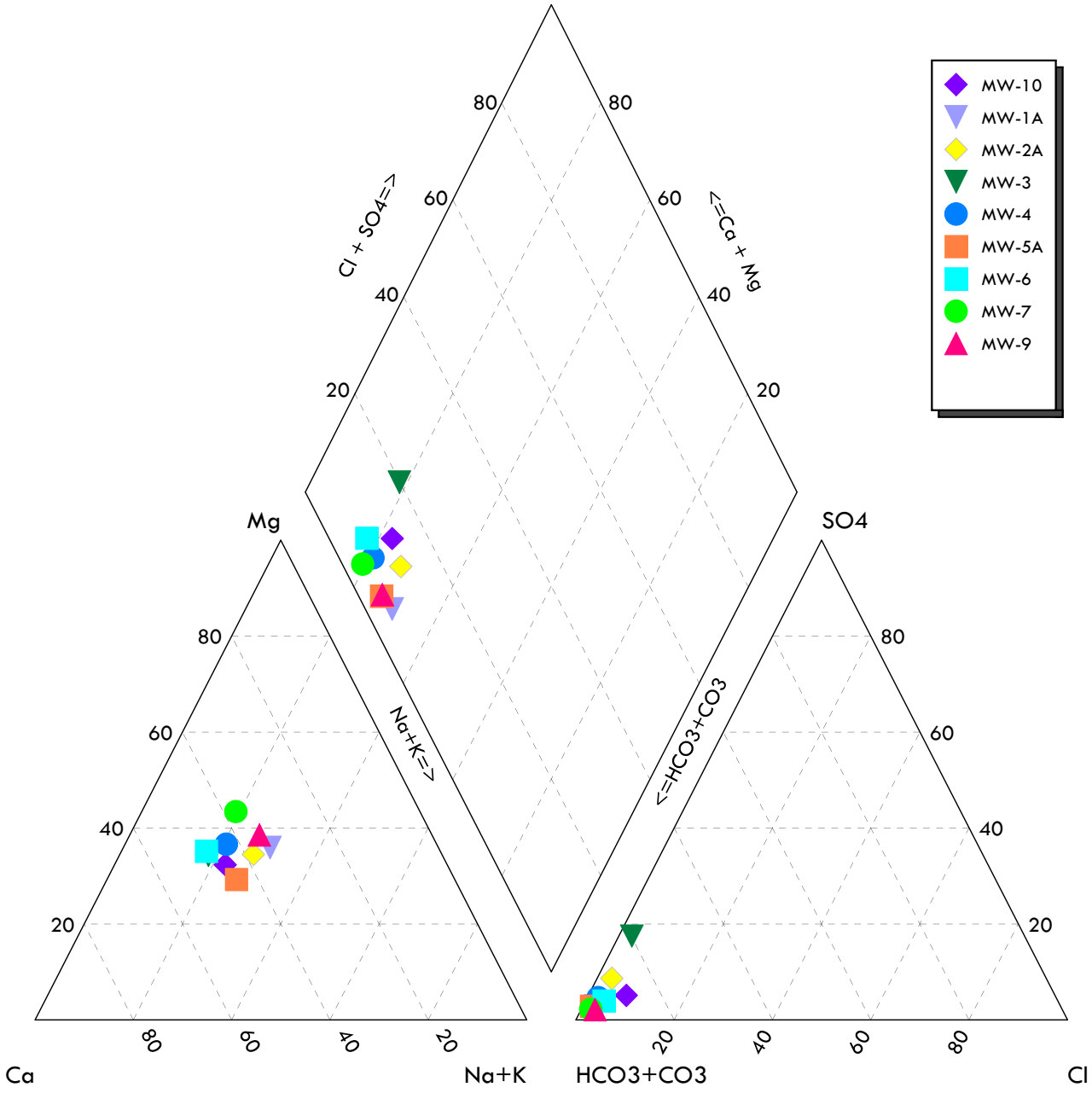
DESCRIPTION: Piper Diagram - 1Q21 Groundwater		
	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: June 2021

Second Quarter 2021, Groundwater Monitoring Wells



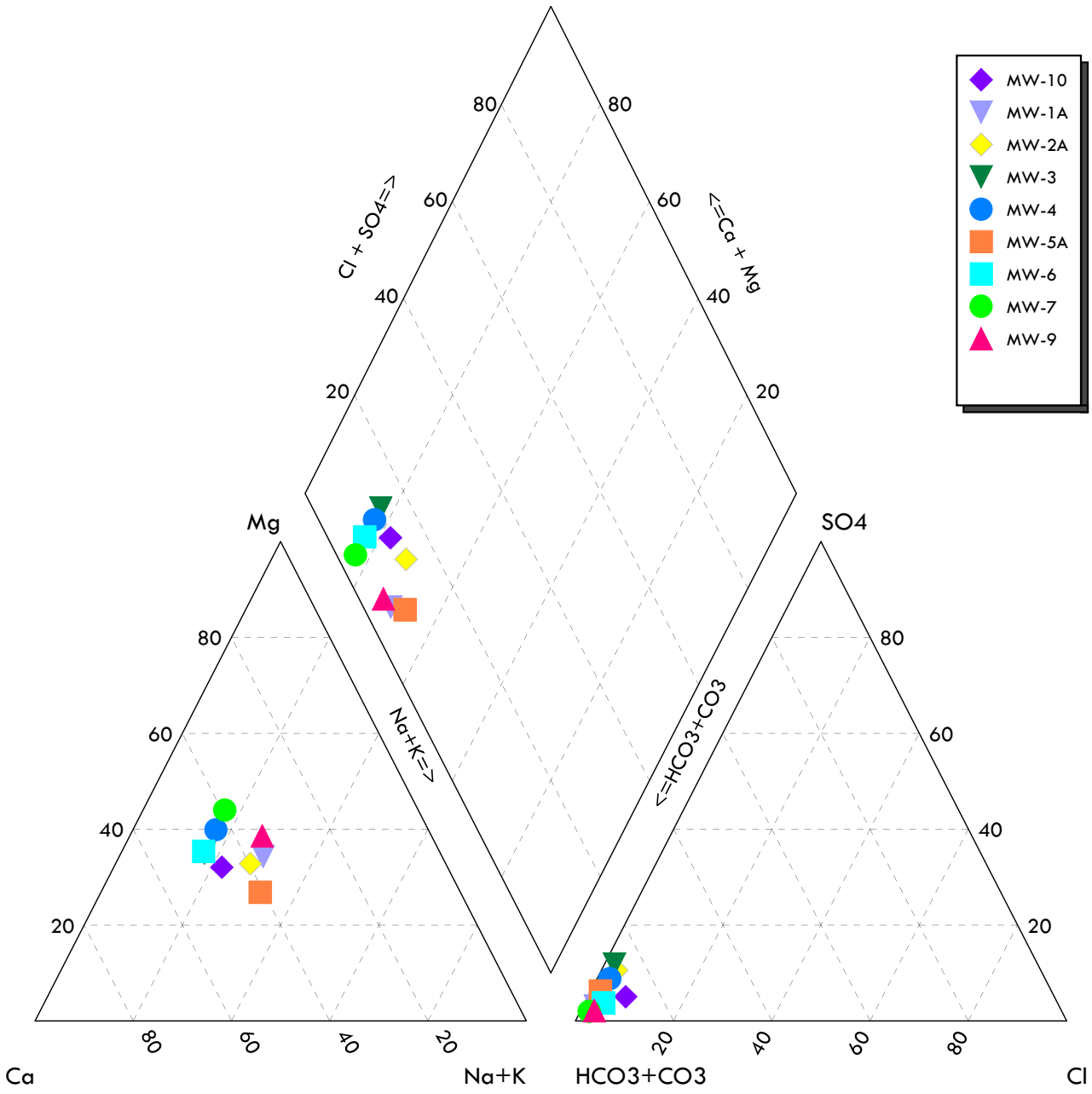
DESCRIPTION: Piper Diagram - 2Q21 Groundwater		
	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: September 2021

Third Quarter 2021, Groundwater Monitoring Wells



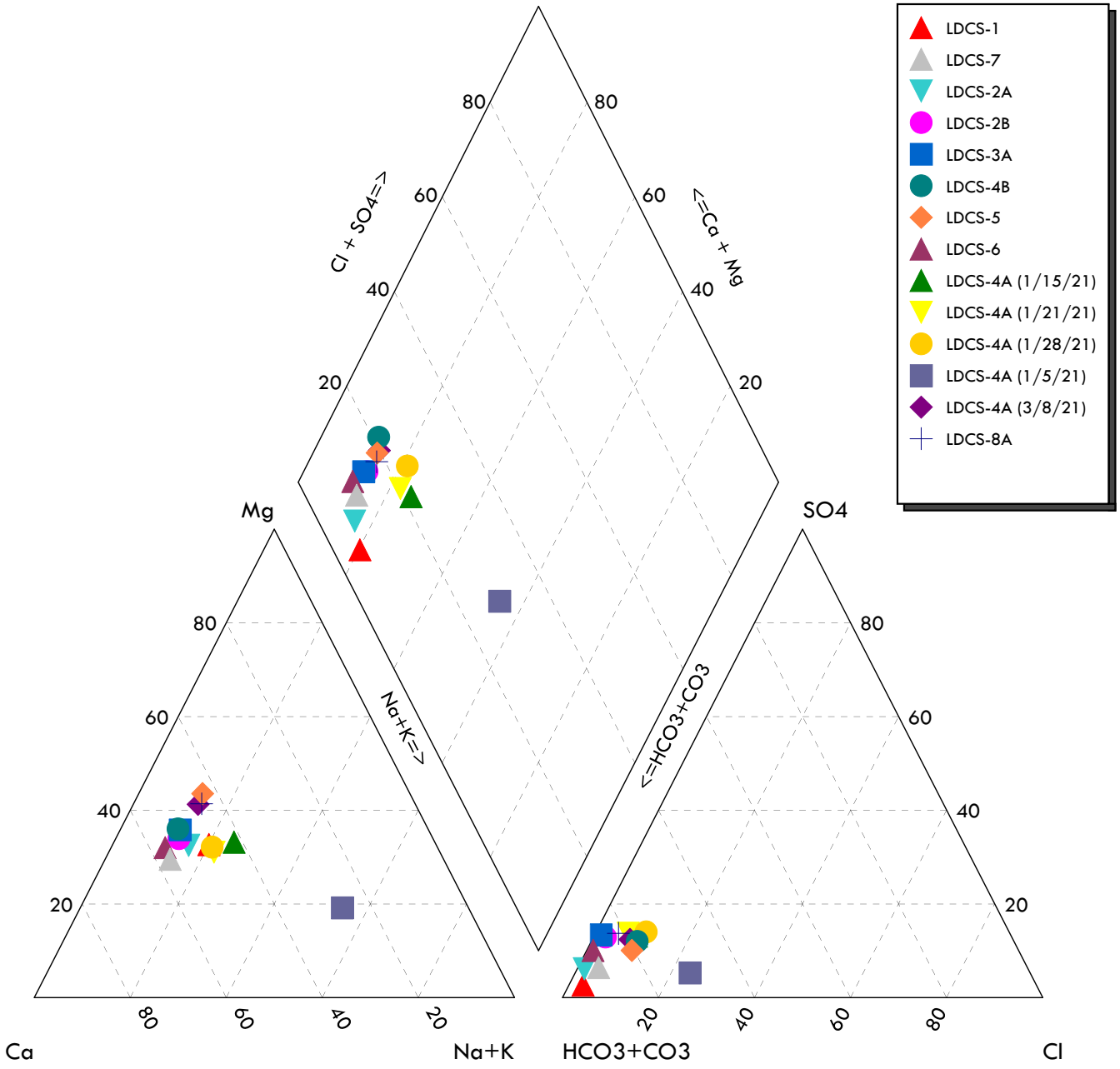
DESCRIPTION: Piper Diagram - 3Q21 Groundwater		
	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: December 2021

Fourth Quarter 2021, Groundwater Monitoring Wells



DESCRIPTION: Piper Diagram- 4Q21 Groundwater		
	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: March 2022

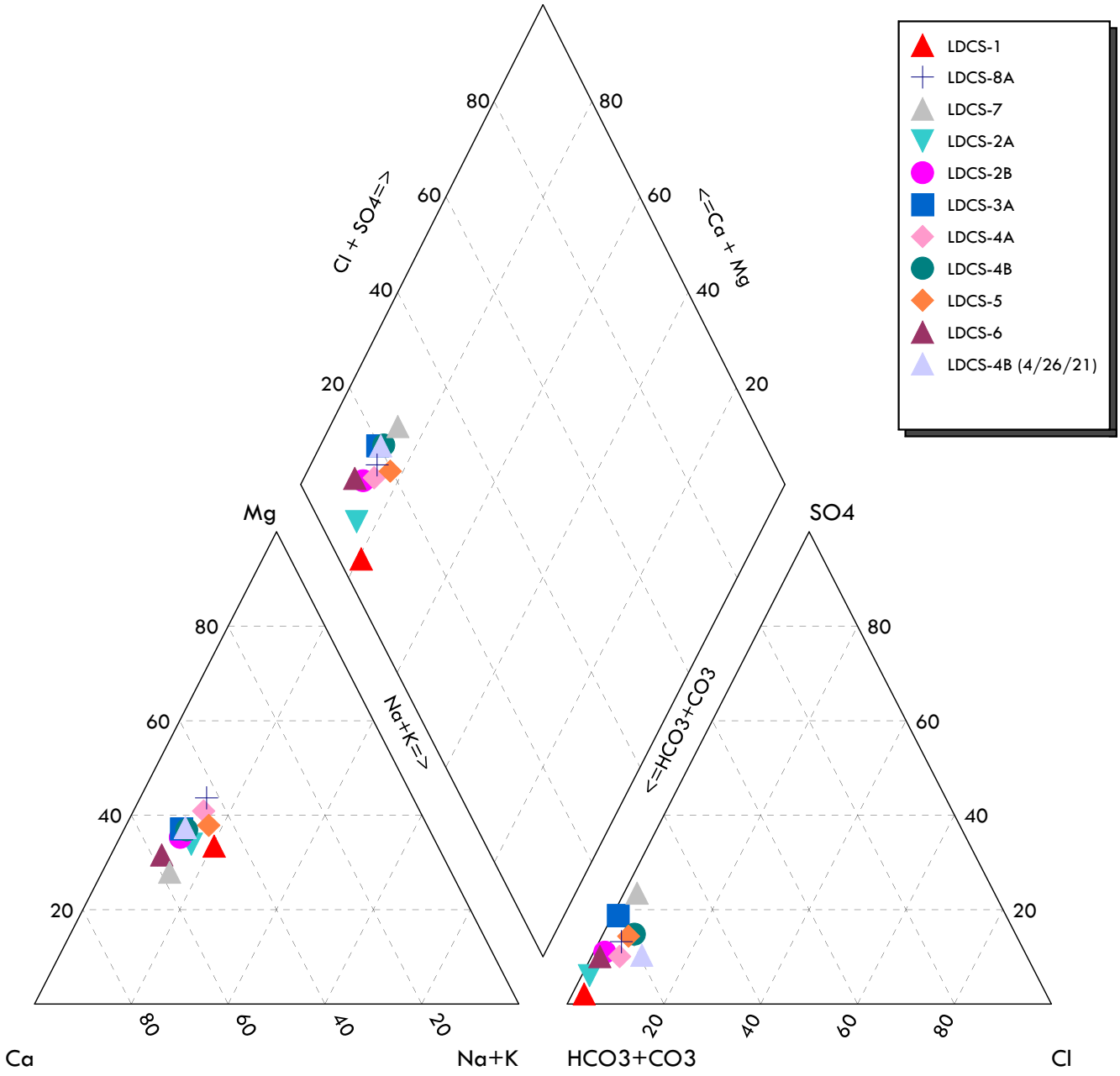
First Quarter 2021, Leak Detection Collection Recovery System



DESCRIPTION: Piper Diagram - 1Q21 LDCRS

	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: June 2021

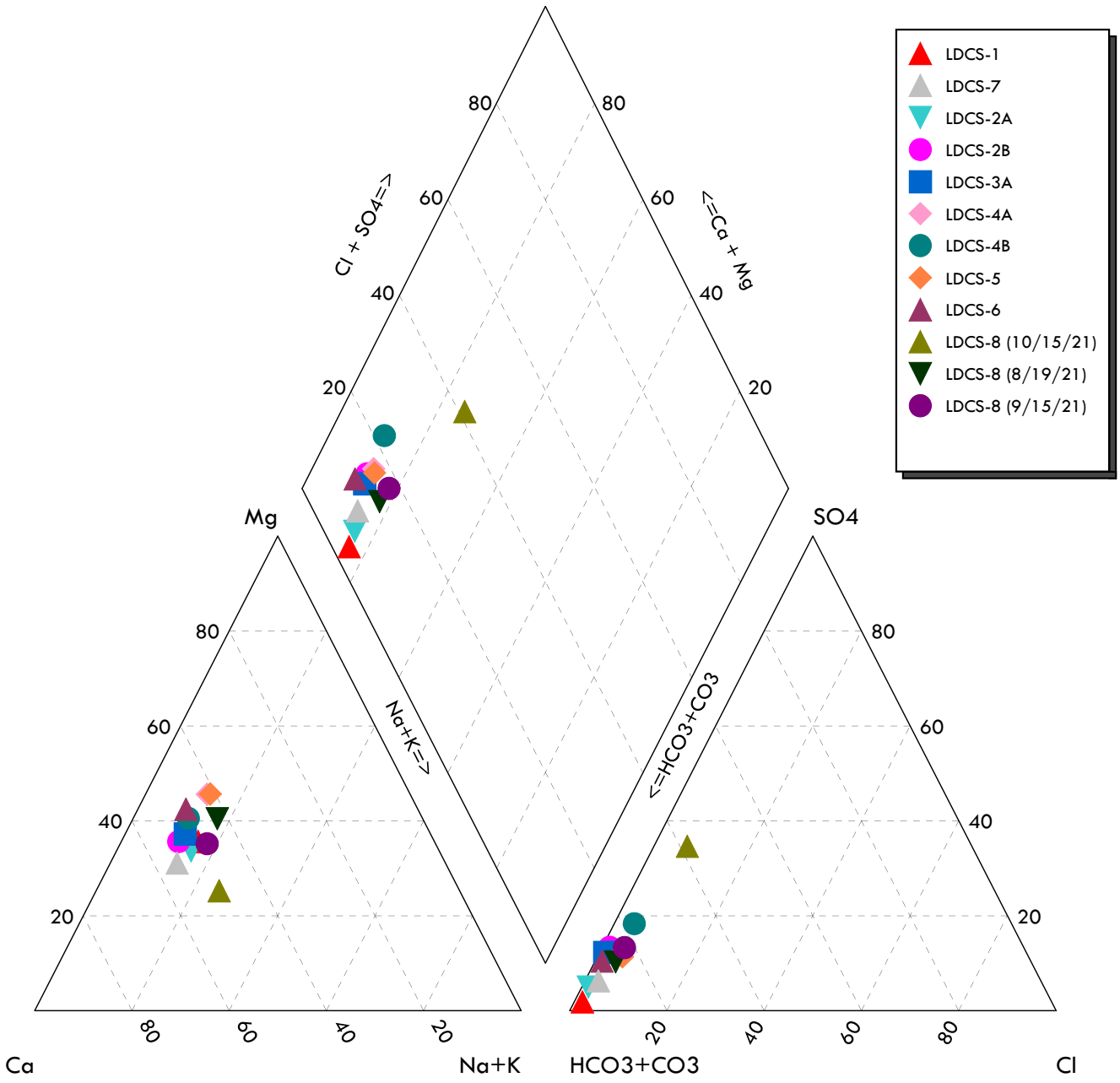
Second Quarter 2021, Leak Detection Collection Recovery System



DESCRIPTION: Piper Diagram - 2Q21 LDCRS

	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: September 2021

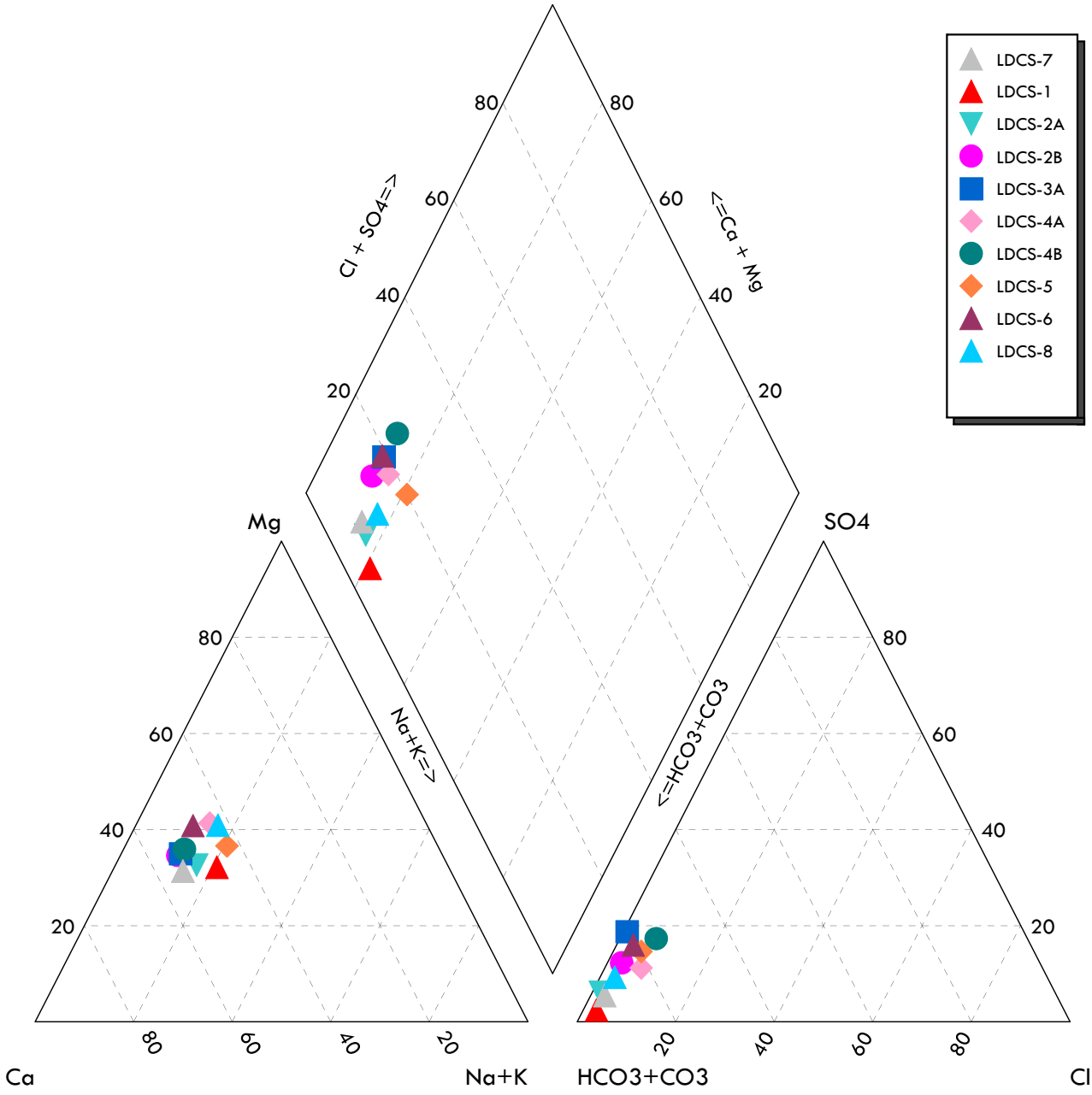
Third Quarter 2021, Leak Detection Collection Recovery System



DESCRIPTION: Piper Diagram - 3Q21 LDCRS

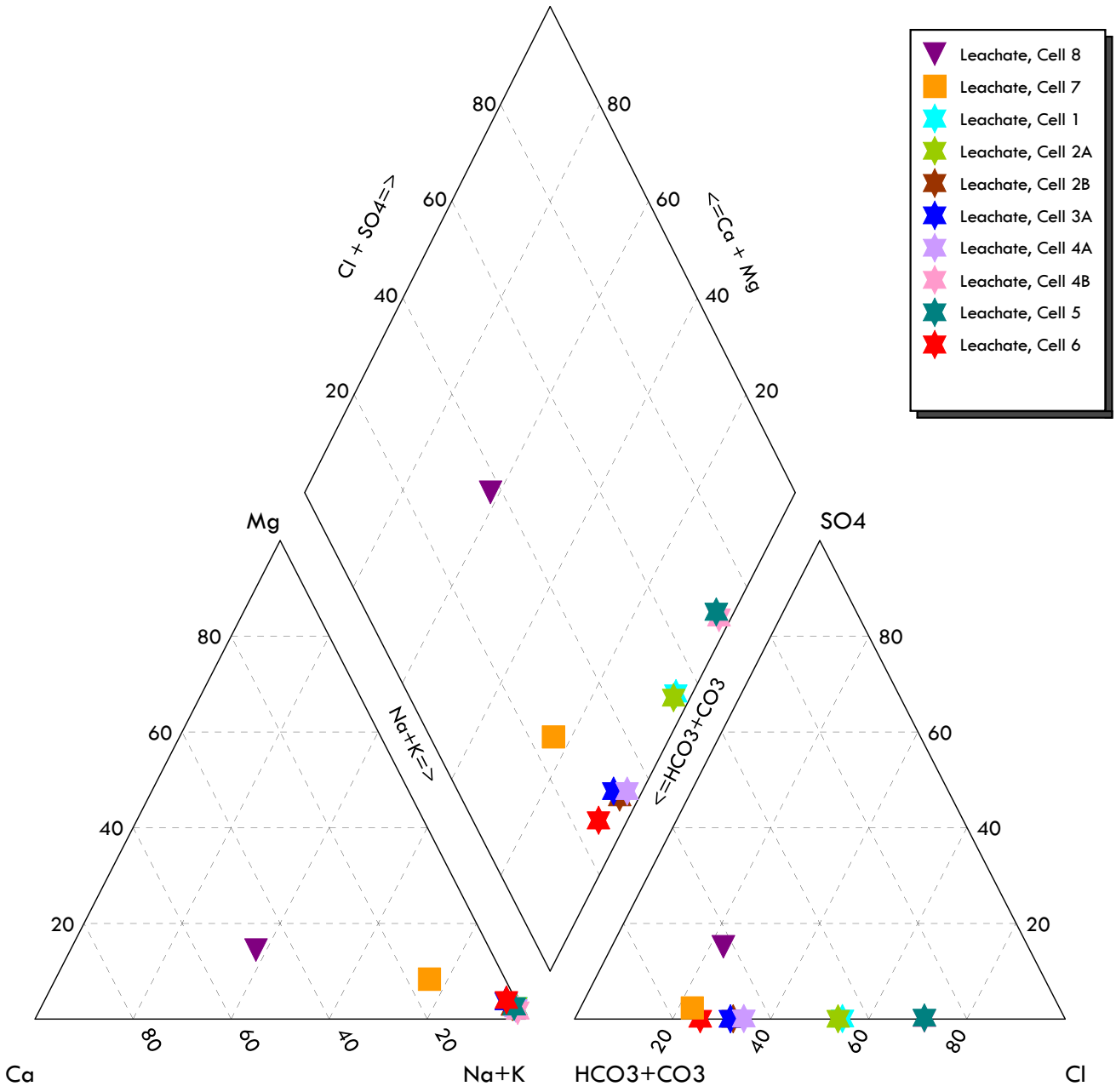
	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: December 2021

Fourth Quarter 2021, Leak Detection Collection Recovery System



DESCRIPTION: Piper Diagram - 4Q21 LDCRS		
	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: March 2022

Fourth Quarter 2021, Leachate Samples



DESCRIPTION: Piper Diagram - 4Q21 Leachate		
	PROJECT: LRI Landfill	PROJECT NO: 04221001.02
	CLIENT: LRI, Inc.	DATE: March 2022

Appendix E

Statistical Calculations

Groundwater Prediction Limits (mg/L)
Appendix I Parameters, Fourth Quarter 2021
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	**0.016**	0.010 L	0.010 L	0.010 L	0.014	0.010 L	0.010 L	0.010 L	**0.016**	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 2021
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	0.01	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	0.01	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	0.01	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		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	0.01	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		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		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

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Fourth Quarter 2021
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-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
Variance		NC		1.6E-06		0.00076		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
Coefficient of Variation (%)		NC		14.0465		121.469		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
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		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		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
Variance		NC		2.1E-07		1.8E-06		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
Coefficient of Variation (%)		NC		6.38736		12.1906		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
MW-7																																
3/26/2014	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		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
Variance		NC		1.7E-06		1.8E-06		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
Coefficient of Variation (%)		NC		28.3682		9.11733		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

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Fourth Quarter 2021
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
Number Analyzed	32		32		32		32		32		32		32		32		32		32		32		32		32		32		32		32	
Number Detected	0		0		8		0		0		0		0		0		0		0		0		0		0		32		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		0.012		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		0.016		0.043		0.25
Average Concentration		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.01425		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		0.00102		NC		NC
Coefficient of Variation (%)		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		7.12983		NC		NC
Standard Error		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.00018		NC		NC
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	0.005	L 0.0025	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	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	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
Number Analyzed	32		32		32		32		32		32		32		32		32		32		32		32		32		32		32		32	
Number Detected	0		0		32		0		0		0		0		0		0		0		0		0		0		0		6		32

Appendix F

Leak Detection System Data and Leachate Pump Records

Summary of LDCS Volumes Pumped and Conductivity Data
Fourth Quarter 2021
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)*
10/1/2021	0.22	1,550	556	260	782	--	763	3108	791	1,520	--	6,920	895	908	854	849	712	0	910	1,018	--
10/2/2021	0.00	1,550	560	240	781	--	855	1977	811	1,460	--	5,234	893	459	880	809	712	0	926	0	--
10/3/2021	0.00	1,540	564	240	798	--	891	278	832	1,450	--	4,112	897	338	919	741	712	0	865	0	--
10/4/2021	0.02	1,550	564	300	811	--	905	422	842	1,460	--	3,608	903	279	941	745	712	49,075	785	0	--
10/5/2021	0.00	1,550	563	260	817	--	875	255	816	1,550	--	3,318	910	931	962	765	719	0	780	45,088	--
10/6/2021	0.34	1,570	563	240	789	--	901	361	781	1,550	--	4,116	905	904	911	768	719	0	777	21	--
10/7/2021	0.02	1,570	557	240	760	--	910	2204	782	1,470	--	3,960	899	472	921	717	719	0	740	0	--
10/8/2021	0.00	1,530	556	240	777	--	911	237	806	1,550	--	3,526	906	367	921	668	719	0	766	0	--
10/9/2021	0.00	1,290	560	240	781	--	910	299	811	1,480	--	3,068	919	280	925	618	719	0	785	0	--
10/10/2021	0.06	990	560	240	780	--	911	159	791	1,480	--	2,744	956	278	948	574	719	0	782	0	--
10/11/2021	0.51	1,560	560	240	775	--	910	252	778	1,370	--	3,138	951	223	914	556	719	0	725	0	--
10/12/2021	0.00	1,550	559	310	770	--	908	2708	778	1,430	--	2,984	929	222	970	524	719	0	730	0	--
10/13/2021	0.09	1,550	558	240	789	--	908	2527	776	700	--	3,258	917	222	832	518	719	0	751	51,827	--
10/14/2021	0.05	1,560	557	260	782	--	910	1716	774	1,880	--	3,188	905	222	832	64	719	0	747	0	--
10/15/2021	0.08	1,540	557	240	776	--	909	2698	776	1,430	--	3,316	913	166	924	910	719	0	706	0	--
10/16/2021	0.00	1,540	557	240	796	--	907	1333	786	1,440	--	3,394	931	222	950	810	719	0	728	0	--
10/17/2021	0.00	1,550	557	340	814	--	911	367	797	1,440	--	2,810	928	166	931	550	719	0	746	0	--
10/18/2021	0.01	1,570	555	240	804	--	913	176	779	1,340	--	2,686	947	221	946	1,174	719	0	725	0	--
10/19/2021	0.00	1,560	540	240	780	--	888	1094	772	1,330	--	2,788	965	165	967	728	719	22,793	712	41,210	--
10/20/2021	0.05	1,550	513	320	745	--	847	493	731	1,320	--	3,300	951	166	988	710	724	0	750	0	--
10/21/2021	0.24	1,550	220	250	313	--	371	131	314	1,330	--	3,714	897	165	1,000	706	717	0	775	18,974	--
10/22/2021	0.60	1,540	444	250	613	--	711	377	625	1,660	--	5,622	902	640	982	698	724	5,814	756	9,222	--
10/23/2021	0.00	1,540	539	320	732	--	831	310	727	1,900	--	6,804	908	837	959	644	724	0	823	8,472	--
10/24/2021	0.17	770	581	180	783	--	835	807	773	1,110	--	4,124	924	474	943	361	724	0	844	4,839	--
10/25/2021	0.30	1,570	602	320	786	--	833	807	789	1,680	--	4,324	930	836	953	884	720	6,023	805	7,197	--
10/26/2021	0.18	1,580	597	240	764	--	742	232	782	1,560	--	3,246	933	919	944	599	731	0	849	8,390	--
10/27/2021	0.36	1,570	563	250	756	--	724	924	784	1,670	--	4,292	938	1,779	968	618	734	0	860	4,041	--
10/28/2021	0.23	1,550	531	280	764	--	699	1884	790	1,800	--	5,224	944	2,394	978	663	738	2,282	811	3,548	--
10/29/2021	2.25	1,550	519	250	789	--	741	2151	810	2,870	--	8,100	930	4,556	951	800	739	3,485	765	3,101	--
10/30/2021	0.20	1,560	525	330	781	--	800	3047	822	2,400	--	4,686	904	738	919	826	728	0	696	2,112	--
10/31/2021	0.00	2,350	539	300	790	--	862	2247	833	1,820	--	4,404	912	578	899	820	723	0	654	2,434	--
11/1/2021	0.12	2,260	558	240	802	--	885	442	832	1,610	--	5,194	921	455	907	780	722	0	640	2,429	--
11/2/2021	0.19	1,670	576	320	790	--	895	927	819	1,620	--	4,454	924	462	920	783	723	10,696	653	2,415	--
11/3/2021	0.02	2,400	588	380	781	--	900	3219	819	2,300	--	7,890	913	1,563	882	885	726	0	662	2,727	--
11/4/2021	0.53	3,260	595	300	795	--	902	1887	816	3,340	--	10,802	871	4,282	818	1,081	734	1,443	683	3,037	--'
11/5/2021	0.10	2,460	603	360	783	--	901	2984	803	4,070	--	10,874	831	1,495	798	1,159	741	7,407	675	2,720	--
11/6/2021	0.33	3,290	609	320	780	--	900	3285	813	3,450	--	9,870	821	1,428	802	1,116	747	0	659	2,419	--
11/7/2021	0.35	3,340	610	390	772	--	898	4238	824	4,430	--	10,750	816	2,219	772	1,242	752	0	662	2,730	--
11/8/2021	0.11	3,390	601	360	766	--	893	3218	829	4,040	--	10,092	795	1,104	751	1,301	754	0	663	3,023	--
11/9/2021	0.63	4,250	596	420	775	--	891	1559	822	3,030	--	5,202	801	715	799	1,171	751	6,079	670	3,024	--
11/10/2021	0.33	3,400	588	400	751	--	885	3639	793	2,760	--	5,428	812	979	814	1,081	740	0	679	2,713	--
11/11/2021	2.05	4,320	567	380	759	--	890	3414	799	3,990	--	5,594	819	4,205	827	987	739	50	675	3,022	--
11/12/2021	0.68	4,400	581	370	768	--	892	2322	813	7,460	--	10,934	785	7,650	791	1,152	743	5,774	652	12,496	--
11/13/2021	0.69	3,630	601	390	757	--	891	2806	820	4,740	--	12,396	772	980	674	851	747	2,979	592	3,314	--
11/14/2021	0.33	5,520	611	430	768	--	886	3225	823	5,250	--	12,396	788	1,160	667	920	753	0	546	3,979	--
11/15/2021	0.58	6,510	622	420	781	--	875	2146	815	3,300	--	12,526	800	841	686	916	755	13,529	572	3,974	--
11/16/2021	0.20	4,780	627	520	752	--	865	1482	784	2,680	--	10,108	819	719	710	844	743	1,469	596	3,353	--
11/17/2021	0.00	6,260	593	420	740	--	871	1964	781	2,290	--	8,020	831	596	730	848	738	0	629	3,611	--
11/18/2021	0.41	5,870	590	480	762	--	876	1807	789	2,130	--	7,822	839	534	772	807	761	5,769	636	3,968	--
11/19/2021	0.28	6,420	622	500	762	--	878	811	782	3,930	--	6,722	836	2,517	734	775	767	219	639	3,343	--
11/20/2021	0.02	5,620	597	450	736	--	879	1929	770	3,390	--	5,744	813	970	705	794	788	0	639	3,131	--
11/21/2021	0.10	6,700	539	500	745	--	875	1591	777	2,860	--	5,768	816	657	728	740	788	0	627	3,658	--
11/22/2021	0.50	6,550	529	530	765	--	871	1709	784	2,380	--	5,222	824	474	763	718	788	6,191	646	3,961	--
11/23/2021	0.02	6,270	562	60	769	--	871	863	777	3,230	--	6,498	832	658	798	691	793	6,127	656	3,650	--
11/24/2021	0.69	6,820	566	0	740	--	869	1517	760	2,590	--	6,674	826	749	774	668	787	0	712	3,344	--
11/25/2021	0.03	7,020	537	0	749	--	867	1395	768	2,520	--	7,608	832	597	772	554	787	5,969	713	3,650	--
11/26/2021	0.91	6,880	534	0	760	--	864	1585	771	4,560	--	10,014	825	1,430	752	780	636	0	686	3,645	--
11/27/2021	0.09	7,260	542	0	763	--	814	1580	776	4,510	--	9,524	812	972	737	658	741	0	676	3,648	--
11/28/2021	0.19	6,890	563	0	768	--	843	1498	778	4,270	--	9,858	809	1,037	734	692	784	0	691	3,644	--
11/29/2021	0.00	6,510	579	0	756	--	856	1396	782	3,410	--	9,888	811	781	740	732	799	6,115	726	3,643	--
11/30/2021	0.07	7,100	589	0	757	--	859	1263	782	2,880	--	9,210	821	595	754	744	803	6,053	695	3,649	--

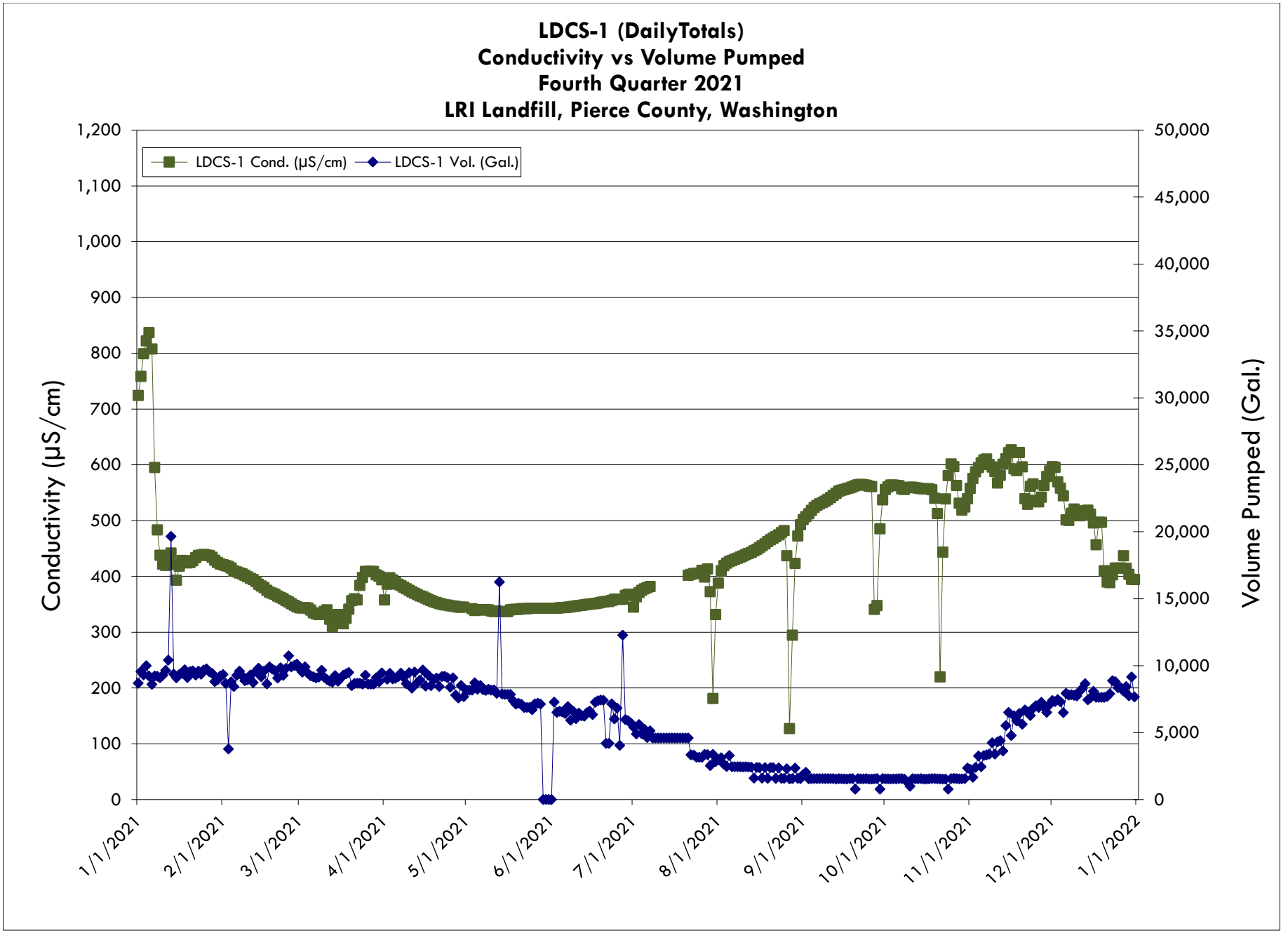
Summary of LDCS Volumes Pumped and Conductivity Data
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington

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)*
12/1/2021	0.00	7,400	597	0	760	--	812	1371	781	3,560	--	10,752	824	595	767	750	804	0	736	3,645	--
12/2/2021	0.01	7,320	596	0	762	--	758	1218	776	810	--	10,272	820	474	783	756	803	2,619	722	3,637	--
12/3/2021	0.15	7,460	569	0	751	--	815	1340	773	4,400	--	10,030	823	415	825	787	801	3,494	723	3,655	--
12/4/2021	0.01	7,300	558	0	762	--	836	927	772	4,200	--	11,198	823	930	865	807	807	0	748	3,970	--
12/5/2021	0.32	6,490	545	0	746	--	842	913	754	3,980	--	11,332	874	1,361	790	891	823	0	676	3,347	--
12/6/2021	0.51	7,930	502	0	755	--	843	1266	759	3,570	--	9,416	936	845	760	906	846	0	678	3,979	--
12/7/2021	0.08	7,810	500	0	761	--	844	1223	768	3,370	--	9,560	929	846	754	959	863	13,506	677	4,001	--
12/8/2021	0.03	7,830	513	0	762	--	831	1236	773	3,240	--	9,936	910	841	752	901	867	210	733	3,659	--
12/9/2021	0.20	7,790	521	0	758	--	831	1261	775	2,960	--	9,016	894	659	755	926	863	4,292	722	3,875	--
12/10/2021	0.00	7,730	518	0	751	--	835	1357	773	2,820	--	8,744	887	642	764	915	860	0	738	3,979	--
12/11/2021	0.24	8,100	509	0	760	--	834	1320	769	3,340	--	8,756	887	725	777	882	858	0	734	4,291	--
12/12/2021	0.42	8,310	513	0	763	--	832	1055	761	4,410	--	10,934	870	1,560	750	849	855	0	727	3,998	--
12/13/2021	0.19	8,660	517	0	766	--	831	1004	765	3,670	--	11,166	847	1,101	737	885	854	12,122	716	4,081	--
12/14/2021	0.14	7,450	519	0	751	--	828	507	761	3,490	--	9,254	840	970	743	872	850	2,737	722	3,489	--
12/15/2021	0.11	7,600	511	0	751	--	825	471	765	2,960	--	7,602	837	743	757	888	847	1,128	719	3,979	--
12/16/2021	0.08	8,090	496	470	747	--	821	1336	776	2,750	--	7,332	840	537	774	849	843	5,111	712	3,663	--
12/17/2021	0.07	7,629	457	240	722	--	818	2179	781	2,980	--	9,019	852	724	787	847	836	0	743	3,824	--
12/18/2021	0.17	7,629	497	--	722	--	815	2179	778	2,980	--	9,019	833	724	780	847	840	0	756	3,824	--
12/19/2021	0.76	7,629	497	--	722	--	815	2179	778	2,980	--	9,019	833	724	780	847	840	0	756	3,824	--
12/20/2021	0.14	7,629	410	--	742	--	800	2179	774	2,980	--	9,019	838	724	755	847	835	12,521	670	3,824	--
12/21/2021	0.17	7,695	390	--	751	--	799	1890	786	4,680	--	10,670	822	1,698	720	773	838	0	760	3,674	--
12/22/2021	0.60	7,898	389	--	769	--	802	2238	772	4,190	--	12,412	836	1,036	757	858	839	6,366	675	3,992	--
12/23/2021	0.08	8,873	403	--	761	--	798	2476	767	3,780	--	12,598	830	907	802	916	833	0	749	4,614	--
12/24/2021	0.35	8,808	415	--	778	--	799	1301	775	4,420	--	12,466	839	1,096	750	879	828	6,846	766	4,323	--
12/25/2021	0.35	8,348	415	--	778	--	799	2932	775	3,800	--	10,669	839	1,632	750	842	828	0	766	4,017	--
12/26/2021	0.12	8,348	415	--	778	--	799	2932	775	3,800	--	10,669	839	1,632	750	842	828	0	766	4,017	--
12/27/2021	0.21	8,110	437	0	730	--	804	3448	775	3,740	--	7,462	870	974	750	833	825	10,603	680	4,022	--
12/28/2021	0.12	8,440	414	0	736	--	793	3749	785	3,720	--	6,554	876	1,258	729	867	817	3,210	672	4,021	--
12/29/2021	0.26	7,760	404	0	739	--	792	3839	786	2,790	--	5,280	857	1,098	736	869	816	772	692	4,013	--
12/30/2021	0.00	9,160	395	50	745	--	791	4421	785	2,510	--	4,196	871	971	754	834	818	5,581	697	4,440	--
12/31/2021	0.00	7,670	395	510	729	--	790	3447	785	2,490	--	4,320	897	1,037	780	799	825	0	713	4,023	--

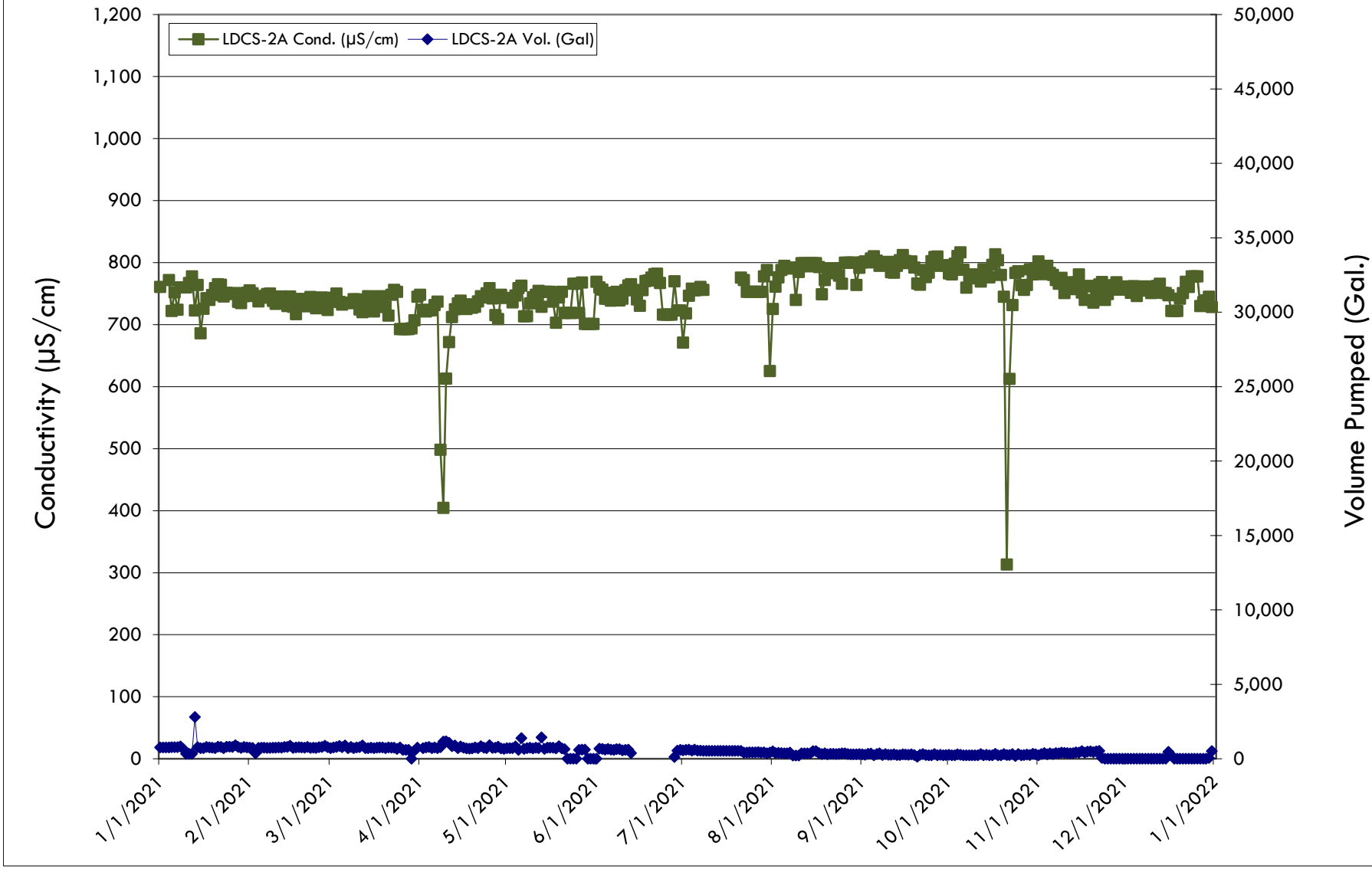
^ = The flowmeter at LDCS-2B did not function properly during the fourth quarter

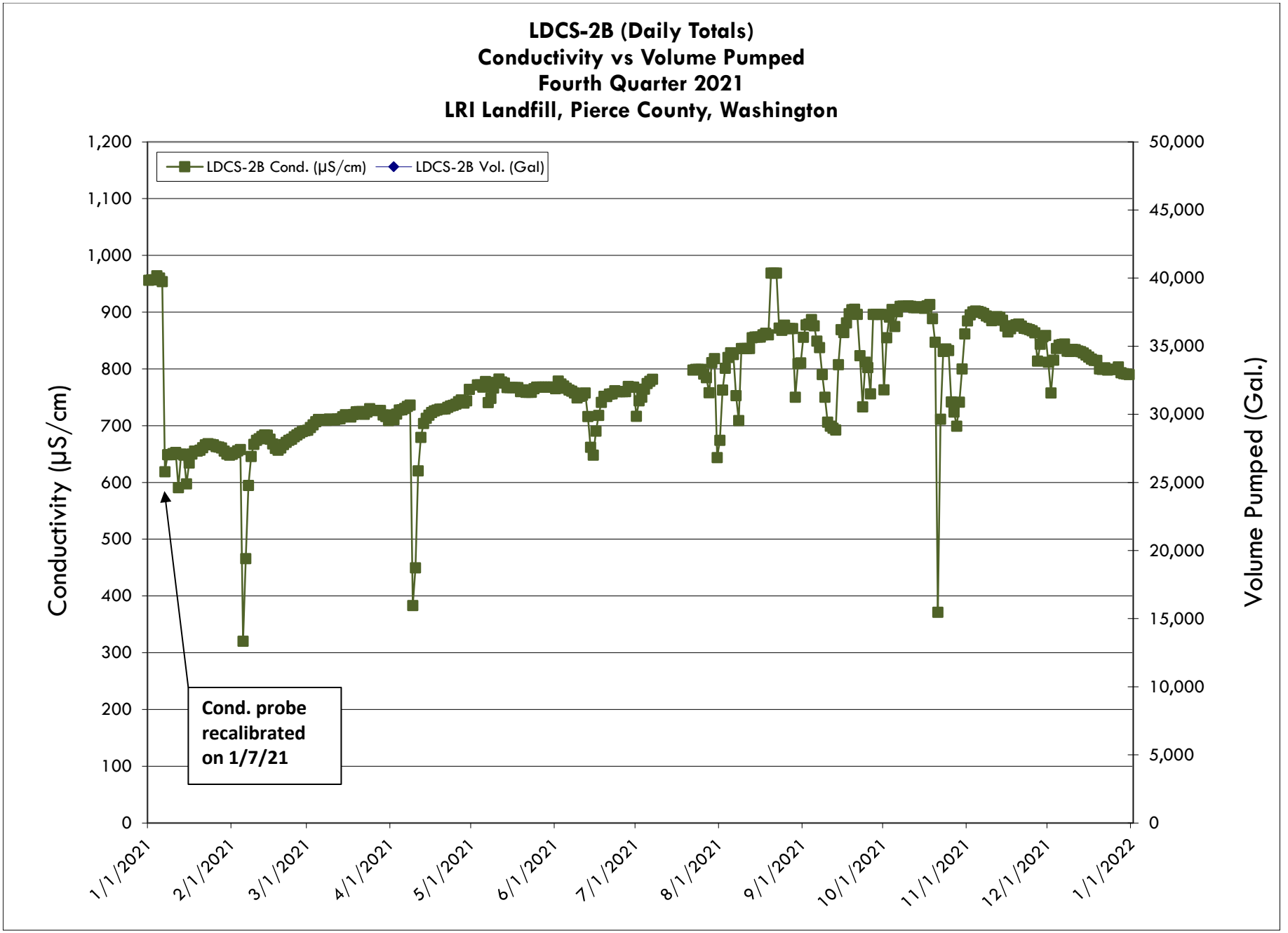
* = The conductivity probes at LDCS4A and LDCS-8 did not function properly during the fourth quarter

-- Readings not available


LDCS-1 (DailyTotals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
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
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

LDCS-2A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington




LDCS-2B (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
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
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
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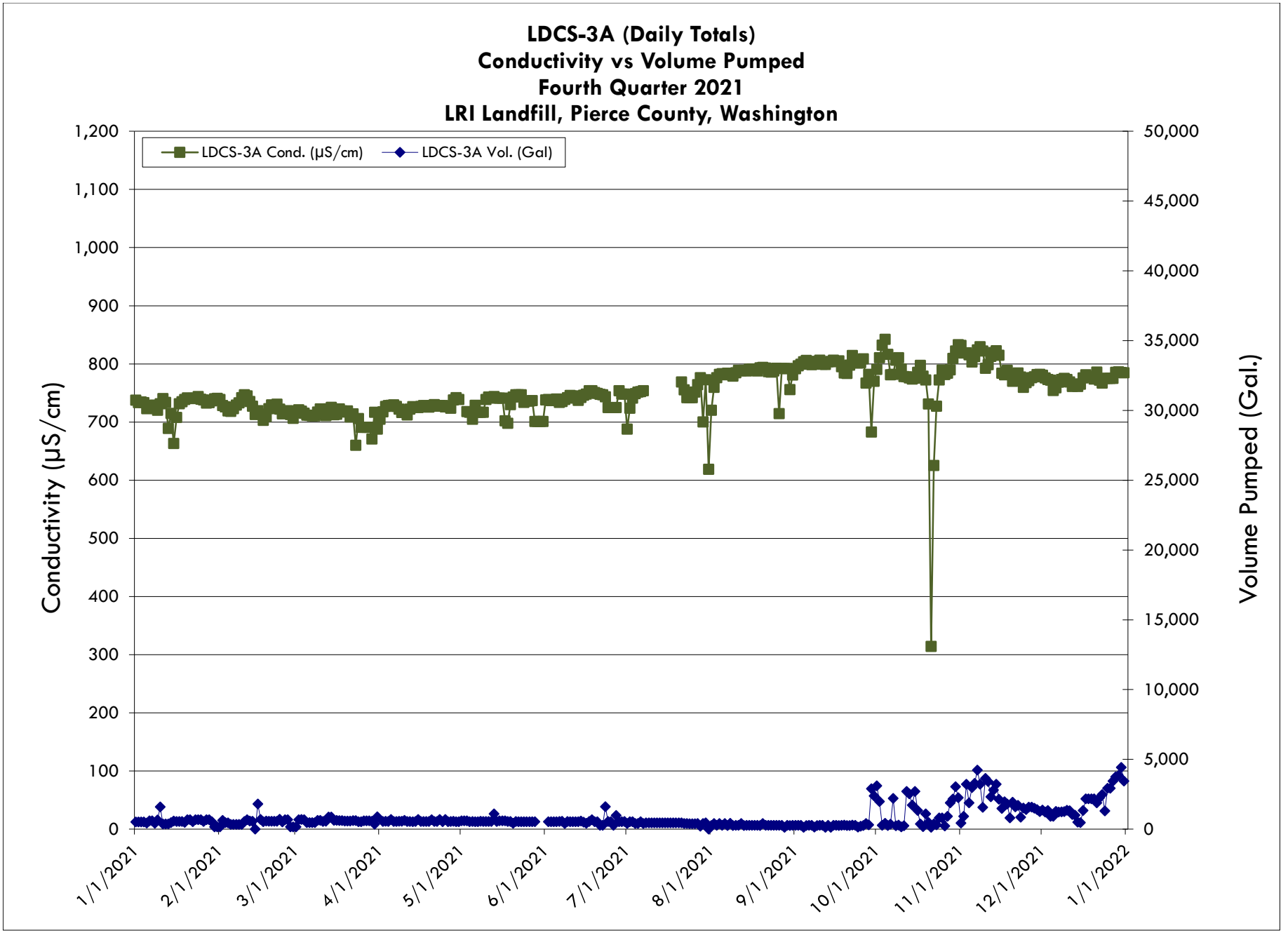
12/1/2021
1/1/2022
Cond. probe recalibrated on 1/7/21


LDCS-3A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
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
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
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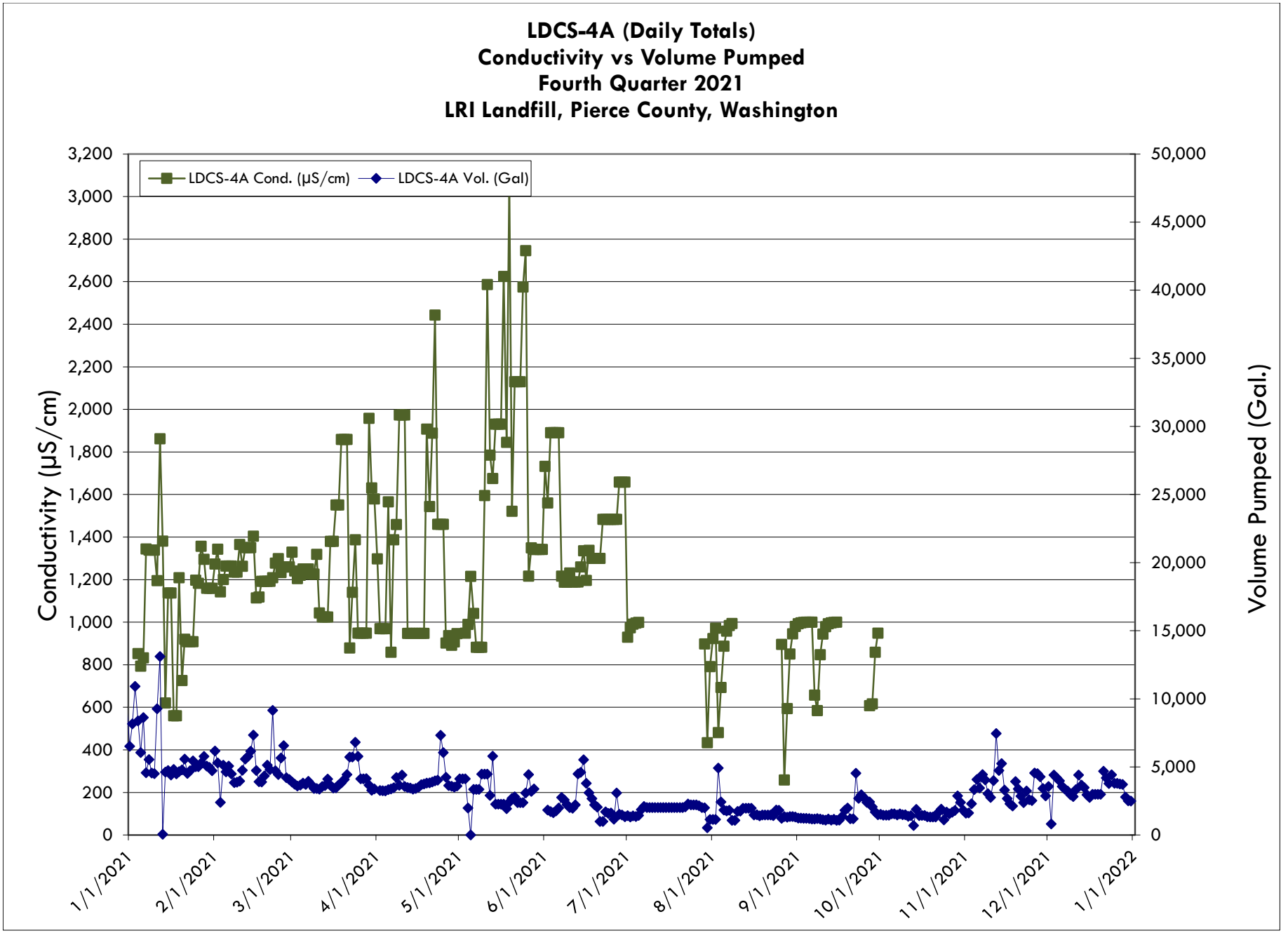
1/1/2022


LDCS-4A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-4A Cond. (µS/cm)
LDCS-4A Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
3,200
3,000
2,800
2,600
2,400
2,200
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
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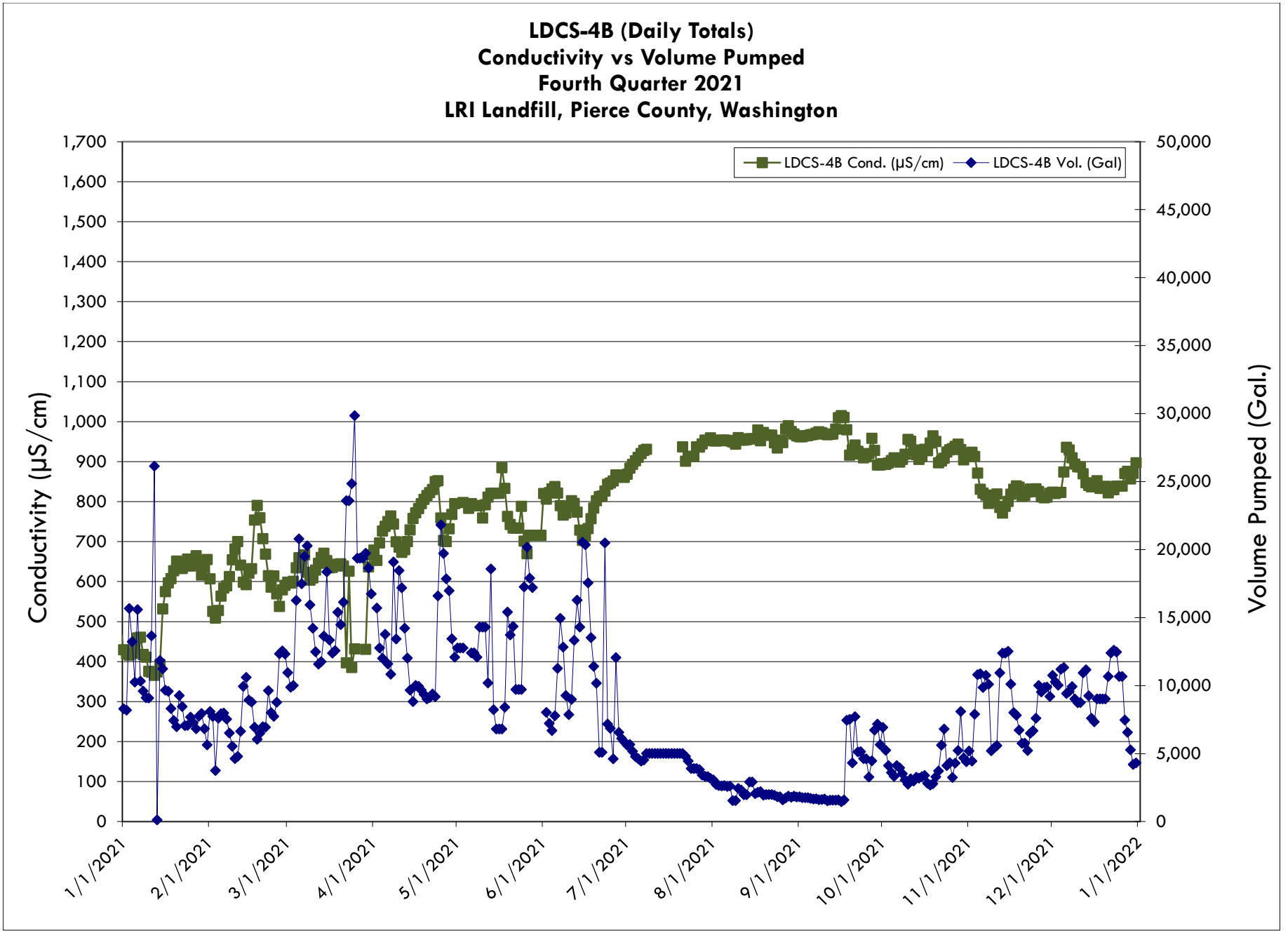
1/1/2022


