2020 Annual Report

LRI Landfill
Graham, Washington

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

SCS ENGINEERS

04220001.02 | March 31, 2021

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This 2020 Annual Report for the LRI Landfill located in Graham, Washington, was prepared by Sam Graber and Kevin Lakey, LHG and was reviewed by Dan Venchiarutti, LHG, of SCS Engineers.

March 31, 2021

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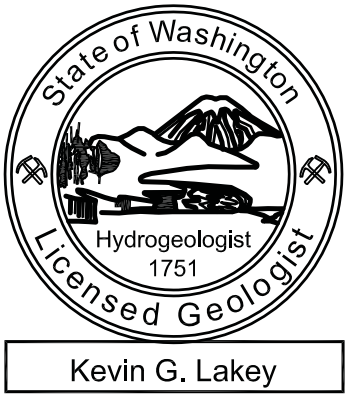

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1.0 INTRODUCTION

This document is the annual report for the LRI Landfill for 2020. 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 2020 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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Site Manager
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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 8A) with a combined bottom liner area of approximately 123.1 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 8A, a 6.0-acre disposal cell, began taking waste in November 2020.

Six final closure constructions, totaling 31.2 acres (in plan-view) have been completed to date over portions of Cells 1, 2A, 2B, 4A and 4B. 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. Closure construction included a foundation layer, bedding layer, geosynthetic clay liner, HDPE geomembrane DrainLiner, a geotextile filter, and a vegetative soil layer.

1.3 2020 MONITORING AND REPORTING ACTIVITIES

Groundwater monitoring activities were conducted quarterly in March, June, September, and December 2020 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 2020 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 2020 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 2020 as outlined in the *LRI Landfill Surface Water Monitoring Plan* (SCS July 2009) and per an Industrial Stormwater General Permit (WAR002557) and a 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 2020. 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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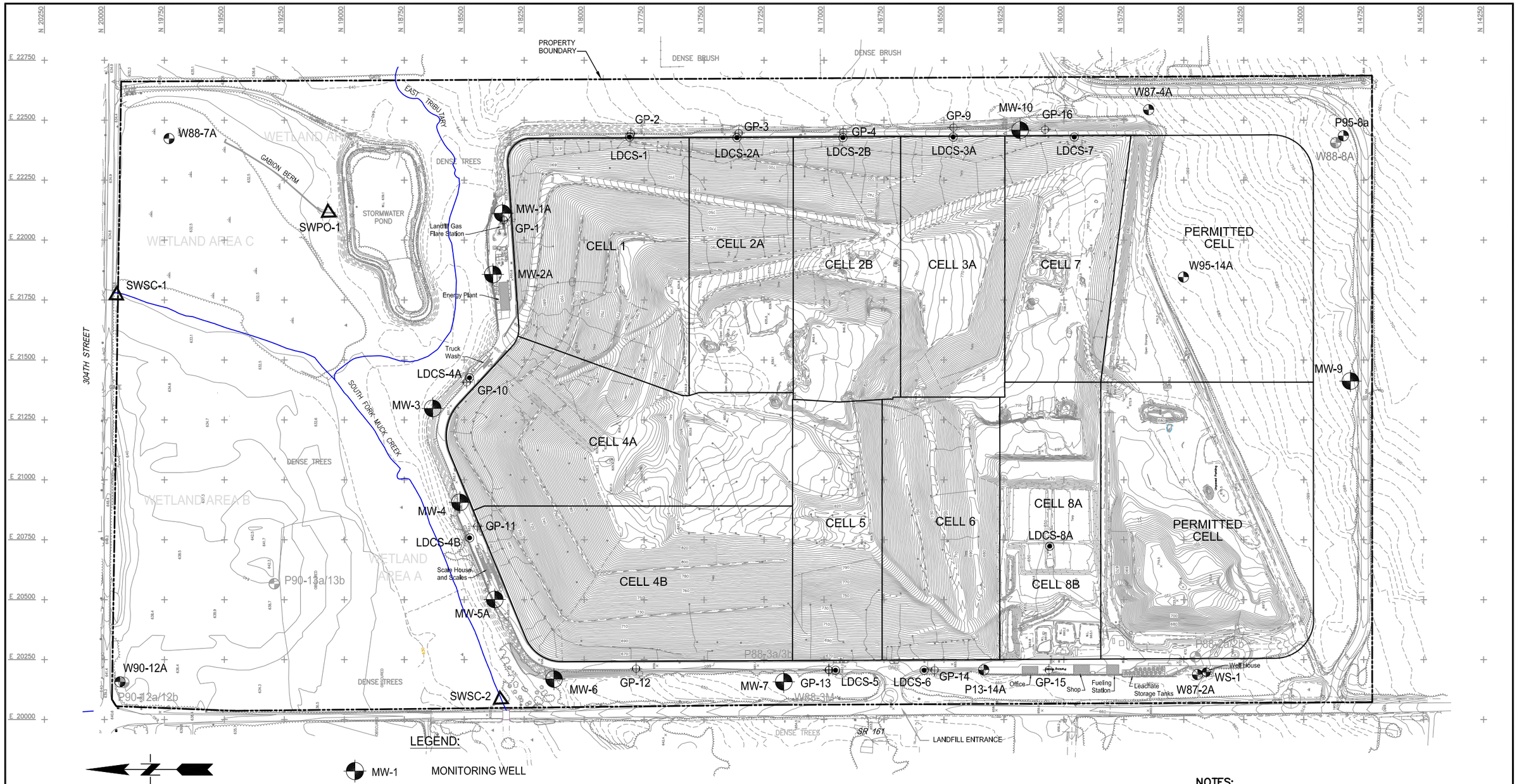
PROJECT NO. 04220001.02	DES BY LEL	SITE LOCATION MAP	DATE MARCH 2021
SCALE NOT TO SCALE	CHK BY SEG	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



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 JANUARY 14, 2021.
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. 04220001.02	DES BY SEG	SITE MAP	DATE MARCH 2021
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 2020 REPORT FORM AND FACILITY CAPACITY INFORMATION

Landfilling operations were conducted over portions of Cells 2A, 2B, 3A, 4A, 4B, 5, and 6 in 2020. The tonnage of waste materials landfilled at the LRI Landfill during 2020 was approximately 1,305,792 tons. The total tonnage landfilled at the LRI Landfill since opening in December 1999 through December 31, 2020 accrues to approximately 20,300,912 tons. The in-place density of combined waste placed between December 1999 and February 20, 2020 (aerial topographic survey date) is approximately 2,073 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 2,073 lbs/CY, the volume of airspace consumed through December 31, 2020 was approximately 19.6 million cubic yards, or approximately 56.6 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 2020 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 force main to sixteen above ground storage tanks, with a combined on-site leachate storage capacity of approximately 218,400 gallons. Leachate collected in 2020 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 2020 leachate volumes truck-hauled off site for proper disposal is shown on Exhibit 1.

Exhibit 1. 2020 Leachate Volume Data

Month	Leachate Production (gallons)	Monthly Rainfall (inches)
January	3,876,603	8.04
February	4,125,075	3.73
March	3,388,407	5.13
April	3,145,820	1.55
May	2,569,708	3.54
June	2,489,078	4.01
July	1,949,077	0.04
August	2,108,396	0.56
September	2,253,493	2.55
October	2,732,978	2.90
November	3,205,143	4.76
December	3,162,214	4.89
Totals	35,005,992	41.70

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 in December at each individual sump location. At disposal cells 1 through 7, leachate samples were obtained from sampling ports installed near the leachate riser pipes. At Cell 8A, a leachate sample was collected using a peristaltic pump from the temporary vertical riser pipe located within the cell. LRI began filling Cell 8A with refuse on November 10, 2020, and the first leachate sample was collected on December 17, 2020. At Cell 7, which began operations in December 2019, additional leachate samples were obtained on January 31, March 17

and June 9, 2020. 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 2020 (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 2020 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 2020 groundwater monitoring event are provided in Appendix B. A copy of the groundwater database for 2020 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 2020, operation and maintenance activities associated with the LDCS included cleaning vaults, checking electrical connections, and calibrating equipment within the vaults (pumps and meters) as needed. Specific activities included the following:

- The conductivity probe at LDCS-5 malfunctioned beginning on October 4, 2019. On April 1, 2020, LRI staff began manually recording conductivity levels using a portable conductivity meter. The conductivity probe was replaced and brought back online on October 8, 2020.

- The conductivity probes at Cells 1, 2A, 2B, 3, 4A, 4B, 5 and 6 were checked for accuracy by LRI staff on March 20, 2020.

- The conductivity probe at LDCS-3A was recalibrated on April 24, 2020. Following recalibration, conductivity readings decreased to levels more consistent with historic data and readings measured in the field.

- The vault and riser pipe at LDCS-5 were cleaned and pressure washed on March 5, 2020 by DrainPro using potable water. Silt and bacteria were removed from the riser pipe. The pumps and water-level transducer were temporarily removed to perform the work. The water-level transducer and the dewatering pump were re-installed following completion. The sample pump was retained for further cleaning and the pump discharge tubing was replaced. LRI attempted to redeploy the sample pump in September. However, the attempt was not successful. LRI successfully redeployed the sample pump on March 3, 2021.

- A conductivity probe was installed at LDCS-7 on June 12, 2020. The meter was connected to the PLC on July 25, 2020.

- The conductivity probes at Cells 1, 2A, 2B, 3, 4A, 4B, 6 and 7 were checked for accuracy by LRI staff on September 21, 2020.

- The flowmeter at LDCS-2B malfunctioned beginning on October 20, 2020. SCS will work with LRI to repair or replace the meter.

- The LDCS flowmeter at LDCS-8A was installed and brought online on October 22, 2020.

- The conductivity readings recorded at LDCS-8A do not reflect what was measured in the field during the fourth quarter 2020 monitoring event. LRI staff will recalibrate the probe.

Conductivity spikes were observed at LDCS-1 around November 3 and December 8, 2020 (see the time trend plots in Appendix F). These dates coincided with large rain events. Given the timing of when the spikes occurred and when the rain events were recorded, it is interpreted that the rainfall events may have caused groundwater within the LDCS to come in contact with the overlying clay material, which in turn, caused the conductivity of the groundwater to rise. The conductivity levels at LDCS-1 decreased to levels more consistent with historic data following these events.

Conductivity levels recorded at LDCS-2B displayed a slight increase during the fourth quarter of 2020. LRI staff recalibrated the probe on January 12, 2021 and the conductivity has since decreased to levels more consistent with historic trends.

Conductivity readings at LDCS-4A displayed a spike on December 30, 2020. See Section 4.2 for additional discussion regarding water quality at LDCS-4A.

Conductivity spikes were observed at LDCS-7 between September 25 and October 2 (up to 1,951 µS/cm) and between October 10 and October 16 (up to 1,557 µS/cm). Large rainfall events (1.7 inches on September 25, and 2.19 inches between October 10 and October 14) correspond to the time frames of the conductivity increases. Since then, conductivity values have decreased to levels more consistent with previous data.

The remaining conductivity data from the LDCS sumps generally trended within typical historical ranges during 2020 (see Appendix F).

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. Due to a sampling pump failure, samples were collected from LDCS-5 as grab samples from the discharge spigot to the concrete stormwater channel during the second, third and fourth quarter monitoring events of 2020. Additional baseline water quality monitoring for LDCS-7 concluded on April 21, 2020. Background water quality monitoring was performed monthly at LDCS-8 beginning in August 2020. See below for additional discussion regarding background sampling at LDCS-8A. Samples were submitted to Eurofins TestAmerica of Denver, Colorado. Water quality test 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 2020 were generally consistent with previously measured values (see Appendix F), except as noted below.

Low-level detections of ammonia (0.49 mg/L or less) were reported during one or more quarters at LDCS-1, LDCS-2A, LDCS-2B, LDCS-3 LDCS-4A, LDCS-4B, and LDCS-7. Low-level detections of ammonia were also reported in nearly all of the groundwater monitoring wells in 2020. 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.

During the 2020 monitoring events, elevated concentrations of dissolved iron (up to 24 mg/L) were reported at LDCS-1, LDCS-2B and LDCS-3 and elevated concentrations of dissolved manganese (up to 7.7 mg/L) were reported at LDCS-2A, LDCS-2B and LDCS-3. Select VOCs including 1,4-dichlorobenzene, acetone, benzene, and m-xylene & p-xylene were also reported in the samples collected from these locations during 2020. However, primary leachate indicator parameter, 2-butanone, was not detected and secondary indicator parameters ammonia and chloride were not detected or remained low throughout the year. 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 and VOC detections do not appear to be the result of impacts from the landfill. The piper diagrams are included in Appendix D.

The sample collected from LDCS-4A during the Fourth Quarter 2020 monitoring event displayed elevated concentrations of ammonia (11 mg/L), chloride (63 mg/L), TOC (24 mg/L), and dissolved potassium (13 mg/L) and sodium (74 mg/L). On January 4, 2021, LRI staff discovered that a weld on the leachate forcemain near LDCS-4A had unexpectedly failed. The weld failure resulted in a small, low-flow leak of leachate that entered the LDCS at Cell 4A. LRI notified Ecology and the TPCHD on January 4, 2021. A follow up letter was submitted to Ecology on January 7, 2021. LRI staff promptly identified and repaired the area of the forcemain that had failed. In addition, groundwater withdrawn from LDCS-4A has been rerouted to the leachate collection system for disposal as leachate since the leak was discovered. SCS collected additional weekly samples from LDCS-4A, beginning on January 5 and ending on January 28, 2021. The samples were analyzed for the routine groundwater monitoring program parameters. The additional sample results will be included in the First Quarter 2021 Groundwater Monitoring Report.

Chloride results from LDCS-4B continue to display a slowly increasing trend (see Appendix F). However, primary leachate indicator parameters, acetone and 2-butanone, were not detected in 2020, and the overall water quality results do not indicate a leachate impact (see the summary tables in Appendix B and the piper plots in Appendix D). As a precautionary measure, water from LDCS-4B has been discharged into the leachate collection system since July of 2019 and is not being discharged through the concrete channel.

Samples collected from LDCS-5 in 2020 continued to display elevated concentrations of secondary leachate indicator parameters ammonia and chloride, as well as slightly elevated concentrations of sodium, potassium, and total organic carbon (see summary tables in Appendix B and time trend plots in Appendix F). As reported previously, although primary leachate indicator parameters acetone and 2-butanone were not detected in the samples collected from LDCS-5, elevated concentrations of ammonia and chloride, as well as sodium, potassium and TOC, are indicative of a potential leachate leak. Pressure testing results for the leachate forcemains adjacent to Cell 5 in 2020 indicated that the forcemain piping was not leaking. Additional improvements to prevent a potential leachate leak at Cell 5 included replacement of the stormwater flap along the concrete channel and replacement of the geomembrane boot surrounding the three leachate riser pipes. This work was completed in September of 2020 (see Documentation Report of Soil Placement within the Future Phase V Closure Area, dated December 4, 2020). Following these improvements, the water quality at LDCS-5 showed improvement during the fourth quarter monitoring event. 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.

The first quarter 2020 sample collected from LDCS-6 included reported detections of 1,1-dichloroethene (0.96 µg/L) and vinyl chloride (1.3 µg/L). Similar detections of these VOC's were reported in the sample collected from LDCS-6 during the fourth quarter 2019 monitoring event. LDCS-6 was re-sampled on January 30, 2020 and on April 21, 2020. No VOCs were detected in the January or April samples, or during the remaining quarterly sampling. Primary leachate indicator parameters, acetone and 2-butanone, were non-detect and secondary leachate indicator parameters ammonia and chloride were non-detect or remained low in 2020. Therefore, the reported VOC detections do not appear to be related to landfill leachate.

As reported previously, background water quality at LDCS-7 includes detections of VOC's and elevated concentrations of inorganic parameters and metals. During 2020, carbon disulfide was reported in each of the samples collected from LDCS-7 with concentrations ranging from 2.2 to 18 µg/L. Toluene (3.0 µg/L), benzene (0.61 µg/L) and acetone (26 µg/L) were also reported in samples collected from LDCS-7 during 2020. 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, toluene, 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. However, graphical plots of LDCS-7 water quality presented on trilinear (piper) diagrams (see Appendix D) demonstrate inherent water quality differences between the groundwater at LDCS-7 and leachate.

4.3 LDCS-8A BACKGROUND WATER QUALITY DATA

Four background water quality samples were obtained from the temporary leak detection sump at LDCS-8A. Samples were collected on August 31, September 21, October 5 and November 10, 2020. The first sample was obtained as a grab sample from the discharge effluent of the piping and the subsequent three samples were collecting from the vertical riser pipe using a peristaltic pump.

The background sampling results display three low-level detections of nitrate (<1.6 mg/L), and relatively elevated concentrations of chloride (up to 44 mg/L), sulfate (up to 170 mg/L), TDS (up to 870 mg/L), TOC (up to 13 mg/L), and dissolved calcium (up to 130 mg/L), manganese (up to 0.53 mg/L), potassium (up to 6.6 mg/L), sodium (up to 64 mg/L), vanadium (up to 0.015 mg/L) and zinc (up to 0.031 mg/L). Analytical results for these background samples can be found in the summary tables in Appendix B and in the groundwater database in Appendix C.

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 2020. 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 2020 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 2020 were validated and input into a database utilizing Microsoft Office Access 2016 software, and uploaded into Ecology's Environmental Information Management (EIM) database system. Field sampling data sheets and a data validation summary for the Fourth Quarter 2020 groundwater monitoring event is provided in Appendix B. A copy of the groundwater database for 2020 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, bicarbonate 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 2020, 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 2020.

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 and are less than or equal to the background levels used to establish prediction limits. 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. However, with the exception of the second and third quarter detections at MW-4 of 0.0110 mg/L, all reported arsenic detections were less than the Federal primary drinking water maximum contaminant level (MCL) of 0.010 mg/L. The reported arsenic concentration of 0.0110 mg/L is equal to the background arsenic concentration established at MW-4 before the landfill began operating. Therefore, this concentration is interpreted to be within natural background variation.

Exhibit 2. 2020 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	Q1	0.00005	**	**	**	0.0093	0.0053	0.0074	0.0050
	Q2		**	**	**	0.0110	0.0062	0.0068	**
	Q3		**	**	**	0.0110	**	0.0064	0.0055
	Q4		**	**	**	0.0097	**	0.0072	0.0056
Iron	Q1	0.30	1.8	0.91	*	*	*	*	*
	Q2		1.6	0.86	*	*	*	*	0.34
	Q3		1.5	0.50	*	*	*	*	*
	Q4		1.4	0.53	*	*	*	*	*
Manganese	Q1	0.05	0.24	0.32	0.44	0.23	0.20	0.19	0.23
	Q2		0.27	0.33	0.37	0.23	0.19	0.20	0.28
	Q3		0.23	0.30	0.26	0.18	0.14	0.21	0.21
	Q4		0.24	0.30	0.28	0.23	0.19	0.24	0.24

Notes:
* = concentration less than WAC 173-200 criterion
** = analyte not detected at or above the MRL, but MRL is greater than the WAC 173-200 Groundwater 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

As shown on the referenced time-trend plots, dissolved metal and inorganic parameter concentrations during 2020 were generally consistent with previously measured values, except as noted below.

Slight increases in concentrations of alkalinity, TDS, dissolved calcium, and dissolved magnesium were noted at MW-3 in the sample collected during the First Quarter 2020 monitoring event. The subsequent samples collected from MW-3 in 2020 displayed concentrations of these parameters that were consistent with historic data. An elevated concentration of TOC (5.3 mg/L) was reported in the sample collected from MW-3 during the Fourth Quarter 2020 monitoring event. However, primary indicator parameters, acetone and 2-butanone, were non-detect and secondary indicator parameters, ammonia and chloride, remained low throughout 2020. Therefore, the increases in select parameter concentrations does not appear to be related to leachate.

Chloride and nitrate concentrations remain higher at upgradient well MW-10 compared to downgradient water quality. The pH values at MW-10 were below the WAC 173-200 criterion of 6.5 during each quarter of 2020. Since MW-10 is upgradient of the landfill, these values are interpreted to reflect background water quality conditions.

Low-level ammonia detections were reported during one or more monitoring events in 2020 at each monitoring well, except MW-1A, MW-9 and MW-10. Reported concentrations ranged up to 0.20 mg/L. Since ammonia has been frequently detected at background well MW-10 at similar concentrations to downgradient monitoring wells in the past, the ammonia concentrations appear to be due to a site-wide aquifer condition, and not landfill leachate.

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 the First Quarter of 2020, the cation-anion balance evaluation slightly exceeded the appropriate threshold for background monitoring well MW-10 (7.4 percent versus a threshold of 5.0 percent). Since MW-10 is upgradient of the landfill, this is 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.

Low-level detections of iodomethane (up to 2.3 µg/L) were reported in samples collected from MW-1A, MW-2A, MW-3, and MW-6 during the Second Quarter monitoring event. No other VOCs were reported in the samples collected from the monitoring wells during the second quarter, including the primary leachate indicator parameters acetone and 2-butanone. Furthermore, secondary indicator parameters, ammonia and chloride, remained low or were non-detect. Previous detections of iodomethane have not been reported at the LRI Landfill. Therefore, the reported detections of iodomethane 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 2020.

6.3 MONITORING WELL CONSTRUCTION/MAINTENANCE

No significant well construction or well maintenance activities occurred in 2020.

7.0 SURFACE WATER MONITORING

Surface water monitoring was performed weekly and quarterly during periods of surface water discharge 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), chloride, 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, 4-methylphenol, alpha-terpineol, p-Cresol, and phenol. Samples for laboratory testing were submitted to Eurofins TestAmerica of Fife, Washington.

Construction and industrial stormwater treatment occurred in 2020. The construction stormwater treatment system is located on the northwest corner of the construction activity area across from the LRI office building. Treated construction stormwater is discharged into a 36-inch diameter drainage pipe that leads to the site's stormwater 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. Both stormwater treatment systems utilize Chitosan enhanced sand filtration (CESF).

No stormwater benchmarks or effluent limits were exceeded in 2020 with the exception of two ISGP parameters during the third quarter. On September 28, 2020, the concentration of total suspended solids (36 mg/L) exceeded the average monthly effluent limit of 27 mg/L. In addition, benzoic acid was analyzed by Method 8270, and not EPA 625.1, due to a lower than normal volume of sample collected. The resulting method detection limit for benzoic acid (500 µg/L) was above the effluent limit.

Copies of the 2020 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 2020 using a Landtec GEM 2000. Methane was not measured above the lower explosive limit of 5 percent methane by volume at performance gas probes GP-3, GP-4, GP-9, GP-11, GP-13, GP-14, GP-15 and GP-16. 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 and GP-12. Table H-1 in Appendix H provides a summary of landfill gas monitoring results for 2020.

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 last barhole survey was conducted by SCS on December 18, 2019 along the base of the perimeter berm adjacent to gas probe GP-2. This work was consistent with a Tier II subsurface gas migration study as described in the LRI Landfill Plan of Operations. The methane concentration measured at GP-2 at the beginning of the survey was 17.3 % by volume. 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 2020. Measurements were obtained using a GasTech or Photovac MicroFID (FID). Minor detections were noted with the FID at several of the buildings. However, the detections were determined to be attributed to natural background levels and/or the presence of aromatic incense in the building. For more details regarding the on-site building monitoring see Appendix H.

8.3 LANDFILL GAS EXTRACTION WELL CONSTRUCTION

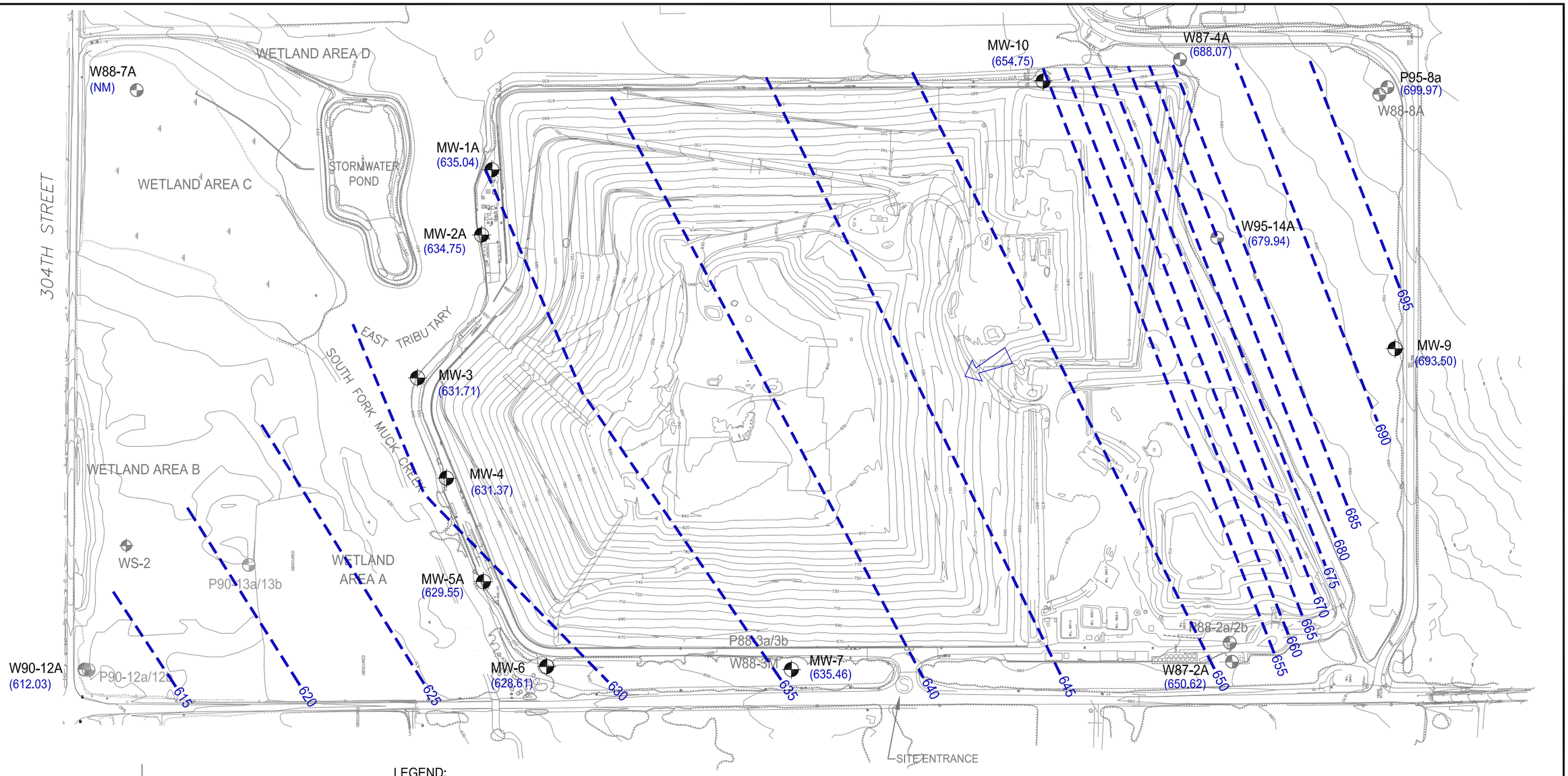
Seventeen vertical landfill gas extraction wells (WE-264 through WE-280) were installed between September 14 and September 28, 2020. The Gas Extraction Well Installation Report that summarizes the work is included in Appendix H.

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



LEGEND:

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

NOTES:

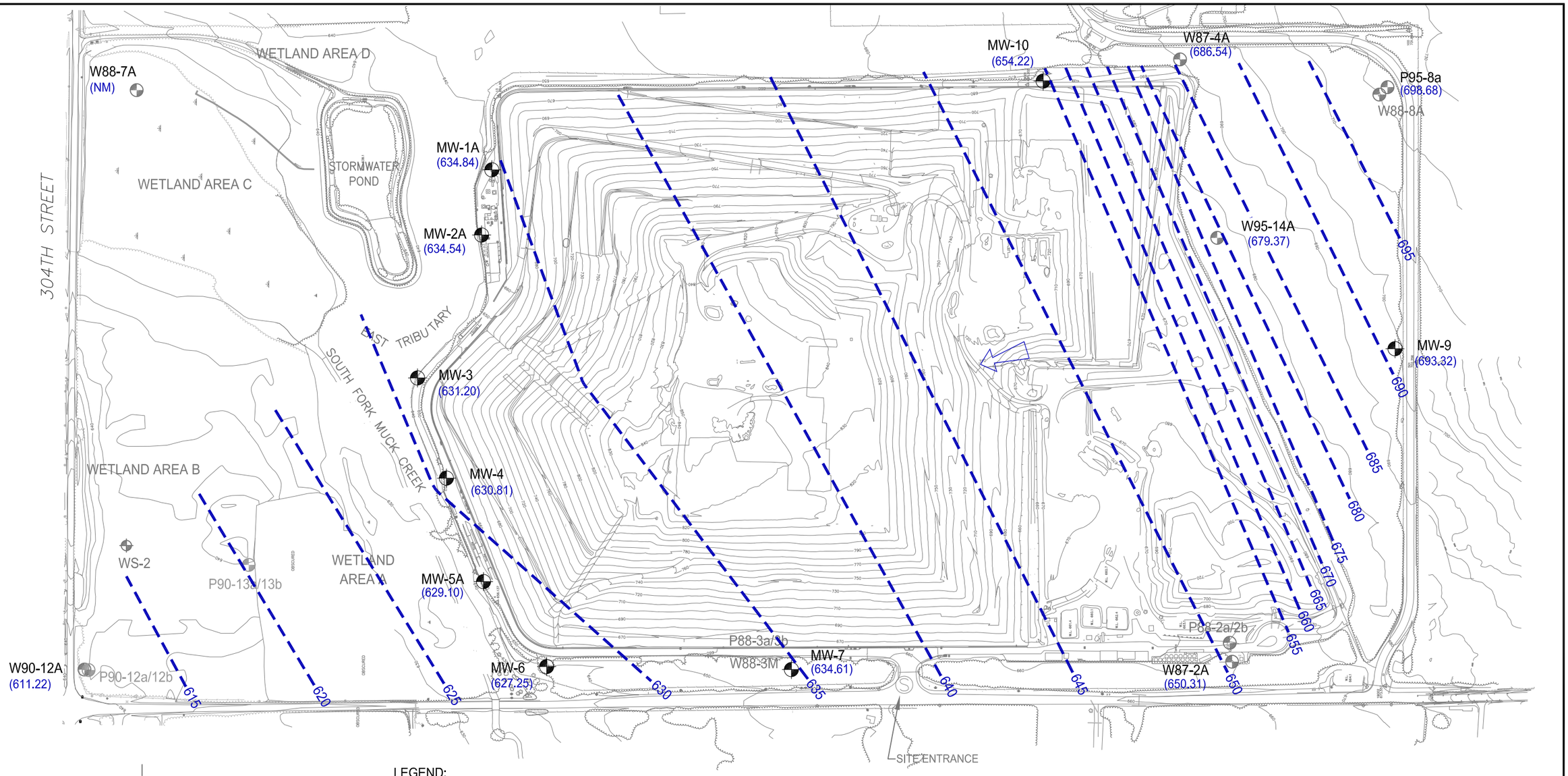
VERTICAL DATUM - BASED ON PIERCE COUNTY BENCH NO. 112-28, ELEVATION 660.29 NGVD29

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. 04220001.02	DES BY SG	POTENTIOMETRIC SURFACE CONTOUR MAP MARCH 17, 2020	DATE MAY 2020
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
(650.31)	GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
	INFERRED GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED

NOTES:

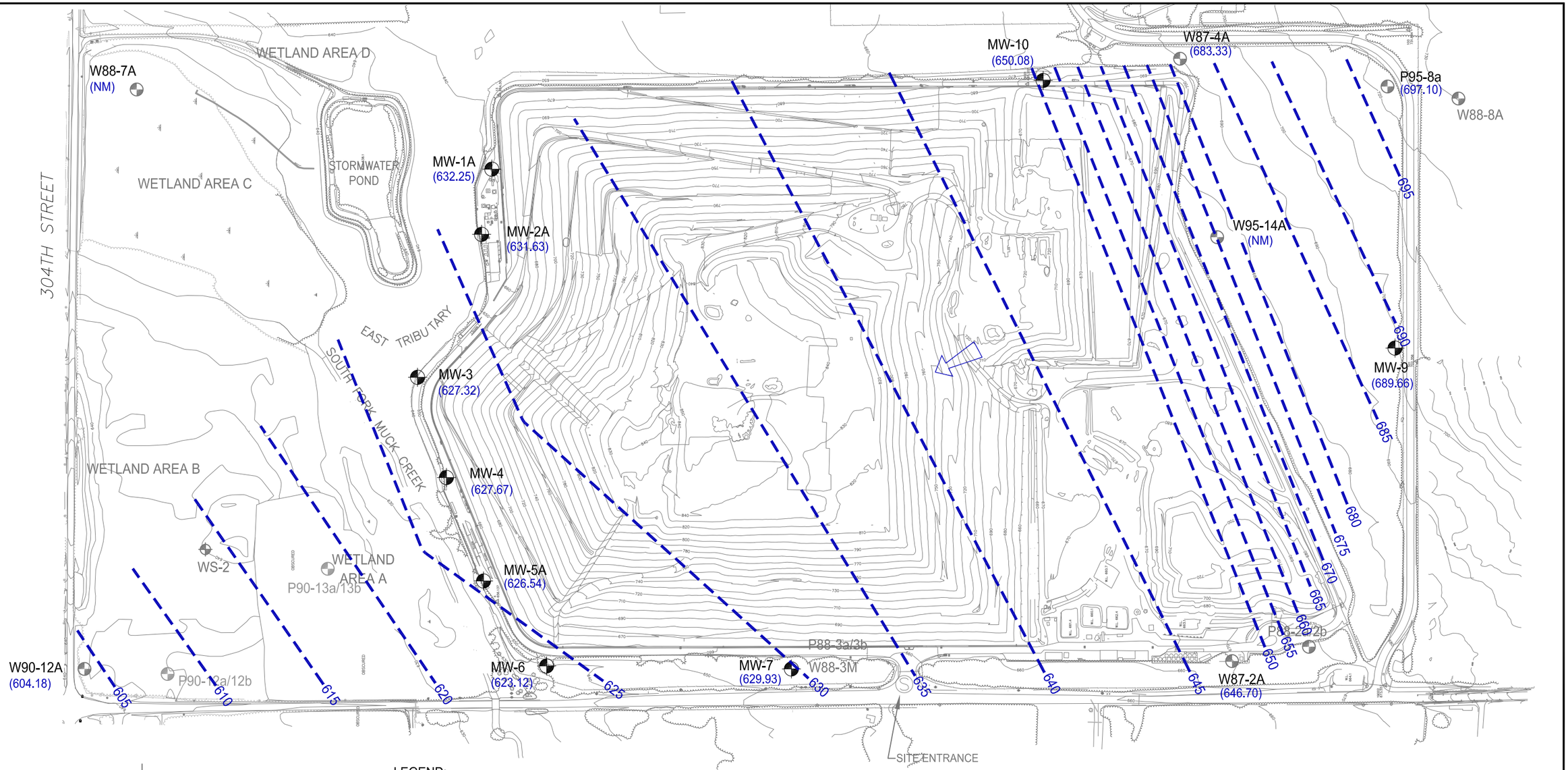
VERTICAL DATUM - BASED ON PIERCE COUNTY BENCH NO. 112-28, ELEVATION 660.29 NGVD29

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. 04220001.02	DES BY SG	POTENTIOMETRIC SURFACE CONTOUR MAP JUNE 9, 2020	DATE JULY 2020
SCALE AS SHOWN	CHK BY KGL	LRI LANDFILL 30919 MERIDIAN STREET E. GRAHAM, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		



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

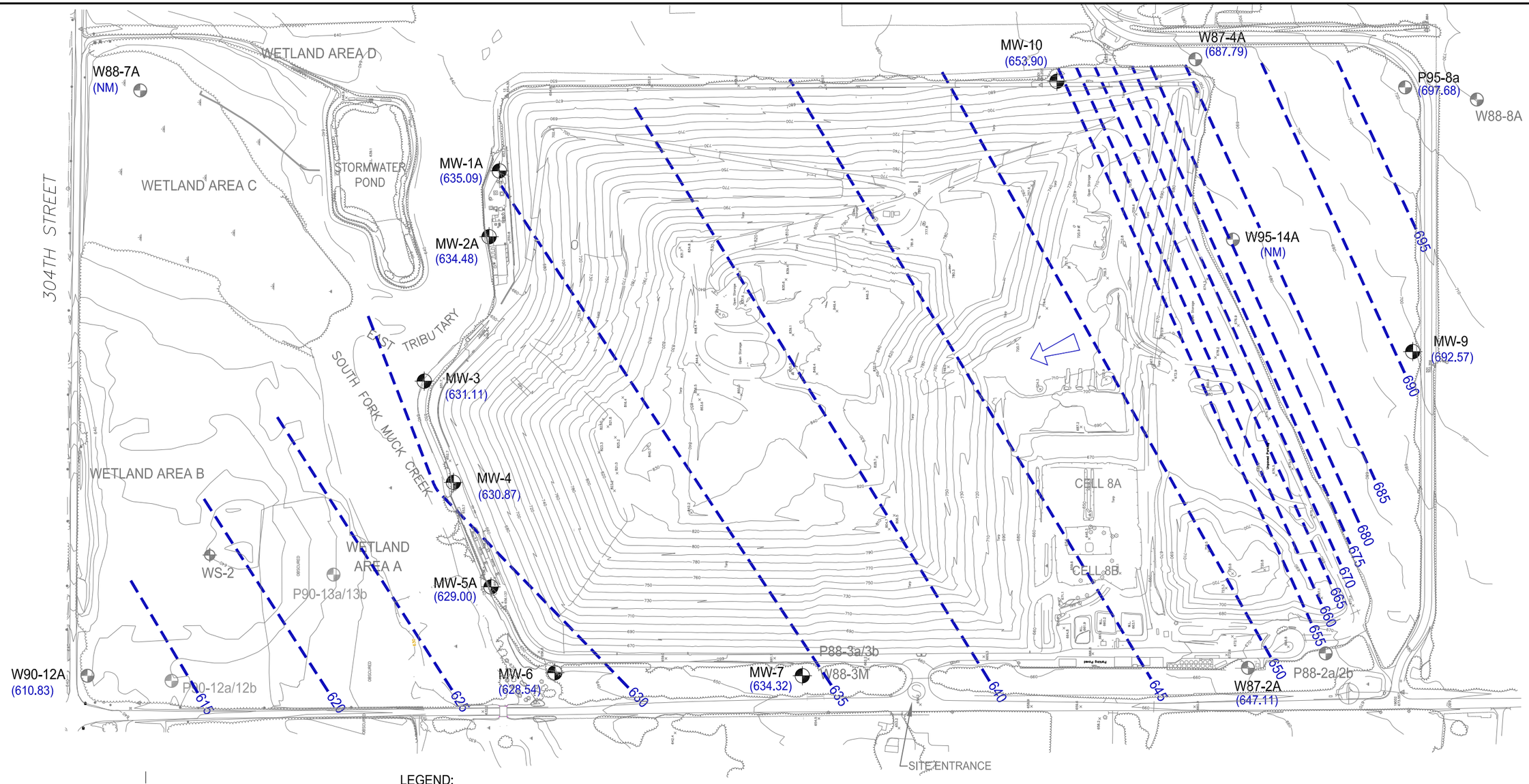
PROJECT NO.	04220001.02
DES BY	SG
SCALE	AS SHOWN
CHK BY	KGL
CAD FILE	FIGURE 1
APP BY	KGL

POTENTIOMETRIC SURFACE CONTOUR MAP
SEPTEMBER 24, 2020

LRI LANDFILL
30919 MERIDIAN STREET E.
GRAHAM, WASHINGTON

DATE: NOVEMBER 2020

FIGURE: 1



LEGEND:

MW-1A	MONITORING WELL
W87-2A	CHARACTERIZATION WELL/ PIEZOMETER
(646.70)	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. 04220001.02	DES BY SG	POTENTIOMETRIC SURFACE CONTOUR MAP DECEMBER 16, 2020	DATE MARCH 2021
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
W87-1A									
W87-2A	646.31	649.62	643.62	644.61	647.79	650.62	650.31	646.70	647.11
W88-3M	643.21	646.20	644.77	641.68	643.54	645.23	644.83	641.02	645.11
W87-4a	684.37	687.70	684.99	684.26	685.68	688.07	686.54	683.33	687.79
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
W90-12A	606.63	611.38	607.49	605.17	607.84	612.03	611.22	604.18	610.83
W95-14A	677.60	679.50	678.15	676.97	678.57	679.94	679.37		
MW-1									
MW-1A	634.17	635.32	634.20	633.22	634.54	635.04	634.84	632.25	635.09
MW-2									
MW-2A	633.67	634.80	633.63	632.95	634.08	634.75	634.54	631.63	634.48
MW-3	628.36	631.29	630.07	628.82	630.43	631.71	631.20	627.32	631.11
MW-4	629.13	631.14	629.85	628.55	629.96	631.37	630.81	627.67	630.87
MW-5									
MW-5A	626.42	629.32	628.22	627.12	628.14	629.55	629.10	626.54	629.00
MW-6	626.91	627.48	625.87	625.63	627.33	628.61	627.25	623.12	628.54
MW-7	631.52	635.15	632.87	630.54	632.11	635.46	634.61	629.93	634.32
MW-9	690.64	693.14	691.71	689.86	691.55	693.50	693.32	689.66	692.57
MW-10	651.58	653.88	652.46	645.95	652.74	654.75	654.22	650.08	653.90
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
P88-3b	634.14	638.73	637.97	633.95	635.02	641.57	639.28	633.75	636.35
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
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
P90-12b	633.71	636.40	634.98	634.38	637.84	637.96	638.03	634.18	638.02
P90-13a									
P90-13b									
P13-14A	642.81	646.62	643.92	642.57	644.67		645.76	641.05	643.78
GP-1P	634.91	635.35	634.90	633.42	635.50	635.94	635.91	633.56	635.79
GP-2P	641.38	640.56	642.26	640.60	643.21	642.76	642.53	640.88	642.63
GP-3P	646.55	646.94	647.04	646.19	647.01	647.12	647.21	648.26	651.21
GP-4P	650.29	652.65	652.25	648.56	653.01	652.97	653.14	647.88	655.68
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
GP-10									
GP-14									
GP-15									
GP-16					668.81				
WS-1									
SG-1									
SG-2									
LDCS-1	630.31	631.68	630.56	630.21	630.84	631.36	631.16	629.31	
LDCS-2A	630.01	630.10	629.93	629.44	629.80	630.24	630.12	630.05	
LDCS-2B	635.12	635.62	635.09	634.55	635.23	635.30	633.55	633.80	

Table 1. Groundwater Level Elevations
March 17, 2020
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	13.39	650.62
W87-4A	693.29	5.22	688.07
W88-3M	658.11	12.88	645.23
W88-7A	632.51	NM*	--
W88-8M	721.05	38.92	682.13
W90-12A	640.84	28.81	612.03
W95-14A	680.49	0.55	679.94
MW-1A	652.57	17.53	635.04
MW-2A	651.93	17.18	634.75
MW-3	637.41	5.70	631.71
MW-4	652.37	21.00	631.37
MW-5A	655.55	26.00	629.55
MW-6	635.71	7.10	628.61
MW-7	656.03	20.57	635.46
MW-9	701.77	8.27	693.50
MW-10	678.37	23.62	654.75
Piezometers			
P13-14A	665.96	NM**	--
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	10.97	645.23
P88-3B	655.98	14.41	641.57
P95-8A	722.07	22.10	699.97
P90-12A	640.79	3.81	636.98
P90-12B	640.73	2.77	637.96
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	16.06	635.94
GP-2P[b]	658.61	15.85	642.76
GP-3P[b]	658.51	11.39	647.12
GP-4P[b]	662.01	9.04	652.97
GP-9P[b]	674.03	11.07	662.96
GP-16[b]	689.51	NM**	--
South Creek			
SWSC-1	632.68	0.98	631.70
SWSC-2	629.98	5.92	624.06
Leak Detection System			
LDCS-1[a]	657.26	25.90	631.36
LDCS-2A[a]	659.24	29.00	630.24
LDCS-2B[a]	661.70	26.40	635.30

Notes:

NM= not measured

-- = not applicable

Measurements taken on 3/17/2020 unless otherwise noted

a = LDCS measurements taken on 3/16/2020

b = Gas probe measurements taken on 3/19/2020

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

** = Water level probe too large to fit into well casing

Table 1. Groundwater Level Elevations
June 9, 2020
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	13.70	650.31
W87-4A	693.29	6.75	686.54
W88-3M	658.11	13.28	644.83
W88-7A	632.51	NM*	--
W88-8M	721.05	39.37	681.68
W90-12A	640.84	29.62	611.22
W95-14A	680.49	1.12	679.37
MW-1A	652.57	17.73	634.84
MW-2A	651.93	17.39	634.54
MW-3	637.41	6.21	631.20
MW-4	652.37	21.56	630.81
MW-5A	655.55	26.45	629.10
MW-6	635.71	8.46	627.25
MW-7	656.03	21.42	634.61
MW-9	701.77	8.45	693.32
MW-10	678.37	24.15	654.22
Piezometers			
P13-14A	665.96	20.20	645.76
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	13.85	642.35
P88-3B	655.98	16.70	639.28
P95-8A	722.07	23.39	698.68
P90-12A	640.79	4.05	636.74
P90-12B	640.73	2.70	638.03
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	16.09	635.91
GP-2P[b]	658.61	16.08	642.53
GP-3P[b]	658.51	11.30	647.21
GP-4P[b]	662.01	8.87	653.14
GP-9P[b]	674.03	11.66	662.37
GP-16[b]	689.51	19.97	669.54
South Creek			
SWSC-1	632.68	0.80	631.88
SWSC-2	629.98	5.93	624.05
Leak Detection System			
LDCS-1[a]	657.26	26.10	631.16
LDCS-2A[a]	659.24	29.12	630.12
LDCS-2B[a]	661.70	28.15	633.55

Notes:

NM= not measured

-- = not applicable

Measurements taken on 6/9/2020 unless otherwise noted

a = LDCS measurements taken on 6/8/2020

b = Gas probe measurements taken on 6/17/2020

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

Table 1. Groundwater Level Elevations
September 24, 2020
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.31	646.70
W87-4A	693.29	9.96	683.33
W88-3M	658.11	17.09	641.02
W88-7A	632.51	NM*	--
W88-8M	721.05	41.02	680.03
W90-12A	640.84	36.66	604.18
W95-14A	680.49	NM**	--
MW-1A	652.57	20.32	632.25
MW-2A	651.93	20.30	631.63
MW-3	637.41	10.09	627.32
MW-4	652.37	24.70	627.67
MW-5A	655.55	29.01	626.54
MW-6	635.71	12.59	623.12
MW-7	656.03	26.10	629.93
MW-9	701.77	12.11	689.66
MW-10	678.37	28.29	650.08
Piezometers			
P13-14A	665.96	24.91	641.05
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	19.74	636.46
P88-3B	655.98	22.23	633.75
P95-8A	722.07	24.97	697.10
P90-12A	640.79	9.55	631.24
P90-12B	640.73	6.55	634.18
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	18.44	633.56
GP-2P[b]	658.61	17.73	640.88
GP-3P[b]	658.51	10.25	648.26
GP-4P[b]	662.01	14.13	647.88
GP-9P[b]	674.03	12.40	661.63
GP-16[b]	689.51	16.78	672.73
South Creek			
SWSC-1	632.68	2.50	630.18
SWSC-2	629.98	Dry	--
Leak Detection System			
LDCS-1[a]	657.26	27.95	629.31
LDCS-2A[a]	659.24	29.19	630.05
LDCS-2B[a]	661.70	27.90	633.80

Notes:

NM= not measured

-- = not applicable

Measurements taken on 9/24/2020 unless otherwise noted

a = LDCS measurements taken on 9/22/2020

b = Gas probe measurements taken on 9/29/2020

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

** = Could not access well during monitoring event

Table 1. Groundwater Level Elevations
December 16, 2020
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	16.90	647.11
W87-4A	693.29	5.50	687.79
W88-3M	658.11	13.00	645.11
W88-8M	721.05	71.00	650.05
W90-12A	640.84	30.01	610.83
W95-14A	680.49	NM**	--
MW-1A[b]	652.57	17.48	635.09
MW-2A[a]	651.93	17.45	634.48
MW-3[a]	637.41	6.30	631.11
MW-4[b]	652.37	21.50	630.87
MW-5A[a]	655.55	26.55	629.00
MW-6[a]	635.71	7.17	628.54
MW-7	656.03	21.71	634.32
MW-9	701.77	9.20	692.57
MW-10	678.37	24.47	653.90
Piezometers			
P13-14A	665.96	22.18	643.78
P88-3A	656.20	18.52	637.68
P88-3B	655.98	19.63	636.35
P95-8A	722.07	24.39	697.68
P90-12A	640.79	3.98	636.81
P90-12B	640.73	2.71	638.02
GP-1P	652.00	16.21	635.79
GP-2P	658.61	15.98	642.63
GP-3P	658.51	7.30	651.21
GP-4P	662.01	6.33	655.68
GP-9P	674.03	10.60	663.43
GP-16	689.51	19.40	670.11
South Creek			
SWSC-1	632.68	0.82	631.86
SWSC-2	629.98	5.21	624.77
Leak Detection System			
LDCS-1	657.26	NM	--
LDCS-2A	659.24	NM	--
LDCS-2B	661.70	NM	--

Notes:

Wells W88-7A, P88-2A, P88-2B, P90-13A, and P90-13B cannot be located and were removed from Table 1

NM= not measured

-- = not applicable

a = Measurements taken on 12/15/2020

b = Measurements taken on 12/17/2020

DTW measurements at gas probes measured on 12/17/20

** = Could not access well during monitoring event

Appendix B

Groundwater Monitoring Data

Table 1. Groundwater Level Elevations
March 17, 2020
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	13.39	650.62
W87-4A	693.29	5.22	688.07
W88-3M	658.11	12.88	645.23
W88-7A	632.51	NM*	--
W88-8M	721.05	38.92	682.13
W90-12A	640.84	28.81	612.03
W95-14A	680.49	0.55	679.94
MW-1A	652.57	17.53	635.04
MW-2A	651.93	17.18	634.75
MW-3	637.41	5.70	631.71
MW-4	652.37	21.00	631.37
MW-5A	655.55	26.00	629.55
MW-6	635.71	7.10	628.61
MW-7	656.03	20.57	635.46
MW-9	701.77	8.27	693.50
MW-10	678.37	23.62	654.75
Piezometers			
P13-14A	665.96	NM**	--
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	10.97	645.23
P88-3B	655.98	14.41	641.57
P95-8A	722.07	22.10	699.97
P90-12A	640.79	3.81	636.98
P90-12B	640.73	2.77	637.96
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	16.06	635.94
GP-2P[b]	658.61	15.85	642.76
GP-3P[b]	658.51	11.39	647.12
GP-4P[b]	662.01	9.04	652.97
GP-9P[b]	674.03	11.07	662.96
GP-16[b]	689.51	NM**	--
South Creek			
SWSC-1	632.68	0.98	631.70
SWSC-2	629.98	5.92	624.06
Leak Detection System			
LDCS-1[a]	657.26	25.90	631.36
LDCS-2A[a]	659.24	29.00	630.24
LDCS-2B[a]	661.70	26.40	635.30

Notes:

NM= not measured

-- = not applicable

Measurements taken on 3/17/2020 unless otherwise noted

a = LDCS measurements taken on 3/16/2020

b = Gas probe measurements taken on 3/19/2020

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

** = Water level probe too large to fit into well casing

Table 2. Field Parameters
First Quarter 2020
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	304-031620-01	3/16/2020	DP	6.91	171	12.7
MW-2A	304-031620-03	3/16/2020	DP	7.07	282	12.4
MW-3	304-031620-05	3/16/2020	DP	7.07	433	10.2
MW-4	304-031720-21	3/17/2020	SP	7.64	346	12.4
MW-5A	304-031620-07	3/16/2020	DP	7.52	418	12.0
MW-6	304-031620-13	3/16/2020	DP	7.65	324	10.5
MW-7	304-031620-11	3/16/2020	DP	7.42	378	10.4
MW-9	304-031720-15	3/17/2020	DP	6.77	135	9.4
MW-10	304-031720-17	3/17/2020	DP	**6.39**	269	10.5
Leak Detection System						
LDCS-1	304-031620-10	3/16/2020	DB	6.33	383	23.1
LDCS-2A	304-031620-08	3/16/2020	DB	7.46	787	21.2
LDCS-2B	304-031620-06	3/16/2020	DB	6.97	684	20.2
LDCS-3A	304-031620-04	3/16/2020	DP	6.51	816	18.2
LDCS-4A	304-031620-12	3/16/2020	DP	6.41	806	22.2
LDCS-4B	304-031620-14	3/16/2020	DP	6.38	989	26.7
LDCS-5^ (1/30/2020)	304-013020-02	1/30/2020	DP	6.47	713	17.4
LDCS-5 (3/17/2020)	304-031720-16	3/17/2020	DP	6.68	946	20.2
LDCS-6^ (1/30/2020)	304-013020-01	1/30/2020	DP	6.52	978	9.7
LDCS-6 (3/17/2020)	304-031720-18	3/17/2020	DP	6.88	904	13.0
LDCS-7^ (1/30/2020)	304-013020-03	1/30/2020	DP	6.52	1,525	9.1
LDCS-7^ (2/28/2020)	304-022820-01	2/28/2020	DP	6.06	1,410	13.1
LDCS-7 (3/16/2020)	304-031620-02	3/16/2020	DP	6.41	1,283	8.9
Leachate Collection System						
Leachate, Cell 7^^	304-013120-01	1/31/2020	GB	6.15	1,384	10.8
Leachate, Cell 7	304-031720-19	3/17/2020	GB	5.69	5,805	10.9

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

b = Secondary Drinking Water Standard

°C = degrees celcius

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

^ = Additional samples collected from LDCS-5, LDCS-6 and LDCS-7 to monitor water quality trends

^^ = Additional sample collected from Leachate, Cell 7 to monitor leachate quality trends

Table 3. Inorganic Parameters
First Quarter 2020
LRI Landfill, Pierce County, Washington

Parameter	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MRL	10	0.1-2.2	0.2-60	0.50	0.2-2.5	10-47	1-21	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	95	*	1.9	*	3.5	140	*	4.0
MW-2A	130	0.12	3.5	*	13	190	*	*
MW-3	200	0.14	3.5	*	27	260	1.2	*
MW-4	160	*	3.3	*	11	210	1.1	*
MW-5A	190	0.17	3.7	*	21	240	1.0	*
MW-6	160	0.11	5.1	*	7.4	200	*	*
MW-7	200	0.19	3.0	*	3.5	220	*	*
(BG) MW-9	69	*	1.6	*	1.8	120	*	*
(BG) MW-10	100	*	7.8	3.7	7.0	190	*	22
Leak Detection System								
LDCS-1	200	0.13	4.2	*	7.0	240	3.2	—
LDCS-2A	410	*	3.5	*	23	470	2.6	—
LDCS-2B	300	*	5.4	*	59	410	2.3	—
LDCS-3	380	*	5.3	*	77	510	1.7	—
LDCS-4A	350	0.24	24	*	50	480	5.3	—
LDCS-4B	390	0.44	39	*	97	600	3.2	—
LDCS-5^ (1/30/2020)	280	11	42	*	37	370	4.9	—
LDCS-5 (3/17/2020)	350	7.6	45	*	59	500	5.7	—
LDCS-6^ (1/30/2020)	450	*	9.5	*	83	590	2.6	—
LDCS-6 (3/17/2020)	440	*	10	*	70	560	2.7	—
LDCS-7^ (1/30/2020)	610	*	77	*	140	940	21	—
LDCS-7^ (2/28/2020)	520	*	28	*	68	680	9.2	*
LDCS-7 (3/16/2020)	600	0.18	58	*	90	810	8.2	—
Leachate Collection System								
Leachate, Cell 7^^ (1/31/2020)	410	27	78	* H	63	1,200	420	—
Leachate, Cell 7 (3/17/2020)	2,400	230	490	0.51	200	6,800	3,000	—

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 TestAmerica of Denver, Colorado

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

^ = Additional samples collected from LDCS-5, LDCS-6 and LDCS-7 to monitor water quality trends

^^ = Additional sample collected from Leachate, Cell 7 to monitor leachate quality trends

* = 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 2020
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	0.005-0.0062	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	—	*	—	*	—	0.021	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-2A	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0093**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.027
MW-5A	—	*	—	**0.0053**	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0074**	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	**0.0050**	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.015	—	*
(BG) MW-10	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.034
Leak Detection System																														
LDCS-1	*	—	0.0082	—	0.019	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	0.0064	—	0.010	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	*	—	0.012	—	—	—	—	—	*	—	0.0011	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3	*	—	*	—	0.016	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	0.0094	—	0.033	—	—	—	—	—	*	—	0.0021	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	0.0053	—	0.038	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5^ (1/30/2020)	*	—	0.0130	—	0.060	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-5 (3/17/2020)	*	—	0.0095	—	0.066	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6^ (1/30/2020)	*	—	*	—	0.017	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6 (3/17/2020)	*	—	*	—	0.021	—	*	—	*	—	*	—	0.0015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7^ (1/30/2020)	*	—	*	—	0.050	—	*	—	*	—	*	—	0.0064	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7^ (2/28/2020)	*	—	*	—	0.025	—	*	—	*	—	*	—	0.0039	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7 (3/16/2020)	*	—	*	—	0.037	—	*	—	*	—	*	—	0.0060	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
Leachate Collection System																														
Leachate, Cell 7^^ (1/31/2020)	—	*	—	0.0053	—	0.17	—	*	—	*	—	0.015	—	0.034	—	0.013	—	0.0030	—	0.052	—	*	—	*	—	*	—	0.0081	—	0.48
Leachate, Cell 7 (3/17/2020)	—	*	—	0.0170	—	0.53	—	*	—	*	—	0.056	—	0.099	—	0.020	—	0.0062	—	0.230	—	*	—	*	—	*	—	0.0530	—	1.10

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 TestAmerica of Denver, Colorado
Method Reporting Limit (MRL) is typical and may be elevated for some samples
^ = Additional samples collected from LDCS-5, LDCS-6 and LDCS-7 to monitor water quality trends
^^ = Additional sample collected from Leachate, Cell 7 to monitor leachate quality trends
* = sample result was not reported at or above the MRL
— = not applicable or not performed
BG = Background

Table 5. WAC 173-351 Appendix II Metals (Dissolved)
First Quarter 2020
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	2.0-2.4	1.0-3.7
WAC 173-200 Criteria	—	0.30	—	0.050	—	—
Monitoring Wells						
MW-1A	15	**1.8**	9.3	**0.24**	3.7	12
MW-2A	23	**0.91**	12	**0.32**	3.4	16
MW-3	49	*	21	**0.44**	4.6	15
MW-4	31	*	17	**0.23**	5.5	11
MW-5A	32	0.10	13	**0.20**	4.6	37
MW-6	35	*	16	**0.19**	5.1	10
MW-7	35	0.19	23	**0.23**	5.6	12
(BG) MW-9	11	*	7.0	*	2.0	7.2
(BG) MW-10	26	*	11	*	2.2	12
Leak Detection System						
LDCS-1	39	0.49	16	1.6	4.9	17
LDCS-2A	90	*	36	0.013	9.3	29
LDCS-2B	79	*	30	0.63	6.4	18
LDCS-3	99	*	42	0.86	5.7	22
LDCS-4A	75	4.1	48	2.4	6.0	23
LDCS-4B	110	0.63	48	1.1	7.2	29
LDCS-5^ (1/30/2020)	56	1.9	25	1.8	13	40
LDCS-5 (3/17/2020)	78	1.1	41	1.9	12	44
LDCS-6^ (1/30/2020)	120	*	40	0.45	3.7	27
LDCS-6 (3/17/2020)	120	*	44	1.1	4.0	26
LDCS-7^ (1/30/2020)	200	*	69	2.7	4.2	56
LDCS-7^ (2/28/2020)	150 B	*	33	1.5	2.1	31
LDCS-7 (3/16/2020)	180	0.21	54	2.5	3.5	43
Leachate Collection System**						
Leachate, Cell 7^^ (1/31/2020)	140	14	27	4.1	25	80
Leachate, Cell 7 (3/17/2020)	590	95	130	16	200	480

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 TestAmerica of Denver, Colorado

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

^ = Additional samples collected from LDCS-5, LDCS-6 and LDCS-7 to monitor water quality trends

^^ = Additional sample collected from Leachate, Cell 7 to monitor leachate quality trends

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

** = Reported concentrations for leachate are total metals

— = not applicable or not performed

BG = Background

B = Compound found in the sample and the blank

Table 6. Volatile Organic Compounds (µg/L)
First Quarter 2020
LRI Landfill, Pierce County, Washington

Parameter	1,1-Dichloroethane	1,1-Dichloroethene	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	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoro-methane	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	µg/L	µg/L	µg/L	µg/L	µg/L
MRL	0.5-2.2	0.5-2.3	0.5-1.3	0.5-1.6	20-Jun	5-9.8	10-19	0.5-1.6	0.5-1.7	0.5-4.1	1-1.6	2-9.4	0.5-1.5	0.5-1.9	0.5-3.6	0.5-2	0.5-1.7	0.5-1.5	0.5-1.6	0.5-2.9	0.5-1
WAC 173-200 Criteria	1.0	—	0.5	4.0	—	—	—	1.0	—	—	—	5.0	—	—	—	0.8	—	—	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	*	*	*	0.51	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5^ (1/30/2020)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5 (3/17/2020)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6^ (1/30/2020)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6 (3/17/2020)	*	0.96	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1.3
LDCS-7^ (1/30/2020)	*	*	*	*	*	*	*	*	4.5	*	*	*	*	*	*	*	3.0	*	*	*	*
LDCS-7^ (2/28/2020)	*	*	*	*	*	*	*	*	3.2	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-7 (3/16/2020)	*	*	*	*	*	*	*	*	2.2	*	*	*	*	*	*	*	*	*	*	*	*
Leachate Collection System																					
Leachate, Cell 7^^ (1/31/2020)	*	*	*	*	560	22	330	*	1.5	*	2.7	31	7.1	3.1	2.1	3.3	27	1.8	*	2.6	*
Leachate, Cell 7 (3/17/2020)	6.0	270	35	*	6,000	130	3,300	12	11	15	17	510	47	20	14	7.5	200	*	6.0	19	*

Notes:
All sample units are milligrams per liter (µg/L)
Analyses performed by TestAmerica of Denver, Colorado
^ = Additional samples collected from LDCS-5, LDCS-6 and LDCS-7 to monitor water quality trends
^^ = Additional sample collected from Leachate, Cell 7 to monitor leachate quality trends
* = sample result was not reported at or above the MRL
— = not applicable or not performed
BG = Background

Table 7. Cation-Anion Balance
First Quarter 2020
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	9.3	3.7	12	40	0.75	0.77	0.08	0.52	2.12	29	35	36
MW-2A	23	12	3.4	16	54.4	1.15	0.99	0.08	0.70	2.91	27	39	34
MW-3	49	21	4.6	15	89.6	2.45	1.73	0.10	0.65	4.93	15	50	35
MW-4	31	17	5.5	11	64.5	1.55	1.40	0.12	0.48	3.55	17	44	39
MW-5A	32	13	4.6	37	86.6	1.60	1.07	0.10	1.61	4.38	39	36	24
MW-6	35	16	5.1	10	66.1	1.75	1.32	0.12	0.44	3.61	15	48	36
MW-7	35	23	5.6	12	75.6	1.75	1.89	0.13	0.52	4.29	15	41	44
MW-9	11.0	7.0	2.0	7.2	27.2	0.55	0.58	0.05	0.31	1.48	24	37	39
MW-10	26	11	2.2	12	51.2	1.30	0.91	0.05	0.52	2.77	21	47	33
LDCS-1	39	16	4.9	17	76.9	1.95	1.32	0.11	0.74	4.11	21	47	32
LDCS-2A	90	36	9.3	29	164.3	4.49	2.96	0.21	1.26	8.93	16	50	33
LDCS-2B	79	30	6.4	18	133.4	3.94	2.47	0.14	0.78	7.34	13	54	34
LDCS-3	99	42	5.7	22	168.7	4.94	3.46	0.13	0.96	9.48	11	52	36
LDCS-4A	75	48	6.0	23	152	3.74	3.95	0.14	1.00	8.83	13	42	45
LDCS-4B	110	48	7.2	29	194.2	5.49	3.95	0.16	1.26	10.86	13	51	36
LDCS-5^ (1/30/2020)	56	25	13	40	134.0	2.79	2.06	0.29	1.74	6.89	30	41	30
LDCS-5 (3/17/2020)	78	41	12	44	175.0	3.89	3.37	0.27	1.91	9.45	23	41	36
LDCS-6^ (1/30/2020)	120	40	3.7	27	190.7	5.99	3.29	0.08	1.17	10.54	12	57	31
LDCS-6 (3/17/2020)	120	44	4.0	26	194.0	5.99	3.62	0.09	1.13	10.83	11	55	33
LDCS-7^ (1/30/2020)	200	69	4.2	56	329.2	9.98	5.68	0.09	2.44	18.19	14	55	31
LDCS-7^ (2/28/2020)	150	33	2.1	31	216.1	7.49	2.72	0.05	1.35	11.60	12	65	23
LDCS-7 (3/16/2020)	180	54	3.5	43	280.5	8.98	4.44	0.08	1.87	15.38	13	58	29
Leachate, Cell 7^^ (1/31/2020)	140	27	25	80	272	6.99	2.22	0.56	3.48	13.25	31	53	17
Leachate, Cell 7 (3/17/2020)	590	130	200	480	1,400	29.44	10.70	4.52	20.88	65.54	39	45	16

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	3.5	119.9	1.87	0.05	0.008	0.07	2.00	3	93	4	4.12	2.8	10	O
MW-2A	156	3.5	0.5	13	173	2.56	0.10	0.008	0.27	2.94	3	87	9	5.84	0.5	5	O
MW-3	240	3.5	0.5	27	271	3.94	0.10	0.008	0.56	4.60	2	85	12	9.53	3.4	5	O
MW-4	192	3.3	0.5	11	206.8	3.15	0.09	0.008	0.23	3.48	3	91	7	7.03	1.0	5	O
MW-5A	228	3.7	0.5	21	253.2	3.74	0.10	0.008	0.44	4.29	2	87	10	8.67	1.1	5	O
MW-6	192	5.1	0.5	7.4	205	3.15	0.14	0.008	0.15	3.45	4	91	4	7.07	2.2	5	O
MW-7	240	3.0	0.5	3.5	247	3.94	0.08	0.008	0.07	4.10	2	96	2	8.39	2.2	5	O
MW-9	82.8	1.6	0.5	1.8	86.7	1.36	0.05	0.008	0.04	1.45	3	94	3	2.93	1.2	10	O
MW-10	120	7.8	3.7	7.0	138.5	1.97	0.22	0.060	0.15	2.39	9	82	6	5.17	7.4	5	Exceeds
LDCS-1	240	4.2	0.5	7.0	251.7	3.94	0.12	0.008	0.15	4.21	3	94	3	8.32	1.1	5	O
LDCS-2A	492	3.5	0.5	23	519	8.07	0.10	0.008	0.48	8.65	1	93	6	17.58	1.5	5	O
LDCS-2B	360	5.4	0.5	59	424.9	5.90	0.15	0.008	1.23	7.29	2	81	17	14.63	0.3	5	O
LDCS-3	456	5.3	0.5	77	538.8	7.48	0.15	0.008	1.60	9.24	2	81	17	18.72	1.3	5	O
LDCS-4A	420	24	0.5	50	494.5	6.89	0.68	0.008	1.04	8.61	8	80	12	17.44	1.2	5	O
LDCS-4B	468	39	0.5	97	605	7.68	1.10	0.008	2.02	10.80	10	71	19	21.66	0.3	5	O
LDCS-5^ (1/30/2020)	336	42	0.5	37	416	5.51	1.18	0.008	0.77	7.47	16	74	10	14.36	4.1	5	O
LDCS-5 (3/17/2020)	420	45	0.5	59	525	6.89	1.27	0.008	1.23	9.39	14	73	13	18.84	0.3	5	O
LDCS-6^ (1/30/2020)	540	9.5	0.5	83	633	8.86	0.27	0.008	1.73	10.86	2	82	16	21.40	1.5	5	O
LDCS-6 (3/17/2020)	528	10	0.5	70	609	8.66	0.28	0.008	1.46	10.41	3	83	14	21.24	2.0	5	O
LDCS-7^ (1/30/2020)	732	77	0.5	140	950	12.00	2.17	0.008	2.91	17.10	13	70	17	35.29	3.1	5	O
LDCS-7^ (2/28/2020)	624	28	0.5	68	721	10.23	0.79	0.008	1.41	12.45	6	82	11	24.04	3.5	5	O
LDCS-7 (3/16/2020)	720	58	0.5	90	869	11.81	1.64	0.008	1.87	15.32	11	77	12	30.70	0.2	5	O
Leachate, Cell 7^^ (1/31/2020)	492	78	0.5	63	634	8.07	2.20	0.008	1.31	11.59	19	70	11	24.84	6.7	5	Exceeds
Leachate, Cell 7 (3/17/2020)	2,880	490	0.51	200	3,571	47.23	13.82	0.008	4.16	65.22	21	72	6	130.75	0.2	5	O

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
Total alkalinity concentration, reported as calcium carbonate ($CaCO_3$), is converted to the bicarbonate (HCO_3^-) ion by multiplying by a factor of 1.2
^ = Additional samples collected from LDCS-5, LDCS-6 and LDCS-7 to monitor water quality trends
^^ = Additional sample collected from Leachate, Cell 7 to monitor leachate quality trends
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 2020 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, Bicarbonate (as CaCO3)	10	190	190	0.0
Ammonia	0.1	0.17	0.15	12.5
Chloride	0.2	3.7	3.6	2.7
Sulfate	0.2	21	21	0.0
Total Dissolved Solids	10	240	250	4.1
Total Organic Carbon	1.0	1.0	1.1	9.5
Dissolved Metals (mg/L)				
Calcium	0.2	32	32	0.0
Iron	0.1	0.10	0.19	62.1
Magnesium	0.1	13	13	0.0
Manganese	0.005	0.2	0.2	0.0
Potassium	2.0	4.6	4.6	0.0
Sodium	1.0	37	40	7.8
Total Metals (mg/L)				
Arsenic	0.005	0.0053	0.0054	1.9
Barium	0.005	0.014	0.014	0.0

Notes:
Analyses performed by TestAmerica of Denver, Colorado
VOCs 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 9, 2020
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	13.70	650.31
W87-4A	693.29	6.75	686.54
W88-3M	658.11	13.28	644.83
W88-7A	632.51	NM*	--
W88-8M	721.05	39.37	681.68
W90-12A	640.84	29.62	611.22
W95-14A	680.49	1.12	679.37
MW-1A	652.57	17.73	634.84
MW-2A	651.93	17.39	634.54
MW-3	637.41	6.21	631.20
MW-4	652.37	21.56	630.81
MW-5A	655.55	26.45	629.10
MW-6	635.71	8.46	627.25
MW-7	656.03	21.42	634.61
MW-9	701.77	8.45	693.32
MW-10	678.37	24.15	654.22
Piezometers			
P13-14A	665.96	20.20	645.76
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	13.85	642.35
P88-3B	655.98	16.70	639.28
P95-8A	722.07	23.39	698.68
P90-12A	640.79	4.05	636.74
P90-12B	640.73	2.70	638.03
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	16.09	635.91
GP-2P[b]	658.61	16.08	642.53
GP-3P[b]	658.51	11.30	647.21
GP-4P[b]	662.01	8.87	653.14
GP-9P[b]	674.03	11.66	662.37
GP-16[b]	689.51	19.97	669.54
South Creek			
SWSC-1	632.68	0.80	631.88
SWSC-2	629.98	5.93	624.05
Leak Detection System			
LDCS-1[a]	657.26	26.10	631.16
LDCS-2A[a]	659.24	29.12	630.12
LDCS-2B[a]	661.70	28.15	633.55

Notes:

NM= not measured

-- = not applicable

Measurements taken on 6/9/2020 unless otherwise noted

a = LDCS measurements taken on 6/8/2020

b = Gas probe measurements taken on 6/17/2020

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

Table 2. Field Parameters
Second Quarter 2020
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	304-060820-01	6/8/2020	DP	6.78	172	13.1
MW-2A	304-060820-03	6/8/2020	DP	7.02	268	12.7
MW-3	304-060820-05	6/8/2020	DP	7.06	390	10.2
MW-4	304-060920-14	6/9/2020	SP	7.55	330	12.6
MW-5A	304-060820-09	6/8/2020	DP	7.61	389	12.1
MW-6	304-060820-07	6/8/2020	DP	7.62	305	10.3
MW-7	304-060820-13	6/8/2020	DP	7.52	396	10.3
MW-9	304-060820-15	6/8/2020	DP	6.87	137	10.0
MW-10	304-060920-17	6/9/2020	DP	**6.18**	273	11.1
Leak Detection System						
LDCS-1	304-060820-08	6/8/2020	DB	6.40	411	21.4
LDCS-2A	304-060820-06	6/8/2020	DB	7.58	779	21.0
LDCS-2B	304-060820-02	6/8/2020	DB	7.40	658	16.7
LDCS-3A	304-060820-10	6/8/2020	DP	6.77	729	19.7
LDCS-4A	304-060820-12	6/8/2020	DP	6.43	873	22.4
LDCS-4B	304-060920-18	6/9/2020	DP	6.34	951	24.4
LDCS-5	304-062920-01	6/29/2020	GB*	6.52	841	25.1
LDCS-6^ (4/21/20)	304-042120-01	4/21/2020	DP	7.01	878	11.5
LDCS-6	304-060920-20	6/9/2020	DP	6.80	1,048	20.1
LDCS-7^ (4/21/20)	304-042120-02	4/21/2020	DP	6.59	1,279	10.7
LDCS-7	304-060820-04	6/8/2020	DP	6.38	1,231	13.4
Leachate Collection System						
Leachate, Cell 7	304-060920-19	6/9/2020	GB	6.08	12,386	17.2

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

b = Secondary Drinking Water Standard

°C = degrees celcius

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

* = Sample from LDCS-5 collected as a grab sample because the pump was not operational during the monitoring event

^ = Additional samples collected from LDCS-6 and LDCS-7 to monitor water quality trends

Table 3. Inorganic Parameters
Second Quarter 2020
LRI Landfill, Pierce County, Washington

Parameter	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MRL	10	0.1-4.4	0.2-120	0.50	0.2-2.5	10-94	1.0-41	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	88	*	2.0	*	3.5	140	*	11
MW-2A	110	0.13	3.4	*	11	160	*	*
MW-3	150	0.12	3.7	*	31	230	1.1	*
MW-4	150	0.14	3.1	*	10	210	*	*
MW-5A	170	0.19	3.4	*	19	240	*	*
MW-6	130	0.11	4.9	*	7.3	180	*	*
MW-7	190	0.20	3.3	*	3.3	230	*	*
(BG) MW-9	63	*	1.6	*	1.8	110	*	*
(BG) MW-10	93	*	7.7	3.7	7.2	190	*	8.0
Leak Detection System								
LDCS-1	190	0.10	4.3	*	6.4	260	3.2	—
LDCS-2A	350	*	4.2	*	21	470	3.4	—
LDCS-2B	260	*	7.6	*	58	410	2.8	—
LDCS-3A	330	*	4.6	*	82	500	2.0	—
LDCS-4A	330	0.29	24	*	54	530	6.6	—
LDCS-4B	340	0.49	30	*	93	570	4.2	—
LDCS-5	320	4.4	42	*	90	510	7.4	—
LDCS-6^ (4/21/20)	450	*	11	*	71	580	2.6	—
LDCS-6 (6/9/20)	430	*	7.0	*	82	600	3.4	—
LDCS-7^ (4/21/20)	560	0.37	54	*	87	800	32	—
LDCS-7 (6/8/20)	510	0.17	55	*	86	850	9.6	—
Leachate Collection System								
Leachate, Cell 7	4,200	580	970	0.61	22	12,000	5,100	—

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 TestAmerica of Denver, Colorado

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

^ = Additional samples collected from LDCS-6 and LDCS-7 to monitor water quality trends

* = 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 2020
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	0.005-0.015	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	—	*	—	*	—	0.022	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-2A	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0110**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.019
MW-5A	—	*	—	**0.0062**	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0068**	—	0.011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.014	—	*
(BG) MW-10	—	*	—	*	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
Leak Detection System																														
LDCS-1	*	—	0.0080	—	0.020	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	0.0064	—	0.010	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	*	—	0.018	—	—	—	—	—	*	—	0.0034	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3A	*	—	*	—	0.016	—	—	—	—	—	*	—	*	—	0.021	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	0.0110	—	0.035	—	—	—	—	—	*	—	0.0028	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	*	—	0.043	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	0.0070	—	0.058	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6^ (4/21/20)	*	—	*	—	0.017	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6 (6/9/20)	*	—	*	—	0.020	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7^ (4/21/20)	*	—	*	—	0.027	—	*	—	*	—	*	—	0.0054	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7 (6/8/20)	*	—	*	—	0.045	—	*	—	*	—	*	—	0.0065	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
Leachate Collection System																														
Leachate, Cell 7	—	*	—	0.031	—	1.0	—	*	—	*	—	0.14	—	0.047	—	0.026	—	0.016	—	0.19	—	0.022	—	*	—	*	—	0.089	—	0.37

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 TestAmerica of Denver, Colorado

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

^ = Additional samples collected from LDCS-6 and LDCS-7 to monitor water quality trends

* = 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 2020
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	2.0-2.4	1.0-3.7
WAC 173-200 Criteria	—	0.30	—	0.050	—	—
Monitoring Wells						
MW-1A	13	**1.6**	7.6	**0.27**	2.9	11
MW-2A	21	**0.86**	11	**0.33**	2.9	15
MW-3	38	*	16	**0.37**	3.6	14
MW-4	27	*	15	**0.23**	4.8	11
MW-5A	25	0.20	10	**0.19**	3.8	41
MW-6	30	*	13	**0.20**	4.1	9.8
MW-7	32	**0.34**	22	**0.28**	4.8	13
(BG) MW-9	9.6	*	6.4	*	*	7.1
(BG) MW-10	24	*	10	*	*	12
Leak Detection System						
LDCS-1	38	0.44	15	1.6	4.4	17
LDCS-2A	85	*	32	0.029	8.4	29
LDCS-2B	78	*	28	2.7	5.9	18
LDCS-3A	96	*	41	0.47	5.8	23
LDCS-4A	77	4.2	46	2.6	5.9	28
LDCS-4B	91	0.45	44	1.2	7.0	34
LDCS-5	72	0.78	39	1.7	9.5	39
LDCS-6^ (4/21/20)	130	*	51	0.20	4.1	27
LDCS-6 (6/9/20)	120	*	43	0.44	4.0	28
LDCS-7^ (4/21/20)	160	0.17	37	2.0	2.1	31
LDCS-7 (6/8/20)	170	0.39	54	2.9	3.4	47
Leachate Collection System**						
Leachate, Cell 7	900	88	210	28	320	930

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 TestAmerica of Denver, Colorado

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

^ = Additional samples collected from LDCS-6 and LDCS-7 to monitor water quality trends

* = 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 2020
LRI Landfill, Pierce County, Washington

Parameter	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Carbon Disulfide	Chloroform	Iodomethane	Methylene Chloride	m-Xylene & p-Xylene	Toluene
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MRL	0.5-16	6-200	5-98	10-190	0.5-17	0.5-16	1-23	2-94	0.5-15	0.5-17
WAC 173-200 Criteria	4.0	—	—	—	—	7.0	—	5.0	—	—
Monitoring Wells										
MW-1A	*	*	*	*	*	*	2.3^^	*	*	*
MW-2A	*	*	*	*	*	*	1.4^^	*	*	*
MW-3	*	*	*	*	*	*	1.1^^	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*
MW-5A	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	1.2^^	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*
Leak Detection System										
LDCS-1	0.66	*	*	*	*	*	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	12	*	*	*	*	*	*
LDCS-3A	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*
LDCS-6^ (4/21/20)	*	*	*	*	*	*	*	*	*	*
LDCS-6 (6/9/20)	*	*	*	*	*	*	*	*	*	*
LDCS-7^ (4/21/20)	*	*	*	*	10	*	*	*	*	*
LDCS-7 (6/8/20)	*	*	*	*	7.2	*	*	*	*	*
Leachate Collection System										
Leachate, Cell 7	*	26,000	210	27,000	*	29	*	*	32	280
Quality Control Samples										
Field Blank	*	*	*	*	*	*	*	7.0	*	*

Notes:
All sample units are milligrams per liter (µg/L)
Analyses performed by TestAmerica of Denver, Colorado
^ = Additional samples collected from LDCS-6 and LDCS-7 to monitor water quality trends
^^ = The LCS or LCSD exhibited recoveries of Iodomethane below the lower control limits. See data validation report for additional details
* = sample result was not reported at or above the MRL
— = not applicable or not performed
BG = Background

Table 7. Cation-Anion Balance
Second Quarter 2020
LRI Landfill, Pierce County, Washington

Cations	mg/L					meq/L					% of Total		
	Ca	Mg	K	Na	Total	Ca	Mg	K	Na	Total	Na+K	Ca	Mg
MW-1A	13	7.6	2.9	11	34.5	0.65	0.63	0.07	0.48	1.82	30	36	34
MW-2A	21	11	2.9	15	49.9	1.05	0.91	0.07	0.65	2.67	27	39	34
MW-3	38	16	3.6	14	71.6	1.90	1.32	0.08	0.61	3.90	18	49	34
MW-4	27	15	4.8	11	57.8	1.35	1.23	0.11	0.48	3.17	19	43	39
MW-5A	25	10	3.8	41	79.8	1.25	0.82	0.09	1.78	3.94	47	32	21
MW-6	30	13	4.1	9.8	56.9	1.50	1.07	0.09	0.43	3.09	17	49	35
MW-7	32	22	4.8	13	71.8	1.60	1.81	0.11	0.57	4.08	17	39	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	24	10	2.0	12	48.0	1.20	0.82	0.05	0.52	2.59	22	46	32
LDCS-1	38	15	4.4	17	74.4	1.90	1.23	0.10	0.74	3.97	21	48	31
LDCS-2A	85	32	8.4	29	154.4	4.24	2.63	0.19	1.26	8.33	17	51	32
LDCS-2B	78	28	5.9	18	129.9	3.89	2.30	0.13	0.78	7.11	13	55	32
LDCS-3A	96	41	5.8	23	165.8	4.79	3.37	0.13	1.00	9.30	12	52	36
LDCS-4A	77	46	5.9	28	156.9	3.84	3.79	0.13	1.22	8.98	15	43	42
LDCS-4B	91	44	7.0	34	176	4.54	3.62	0.16	1.48	9.80	17	46	37
LDCS-5	72	39	10	39	159.5	3.59	3.21	0.21	1.70	8.71	22	41	37
LDCS-6^ (4/21/20)	130	51	4.1	27	212.1	6.49	4.20	0.09	1.17	11.95	11	54	35
LDCS-6 (6/9/20)	120	43	4.0	28	195.0	5.99	3.54	0.09	1.22	10.84	12	55	33
LDCS-7^ (4/21/20)	160	37	2.1	31	230.1	7.98	3.05	0.05	1.35	12.43	11	64	25
LDCS-7 (6/8/20)	170	54	3.4	47	274.4	8.48	4.44	0.08	2.04	15.05	14	56	30
Leachate, Cell 7	900	210	320	930	2,360	44.91	17.28	7.23	40.46	109.87	43	41	16

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	105.6	2.0	0.5	3.5	111.6	1.73	0.06	0.008	0.07	1.87	3	93	4	3.69	1.4	10	O
MW-2A	132	3.4	0.5	11	146.9	2.16	0.10	0.008	0.23	2.50	4	87	9	5.17	3.4	5	O
MW-3	180	3.7	0.5	31	215.2	2.95	0.10	0.008	0.64	3.71	3	80	17	7.61	2.5	5	O
MW-4	180	3.1	0.5	10	193.6	2.95	0.09	0.008	0.21	3.26	3	91	6	6.42	1.4	5	O
MW-5A	204	3.4	0.5	19	226.9	3.35	0.10	0.008	0.40	3.84	2	87	10	7.78	1.2	5	O
MW-6	156	4.9	0.5	7.3	168.7	2.56	0.14	0.008	0.15	2.86	5	90	5	5.94	3.9	5	O
MW-7	228	3.3	0.5	3.3	235.1	3.74	0.09	0.008	0.07	3.91	2	96	2	7.99	2.2	5	O
MW-9	75.6	1.6	0.5	1.8	79.5	1.24	0.05	0.008	0.04	1.33	3	93	3	2.69	1.1	10	O
MW-10	111.6	7.7	3.7	7.2	130.2	1.83	0.22	0.060	0.15	2.26	10	81	7	4.84	6.8	10	O
LDCS-1	228	4.3	0.5	6.4	239.2	3.74	0.12	0.008	0.13	4.00	3	93	3	7.97	0.4	5	O
LDCS-2A	420	4.2	0.5	21	445.7	6.89	0.12	0.008	0.44	7.45	2	92	6	15.78	5.5	5	Exceeds
LDCS-2B	312	7.6	0.5	58	378.1	5.12	0.21	0.008	1.21	6.55	3	78	18	13.66	4.2	5	O
LDCS-3A	396	4.6	0.5	82	483.1	6.49	0.13	0.008	1.71	8.34	2	78	20	17.63	5.4	5	Exceeds
LDCS-4A	396	24	0.5	54	474.5	6.49	0.68	0.008	1.12	8.30	8	78	14	17.28	3.9	5	O
LDCS-4B	408	30	0.5	93	532	6.69	0.85	0.008	1.93	9.48	9	71	20	19.28	1.7	5	O
LDCS-5	384	42	0.5	90	517	6.30	1.18	0.008	1.87	9.36	13	67	20	18.08	3.6	5	O
LDCS-6^ (4/21/20)	540	11	0.5	71	623	8.86	0.31	0.008	1.48	10.65	3	83	14	22.60	5.8	5	Exceeds
LDCS-6 (6/9/20)	516	7.0	0.5	82	606	8.46	0.20	0.008	1.71	10.37	2	82	16	21.21	2.2	5	O
LDCS-7^ (4/21/20)	672	54	0.5	87	814	11.02	1.52	0.008	1.81	14.36	11	77	13	26.79	7.2	5	Exceeds
LDCS-7 (6/8/20)	612	55	0.5	86	754	10.04	1.55	0.008	1.79	13.38	12	75	13	28.43	5.9	5	Exceeds
Leachate, Cell 7	5,040	970	0.61	22	6,033	82.66	27.35	0.010	0.46	110.48	25	75	0	220.35	0.3	5	O