LDCS-4B (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
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
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
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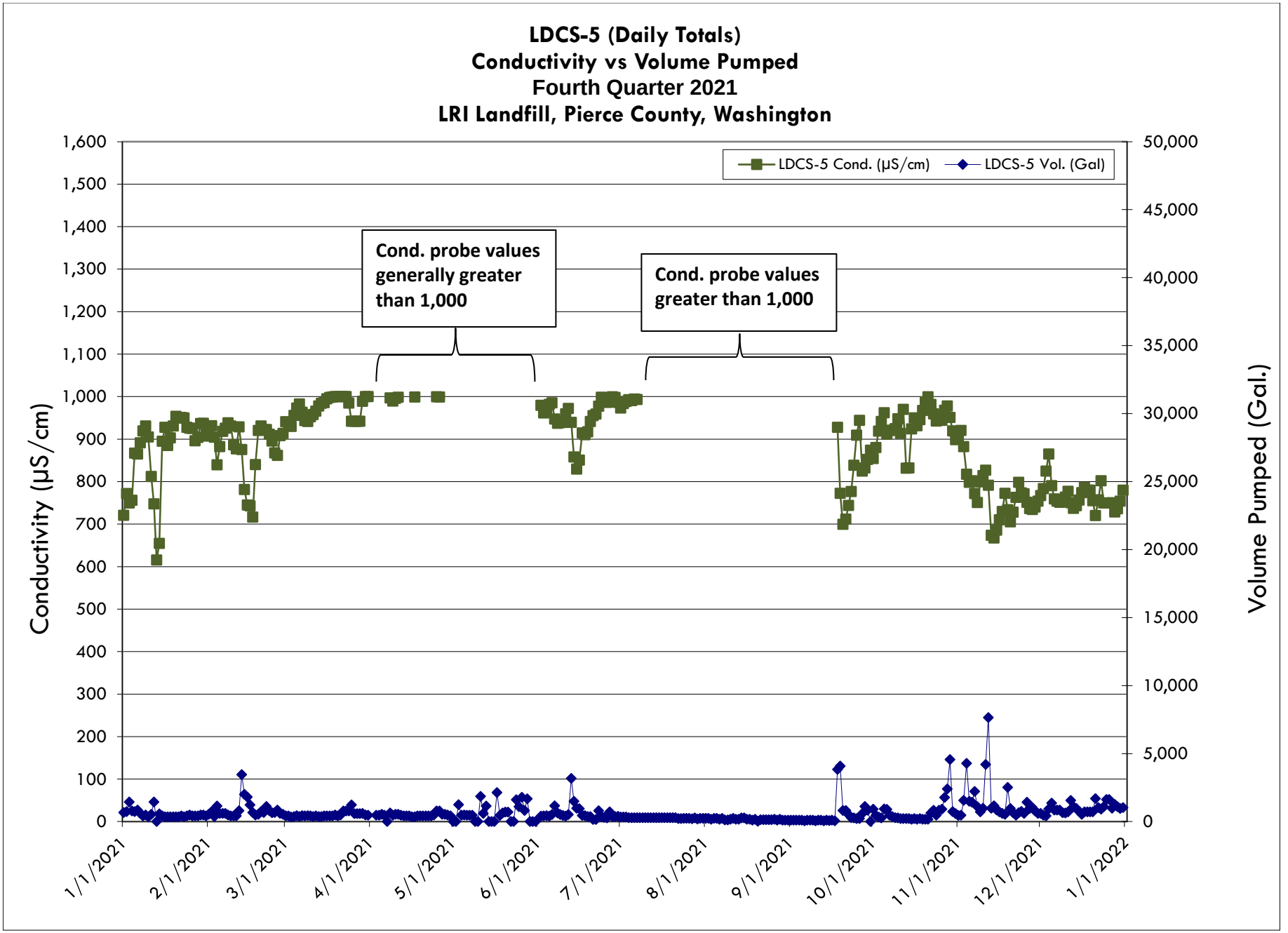
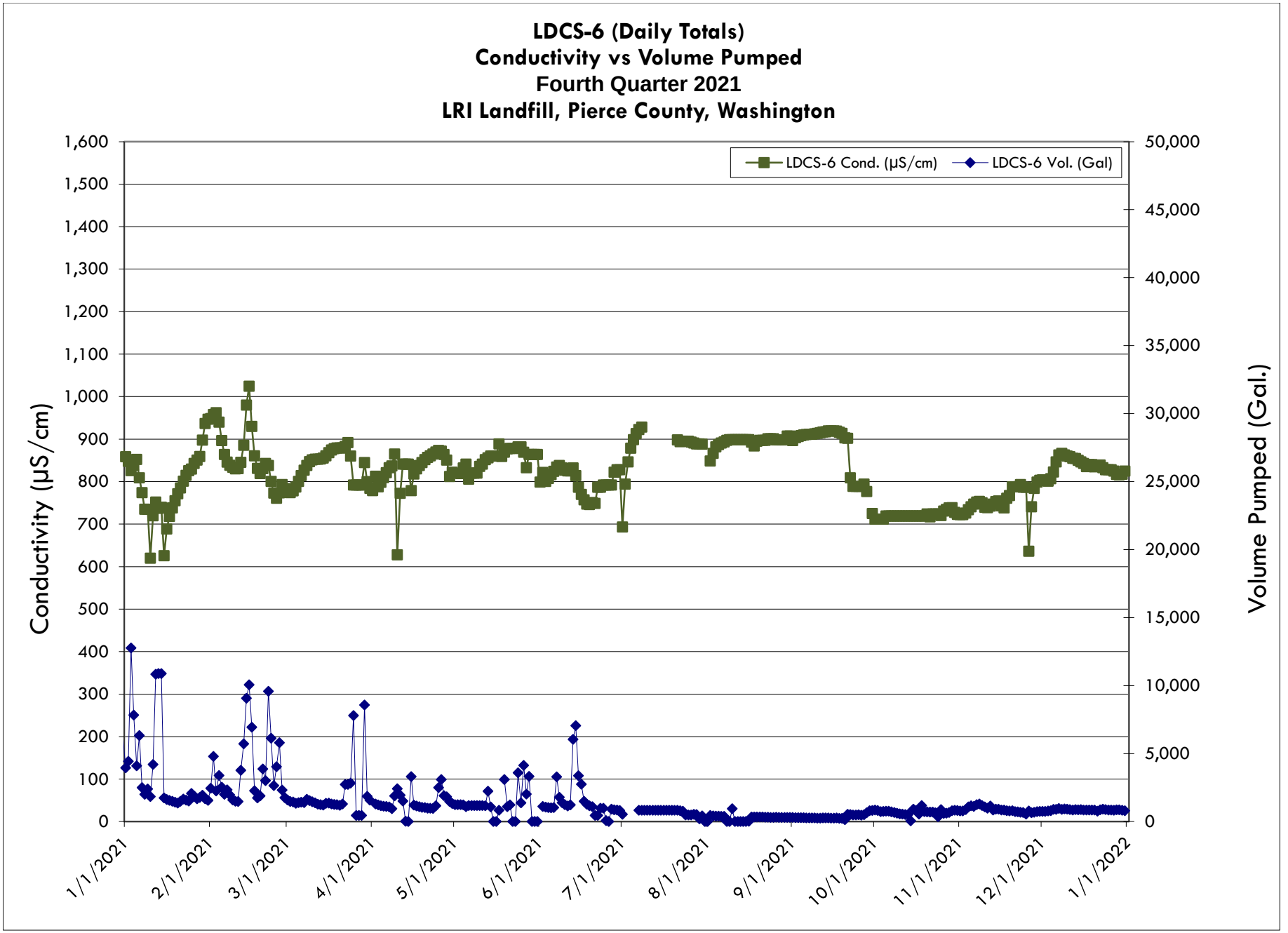
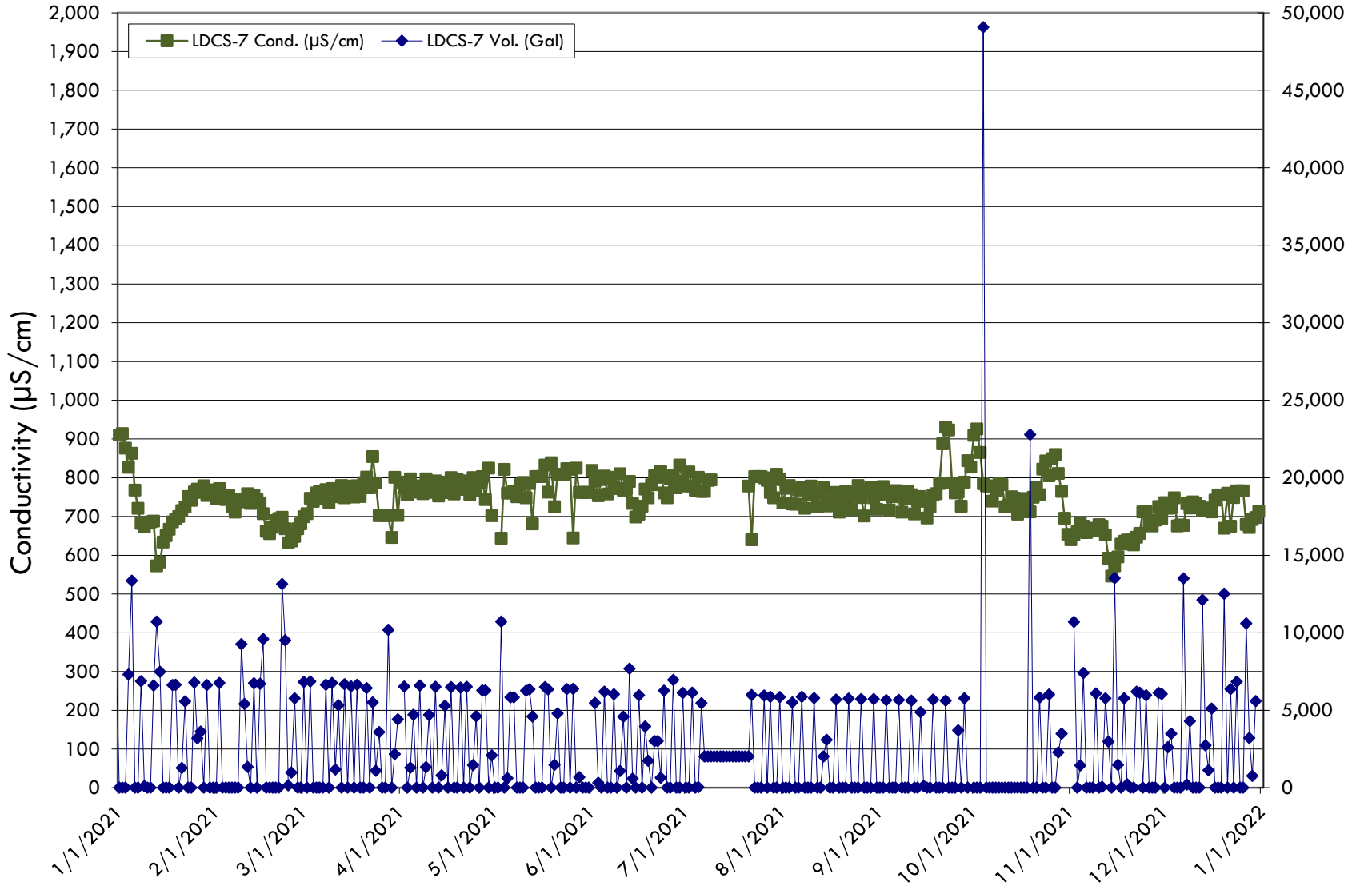
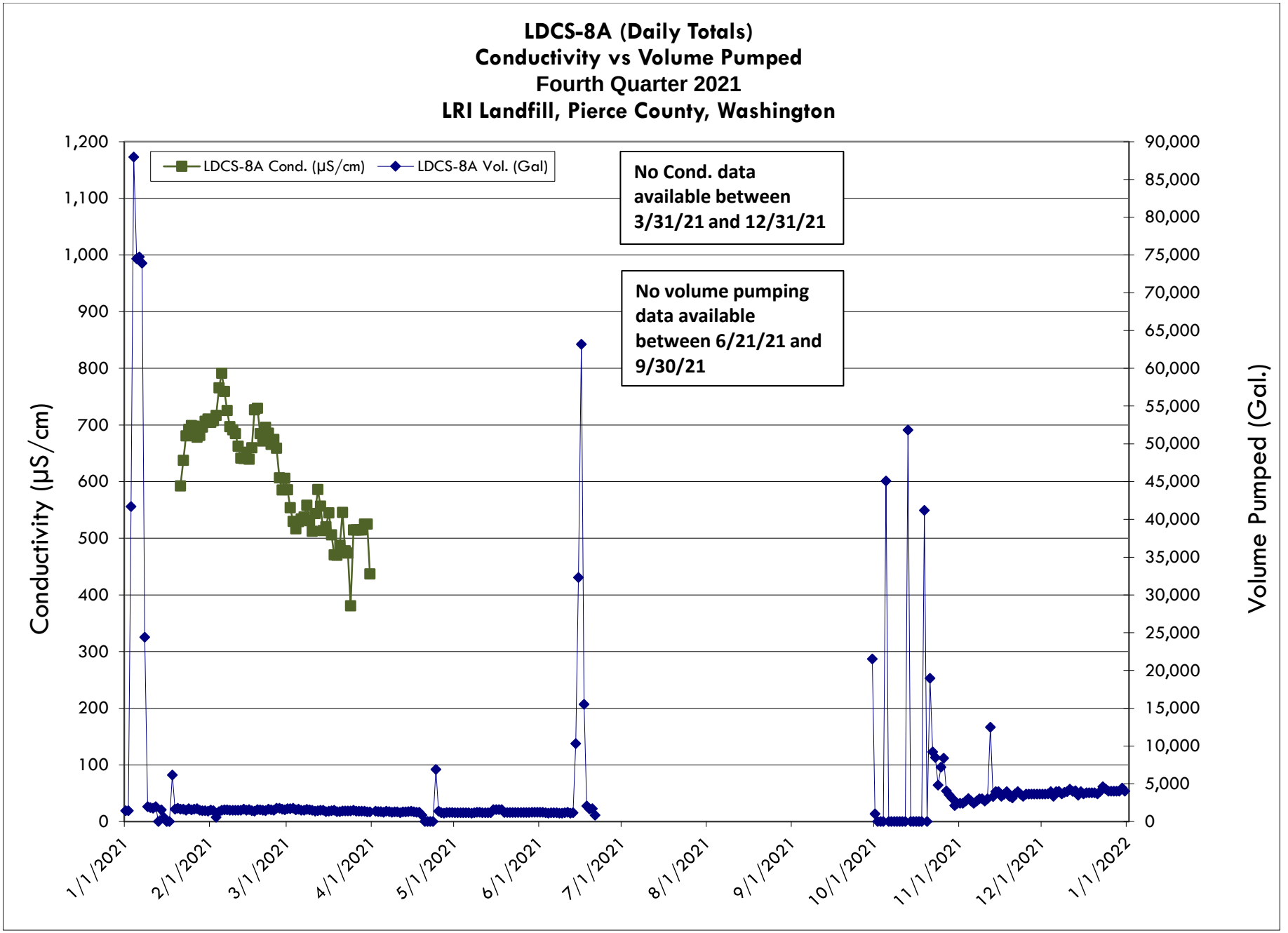
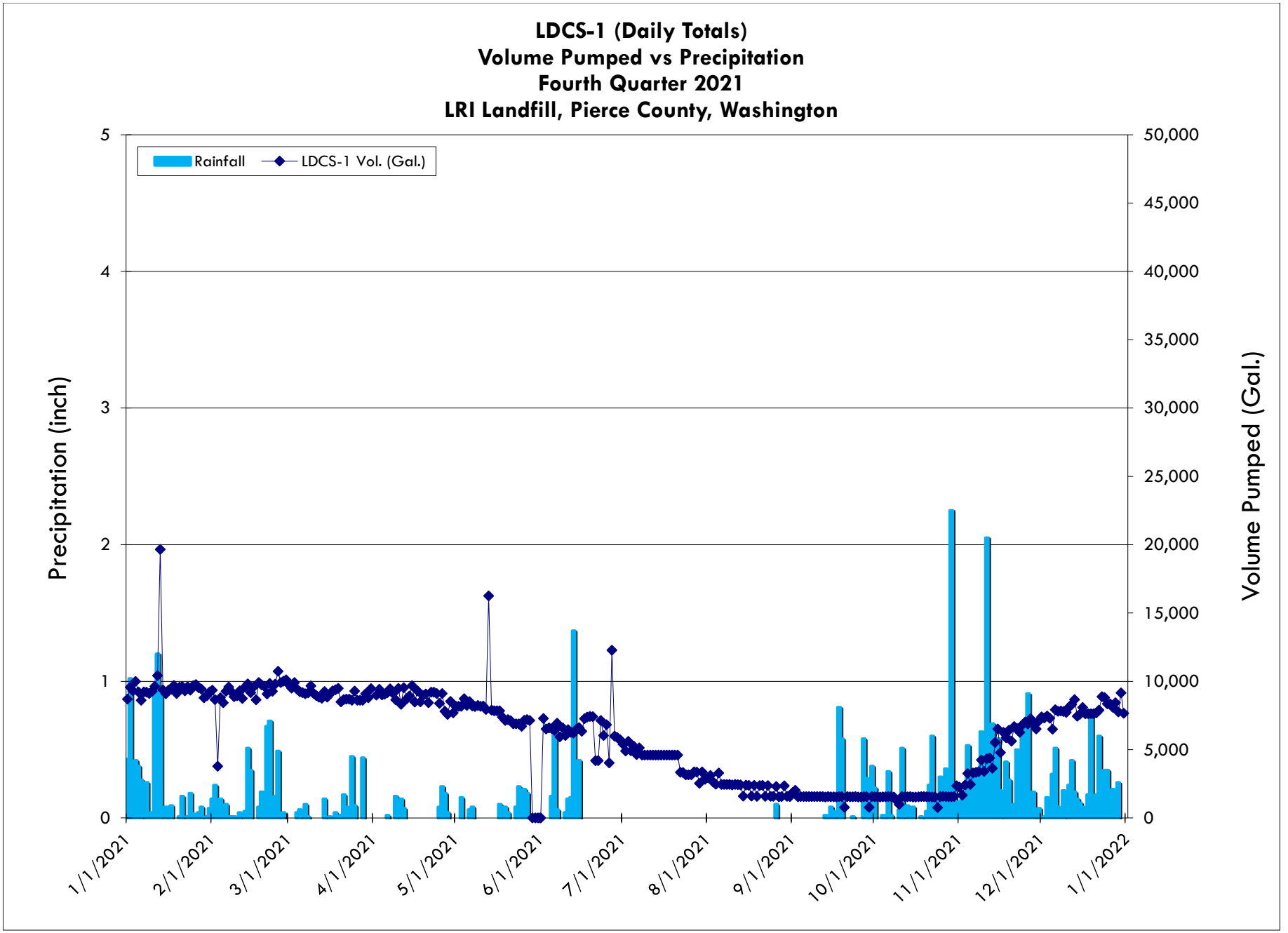

LDCS-5 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-5 Cond. (µS/cm)
LDCS-5 Vol. (Gal)
Cond. probe values generally greater than 1,000
Cond. probe values greater than 1,000
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
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
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

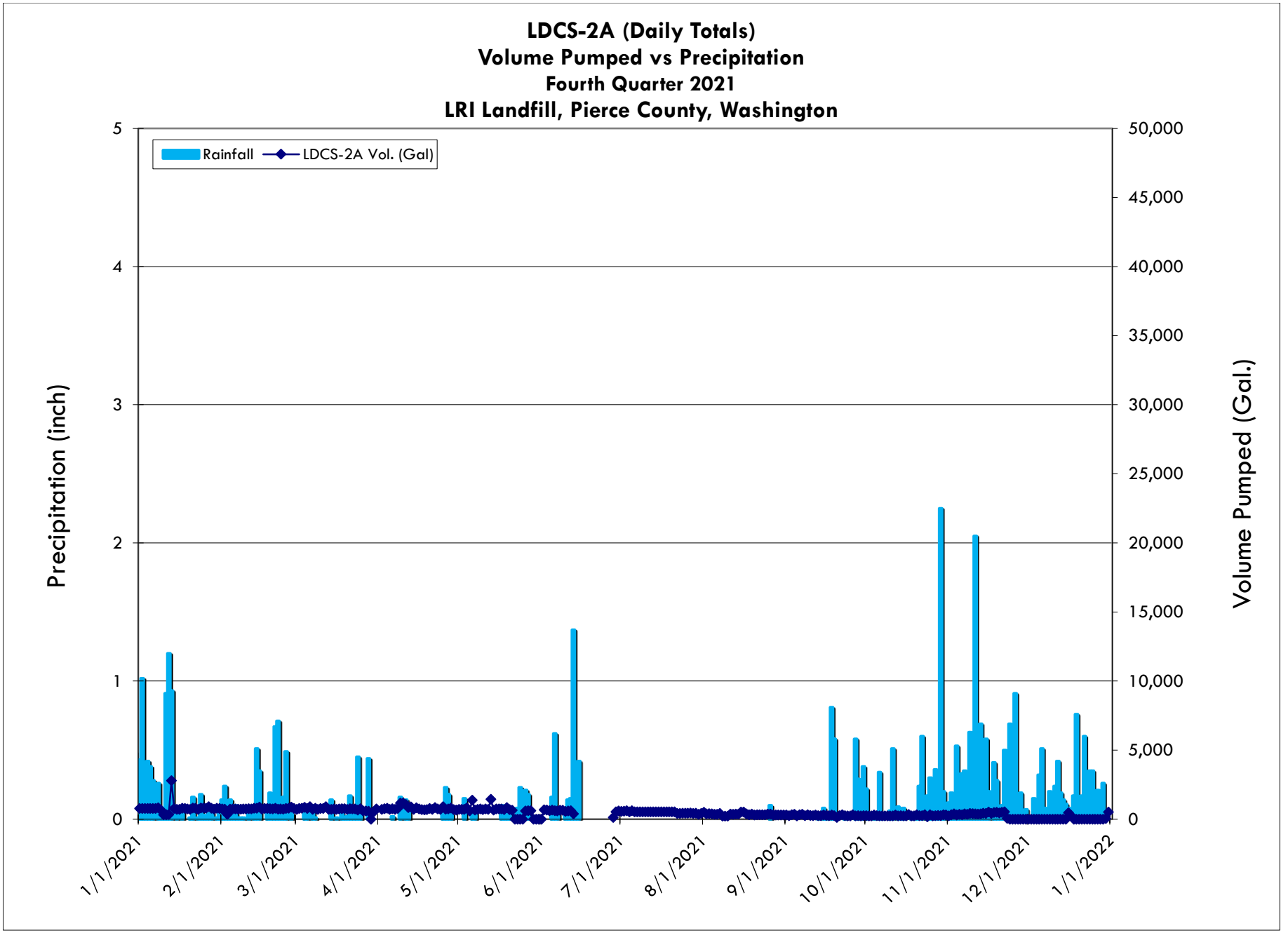

LDCS-6 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-6 Cond. (µS/cm)
LDCS-6 Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

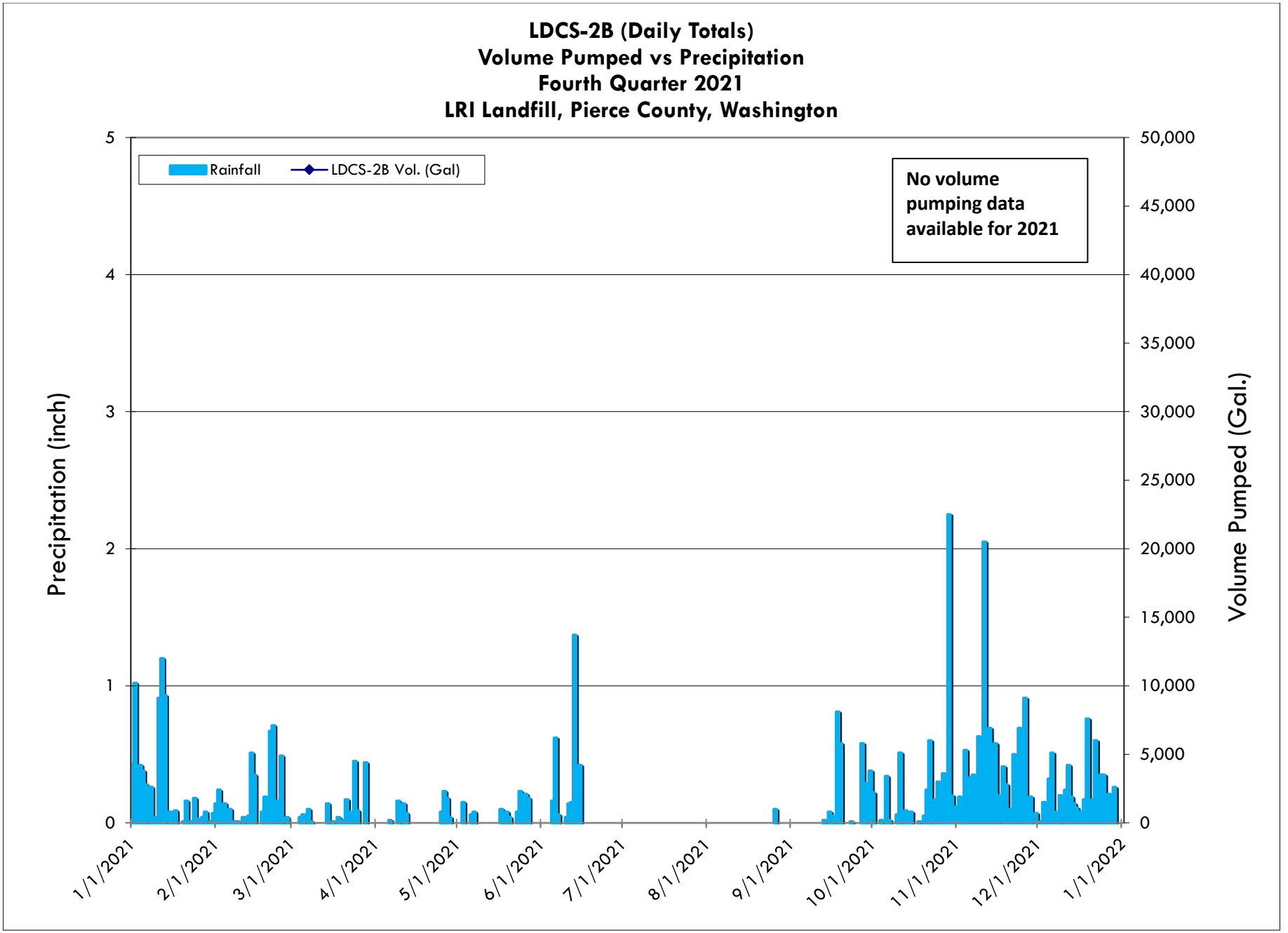
LDCS-7 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington

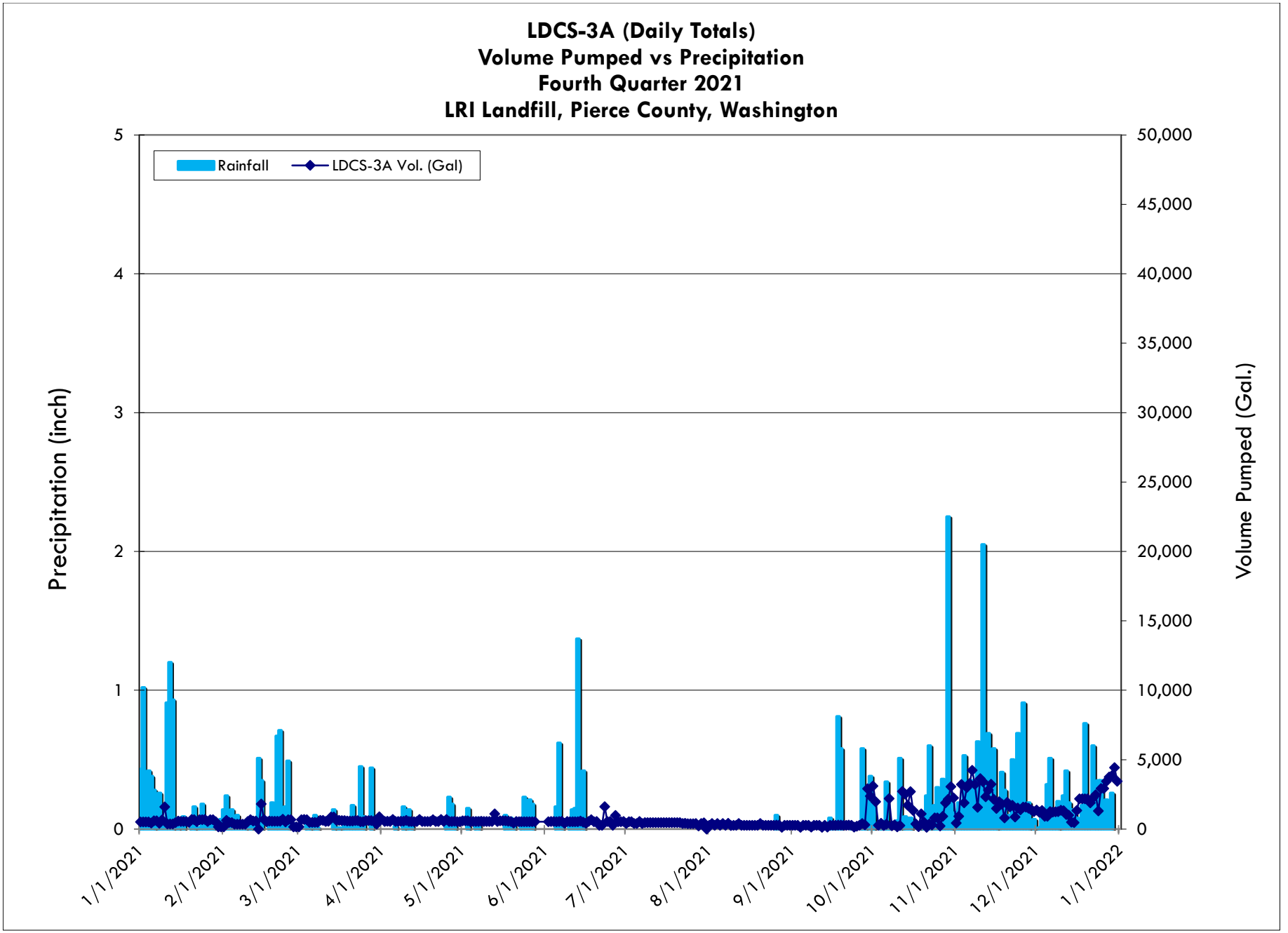


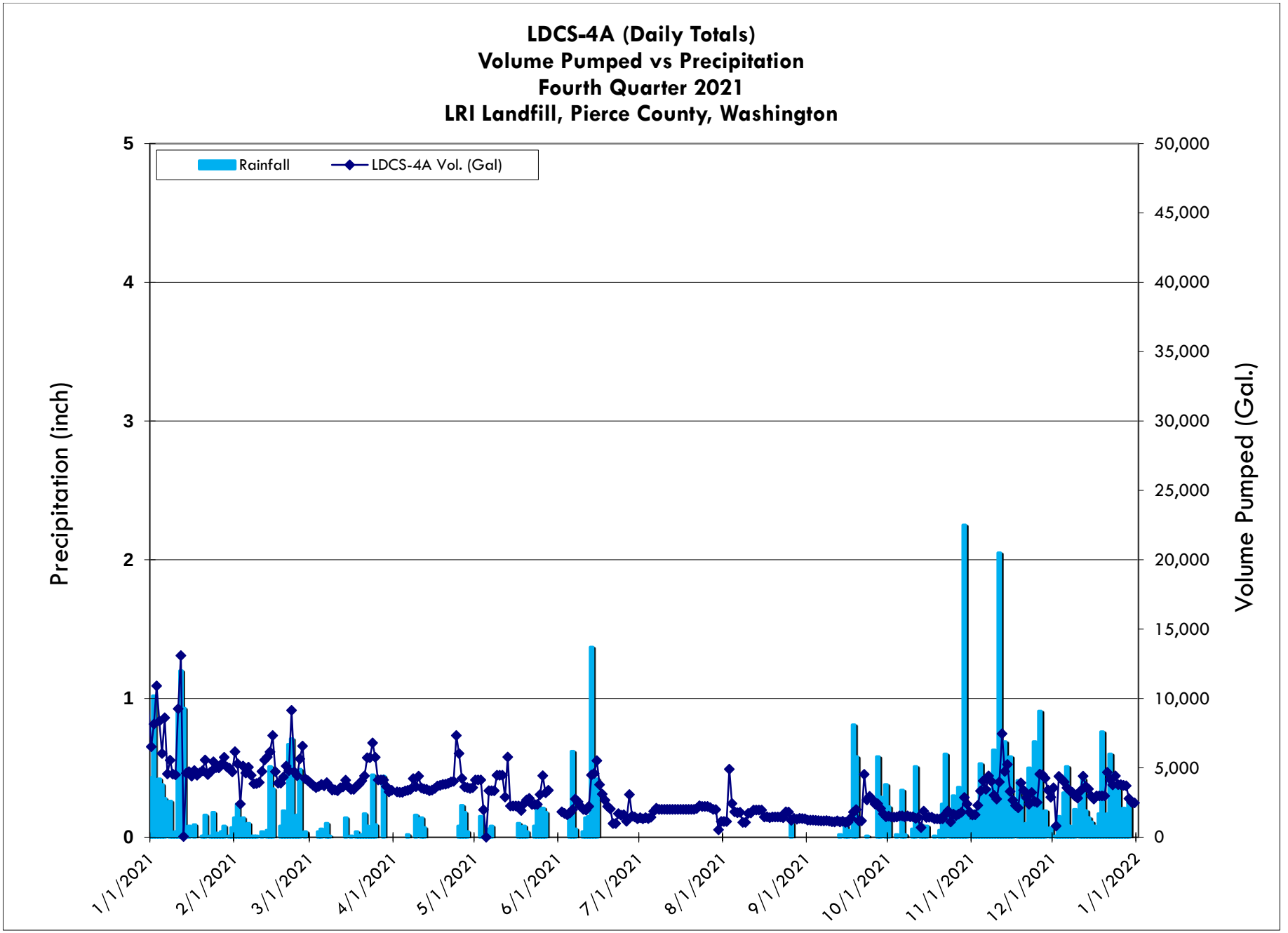

LDCS-8A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-8A Cond. (µS/cm)
LDCS-8A Vol. (Gal)
No Cond. data available between 3/31/21 and 12/31/21
No volume pumping data available between 6/21/21 and 9/30/21
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
90,000
85,000
80,000
75,000
70,000
65,000
60,000
55,000
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

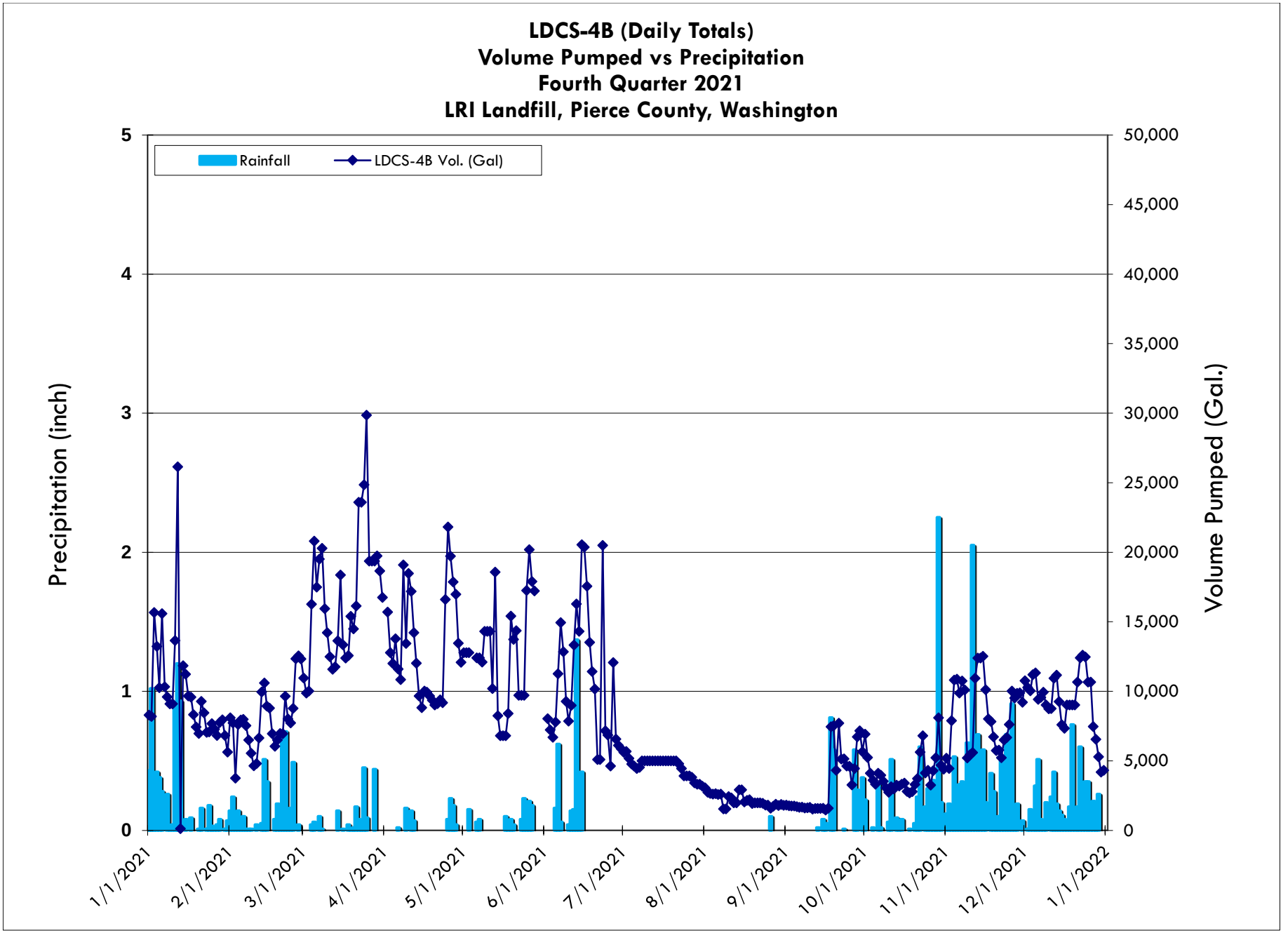

LDCS-1 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-1 Vol. (Gal.)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

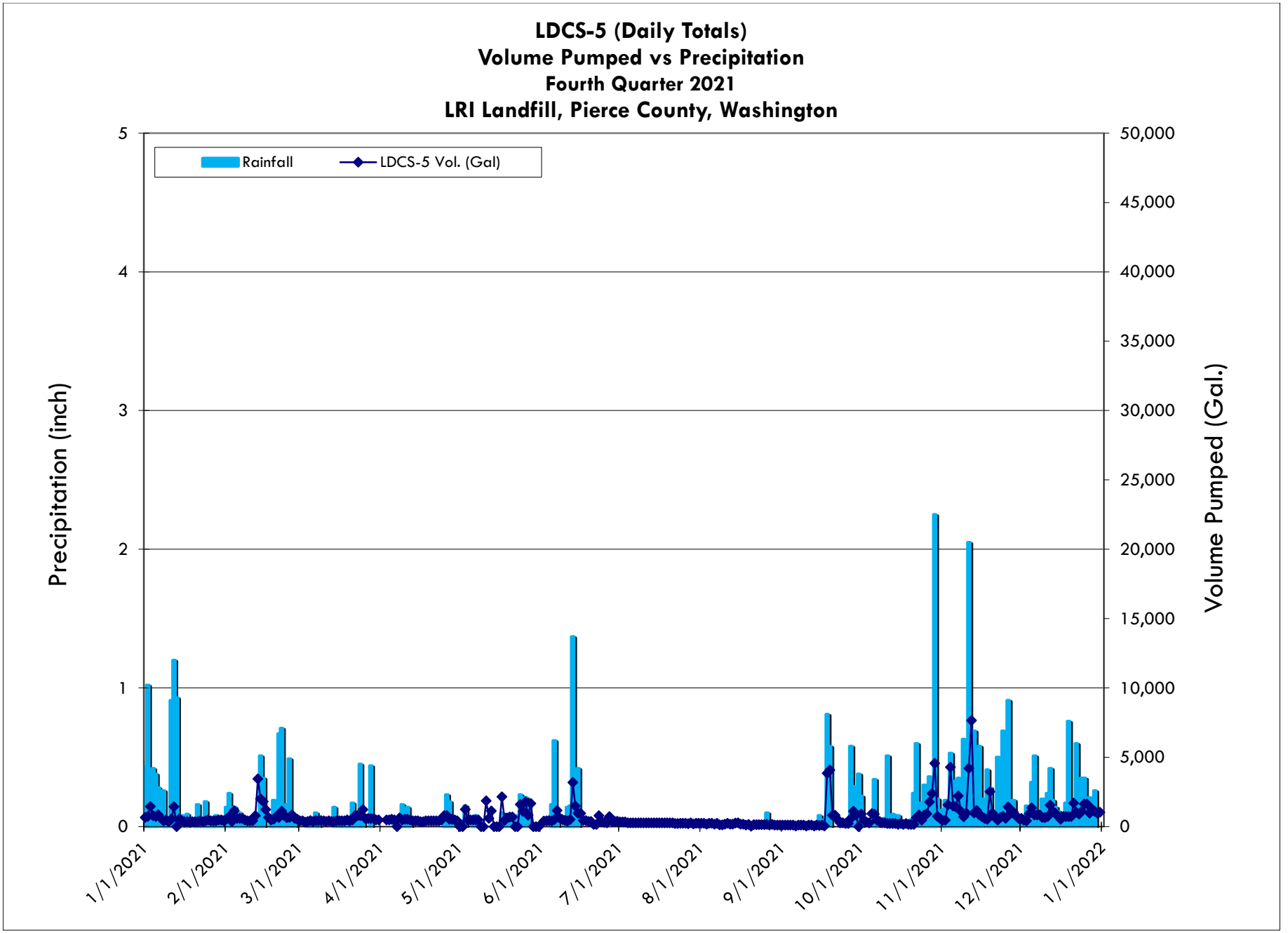

LDCS-2A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-2A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

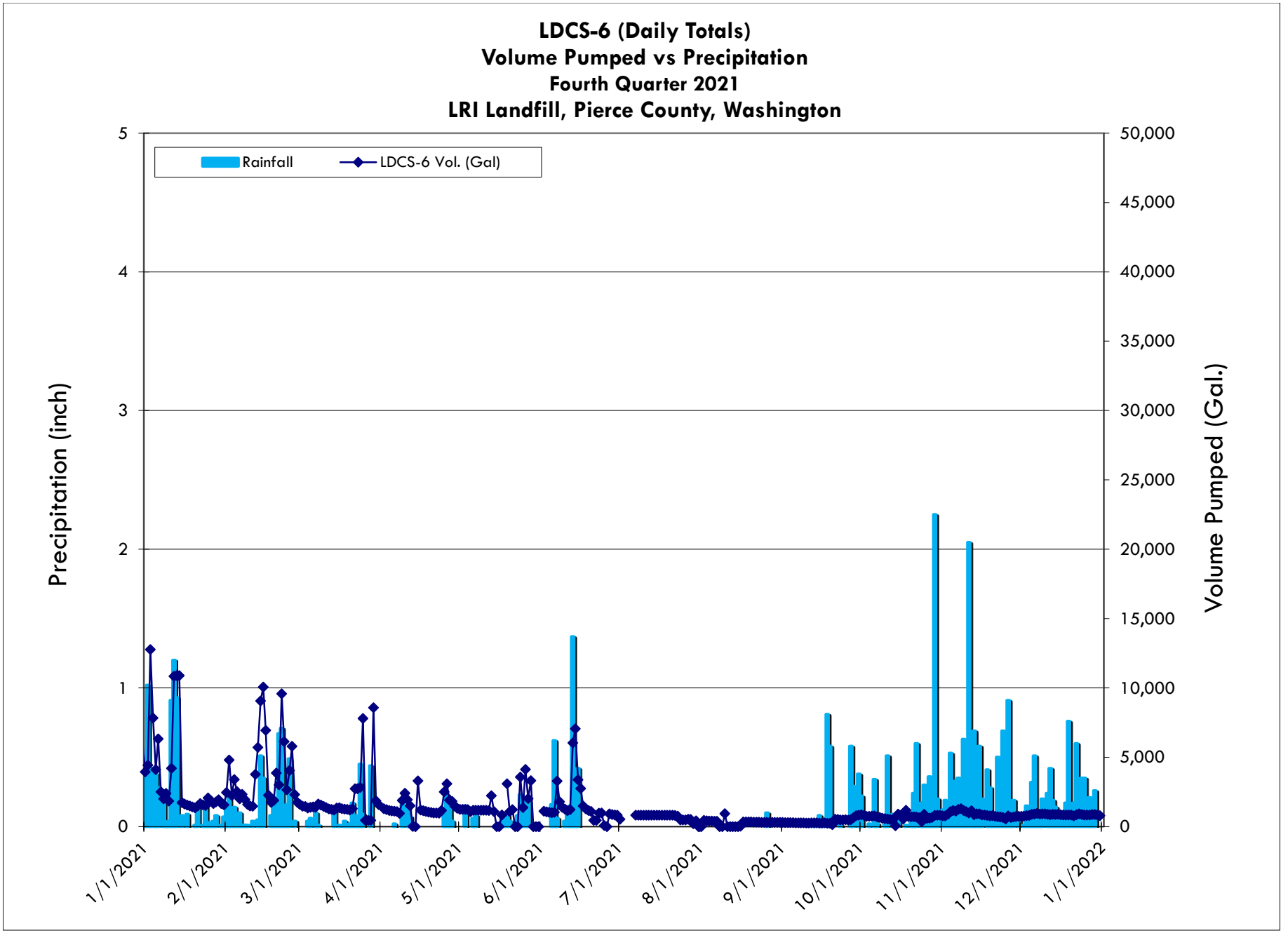

LDCS-2B (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-2B Vol. (Gal)
No volume pumping data available for 2021
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

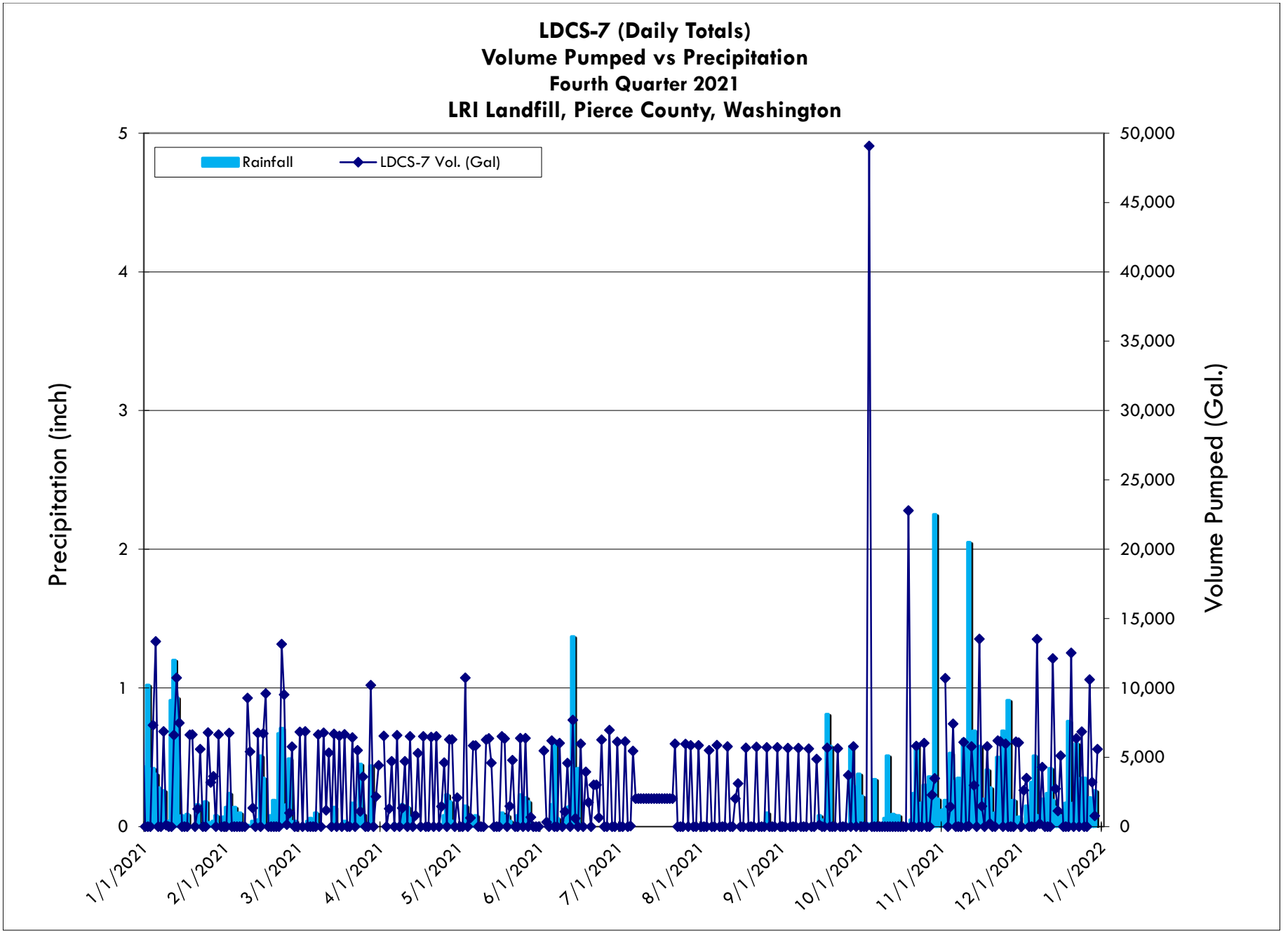

LDCS-3A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-3A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

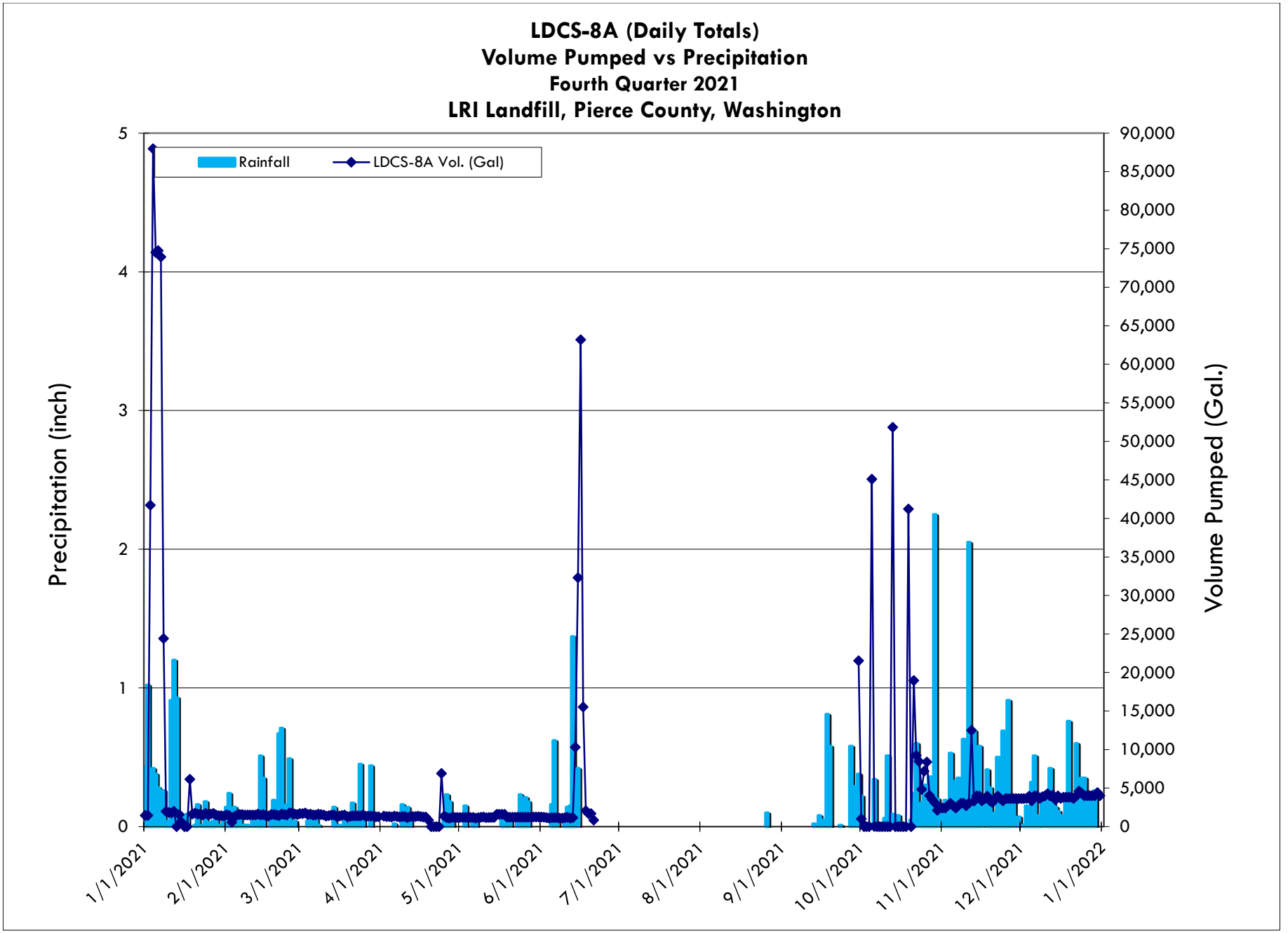

LDCS-4A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-4A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022


LDCS-4B (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
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
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

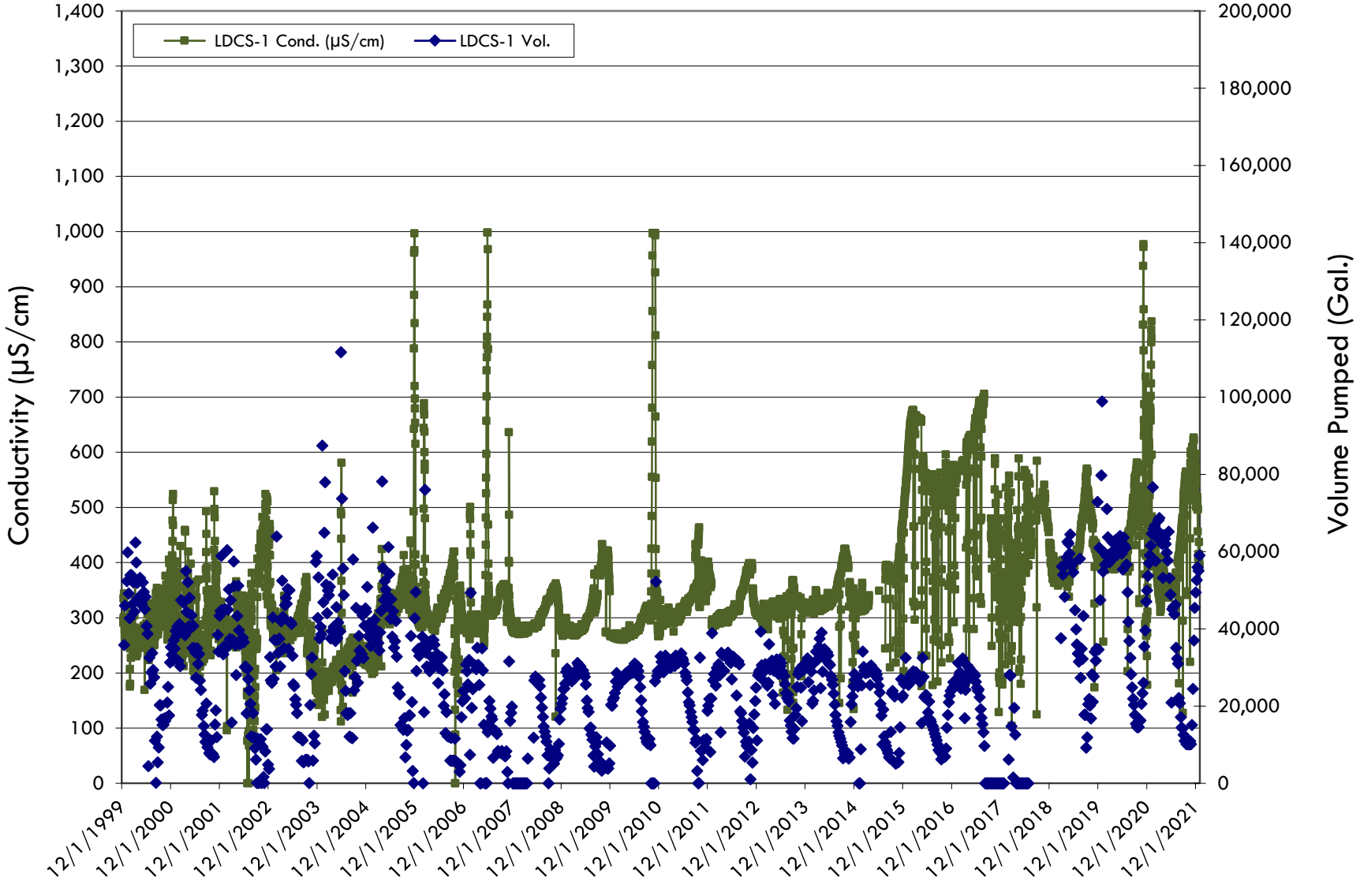

LDCS-5 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-5 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

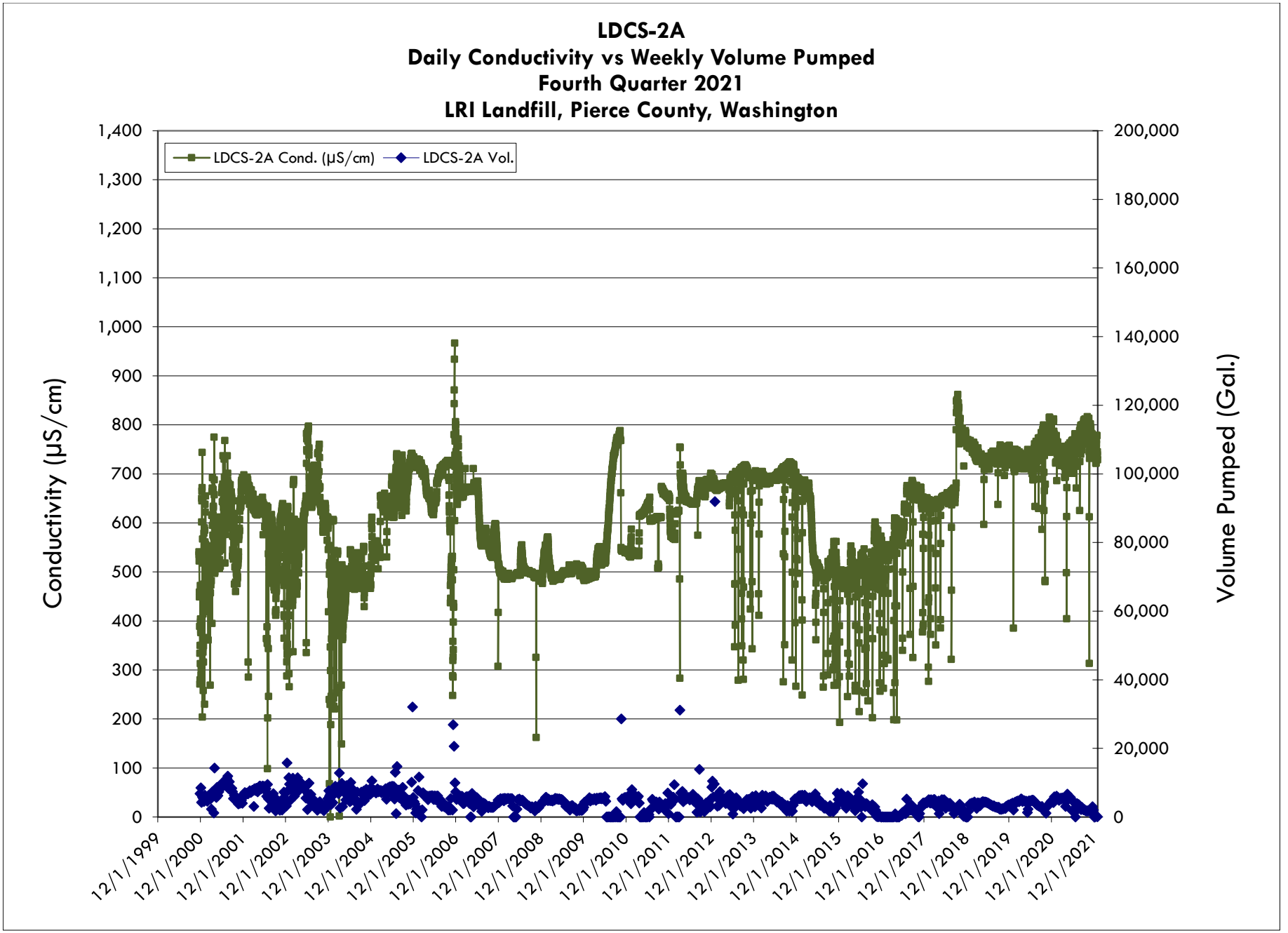

LDCS-6 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-6 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

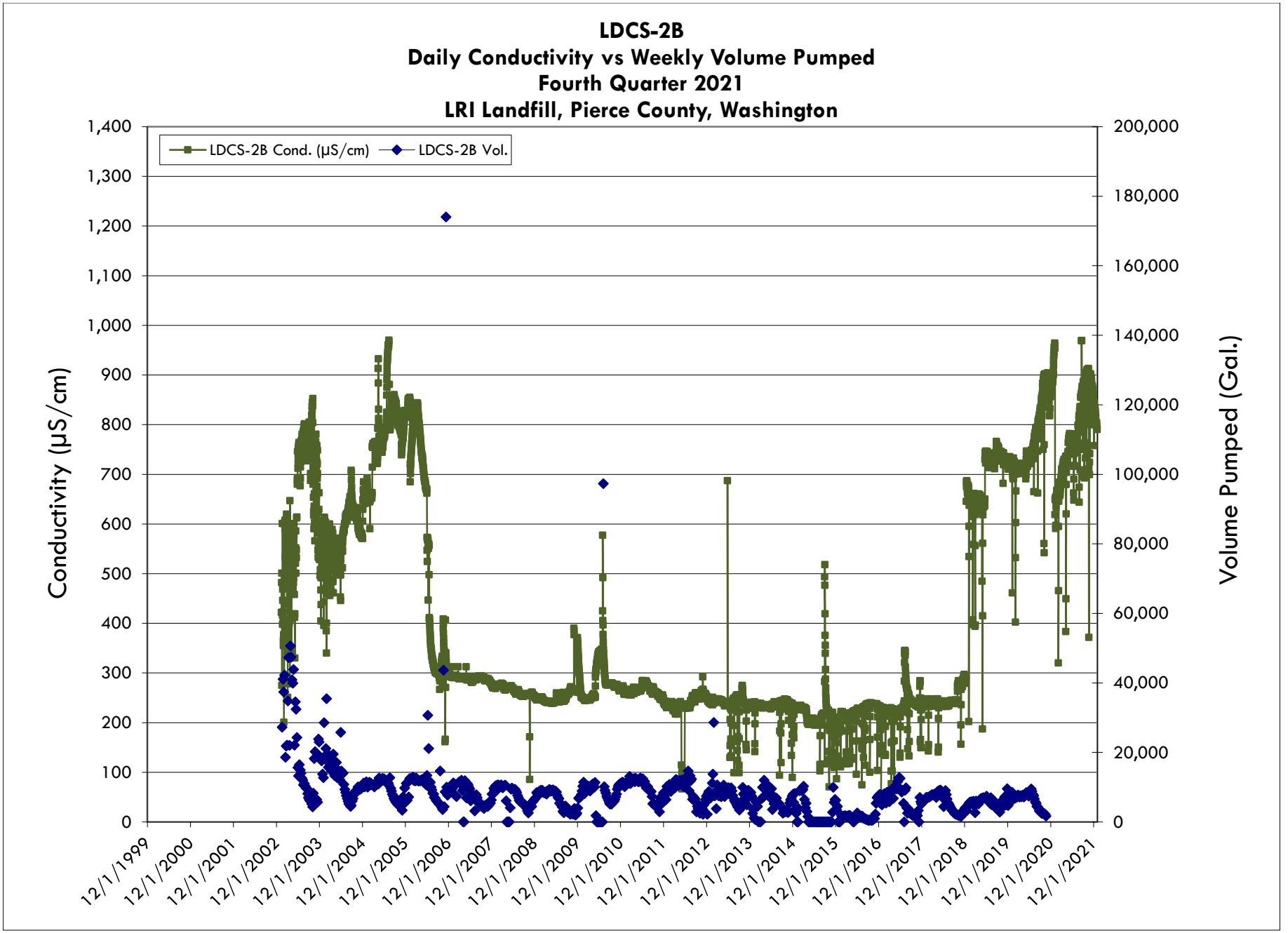

LDCS-7 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-7 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022


LDCS-8A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2021
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
1/1/2021
2/1/2021
3/1/2021
4/1/2021
5/1/2021
6/1/2021
7/1/2021
8/1/2021
9/1/2021
10/1/2021
11/1/2021
12/1/2021
1/1/2022

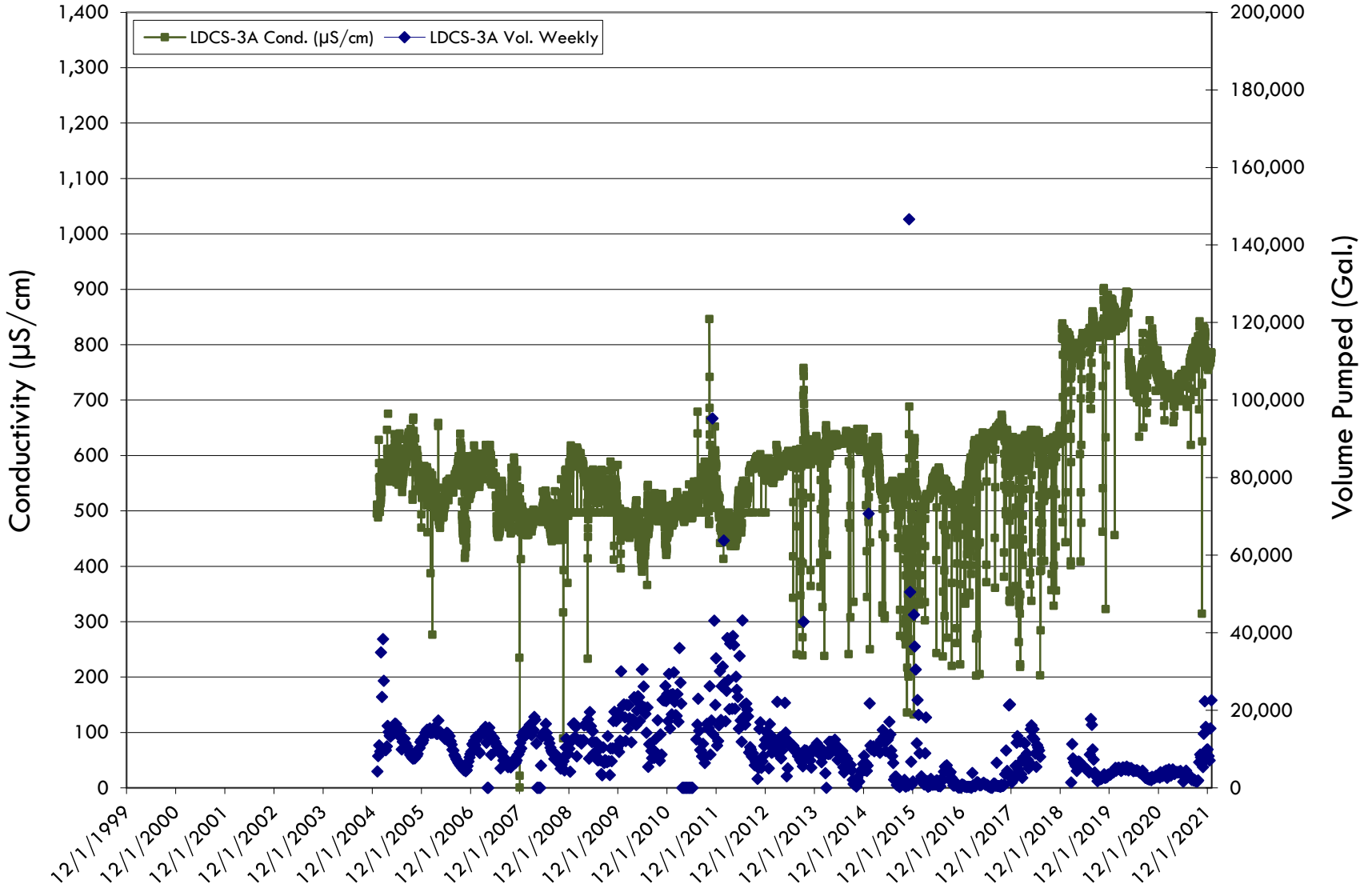
LDCS-1
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington



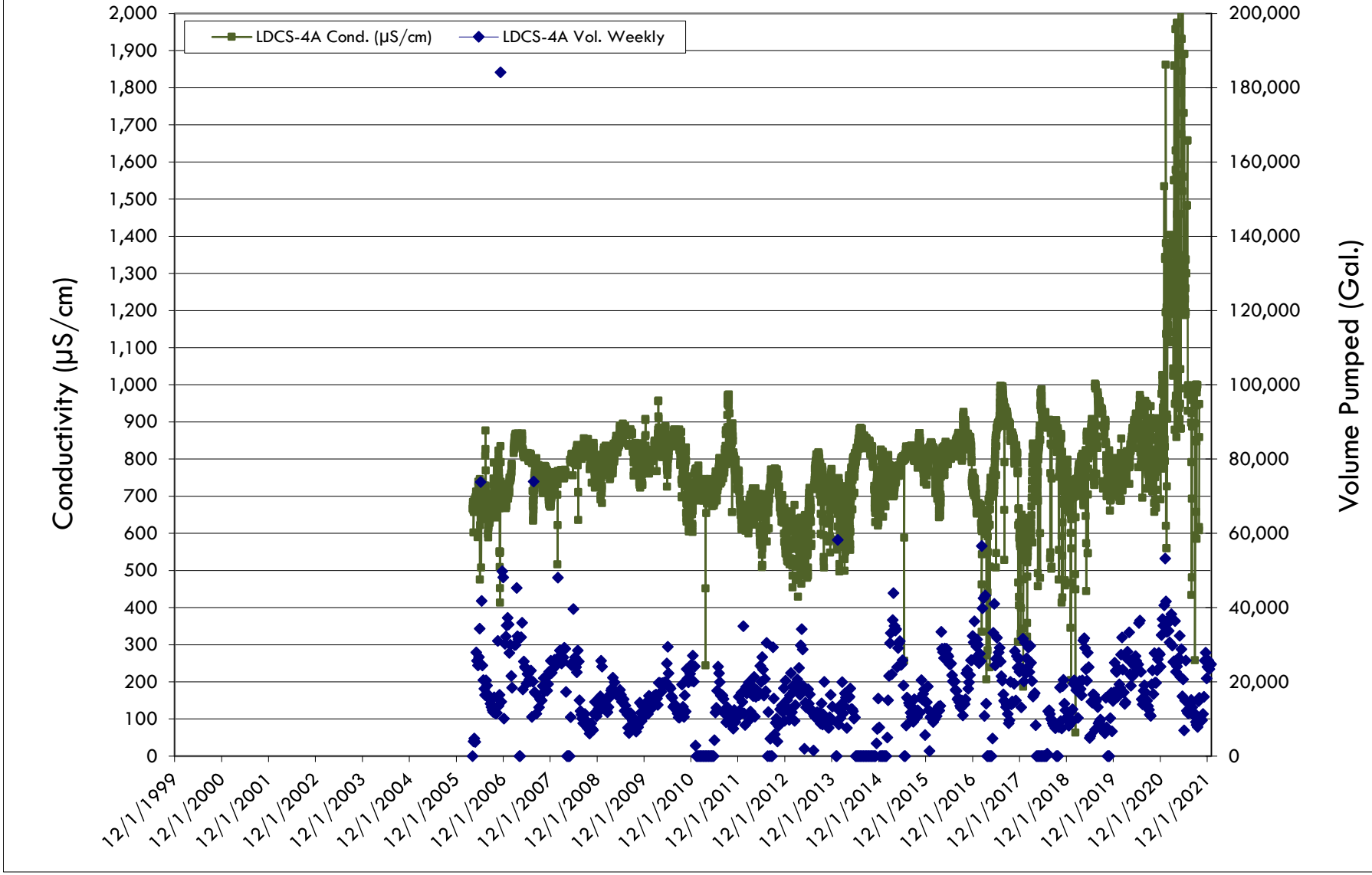

LDCS-2A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-2A Cond. (µS/cm)
LDCS-2A Vol.
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
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

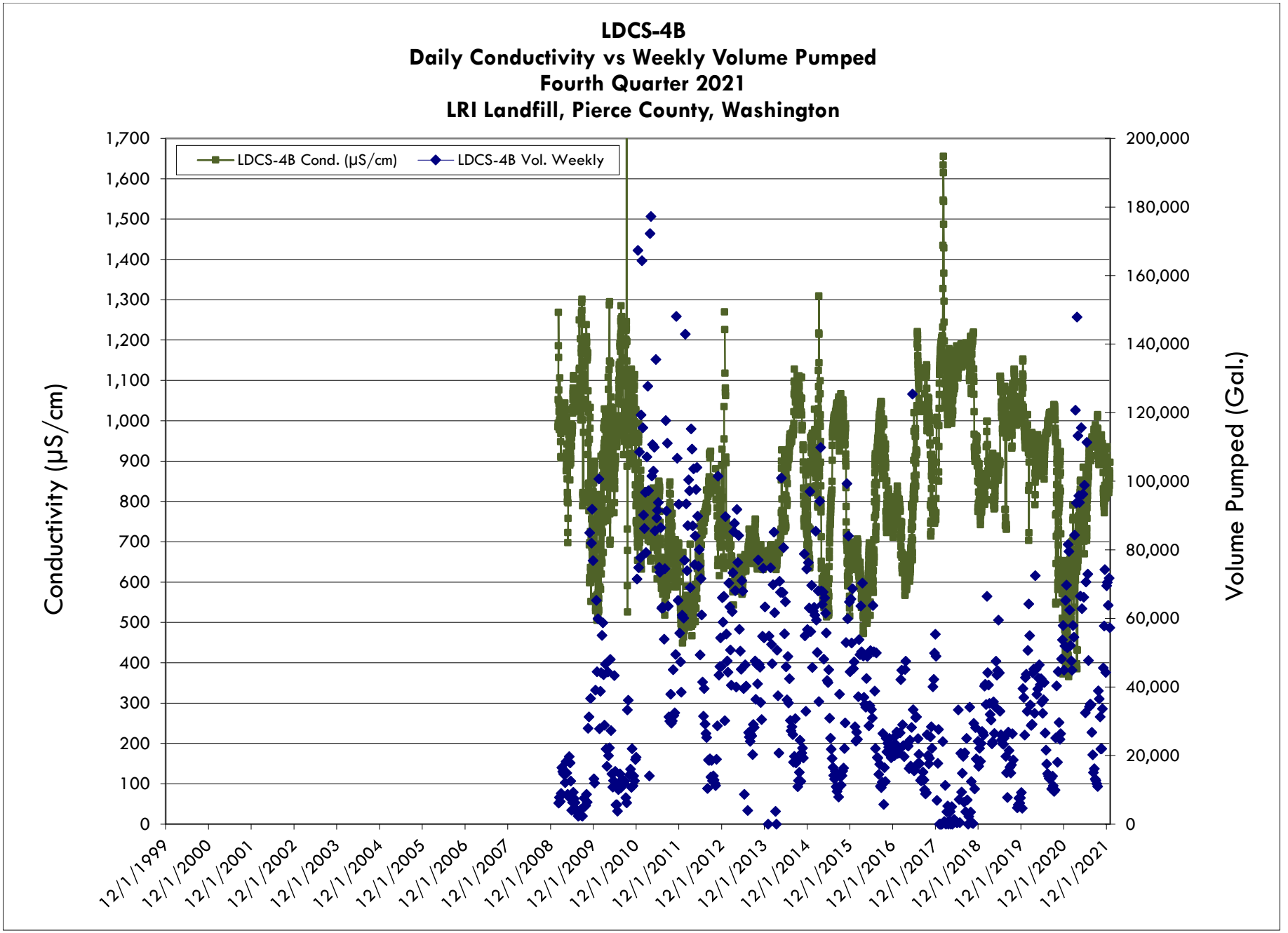

LDCS-2B
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-2B Cond. (µS/cm)
LDCS-2B Vol.
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
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

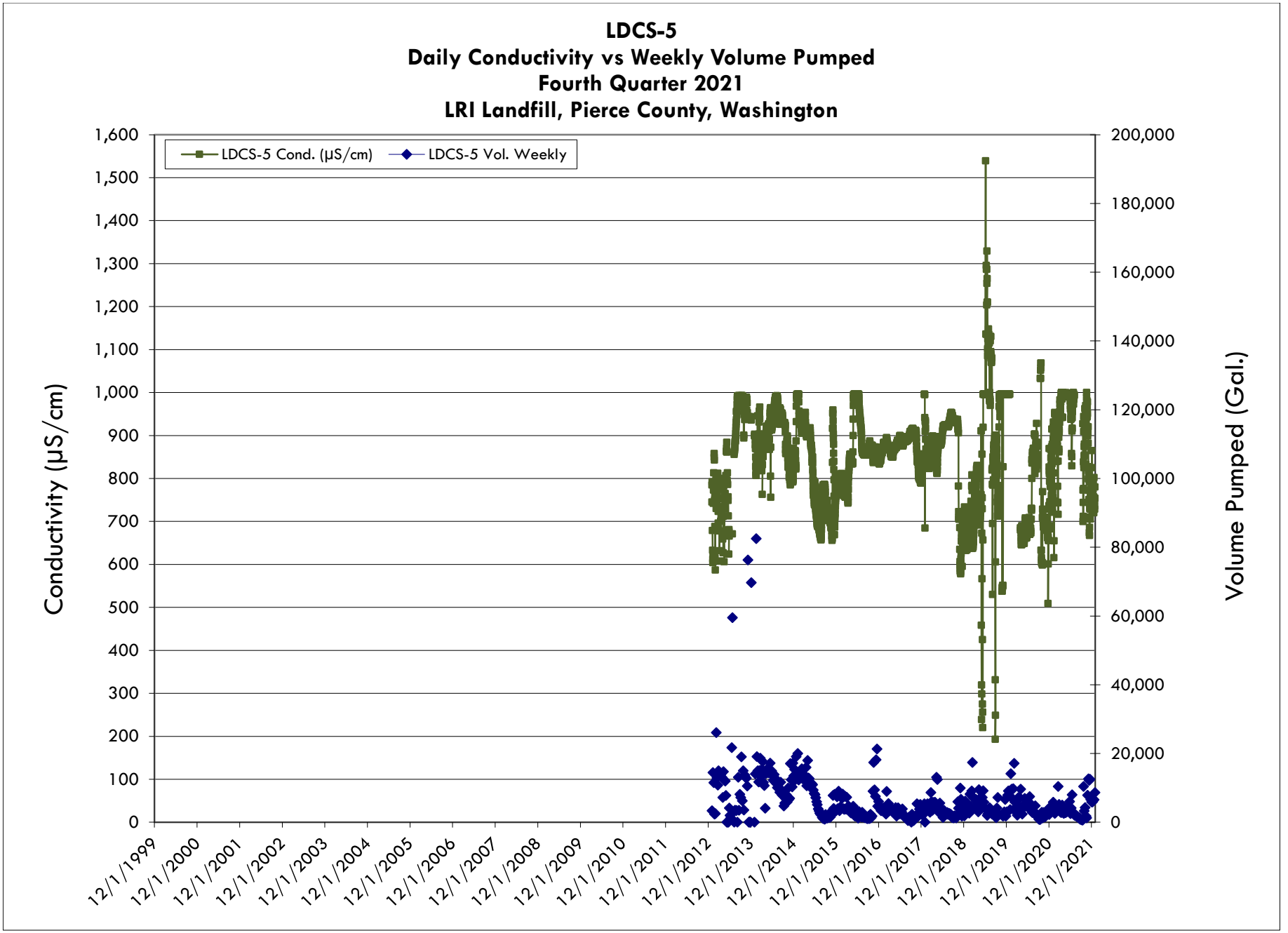
LDCS-3A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington