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
Total alkalinity concentration, reported as calcium carbonate ($CaCO_3$), is converted to the bicarbonate (HCO_3^-) ion by multiplying by a factor of 1.2
Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].
^ = Additional samples collected from LDCS-6 and LDCS-7 to monitor water quality trends
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/lite
A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/lite

Table 8. Duplicate Sample Results
Second Quarter 2020 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	170	170	0.0
Ammonia	0.1	0.19	0.15	23.5
Chloride	0.2	3.4	3.4	0.0
Sulfate	0.2	19	19	0.0
Total Dissolved Solids	10	240	240	0.0
Dissolved Metals (mg/L)				
Calcium	0.2	25	25	0.0
Iron	0.1	0.20	0.31	43.1
Magnesium	0.1	10	10	0.0
Manganese	0.005	0.19	0.19	0.0
Potassium	2.0	3.8	3.8	0.0
Sodium	1.0	41	39	5.0
Total Metals (mg/L)				
Arsenic	0.005	0.0062	0.0059	5.0
Barium	0.005	0.012	0.013	8.0

Notes:
Analyses performed by TestAmerica of Denver, Colorado
VOCs 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 24, 2020
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	17.31	646.70
W87-4A	693.29	9.96	683.33
W88-3M	658.11	17.09	641.02
W88-7A	632.51	NM*	--
W88-8M	721.05	41.02	680.03
W90-12A	640.84	36.66	604.18
W95-14A	680.49	NM**	--
MW-1A	652.57	20.32	632.25
MW-2A	651.93	20.30	631.63
MW-3	637.41	10.09	627.32
MW-4	652.37	24.70	627.67
MW-5A	655.55	29.01	626.54
MW-6	635.71	12.59	623.12
MW-7	656.03	26.10	629.93
MW-9	701.77	12.11	689.66
MW-10	678.37	28.29	650.08
Piezometers			
P13-14A	665.96	24.91	641.05
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	19.74	636.46
P88-3B	655.98	22.23	633.75
P95-8A	722.07	24.97	697.10
P90-12A	640.79	9.55	631.24
P90-12B	640.73	6.55	634.18
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P[b]	652.00	18.44	633.56
GP-2P[b]	658.61	17.73	640.88
GP-3P[b]	658.51	10.25	648.26
GP-4P[b]	662.01	14.13	647.88
GP-9P[b]	674.03	12.40	661.63
GP-16[b]	689.51	16.78	672.73
South Creek			
SWSC-1	632.68	2.50	630.18
SWSC-2	629.98	Dry	--
Leak Detection System			
LDCS-1[a]	657.26	27.95	629.31
LDCS-2A[a]	659.24	29.19	630.05
LDCS-2B[a]	661.70	27.90	633.80

Notes:

NM= not measured

-- = not applicable

Measurements taken on 9/24/2020 unless otherwise noted

a = LDCS measurements taken on 9/22/2020

b = Gas probe measurements taken on 9/29/2020

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

** = Could not access well during monitoring event

Table 2. Field Parameters
Third Quarter 2020
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	304-092120-02	9/21/2020	DP	6.96	179	13.1
MW-2A	304-092120-03	9/21/2020	DP	6.99	284	12.7
MW-3	304-092120-04	9/21/2020	DP	7.34	346	10.3
MW-4	304-092420-19	9/24/2020	SP	7.21	319	13.9
MW-5A	304-092120-05	9/21/2020	DP	7.42	291	12.5
MW-6	304-092120-07	9/21/2020	DP	7.46	311	10.5
MW-7	304-092220-09	9/22/2020	DP	7.46	368	10.3
MW-9	304-092220-08	9/22/2020	DP	6.63	139	10.7
MW-10	304-092220-10	9/22/2020	DP	**6.40**	266	10.9
Leak Detection System						
LDCS-1	304-092220-14	9/22/2020	DB	6.12	615	24.4
LDCS-2A	304-092220-13	9/22/2020	DB	6.57	920	24.0
LDCS-2B	304-092220-12	9/22/2020	DB	6.21	809	23.8
LDCS-3A	304-092220-11	9/22/2020	DP	6.21	871	20.0
LDCS-4A	304-092320-15	9/23/2020	DP	6.18	855	20.5
LDCS-4B	304-092320-16	9/23/2020	DP	6.35	946	21.1
LDCS-5	304-092420-21	9/24/2020	GB*	6.24	920	29.7
LDCS-6	304-092320-17	9/23/2020	DP	7.59	815	15.7
LDCS-7	304-092320-18	9/23/2020	DP	6.82	1,337	16.2
LDCS-8A^ (8/31/20)	304-083120-01	8/31/2020	GB	7.81	993	18.1
LDCS-8A^ (9/21/20)	304-092120-01	9/21/2020	PP	7.04	1,295	17.0

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

* = Sample from LDCS-5 collected as a grab sample because the pump was not operational during the monitoring event

^ = Samples collected from LDCS-8A serve as background water quality data

Table 3. Inorganic Parameters
Third Quarter 2020
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	*	2.0	*	3.2	160	*	*
MW-2A	130	*	3.4	*	14	190	*	*
MW-3	130	0.11	3.6	*	30	220	*	*
MW-4	150	0.12	2.8	*	7.8	190	1.0	*
MW-5A	130	0.10	2.2	*	5.1	210	*	*
MW-6	140	0.12	4.9	*	7.0	210	*	*
MW-7	170	0.20	2.9	*	3.8	220	*	*
(BG) MW-9	56	*	1.6	*	1.6	150	*	*
(BG) MW-10	100	*	7.0	3.4	6.6	220	*	11
Leak Detection System								
LDCS-1	260	0.22	4.1	*	7.4	360	6.3	—
LDCS-2A	400	0.16	4.0	*	20	530	3.6	—
LDCS-2B	340	0.20	6.4	*	48	320	2.7	—
LDCS-3A	350	0.14	4.9	*	66	540	1.7	—
LDCS-4A	310	0.48	20	*	72	230	4.8	—
LDCS-4B	340	0.47	22	*	110	610	4.0	—
LDCS-5	370	4.9	27	*	43	580	8.3	—
LDCS-6	410	*	6.1	* H	71	920	2.9	—
LDCS-7	470	0.47	54	*	90	660	32	—
LDCS-8A^ (8/31/20)	360	*	44	1.1	97	680	11	—
LDCS-8A^ (9/21/20)	490	*	43	1.5	170	870	13	—

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 TestAmerica of Denver, Colorado

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

^ = Samples collected from LDCS-8A serve as background 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
Third Quarter 2020
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	—	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0110**	—	0.018	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.052
MW-5A	—	*	—	*	—	0.0093	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0064**	—	0.0099	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	**0.0055**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.016	—	*
(BG) MW-10	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.011
Leak Detection System																														
LDCS-1	*	—	0.0110	—	0.029	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	0.0120	—	0.054	—	—	—	—	—	*	—	0.0035	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	0.0350	—	0.075	—	—	—	—	—	*	—	0.010	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3A	*	—	0.0110	—	0.026	—	—	—	—	—	*	—	0.0027	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	0.0110	—	0.036	—	—	—	—	—	*	—	0.0033	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	0.0056	—	0.043	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	0.0098	—	0.062	—	*	—	*	—	0.0053	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	*	—	0.036	—	*	—	*	—	*	—	0.0042	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8A^ (8/31/20)	*	—	*	—	0.028	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.014	—	*	—
LDCS-8A^ (9/21/20)	*	—	*	—	0.050	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.015	—	*	—

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

Analyses performed by TestAmerica of Denver, Colorado

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

^ = Samples collected from LDCS-8A 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 2020
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**	8.6	**0.23**	3.3	13
MW-2A	23	**0.50**	12	**0.30**	3.2	17
MW-3	33	*	14	**0.26**	3.5	13
MW-4	29	0.14	15	**0.18**	5.8	13
MW-5A	25	*	11	**0.14**	3.6	18
MW-6	30	*	13	**0.21**	4.5	10
MW-7	30	0.20	20	**0.21**	4.9	12
(BG) MW-9	9.7	*	6.4	*	*	6.5
(BG) MW-10	24	*	10	*	*	11
Leak Detection System						
LDCS-1	59	0.24	25	2.3	5.7	18
LDCS-2A	98	0.23	36	6.1	9.2	28
LDCS-2B	91	10	33	7.7	7.1	18
LDCS-3A	97	1.2	40	3.1	6.3	22
LDCS-4A	79	1.5	44	2.1	7.8	32
LDCS-4B	91	0.71	51	1.4	8.2	34
LDCS-5	79	1.1	46	1.8	12	44
LDCS-6	110	*	48	0.08	4.3	24
LDCS-7	140	0.18	46	2.3	3.5	38
LDCS-8A^ (8/31/20)	92	*	52	0.05	4.7	50
LDCS-8A^ (9/21/20)	130	*	65	0.35	6.6	64

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 TestAmerica of Denver, Colorado

^ = Samples collected from LDCS-8A serve as background water quality data

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

— = not applicable or not performed

BG = Background

Table 6. Volatile Organic Compounds (µg/L)
Third Quarter 2020
LRI Landfill, Pierce County, Washington

Parameter	Acetone	Benzene	Carbon Disulfide
Units	µg/L	µg/L	µg/L
MRL	10	0.5	0.5
WAC 173-200 Criteria	—	1.0	—
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	*	*	*
LDCS-2A	26	*	*
LDCS-2B	30	*	*
LDCS-3A	*	*	*
LDCS-4A	*	*	*
LDCS-4B	*	*	*
LDCS-5	*	*	*
LDCS-6	*	*	*
LDCS-7	*	0.61	18
LDCS-8A^ (8/31/20)	*	*	*
LDCS-8A^ (9/21/20)	*	*	*
Quality Control Samples			
Field Blank	*	*	*

Notes:
All sample units are milligrams per liter (µg/L)
Analyses performed by TestAmerica of Denver, Colorado
^ = Samples collected from LDCS-8A serve as background 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 2020
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	8.6	3.3	13	38.9	0.70	0.71	0.07	0.57	2.05	31	34	35
MW-2A	23	12	3.2	17	55.2	1.15	0.99	0.07	0.74	2.95	28	39	34
MW-3	33	14	3.5	13	63.5	1.65	1.15	0.08	0.57	3.44	19	48	33
MW-4	29	15	5.8	13	62.8	1.45	1.23	0.13	0.57	3.38	21	43	37
MW-5A	25	11	3.6	18	57.6	1.25	0.91	0.08	0.78	3.02	29	41	30
MW-6	30	13	4.5	10	57.5	1.50	1.07	0.10	0.44	3.10	17	48	34
MW-7	30	20	4.9	12	66.9	1.50	1.65	0.11	0.52	3.78	17	40	44
MW-9	9.7	6.4	2.0	6.5	24.6	0.48	0.53	0.05	0.28	1.34	24	36	39
MW-10	24	10	2.0	11	47.0	1.20	0.82	0.05	0.48	2.54	21	47	32
LDCS-1	59	25	5.7	18	107.7	2.94	2.06	0.13	0.78	5.91	15	50	35
LDCS-2A	98	36	9.2	28	171.2	4.89	2.96	0.21	1.22	9.28	15	53	32
LDCS-2B	91	33	7.1	18	149.1	4.54	2.72	0.16	0.78	8.20	12	55	33
LDCS-3A	97	40	6.3	22	165.3	4.84	3.29	0.14	0.96	9.23	12	52	36
LDCS-4A	79	44	7.8	32	162.8	3.94	3.62	0.18	1.39	9.13	17	43	40
LDCS-4B	91	51	8.2	34	184.2	4.54	4.20	0.19	1.48	10.40	16	44	40
LDCS-5	79	46	12	44	181.0	3.94	3.79	0.27	1.91	9.91	22	40	38
LDCS-6	110	48	4.3	24	186.3	5.49	3.95	0.10	1.04	10.58	11	52	37
LDCS-7	140	46	3.5	38	227.5	6.99	3.79	0.08	1.65	12.50	14	56	30
LDCS-8A^ (8/31/20)	92	52	4.7	50	198.7	4.59	4.28	0.11	2.18	11.15	20	41	38
LDCS-8A^ (9/21/20)	130	65	6.6	64	265.6	6.49	5.35	0.15	2.78	14.77	20	44	36

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	2.0	0.5	3.2	119.7	1.87	0.06	0.008	0.07	2.00	3	93	3	4.05	1.1	10	O
MW-2A	156	3.4	0.5	14	173.9	2.56	0.10	0.008	0.29	2.95	3	87	10	5.90	0.1	5	O
MW-3	156	3.6	0.5	30	190.1	2.56	0.10	0.008	0.62	3.29	3	78	19	6.74	2.2	5	O
MW-4	180	2.8	0.5	7.8	191.1	2.95	0.08	0.008	0.16	3.20	2	92	5	6.58	2.7	5	O
MW-5A	156	2.2	0.5	5.1	163.8	2.56	0.06	0.008	0.11	2.73	2	94	4	5.75	4.9	5	O
MW-6	168	4.9	0.5	7.0	180.4	2.76	0.14	0.008	0.15	3.05	5	90	5	6.15	0.9	5	O
MW-7	204	2.9	0.5	3.8	211.2	3.35	0.08	0.008	0.08	3.51	2	95	2	7.29	3.6	5	O
MW-9	67.2	1.6	0.5	1.6	70.9	1.10	0.05	0.008	0.03	1.19	4	93	3	2.53	5.9	10	O
MW-10	120	7.0	3.4	6.6	137	1.97	0.20	0.055	0.14	2.36	8	83	6	4.90	3.8	10	O
LDCS-1	312	4.1	0.5	7.4	324	5.12	0.12	0.008	0.15	5.39	2	95	3	11.31	4.6	5	O
LDCS-2A	480	4.0	0.5	20	504.5	7.87	0.11	0.008	0.42	8.41	1	94	5	17.69	4.9	5	O
LDCS-2B	408	6.4	0.5	48	462.9	6.69	0.18	0.008	1.00	7.88	2	85	13	16.08	2.0	5	O
LDCS-3A	420	4.9	0.5	66	491.4	6.89	0.14	0.008	1.37	8.41	2	82	16	17.64	4.7	5	O
LDCS-4A	372	20	0.5	72	464.5	6.10	0.56	0.008	1.50	8.17	7	75	18	17.30	5.6	5	Exceeds
LDCS-4B	408	22	0.5	110	541	6.69	0.62	0.008	2.29	9.61	6	70	24	20.01	4.0	5	O
LDCS-5	444	27	0.5	43	515	7.28	0.76	0.008	0.89	8.95	9	81	10	18.86	5.1	5	Exceeds
LDCS-6	492	6.1	0.5	71	570	8.07	0.17	0.008	1.48	9.73	2	83	15	20.31	4.2	5	O
LDCS-7	564	54	0.5	90	709	9.25	1.52	0.008	1.87	12.65	12	73	15	25.16	0.6	5	O
LDCS-8A^ (8/31/20)	432	44	1.1	97	574	7.08	1.24	0.018	2.02	10.36	12	68	19	21.51	3.7	5	O
LDCS-8A^ (9/21/20)	588	43	1.5	170	803	9.64	1.21	0.024	3.54	14.42	8	67	25	29.19	1.2	5	O

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
Total alkalinity concentration, reported as calcium carbonate ($CaCO_3$), is converted to the bicarbonate (HCO_3^-) ion by multiplying by a factor of 1.2
Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].
^ = Samples collected from LDCS-8A 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 2020 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	130	140	7.4
Ammonia	0.1	0.10	0.10	0.0
Chloride	0.2	2.2	2.2	0.0
Sulfate	0.2	5.1	5.1	0.0
Total Dissolved Solids	10	210	180	15.4
Total Organic Carbon	1.0	*	1.1	9.5
Dissolved Metals (mg/L)				
Calcium	0.2	25	26	3.9
Magnesium	0.1	11	11	0.0
Manganese	0.005	0.14	0.14	0.0
Potassium	2.0	3.6	3.7	2.7
Sodium	1.0	18	18	0.0
Total Metals (mg/L)				
Barium	0.005	0.0093	0.01	7.3

Notes:
Analyses performed by 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 16, 2020
LRI Landfill, Pierce County, Washington

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	16.90	647.11
W87-4A	693.29	5.50	687.79
W88-3M	658.11	13.00	645.11
W88-8M	721.05	71.00	650.05
W90-12A	640.84	30.01	610.83
W95-14A	680.49	NM**	--
MW-1A[b]	652.57	17.48	635.09
MW-2A[a]	651.93	17.45	634.48
MW-3[a]	637.41	6.30	631.11
MW-4[b]	652.37	21.50	630.87
MW-5A[a]	655.55	26.55	629.00
MW-6[a]	635.71	7.17	628.54
MW-7	656.03	21.71	634.32
MW-9	701.77	9.20	692.57
MW-10	678.37	24.47	653.90
Piezometers			
P13-14A	665.96	22.18	643.78
P88-3A	656.20	18.52	637.68
P88-3B	655.98	19.63	636.35
P95-8A	722.07	24.39	697.68
P90-12A	640.79	3.98	636.81
P90-12B	640.73	2.71	638.02
GP-1P	652.00	16.21	635.79
GP-2P	658.61	15.98	642.63
GP-3P	658.51	7.30	651.21
GP-4P	662.01	6.33	655.68
GP-9P	674.03	10.60	663.43
GP-16	689.51	19.40	670.11
South Creek			
SWSC-1	632.68	0.82	631.86
SWSC-2	629.98	5.21	624.77
Leak Detection System			
LDCS-1	657.26	NM	--
LDCS-2A	659.24	NM	--
LDCS-2B	661.70	NM	--

Notes:

Wells W88-7A, P88-2A, P88-2B, P90-13A, and P90-13B cannot be located and were removed from Table 1

NM= not measured

-- = not applicable

a = Measurements taken on 12/15/2020

b = Measurements taken on 12/17/2020

DTW measurements at gas probes measured on 12/17/20

** = Could not access well during monitoring event

Table 2. Field Parameters
Fourth Quarter 2020
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-1	304-121720-16	12/17/2020	DP	7.00	184	13.0
MW-2A	304-121520-07	12/15/2020	DP	7.21	259	11.9
MW-3	304-121520-05	12/15/2020	DP	7.42	365	9.6
MW-4	304-121720-18	12/17/2020	SP	7.47	337	12.7
MW-5A	304-121520-03	12/15/2020	DP	7.60	319	11.1
MW-6	304-121520-01	12/15/2020	DP	7.41	350	9.6
MW-7	304-121620-15	12/16/2020	DP	7.52	352	9.6
MW-9	304-121620-10	12/16/2020	DP	6.75	136	10.1
MW-10	304-121620-13	12/16/2020	DP	**6.36**	260	10.0
Leak Detection System						
LDCS-1	304-121620-09	12/16/2020	DB	6.15	410	14.8
LDCS-2A	304-121720-17	12/17/2020	DB	6.93	837	20.2
LDCS-2B	304-121620-11	12/16/2020	DB	6.48	718	15.1
LDCS-3A	304-121520-04	12/15/2020	DP	6.22	874	17.6
LDCS-4A	304-121520-02	12/15/2020	DP	6.24	1005	19.7
LDCS-4B	304-121520-08	12/15/2020	DP	6.19	775	27.3
LDCS-5	304-121620-14	12/16/2020	GB*	6.35	790	28.0
LDCS-6	304-121620-12	12/16/2020	DP	6.65	935	12.3
LDCS-7	304-121520-06	12/15/2020	DP	6.11	1,036	14.3
LDCS-8A^ (10/5/20)	304-100520-01	10/5/2020	PP	6.93	1,244	15.5
LDCS-8A^ (11/10/20)	304-111020-01	11/10/2020	PP	7.44	1,101	10.9
LDCS-8A (12/17/20)	304-121720-19	12/17/2020	PP	7.65	1,187	10.8
Leachate Collection System						
Leachate, Cell 1	304-121720-25	12/17/2020	GB	7.52	20,796	7.4
Leachate, Cell 2A	304-121720-26	12/17/2020	GB	7.72	26,370	10.3
Leachate, Cell 2B	304-121720-27	12/17/2020	GB	7.54	21,239	9.3
Leachate, Cell 3A	304-121720-28	12/17/2020	GB	7.57	21,479	10.5
Leachate, Cell 4A	304-121720-24	12/17/2020	GB	7.68	25,978	10.7
Leachate, Cell 4B	304-121720-23	12/17/2020	GB	7.89	31,005	16.5
Leachate, Cell 5	304-121720-22	12/17/2020	GB	8.27	22,918	11.4
Leachate, Cell 6	304-121720-21	12/17/2020	GB	7.63	13,321	14.9
Leachate, Cell 7	304-121720-29	12/17/2020	GB	7.02	6,873	13.3
Leachate, Cell 8A	304-121720-30	12/17/2020	PP	5.36	1,079	8.4

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

* = Sample from LDCS-5 collected as a grab sample because the pump was not operational during the monitoring event

^ = Samples collected serve as background water quality data for LDCS-8A

Table 3. Inorganic Parameters
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

Parameter	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MRL	10	0.1-22.0	0.2-14.0	0.5	0.5-26.0	10.0-47.0	1.0-35.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1	97	*	2.4	*	3.4	140	*	12
MW-2A	120	*	3.7	* H	13	170	*	*
MW-3	160	0.11	3.5	* H	27	210	5.3	*
MW-4	160	0.14	3.5	* H	14	220	*	4.8
MW-5A	160	0.12	2.7	* H	8.1	200	1.1	8.0
MW-6	170	0.12	5.4	* H	7.6	200	1.2	*
MW-7	180	0.19	2.8	*	4.5	210	1.0	*
(BG) MW-9	69	*	1.7	*	2.1	140	*	*
(BG) MW-10	110	*	7.1	3.2	7.1	200	*	8.8
Leak Detection System								
LDCS-1	200	0.13	4.5	*	6.8	260	2.9	—
LDCS-2A	440	*	4.8	* H	30	510	2.8	—
LDCS-2B	330	*	7.5	* H	61	460	2.3	—
LDCS-3A	400	0.10	5.5	* H	83	540	2.3	—
LDCS-4A	360	11	63	* H	43	550	24	—
LDCS-4B	330	*	12	* H	74	450	2.7	—
LDCS-5	320	3.4	14	*	78	480	3.2	—
LDCS-6	450	*	6.1	*	71	530	2.4	—
LDCS-7	510	0.2	14	* H	70	640	4.9	—
LDCS-8A^ (10/5/20)	480	*	39	0.60 H	120	780	10	—
LDCS-8A^ (11/10/20)	560	*	36	* B	93 B	750	10	—
LDCS-8A (12/17/20)	570	*	30	* H	130	790	9.5	—
Leachate Collection System								
Leachate, Cell 1	7,700	1,300	2,500	* H	*	21,000	1,200	—
Leachate, Cell 2A	11,000	2,000	4,400	* H	*	34,000	1,800	—
Leachate, Cell 2B	7,900	1,300	2,600	10 H	*	20,000	1,200	—
Leachate, Cell 3A	7,800	1,300	2,600	11 H	*	22,000	1,200	—
Leachate, Cell 4A	12,000	1,600	5,700	5.3 H	*	37,000	2,500	—
Leachate, Cell 4B	12,000	2,000	3,800	* H	70	33,000	1,600	—
Leachate, Cell 5	8,900	1,000	2,900	4.8 H	49	25,000	1,500	—
Leachate, Cell 6	10,000	860	1,300	7.3 H	30	11,000	910	—
Leachate, Cell 7	2,600	350	670	1.7 H	12	3,200	470	—
Leachate, Cell 8A	340	12	58	* H	55	910	330	—

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 TestAmerica of Denver, Colorado

Method Reporting Limits (MRL) are typical and may be elevated for some samples

^ = Samples collected serve as background water quality data for LDCS-8A

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

— = Not applicable or not performed

BG = Background

B = Compound was detected in the sample and in the blank

H = Sample was prepped or analyzed beyond the specified holding time due to lab error or delay in transit

Table 4. WAC 173-351 Appendix I Metals
Fourth Quarter 2020
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	0.005-0.0062	0.01	0.01-0.02
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-1	—	*	—	*	—	0.021	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.015
MW-2A	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-3	—	*	—	*	—	0.011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-4	—	*	—	**0.0097**	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.014
MW-5A	—	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-6	—	*	—	**0.0072**	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
MW-7	—	*	—	**0.0056**	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.014	—	*
(BG) MW-10	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
Leak Detection System																														
LDCS-1	*	—	0.0110	—	0.023	—	—	—	—	—	*	—	0.0014	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	0.015	—
LDCS-2A	*	—	0.0063	—	0.020	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	0.0620	—	0.096	—	—	—	—	—	*	—	0.0066	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-3A	*	—	0.0066	—	0.017	—	—	—	—	—	*	—	0.0019	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	0.0054	—	0.038	—	—	—	—	—	0.0057	—	0.0047	—	0.016	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	*	—	0.027	—	—	—	—	—	*	—	0.0010	—	*	—	*	—	*	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	0.0082	—	0.053	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-6	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-7	*	—	*	—	0.031	—	*	—	*	—	*	—	0.0042	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
LDCS-8A^ (10/5/20)	*	—	*	—	0.039	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.0072	—	0.031	—
LDCS-8A^ (11/10/20)	*	—	*	—	0.034	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.0080	—	*	—
LDCS-8A (12/17/20)	*	—	*	—	0.039	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.0056	—	*	—
Leachate Collection System																														
Leachate, Cell 1	—	*	—	0.063	—	1.2	—	*	—	*	—	0.41	—	0.038	—	0.019	—	0.020	—	0.35	—	*	—	*	—	*	—	0.17	—	0.09
Leachate, Cell 2A	—	*	—	0.140	—	1.4	—	*	—	*	—	0.71	—	0.060	—	0.068	—	0.030	—	0.87	—	0.0052	—	*	—	*	—	0.51	—	0.23
Leachate, Cell 2B	—	*	—	0.077	—	1.2	—	*	—	*	—	0.43	—	0.039	—	0.089	—	0.024	—	0.38	—	*	—	*	—	*	—	0.21	—	0.23
Leachate, Cell 3A	—	*	—	0.058	—	1.0	—	*	—	*	—	0.36	—	0.034	—	0.12	—	0.026	—	0.31	—	*	—	*	—	*	—	0.16	—	0.29
Leachate, Cell 4A	—	*	—	0.170	—	1.0	—	*	—	*	—	0.54	—	0.035	—	0.077	—	0.019	—	0.46	—	*	—	*	—	*	—	0.25	—	0.16
Leachate, Cell 4B	—	0.068	—	0.110	—	1.5	—	*	—	*	—	0.76	—	0.043	—	0.24	—	0.036	—	0.83	—	*	—	*	—	*	—	0.075	—	0.19
Leachate, Cell 5	—	*	—	0.140	—	0.79	—	*	—	*	—	0.59	—	0.042	—	0.54	—	0.024	—	0.47	—	*	—	*	—	*	—	0.12	—	0.32
Leachate, Cell 6	—	*	—	0.140	—	0.62	—	*	—	*	—	0.36	—	0.021	—	2.5	—	0.025	—	0.26	—	*	—	*	—	*	—	0.084	—	8.1
Leachate, Cell 7	—	*	—	0.074	—	0.29	—	*	—	*	—	0.14	—	0.013	—	0.073	—	0.017	—	0.092	—	*	—	*	—	*	—	0.062	—	0.23
Leachate, Cell 8A	—	*	—	*	—	0.13	—	*	—	*	—	0.0081	—	0.053	—	*	—	*	—	0.054	—	*	—	*	—	*	—	*	—	0.26

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 TestAmerica of Denver, Colorado

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

^ = Samples collected serve as background water quality data for LDCS-8A

* = 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 2020
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	0.2-0.39	0.1-0.11	0.1-0.13	0.005	2.0	1-1.9
WAC 173-200 Criteria	—	0.30	—	0.050	—	—
Monitoring Wells						
MW-1	14	**1.4**	8.6	**0.24**	3.3	10
MW-2A	20	**0.53**	11	**0.30**	2.8	14
MW-3	35	*	15	**0.28**	3.5	12
MW-4	30	*	17	**0.23**	5.4	11
MW-5A	27	*	11	**0.19**	3.7	19
MW-6	34	*	15	**0.24**	4.6	10
MW-7	32	0.21	21	**0.24**	5.3	12
(BG) MW-9	10	*	6.9	*	*	7.7
(BG) MW-10	25	*	11	*	2.1	13
Leak Detection System						
LDCS-1	40	4.1	16	1.9	4.7	17
LDCS-2A	93	*	37	1.5	9.1	28
LDCS-2B	83	24	30	3.1	5.9	18
LDCS-3A	100	0.49	43	2.1	6.6	25
LDCS-4A	75	0.43	34	1.0	13	74
LDCS-4B	84	0.92	37	0.96	6.2	23
LDCS-5	64	0.34	35	1.5	8.8	27
LDCS-6	110	*	37	0.13	3.3	21
LDCS-7	140	0.24	38	2.2	3.5	38
LDCS-8A^ (10/5/20)	130	*	67	0.53	5.5	63
LDCS-8A^ (11/10/20)	120	*	67	*	5.1	45
LDCS-8A (12/17/20)	130	*	76	*	5.0	51
Leachate Collection System**						
Leachate, Cell 1	67	8.7	57	0.79	470	2200
Leachate, Cell 2A	26	9.4	42	0.24	760	3900
Leachate, Cell 2B	70	11	62	0.72	530	2700
Leachate, Cell 3A	74	9.8	62	0.67	510	2600
Leachate, Cell 4A	25	9.7	49	0.21	1000	3800
Leachate, Cell 4B	25	6.3	45	0.24	1000	3900
Leachate, Cell 5	43	7.9	50	0.39	710	2800
Leachate, Cell 6	89	9.5	64	1.1	470	1500
Leachate, Cell 7	140	3.3	79	2.7	220	550
Leachate, Cell 8A	110	8.6	27	5.5	12	44

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 TestAmerica of Denver, Colorado

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

^ = Samples collected serve as background water quality data for LDCS-8A

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

** = Concentrations for leachate are reported as total metals

— = not applicable or not performed

BG = Background

Table 6. Volatile Organic Compounds (µg/L)
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

Parameter	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform
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
MRL	0.5	0.5	0.5	0.5	0.5	6	5	10	0.5	0.5	0.5	0.5	0.5
WAC 173-200 Criteria	200	1.0	—	0.5	4.0	—	—	—	1.0	—	—	—	7.0
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	*	*	*	*	*	*	*	15	0.75	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	13	*	*	*	*	*
LDCS-3A	*	*	*	*	*	*	*	12	0.66	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	*	*	26	*	11	*	*	*
LDCS-8A^ (10/5/20)	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8A^ (11/10/20)	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8A (12/17/20)	*	*	*	*	*	*	*	*	*	*	*	*	*
Leachate Collection System													
Leachate, Cell 1	*	*	*	*	16	15	*	42	14	*	2.4	*	*
Leachate, Cell 2A	*	*	*	*	8.9	160	11	640	9.9	*	1.3	*	*
Leachate, Cell 2B	*	*	*	*	15	*	11	120	14	*	2.3	*	*
Leachate, Cell 3A	*	*	0.53	*	17	*	*	24	14	*	2.4	*	*
Leachate, Cell 4A	*	*	*	*	14	1,400	25	1,400	15	*	1.8	*	*
Leachate, Cell 4B	*	*	*	*	*	4,900	210	6,000	26	*	*	*	*
Leachate, Cell 5	*	*	*	*	*	1,400	27	2,000	2.2	*	*	*	*
Leachate, Cell 6	*	*	*	*	0.65	770	19	490	3.5	*	*	*	*
Leachate, Cell 7	*	*	*	*	*	11,000	330	7,200	14	*	*	*	*
Leachate, Cell 8A	7.0	3.8	*	16	*	580	16	220	5.3	5.7	*	6.7	2.3
Quality Control Samples													
Field Blank	*	*	*	*	*	*	*	*	*	*	*	*	*

Notes:
All sample units are micrograms per liter (µg/L)
Analyses performed by TestAmerica of Denver, Colorado
Method Reporting Limits (MRL) lsited are the typical concentrations but may be elevated for the leachate samples
^ = Samples collected serve as background water quality data for LDCS-8A
* = sample result was not reported at or above the MRL
— = not applicable or not performed
BG = Background

Table 6. Volatile Organic Compounds (µg/L)
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

Parameter	Chloromethane	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	m-Xylene & p-Xylene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoro-methane	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
MRL	0.5	0.5	1	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
WAC 173-200 Criteria	—	—	—	5.0	—	—	—	0.8	—	—	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	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-2A	*	*	*	*	0.63	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-3A	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8A^ (10/5/20)	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8A^ (11/10/20)	*	*	*	*	*	*	*	*	*	*	*	*	*
LDCS-8A (12/17/20)	*	*	*	*	*	*	*	*	*	*	*	*	*
Leachate Collection System													
Leachate, Cell 1	*	1.4	68	*	100	49	3.4	*	15	*	*	*	0.59
Leachate, Cell 2A	*	1.9	42	*	66	30	2.5	*	65	*	*	*	*
Leachate, Cell 2B	*	1.2	63	*	100	47	3.2	*	20	*	*	*	*
Leachate, Cell 3A	*	1.5	61	*	110	53	4.0	*	19	*	*	*	0.57
Leachate, Cell 4A	*	1.3	35	*	77	35	2.5	*	51	*	*	*	*
Leachate, Cell 4B	*	*	32	*	63	28	*	*	54	*	*	*	*
Leachate, Cell 5	*	*	1.2	*	1.7	1.4	*	*	4.3	*	*	*	*
Leachate, Cell 6	*	2.8	20	*	38	18	*	*	48	*	*	*	*
Leachate, Cell 7	*	3.7	33	*	60	28	*	*	890	*	*	*	*
Leachate, Cell 8A	3.0	4.3	7.2	170	21	11	3.8	7.6	76	2.6	7.0	21	*
Quality Control Samples													
Field Blank	*	*	*	*	*	*	*	*	*	*	*	*	*

Table 7. Cation-Anion Balance
Fourth Quarter 2020
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-1	14	8.6	3.3	9.8	35.7	0.70	0.71	0.07	0.43	1.91	26	37	37
MW-2A	20	11	2.8	14	47.8	1.00	0.91	0.06	0.61	2.58	26	39	35
MW-3	35	15	3.5	12	65.5	1.75	1.23	0.08	0.52	3.58	17	49	34
MW-4	30	17	5.4	11	63.4	1.50	1.40	0.12	0.48	3.50	17	43	40
MW-5A	27	11	3.7	19	60.7	1.35	0.91	0.08	0.83	3.16	29	43	29
MW-6	34	15	4.6	10	63.6	1.70	1.23	0.10	0.44	3.47	16	49	36
MW-7	32	21	5.3	12	70.3	1.60	1.73	0.12	0.52	3.97	16	40	44
MW-9	10.0	6.9	2.0	7.7	26.6	0.50	0.57	0.05	0.33	1.45	26	34	39
MW-10	25	11	2.1	13	51.1	1.25	0.91	0.05	0.57	2.77	22	45	33
LDCS-1	40	16	4.7	17	77.7	2.00	1.32	0.11	0.74	4.16	20	48	32
LDCS-2A	93	37	9.1	28	167.1	4.64	3.05	0.21	1.22	9.11	16	51	33
LDCS-2B	83	30	5.9	18	136.9	4.14	2.47	0.13	0.78	7.53	12	55	33
LDCS-3A	100	43	6.6	25	174.6	4.99	3.54	0.15	1.09	9.77	13	51	36
LDCS-4A	75	34	13	74	196	3.74	2.80	0.29	3.22	10.05	35	37	28
LDCS-4B	84	37	6.2	23	150.2	4.19	3.05	0.14	1.00	8.38	14	50	36
LDCS-5	64	35	8.8	27	134.8	3.19	2.88	0.20	1.17	7.45	18	43	39
LDCS-6	110	37	3.3	21	171.3	5.49	3.05	0.07	0.91	9.52	10	58	32
LDCS-7	140	38	3.5	38	219.5	6.99	3.13	0.08	1.65	11.85	15	59	26
LDCS-8A^ (10/5/20)	130	67	5.5	63	265.5	6.49	5.51	0.12	2.74	14.87	19	44	37
LDCS-8A^ (11/10/20)	120	67	5.1	45	237.1	5.99	5.51	0.12	1.96	13.57	15	44	41
LDCS-8A (12/17/20)	130	76	5.0	51	262.0	6.49	6.25	0.11	2.22	15.07	15	43	41
Leachate, Cell 1	67	57	470	2200	2794.0	3.34	4.69	10.61	95.70	114.35	93	3	4
Leachate, Cell 2A	26	42	760	3900	4728.0	1.30	3.46	17.16	169.65	191.56	98	1	2
Leachate, Cell 2B	70	62	530	2700	3362.0	3.49	5.10	11.97	117.45	138.01	94	3	4
Leachate, Cell 3A	74	62	510	2600	3246.0	3.69	5.10	11.52	113.10	133.41	93	3	4
Leachate, Cell 4A	25	49	1000	3800	4874.0	1.25	4.03	22.58	165.30	193.16	97	1	2
Leachate, Cell 4B	25	45	1000	3900	4970.0	1.25	3.70	22.58	169.65	197.18	97	1	2
Leachate, Cell 5	43	50	710	2800	3603.0	2.15	4.12	16.03	121.80	144.09	96	1	3
Leachate, Cell 6	89	64	470	1500	2123.0	4.44	5.27	10.61	65.25	85.57	89	5	6
Leachate, Cell 7	140	79	220	550	989.0	6.99	6.50	4.97	23.93	42.38	68	16	15
Leachate, Cell 8A	110	27	12	44	193.0	5.49	2.22	0.27	1.91	9.90	22	55	22

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-1	116.4	2.4	0.5	3.4	122.7	1.91	0.07	0.008	0.07	2.06	3	93	3	3.96	3.7	10	O
MW-2A	144	3.7	0.5	13	161.2	2.36	0.10	0.008	0.27	2.74	4	86	10	5.32	3.2	5	O
MW-3	192	3.5	0.5	27	223	3.15	0.10	0.008	0.56	3.82	3	82	15	7.40	3.2	5	O
MW-4	192	3.5	0.5	14	210.0	3.15	0.10	0.008	0.29	3.55	3	89	8	7.04	0.7	5	O
MW-5A	192	2.7	0.5	8.1	203.3	3.15	0.08	0.008	0.17	3.40	2	93	5	6.56	3.6	5	O
MW-6	204	5.4	0.5	7.6	217.5	3.35	0.15	0.008	0.16	3.66	4	91	4	7.13	2.7	5	O
MW-7	216	2.8	0.5	4.5	223.8	3.54	0.08	0.008	0.09	3.72	2	95	3	7.69	3.2	5	O
MW-9	82.8	1.7	0.5	2.1	87.1	1.36	0.05	0.008	0.04	1.46	3	93	3	2.90	0.4	10	O
MW-10	132	7.1	3.2	7.1	149.4	2.16	0.20	0.052	0.15	2.56	8	84	6	5.33	3.8	5	O
LDCS-1	240	4.5	0.5	6.8	251.8	3.94	0.13	0.008	0.14	4.21	3	93	3	8.37	0.6	5	O
LDCS-2A	528	4.8	0.5	30	563.3	8.66	0.14	0.008	0.62	9.43	1	92	7	18.54	1.7	5	O
LDCS-2B	396	7.5	0.5	61	465	6.49	0.21	0.008	1.27	7.98	3	81	16	15.51	2.9	5	O
LDCS-3A	480	5.5	0.5	83	569	7.87	0.16	0.008	1.73	9.76	2	81	18	19.53	0.0	5	O
LDCS-4A	432	63	0.5	43	538.5	7.08	1.78	0.008	0.89	9.76	18	73	9	19.82	1.5	5	O
LDCS-4B	396	12	0.5	74	483	6.49	0.34	0.008	1.54	8.38	4	77	18	16.76	0.0	5	O
LDCS-5	384	14	0.5	78	477	6.30	0.39	0.008	1.62	8.32	5	76	19	15.77	5.6	5	Exceeds
LDCS-6	540	6.1	0.5	71	618	8.86	0.17	0.008	1.48	10.51	2	84	14	20.03	4.9	5	O
LDCS-7	612	14	0.5	70	696.5	10.04	0.39	0.008	1.46	11.90	3	84	12	23.74	0.2	5	O
LDCS-8A^ (10/5/20)	576	39	0.6	120	736	9.45	1.10	0.010	2.50	13.05	8	72	19	27.92	6.5	5	Exceeds
LDCS-8A^ (11/10/20)	672	36	0.5	93	802	11.02	1.02	0.008	1.93	13.98	7	79	14	27.55	1.5	5	O
LDCS-8A (12/17/20)	684	30	0.5	130	845	11.22	0.85	0.008	2.70	14.78	6	76	18	29.85	1.0	5	O
Leachate, Cell 1	9240	2500	0.5	26	11767	151.54	70.50	0.008	0.54	222.58	32	68	0	336.93	32.1	5	Exceeds
Leachate, Cell 2A	13200	4400	0.5	26	17627	216.48	124.08	0.008	0.54	341.11	36	63	0	532.67	28.1	5	Exceeds
Leachate, Cell 2B	9480	2600	10	26	12116	155.47	73.32	0.161	0.54	229.49	32	68	0	367.51	24.9	5	Exceeds
Leachate, Cell 3A	9360	2600	11	26	11997	153.50	73.32	0.177	0.54	227.54	32	67	0	360.95	26.1	5	Exceeds
Leachate, Cell 4A	14400	5700	5.3	26	20131	236.16	160.74	0.085	0.54	397.53	40	59	0	590.69	34.6	5	Exceeds
Leachate, Cell 4B	14400	3800	0.5	70	18271	236.16	107.16	0.008	1.46	344.78	31	68	0	541.97	27.2	5	Exceeds
Leachate, Cell 5	10680	2900	4.8	49	13634	175.15	81.78	0.077	1.02	258.03	32	68	0	402.12	28.3	5	Exceeds
Leachate, Cell 6	12000	1300	7.3	30	13337	196.80	36.66	0.118	0.62	234.20	16	84	0	319.77	46.5	5	Exceeds
Leachate, Cell 7	3120	670	1.7	12	3803.7	51.17	18.89	0.027	0.25	70.34	27	73	0	112.72	24.8	5	Exceeds
Leachate, Cell 8A	408	58	0.5	55	522	6.69	1.64	0.008	1.14	9.48	17	71	12	19.37	2.2	5	O

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
Total alkalinity concentration, reported as calcium carbonate ($CaCO_3$), is converted to the bicarbonate (HCO_3) ion by multiplying by a factor of 1.2
Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].
^ = Samples collected serve as background water quality data for LDCS-8A
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 2020
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	160	160	0.0
Ammonia	0.1	0.12	0.11	8.7
Chloride	0.2	2.7	2.6	3.8
Sulfate	0.2	8.1	8.1	0.0
Total Dissolved Solids	10	200	190	5.1
Total Organic Carbon	1.0	1.1	*	9.5
Total Suspended Solids	4.0	8.0	6.0	28.6
Dissolved Metals (mg/L)				
Calcium	0.2	27	27	0.0
Magnesium	0.1	11	11	0.0
Manganese	0.005	0.19	0.18	5.4
Potassium	2.0	3.7	3.7	0.0
Sodium	1.0	19	20	5.1
Total Metals (mg/L)				
Barium	0.005	0.013	0.013	0.0

Notes:

Analyses performed by TestAmerica of Denver, Colorado

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

RPD = relative percent difference

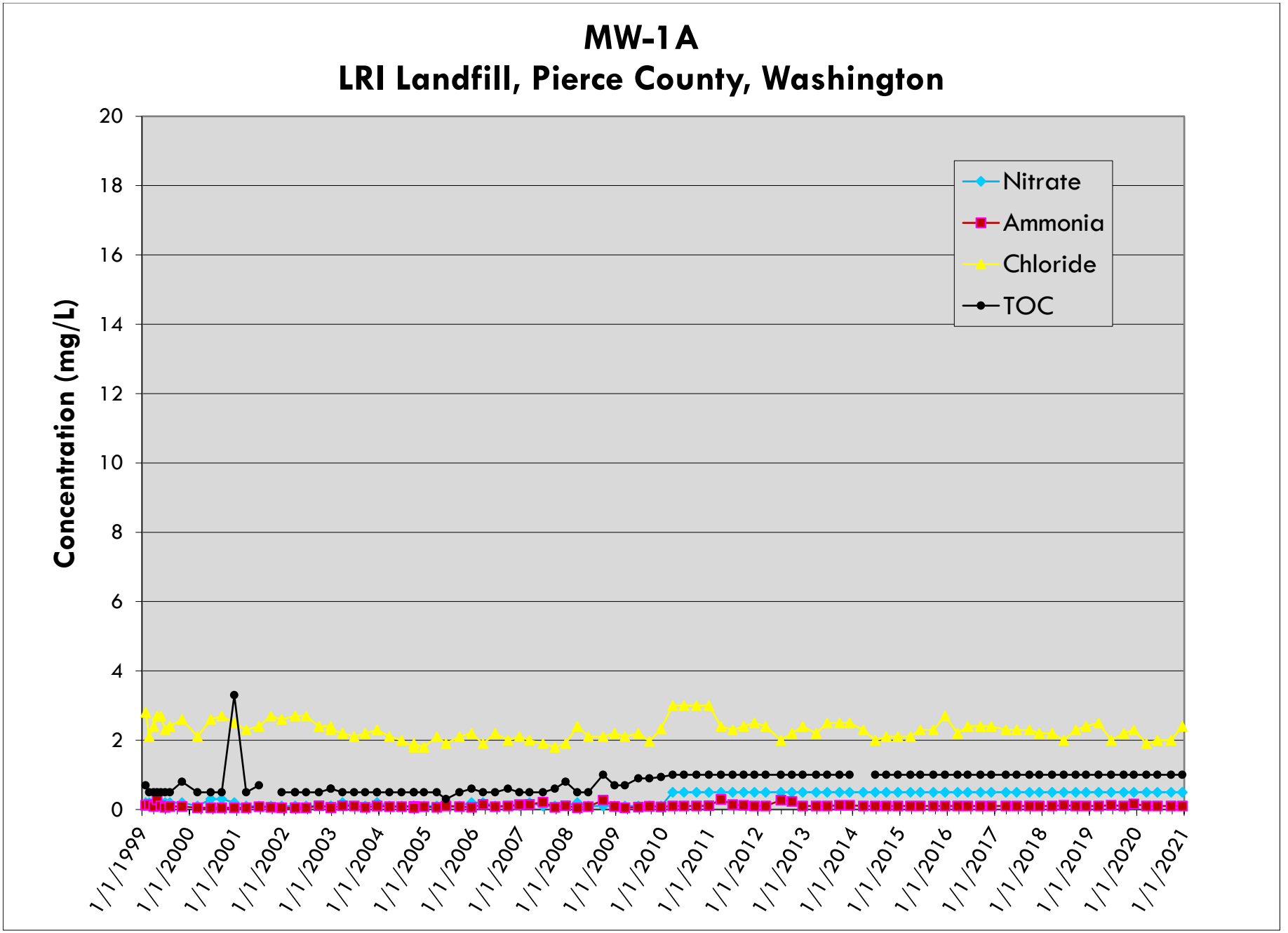
µg/L = micrograms per liter

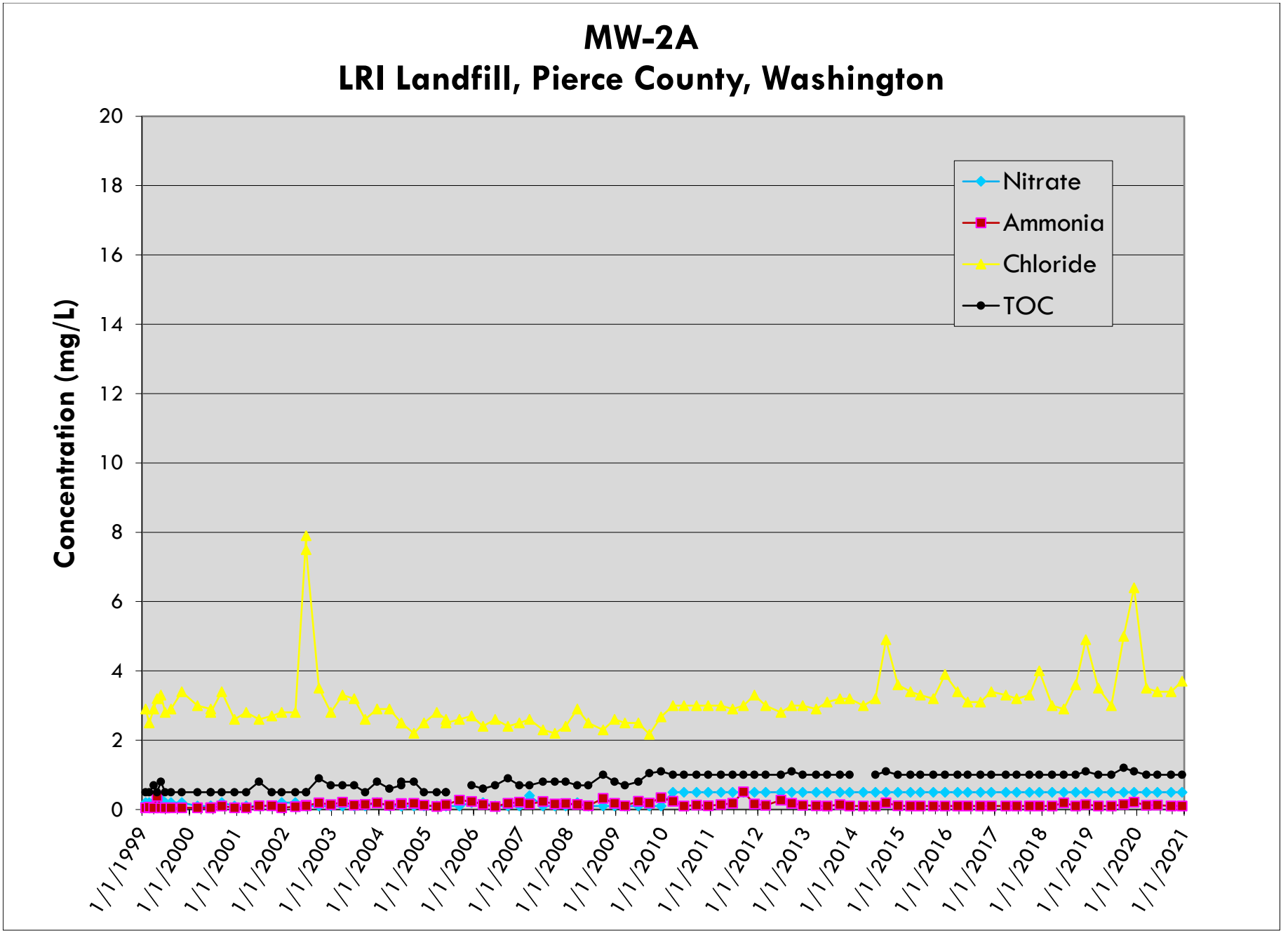
mg/L = milligrams per liter

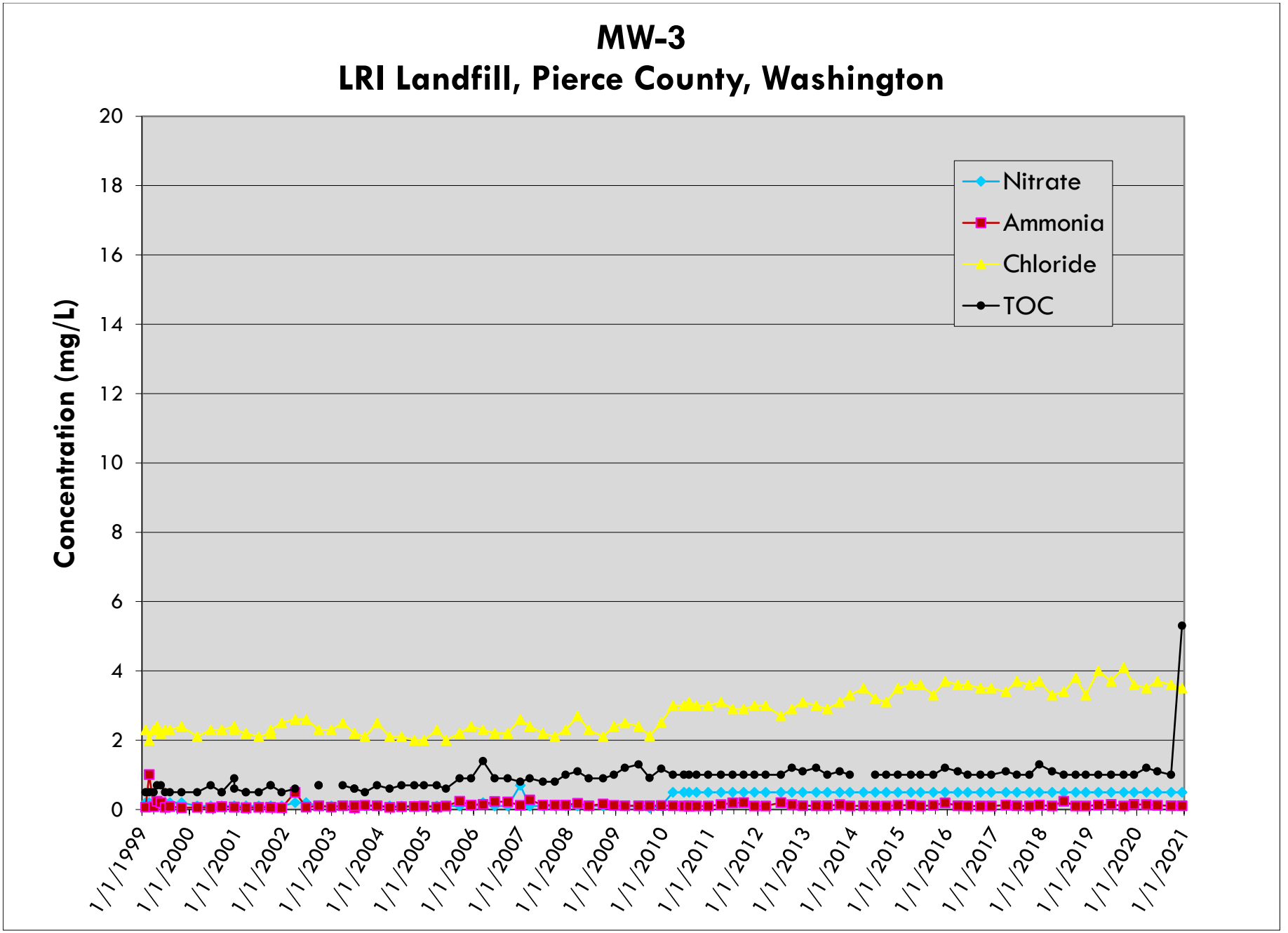
* = sample result was not reported at or above the MRL

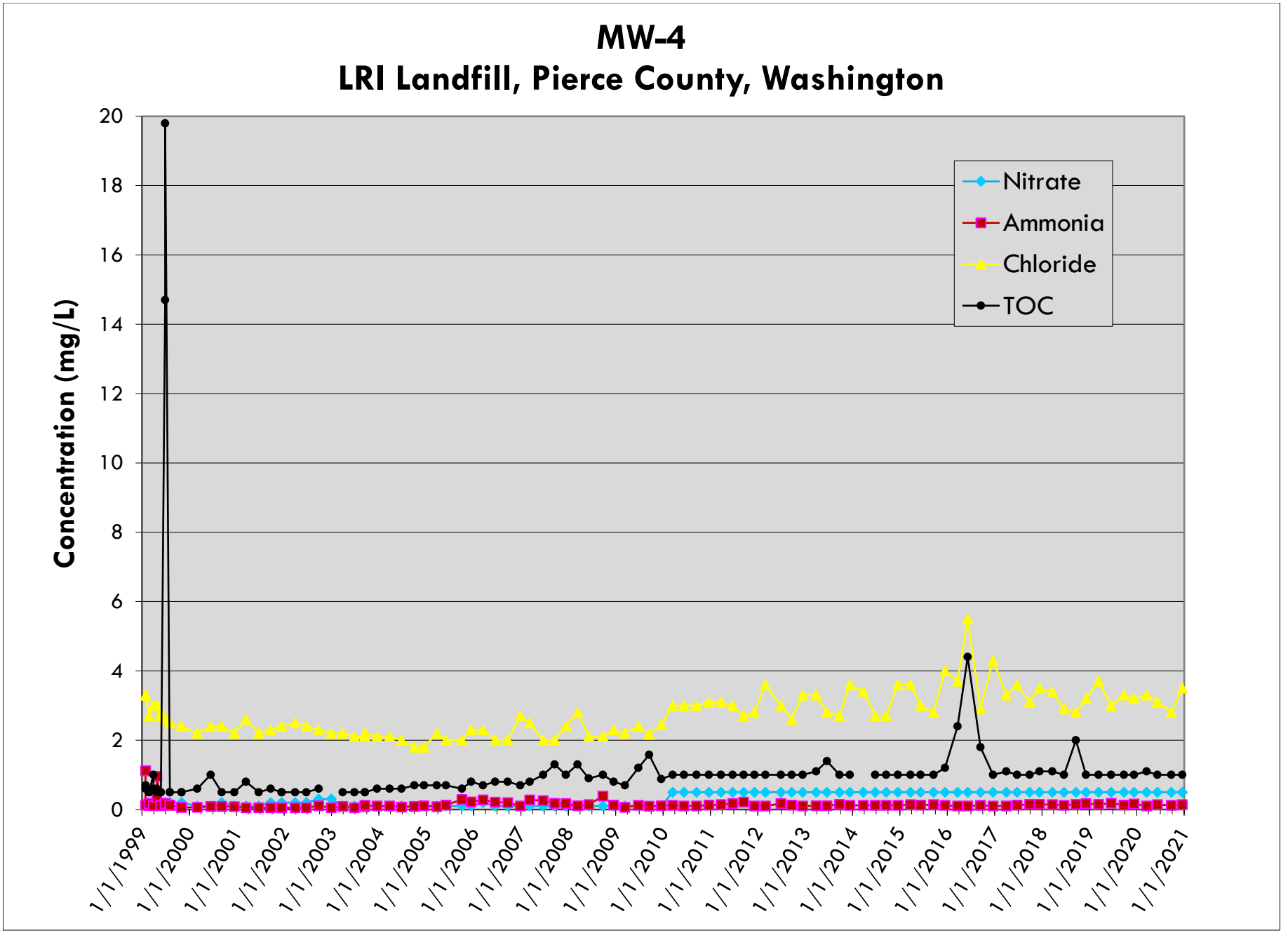
— = Not applicable or not performed

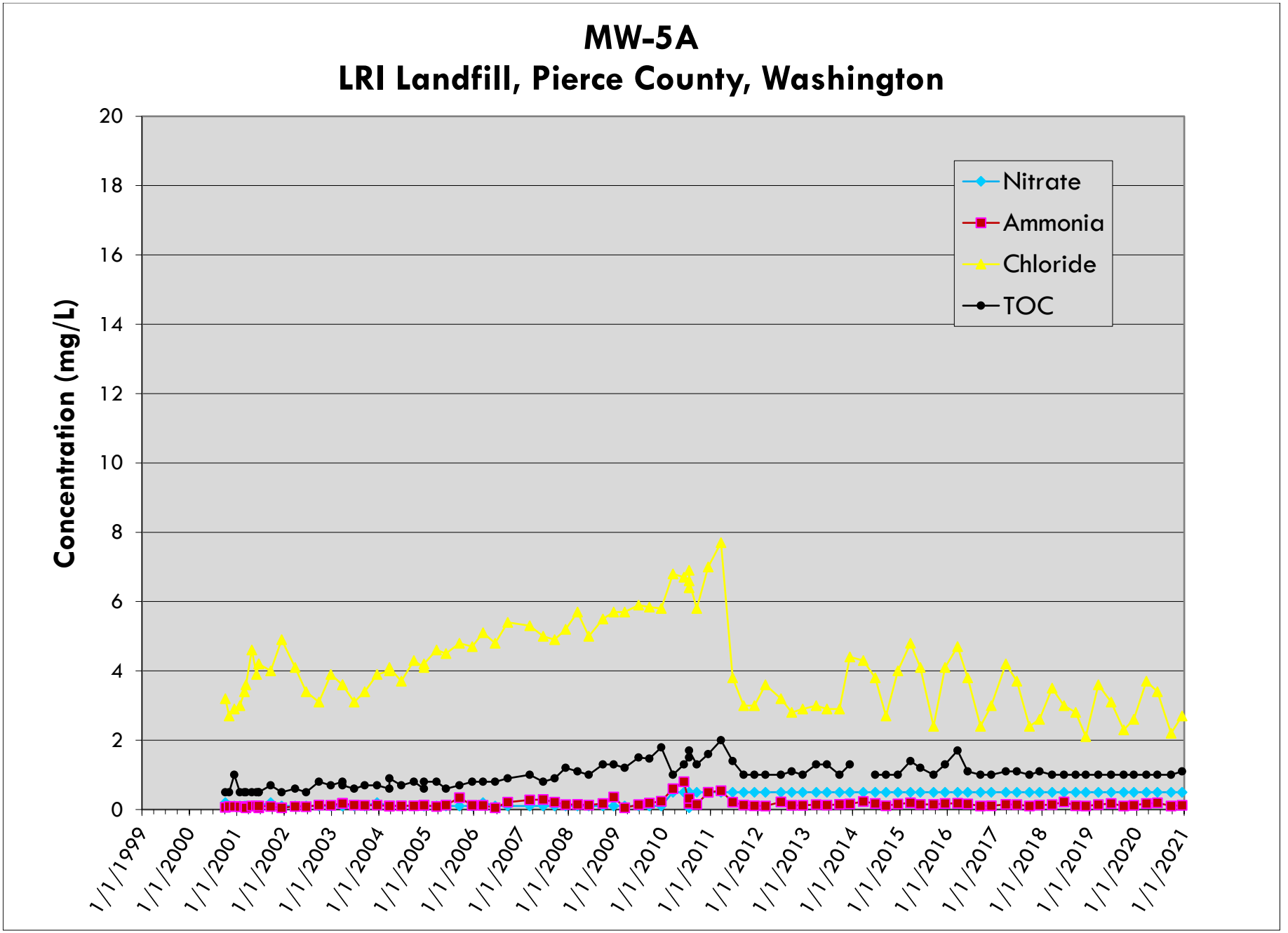
The MRL was used to calculate the RPD for analytes where one sample was non-detect


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
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

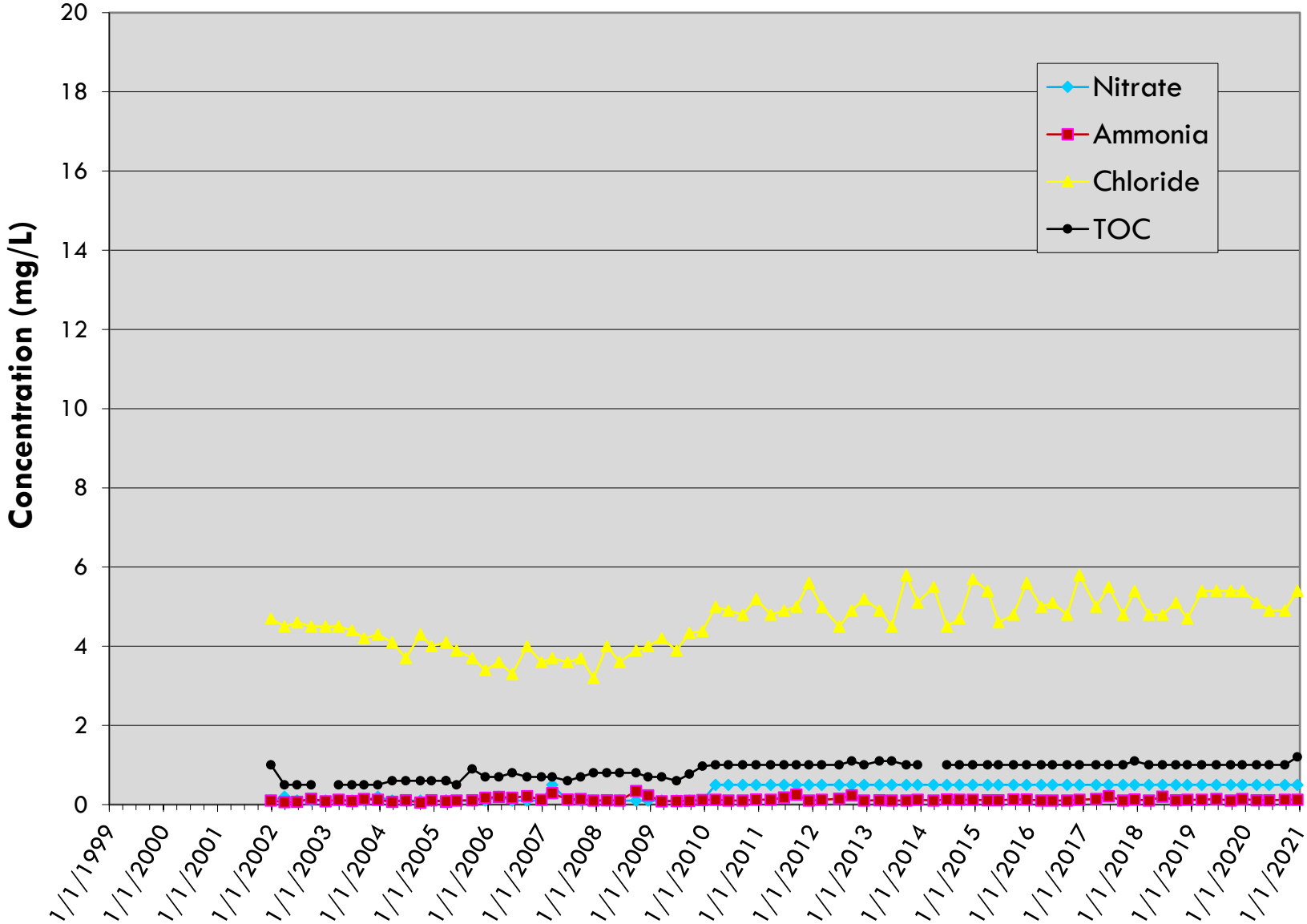

MW-2A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018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

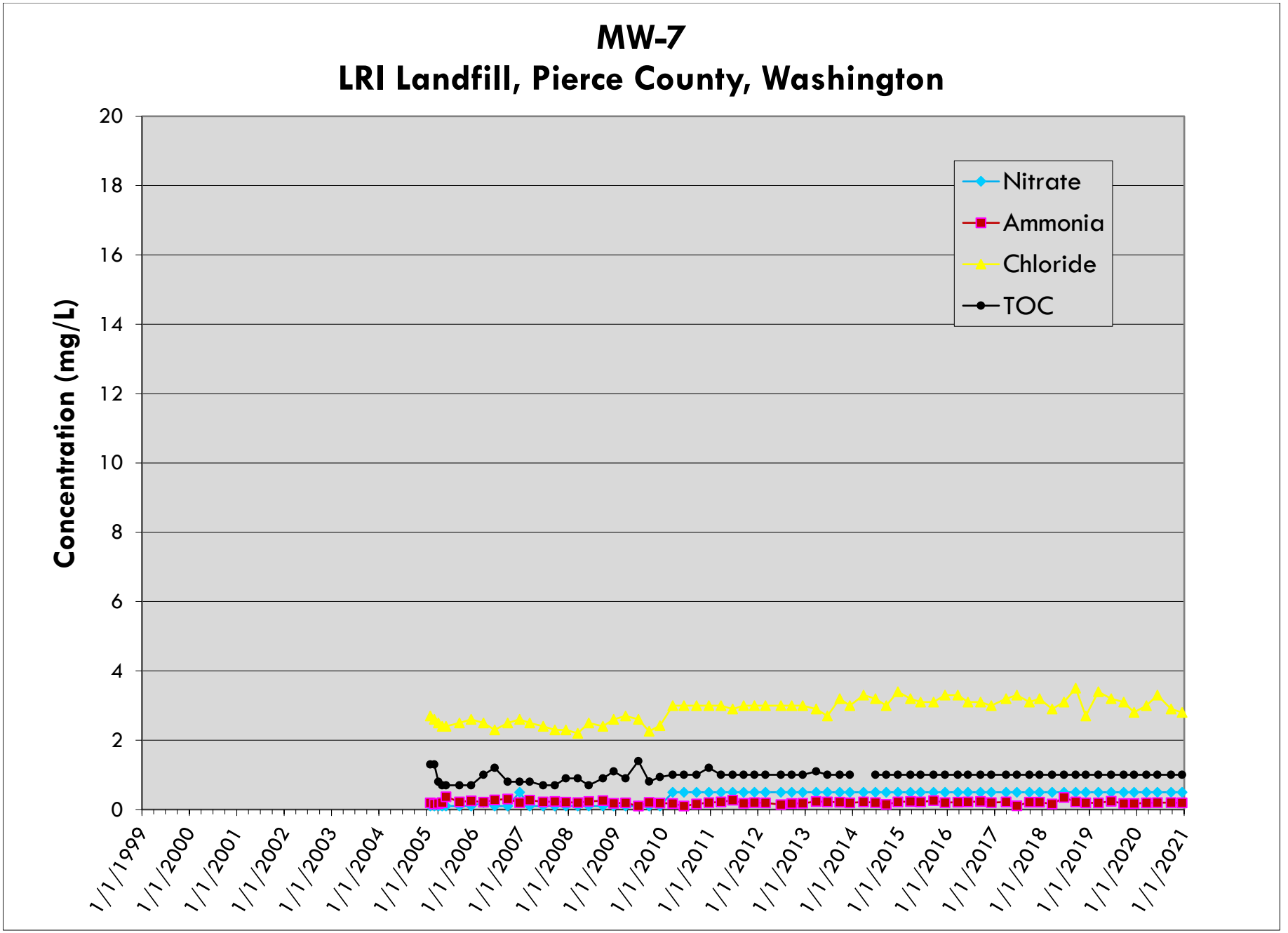

MW-3
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018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

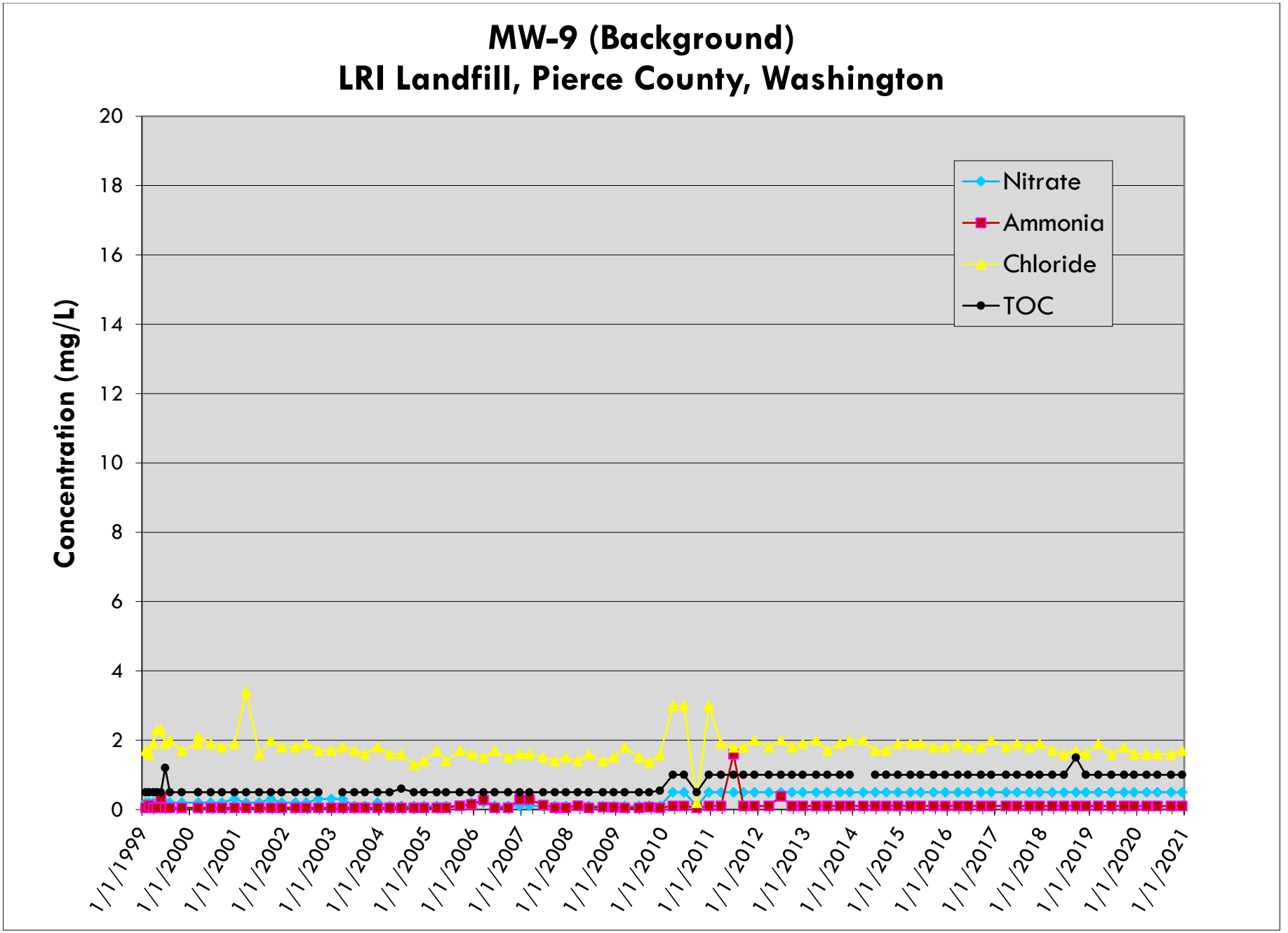

MW-4
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018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


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

MW-6
LRI Landfill, Pierce County, Washington




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


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
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1/1/2012
1/1/2013
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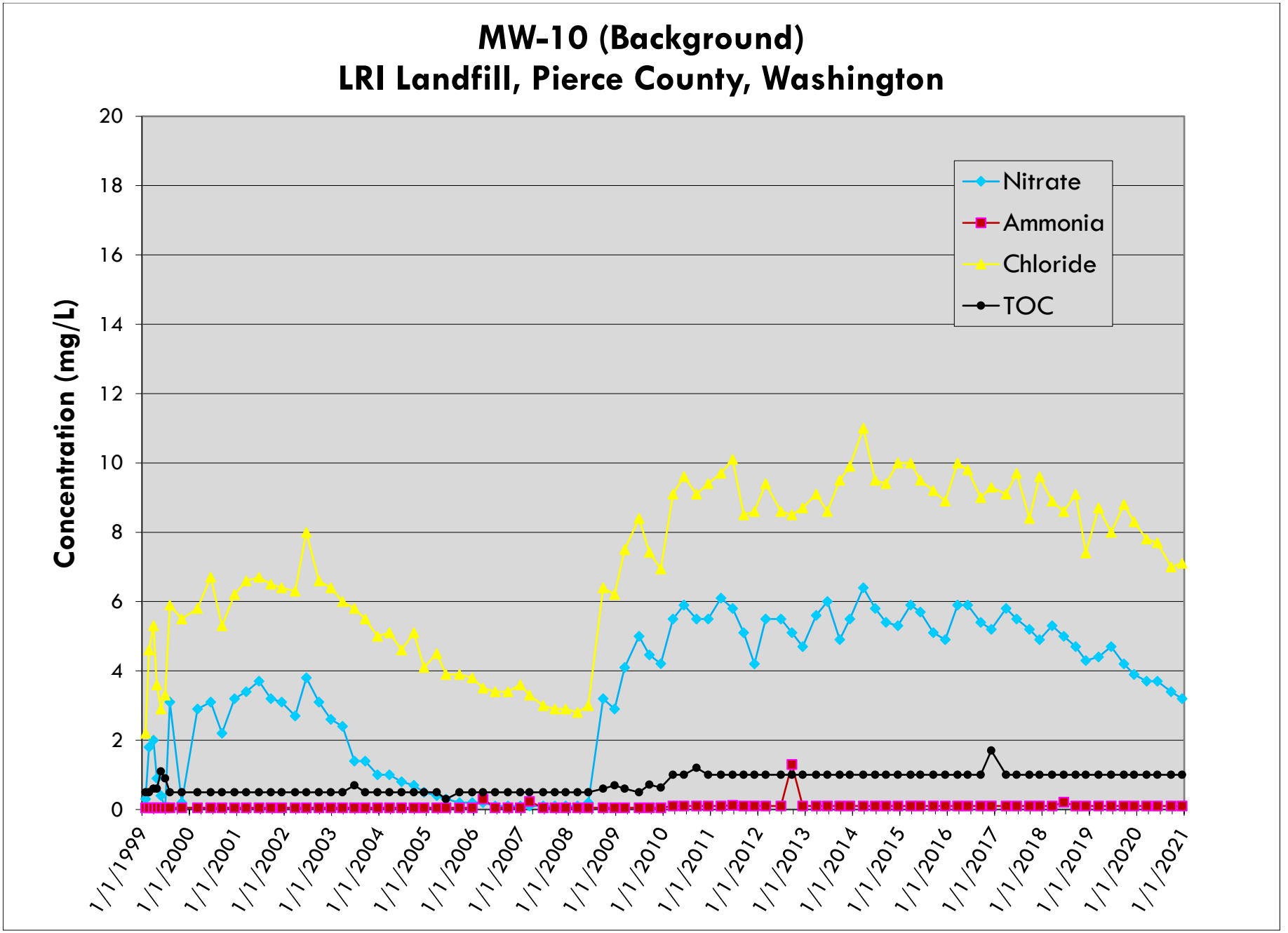
1/1/2020
1/1/2021


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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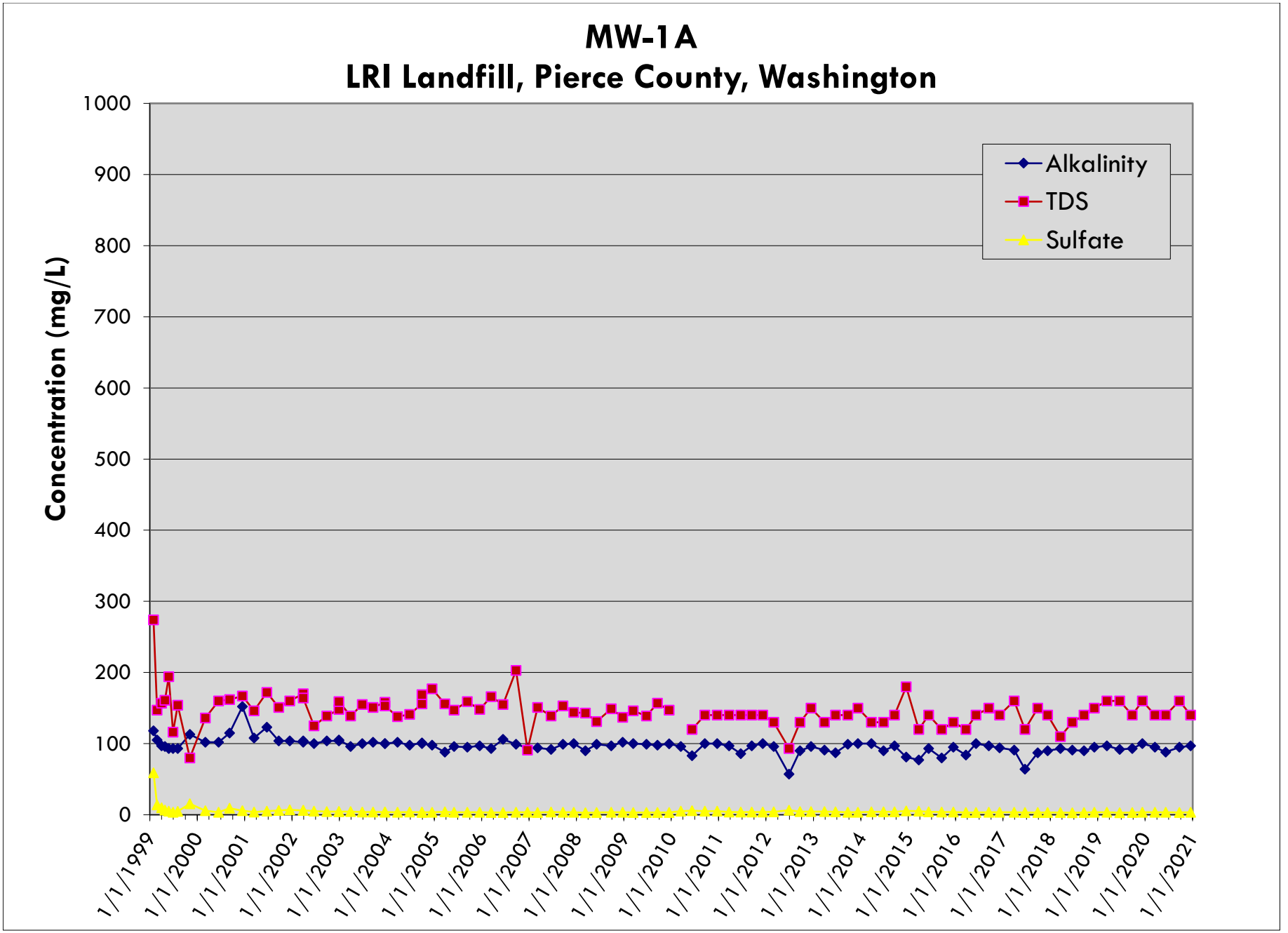
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021


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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1/1/2011
1/1/2012
1/1/2013
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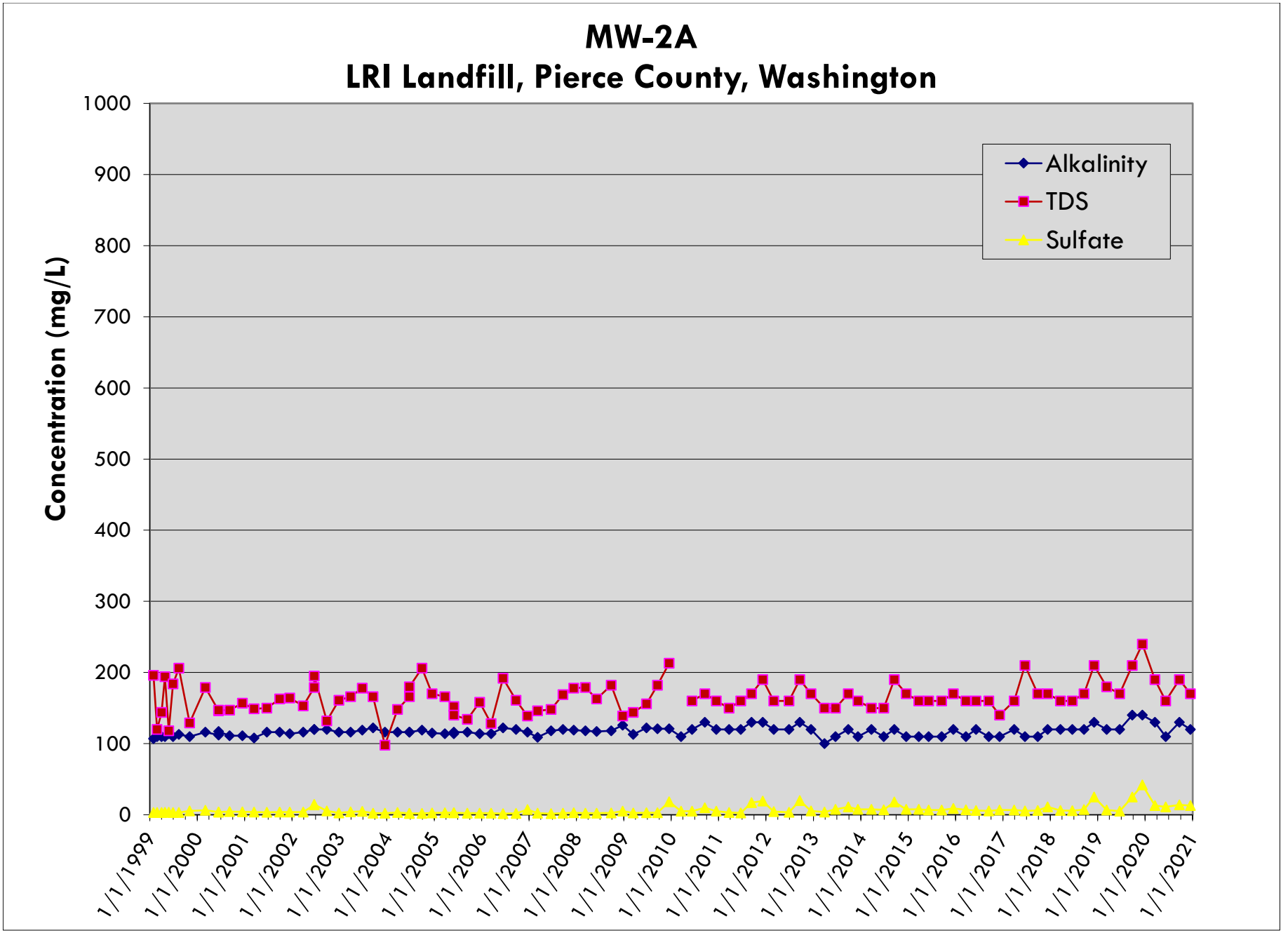
1/1/2020
1/1/2021