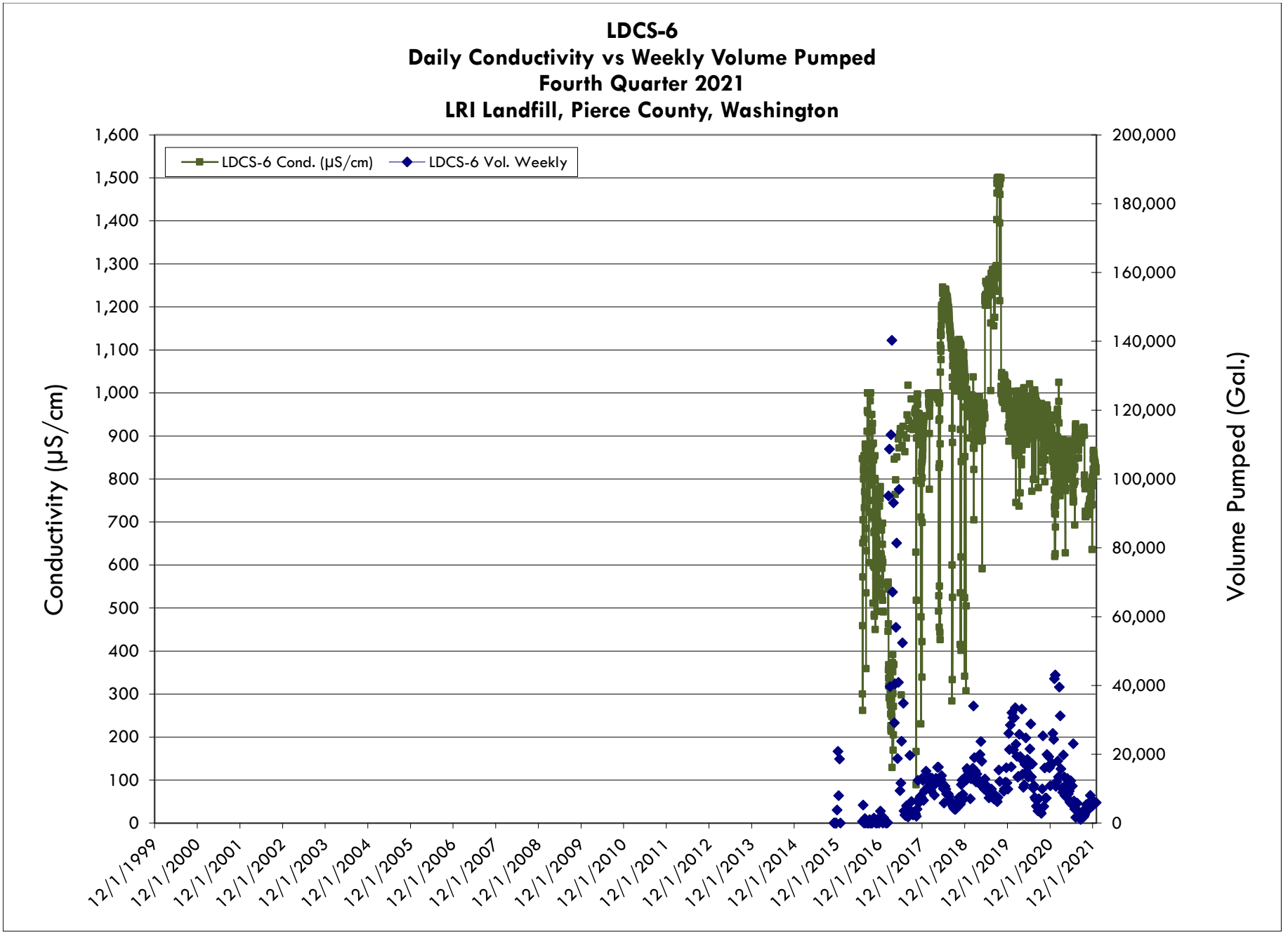


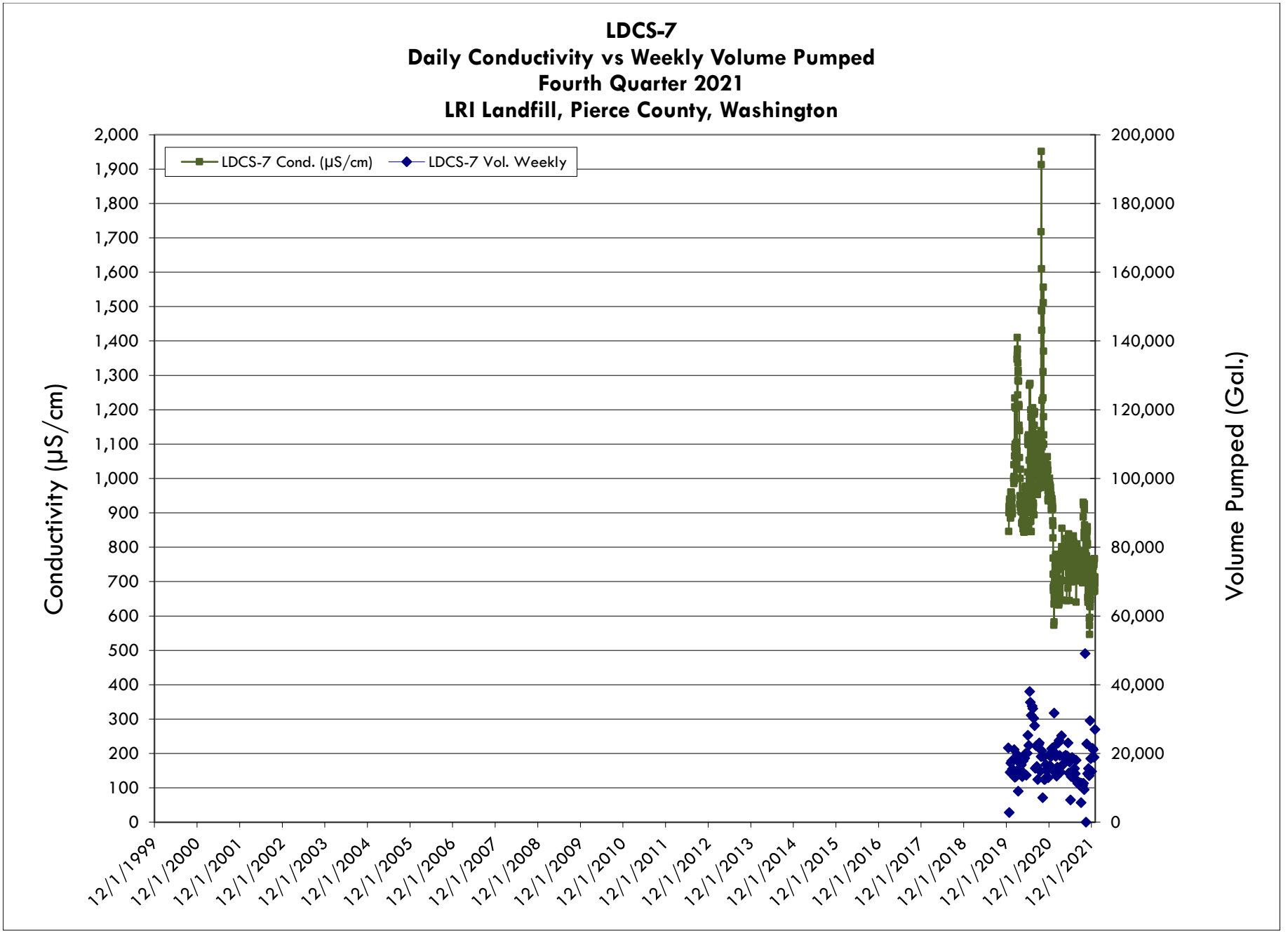
LDCS-4A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington

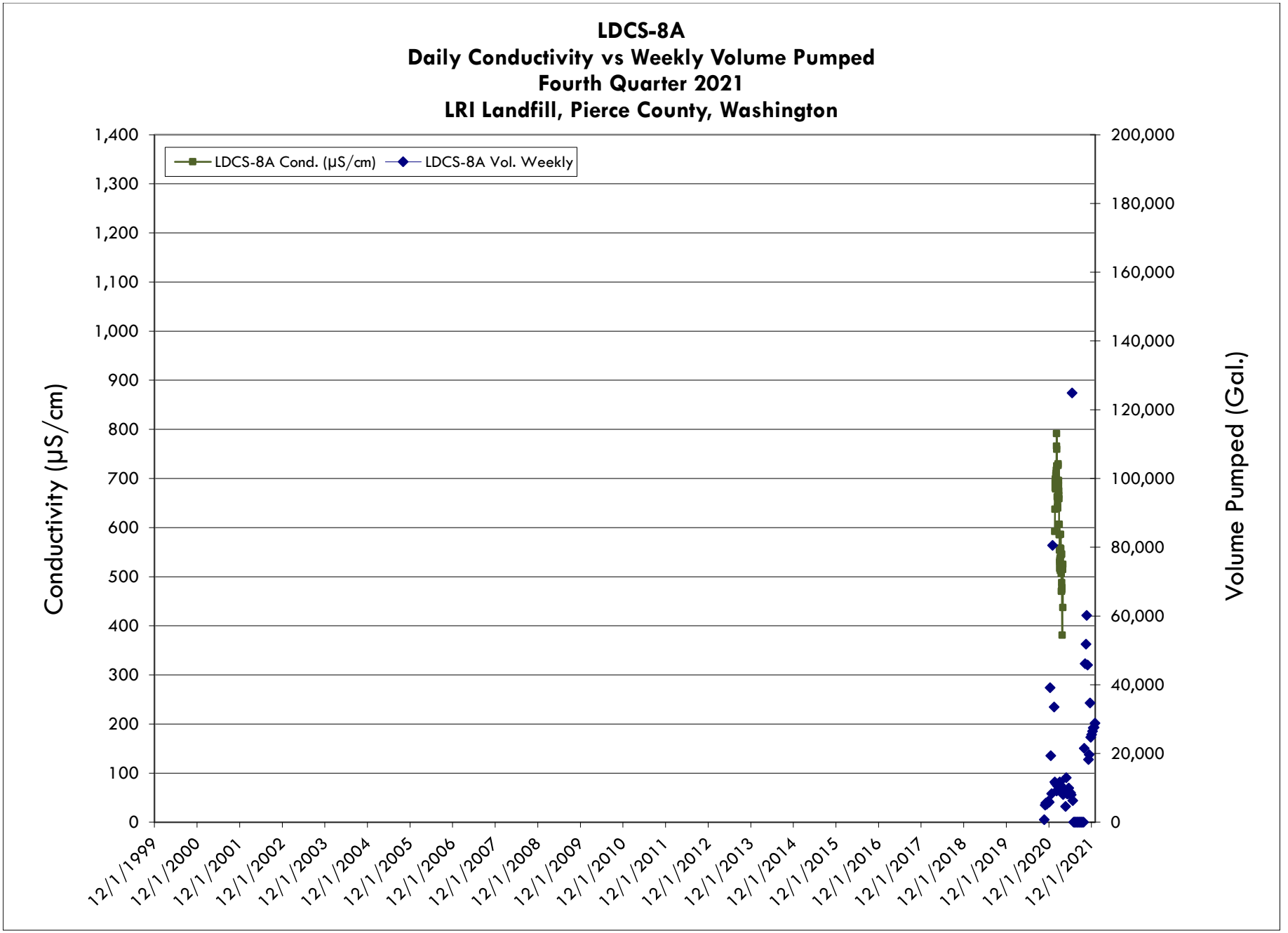



LDCS-4B
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-4B Cond. (µS/cm)
LDCS-4B Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
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


LDCS-5
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
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

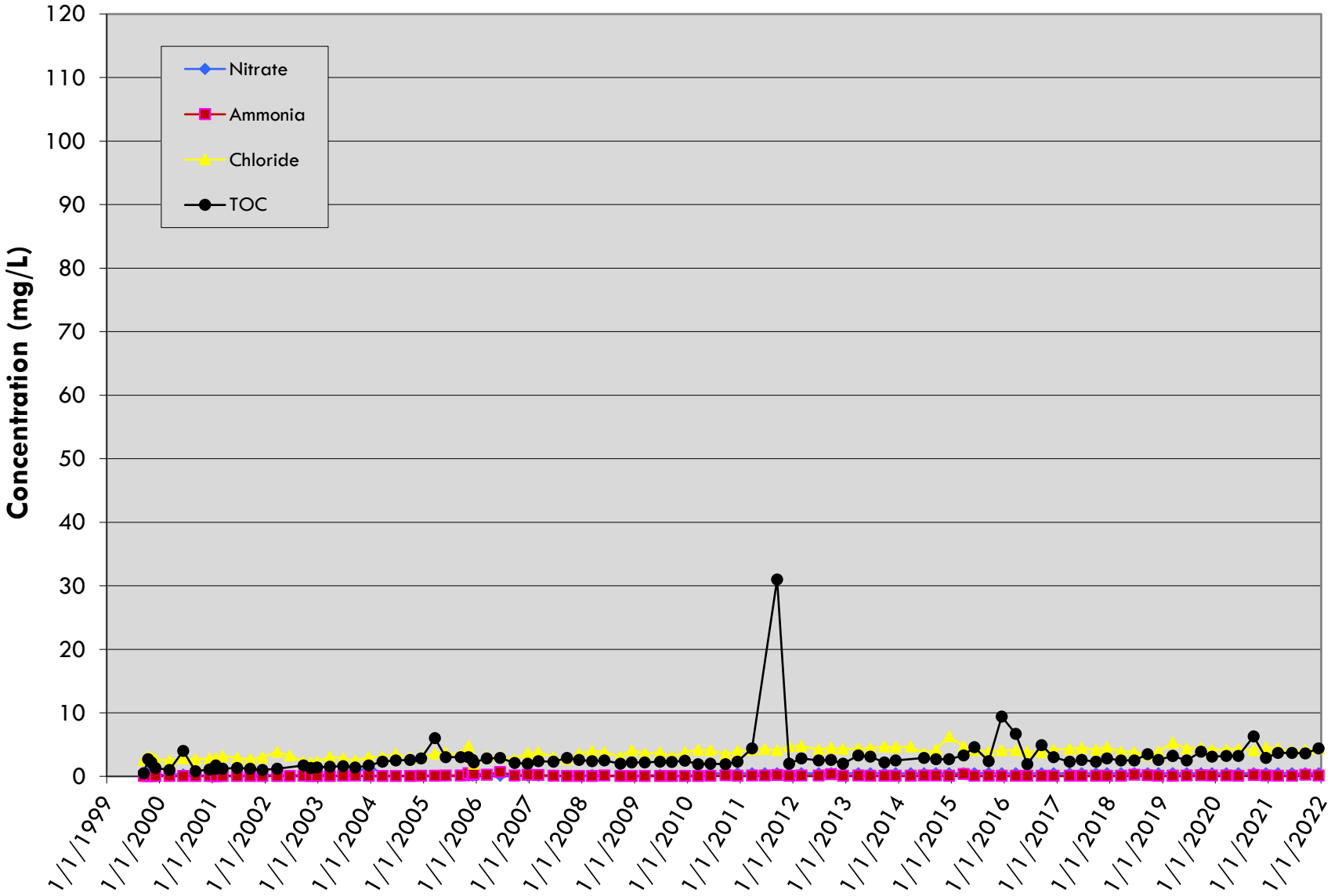

LDCS-6
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-6 Cond. (µS/cm)
LDCS-6 Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
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


LDCS-7
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
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

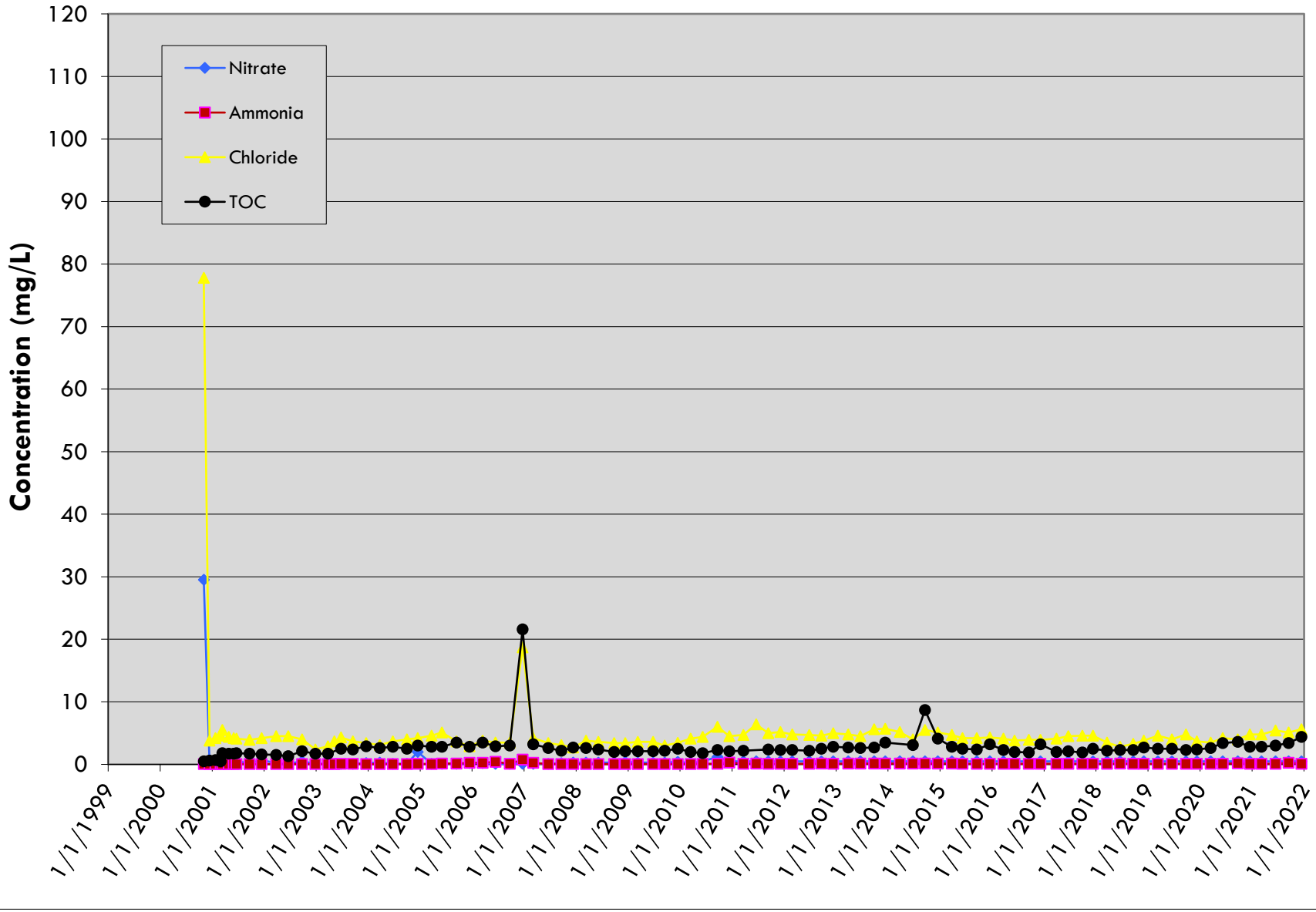

LDCS-8A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2021
LRI Landfill, Pierce County, Washington
LDCS-8A Cond. (µS/cm)
LDCS-8A Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
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

LDCS-1

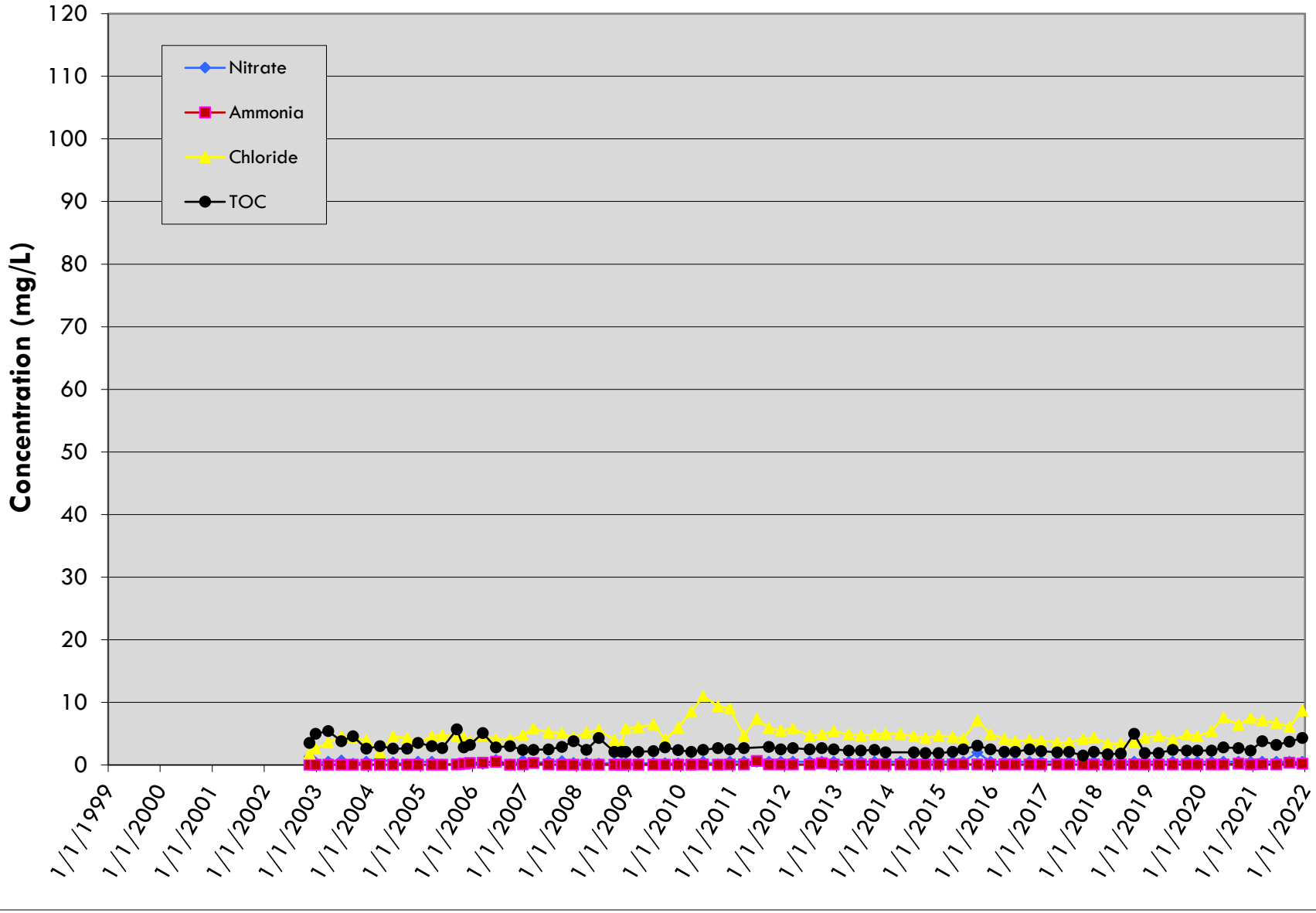
LRI Landfill, Pierce County, Washington



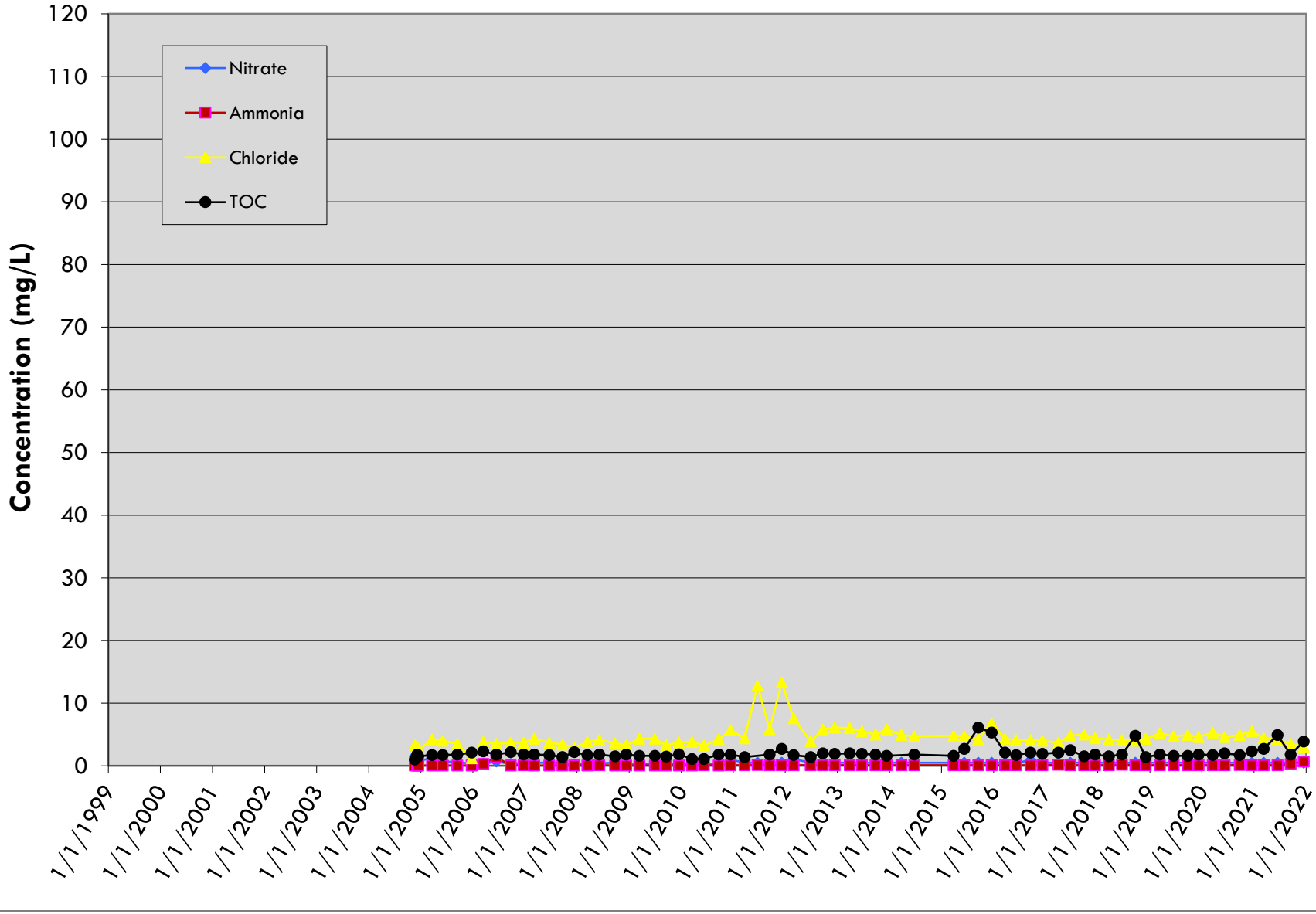
LDCS-2A
LRI Landfill, Pierce County, Washington



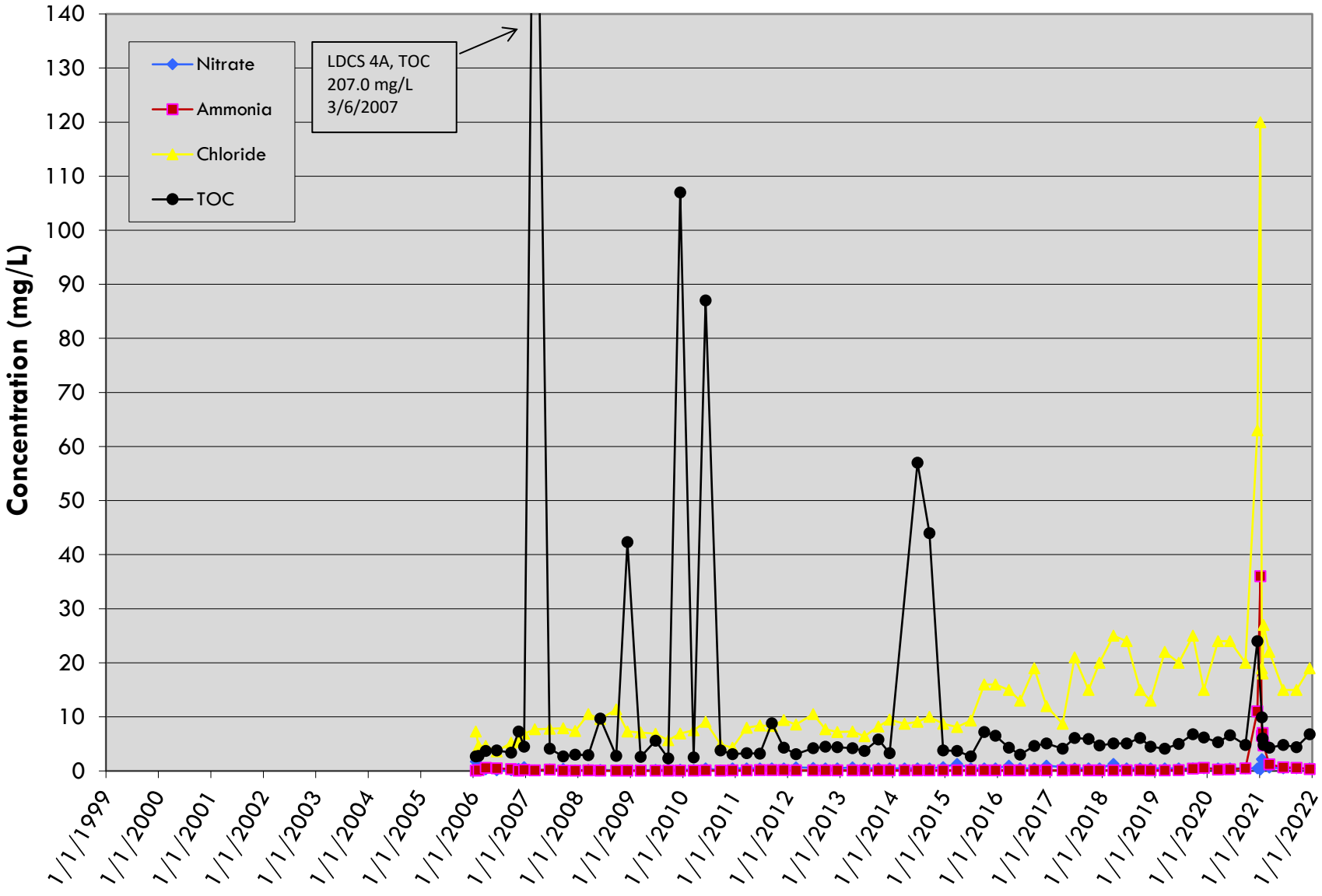
LDCS-2B
LRI Landfill, Pierce County, Washington



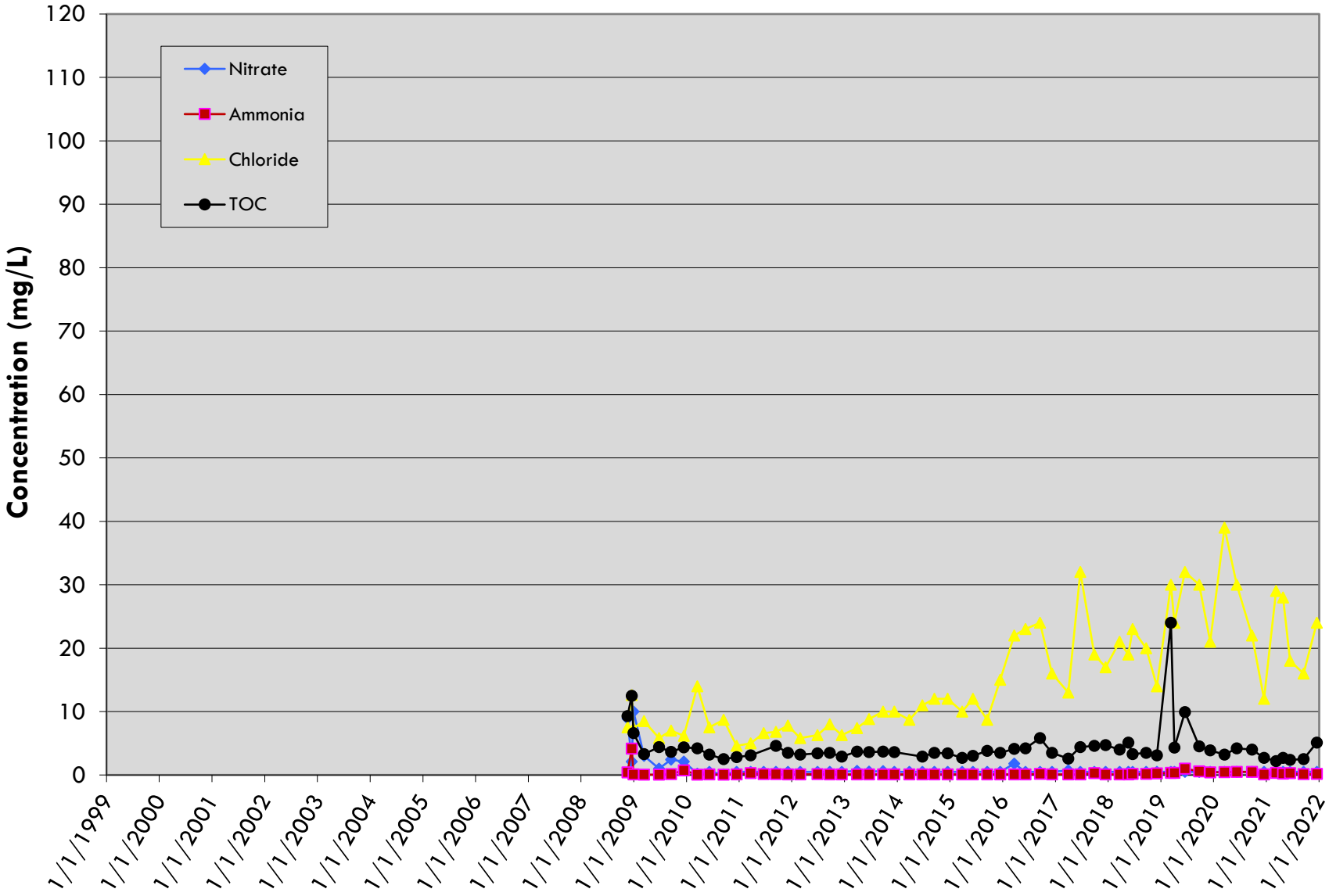
LDCS-3A
LRI Landfill, Pierce County, Washington

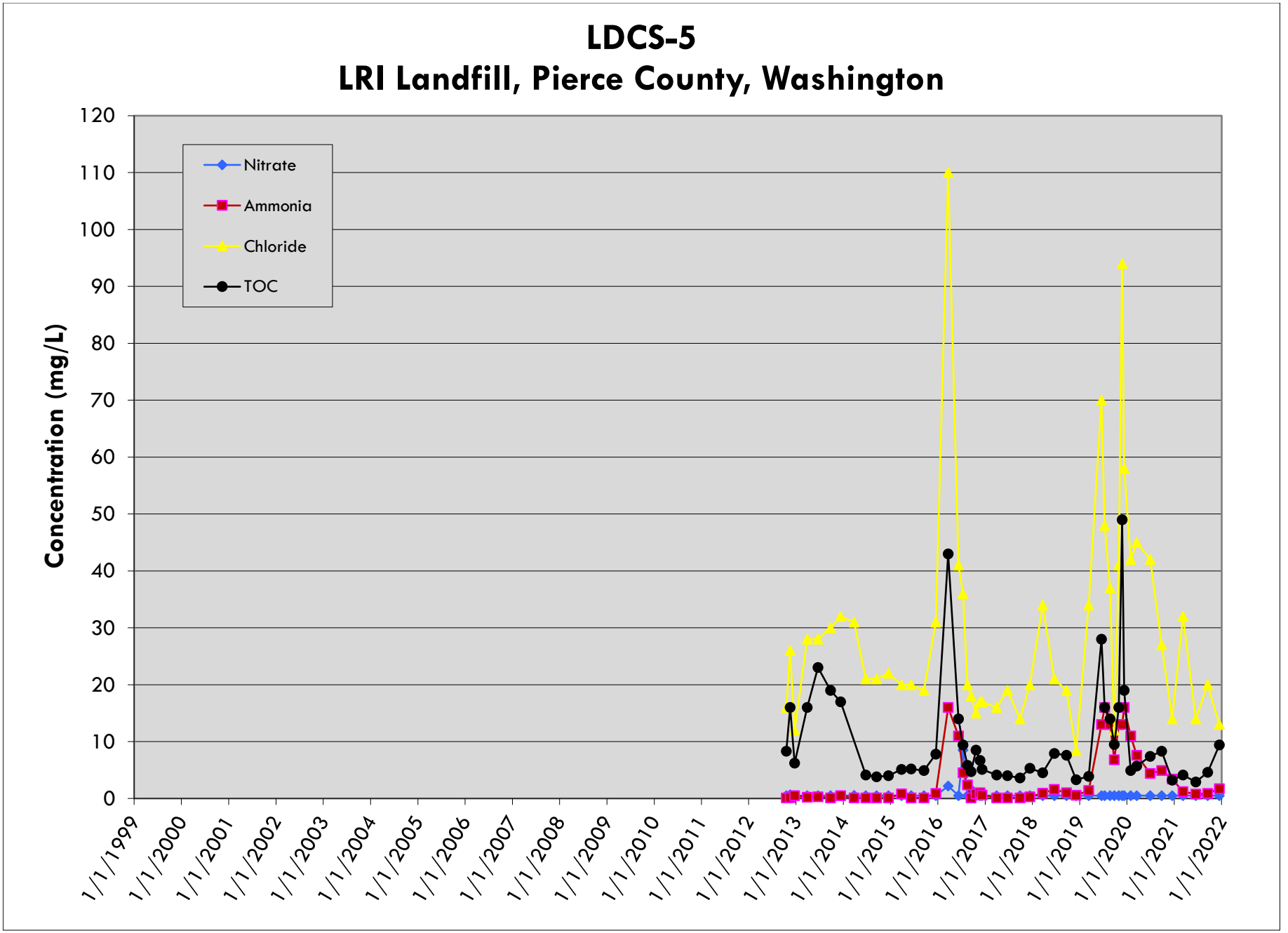


LDCS-4A
LRI Landfill, Pierce County, Washington

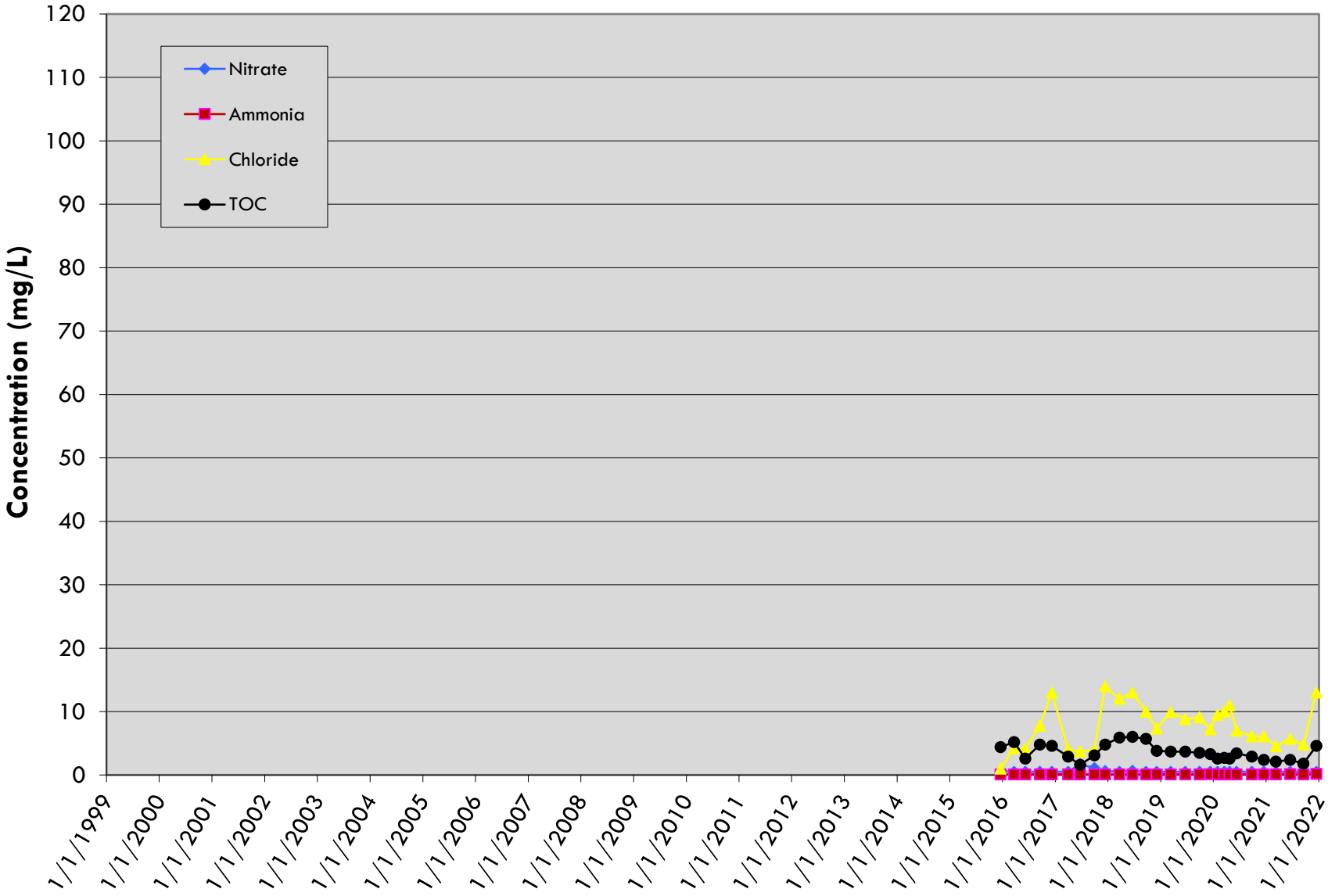


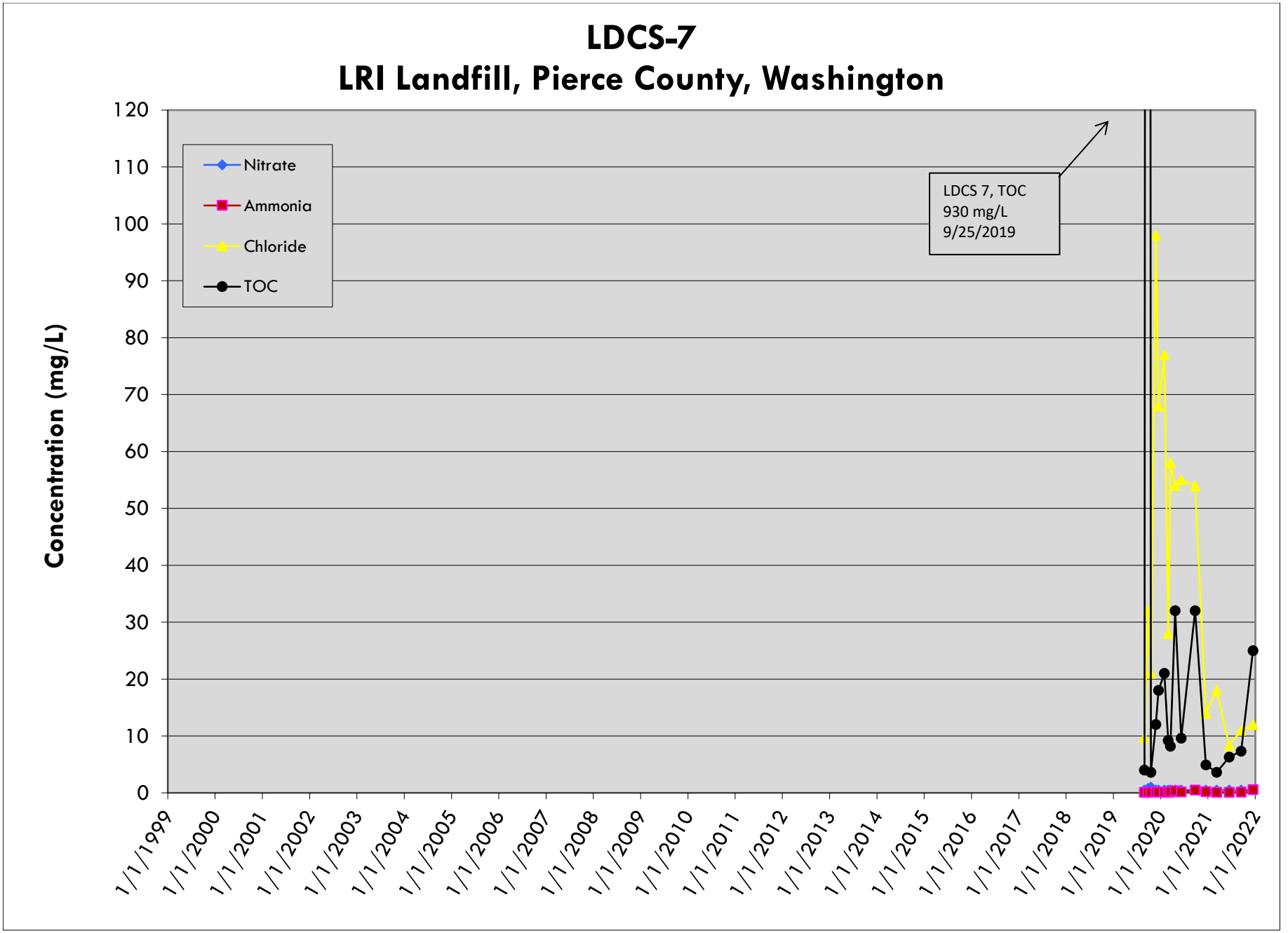
LDCS-4B
LRI Landfill, Pierce County, Washington



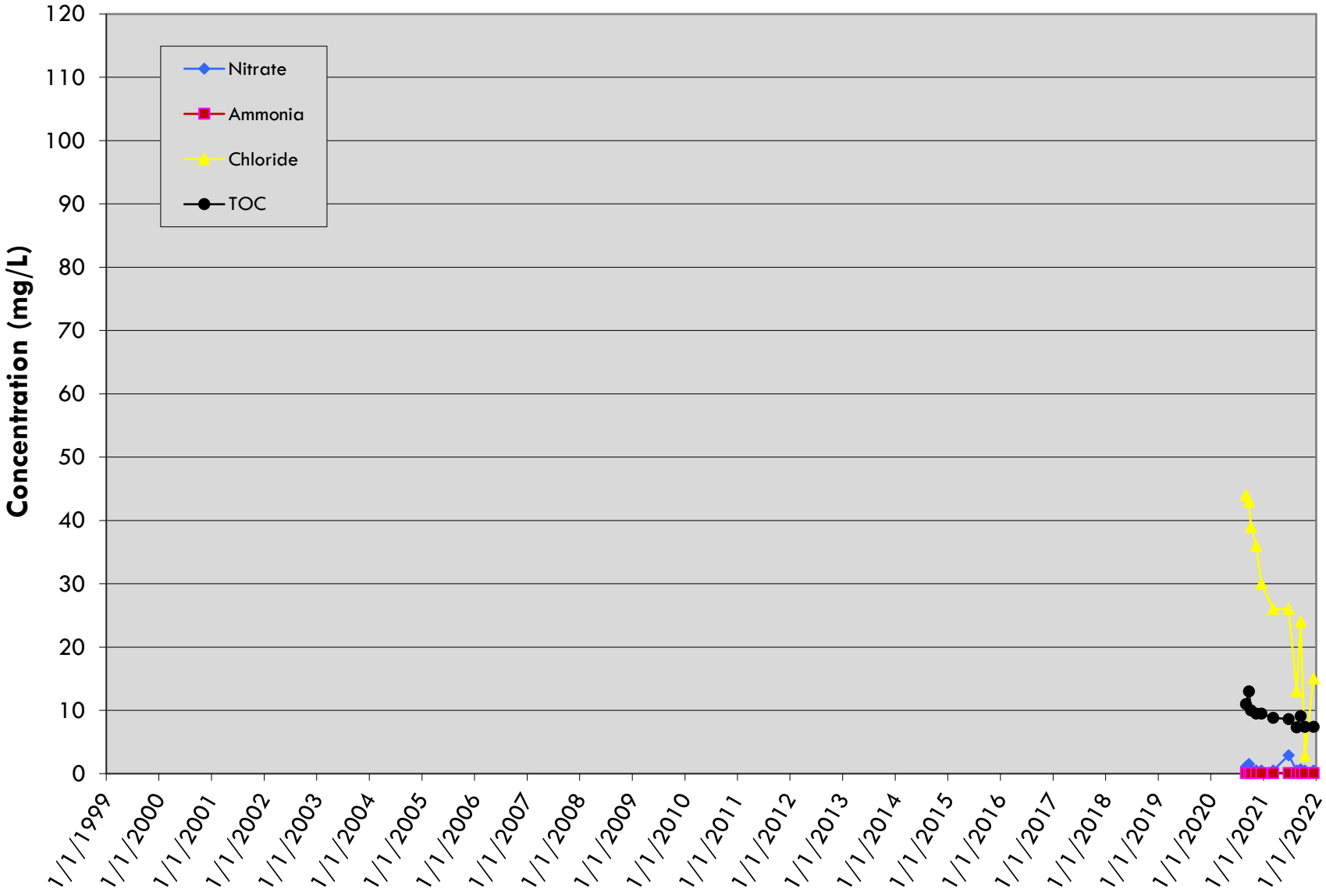

LDCS-5
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
120
110
100
90
80
70
60
50
40
30
20
10
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022

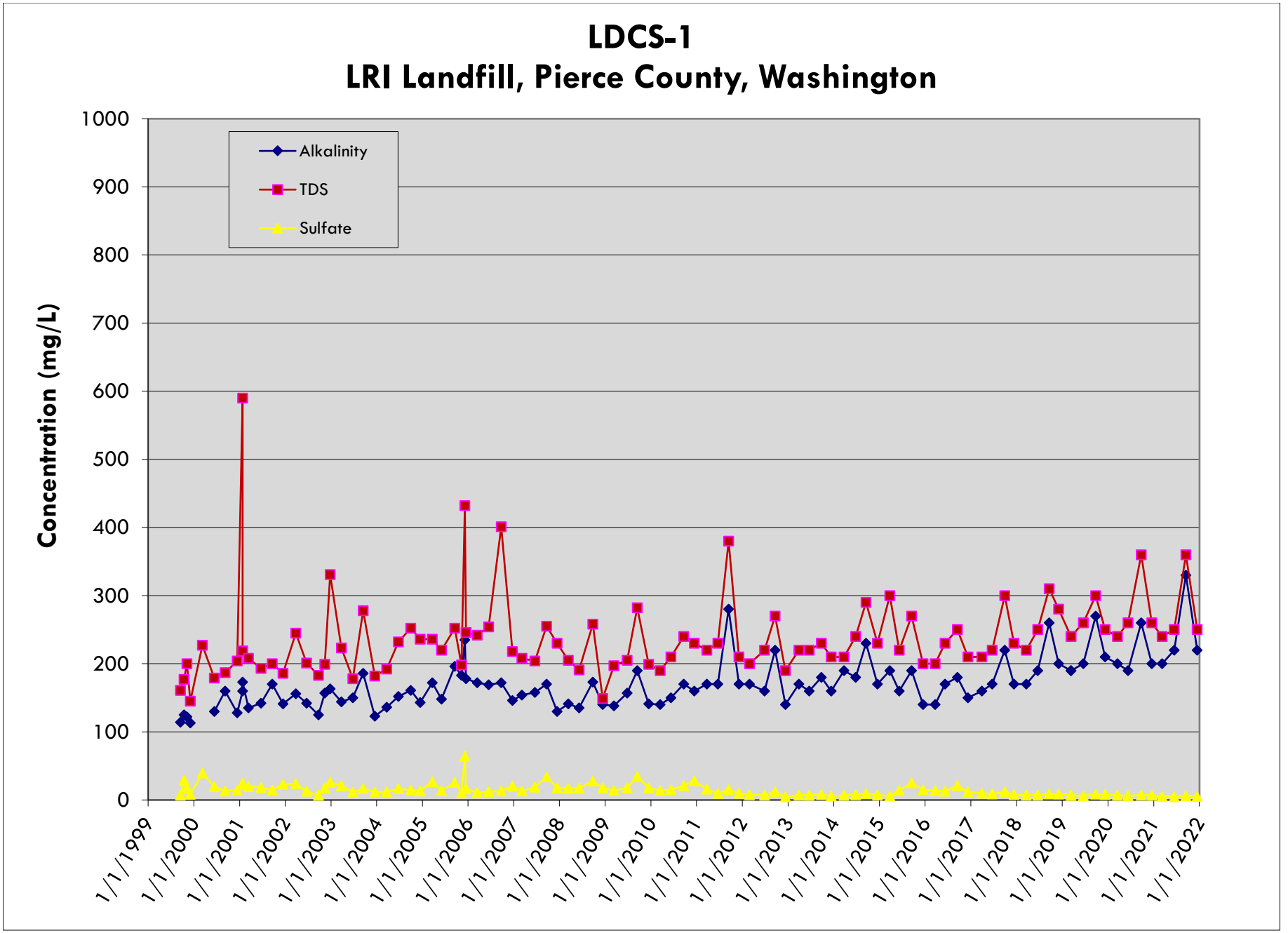
LDCS-6A
LRI Landfill, Pierce County, Washington



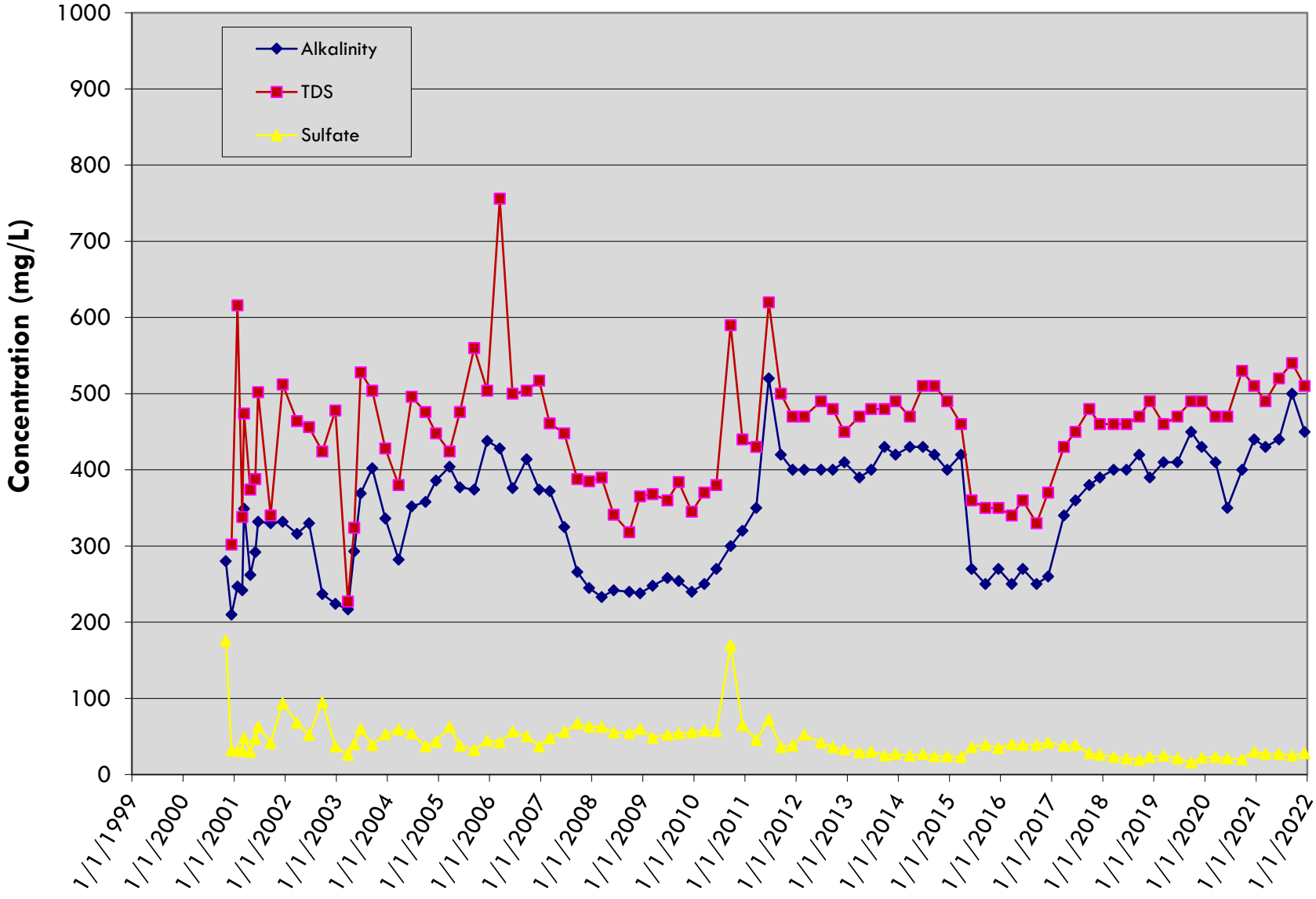

LDCS-7
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
120
110
100
90
80
70
60
50
40
30
20
10
0
Nitrate
Ammonia
Chloride
TOC
LDCS 7, TOC
930 mg/L
9/25/2019
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013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

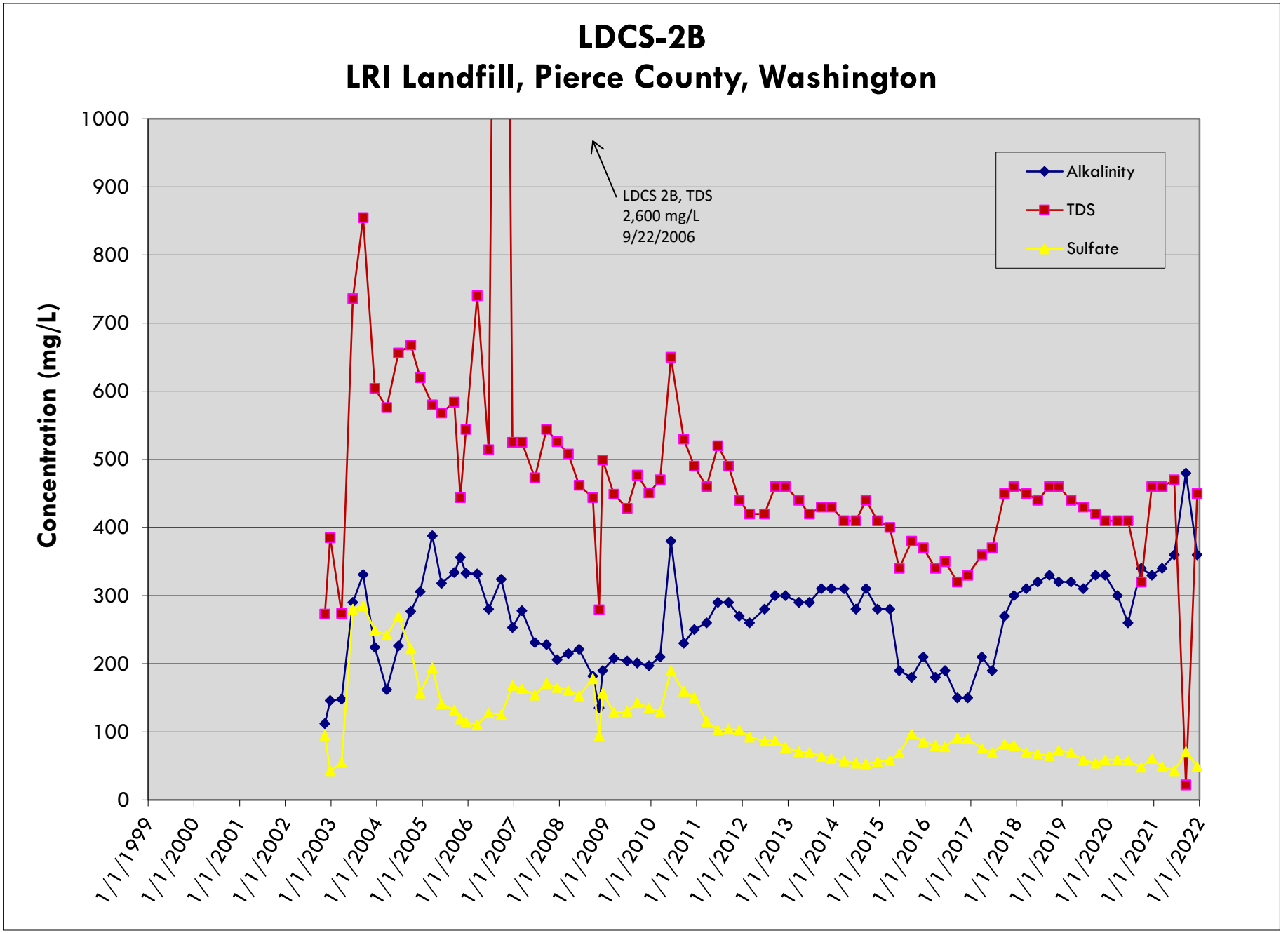
LDCS-8A
LRI Landfill, Pierce County, Washington

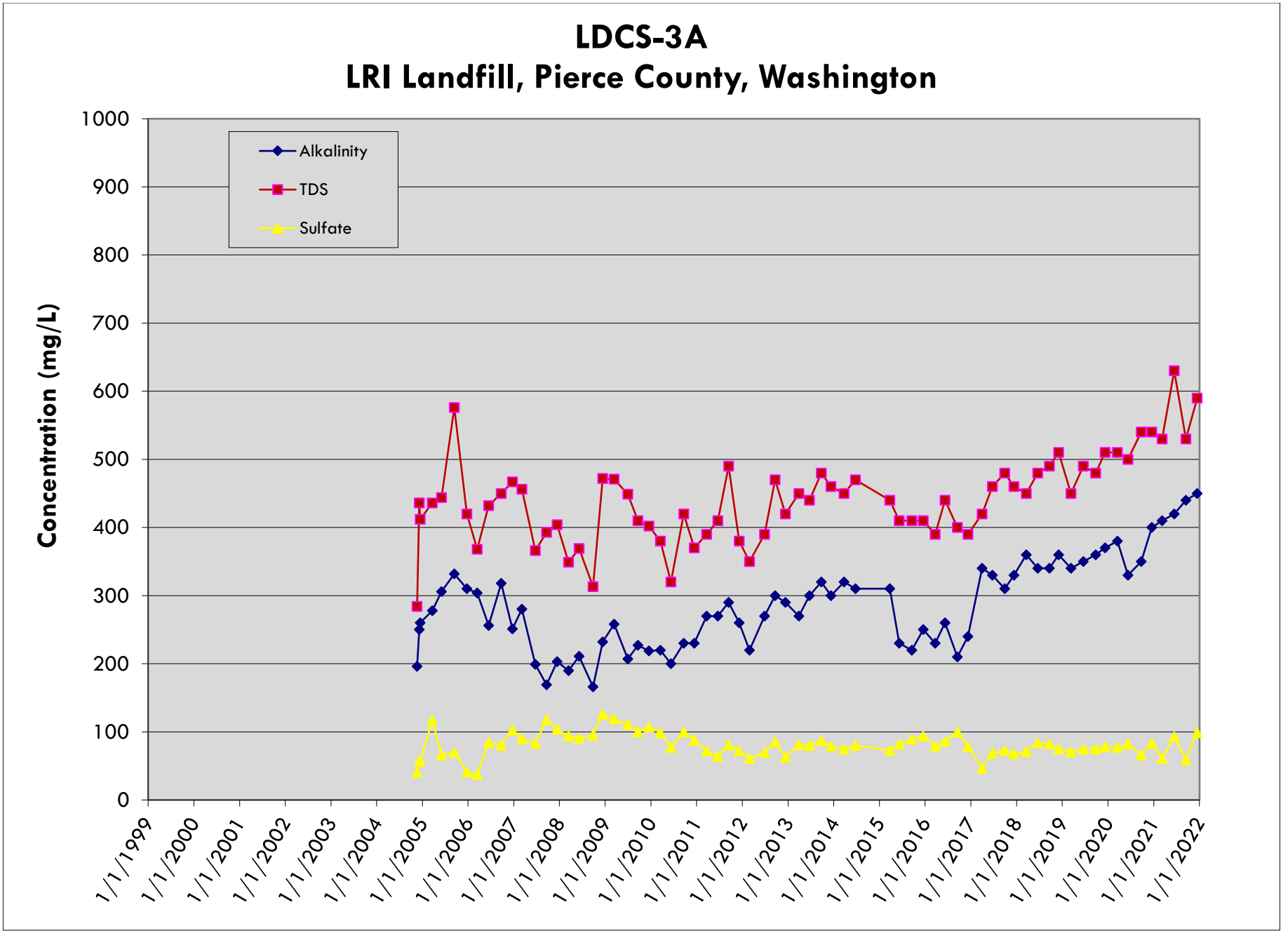


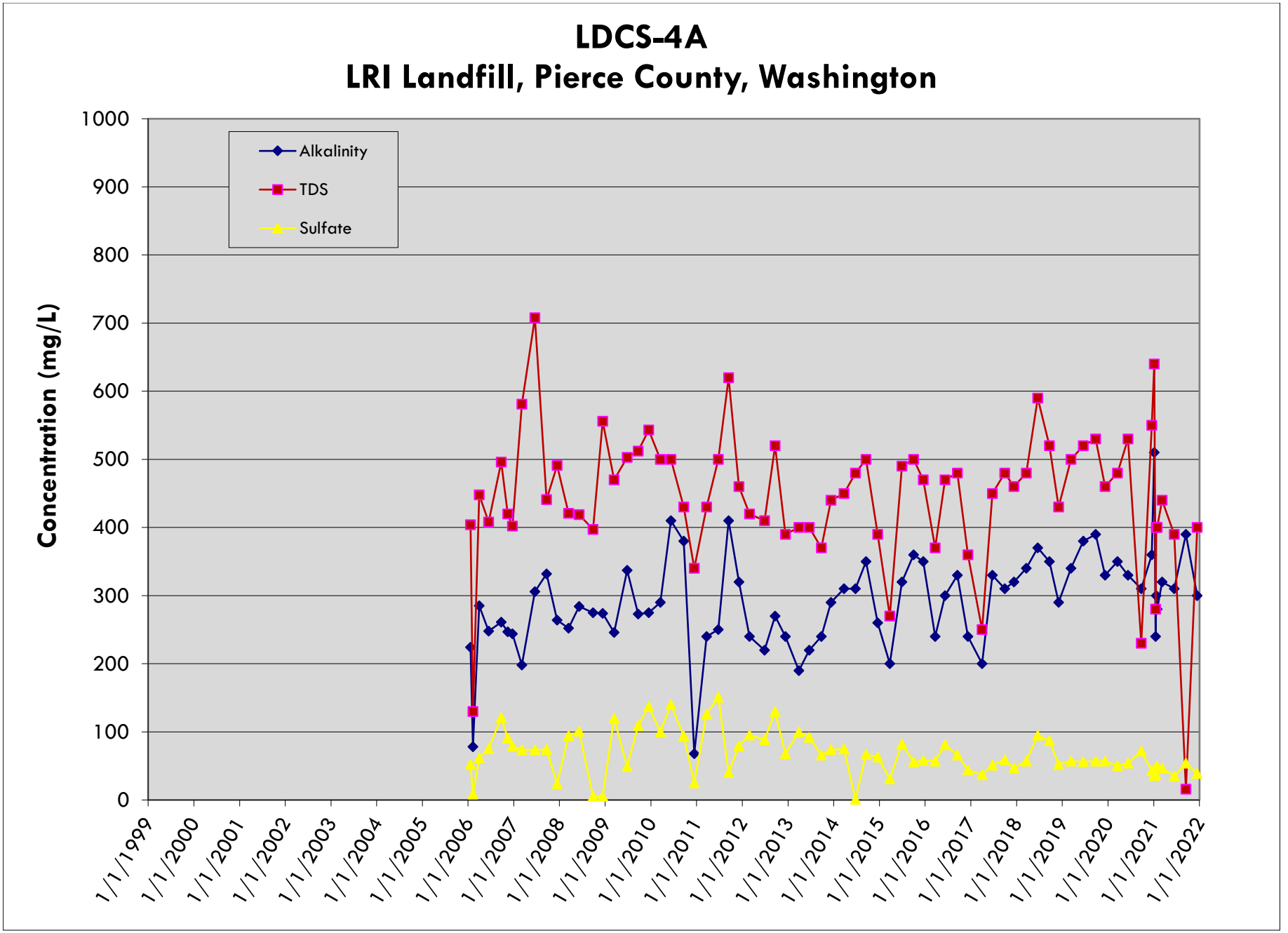

LDCS-1
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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

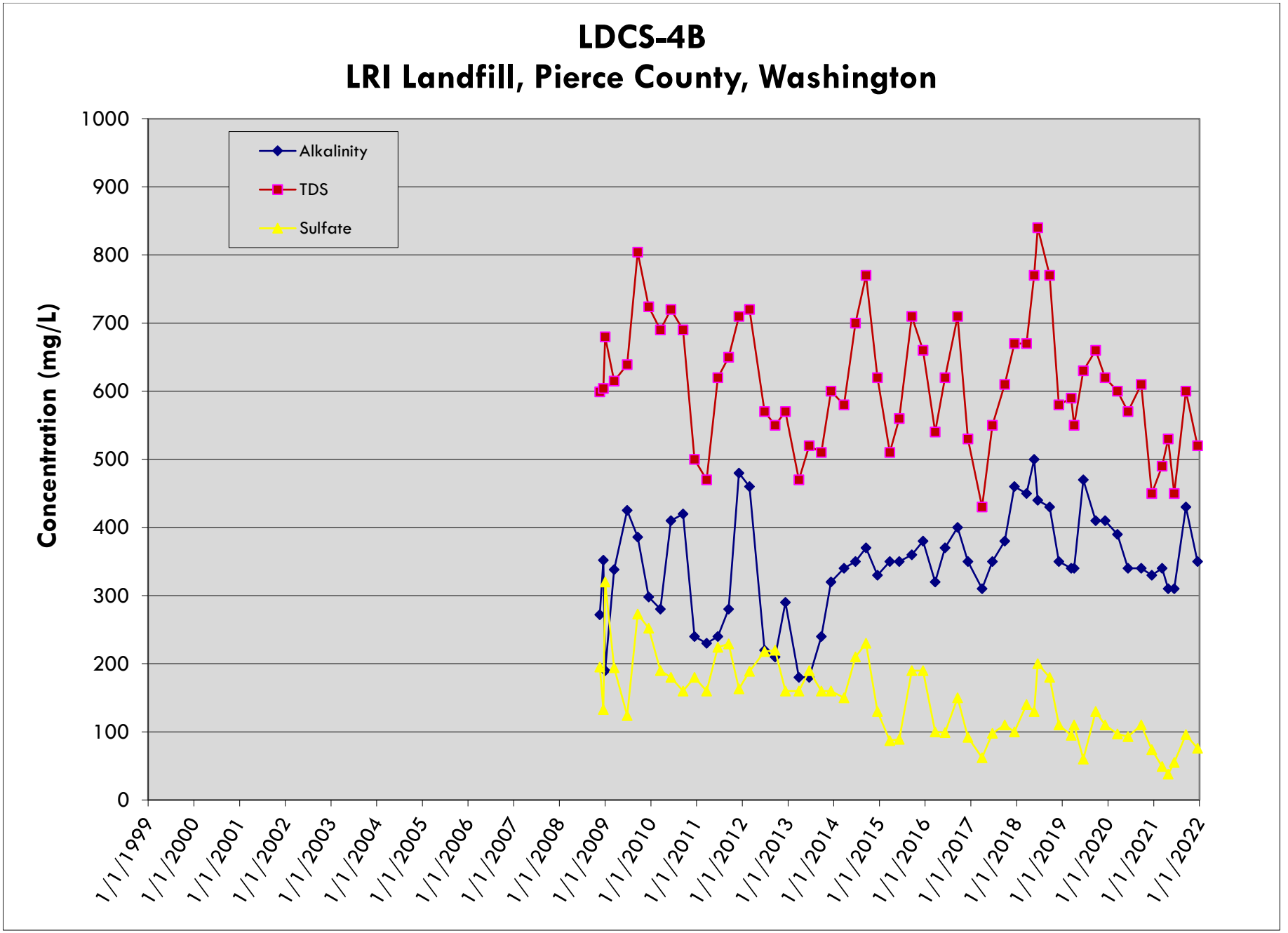
LDCS-2A
LRI Landfill, Pierce County, Washington



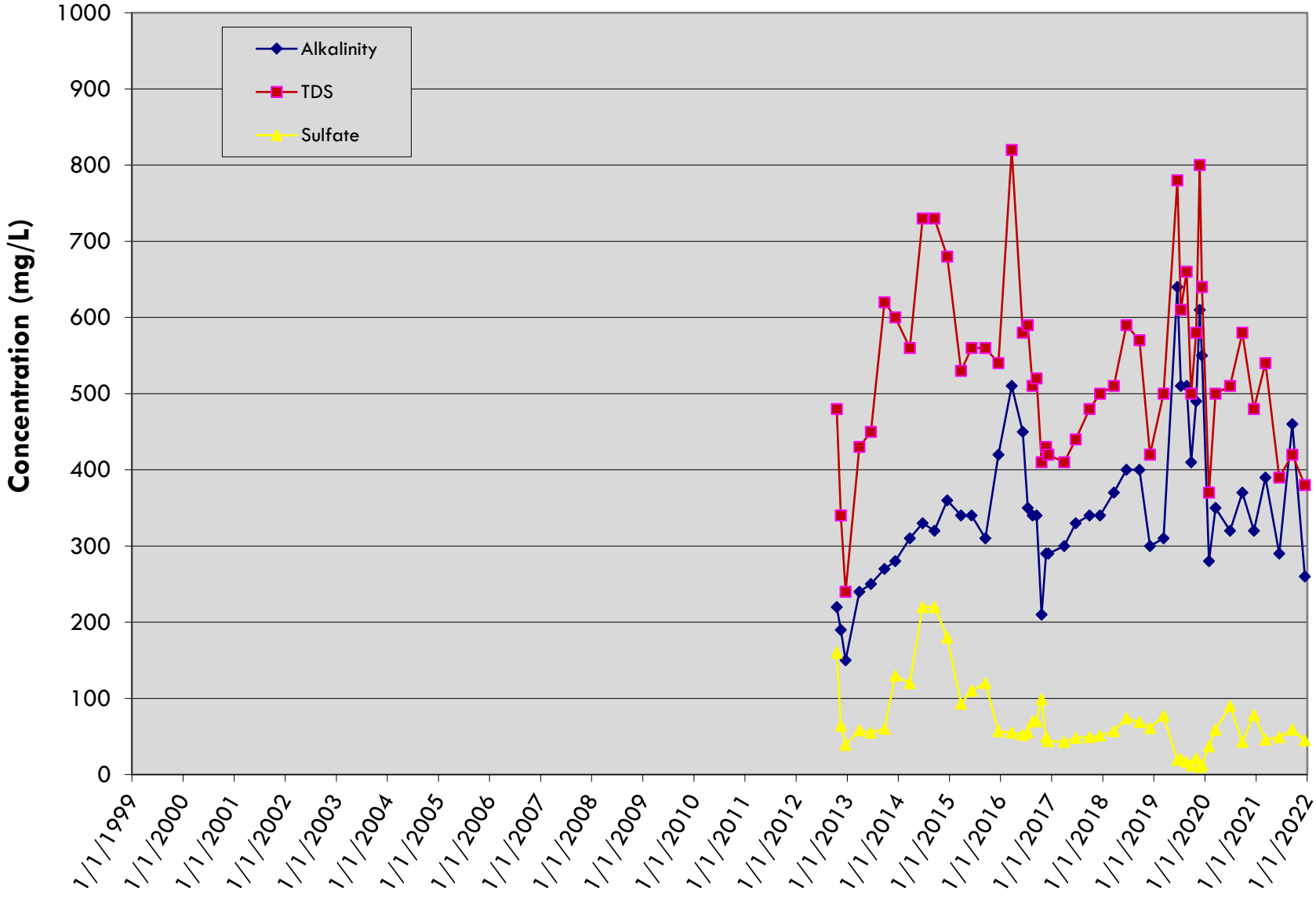

LDCS-2B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019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


LDCS-3A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
0
100
200
300
400
500
600
700
800
900
1000
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

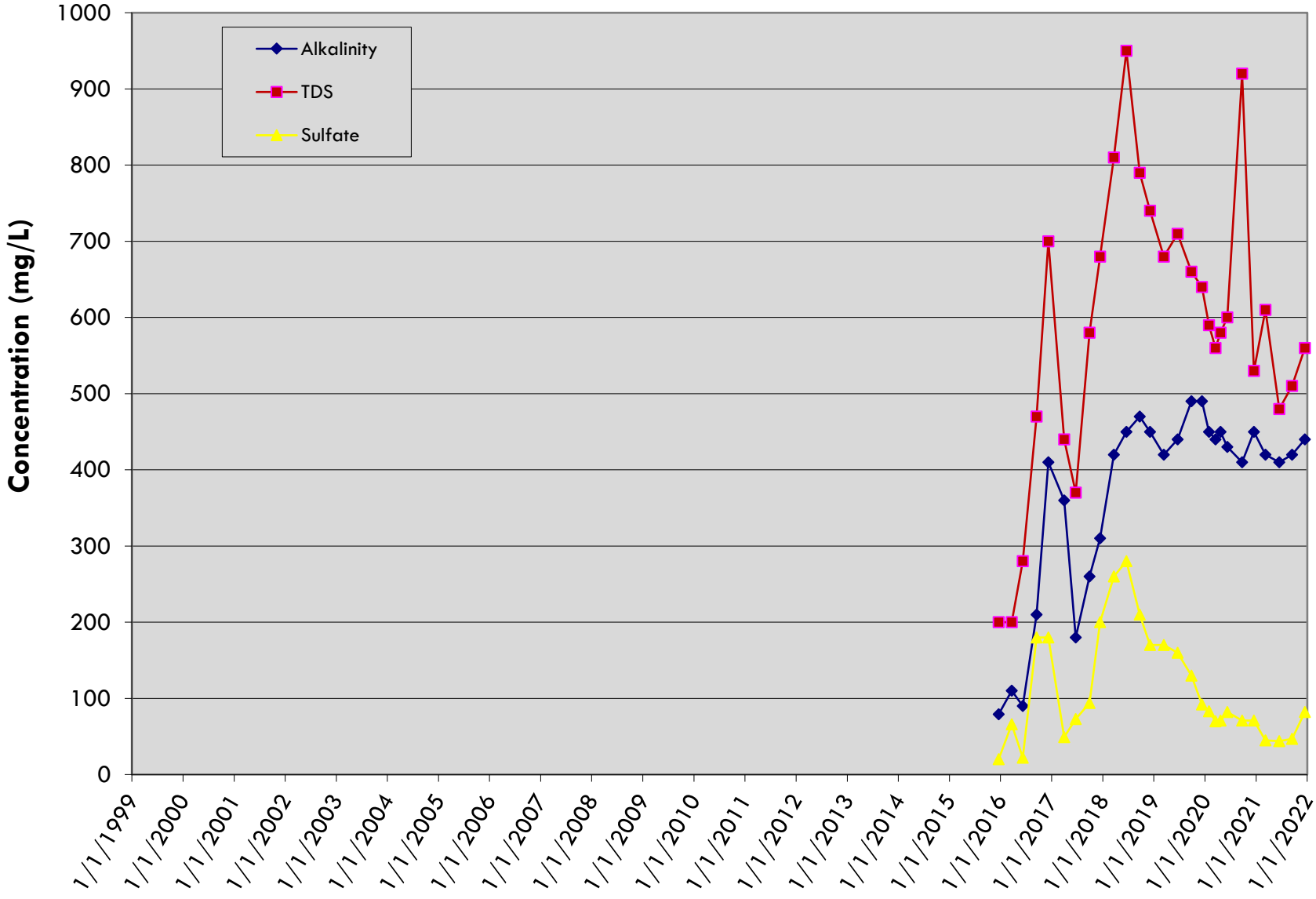

LDCS-4A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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


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
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

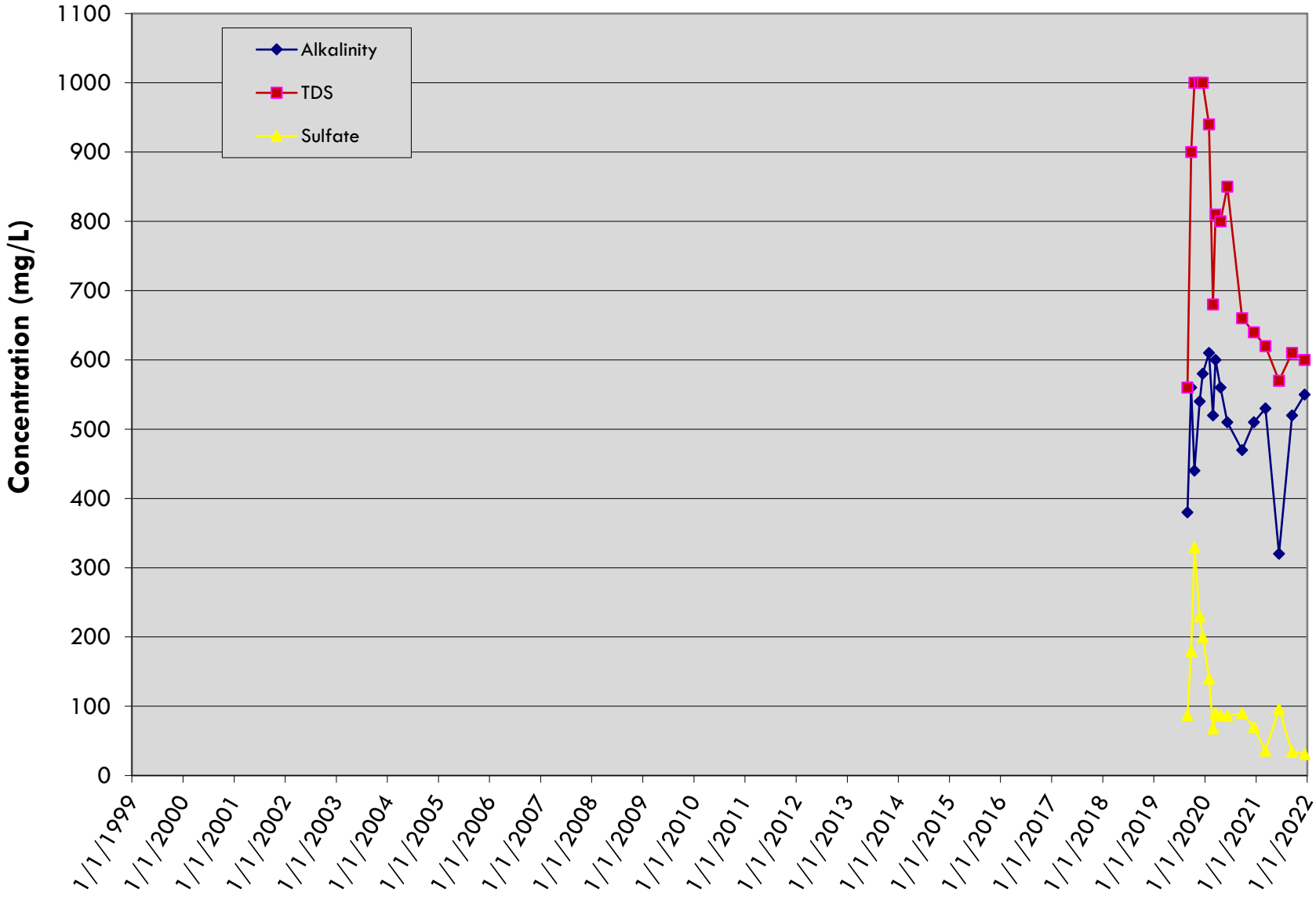
LDCS-5
LRI Landfill, Pierce County, Washington



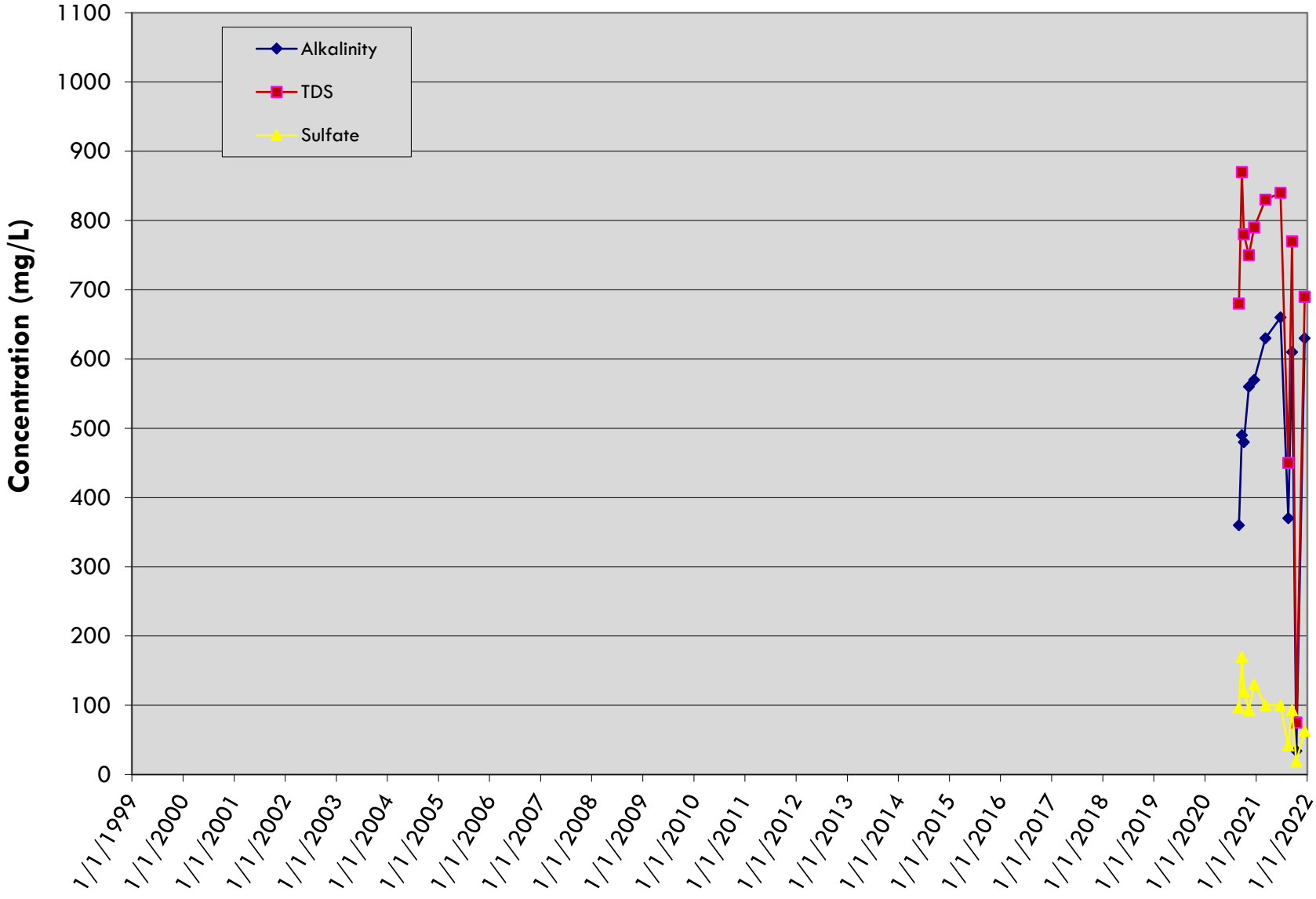
LDCS-6A
LRI Landfill, Pierce County, Washington



LDCS-7
LRI Landfill, Pierce County, Washington

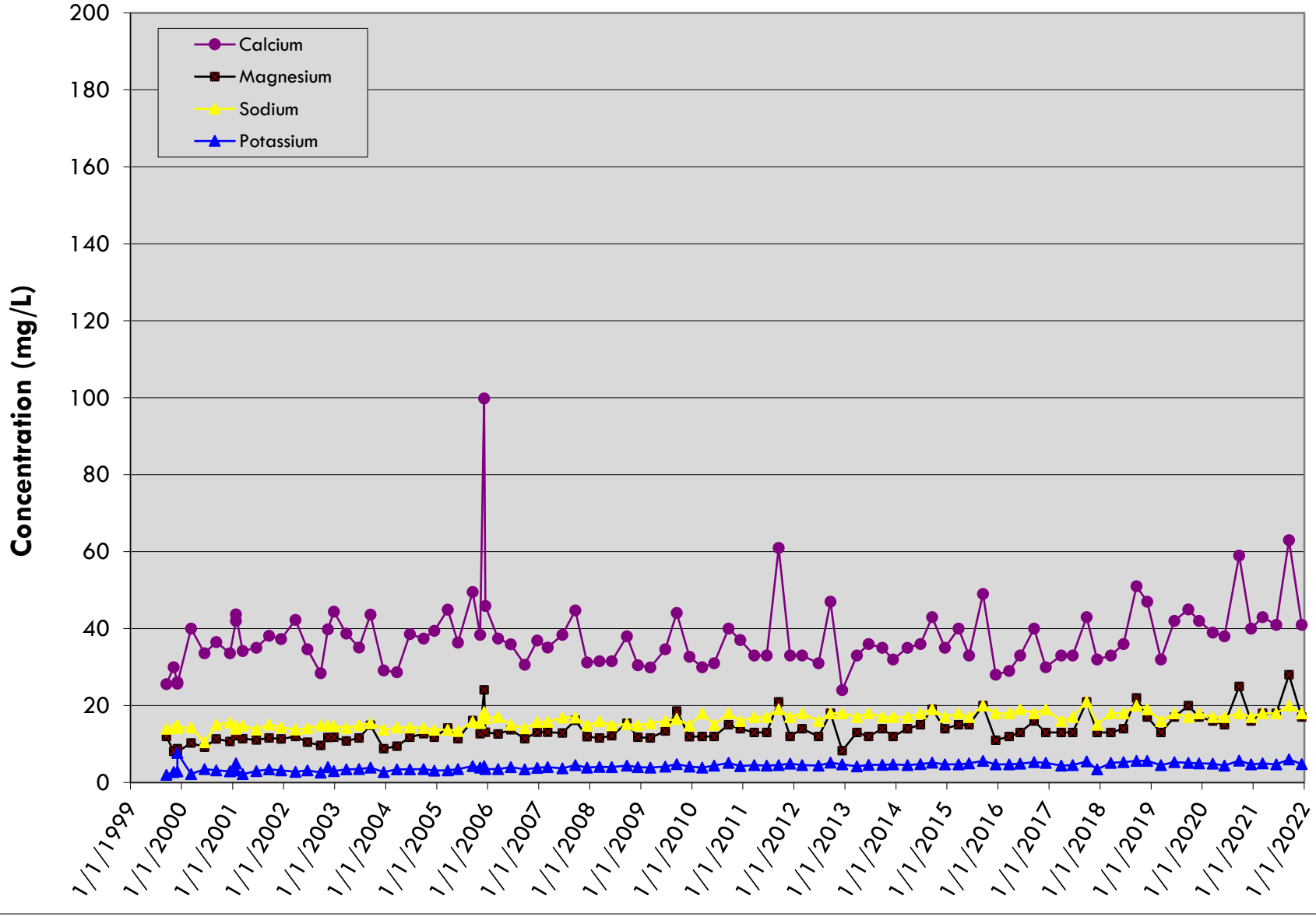


LDCS-8A
LRI Landfill, Pierce County, Washington

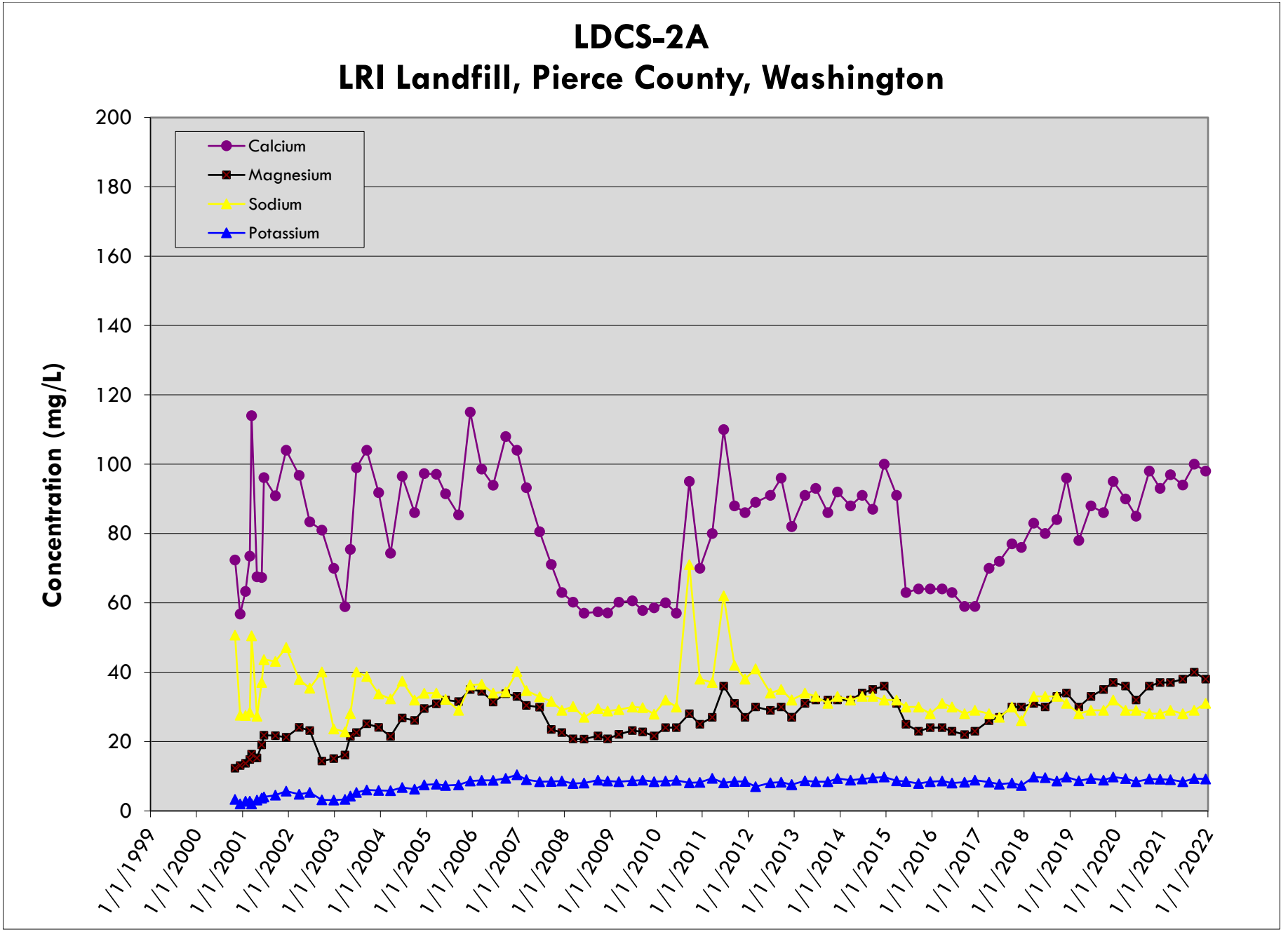


LDCS-1

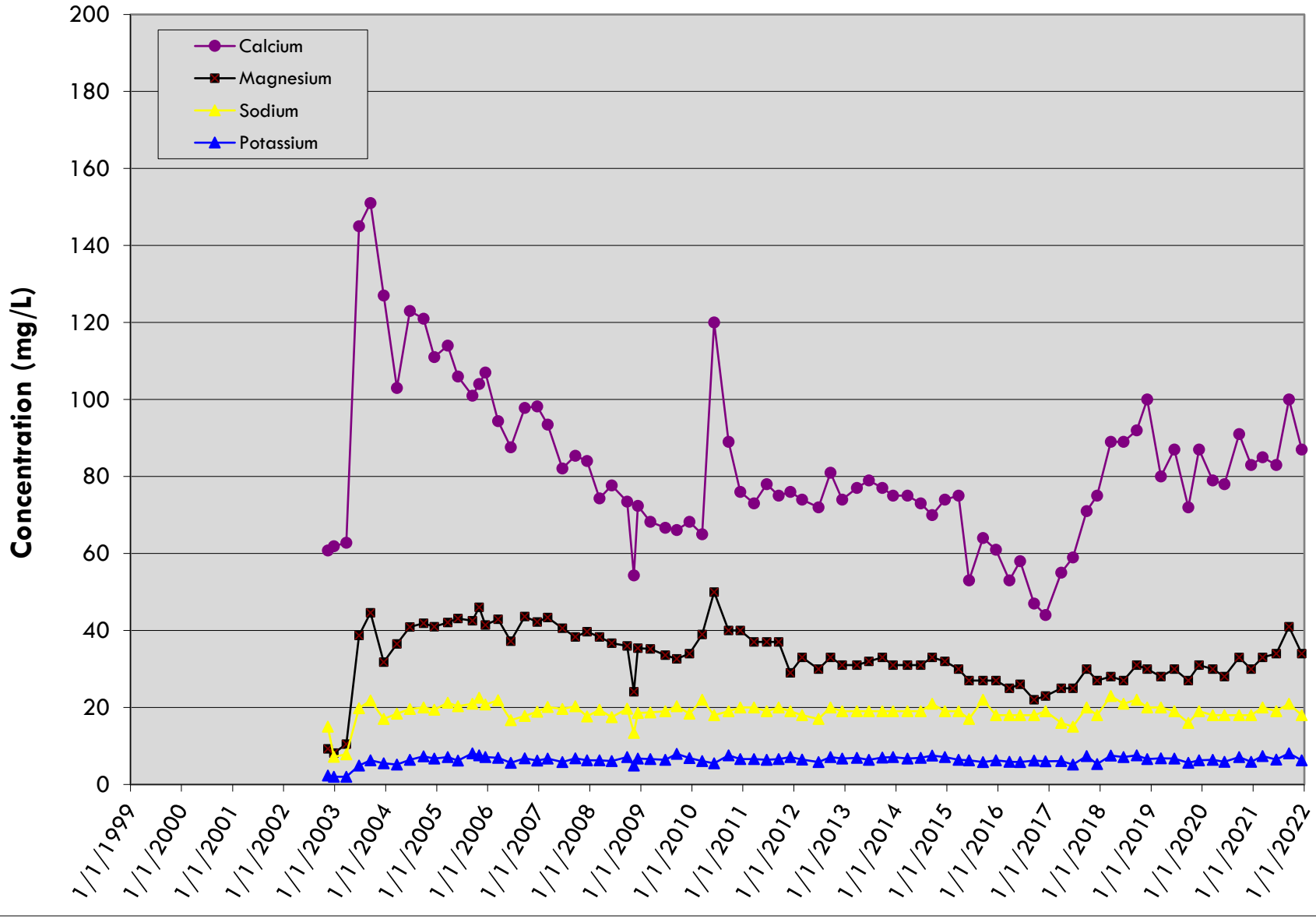
LRI Landfill, Pierce County, Washington



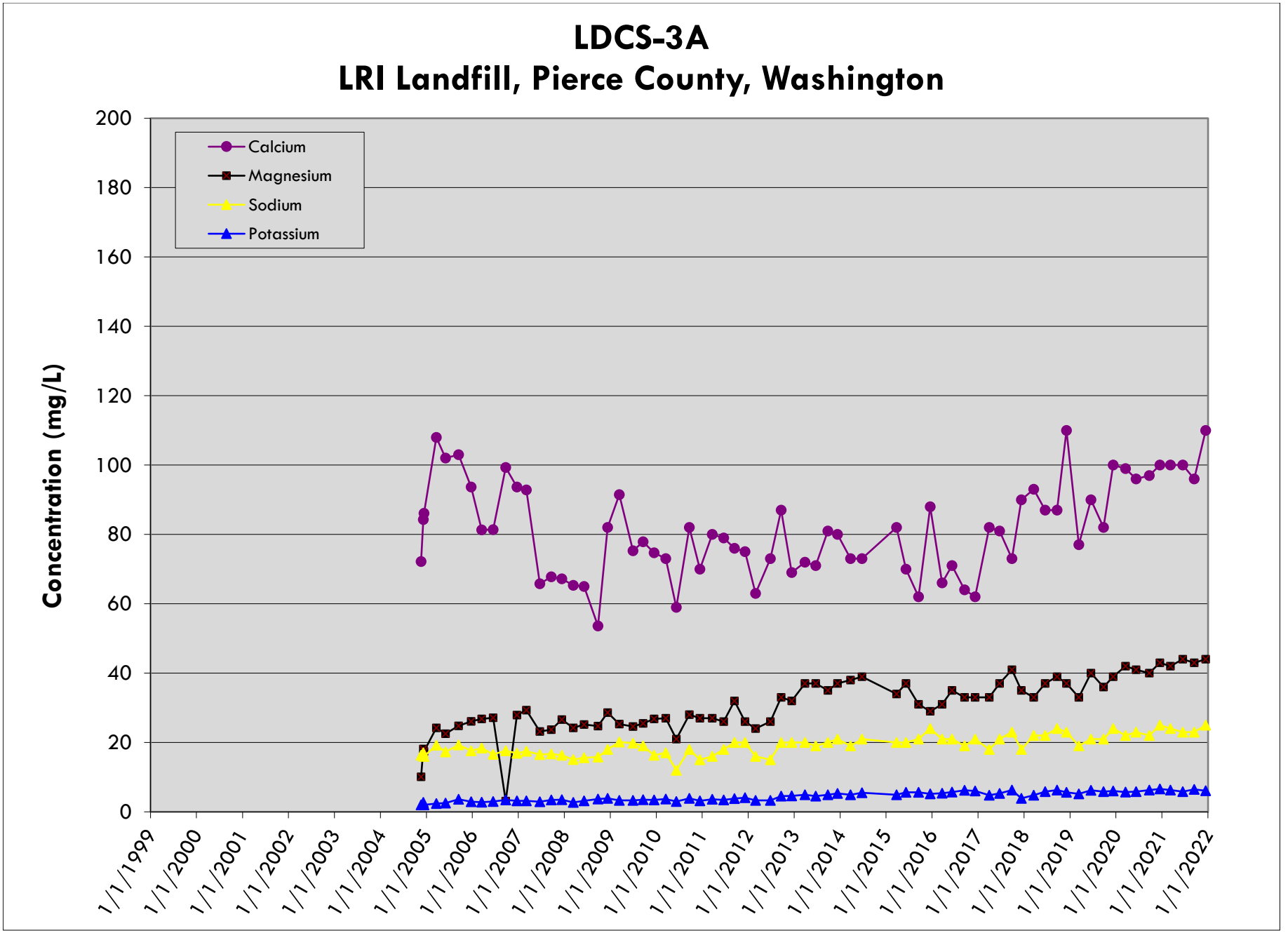
LDCS-2A
LRI Landfill, Pierce County, Washington



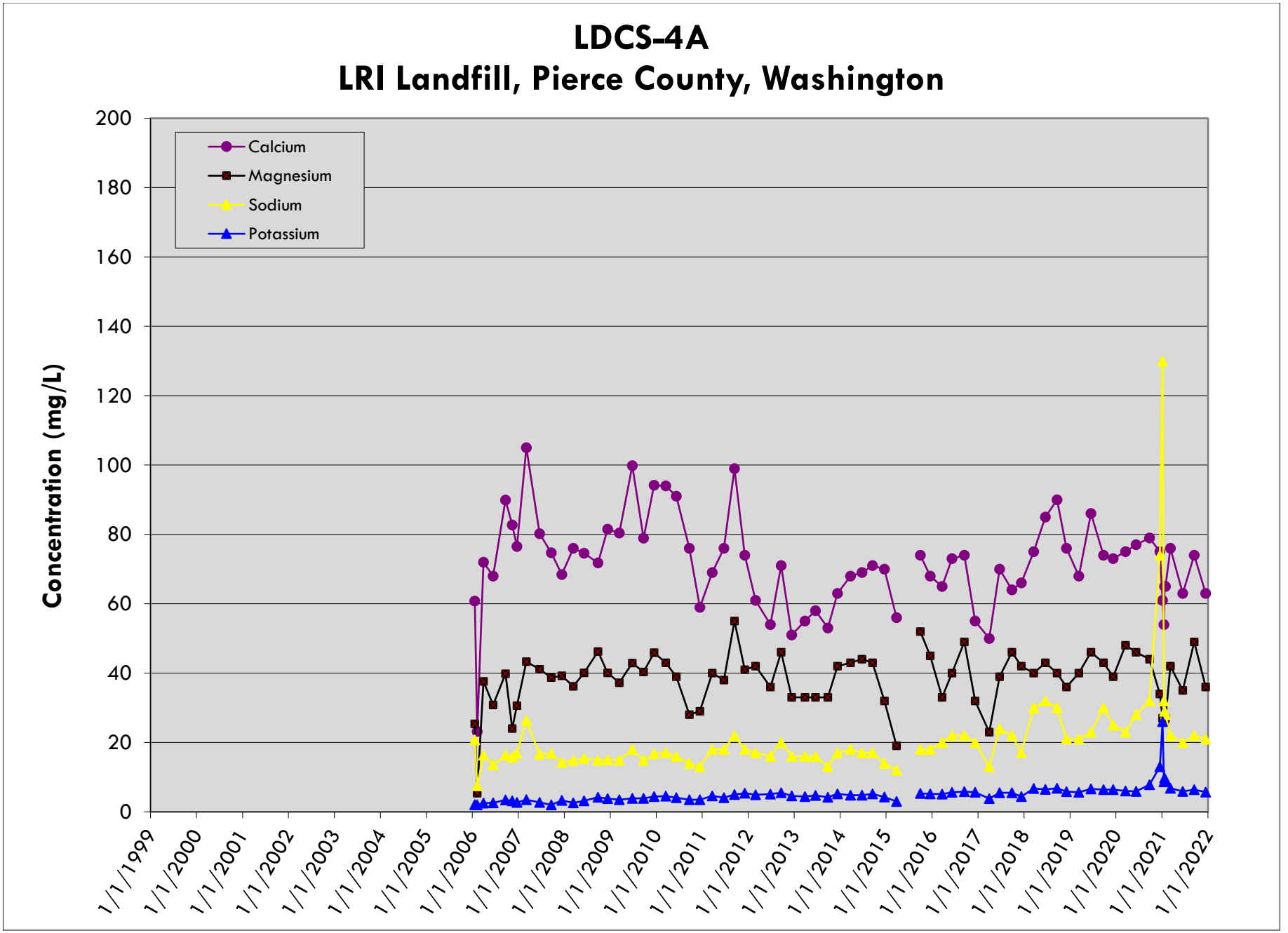
LDCS-2B
LRI Landfill, Pierce County, Washington



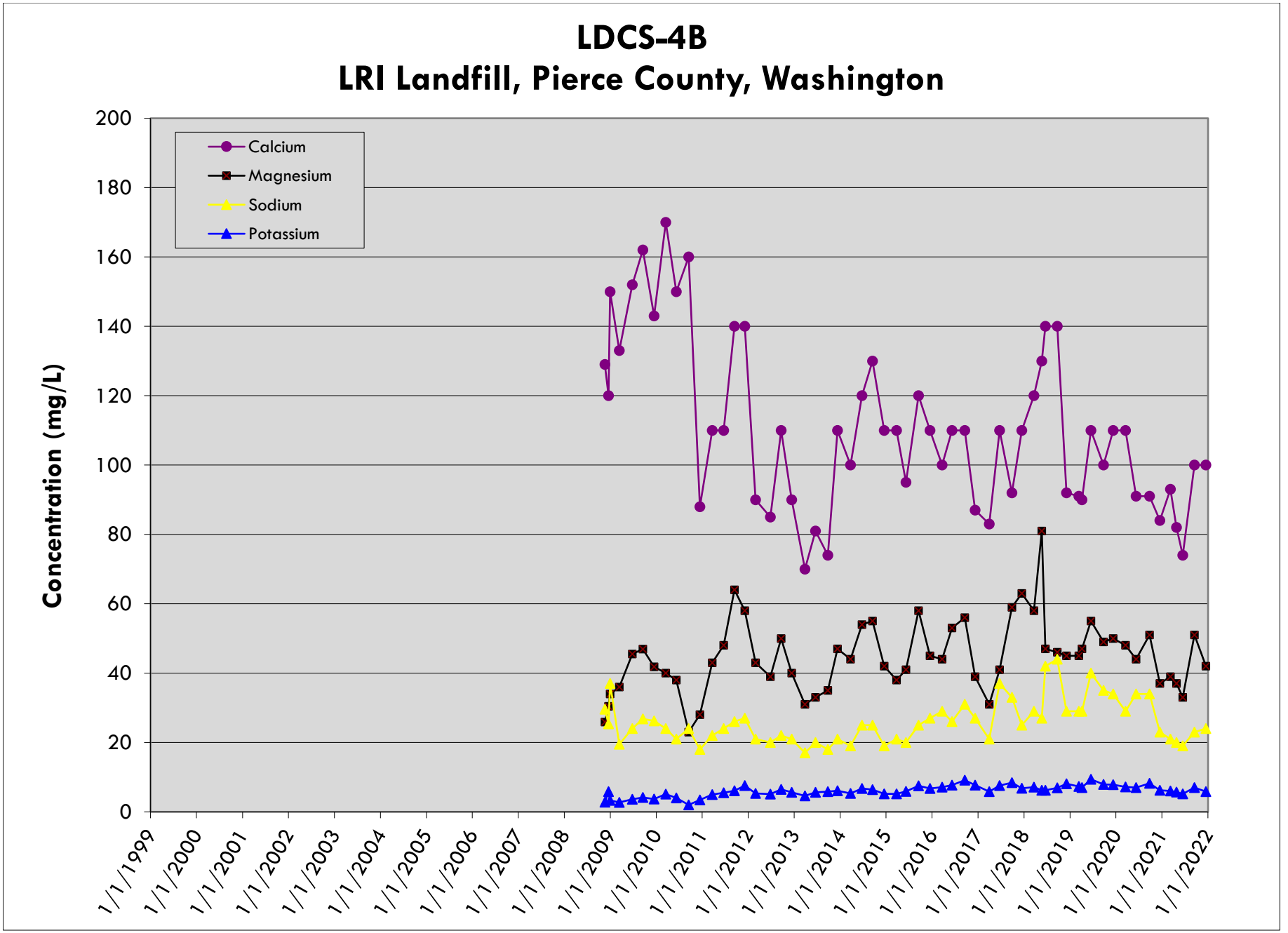
LDCS-3A
LRI Landfill, Pierce County, Washington



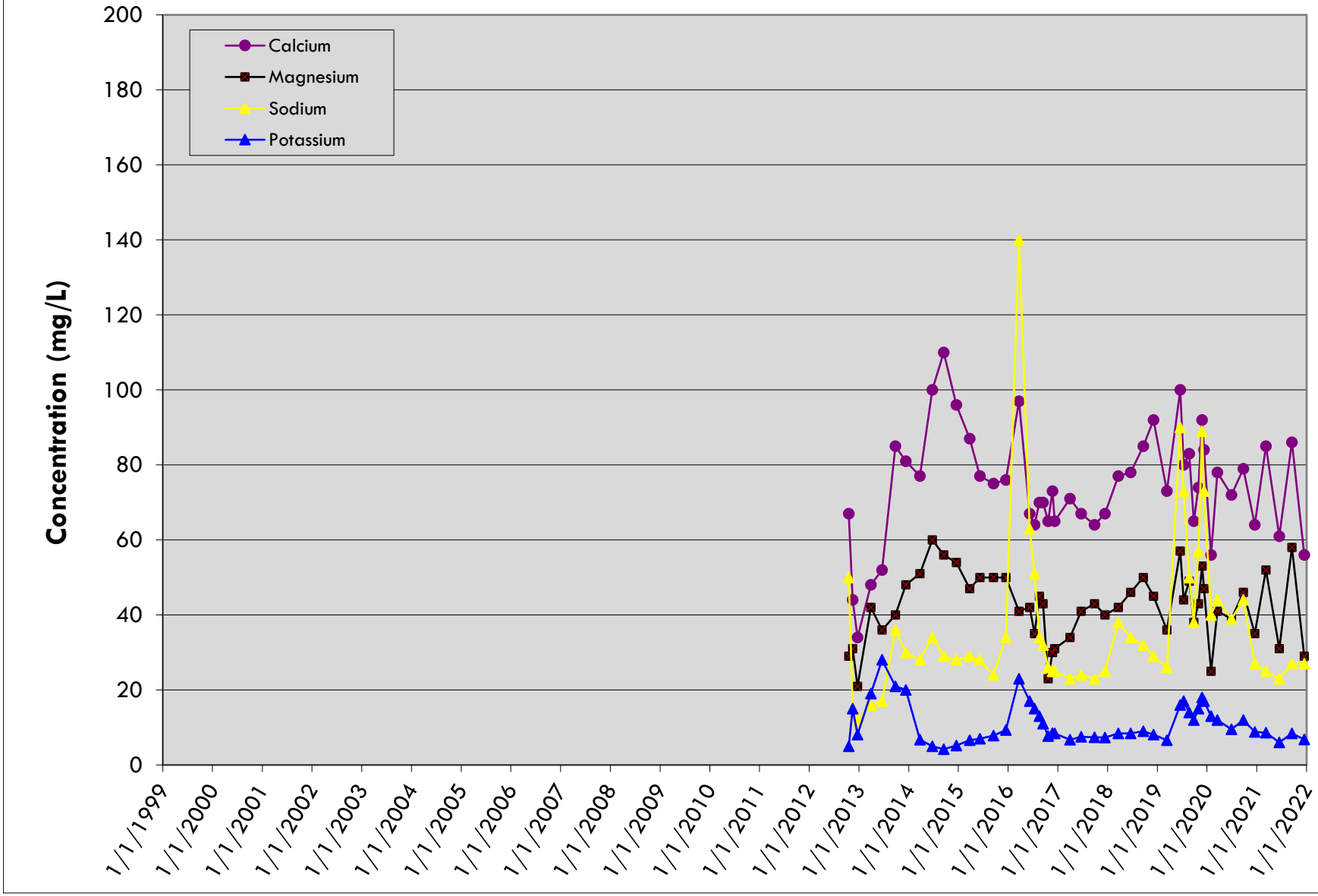
LDCS-4A
LRI Landfill, Pierce County, Washington



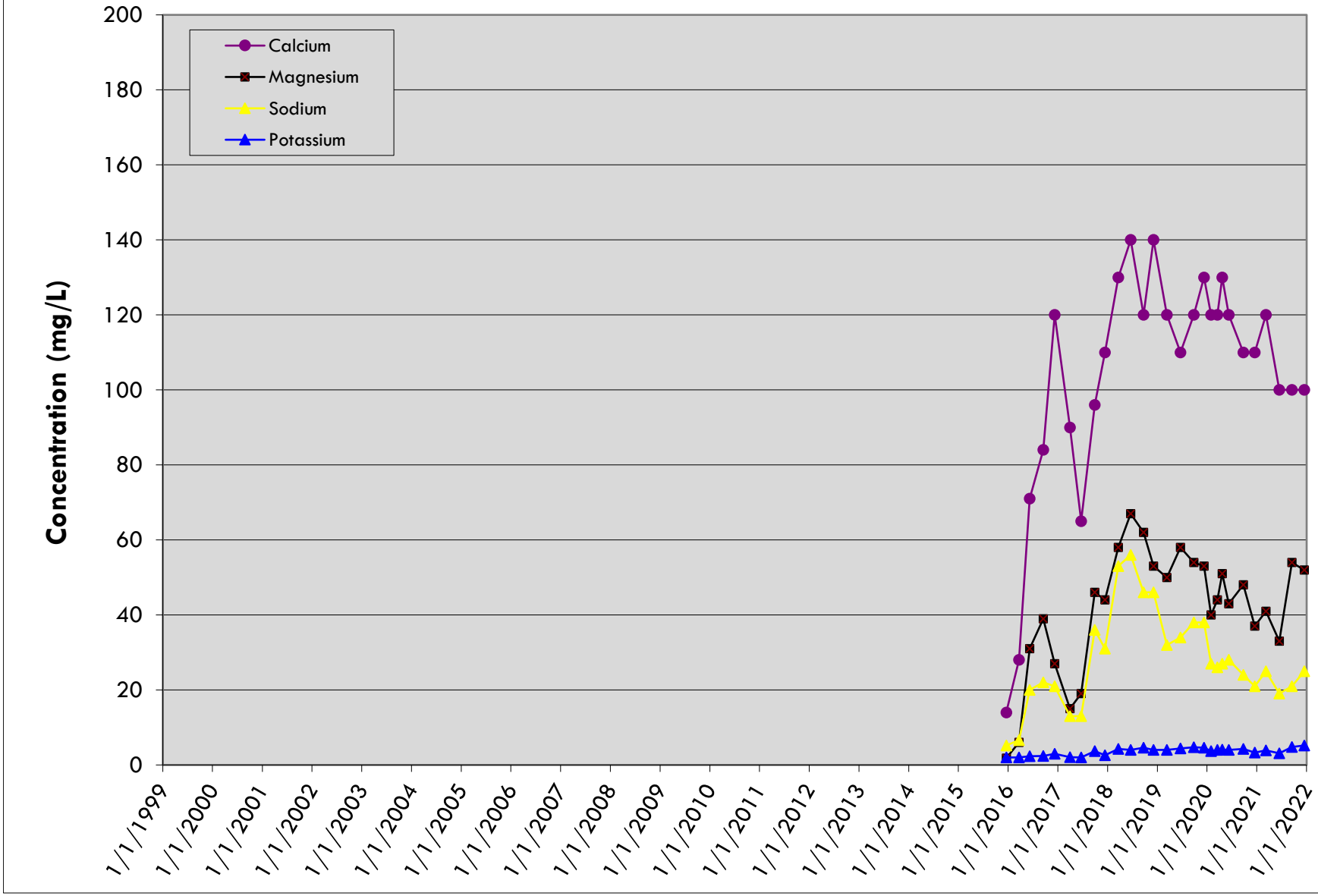
LDCS-4B
LRI Landfill, Pierce County, Washington



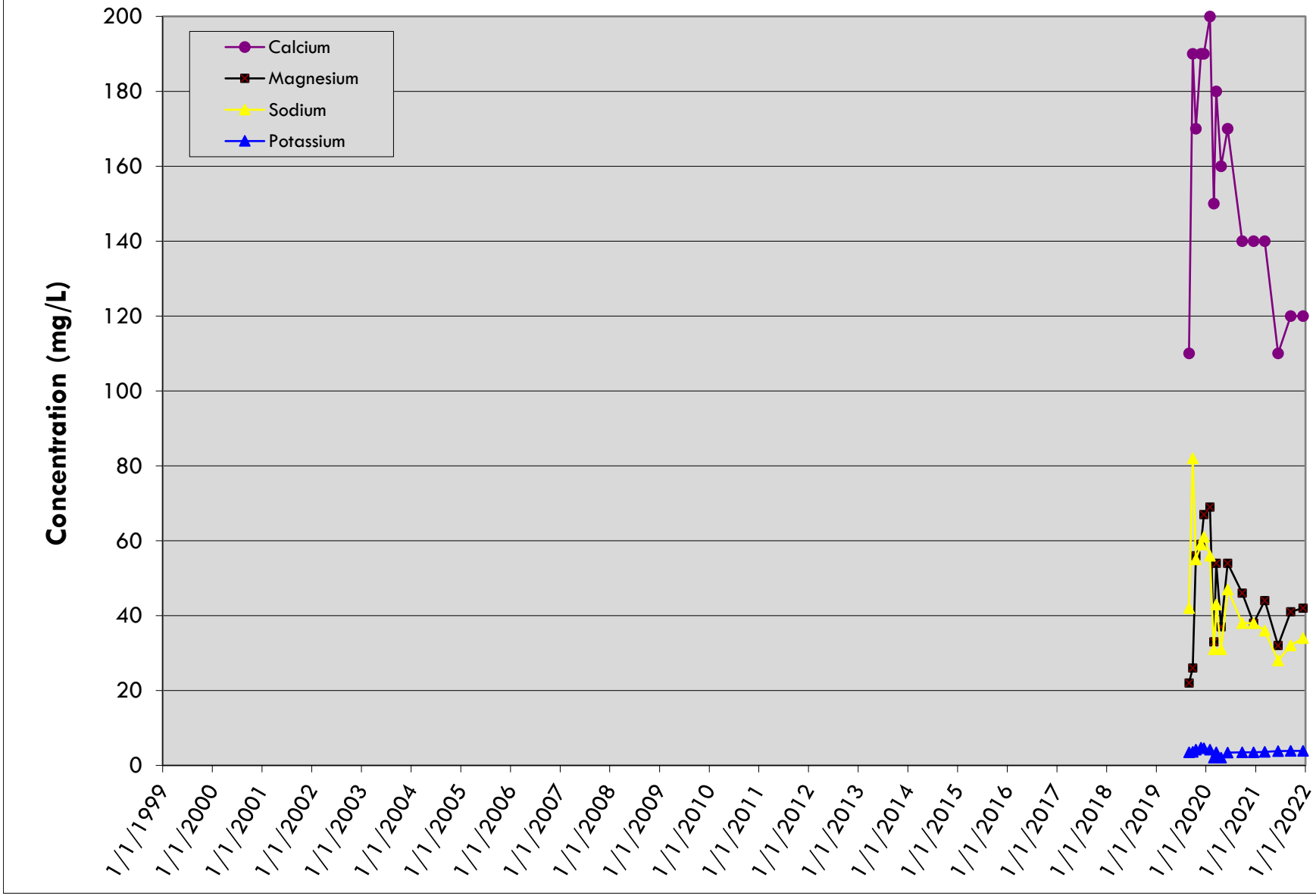
LDCS-5
LRI Landfill, Pierce County, Washington



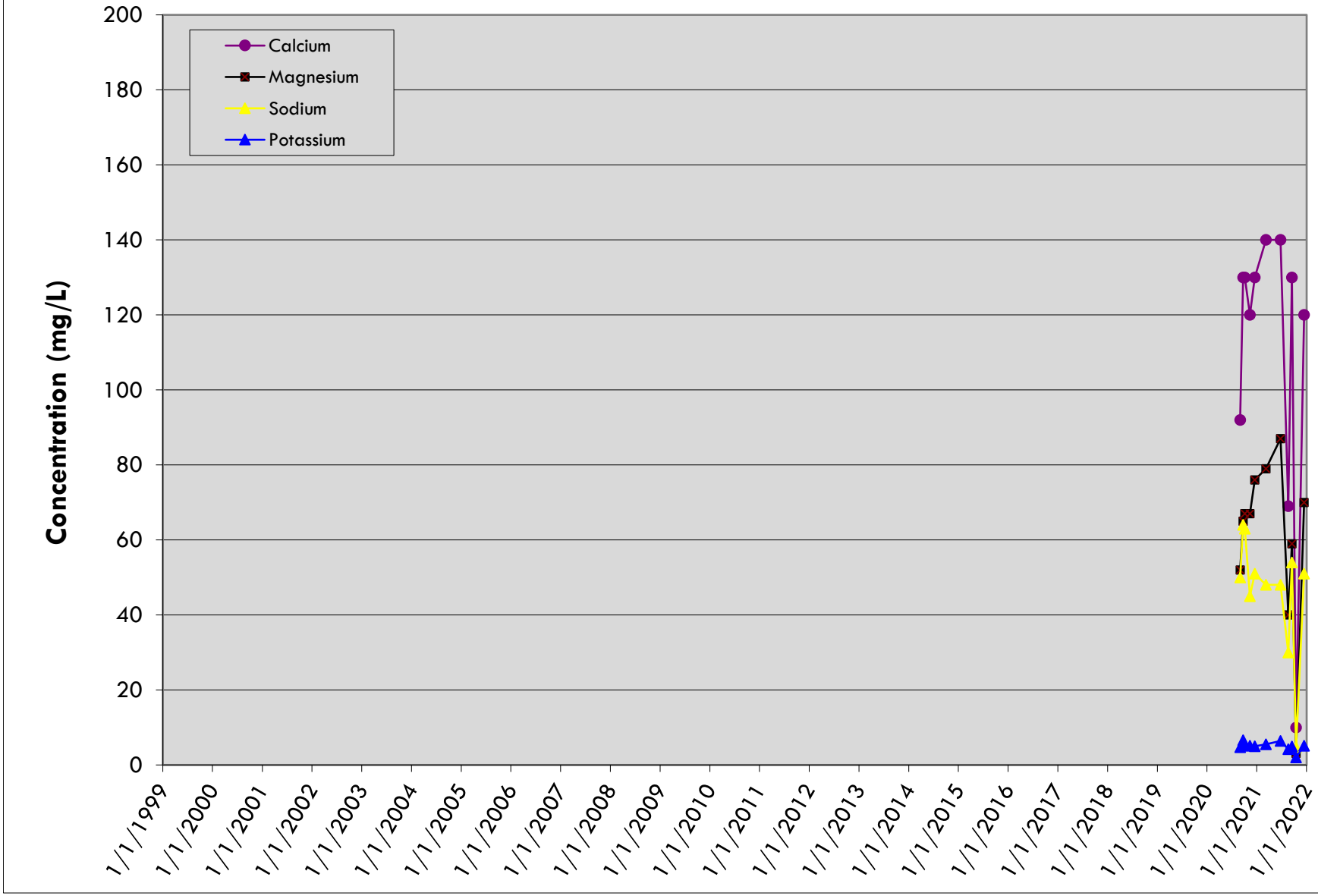
LDCS-6A
LRI Landfill, Pierce County, Washington

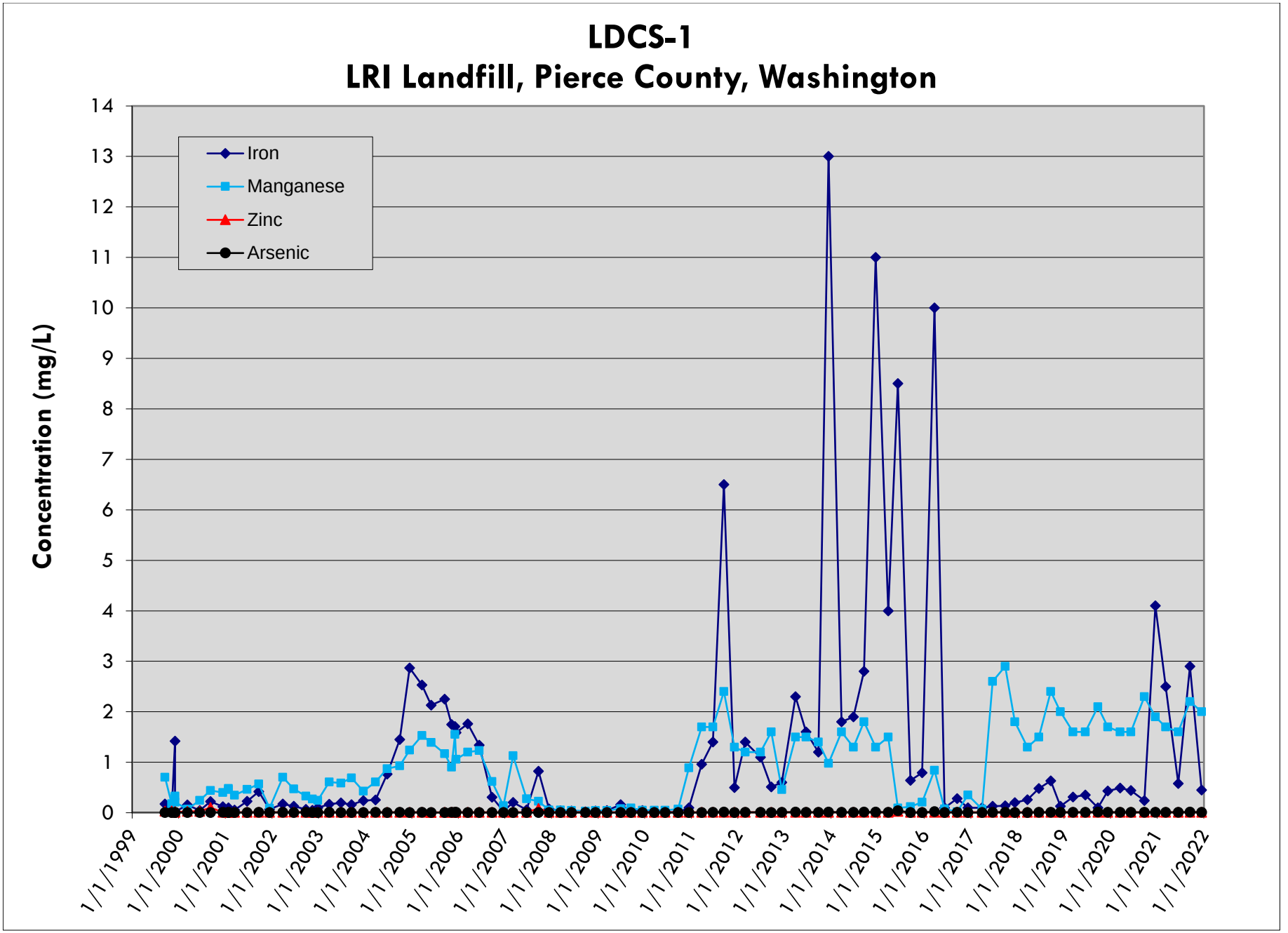


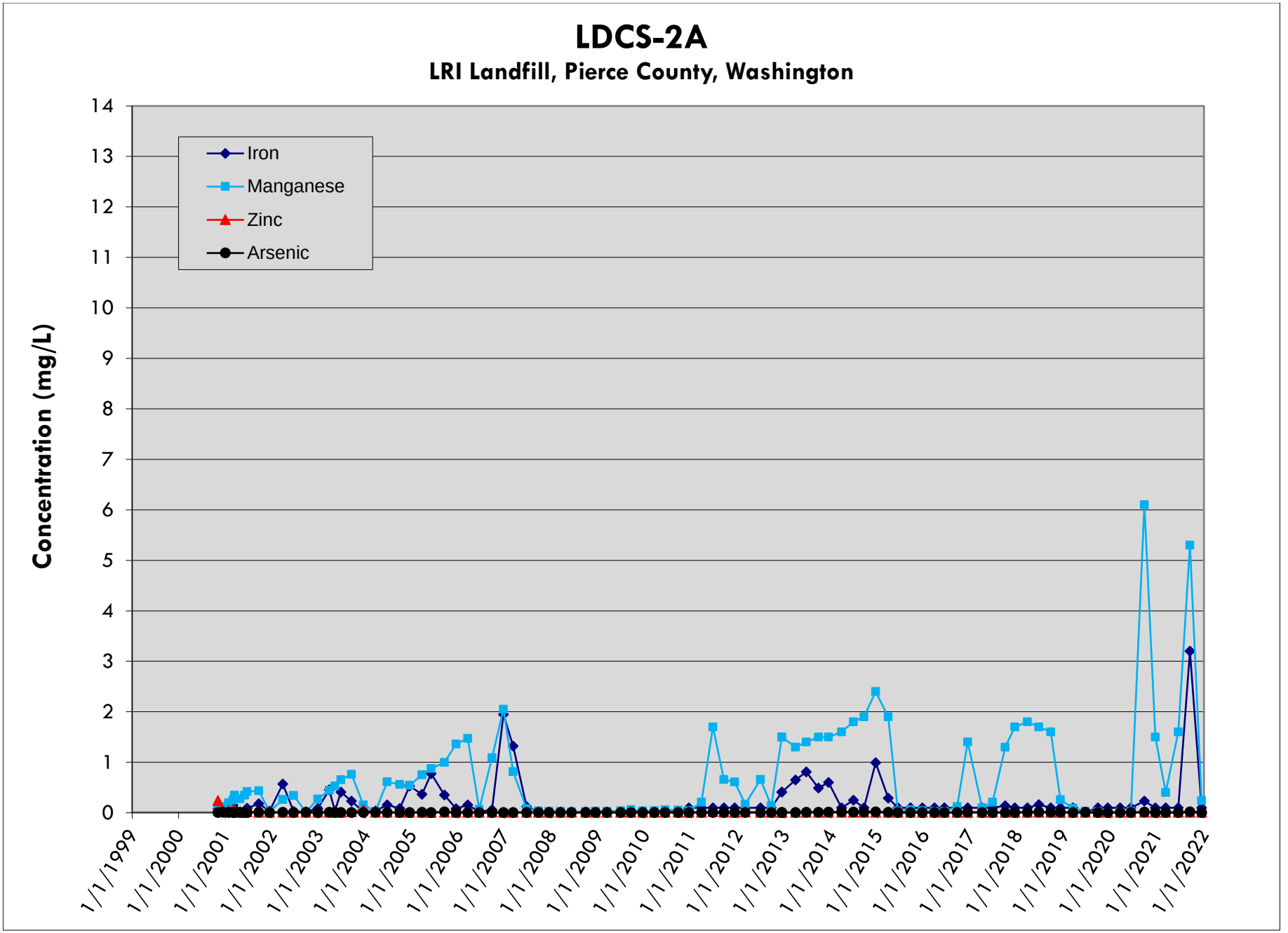
LDCS-7
LRI Landfill, Pierce County, Washington



LDCS-8A
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
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


LDCS-2A
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
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
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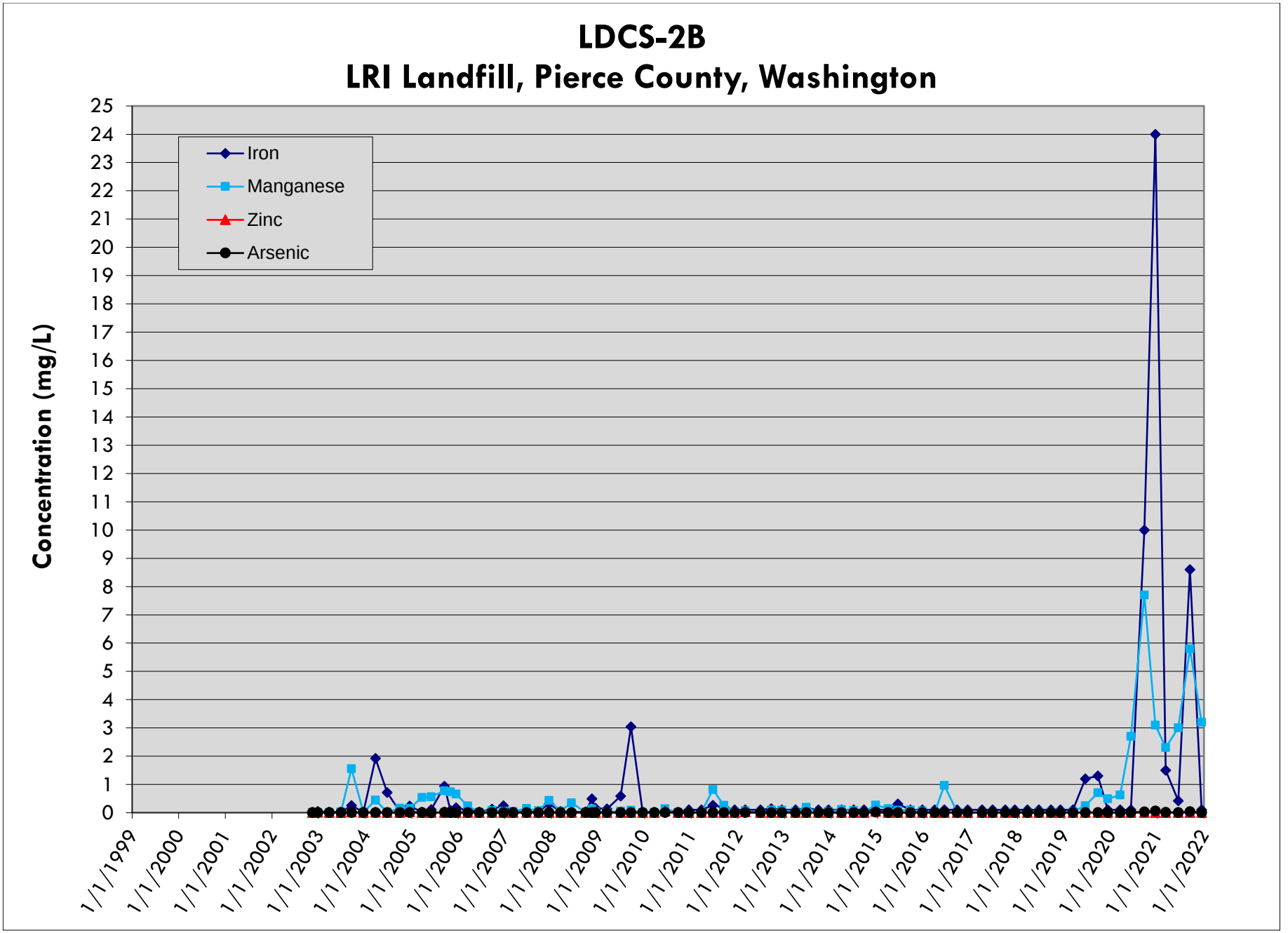
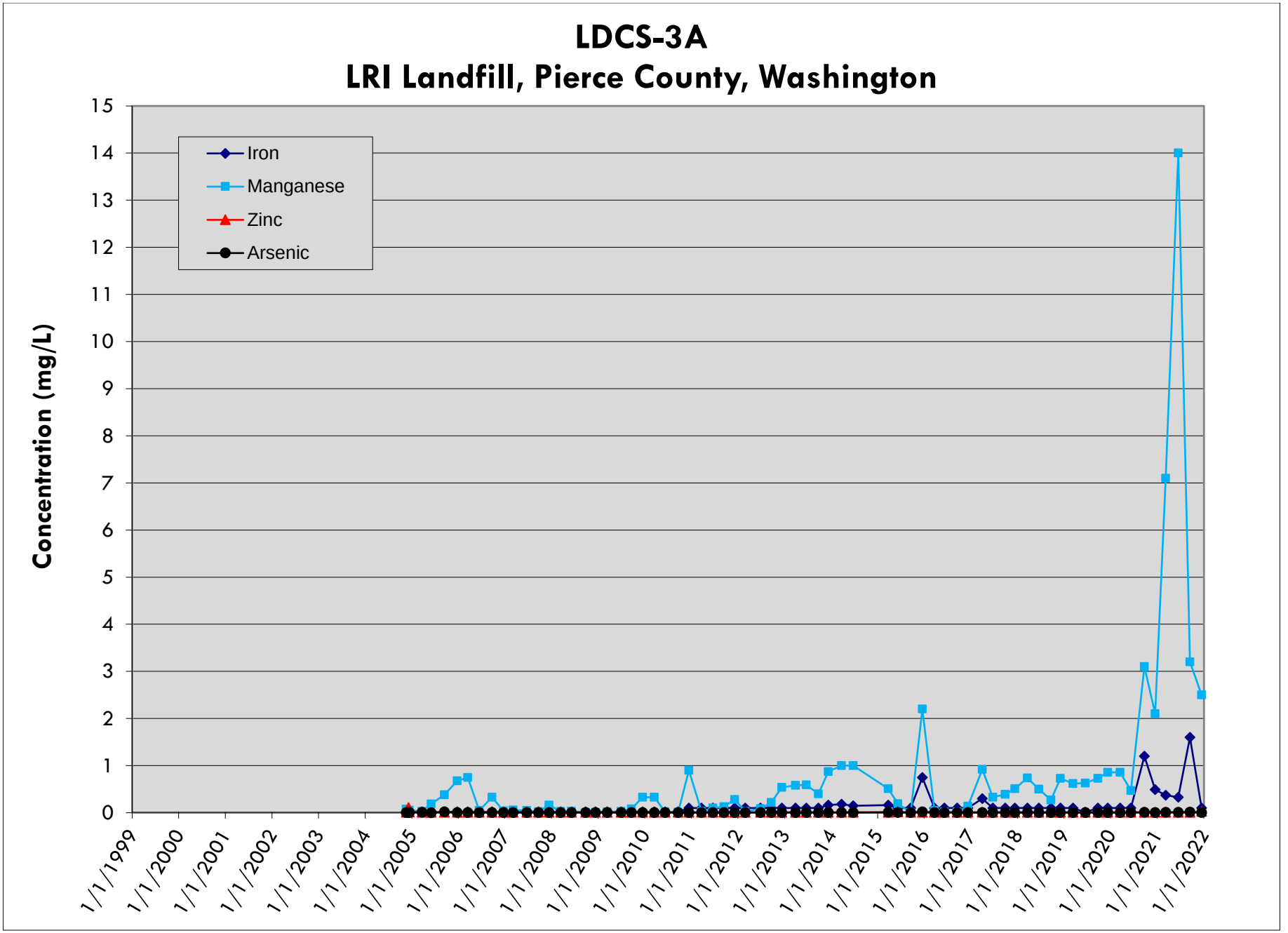
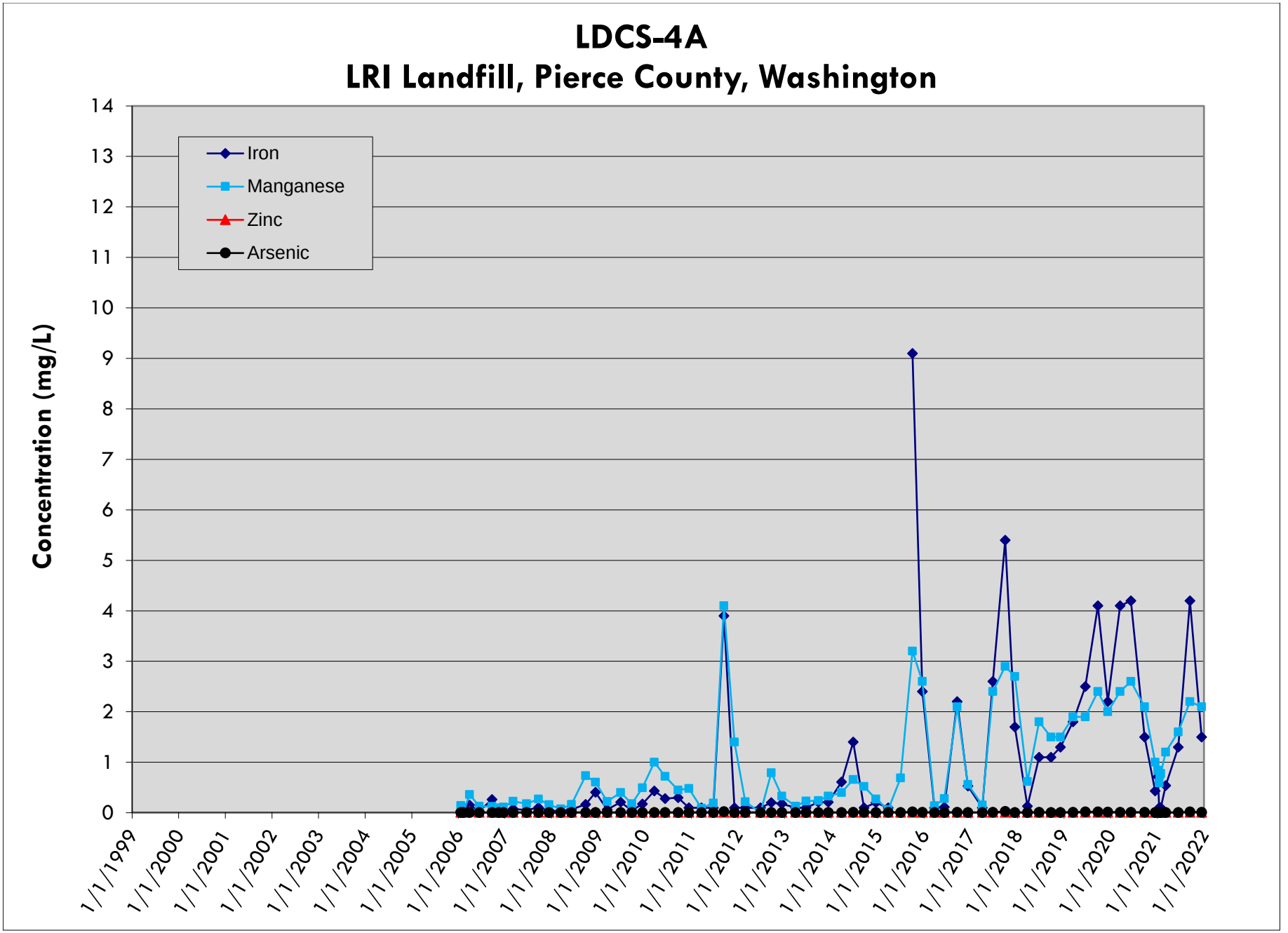
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022