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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1/1/2012
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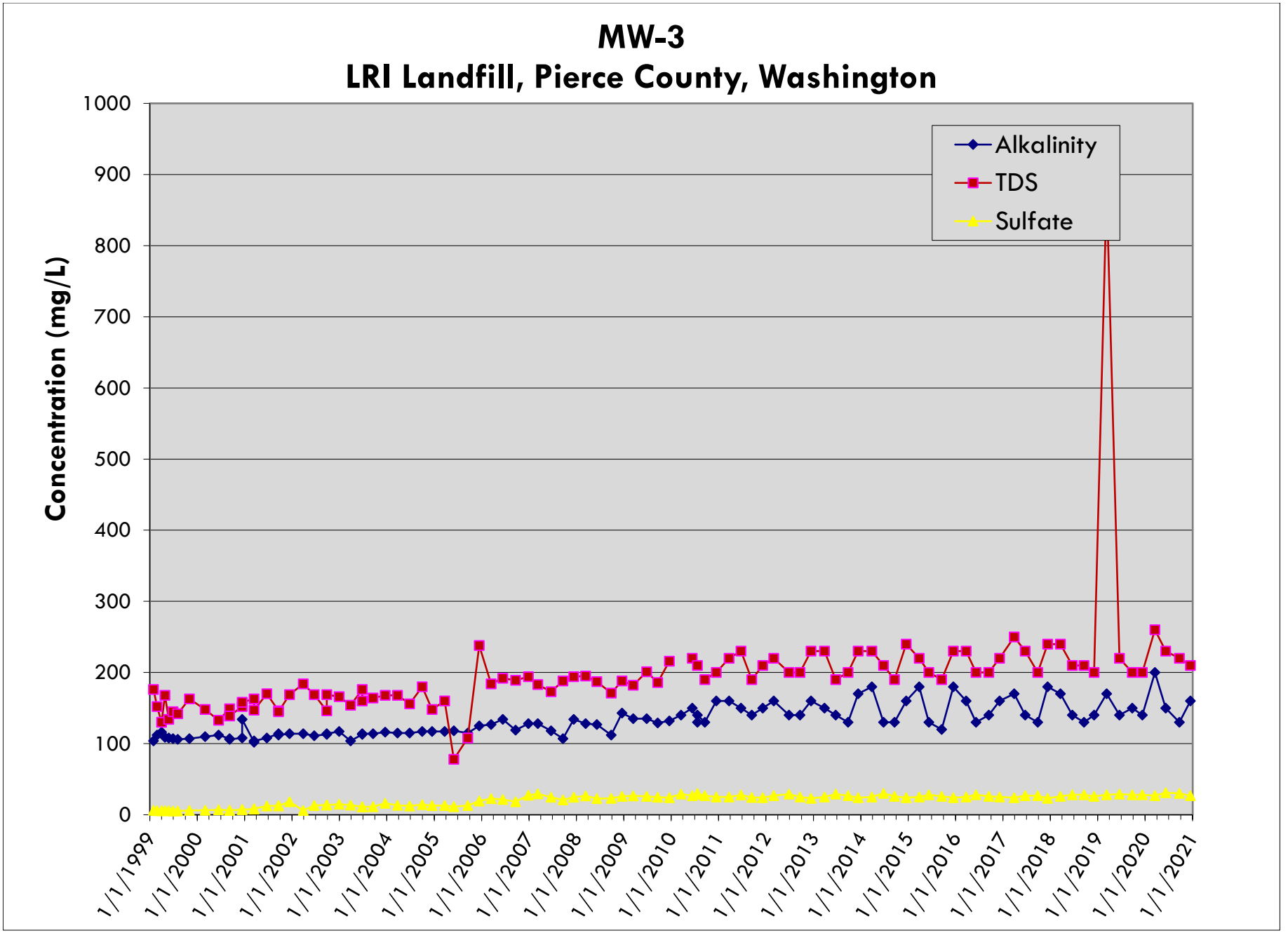
1/1/2020
1/1/2021


MW-3
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
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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
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1/1/2012
1/1/2013
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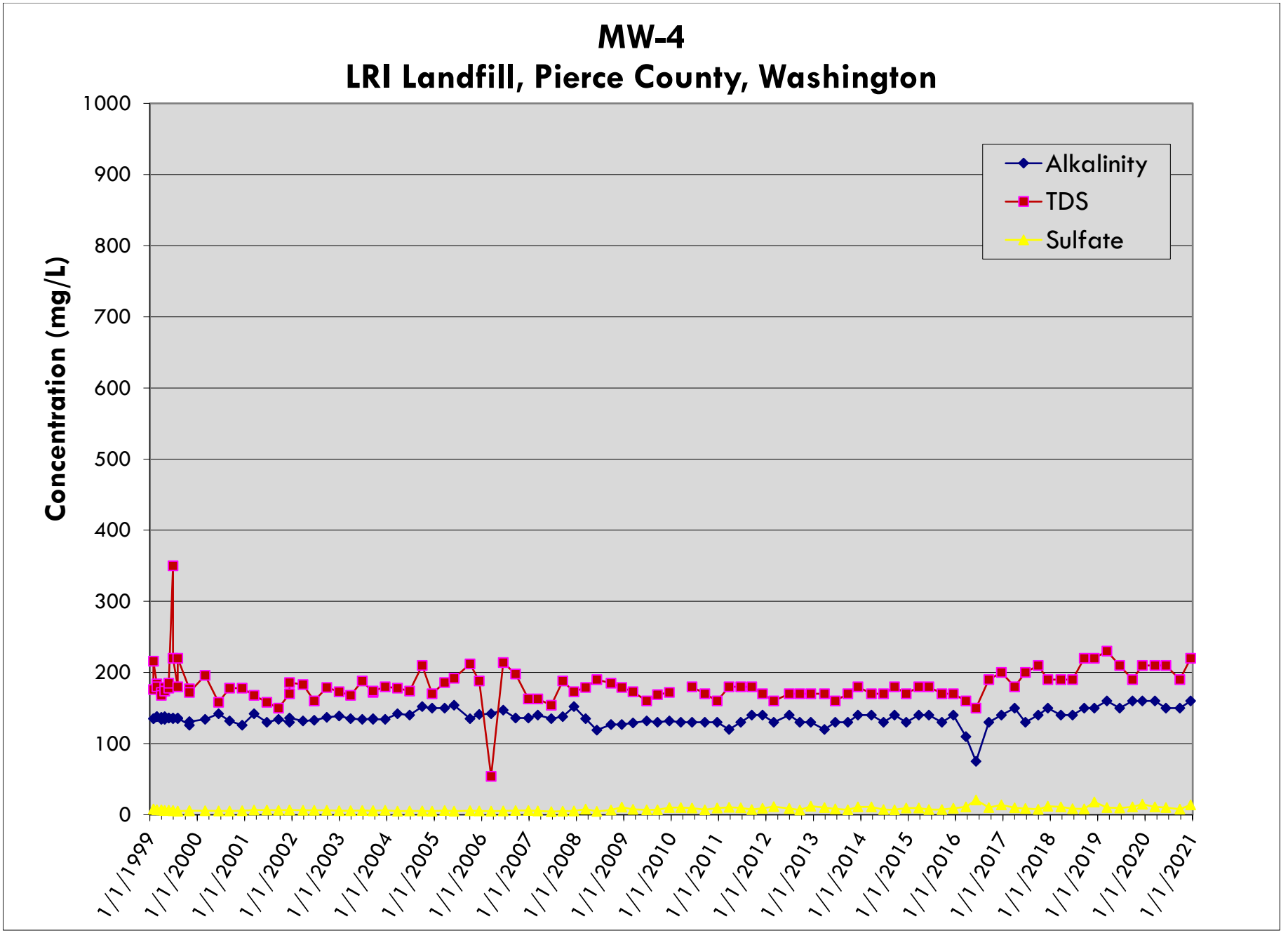
1/1/2019
1/1/2020
1/1/2021


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
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1/1/2012
1/1/2013
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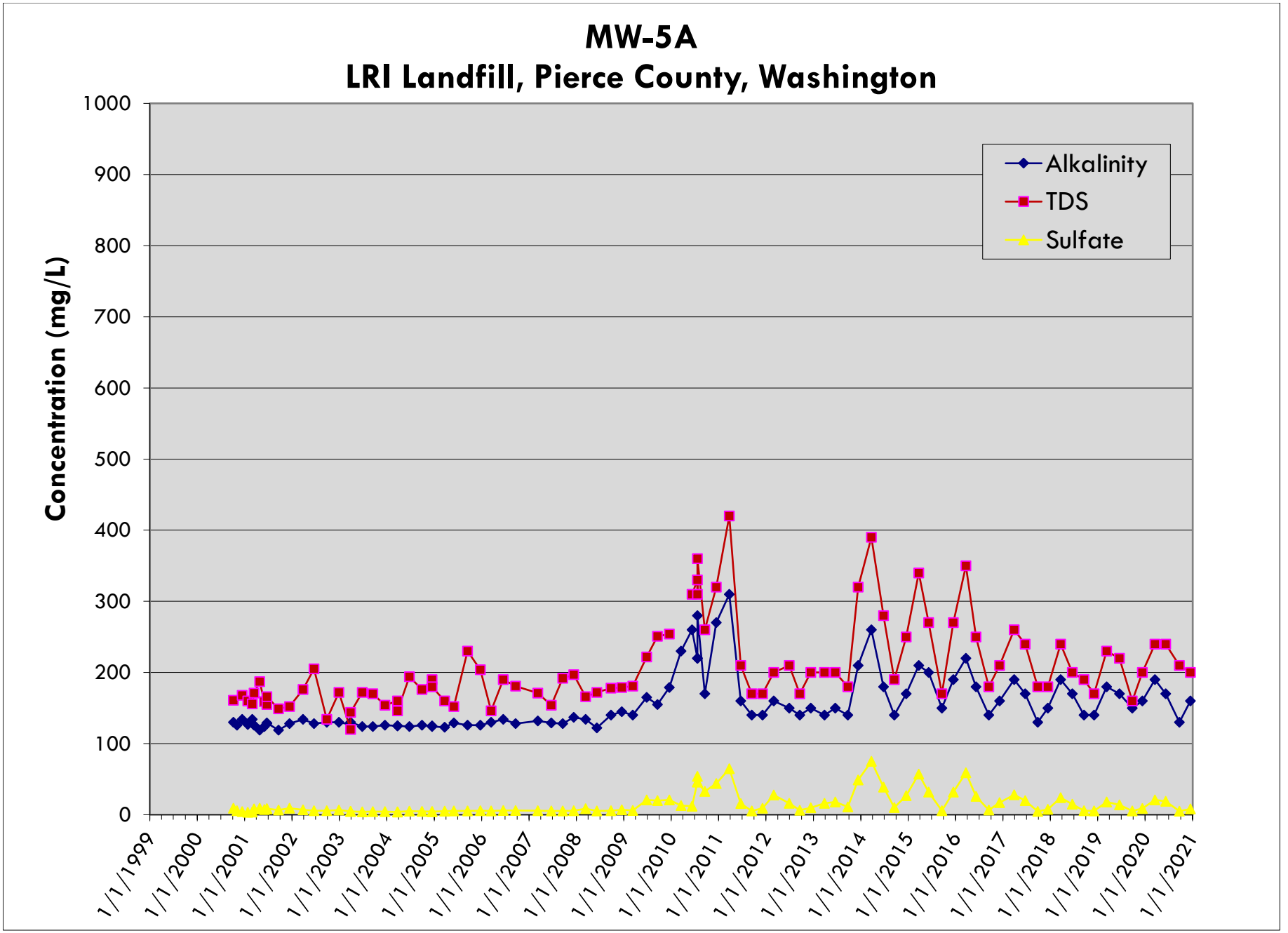
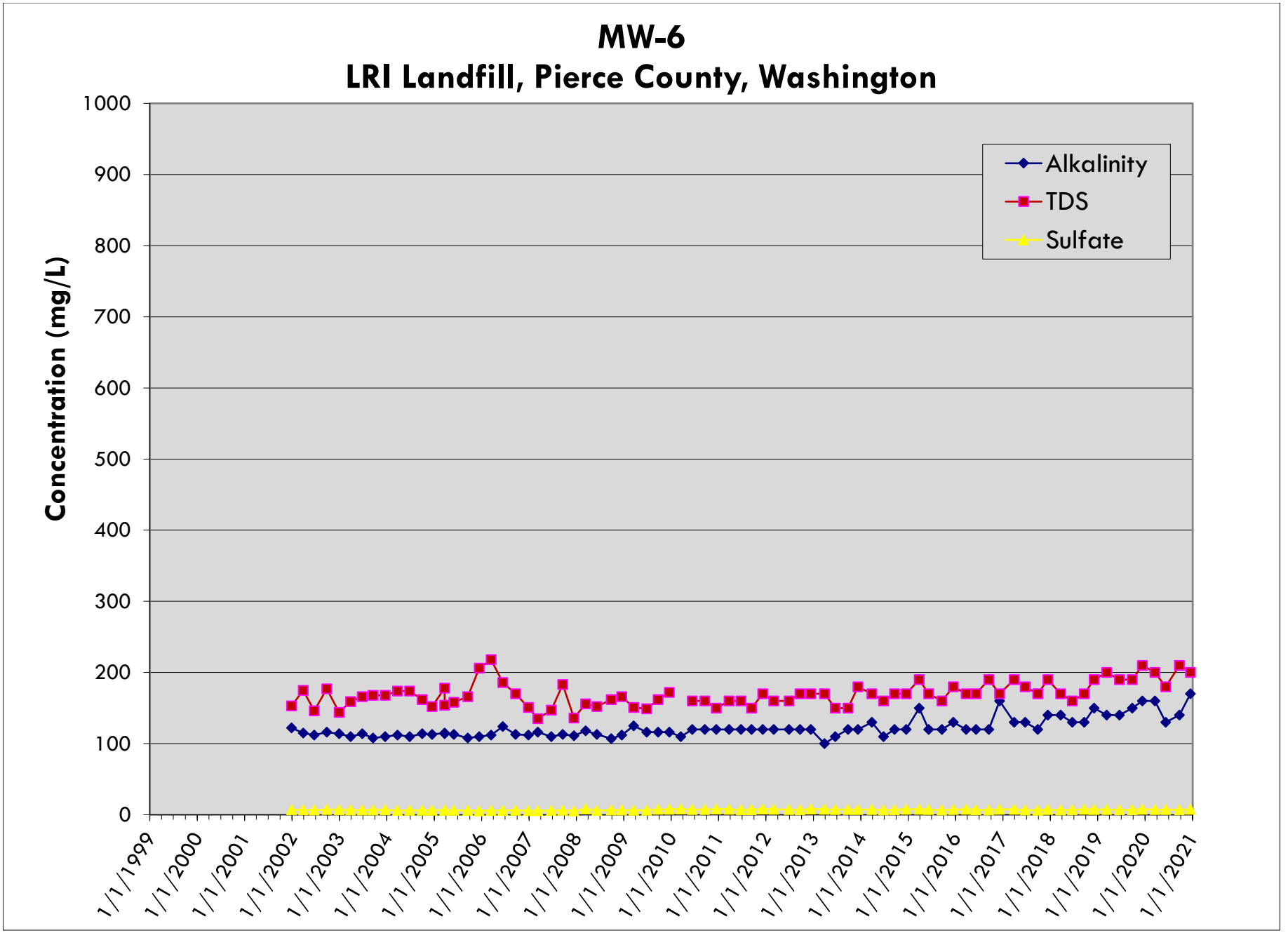
1/1/2019
1/1/2020
1/1/2021


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


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
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1/1/2012
1/1/2013
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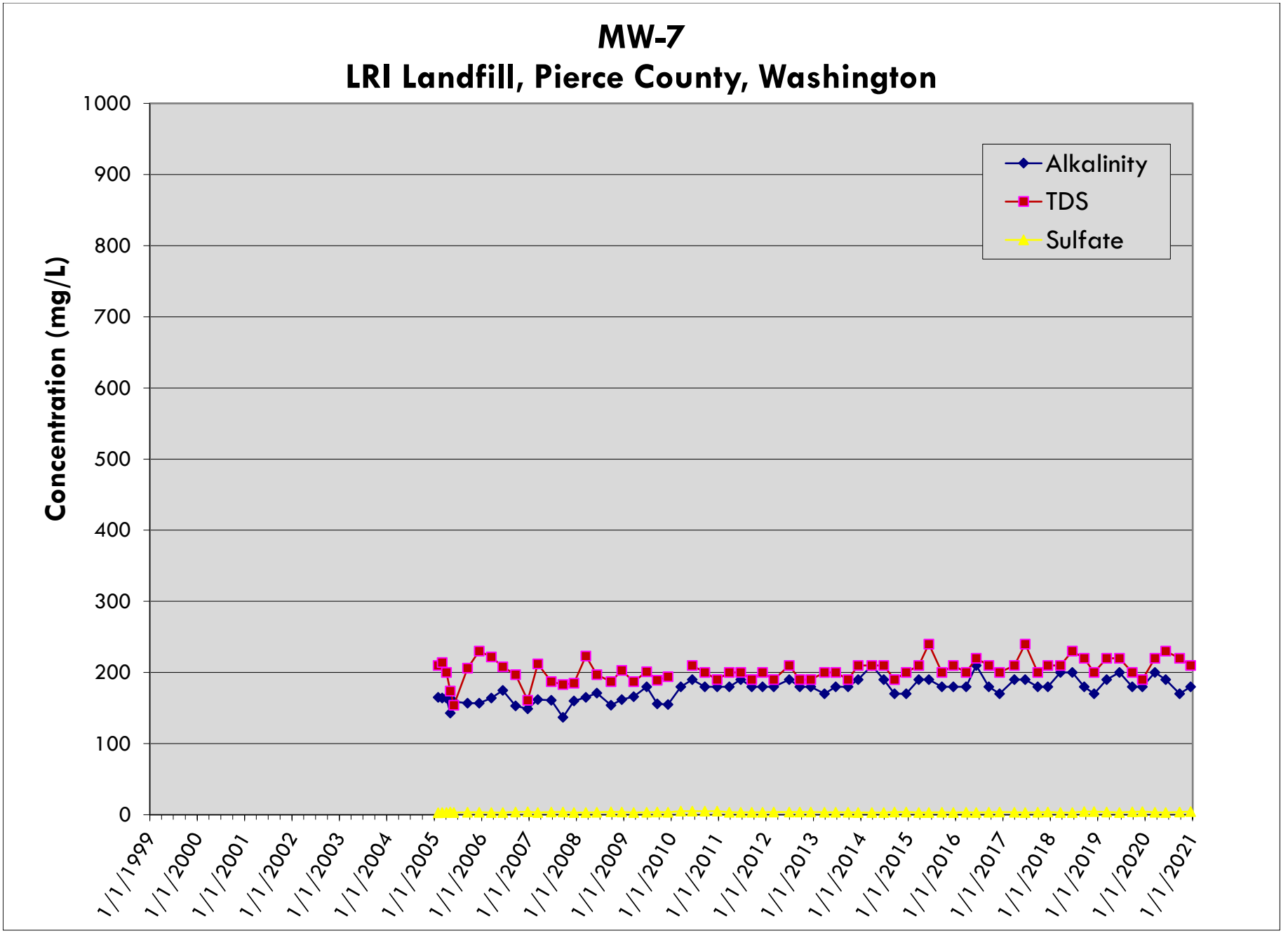
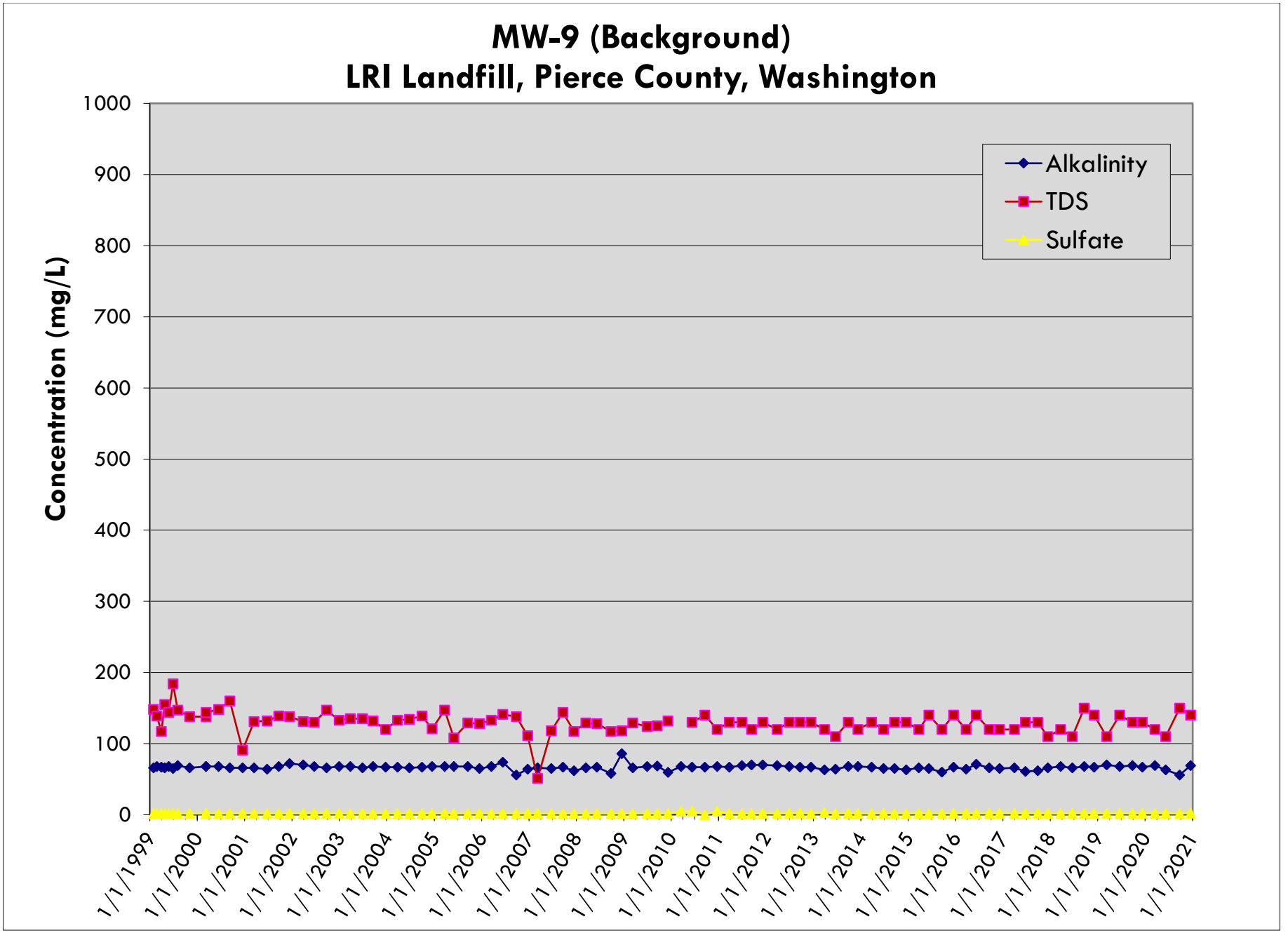
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021


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


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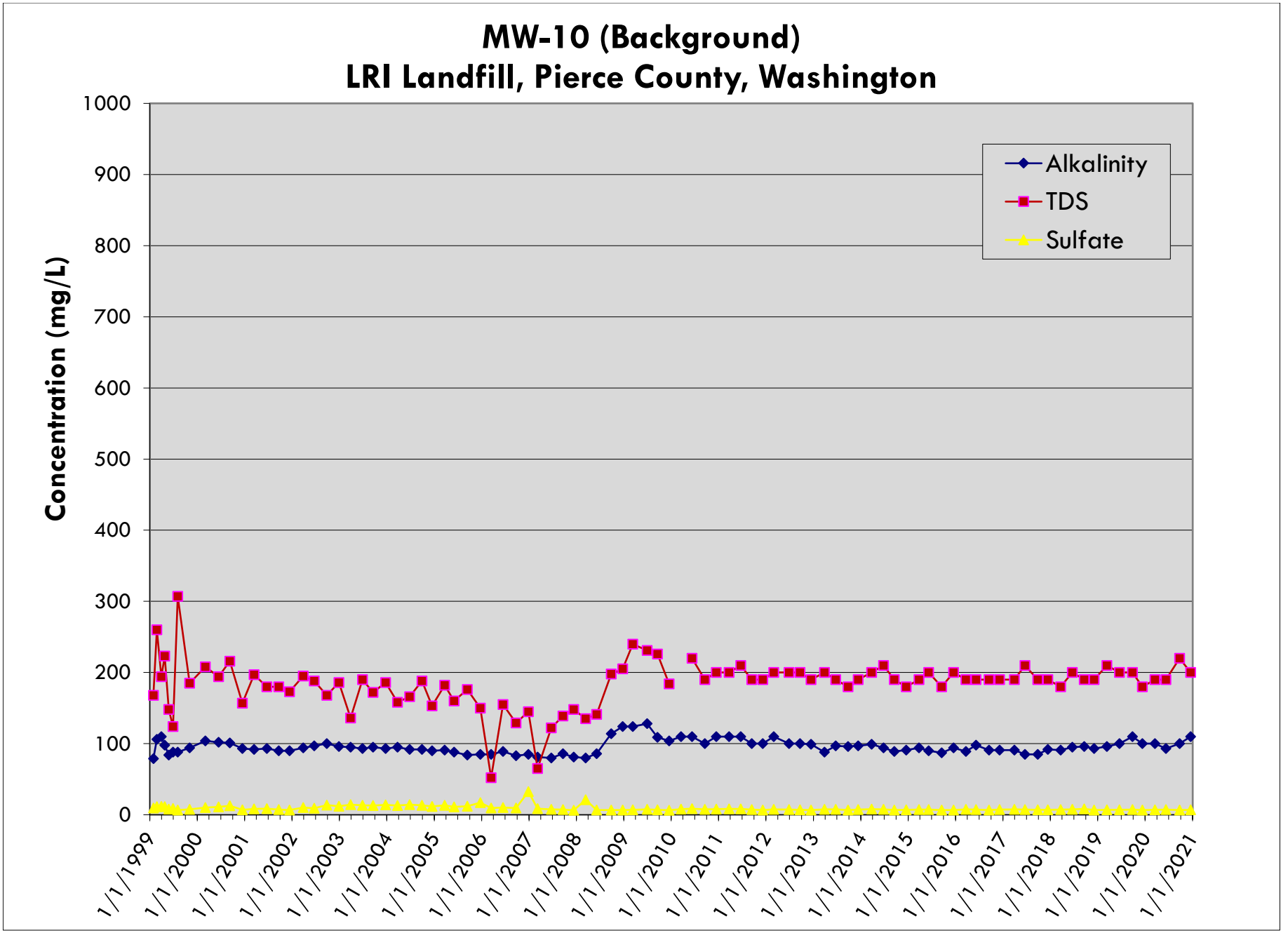
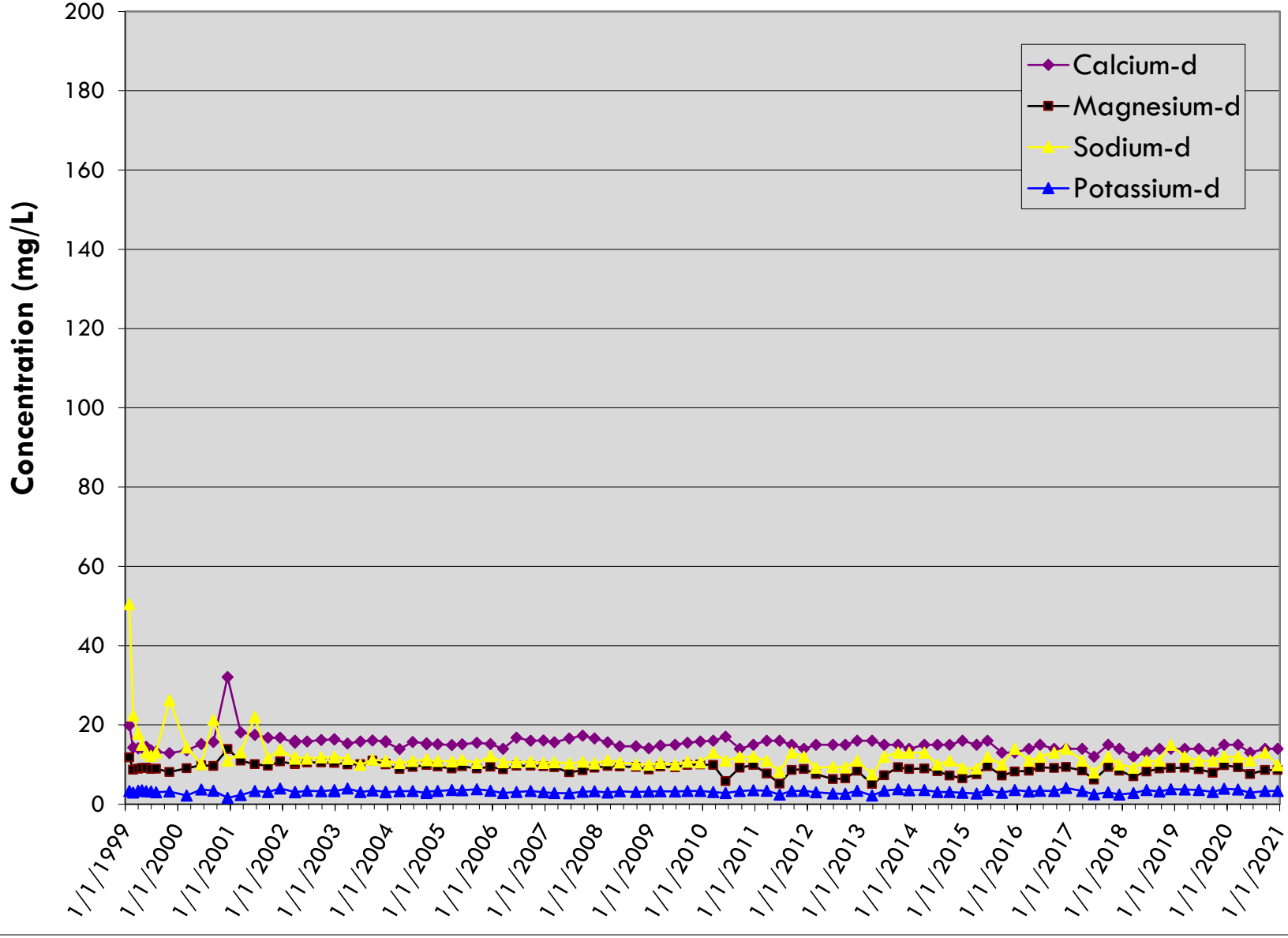
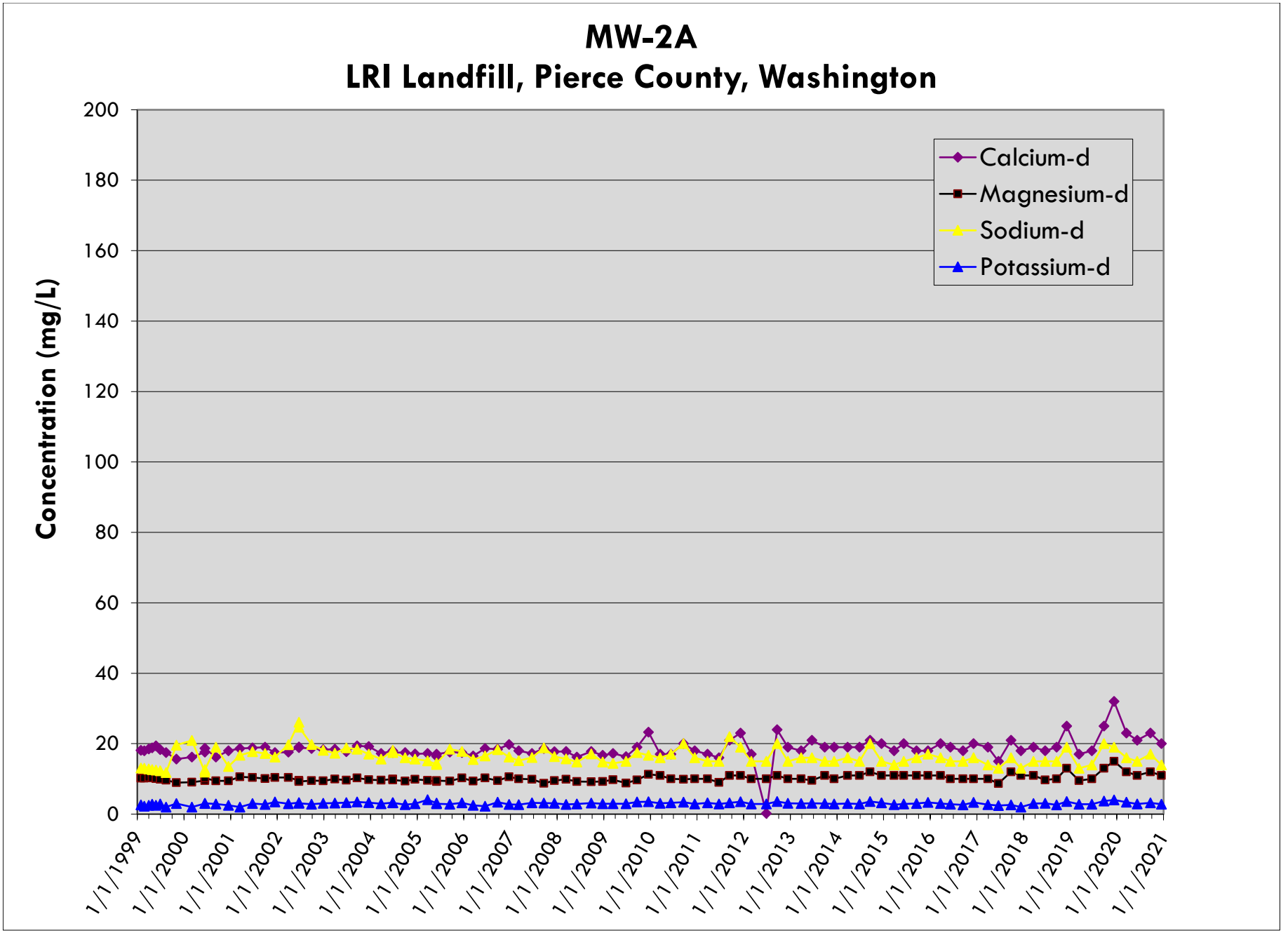
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021

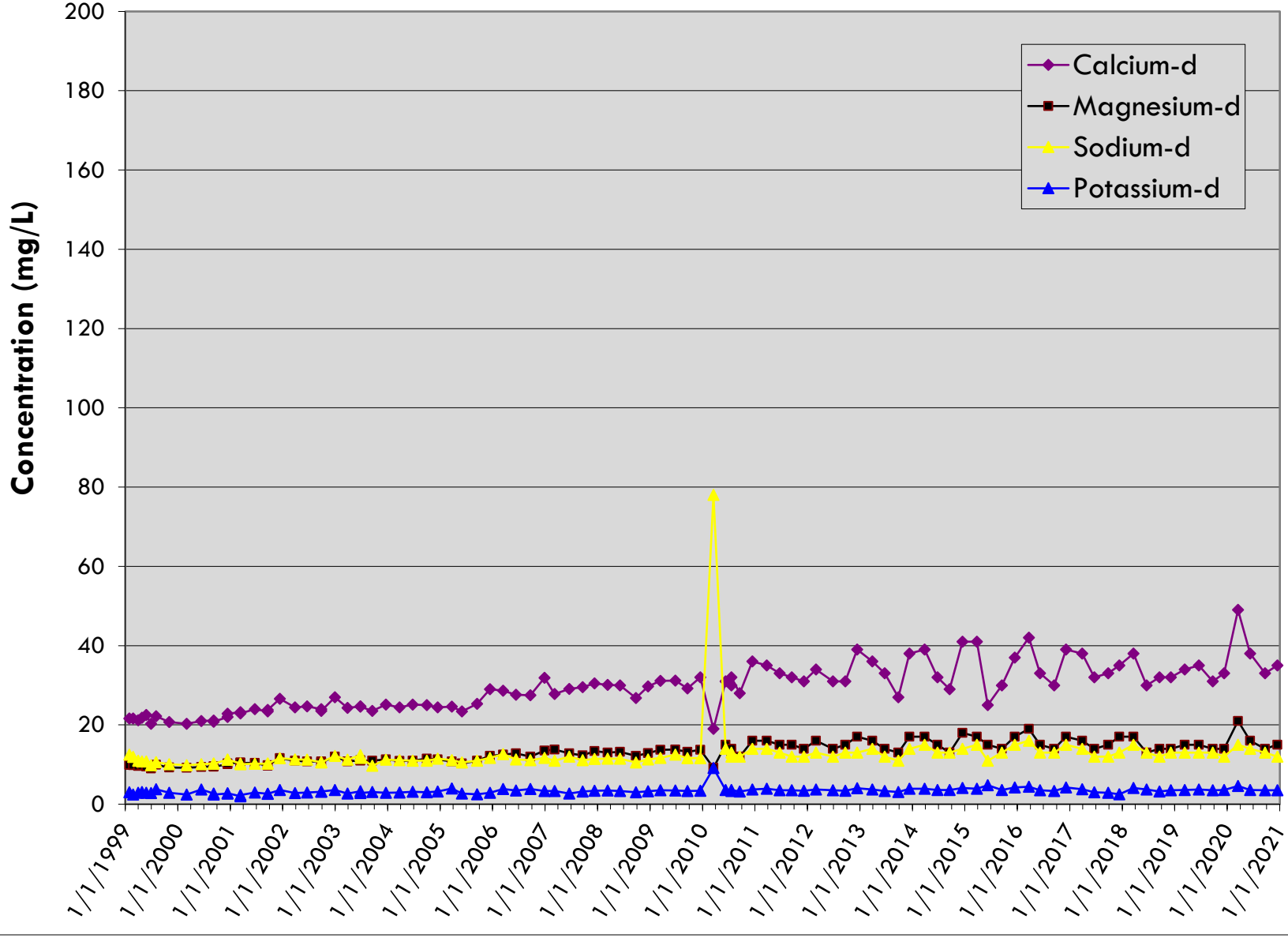

MW-10 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Alkalinity
TDS
Sulfate
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016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

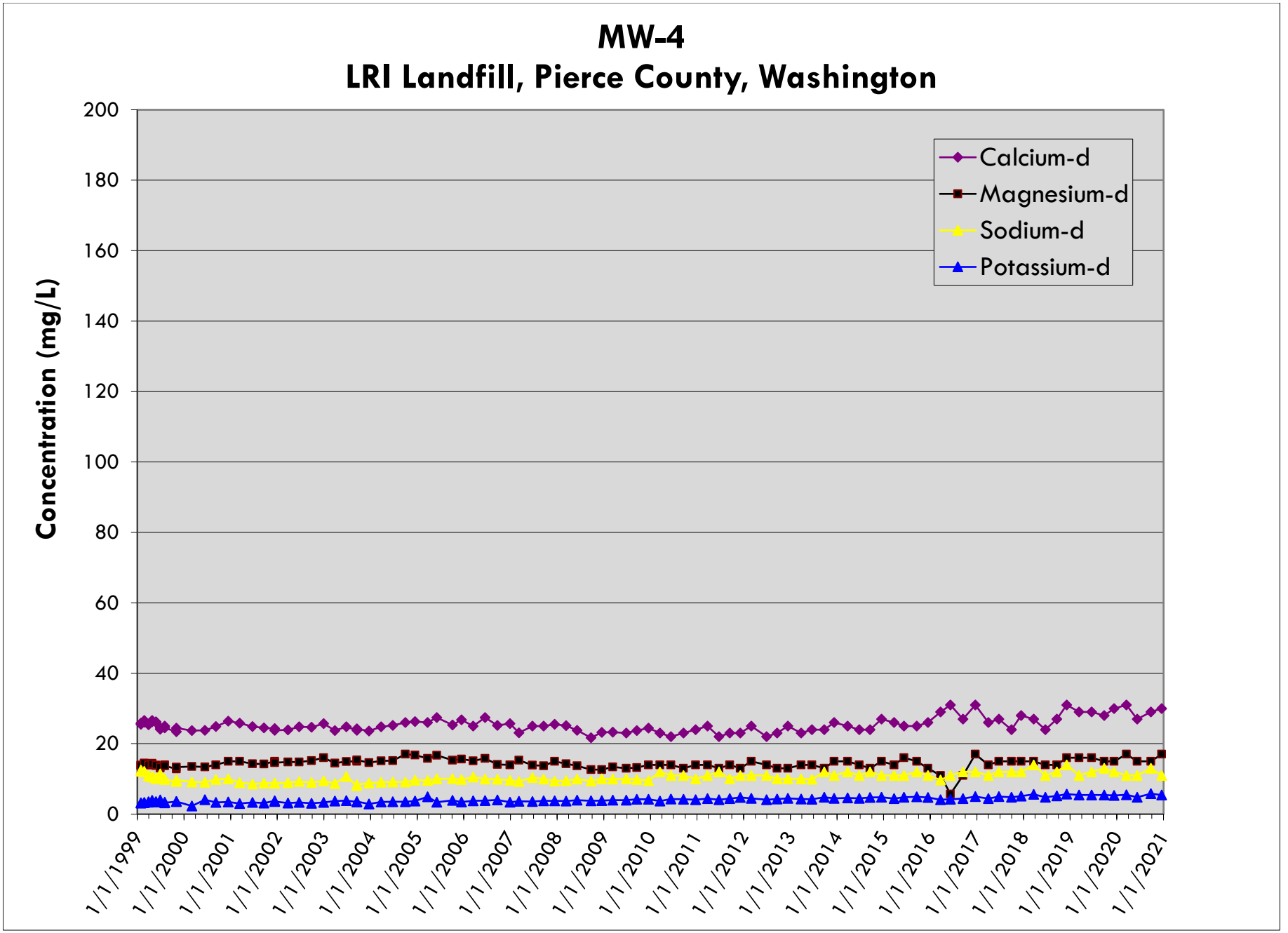
MW-1A
LRI Landfill, Pierce County, Washington

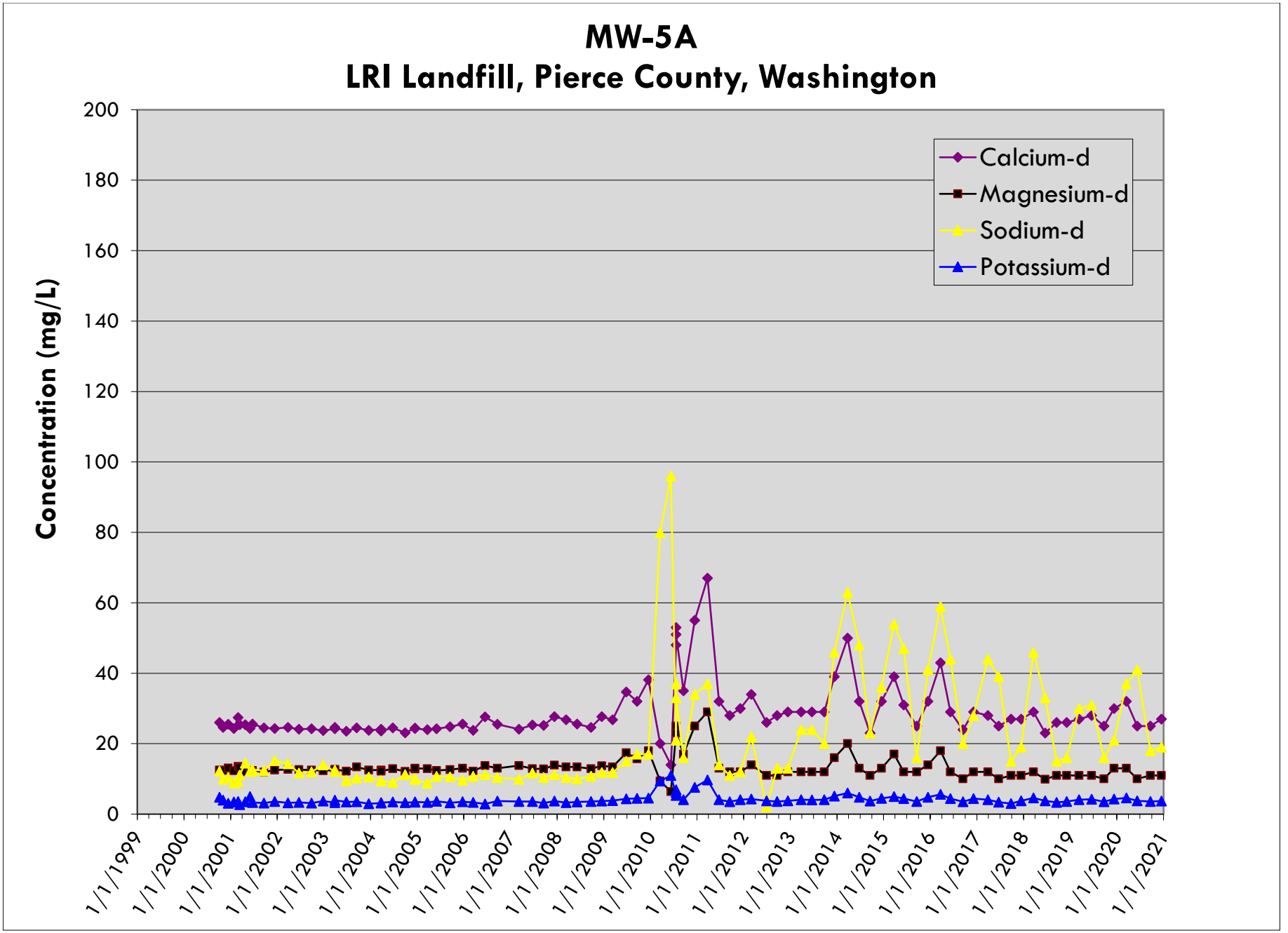


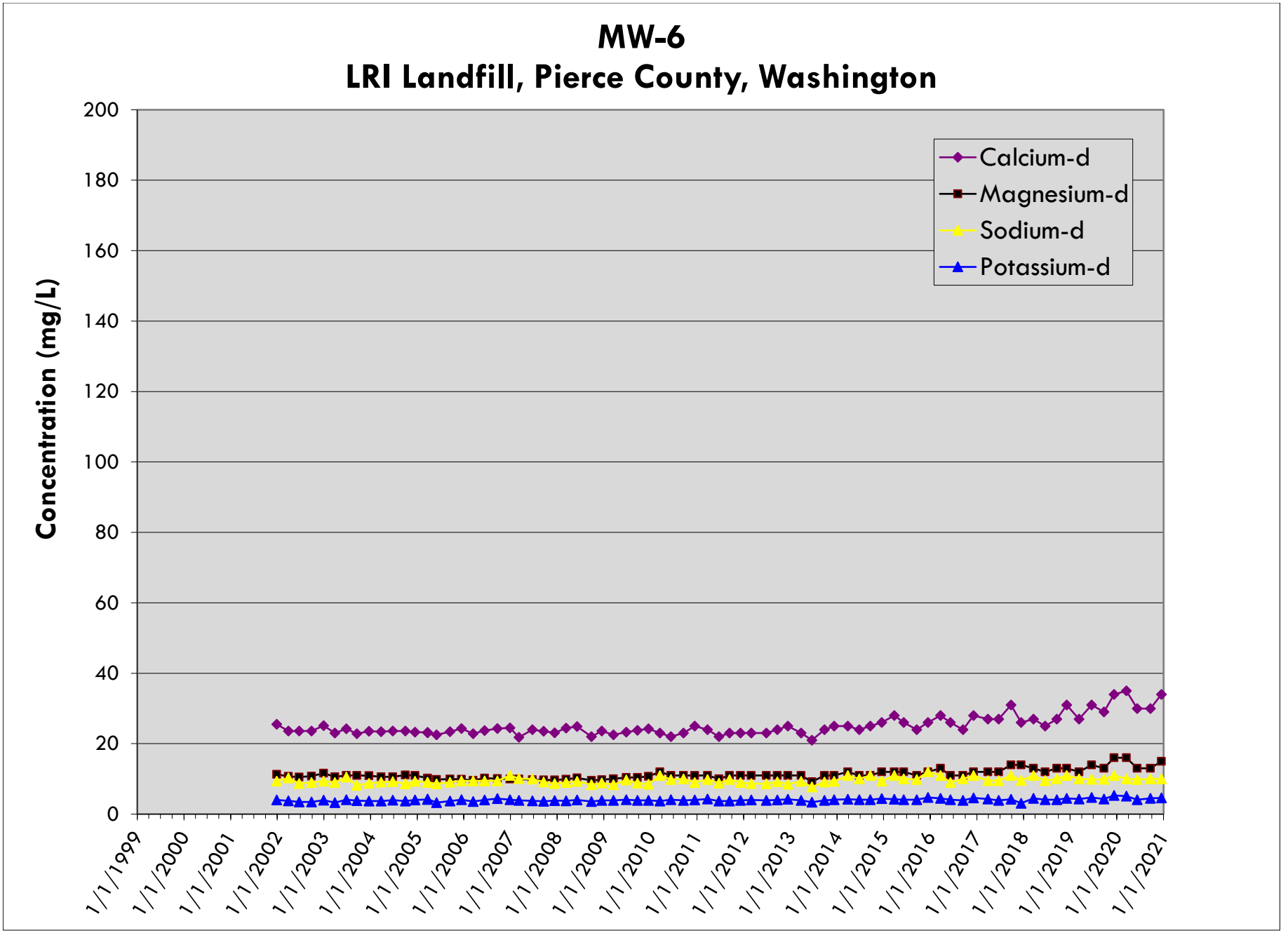

MW-2A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015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

MW-3
LRI Landfill, Pierce County, Washington

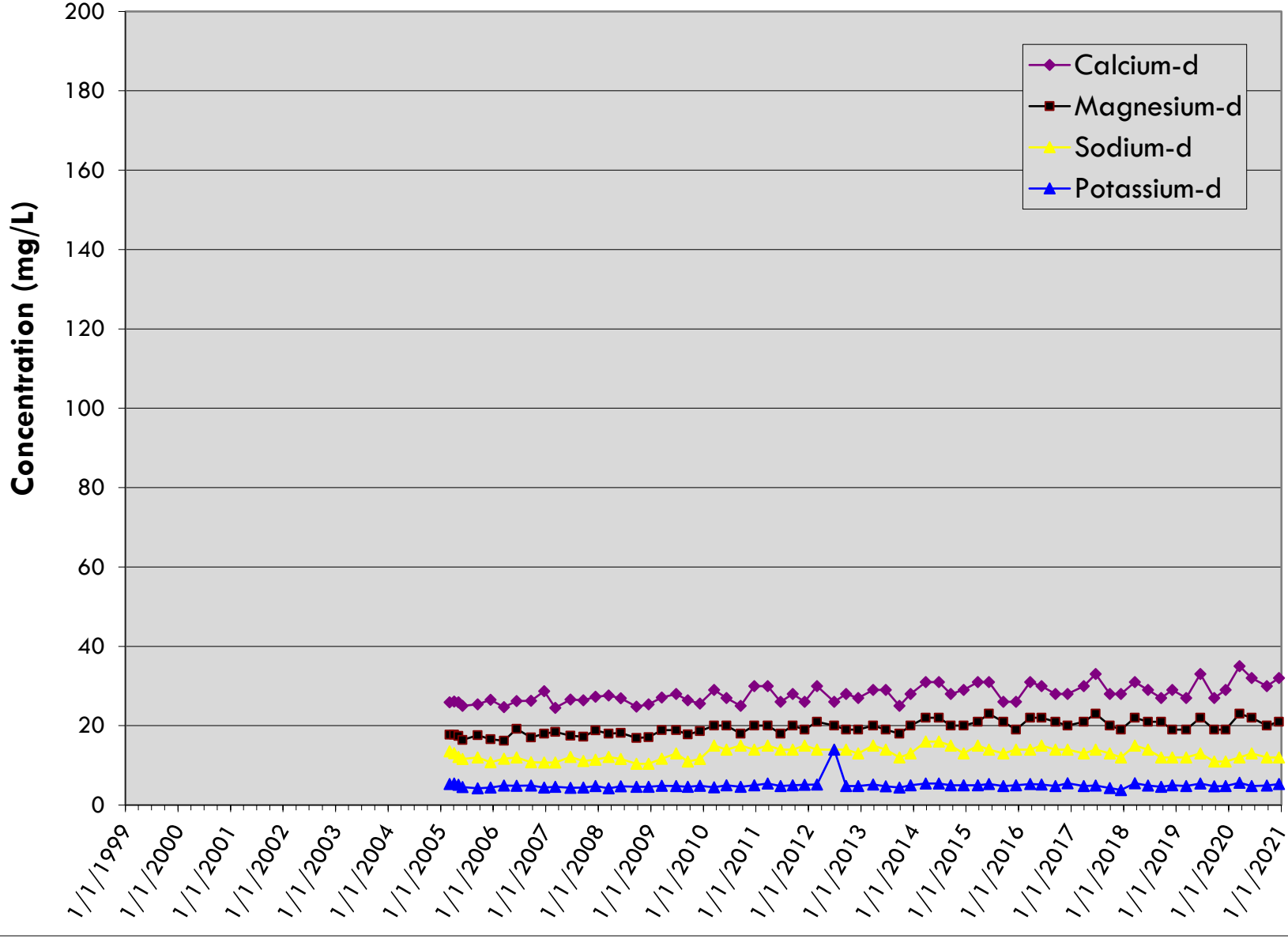


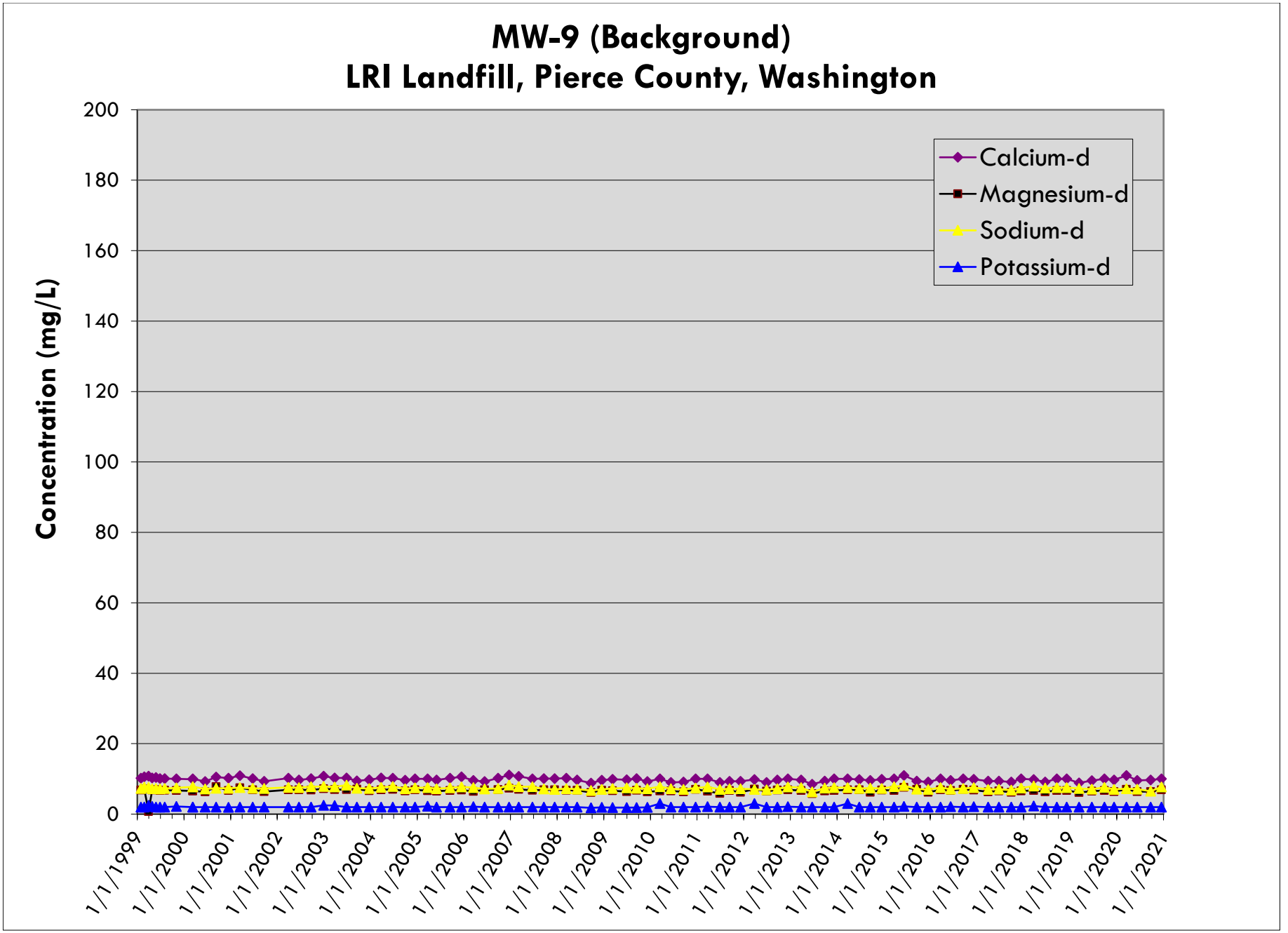

MW-4
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021


MW-5A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
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
Calcium-d
Magnesium-d
Sodium-d
Potassium-d

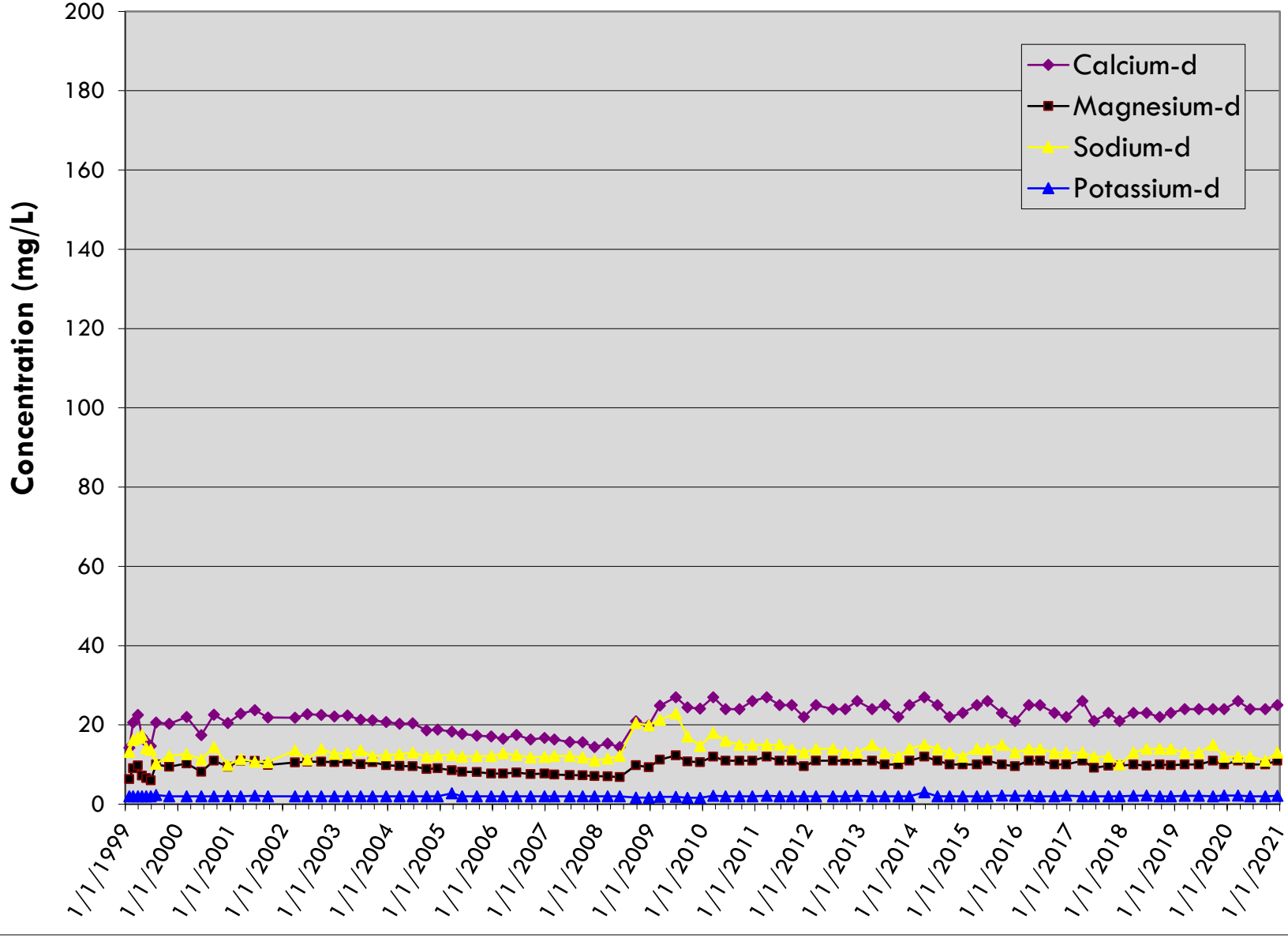

MW-6
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016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

MW-7
LRI Landfill, Pierce County, Washington

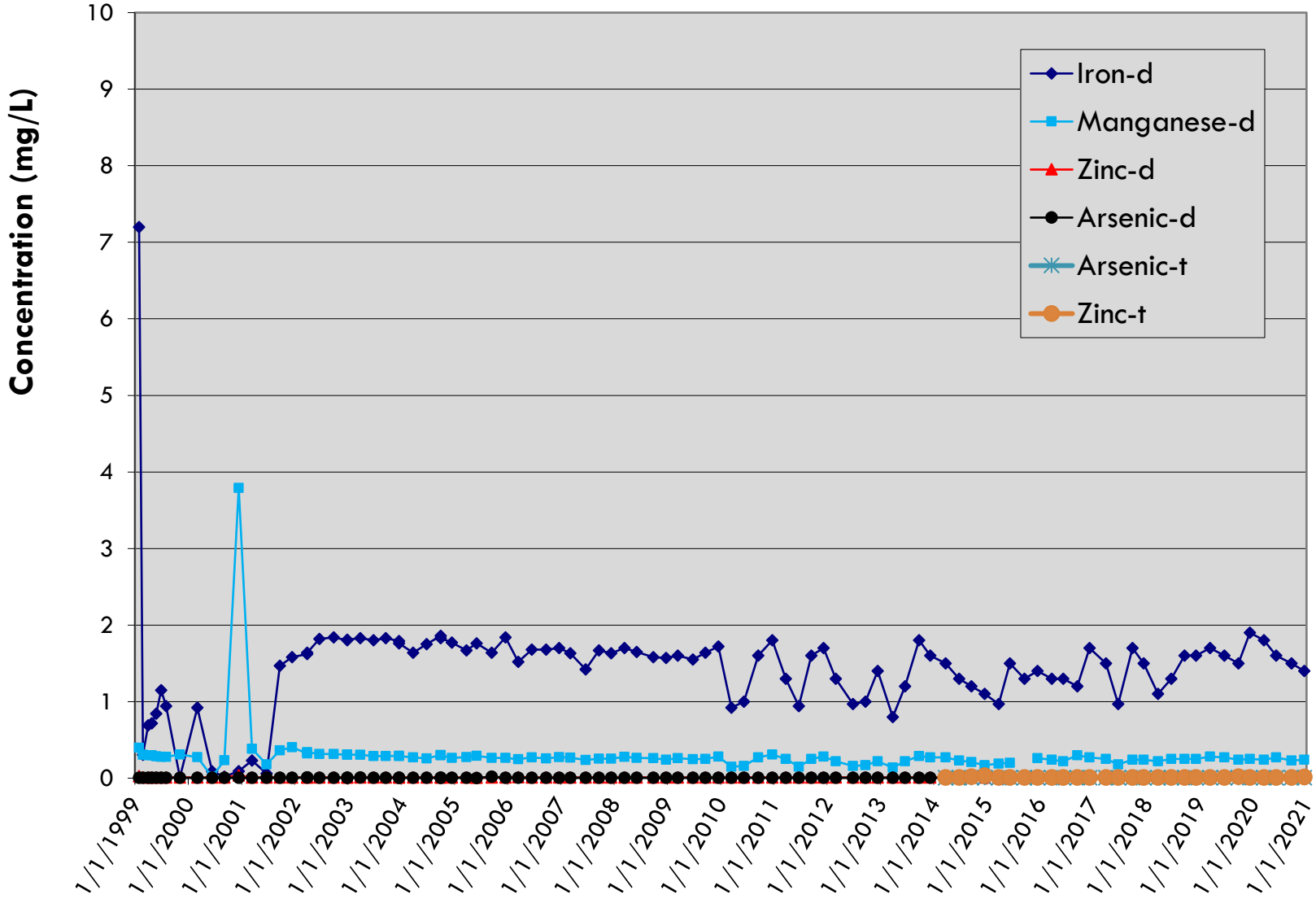



MW-9 (Background)
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
200
180
160
140
120
100
80
60
40
20
0
Calcium-d
Magnesium-d
Sodium-d
Potassium-d
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014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

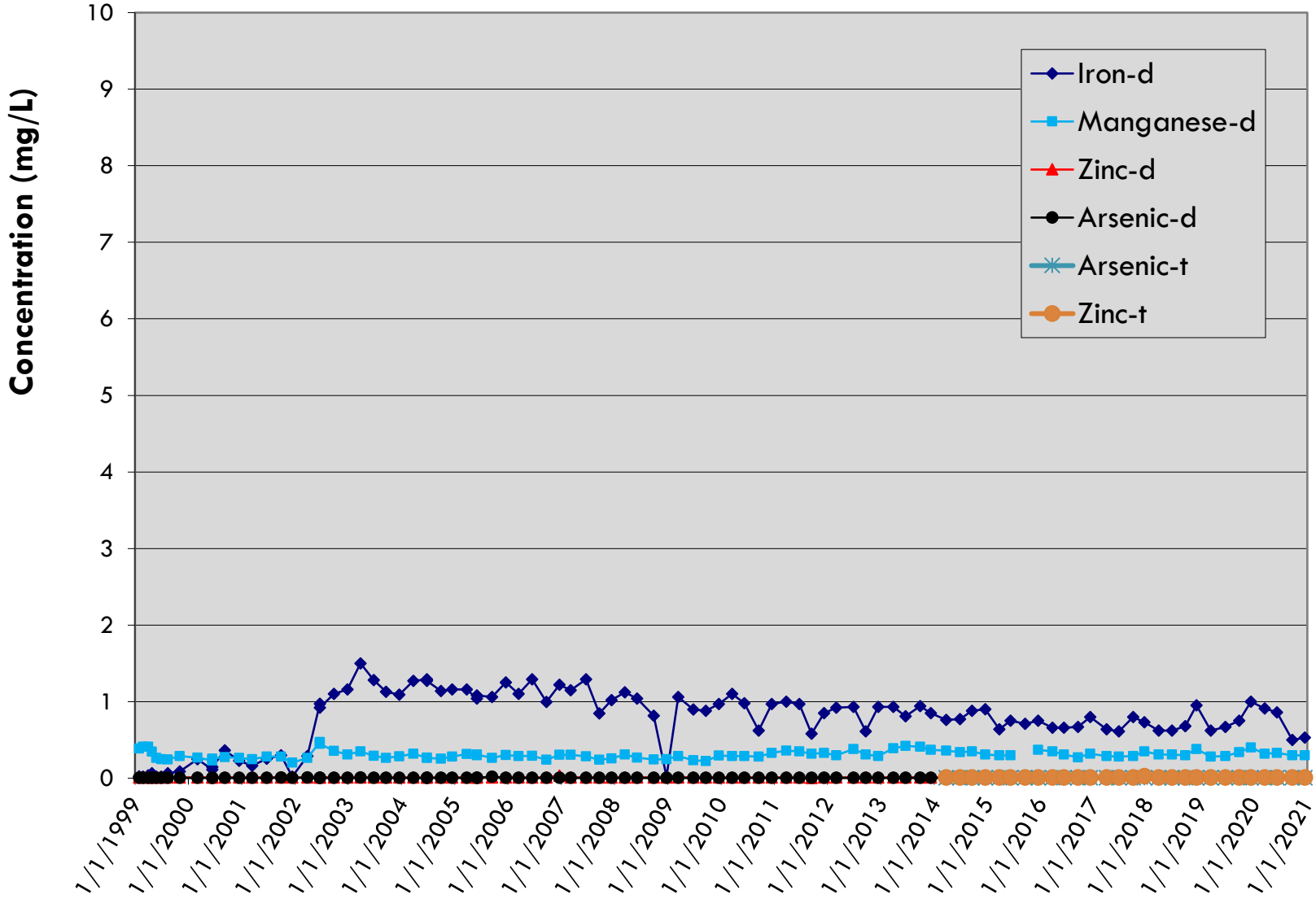
MW-10 (Background)
LRI Landfill, Pierce County, Washington



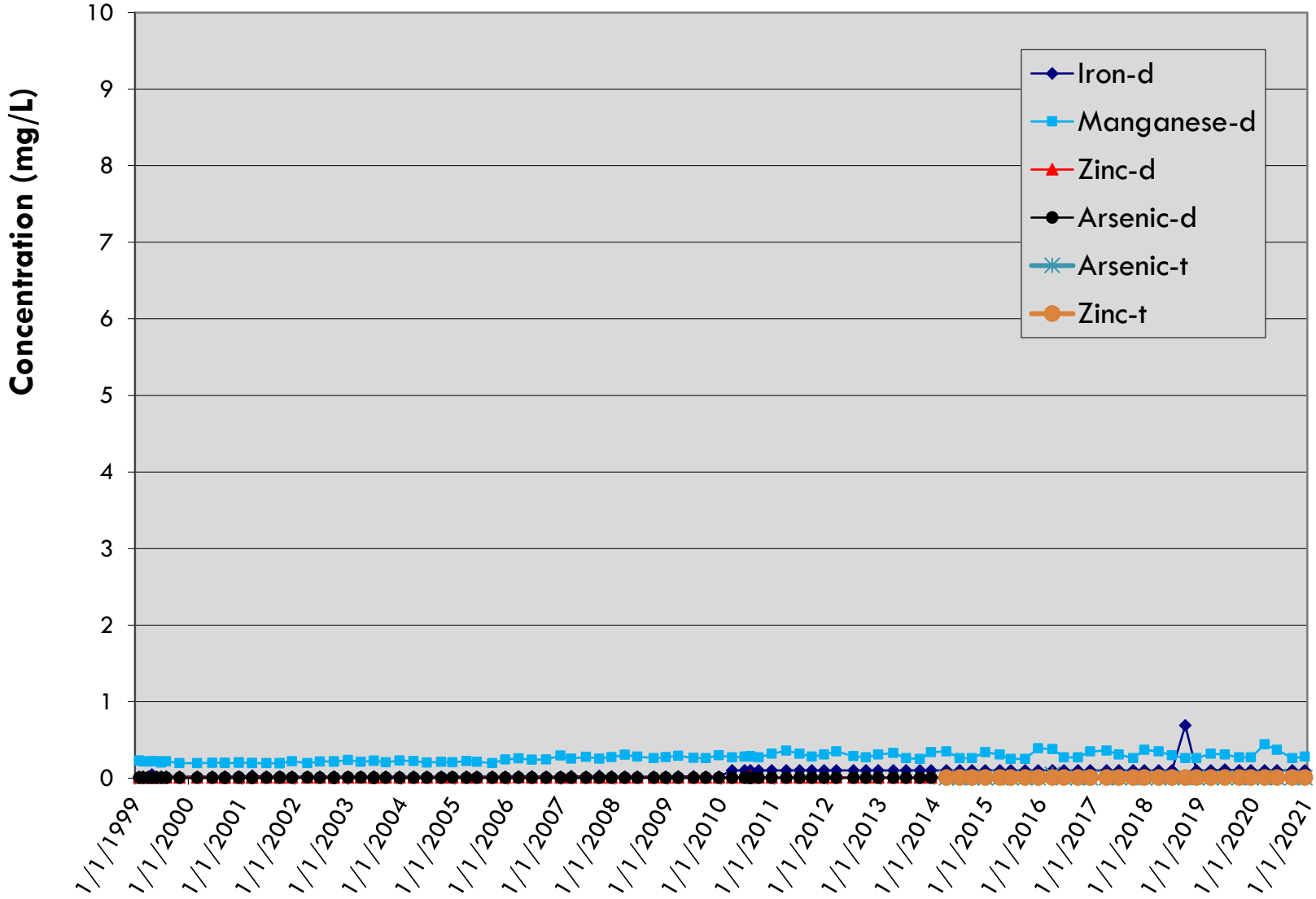
MW-1A
LRI Landfill, Pierce County, Washington



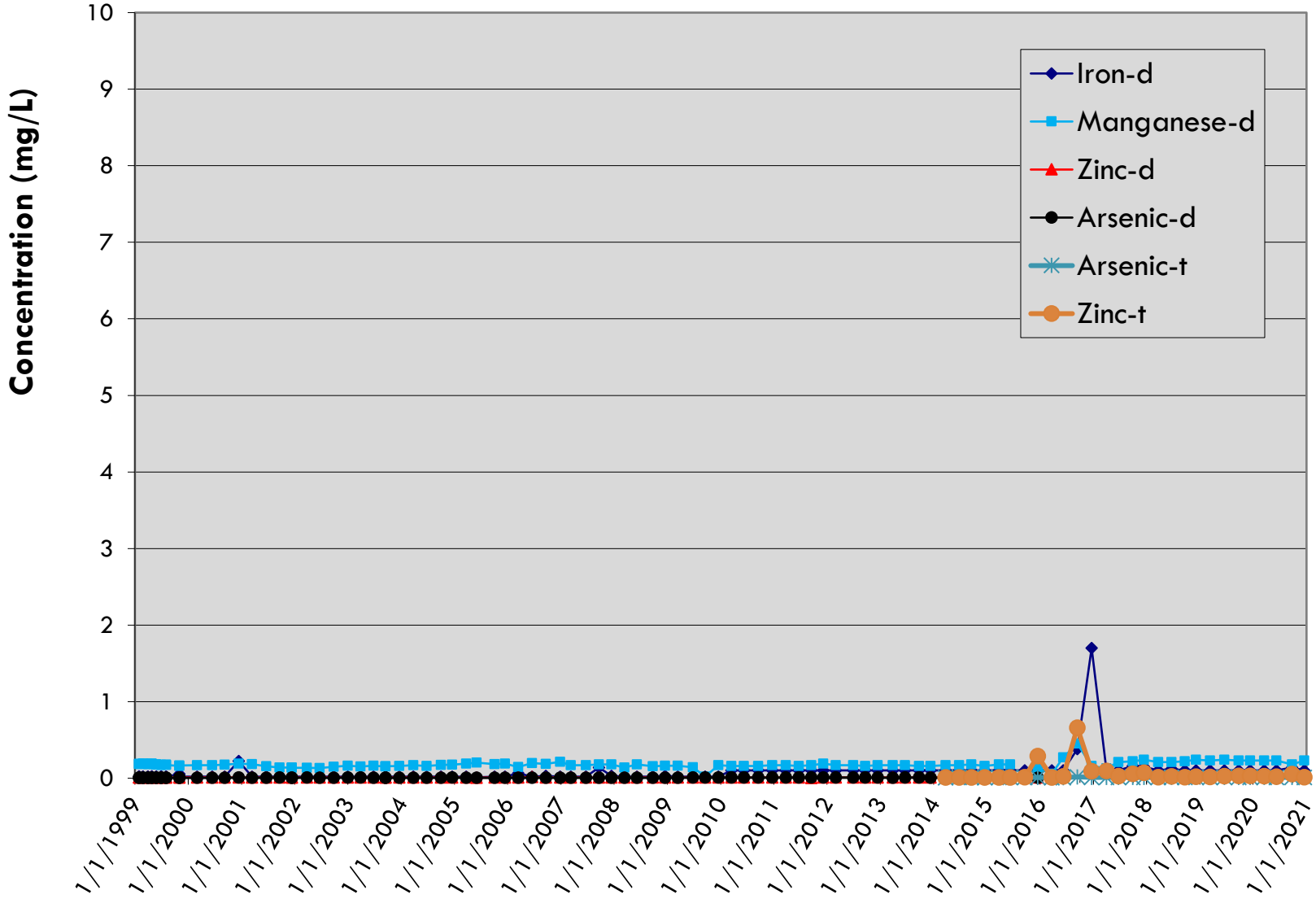
MW-2A
LRI Landfill, Pierce County, Washington



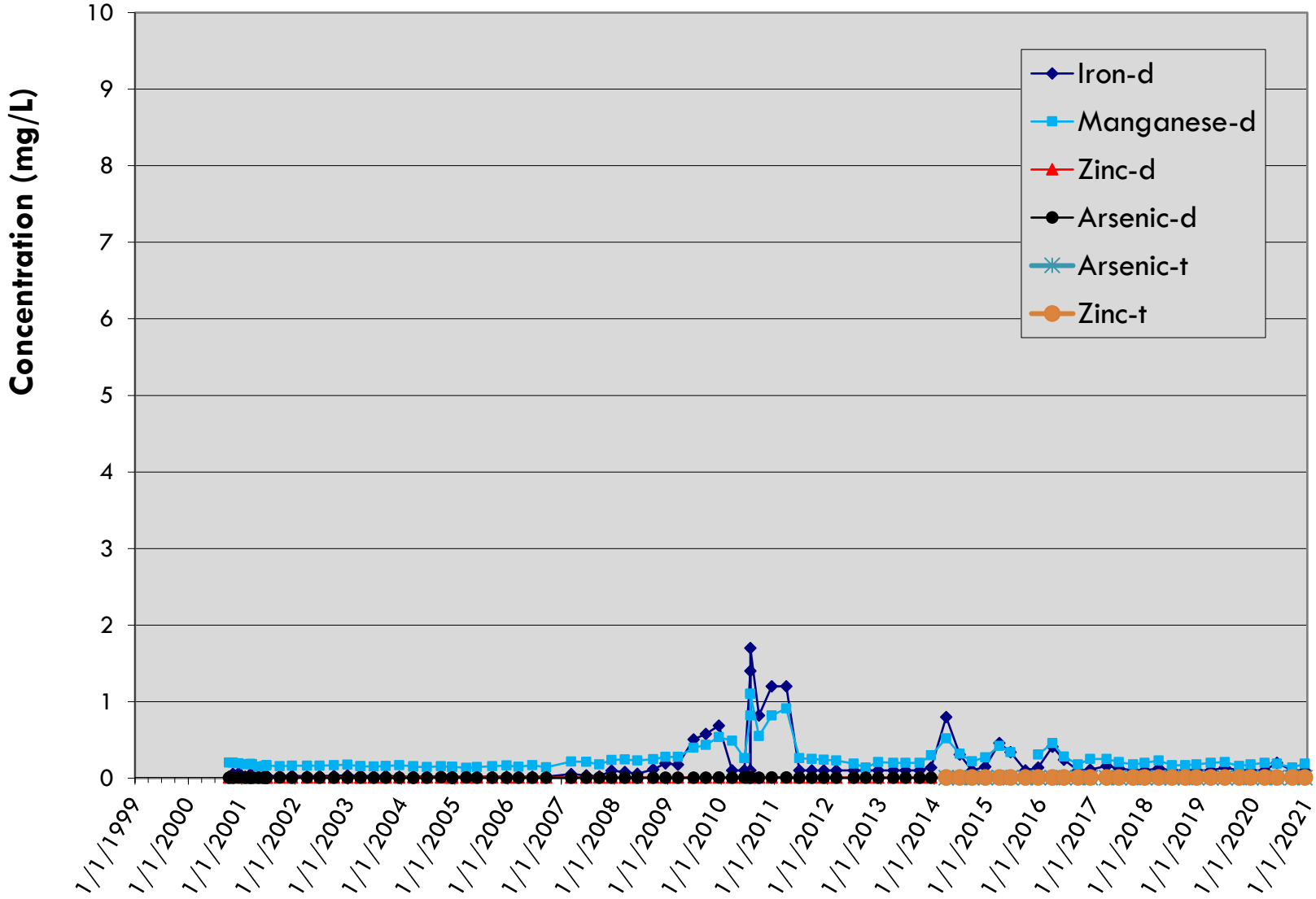
MW-3
LRI Landfill, Pierce County, Washington



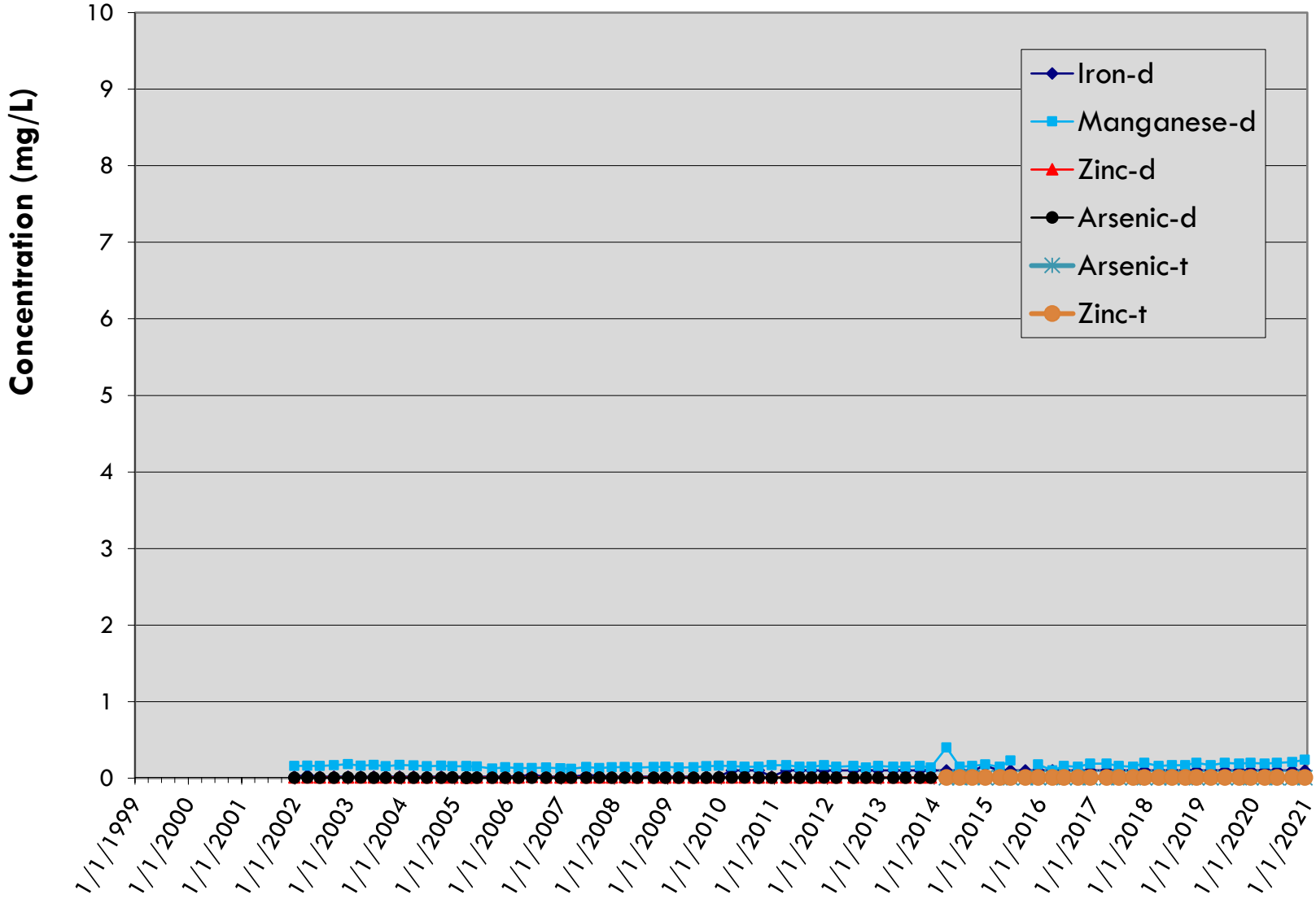
MW-4
LRI Landfill, Pierce County, Washington



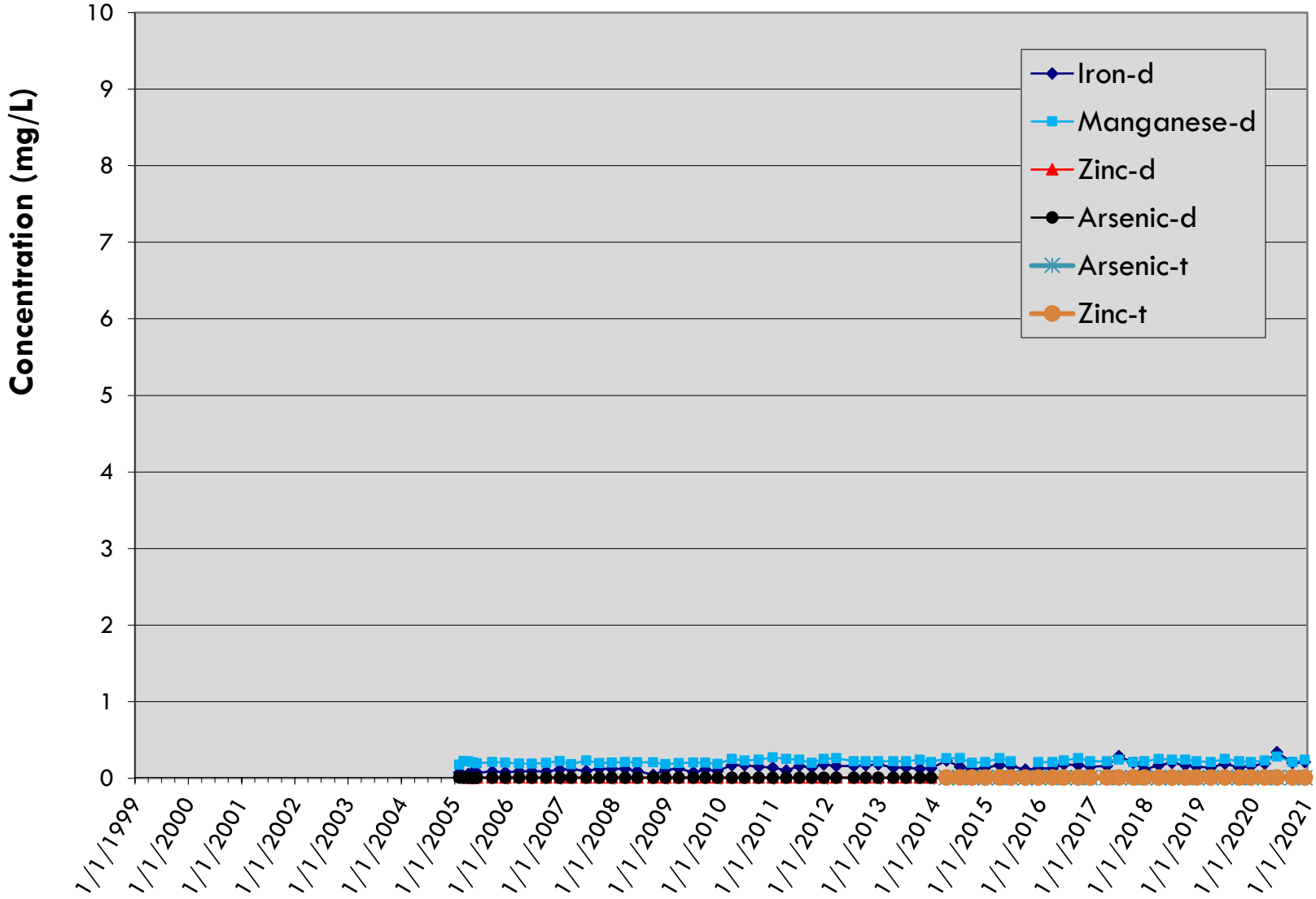
MW-5A
LRI Landfill, Pierce County, Washington

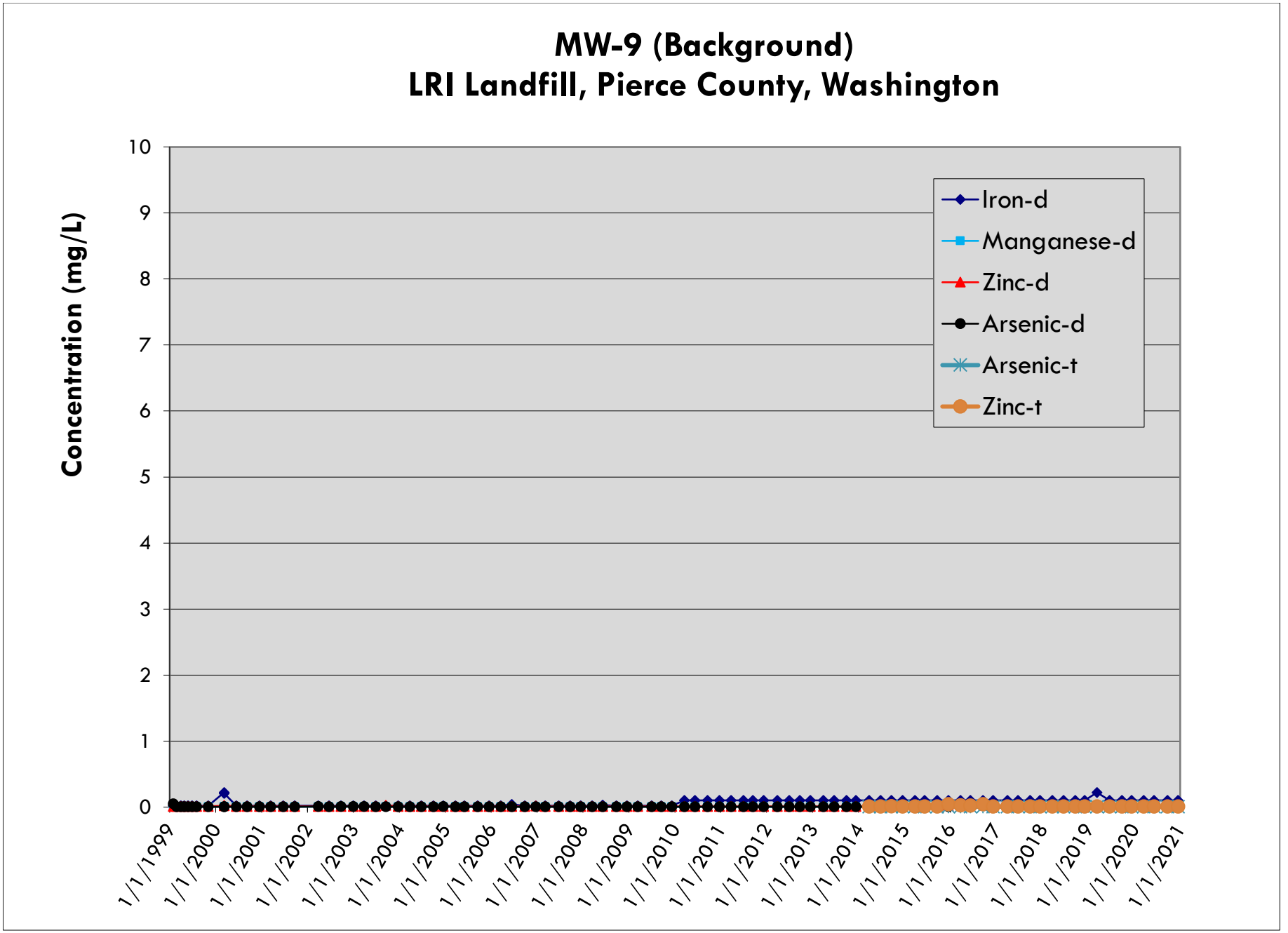


MW-6
LRI Landfill, Pierce County, Washington

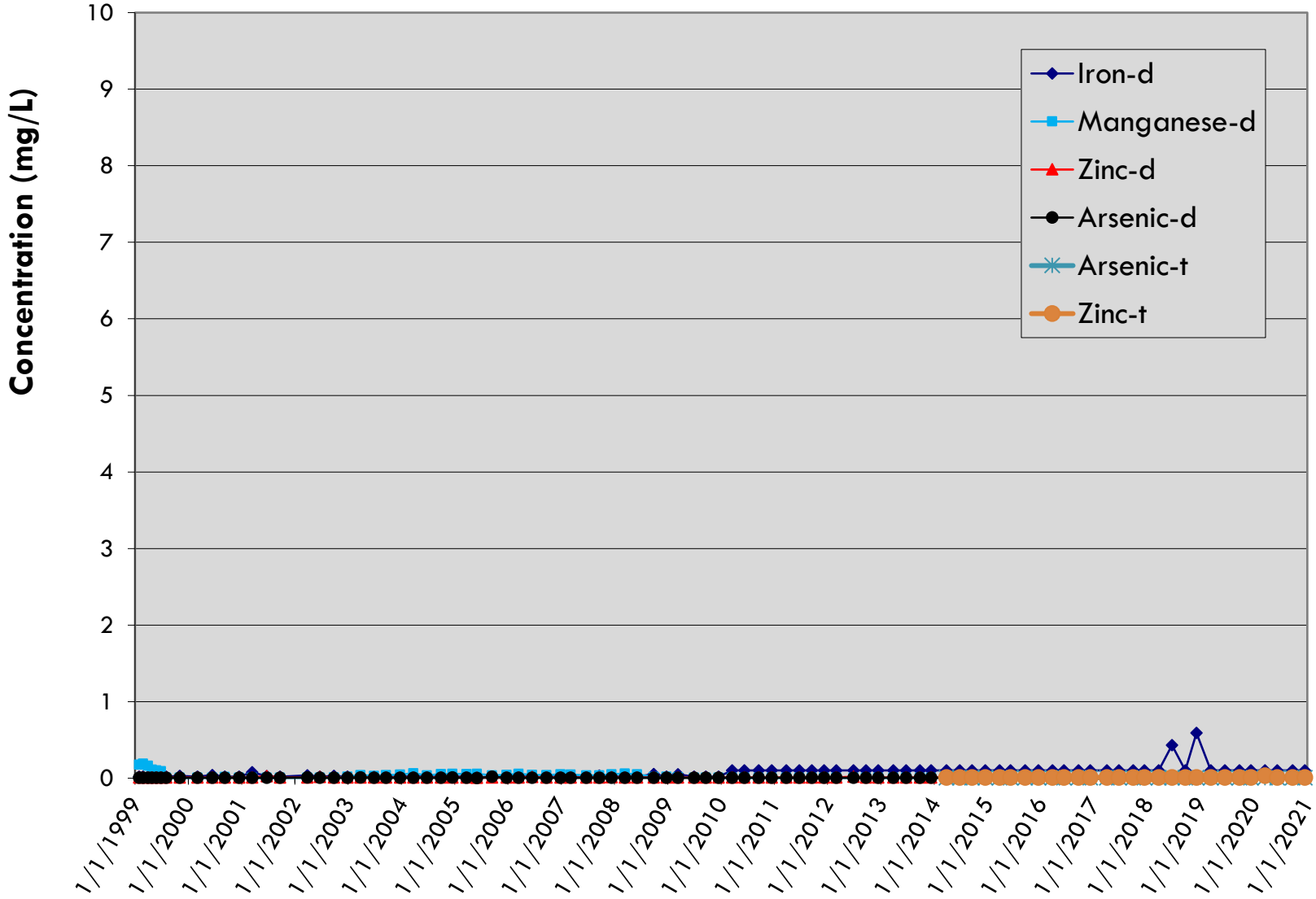


MW-7
LRI Landfill, Pierce County, Washington




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

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



FOURTH QTR. 2020 DATA VALIDATION REPORT – LRI LANDFILL

Project Details

Project No.	04220001.02	**Site Name**	LRI 304th Street LF
Data Validator	Andres Lopez	**Data Level**	Level 2
Date	2/26/2021	**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)
280-143876-1	No comments.	TestAmerica, Denver, CO
280-143958-1	The nitrate analyses were performed outside of the holding time due to lab error.	TestAmerica, Denver, CO
280-143954-1	The nitrate analyses were performed outside of the holding time due to lab error.	TestAmerica, Denver, CO
280-143897-1	The nitrate analyses were performed outside of the holding time due to transit.	TestAmerica, Denver, CO
280-143899-1	No comments.	TestAmerica, Denver, CO
280-143956-1	The nitrate analyses were performed outside of the holding time due to lab error.	TestAmerica, Denver, CO
280-143893-1	The nitrate analyses were performed outside of the holding time due to transit.	TestAmerica, Denver, CO
280-141247-1	The nitrate analyses were performed outside of the holding time due to transit.	TestAmerica, Denver, CO
280-142621-1	No comments.	TestAmerica, Denver, CO

Analytical Summary

Sample Group	Analyses					
	TDS/Alk/NO3	Metals	NH3/TOC	VOCs	Anions	TSS
280-143876-1	X	X[2]	X	X	X	X
280-143958-1	X	X[2]	X	X	X	X
280-143954-1	X	X[3]	X	X	X	--
280-143897-1	X	X[1]	X	X	X	--
280-143899-1	X	X[1]	X	X	X	--
280-143956-1	X	X[1]	X	X	X	--
280-143893-1	X	X[2]	X	X	X	X
280-141247-1	X	X[1]	X	X	X	--
280-142621-1	X	X[1]	X	X	X	--

Notes:

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

Laboratory Quality Assurance Samples

Lab QA Samples	Results	Comments
Method Blank	Acceptable.	The Method 300.0 LCS for Chloride exhibited a recovery above the upper limit at 134% (control limits 90%-110%). The sample was reanalyzed outside of the 28-day holding time with a similar result and all QC samples within control limits. Only the original analysis that was performed within the holding time is reported in this submission. The Method 6020 LCS recovery for Dissolved Beryllium was above control limits. Because the data are considered to be biased high and the associated sample was non-detect above the reporting limit for Dissolved Beryllium, corrective action was deemed unnecessary.
LCS/LCSD	Acceptable.	See case narratives.
MS/MSD	Acceptable.	See case narratives.
Metals	Acceptable.	The Method 6020 Continuing Calibration Verification (CCV) sample was above the control limits for Total Beryllium [280-143954-1], Total Selenium [280-143954-1], and Dissolved Beryllium [280-143956-1, 280-141247-1]. Because the data are considered biased high and the respective parameters were not detected in the associated samples above the reporting limit, corrective action was deemed unnecessary.
Duplicates	Acceptable.	See case narratives.
Organics	Acceptable.	Samples 304-121720-21, 304-121720-22, 304-121720-23, 304-121720-24, 304-121720-29 and 304-121720-30 were analyzed at dilutions for Method 8260B due to a high concentration of target compounds. As a result, the reporting limits were elevated. Samples 304-121720-21, 304-121720-22, 304-121720-23, 304-121720-24, 304-121720-25, 304-121720-26, 304-121720-27, 304-121720-28 and 304-121720-29 exhibited pH values greater than 2, which is non-compliant with Method 8260B. The sample 304-121720-24 was analyzed with headspace in the sample vials received for Method 8260B. All available containers had headspace.