LDCS-2B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
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


LDCS-3A
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
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


LDCS-4A
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
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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1/1/2011
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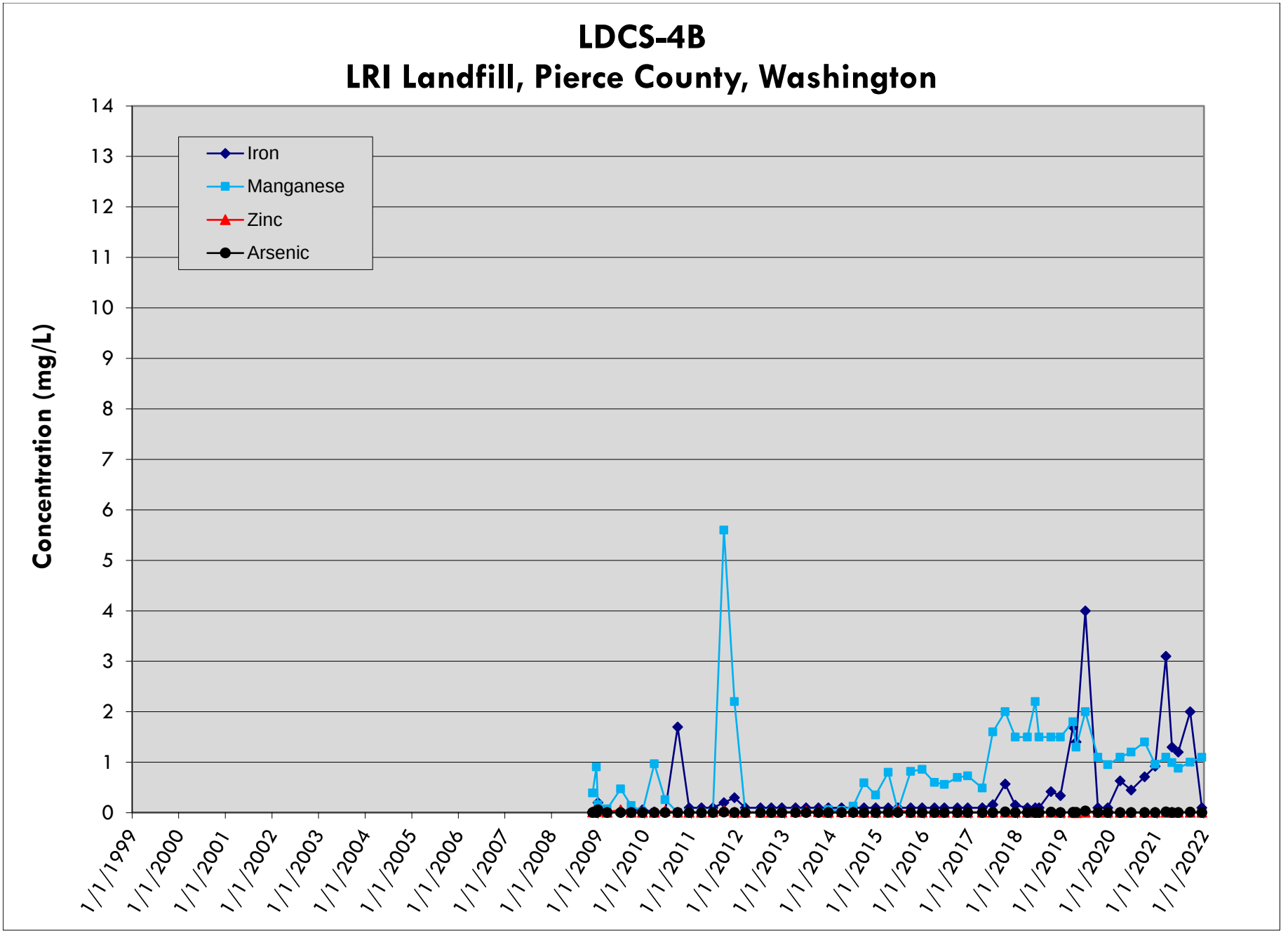
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022


LDCS-4B
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
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
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1/1/2008
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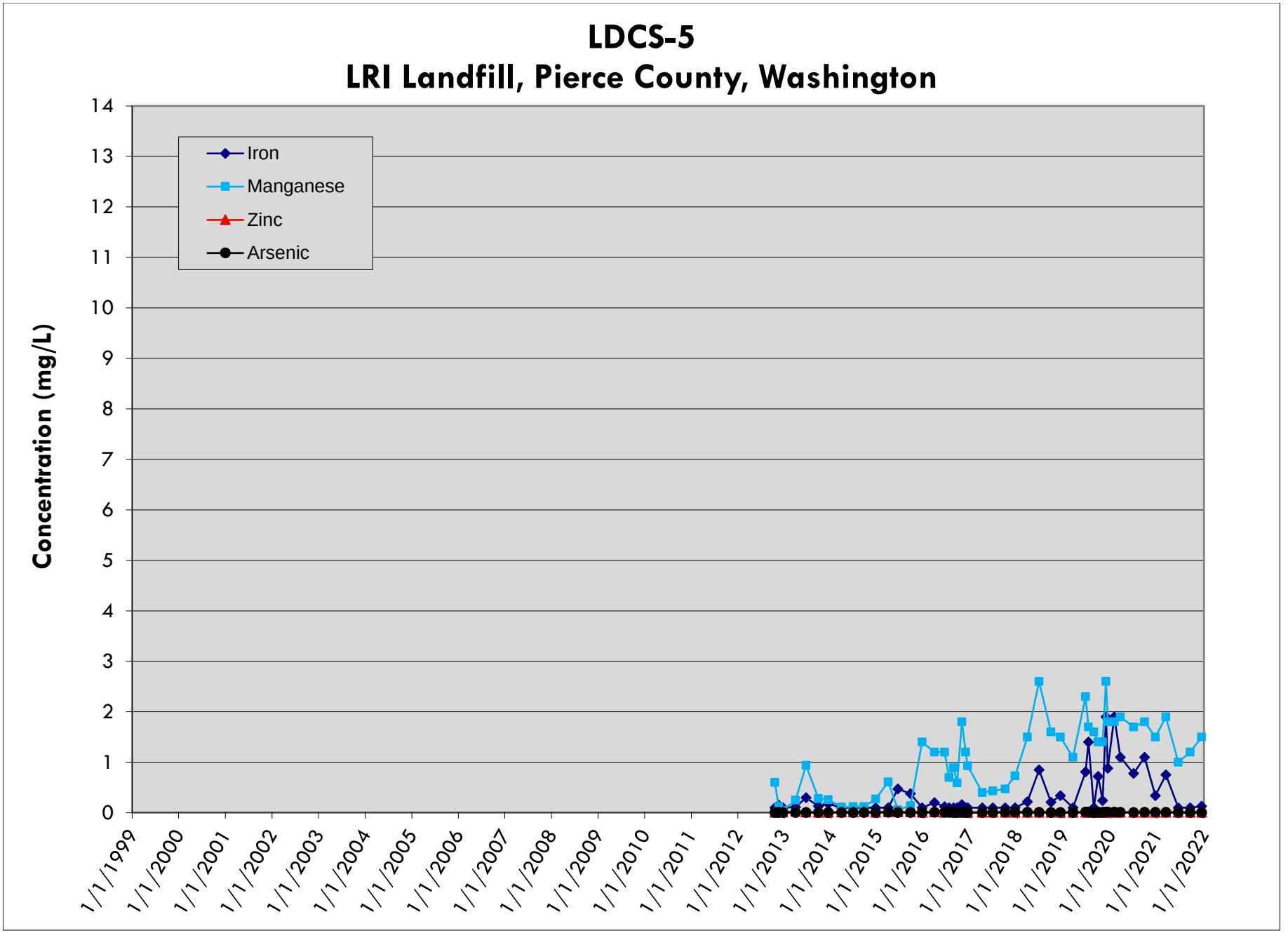
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022


LDCS-5
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
14
13
12
11
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
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1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
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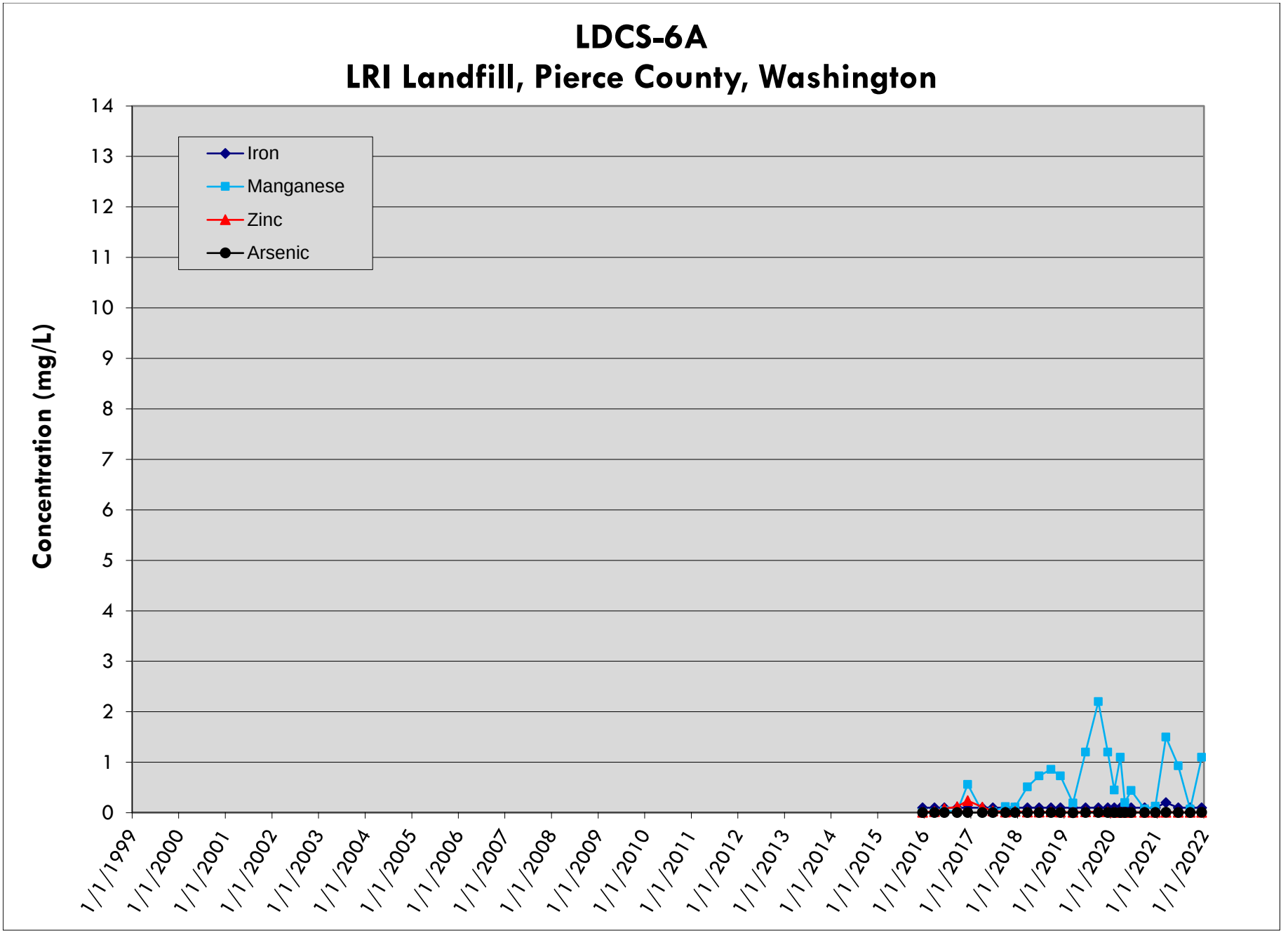
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022


LDCS-6A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
1
2
3
4
5
6
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8
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14
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
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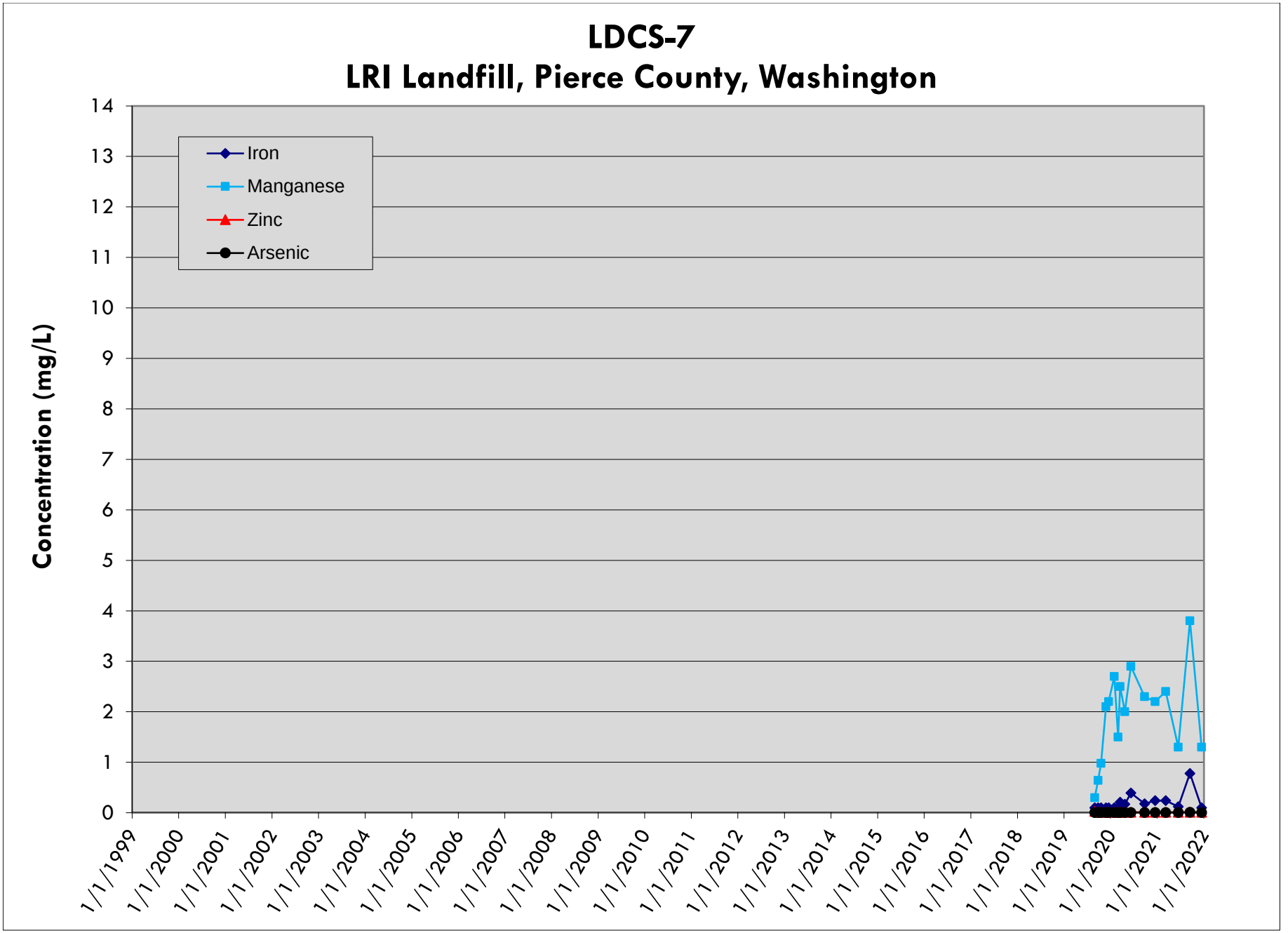
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022


LDCS-7
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
1
2
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1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
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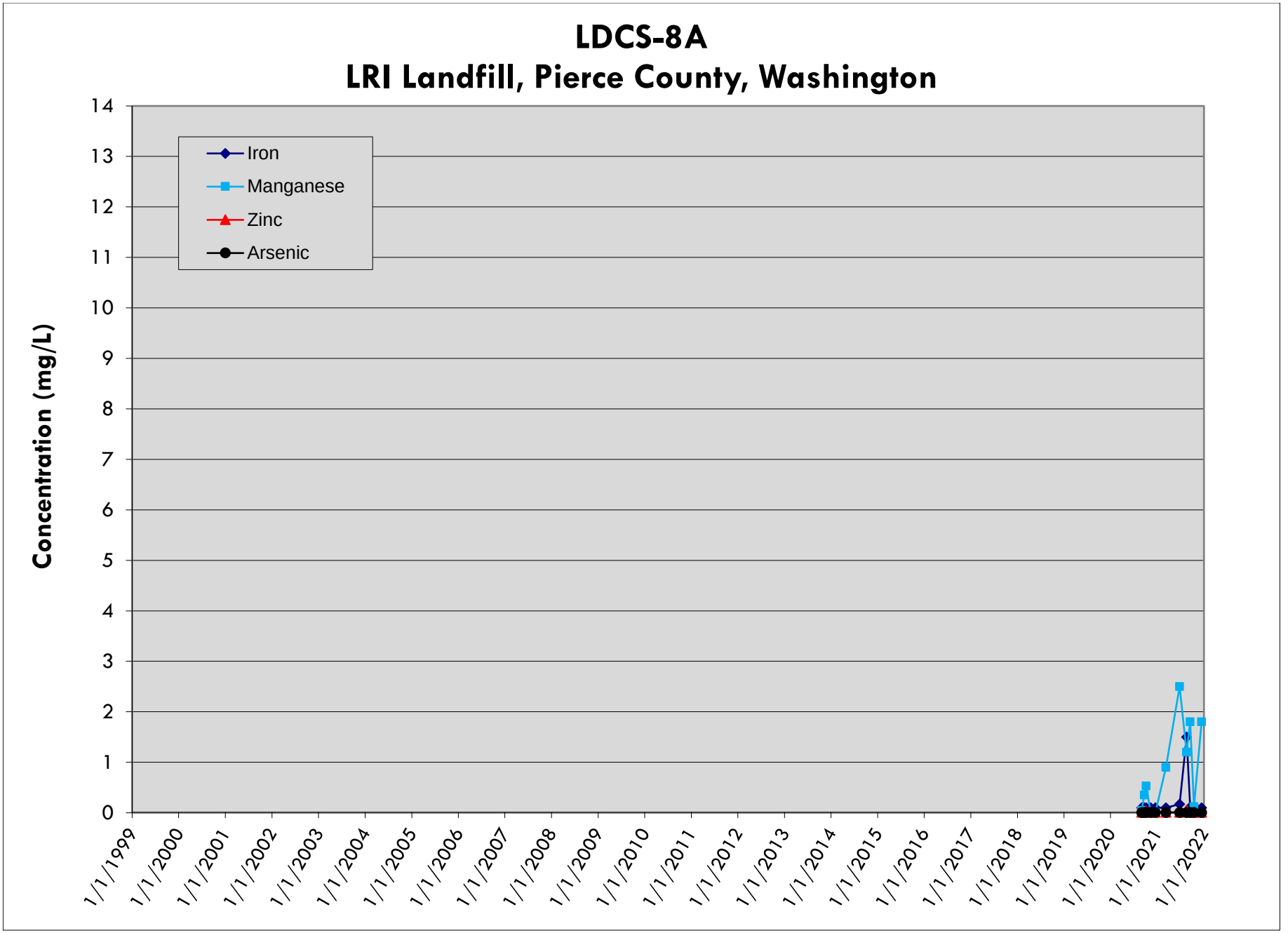
1/1/2020
1/1/2021
1/1/2022


LDCS-8A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
1
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14
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1/1/2000
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1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021
1/1/2022

Summary of Leachate Volume and Depth Data
Fourth Quarter 2021
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.)
10/1/2021	1,522	11.4	6,729	7.2	1,447	10.6	7,053	9.6	0	19.0	7,146	10.6	14,491	13.8	11,138	9.3	15,767	10.7	0	10.7
10/2/2021	9,107	9.5	0	8.2	4,222	12.1	9,712	12.0	0	20.7	7,142	12.8	14,491	11.2	26,369	9.6	15,767	11.1	0	11.4
10/3/2021	0	10.6	0	9.5	2,618	8.9	7,404	9.6	0	21.3	12,858	13.2	14,491	7.4	19,398	9.2	15,767	10.8	0	13.0
10/4/2021	8,855	9.7	7,992	8.8	3,111	9.6	8,282	10.1	0	21.8	13,571	13.0	14,491	7.5	24,980	9.1	15,767	10.7	0	14.2
10/5/2021	0	9.8	0	5.9	2,575	8.9	7,530	9.6	0	20.3	11,402	10.2	14,491	8.2	34,163	8.3	15,767	10.4	0	13.1
10/6/2021	0	10.9	0	7.8	3,781	8.6	7,270	9.5	0	15.0	4,382	13.3	10,826	12.7	19,156	8.8	8,651	10.8	0	10.5
10/7/2021	0	11.3	0	9.8	2,418	8.8	7,897	9.6	0	19.0	19,584	10.4	10,826	12.6	22,197	8.7	8,651	10.5	0	9.8
10/8/2021	0	11.9	6,201	9.1	3,626	9.0	9,437	9.5	0	16.8	69	11.5	10,826	11.7	20,389	8.8	8,651	10.5	0	11.2
10/9/2021	3,693	11.1	0	6.9	2,686	8.5	7,994	9.4	0	20.0	15,113	13.1	10,826	11.8	19,217	8.8	8,651	10.6	0	9.4
10/10/2021	5,433	8.9	0	8.5	2,527	9.0	6,980	9.5	0	20.6	8,905	10.2	10,826	11.6	18,974	8.8	8,651	10.8	0	10.7
10/11/2021	0	10.9	0	9.8	3,876	8.6	6,956	9.5	0	21.0	3,293	13.3	10,826	10.7	21,078	8.7	8,651	10.3	0	10.0
10/12/2021	0	11.5	7,294	9.6	2,524	8.8	7,936	9.9	0	21.5	21,804	10.7	10,826	9.6	17,695	8.8	8,651	10.6	0	11.2
10/13/2021	0	11.9	0	6.5	3,895	8.9	7,280	9.4	12	21.5	84	11.9	10,826	10.7	18,554	8.8	8,651	10.5	0	11.4
10/14/2021	7,815	9.8	0	8.4	2,542	8.5	7,288	9.4	0	21.7	21,260	12.5	10,826	11.3	17,750	8.8	8,651	10.9	0	10.6
10/15/2021	0	10.6	0	9.5	2,833	9.0	7,303	9.5	30	22.0	4,338	10.6	10,826	11.4	17,011	8.8	8,651	10.3	0	9.4
10/16/2021	357	11.5	6,917	9.0	3,396	8.5	7,404	9.7	0	22.0	15,069	12.9	10,826	9.2	17,410	8.8	8,651	10.8	0	9.8
10/17/2021	9,259	8.5	0	7.1	2,451	9.0	7,244	9.6	0	22.0	8,648	10.4	10,826	7.0	16,315	8.8	8,651	10.5	0	10.8
10/18/2021	0	10.6	9	8.7	3,877	8.5	7,081	9.4	34,304	15.9	8,735	13.3	10,826	12.1	15,067	8.8	8,651	10.7	0	12.3
10/19/2021	0	11.3	0	10.2	2,503	8.7	7,083	9.6	51,184	4.7	7,738	11.7	10,826	10.7	15,033	8.7	8,651	10.6	10,521	9.9
10/20/2021	5	11.4	2,371	11.0	3,046	9.1	8,521	9.4	27,473	0.9	5,724	13.6	10,826	12.4	21,805	8.6	8,651	10.8	114,295	10.3
10/21/2021	8,905	8.8	6,456	7.3	2,420	9.0	5,803	9.6	23,936	6.6	6,316	12.6	0	7.2	21,223	8.8	5,675	10.3	88,789	11.0
10/22/2021	0	10.8	0	6.9	2,510	11.3	5,795	13.2	16,959	3.4	5,545	13.9	21,664	10.7	28,254	10.7	11,238	12.5	213,008	22.4
10/23/2021	0	11.4	0	8.7	2,714	11.7	7,100	14.8	17,187	4.9	8,673	14.1	6,256	13.5	29,329	10.5	7,462	11.2	206,527	15.4
10/24/2021	5,912	8.5	0	10.4	2,840	10.2	7,970	14.0	11,835	7.6	5,003	14.2	12,568	13.6	17,655	9.8	18,518	10.5	61,006	11.4
10/25/2021	3,827	8.1	3,886	7.6	3,768	8.6	11,404	10.4	28,087	5.5	13,667	13.9	12,568	12.9	45,532	9.5	18,518	10.6	130,031	11.1
10/26/2021	0	10.1	0	7.5	3,083	9.1	8,571	10.0	25,881	3.7	2,543	13.6	12,568	13.2	33,603	8.8	18,518	11.0	184,257	12.1
10/27/2021	12	10.5	24	8.5	2,106	9.2	3,517	10.0	20,466	4.3	6,971	13.9	0	14.0	25,573	9.3	19,158	12.0	280,058	16.2
10/28/2021	0	11.0	0	10.6	3,196	11.3	5,957	13.3	19,618	5.4	9,981	13.5	13,060	13.0	27,788	10.2	19,158	13.0	22,379	19.1
10/29/2021	0	11.0	0	11.2	2,807	11.1	5,822	13.6	19,060	8.4	8	13.6	13,060	12.8	24,802	16.3	19,158	26.4	25,247	47.4
10/30/2021	0	11.4	0	12.6	0	15.8	0	24.1	349	17.8	0	15.6	18,552	22.2	0	20.0	17,102	23.1	100	49.4
10/31/2021	0	11.8	0	13.8	0	17.6	8,614	21.2	16,754	22.9	6	18.0	0	18.7	31,377	20.9	32,016	10.9	45,741	47.2
11/1/2021	1,475	11.1	12,728	9.4	6,296	12.3	12,235	14.5	42,684	10.4	12,412	19.0	18,727	13.2	54,247	14.1	4,607	10.8	60,590	29.7
11/2/2021	822	11.1	0	6.9	2,900	10.7	8,878	10.7	25,367	13.4	10,773	17.9	18,727	12.4	36,360	12.3	0	11.1	25,602	13.7
11/3/2021	1,981	11.2	11	8.9	3,545	10.7	7,673	9.8	27,725	11.9	11,946	17.0	18,727	14.0	40,180	11.2	38,602	11.7	14,706	13.1
11/4/2021	1,159	11.0	0	10.1	2,473	10.7	4,045	10.5	19,075	12.4	7,868	16.0	17,568	13.3	27,797	12.6	30,920	16.4	29,088	24.5
11/5/2021	0	11.9	0	11.3	0	16.2	9,930	13.0	8,410	20.5	3,124	16.9	9,732	13.1	38,121	12.7	29,085	15.1	37,110	23.9
11/6/2021	0	12.0	0	12.5	1	17.9	4,634	10.6	13,045	19.5	4,995	18.0	9,732	13.6	18,041	13.6	29,085	12.3	18,673	17.9
11/7/2021	0	12.0	0	13.7	0	18.0	7,880	13.3	22,409	17.8	9,141	18.7	9,732	13.4	32,353	15.2	29,085	13.8	33,713	22.3
11/8/2021	0	12.5	11,826	9.8	8,542	12.7	6,052	12.4	17,956	17.2	7,546	19.0	22,272	11.4	26,430	15.1	8,744	11.9	18,964	15.3
11/9/2021	0	12.3	0	7.2	2,836	10.9	9,461	12.7	29,801	14.6	12,743	18.8	13,148	7.7	42,908	13.6	16,329	11.5	17,709	11.0
11/10/2021	0	12.1	0	8.9	2,887	11.0	8,044	10.3	26,678	12.2	11,646	17.6	15,938	8.1	39,370	11.1	15,224	11.7	14,587	11.9
11/11/2021	0	13.0	0	10.5	2,922	11.3	3,496	10.4	18,580	13.0	7,922	16.7	15,938	7.5	27,839	11.4	31,380	15.1	29,950	23.7
11/12/2021	0	12.9	0	12.0	0	16.2	6,173	13.9	11,163	19.9	4,472	17.0	0	10.5	42,024	19.3	38,316	28.2	42,195	64.1
11/13/2021	0	12.7	0	13.0	0	17.6	6,911	14.7	18,593	18.5	4	19.0	0	19.5	27,471	21.6	38,316	28.2	32,095	65.0
11/14/2021	0	13.0	0	14.3	0	18.5	8,906	16.7	12,589	22.4	4,085	21.0	0	23.9	17,606	23.9	38,316	24.5	54,105	65.8
11/15/2021	0	13.2	0	15.8	0	19.0	6,788	15.1	14,466	24.7	5,867	22.9	29,092	10.8	37,008	23.3	22,518	20.5	47,871	61.8
11/16/2021	0	13.0	0	16.6	0	18.0	7,311	16.6	21,022	17.6	8,921	23.3	24	20.1	31,025	22.5	10,876	19.1	45,763	58.4
11/17/2021	0	13.0	0	17.4	0	19.1	6,812	15.2	0	20.2	11,203	23.1	21,256	14.7	30,393	21.5	9,544	20.0	49,267	52.4
11/18/2021	0	13.0	0	18.3	0	20.0	6,880	14.6	9,169	20.5	12,186	23.1	0	11.8	27,302	21.4	16,979	20.5	57,096	44.7
11/19/2021	0	13.0	0	18.3	0	19.9	0	20.5	11	22.5	13,359	22.8	0	15.1	35,649	22.7	25,645	31.3	56,151	40.2
11/20/2021	0	13.0	0	19.5	1	20.5	0	28.2	0	23.5	8,289	23.0	0	53.6	22,079	22.5	25,645	31.2	34,360	28.5
11/21/2021	0	13.0	0	21.1	0	22.5	7,354	25.2	4,358	22.4	3,751	23.9	25,680	55.0	11,922	23.6	25,645	29.8	15,036	21.1
11/22/2021	1	13.5	0	22.7	17,176	15.1	15,271	16.8	11,786	20.4	5,039	24.8	21,360	54.8	17,574	24.5	18,801	28.4	18,128	16.7
11/23/2021	0	13.4	22,898	14.1	0	16.9	6,928	14.6	0	21.9	9,734	25.3	0	54.6	25,717	24.9	27,271	30.3	25,794	15.8
11/24/2021	0	13.2	0	8.4	5	17.8	9,290	13.4	6,545	21.3	12,320	25.3	24,812	24.0	33,288	24.2	49,036	28.2	10,284	14.3
11/25/2021	5,394	12.3	0	10.4	7,964	13.6	5,118	11.9	9,586	19.6	4,335	25.7	0	12.9	13,723	24.7	21,528	26.0	5,471	15.4
11/26/2021	0	13.0	0	11.5	0	16.2	6,367	13.9	0	22.0	8,427	26.0	0	17.3	22,211	26.2	21,528	33.3	33,655	22.1
11/27/2021	0	13.5	0	13.2	5,441	13.3	7,327	15.2	15,438	19.8	10,752	26.2	0	18.3	31,955	25.8	21,528	32.5	23,989	14.5
11/28/2021	0	13.7	0	14.0	1,848	12.2	5,758	13.4	15,936	16.9	7,423	26.4	22,076	15.1	23,356	26.1	21,528	32.9	14,762	14.5
11/29/2021	0	13.9	0	15.5	0	16.9	9,985	13.0	0	20.4	18,247	26.1	60	22.9	45,833	24.6	46,542	28.8	0	20.9
11/30/2021	0	14.0	0	16.5	0	18.0	0	17.5	0	22.0	13,100	25.3	22,144	18.7	34,081	23.2	39,241	22.9	34,114	19.3

Summary of Leachate Volume and Depth Data
Fourth Quarter 2021
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.)
12/1/2021	5,088	12.4	4,990	15.0	5,391	16.2	6,560	18.9	12,013	19.6	6,152	25.0	0	15.0	19,180	23.3	0	19.9	9,708	12.5
12/2/2021	0	13.0	13,480	9.6	3,161	12.5	8,736	14.8	18,311	16.3	9,015	25.6	2,632	17.0	27,905	23.0	9,235	14.5	13,496	12.8
12/3/2021	0	13.6	0	7.4	4,308	11.2	9,786	12.7	27,881	13.2	13,662	24.8	2,632	16.2	42,516	21.2	9,235	11.4	13,641	12.3
12/4/2021	1	13.9	0	8.3	2,387	10.2	4,158	10.4	11,973	12.3	6,034	24.4	7,984	15.7	18,715	20.7	26,387	17.4	18,846	15.8
12/5/2021	0	13.5	0	9.7	3,433	11.4	5,977	13.5	11,629	13.7	5,993	24.8	15,487	17.8	19,357	22.7	24,887	26.1	20,042	20.7
12/6/2021	0	14.0	8,384	8.2	3,250	11.1	6,942	13.9	12,543	13.6	11,443	24.6	15,487	16.5	32,445	22.4	24,887	25.6	20,457	17.3
12/7/2021	9,340	12.5	0	6.6	2,988	13.5	9,802	12.5	9,714	14.7	14,277	21.7	15,487	15.9	23,247	22.8	24,887	24.2	15,576	18.3
12/8/2021	8,007	11.1	0	8.2	2,788	10.8	3,951	11.1	15,280	11.7	8,041	18.1	5,134	16.0	24,419	22.6	40,466	19.7	12,024	13.4
12/9/2021	6,214	11.2	0	9.7	3,157	11.3	6,672	14.7	12,014	12.1	6,332	18.3	5,134	15.8	19,428	23.1	25,722	16.9	13,630	13.7
12/10/2021	6,685	11.0	7,155	9.5	3,130	11.4	10,049	13.3	21,140	9.8	11,526	18.0	8,980	15.8	34,669	22.3	17,482	13.6	14,261	12.7
12/11/2021	8,887	10.7	0	7.8	3,737	11.6	6,881	10.5	7,516	11.6	3,965	18.2	8,980	18.2	12,090	23.6	17,482	17.5	11,224	17.9
12/12/2021	4,157	11.2	0	9.1	3,585	11.2	6,561	12.3	8,052	12.8	4,320	19.2	8,980	18.6	13,078	25.8	17,482	27.3	12,292	26.3
12/13/2021	0	12.0	0	10.8	0	16.9	10,226	13.2	0	17.6	13,671	18.9	8,980	16.6	34,720	25.4	17,482	25.2	32,154	22.4
12/14/2021	0	12.1	0	11.5	0	18.0	6,597	14.6	17,724	13.8	9,779	17.6	8,980	15.6	30,034	24.9	38,484	20.8	16,591	12.9
12/15/2021	7,064	11.1	9,540	9.1	7,088	12.8	5,816	11.5	18,206	10.7	9,984	16.9	8,980	15.5	28,540	24.3	34,372	14.2	10,274	11.7
12/16/2021	2,420	11.4	0	7.5	3,160	10.8	8,421	12.6	16,859	9.5	9,795	15.8	8,980	15.1	27,736	23.8	22,021	11.9	12,822	12.1
12/17/2021	2,135	11.1	0	8.7	2,231	9.8	4,322	9.4	3,548	9.7	2,174	15.2	8,980	10.6	6,103	23.2	12,400	11.9	6,067	12.2
12/18/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	8,980	7.0	6,103	22.5	12,400	11.7	6,067	10.9
12/19/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	8,980	7.0	6,103	22.5	12,400	11.7	6,067	10.9
12/20/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	8,980	7.0	6,103	22.5	12,400	11.7	6,067	10.9
12/21/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	11,128	7.0	6,103	22.5	44,001	11.7	6,067	10.9
12/22/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	8,444	7.0	6,103	22.5	41,015	11.7	6,067	10.9
12/23/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	9,260	7.0	6,103	22.5	49,336	11.7	6,067	10.9
12/24/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	5,831	7.0	6,103	22.5	29,092	11.7	6,067	10.9
12/25/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	5,831	7.0	6,103	22.5	11,060	11.7	6,067	10.9
12/26/2021	2,135	11.0	0	9.0	2,231	8.0	4,322	8.0	3,548	9.0	2,174	15.0	5,831	7.0	6,103	22.5	11,060	11.7	6,067	10.9
12/27/2021	0	11.6	0	10.3	0	14.0	0	22.5	0	13.8	0	23.3	5,831	22.1	0	28.7	11,060	22.7	0	30.3
12/28/2021	0	12.0	0	12.5	0	19.0	21,940	21.7	0	19.2	0	30.6	84	30.7	31,793	32.6	14,964	26.9	29,789	44.5
12/29/2021	0	12.2	0	13.7	0	19.0	9,261	16.2	25	20.4	2	32.2	23,092	20.7	27,921	32.7	14,964	23.1	26,103	42.5
12/30/2021	0	13.0	0	15.7	0	20.0	10,803	14.4	22,080	15.5	0	33.9	20,400	16.2	30,824	32.7	26,821	16.5	29,843	40.4
12/31/2021	0	13.0	0	16.4	0	19.1	7,789	10.1	24,688	10.5	1	35.0	0	15.0	34,013	32.2	0	12.0	32,554	37.5

-- = No data available

Appendix G

Surface Water Monitoring Data

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

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

Facility County: Pierce **Receiving Waterbody:** South Creek

Monitoring Period: 01/01/2021 - 01/31/2021 **Outfall:** UNK - South Creek **Version:** 2

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1
1-F	**1/1/21**	1.0	M
1-Sa	**1/2/21**	1.8	M
2-Su	**1/3/21**	3.2	M
2-M	**1/4/21**	3.1	M
2-T	**1/5/21**	2.3	M
2-W	**1/6/21**	3.2	M
2-Th	**1/7/21**	4.3	M
2-F	**1/8/21**	2.1	M
2-Sa	**1/9/21**	2.4	M
3-M	**1/11/21**	0.8	M
3-T	**1/12/21**	1.2	M
3-W	**1/13/21**	4.4	M
3-Th	**1/14/21**	0.9	M
3-F	**1/15/21**	9.2	M
4-Su	**1/17/21**	0.8	M
4-M	**1/18/21**	0.8	M
4-Sa	**1/23/21**	7.7	M
5-Su	**1/24/21**	3.7	M
5-M	**1/25/21**	3.0	M
5-T	**1/26/21**	2.1	M
5-Sa	**1/30/21**	1.9	M
6-Su	**1/31/21**	0.7	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		9.2	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Overall DMR Notes/Comment

Construction stormwater treatment using Chitosan Enhanced Sand Filtration (CESF). The averaged turbidity value is reported for each day that a discharge occurred.

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Construction Stormwater Chemical Treatment
C7-1		Other
C7-1		Sediment Trap
C7-1		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**

4/15/2021 3:53:19 PM — **Date**

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

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

Facility County: Pierce **Receiving Waterbody:** South Creek

Monitoring Period: 02/01/2021 - 02/28/2021 **Outfall:** UNK - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1
1-M	**2/1/21**	0.9	M
1-T	**2/2/21**	1.3	M
1-W	**2/3/21**	0.8	M
1-Th	**2/4/21**	0.8	M
1-F	**2/5/21**	0.8	M
2-Su	**2/7/21**	C	C
3-Su	**2/14/21**	5.3	M
3-M	**2/15/21**	5.9	M
3-T	**2/16/21**	4.0	M
3-W	**2/17/21**	0.9	M
3-Th	**2/18/21**	4.3	M
3-F	**2/19/21**	5.0	M
3-Sa	**2/20/21**	0.5	M
4-Su	**2/21/21**	0.3	M
4-M	**2/22/21**	4.8	M
4-T	**2/23/21**	5.2	M
4-Th	**2/25/21**	1.1	M
4-F	**2/26/21**	1.7	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		5.9	M
		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 using Chitosan Enhanced Sand Filtration (CESF). The averaged turbidity value is reported for each day that a discharge occurred.

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Construction Stormwater Chemical Treatment
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence

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George Duvendack — **Signature**

3/15/2021 2:08:31 PM — **Date**

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

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

Facility County: Pierce **Receiving Waterbody:** South Creek

Monitoring Period: 03/01/2021 - 03/31/2021 **Outfall:** UNK - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1
1-W	**3/3/21**	0.3	M
2-Su	**3/7/21**	0.2	M
2-M	**3/8/21**	0.6	M
2-T	**3/9/21**	2.1	M
2-W	**3/10/21**	2.2	M
2-Sa	**3/13/21**	3.1	M
3-Th	**3/18/21**	5.5	M
4-W	**3/24/21**	1.3	M
4-Th	**3/25/21**	0.5	M
5-Su	**3/28/21**	0.6	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		5.5	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Overall DMR Notes/Comment

Construction stormwater treatment using Chitosan Enhanced Sand Filtration (CESF). The averaged turbidity value is reported for each day that a discharge occurred.

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Construction Stormwater Chemical Treatment
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence

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George Duvendack — **Signature**

4/15/2021 3:53:16 PM — **Date**

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

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

Facility County: Pierce **Receiving Waterbody:** South Creek

Monitoring Period: 04/01/2021 - 04/30/2021 **Outfall:** UNK - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1
1-Th	**4/1/21**	C	C
2-Su	**4/4/21**	C	C
3-Su	**4/11/21**	0.7	M
4-Su	**4/18/21**	C	C
5-Su	**4/25/21**	C	C
Minimum			M
			BM: >= 6.5 (RO)
Maximum		0.7	M
		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 using Chitosan Enhanced sand Filtration (CESF). The averaged turbidity value is reported for each day that a discharge occurred.

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Construction Stormwater Chemical Treatment
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence

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George Duvendack — **Signature**

5/13/2021 3:49:45 PM — **Date**

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

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

Facility County: Pierce **Receiving Waterbody:** South Creek

Monitoring Period: 05/01/2021 - 05/31/2021 **Outfall:** UNK - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		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 discharges occurred during the month of May.

Outfall: UNK - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence

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George Duvendack — **Signature**

6/15/2021 8:57:58 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: 06/01/2021 - 06/30/2021 **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
		C7-1	C7-1	C8-1	C8-1	C8-2	C8-2
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 discharges occurred during the month of June.

Outfall: 001 - South Creek

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

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence
C8-1		Check Dams
C8-1		Other
C8-1		Sediment Trap
C8-1		Silt Fence
C8-2		Check Dams
C8-2		Sediment Trap
C8-2		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**

7/13/2021 7:44:59 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: 07/01/2021 - 07/31/2021 **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
		C7-1	C7-1	C8-1	C8-1	C8-2	C8-2
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 discharges occurred during the month of July.

Outfall: 001 - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters		C	
C8-1	All Parameters		C	
C8-2	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence
C8-1		Check Dams
C8-1		Other
C8-1		Sediment Trap
C8-1		Silt Fence
C8-2		Check Dams
C8-2		Other
C8-2		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**

8/10/2021 8:16:10 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: 08/01/2021 - 08/31/2021 **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
		C7-1	C7-1	C8-1	C8-1	C8-2	C8-2
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 discharges occurred during the month of August.

Outfall: 001 - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters		C	
C8-1	All Parameters		C	
C8-2	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence
C8-1		Check Dams
C8-1		Other
C8-1		Sediment Trap
C8-1		Silt Fence
C8-2		Check Dams
C8-2		Other
C8-2		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**

9/8/2021 6:38:34 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: 09/01/2021 - 09/30/2021 **Outfall:** 001 - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab C7-1	pH Standard Units Weekly Grab C7-1	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
Minimum			C		C		C
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		C	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

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

No construction stormwater discharges occurred during the month of September.

Outfall: 001 - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters		C	
C8-1	All Parameters		C	
C8-2	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence
C7-1		Straw Wattles
C8-1		Check Dams
C8-1		Other
C8-1		Sediment Trap
C8-1		Silt Fence
C8-2		Check Dams
C8-2		Other
C8-2		Silt Fence

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George Duvendack — **Signature**

10/14/2021 5:48:38 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: 10/01/2021 - 10/31/2021 **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
		C8-1	C8-1	C8-2	C8-2
1-F	**10/1/21**	C	C	C	C
2-Su	**10/3/21**	C	C	C	C
3-Su	**10/10/21**	C	C	C	C
4-Su	**10/17/21**	C	C	C	C
5-W	**10/27/21**	5.5	M	C	C
5-Th	**10/28/21**	6.3	M	C	C
5-F	**10/29/21**	7.7	M	C	C
5-Sa	**10/30/21**	5.8	M	C	C
Minimum			M		C
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		7.7	M	C	C
		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

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George Duvendack — **Signature**

11/15/2021 1:28:35 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: 11/01/2021 - 11/30/2021 **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
		C8-1	C8-1	C8-2	C8-2
1-M	**11/1/21**	2.1	M	C	C
1-T	**11/2/21**	3.8	M		
1-W	**11/3/21**	3.8	M		
1-Th	**11/4/21**	3.2	M		
1-F	**11/5/21**	4.2	M		
2-Su	**11/7/21**	4.9	M		
2-M	**11/8/21**	1.6	M		
2-T	**11/9/21**	1.4	M		
2-W	**11/10/21**	0.7	M		
2-Th	**11/11/21**	1.0	M		
2-F	**11/12/21**	1.1	M	897	M
2-Sa	**11/13/21**	4.3	M		
3-Su	**11/14/21**	2.0	M	C	C
3-M	**11/15/21**	2.8	M		
3-T	**11/16/21**	2.4	M		
3-Th	**11/18/21**	4.4	M		
3-F	**11/19/21**	6.0	M		
3-Sa	**11/20/21**	6.6	M		
4-Su	**11/21/21**			C	C
4-T	**11/23/21**	0.8	M		
4-Th	**11/25/21**	0.8	M		
4-F	**11/26/21**	0.8	M		
4-Sa	**11/27/21**	1.0	M		
5-Su	**11/28/21**	1.4	M		
5-M	**11/29/21**	1.3	M		
5-T	**11/30/21**	1.4	M		
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		6.6	M	897	M
		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

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George Duvendack	12/15/2021 11:01:32 AM
Signature	**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: 12/01/2021 - 12/31/2021 **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
		C8-1	C8-1	C8-2	C8-2
1-W	**12/1/21**	1.0	M	C	M
1-Sa	**12/4/21**	0.9	M		
2-Su	**12/5/21**	2.2	M		
2-M	**12/6/21**	1.5	M		
2-T	**12/7/21**	1.3	M		
2-W	**12/8/21**	3.0	M		
2-Th	**12/9/21**	3.1	M		
2-F	**12/10/21**			10	M
2-Sa	**12/11/21**	1.8	M		
3-Su	**12/12/21**	1.4	M		
3-M	**12/13/21**	1.5	M		
3-T	**12/14/21**	1.7	M		
3-W	**12/15/21**	2.8	M		
3-Th	**12/16/21**	2.5	M	18	M
4-M	**12/20/21**	3.6	M		
4-T	**12/21/21**	0.5	M		
4-W	**12/22/21**	0.3	M		
4-Th	**12/23/21**	0.4	M	12	M
5-Su	**12/26/21**	9.9	M		
5-M	**12/27/21**	8.2	M		
5-T	**12/28/21**	9.0	M		
5-Th	**12/30/21**			15	M
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		9.9	M	18	M
		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

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**

1/14/2022 9:11:06 AM — **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: 01/01/2021 - 03/31/2021 **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
2-T	**1/5/21**	8.9	7.33	No	5.5	9.8	B|2.0	14	B|0.50	B|9.7	B|58	B|9.7
Minimum			7.33									
			BM: >= 5.0 (RO)									
Average		8.9			5.5	9.8						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			7.33									
			BM: <= 9.0 (RO)									
Month 1 Average							B|2.0	14	B|0.50	B|9.7	B|58	B|9.7
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							B|2.0	14	B|0.50	B|9.7	B|58	B|9.7
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							B|2.9	14	B|0.50	B|9.7	B|58	B|9.7
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14

Reporting Codes Used: B - Below Detection Limit/No Detection

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

5/13/2021 3:47:05 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
2-T	**1/5/21**	B|9.7	9.8	7.33
Minimum				7.33
				>= 6.0 (RO)
Average				
Maximum				7.33
				<= 9.0 (RO)
Month 1 Average		B|9.7	9.8	
		<= 15	<= 110	
Month 2 Average		B|9.7	9.8	
		<= 15	<= 110	
Month 3 Average		B|9.7	9.8	
		<= 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: 04/01/2021 - 06/30/2021 **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
2-F	**4/9/21**	4.0	6.9	No	J|4.2	J|7.8	2.3	5	B|0.5	B|10	B|61	B|10
Minimum			6.9									
			BM: >= 5.0 (RO)									
Average		4			J|4.2	J|7.8						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			6.9									
			BM: <= 9.0 (RO)									
Month 1 Average							2.3	5	B|0.50	B|10	B|61	B|10
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							2.3	5	B|0.50	B|10	B|61	B|10
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							2.3	5	B|0.50	B|10	B|61	B|10
							<= 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

8/10/2021 8:14:37 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
2-F	**4/9/21**	B|10	J|7.8	6.9
Minimum				6.9
				>= 6.0 (RO)
Average				
Maximum				6.9
				<= 9.0 (RO)
Month 1 Average		B|10	J|7.8	
		<= 15	<= 110	
Month 2 Average		B|10	J|7.8	
		<= 15	<= 110	
Month 3 Average		B|10	J|7.8	
		<= 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: 07/01/2021 - 09/30/2021 **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.

George Duvendack

Signature

11/15/2021 1:27:52 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: 10/01/2021 - 12/31/2021 **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-F	**10/22/21**	7.0	6.7	No	4.2	J|5.1	2	9	B|0.50	B|9.6	B|57	B|9.6
Minimum			6.7									
			BM: >= 5.0 (RO)									
Average		7			4.2	J|5.1						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			6.7									
			BM: <= 9.0 (RO)									
Month 1 Average							2.0	9	B|0.50	B|9.6	B|57	B|9.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							2.0	9	B|0.50	B|9.6	B|57	B|9.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							2.0	9	B|0.50	B|9.6	B|57	B|9.6
							<= 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

2/11/2022 2:38:31 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
4-F	**10/22/21**	B|9.6	J|5.1	6.7
Minimum				6.7
				>= 6.0 (RO)
Average				
Maximum				6.7
				<= 9.0 (RO)
Month 1 Average		B|9.6	J|5.1	
		<= 15	<= 110	
Month 2 Average		B|9.6	J|5.1	
		<= 15	<= 110	
Month 3 Average		B|9.6	J|5.1	
		<= 15	<= 110	

Appendix H

Landfill Gas Monitoring Data

Table H-1. 2021 Landfill Gas Probe Monitoring Summary
Methane (% vol.)
LRI Landfill, Pierce County, Washington

Monitoring Date	GP-1	GP-2	GP-3	GP-4	GP-9	GP-10	GP-10P	GP-11	GP-12	GP-13	GP-14	GP-15	GP-16
January, 2021	3.0	3.0	0.0	0.0	0.0	0.0	13.1	0.0	23.5	0.2	0.0	0.0	0.0
Febuary, 2021	1.2	2.1	0.0	0.0	0.0	0.1	9.3	0.0	27.6	0.0	0.0	0.0	0.0
March, 2021	1.8	2.0	0.0	0.0	0.0	1.6	14.8	0.0	3.6	0.0	0.0	0.0	0.0
April, 2021	1.9	1.8	0.0	0.0	0.0	0.3	14.3	0.0	30.7	0.0	0.0	0.0	0.0
May, 2021	1.9	1.3	0.0	0.0	0.0	0.0	14.3	0.0	24.4	0.0	0.0	0.0	0.0
June, 2021	3.9	0.3	0.0	0.0	0.0	4.3	13.6	0.0	25.7	0.0	0.0	0.0	0.0
July, 2021	2.7	0.5	0.0	0.0	0.0	28.3	21.5	0.0	27.9	0.0	0.0	0.0	0.0
August, 2021	0.1	0.1	0.0	0.0	0.0	0.1	1.7	0.0	4.0	0.0	0.0	0.2	0.0
September, 2021	0.0	0.5	0.0	0.0	0.0	0.0	0.2	0.0	4.7	0.0	0.0	0.0	0.0
October, 2021	11.2	5.0	0.0	0.0	0.0	0.0	8.2	6.2	24.4	0.6	10.3	0.0	6.1
November, 2021	6.5	6.5	0.0	0.0	0.0	2.1	17.1	10.6	22.9	0.4	0.0	16.0	0.0
December, 2021	5.3	7.0	0.0	0.0	0.0	3.2	19.7	0.2	21.0	0.1	0.0	0.1	0.0

Notes:
All locations measured by SCS Engineeres.
(-) indicates no measurement taken.

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

January-21

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	0.3	-				20.0	
(max)			5.00		5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	1/16/2021	8:05	0.2	3.3	3.0	2.9	13.8	80.3	16.6	0.0	0.0	
GP-2	1/16/2021	8:13	0.2	3.3	3.0	16.3	0.2	80.5	15.3	0.0	0.0	
GP-3	1/16/2021	8:21	0.1	--	0.0	7.3	9.1	83.6	7.2	2.3	46.2	
GP-4	1/16/2021	8:26	0.2	--	0.0	2.6	17.4	80.0	9.2	0.0	0.0	
GP-9	1/16/2021	8:32	0.2	--	0.0	11.0	3.5	85.5	10.7	0.0	0.0	
GP-10	1/16/2021	7:59	0.2	--	0.0	12.2	9.1	78.7				
GP-10P	1/16/2021	7:55	0.2	13.1	13.1	26.2	3.5	57.2				*Note 5*
GP-11	1/16/2021	7:48	0.2	--	0.0	6.2	15.4	78.4				
GP-12	1/16/2021	7:37	0.3	28.6	23.5	55.2	0.0	21.3				
GP-13	1/16/2021	7:29	0.3	0.2	0.2	21.2	1.7	76.9				
GP-14	1/16/2021	8:57	0.2	--	0.0	0.2	21.2	78.6	10.3	0.0	0.0	
GP-15	1/16/2021	9:22	0.2	0.1	0.0	0.2	21.2	78.6	8.6	0.0	0.0	
GP-16	1/16/2021	8:41	0.2	--	0.0	1.1	20.6	78.3	18.6	11.3	75.1	

	Beginning	Ending	Average
Weather:	Drizzle and Fog	Light Drizzle	Drizzle
Temperature, T (deg F):	34	41	37.5
Wind Speed (mph):	0	0	0
Wind Direction:	0	0	0
Barometric Pressure, P (in Hg):	29.79	29.80	29.80
24hr Baro.Trend (rising / falling / steady / unsteady)	Rising		

Starting Date:	1/16/2021
Starting Time:	7:29
Finishing Date:	1/16/2021
Finishing Time:	9:22
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	1/16/2021

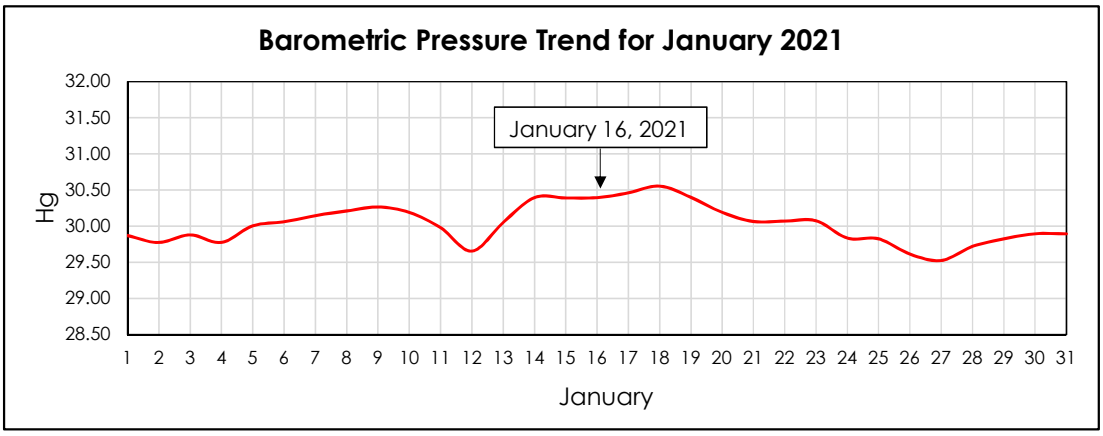
Headings:

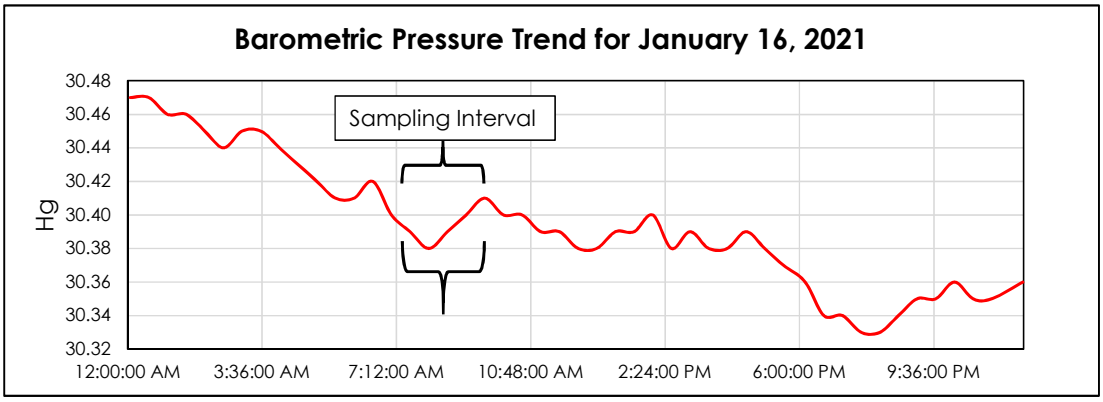
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
5. GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - January 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-01-16/2021-01-16/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-01-16/2021-01-16/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

February-21

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	0.3	-				20.0	
(max)			5.00		5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	2/20/2021	9:02	0.2	1.2	1.2	2.0	16.7	80.1	16.2	0.0	0.0	
GP-2	2/20/2021	9:08	0.2	2.3	2.1	14.7	0.6	82.6	15.4	0.0	0.0	
GP-3	2/20/2021	9:15	0.2	--	0.0	6.6	8.7	84.7	8.0	0.0	0.0	
GP-4	2/20/2021	9:20	0.1	--	0.0	3.2	13.6	83.2	9.3	0.0	0.0	
GP-9	2/20/2021	9:26	0.1	--	0.0	9.4	6.8	83.8	10.9	0.0	0.0	
GP-10	2/20/2021	8:54	0.2	1.7	0.1	6.7	16.6	76.6				
GP-10P	2/20/2021	8:51	0.2	9.3	9.3	20.7	6.6	63.4				*Note 5*
GP-11	2/20/2021	8:44	0.2	--	0.0	4.3	17.6	78.1				
GP-12	2/20/2021	8:33	0.2	32.1	27.6	50.5	0.0	21.9				
GP-13	2/20/2021	8:18	0.1	--	0.0	12.8	7.9	79.3				
GP-14	2/20/2021	9:56	0.0	--	0.0	0.2	21.0	78.8				
GP-15	2/20/2021	10:16	0.0	--	0.0	0.1	21.0	78.9	8.6	0.0	0.0	
GP-16	2/20/2021	9:38	0.2	--	0.0	0.3	21.0	78.7	19.0	11.9	79.1	

	Beginning	Ending	Average
Weather:	Mostly Cloudy	Mostly Cloudy	Mostly Cloudy
Temperature, T (deg F):	39	38.7	38.85
Wind Speed (mph):	3.8	2	2.9
Wind Direction:	202	202	202
Barometric Pressure, P (in Hg):	30.17	30.20	30.19
24hr Baro.Trend (rising / falling / steady / unsteady)	Rising		

Starting Date:	2/20/2021
Starting Time:	8:18
Finishing Date:	2/20/2021
Finishing Time:	10:16
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	2/20/2021

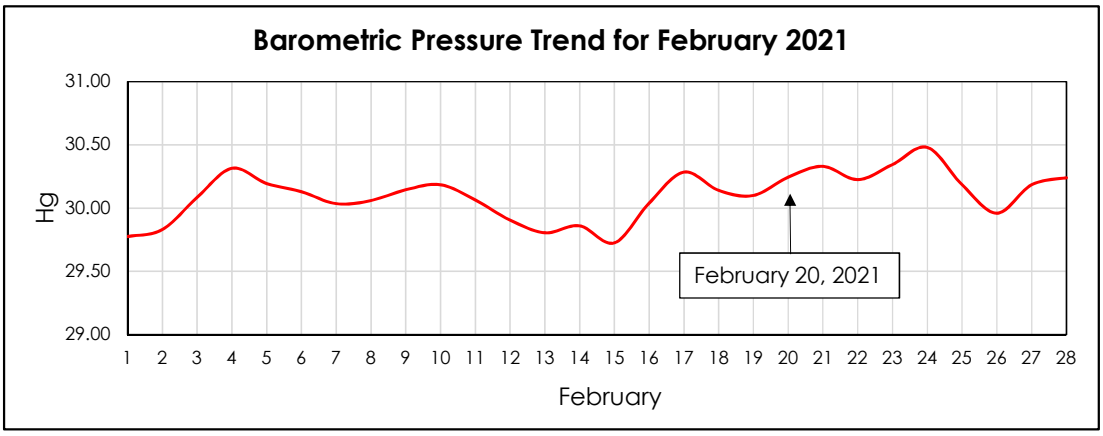
Headings:

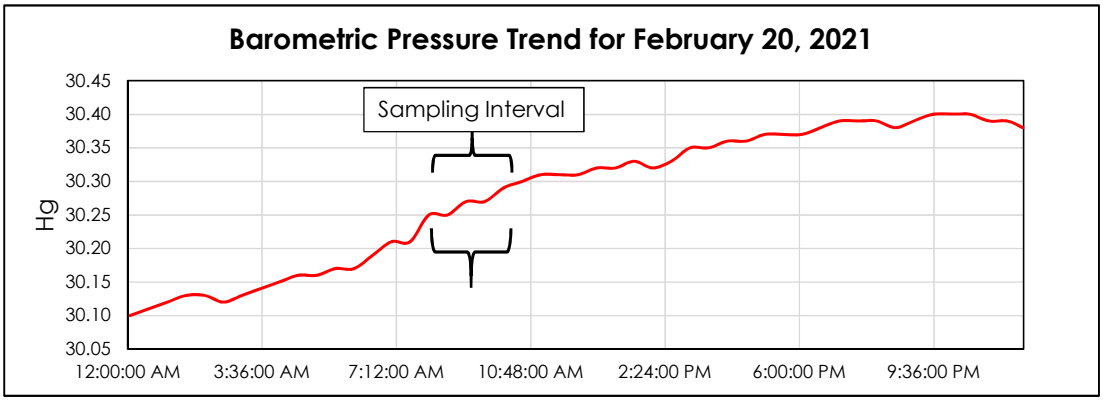
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
5. GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - February 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-02-16/2021-02-16/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-02-20/2021-02-20/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

March-21

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	0.3	-				20.0	
(max)			5.00		5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	3/8/2021	8:21	0.2	4,5	1.8	2.7	15.4	80.1	16.2	9.2	100.0	
GP-2	3/8/2021	16:01	0.2	2.2	2.0	15.8	0.0	82.2	15.1	8.1	100.0	
GP-3	3/8/2021	8:31	0.2	--	0.0	2.7	15.5	81.8	7.5	3.5	70.0	
GP-4	3/8/2021	8:36	0.2	--	0.0	3.2	14.4	82.4	9.3	5.3	100.0	
GP-9	3/8/2021	8:40	0.2	--	0.0	9.6	7.8	82.6	11.1	0.0	0.0	
GP-10	3/8/2021	8:15	0.2	1.6	1.6	17.6	5.6	75.2				
GP-10P	3/8/2021	8:09	0.2	15.5	14.8	23.2	6.4	55.6				*Note 5*
GP-11	3/8/2021	8:04	0.2	--	0.0	13.3	8.3	78.4				
GP-12	3/8/2021	7:54	0.0	32.2	3.6	7.6	17.9	70.9				
GP-13	3/8/2021	7:42	0.2	--	0.0	15.1	6.4	78.5				
GP-14	3/8/2021	9:37	0.2	--	0.0	0.3	20.7	79.0	10.6	0.0	0.0	
GP-15	3/8/2021	8:54	0.2	--	0.0	0.3	21.1	78.6				
GP-16	3/8/2021	8:46	0.2	--	0.0	2.4	19.3	78.3	19.0	12.0	80.0	

	Beginning	Ending	Average
Weather:	Patches of Fog	Cloudy	Cloudy
Temperature, T (deg F):	34	50	42
Wind Speed (mph):	5	3	4
Wind Direction:	65	270	167.5
Barometric Pressure, P (in Hg):	29.53	29.47	29.50
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling		

Starting Date:	3/8/2021
Starting Time:	7:42
Finishing Date:	3/8/2021
Finishing Time:	16:01
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	3/8/2021

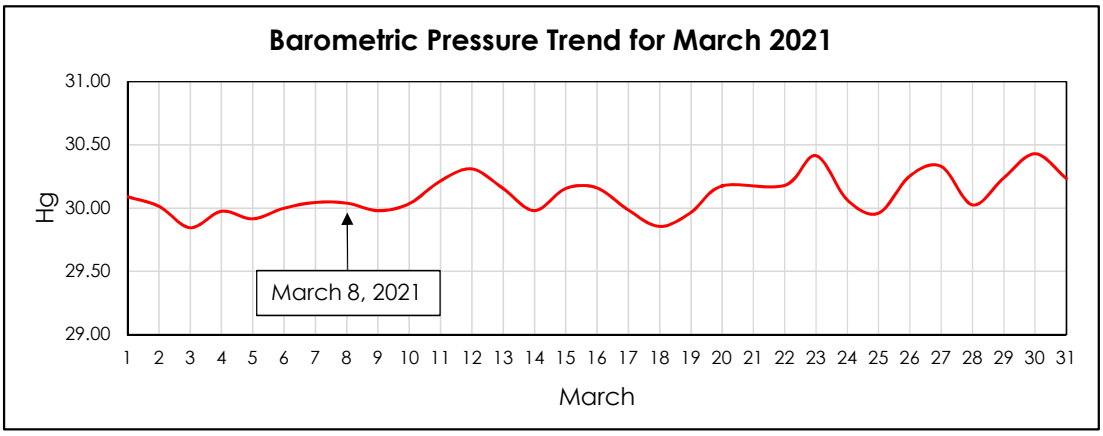
Headings:

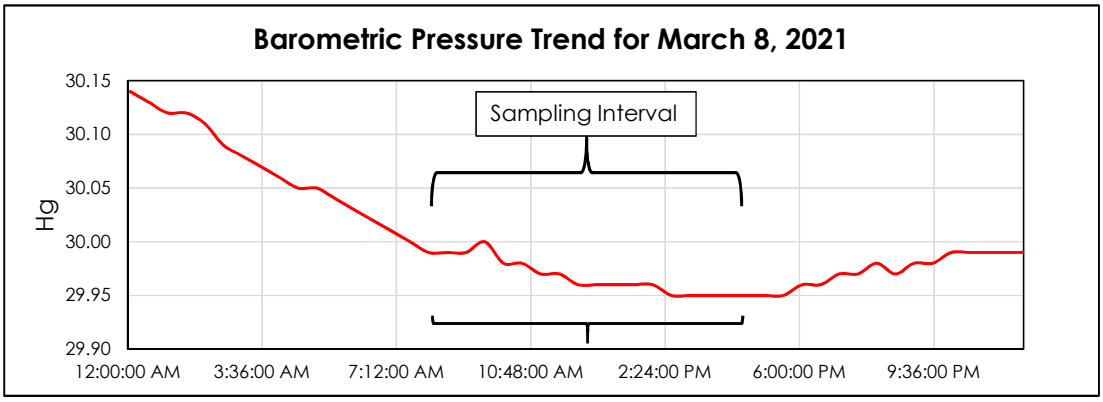
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
5. GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - March 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-03-16/2021-03-16/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-03-8/2021-03-8/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

April-21

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	0.3	--				20.0	
(max)			5.00		5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	4/10/2021	8:45	--	2.3	1.9	3.5	14.7	79.9	16.5	9.5	100.0	
GP-2	4/10/2021	8:58	--	2.0	1.8	14.4	1.1	82.7	15.3	8.3	100.0	
GP-3	4/10/2021	9:07	--	--	0.0	6.6	9.4	84.0	17.4	13.4	100.0	
GP-4	4/10/2021	9:15	--	--	0.0	4.6	13.9	81.5	9.6	5.6	100.0	
GP-9	4/10/2021	9:22	--	--	0.0	10.6	6.0	83.4	11.4	0.0	0.0	
GP-10	4/10/2021	8:34	--	1.1	0.3	13.4	10.4	75.9				
GP-10P	4/10/2021	8:28	--	14.3	14.3	28.8	2.8	54.1				*Note 5*
GP-11	4/10/2021	8:16	--	--	0.0	7.8	13.7	78.5				
GP-12	4/10/2021	7:59	--	31.0	30.7	49.3	1.0	19.0				
GP-13	4/10/2021	7:44	--	--	0.0	15.3	6.7	78.0				
GP-14	4/10/2021	9:59	--	--	0.0	0.2	20.9	78.9	11.0	0.0	0.0	
GP-15	4/10/2021	9:45	--	--	0.0	0.1	21.3	78.6	9.9	0.0	0.0	
GP-16	4/10/2021	9:30	--	--	0.0	0.4	21.4	78.2	19.7	12.7	84.4	

	Beginning	Ending	Average
Weather:	Passing Clouds	Sunny	Partly Sunny
Temperature, T (deg F):	37.7	41.8	39.75
Wind Speed (mph):	5.9	10.3	8.1
Wind Direction:	203	225	214
Barometric Pressure, P (in Hg):	30.15	30.20	30.18
24hr Baro.Trend (rising / falling / steady / unsteady)	Rising		

Starting Date:	4/10/2021
Starting Time:	7:44
Finishing Date:	4/10/2021
Finishing Time:	9:59
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	4/10/2021

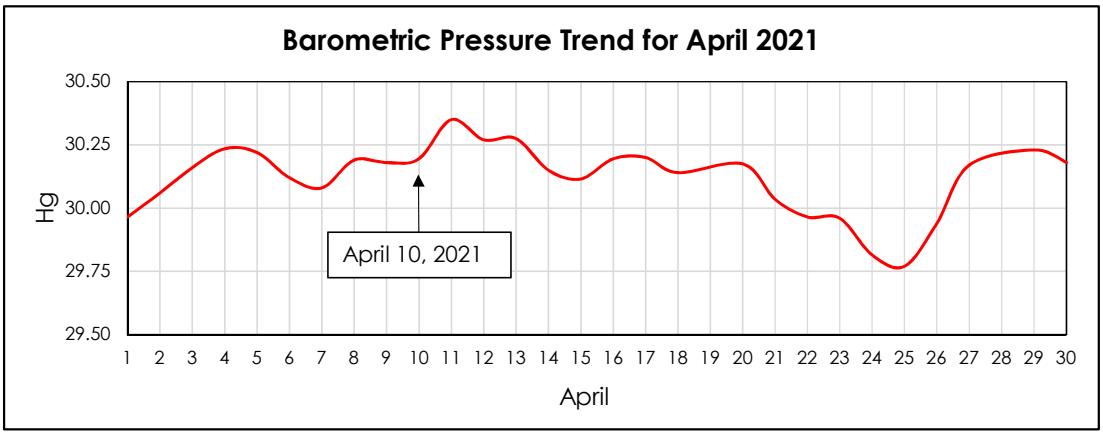
Headings:

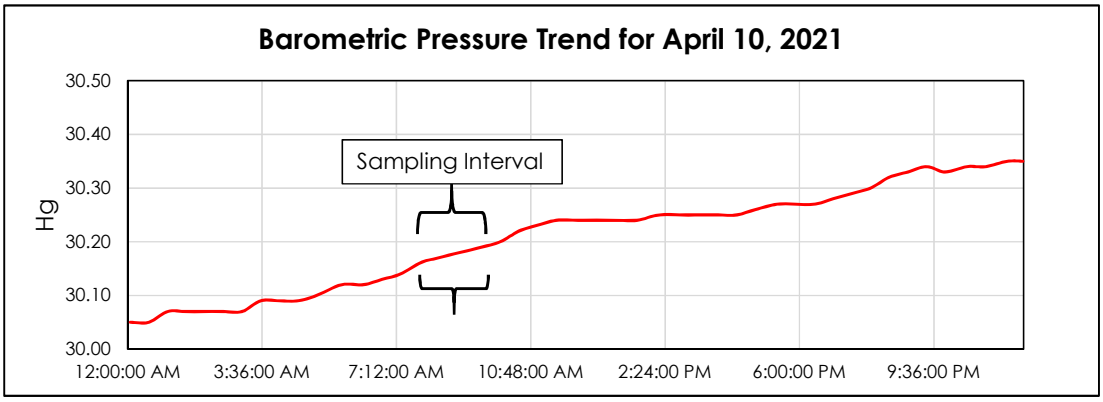
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
5. GP-10P connection repaired on October 23rd, 2020.
6. Pressure was not recorded this month due to a pressure transducer error.

Barometric Pressure Trend - April 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-04-16/2021-04-16/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-04-10/2021-04-10/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

May-21

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	0.3	-				20.0	
(max)			5.00		5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	5/8/2021	8:08	1.0	2.1	1.9	3.1	15.5	79.5	16.7	9.7	100.0	
GP-2	5/8/2021	8:17	1.0	1.5	1.3	12.9	3.8	82.0	15.9	8.9	100.0	
GP-3	5/8/2021	8:25	0.3	--	0.0	4.7	12.9	82.4	8.0	4.0	79.0	
GP-4	5/8/2021	8:33	1.0	--	0.0	6.9	9.7	83.4	9.3	5.3	100.0	
GP-9	5/8/2021	8:39	1.0	--	0.0	9.8	7.3	82.9	10.9	0.0	0.0	
GP-10	5/8/2021	7:58	1.0	--	0.0	12.6	11.2	76.2				
GP-10P	5/8/2021	7:52	1.0	14.5	14.3	33.0	0.6	52.1				*Note 5*
GP-11	5/8/2021	7:31	1.0	--	0.0	9.4	14.5	76.1				
GP-12	5/8/2021	7:23	1.0	24.8	24.4	42.2	5.5	27.9				
GP-13	5/8/2021	7:15	1.0	--	0.0	21.0	2.4	76.6				
GP-14	5/8/2021	9:04	1.0	--	0.0	0.1	21.2	78.7	12.6	0.0	0.0	
GP-15	5/12/2021	10:10	0.1	--	0.0	0.1	20.9	79.0	10.8	0.0	0.0	
GP-16	5/8/2021	8:47	1.0	--	0.0	0.3	21.3	78.4	20.2	13.2	88.0	

	Beginning	Ending	Average
Weather:	Overcast	Overcast	Overcast
Temperature, T (deg F):	42.8	46.6	44.7
Wind Speed (mph):	3.9	5.8	4.85
Wind Direction:	180	203	191.5
Barometric Pressure, P (in Hg):	30.37	30.39	30.38
24hr Baro.Trend (rising / falling / steady / unsteady)	Rising		

Starting Date:	5/8/2021
Starting Time:	7:15
Finishing Date:	5/12/2021
Finishing Time:	10:10
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	5/8/2021

Headings:

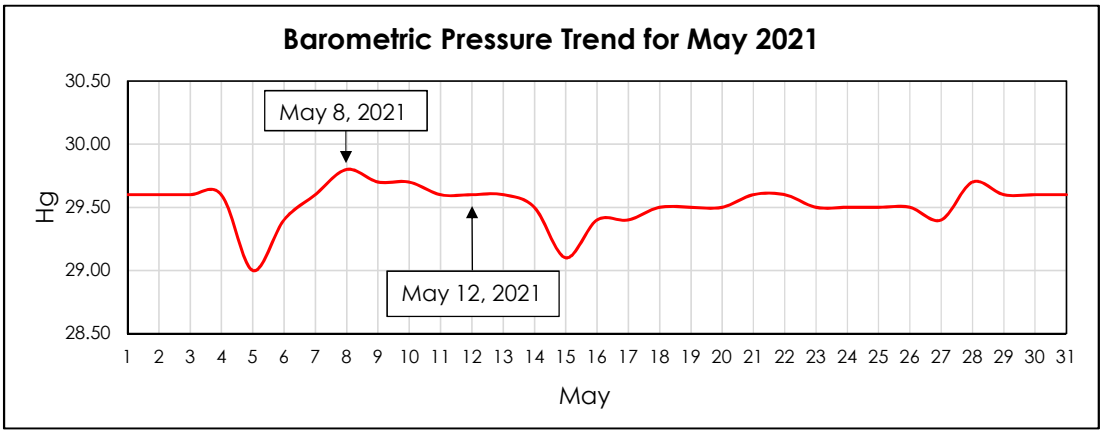
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

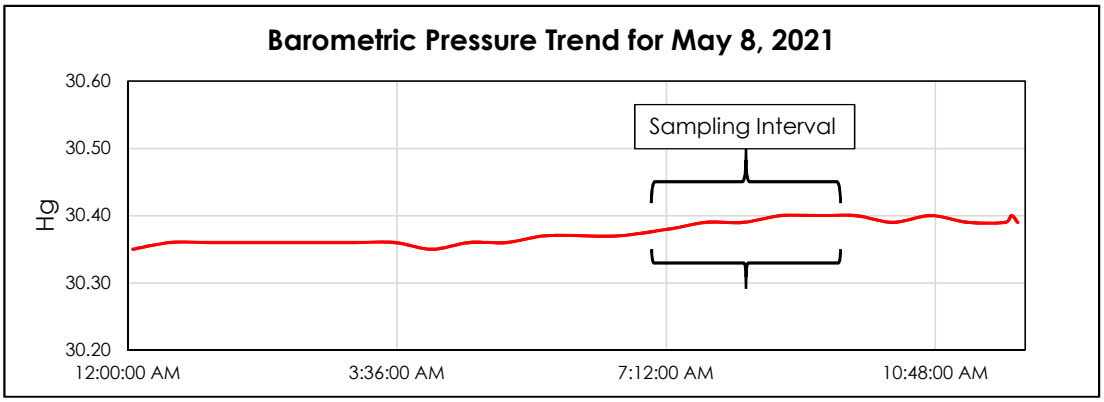
Notes:

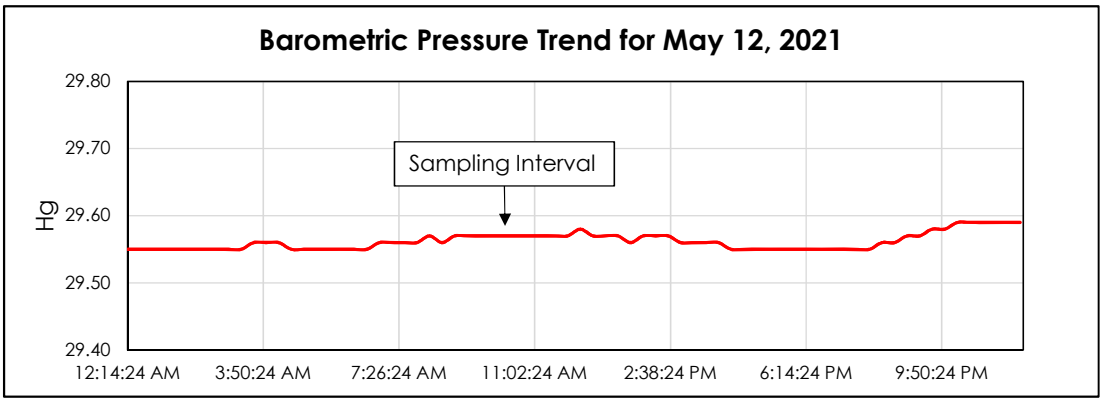
1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section not submerged by liquid.
4. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.

5 GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - May 2021
LRI 304th Landfill, Washington







Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/history/monthly/us/wa/puyallup/KPLU/date/2021-5

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-05-8/2021-05-8/daily
Data Source: https://www.wunderground.com/history/daily/us/wa/puyallup/KPLU/date/2021-5-12

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

June-21

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	0.3	-				20.0	
(max)			5.00		5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	6/7/2021	11:59	0.1	4.9	3.9	5.6	11.8	78.7	17.2	10.2	100.0	
GP-2	6/7/2021	12:09	0.0	0.2	0.3	14.4	0.9	84.4	16.1	9.1	100.0	
GP-3	6/7/2021	12:16	-3.0	--	0.0	9.4	5.7	84.9	7.4	3.4	67.0	
GP-4	6/7/2021	12:23	0.0	--	0.0	8.3	8.4	83.3	10.8	6.8	100.0	
GP-9	6/7/2021	12:30	0.0	--	0.0	11.9	4.1	84.0	11.3	0.0	0.0	
GP-10	6/7/2021	11:51	0.0	7.0	4.3	20.6	3.5	71.6				
GP-10P	6/7/2021	11:47	0.0	12.1	13.6	25.3	5.0	56.1				*Note 5*
GP-11	6/7/2021	11:41	0.0	0.1	0.0	17.0	7.1	75.9				
GP-12	6/7/2021	11:36	0.0	38.2	25.7	49.9	4.1	20.3				
GP-13	6/7/2021	11:30	0.0	--	0.0	24.3	0.8	74.9				
GP-14	6/7/2021	13:12	-0.1	--	0.0	0.1	20.6	79.3	13.7	0.0	0.0	
GP-15	6/7/2021	13:03	-1.9	--	0.0	0.2	20.7	79.1	11.8	0.0	0.0	
GP-16	6/7/2021	12:42	-0.1	--	0.0	1.2	20.2	78.6	20.7	13.7	91.3	

	Beginning	Ending	Average
Weather:	Overcast	Overcast	Overcast
Temperature, T (deg F):	53.8	56.8	55.3
Wind Speed (mph):	5.7	2.1	3.9
Wind Direction:	225	315	270
Barometric Pressure, P (in Hg):	29.99	29.98	29.99
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling		

Starting Date:	6/7/2021
Starting Time:	11:30
Finishing Date:	6/7/2021
Finishing Time:	13:12
Monitored by:	R. Martinez
Instruments:	GEM 2000
Calibration Date:	6/7/2021

Headings:

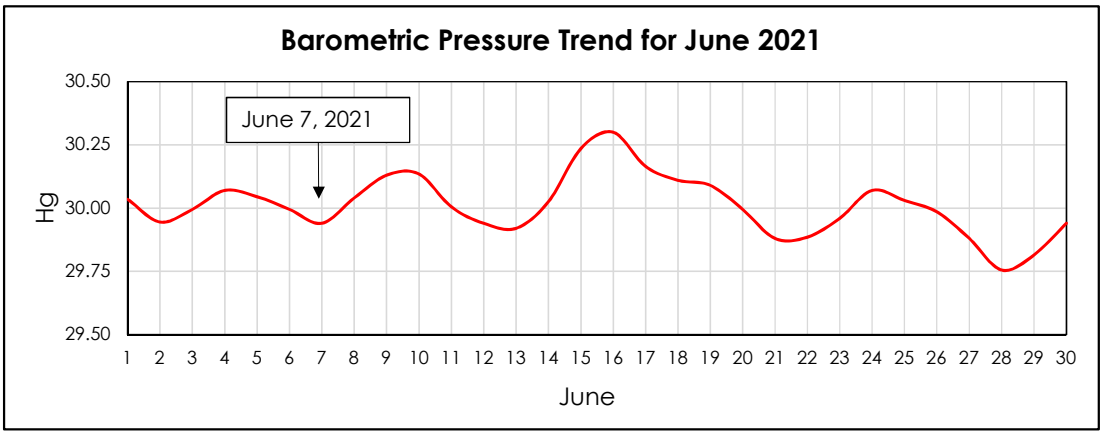
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

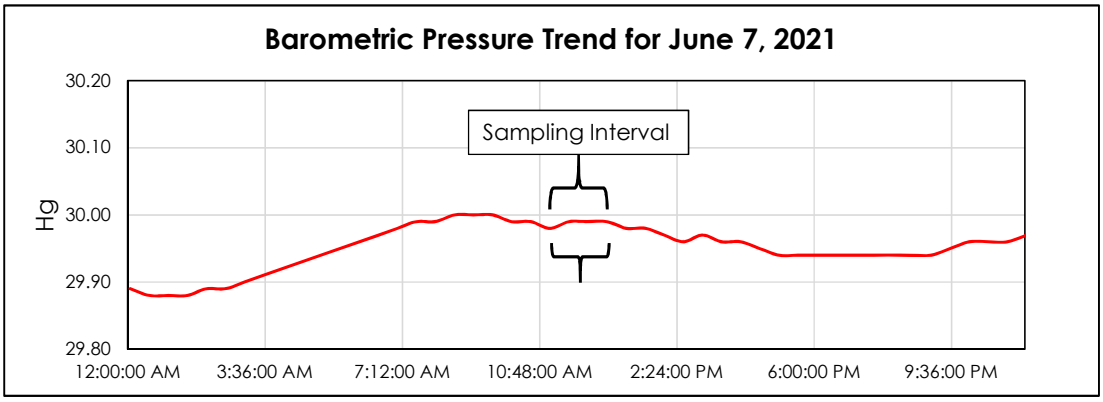
Notes:

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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.

5 GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - June 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-06-16/2021-06-16/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-06-7/2021-06-7/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

July-21

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	0.3	-				20.0	
(max)			5.00		5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	7/7/2021	10:39	-4.7	3.6	2.7	2.6	16.1	78.6	18.2	11.2	100.0	
GP-2	7/7/2021	10:45	-0.3	--	0.5	12.4	5.9	81.2	14.2	7.2	100.0	
GP-3	7/7/2021	10:49	-1.6	--	0.0	6.1	12.2	81.7	9.7	5.7	100.0	
GP-4	7/7/2021	10:54	-0.1	--	0.0	10.2	6.8	83.0	12.3	8.3	100.0	
GP-9	7/7/2021	9:34	-0.1	--	0.0	12.3	4.2	83.5	12.7	0.0	0.0	
GP-10	7/7/2021	10:30	-0.1	28.3	28.3	31.8	2.7	37.2				
GP-10P	7/7/2021	10:27	-0.1	21.9	21.5	23.1	8.7	46.7				*Note 5*
GP-11	7/7/2021	10:22	-0.1	--	0.0	22.2	3.0	74.8				
GP-12	7/7/2021	10:18	0.0	28.0	27.9	63.6	1.3	7.2				
GP-13	7/7/2021	10:12	-0.1	--	0.0	25.3	1.6	73.1				
GP-14	7/7/2021	10:05	-7.5	--	0.0	0.0	20.9	79.1	14.3	0.0	0.0	
GP-15	7/7/2021	9:41	-0.1	--	0.0	0.2	20.8	79.0	13.6	0.0	0.0	
GP-16	7/7/2021	9:57	-0.1	--	0.0	0.0	21.0	79.0	13.4	6.4	42.7	

	Beginning	Ending	Average
Weather:	Sunny	Sunny	Sunny
Temperature, T (deg F):	61.2	62	61.6
Wind Speed (mph):	7.2	7	7.1
Wind Direction:	225	225	225
Barometric Pressure, P (in Hg):	30.06	30.07	30.07
24hr Baro.Trend (rising / falling / steady / unsteady)	Rising		

Starting Date:	7/7/2021
Starting Time:	9:34
Finishing Date:	7/7/2021
Finishing Time:	10:54
Monitored by:	R. Martinez
Instruments:	GEM 2000
Calibration Date:	7/7/2021

Headings:

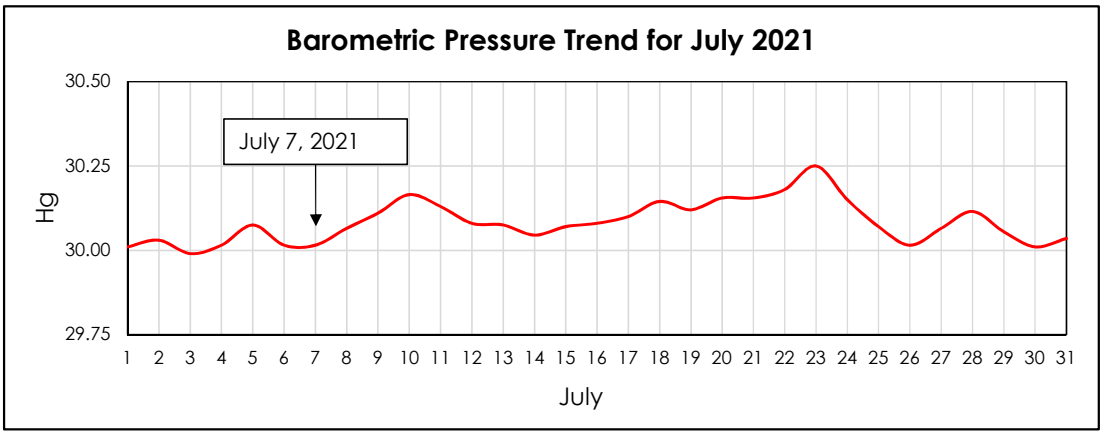
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

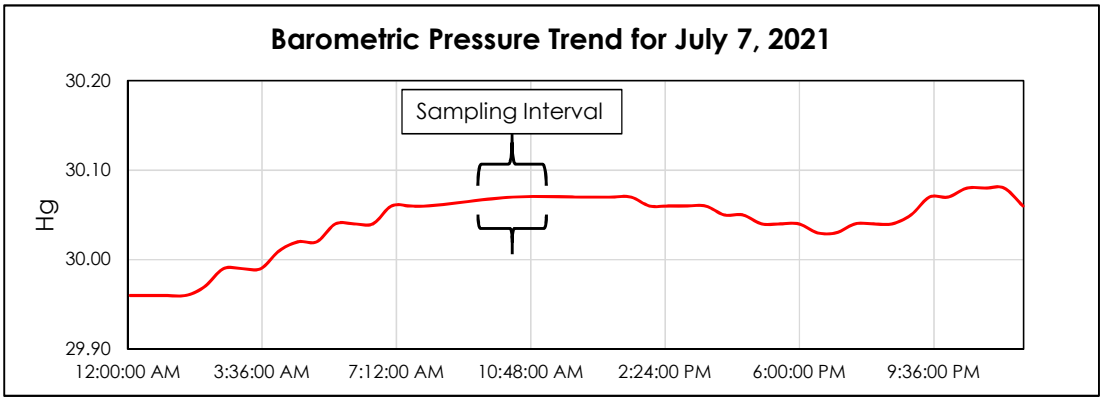
Notes:

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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.

5 GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - July 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-07-07/2021-07-07/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-07-07/2021-07-07/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

August-21

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	0.3	-				20.0	
(max)			5.00		5.0	5.0	20.3				90.0	
Perimeter Gas Probes												
GP-1	8/12/2021	8:02	0.0	0.1	0.1	0.5	20.4	79.0	19.1	12.1	100.0	
GP-2	8/12/2021	8:10	-0.1	0.1	0.1	0.8	16.9	82.2	17.1	10.1	100.0	
GP-3	8/12/2021	8:15	-0.1	--	0.0	1.5	18.5	80.0	11.9	7.9	100.0	
GP-4	8/12/2021	8:20	-0.1	--	0.0	1.4	19.3	79.3	13.6	9.6	100.0	
GP-9	8/12/2021	8:24	-0.1	--	0.0	1.0	19.3	79.7	13.9	0.0	0.0	
GP-10	8/12/2021	7:47	-0.1	0.1	0.1	0.8	18.6	80.5				
GP-10P	8/12/2021	7:40	0.0	1.7	1.7	2.3	19.1	76.9				*Note 5*
GP-11	8/12/2021	7:33	0.0	--	0.0	1.1	20.1	78.8				
GP-12	8/12/2021	7:23	-0.1	5.0	4.0	8.0	18.1	69.9				
GP-13	8/12/2021	7:14	-0.1	--	0.0	0.7	20.0	79.3				
GP-14	8/12/2021	10:18	0.0	--	0.0	0.5	20.1	79.4	16.3	0.3	6.0	
GP-15	8/12/2021	10:30	-0.1	0.2	0.2	0.4	19.3	80.1	16.2	0.2	4.0	
GP-16	8/12/2021	8:29	-0.1	--	0.0	0.7	20.3	79.0	21.9	14.9	99.3	

	Beginning	Ending	Average
Weather:	Sunny	Sunny	Sunny
Temperature, T (deg F):	70	79	74.5
Wind Speed (mph):	9	10	9.5
Wind Direction:	45	0	22.5
Barometric Pressure, P (in Hg):	29.52	29.56	29.54
24hr Baro.Trend (rising / falling / steady / unsteady)	Rising		

Starting Date:	8/12/2021
Starting Time:	7:14
Finishing Date:	8/12/2021
Finishing Time:	10:30
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	8/12/2021

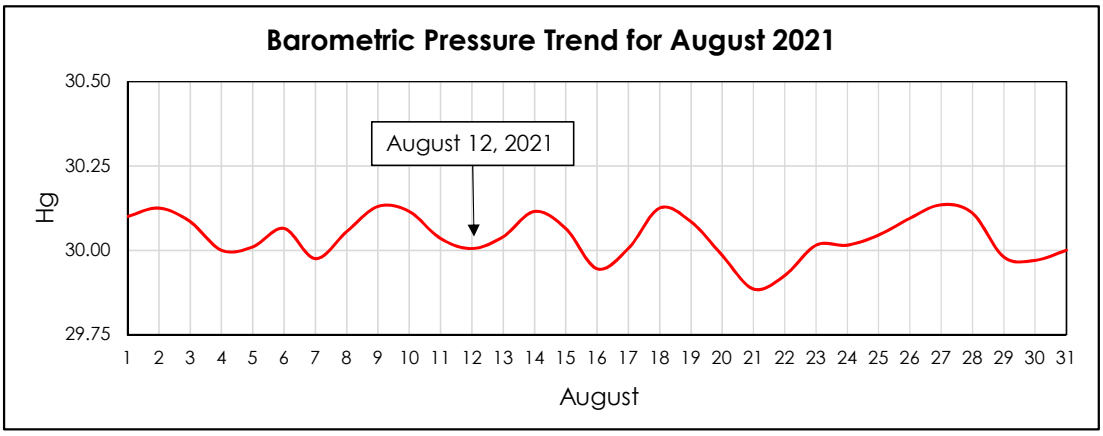
Headings:

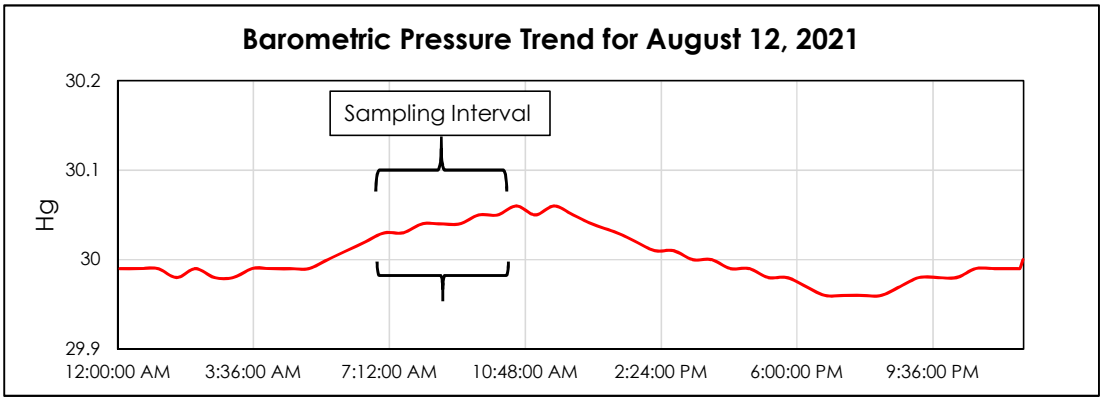
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
5. GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - August 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-08-12/2021-08-12/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-08-12/2021-08-12/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

September-21

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	0.3	-				20.0	
(max)			5.0		5.0	5.0	21.0				90.0	
Perimeter Gas Probes												
GP-1	9/12/2021	13:46	-0.1	0.1	0.0	0.4	20.8	78.8	20.0	0.0	0.0	
GP-2	9/12/2021	13:51	-0.1	0.5	0.5	1.7	16.9	80.9	18.0	0.0	0.0	
GP-3	9/12/2021	13:56	-0.1	0.1	0.0	1.8	18.8	79.4	11.7	2.0	39.0	
GP-4	9/12/2021	14:01	-0.1	--	0.0	1.4	20.1	78.5	14.4	4.8	95.8	
GP-9	9/12/2021	14:06	-0.1	--	0.0	0.9	19.8	79.3	15.6	2.5	49.4	
GP-10	9/12/2021	13:40	-0.1	--	0.0	1.5	19.6	78.9				
GP-10P	9/12/2021	13:37	-0.1	0.2	0.2	2.2	19.7	77.9				*Note 5*
GP-11	9/12/2021	13:32	-0.1	--	0.0	3.4	18.7	77.9				
GP-12	9/12/2021	13:25	0.0	5.9	4.7	10.5	17.7	67.1				
GP-13	9/12/2021	13:19	-0.1	--	0.0	0.7	20.6	78.7				
GP-14	9/12/2021	14:28	-0.1	--	0.0	0.2	21.1	78.7	17.9	1.9	37.0	
GP-15	9/12/2021	14:22	-0.1	--	0.0	0.0	21.2	78.8	15.6	0.2	3.6	
GP-16	9/12/2021	14:13	-0.1	--	0.0	0.6	20.9	78.5	22.4	15.2	100.0	

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	63	66	64.5
Wind Speed (mph):	5	0	2.5
Wind Direction:	VAR	N/A	VAR
Barometric Pressure, P (in Hg):	29.57	29.57	29.57
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	9/12/2021
Starting Time:	13:19
Finishing Date:	9/12/2021
Finishing Time:	14:28
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	9/12/2021

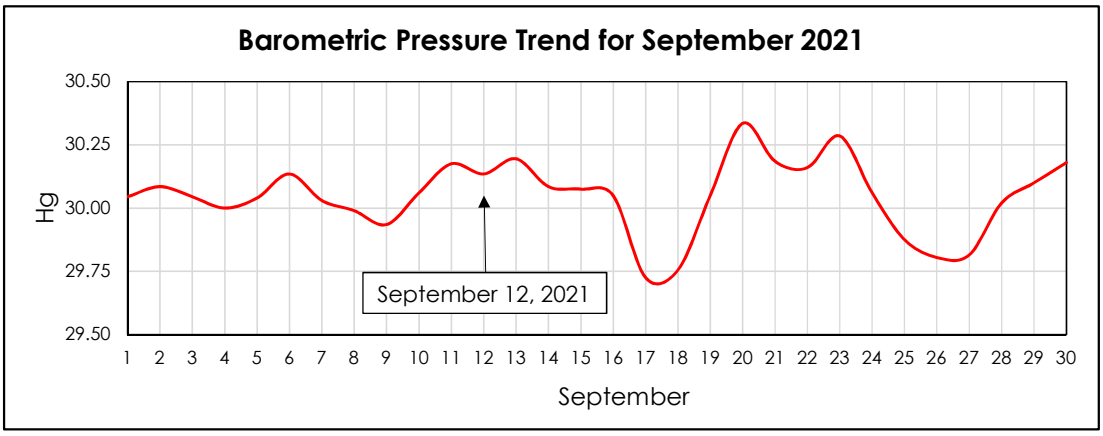
Headings:

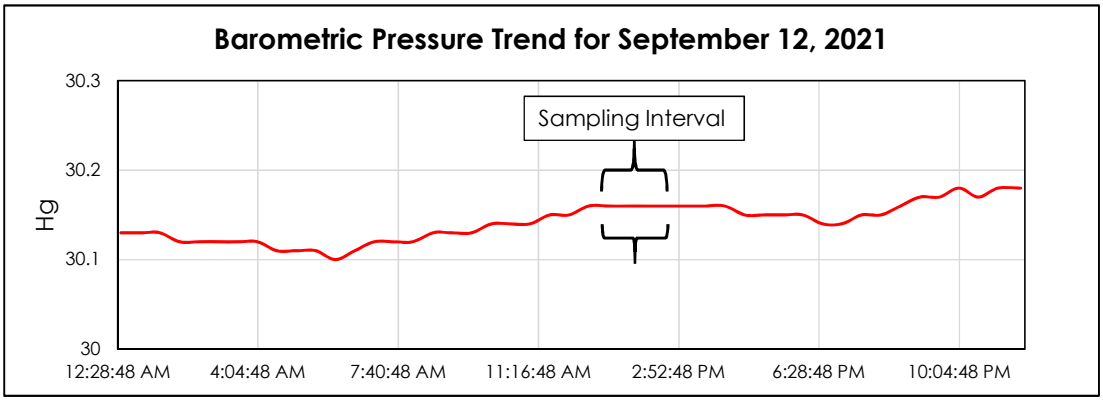
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
5. GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - September 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-09-12/2021-09-12/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-09-12/2021-09-12/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

October-21

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	0.3	—				20.0	
(max)			2.5		5.0	5.0	21.0				90.0	
Perimeter Gas Probes												
GP-1	10/15/2021	11:29	0.03	24.6	11.2	7.6	11.0	70.2	17.5	0.0	0.0	
GP-2	10/15/2021	11:36	0.01		5.0	19.1	0.1	75.8	17.7	0.0	0.0	
GP-3	10/15/2021	11:47	0.19		0.0	10.5	9.2	80.3	11.7	1.9	38.6	
GP-4	10/15/2021	12:01	0.04	—	0.0	9.6	12.1	78.3	14.0	4.4	88.4	
GP-9	10/15/2021	12:14	0.00	—	0.0	13.1	5.3	81.6	12.2	0.0	0.0	
GP-10	10/15/2021	11:21	0.03	—	0.0	16.7	5.7	77.6				
GP-10P	10/15/2021	11:17	0.03		8.2	25.1	4.9	61.8				*Note 5*
GP-11	10/15/2021	13:25	0.00	—	6.2	24.4	0.0	69.4				
GP-12	10/15/2021	11:02	0.36	24.6	24.4	70.6	0.1	4.9				
GP-13	10/15/2021	10:54	-0.04	—	0.6	27.7	1.3	70.4				
GP-14	10/15/2021	13:22	0.03	—	6.1	24.1	0.1	69.7	17.6	1.6	31.6	
GP-15	10/15/2021	13:05	-0.06	—	10.3	23.5	3.0	63.2	17.3	1.9	37.2	
GP-16	10/15/2021	12:38	0.09	—	0.0	1.1	20.8	78.1	23.2	16.0	100.0	

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	58	63	60.5
Wind Speed (mph):	3	13	8
Wind Direction:	VAR	N/A	VAR
Barometric Pressure, P (in Hg):	29.59	29.58	29.59
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	10/15/2021
Starting Time:	10:54
Finishing Date:	10/15/2021
Finishing Time:	13:25
Monitored by:	R. Martinez
Instruments:	GEM 2000
Calibration Date:	10/15/2021

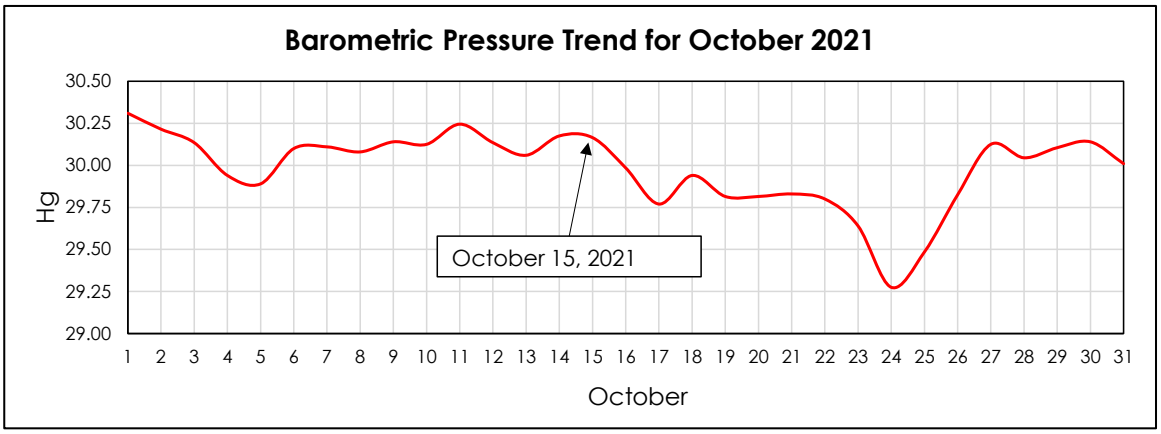
Headings:

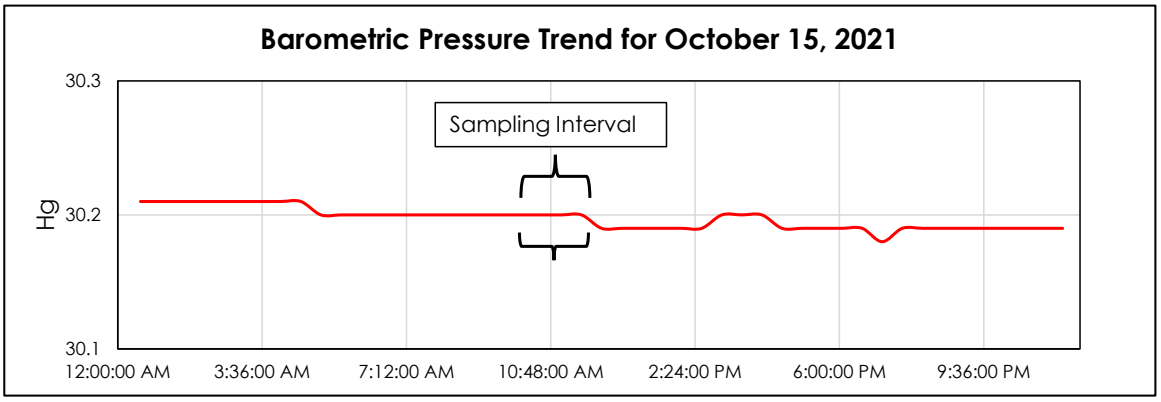
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH4 and CO2 are recorded during sampling. Spike concentrations that are 0.3 percent by volume or greater than stabilized measurements are reported.
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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
5. GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - October 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-10-15/2021-10-15/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-10-15/2021-10-15/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04221001.04

LRI Landfill

November-21

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	0.3	—				20.0	
(max)			2.5		5.0	5.0	21.0				90.0	
Perimeter Gas Probes												
GP-1	11/3/2021	11:19	0.1	—	6.5	6.0	13.4	74.1	17.2	0.0	0.0	
GP-2	11/3/2021	11:28	0.6	—	6.5	19.0	0.1	74.4	16.7	0.0	0.0	
GP-3	11/3/2021	11:40	7.6	—	0.0	9.9	8.7	81.4	9.5	0.0	0.0	
GP-4	11/3/2021	11:49	0.1	—	0.0	11.1	9.1	79.8	14.1	4.6	91.4	
GP-9	11/3/2021	11:56	0.3	—	0.0	13.4	4.6	82.0	10.9	0.0	0.0	
GP-10	11/3/2021	11:06	0.1	—	2.1	22.9	0.3	74.7				
GP-10P	11/3/2021	11:02	0.1	—	17.1	31.2	3.3	48.4				*Note 5*
GP-11	11/3/2021	10:52	0.6	—	10.6	25.7	0.0	63.7				
GP-12	11/3/2021	10:45	1.3	23.2	22.9	68.8	0.1	8.2				
GP-13	11/3/2021	10:34	0.1	—	0.4	29.8	0.5	69.3				
GP-14	11/3/2021	12:31	1.2	—	0.0	1.2	20.5	78.3	20.9	4.9	98.8	
GP-15	11/3/2021	12:16	0.3	17.5	16.0	32.1	0.1	51.8	14.6	0.0	0.0	
GP-16	11/3/2021	12:03	1.5	—	0.0	7.1	16.9	76.0	21.1	13.9	92.5	

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	52	55	53.5
Wind Speed (mph):	0	0	0
Wind Direction:	CALM	CALM	CALM
Barometric Pressure, P (in Hg):	29.44	29.41	29.43
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	11/3/2021
Starting Time:	10:34
Finishing Date:	11/3/2021
Finishing Time:	12:31
Monitored by:	R. Martinez
Instruments:	GEM 2000
Calibration Date:	11/3/2021

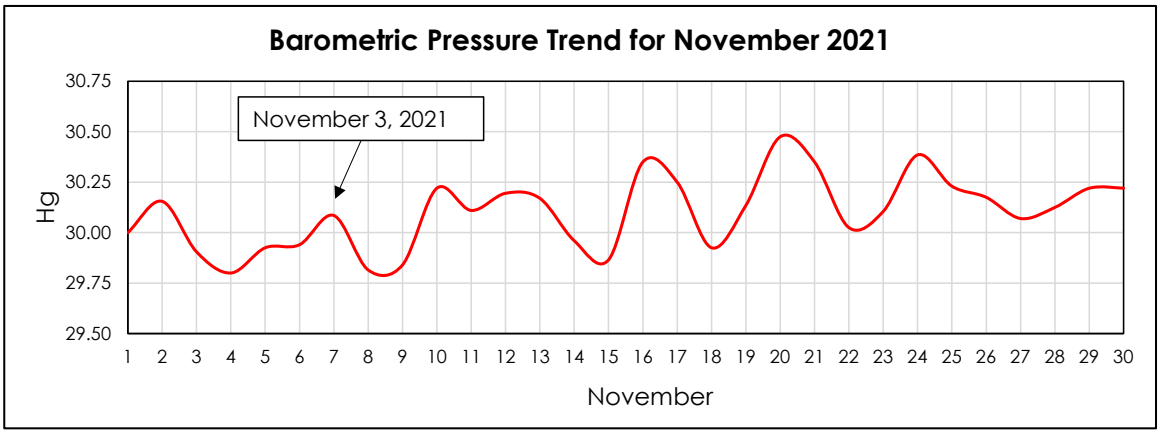
Headings:

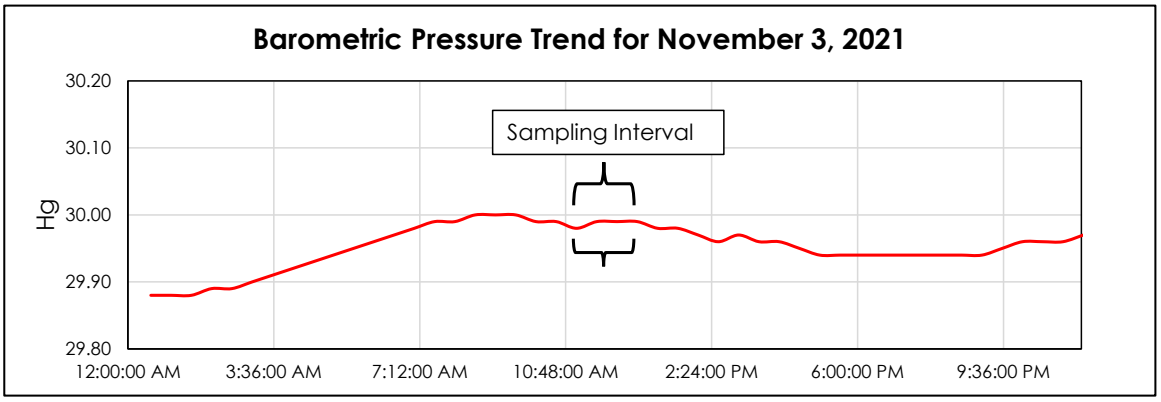
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH4 and CO2 are recorded during sampling. Spike concentrations that are 0.3 percent by volume or greater than stabilized measurements are reported.
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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
5. GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - November 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-11-03/2021-11-03/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-11-03/2021-11-03/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring — **SCS Engineers**

Landfill Gas Control System — 04221001.04

LRI Landfill

December-21

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	0.3	—				20.0	
(max)			2.5		5.0	5.0	21.0				90.0	
Perimeter Gas Probes												
GP-1	12/1/2021	8:01	0.0	5.1	5.3	4.8	12.5	77.4	16.4	0.0	0.0	
GP-2	12/1/2021	8:07	0.1	7.5	7.0	17.7	0.3	75.0	15.8	0.0	0.0	
GP-3	12/1/2021	8:12	0.1	—	0.0	7.3	11.6	81.1	7.8	0.0	0.0	
GP-4	12/1/2021	8:17	0.0	—	0.0	10.0	10.6	79.4	10.5	0.9	17.8	
GP-9	12/1/2021	8:21	-0.2	—	0.0	10.4	8.0	81.6	10.2	0.0	0.0	
GP-10	12/1/2021	7:52	0.0	2.2	3.2	23.1	1.0	72.7				
GP-10P	12/1/2021	7:49	0.0	20.0	19.7	34.2	2.6	43.5				
GP-11	12/1/2021	7:45	0.0	0.4	0.2	20.0	1.1	78.7				
GP-12	12/1/2021	7:34	0.0	21.2	21.0	67.8	0.1	32.1				
GP-13	12/1/2021	7:28	0.0	—	0.1	25.6	2.5	71.8				
GP-14	12/1/2021	8:44	0.4	—	0.0	0.2	21.2	78.6	10.8	0.0	0.0	
GP-15	12/1/2021	8:36	0.1	0.2	0.1	0.3	21.2	78.4	13.2	0.0	0.0	
GP-16	12/1/2021	8:27	0.0	—	0.0	1.5	20.6	77.9	19.0	11.8	78.6	

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	54	55	54.5
Wind Speed (mph):	0	5	2.5
Wind Direction:	CALM	WSW	CALM
Barometric Pressure, P (in Hg):	29.64	29.62	29.63
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	12/1/2021
Starting Time:	7:28
Finishing Date:	12/1/2021
Finishing Time:	8:44
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	12/1/2021

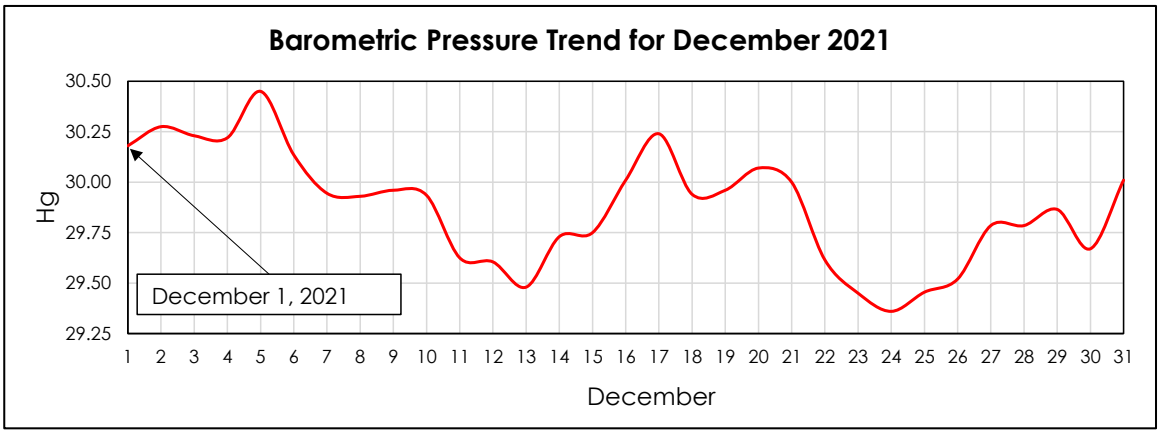
Headings:

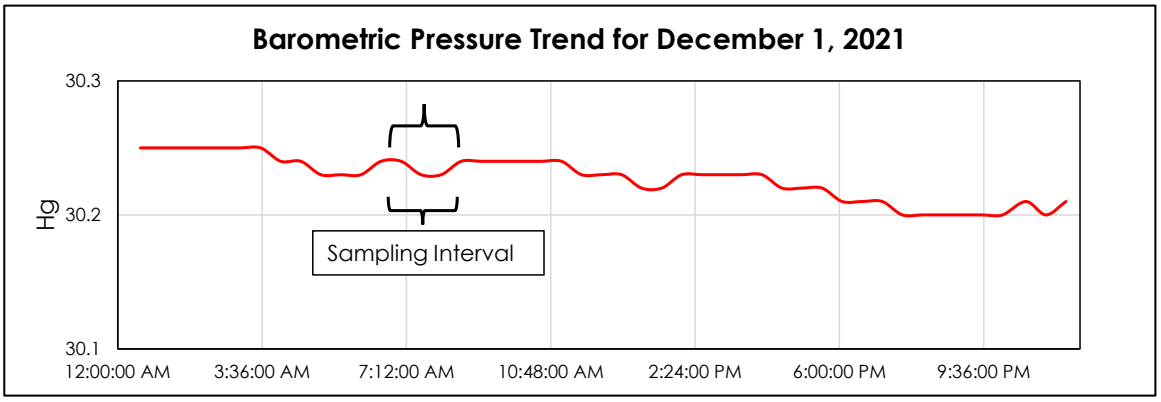
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

Notes:

1. Measurement for spike concentrations of CH4 and CO2 are recorded during sampling. Spike concentrations that are 0.3 percent by volume or greater than stabilized measurements are reported.
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. GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.

Barometric Pressure Trend - December 2021
LRI 304th Landfill, Washington





Monthly Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-12-01/2021-12-01/monthly

Daily Data Source: Wunderground.com (Puyallup)
Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2021-12-01/2021-12-01/daily

LRI 304th Street Landfill
Landfill Gas Monitoring of On-site Buildings

Date: 3/4/2021
Weather Conditions: Sunny
Instrument: MicroFID
Measured By: Andres Lopez

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**.

- ☑ 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.
- ☑ Work Shop – interior of shed adjacent to stormwater ponds.

Signature

LRI 304th Street Landfill
Landfill Gas Monitoring of On-site Buildings

Date: 4/9/2021
Weather Conditions: Cloudy
Instrument: MicroFID
Measured By: Andres Lopez

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**.

- ☑ 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.
- ☑ Work Shop – interior of shed adjacent to stormwater ponds.

Signature

LRI 304th Street Landfill
Landfill Gas Monitoring of On-site Buildings

Date: 7/20/2021
Weather Conditions: Cloudy
Instrument: MicroFID
Measured By: Andres Lopez

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**.

- ☑ 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.

* Work Shop was demolished during the construction of Cell 8B.

Signature

LRI 304th Street Landfill
Quaterly Interior Monitoring of On-site Buildings for Methane

Date: 10/19/21
Weather Conditions: Cloudy
Instrument: Micro FID
Measured By: Ruben Martinez

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) (625 ppm methane or 1.25% of methane per volume). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:

- Cabinetry
- Electrical outlets
- Floor drains
- General work area
- Sink drains

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
- [x] Repair Shop
- [x] Pay/Scale Booth

Signature

November 9, 2021
File No. 04221001.10

Mr. George Duvendack
Site Manager
Pierce County Recycling, Composting and Disposal, LLC dba LRI
17925 Meridian Street East
Puyallup, Washington 98375

Subject: **March 2021 Gas Extraction Well Installation Report**
LRI Landfill, Graham, Washington

Dear George:

This letter report presents a summary of field activities and observations performed by SCS Engineers (SCS) during the installation of 13 new landfill gas (LFG) extraction wells at the LRI Landfill located in Graham, Washington. The LFG extraction wells were installed in general accordance with the 2021 Gas System Expansion design plans, approved well construction variance, and well completion schedule issued by SCS on March 9, 2021. 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. Drawings showing the well locations and boring/well completion logs for each completed well are enclosed with this report.

Summary

SCS personnel were onsite from March 10, 2021 through March 16, 2021 to observe drilling and installation of 13 new 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 logs. 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[3]	Design Depth (ft)	Installed Depth (ft)	Length of Screen (ft)
WE-281	9-0305	847.6	HDPE	BLP-615	40.0	40.5	18.0
WE-282	10-0305	847.4	HDPE	BLP-616	40.0	40.0	18.0
WE-283	11-0305	845.2	HDPE	BLP-617	40.0	42.0	18.0
WE-284	12-0305	842.4	HDPE	BLP-619	40.0	42.0	18.0
WE-285	13-0305	837.9	HDPE	BLP-620	40.0	43.0	18.0
WE-286	5-0305	779.7	HDPE	BLP-618	40.0	42.0	18.0
WE-287	6-0305	774.9	HDPE	BLP-622	40.0	41.0	18.0
WE-288	7-0305	768.5	HDPE	BLP-623	40.0	40.0	18.0
WE-289	8-0305	848.2	HDPE	BLP-614	40.0	40.0	18.0
WE-290	3-0305	713.1	HDPE	BLP-625	40.0	41.0	18.0
WE-291	4-0305	714.3	HDPE	BLP-626	40.0	42.0	18.0
WE-292	2-0305	708.1	HDPE	BLP-621	34.0	33.5	12.0
WE-293	1-0305	703.4	HDPE	BLP-624	40.0	38.5	18.0

Notes:

1. Survey data provided by HRK Engineering & Field Services 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 AF240 drill rig with a 10 foot long, 36-inch diameter bucket auger. For each of the extraction wells, the borings were advanced to within 1.0 to 2.0 feet of the design depths. The extraction wells were then constructed using 6-inch diameter SDR 11 high-density polyethylene (HDPE) pipe and fittings. Backfill was completed with 2-inch minus round rock, hydrated bentonite chips, and clean soil as shown on the attached 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 7 feet of pipe stickup above the ground surface to allow for grading 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.

The following variations to design were completed in conjunction with the well installations. Borings that were completed to within 2.0 feet of the design depth are not included on the following list.

- **WE-285** (13-0305): The boring was completed to 43.0 feet-bgs, exceeding the design depth by 3 feet, resulting in a clearance of 140.6 feet from the operations layer.
- **WE-292** (2-0305): The boring location was moved 20 feet east to be further away from the subgrade divide (berm) between Cell 7 and Cell 8A. The relocated boring was completed to 33.5 feet-bgs, resulting in a clearance of 10.2 feet from the operations layer.

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,

Andres Lopez, EIT
Associate Professional
SCS Engineers

Kevin Lakey, PE, LHG,
Project Director
SCS Engineers

AL

cc: David Bosch, TPCDH
Olivier Moi, LRI

Attachments:

LFG Extraction Boring/Well Completion Logs
Site Plan of Well Locations

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
- 01 2021 Vertical Gas Extraction Well

CELL 1

CELL 2A

CELL 2B

CELL 3A

CELL 4A

CELL 4B

CELL 5

CELL 6

CELL 7

CELL 8A

FUTURE CELL 8B

EXISTING PHASE I CLOSURE

EXISTING PHASE IIA CLOSURE

EXISTING PHASE IIB CLOSURE

EXISTING PHASE IIC CLOSURE

EXISTING PHASE III CLOSURE

EXISTING PHASE IVA CLOSURE

FUTURE PHASE IVB CLOSURE

FLARE STATION

ENERGY PLANT

TRUCK WASH

SCALE HOUSE AND SCALES

OFFICE

FACILITY ENTRANCE

GENERAL NOTES:

1. EXISTING TOPOGRAPHY BY MILLER CREEK ASSOCIATES, SEATAC, WA. SURVEY DATE JANUARY 14, 2021. HORIZONTAL DATUM: ASSUMED LOCAL COORDINATE SYSTEM VERTICAL DATUM: BASED ON PIERCE COUNTY BENCH No 112-28, ELEVATION 660.29 NGVD 1929
2. LFG WELL LOCATIONS AND GCCS BY SCS ENGINEERS, BELLEVUE, WA. BASED ON AS-BUILT LOCATIONS AND FIELD LOCATION BY LRI STAFF. UPDATED FEBRUARY 15, 2021.

0 150 300 450

APPROXIMATE SCALE IN FEET

RECORD DRAWING

THIS DRAWING IS A RECORD COMPILING THE DESIGN INFORMATION, FIELD CHANGES, AND SURVEY INFORMATION USED DURING CONSTRUCTION OF THE FACILITY. THE INTENT IS TO PROVIDE THE OWNER WITH A DOCUMENT TO FACILITATE THE OPERATION, MAINTENANCE, AND POSSIBLE FUTURE MODIFICATIONS DURING THE LIFE OF THE FACILITY. THIS RECORD DRAWING MAY NOT BE AN EXACT AND PRECISE DEPICTION OF THE FACILITY. NEITHER SCS NOR THE PROFESSIONAL ENGINEER ASSUMES LIABILITY OR RESPONSIBILITY FOR ANY ACTION OR ACTIVITY BASED UPON THIS DRAWING. IF NECESSARY, FIELD VERIFY THE FEATURES ON THIS DRAWING.

NO.	REVISION	DATE
1	ISSUED FOR CLIENT REVIEW	3/8/2021
2	ISSUED FOR CONSTRUCTION	3/9/2021
3	ISSUED FOR RECORD DRAWING	4/19/2021

SHEET TITLE: SITE PLAN

PROJECT TITLE: 2021 GCCS EXPANSION - PART A

LRI LANDFILL
30919 MERIDIAN STREET EAST
GRAHAM, WASHINGTON 98338

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX (503) 684-6948

PROJ. NO. 04220001.05 | DWN. BY: GDB | ACAD FILE: 2021-A LRLF GCCS RD.dwg | APP. BY: KGL
DSN. BY: GDB | CHK. BY: TAB

DATE: MARCH 2021

SCALE: AS SHOWN

FIGURE NO. 1

C:\Users\GDB\Dropbox_WIP\LRI [Client]\GCCS\2021 GCCS PART A_2DWG\2021-A LRLF GCCS RD-v2.dwg, 1, 4/19/2021 10:30:08 AM, AutoCAD PDF (General Documentation).pc3

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
- 01 2021 Vertical Gas Extraction Well

CELL 1
CELL 2A
CELL 2B
CELL 3A
CELL 4A
CELL 4B
CELL 5
CELL 6
CELL 7
CELL 8A
FUTURE CELL 8B

EXISTING PHASE I CLOSURE
EXISTING PHASE IIA CLOSURE
EXISTING PHASE IIB CLOSURE
EXISTING PHASE IIC CLOSURE
EXISTING PHASE III CLOSURE
EXISTING PHASE IVA CLOSURE
FUTURE PHASE IVB CLOSURE

FLARE STATION
ENERGY PLANT
TRUCK WASH
SCALE HOUSE AND SCALES
OFFICE
FACILITY ENTRANCE

GENERAL NOTES:
1. EXISTING TOPOGRAPHY BY MILLER CREEK ASSOCIATES, SEATAC, WA. SURVEY DATE JANUARY 14, 2021. HORIZONTAL DATUM: ASSUMED LOCAL COORDINATE SYSTEM VERTICAL DATUM: BASED ON PIERCE COUNTY BENCH No 112-28, ELEVATION 660.29 NGVD 1929
2. LFG WELL LOCATIONS AND GCCS BY SCS ENGINEERS, BELLEVUE, WA. BASED ON AS-BUILT LOCATIONS AND FIELD LOCATION BY LRI STAFF. UPDATED FEBRUARY 15, 2021.

0 150 300 450
APPROXIMATE SCALE IN FEET

RECORD DRAWING

THIS DRAWING IS A RECORD COMPILING THE DESIGN INFORMATION, FIELD CHANGES, AND SURVEY INFORMATION USED DURING CONSTRUCTION OF THE FACILITY. THE INTENT IS TO PROVIDE THE OWNER WITH A DOCUMENT TO FACILITATE THE OPERATION, MAINTENANCE, AND POSSIBLE FUTURE MODIFICATIONS DURING THE LIFE OF THE FACILITY. THIS RECORD DRAWING MAY NOT BE AN EXACT AND PRECISE DEPICTION OF THE FACILITY. NEITHER SCS NOR THE PROFESSIONAL ENGINEER ASSUMES LIABILITY OR RESPONSIBILITY FOR ANY ACTION OR ACTIVITY BASED UPON THIS DRAWING. IF NECESSARY, FIELD VERIFY THE FEATURES ON THIS DRAWING.

NO.	REVISION	DATE
A	ISSUED FOR CLIENT REVIEW	3/8/2021
B	ISSUED FOR CONSTRUCTION	3/9/2021
1	ISSUED FOR RECORD DRAWING	4/19/2021

SHEET TITLE: SITE PLAN - TOP OF OPERATIONS LAYER

PROJECT TITLE: 2021 GCCS EXPANSION - PART A
LRI LANDFILL
30919 MERIDIAN STREET EAST
GRAHAM, WASHINGTON 98338

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX (503) 684-6948

PROJ. NO.	04220001.05
DSN. BY:	GDB
DWN. BY:	GDB
CHK. BY:	TAB
ACAD FILE:	2021-A LRILF GCCS RD v2.2
APP. BY:	KGL

DATE: MARCH 2021

SCALE: AS SHOWN

FIGURE NO. 2

C:\Users\GDB\Dropbox_WIP\LRI (Valley)\GCCS\2021 GCCS PART A_2021\2021-A LRILF GCCS RD v2.dwg, 2, 4/19/2021 10:30:11 AM, AutoCAD PDF (General Documentation).pc3

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-281

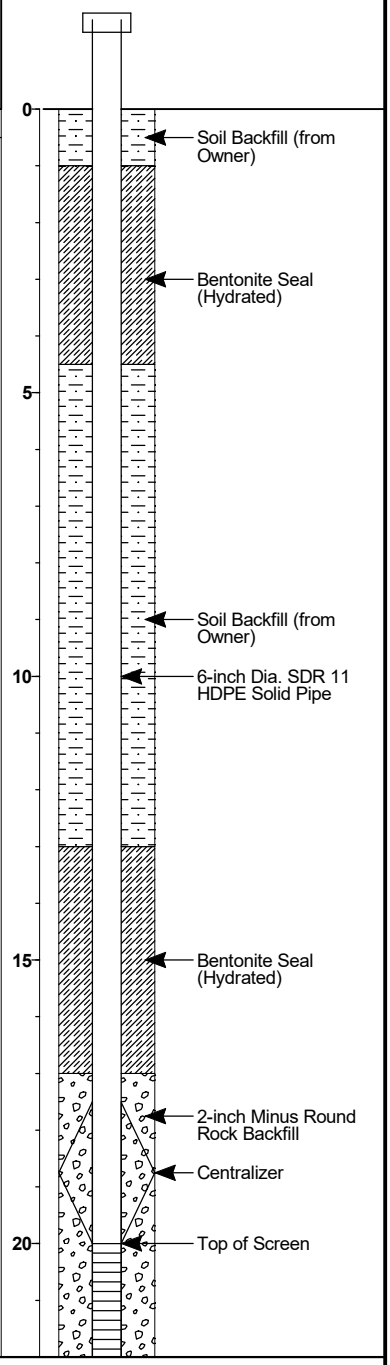
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-615. Drawing ID: 9-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10					REFUSE		Brown-white refuse (plastic) with soil, dry, mild decomposition, 77°F.
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
6	19							
	20							
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/10/21**
Date Ended: **3/10/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **10:42**
Time Ended: **12:00**
Total Depth: **40.5 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

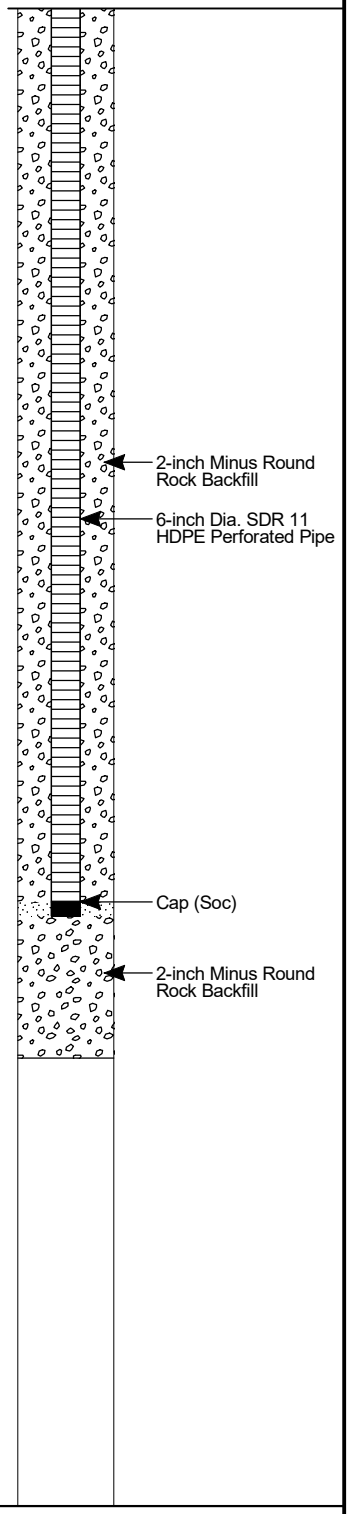
BORING NUMBER: WE-281

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	24					REFUSE		Black refuse (plastic, paper) with soil, moist-wet, moderate-well decomposition, 89°F.
9	30					REFUSE		Black refuse (plastic, fabric) with soil, moist-wet, moderate-well decomposition, 116°F.

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-282

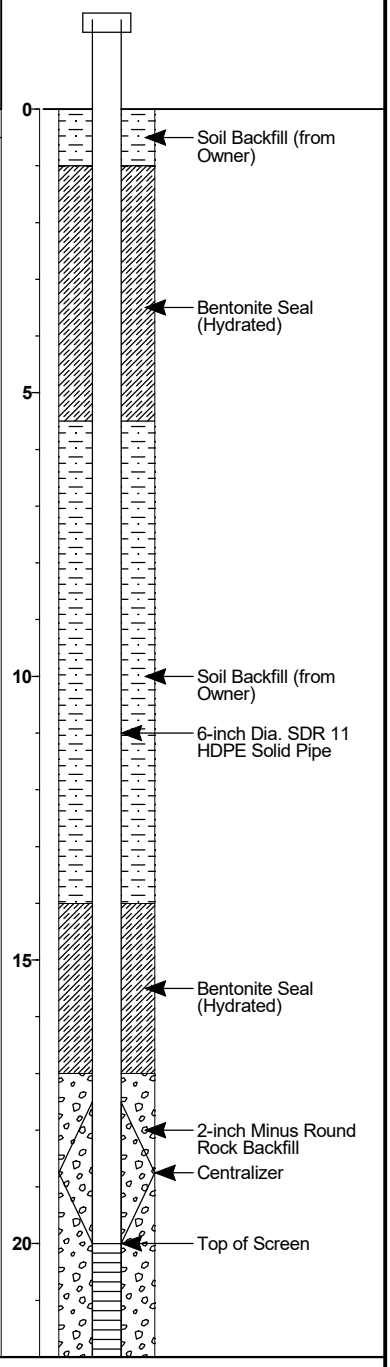
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-616. Drawing ID: 10-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10					REFUSE		Grey-brown refuse (paper, plastic) with soil, moist, mild decomposition, 78°F.
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
6	19							
	20							
	21					REFUSE		Brown-green-black refuse (plastic) with soil, moist, moderate decomposition, 108°F.
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/10/21**
Date Ended: **3/10/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **12:07**
Time Ended: **13:25**
Total Depth: **40.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

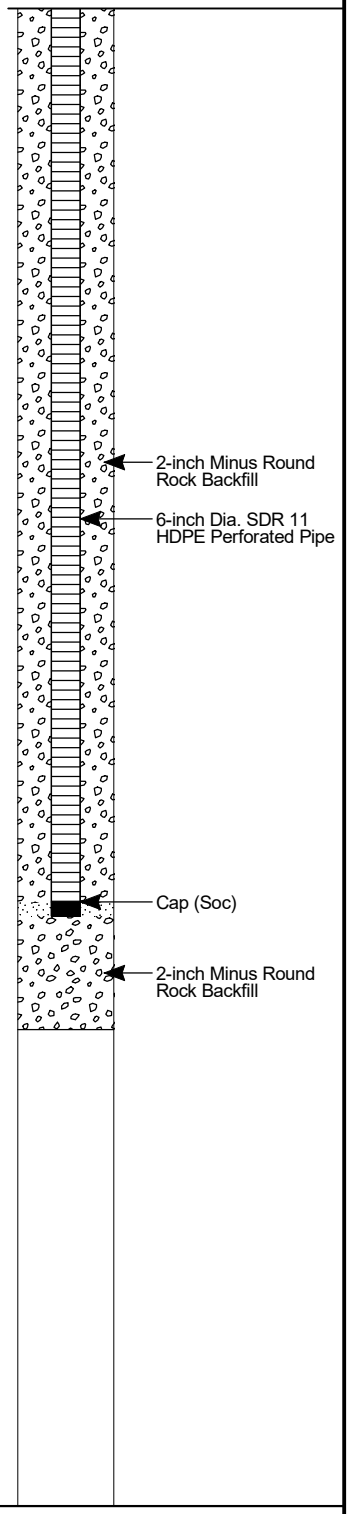
BORING NUMBER: WE-282

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	22–23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33					REFUSE		Black refuse (plastic) with soil, moist, moderate-well decomposition, 126°F.
	34							
	35							
11	36							
	37							
	38							
12	39							
	40							
	41							
	42							
13	43							
	44							
	45							
14	46							
	47							
	48							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-283

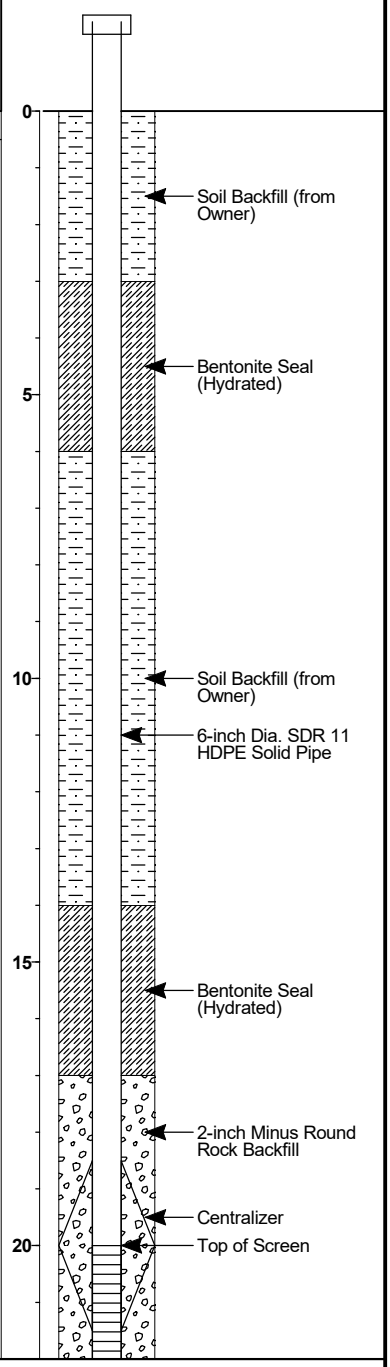
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-617. Drawing ID: 11-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
1	3							
	4							
	5					REFUSE		Brown-grey refuse (plastic, fabric) with soil, dry-moist, mild decomposition.
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
6	19							
	20							
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/11/21**
Date Ended: **3/11/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **08:20**
Time Ended: **09:40**
Total Depth: **42.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

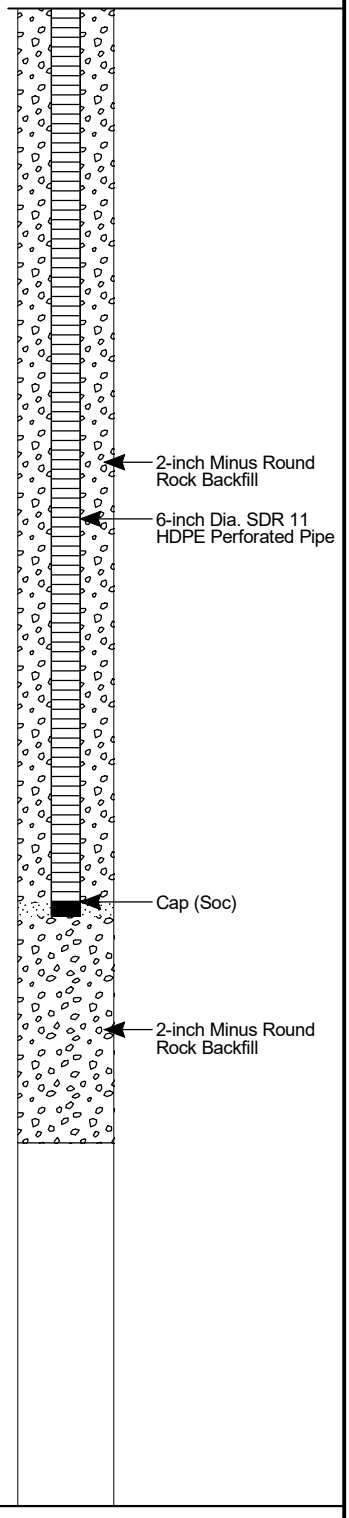
BORING NUMBER: WE-283

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	22–24							
	25							
8	26–28							
	29							
9	30–31							
	32					REFUSE		Black-brown refuse (plastic, fabric) with soil, wet, moderate decomposition, 110°F.
10	33							
	34					REFUSE		Black refuse (plastic) with soil, wet, moderate-well decomposition, 122°F.
11	35–37							
	38							
12	39–41							
	42							
13	43–45							
	46							
14	47–48							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

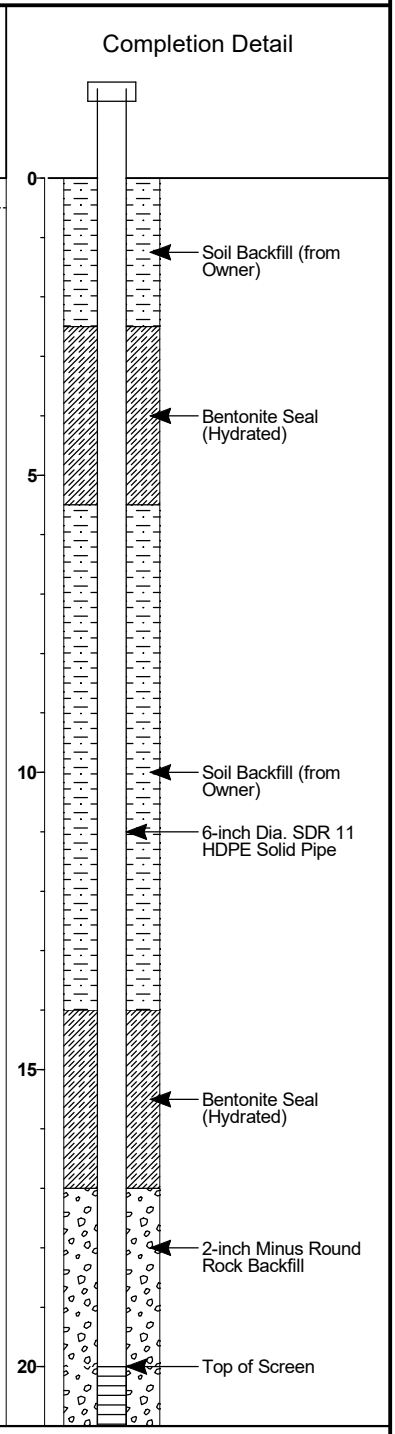
BORING NUMBER: WE-284

LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-619. Drawing ID: 12-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
	3							
1	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11					REFUSE		Brown-grey refuse (plastic, styrofoam, wire) with soil, moist, mild decomposition, 76°F.
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							
	21							



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/11/21**
Date Ended: **3/11/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**
Time Started: **09:46**
Time Ended: **11:34**
Total Depth: **42.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

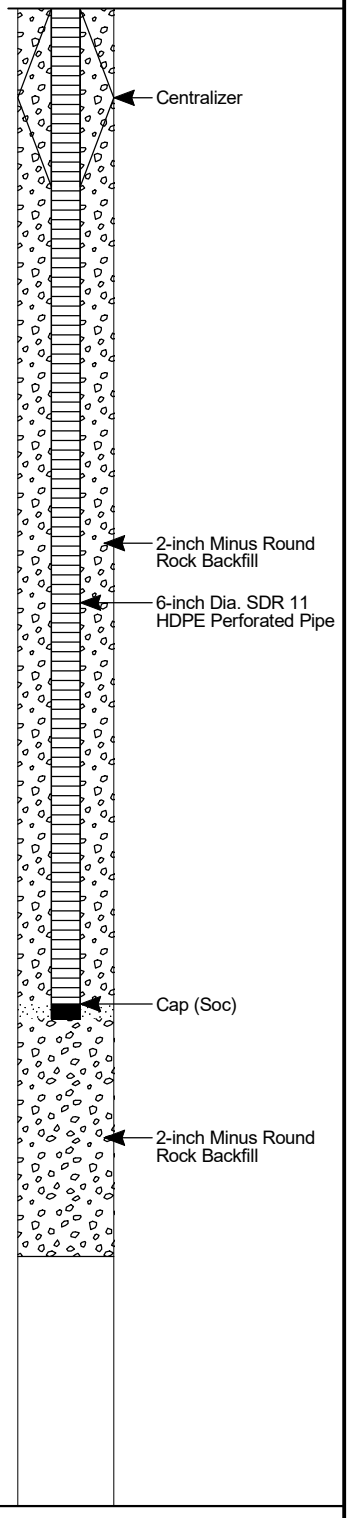
BORING NUMBER: WE-284

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	21							
	22							
7	23							
	24							
	25							
8	26					REFUSE		Black refuse (plastic) with soil, moist-wet, moderate-well decomposition, 119°F.
	27							
	28							
	29					REFUSE		Black refuse with soil, moist-wet, moderate-well decomposition, 104°F.
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37					REFUSE		Black refuse with soil, moist-wet, moderate-well decomposition, 110°F.
	38							
12	39							
	40							
	41							
	42							
13	43							
	44							
	45							
14	46							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-285