Lab QA Samples	Results	Comments
General Chemistry	Acceptable.	The Method 300.0 CCV sample was above the control limits for Nitrate. Because the data are considered biased high and Nitrate was not detected in the associated samples above the reporting limit, corrective action was deemed unnecessary [280-143954-1, 280-143956-1].
General Comments	Acceptable.	See case narratives.

Field Quality Assurance Samples

Field QA Samples	Sample Group	Analytes	Notes
QC-FB	280-143958-1	Chloride (0.22 mg/L)	
QC-TB	280-143876-1	None.	
QC-TB	280-143958-1	None.	
QC-TB	280-143897-1	None.	
QC-TB	280-143899-1	None.	
QC-TB	280-143893-1	None.	
QC-TB	280-141247-1	None.	

Lab Quality Flags

Flag	Sample Groups	Comments
4	280-143958-1, 280-143958-1, 280-143956-1, 280-143954-1, 280-143897-1, 280-141247-1, 280-142621-1	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	280-143958-1	Result exceeded calibration range.
F1	280-143954-1, 280-143897-1, 280-141247-1, 280-142621-1	MS and/or MSD recovery exceeds the control limits.
F2	280-143954-1, 280-143897-1	MS/MSD RPD exceeds control limits.
F3	280-143954-1, 280-143897-1	Duplicate RPD exceeds the control limit
H	280-143958-1, 280-143956-1, 280-143954-1, 280-143893-1, 280-143897-1, 280-141247-1	Sample was prepped or analyzed beyond specified holding time.
H3	280-143893-1, 280-143897-1	Sample was received and analyzed past holding time.
J	280-143876-1, 280-143958-1, 280-143899-1, 280-143956-1, 280-143954-1, 280-143893-1, 280-143897-1, 280-141247-1, 280-142621-1	Result is less than RL but greater than or equal to the MDL and concentration is an approximate value.
^+	280-143958-1, 280-143956-1, 280-143954-1	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased
*	280-141247-1	LCS or LCSD is outside acceptance limits.

*1	280-142621-1	LCS/LCSD RPD exceeds control limits
B	280-142621-1	Compound was found in the blank and sample.
^	280-141247-1	ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK, or MRL standard: instrument related QC is outside acceptance limits.

Duplicate Evaluation

Analyte	Units	MW-5A (304-121520-03)	MW-5A DUP (304-121520-31)	RPD (%)
Alkalinity, Total	mg/L	160	160	0.0
Ammonia	mg/L	0.12	0.11	8.7
Barium, Total	mg/L	0.013	0.013	0.0
Calcium, Dissolved	mg/L	27	27	0.0
Chloride	mg/L	2.7	2.6	3.8
Magnesium, Dissolved	mg/L	11	11	0.0
Manganese, Dissolved	mg/L	0.19	0.18	5.4
Potassium, Dissolved	mg/L	3.7	3.7	0.0
Sodium, Dissolved	mg/L	19	20	5.1
Sulfate	mg/L	8.1	8.1	0.0
Total Dissolved Solids	mg/L	200	190	5.1
Total Suspended Solids	mg/L	8.0	6.0	28.6
Total Organic Carbon	mg/L	1.1	1.0 U	9.5

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 18, 2020
File No. 04220001.02

Subject: **Fourth Quarter 2020 Groundwater Monitoring Event**
LRI Landfill, Pierce County, Washington

NOTES/SAMPLE DECODING:

Event Dates: December 15-17, 2020
Field Staff: Sam Graber & Andres Lopez

- This event served as the annual monitoring event.
- Dedicated pumps were used for purging and sampling wells MW-1A, MW-2A, MW-3, MW-5A, MW-6, MW-7, MW-9, MW-10, and leak detection/collection system points LDCS-3A, LDCS-4A, LDCS-4B, LDCS-6, and LDCS-7.
- Disposable bailers were used to sample leak detection/collection system points LDCS-1, LDCS-2A, and LDCS-2B.
- The fourth quarter sample from LDCS-5 was collected as a grab sample from the channel discharge spigot. The sampling pump was not operational during the monitoring event.
- The fourth quarter baseline samples for LDCS-8A were collected as grab samples from the riser pipe using a peristaltic pump.
- 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 16, 2020.
- Multiparameter field meters were calibrated daily, prior to sampling.
- Source water for the field blank was lab-grade deionized water (VOC-free) provided by TestAmerica in Tacoma, Washington.

Sample Number	Well Number
304-121520-01	MW-6
304-121520-02	LDCS-4A
304-121520-03	MW-5A
304-121520-04	LDCS-3A
304-121520-05	MW-3
304-121520-06	LDCS-7
304-121520-07	MW-2A
304-121520-08	LDCS-4B
304-121620-09	LDCS-1
304-121620-10	MW-9

304-121620-11	LDCS-2B
304-121620-12	LDCS-6
304-121620-13	MW-10
304-121620-14	LDCS-5
304-121620-15	MW-7
304-121720-16	MW-1
304-121720-17	LDCS-2A
304-121720-18	MW-4
304-121720-19	LDCS-8A
304-121720-20	Field Blank
304-121720-21	Leachate, Cell 6
304-121720-22	Leachate, Cell 5
304-121720-23	Leachate, Cell 4B
304-121720-24	Leachate, Cell 4A
304-121720-25	Leachate, Cell 1
304-121720-26	Leachate, Cell 2A
304-121720-27	Leachate, Cell 2B
304-121720-28	Leachate, Cell 3A
304-121720-29	Leachate, Cell 7
304-121720-30	Leachate, Cell 8A
304-121520-31	MW-5A (Duplicate)

Additional Samples

Sample Number	**Well Number**
304-100520-01	LDCS-8A^
304-111020-01	LDCS-8A^

Notes:
^ = Additional sample collected to establish background water quality trends

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

Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: MW-6
Sample ID: 304-12 15 20- ~~07~~ 07
Date: 12/ 15 /20
Weather: Overcast

7.17 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
Discharge 6
Pressure 25
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

Notes / Observations (color, odor, anomalies, etc):
* Bring lock next event

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1049		9.49	324	9.30	5.49	176.6		
1054		9.66	349	0.57	7.07	152.6		
1058		9.64	350	0.46	7.26	147.1		
1103		9.65	350	0.42	7.31	144.0		
1108		9.65	350	0.36	7.38	134.9		
1109		9.65	350	0.33	7.39	129.4		
1109	8.31	9.64	350	0.31	7.41	122.4	1.91	

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

SAMPLER: Andres Lopez
Printed Name

Signature

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

Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: LDCS-4A
Sample ID: 304-12 15 20- 02
Date: 12/ 15 /20
Weather: rainy

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

Meter: MP-20 YSI

DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill 12
Discharge 3
Pressure 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 (NA)
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	Purge Vol.
1120		15.2	805	1.05	6.33	240.7	21.39	
1125		17.7	893	0.11	6.24	-17.2		
1128		18.2	951	0.26	6.24	2.11		
1131		19.1	1061	0.06	6.24	60.0	14.87	
1134		19.4	1002	0.04	6.24	65.4		
1137		19.4	1004	0.03	6.24	69.7	10.20	
1140		19.7	1005	0.02	6.24	70.6	9.59	943

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

level at 31.0. water right away

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

SAMPLER: Sam Gaber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: MW-5
Sample ID: 304-12 15 20-03
Date: 12/ 15 /20
Weather: Overcast

26.55' 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: 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			

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

Dup taken @ MW-5 12:32

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
12:04	26.55'	11.32	305	1.50	7.44	109.7		
12:09		11.19	315	0.47	7.65	36.6		
12:12		11.14	315	0.44	7.64	15.5		
12:15		11.06	316	0.42	7.65	-3.7		
12:18		11.06	316	0.37	7.66	-11.5		
12:21		11.11	317	0.31	7.64	-21.5		
12:24	27.89'	11.08	317	0.34	7.62	-27.6	6.53	
12:27		11.12	319	0.45	7.60	-22.8	5.06	

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: LDCS-3A
Sample ID: 304-12 15 20- 04
Date: 12/15/20
Weather: rainy

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

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 11
Discharge 4
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 (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

Notes / Observations (color, odor, anomalies, etc):
level at 9.06, water right away.

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	~~Cr~~ Vol.
1218		14.1	842	2.10	6.37	42.5	2.08	
1223		15.2	851	0.41	6.28	40.6	2.13	
1226		15.9	860	0.27	6.21	38.4	2.25	
1229		17.0	874	0.17	6.24	36.9	2.59	
1232		17.2	873	0.14	6.22	35.2	2.52	
1235		17.4	873	0.12	6.22	34.3	2.40	
1238		17.6	874	0.08	6.22	34.2	2.31	764

Purged

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 #: 04220001.02
Site: LRI 304th
Well ID: MW-3
Sample ID: 304-12 15 20-05
Date: 12/ 15 /20
Weather: Cloudy

6.30' DTW
/ TOS
/ Intake
/ BOS
/ Total Depth

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

Meter: MP-20 (YSI)

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

Refill 9
Discharge 6
Pressure 30
Flow 500 mL/min

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

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

Sample Containers:

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

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

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1352	6.30'	9.60	342	4.11	7.18	86.8		
1357		9.59	361	0.96	6.92	83.9		
1400		9.60	362	0.70	7.22	90.3		
1403		9.61	363	0.43	7.35	58.1		
1406		9.61	364	0.34	7.40	46.5		
1409		9.61	364	0.35	7.42	38.7		
1412	7.23'	9.61	365	0.27	7.42	31.9	1.63	

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

SAMPLER: Andres Lopez
Printed Name

Signature

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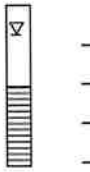
Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: LDCS-7
Sample ID: 304-12 15 20- 06
Date: 12/15/20
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:
1 ft water = 0.62L
1L = 0.26 gallons
Refill 1.5
Discharge 3.5
Pressure 40
Flow 200 ML/min
One Well Volume (liters)
Total Volume Bailed (liters)
Other:
Flow Setting:

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

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

Notes / Observations (color, odor, anomalies, etc):
level at 7.5, water right away

Pump Q1 Vol.

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Pump Q1 Vol.
1317		10.0	1097	1.58	6.71	119.0	3.72	
1322		12.1	1098	0.28	6.72	148.4	3.59	
1325		12.8	1099	0.31	6.73	149.2		
1328		13.4	1100	0.33	6.74	150.6		
1331		13.8	1095	1.30	6.82	145.1	3.71	
1334		14.0	1097	0.58	6.49	13.6	3.36	
1337		14.1	1093	0.12	6.31	-49.6	3.40	
1340		14.1	1057	0.06	6.15	-75.6	2.58	917
1343		14.3	1036	0.05	6.11	-53.5	2.06	

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 #: 04220001.02
Site: LRI 304th
Well ID: MW-2A
Sample ID: 304-12 15 20- 07
Date: 12/15/20
Weather: Overcast

17.45' DTW
TOS
Intake
BOS
Total Depth

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI
CONTROL SETTINGS:
1 ft water = 0.62L 1L = 0.26 gallons
Refill 9
Discharge 6
Pressure 40
Flow 550 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.
1447	17.45'	12.20	271	1.58	7.20	83.5		
1452		11.93	254	0.53	7.22	-14.5		
1455		11.90	254	0.42	7.23	-32.2		
1458		11.94	254	0.31	7.22	-39.3		
1501		11.90	257	0.28	7.21	-45.9		
1504		11.92	260	0.24	7.21	-50.0		
1507	18.66'	11.88	259	0.22	7.21	-51.0	3.25	

Notes / Observations (color, odor, anomalies, etc):
1 vol bale while filling

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: LDC5-4B
Sample ID: 304-12 is 20-08
Date: 12/15/20
Weather: rainy

Sampling Method: Dedicated | 1.75" QED SamplePro | Bail | Peristaltic | Grab | Other
Meter: MP-20 YSI
CONTROL SETTINGS:
Refill 11
Discharge 4
Pressure 40
Flow 300 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

PC panel

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1426		Began purge						
1431		21.5	956	0.77	6.34	-89.7	2.02	
1436		26.4	773	0.09	6.22	-36.7		
1439		26.5	773	0.06	6.21	-51.2		
1442		26.7	774	0.05	6.20	-78.8	1.66	
1445		26.8	774	0.04	6.19	-86.1		
1448		27.0	774	0.03	6.19	-101.9	1.77	
1451		27.3	775	0.03	6.19	-108.7	1.79	656

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

level at 23.0, water in 5 mins

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 #: 04220001.02
Site: LRI 304th
Well ID: LDCRS-1
Sample ID: 304-12 16 20-~~01~~09
Date: 12/16/20
Weather: overcast

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

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

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

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

Sample Containers:

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

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1040		14.77	410	3.52	6.15	50.2	27.7	

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

Sp. Cond. - 671.4 (at pause)

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: MW-9
Sample ID: 304-12 16 20-10
Date: 12/16/20
Weather: Cloudy

9.20 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			

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1040		10.2	136.6	4.26	5.86	225.8	2.40	
1045		10.1	136	3.97	6.61	212.0	2.06	
1048		10.1	136	3.95	6.73	208.9	2.01	
1051		10.1	136	3.93	6.75	207.6	1.95	
1054		10.1	136	3.93	6.75	206.5	1.94	
1057		10.1	136	3.92	6.75	205.2	1.98	
1100	9.50	10.1	136	3.91	6.75	204.7	1.97	

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

repaired gas line prior to sampling.

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 #: 04220001.02
Site: LRI 304th
Well ID: LDCRS-2B
Sample ID: 304-12|6 20- II
Date: 12/16/20
Weather: Overcast

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

Meter: MP-20 YSI

DTW
TOS
Intake
BOS
Total Depth

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.
1120		15.13	718	2.26	6.48	65.5	19.9	

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

Sp. Cond - 891.6 µS/cm (at pump)

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: LDCS-6
Sample ID: 304-12 16 20- 12
Date: 12/ 16 /20
Weather: Cloudy

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 One Well Volume (liters) Other:
Discharge 3 Flow Setting:
Pressure 50 Total Volume Bailed (liters)
Flow 125 ml/min

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

Sample Containers:

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

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1325		10.2	~~956~~	7.84	7.31	179.5		
1330		10.3	~~960~~	2.82	7.28	186.5		
1333		10.8		4.81	6.95	193.6		
1336		11.1	941 ~~948~~	3.67	6.71	194.7	3.84	
1339		11.7	938	3.11	6.69	202.1		
1342		12.4	936	2.88	6.66	205.4	2.63	
1345		12.3	935	2.41	6.65	208.2	2.52	9/4

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

level at ≈ 40. Water right away.

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

SAMPLER: Sam Grover
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: MW-10
Sample ID: 304-12 16 20- 13
Date: 12/ 16 /20
Weather: Overcast

24.47' 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 100mL/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.
1307	24.47'	10.45	250	2.20	6.26	167.7		
1312		9.99	259	0.59	6.29	158.1		
1315		10.01	257	0.47	6.32	156.1		
1318		9.96	259	0.38	6.35	154.5		
1321		9.92	260	0.35	6.35	154.2		
1324		9.76	260	0.36	6.35	153.6		
1327	24.38'	9.97	260	0.37	6.36	153.1	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: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: LDCS-5
Sample ID: 304-12/16 20-14
Date: 12/16/20
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):
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 Flow

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q/Vol.
1445		18.0	790	2.15	6.35	129.8	18.17	656

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

grab from spigot

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

SAMPLER: [signature] Printed Name

Sam Graber Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: MW-7
Sample ID: 304-12162015
Date: 12/16/20
Weather:

21.71' 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: 4030
Flow: 300mL/min

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

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

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

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

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1454	21.71'	9.66	355	5.80	5.98	172.9		
1459		9.70	352	0.43	7.44	6.5		
1502		9.70	351	0.28	7.44	-25.5		
1505		9.59	351	0.23	7.46	-41.3		
1508		9.60	351	0.23	7.49	-48.9		
1511		9.60	352	0.21	7.51	-60.1		
1514	25.43'	9.58	352	0.20	7.52	-65.9	2.10	

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: MW-1
Sample ID: 304-12 17 20- 16
Date: 12/ 17 /20
Weather: cloudy

17.48 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 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.
910		13.6	186	5.94	6.70	220.9	2.08	
915		13.3	66.9	3.51	6.59	230.7		
918		13.2	93.6	2.50	6.59	148.6	10.04	
921		13.2	144.7	1.89	6.76	60.9	10.77	
924		13.1	159.8	1.38	6.87	14.8	9.80	
927		13.1	175.6	1.02	6.96	-19.7	7.86	
(930)		13.0	181.2	0.81	6.98	-35.3	6.29	
933		13.0	184.1	0.71	7.00	-42.3	5.68	

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

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

SAMPLER: Sam Erdin
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th 304-121720-17
Well ID: LDCRS-2A
Sample ID: ~~304-12-16-20-05~~
Date: ~~12/16/20~~ 12/17/20
Weather: Overcast

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.
~~1720~~								
1030		20.2	837	4.00	6.93	155.7	4.15	777

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

Very strong odor from riser

bailer + reel got stuck in riser. LRF removed on 12/16/20

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

SAMPLER: ~~Andrew Lopez~~ Sam Graber
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: MW-4
Sample ID: 304-12 17 20- 18
Date: 12/ 17 /20
Weather: Cloudy

21.50 DTW
/ TOS
/ Intake
/ BOS
Total Depth

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

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill 7
Discharge 6
Pressure 50
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.
1135		12.1	346	4.20	7.38	170.4	18.70	
1140		12.4	320	1.25	7.34	139.4	24.75	
1150		12.8	335	0.89	7.46	35.0		
1153		12.7	336	0.39	7.47	15.4	7.47	
1156		12.6	337	0.28	7.47	4.8	6.75	
1159		12.7	337	0.23	7.47	-3.3	6.20	

Sample time = 1150

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

21.50

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 #: 04220001.02
Site: LRI 304th
Well ID: LDCS-8
Sample ID: 304-12 17 20- 19
Date: 12/ 17 /20
Weather: 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
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.
1310		10.8	1187	7.58	7.65	169.2	0.17	

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

~ 5" of water in sump liner

sediment at bottom

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

SAMPLER: Sam Gabor
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: Field blank
Sample ID: 304-12 17 20- 20
Date: 12/ 17 /20
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 (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.
1350		11.8	3.7	7.92	8.37	163.1	0.0	

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

Collected near LDCS-8

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 #: 04220001.02
Site: LRI 304th
Well ID: Leachate Cell 6
Sample ID: 304-12 17 20- 21
Date: 12/ 17 /20
Weather: Overcast

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

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

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

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y N (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.
0847		14.93	13,321	4.79	7.63	-99.3	41.1	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: Leachate cell 5
Sample ID: 304-12 17 20-22
Date: 12/17 /20
Weather: overcast

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 (N/A)
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.
0916		11.42	22,918	0.14	8.27	-87.6	26.9	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: Leachate cell 4B
Sample ID: 304-12 17 20-23
Date: 12/ 17 /20
Weather: overcast

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

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

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

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y N (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.
1020		~~16.53~~ 16.53	31005	0.42	7.89	-78.3	36.6	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: LDWDS Leachate Cell 4A
Sample ID: 304-12 17 20-24
Date: 12/ 17 /20
Weather: Overcast

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

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

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

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y N (N/A)
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.
10:10		10.65	25978	6.14	7.68	-123.4	70.2	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: Leachate (RI) 7
Sample ID: 304-1217 20-25
Date: 12/17/20
Weather: Overcast

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 (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.
1145		9.40	20796	0.26	7.52	164.0	14.5	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: Leachate Well 2A
Sample ID: 304-12 [illegible] 20-26
Date: 12/ [illegible] /20
Weather: overcast

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

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 YSI

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

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

Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y N (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.
1230		10.30	26370	0.14	7.72	-97.6	9.66	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: Leachate 23
Sample ID: 304-12 17 20- 27
Date: 12/17/20
Weather: Overcast

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 (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.
1320		9.26	21239	5.37	7.54	−28.0	8.62	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: Leachate cell 3A
Sample ID: 304-1217 20-28
Date: 12/17/20
Weather: Overcast

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 (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.
1350		10.51	2479	1.37	7.57	15.3	12.8	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02 — 5.6?
Site: LRI 304th
Well ID: Leachate Cell 7
Sample ID: 304-12 17 20- 29
Date: 12/ 17 /20
Weather: overcast

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

DTW
TOS
Intake
BOS
Total Depth

Meter: MP-20 (YSI)

CONTROL SETTINGS:
Refill
Discharge
Pressure
Flow

1 ft water = 0.62L
1L = 0.26 gallons

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

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

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

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1425		13.32	6873	0.26	7.02	-72.3	107	

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

SAMPLER: Andres Lopez
Printed Name

Signature

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Groundwater Sampling Data Sheet

Project #: 04220001.02
Site: LRI 304th
Well ID: Leachate Cell 2A
Sample ID: 304-12 17 20- 30
Date: 12/ 17 /20
Weather: Overcast
Filtered? Y (N)
Locked? Y (N)
Water in Protector? Y N (NA)
Damage? Y (N)

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

Meter: MP-20 YSI

DTW
TOS
Intake
BOS
Total Depth

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:

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.
1515		8.35	1079	1.79	5.36	70.7	8.18	

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

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

SAMPLER: Andres Lopez
Printed Name

Signature

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GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/15/20					
Time	945					
Weather (sky or precip, temp)	Cloudy					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1409	3.70	7.07	1.81		
Post Cal Reading	1413	4.00	7.00			
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	SEG					
Instrument Type, ID	MP20 / YSI 556				MicoTPW / 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	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/15/20					
Time	945					
Weather (sky or precip, temp)	cloudy					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1401	~~10~~ 4.02	7.02			
Post Cal Reading	1413	4.00	7.00	8.5		
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	SEG					
Instrument Type, ID	MP20 / YSI ~~556~~ DSS Pro				MicoTPW / HACH2000	
Calibration Location	3 Out/Th					

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

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/16/20					
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	1407	4.01	7.01	8.28		
Post Cal Reading	1413	4.00	4.00	8.50		
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	SEG					
Instrument Type, ID	MP20 / YSI ~~556~~ DDS Pro				MicoTPW / HACH2000	
Calibration Location	Youth					

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

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/16/20					
Time	09:04					
Weather (sky or precip, temp)	Overcast					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1439	4.14	6.93	3.64	786, 99.1, 21, 0.56	
Post Cal Reading	1413	4.01	7.00			
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	AEL					
Instrument Type, ID	MP20 / YSI 556				MicoTPW / HACH2000	
Calibration Location	Next to Flare @ 304th					

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

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/17/20					
Time	0754					
Weather (sky or precip, temp)	Overcast					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1395	3.86	7.13	5.97		
Post Cal Reading	1413	4.01	7.00			
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	AEL					
Instrument Type, ID	MP20 / YSI 556				MicoTPW / HACH2000	
Calibration Location	@ LDCRS-6 - 304H					

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

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/17/20					
Time	750					
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	1410	4.00	6.98	8.91		
Post Cal Reading	1413	4.00	7.00	8.5		
Descrepancy	No					
Calib. Successful?	Yes					
Calibration by	SEL					
Instrument Type, ID	MP20 / YSI 556 DDS Pro				MicoTPW / HACH2000	
Calibration Location	Boyne					

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

Appendix C

Groundwater Database

Groundwater Database - Waterlevels
2020 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	304-031620-01	3/17/2020	652.57	17.53	635.04	
	304-060820-01	6/9/2020	652.57	17.73	634.84	
	304-092120-02	9/24/2020	652.57	20.32	632.25	
	304-121720-16	12/17/2020	652.57	17.48	635.09	
MW-2A	304-031620-03	3/17/2020	651.93	17.18	634.75	
	304-060820-03	6/9/2020	651.93	17.39	634.54	
	304-092120-03	9/24/2020	651.93	20.30	631.63	
	304-121520-07	12/15/2020	651.93	17.45	634.48	
MW-3	304-031620-05	3/17/2020	637.41	5.70	631.71	
	304-060820-05	6/9/2020	637.41	6.21	631.20	
	304-092120-04	9/24/2020	637.41	10.09	627.32	
	304-121520-05	12/15/2020	637.41	6.30	631.11	
MW-4	304-031720-21	3/17/2020	652.37	21.00	631.37	
	304-060920-14	6/9/2020	652.37	21.56	630.81	
	304-092420-19	9/24/2020	652.37	24.70	627.67	
	304-121720-18	12/17/2020	652.37	21.50	630.87	
MW-5A	304-031620-07	3/17/2020	655.55	26.00	629.55	
	304-060820-09	6/9/2020	655.55	26.45	629.10	
	304-092120-05	9/24/2020	655.55	29.01	626.54	
	304-121520-03	12/15/2020	655.55	26.55	629.00	
MW-6	304-031620-13	3/17/2020	635.71	7.10	628.61	
	304-060820-07	6/9/2020	635.71	8.46	627.25	
	304-092120-07	9/24/2020	635.71	12.59	623.12	
	304-121520-01	12/15/2020	635.71	7.17	628.54	
MW-7	304-031620-11	3/17/2020	656.03	20.57	635.46	
	304-060820-13	6/9/2020	656.03	21.42	634.61	
	304-092220-09	9/24/2020	656.03	26.10	629.93	
	304-121620-15	12/16/2020	656.03	21.71	634.32	
MW-9	304-031720-15	3/17/2020	701.77	8.27	693.50	
	304-060820-15	6/9/2020	701.77	8.45	693.32	
	304-092220-08	9/24/2020	701.77	12.11	689.66	
	304-121620-10	12/16/2020	701.77	9.20	692.57	
MW-10	304-031720-17	3/17/2020	678.37	23.62	654.75	
	304-060920-17	6/9/2020	678.37	24.15	654.22	
	304-092220-10	9/24/2020	678.37	28.29	650.08	
	304-121620-13	12/16/2020	678.37	24.47	653.90	
Leak Detection System						
LDCS-1	304-031620-10	3/16/2020	657.26	25.9	631.36	
	304-060820-08	6/8/2020	657.26	26.10	631.16	
	304-092220-14	9/22/2020	657.26	27.95	629.31	
	304-121620-09	12/16/2020	657.26	NM	NC	
LDCS-2A	304-031620-08	3/16/2020	659.24	29.00	630.24	
	304-060820-06	6/8/2020	659.24	29.12	630.12	
	304-092220-13	9/22/2020	659.24	29.19	630.05	
	304-121720-17	12/16/2020	659.24	NM	NC	
LDCS-2B	304-031620-06	3/16/2020	661.70	26.40	635.30	
	304-060820-02	6/8/2020	661.70	28.15	633.55	
	304-092220-12	9/22/2020	661.70	27.90	633.80	
	304-121620-11	12/16/2020	661.70	NM	NC	

Notes:
NM = Not measured
NC = Not calculated

Groundwater Database - Field Parameters
2020 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Monitoring Well						
MW-1A	304-031620-01	3/16/2020	DP	6.91	171	12.70
	304-060820-01	6/8/2020	DP	6.78	172	13.10
	304-092120-02	9/21/2020	DP	6.96	179	13.10
	304-121720-16	12/17/2020	DP	7.00	184	13.00
MW-2A	304-031620-03	3/16/2020	DP	7.07	282	12.40
	304-060820-03	6/8/2020	DP	7.02	268	12.70
	304-092120-03	9/21/2020	DP	6.99	284	12.71
	304-121520-07	12/15/2020	DP	7.21	259	11.88
MW-3	304-031620-05	3/16/2020	DP	7.07	433	10.20
	304-060820-05	6/8/2020	DP	7.06	390	10.20
	304-092120-04	9/21/2020	DP	7.34	346	10.29
	304-121520-05	12/15/2020	DP	7.42	365	9.61
MW-4	304-031720-21	3/17/2020	SP	7.64	346	12.37
	304-060920-14	6/9/2020	SP	7.55	330	12.56
	304-092420-19	9/24/2020	SP	7.21	319	13.85
	304-121720-18	12/17/2020	SP	7.47	337	12.70
MW-5A	304-031620-07	3/16/2020	DP	7.52	418	12.00
	304-060820-09	6/8/2020	DP	7.61	389	12.10
	304-092120-05	9/21/2020	DP	7.42	291	12.53
	304-121520-03	12/15/2020	DP	7.60	319	11.12
MW-6	304-031620-13	3/16/2020	DP	7.65	324	10.50
	304-060820-07	6/8/2020	DP	7.62	305	10.30
	304-092120-07	9/21/2020	DP	7.46	311	10.46
	304-121520-01	12/15/2020	DP	7.41	350	9.64
MW-7	304-031620-11	3/16/2020	DP	7.42	378	10.40
	304-060820-13	6/8/2020	DP	7.52	396	10.30
	304-092220-09	9/22/2020	DP	7.46	368	10.25
	304-121620-15	12/16/2020	DP	7.52	352	9.58
MW-9	304-031720-15	3/17/2020	DP	6.77	135	9.40
	304-060820-15	6/8/2020	DP	6.87	137	10.00
	304-092220-08	9/22/2020	DP	6.63	139	10.71
	304-121620-10	12/16/2020	DP	6.75	136	10.10
MW-10	304-031720-17	3/17/2020	DP	6.39	269	10.50
	304-060920-17	6/9/2020	DP	6.18	273	11.10
	304-092220-10	9/22/2020	DP	6.40	266	10.94
	304-121620-13	12/16/2020	DP	6.36	260	9.97

Groundwater Database - Field Parameters
2020 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Leak Detection System						
LDCS-1	304-031620-10	3/16/2020	DB	6.33	383	23.05
	304-060820-08	6/8/2020	DB	6.40	411	21.43
	304-092220-14	9/22/2020	DB	6.12	615	24.35
	304-121620-09	12/16/2020	DB	6.15	410	14.77
LDCS-2A	304-031620-08	3/16/2020	DB	7.46	787	21.22
	304-060820-06	6/8/2020	DB	7.58	779	21.00
	304-092220-13	9/22/2020	DB	6.57	920	23.99
	304-121720-17	12/17/2020	DB	6.93	837	20.20
LDCS-2B	304-031620-06	3/16/2020	DB	6.97	684	20.22
	304-060820-02	6/8/2020	DB	7.40	658	16.68
	304-092220-12	9/22/2020	DB	6.21	809	23.76
	304-121620-11	12/16/2020	DB	6.48	718	15.13
LDCS-3A	304-031620-04	3/16/2020	DP	6.51	816	18.23
	304-060820-10	6/8/2020	DP	6.77	729	19.71
	304-092220-11	9/22/2020	DP	6.21	871	20.04
	304-121520-04	12/15/2020	DP	6.22	874	17.60
LDCS-4A	304-031620-12	3/16/2020	DP	6.41	806	22.15
	304-060820-12	6/8/2020	DP	6.43	873	22.40
	304-092320-15	9/23/2020	DP	6.18	855	20.47
	304-121520-02	12/15/2020	DP	6.24	1,005	19.70
LDCS-4B	304-031620-14	3/16/2020	DP	6.38	989	26.72
	304-060920-18	6/9/2020	DP	6.34	951	24.41
	304-092320-16	9/23/2020	DP	6.35	946	21.13
	304-121520-08	12/15/2020	DP	6.19	775	27.30
LDCS-5	304-013020-02	1/30/2020	DP	6.47	713	17.39
	304-031720-16	3/17/2020	GB	6.68	946	20.22
	304-062920-01	6/29/2020	GB	6.52	841	25.05
	304-092420-21	9/24/2020	GB	6.24	920	29.72
	304-121620-14	12/16/2020	GB	6.35	790	28.00
LDCS-6	304-013020-01	1/30/2020	DP	6.52	978	9.72
	304-031720-18	3/17/2020	DP	6.88	904	13.02
	304-042120-01	4/21/2020	DP	7.01	878	11.47
	304-060920-20	6/9/2020	DP	6.80	1,048	20.08
	304-092320-17	9/23/2020	DP	7.59	815	15.66
	304-121620-12	12/16/2020	DP	6.65	935	12.30
LDCS-7	304-013020-03	1/30/2020	DP	6.52	1,525	9.06
	304-022820-01	2/28/2020	DP	6.06	1,410	13.05
	304-031620-02	3/16/2020	DP	6.41	1,283	8.94
	304-042120-02	4/21/2020	DP	6.59	1,279	10.70
	304-060820-04	6/8/2020	DP	6.38	1,231	13.42
	304-092320-18	9/23/2020	DP	6.82	1,337	16.23
	304-121520-06	12/15/2020	DP	6.11	1,036	14.30
LDCS-8A	304-083120-01	8/31/2020	GB	7.81	993	18.09
	304-092120-01	9/21/2020	PP	7.04	1,295	16.99
	304-100520-01	10/5/2020	PP	6.93	1,244	15.52
	304-111020-01	11/10/2020	PP	7.44	1,101	10.87
	304-121720-19	12/17/2020	PP	7.65	1,187	10.80

Groundwater Database - Field Parameters
2020 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Specific Conductivity	Temperature
Leachate						
Leachate, Cell 1	304-121720-25	12/17/2020	GB	7.52	20,796	7.40
Leachate, Cell 2A	304-121720-26	12/17/2020	GB	7.72	26,370	10.30
Leachate, Cell 2B	304-121720-27	12/17/2020	GB	7.54	21,239	9.26
Leachate, Cell 3A	304-121720-28	12/17/2020	GB	7.57	21,479	10.51
Leachate, Cell 4A	304-121720-24	12/17/2020	GB	7.68	25,978	10.65
Leachate, Cell 4B	304-121720-23	12/17/2020	GB	7.89	31,005	16.53
Leachate, Cell 5	304-121720-22	12/17/2020	GB	8.27	22,918	11.42
Leachate, Cell 6	304-121720-21	12/17/2020	GB	7.63	13,321	14.93
Leachate, Cell 7	304-013120-01	1/31/2020	GB	6.15	1,384	10.79
Leachate, Cell 7	304-031720-19	3/17/2020	GB	5.69	5,805	10.90
Leachate, Cell 7	304-060920-19	6/9/2020	GB	6.08	12,386	17.20
Leachate, Cell 7	304-121720-29	12/17/2020	GB	7.02	6,873	13.32
Leachate, Cell 8A	304-121720-30	12/17/2020	GB	5.36	1,079	8.35

Notes:
DB = Dedicated bailer
DP = Dedicated pump
GB = Grab sample
SP = Submersible pump
PP = Peristaltic Pump

Groundwater Database - Inorganic Parameters
2020 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample ID	Sample Date	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
Monitoring Well										
MW-1A	304-031620-01	3/16/2020	95	0.1 U	1.9	0.5 U	3.5	140	1 U	4
	304-060820-01	6/8/2020	88	0.1 U	2.0	0.5 U	3.5	140	1 U	11
	304-092120-02	9/21/2020	95	0.1 U	2.0	0.5 U	3.2	160	1 U	4 U
	304-121720-16	12/17/2020	97	0.1 U	2.4	0.5 U	3.4	140	1 U	12
MW-2A	304-031620-03	3/16/2020	130	0.12	3.5	0.5 U	13	190	1 U	4 U
	304-060820-03	6/8/2020	110	0.13	3.4	0.5 U	11	160	1 U	4 U
	304-092120-03	9/21/2020	130	0.1 U	3.4	0.5 U	14	190	1 U	4 U
	304-121520-07	12/15/2020	120	0.1 U	3.7	0.5 U H	13	170	1 U	4 U
MW-3	304-031620-05	3/16/2020	200	0.14	3.5	0.5 U	27	260	1.2	4 U
	304-060820-05	6/8/2020	150	0.12	3.7	0.5 U	31	230	1.1	4 U
	304-092120-04	9/21/2020	130	0.11	3.6	0.5 U	30	220	1 U	4 U
	304-121520-05	12/15/2020	160	0.11	3.5	0.5 U H	27	210	5.3	4 U
MW-4	304-031720-21	3/17/2020	160	0.1 U	3.3	0.5 U	11	210	1.1	4 U
	304-060920-14	6/9/2020	150	0.14	3.1	0.5 U	10	210	1 U	4 U
	304-092420-19	9/24/2020	150	0.12	2.8	0.5 U	7.8	190	1	4 U
	304-121720-18	12/17/2020	160	0.14	3.5	0.5 U H	14	220	1 U	4.8
MW-5A	304-031620-07	3/16/2020	190	0.17	3.7	0.5 U	21	240	1.0	4 U
	304-060820-09	6/8/2020	170	0.19	3.4	0.5 U	19	240	1 U	4 U
	304-092120-05	9/21/2020	130	0.10	2.2	0.5 U	5.1	210	1 U	4 U
	304-121520-03	12/15/2020	160	0.12	2.7	0.5 U H	8.1	200	1.1	8
MW-6	304-031620-13	3/16/2020	160	0.11	5.1	0.5 U	7.4	200	1 U	4 U
	304-060820-07	6/8/2020	130	0.11	4.9	0.5 U	7.3	180	1 U	4 U
	304-092120-07	9/21/2020	140	0.12	4.9	0.5 U	7.0	210	1 U	4 U
	304-121520-01	12/15/2020	170	0.12	5.4	0.5 U H	7.6	200	1.2	4 U

Groundwater Database - Inorganic Parameters
2020 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample ID	Sample Date	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MW-7	304-031620-11	3/16/2020	200	0.19	3.0	0.5 U	3.5	220	1 U	4 U
	304-060820-13	6/8/2020	190	0.20	3.3	0.5 U	3.3	230	1 U	4 U
	304-092220-09	9/22/2020	170	0.20	2.9	0.5 U	3.8	220	1 U	4 U
	304-121620-15	12/16/2020	180	0.19	2.8	0.5 U	4.5	210	1.0	4 U
MW-9	304-031720-15	3/17/2020	69	0.1 U	1.6	0.5 U	1.8	120	1 U	4 U
	304-060820-15	6/8/2020	63	0.1 U	1.6	0.5 U	1.8	110	1 U	4 U
	304-092220-08	9/22/2020	56	0.1 U	1.6	0.5 U	1.6	150	1 U	4 U
	304-121620-10	12/16/2020	69	0.1 U	1.7	0.5 U	2.1	140	1 U	4 U
MW-10	304-031720-17	3/17/2020	100	0.1 U	7.8	3.7	7.0	190	1 U	22
	304-060920-17	6/9/2020	93	0.1 U	7.7	3.7	7.2	190	1 U	8.0
	304-092220-10	9/22/2020	100	0.1 U	7.0	3.4	6.6	220	1 U	11
	304-121620-13	12/16/2020	110	0.1 U	7.1	3.2	7.1	200	1 U	8.8
Leak Detection System										
LDCS-1	304-031620-10	3/16/2020	200	0.13	4.2	0.5 U	7.0	240	3.2	-
	304-060820-08	6/8/2020	190	0.10	4.3	0.5 U	6.4	260	3.2	-
	304-092220-14	9/22/2020	260	0.22	4.1	0.5 U	7.4	360	6.3	-
	304-121620-09	12/16/2020	200	0.13	4.5	0.5 U	6.8	260	2.9	-
LDCS-2A	304-031620-08	3/16/2020	410	0.1 U	3.5	0.5 U	23	470	2.6	-
	304-060820-06	6/8/2020	350	0.1 U	4.2	0.5 U	21	470	3.4	-
	304-092220-13	9/22/2020	400	0.16	4.0	0.5 U	20	530	3.6	-
	304-121720-17	12/17/2020	440	0.1 U	4.8	0.5 U H	30	510	2.8	-
LDCS-2B	304-031620-06	3/16/2020	300	0.1 U	5.4	0.5 U	59	410	2.3	-
	304-060820-02	6/8/2020	260	0.1 U	7.6	0.5 U	58	410	2.8	-
	304-092220-12	9/22/2020	340	0.20	6.4	0.5 U	48	320	2.7	-
	304-121620-11	12/16/2020	330	0.1 U	7.5	0.5 U	61	460	2.3	-

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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	304-031620-04	3/16/2020	380	0.1 U	5.3	0.5 U	77	510	1.7	-
	304-060820-10	6/8/2020	330	0.1 U	4.6	0.5 U	82	500	2.0	-
	304-092220-11	9/22/2020	350	0.14	4.9	0.5 U	66	540	1.7	-
	304-121520-04	12/15/2020	400	0.10	5.5	0.5 U H	83	540	2.3	-
LDCS-4A	304-031620-12	3/16/2020	350	0.24	24	0.5 U	50	480	5.3	-
	304-060820-12	6/8/2020	330	0.29	24	0.5 U	54	530	6.6	-
	304-092320-15	9/23/2020	310	0.48	20	0.5 U	72	230	4.8	-
	304-121520-02	12/15/2020	360	11	63	0.5 U H	43	550	24	-
LDCS-4B	304-031620-14	3/16/2020	390	0.44	39	0.5 U	97	600	3.2	-
	304-060920-18	6/9/2020	340	0.49	30	0.5 U	93	570	4.2	-
	304-092320-16	9/23/2020	340	0.47	22	0.5 U	110	610	4.0	-
	304-121520-08	12/15/2020	330	0.1 U	12	0.5 U H	74	450	2.7	-
LDCS-5	304-013020-02	1/30/2020	280	11	42	0.5 U	37	370	4.9	-
	304-031720-16	3/17/2020	350	7.6	45	0.5 U	59	500	5.7	-
	304-062920-01	6/29/2020	320	4.4	42	0.5 U	90	510	7.4	-
	304-092420-21	9/24/2020	370	4.9	27	0.5 U	43	580	8.3	-
	304-121620-14	12/16/2020	320	3.4	14	0.5 U	78	480	3.2	-
LDCS-6	304-013020-01	1/30/2020	450	0.1 U	9.5	0.5 U	83	590	2.6	-
	304-031720-18	3/17/2020	440	0.1 U	10	0.5 U	70	560	2.7	-
	304-042120-01	4/21/2020	450	0.1 U	11	0.5 U	71	580	2.6	-
	304-060920-20	6/9/2020	430	0.1 U	7.0	0.5 U	82	600	3.4	-
	304-092320-17	9/23/2020	410	0.1 U	6.1	0.5 U H	71	920	2.9	-
	304-121620-12	12/16/2020	450	0.1 U	6.1	0.5 U	71	530	2.4	-

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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	304-013020-03	1/30/2020	610	0.1 U	77	0.5 U	140	940	21	-
	304-022820-01	2/28/2020	520	0.1 U	28	0.5 U	68	680	9.2	-
	304-031620-02	3/16/2020	600	0.18	58	0.5 U	90	810	8.2	-
	304-042120-02	4/21/2020	560	0.37	54	0.5 U	87	800	32	-
	304-060820-04	6/8/2020	510	0.17	55	0.5 U	86	850	9.6	-
	304-092320-18	9/23/2020	470	0.47	54	0.5 U	90	660	32	-
	304-121520-06	12/15/2020	510	0.20	14	0.5 U H	70	640	4.9	-
LDCS-8A	304-083120-01	8/31/2020	360	0.1 U	44	1.1	97	680	11	-
	304-092120-01	9/21/2020	490	0.1 U	43	1.5	170	870	13	-
	304-100520-01	10/5/2020	480	0.1 U	39	0.6 H	120	780	10	-
	304-111020-01	11/10/2020	560	0.1 U	36	0.5 U	93 B	750	9.5	-
	304-121720-19	12/17/2020	570	0.1 U	30	0.5 U H	130	790	9.5	-
Leachate										
Leachate, Cell 1	304-121720-25	12/17/2020	7,700	1,300	2,500	0.5 U H	26 U	21,000	1,200	-
Leachate, Cell 2A	304-121720-26	12/17/2020	11,000	2,000	4,400	0.5 U H	26 U	34,000	1,800	-
Leachate, Cell 2B	304-121720-27	12/17/2020	7,900	1,300	2,600	10 H	26 U	20,000	1,200	-
Leachate, Cell 3A	304-121720-28	12/17/2020	7,800	1,300	2,600	11 H	26 U	22,000	1,200	-
Leachate, Cell 4A	304-121720-24	12/17/2020	12,000	1,600	5,700	5.3 H	26 U	37,000	2,500	-
Leachate, Cell 4B	304-121720-23	12/17/2020	12,000	2,000	3,800	0.5 U H	70	33,000	1,600	-
Leachate, Cell 5	304-121720-22	12/17/2020	8,900	1,000	2,900	4.8 H	49	25,000	1,500	-
Leachate, Cell 6	304-121720-21	12/17/2020	10,000	860	1,300	7.3 H	30	11,000	910	-
Leachate, Cell 7	304-013120-01	1/31/2020	410	27	78	0.5 U H	63	1,200	420	-
Leachate, Cell 7	304-031720-19	3/17/2020	2,400	230	490	0.5	200	6,800	3,000	-
Leachate, Cell 7	304-060920-19	6/9/2020	4,200	580	970	0.6	22	12,000	5,100	-
Leachate, Cell 7	304-121720-29	12/17/2020	2,600	350	670	1.7 H	12	3,200	470	-
Leachate, Cell 8A	304-121720-30	12/17/2020	340	12	58	0.5 U H	55	910	330	-

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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	304-031720-20	3/17/2020	10 U	0.13	0.2 U	0.5 U	0.2 U	10 U	1 U	4 U
	304-060920-16	6/9/2020	10 U	0.1 U	0.2 U	0.5 U	0.2 U	31	1 U	4 U
	304-092420-20	9/24/2020	10 U	0.1 U	0.2 U	0.5 U	0.2 U	30	1 U	4 U
	304-121720-20	12/17/2020	10 U	0.1 U	0.22	0.5 U H	0.5 U	10 U	1 U	4 U

Notes:
B = Compound found in the blank and the sample
H = Sample was prepped or analyzed beyond the specified holding time
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
U = Sample result was not reported at or above the MRL
- = Not analyzed

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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	304-031620-01	3/16/2020		0.05 U		0.005 U		0.021		0.001 U		0.001 U
	304-060820-01	6/8/2020		0.05 U		0.005 U		0.022		0.001 U		0.001 U
	304-092120-02	9/21/2020		0.05 U		0.005 U		0.019		0.001 U		0.001 U
	304-121720-16	12/17/2020		0.05 U		0.005 U		0.021		0.001 U		0.001 U
MW-2A	304-031620-03	3/16/2020		0.05 U		0.005 U		0.014		0.001 U		0.001 U
	304-060820-03	6/8/2020		0.05 U		0.005 U		0.014		0.001 U		0.001 U
	304-092120-03	9/21/2020		0.05 U		0.005 U		0.013		0.001 U		0.001 U
	304-121520-07	12/15/2020		0.05 U		0.005 U		0.015		0.001 U		0.001 U
MW-3	304-031620-05	3/16/2020		0.05 U		0.005 U		0.015		0.001 U		0.001 U
	304-060820-05	6/8/2020		0.05 U		0.005 U		0.014		0.001 U		0.001 U
	304-092120-04	9/21/2020		0.05 U		0.005 U		0.011		0.001 U		0.001 U
	304-121520-05	12/15/2020		0.05 U		0.005 U		0.011		0.001 U		0.001 U
MW-4	304-031720-21	3/17/2020		0.05 U		0.0093		0.016		0.001 U		0.001 U
	304-060920-14	6/9/2020		0.05 U		0.011		0.016		0.001 U		0.001 U
	304-092420-19	9/24/2020		0.05 U		0.011		0.018		0.001 U		0.001 U
	304-121720-18	12/17/2020		0.05 U		0.010		0.016		0.001 U		0.001 U
MW-5A	304-031620-07	3/16/2020		0.05 U		0.0053		0.014		0.001 U		0.001 U
	304-060820-09	6/8/2020		0.05 U		0.0062		0.012		0.001 U		0.001 U
	304-092120-05	9/21/2020		0.05 U		0.005 U		0.0093		0.001 U		0.001 U
	304-121520-03	12/15/2020		0.05 U		0.005 U		0.013		0.001 U		0.001 U
MW-6	304-031620-13	3/16/2020		0.05 U		0.0074		0.012		0.001 U		0.001 U
	304-060820-07	6/8/2020		0.05 U		0.0068		0.011		0.001 U		0.001 U
	304-092120-07	9/21/2020		0.05 U		0.0064		0.0099		0.001 U		0.001 U
	304-121520-01	12/15/2020		0.05 U		0.0072		0.014		0.001 U		0.001 U
MW-7	304-031620-11	3/16/2020		0.05 U		0.005		0.015		0.001 U		0.001 U
	304-060820-13	6/8/2020		0.05 U		0.005 U		0.015		0.001 U		0.001 U
	304-092220-09	9/22/2020		0.05 U		0.0055		0.016		0.001 U		0.001 U
	304-121620-15	12/16/2020		0.05 U		0.0056		0.013		0.001 U		0.001 U
MW-9	304-031720-15	3/17/2020		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-060820-15	6/8/2020		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-092220-08	9/22/2020		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-121620-10	12/16/2020		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	304-031620-01	3/16/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060820-01	6/8/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092120-02	9/21/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121720-16	12/17/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-2A	304-031620-03	3/16/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060820-03	6/8/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092120-03	9/21/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121520-07	12/15/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-3	304-031620-05	3/16/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060820-05	6/8/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092120-04	9/21/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121520-05	12/15/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-4	304-031720-21	3/17/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060920-14	6/9/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092420-19	9/24/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121720-18	12/17/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-5A	304-031620-07	3/16/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060820-09	6/8/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092120-05	9/21/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121520-03	12/15/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-6	304-031620-13	3/16/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060820-07	6/8/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092120-07	9/21/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121520-01	12/15/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-7	304-031620-11	3/16/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060820-13	6/8/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092220-09	9/22/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121620-15	12/16/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
MW-9	304-031720-15	3/17/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060820-15	6/8/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092220-08	9/22/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121620-10	12/16/2020		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	304-031620-01	3/16/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-060820-01	6/8/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-092120-02	9/21/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121720-16	12/17/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.015
MW-2A	304-031620-03	3/16/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-060820-03	6/8/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-092120-03	9/21/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121520-07	12/15/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-3	304-031620-05	3/16/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-060820-05	6/8/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-092120-04	9/21/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121520-05	12/15/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-4	304-031720-21	3/17/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.027
	304-060920-14	6/9/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.019
	304-092420-19	9/24/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.052
	304-121720-18	12/17/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.014
MW-5A	304-031620-07	3/16/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-060820-09	6/8/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-092120-05	9/21/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121520-03	12/15/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-6	304-031620-13	3/16/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-060820-07	6/8/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-092120-07	9/21/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121520-01	12/15/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-7	304-031620-11	3/16/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-060820-13	6/8/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-092220-09	9/22/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121620-15	12/16/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
MW-9	304-031720-15	3/17/2020		0.005 U		0.005 U		0.005 U		0.015		0.01 U
	304-060820-15	6/8/2020		0.005 U		0.005 U		0.005 U		0.014		0.01 U
	304-092220-08	9/22/2020		0.005 U		0.005 U		0.005 U		0.016		0.01 U
	304-121620-10	12/16/2020		0.005 U		0.005 U		0.005 U		0.014		0.01 U

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MW-10	304-031720-17	3/17/2020		0.05 U		0.005 U		0.015		0.001 U		0.001 U
	304-060920-17	6/9/2020		0.05 U		0.005 U		0.016		0.001 U		0.001 U
	304-092220-10	9/22/2020		0.05 U		0.005 U		0.015		0.001 U		0.001 U
	304-121620-13	12/16/2020		0.05 U		0.005 U		0.014		0.001 U		0.001 U
Leak Detection System												
LDCS-1	304-031620-10	3/16/2020	0.05 U		0.0082		0.019					
	304-060820-08	6/8/2020	0.05 U		0.0080		0.020					
	304-092220-14	9/22/2020	0.05 U		0.0110		0.029					
	304-121620-09	12/16/2020	0.05 U		0.0110		0.023					
LDCS-2A	304-031620-08	3/16/2020	0.05 U		0.0064		0.010					
	304-060820-06	6/8/2020	0.05 U		0.0064		0.010					
	304-092220-13	9/22/2020	0.05 U		0.0120		0.054					
	304-121720-17	12/17/2020	0.05 U		0.0063		0.02					
LDCS-2B	304-031620-06	3/16/2020	0.05 U		0.005 U		0.012					
	304-060820-02	6/8/2020	0.05 U		0.005 U		0.018					
	304-092220-12	9/22/2020	0.05 U		0.035		0.075					
	304-121620-11	12/16/2020	0.05 U		0.062		0.096					
LDCS-3A	304-031620-04	3/16/2020	0.05 U		0.005 U		0.016					
	304-060820-10	6/8/2020	0.05 U		0.005 U		0.016					
	304-092220-11	9/22/2020	0.05 U		0.011		0.026					
	304-121520-04	12/15/2020	0.05 U		0.0066		0.017					
LDCS-4A	304-031620-12	3/16/2020	0.05 U		0.0094		0.033					
	304-060820-12	6/8/2020	0.05 U		0.0110		0.035					
	304-092320-15	9/23/2020	0.05 U		0.0110		0.036					
	304-121520-02	12/15/2020	0.05 U		0.0054		0.038					
LDCS-4B	304-031620-14	3/16/2020	0.05 U		0.0053		0.038					
	304-060920-18	6/9/2020	0.05 U		0.005 U		0.043					
	304-092320-16	9/23/2020	0.05 U		0.0056		0.043					
	304-121520-08	12/15/2020	0.05 U		0.005 U		0.027					
LDCS-5	304-013020-02	1/30/2020	0.05 U		0.0130		0.060		0.001 U		0.001 U	
	304-031720-16	3/17/2020	0.05 U		0.0095		0.066		0.001 U		0.001 U	
	304-062920-01	6/29/2020	0.05 U		0.0070		0.058		0.001 U		0.001 U	
	304-092420-21	9/24/2020	0.05 U		0.0098		0.062		0.001 U		0.001 U	
	304-121620-14	12/16/2020	0.05 U		0.0082		0.053		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	304-031720-17	3/17/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060920-17	6/9/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092220-10	9/22/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121620-13	12/16/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
Leak Detection System												
LDCS-1	304-031620-10	3/16/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060820-08	6/8/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092220-14	9/22/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121620-09	12/16/2020	0.005 U		0.0014		0.01 U		0.002 U		0.02 U	
LDCS-2A	304-031620-08	3/16/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060820-06	6/8/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092220-13	9/22/2020	0.005 U		0.0035		0.01 U		0.002 U		0.02 U	
	304-121720-17	12/17/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
LDCS-2B	304-031620-06	3/16/2020	0.005 U		0.0011		0.01 U		0.002 U		0.02 U	
	304-060820-02	6/8/2020	0.005 U		0.0034		0.01 U		0.002 U		0.02 U	
	304-092220-12	9/22/2020	0.005 U		0.010		0.01 U		0.002 U		0.02 U	
	304-121620-11	12/16/2020	0.005 U		0.0066		0.01 U		0.002 U		0.02 U	
LDCS-3A	304-031620-04	3/16/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060820-10	6/8/2020	0.005 U		0.001 U		0.021		0.002 U		0.02 U	
	304-092220-11	9/22/2020	0.005 U		0.0027		0.01 U		0.002 U		0.02 U	
	304-121520-04	12/15/2020	0.005 U		0.0019		0.01 U		0.002 U		0.02 U	
LDCS-4A	304-031620-12	3/16/2020	0.005 U		0.0021		0.01 U		0.002 U		0.02 U	
	304-060820-12	6/8/2020	0.005 U		0.0028		0.01 U		0.002 U		0.02 U	
	304-092320-15	9/23/2020	0.005 U		0.0033		0.01 U		0.002 U		0.02 U	
	304-121520-02	12/15/2020	0.0057		0.0047		0.016		0.002 U		0.02 U	
LDCS-4B	304-031620-14	3/16/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060920-18	6/9/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092320-16	9/23/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121520-08	12/15/2020	0.005 U		0.001		0.01 U		0.002 U		0.02 U	
LDCS-5	304-013020-02	1/30/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-031720-16	3/17/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-062920-01	6/29/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092420-21	9/24/2020	0.0053		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121620-14	12/16/2020	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	304-031720-17	3/17/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.034
	304-060920-17	6/9/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-092220-10	9/22/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.011
	304-121620-13	12/16/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
Leak Detection System												
LDCS-1	304-031620-10	3/16/2020							0.005 U		0.01 U	
	304-060820-08	6/8/2020							0.005 U		0.01 U	
	304-092220-14	9/22/2020							0.005 U		0.01 U	
	304-121620-09	12/16/2020							0.005 U		0.015	
LDCS-2A	304-031620-08	3/16/2020							0.005 U		0.01 U	
	304-060820-06	6/8/2020							0.005 U		0.01 U	
	304-092220-13	9/22/2020							0.005 U		0.01 U	
	304-121720-17	12/17/2020							0.005 U		0.01 U	
LDCS-2B	304-031620-06	3/16/2020							0.005 U		0.01 U	
	304-060820-02	6/8/2020							0.005 U		0.01 U	
	304-092220-12	9/22/2020							0.005 U		0.01 U	
	304-121620-11	12/16/2020							0.005 U		0.01 U	
LDCS-3A	304-031620-04	3/16/2020							0.005 U		0.01 U	
	304-060820-10	6/8/2020							0.005 U		0.01 U	
	304-092220-11	9/22/2020							0.005 U		0.01 U	
	304-121520-04	12/15/2020							0.005 U		0.01 U	
LDCS-4A	304-031620-12	3/16/2020							0.005 U		0.01 U	
	304-060820-12	6/8/2020							0.005 U		0.01 U	
	304-092320-15	9/23/2020							0.005 U		0.01 U	
	304-121520-02	12/15/2020							0.005 U		0.01 U	
LDCS-4B	304-031620-14	3/16/2020							0.005 U		0.01 U	
	304-060920-18	6/9/2020							0.005 U		0.01 U	
	304-092320-16	9/23/2020							0.005 U		0.01 U	
	304-121520-08	12/15/2020							0.005 U		0.01 U	
LDCS-5	304-013020-02	1/30/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-031720-16	3/17/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-062920-01	6/29/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-092420-21	9/24/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-121620-14	12/16/2020	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	304-013020-01	1/30/2020	0.05 U		0.005 U		0.017		0.001 U		0.001 U	
	304-031720-18	3/17/2020	0.05 U		0.005 U		0.021		0.001 U		0.001 U	
	304-042120-01	4/21/2020	0.05 U		0.005 U		0.017		0.001 U		0.001 U	
	304-060920-20	6/9/2020	0.05 U		0.005 U		0.020		0.001 U		0.001 U	
	304-092320-17	9/23/2020	0.05 U		0.005 U		0.013		0.001 U		0.001 U	
	304-121620-12	12/16/2020	0.05 U		0.005 U		0.012		0.001 U		0.001 U	
LDCS-7	304-013020-03	1/30/2020	0.05 U		0.005 U		0.050		0.001 U		0.001 U	
	304-022820-01	2/28/2020	0.05 U		0.005 U		0.025		0.001 U		0.001 U	
	304-031620-02	3/16/2020	0.05 U		0.005 U		0.037		0.001 U		0.001 U	
	304-042120-02	4/21/2020	0.05 U		0.005 U		0.027		0.001 U		0.001 U	
	304-060820-04	6/8/2020	0.05 U		0.005 U		0.045		0.001 U		0.001 U	
	304-092320-18	9/23/2020	0.05 U		0.005 U		0.036		0.001 U		0.001 U	
	304-121520-06	12/15/2020	0.05 U		0.005 U		0.031		0.001 U		0.001 U	
LDCS-8A	304-083120-01	8/31/2020	0.05 U		0.005 U		0.028		0.001 U		0.001 U	
	304-092120-01	9/21/2020	0.05 U		0.005 U		0.050		0.001 U		0.001 U	
	304-100520-01	10/5/2020	0.05 U		0.005 U		0.039		0.001 U		0.001 U	
	304-111020-01	11/10/2020	0.05 U		0.005 U		0.034		0.001 U		0.001 U	
	304-121720-19	12/17/2020	0.05 U		0.005 U		0.039		0.001 U		0.001 U	
Leachate												
Leachate, Cell 1	304-121720-25	12/17/2020		0.05 U		0.063		1.2		0.001 U		0.001 U
Leachate, Cell 2A	304-121720-26	12/17/2020		0.05 U		0.140		1.4		0.001 U		0.001 U
Leachate, Cell 2B	304-121720-27	12/17/2020		0.05 U		0.077		1.2		0.001 U		0.001 U
Leachate, Cell 3A	304-121720-28	12/17/2020		0.05 U		0.058		1.0		0.001 U		0.001 U
Leachate, Cell 4A	304-121720-24	12/17/2020		0.05 U		0.170		1.0		0.001 U		0.001 U
Leachate, Cell 4B	304-121720-23	12/17/2020		0.068		0.110		1.5		0.001 U		0.001 U
Leachate, Cell 5	304-121720-22	12/17/2020		0.05 U		0.140		0.79		0.001 U		0.001 U
Leachate, Cell 6	304-121720-21	12/17/2020		0.05 U		0.140		0.62		0.001 U		0.001 U
Leachate, Cell 7	304-013120-01	1/31/2020		0.05 U		0.0053		0.17		0.001 U		0.001 U
Leachate, Cell 7	304-031720-19	3/17/2020		0.05 U		0.017		0.53		0.001 U		0.001 U
Leachate, Cell 7	304-060920-19	6/9/2020		0.05 U		0.031		1.0		0.001 U		0.001 U
Leachate, Cell 7	304-121720-29	12/17/2020		0.05 U		0.074		0.29		0.001 U		0.001 U
Leachate, Cell 8A	304-121720-30	12/17/2020		0.05 U		0.005 U		0.13		0.001 U		0.001 U
Quality Control												
QC, FB	304-031720-20	3/17/2020		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-060920-16	6/9/2020		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-092420-20	9/24/2020		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U
	304-121720-20	12/17/2020		0.05 U		0.005 U		0.005 U		0.001 U		0.001 U

Notes:
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
U = Sample result was not reported at or above the MRL

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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	304-013020-01	1/30/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-031720-18	3/17/2020	0.005 U		0.0015		0.01 U		0.002 U		0.02 U	
	304-042120-01	4/21/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-060920-20	6/9/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092320-17	9/23/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121620-12	12/16/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
LDCS-7	304-013020-03	1/30/2020	0.005 U		0.0064		0.01 U		0.002 U		0.02 U	
	304-022820-01	2/28/2020	0.005 U		0.0039		0.01 U		0.002 U		0.02 U	
	304-031620-02	3/16/2020	0.005 U		0.0060		0.01 U		0.002 U		0.02 U	
	304-042120-02	4/21/2020	0.005 U		0.0054		0.01 U		0.002 U		0.02 U	
	304-060820-04	6/8/2020	0.005 U		0.0065		0.01 U		0.002 U		0.02 U	
	304-092320-18	9/23/2020	0.005 U		0.0042		0.01 U		0.002 U		0.02 U	
	304-121520-06	12/15/2020	0.005 U		0.0042		0.01 U		0.002 U		0.02 U	
LDCS-8A	304-083120-01	8/31/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-092120-01	9/21/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-100520-01	10/5/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-111020-01	11/10/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
	304-121720-19	12/17/2020	0.005 U		0.001 U		0.01 U		0.002 U		0.02 U	
Leachate												
Leachate, Cell 1	304-121720-25	12/17/2020		0.41		0.038		0.019		0.020		0.35
Leachate, Cell 2A	304-121720-26	12/17/2020		0.71		0.060		0.068		0.030		0.87
Leachate, Cell 2B	304-121720-27	12/17/2020		0.43		0.039		0.089		0.024		0.38
Leachate, Cell 3A	304-121720-28	12/17/2020		0.36		0.034		0.12		0.026		0.31
Leachate, Cell 4A	304-121720-24	12/17/2020		0.54		0.035		0.077		0.019		0.46
Leachate, Cell 4B	304-121720-23	12/17/2020		0.76		0.043		0.24		0.036		0.83
Leachate, Cell 5	304-121720-22	12/17/2020		0.59		0.042		0.54		0.024		0.47
Leachate, Cell 6	304-121720-21	12/17/2020		0.36		0.021		2.5		0.025		0.26
Leachate, Cell 7	304-013120-01	1/31/2020		0.015		0.034		0.013		0.003		0.052
Leachate, Cell 7	304-031720-19	3/17/2020		0.056		0.099		0.020		0.0062		0.23
Leachate, Cell 7	304-060920-19	6/9/2020		0.14		0.047		0.026		0.016		0.19
Leachate, Cell 7	304-121720-29	12/17/2020		0.14		0.013		0.073		0.017		0.092
Leachate, Cell 8A	304-121720-30	12/17/2020		0.0081		0.053		0.01 U		0.002 U		0.054
Quality Control												
QC, FB	304-031720-20	3/17/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-060920-16	6/9/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-092420-20	9/24/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U
	304-121720-20	12/17/2020		0.005 U		0.001 U		0.01 U		0.002 U		0.02 U

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

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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	304-013020-01	1/30/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-031720-18	3/17/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-042120-01	4/21/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-060920-20	6/9/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-092320-17	9/23/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-121620-12	12/16/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
LDCS-7	304-013020-03	1/30/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-022820-01	2/28/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-031620-02	3/16/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-042120-02	4/21/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-060820-04	6/8/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-092320-18	9/23/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
	304-121520-06	12/15/2020	0.005 U		0.005 U		0.005 U		0.005 U		0.01 U	
LDCS-8A	304-083120-01	8/31/2020	0.005 U		0.005 U		0.005 U		0.0140		0.01 U	
	304-092120-01	9/21/2020	0.005 U		0.005 U		0.005 U		0.0150		0.01 U	
	304-100520-01	10/5/2020	0.005 U		0.005 U		0.005 U		0.0072		0.031	
	304-111020-01	11/10/2020	0.005 U		0.005 U		0.005 U		0.0080		0.01 U	
	304-121720-19	12/17/2020	0.005 U		0.005 U		0.005 U		0.0056		0.01 U	
Leachate												
Leachate, Cell 1	304-121720-25	12/17/2020		0.005 U		0.005 U		0.005 U		0.17		0.09
Leachate, Cell 2A	304-121720-26	12/17/2020		0.0052		0.005 U		0.005 U		0.51		0.23
Leachate, Cell 2B	304-121720-27	12/17/2020		0.005 U		0.005 U		0.005 U		0.21		0.23
Leachate, Cell 3A	304-121720-28	12/17/2020		0.005 U		0.005 U		0.005 U		0.16		0.29
Leachate, Cell 4A	304-121720-24	12/17/2020		0.005 U		0.005 U		0.005 U		0.25		0.16
Leachate, Cell 4B	304-121720-23	12/17/2020		0.005 U		0.005 U		0.005 U		0.075		0.19
Leachate, Cell 5	304-121720-22	12/17/2020		0.005 U		0.005 U		0.005 U		0.12		0.32
Leachate, Cell 6	304-121720-21	12/17/2020		0.005 U		0.005 U		0.005 U		0.084		8.1
Leachate, Cell 7	304-013120-01	1/31/2020		0.005 U		0.005 U		0.005 U		0.0081		0.48
Leachate, Cell 7	304-031720-19	3/17/2020		0.005 U		0.005 U		0.005 U		0.053		1.1
Leachate, Cell 7	304-060920-19	6/9/2020		0.022		0.005 U		0.005 U		0.089		0.37
Leachate, Cell 7	304-121720-29	12/17/2020		0.005 U		0.005 U		0.005 U		0.062		0.23
Leachate, Cell 8A	304-121720-30	12/17/2020		0.005 U		0.005 U		0.005 U		0.0062 U		0.26
Quality Control												
QC, FB	304-031720-20	3/17/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-060920-16	6/9/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-092420-20	9/24/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U
	304-121720-20	12/17/2020		0.005 U		0.005 U		0.005 U		0.005 U		0.01 U

Notes:
J = Result is less than the RL but greater than or equal to the MDL
U = Sample result was not reported at or above the MRL

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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	304-031620-01	3/16/2020	15		1.8		9.3		0.24		3.7		12	
MW-1A	304-060820-01	6/8/2020	13		1.6		7.6		0.27		2.9		11	
MW-1A	304-092120-02	9/21/2020	14		1.5		8.6		0.23		3.3		13	
MW-1A	304-121720-16	12/17/2020	14		1.4		8.6		0.24		3.3		9.8	
MW-2A	304-031620-03	3/16/2020	23		0.91		12		0.32		3.4		16	
MW-2A	304-060820-03	6/8/2020	21		0.86		11		0.33		2.9		15	
MW-2A	304-092120-03	9/21/2020	23		0.50		12		0.30		3.2		17	
MW-2A	304-121520-07	12/15/2020	20		0.53		11		0.30		2.8		14	
MW-3	304-031620-05	3/16/2020	49		0.1 U		21		0.44		4.6		15	
MW-3	304-060820-05	6/8/2020	38		0.1 U		16		0.37		3.6		14	
MW-3	304-092120-04	9/21/2020	33		0.1 U		14		0.26		3.5		13	
MW-3	304-121520-05	12/15/2020	35		0.1 U		15		0.28		3.5		12	
MW-4	304-031720-21	3/17/2020	31		0.1 U		17		0.23		5.5		11	
MW-4	304-060920-14	6/9/2020	27		0.1 U		15		0.23		4.8		11	
MW-4	304-092420-19	9/24/2020	29		0.14		15		0.18		5.8		13	
MW-4	304-121720-18	12/17/2020	30		0.1 U		17		0.23		5.4		11	
MW-5A	304-031620-07	3/16/2020	32		0.1		13		0.20		4.6		37	
MW-5A	304-060820-09	6/8/2020	25		0.2		10		0.19		3.8		41	
MW-5A	304-092120-05	9/21/2020	25		0.1 U		11		0.14		3.6		18	
MW-5A	304-121520-03	12/15/2020	27		0.1 U		11		0.19		3.7		19	
MW-6	304-031620-13	3/16/2020	35		0.1 U		16		0.19		5.1		10	
MW-6	304-060820-07	6/8/2020	30		0.1 U		13		0.20		4.1		9.8	
MW-6	304-092120-07	9/21/2020	30		0.1 U		13		0.21		4.5		10	
MW-6	304-121520-01	12/15/2020	34		0.1 U		15		0.24		4.6		10	
MW-7	304-031620-11	3/16/2020	35		0.19		23		0.23		5.6		12	
MW-7	304-060820-13	6/8/2020	32		0.34		22		0.28		4.8		13	
MW-7	304-092220-09	9/22/2020	30		0.20		20		0.21		4.9		12	
MW-7	304-121620-15	12/16/2020	32		0.21		21		0.24		5.3		12	
MW-9	304-031720-15	3/17/2020	11		0.1 U		7.0		0.005 U		2		7.2	
MW-9	304-060820-15	6/8/2020	9.6		0.1 U		6.4		0.005 U		2 U		7.1	
MW-9	304-092220-08	9/22/2020	9.7		0.1 U		6.4		0.005 U		2 U		6.5	
MW-9	304-121620-10	12/16/2020	10		0.1 U		6.9		0.005 U		2 U		7.7	
MW-10	304-031720-17	3/17/2020	26		0.1 U		11		0.005 U		2.2		12	
MW-10	304-060920-17	6/9/2020	24		0.1 U		10		0.005 U		2 U		12	
MW-10	304-092220-10	9/22/2020	24		0.1 U		10		0.005 U		2 U		11	
MW-10	304-121620-13	12/16/2020	25		0.1 U		11		0.005 U		2.1		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	304-031620-10	3/16/2020	39		0.49		16		1.6		4.9		17	
LDCS-1	304-060820-08	6/8/2020	38		0.44		15		1.6		4.4		17	
LDCS-1	304-092220-14	9/22/2020	59		0.24		25		2.3		5.7		18	
LDCS-1	304-121620-09	12/16/2020	40		4.1		16		1.9		4.7		17	
LDCS-2A	304-031620-08	3/16/2020	90		0.1 U		36		0.013		9.3		29	
LDCS-2A	304-060820-06	6/8/2020	85		0.1 U		32		0.029		8.4		29	
LDCS-2A	304-092220-13	9/22/2020	98		0.23		36		6.1		9.2		28	
LDCS-2A	304-121720-17	12/17/2020	93		0.1 U		37		1.5		9.1		28	
LDCS-2B	304-031620-06	3/16/2020	79		0.1 U		30		0.63		6.4		18	
LDCS-2B	304-060820-02	6/8/2020	78		0.1 U		28		2.7		5.9		18	
LDCS-2B	304-092220-12	9/22/2020	91		10		33		7.7		7.1		18	
LDCS-2B	304-121620-11	12/16/2020	83		24		30		3.1		5.9		18	
LDCS-3A	304-031620-04	3/16/2020	99		0.1 U		42		0.86		5.7		22	
LDCS-3A	304-060820-10	6/8/2020	96		0.1 U		41		0.47		5.8		23	
LDCS-3A	304-092220-11	9/22/2020	97		1.2		40		3.1		6.3		22	
LDCS-3A	304-121520-04	12/15/2020	100		0.49		43		2.1		6.6		25	
LDCS-4A	304-031620-12	3/16/2020	75		4.1		48		2.4		6		23	
LDCS-4A	304-060820-12	6/8/2020	77		4.2		46		2.6		5.9		28	
LDCS-4A	304-092320-15	9/23/2020	79		1.5		44		2.1		7.8		32	
LDCS-4A	304-121520-02	12/15/2020	75		0.43		34		1.0		13		74	
LDCS-4B	304-031620-14	3/16/2020	110		0.63		48		1.1		7.2		29	
LDCS-4B	304-060920-18	6/9/2020	91		0.45		44		1.2		7.0		34	
LDCS-4B	304-092320-16	9/23/2020	91		0.71		51		1.4		8.2		34	
LDCS-4B	304-121520-08	12/15/2020	84		0.92		37		0.96		6.2		23	
LDCS-5	304-013020-02	1/30/2020	56		1.9		25		1.8		13		40	
LDCS-5	304-031720-16	3/17/2020	78		1.1		41		1.9		12		44	
LDCS-5	304-062920-01	6/29/2020	72		0.78		39		1.7		9.5		39	
LDCS-5	304-092420-21	9/24/2020	79		1.1		46		1.8		12		44	
LDCS-5	304-121620-14	12/16/2020	64		0.34		35		1.5		8.8		27	
LDCS-6	304-013020-01	1/30/2020	120		0.1 U		40		0.45		3.7		27	
LDCS-6	304-031720-18	3/17/2020	120		0.1 U		44		1.1		4.0		26	
LDCS-6	304-042120-01	4/21/2020	130		0.1 U		51		0.2		4.1		27	
LDCS-6	304-060920-20	6/9/2020	120		0.1 U		43		0.44		4.0		28	
LDCS-6	304-092320-17	9/23/2020	110		0.1 U		48		0.076		4.3		24	
LDCS-6	304-121620-12	12/16/2020	110		0.1 U		37		0.13		3.3		21	
LDCS-7	304-013020-03	1/30/2020	200		0.1 U		69		2.7		4.2		56	
LDCS-7	304-022820-01	2/28/2020	150 B		0.1 U		33		1.5		2.1		31	
LDCS-7	304-031620-02	3/16/2020	180		0.21		54		2.5		3.5		43	
LDCS-7	304-042120-02	4/21/2020	160		0.17		37		2.0		2.1		31	
LDCS-7	304-060820-04	6/8/2020	170		0.39		54		2.9		3.4		47	
LDCS-7	304-092320-18	9/23/2020	140		0.18		46		2.3		3.5		38	
LDCS-7	304-121520-06	12/15/2020	140		0.24		38		2.2		3.5		38	
LDCS-8A	304-083120-01	8/31/2020	92		0.1 U		52		0.045		4.7		50	
LDCS-8A	304-092120-01	9/21/2020	130		0.1 U		65		0.35		6.6		64	
LDCS-8A	304-100520-01	10/5/2020	130		0.1 U		67		0.53		5.5		63	
LDCS-8A	304-111020-01	11/10/2020	120		0.1 U		67		0.005 U		5.1		45	
LDCS-8A	304-121720-19	12/17/2020	130		0.1 U		76		0.005 U		5.0		51	