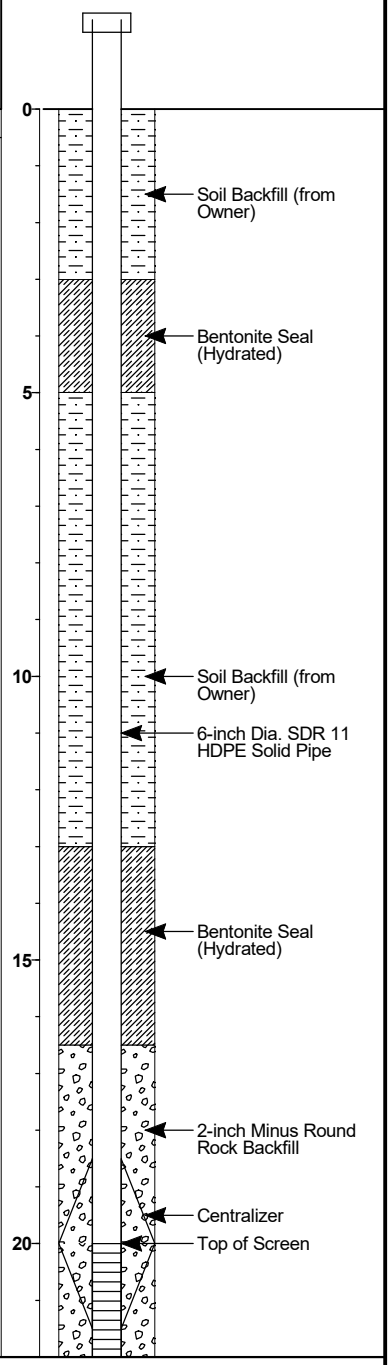
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-620. Drawing ID: 13-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16					REFUSE		Brown-grey-black refuse (plastic, fabric) with soil, moist-wet, moderate decomposition, 87°F.
	17							
	18							
	19							
6	20							
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/11/21**
Date Ended: **3/11/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **11:21**
Time Ended: **13:10**
Total Depth: **43.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

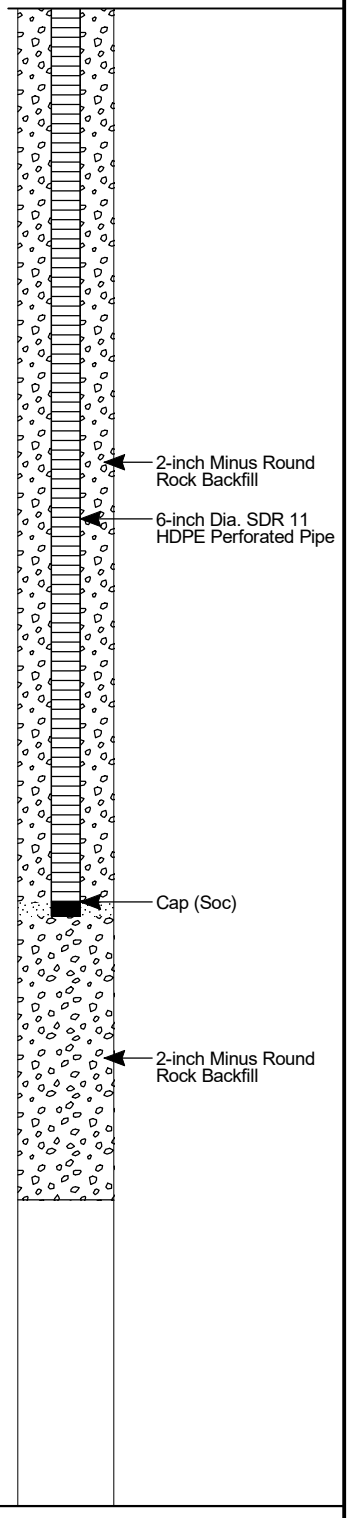
BORING NUMBER: WE-285

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	22–23					REFUSE		Brown-green refuse (paper, plastic) with soil, moist, moderate decomposition, 109°F.
	24–28							
8	27–28							
	29							
9	30–32							
10	33–34							
	35							
11	36–38							
	37							
12	39–40					REFUSE		Brown-white-black refuse (plastic) with soil, moist, moderate decomposition, 113°F.
	41–43							
13	42–43							
	44–45							
14	46–48							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-286

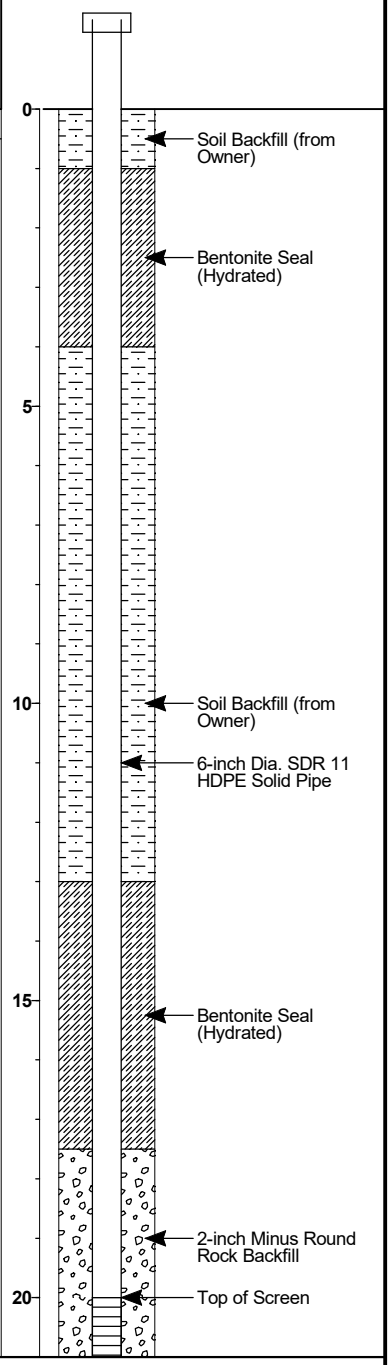
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-618. Drawing ID: 5-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9					REFUSE		Brown-black refuse (paper) with soil and wood, dry-moist, mild decomposition, 58°F.
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							
	21							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/12/21**
Date Ended: **3/12/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **08:07**
Time Ended: **09:30**
Total Depth: **42.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

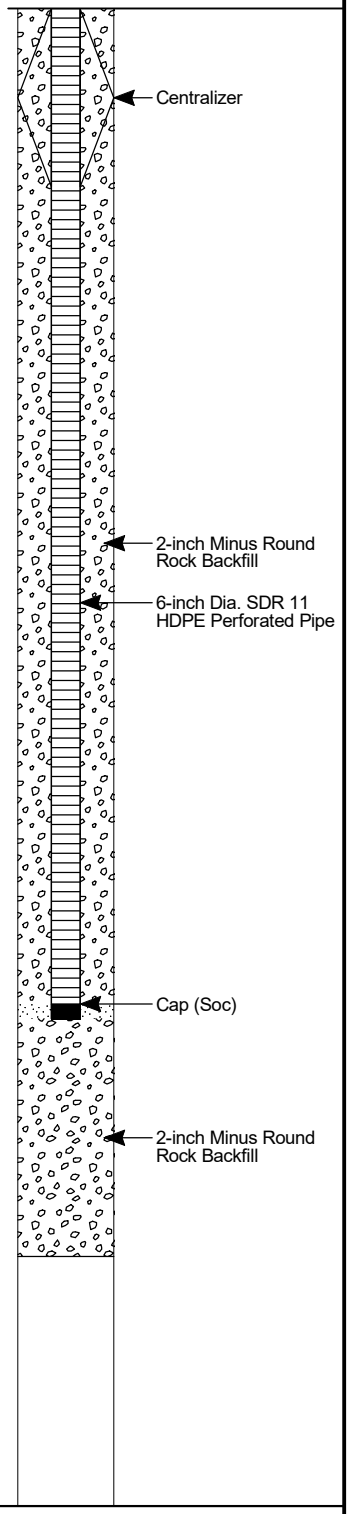
BORING NUMBER: WE-286

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	21							
	22					SM-GM		Grey-green-brown soil with clay, moist, no decomposition, 76°F.
7	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33					REFUSE		Brown-black refuse (plastic) with soil, moist-wet, moderate decomposition, 96°F.
	34							
	35							
11	36							
	37							
	38					REFUSE		Black refuse (plastic) with soil, wet, moderate decomposition, 97°F.
12	39							
	40							
	41							
	42							
13	43							
	44							
	45							
14	46							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-287

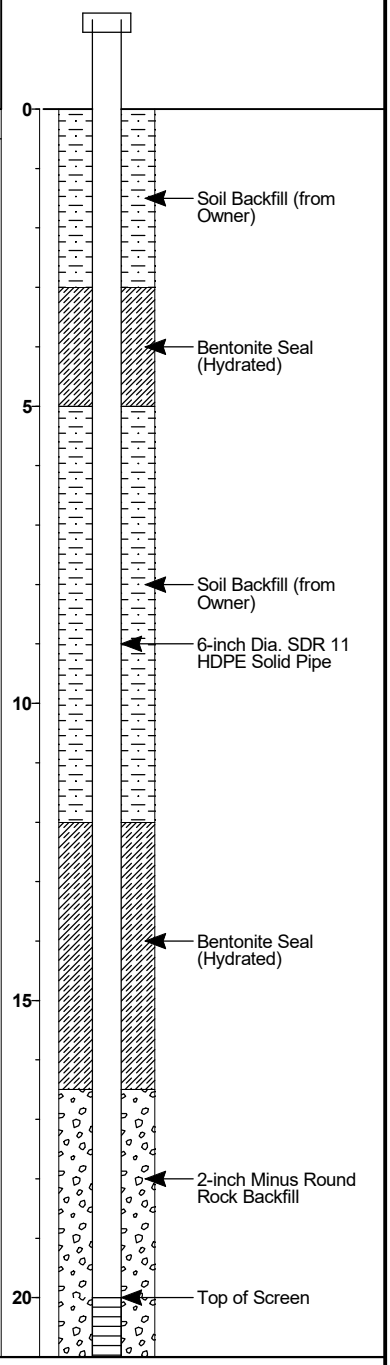
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-622. Drawing ID: 6-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13					SM-GM		Brown soil, dry, no decomposition, 70°F.
	14							
	15							
5	16							
	17							
	18							
	19							
6	20					REFUSE		Brown-black refuse (plastic) with soil and wood, moist, mild-moderate decomposition, 87°F.
	21							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/12/21**
Date Ended: **3/12/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **09:35**
Time Ended: **11:00**
Total Depth: **41.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

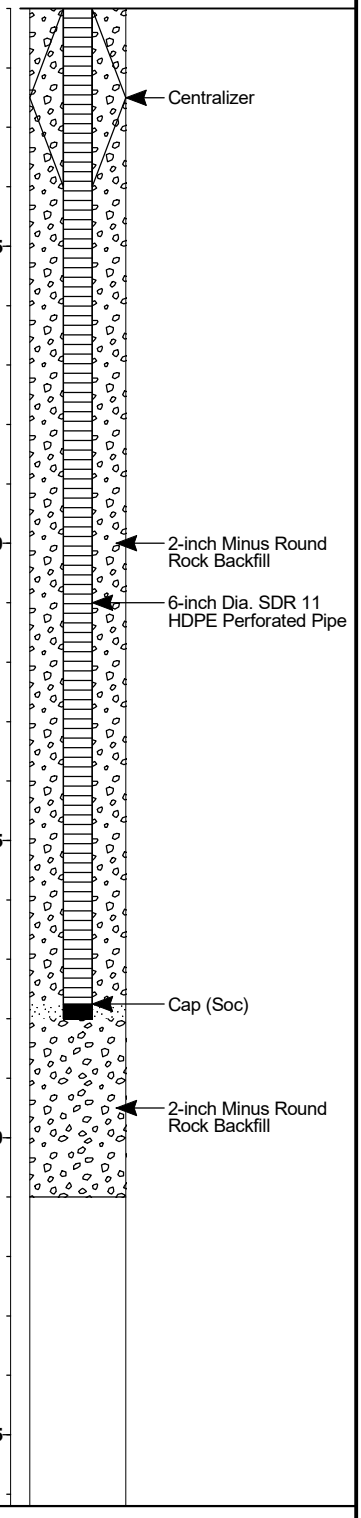
BORING NUMBER: WE-287

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	21							
	22							
7	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32					REFUSE		Brown-green refuse (plastic, fabric, styrofoam) with soil and wood, moist, moderate decomposition, 87°F.
10	33							
	34							
	35							
11	36							
	37							
	38							
	39							
12	40							
	41					SM-GM		Black-brown soil, moist, no decomposition, 100°F. End of boring.
	42							
13	43							
	44							
	45							
14	46							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-288

LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-623. Drawing ID: 7-0305. 7 ft-bgs stickup.

Depth		Sample Information							Completion Detail
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description	
0	0					SM-GM		Brown soil, dry.	0
	1					REFUSE			Soil Backfill (from Owner)
	2								
	3								
1	4								Bentonite Seal (Hydrated)
	5								5
	6								
2	7								
	8								Soil Backfill (from Owner)
	9								6-inch Dia. SDR 11 HDPE Solid Pipe
3	10								10
	11								
	12								
4	13								
	14								
	15								Bentonite Seal (Hydrated)
5	16								15
	17								
	18								
	19								2-inch Minus Round Rock Backfill
6	20								Top of Screen
	21								20

Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/12/21**
Date Ended: **3/12/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **10:34**
Time Ended: **12:10**
Total Depth: **40.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

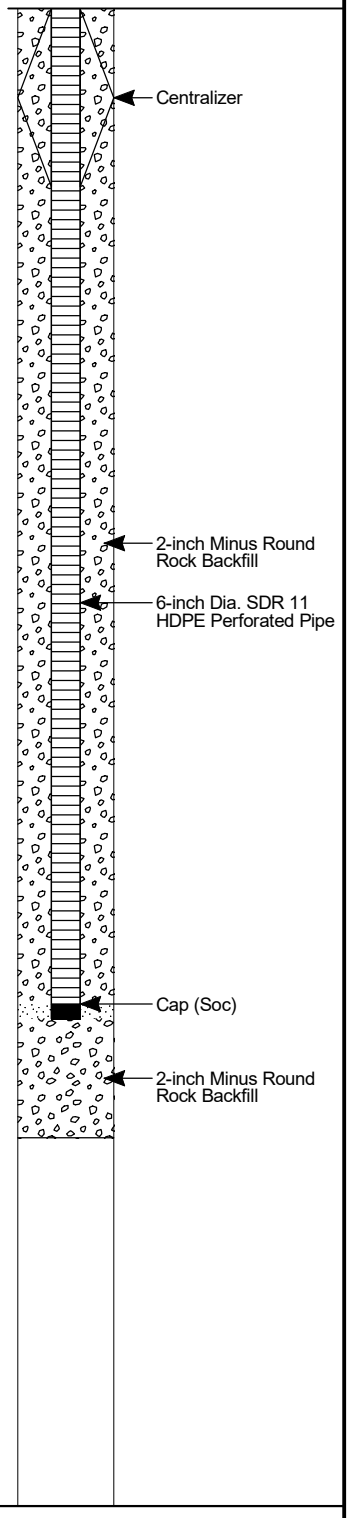
BORING NUMBER: WE-288

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	21							
	22					REFUSE		Brown-grey-black refuse (plastic, paper) with soil, moist, moderate decomposition, 76°F.
7	23							
	24							
	25							
8	26							
	27					REFUSE		Black-brown refuse (plastic) with soil and wood, moist, moderate decomposition, 87°F.
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35					REFUSE		Brown-green refuse (plastic, paper) with soil, moist, moderate decomposition, 90°F.
11	36							
	37							
	38							
12	39							
	40							
	41							
	42							
13	43							
	44							
	45							
14	46							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-289

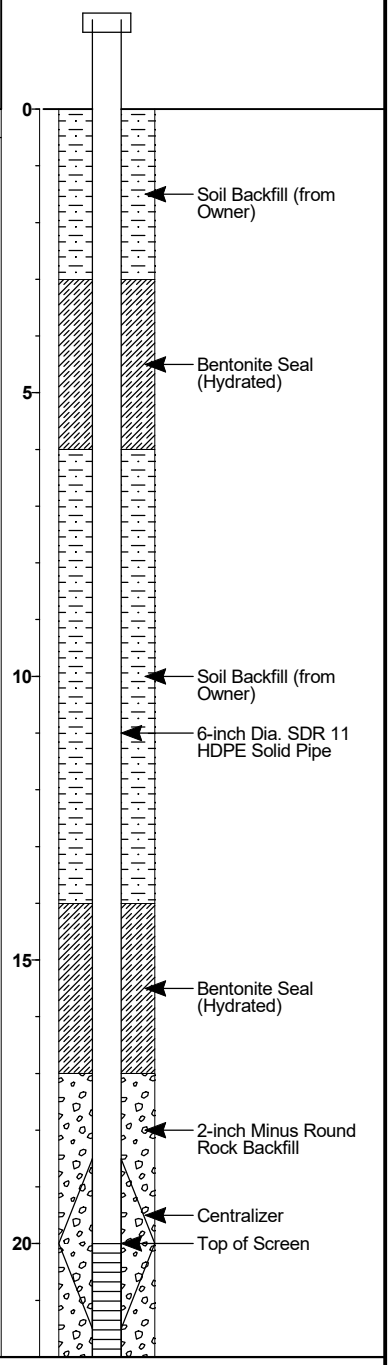
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-614. Drawing ID: 8-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
	3							
1	4							
	5					REFUSE		Black-brown-grey refuse (paper, plastic) with soil, dry, mild decomposition.
	6							
2	7							
	8							
	9							
3	10					REFUSE		Brown-white refuse (plastic) with soil and wood, moist, mild decomposition, 82°F.
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20					REFUSE		Brown-black refuse (plastic, cardboard) with soil and wood, moist-wet, moderate decomposition, 74°F.
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/10/21**
Date Ended: **3/10/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **08:39**
Time Ended: **10:15**
Total Depth: **40.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

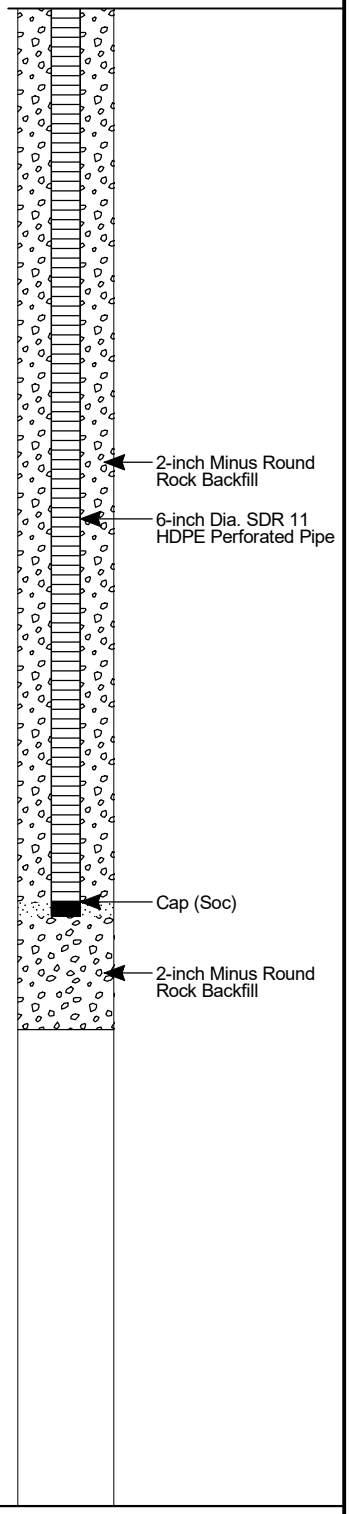
BORING NUMBER: WE-289

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	22–25					REFUSE		Black refuse with soil, wet, moderate-well decomposition, 79°F.
8	26–29							
9	30–32							
10	33–35							
11	36–40					REFUSE		Black refuse (plastic) with soil, moist-wet, moderate-well decomposition, 87°F.
12	39–40							
13	41–44							
14	45–48							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-290

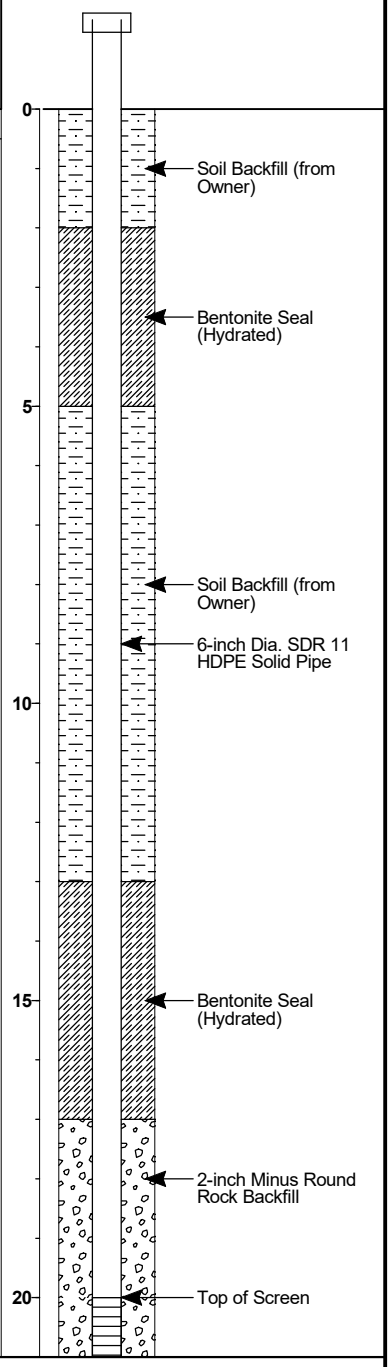
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-625. Drawing ID: 3-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
1	3							
	4							
	5							
	6							
2	7							
	8					REFUSE		Black refuse (plastic, fabric) with soil and wood, moist, mild decomposition, 70°F.
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							
	21							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/15/21**
Date Ended: **3/15/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **10:22**
Time Ended: **12:35**
Total Depth: **41.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

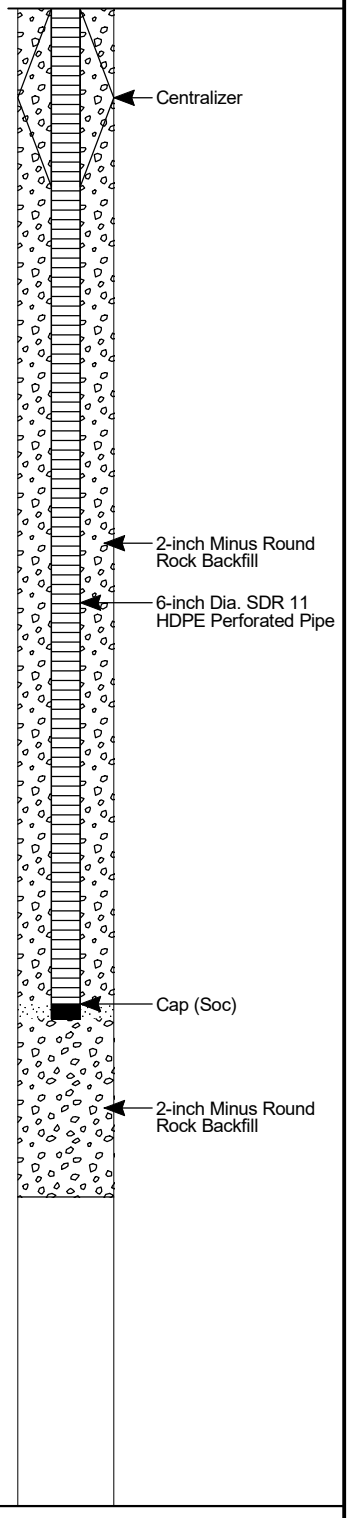
BORING NUMBER: WE-290

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	21					REFUSE		Black-brown refuse (plastic, paper) with soil, moist, moderate decomposition, 112°F.
	22							
7	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37					REFUSE		Black-brown refuse (plastic, cardboard) with soil, moist, moderate-well decomposition, 114°F.
	38							
12	39							
	40							
	41							
	42							
13	43							
	44							
	45							
14	46							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-291

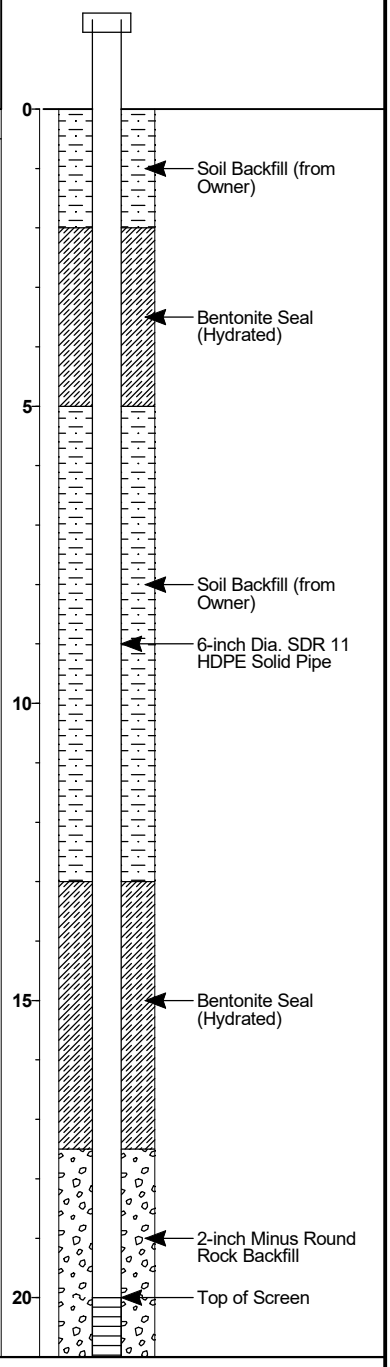
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-626. Drawing ID: 4-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12					REFUSE		Black refuse (plastic, wire) with soil, moist-wet, mild-moderate decomposition, 76°F.
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							
	21							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/15/21**
Date Ended: **3/15/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **12:16**
Time Ended: **13:42**
Total Depth: **42.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

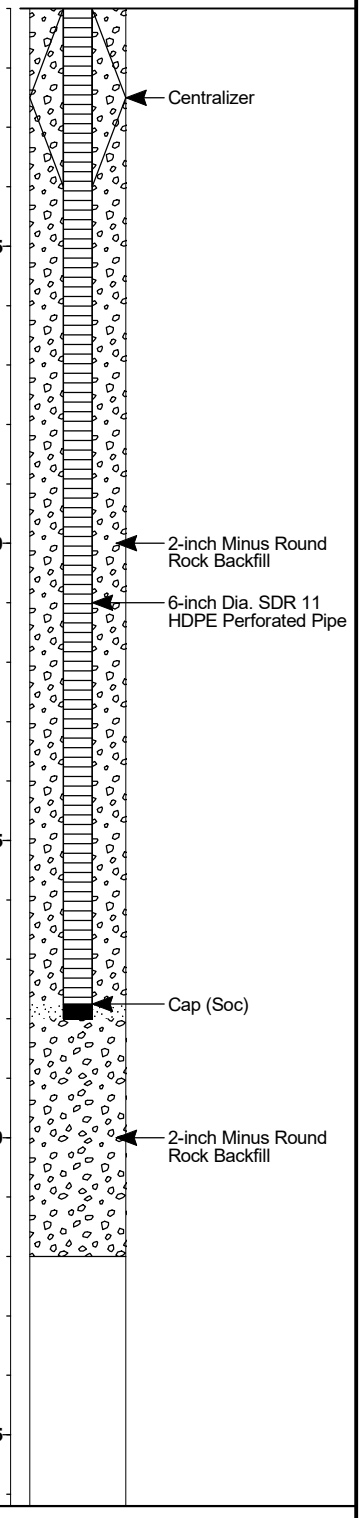
BORING NUMBER: WE-291

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	21							
	22							
7	23							
	24							
	25							
8	26							
	27							
	28					REFUSE		Black refuse with soil and wood, wet-saturated, moderate-well decomposition, 115°F.
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37							
	38					REFUSE		Black refuse with soil, wet-saturated, well decomposition, 127°F.
12	39							
	40							
	41							
	42							
13	43							
	44							
	45							
14	46							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-292

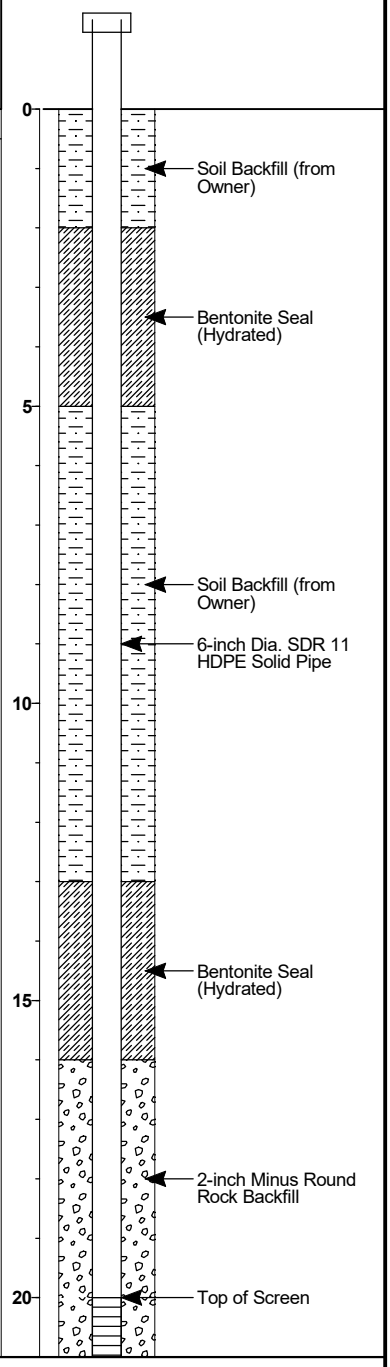
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-621. Drawing ID: 2-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		Multicolor refuse (plastic, textiles) with soil, moist, mild decomposition.
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15					REFUSE		Multicolor refuse (plastic, textiles) with soil, moist, 87°F.
5	16							
	17							
	18							
	19							
6	20					REFUSE		Multicolor refuse (plastic, textiles) with soil, moist, 83°F.
	21							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **T.Berndahl**

Date Started: **3/16/21**
Date Ended: **3/16/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **08:23**
Time Ended: **09:34**
Total Depth: **33.5 ft.**

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

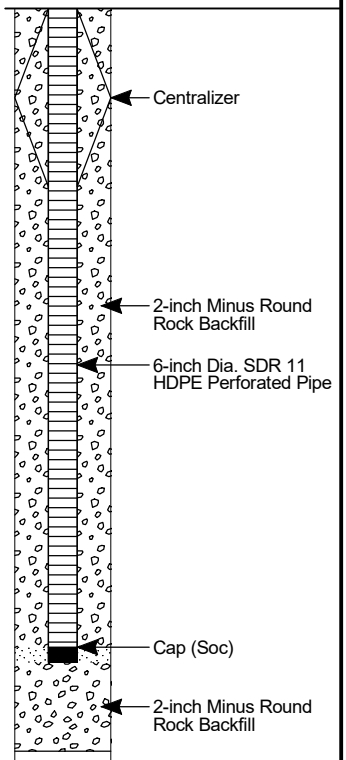
BORING NUMBER: WE-292

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	21–23							
8	24–26							
9	27–30					REFUSE		Multicolor refuse (plastic, textiles) with soil, moist-wet, 101°F.
10	31–33					REFUSE		Multicolor refuse (plastic, textiles) with soil, wet, 102°F. End of boring.
11	34–36							
12	37–39							
13	40–43							
14	44–46							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-293

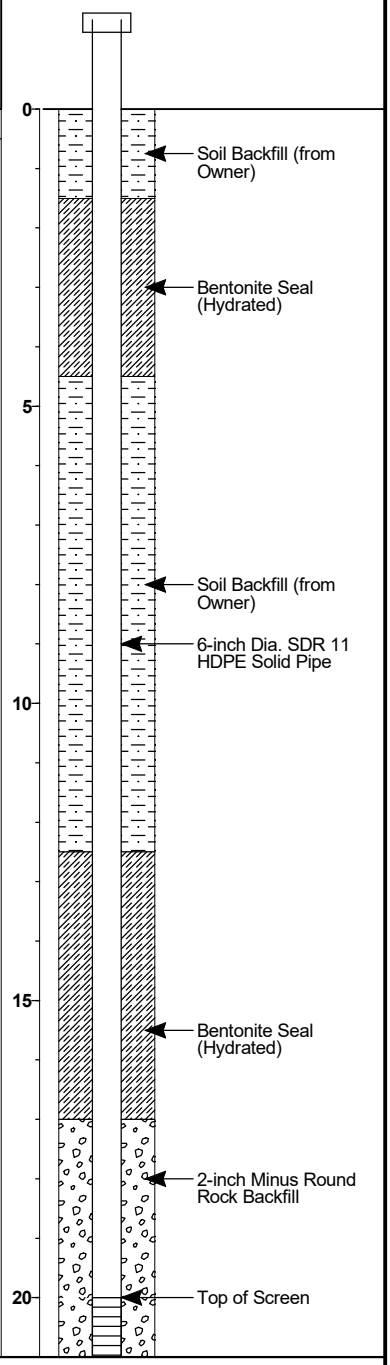
LRI Landfill, Gas Wells, March 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Start Card BLP-624. Drawing ID: 1-0305. 7 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1					REFUSE		
	2							
	3							
1	4							
	5							
	6							
2	7							
	8							
	9							
3	10					REFUSE		Brown-green refuse (paper, plastic, fabric) with soil, mosit, mild decomposition.
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							
	21							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **3/15/21**
Date Ended: **3/15/21**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**

Time Started: **08:27**
Time Ended: **10:00**
Total Depth: **38.5 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS MAR 2021.GPJ STD_LOG.GDT 4/12/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

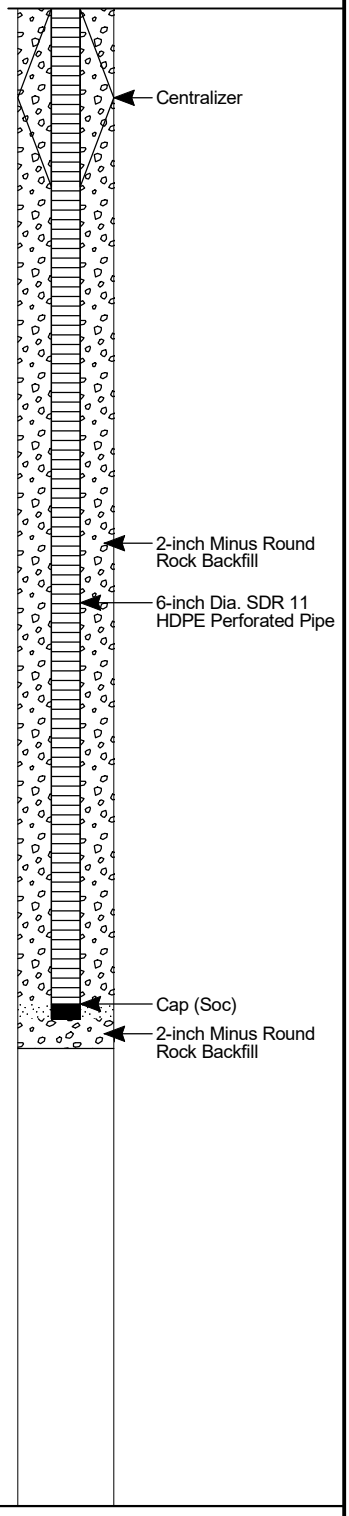
BORING NUMBER: WE-293

LRI Landfill, Gas Wells, March 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	21							
	22							
7	23					REFUSE		Brown-black refuse (paper, plastic) with soil, wet, moderate decomposition, 96°F.
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
	39					REFUSE		Black-brown refuse (plastic, paper) with soil, moist-wet, moderate-well decomposition, 92°F. End of boring.
12	40							
	41							
	42							
13	43							
	44							
	45							
14	46							

Completion Detail



November 9, 2021
File No. 04221001.10

Mr. George Duvendack
Site Manager
Pierce County Recycling, Composting and Disposal, LLC dba LRI
17925 Meridian Street East
Puyallup, Washington 98375

Subject: **June 2021 Gas Extraction Well Installation Report**
LRI Landfill, Graham, Washington

Dear George:

This letter report presents a summary of field activities and observations performed by SCS Engineers (SCS) during the installation of 16 new landfill gas (LFG) extraction wells at the LRI Landfill located in Graham, Washington. The LFG extraction wells were installed in general accordance with the 2021 Gas System Expansion design plans, approved well construction variance, and well completion schedule issued by SCS on June 18, 2021. 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. Drawings showing the well locations and boring/well completion logs for each completed well are enclosed with this report.

LFG Extraction Well Drilling and Installation

SCS personnel were onsite from June 22, 2021 through July 2, 2021 to observe drilling and installation of 16 new 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 logs.

The borings for the LFG extraction wells were drilled using an IMT AF240 drill rig with a 10 foot long, 36-inch diameter bucket auger. For each of the extraction wells, the borings were advanced to within 2.0 feet of the design depths. The extraction wells were then constructed using 6 and 8-inch diameter schedule 80 polyvinyl chloride (PVC) pipe and fittings. Backfill was completed with 2-inch minus rounded rock, hydrated bentonite chips, and clean soil as shown on the attached 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 on the same day. No boreholes were left open overnight.

The wells were completed with approximately 5-7 feet of pipe stickup above the ground surface to allow for grading 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.

The following variations to design were completed in conjunction with the well installations. Borings that were completed to within 2.0 feet of the design depth are not included on the following list.

- **WE-299** (2021-10): The boring was completed to 41.0 feet-bgs, short 16 feet of the design depth, resulting in a clearance of 32.3 feet from the operations layer. Drilling operations were terminated prior to reaching design depth due to wet drilling conditions and boring collapse.
- **WE-302** (2021-05): The boring was completed to 70.5 feet-bgs, short 4.5 feet of the design depth, resulting in a clearance of 19.0 feet from the operations layer. Drilling operations were terminated prior to reaching design depth due to inability to progress past saturated material.
- **WE-307** (2021-01): The boring was completed to 57.0 feet-bgs, short 17 feet of the design depth due, resulting in a clearance of 32.3 feet from the operations layer. Drilling operations were terminated prior to reaching design depth due to wet drilling conditions and boring collapse.

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-295	2021-13	822.43	PVC	BKM-909	60.0	60.0	40.0
WE-296	2021-11	798.87	PVC	BKM-905	50.0	51.5	30.0
WE-297	2021-09	824.37	PVC	BKM-903	60.0	60.0	40.0
WE-298	2021-12	777.39	PVC	BKM-904	60.0	59.0	40.0
WE-299	2021-10	726.00	PVC	BKM-902	57.0	41.0	23.0
WE-300	2021-08	726.86	PVC	BKM-901	72.0	73.0	55.0
WE-301	2021-07	750.81	PVC	BLP-033	60.0	61.0	40.0
WE-302	2021-05	726.85	PVC	BLP-030	75.0	70.5	51.0
WE-303	2021-06	775.13	PVC	BLP-032	60.0	59.5	40.0
WE-304	2021-04	798.58	PVC	BLP-627	130.0	130.0	110.5
WE-305	2021-03	750.71	PVC	BLP-629	60.0	60.5	39.0
WE-306	2021-02	772.36	PVC	BLP-628	60.0	60.0	39.0
WE-307	2021-01	724.03	PVC	BLP-031	74.0	57.0	36.0
WE-308	2021-21	763.08	PVC	BLP-907	50.0	50.0	29.0
WE-309	2021-20	759.39	PVC	BLP-906	50.0	51.5	30.5
WE-310	2021-19	757.63	PVC	BLP-908	50.0	52.0	30.0

Notes:

1. Survey data provided by HRK Engineering & Field Services 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.

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,

Andres Lopez, EIT
Associate Professional
SCS Engineers

Ruben Martinez-Barrientos, EIT
Staff Engineer
SCS Engineers

Kevin Lakey, PE, LHG,
Project Director
SCS Engineers

AEL/RMB

cc: Keith Johnston, TPCDH
Olivier Moi, LRI

Attachments:

LFG Extraction Boring/Well Completion Logs
Site Plan of Well Locations

NOTES:
1. EXISTING TOPOGRAPHY BY MILLER CREEK ASSOCIATES, SEATAC, WA. SURVEY DATE JANUARY 14, 2021.
   HORIZONTAL DATUM: ASSUMED LOCAL COORDINATE SYSTEM
   VERTICAL DATUM: BASED ON PIERCE COUNTY BENCH No 112-28, ELEVATION 660.29 NGVD 1929
2. LFG WELL LOCATIONS AND GCCS BASED ON INFORMATION PROVIDED BY LRI. UPDATED FEBRUARY, 2021.

Landfill Gas Flare Station
Energy Plant
Truck Wash
Scale House and Scales
Office
Shop
Fueling Station
Leachate Storage Tanks
Well House

DRAFT
NOT FOR CONSTRUCTION

0 150 300
1 INCH = 150 FEET

NO.	REVISION	DATE
1	ISSUED FOR REVIEW	06/18/2021

SHEET TITLE
FINAL GCCS PLAN - JAN 2021 TOPO

PROJECT TITLE
PHASE V CLOSURE, STAGE A
LRI LANDFILL
30919 MERIDIAN STREET EAST
GRAHAM, WASHINGTON 98338

LRI LANDFILLING & RECYCLING

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4900 FAX: (503) 684-6948

ACAD FILE: VA Closure C4 v3.13 Cells.dwg
APP. BY: KGL
DWN. BY: GDB
CHK. BY: TAB
PROJ. NO. 04221001.13
DSN. BY: GDB

DATE: JUNE 2021
SCALE: AS SHOWN
FIGURE NO. 1

C:\Users\GBoyd\Documents_WPDOCS_SCS\Projects\Landfill Gas\LRI\2020 GCCS Design\Phase V\Closure\SCS Drawings\Phase V Closure C4 v3.13 Cells.dwg, 6/17/2021 11:59:54 AM, AutoCAD PDF (General Documentation).pdf

NOTES:
1. EXISTING TOPOGRAPHY BY MILLER CREEK ASSOCIATES, SEATAC, WA. SURVEY DATE JANUARY 14, 2021.
   HORIZONTAL DATUM: ASSUMED LOCAL COORDINATE SYSTEM
   VERTICAL DATUM: BASED ON PIERCE COUNTY BENCH No 112-28, ELEVATION 660.29 NGVD 1929
2. LFG WELL LOCATIONS AND GCCS BASED ON INFORMATION PROVIDED BY LRI. UPDATED FEBRUARY, 2021.

Landfill Gas Flare Station
Energy Plant
Truck Wash
Scale House and Scales
Office
Shop
Fueling Station
Leachate Storage Tanks
Well House

0 150 300
1 INCH = 150 FEET

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	06/18/2021

SHEET TITLE
FINAL GCCS PLAN - TOP OF OPERATIONS LAYER

PROJECT TITLE
PHASE V CLOSURE, STAGE A
LRI LANDFILL
30919 MERIDIAN STREET EAST
GRAHAM, WASHINGTON 98338

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (503) 684-6948

PROJ. NO.	04221001.13
DSN. BY:	GDB
DWN. BY:	GDB
CHK. BY:	TAB
ACAD FILE: VA Closure C4 v3.13 Calcs.dwg	
APP. BY:	KGL

DATE: JUNE 2021

SCALE: AS SHOWN

FIGURE NO. 2

C:\Users\GMB\gdb\Desktop_VA\Plot 30th\2021\Closure\SCS Drawings\4.APC\2021 GCCS (MAP) VA Closure C4 v3.13 Calcs.dwg, (L) 4.27.2021 7:12:00:00 PM, AutoCAD PDF (General Documentation).pc3

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-295 Page 1 of 3

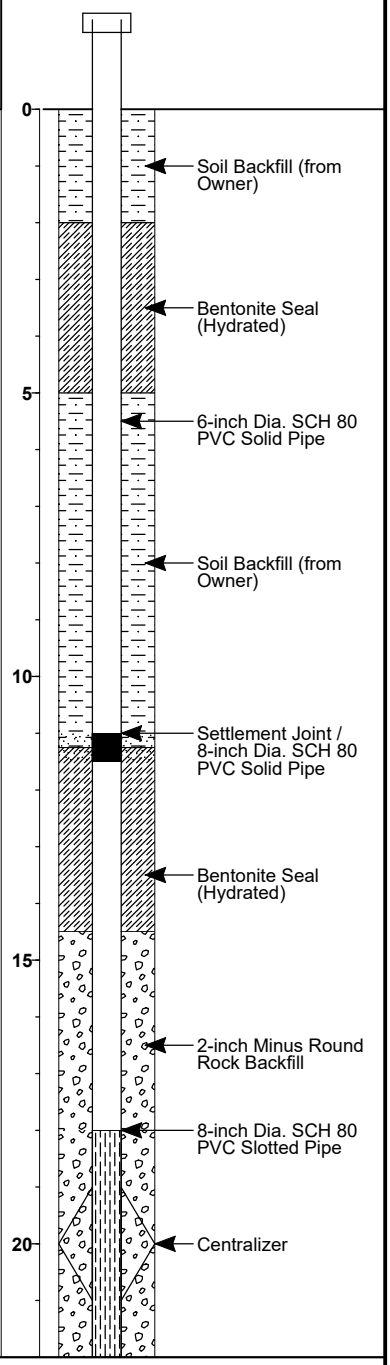
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-909. Drawing ID: 2021-13.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Black-brown, dry, soil, no decomposition.
	10					SM-GM		
	20					REFUSE		Black, dry-moist, refuse (textile) with soil, mild decomposition, 97°F.

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **6/30/21**
Date Ended: **6/30/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **10:34**
Time Ended: **13:55**
Total Depth: **60.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS | **BORING LOG**

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

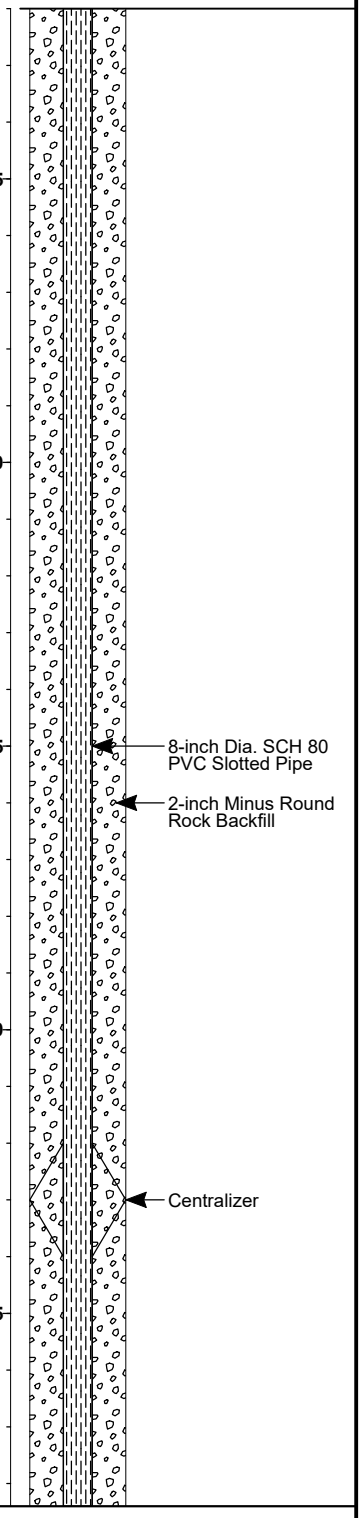
BORING NUMBER: WE-295

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	22–23							
	24							
	25							
8	26							
	27					REFUSE		Black-brown, moist, refuse (plastic, paper and textile) with soil, mil decomposition, 116°F.
	28							
9	29							
	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37					REFUSE		Brown-black, moist, refuse (textile) with soil, mild decomposition, 118°F.
	38							
	39							
12	40							
	41							
	42							
13	43							
	44							
	45							
14	46					REFUSE		Brown-black, moist, refuse (paper) with soil, mild decomposition, 120°F.
	47							
	48							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

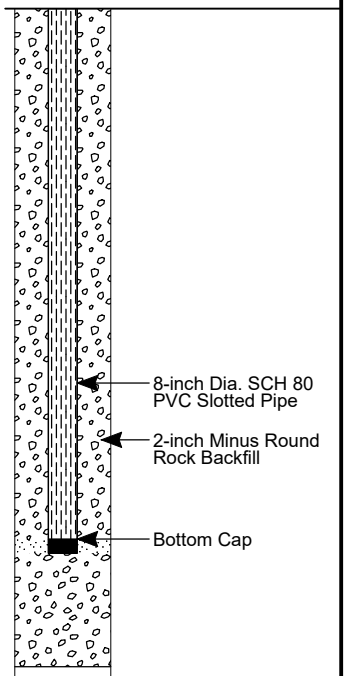
BORING NUMBER: WE-295

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
15	49							
	50							
	51							
	52					REFUSE		Brown-grey, moist, refuse with slag cement and soil, mild decomposition, 117°F.
16	53							
	54							
	55					SM-GM		Black-brown, moist, refuse with wood and soil, mild decomposition, 119°F.
17	56							
	57							
	58							
18	59							
	60					REFUSE		Black-brown, moist, refuse (plastic) with soil, mild decomposition, 108°F.
	61							
19	62							
	63							
	64							
20	65							
	66							
	67							
	68							
21	69							
	70							
	71							
22	72							
	73							
	74							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-296 Page 1 of 3

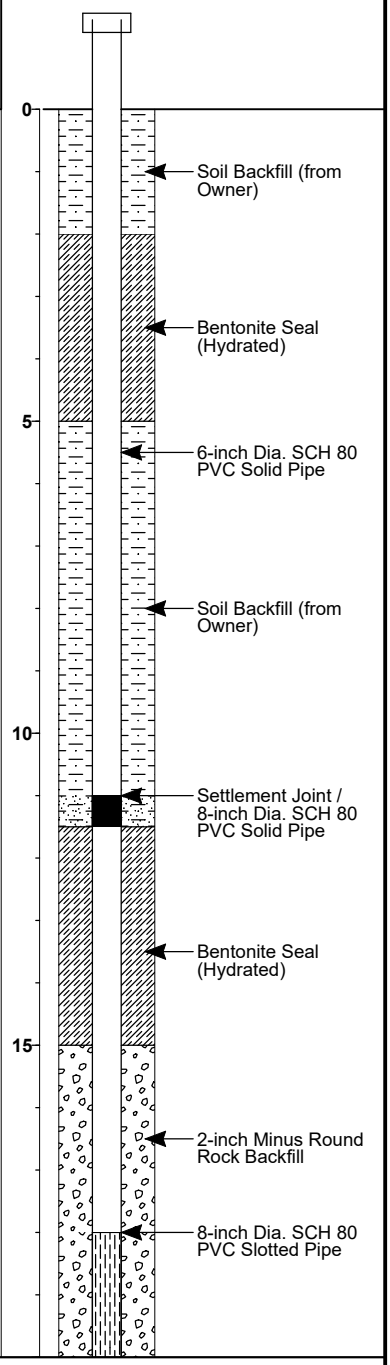
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-905. Drawing ID: 2021-11.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Black, dry, soil, no decomposition.
	10					REFUSE		Multicolor, dry, refuse (paper and plastic) with soil, mild decomposition, 74°F.

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **6/30/21**
Date Ended: **6/30/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **07:50**
Time Ended: **10:45**
Total Depth: **51.5 ft.**

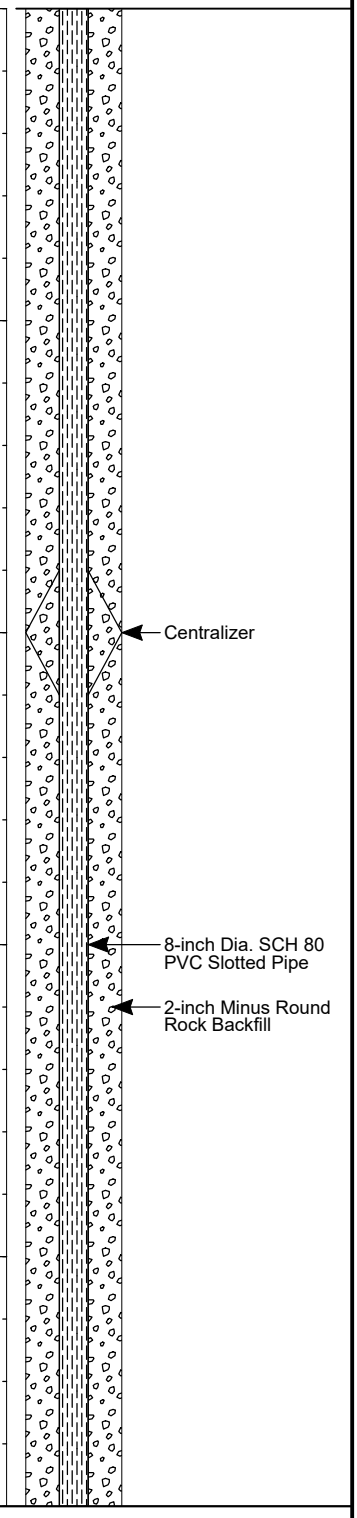
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		Black-brown, dry-moist, refuse (textile and plastic) with soil, mild decomposition, 90°F.
	21							
	22							
7	23							
	24							
	25					REFUSE		Brown-black, moist, refuse (plastic) with soil, mild decomposition, 99°F.
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36					REFUSE		Black-brown, moist-wet, refuse (plastic) with soil, mild decomposition, 97°F.
	37							
	38							
	39							
12	40					REFUSE		Black, moist-wet, refuse (plastic) with soil, mild-well decomposition, 110°F.
	41							
	42							
13	43							
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

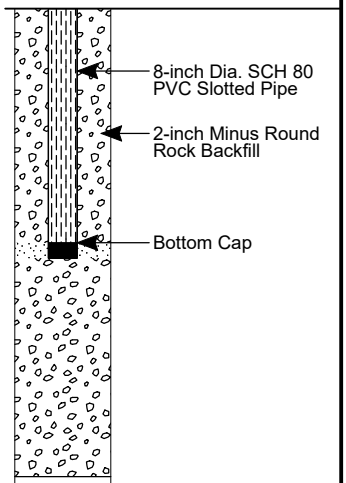
BORING NUMBER: WE-296

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							
14	46							
	47							
	48							
15	49							
	50							
	51							
	52					REFUSE		Black, moist-wet, refuse with soil, mild-well decomposition.
16	53							
	54							
	55							
17	56							
	57							
	58							
18	59							
	60							
	61							
19	62							
	63							
	64							
	65							
20	66							
	67							
	68							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-297 Page 1 of 3

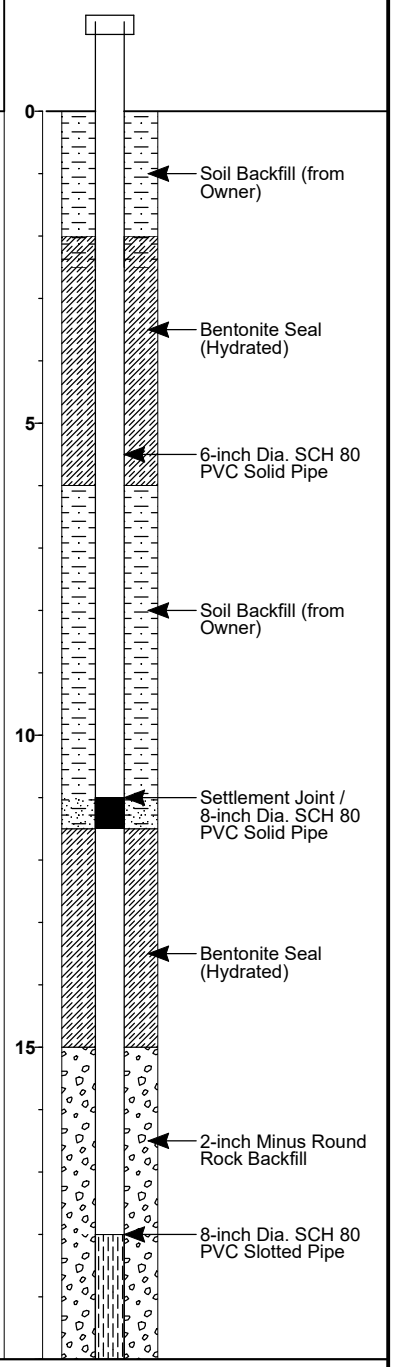
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-903. Drawing ID: 2021-09.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9					REFUSE		Brown, dry, refuse (plastic and textile).
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **6/29/21**
Date Ended: **6/29/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **10:45**
Time Ended: **12:15**
Total Depth: **60.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

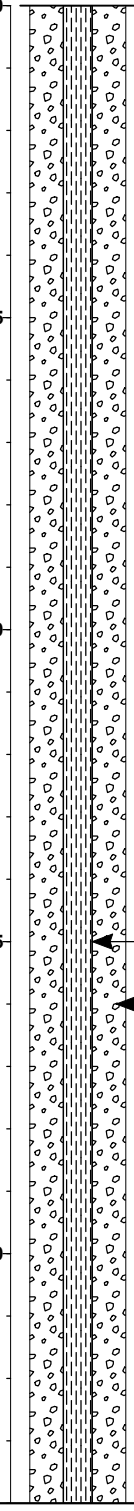
BORING NUMBER: WE-297

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					REFUSE		Brown, dry, refuse (plastic), 97°F.
	21							
	22							
7	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31					REFUSE		Brown, moist, refuse (plastic), 114°F.
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
	39							
12	40							
	41							
	42							
13	43							
	44							

Completion Detail

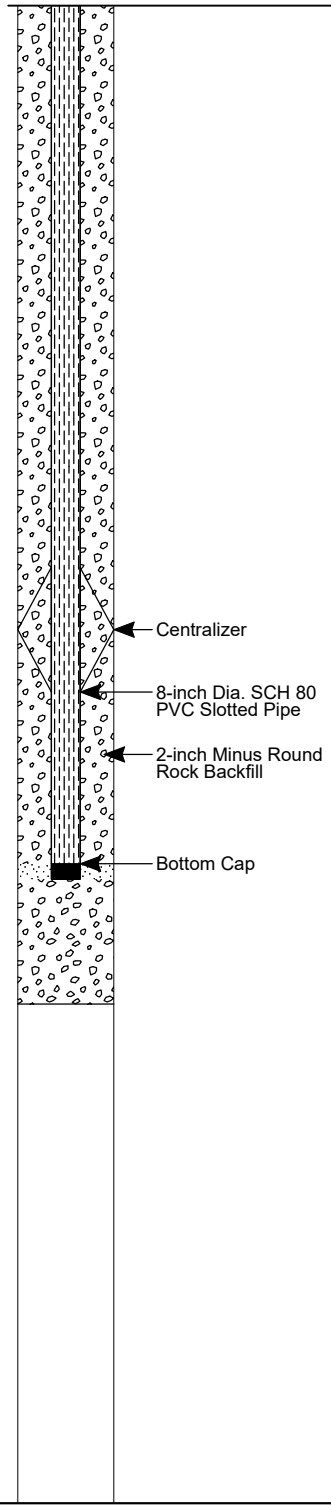


LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							
14	46							
	47					REFUSE		Brown, dry, refuse (plastic), 103°F.
	48							
15	49							
	50							
	51							
	52					REFUSE		Black, moist, refuse (plastic), 103°F.
16	53							
	54							
	55							
17	56							
	57					REFUSE		Black, moist, refuse (plastic), 113°F.
	58							
18	59							
	60					REFUSE		Black, moist, refuse (plastic), 113°F.
	61							
19	62							
	63							
	64							
20	65							
	66							
	67							
	68							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-298

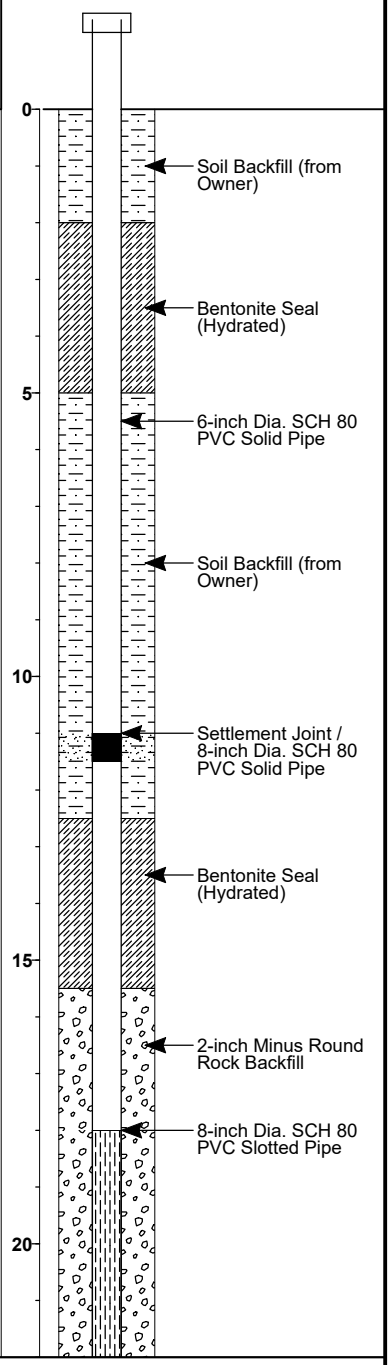
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-904. Drawing ID: 2021-12.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		
	1							
	2					REFUSE		Black, moist, refuse (plastic), 105°F.
1	3							
	4							
	5							
2	6							
	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **7/2/21**
Date Ended: **7/2/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **08:42**
Time Ended: **09:52**
Total Depth: **59.0 ft.**

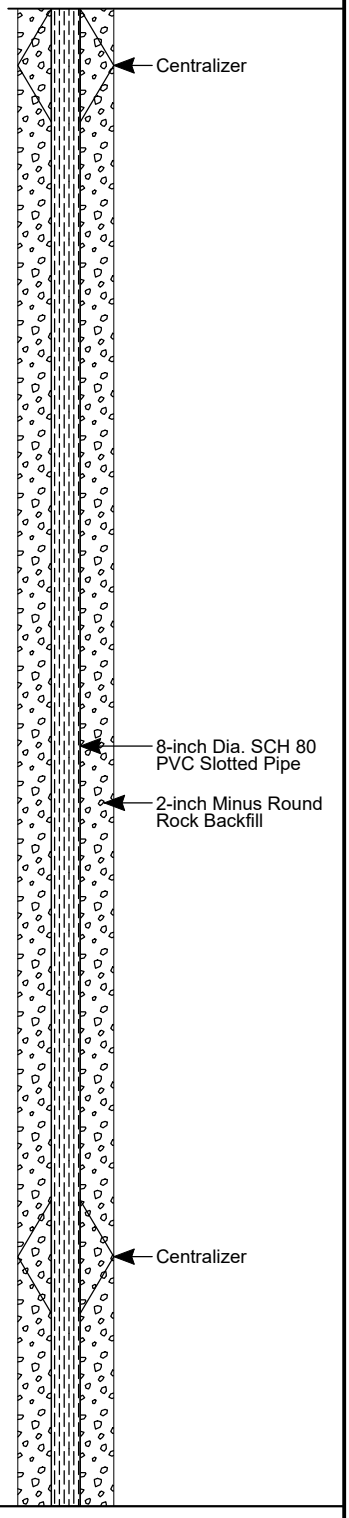
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	22							
7	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35					REFUSE		Black, moist, refuse (plastic and paper) with soil, 102°F.
11	36							
	37							
	38							
	39							
12	40							
	41							
	42					REFUSE		Black, wet, refuse (plastic and textile), moderate decomposition, 106°F.
13	43							
	44							
	45							
14	46							
	47					REFUSE		Black, wet, refuse (plastic and textile), moderate decomposition, 111°F.
	48							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

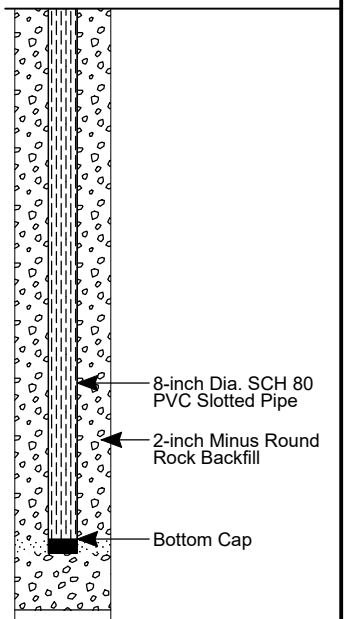
BORING NUMBER: WE-298

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
15	49							
	50							
	51							
	52							
16	53					REFUSE		Black, wet, refuse (plastic and textile), moderate decomposition, 111°F.
	54							
	55							
17	56							
	57							
	58							
18	59					REFUSE		Black, wet, refuse (plastic and textile), moderate decomposition.
	60							
	61							
	62							
19	63							
	64							
	65							
20	66							
	67							
	68							
21	69							
	70							
	71							
22	72							
	73							
	74							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-299

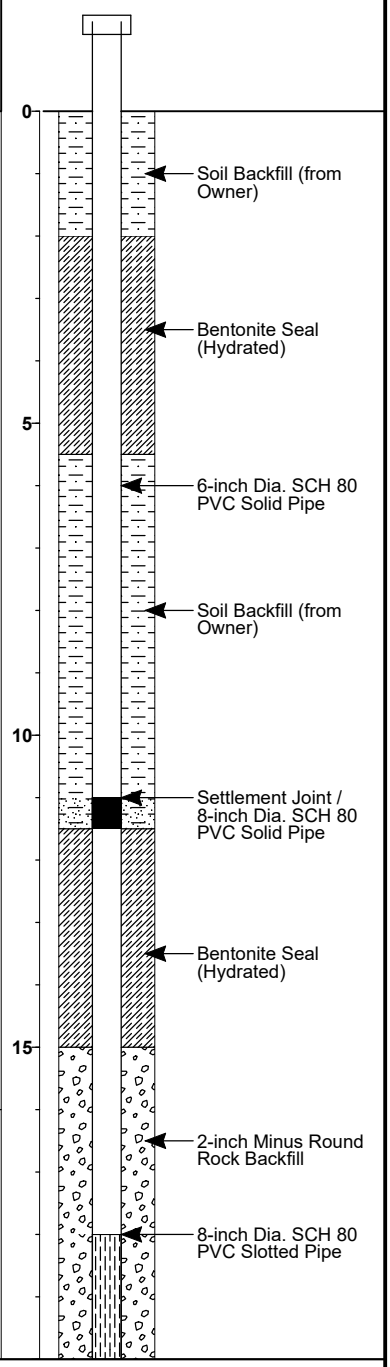
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-902. Drawing ID: 2021-10.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown, dry, soil
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16					REFUSE		Brown refuse (plastic), dry
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **6/29/21**
Date Ended: **6/29/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **08:07**
Time Ended: **09:55**
Total Depth: **41.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

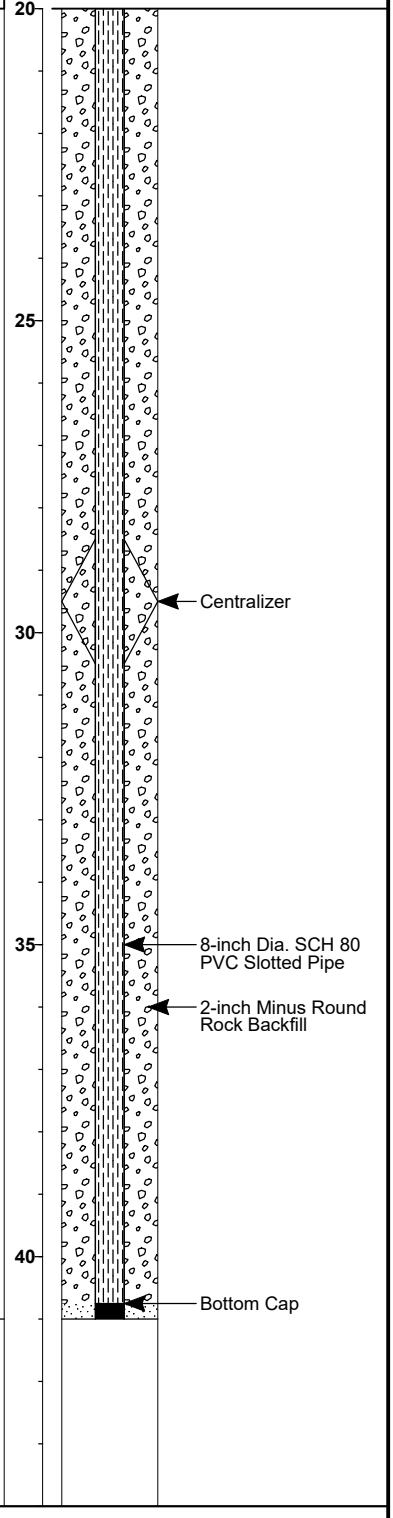
BORING NUMBER: WE-299

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

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		Black-brown refuse (plastic and textiles) with soil, moist, 97°F
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33					REFUSE		Black refuse (plastic and textiles), moist, 108°F
	34							
	35							
11	36							
	37							
	38							
12	39					REFUSE		Black refuse (plastic and textiles), moist, 106°F
	40							
	41							Black saturated refuse, boring collapsing
	42							
13	43							
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-300 Page 1 of 4

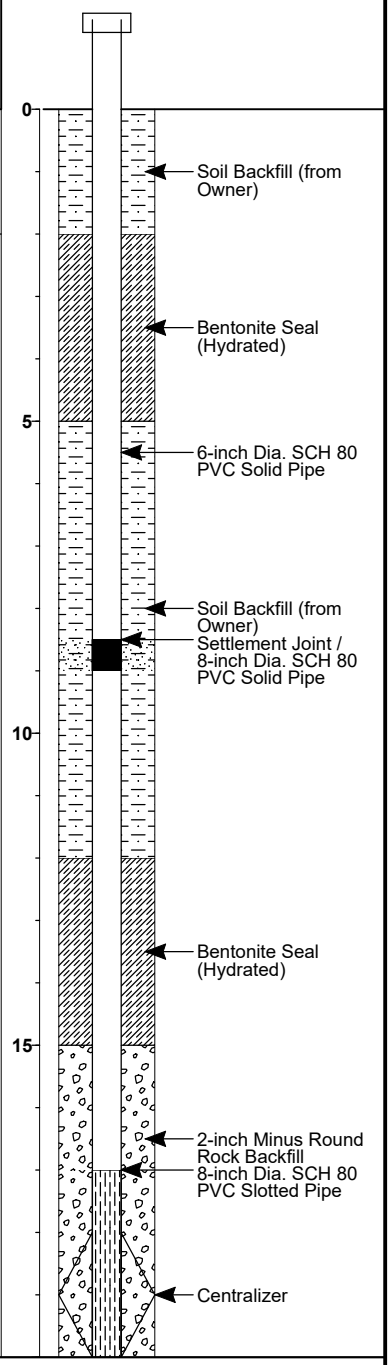
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-901. Drawing ID: 2021-08.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **6/28/21**
Date Ended: **6/28/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **07:30**
Time Ended: **08:38**
Total Depth: **73.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-300

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Information: Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description	Completion Detail
	20								20
	21								
	22								
7	23								
	24								
	25								25
8	26								
	27								
	28								
	29								
9	30								30
	31								
	32								
10	33								
	34								
	35								35
11	36								
	37								
	38								
	39								
12	40								40
	41								
	42								
13	43								
	44								