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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	304-121720-25	12/17/2020		67		8.7		57		0.79		470		2,200
Leachate, Cell 2A	304-121720-26	12/17/2020		26		9.4		42		0.24		760		3,900
Leachate, Cell 2B	304-121720-27	12/17/2020		70		11		62		0.72		530		2,700
Leachate, Cell 3A	304-121720-28	12/17/2020		74		9.8		62		0.67		510		2,600
Leachate, Cell 4A	304-121720-24	12/17/2020		25		9.7		49		0.21		1,000		3,800
Leachate, Cell 4B	304-121720-23	12/17/2020		25		6.3		45		0.24		1,000		3,900
Leachate, Cell 5	304-121720-22	12/17/2020		43		7.9		50		0.39		710		2,800
Leachate, Cell 6	304-121720-21	12/17/2020		89		9.5		64		1.1		470		1,500
Leachate, Cell 7	304-013120-01	1/31/2020		140		14		27		4.1		25		80
Leachate, Cell 7	304-031720-19	3/17/2020		590		95		130		16		200		480
Leachate, Cell 7	304-060920-19	6/9/2020		900		88		210		28		320		930
Leachate, Cell 7	304-121720-29	12/17/2020		140		3.3		79		2.7		220		550
Leachate, Cell 8A	304-121720-30	12/17/2020		110		8.6		27		5.5		12		44
Quality Control														
QC, FB	304-031720-20	3/17/2020	0.57		0.1 U		0.1 U		0.005 U		2 U		1.3	
	304-060920-16	6/9/2020	0.30		0.1 U		0.1 U		0.005 U		2 U		1 U	
	304-092420-20	9/24/2020	0.73		0.1 U		0.1 U		0.005 U		2 U		1.6	
	304-121720-20	12/17/2020	0.2 U		0.1 U		0.1 U		0.005 U		2 U		1 U	

Notes:
B = Compound found in the blank and the sample
U = Sample result was not reported at or above the MRL

Groundwater Database - Appendix I VOCs
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Location	Sample Number	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,4-Dichlorobenzene	2-Butanone (MEK)
Monitoring Well																
MW-1A	304-031620-01	3/16/2020	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
	304-060820-01	6/8/2020	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
	304-092120-02	9/21/2020	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
	304-121720-16	12/17/2020	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	304-031620-03	3/16/2020	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
	304-060820-03	6/8/2020	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
	304-092120-03	9/21/2020	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
	304-121520-07	12/15/2020	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	304-031620-05	3/16/2020	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
	304-060820-05	6/8/2020	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
	304-092120-04	9/21/2020	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
	304-121520-05	12/15/2020	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	304-031720-21	3/17/2020	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
	304-060920-14	6/9/2020	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
	304-092420-19	9/24/2020	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
	304-121720-18	12/17/2020	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	304-031620-07	3/16/2020	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
	304-060820-09	6/8/2020	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
	304-092120-05	9/21/2020	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
	304-121520-03	12/15/2020	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	304-031620-13	3/16/2020	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
	304-060820-07	6/8/2020	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
	304-092120-07	9/21/2020	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
	304-121520-01	12/15/2020	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	304-031620-11	3/16/2020	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
	304-060820-13	6/8/2020	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
	304-092220-09	9/22/2020	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
	304-121620-15	12/16/2020	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
Monitoring Well																	
MW-1A	304-031620-01	3/16/2020	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
	304-060820-01	6/8/2020	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
	304-092120-02	9/21/2020	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
	304-121720-16	12/17/2020	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	304-031620-03	3/16/2020	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
	304-060820-03	6/8/2020	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
	304-092120-03	9/21/2020	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
	304-121520-07	12/15/2020	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	304-031620-05	3/16/2020	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
	304-060820-05	6/8/2020	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
	304-092120-04	9/21/2020	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
	304-121520-05	12/15/2020	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	304-031720-21	3/17/2020	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
	304-060920-14	6/9/2020	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
	304-092420-19	9/24/2020	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
	304-121720-18	12/17/2020	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	304-031620-07	3/16/2020	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
	304-060820-09	6/8/2020	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
	304-092120-05	9/21/2020	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
	304-121520-03	12/15/2020	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	304-031620-13	3/16/2020	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
	304-060820-07	6/8/2020	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
	304-092120-07	9/21/2020	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
	304-121520-01	12/15/2020	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	304-031620-11	3/16/2020	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
	304-060820-13	6/8/2020	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
	304-092220-09	9/22/2020	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
	304-121620-15	12/16/2020	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	304-031620-01	3/16/2020	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
	304-060820-01	6/8/2020	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2.3*	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
	304-092120-02	9/21/2020	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
	304-121720-16	12/17/2020	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	304-031620-03	3/16/2020	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
	304-060820-03	6/8/2020	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.4*	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
	304-092120-03	9/21/2020	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
	304-121520-07	12/15/2020	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	304-031620-05	3/16/2020	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
	304-060820-05	6/8/2020	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.1*	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
	304-092120-04	9/21/2020	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
	304-121520-05	12/15/2020	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	304-031720-21	3/17/2020	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
	304-060920-14	6/9/2020	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
	304-092420-19	9/24/2020	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
	304-121720-18	12/17/2020	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	304-031620-07	3/16/2020	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
	304-060820-09	6/8/2020	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
	304-092120-05	9/21/2020	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
	304-121520-03	12/15/2020	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	304-031620-13	3/16/2020	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
	304-060820-07	6/8/2020	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.2*	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
	304-092120-07	9/21/2020	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
	304-121520-01	12/15/2020	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	304-031620-11	3/16/2020	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
	304-060820-13	6/8/2020	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
	304-092220-09	9/22/2020	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
	304-121620-15	12/16/2020	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	304-031620-01	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-01	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092120-02	9/21/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121720-16	12/17/2020	0.5 U	0.5 U	3 U	0.5 U
MW-2A	304-031620-03	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-03	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092120-03	9/21/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121520-07	12/15/2020	0.5 U	0.5 U	3 U	0.5 U
MW-3	304-031620-05	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-05	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092120-04	9/21/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121520-05	12/15/2020	0.5 U	0.5 U	3 U	0.5 U
MW-4	304-031720-21	3/17/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060920-14	6/9/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092420-19	9/24/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121720-18	12/17/2020	0.5 U	0.5 U	3 U	0.5 U
MW-5A	304-031620-07	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-09	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092120-05	9/21/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121520-03	12/15/2020	0.5 U	0.5 U	3 U	0.5 U
MW-6	304-031620-13	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-07	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092120-07	9/21/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121520-01	12/15/2020	0.5 U	0.5 U	3 U	0.5 U
MW-7	304-031620-11	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-13	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092220-09	9/22/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121620-15	12/16/2020	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	304-031720-15	3/17/2020	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
	304-060820-15	6/8/2020	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
	304-092220-08	9/22/2020	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
	304-121620-10	12/16/2020	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	304-031720-17	3/17/2020	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
	304-060920-17	6/9/2020	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
	304-092220-10	9/22/2020	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
	304-121620-13	12/16/2020	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	304-031620-10	3/16/2020	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	0.51	6 U
	304-060820-08	6/8/2020	0.5 U	0.5 U	0.5 U	0.54 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.5 U	0.5 U	0.66	6 U
	304-092220-14	9/22/2020	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
	304-121620-09	12/16/2020	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-2A	304-031620-08	3/16/2020	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
	304-060820-06	6/8/2020	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
	304-092220-13	9/22/2020	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
	304-121720-17	12/17/2020	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	304-031620-06	3/16/2020	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
	304-060820-02	6/8/2020	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
	304-092220-12	9/22/2020	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
	304-121620-11	12/16/2020	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	304-031620-04	3/16/2020	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
	304-060820-10	6/8/2020	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
	304-092220-11	9/22/2020	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
	304-121520-04	12/15/2020	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	304-031720-15	3/17/2020	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
	304-060820-15	6/8/2020	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
	304-092220-08	9/22/2020	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
	304-121620-10	12/16/2020	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	304-031720-17	3/17/2020	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
	304-060920-17	6/9/2020	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
	304-092220-10	9/22/2020	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
	304-121620-13	12/16/2020	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	304-031620-10	3/16/2020	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
	304-060820-08	6/8/2020	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.92 U	0.5 U	0.5 U	0.5 U	0.5 U	0.82 U	0.5 U	0.6 U
	304-092220-14	9/22/2020	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
	304-121620-09	12/16/2020	5 U	5 U	15	5 U	0.75	0.5 U	0.5 U	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	304-031620-08	3/16/2020	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
	304-060820-06	6/8/2020	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
	304-092220-13	9/22/2020	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
	304-121720-17	12/17/2020	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	304-031620-06	3/16/2020	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
	304-060820-02	6/8/2020	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
	304-092220-12	9/22/2020	5 U	5 U	30	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121620-11	12/16/2020	5 U	5 U	13	5 U	0.5 U	0.5 U	0.5 U	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	304-031620-04	3/16/2020	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
	304-060820-10	6/8/2020	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
	304-092220-11	9/22/2020	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
	304-121520-04	12/15/2020	5 U	5 U	12	5 U	0.66	0.5 U	0.5 U	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	304-031720-15	3/17/2020	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
	304-060820-15	6/8/2020	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
	304-092220-08	9/22/2020	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
	304-121620-10	12/16/2020	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	304-031720-17	3/17/2020	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
	304-060920-17	6/9/2020	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
	304-092220-10	9/22/2020	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
	304-121620-13	12/16/2020	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	304-031620-10	3/16/2020	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
	304-060820-08	6/8/2020	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.5 U	0.5 U	0.71 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-092220-14	9/22/2020	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
	304-121620-09	12/16/2020	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	304-031620-08	3/16/2020	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
	304-060820-06	6/8/2020	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
	304-092220-13	9/22/2020	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
	304-121720-17	12/17/2020	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	2 U	0.63	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
LDCS-2B	304-031620-06	3/16/2020	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
	304-060820-02	6/8/2020	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
	304-092220-12	9/22/2020	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
	304-121620-11	12/16/2020	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	304-031620-04	3/16/2020	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
	304-060820-10	6/8/2020	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
	304-092220-11	9/22/2020	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
	304-121520-04	12/15/2020	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	304-031720-15	3/17/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-15	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092220-08	9/22/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121620-10	12/16/2020	0.5 U	0.5 U	3 U	0.5 U
MW-10	304-031720-17	3/17/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060920-17	6/9/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092220-10	9/22/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121620-13	12/16/2020	0.5 U	0.5 U	3 U	0.5 U
Leak Detection System						
LDCS-1	304-031620-10	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-08	6/8/2020	0.5 U	0.58 U	3 U	0.5 U
	304-092220-14	9/22/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121620-09	12/16/2020	0.5 U	0.5 U	3 U	0.5 U
LDCS-2A	304-031620-08	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-06	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092220-13	9/22/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121720-17	12/17/2020	0.5 U	0.5 U	3 U	0.5 U
LDCS-2B	304-031620-06	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-02	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092220-12	9/22/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121620-11	12/16/2020	0.5 U	0.5 U	3 U	0.5 U
LDCS-3A	304-031620-04	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-10	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092220-11	9/22/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121520-04	12/15/2020	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	304-031620-12	3/16/2020	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
	304-060820-12	6/8/2020	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
	304-092320-15	9/23/2020	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
	304-121520-02	12/15/2020	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	304-031620-14	3/16/2020	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
	304-060920-18	6/9/2020	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
	304-092320-16	9/23/2020	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
	304-121520-08	12/15/2020	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	304-013020-02	1/30/2020	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
	304-031720-16	3/17/2020	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
	304-062920-01	6/29/2020	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
	304-092420-21	9/24/2020	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
	304-121620-14	12/16/2020	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	304-013020-01	1/30/2020	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
	304-031720-18	3/17/2020	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.96	1 U	2 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	6 U
	304-042120-01	4/21/2020	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
	304-060920-20	6/9/2020	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
	304-092320-17	9/23/2020	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
	304-121620-12	12/16/2020	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	304-013020-03	1/30/2020	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
	304-022820-01	2/28/2020	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
	304-031620-02	3/16/2020	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
	304-042120-02	4/21/2020	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
	304-060820-04	6/8/2020	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
	304-092320-18	9/23/2020	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
	304-121520-06	12/15/2020	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	304-031620-12	3/16/2020	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
	304-060820-12	6/8/2020	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
	304-092320-15	9/23/2020	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
	304-121520-02	12/15/2020	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	304-031620-14	3/16/2020	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
	304-060920-18	6/9/2020	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
	304-092320-16	9/23/2020	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
	304-121520-08	12/15/2020	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	304-013020-02	1/30/2020	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
	304-031720-16	3/17/2020	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
	304-062920-01	6/29/2020	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
	304-092420-21	9/24/2020	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
	304-121620-14	12/16/2020	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	304-013020-01	1/30/2020	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
	304-031720-18	3/17/2020	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
	304-042120-01	4/21/2020	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
	304-060920-20	6/9/2020	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
	304-092320-17	9/23/2020	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
	304-121620-12	12/16/2020	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	304-013020-03	1/30/2020	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-022820-01	2/28/2020	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-031620-02	3/16/2020	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-042120-02	4/21/2020	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-060820-04	6/8/2020	5 U	5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-092320-18	9/23/2020	5 U	5 U	10 U	5 U	0.61	0.5 U	0.5 U	0.5 U	0.5 U	18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	304-121520-06	12/15/2020	5 U	5 U	26	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

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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	304-031620-12	3/16/2020	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
	304-060820-12	6/8/2020	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
	304-092320-15	9/23/2020	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
	304-121520-02	12/15/2020	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	304-031620-14	3/16/2020	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
	304-060920-18	6/9/2020	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
	304-092320-16	9/23/2020	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
	304-121520-08	12/15/2020	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	304-013020-02	1/30/2020	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
	304-031720-16	3/17/2020	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
	304-062920-01	6/29/2020	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
	304-092420-21	9/24/2020	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
	304-121620-14	12/16/2020	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	304-013020-01	1/30/2020	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
	304-031720-18	3/17/2020	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
	304-042120-01	4/21/2020	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
	304-060920-20	6/9/2020	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
	304-092320-17	9/23/2020	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
	304-121620-12	12/16/2020	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	304-013020-03	1/30/2020	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	3	0.5 U	0.5 U	3 U
	304-022820-01	2/28/2020	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
	304-031620-02	3/16/2020	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
	304-042120-02	4/21/2020	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
	304-060820-04	6/8/2020	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
	304-092320-18	9/23/2020	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
	304-121520-06	12/15/2020	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	304-031620-12	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-12	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092320-15	9/23/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121520-02	12/15/2020	0.5 U	0.5 U	3 U	0.5 U
LDCS-4B	304-031620-14	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060920-18	6/9/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092320-16	9/23/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121520-08	12/15/2020	0.5 U	0.5 U	3 U	0.5 U
LDCS-5	304-013020-02	1/30/2020	0.5 U	0.5 U	3 U	0.5 U
	304-031720-16	3/17/2020	0.5 U	0.5 U	3 U	0.5 U
	304-062920-01	6/29/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092420-21	9/24/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121620-14	12/16/2020	0.5 U	0.5 U	3 U	0.5 U
LDCS-6	304-013020-01	1/30/2020	0.5 U	0.5 U	3 U	0.5 U
	304-031720-18	3/17/2020	0.5 U	0.5 U	3 U	1.3
	304-042120-01	4/21/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060920-20	6/9/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092320-17	9/23/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121620-12	12/16/2020	0.5 U	0.5 U	3 U	0.5 U
LDCS-7	304-013020-03	1/30/2020	0.5 U	0.5 U	3 U	0.5 U
	304-022820-01	2/28/2020	0.5 U	0.5 U	3 U	0.5 U
	304-031620-02	3/16/2020	0.5 U	0.5 U	3 U	0.5 U
	304-042120-02	4/21/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060820-04	6/8/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092320-18	9/23/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121520-06	12/15/2020	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-8A	304-083120-01	8/31/2020	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
	304-092120-01	9/21/2020	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
	304-100520-01	10/5/2020	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
	304-111020-01	11/10/2020	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
	304-121720-19	12/17/2020	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	304-121720-25	12/17/2020	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	16	15
Leachate, Cell 2A	304-121720-26	12/17/2020	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	8.9	160
Leachate, Cell 2B	304-121720-27	12/17/2020	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	15	6 U
Leachate, Cell 3A	304-121720-28	12/17/2020	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	2 U	1 U	0.53	0.5 U	0.5 U	17	6 U
Leachate, Cell 4A	304-121720-24	12/17/2020	0.5 U	0.5 U	0.5 U	0.54 U	0.5 U	0.5 U	1 U	2 U	1 U	0.5 U	0.5 U	0.5 U	14	1400
Leachate, Cell 4B	304-121720-23	12/17/2020	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	3.2 U	4900
Leachate, Cell 5	304-121720-22	12/17/2020	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	0.64 U	1400
Leachate, Cell 6	304-121720-21	12/17/2020	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	0.65	770
Leachate, Cell 7	304-013120-01	1/31/2020	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	0.8 U	560
Leachate, Cell 7	304-031720-19	3/17/2020	2.1 U	1.6 U	2.1 U	2.7 U	6.0	270	3.3 U	4.7 U	1.8 U	1.5 U	35	1.8 U	1.6 U	6000
Leachate, Cell 7	304-060920-19	6/9/2020	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	26000
Leachate, Cell 7	304-121720-29	12/17/2020	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	3.2 U	11000
Leachate, Cell 8A	304-121720-30	12/17/2020	0.5 U	7.0	0.5 U	0.54 U	3.8	0.5 U	1 U	2 U	1 U	0.5 U	16	0.5 U	0.5 U	580
Quality Control																
QC, FB	304-031720-20	3/17/2020	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
	304-060920-16	6/9/2020	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
	304-092420-20	9/24/2020	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
	304-121720-20	12/17/2020	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

* = The LCS or LCSD exhibited recoveries of Iodomethane below the lower control limits. See data validation report for additional details.

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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-8A	304-083120-01	8/31/2020	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
	304-092120-01	9/21/2020	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
	304-100520-01	10/5/2020	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
	304-111020-01	11/10/2020	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
	304-121720-19	12/17/2020	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	304-121720-25	12/17/2020	5 U	5 U	42	5 U	14	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4	0.5 U	0.5 U	0.5 U
Leachate, Cell 2A	304-121720-26	12/17/2020	5 U	11	640	5 U	9.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.5 U	0.5 U	0.5 U
Leachate, Cell 2B	304-121720-27	12/17/2020	5 U	11	120	5 U	14	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.3	0.5 U	0.5 U	0.5 U
Leachate, Cell 3A	304-121720-28	12/17/2020	5 U	5 U	24	5 U	14	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4	0.5 U	0.5 U	0.5 U
Leachate, Cell 4A	304-121720-24	12/17/2020	5 U	25	1400	5 U	15	0.5 U	0.5 U	0.92 U	0.5 U	0.5 U	0.5 U	1.8	0.82 U	0.5 U	0.6 U
Leachate, Cell 4B	304-121720-23	12/17/2020	34 U	210	6000	28 U	26	2 U	3.4 U	9.2 U	4.2 U	3.3 U	3.8 U	3.4 U	8.2 U	3.2 U	6 U
Leachate, Cell 5	304-121720-22	12/17/2020	6.8 U	27	2000	5.6 U	2.2	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 6	304-121720-21	12/17/2020	6.8 U	19	490	5.6 U	3.5	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	304-013120-01	1/31/2020	8.5 U	22	330	7 U	0.8 U	0.5 U	0.85 U	2.3 U	1.1 U	1.5	0.95 U	0.85 U	2.1 U	0.8 U	1.5 U
Leachate, Cell 7	304-031720-19	3/17/2020	17 U	130	3300	14 U	12	1 U	1.7 U	4.6 U	2.1 U	11	1.9 U	1.7 U	15	1.6 U	3 U
Leachate, Cell 7	304-060920-19	6/9/2020	170 U	210	27000	140 U	16 U	10 U	17 U	46 U	21 U	17 U	19 U	17 U	41 U	29	30 U
Leachate, Cell 7	304-121720-29	12/17/2020	34 U	330	7200	28 U	14	2 U	3.4 U	9.2 U	4.2 U	3.3 U	3.8 U	3.4 U	8.2 U	3.2 U	6 U
Leachate, Cell 8A	304-121720-30	12/17/2020	5 U	16	220	5 U	5.3	0.5 U	0.5 U	0.92 U	0.5 U	5.7	0.5 U	0.5 U	6.7	2.3	3.0
Quality Control																	
QC, FB	304-031720-20	3/17/2020	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
	304-060920-16	6/9/2020	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
	304-092420-20	9/24/2020	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
	304-121720-20	12/17/2020	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 MR

* = The LCS or LCSD exhibited recoveries of Iodomethar

Groundwater Database - Appendix I VOCs
2020 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-8A	304-083120-01	8/31/2020	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
	304-092120-01	9/21/2020	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
	304-100520-01	10/5/2020	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
	304-111020-01	11/10/2020	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
	304-121720-19	12/17/2020	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	304-121720-25	12/17/2020	1.4	0.5 U	0.5 U	0.5 U	68	1 U	2 U	100	49	3.4	0.5 U	15	0.5 U	0.5 U	3 U
Leachate, Cell 2A	304-121720-26	12/17/2020	1.9	0.5 U	0.5 U	0.5 U	42	1 U	2 U	66	30	2.5	0.5 U	65	0.5 U	0.5 U	3 U
Leachate, Cell 2B	304-121720-27	12/17/2020	1.2	0.5 U	0.5 U	0.5 U	63	1 U	2 U	100	47	3.2	0.5 U	20	0.5 U	0.5 U	3 U
Leachate, Cell 3A	304-121720-28	12/17/2020	1.5	0.5 U	0.5 U	0.5 U	61	1 U	2 U	110	53	4.0	0.5 U	19	0.5 U	0.5 U	3 U
Leachate, Cell 4A	304-121720-24	12/17/2020	1.3	0.5 U	0.5 U	0.5 U	35	1 U	2 U	77	35	2.5	0.5 U	51	0.5 U	0.5 U	3 U
Leachate, Cell 4B	304-121720-23	12/17/2020	3 U	3.2 U	3.4 U	3.4 U	32	4.6 U	19 U	63	28	7.1 U	4 U	54	3 U	3.8 U	16 U
Leachate, Cell 5	304-121720-22	12/17/2020	0.6 U	0.64 U	0.68 U	0.68 U	1.2	1 U	3.8 U	1.7	1.4	1.4 U	0.8 U	4.3	0.6 U	0.76 U	3.2 U
Leachate, Cell 6	304-121720-21	12/17/2020	2.8	0.64 U	0.68 U	0.68 U	20	1 U	3.8 U	38	18	1.4 U	0.8 U	48	0.6 U	0.76 U	3.2 U
Leachate, Cell 7	304-013120-01	1/31/2020	0.75 U	0.8 U	0.85 U	0.85 U	2.7	1.2 U	31	7.1	3.1	2.1	3.3	27	1.8	0.95 U	4 U
Leachate, Cell 7	304-031720-19	3/17/2020	1.5 U	1.6 U	1.7 U	1.7 U	17	2.3 U	510	47	20	14	7.5	200	1.5 U	1.9 U	8 U
Leachate, Cell 7	304-060920-19	6/9/2020	15 U	16 U	17 U	17 U	16 U	23 U	94 U	32	19 U	36 U	20 U	280	15 U	19 U	80 U
Leachate, Cell 7	304-121720-29	12/17/2020	3.7	3.2 U	3.4 U	3.4 U	33	4.6 U	19 U	60	28	7.1 U	4 U	890	3 U	3.8 U	16 U
Leachate, Cell 8A	304-121720-30	12/17/2020	4.3	0.5 U	0.5 U	0.5 U	7.2	1 U	170	21	11	3.8	7.6	76	2.6	0.5 U	3 U
Quality Control																	
QC, FB	304-031720-20	3/17/2020	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	7.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-060920-16	6/9/2020	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3 U
	304-092420-20	9/24/2020	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
	304-121720-20	12/17/2020	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 MR

* = The LCS or LCSD exhibited recoveries of Iodomethar

Groundwater Database - Appendix I VOCs
2020 Annual Monitoring Report
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
LDCS-8A	304-083120-01	8/31/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092120-01	9/21/2020	0.5 U	0.5 U	3 U	0.5 U
	304-100520-01	10/5/2020	0.5 U	0.5 U	3 U	0.5 U
	304-111020-01	11/10/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121720-19	12/17/2020	0.5 U	0.5 U	3 U	0.5 U
Leachate						
Leachate, Cell 1	304-121720-25	12/17/2020	0.5 U	0.5 U	3 U	0.59
Leachate, Cell 2A	304-121720-26	12/17/2020	0.5 U	0.5 U	3 U	0.5 U
Leachate, Cell 2B	304-121720-27	12/17/2020	0.5 U	0.5 U	3 U	0.5 U
Leachate, Cell 3A	304-121720-28	12/17/2020	0.5 U	0.5 U	3 U	0.57
Leachate, Cell 4A	304-121720-24	12/17/2020	0.5 U	0.58 U	3 U	0.5 U
Leachate, Cell 4B	304-121720-23	12/17/2020	3.2 U	5.8 U	19 U	2 U
Leachate, Cell 5	304-121720-22	12/17/2020	0.64 U	1.2 U	3.8 U	0.5 U
Leachate, Cell 6	304-121720-21	12/17/2020	0.64 U	1.2 U	3.8 U	0.5 U
Leachate, Cell 7	304-013120-01	1/31/2020	0.8 U	2.6	4.7 U	0.5 U
Leachate, Cell 7	304-031720-19	3/17/2020	6.0	19	9.4 U	1 U
Leachate, Cell 7	304-060920-19	6/9/2020	16 U	29 U	94 U	10 U
Leachate, Cell 7	304-121720-29	12/17/2020	3.2 U	5.8 U	19 U	2 U
Leachate, Cell 8A	304-121720-30	12/17/2020	7.0	21	3 U	0.5 U
Quality Control						
QC, FB	304-031720-20	3/17/2020	0.5 U	0.5 U	3 U	0.5 U
	304-060920-16	6/9/2020	0.5 U	0.5 U	3 U	0.5 U
	304-092420-20	9/24/2020	0.5 U	0.5 U	3 U	0.5 U
	304-121720-20	12/17/2020	0.5 U	0.5 U	3 U	0.5 U

Notes:

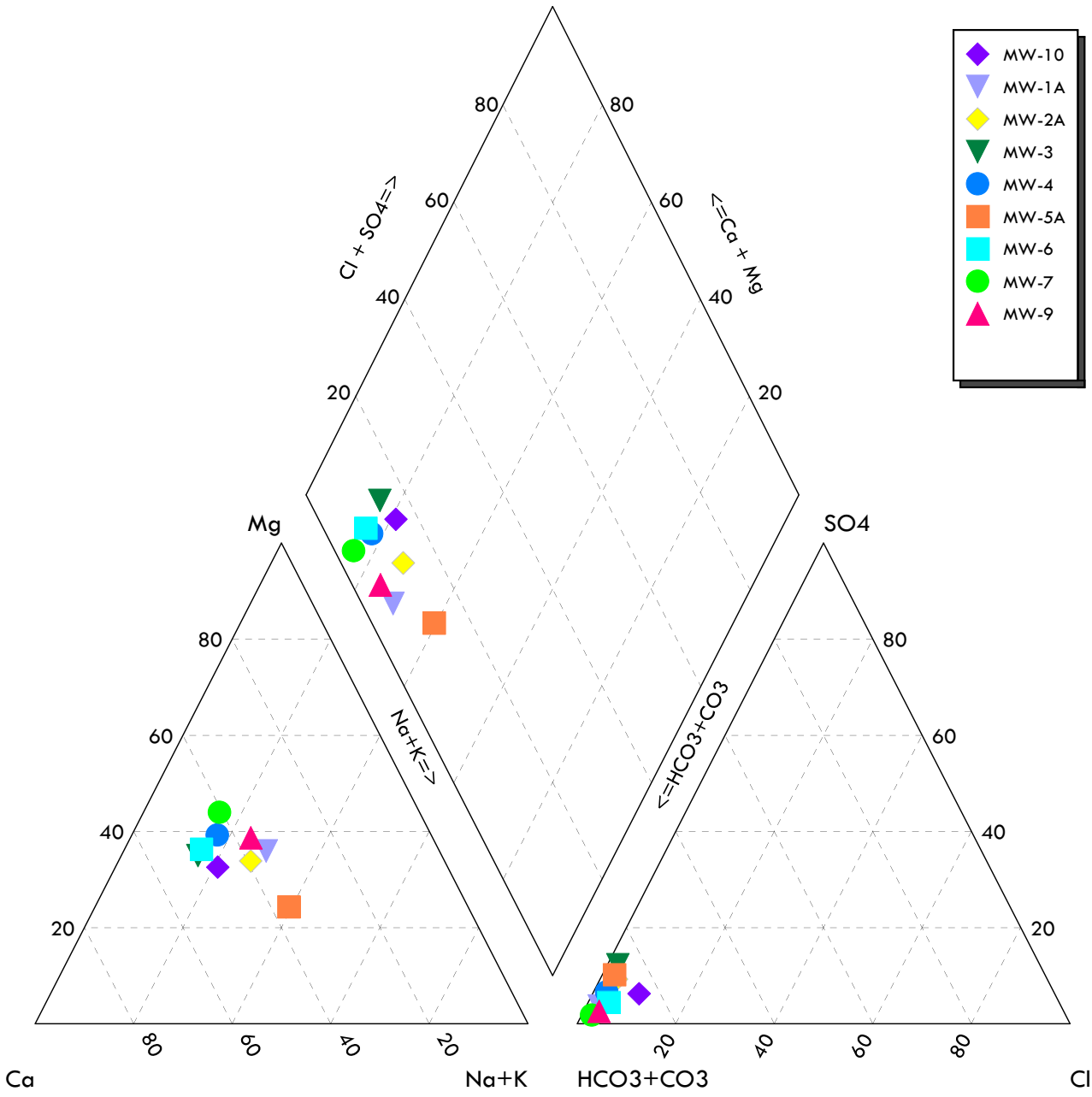
U = Sample result was not reported at or above the MR

* = The LCS or LCSD exhibited recoveries of Iodomethar

Appendix D

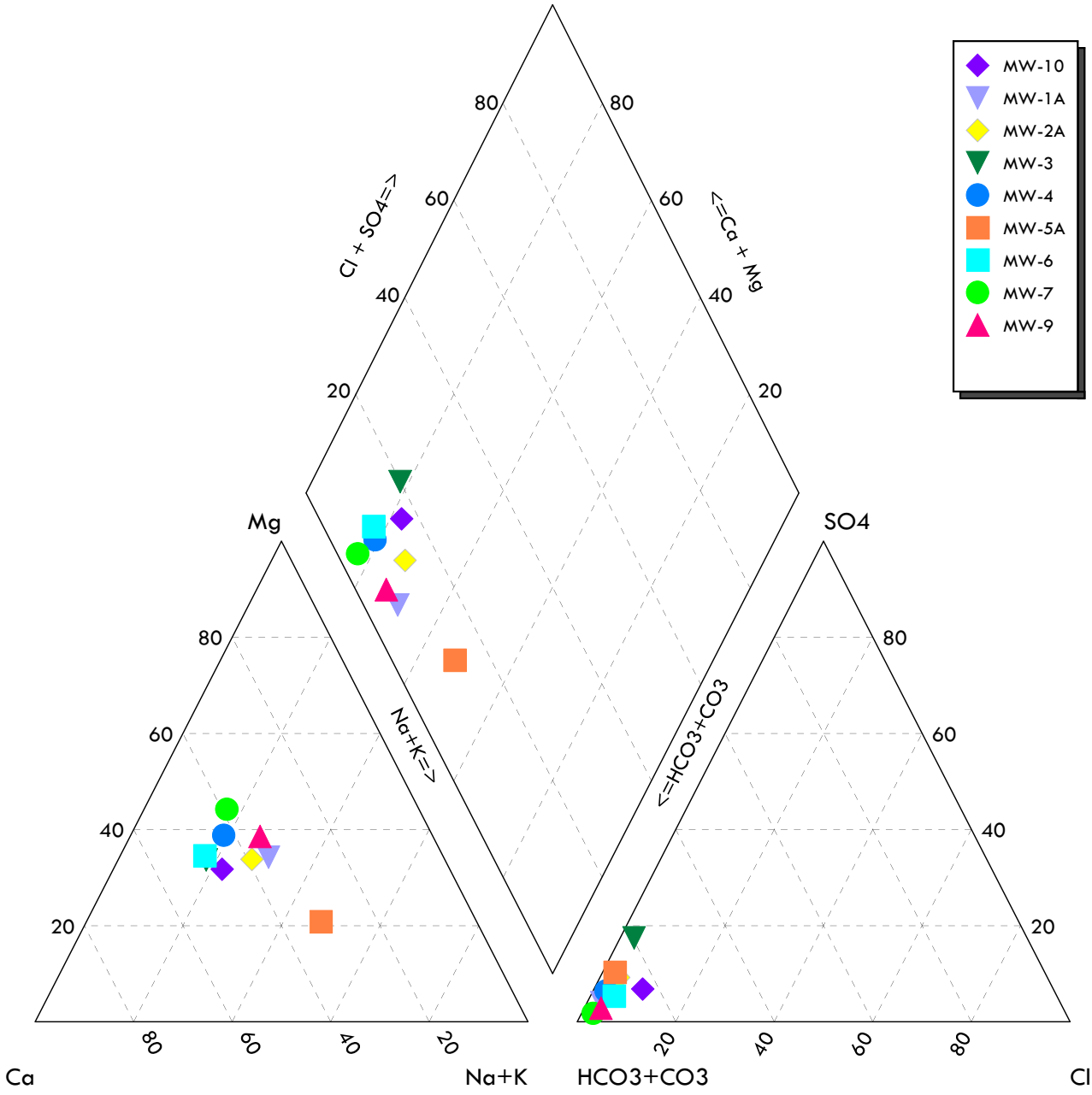
Geochemical Evaluation

First Quarter 2020, Groundwater Monitoring Wells



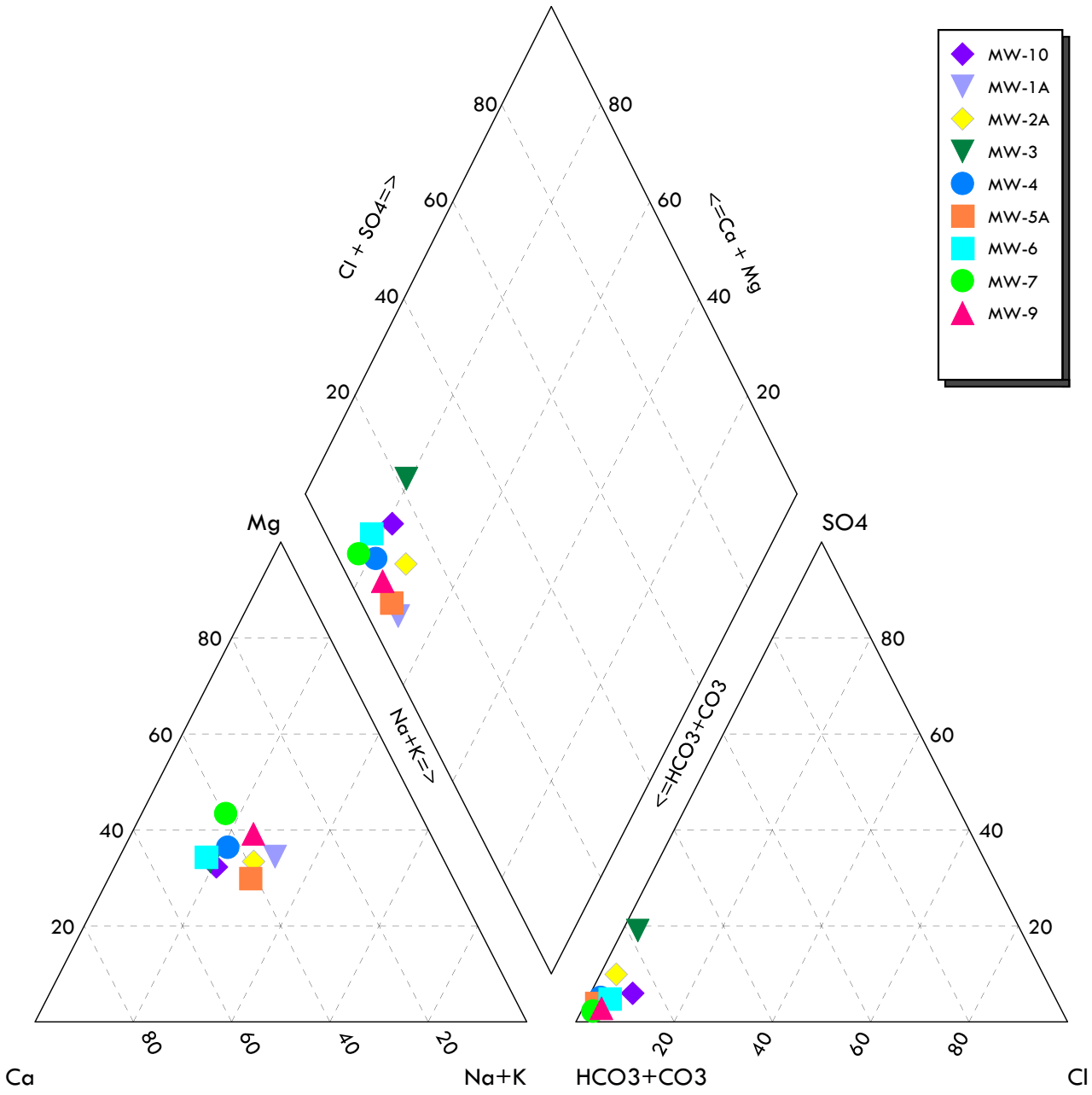
DESCRIPTION: Piper Diagram - Groundwater - 1Q20		
	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: April 2020

Second Quarter 2020, Groundwater Monitoring Wells



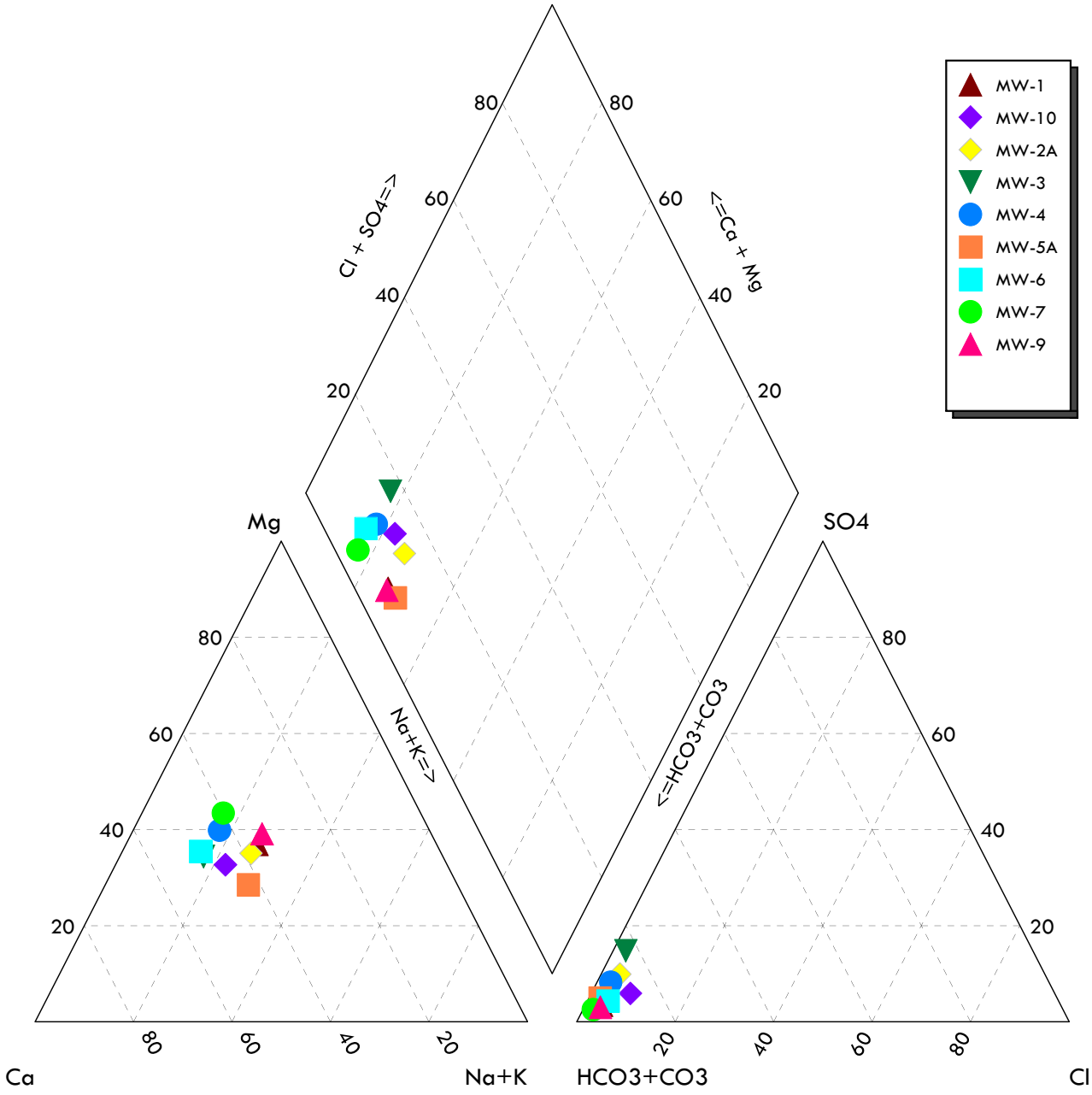
DESCRIPTION: Piper Diagram - Groundwater - 2Q20		
	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: July 2020

Third Quarter, Groundwater Monitoring Wells



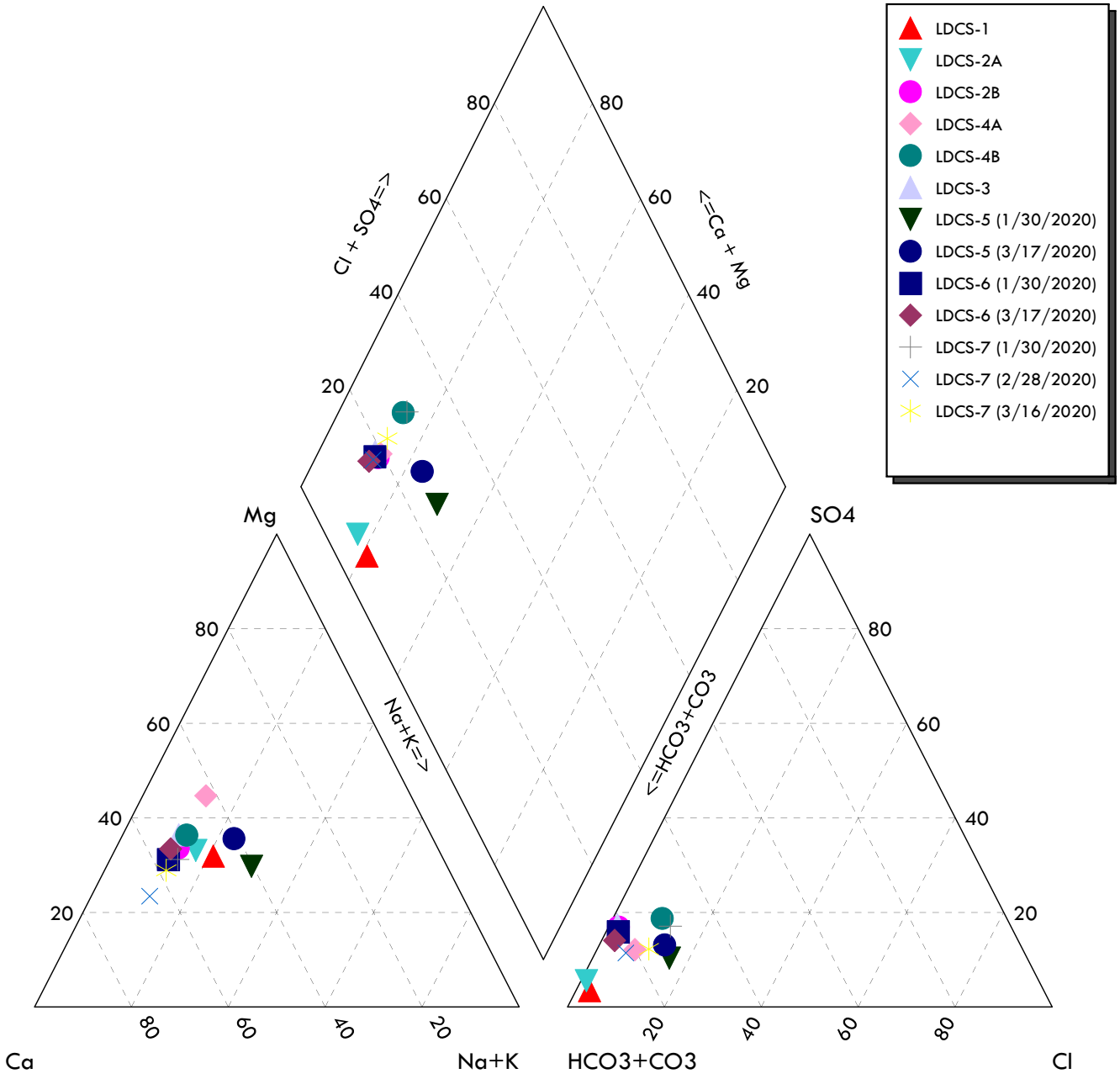
DESCRIPTION: Piper Diagram - Groundwater - 3Q20		
	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: November 2020

Fourth Quarter 2020, Groundwater Monitoring Wells



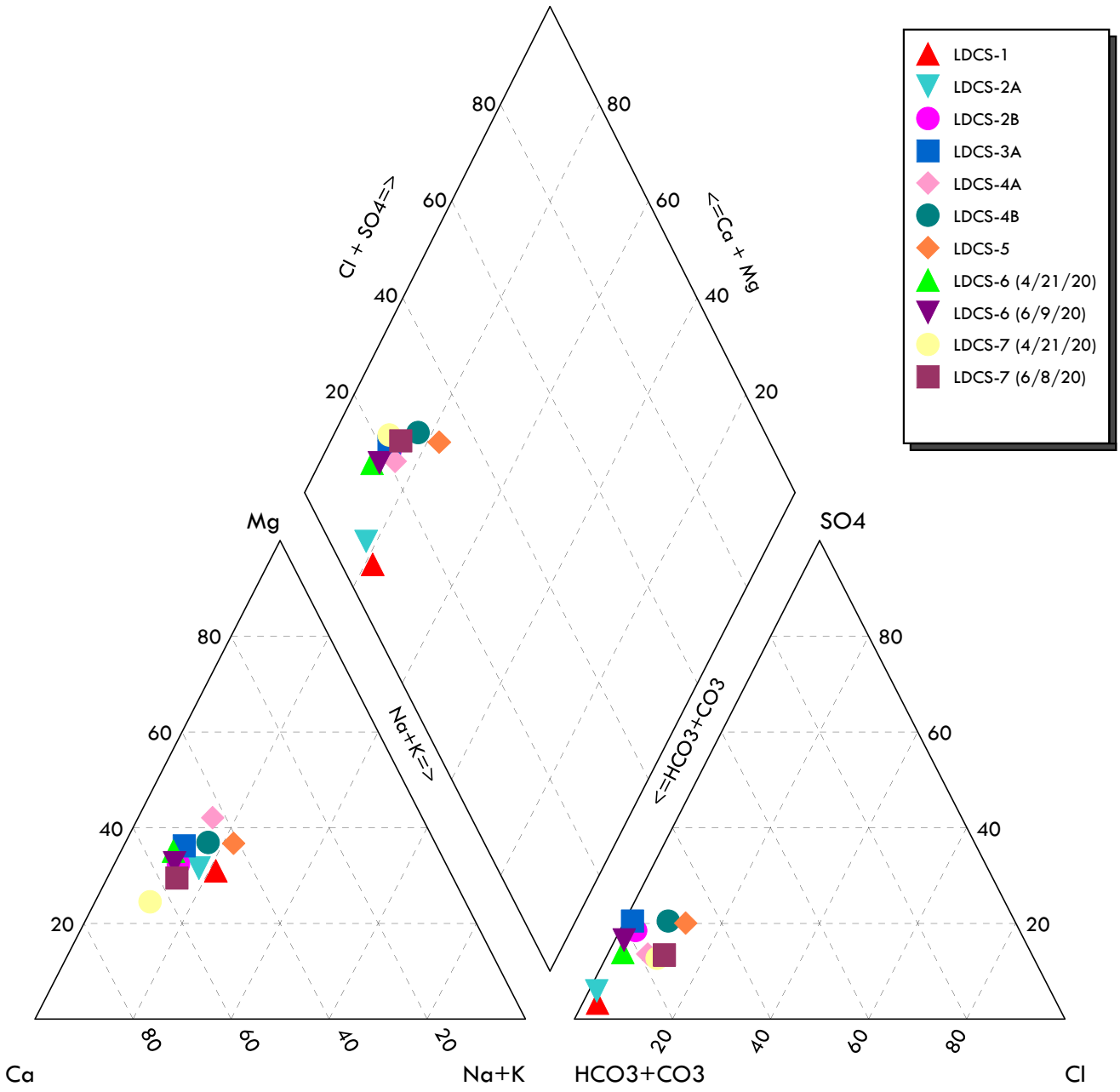
DESCRIPTION: Piper Diagram - 4Q20 Groundwater		
	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: March 2021

First Quarter 2020, Leak Detection Collection Recovery System



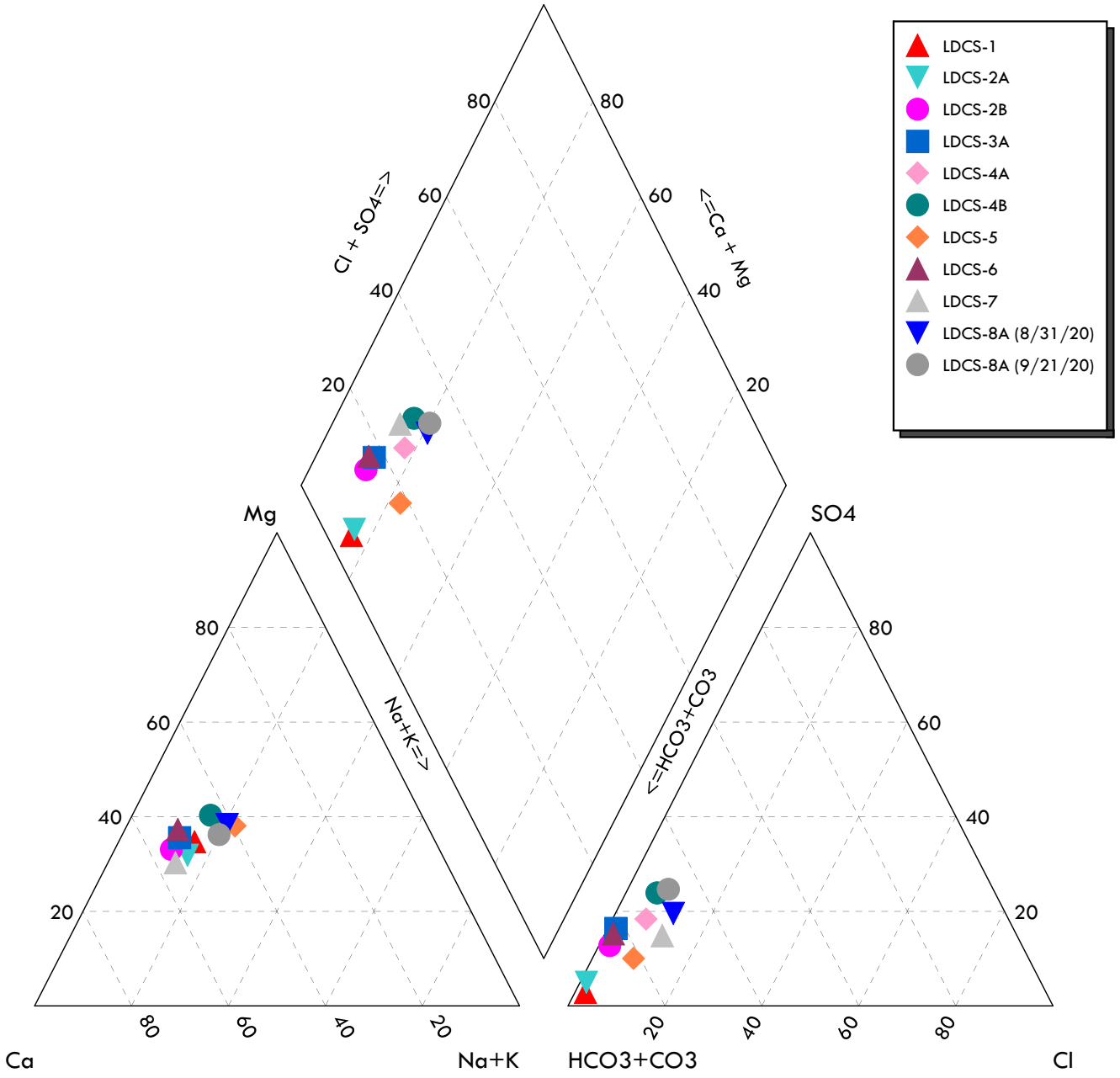
DESCRIPTION: Piper Diagram - LDCRS - 1Q20		
	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: April 2020

Second Quarter, Leak Detection Collection Recovery System



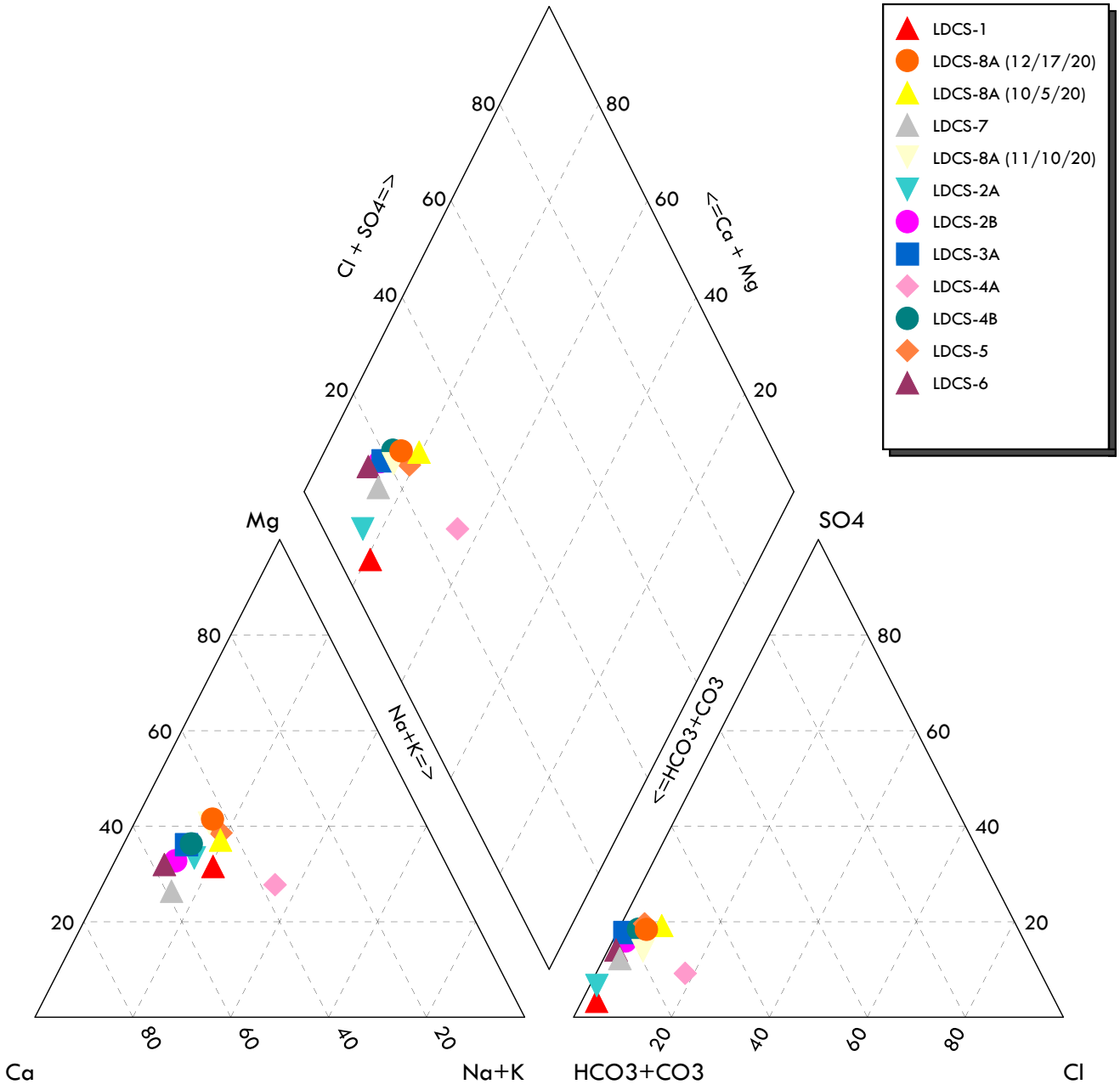
DESCRIPTION: Piper Diagram - LDCRS - 2Q20		
	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: July 2020

Third Quarter, Leak Detection Collection Recovery System



DESCRIPTION: Piper Diagram - LDCRS - 3Q20		
	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: November 2020

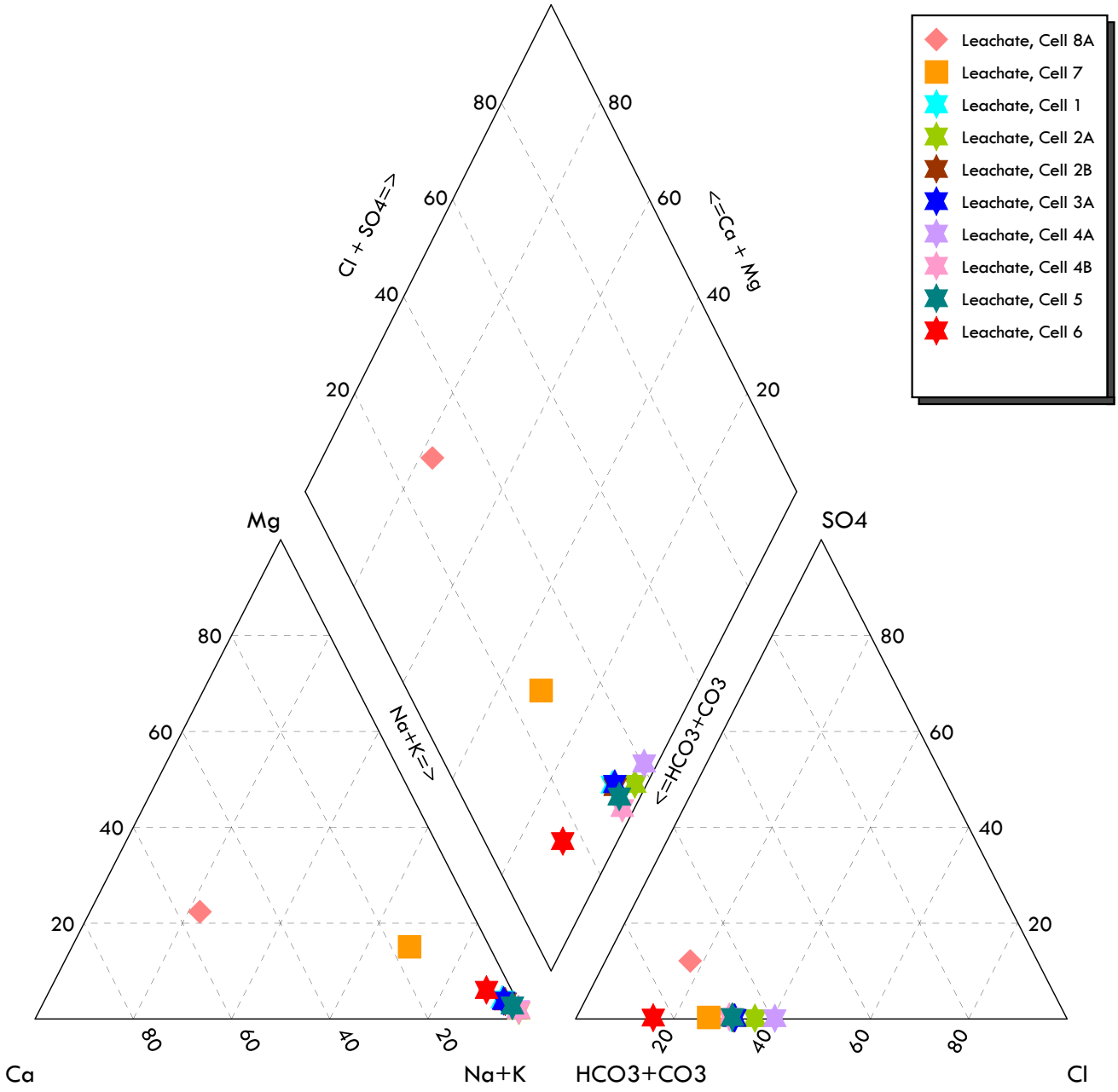
Fourth Quarter 2020, Leak Detection Collection System



DESCRIPTION: Piper Diagram - 4Q20 LDCS

	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: March 2021

Fourth Quarter 2020, Leachate



DESCRIPTION: Piper Diagram - 4Q20 Leachate

	PROJECT: LRI Landfill	PROJECT NO: 04220001.02
	CLIENT: LRI, Inc.	DATE: March 2021

Appendix E

Statistical Calculations

Groundwater Prediction Limits (mg/L)
Appendix I Parameters, Fourth Quarter 2020
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 2020
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
oefficient 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
oefficient 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
oefficient 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 2020
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
oefficient 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
oefficient 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		NC
Variance		NC		2.1E-07		1.8E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		0.00046		0.00136		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
oefficient of Variation (%)		NC		6.38736		12.1906		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		0.00016		0.00048		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
MW-7																																
3/26/2014	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		NC
Variance		NC		1.7E-06		1.8E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Deviation		NC		0.0013		0.00136		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
oefficient of Variation (%)		NC		28.3682		9.11733		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC
Standard Error		NC		0.00046		0.00048		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Fourth Quarter 2020
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
Number Analyzed	28		28		28		28		28		28		28		28		28		28		28		28		28		28		28		28	
Number Detected	0		0		8		0		0		0		0		0		0		0		0		0		0		28		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		0.01418		NC		NC
Variance		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		1.1E-06		NC		NC
Standard Deviation		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.00106		NC		NC
oefficient of Variation (%)		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		7.44767		NC		NC
Standard Error		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.0002		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
Number Analyzed	28		28		28		28		28		28		28		28		28		28		28		28		28		28		28		28	
Number Detected	0		0		28		0		0		0		0		0		0		0		0		0		0		28		4		28	
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		3.2
Maximum Concentration		0.025		0.0025		0.016		0.0025		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.005		0.034		6.4
Average Concentration		NC		NC		0.01368		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		4.957143
Variance		NC		NC		1.1E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.704762
Standard Deviation		NC		NC		0.00106		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.839501
oefficient of Variation (%)		NC		NC		7.71991		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		16.93518
Standard Error		NC		NC		0.0002		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		0.158651

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

Appendix F

Leak Detection System Data and Leachate Pump Records

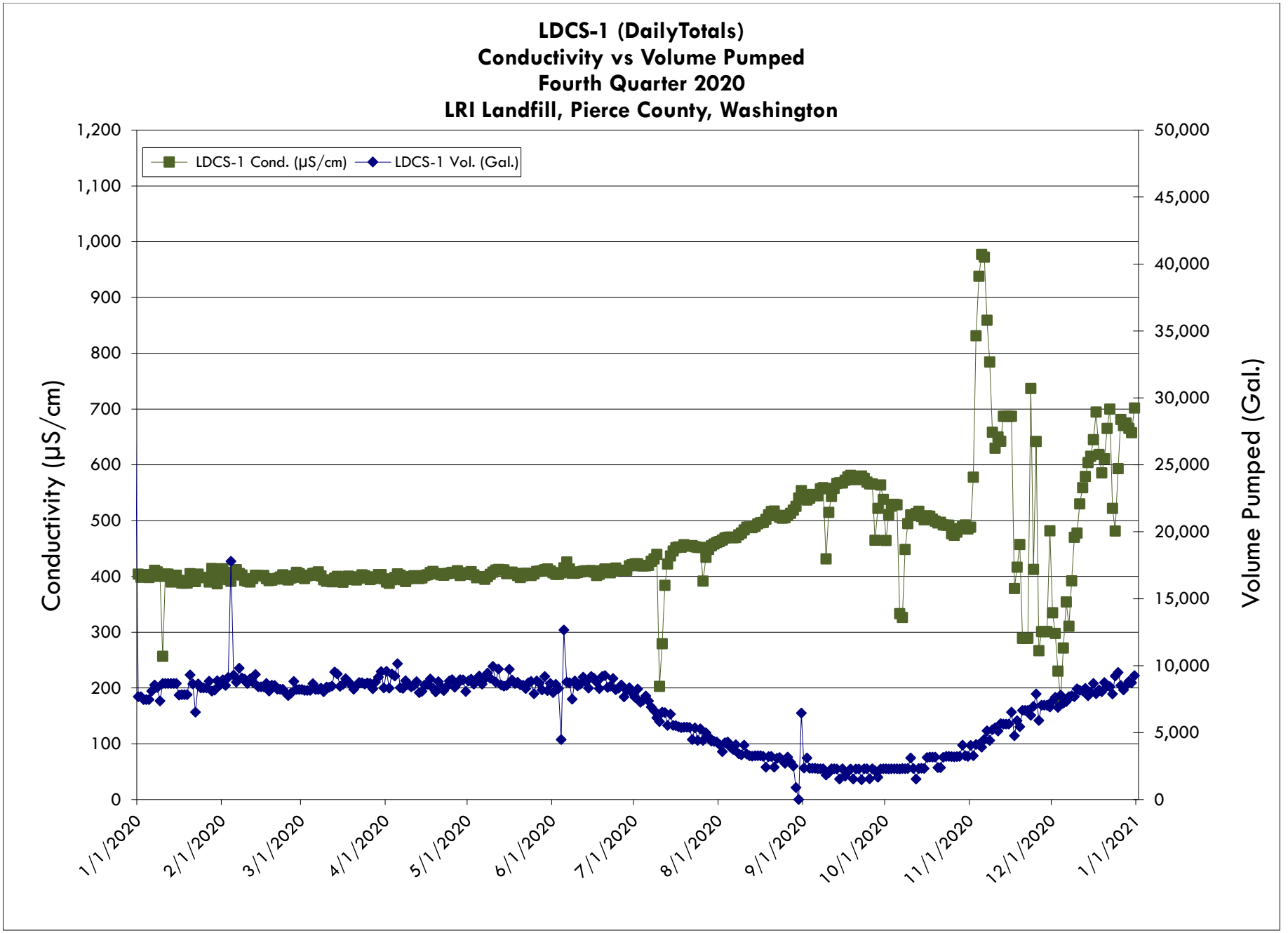
Summary of LDCS Volumes Pumped and Conductivity Data
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

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-8A Vol. (Gal)	LDCS-8A Cond.* (µS/cm)
10/1/2020	0.00	2,310	464	0	666	350	886	206	795	2,690	713	3,368	815	181	603	959	837	4,488	1,431	--	--
10/2/2020	0.01	2,290	511	0	737	300	855	206	802	2,330	713	2,989	841	241	604	860	846	1,400	1,227	--	--
10/3/2020	0.01	2,310	526	0	773	400	884	206	802	2,460	713	2,851	874	180	604	787	853	0	1,126	--	--
10/4/2020	0.02	2,310	529	0	789	300	896	206	802	2,380	713	2,729	895	181	604	704	861	0	1,105	--	--
10/5/2020	0.00	2,300	529	0	779	350	901	269	788	2,500	742	2,892	904	180	601	710	867	5,693	1,091	--	--
10/6/2020	0.00	2,290	333	0	480	350	560	400	797	2,420	762	2,341	917	179	598	632	874	29	1,005	--	--
10/7/2020	0.01	2,320	326	0	483	400	542	409	768	2,410	757	2,146	930	119	709	590	881	0	980	--	--
10/8/2020	0.01	2,310	448	0	679	300	760	282	771	2,200	755	2,097	938	180	769	551	887	0	1,006	--	--
10/9/2020	0.73	2,320	495	0	756	350	856	361	772	2,200	793	2,153	945	120	729	497	895	6,272	1,006	--	--
10/10/2020	0.65	3,110	510	40	789	300	888	361	772	4,810	793	6,977	898	300	716	1,330	901	0	1,004	--	--
10/11/2020	0.39	2,320	509	20	777	350	899	361	772	5,460	793	8,751	719	423	711	3,686	905	4,112	1,235	--	--
10/12/2020	0.15	1,540	513	0	768	250	902	539	789	4,270	806	7,532	582	549	708	3,460	912	2,511	1,311	--	--
10/13/2020	0.34	2,320	517	320	767	300	902	403	807	4,760	716	8,082	598	608	702	3,460	902	0	1,511	--	--
10/14/2020	0.01	2,340	508	360	762	350	901	397	808	3,130	681	6,203	599	485	696	2,139	896	738	1,557	--	--
10/15/2020	0.01	2,320	501	360	750	300	897	401	821	3,090	658	4,788	622	362	690	1,476	877	5,381	1,370	--	--
10/16/2020	0.00	3,140	509	440	771	350	894	404	829	3,200	783	4,684	655	300	686	1,217	866	0	1,179	--	--
10/17/2020	0.00	3,170	508	430	793	400	897	404	820	3,080	783	4,554	692	239	686	1,096	866	0	1,127	--	--
10/18/2020	0.19	3,170	503	430	794	350	899	405	813	3,100	783	4,678	729	238	687	1,039	793	5,853	1,099	--	--
10/19/2020	0.01	3,170	499	430	795	400	900	400	808	2,820	751	5,128	749	239	691	1,065	844	421	1,036	--	--
10/20/2020	0.01	2,390	496	370	776	200	897	269	807	2,340	796	3,549	774	179	694	920	870	0	1,031	--	--
10/21/2020	0.02	2,390	497	430	773	--	898	402	806	2,620	688	3,515	784	239	695	975	877	0	1,038	--	--
10/22/2020	0.01	3,150	492	440	765	--	896	400	800	2,620	750	3,549	799	179	698	941	894	6,177	1,020	718	--
10/23/2020	0.25	3,220	492	490	761	--	892	317	795	2,890	809	3,188	815	236	700	896	913	0	981	783	--
10/24/2020	0.01	3,220	492	430	770	--	891	317	783	3,040	809	5,765	802	178	702	1,085	922	0	1,011	717	--
10/25/2020	0.00	3,200	477	440	747	--	887	316	785	2,690	809	3,634	793	239	702	1,170	926	2,434	1,027	650	--
10/26/2020	0.01	3,190	474	510	748	--	884	406	798	2,840	690	3,295	803	252	703	1,116	931	3,722	997	716	--
10/27/2020	0.00	3,210	479	420	766	--	885	402	798	2,840	766	3,199	817	197	704	1,045	935	0	982	713	--
10/28/2020	0.01	3,230	486	490	782	--	887	267	791	2,740	669	2,925	833	239	705	977	939	0	1,004	716	--
10/29/2020	0.00	4,070	490	490	787	--	893	443	787	2,700	717	2,739	865	238	707	957	943	6,339	1,014	715	--
10/30/2020	0.03	3,270	492	480	791	--	897	345	781	2,820	717	2,708	890	178	709	436	945	0	980	776	--
10/31/2020	0.01	3,230	485	480	766	--	897	345	779	2,610	717	2,337	898	178	709	727	0	0	1,014	585	--
11/1/2020	0.00	4,050	488	510	766	--	895	344	785	2,490	0	1,895	911	179	708	727	0	3,309	1,041	715	--
11/2/2020	0.01	3,280	578	500	782	--	896	402	781	2,290	858	1,682	924	179	707	727	0	2,912	1,015	906	--
11/3/2020	0.99	4,120	831	490	792	--	899	399	775	3,650	778	3,239	923	238	707	1,085	935	293	987	456	--
11/4/2020	0.34	4,110	938	550	795	--	903	443	775	3,630	883	6,330	871	299	707	3,656	962	6,310	1,021	1,401	--
11/5/2020	0.94	3,910	977	510	790	--	904	362	780	5,600	910	8,152	825	738	708	12,584	972	3,964	1,044	716	--
11/6/2020	0.04	4,500	972	490	794	--	900	1413	784	5,590	895	10,001	719	1,178	701	9,995	962	8,519	1,038	783	--
11/7/2020	0.06	5,130	859	550	796	--	896	193	782	3,740	895	7,556	622	482	691	721	962	0	1,022	784	--
11/8/2020	0.00	4,410	784	540	796	--	894	193	783	3,340	895	6,600	610	360	686	721	962	0	1,024	717	--
11/9/2020	0.03	5,220	658	540	773	--	891	193	790	3,200	797	5,331	615	358	682	721	865	0	1,012	715	--
11/10/2020	0.33	5,350	630	530	780	--	889	193	788	3,750	858	6,312	620	298	679	721	872	0	1,010	781	--
11/11/2020	0.00	5,120	650	550	787	--	889	402	779	3,340	828	6,719	614	419	680	1,917	891	6,412	1,012	716	--
11/12/2020	0.06	5,670	642	610	781	--	887	539	787	3,100	779	5,634	615	298	680	1,614	905	0	998	786	--
11/13/2020	0.05	5,645	687	620	815	--	888	402	717	3,380	779	6,427	621	298	682	1,996	909	0	1,005	849	--
11/14/2020	0.10	5,645	687	620	815	--	888	402	717	2,950	779	5,501	620	358	685	1,996	909	0	1,005	846	--
11/15/2020	0.17	5,645	687	610	815	--	888	402	717	4,180	779	7,544	615	420	686	1,996	909	0	1,005	716	--
11/16/2020	0.24	6,525	687	610	769	--	881	400	749	4,950	837	7,823	601	690	682	4,169	935	0	1,005	848	--
11/17/2020	0.22	4,770	379	420	810	--	874	533	763	4,160	841	8,169	588	541	679	3,061	916	12,850	1,030	913	--
11/18/2020	0.16	5,890	417	620	760	--	873	396	753	3,740	830	8,824	572	603	677	3,094	913	2,865	1,063	848	--
11/19/2020	0.13	5,443	457	620	744	--	847	312	746	4,410	873	9,440	550	667	667	2,991	896	0	1,040	782	--
11/20/2020	0.01	6,663	289	630	766	--	818	432	779	3,820	846	8,015	510	460	662	2,059	885	0	1,024	587	--
11/21/2020	0.00	6,663	289	630	766	--	818	432	779	3,820	846	8,015	510	460	662	2,059	885	0	1,024	873	--
11/22/2020	0.23	6,663	289	630	766	--	818	433	779	3,820	846	8,015	510	459	662	2,059	885	6,432	1,024	873	--
11/23/2020	0.08	6,290	737	660	789	--	865	403	741	4,700	903	9,912	372	543	670	2,980	871	1	939	873	--
11/24/2020	0.23	6,970	413	630	766	--	869	400	751	4,330	840	9,073	637	480	509	2,551	908	6,535	964	914	--
11/25/2020	0.03	7,888	642	730	766	--	832	440	762	4,020	810	9,020	571	540	663	2,719	884	0	935	981	--
11/26/2020	0.01	5,913	267	620	748	--	859	358	790	2,860	848	5,882	583	299	601	1,640	884	0	942	980	--
11/27/2020	0.10	7,055	301	690	794	--	856	449	775	3,520	851	6,790	589	318	656	1,523	885	0	940	0	--
11/28/2020	0.01	7,055	301	690	794	--	856	449	775	3,520	851	6,790	589	318	656	1,523	885	0	940	0	--
11/29/2020	0.16	7,055	301	680	794	--	856	450	775	3,520	851	6,790	589	317	656	1,523	885	6,467	940	1,547	--
11/30/2020	0.03	6,908	482	660	786	--	864	402	736	3,500	873	7,667	627	358	728	1,656	893	6,565	958	1,547	--

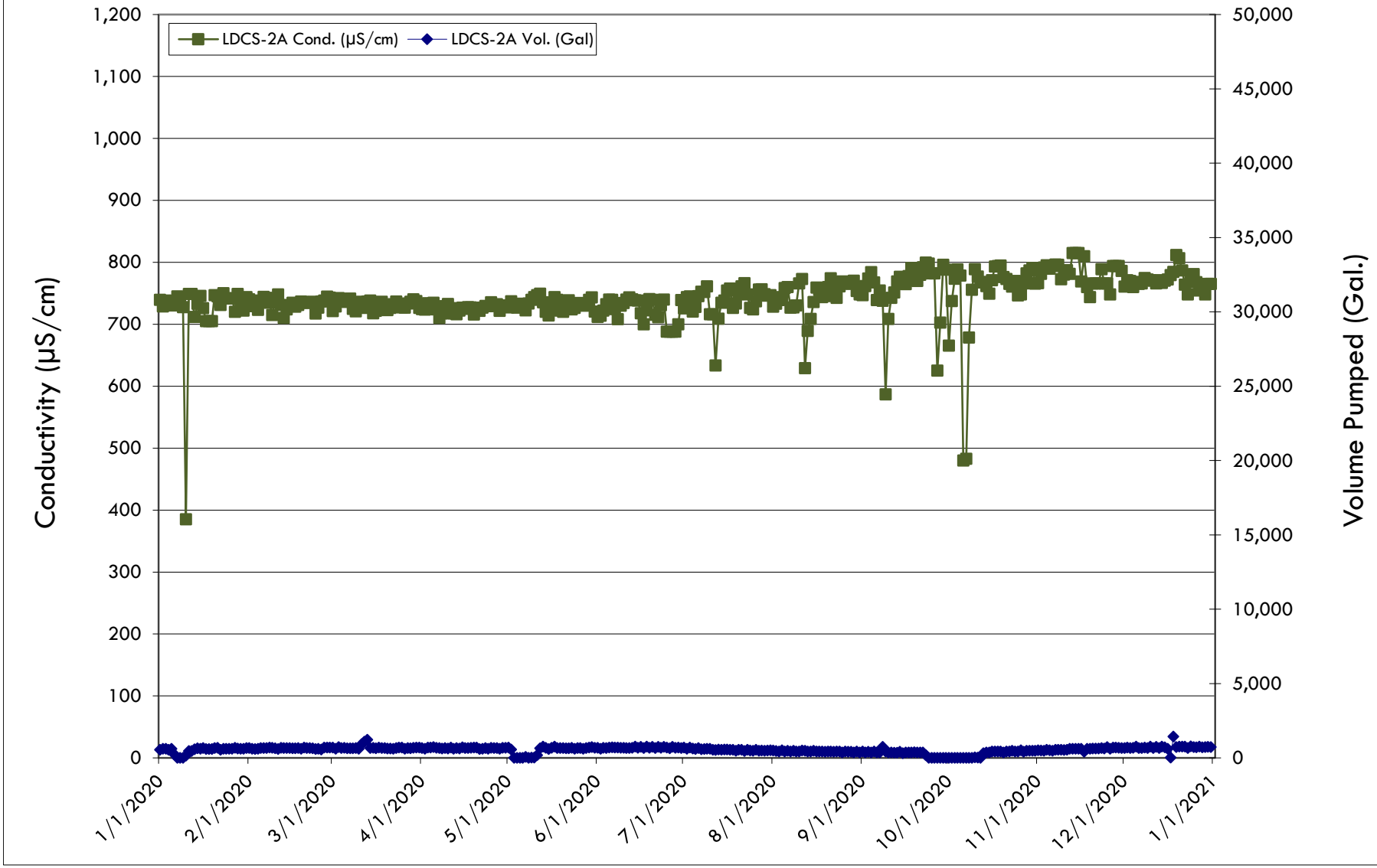
Summary of LDCS Volumes Pumped and Conductivity Data
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

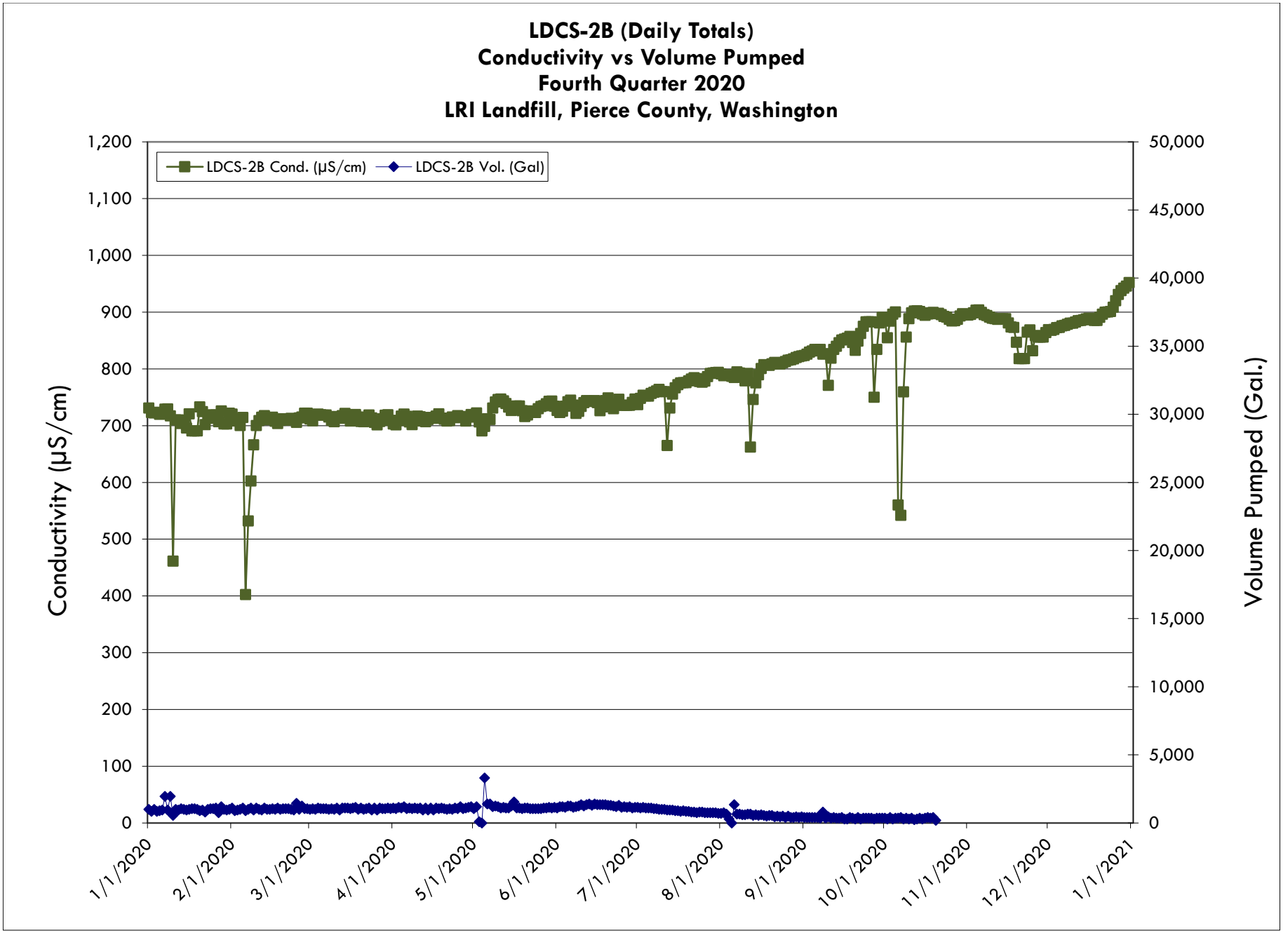
Date	Rainfall	LDCS-1 Vol. (Gal.)	LDCS-1 Cond. (µS/cm)	LDCS-2A Vol. (Gal)	LDCS-2A Cond. (µS/cm)	LDCS-2B Vol. (Gal)	LDCS-2B Cond. (µS/cm)	LDCS-3A Vol. (Gal)	LDCS-3A Cond. (µS/cm)	LDCS-4A Vol. (Gal)	LDCS-4A Cond. (µS/cm)	LDCS-4B Vol. (Gal)	LDCS-4B Cond. (µS/cm)	LDCS-5 Vol. (Gal)	LDCS-5 Cond. (µS/cm)	LDCS-6 Vol. (Gal)	LDCS-6 Cond. (µS/cm)	LDCS-7 Vol. (Gal)	LDCS-7 Cond. (µS/cm)	LDCS-8A Vol. (Gal)	LDCS-8A Cond.* (µS/cm)
12/1/2020	0.00	7,360	335	660	761	--	869	445	750	3,210	792	5,980	608	358	737	1,656	906	6,565	947	848	--
12/2/2020	0.01	7,630	298	690	771	--	868	408	757	3,350	691	5,654	613	298	827	1,570	914	0	974	984	--
12/3/2020	0.01	6,880	230	670	770	--	869	502	758	3,450	783	5,196	623	298	870	1,419	918	0	998	916	--
12/4/2020	0.00	7,810	178	680	760	--	873	403	763	3,440	813	4,732	637	238	811	1,227	922	6,450	963	915	--
12/5/2020	0.08	7,200	272	770	768	--	873	336	760	3,480	813	4,634	648	297	818	909	926	0	976	1,046	--
12/6/2020	0.05	7,320	354	670	765	--	876	336	755	4,180	813	6,440	653	238	793	1,233	932	0	1,001	912	--
12/7/2020	0.03	7,680	311	660	766	--	877	336	757	3,620	846	5,623	638	297	814	1,301	939	0	967	914	--
12/8/2020	1.19	7,750	392	700	775	--	879	335	754	6,140	885	8,544	619	486	824	3,041	948	6,433	950	981	--
12/9/2020	0.01	7,680	470	660	772	--	881	401	752	6,970	976	12,192	502	1,380	745	9,206	941	0	973	78	--
12/10/2020	0.10	8,270	478	770	771	--	881	498	758	4,760	874	9,775	482	541	682	0	905	3,583	982	34,301	--
12/11/2020	0.00	8,150	530	660	770	--	883	398	757	4,510	901	9,287	546	420	690	0	878	5,571	972	12,386	--
12/12/2020	0.06	8,120	559	740	766	--	885	535	760	4,200	901	7,870	603	359	796	1,762	877	0	971	1,245	--
12/13/2020	0.16	8,310	579	670	771	--	886	747	759	5,200	901	9,317	614	359	781	1,706	882	0	964	1,177	--
12/14/2020	0.01	7,750	604	760	767	--	887	747	763	5,110	873	9,582	543	541	795	2,435	895	6,532	976	1,049	--
12/15/2020	0.27	8,040	616	720	770	--	888	533	763	5,210	842	8,759	583	481	782	2,349	910	6,494	958	1,178	--
12/16/2020	0.19	8,680	645	620	772	--	889	534	759	6,540	989	10,117	501	676	790	4,276	915	0	934	1,186	--
12/17/2020	0.06	7,900	695	20	780	--	888	534	739	6,130	1011	10,360	429	790	790	4,886	912	448	940	1,112	--
12/18/2020	0.19	8,190	619	1440	784	--	886	397	729	5,580	1026	8,892	440	605	867	2,657	902	6,462	938	1,113	--
12/19/2020	0.44	8,050	585	730	812	--	886	513	731	6,420	1026	9,601	418	666	848	3,809	894	0	954	1,113	--
12/20/2020	0.20	8,740	611	770	807	--	891	513	729	6,060	1026	10,684	417	920	791	5,874	887	0	952	1,176	--
12/21/2020	0.40	8,490	665	760	787	--	896	514	734	7,800	939	14,118	389	855	831	5,114	876	7,865	932	1,373	--
12/22/2020	0.00	8,440	700	760	764	--	900	506	723	3,970	931	11,377	405	921	760	4,818	864	1,198	931	1,047	--
12/23/2020	0.02	7,890	522	660	748	--	900	947	725	2,370	912	7,975	500	519	802	2,088	853	5,879	910	1,139	--
12/24/2020	0.01	9,220	482	780	771	--	901	407	736	2,950	912	7,058	598	359	857	1,719	841	0	908	1,376	--
12/25/2020	0.19	9,500	593	730	781	--	909	407	743	4,810	912	7,147	652	298	874	1,567	844	0	920	42,818	--
12/26/2020	0.10	8,530	681	720	768	--	920	407	739	4,930	912	7,376	617	420	915	1,941	856	0	925	31,253	--
12/27/2020	0.10	8,180	670	760	754	--	931	407	731	5,200	912	7,755	599	481	864	3,012	881	0	941	1,241	--
12/28/2020	0.01	8,540	675	720	759	--	938	407	739	4,710	972	6,334	578	480	843	2,390	898	13,318	933	1,307	--
12/29/2020	0.35	8,820	665	730	748	--	942	383	740	1,480	949	5,404	634	419	879	1,810	900	0	928	1,180	--
12/30/2020	0.49	8,720	657	740	765	--	946	493	750	10,200	1535	9,324	574	1,050	835	7,418	899	0	934	1,440	--
12/31/2020	0.16	9,260	702	730	765	--	952	544	744	9,300	774	8,099	474	982	729	6,204	878	8,311	919	1,297	--

-- = No data collected
* = Conductivity values measured at LDCS-8A during the fourth quarter were not accurate and therefore were not reported


LDCS-1 (DailyTotals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
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
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

LDCS-2A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington




LDCS-2B (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
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
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
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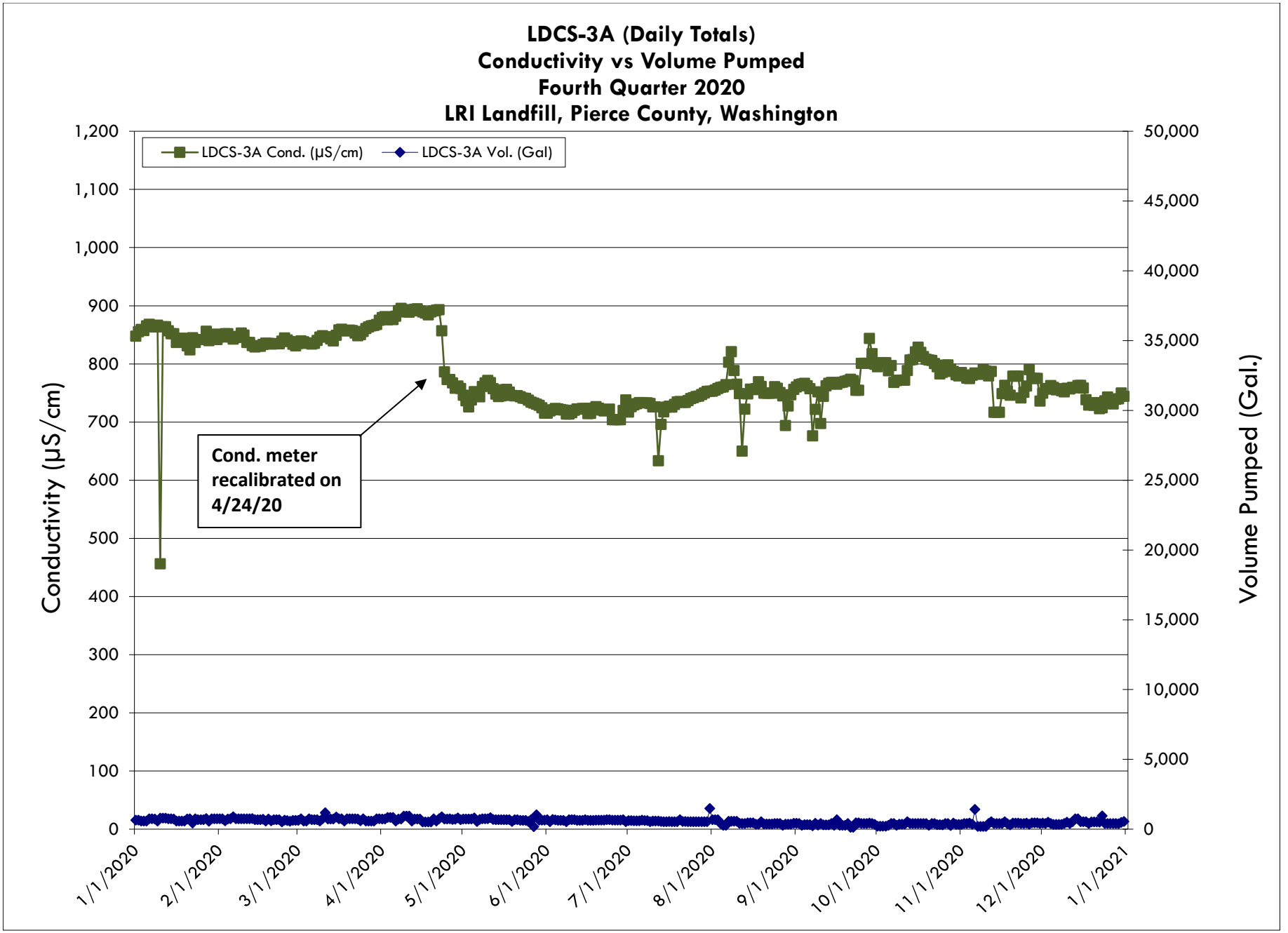
1/1/2021


LDCS-3A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-3A Cond. (µS/cm)
LDCS-3A Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
Cond. meter recalibrated on 4/24/20
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
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
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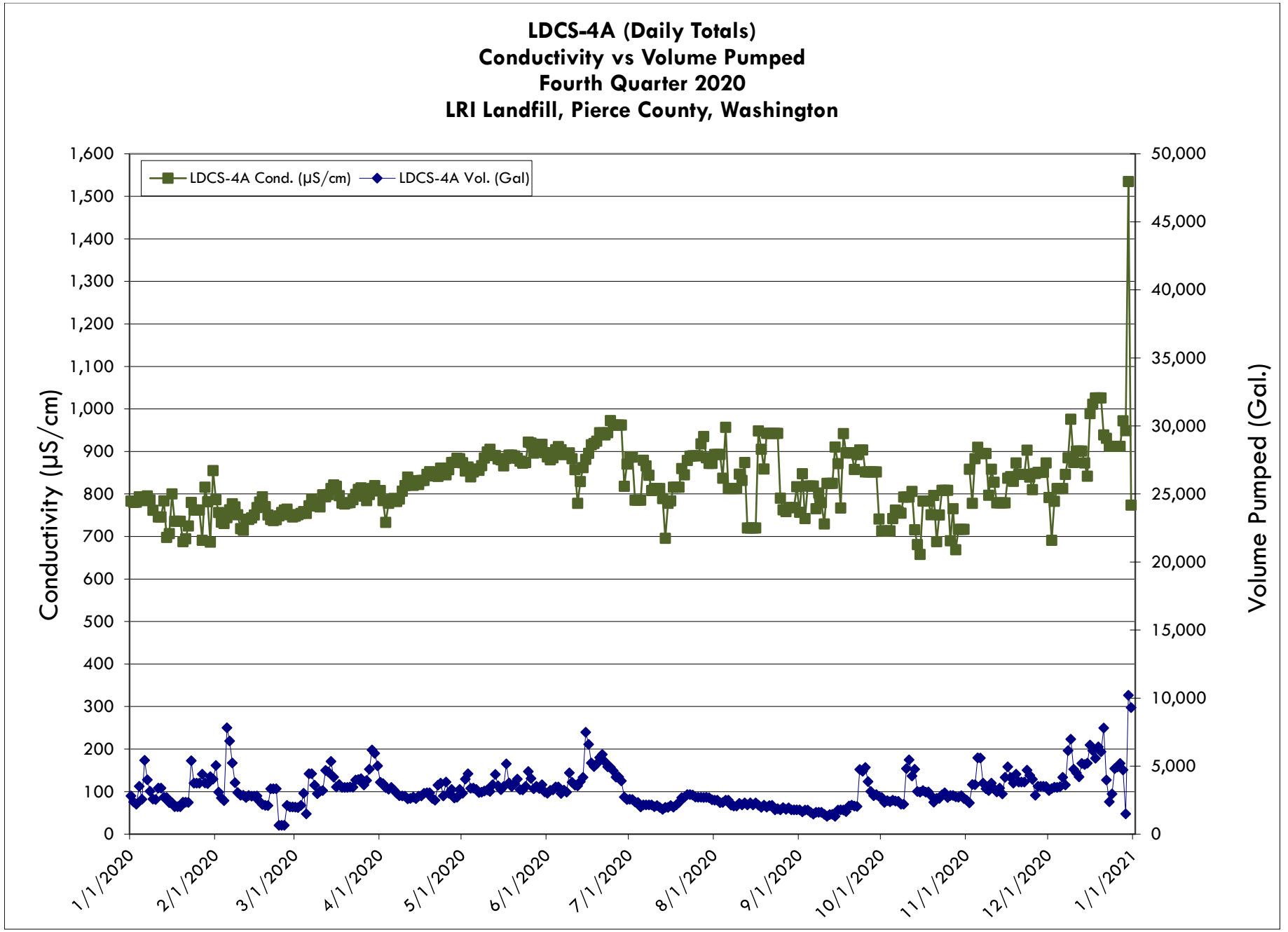
1/1/2021


LDCS-4A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-4A Cond. (µS/cm)
LDCS-4A 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
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
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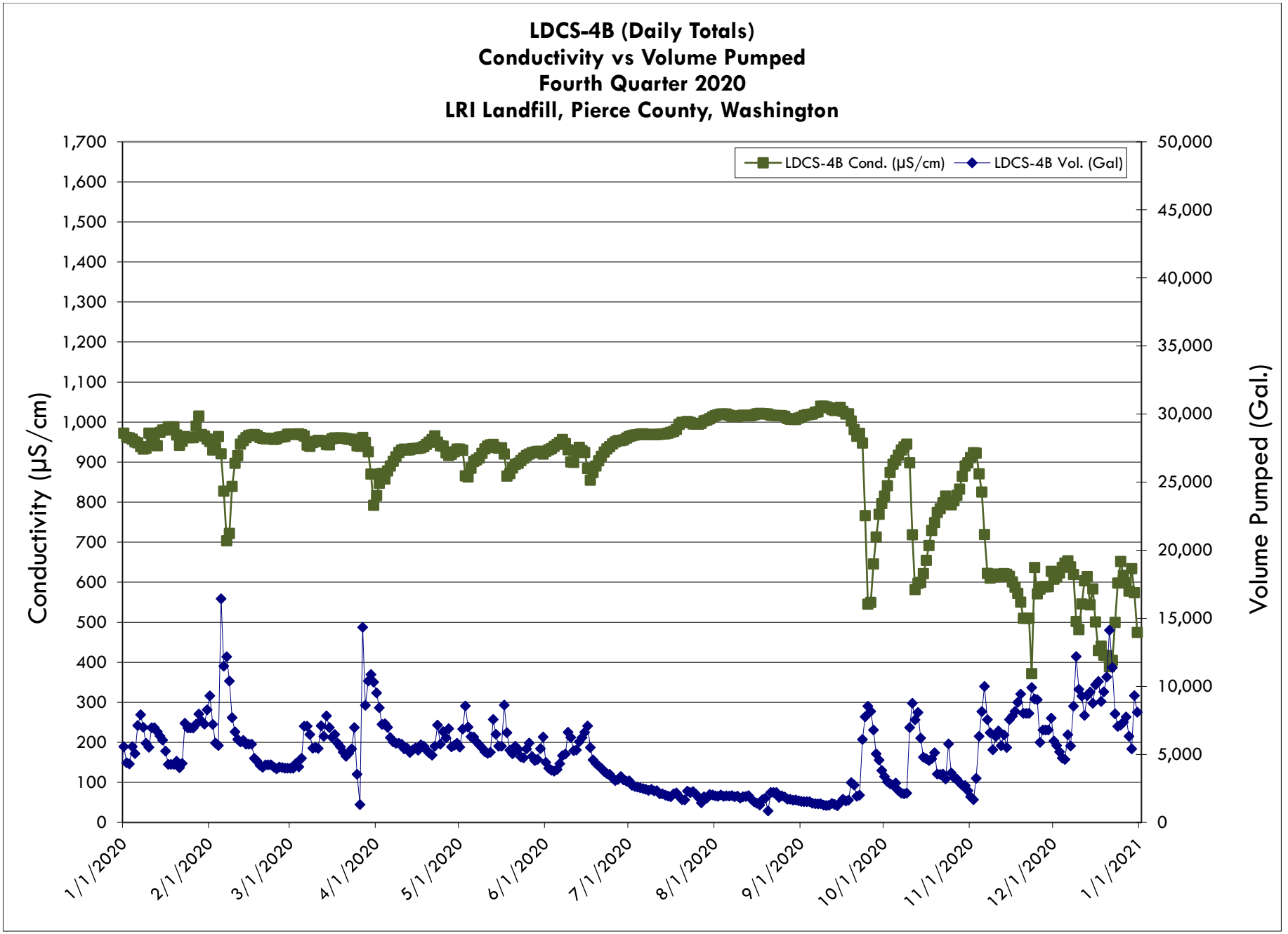
1/1/2021


LDCS-4B (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
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
1/1/2020
2/1/2020
3/1/2020
4/1/2020
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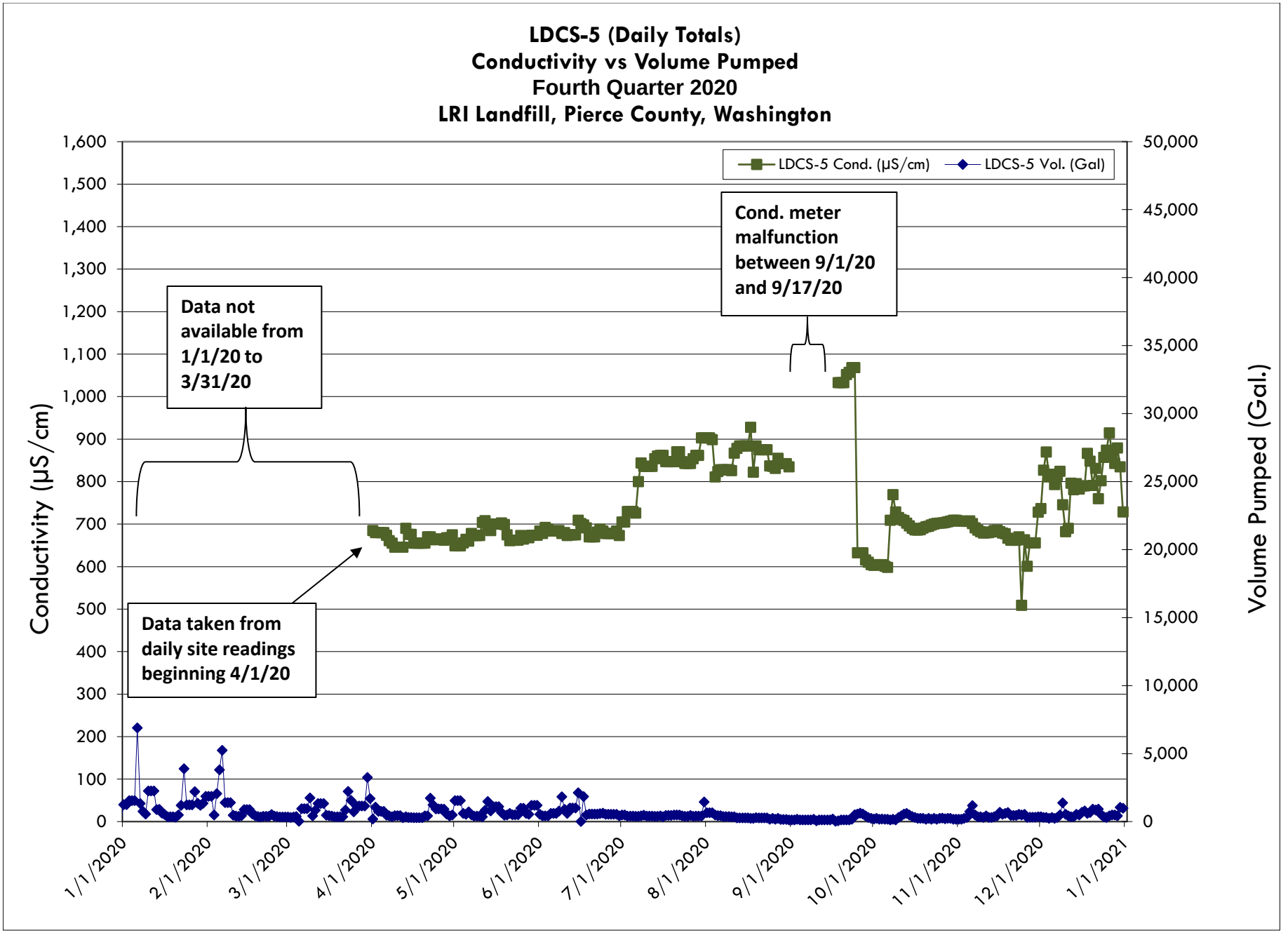
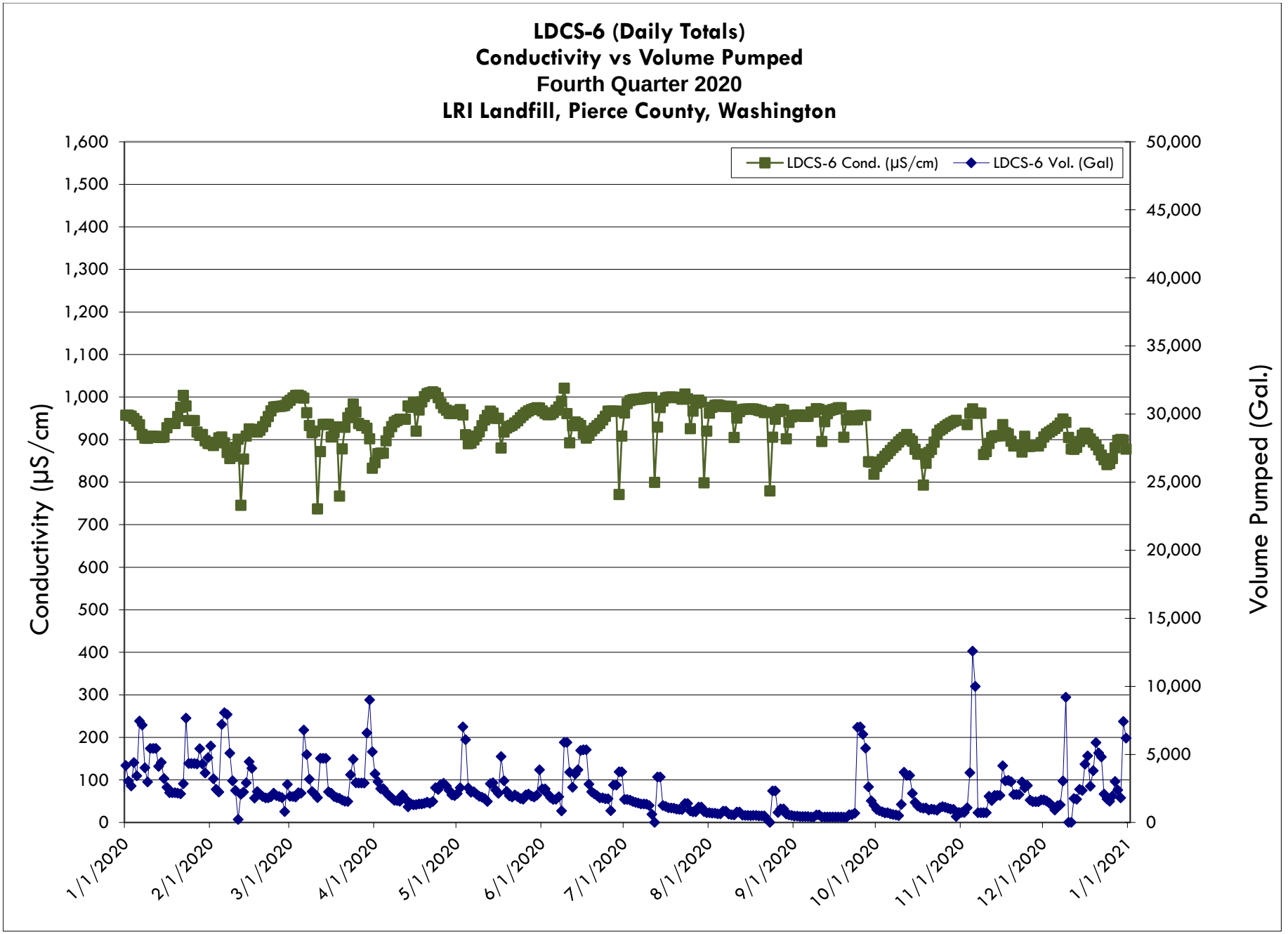
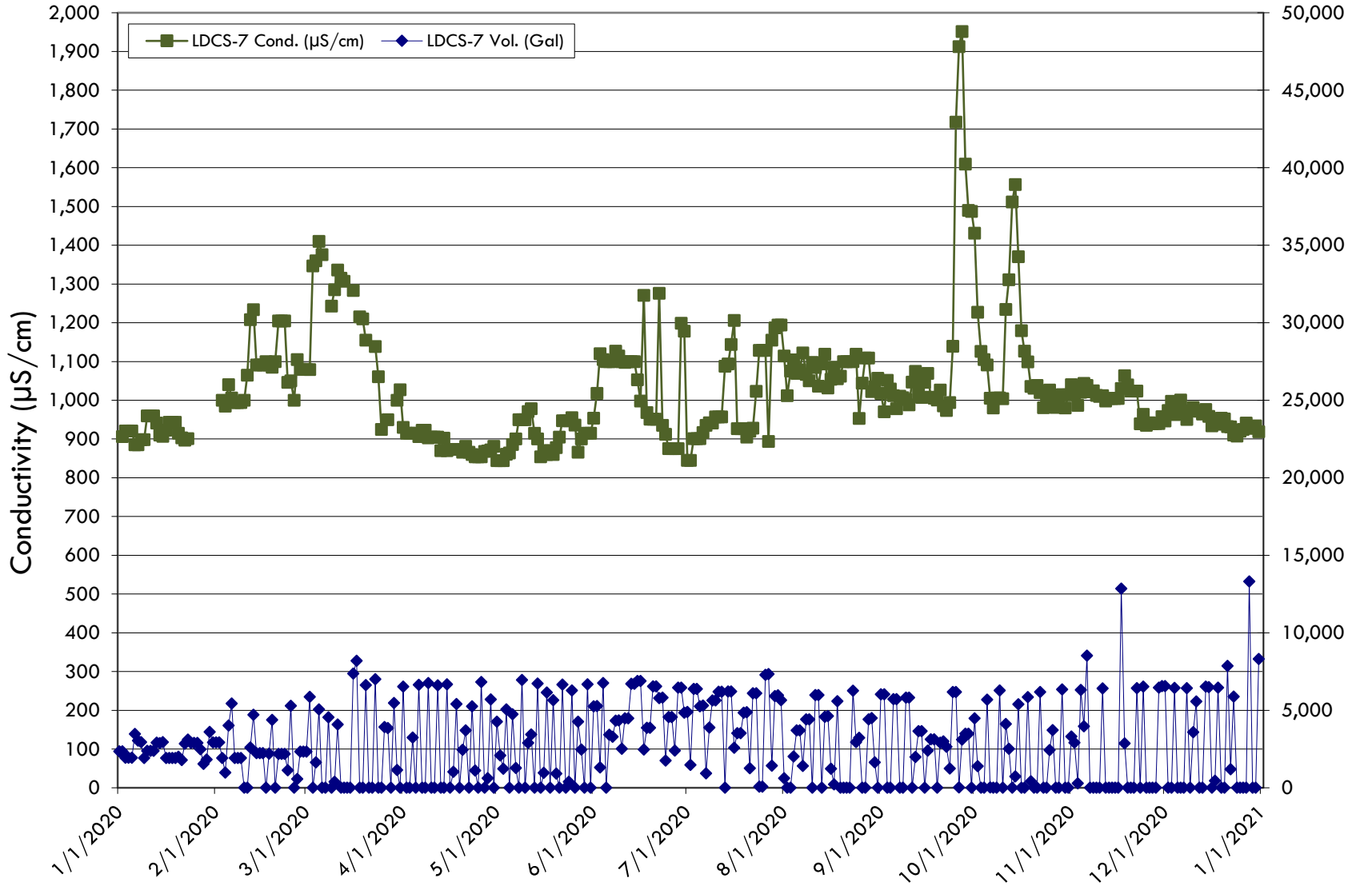
1/1/2021

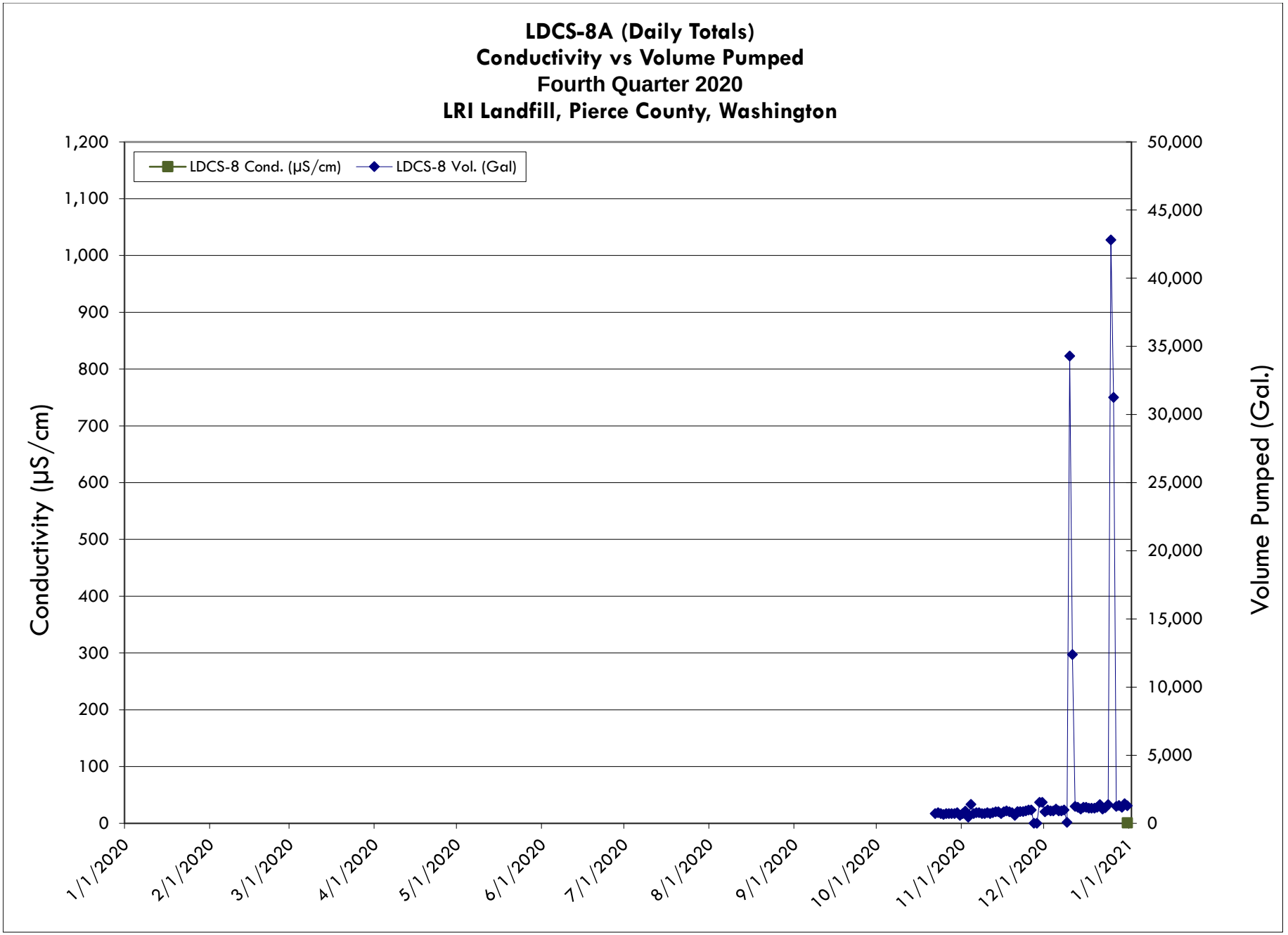

LDCS-5 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-5 Cond. (µS/cm)
LDCS-5 Vol. (Gal)
Data not available from 1/1/20 to 3/31/20
Cond. meter malfunction between 9/1/20 and 9/17/20
Data taken from daily site readings beginning 4/1/20
Conductivity (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
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

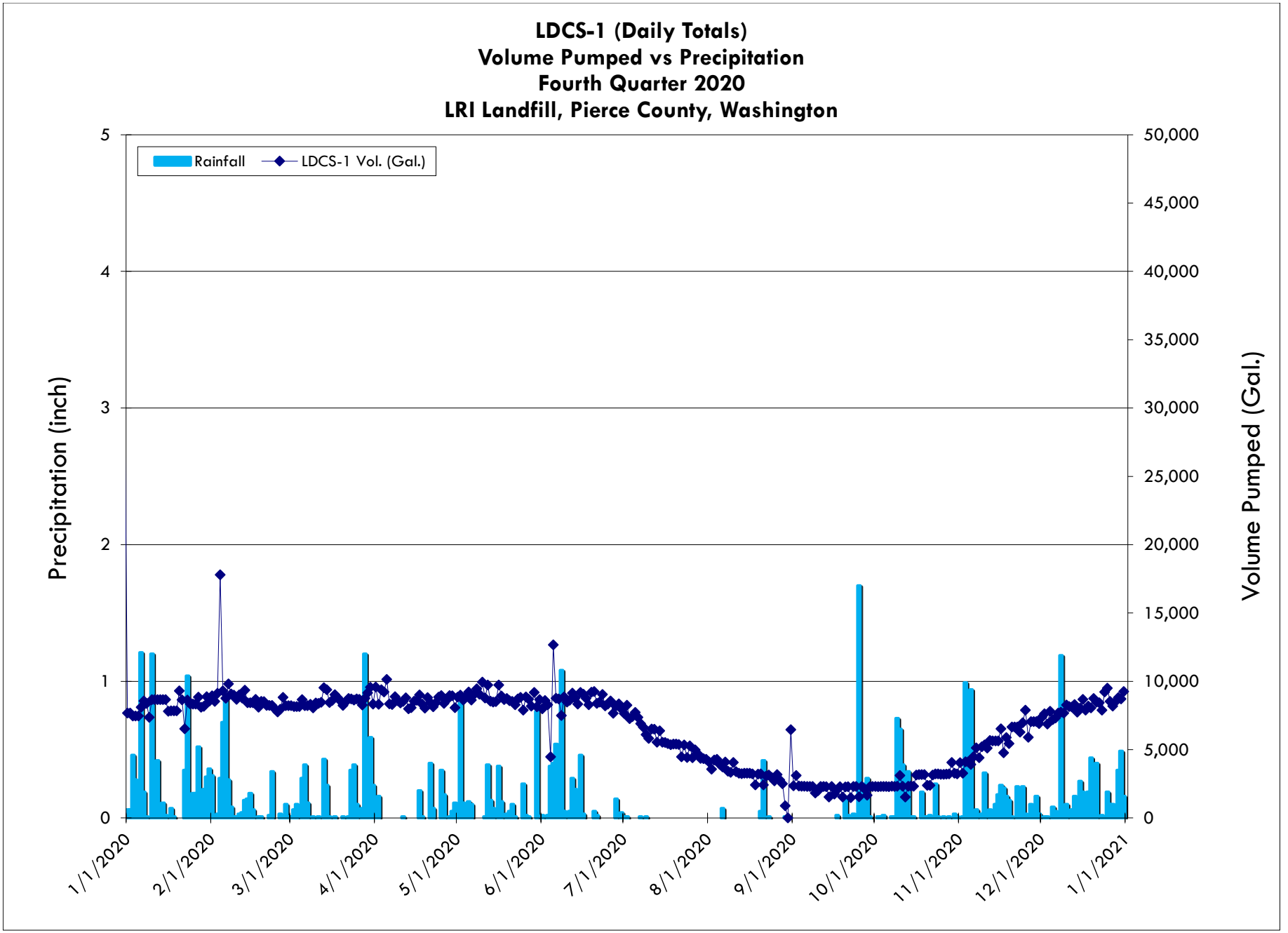

LDCS-6 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-6 Cond. (µS/cm)
LDCS-6 Vol. (Gal)
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

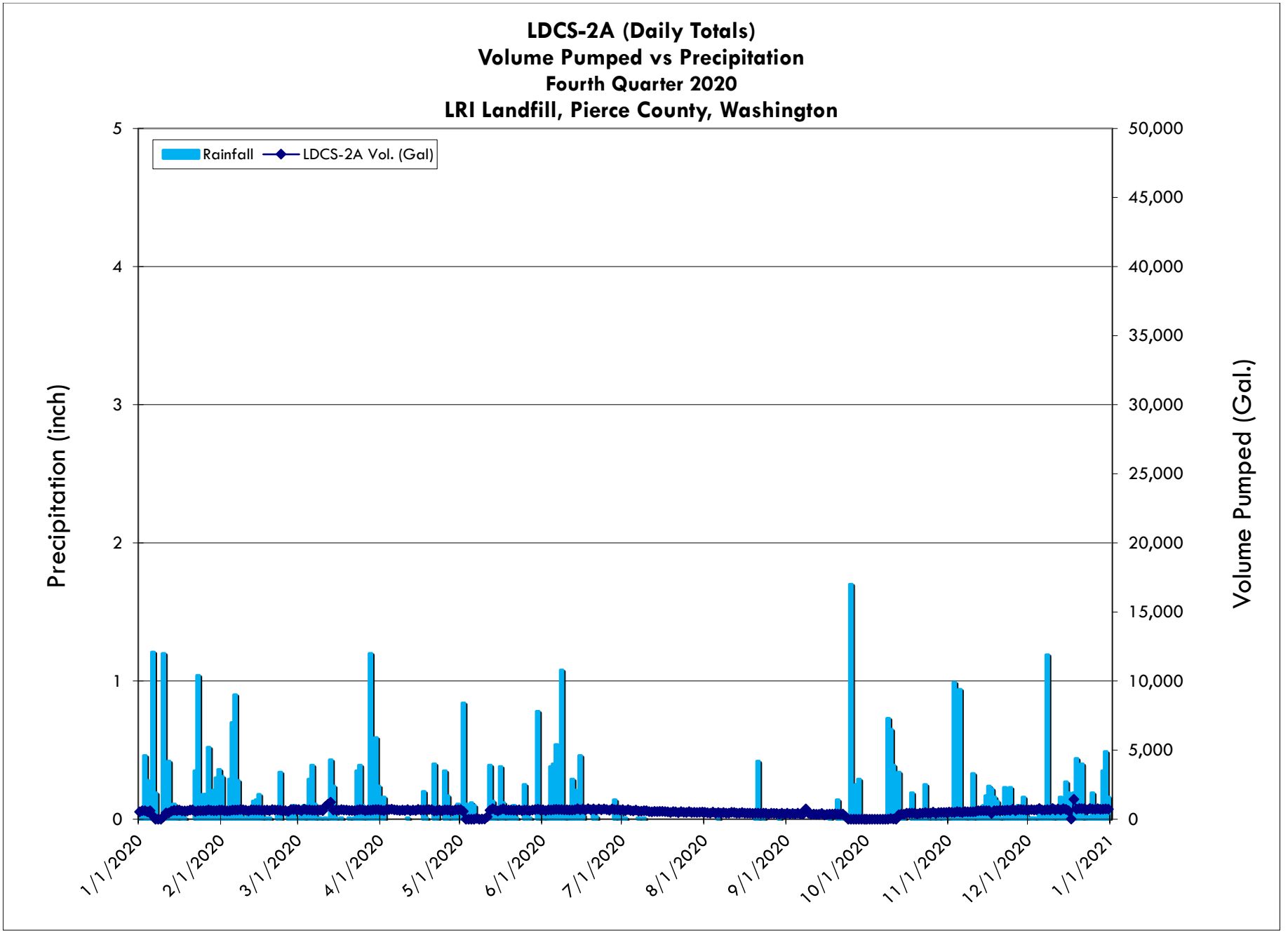
LDCS-7 (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

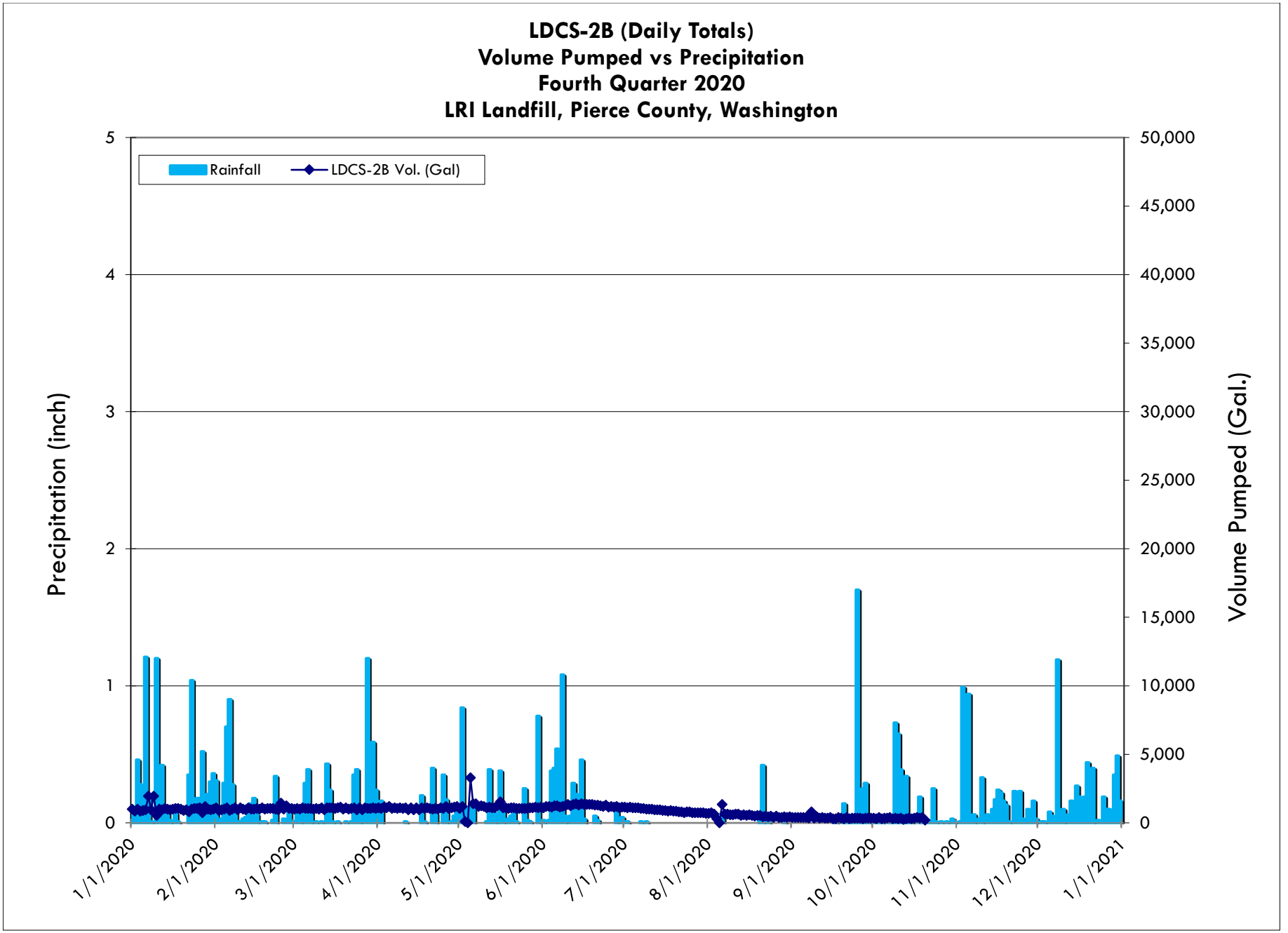


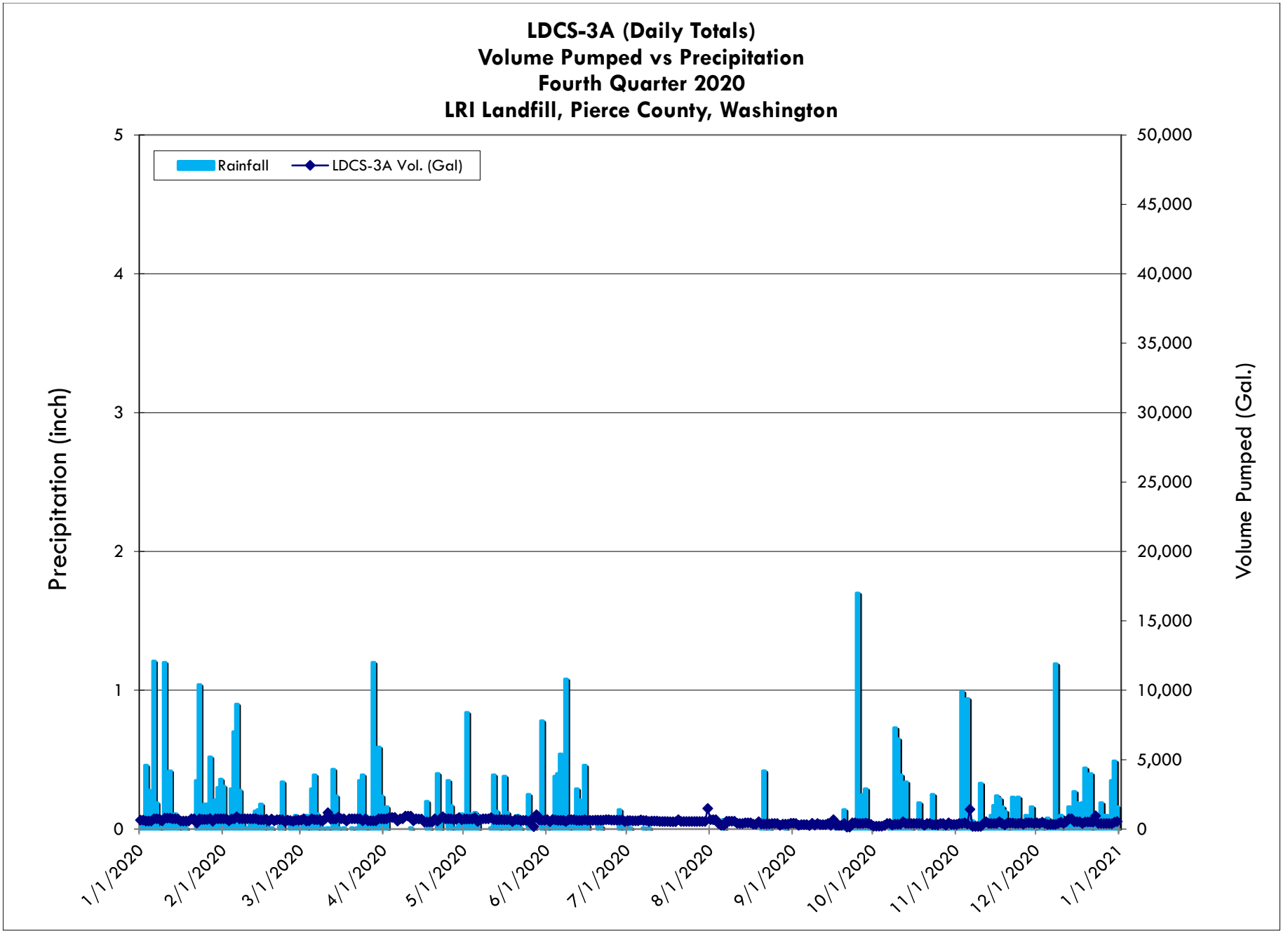
LDCS-8A (Daily Totals)
Conductivity vs Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

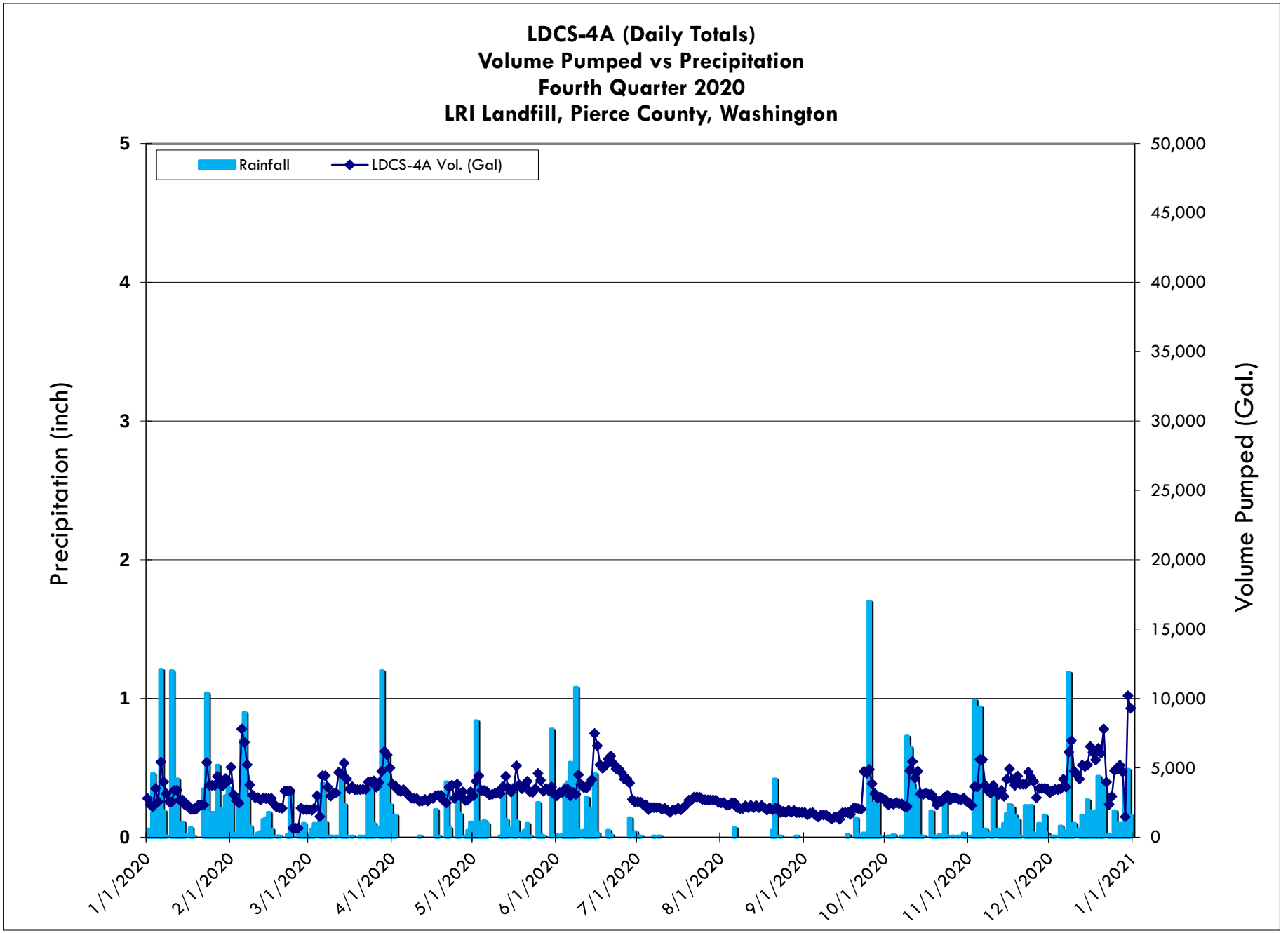


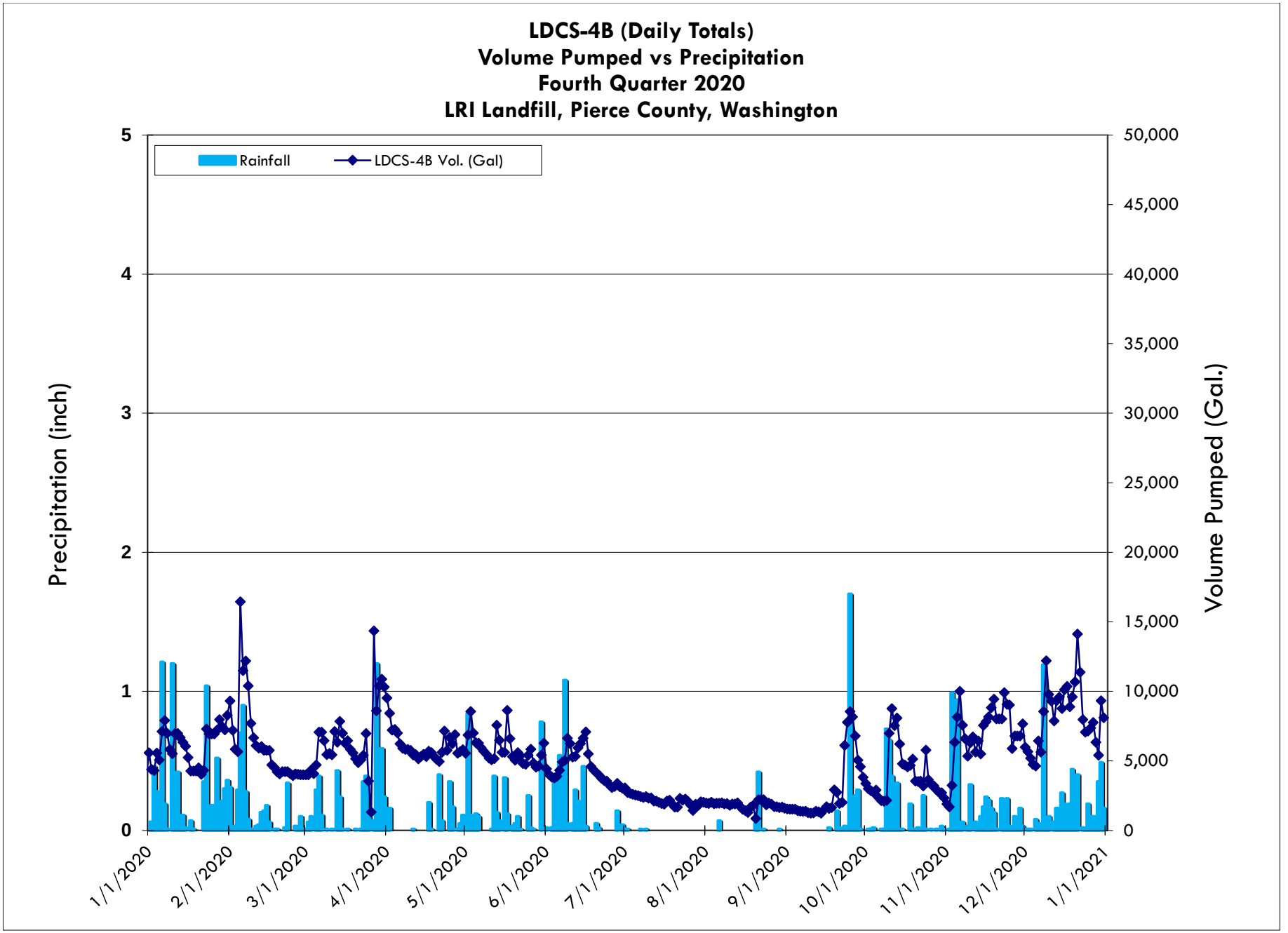

LDCS-1 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-1 Vol. (Gal.)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

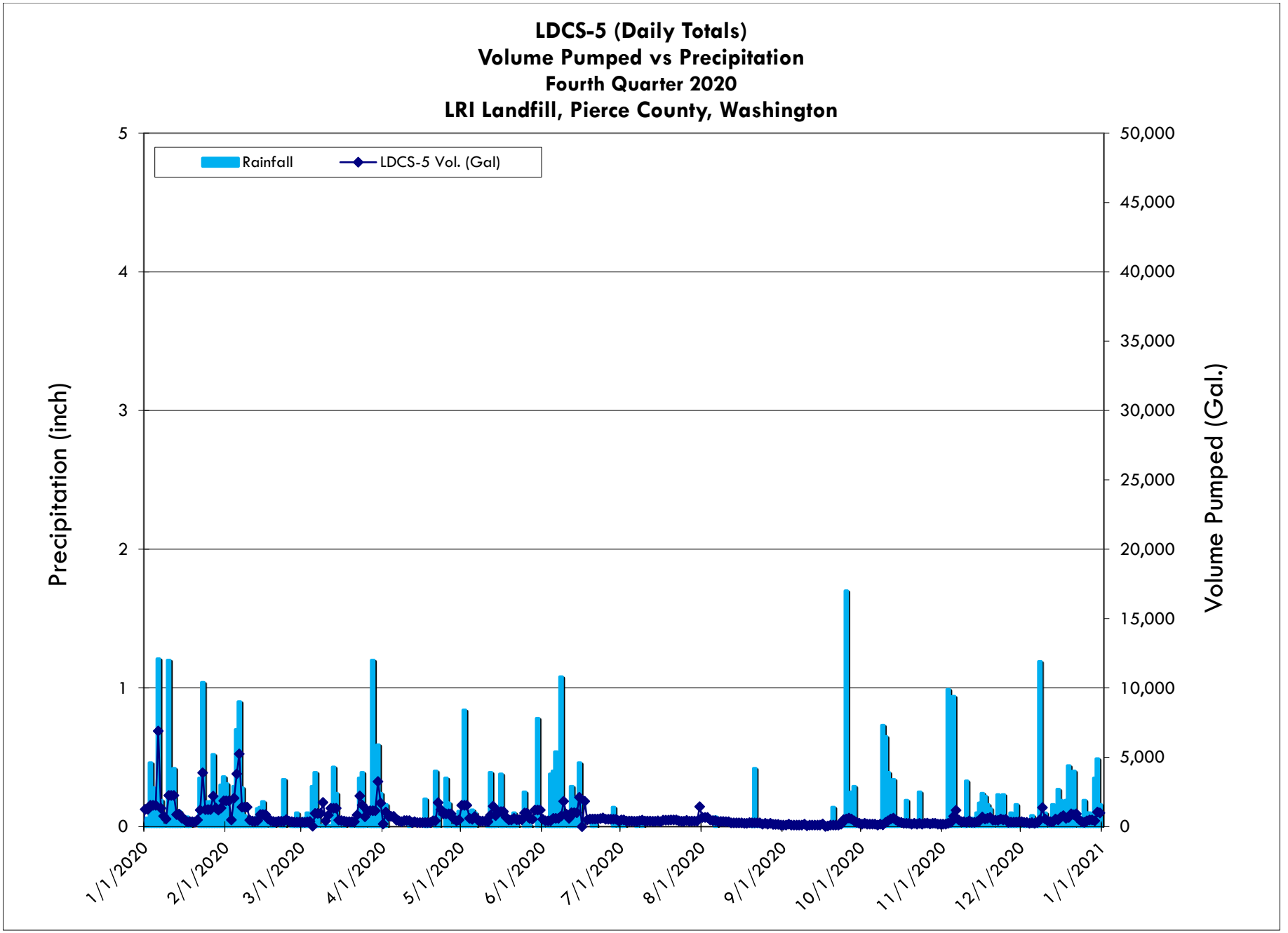

LDCS-2A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-2A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

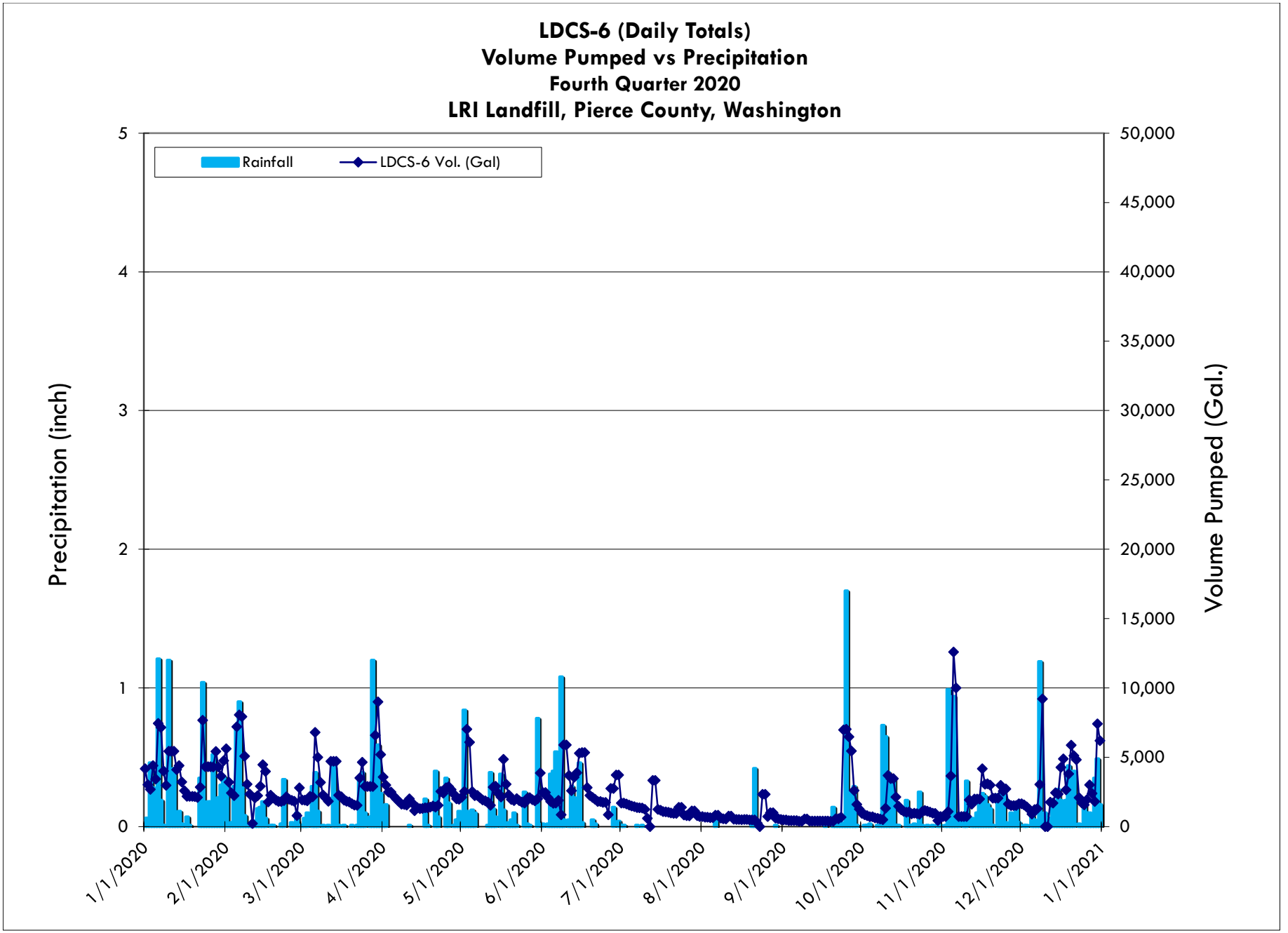

LDCS-2B (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-2B Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

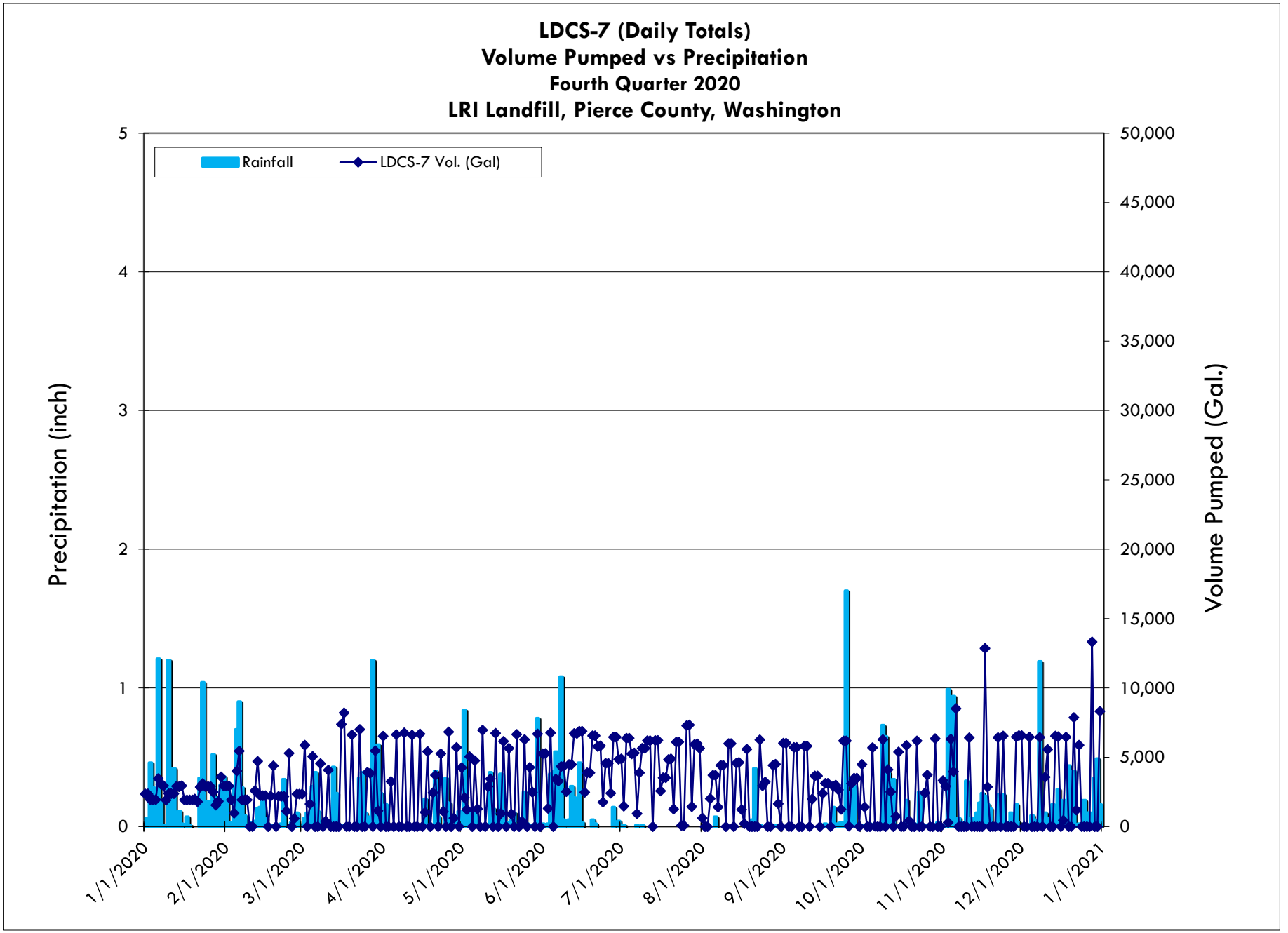

LDCS-3A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-3A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

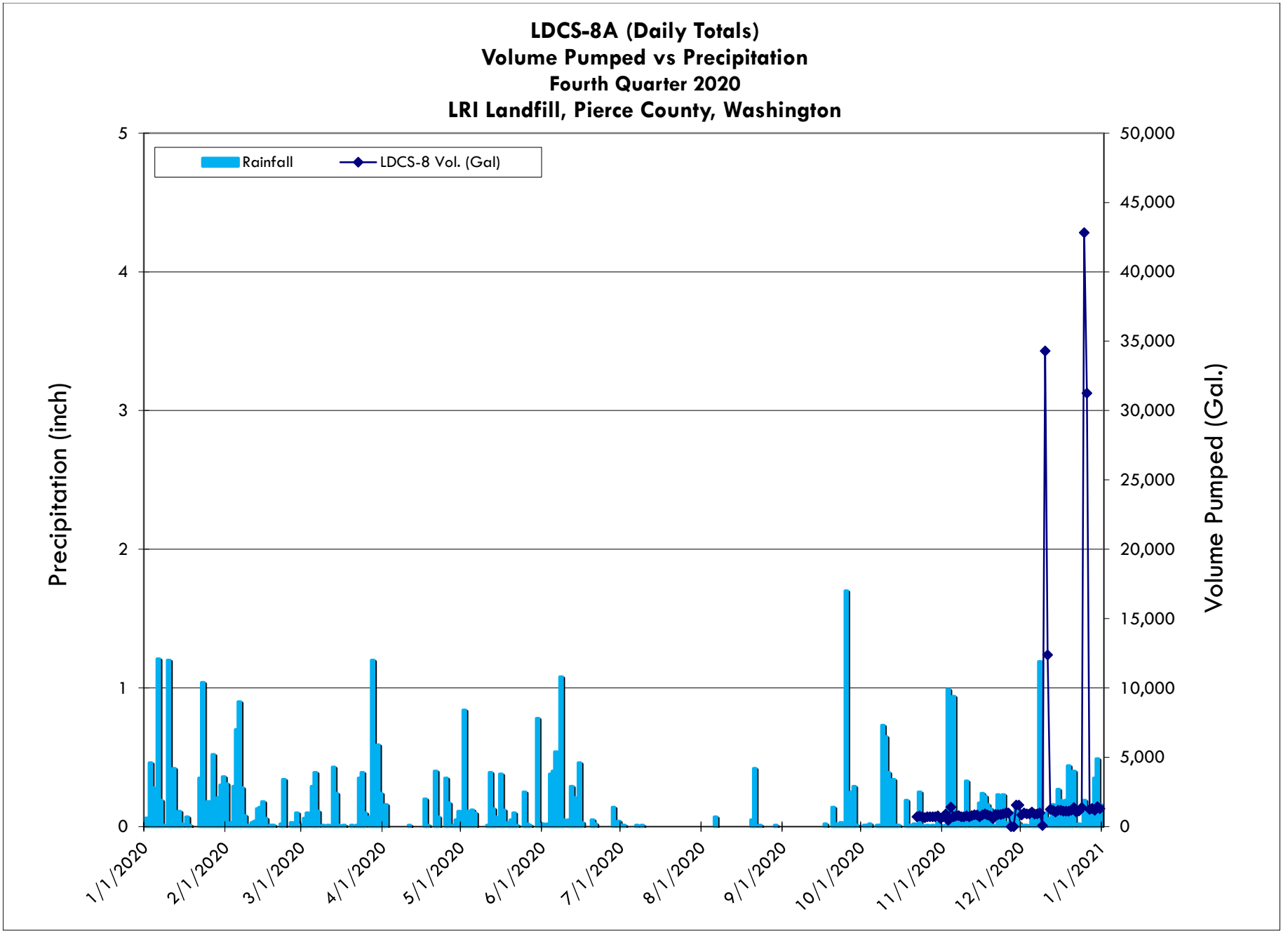

LDCS-4A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-4A Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021


LDCS-4B (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
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
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

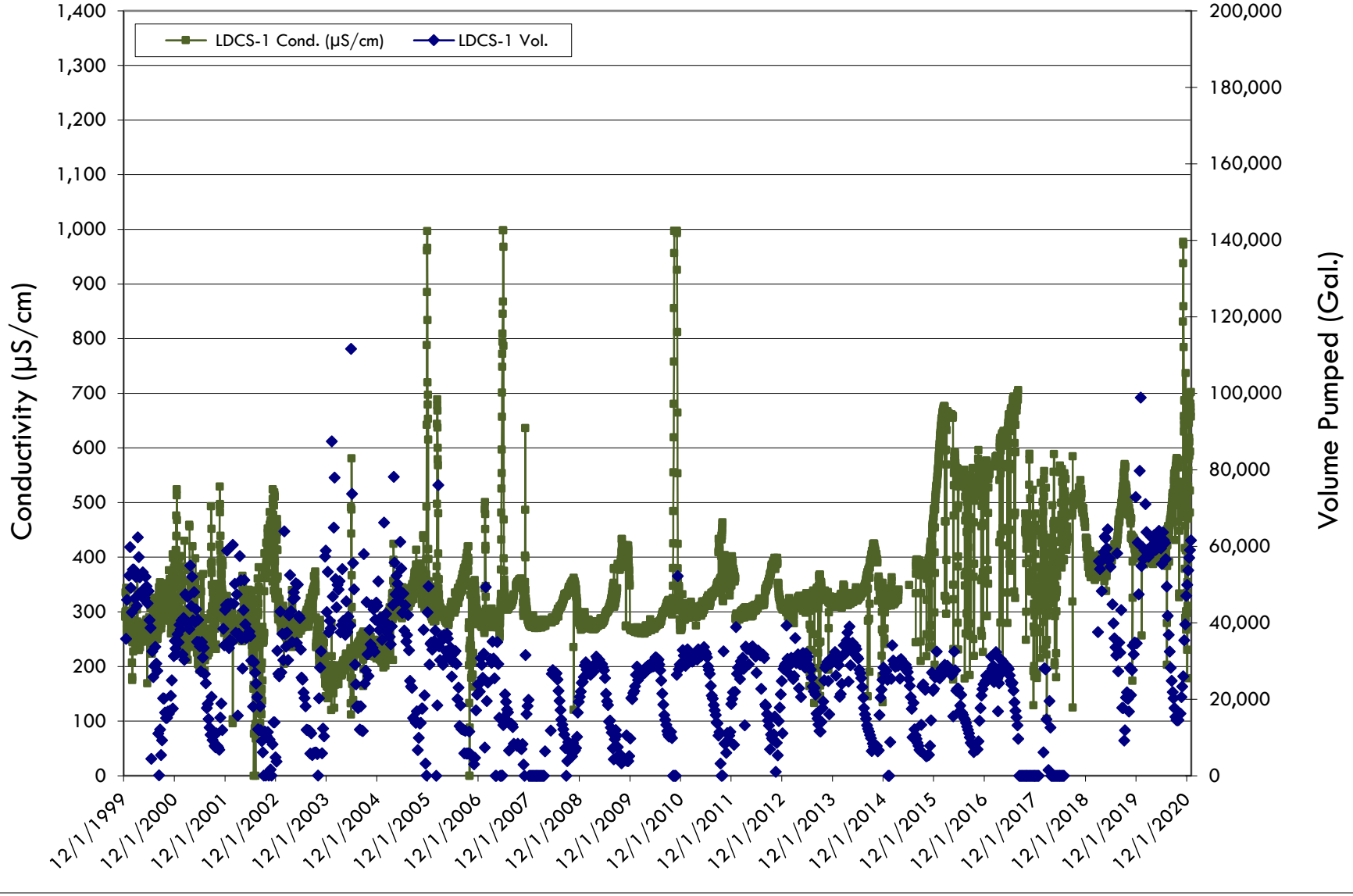

LDCS-5 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-5 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021


LDCS-6 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
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
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

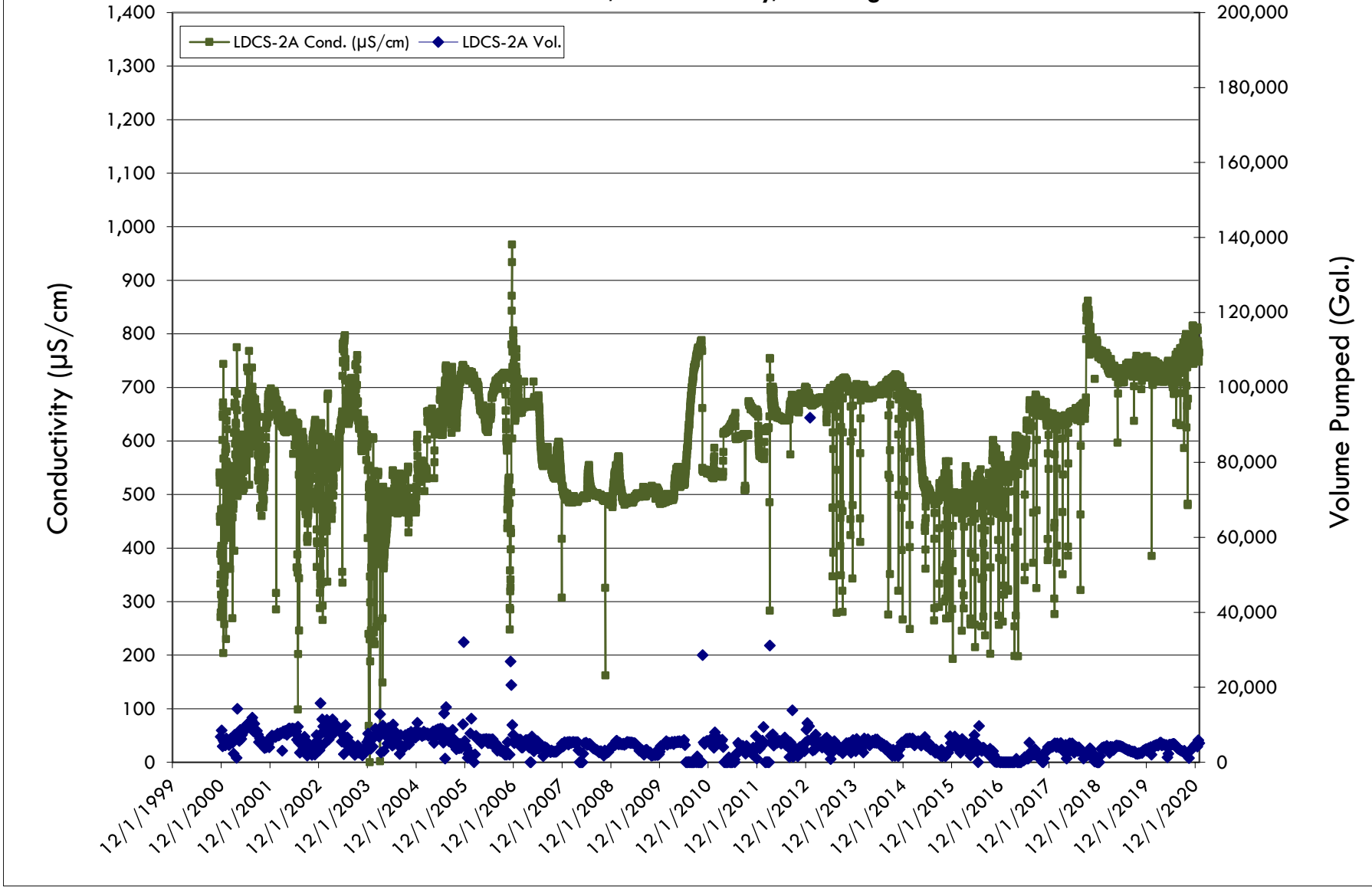

LDCS-7 (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-7 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

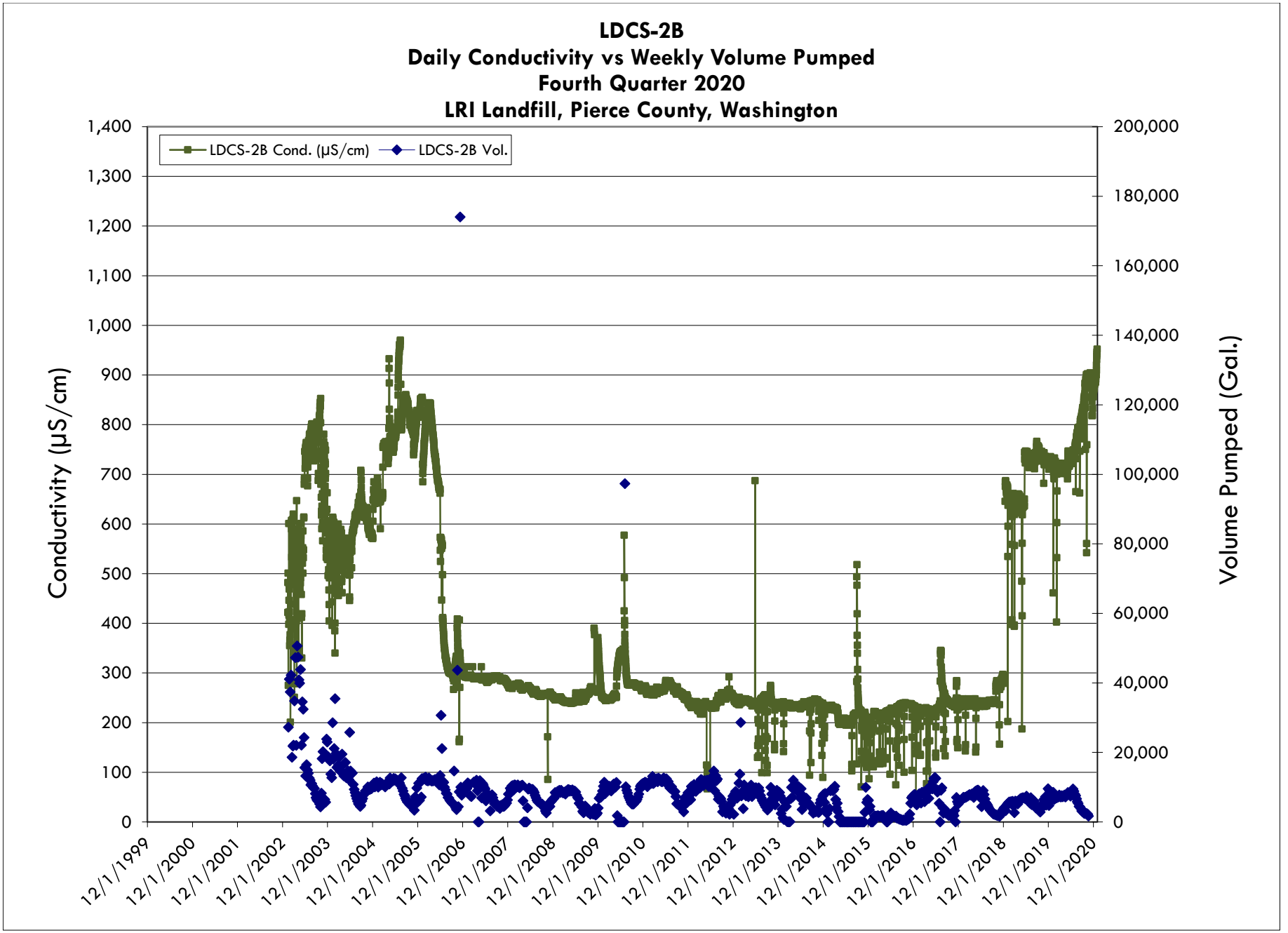

LDCS-8A (Daily Totals)
Volume Pumped vs Precipitation
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
Rainfall
LDCS-8 Vol. (Gal)
Precipitation (inch)
Volume Pumped (Gal.)
0
1
2
3
4
5
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
1/1/2021

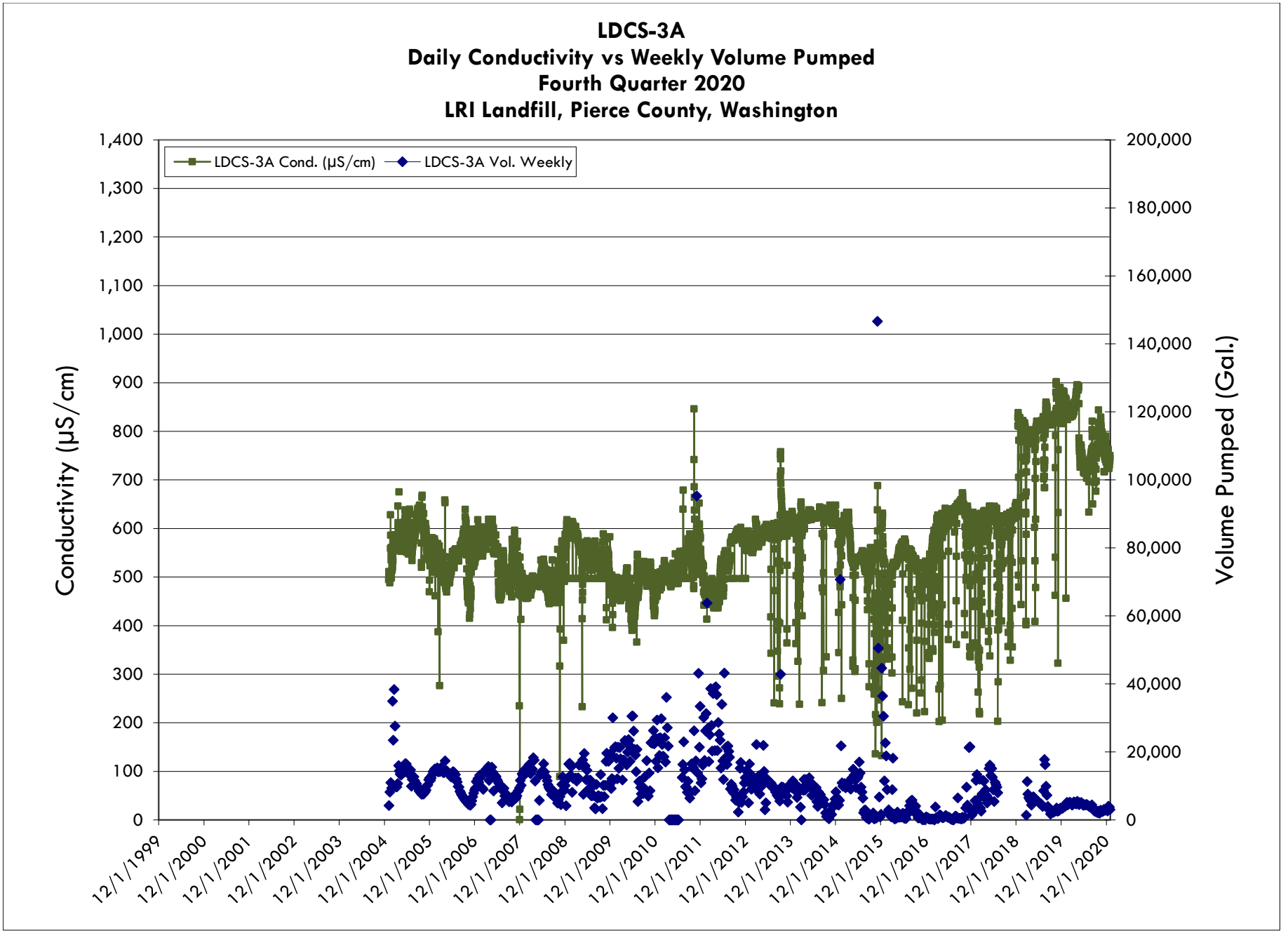
LDCS-1
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington



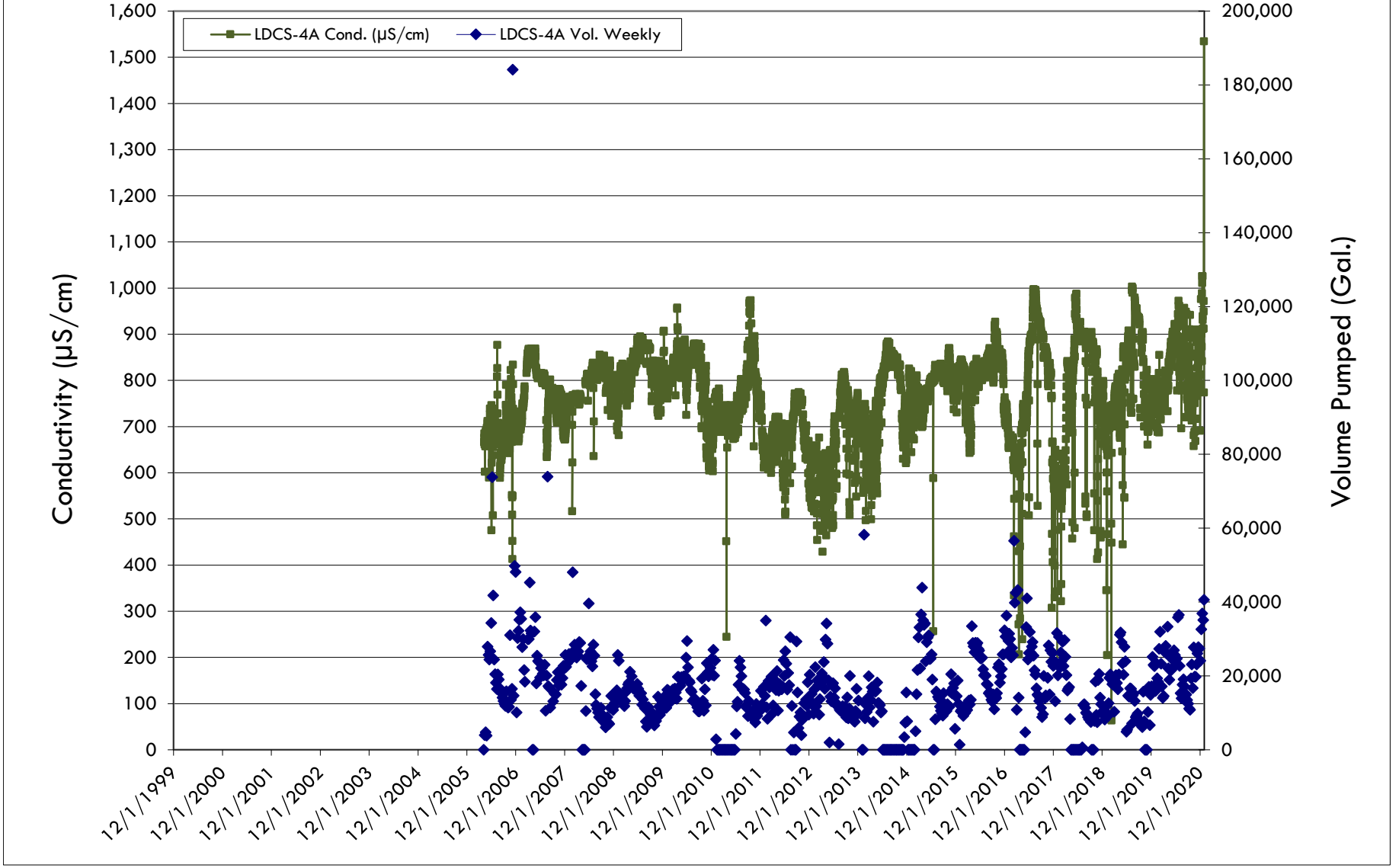
LDCS-2A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