8-inch Dia. SCH 80 PVC Slotted Pipe

2-inch Minus Round Rock Backfill

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

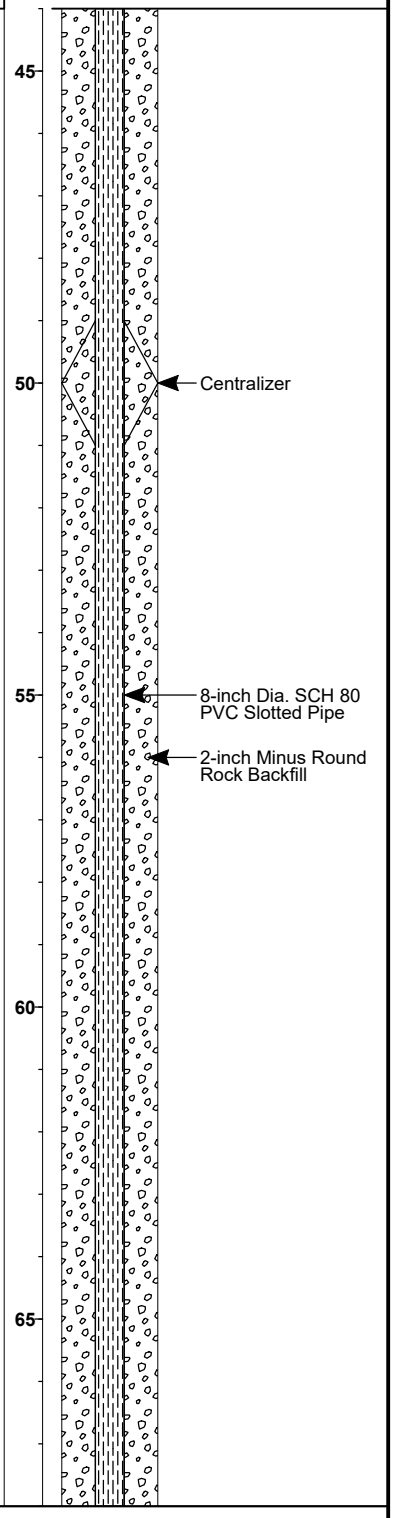
BORING NUMBER: WE-300

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
14	44–47					REFUSE		Black, moist, refuse, 119°F
15	48–51							
16	52–54					REFUSE		Black, moist, refuse
17	55–58							
18	59–62							
19	63–64					REFUSE		Black, saturated, refuse, 128°F
20	65–68							

Completion Detail



SCS ENGINEERS | **BORING LOG**

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

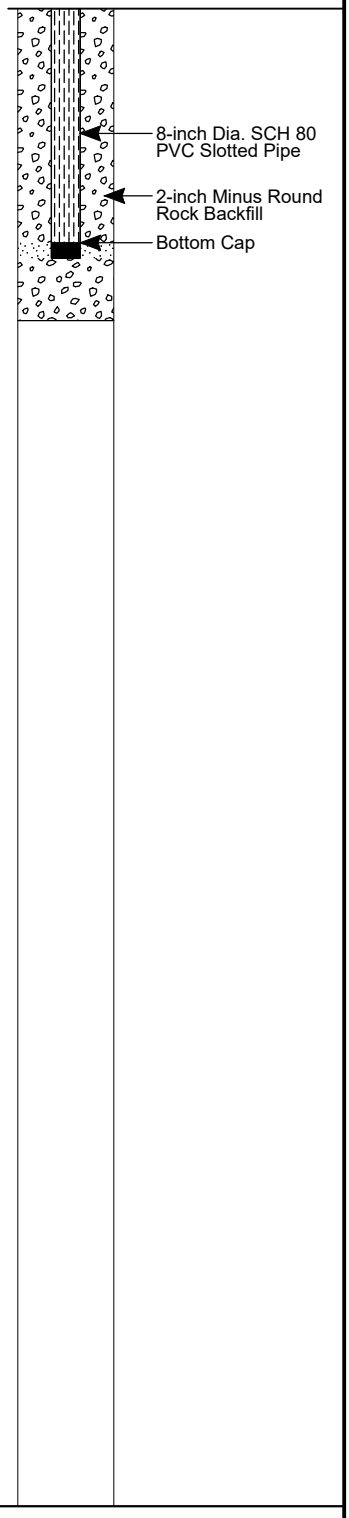
BORING NUMBER: WE-300

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
21	68–69					REFUSE		Black, moist, refuse, 127°F
22	70–72							
23	73–76					REFUSE		Black, moist, refuse, 116°F
24	77–80							
25	81–84							
26	85–88							
27	89–92							
28								

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-301 Page 1 of 3

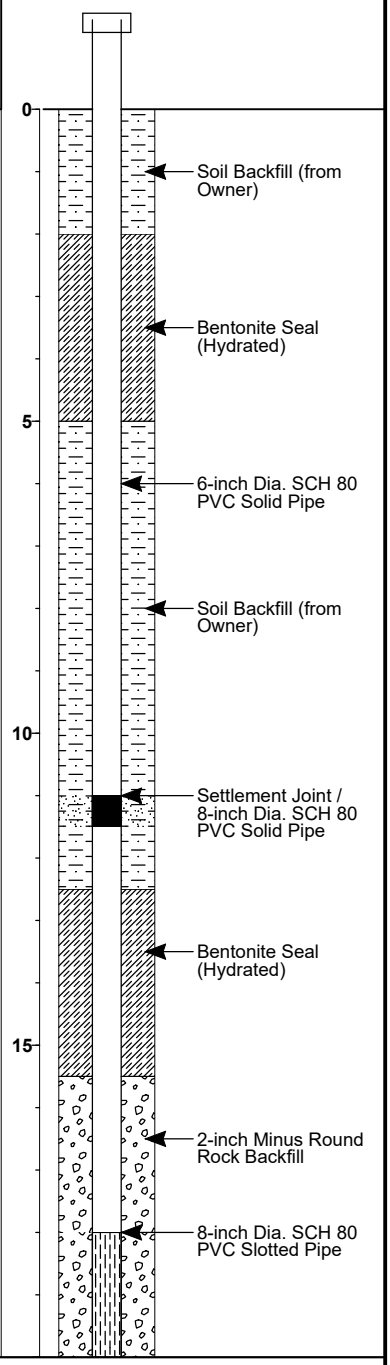
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BLP-033. Drawing ID: 2021-07.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown-gray soil-clay, dry, no decomposition
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **6/25/21**
Date Ended: **6/25/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **09:50**
Time Ended: **12:50**
Total Depth: **61.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

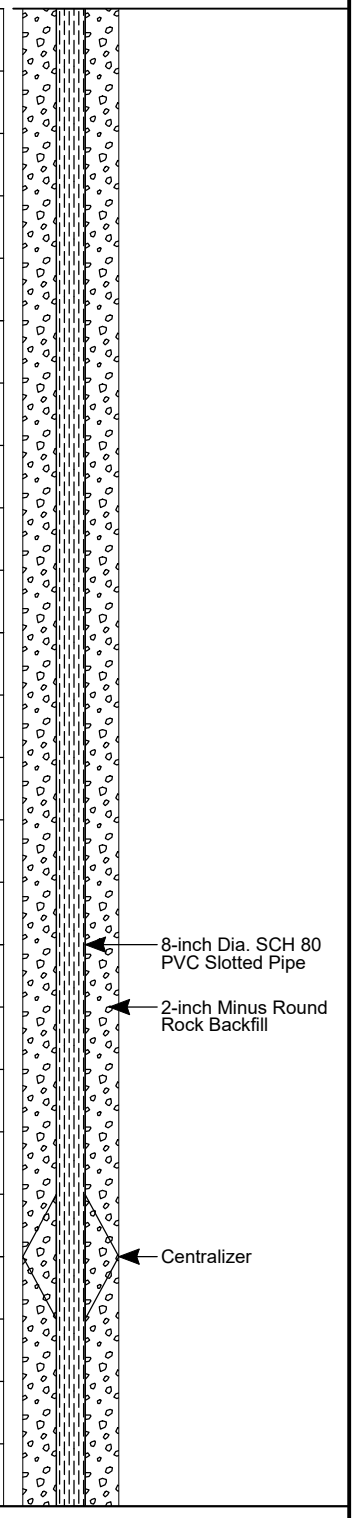
BORING NUMBER: WE-301

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20					SM-GM		
	21							
	22							
7	23							
	24					REFUSE		Black-brown refuse (plastic and textile) with soil, moist, mild decomposition, 86°F
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32					REFUSE		Black-brown refuse (textile) with soil, moist, mild decomposition, 110°F
10	33							
	34							
	35							
11	36							
	37							
	38							
	39							
12	40							
	41							
	42							
13	43							
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

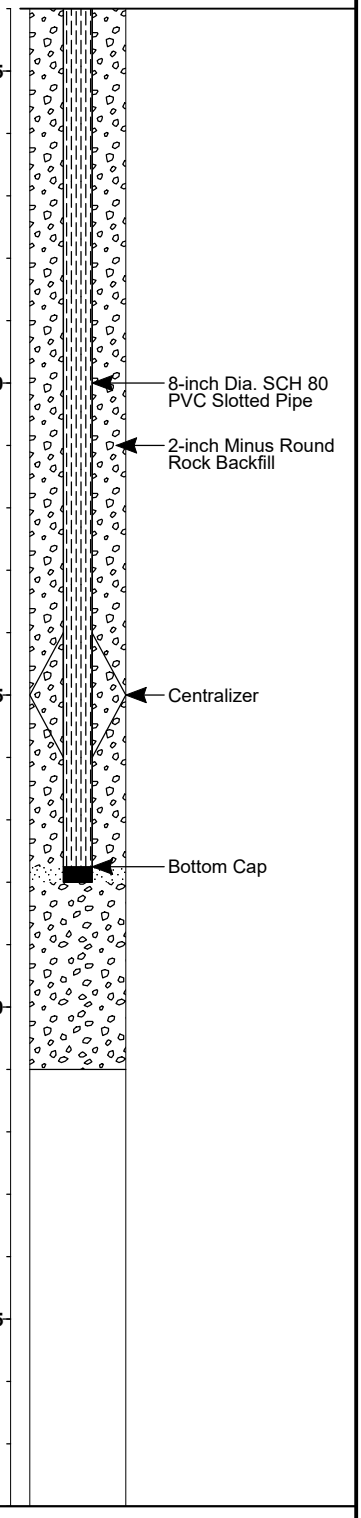
BORING NUMBER: WE-301

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							
14	46							
	47					REFUSE		Brown-black refuse (paper and textile) with soil, wet, mild decomposition, 104°F
	48							
15	49							
	50							
	51							
16	52							
	53					REFUSE		Black-brown refuse (plastic) with soil, wet, mild-well decomposition, 128°F
	54							
	55							
17	56					REFUSE		Black refuse (plastic and textile) with soil, wet-saturated, well decomposition, 118°F
	57							
	58							
18	59							
	60							
	61					REFUSE		Black refuse (plastic) with soil, wet-saturated, well decomposition, 121°F
19	62							
	63							
	64							
	65							
20	66							
	67							
	68							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-302 Page 1 of 4

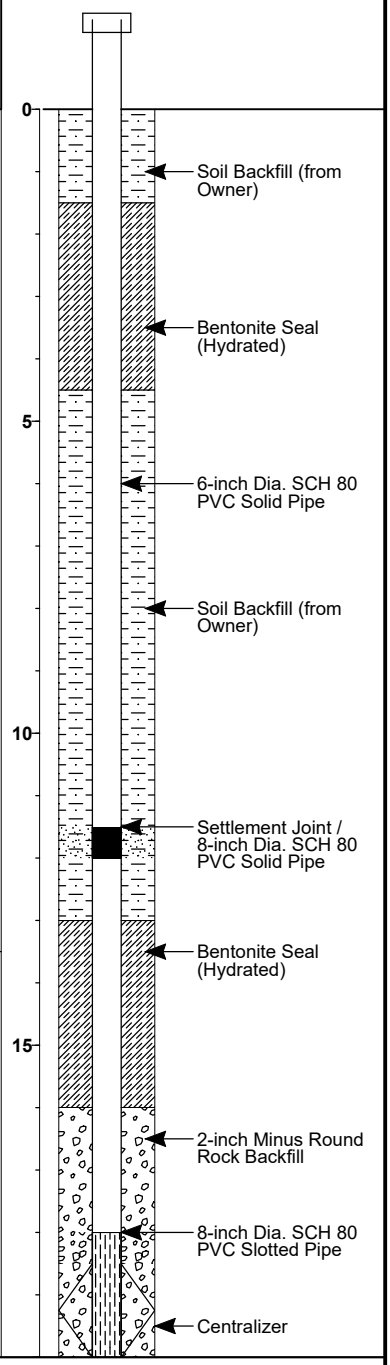
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BLP-030. Drawing ID: 2021-05.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, dry.
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14					SM-GM		Brown dirt, dry
	15							
	16							
5	17							
	18					REFUSE		Brown dirt and refuse, moist, 84°F
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **6/24/21**
Date Ended: **6/24/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **07:45**
Time Ended: **09:50**
Total Depth: **70.5 ft.**

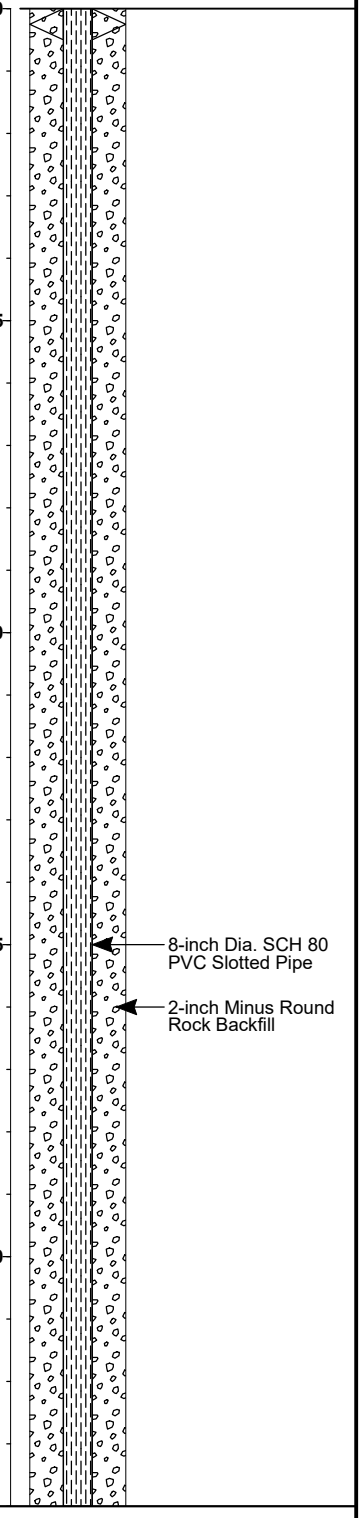
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21							
	22					REFUSE		Brown refuse (textiles), moist, 89°F
7	23							
	24							
	25							
8	26							
	27							
	28					REFUSE		Black refuse, moist, 111°F
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37							
	38					REFUSE		Black refuse (plastics & textiles), moist, 118°F
12	39							
	40							
	41							
	42							
13	43					REFUSE		Black refuse (plastics), moist, 123°F
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

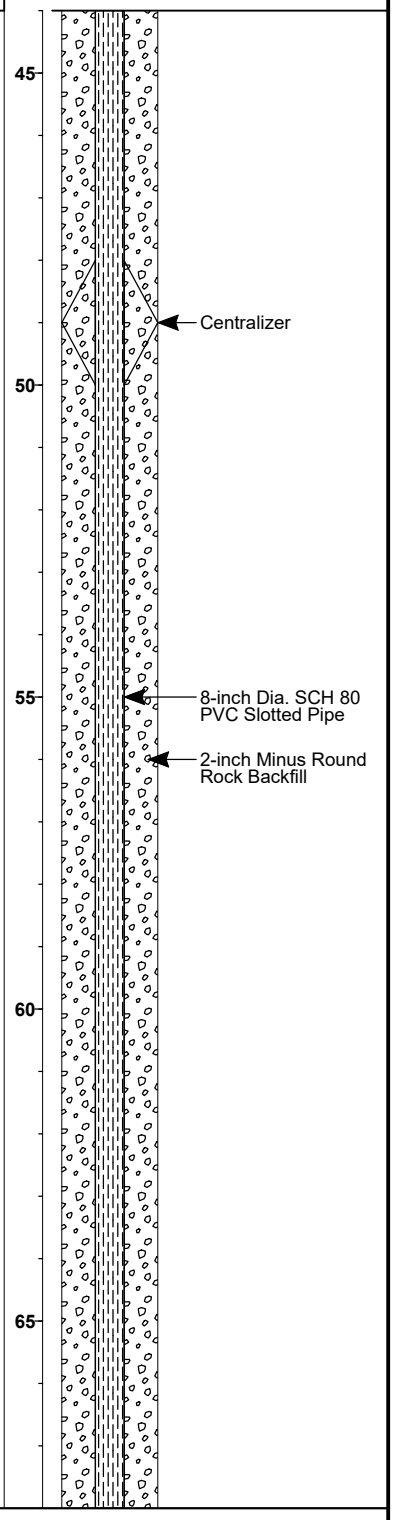
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-302

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							
14	46							
	47							
	48							
15	49							
	50					REFUSE		Black refuse (plastics & textiles), moist, 121°F
	51							
	52							
16	53							
	54							
	55							
17	56							
	57							
	58							
18	59							
	60					REFUSE		Black refuse (plastics), moist, 124°F
	61							
	62							
19	63					REFUSE		Black refuse (indistinguishable), moist, 116°F
	64							
	65							
20	66							
	67					REFUSE		Black refuse (indistinguishable), wet, 117°F
	68							



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-302

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description	Completion Detail
21	68								8-inch Dia. SCH 80 PVC Slotted Pipe Bottom Cap
	69								
	70								2-inch Minus Round Rock Backfill
						REFUSE		Black saturated refuse (indistinguishable), boring collapsing, 121°F	
22	71								
	72								
	73								
	74								
23	75								
	76								
	77								
	78								
24	79								
	80								
	81								
25	82								
	83								
	84								
26	85								
	86								
	87								
	88								
27	89								
	90								
	91								
28	92								

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-303 Page 1 of 3

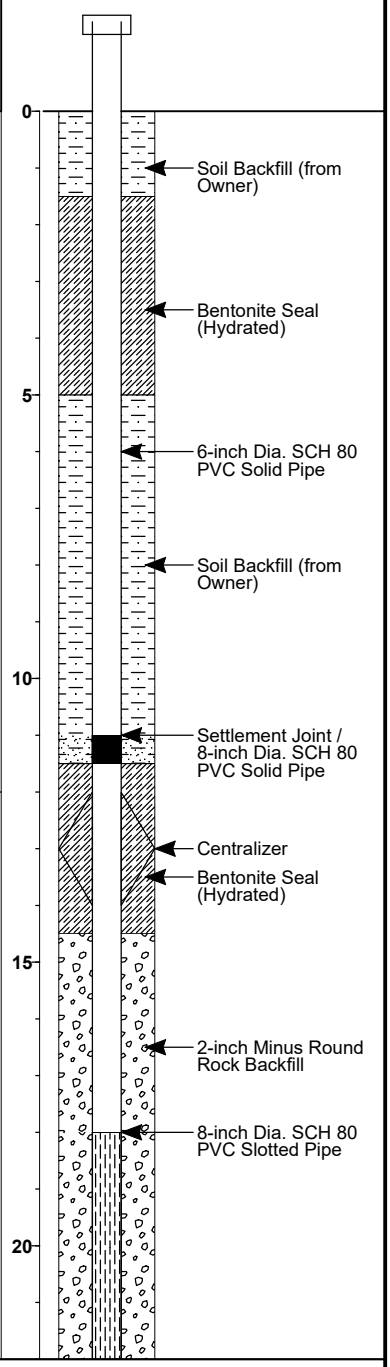
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BLP-032. Drawing ID: 2021-06.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown-gray soil, dry, no decomposition
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12					SM-GM		
4	13							
	14							
	15							
5	16							
	17					REFUSE		Brown-black refuse (plastic and textile) with soil, dry, mild decomposition, 84°F
	18							
	19							
6	20					REFUSE		Black-brown refuse (plastic) with soil and wood, dry-moist, mild decomposition, 91°F
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **A.Lopez**

Date Started: **6/25/21**
Date Ended: **6/25/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **08:25**
Time Ended: **10:45**
Total Depth: **59.5 ft.**

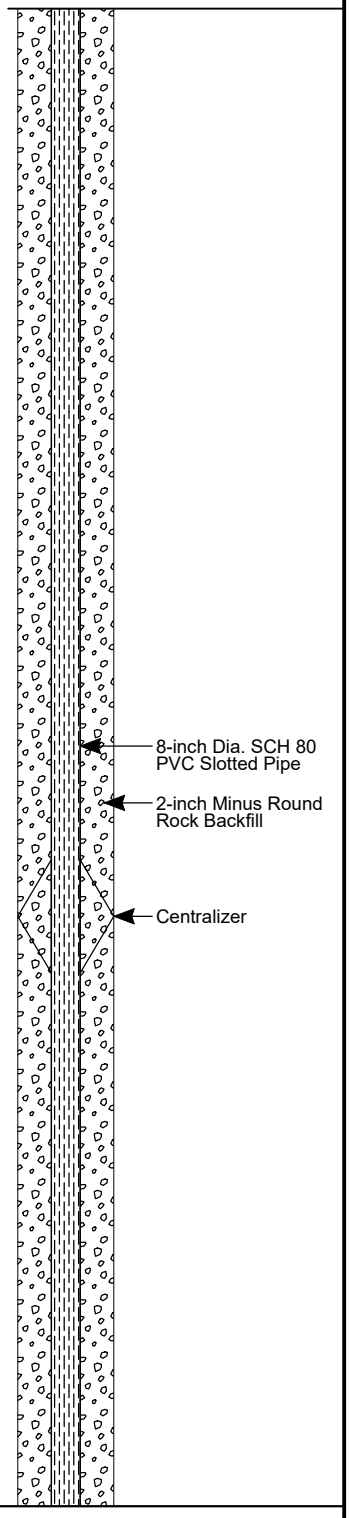
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	22							
	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32					REFUSE		Black-brown refuse (plastic) with soil, moist, mild decomposition, 106°F
10	33							
	34							
	35							
11	36							
	37							
	38					REFUSE		Black-brown refuse (plastic and textile) with soil, moist, mild decomposition, 109°F
12	39							
	40							
	41							
	42							
13	43							
	44							
	45							
14	46							
	47							
	48							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

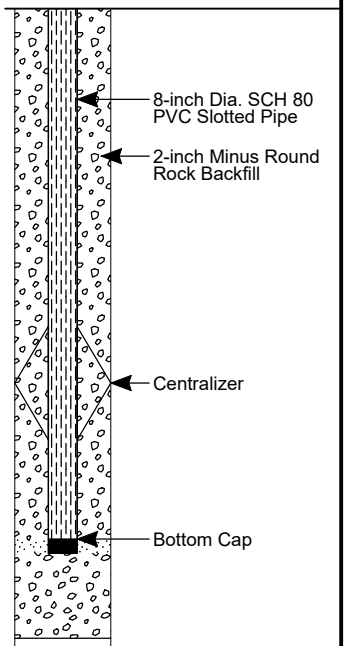
BORING NUMBER: WE-303

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
15	49							
	50							
	51							
	52							
16	53					REFUSE		Brown-orange refuse (plastic and textile) with soil and wood, moist, mild decomposition, 120°F
	54							
	55							
17	56							
	57					REFUSE		Brown-orange refuse (paper, plastic and textile) with soil, moist, mild decomposition, 122°F
	58							
18	59							
	60					REFUSE		Brown-black refuse (plastic and textile) with soil, moist, mild decomposition, 126°F
	61							
	62							
19	63							
	64							
	65							
20	66							
	67							
	68							
21	69							
	70							
	71							
22	72							
	73							
	74							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-304 Page 1 of 5

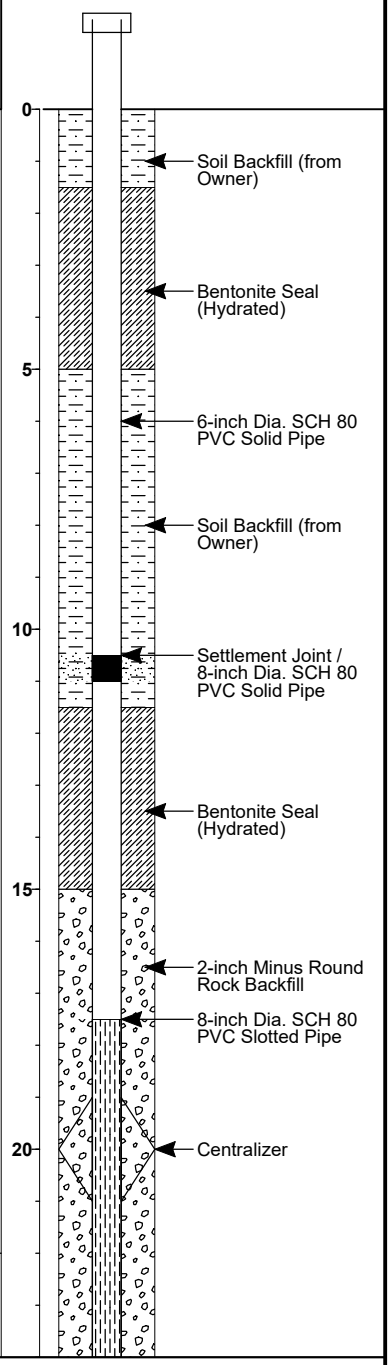
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BLP-627. Drawing ID: 2021-04.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Wet, soil
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16					SM-GM		Moist, soil, 79°F
	17							
	18							
	19							
6	20							
	21							
	22					REFUSE		Moist, refuse (textile), 79°F
7	23							
	24							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **6/22/21**
Date Ended: **6/22/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **09:51**
Time Ended: **13:45**
Total Depth: **130.0 ft.**

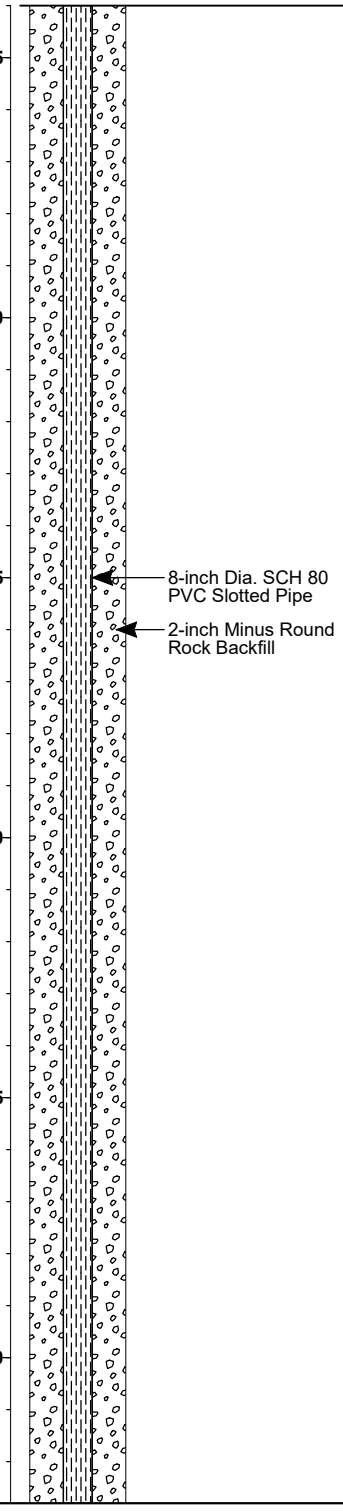
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	24							
	25							
8	26							
	27							
	28							
	29					REFUSE		Wet, refuse (plastic and textile) with soil, 97°F
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
	39					REFUSE		Refuse (textile), 103°F
12	40					REFUSE		Refuse (textile), 96°F
	41							
	42							
13	43							
	44							
	45							
14	46							
	47							
	48							
15	49							
	50							
	51					REFUSE		Moist, refuse (textile) with wood and soil, 105°F
16	52							

Completion Detail

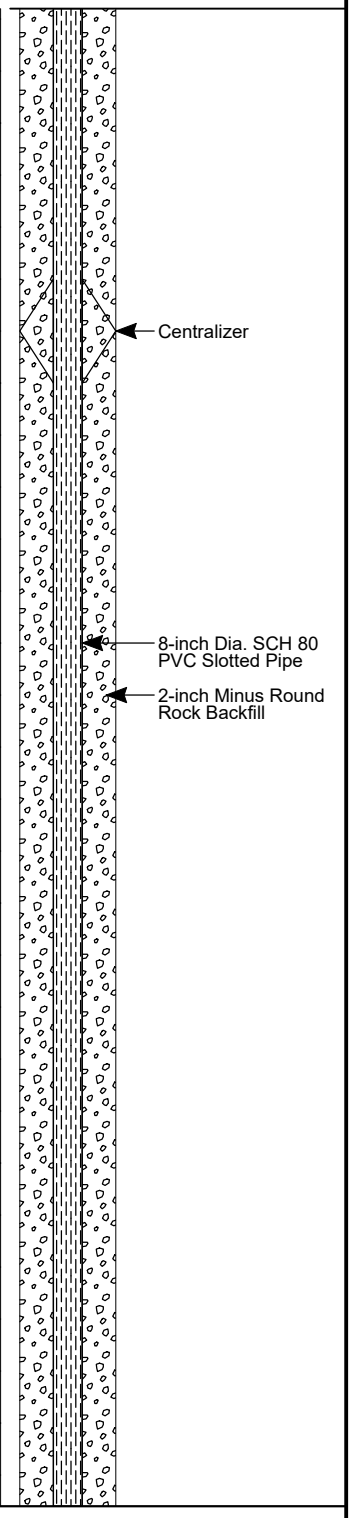


LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	53							
	54							
	55							
17	56							
	57							
	58							
18	59					REFUSE		Moist, refuse (plastic and textile) with soil, 112°F
	60							
	61							
19	62							
	63							
	64							
	65							
20	66							
	67							
	68					REFUSE		Black-brown, moist, refuse (plastic and textile) with soil, 119°F
21	69							
	70							
	71							
22	72							
	73							
	74							
	75					REFUSE		Black-brown, moist, refuse (textile) with soil, 128°F
23	76							
	77							
	78							
24	79							
	80							
	81							

Completion Detail

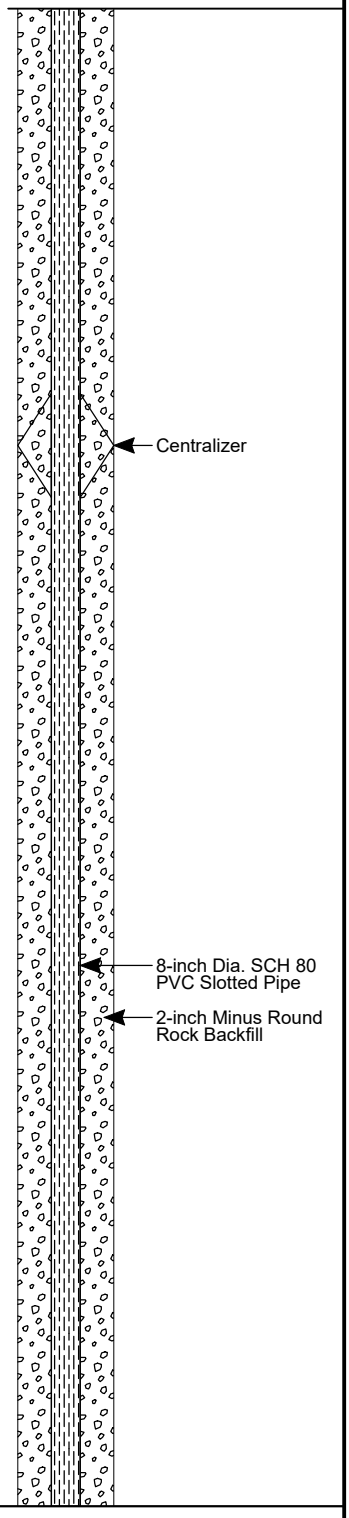


LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
25	82					REFUSE		Black-brown, moist, refuse (plastic and textile), 129°F
	83							
	84							
26	85							
	86							
	87							
	88							
27	89							
	90							
	91					REFUSE		Black-brown, moist, refuse (textile) with soil, 109°F
28	92							
	93							
	94							
29	95							
	96							
	97							
	98							
30	99					REFUSE		Black-brown, moist, refuse (textile) with soil, 99°F
	100							
	101							
31	102							
	103							
	104							
32	105							
	106							
	107							
33	108					REFUSE		Black, moist, refuse (plastic and textile) with soil, 108°F
	109							
	110							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

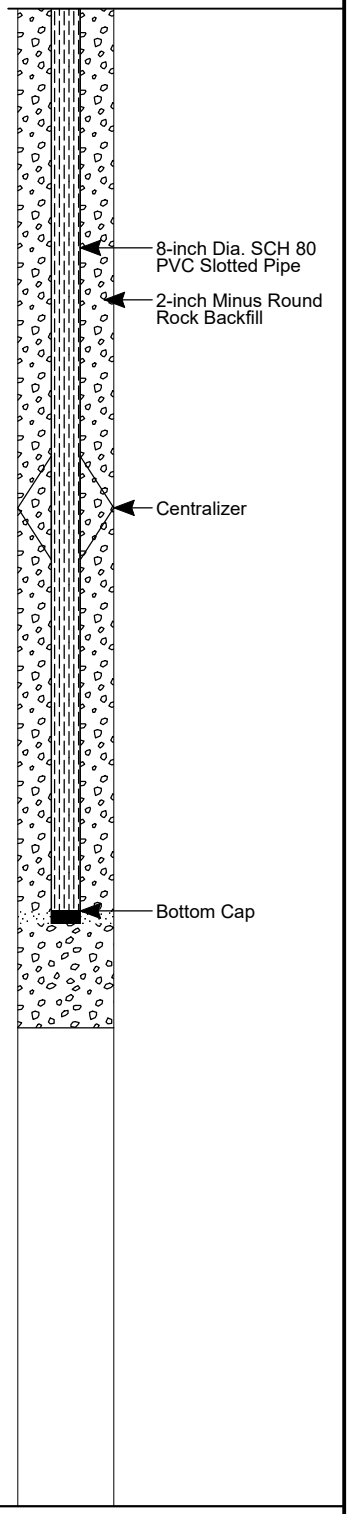
BORING NUMBER: WE-304

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
34	111							
	112							
	113							
	114							
35	115							
	116							
	117							
36	118					REFUSE		Black, moist, refuse (textile) with soil, 119°F
	119							
	120					REFUSE		Black, moist, refuse (textile) with soil, 105°F
37	121							
	122							
	123							
	124							
38	125							
	126							
	127							
39	128							
	129							
	130					REFUSE		Saturated, refuse, 130°F
40	131							
	132							
	133							
	134							
41	135							
	136							
	137							
42	138							
	139							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-305 Page 1 of 3

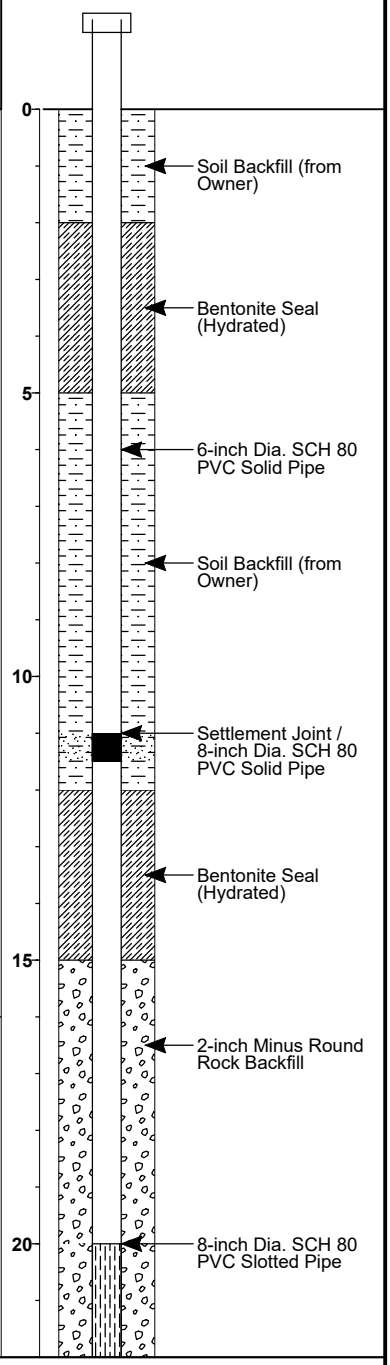
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BLP-629. Drawing ID: 2021-03.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16					REFUSE		Hit Refuse
	17							
	18							
	19							
6	20					REFUSE		Moist, refuse (plastic) with dirt
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **6/23/21**
Date Ended: **6/23/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **11:33**
Time Ended: **12:29**
Total Depth: **60.5 ft.**

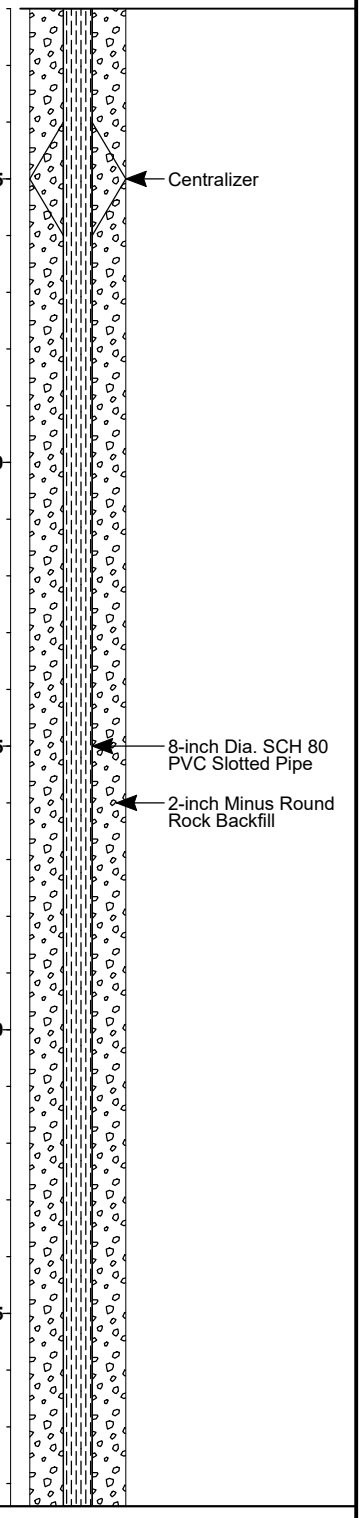
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	22							
7	23							
	24							
	25							
8	26							
	27					REFUSE		Black, moist, refuse (plastic and textiles), 83°F
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35					REFUSE		Black, moist, refuse (plastic and textiles), 94°F
11	36							
	37							
	38							
12	39							
	40							
	41							
	42					REFUSE		Black, moist, refuse (plastic and textiles), 101°F
13	43							
	44							
	45							
14	46							
	47							
	48							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

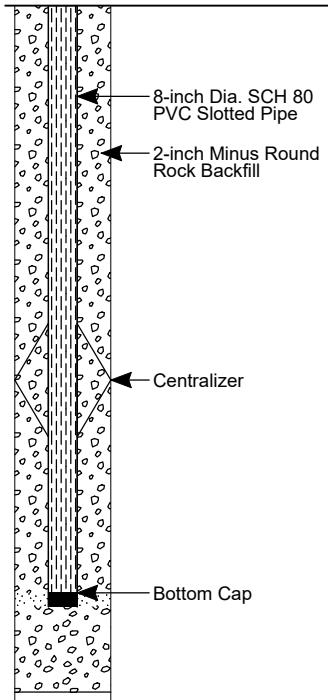
BORING NUMBER: WE-305

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
15	49					REFUSE		Black, moist, refuse (plastic and textiles), 105°F
	50							
	51							
16	52					REFUSE		Black, moist, refuse (plastic and textiles), 101°F
	53							
	54							
17	55							
	56							
	57					REFUSE		Black, moist, refuse (plastic and textiles), 109°F
	58							
18	59							
	60							
	61					REFUSE		Black, moist, refuse (plastic and textiles), 105°F
19	62							
	63							
	64							
20	65							
	66							
	67							
	68							
21	69							
	70							
	71							
22	72							
	73							
	74							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-306 Page 1 of 3

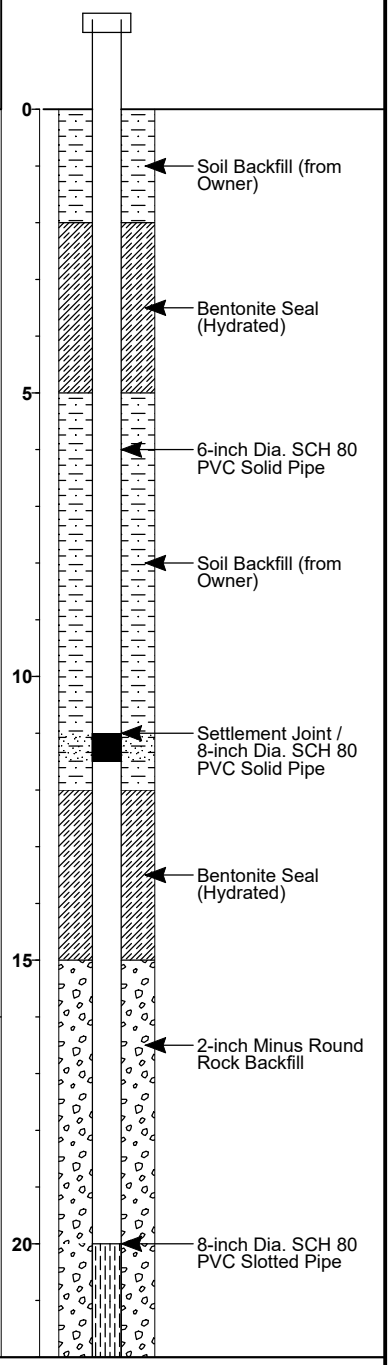
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BLP-628. Drawing ID: 2021-02.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Soil
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16					REFUSE		Brown, dry, refuse with soil, 69°F
	17							
	18							
6	19					REFUSE		Black, moist, refuse, 75°F
	20							
	21					REFUSE		Black, refuse (textile, plastic and rubber), 85°F
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **6/23/21**
Date Ended: **6/23/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

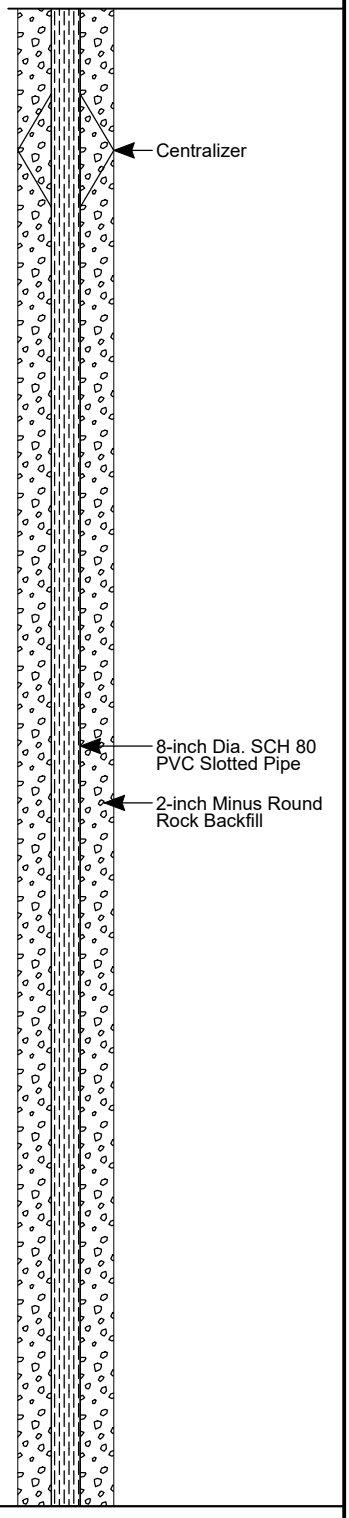
Time Started: **08:34**
Time Ended: **09:25**
Total Depth: **60.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	22							
7	23							
	24							
	25							
8	26							
	27							
	28							
	29					REFUSE		Black, moist, refuse (plastic and rubber), 82°F
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37					REFUSE		Black, moist, refuse (plastic and textile), 109°F
	38							
	39							
12	40							
	41					REFUSE		Black, moist, refuse (plastic), 96°F
	42							
13	43							
	44							
	45							
14	46					REFUSE		Black, moist, refuse (plastic and textile), 109°F
	47							
	48							



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

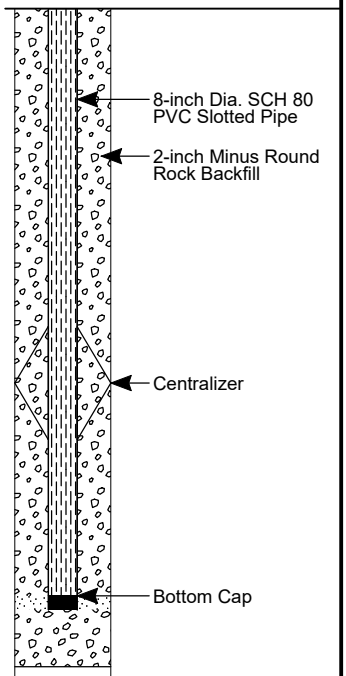
BORING NUMBER: WE-306

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
15	49							
	50					REFUSE		Black, moist, refuse (plastic and textile), 104°F
	51							
	52					REFUSE		Black, moist, refuse (plastic and textile), 106°F
16	53							
	54							
	55							
17	56					REFUSE		Black, refuse, 97°F
	57							
	58							
18	59							
	60					REFUSE		Black, refuse
	61							
19	62							
	63							
	64							
20	65							
	66							
	67							
	68							
21	69							
	70							
	71							
22	72							
	73							
	74							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-307 Page 1 of 3

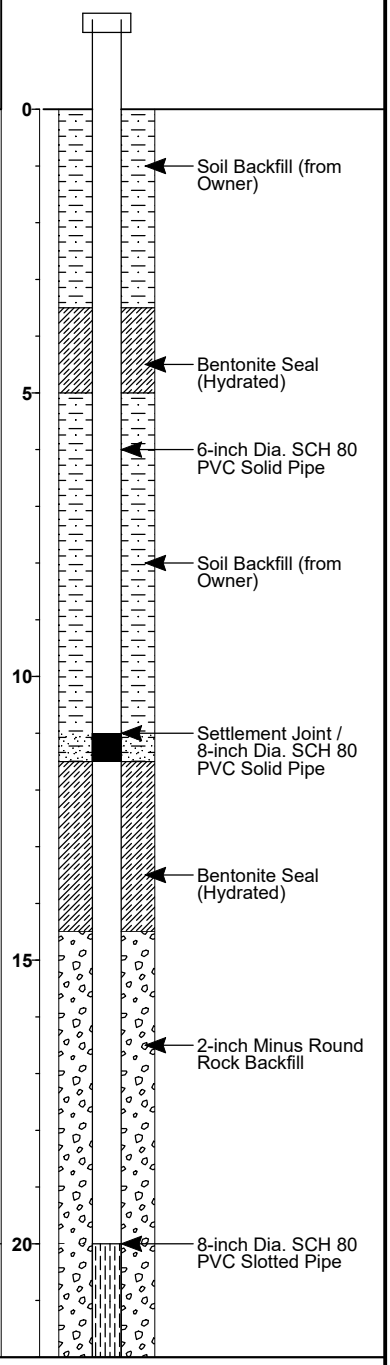
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BLP-031. Drawing ID: 2021-01.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		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					REFUSE		Brown, moist, refuse (plastic and textile), 95°F
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **6/24/21**
Date Ended: **6/24/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **12:20**
Time Ended: **14:00**
Total Depth: **57.0 ft.**

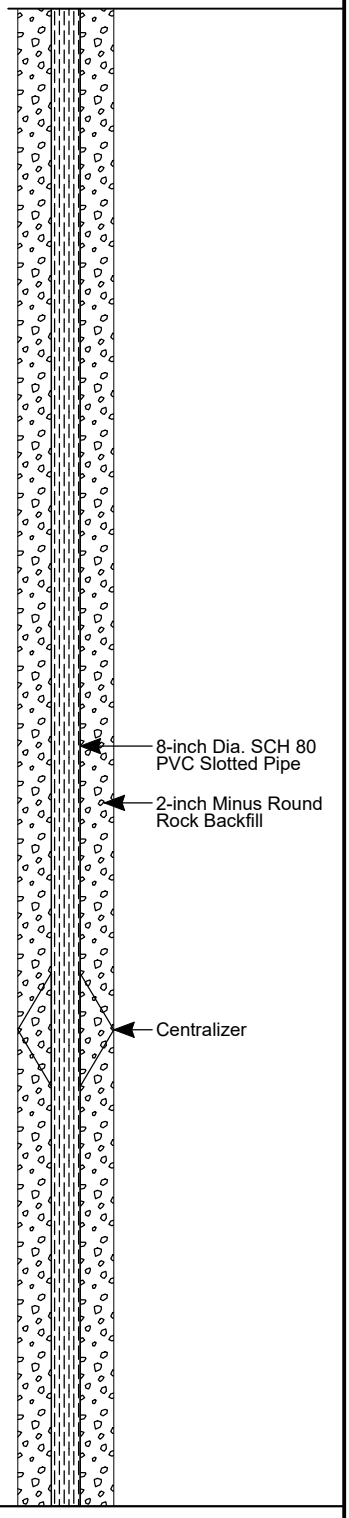
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
7	22–24							
	25–26							
8	27–29							
9	30					REFUSE		Black, moist, refuse (plastic and textile), 94°F
	31–32							
10	33–34							
	35–36							
11	37							
	38					REFUSE		Black, moist, refuse (plastic and textile), 92°F
12	39–40							
	41–42							
13	43–44							
	45					REFUSE		Black, moist, refuse (plastic), 102°F
14	46–48							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

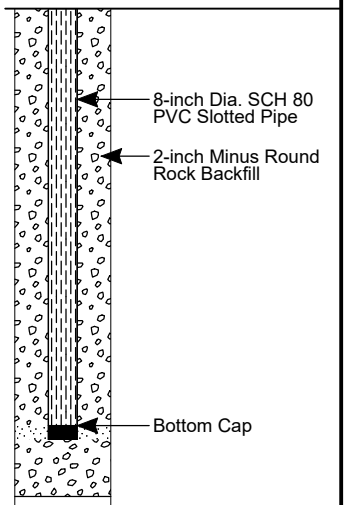
BORING NUMBER: WE-307

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
15	49							
	50							
	51							
	52							
16	53					REFUSE		Black, moist, refuse (plastic and textile), 106°F
	54							
	55							
17	56							
	57					REFUSE		Black, saturated, refuse, boring collapsing, 119°F
	58							
18	59							
	60							
	61							
	62							
19	63							
	64							
	65							
20	66							
	67							
	68							
21	69							
	70							
	71							
22	72							
	73							
	74							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-308 Page 1 of 3

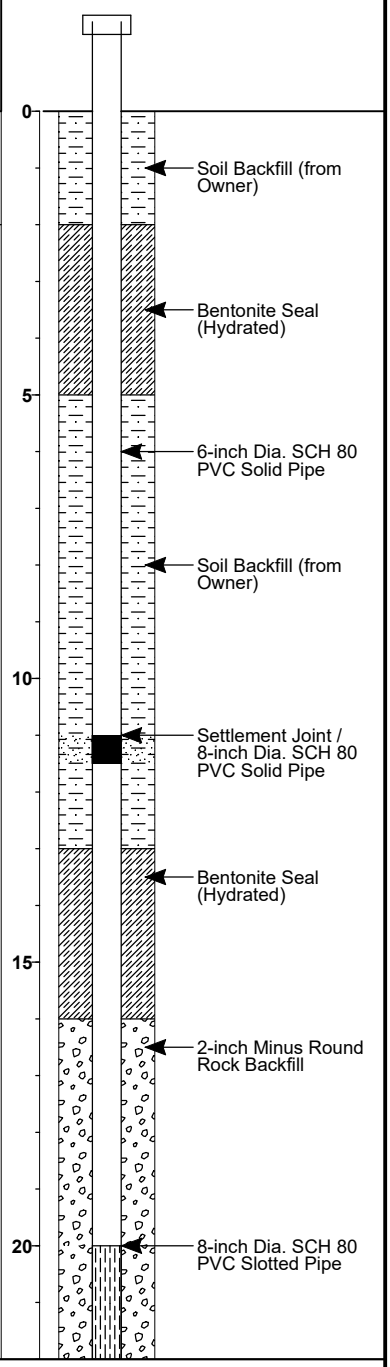
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-907. Drawing ID: 2021-21.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		Brown soil, 77°F
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9							
3	10					REFUSE		Brown, moist, refuse, 104°F
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							
	21							
	22							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **7/1/21**
Date Ended: **7/1/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **12:38**
Time Ended: **13:20**
Total Depth: **50.0 ft.**

STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

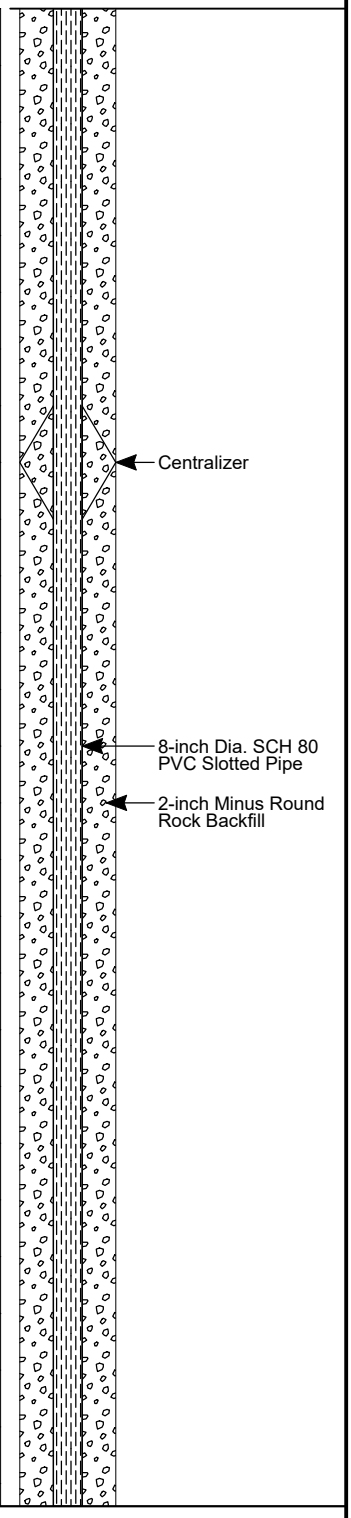
BORING NUMBER: WE-308

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	22							
7	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
12	39							
	40							
	41							
	42					REFUSE		Brown, moist, refuse (plastic and textile), 105°F
13	43							
	44							
	45							
14	46					REFUSE		Brown, moist, refuse (plastic and textile), 109°F
	47							
	48							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-308

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description	Completion Detail
15	49								
	50					REFUSE		Brown, moist, refuse (plastic and textile), 108°F	50
	51								
	52								
16	53								
	54								
	55								55
17	56								
	57								
	58								
18	59								
	60								60
	61								
	62								
19	63								
	64								
	65								65
20	66								
	67								
	68								
21	69								
	70								70
	71								
22	72								
	73								
	74								

Bottom Cap

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-309

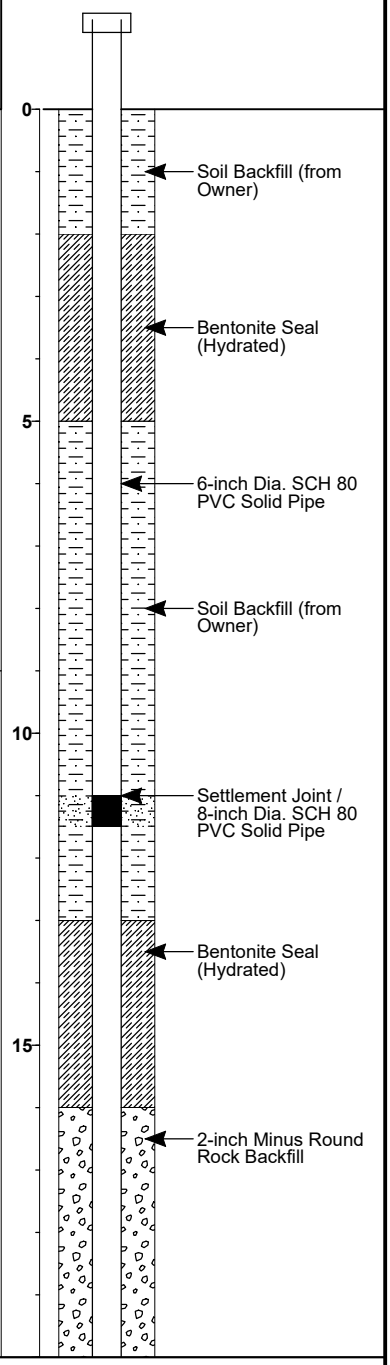
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-906. Drawing ID: 2021-20.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8							
	9					REFUSE		Brown, dry, refuse (plastic and textile), 70°F
3	10							
	11							
	12							
4	13							
	14							
	15							
5	16							
	17							
	18							
	19							
6	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **7/1/21**
Date Ended: **7/1/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **11:22**
Time Ended: **12:16**
Total Depth: **51.5 ft.**

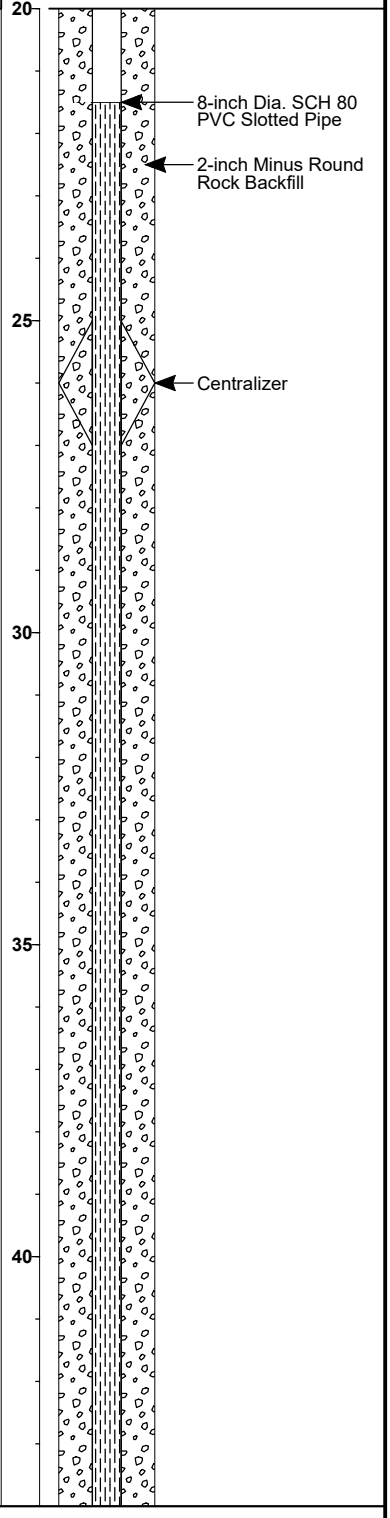
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	20							
	21					REFUSE		Black, moist, refuse, 103°F
	22							
7	23							
	24							
	25							
8	26							
	27							
	28							
	29							
9	30							
	31					REFUSE		Black, moist, refuse, 104°F
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
	39							
12	40							
	41					REFUSE		Brown, moist, refuse (plastic), 99°F
	42							
13	43					REFUSE		Brown, moist, refuse (plastic), 109°F
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

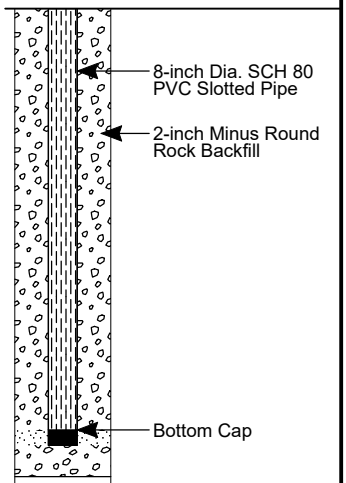
BORING NUMBER: WE-309

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
14	44–48					REFUSE		Brown, moist, refuse (plastic), 115°F
15–16	49–53					REFUSE		Black, moist, refuse (plastic), 103°F
16–20	52–68							

Completion Detail



STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-310 Page 1 of 3

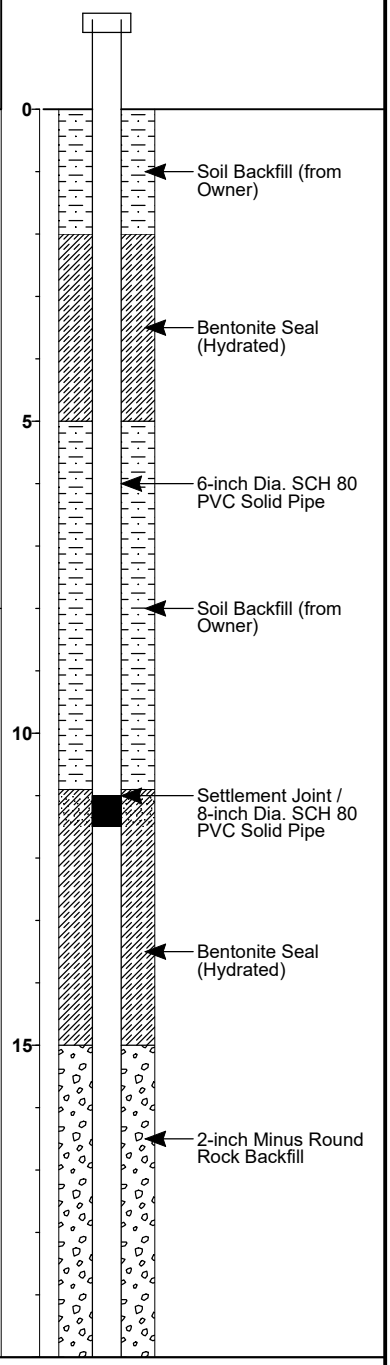
LRI Landfill, Gas Wells, June 2021
30919 Meridian East
Graham, Washington

JOB NUMBER: 04221001.10

REMARKS:
Ecology Tag BKM-908. Drawing ID: 2021-19.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
0	0					SM-GM		
	1							
	2							
1	3							
	4							
	5							
	6							
2	7							
	8					REFUSE		Brown, dry, refuse (plastic and textile) with soil, 91°F
	9							
3	10							
	11							
	12							
4	13							
	14					REFUSE		Brown, dry, refuse (plastic and textile) with soil, 98°F
	15							
5	16							
	17							
	18							
6	19							
	20							

Completion Detail



Drilling Company: **DBM Contractors, Inc.**
Drilling Method: **IMT AF-240**
Logged By: **R.Martinez**

Date Started: **7/2/21**
Date Ended: **7/2/21**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **12:32**
Time Ended: **13:16**
Total Depth: **52.0 ft.**

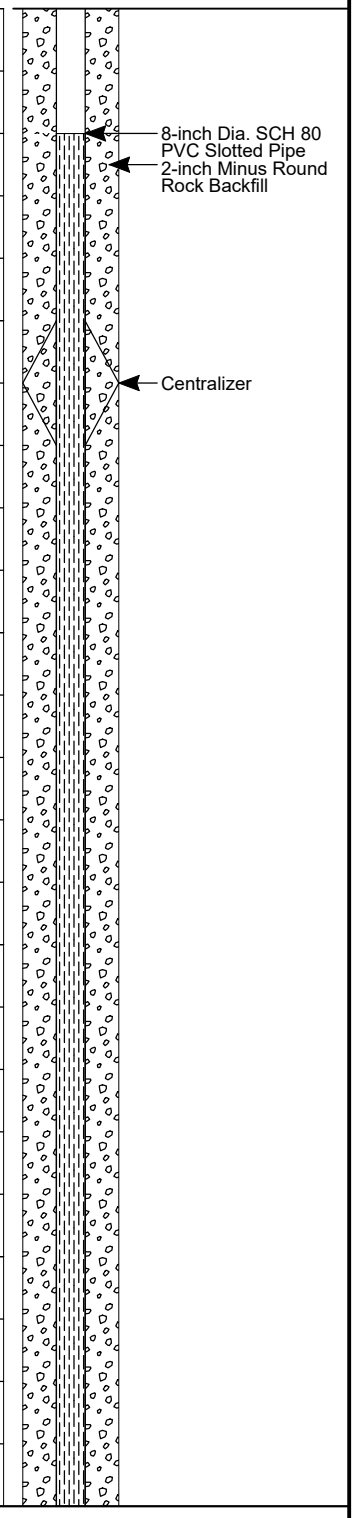
STANDARD_LOG 04221001.10 - LRI 304 GAS WELLS JUN 2021.GPJ STD_LOG.GDT 10/31/21

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

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		Brown, dry, refuse (plastic) with soil, 100°F
8	26							
	27							
	28							
	29							
9	30							
	31							
	32							
10	33							
	34							
	35							
11	36							
	37							
	38							
12	39					REFUSE		Black, dry, refuse (plastic and textile) with soil, 103°F
	40							
	41							
	42							
13	43							
	44							

Completion Detail



SCS ENGINEERS

BORING LOG

2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

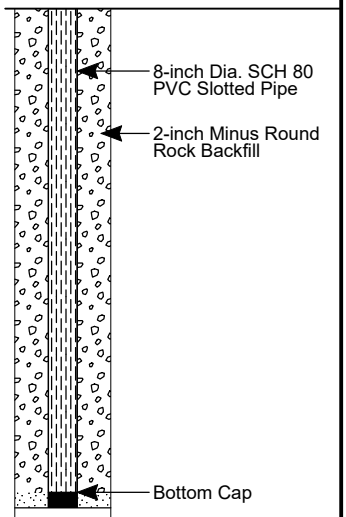
BORING NUMBER: WE-310

LRI Landfill, Gas Wells, June 2021

JOB NUMBER: 04221001.10

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	44							
	45							
14	46							
	47					REFUSE		Brown, dry, refuse (plastic) with soil, 88°F
	48							
15	49							
	50							
	51							
	52					REFUSE		Brown, dry, refuse (plastic) with soil, 96°F
16	53							
	54							
	55							
17	56							
	57							
	58							
18	59							
	60							
	61							
19	62							
	63							
	64							
20	65							
	66							
	67							
	68							

Completion Detail



Appendix I

Financial Assurance Cost Estimates

Table 1
Estimated Closure Costs
LRI Landfill, Pierce County, Washington
January 14, 2022 Update

Total Acreage at Full Build-Out:	169.20	Acres
Remaining Closure at Full Build-Out:	129.97	Acres
Remaining Closure at Full Build-Out:	5,661,493	SF

Item	Description	Unit	Unit Price	Quantity	Cost
1	Subgrade Preparation	SF	$ 0.10	5,661,493	$ 566,149.32
2	Bedding Layer	SF	$ 0.67	5,661,493	$ 3,793,200.44
3	Geosynthetic Clay Liner	SF	$ -	5,661,493	$ -
4	Geomembrane - Micro DrainLiner	SF	$ 1.06	5,661,493	$ 6,001,182.79
5	Geotextile Filter	SF	$ 0.36	5,661,493	$ 2,060,783.52
6	Vegetative / Topsoil Layer / (14-inch layer)	SF	$ 1.05	5,661,493	$ 5,944,567.86
7	Erosion Control Blanket	SF	$ 0.30	5,661,493	$ 1,698,447.96
8	Hydroseed	acre	$ 3,500.00	130.0	$ 454,895.00
9	Access Road (24 ft wide w/ 3-in asphalt layer)	LF	$ 126.53	1,060	$ 134,121.80
10	Storwater Ditches	LF	$ 33.25	11,024	$ 366,548.00
11	4-inch gas collection piping	LF	$ 54.60	18,385	$ 1,003,821.00
12	6-inch gas collection piping	LF	$ 62.00	4,480	$ 277,760.00
13	8-inch gas collection piping	LF	$ 78.50	722	$ 56,677.00
14	10-inch gas collection headers	LF	$ 62.20	1,588	$ 98,773.60
15	Main GCCS Header Piping	LF	$ 80.00	6,792	$ 543,360.00
16	Condensate Sumps	EA	$ 15,825.00	8	$ 126,600.00
17	Vertical Gas Extraction Wells (avg. depth = 96 ft.)	EA	$ 9,160.00	144	$ 1,319,040.00
	Subtotal				$ 24,445,928
	Mobilization @	5.0%			$ 1,222,296
	Sales Tax @	7.9%			$ 1,931,228
	Engineering and Construction Management @	10.0%			$ 2,444,593
				Estimated Closure Cost:	**$ 30,044,046**
	Total Acreage at Full Build-Out:	169.20			
	Acreage with Final Closure through 2021:	39.23			
	Acres Remaining to be Closed at Full Build-Out:	129.97			
				Estimated Per Acre Unit Cost:	**$ 231,161.39**
	Constructed Acreage through 2021:	127.50			
	Acreage Closed through 2021:	39.23			
	Remaining Acres to be Closed as of January 1, 2021:	88.27			
				Estimated 2021 Closure Cost:	**$ 20,404,616**

Note: Closure acreages are plan-view.

Table 2

Estimated Annual Post-Closure Costs

LRI Landfill, Pierce County, Washington

January 14, 2022 Update

Total Acreage at Full Build-Out: 169.20
Constructed Acreage through 2021: 127.50

Description	Frequency	Quantity	Unit Cost	Total Cost
LDCRS Monitoring (10 sumps)				
sample collection	quarter	4	$ 1,771.00	$ 7,084.00
laboratory testing	quarter	4	$ 3,200.00	$ 12,800.00
data analysis and reporting	quarter	4	$ 2,361.00	$ 9,444.00
Groundwater Monitoring				
sample collection	quarter	4	$ 7,084.00	$ 28,336.00
laboratory testing	quarter	4	$ 7,100.00	$ 28,400.00
data analysis and reporting	quarter	4	$ 9,446.00	$ 37,784.00
Surface Water Monitoring				
sample collection	quarter	4	$ 649.00	$ 2,596.00
laboratory analysis	quarter	4	$ 600.00	$ 2,400.00
data analysis and reporting	quarter	4	$ 1,771.00	$ 7,084.00
Gas System Monitoring				
surface emission monitoring	quarterly	4	$ 1,181.00	$ 4,724.00
probe monitoring	month	12	$ 1,476.00	$ 17,712.00
data analysis and reporting	annual	1	$ 23,615.00	$ 23,615.00
General Facility Maintenance				
gas system maintenance	annual	1	$ 2,829.00	$ 2,829.00
gas flare replacement, 30 year amortization	annual	1	$ 12,653.00	$ 12,653.00
gas system operation	annual	1	$ 14,147.00	$ 14,147.00
cover maintenance	acre	127.50	$ 328.00	$ 41,820.00
cover replacement & repair	annual	1	$ 2,829.00	$ 2,829.00
sedimentation basin	annual	1	$ 3,271.00	$ 3,271.00
ditch / erosion maintenance	annual	1	$ 1,415.00	$ 1,415.00
buildings	month	12	$ 328.00	$ 3,936.00
equipment	month	12	$ 328.00	$ 3,936.00
General Operating Expenses				
administration	month	12	$ 1,308.00	$ 15,696.00
support services / accounting	month	12	$ 1,308.00	$ 15,696.00
real estate taxes	year	1	$ 52,339.00	$ 52,339.00
electricity	month	12	$ 1,270.00	$ 15,240.00
legal	year	1	$ 1,308.00	$ 1,308.00
engineering	year	1	$ 1,308.00	$ 1,308.00
Leachate System Operation & Maintenance				
pumps	year	2	$ 4,344.00	$ 8,688.00
collection pipe and force main	year	1	$ 2,714.00	$ 2,714.00
storage and load facility	year	1	$ 2,714.00	$ 2,714.00
trucking	gal	1,000,000	0.03	$ 30,000
treatment	gal	1,000,000	0.04	$ 40,000
			Estimated Annual Cost:	**$ 454,518**

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, and 8).

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 10 leachate sumps (LCRS-1, 2A, 2B, 3A, 4A, 4B, 5, 6, 7, and 8).

3) Surface water monitoring costs assume samples will be collected by LRI staff.

Appendix J

LRI Landfill 2021 Tonnage Report Form

DEPARTMENT OF ECOLOGY
State of Washington

ANNUAL REPORT
MUNICIPAL SOLID WASTE LANDFILL

FACILITY NAME: **LRI Landfill**	CALENDAR YEAR OF REPORT: **2021**	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 2021 ?

☒ 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	668,881
☒ Construction/Demolition Waste	18,908
☒ Yard Waste (disposed)	294
☐ Food Processing Waste (disposed)	
☐ Landclearing Debris	
☒ Industrial Waste	235,011
☐ Inert Waste	
☐ Wood Waste	
☒ Ash (other than special incinerator ash)	30,818
☐ Dredged Materials	
☐ Sewage Sludge	
☒ Asbestos	1,123
☐ Petroleum Contaminated Soils	
☒ Other Contaminated Soils	138,486
☐ Tires (disposed)	
☒ Medical Waste	1,277
☒ Other (specify):Auto Fluff	150,895
☒ Other (specify):Saw Dust	175
☒ Other (specify):Compost Overs	41,924
☒ Other (specify):Manure	25
Total	**1,287,817**

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): $168.51 per ton

REMAINING PERMITTED CAPACITY:

In tons: 13,864,283

Estimated Date of Closure: 2036

Are you planning an expansion this year?

☐ Yes ☒ No

ENERGY RECOVERY FROM LANDFILL:

Power Produced Annually 27,498,446 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.

PREPARED BY: Kevin Lakey, P.E.	DATE: 3/30/2022	PHONE: (425) 289-5447
EMAIL: klakey@scsengineers.com		

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Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.