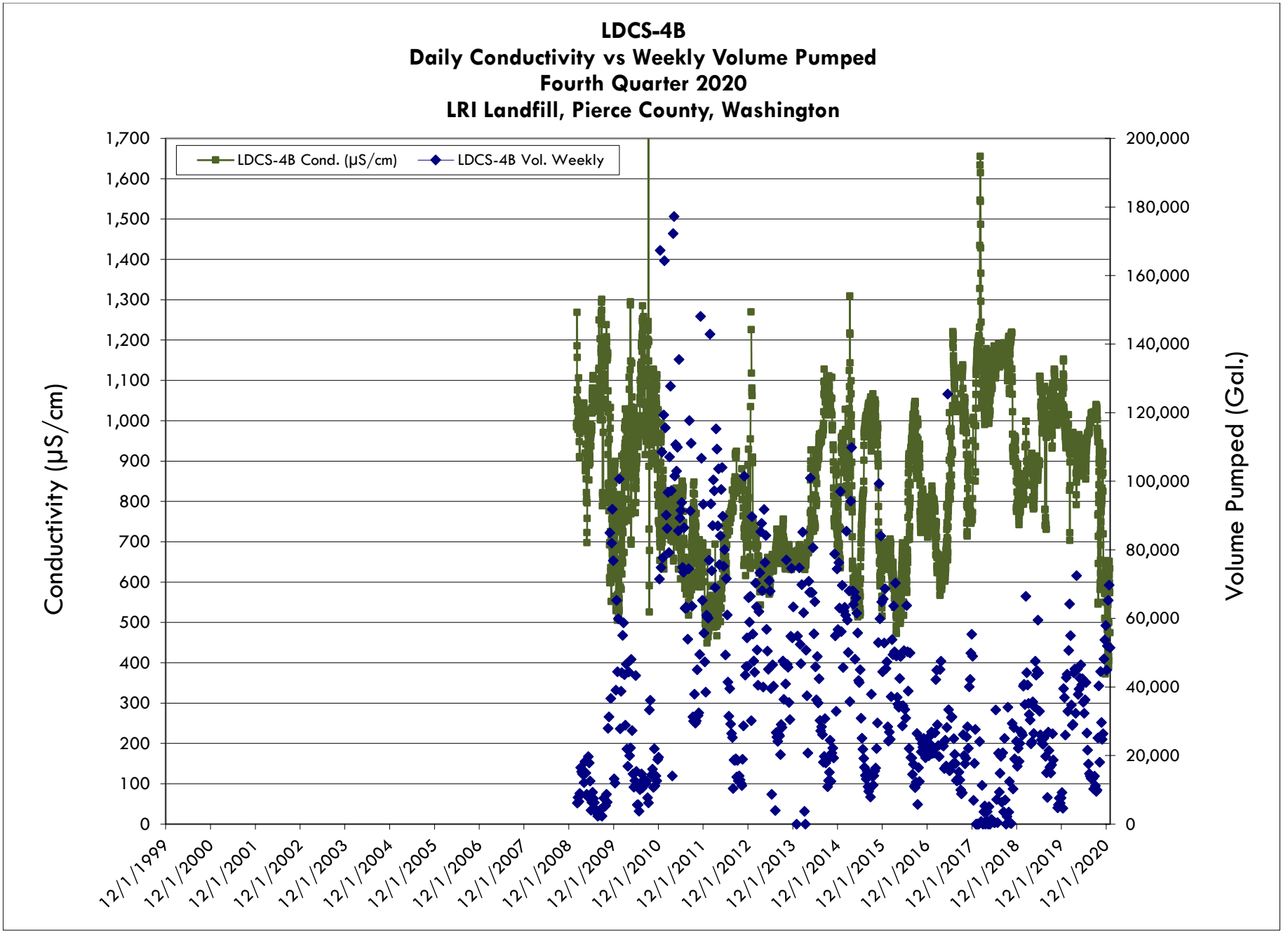


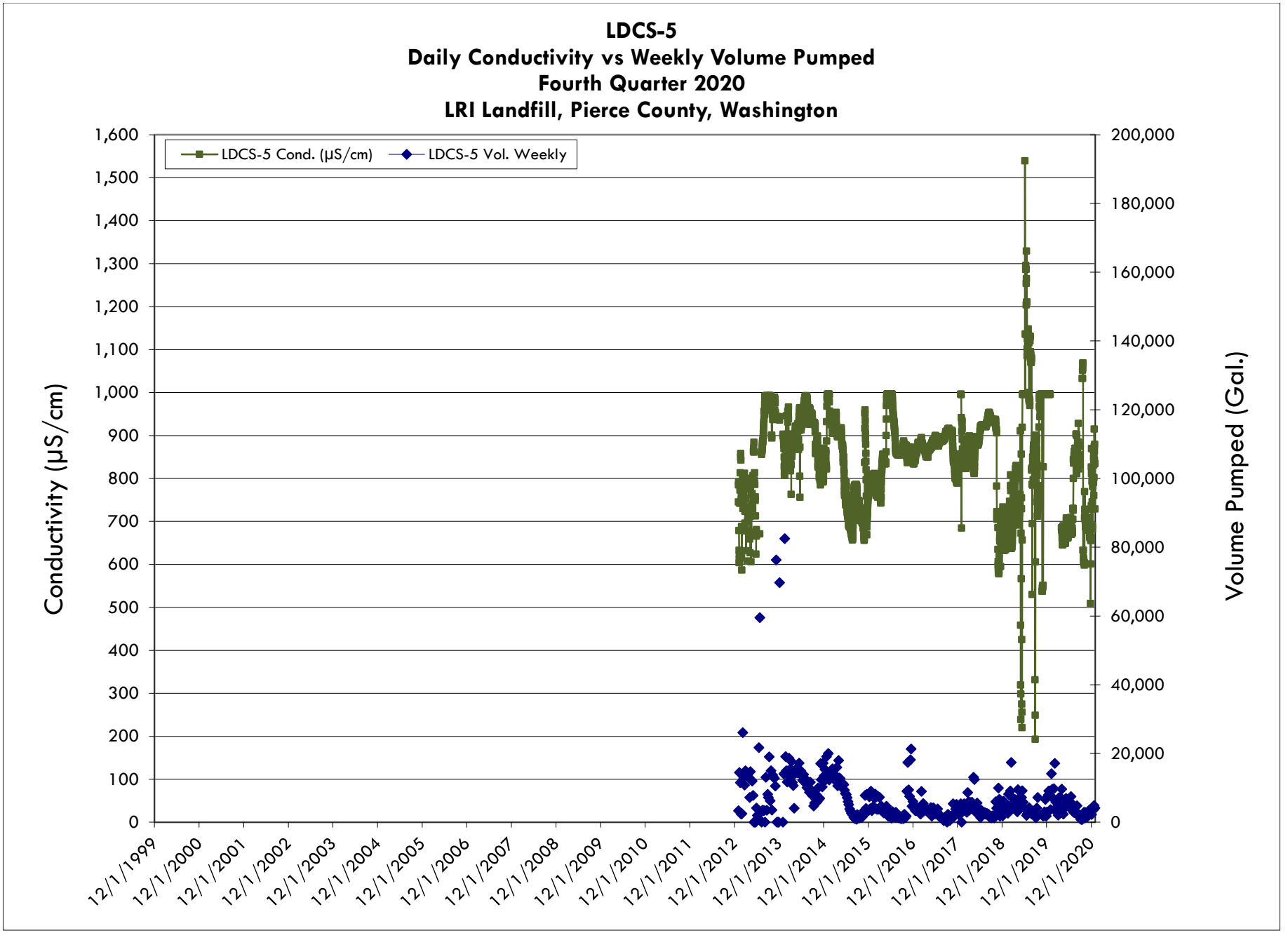

LDCS-2B
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-2B Cond. (µS/cm)
LDCS-2B Vol.
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000
100,000
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

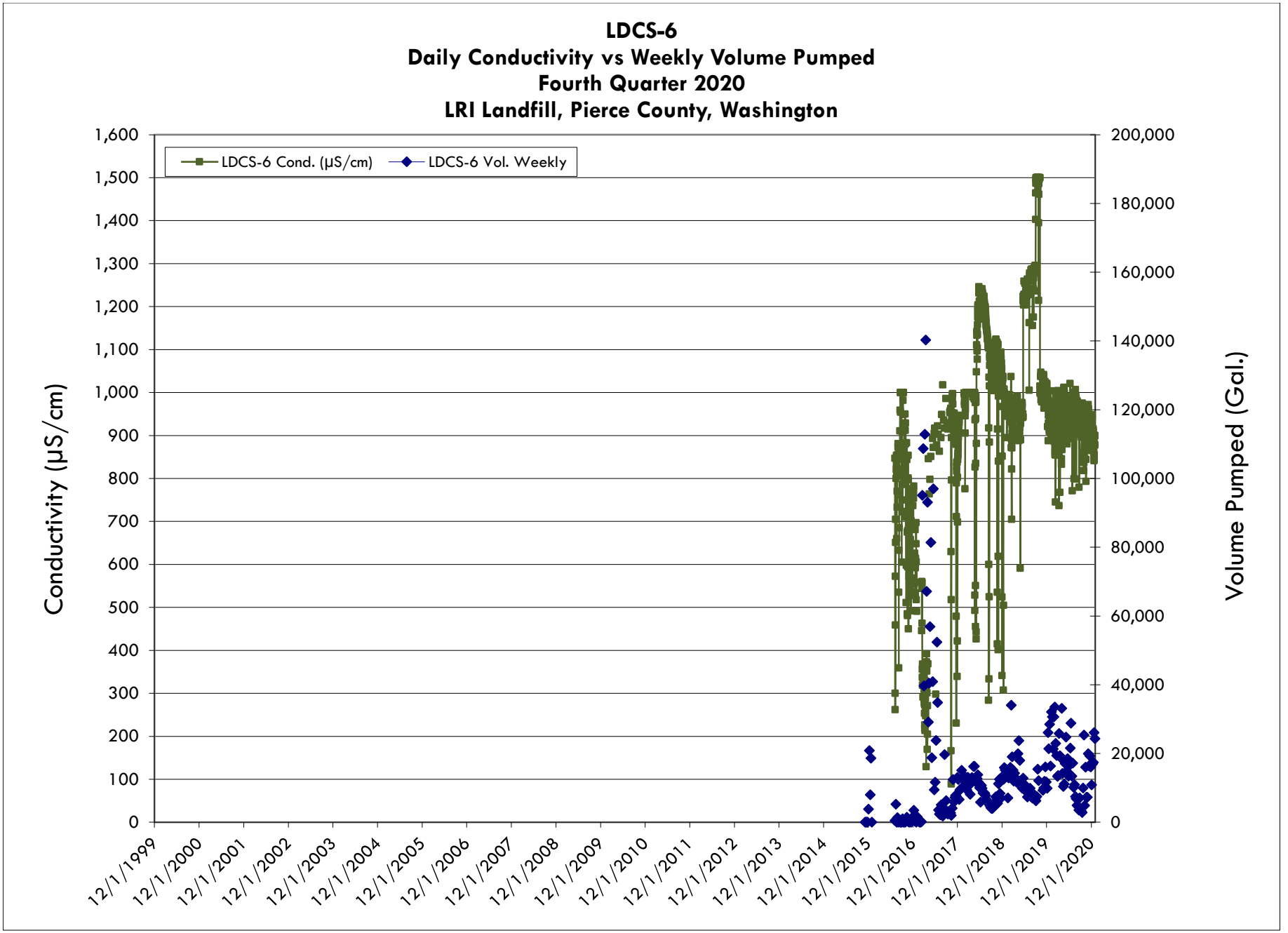

LDCS-3A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-3A Cond. (µS/cm)
LDCS-3A Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
120,000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

LDCS-4A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington

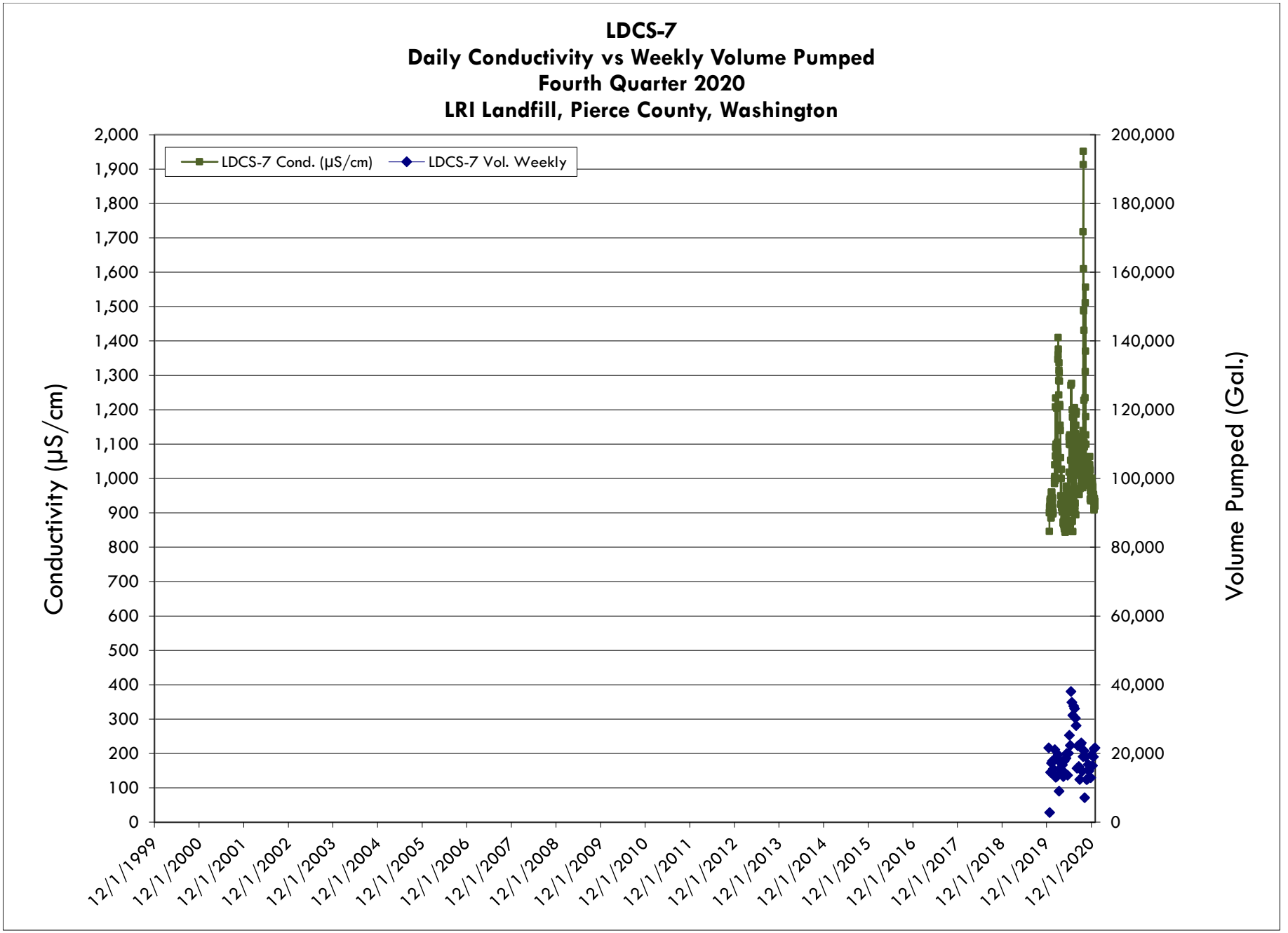


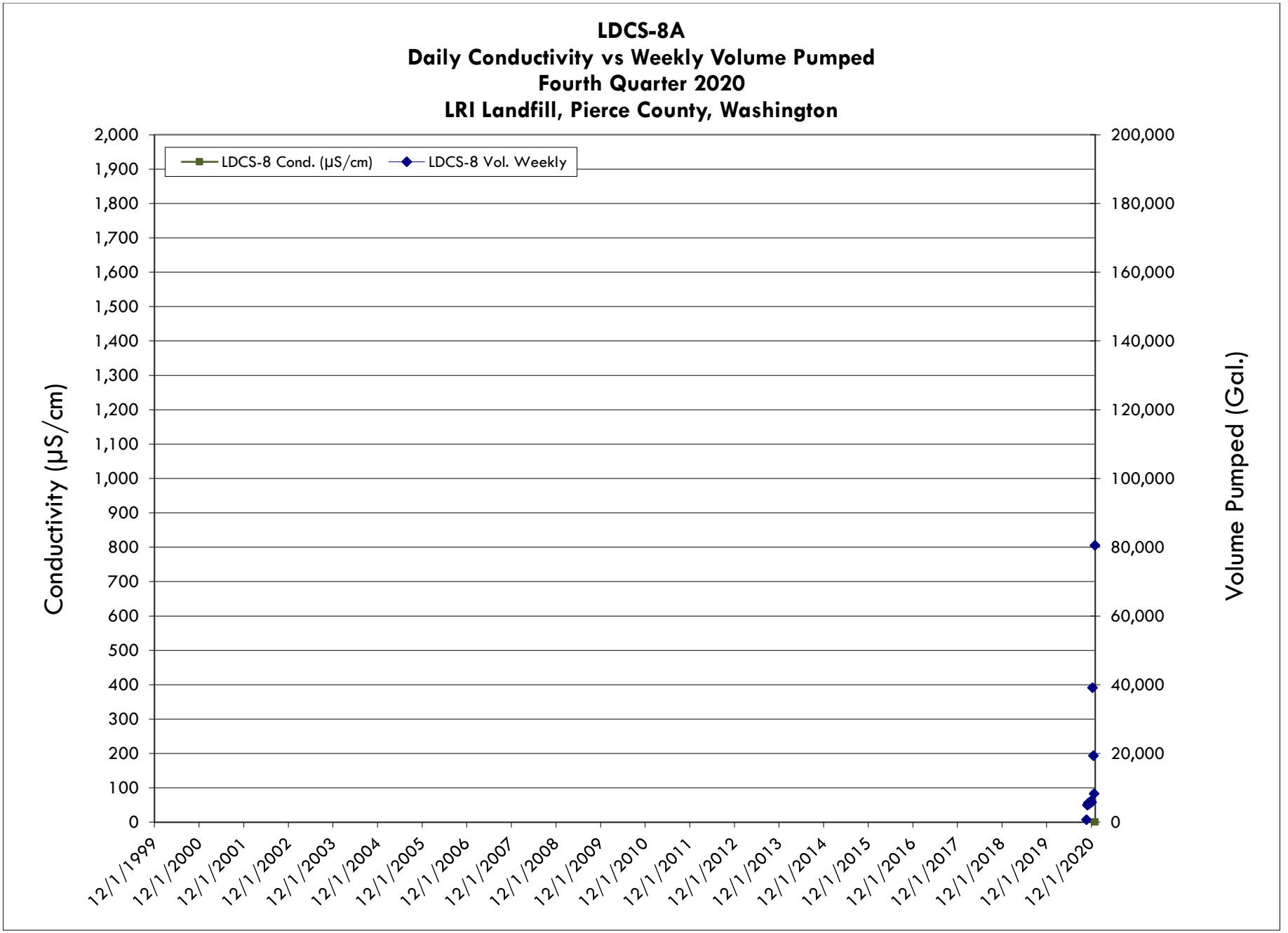

LDCS-4B
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-4B Cond. (µS/cm)
LDCS-4B Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
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

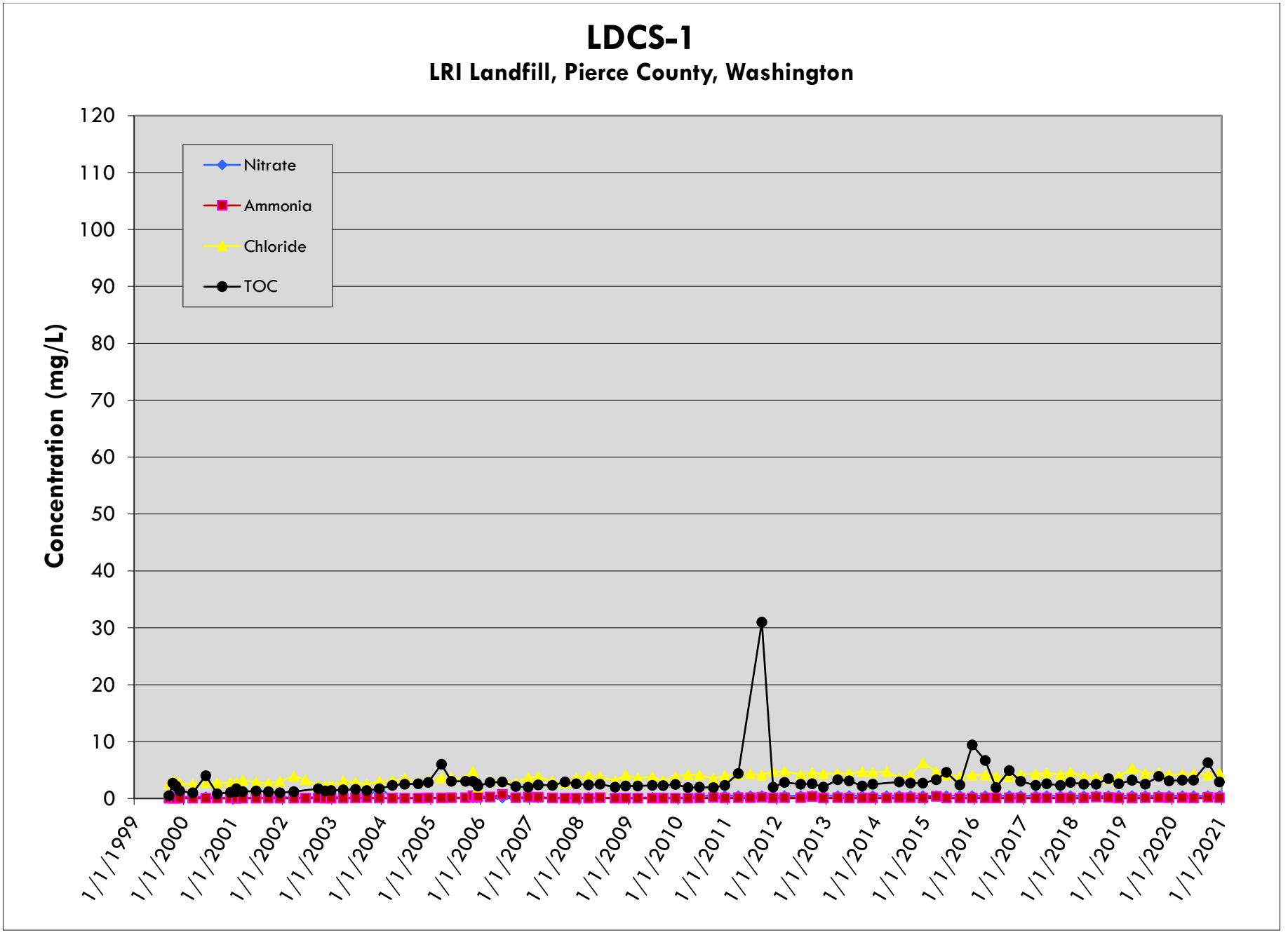

LDCS-5
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-5 Cond. (µS/cm)
LDCS-5 Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
180,000
160,000
140,000
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


LDCS-6
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
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

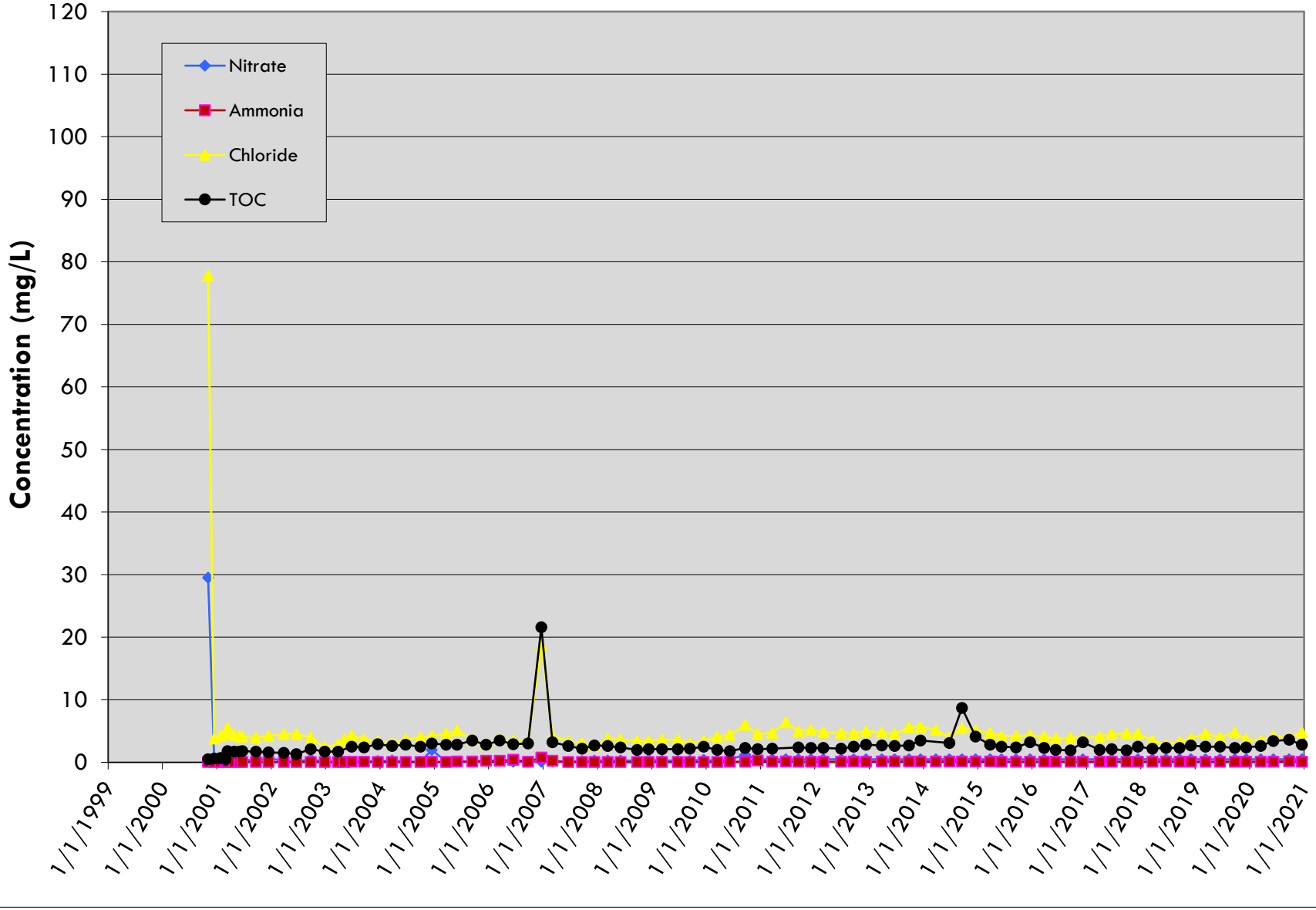
LDCS-7
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington



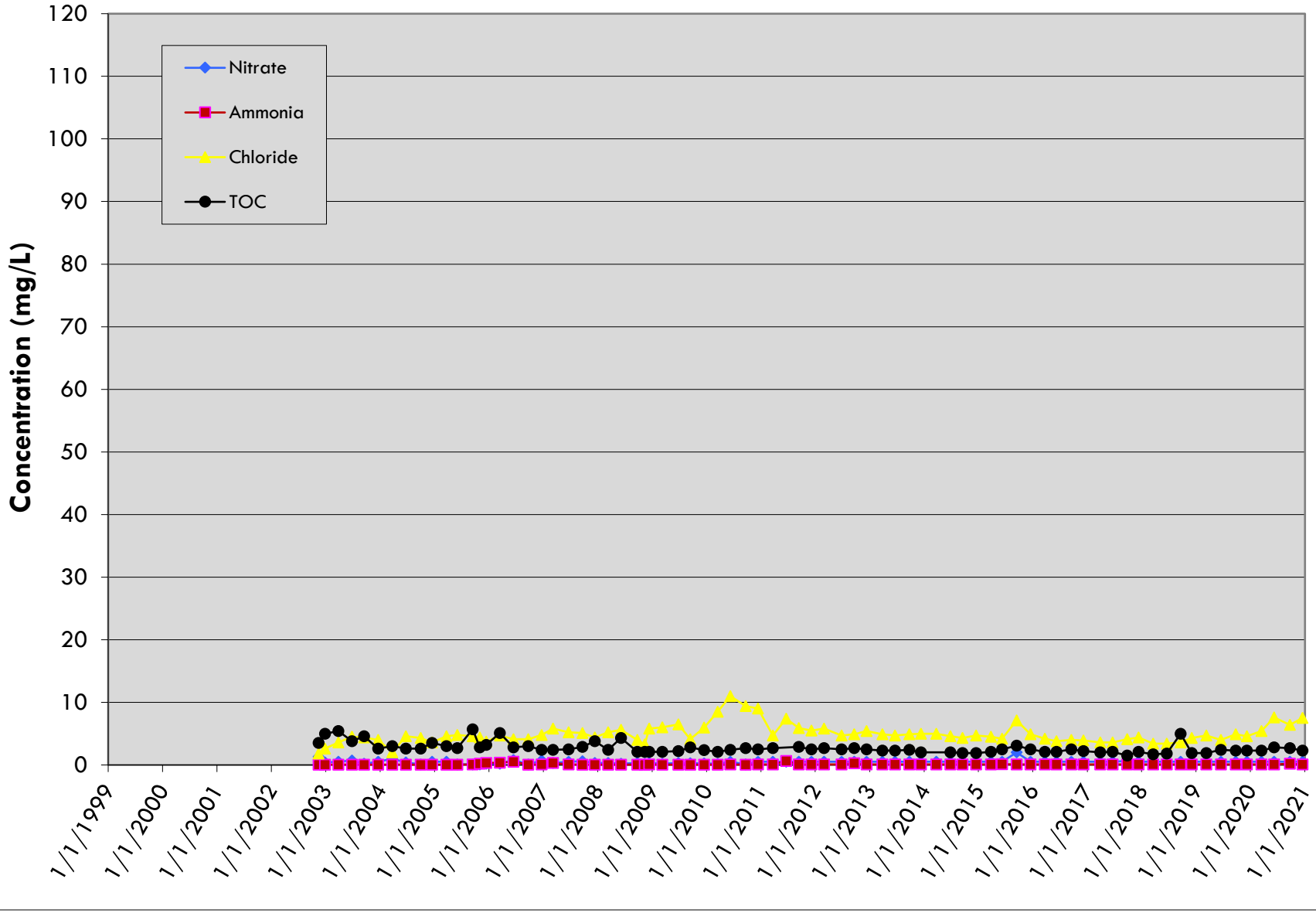

LDCS-8A
Daily Conductivity vs Weekly Volume Pumped
Fourth Quarter 2020
LRI Landfill, Pierce County, Washington
LDCS-8 Cond. (µS/cm)
LDCS-8 Vol. Weekly
Conductivity (µS/cm)
Volume Pumped (Gal.)
2,000
1,900
1,800
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
200,000
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


LDCS-1
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

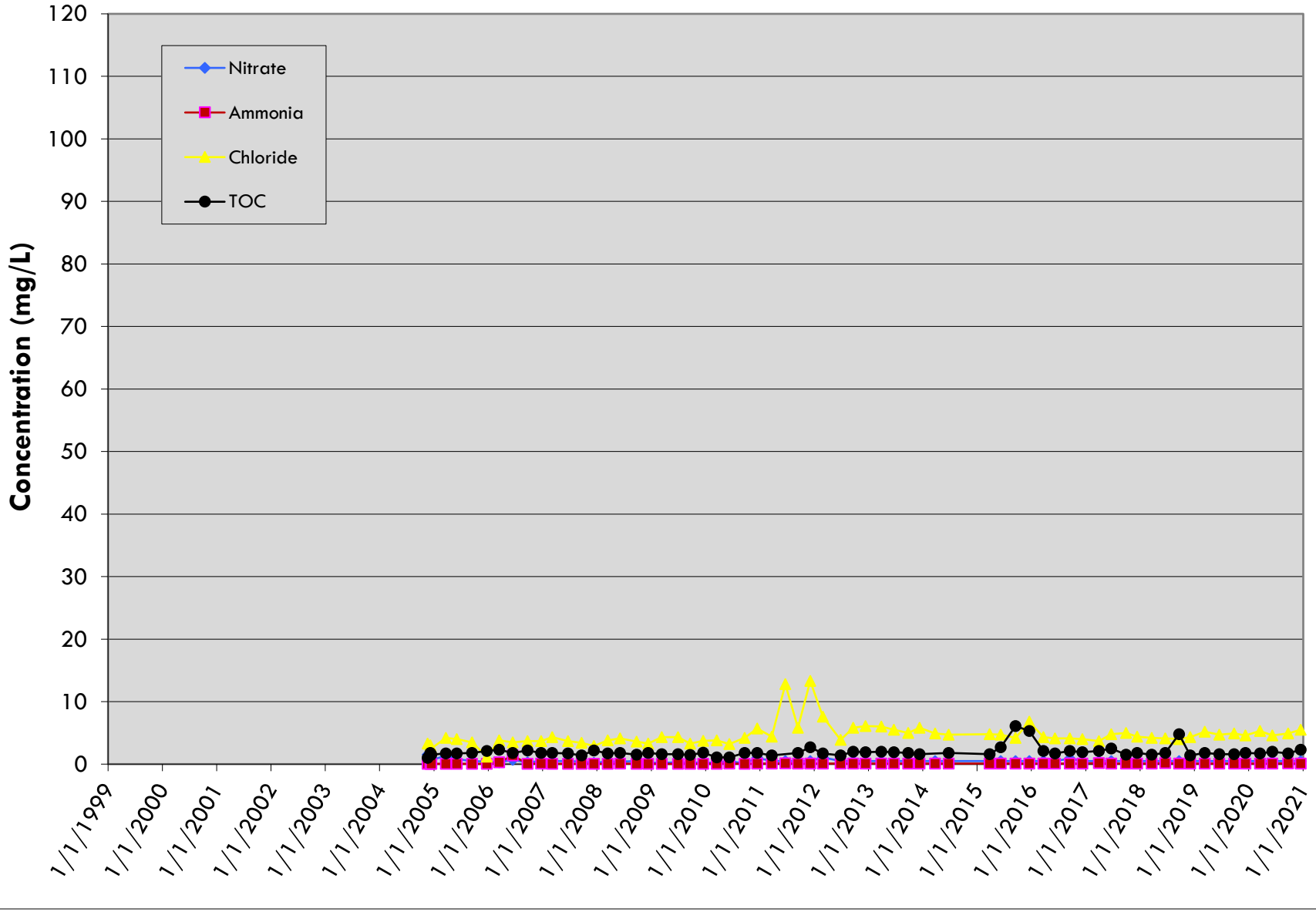
LDCS-2A
LRI Landfill, Pierce County, Washington



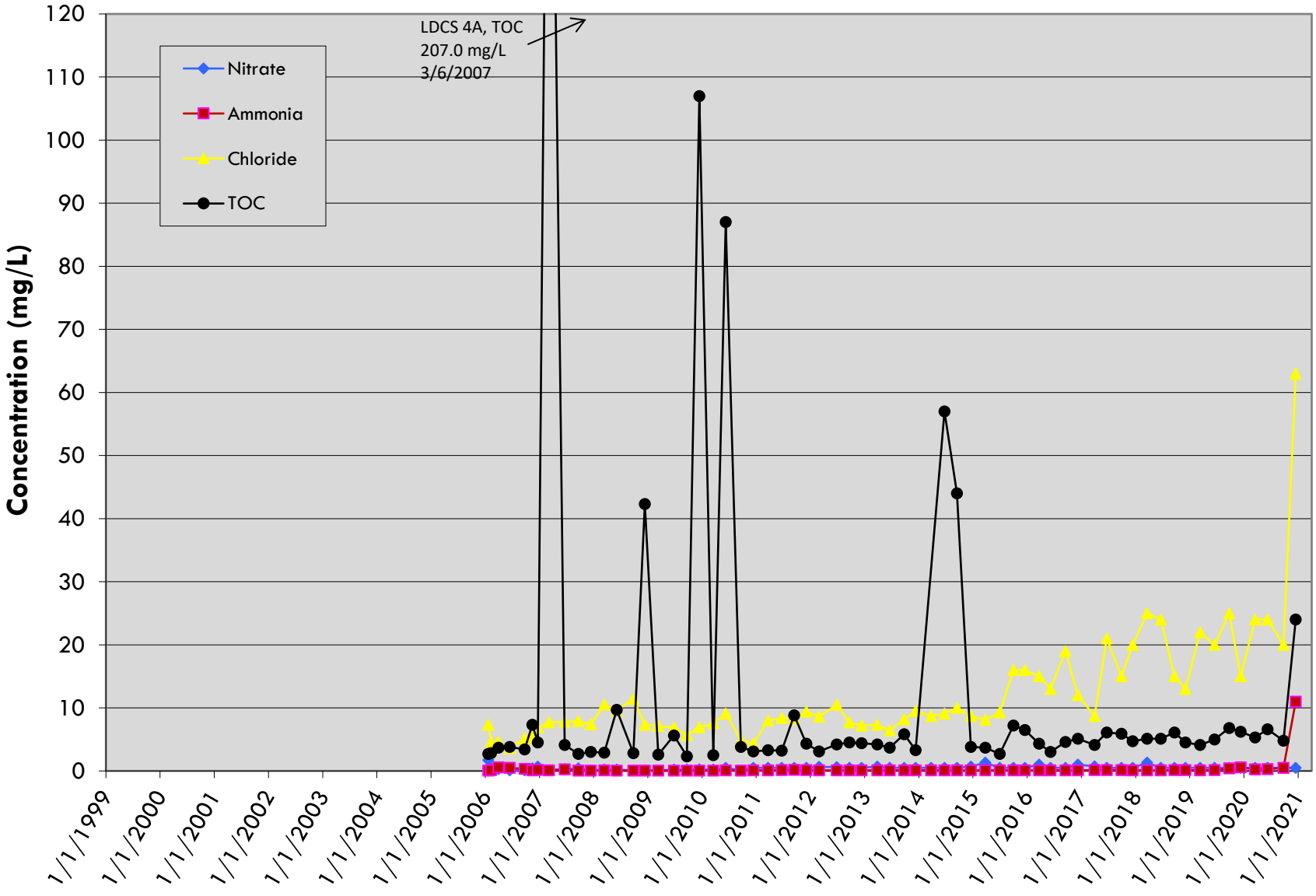
LDCS-2B
LRI Landfill, Pierce County, Washington



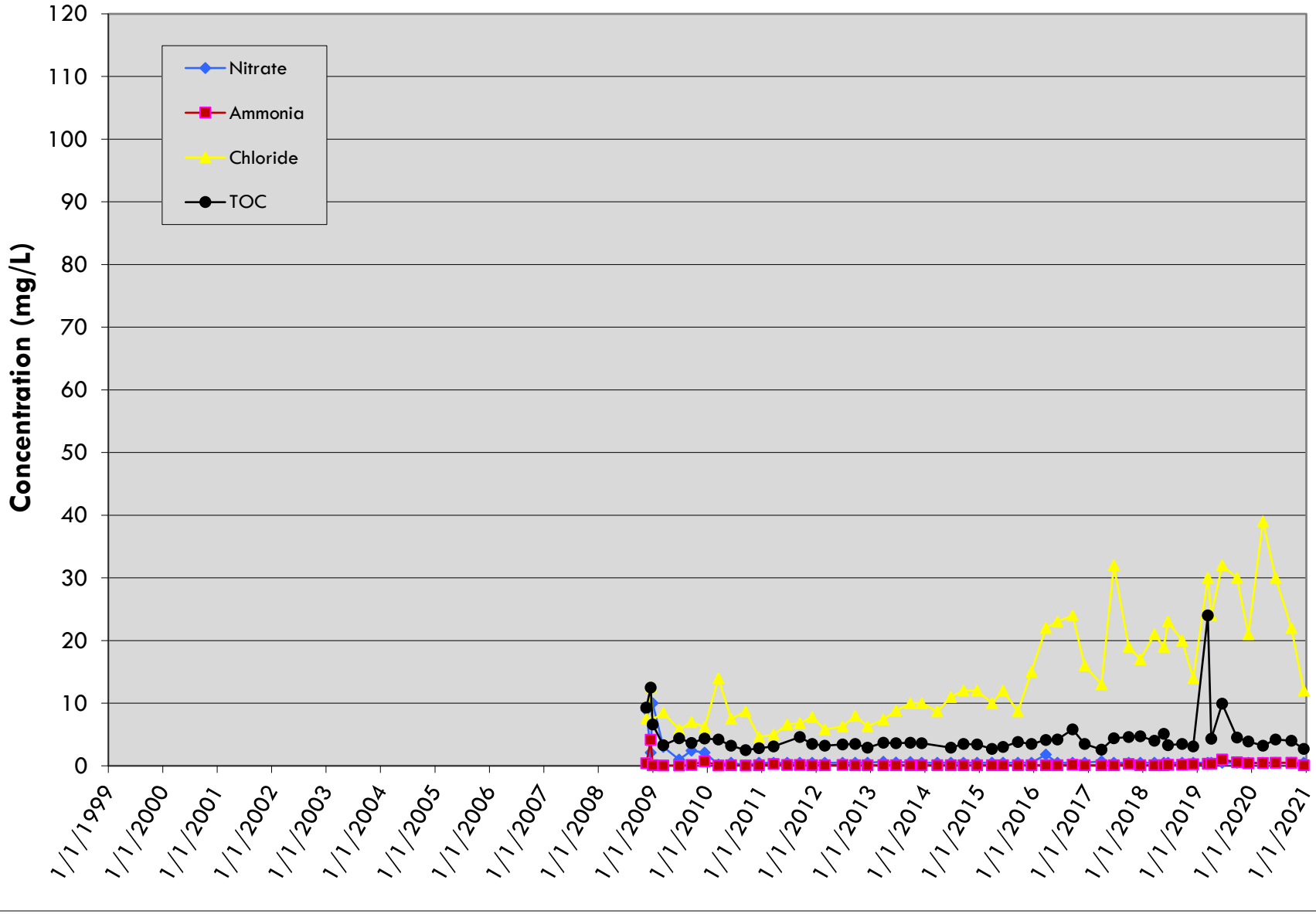
LDCS-3A
LRI Landfill, Pierce County, Washington

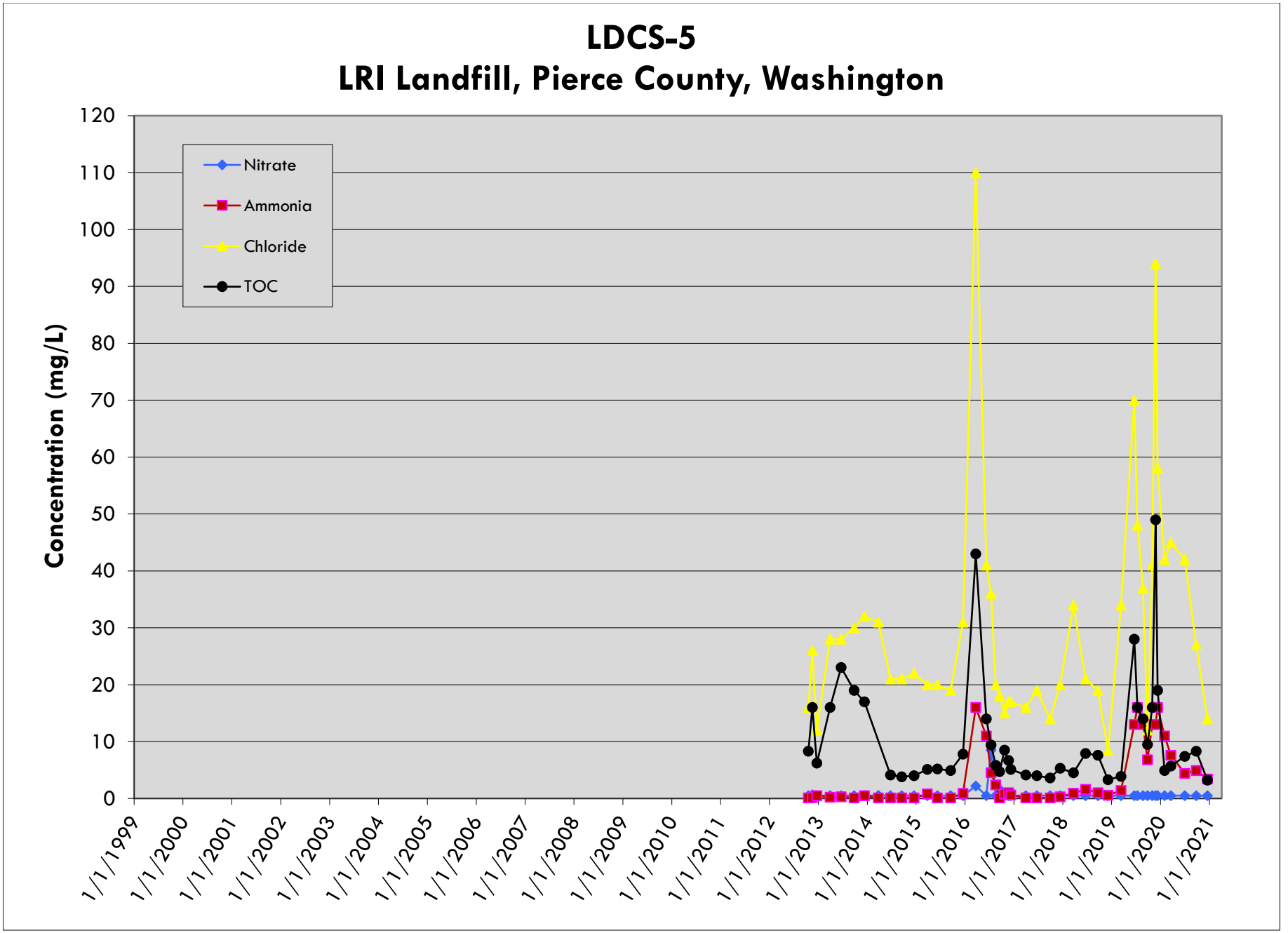


LDCS-4A
LRI Landfill, Pierce County, Washington

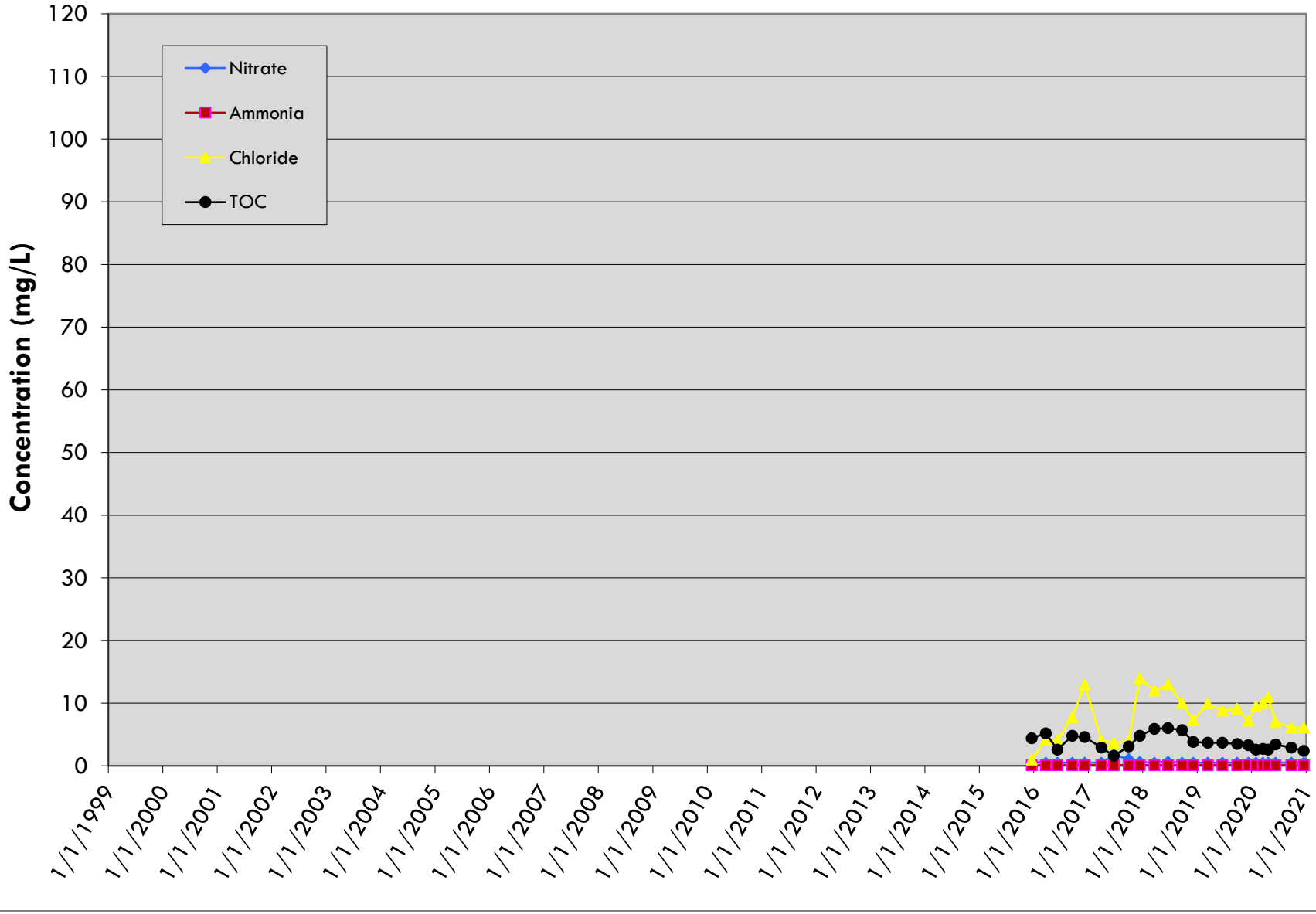


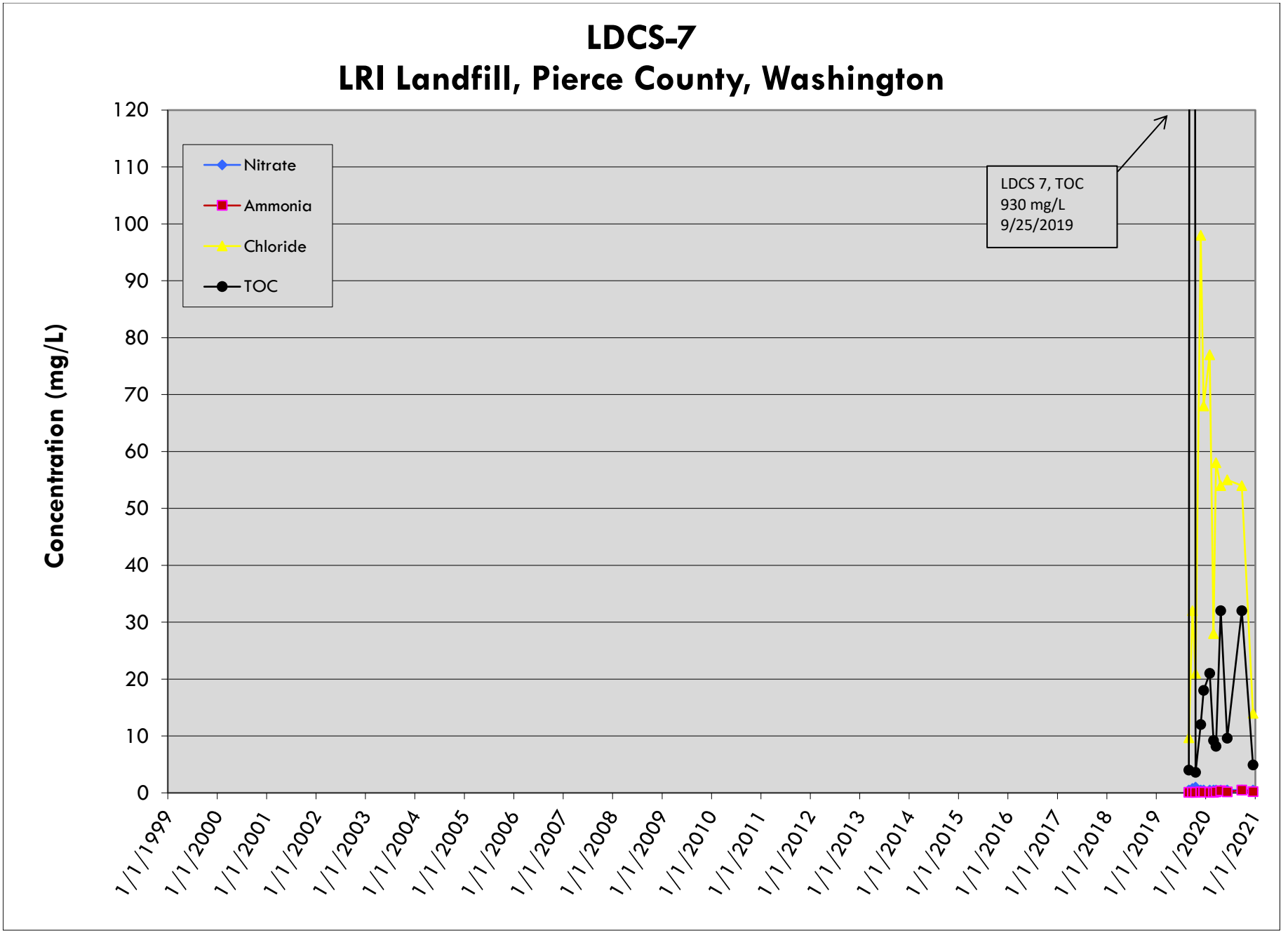
LDCS-4B
LRI Landfill, Pierce County, Washington



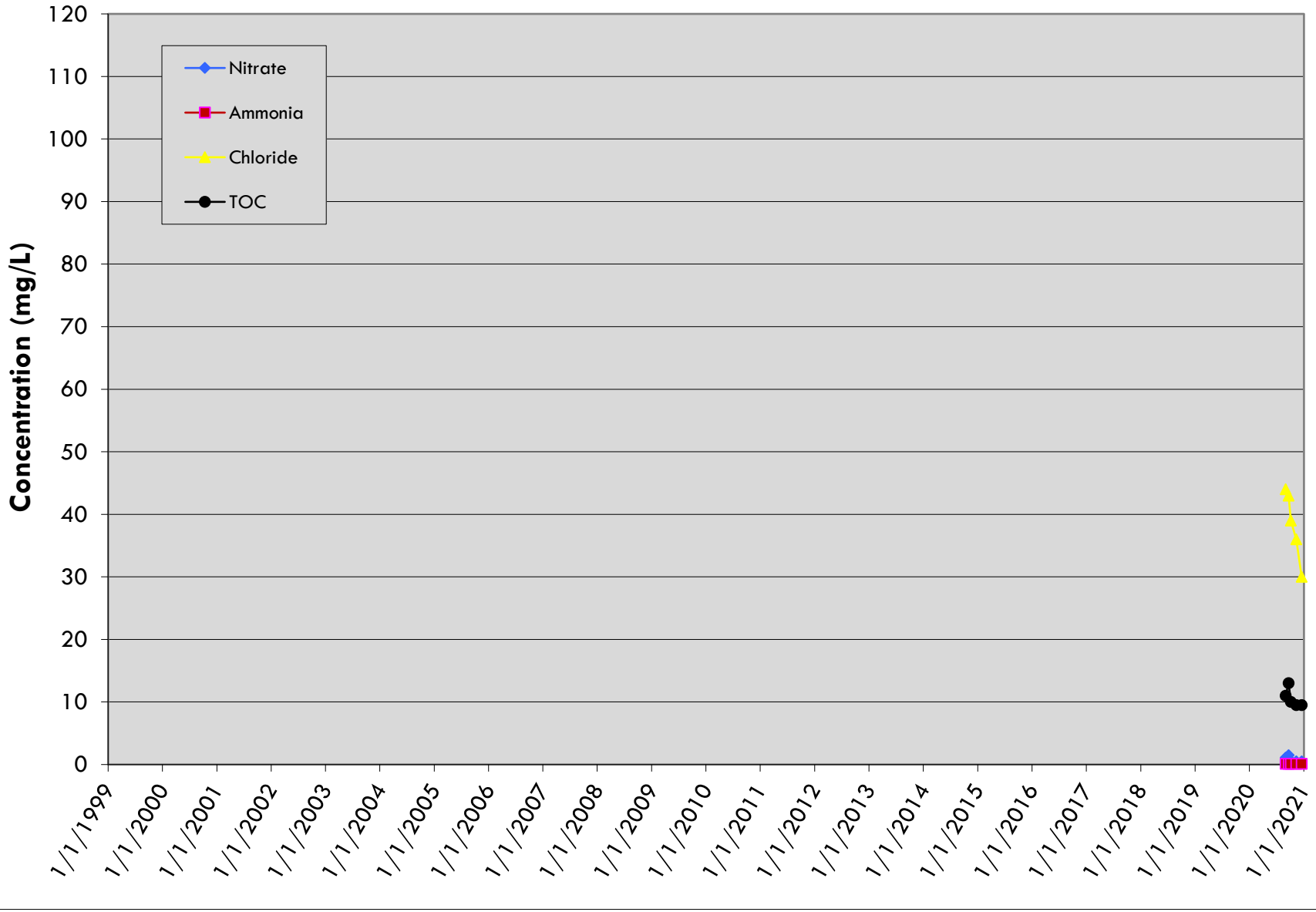

LDCS-5
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
120
110
100
90
80
70
60
50
40
30
20
10
0
Nitrate
Ammonia
Chloride
TOC
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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

LDCS-6A
LRI Landfill, Pierce County, Washington

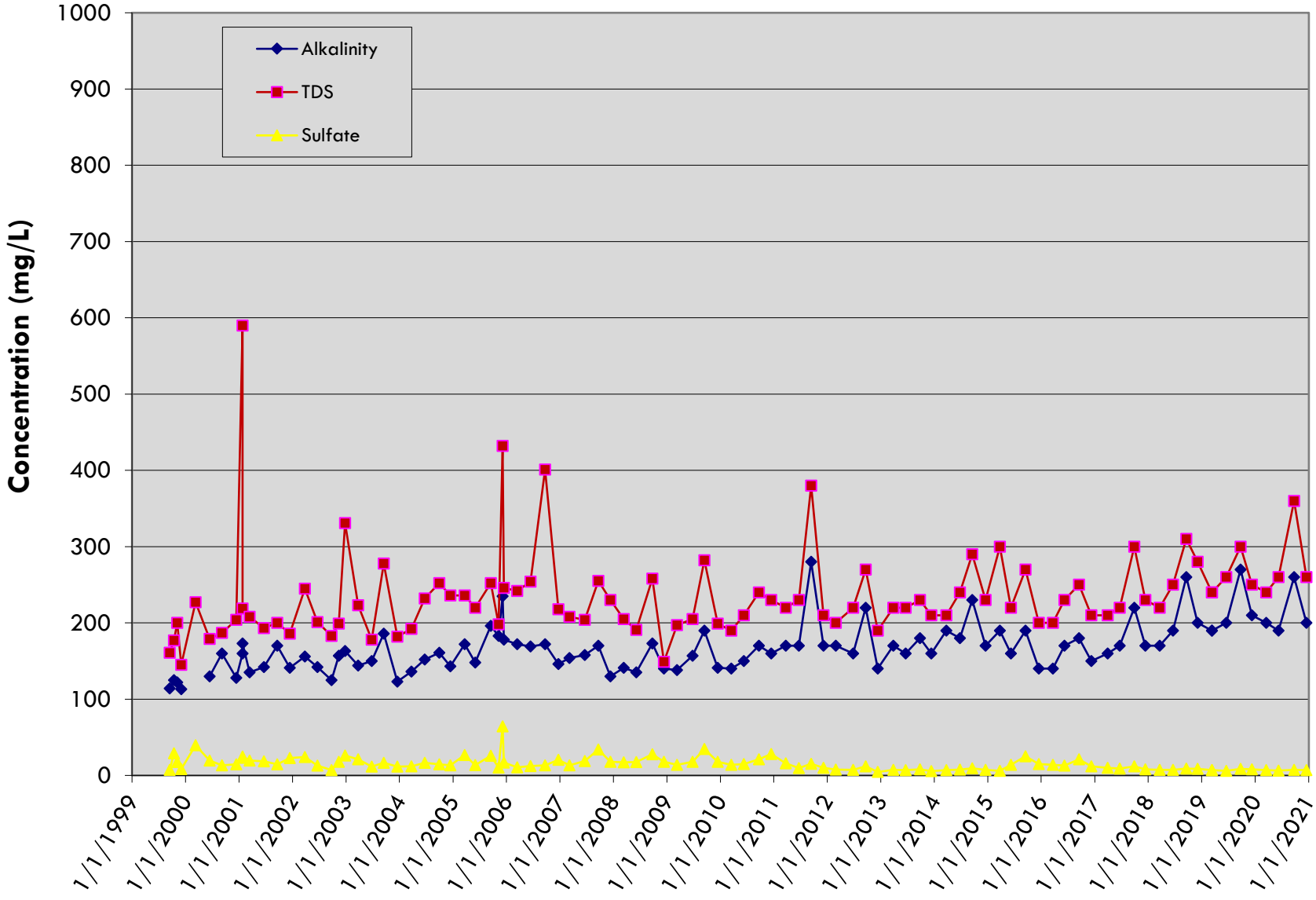


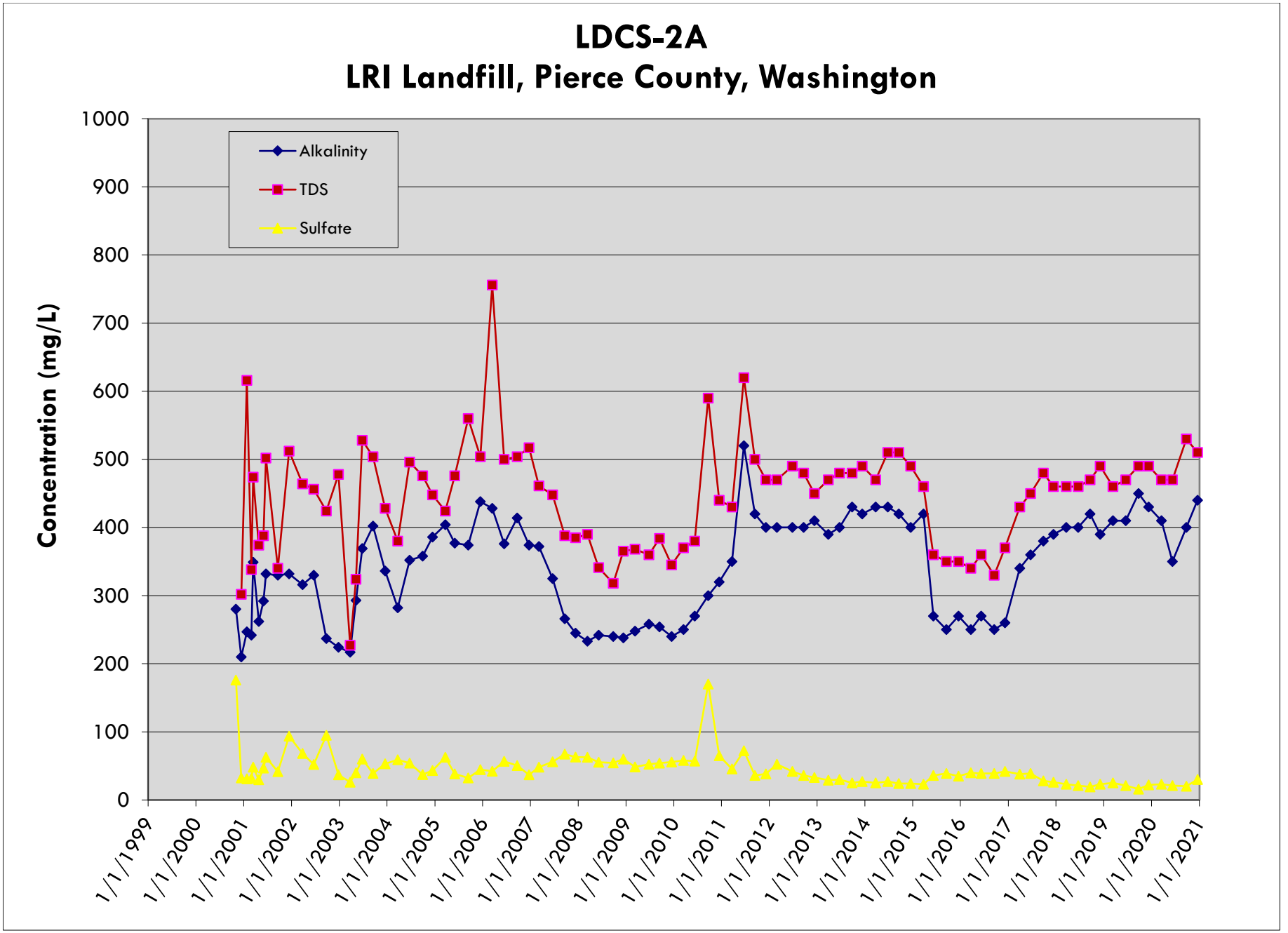

LDCS-7
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
120
110
100
90
80
70
60
50
40
30
20
10
0
Nitrate
Ammonia
Chloride
TOC
LDCS 7, TOC
930 mg/L
9/25/2019
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013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

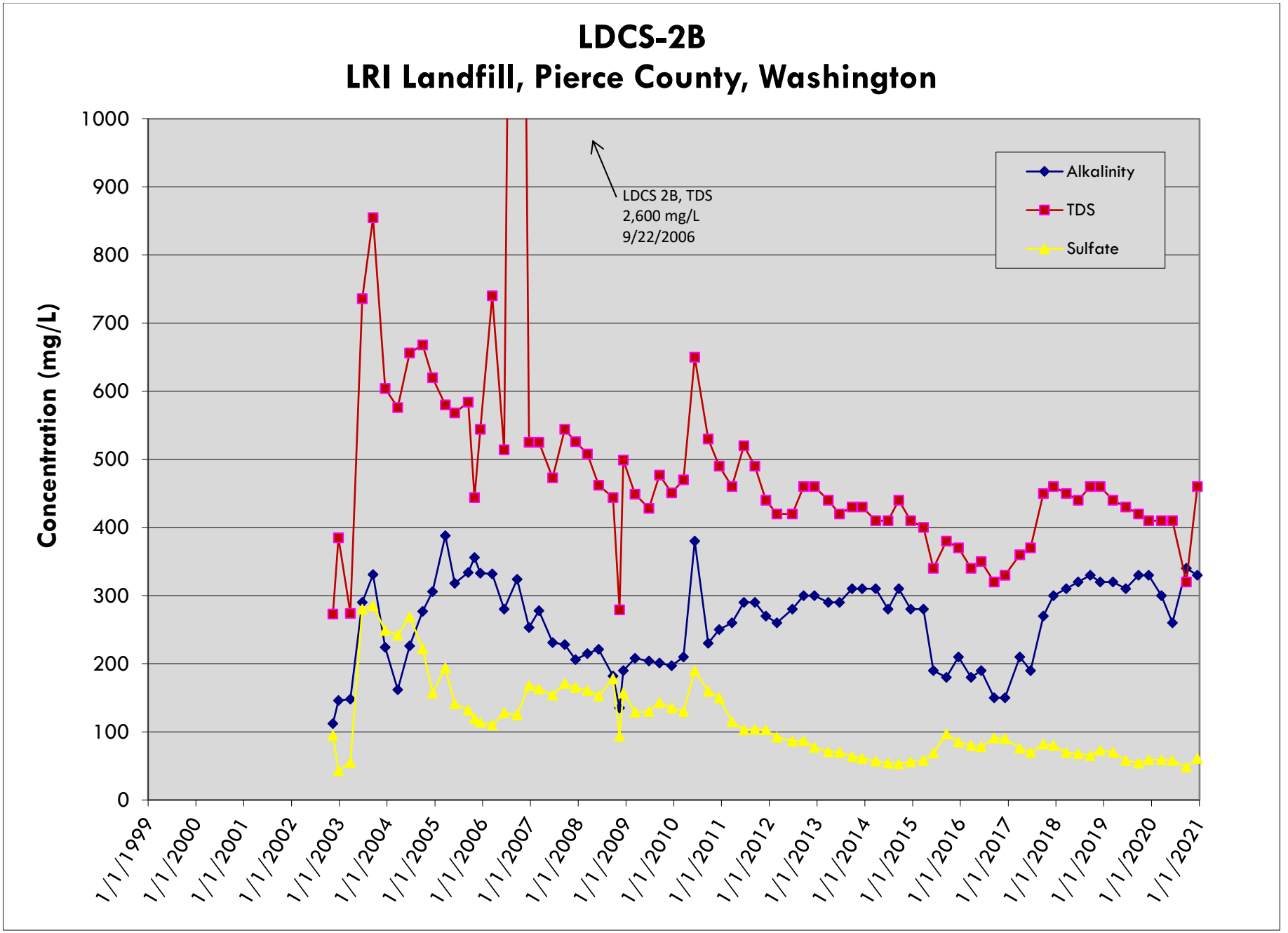
LDCS-8A
LRI Landfill, Pierce County, Washington



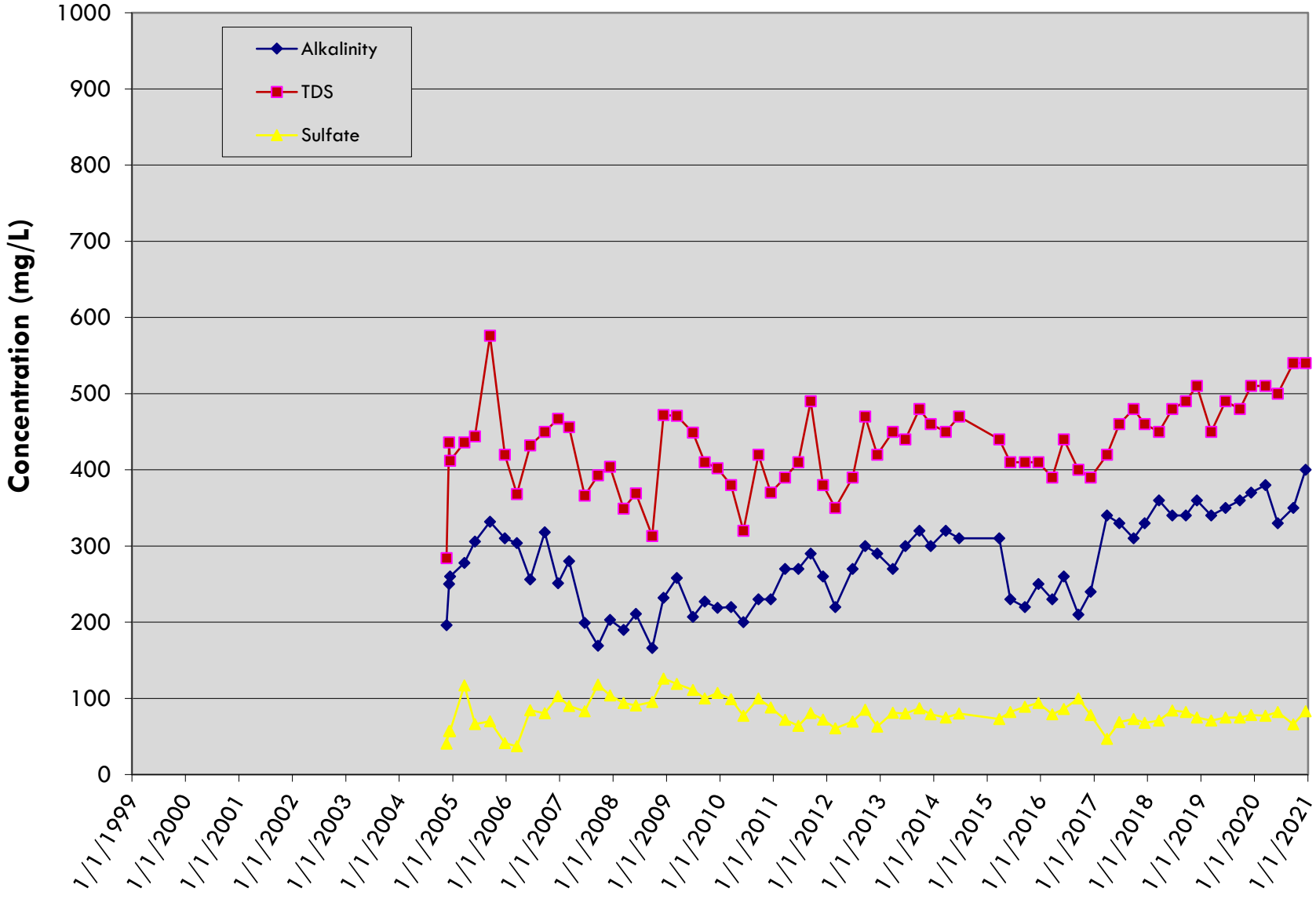
LDCS-1
LRI Landfill, Pierce County, Washington



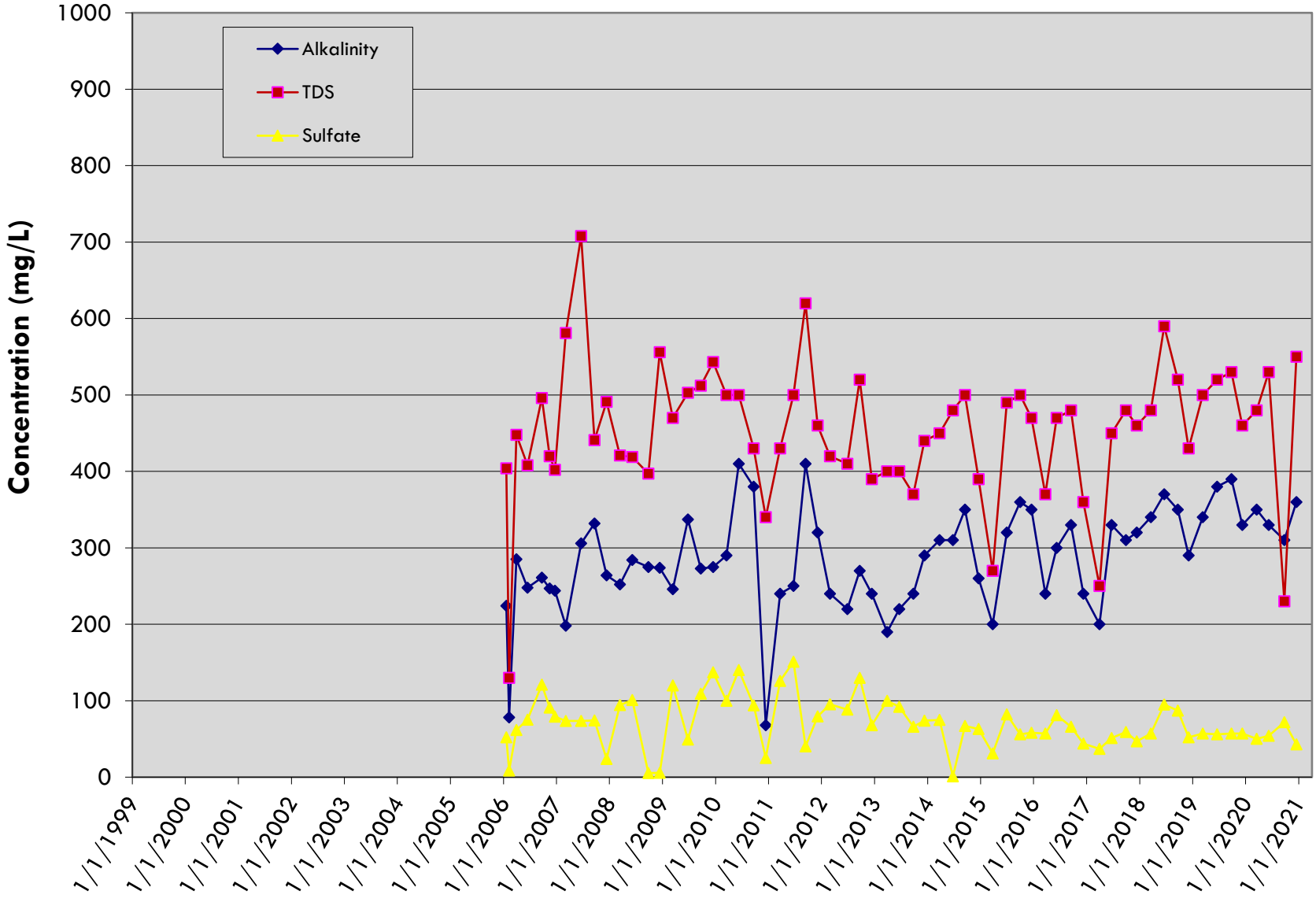

LDCS-2A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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

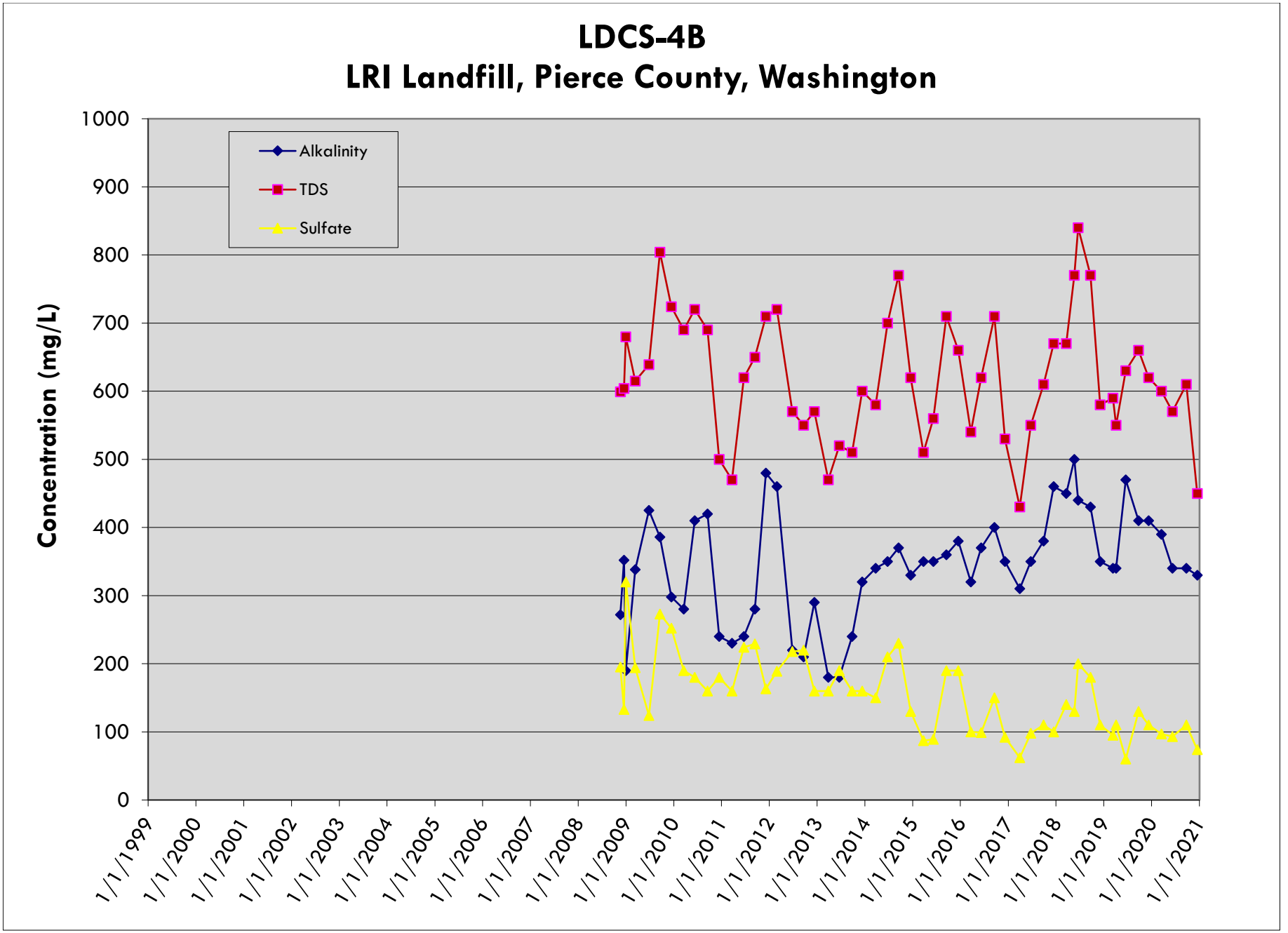

LDCS-2B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019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

LDCS-3A
LRI Landfill, Pierce County, Washington

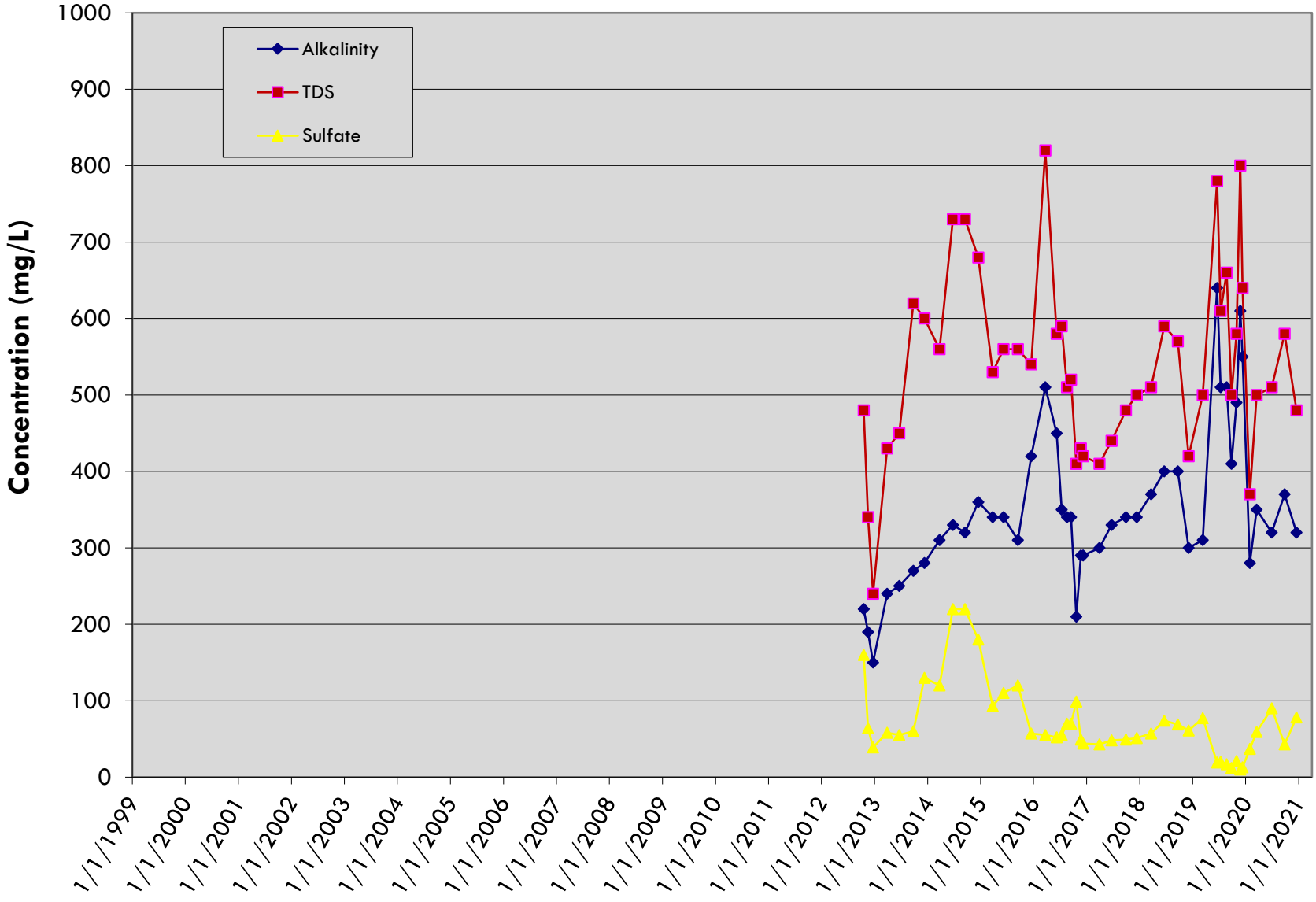


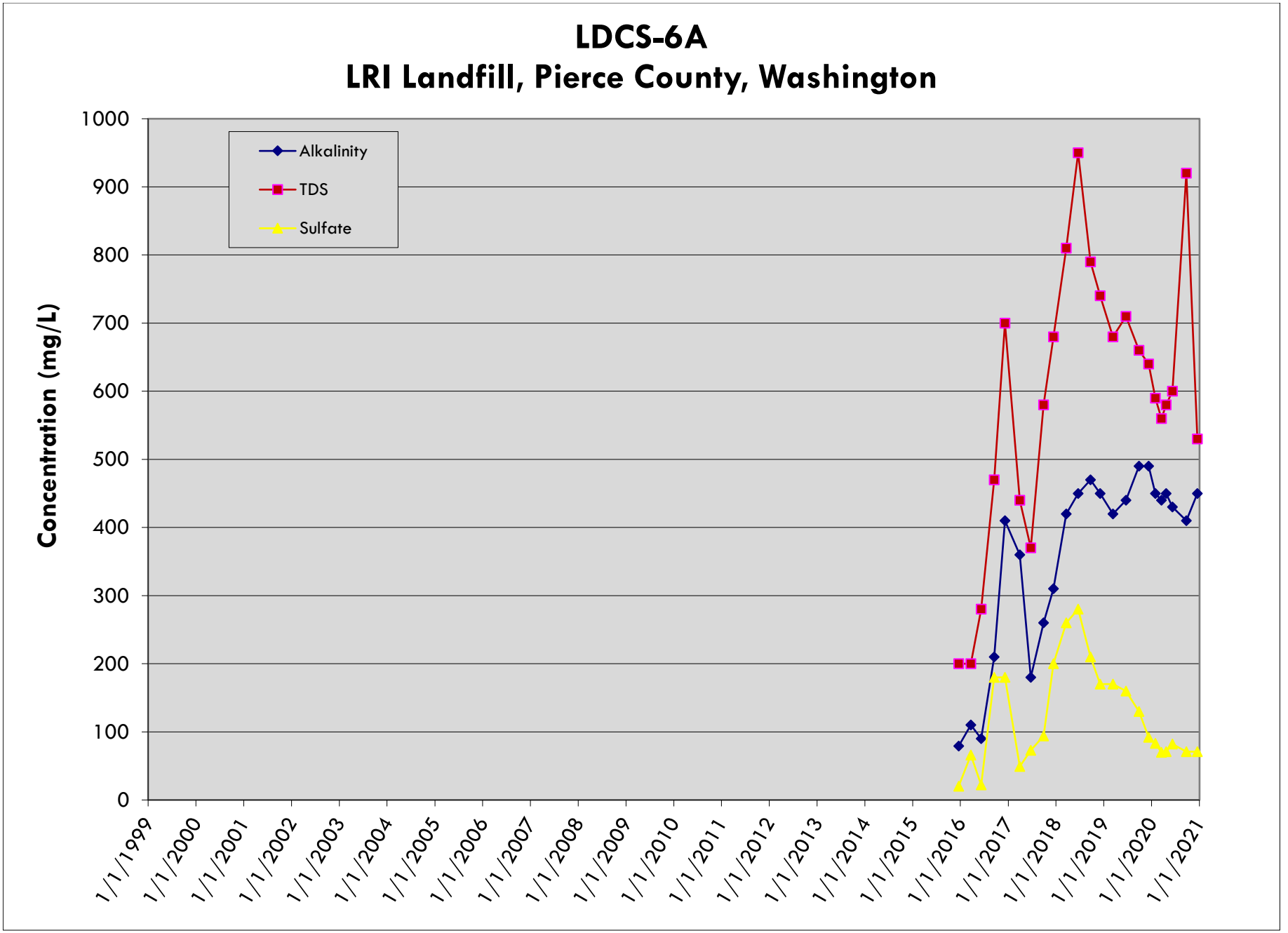
LDCS-4A
LRI Landfill, Pierce County, Washington



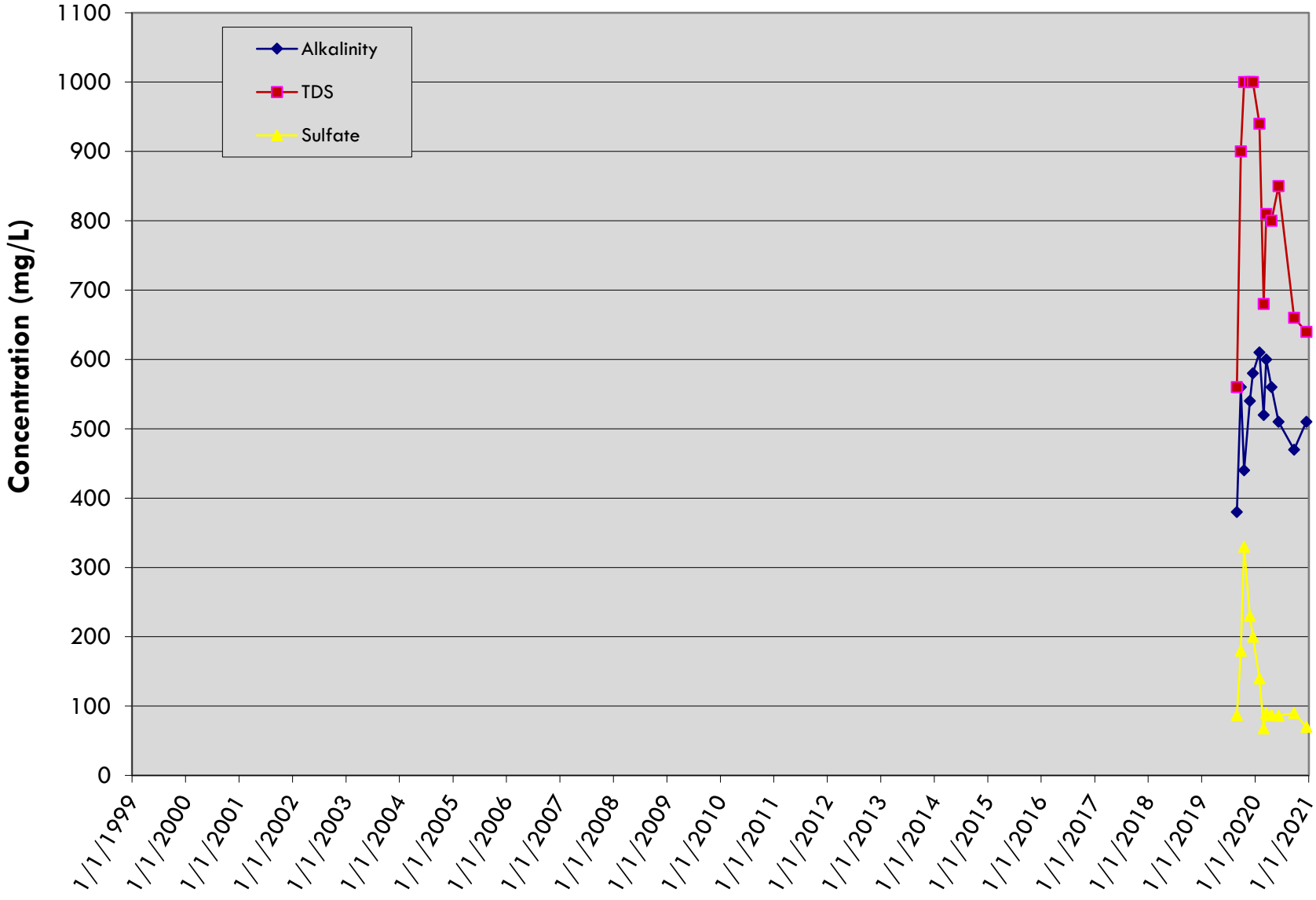

LDCS-4B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
1000
900
800
700
600
500
400
300
200
100
0
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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

LDCS-5
LRI Landfill, Pierce County, Washington

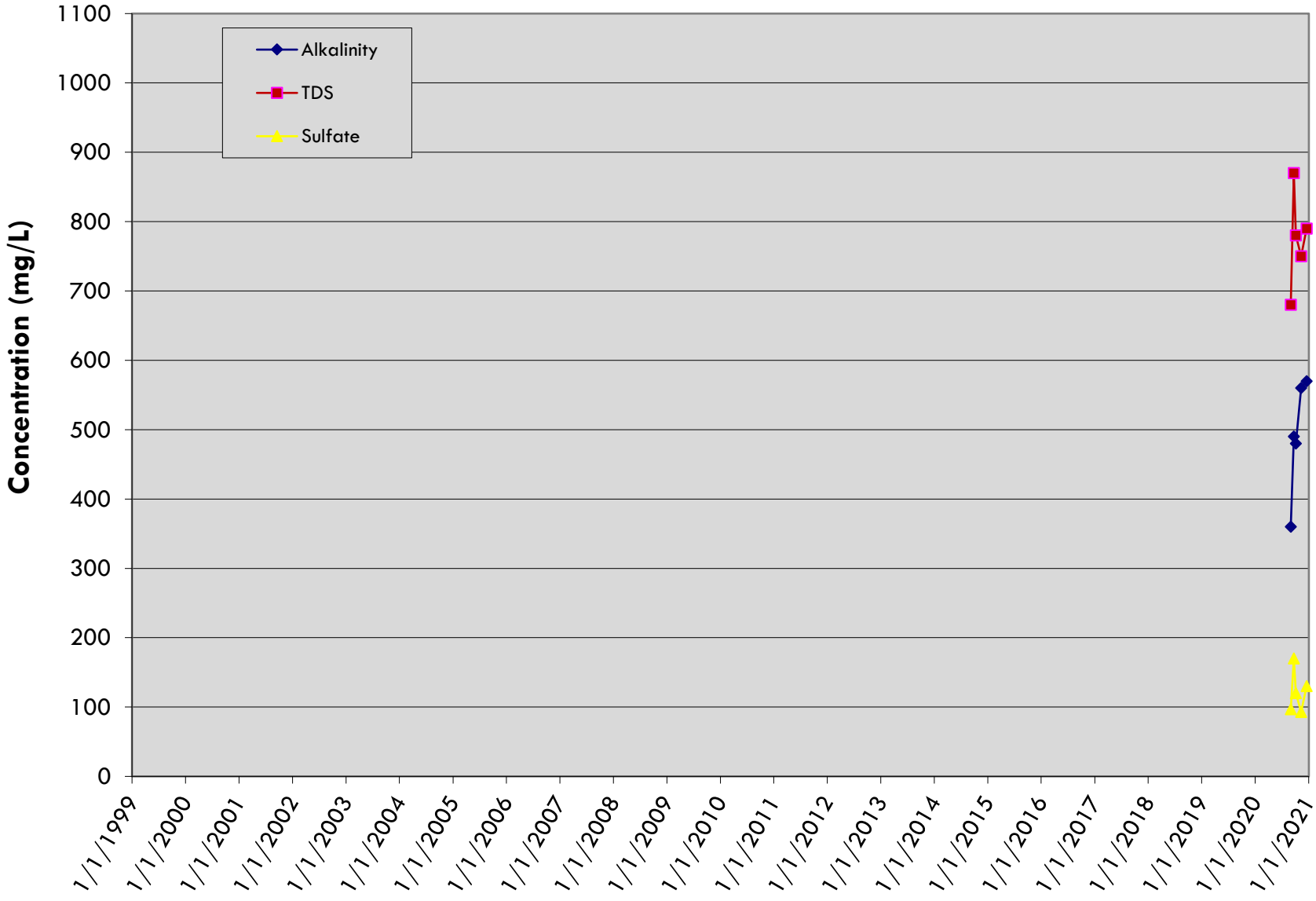



LDCS-6A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Alkalinity
TDS
Sulfate
0
100
200
300
400
500
600
700
800
900
1000
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017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

LDCS-7
LRI Landfill, Pierce County, Washington

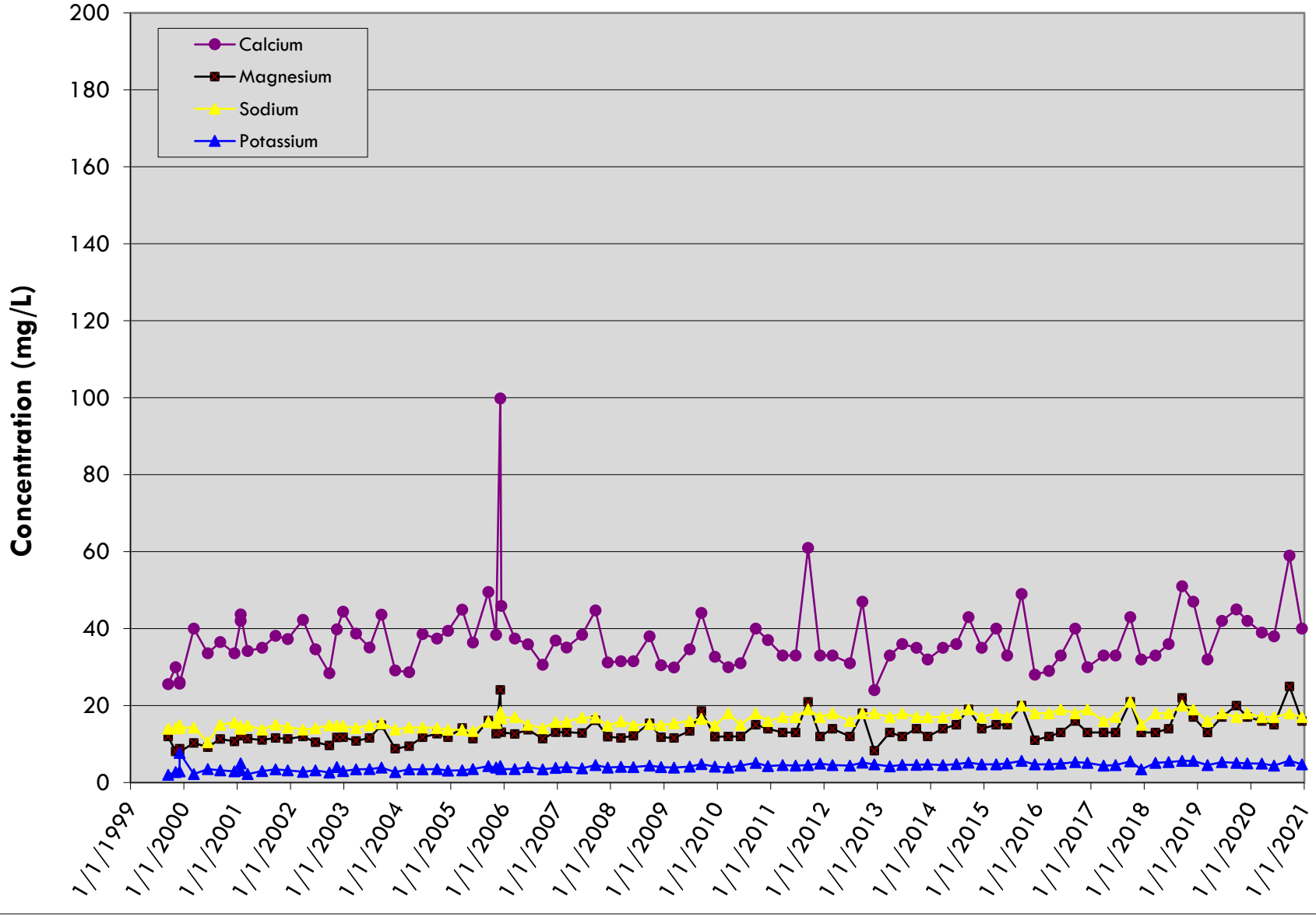


LDCS-8A
LRI Landfill, Pierce County, Washington

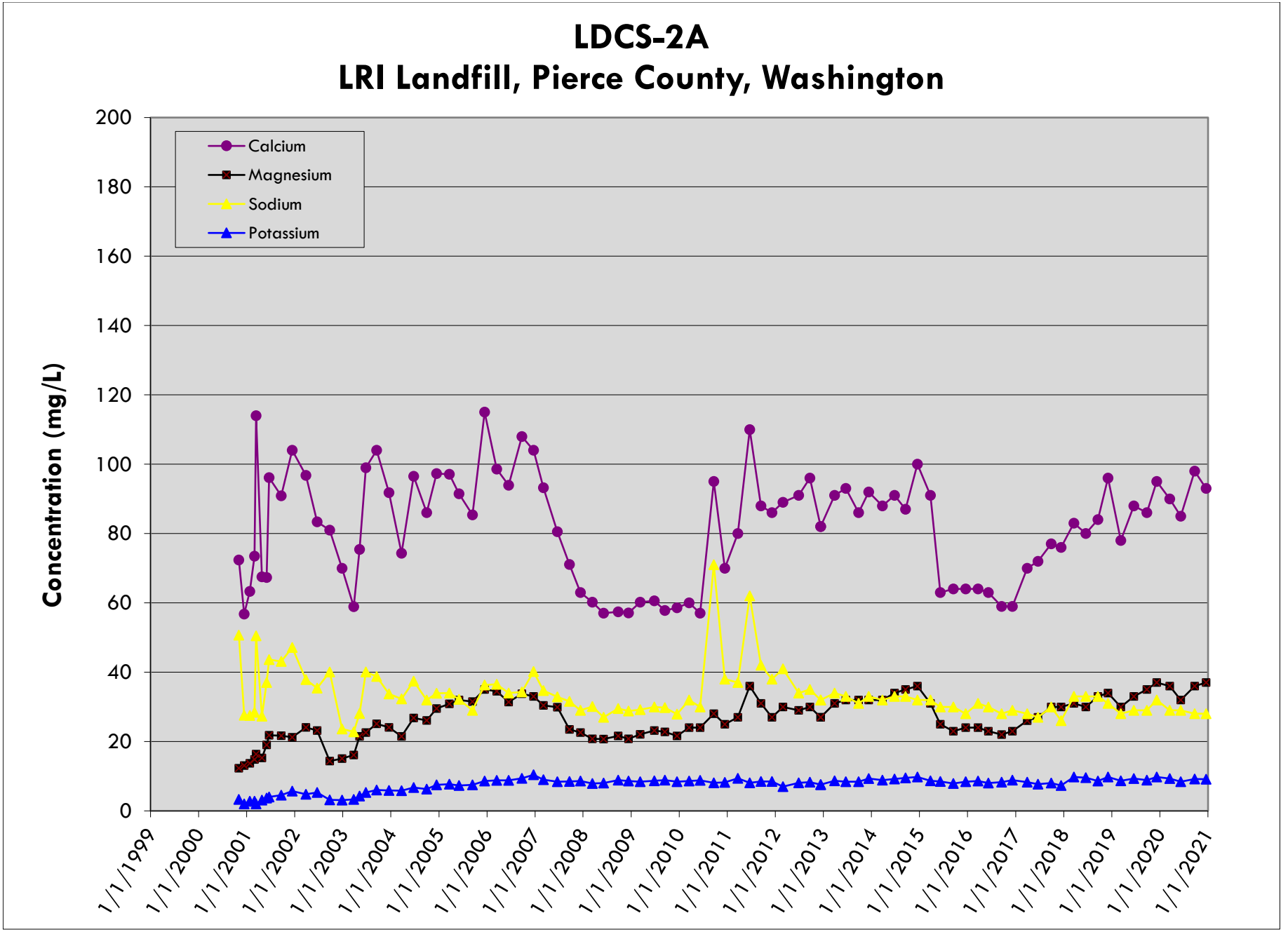


LDCS-1

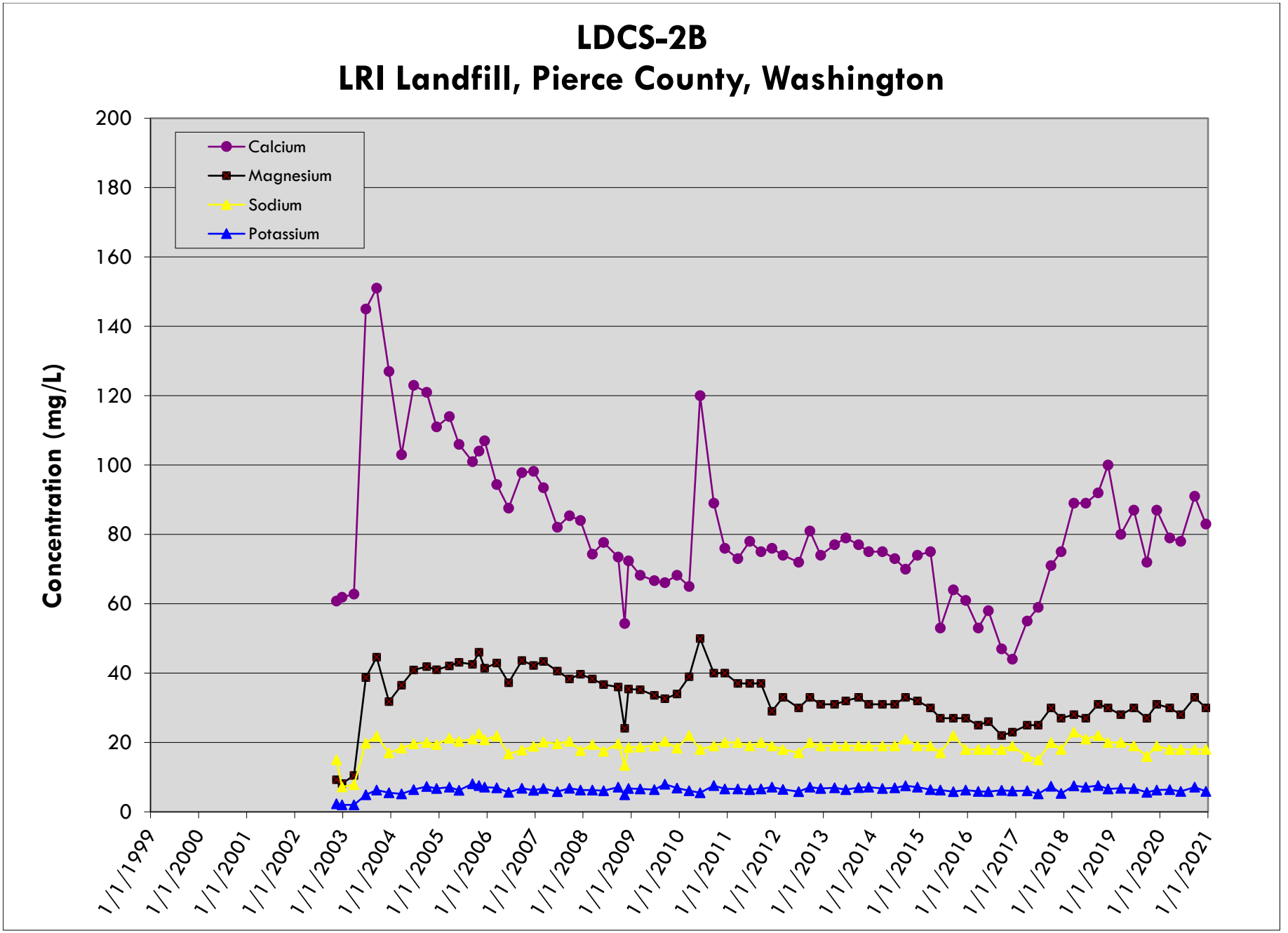
LRI Landfill, Pierce County, Washington



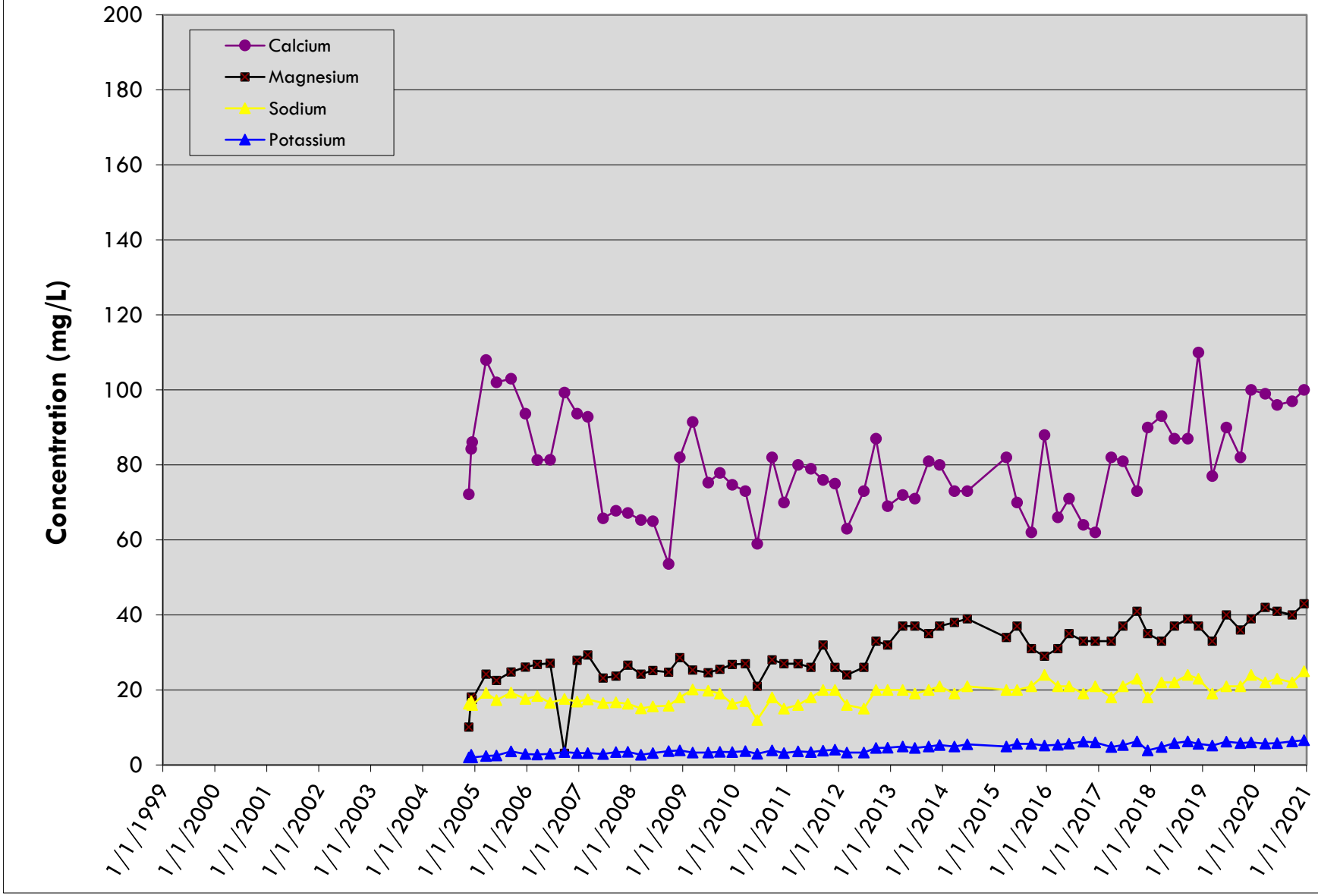
LDCS-2A
LRI Landfill, Pierce County, Washington



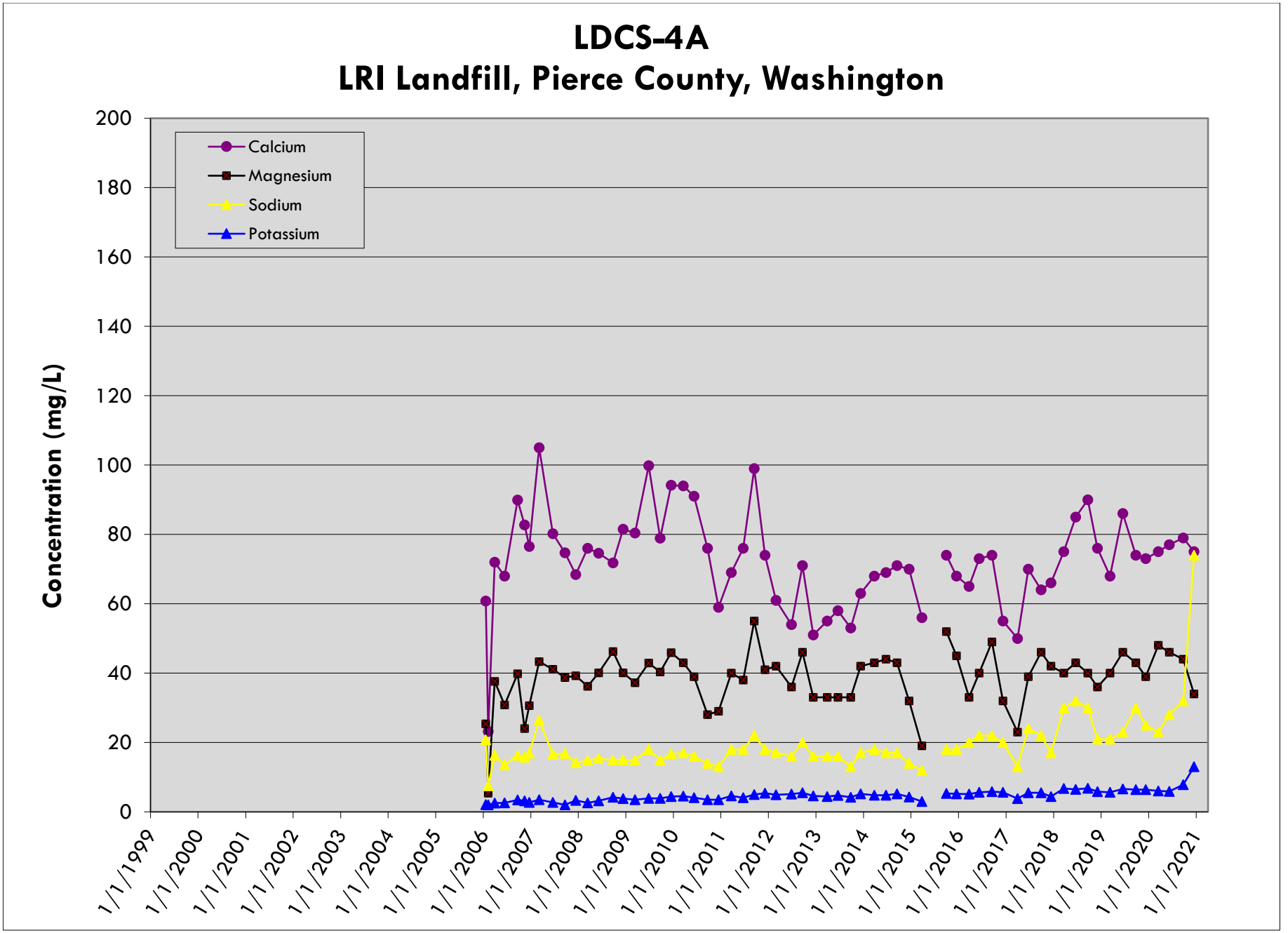
LDCS-2B
LRI Landfill, Pierce County, Washington



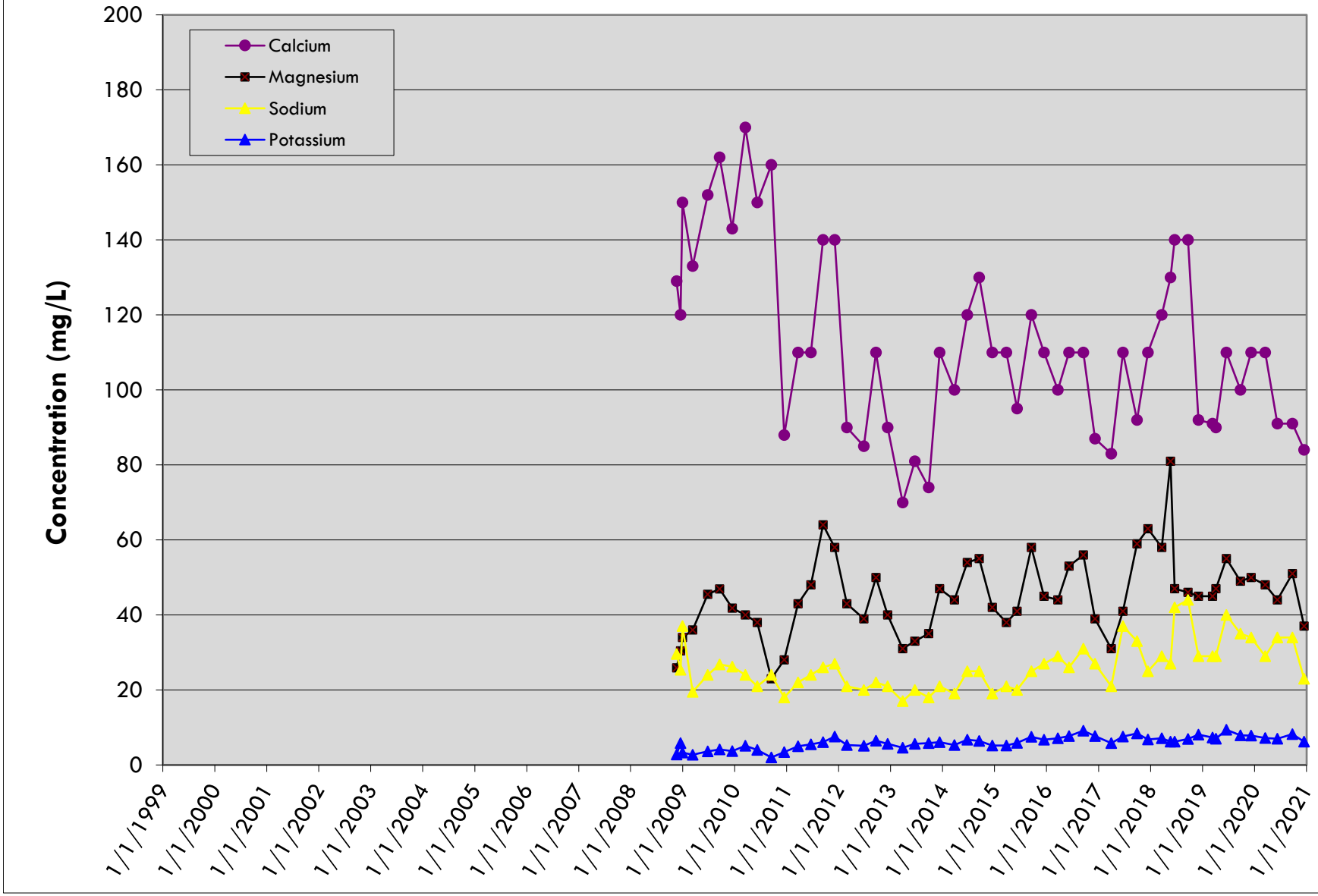
LDCS-3A
LRI Landfill, Pierce County, Washington



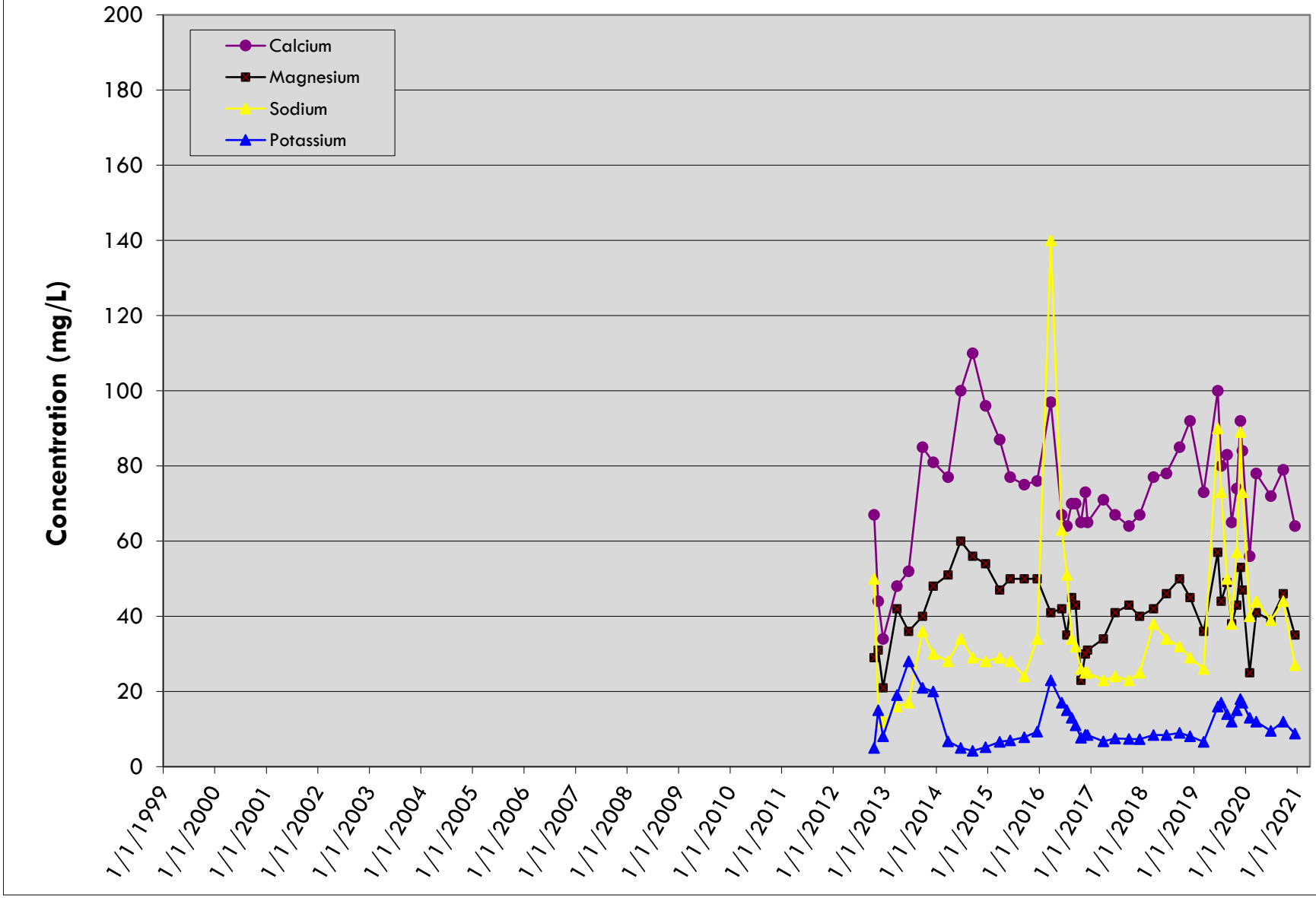
LDCS-4A
LRI Landfill, Pierce County, Washington



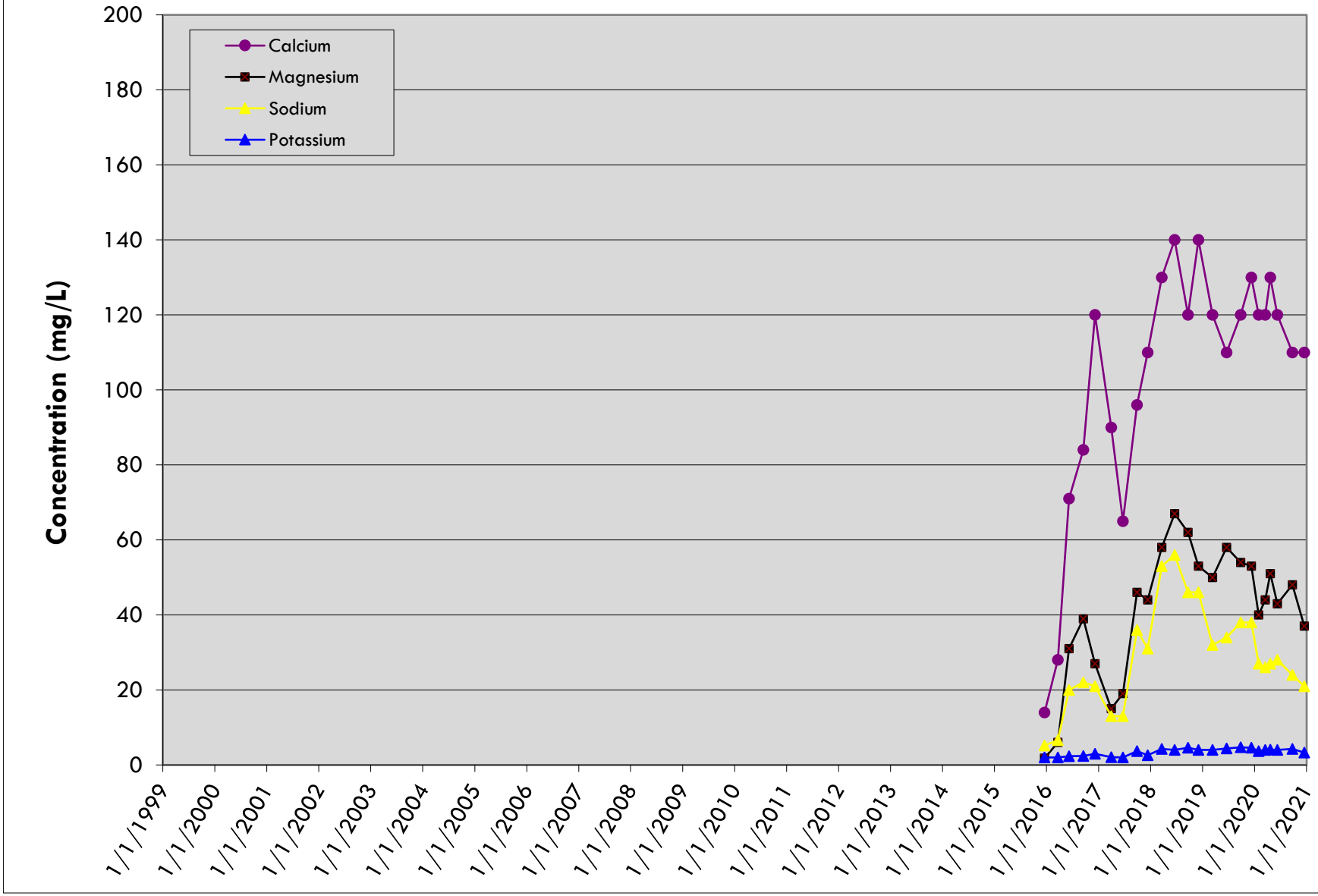
LDCS-4B
LRI Landfill, Pierce County, Washington



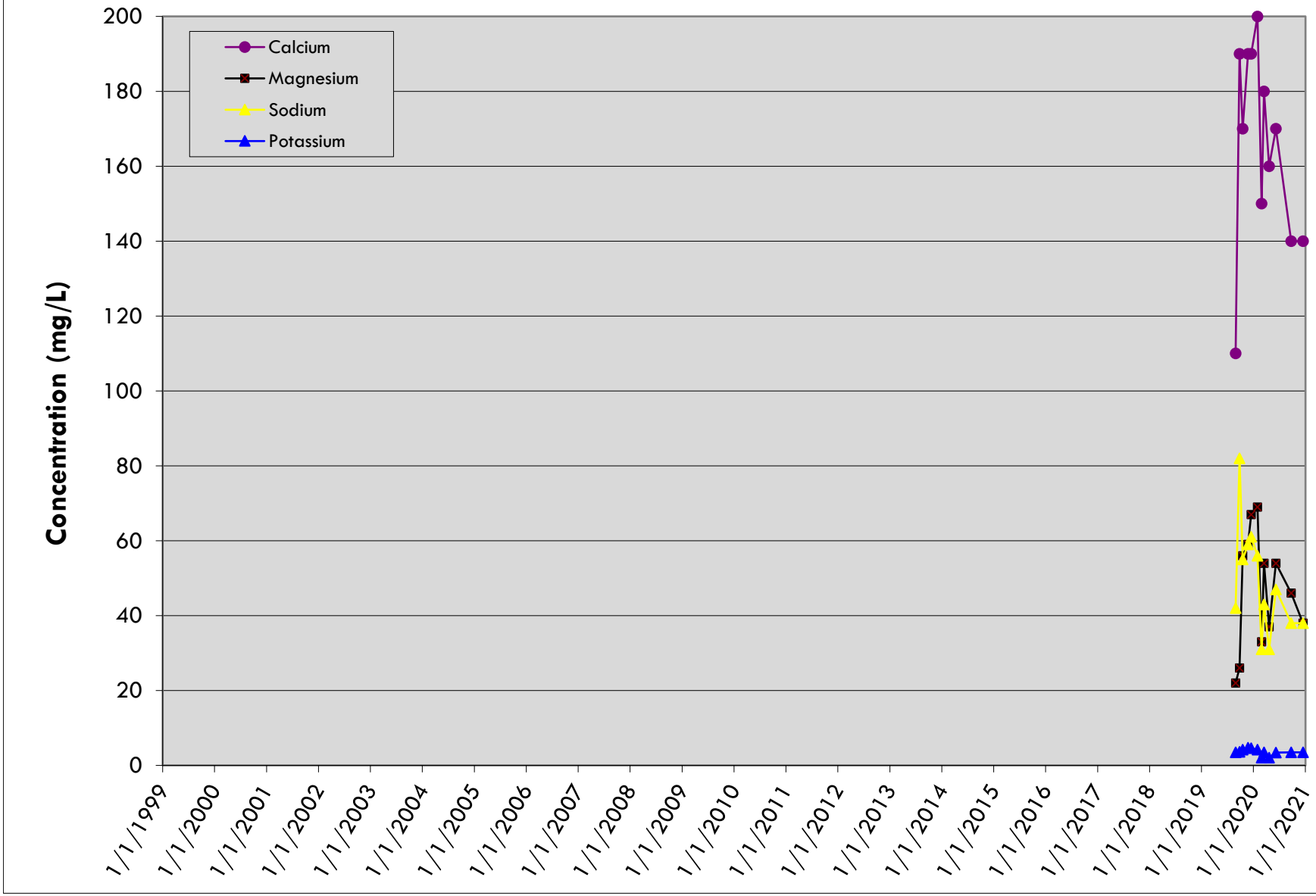
LDCS-5
LRI Landfill, Pierce County, Washington



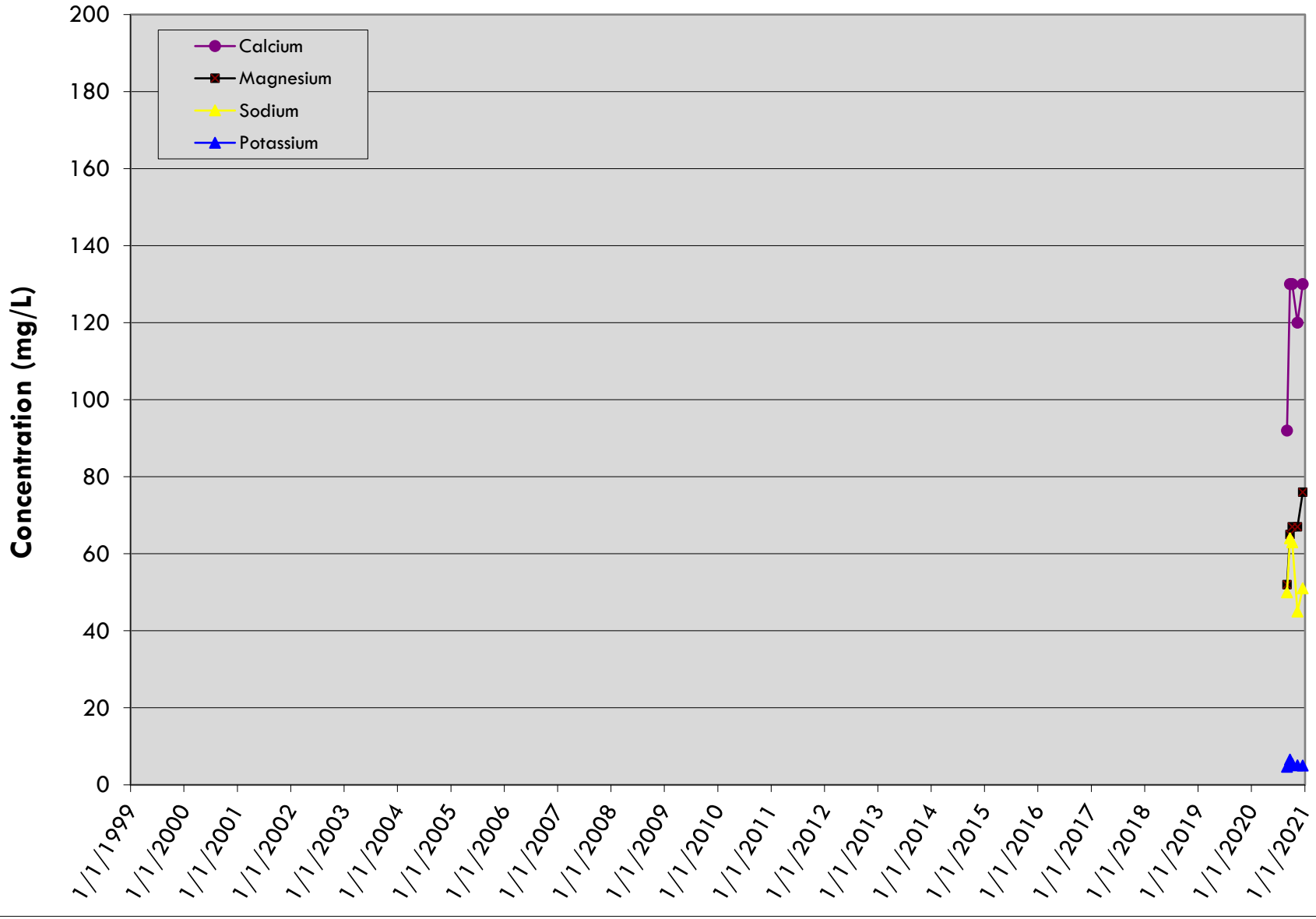
LDCS-6A
LRI Landfill, Pierce County, Washington

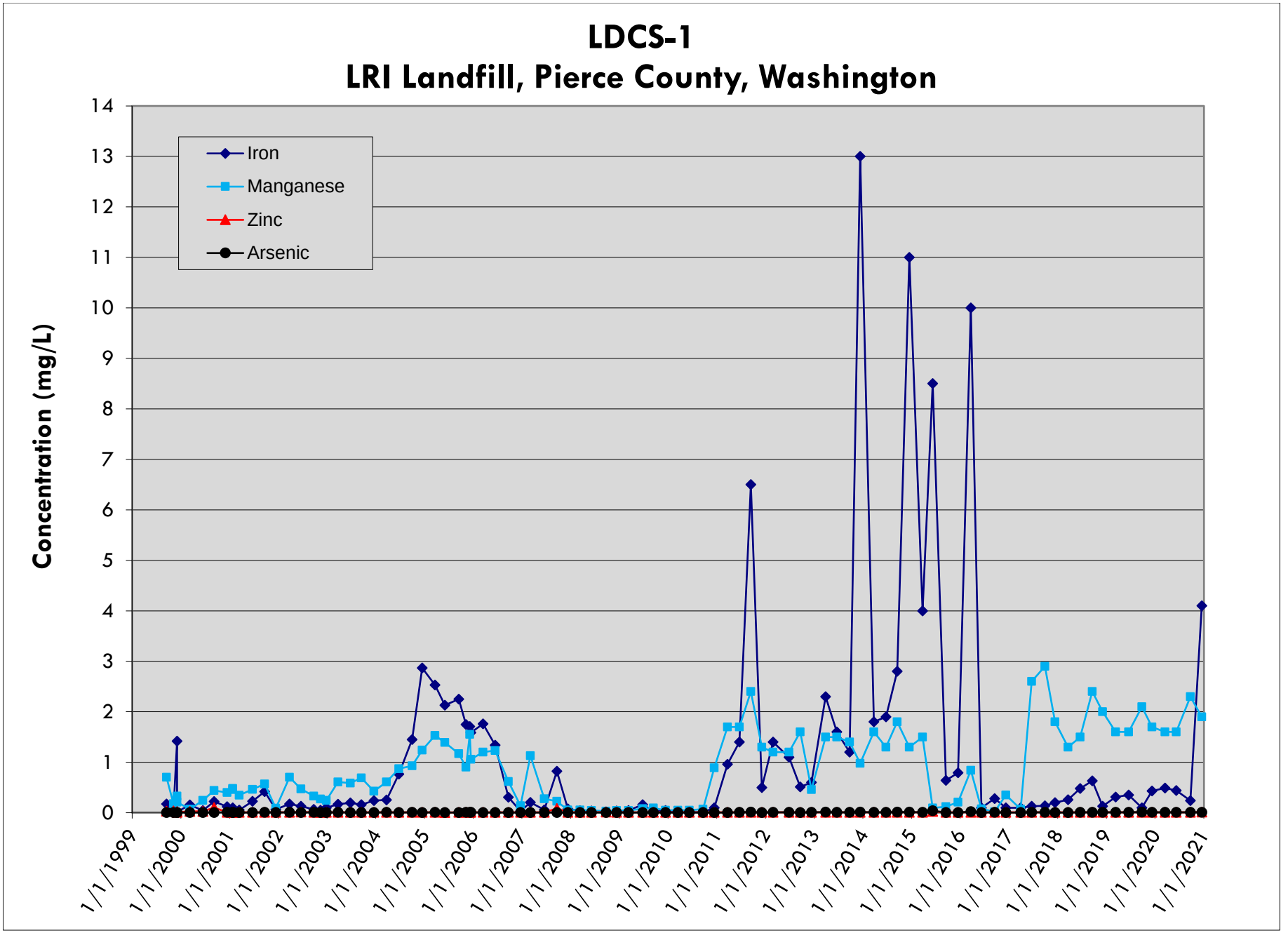


LDCS-7
LRI Landfill, Pierce County, Washington



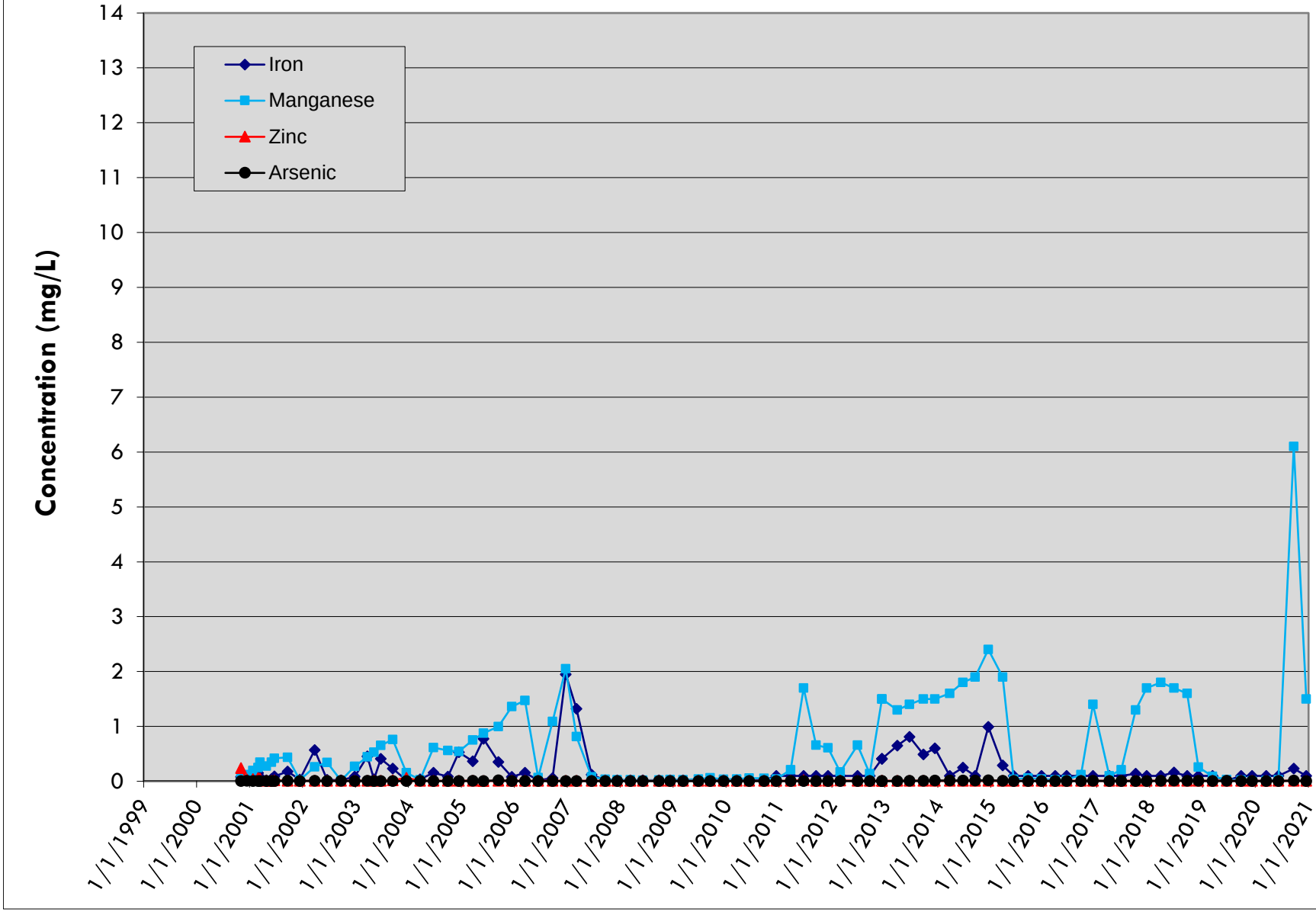
LDCS-8A
LRI Landfill, Pierce County, Washington

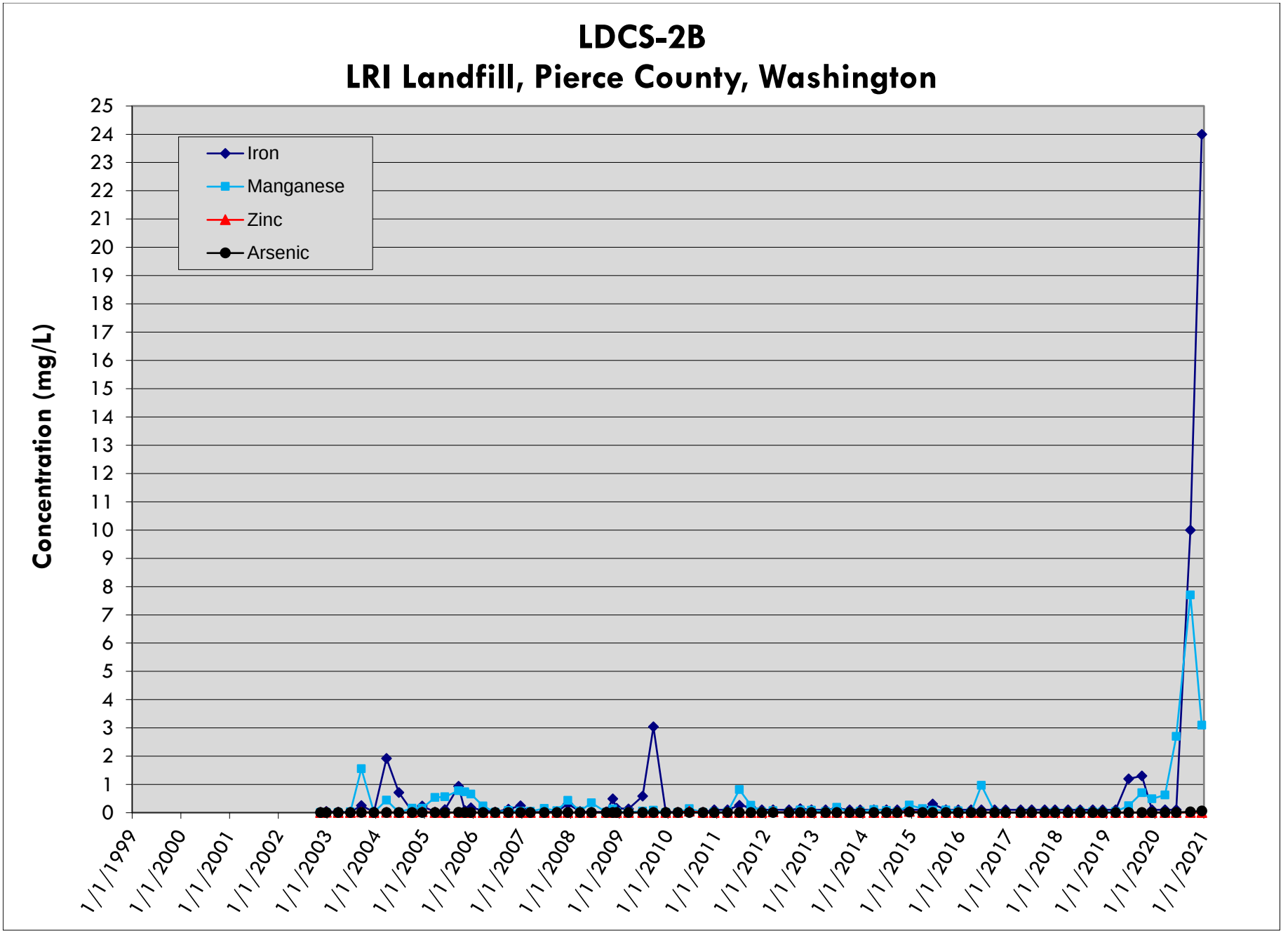



LDCS-1
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021

LDCS-2A

LRI Landfill, Pierce County, Washington




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
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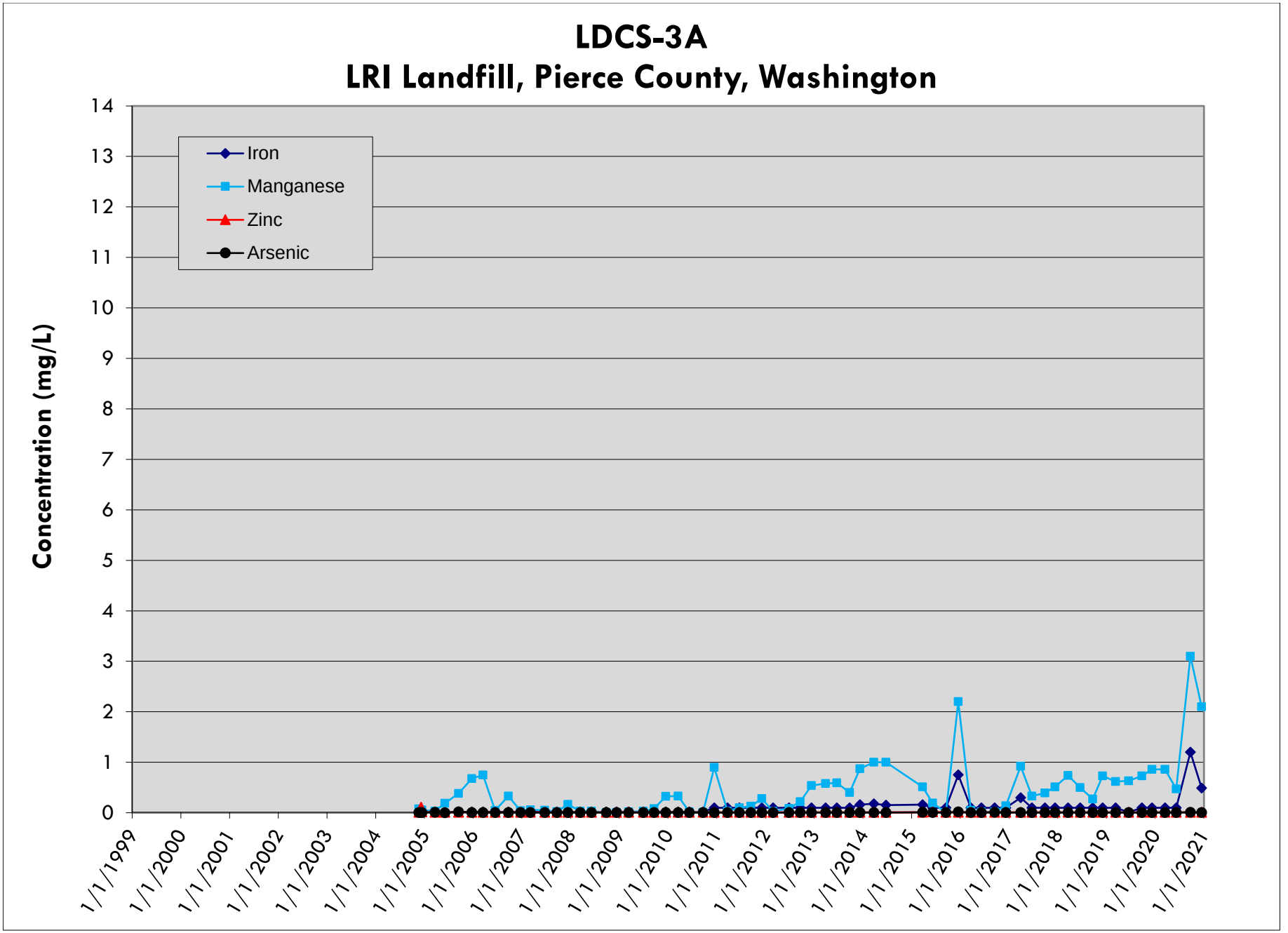
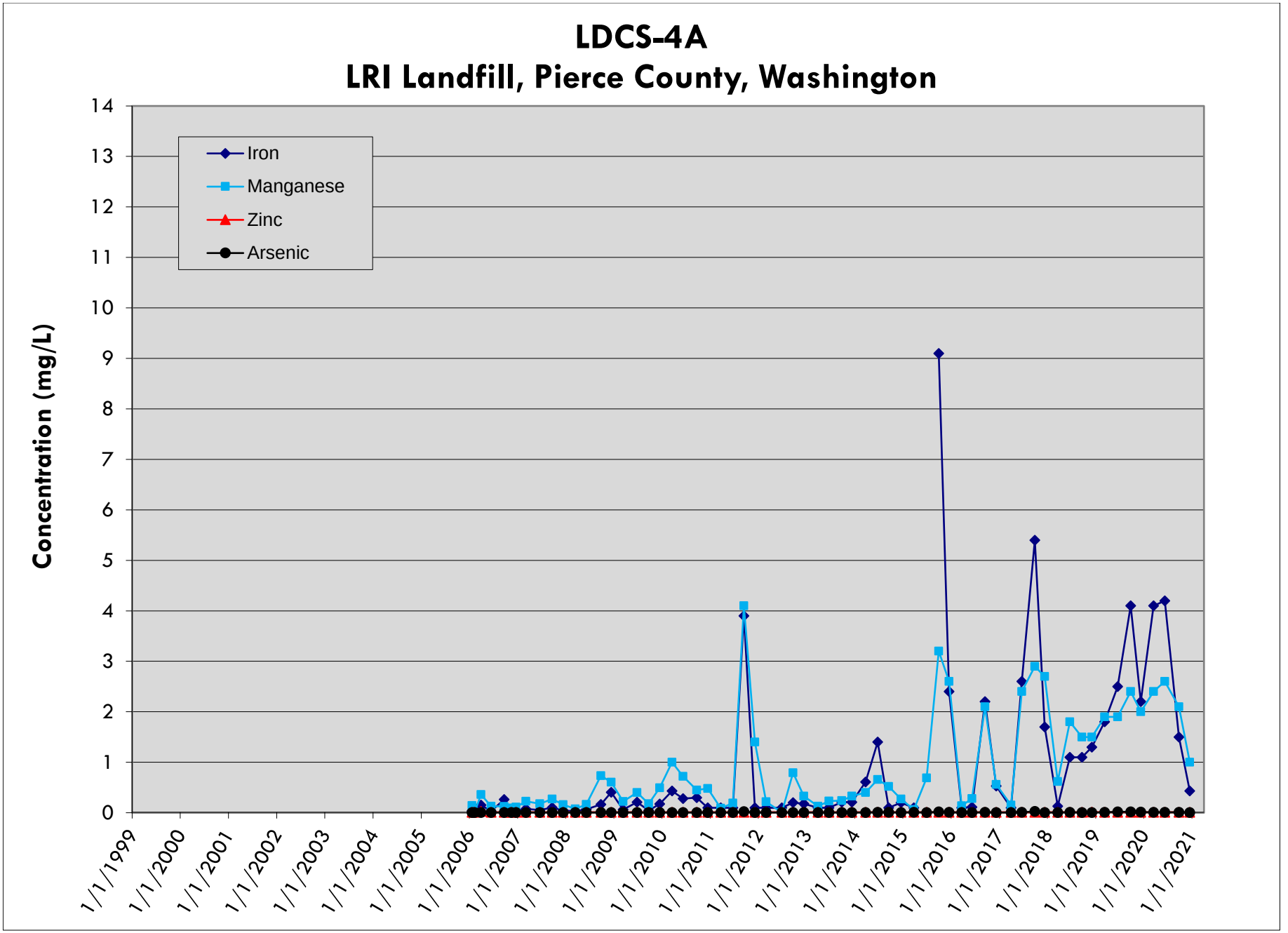
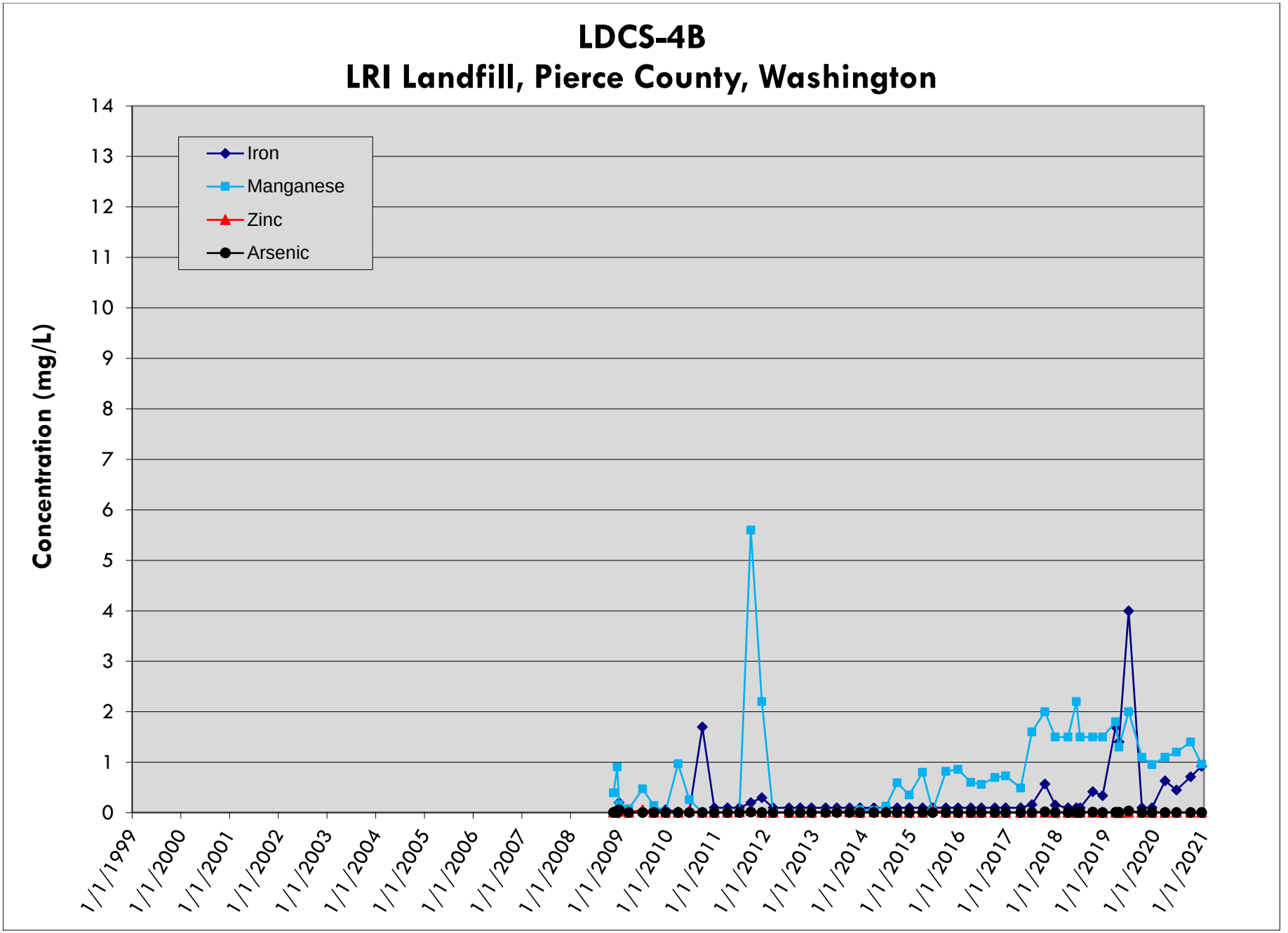
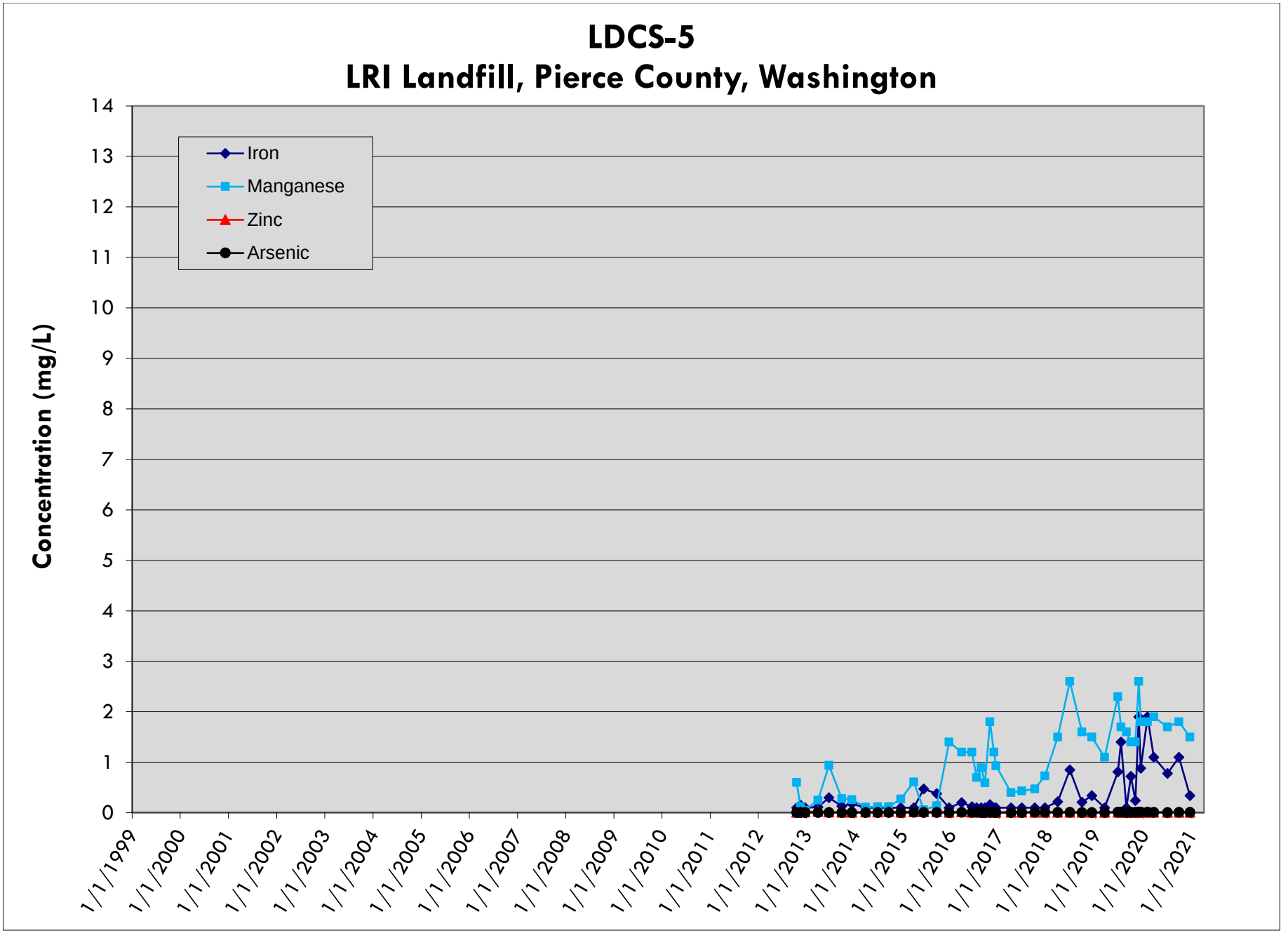
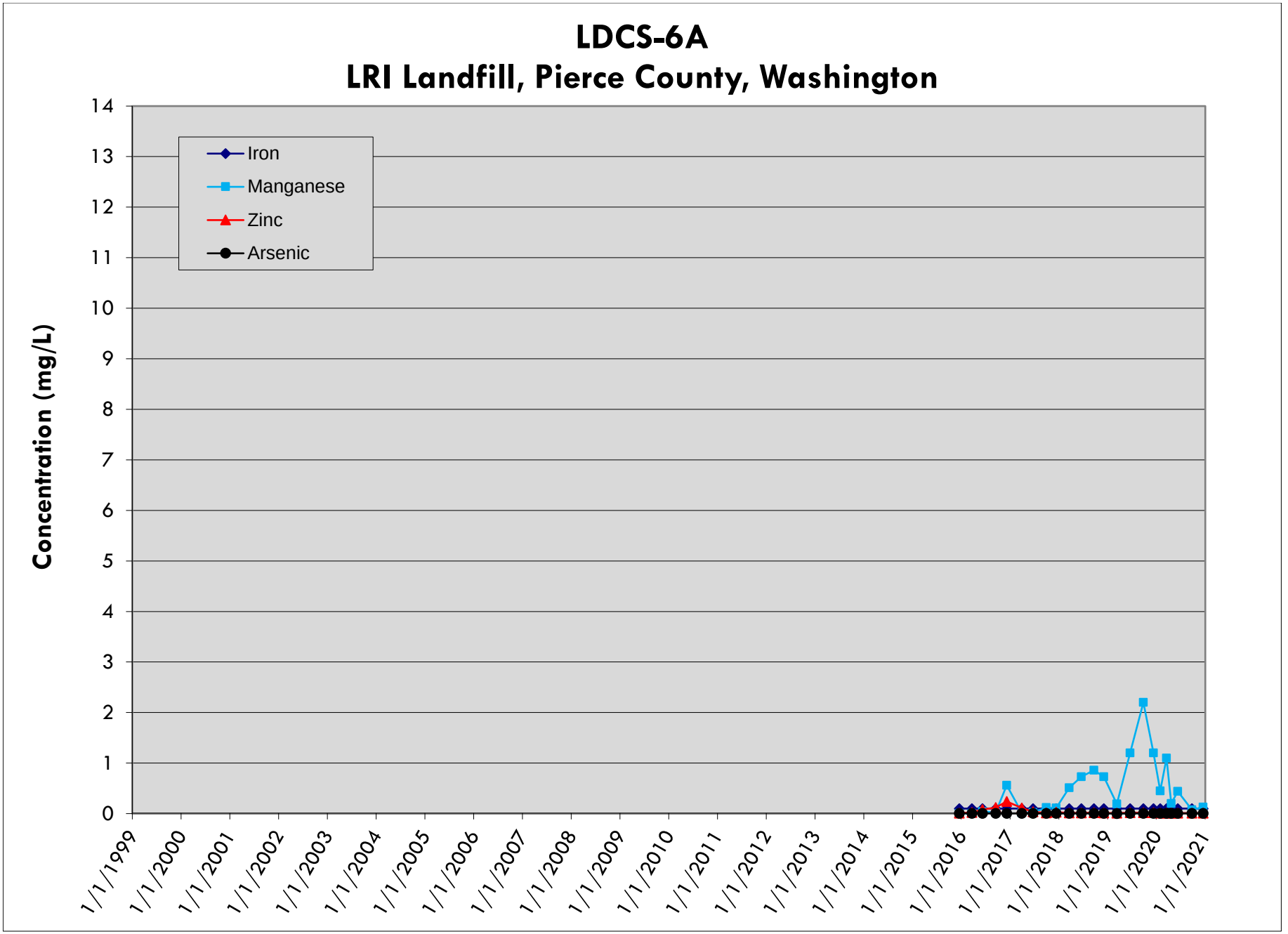
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021

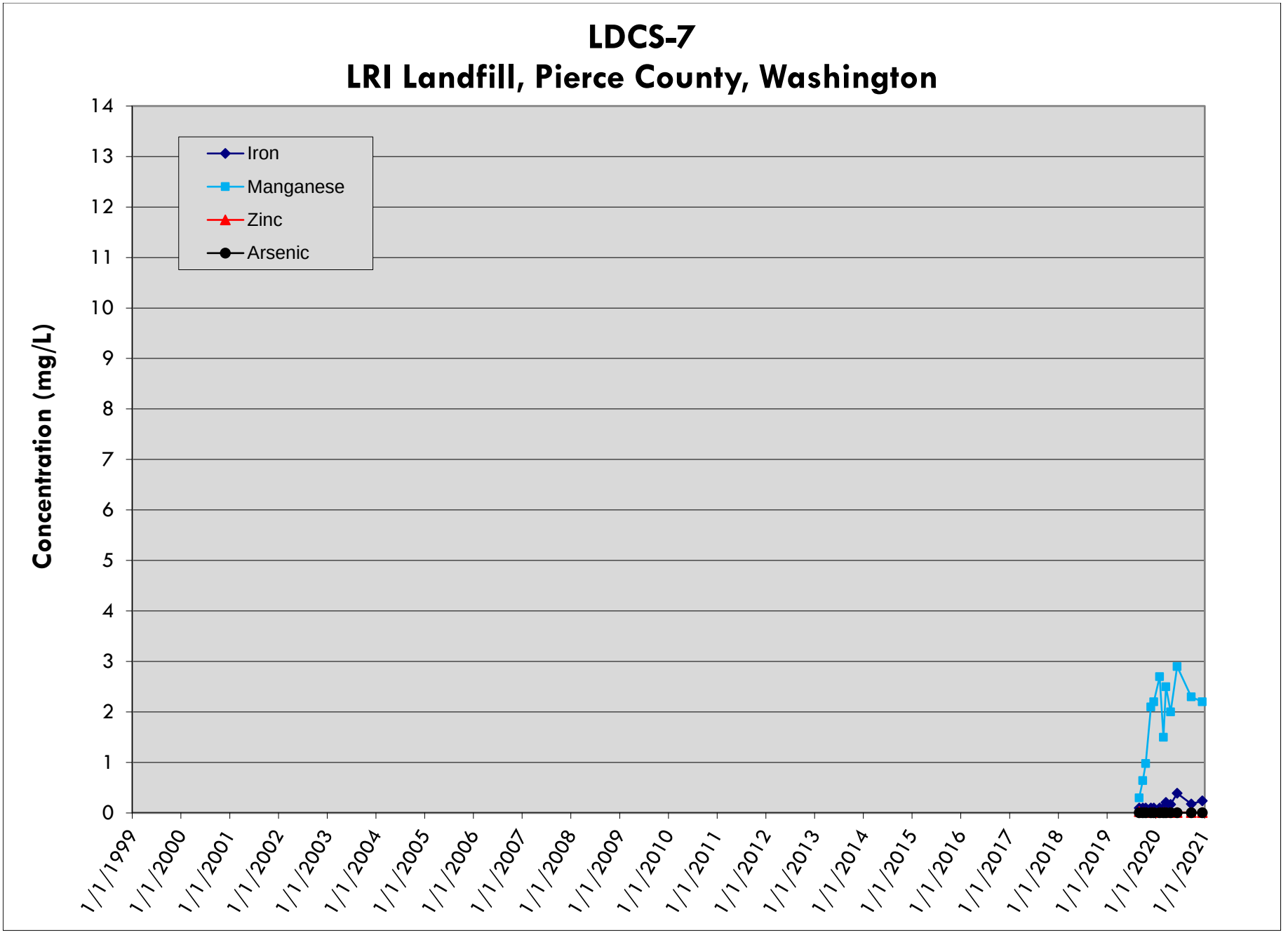

LDCS-3A
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021


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
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

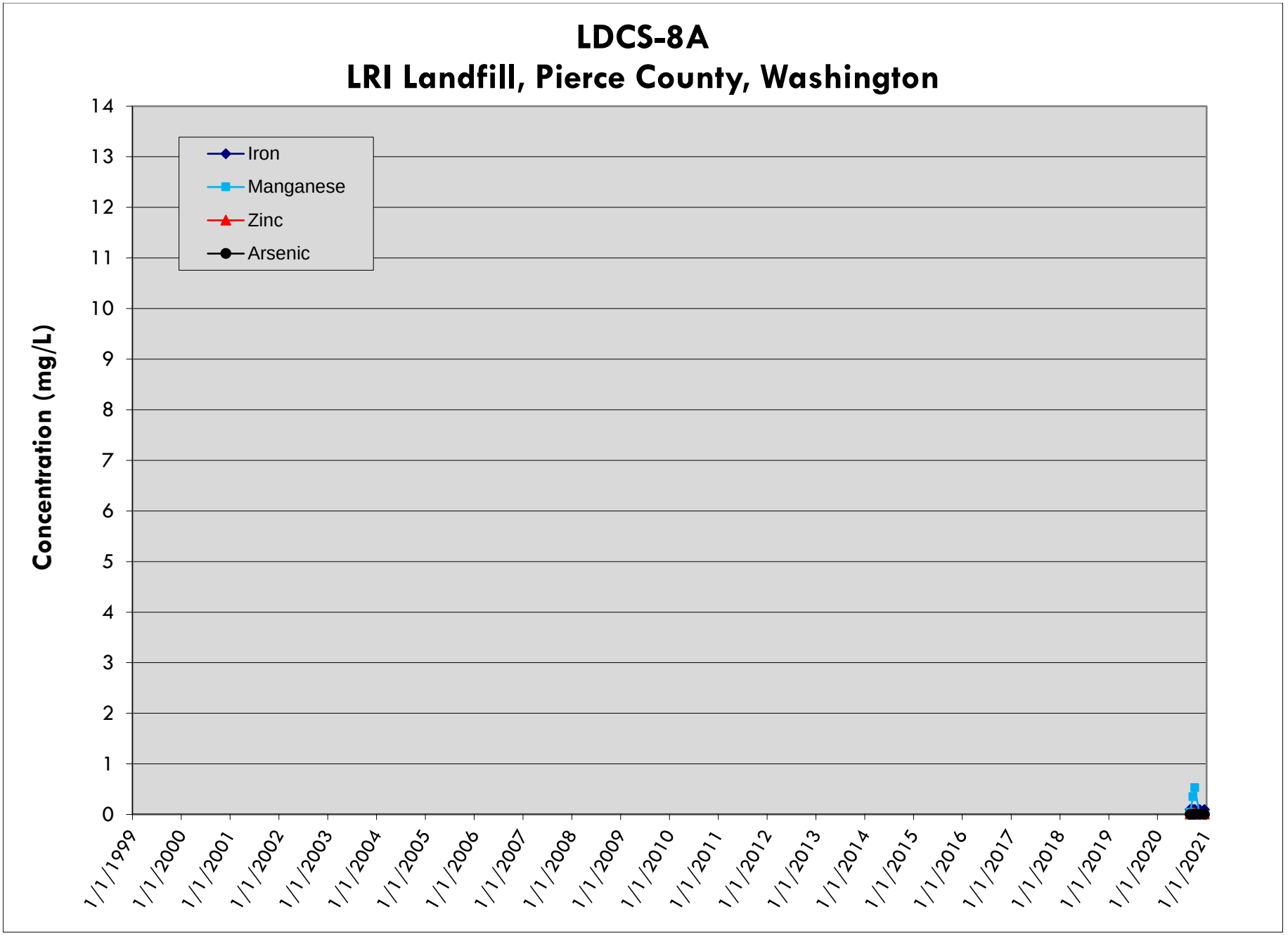

LDCS-4B
LRI Landfill, Pierce County, Washington
Concentration (mg/L)
Iron
Manganese
Zinc
Arsenic
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
1/1/1999
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
1/1/2020
1/1/2021


LDCS-5
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


LDCS-6A
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


LDCS-7
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
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

LDCS-8A
LRI Landfill, Pierce County, Washington



Summary of Leachate Volume and Depth Data
Fourth Quarter 2020
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.)
10/1/2020	-	10.7	30	9.5	0	10.3	11,283	12.3	12,629	16.0	21,086	17.9	11,570	14.1	40,334	19.1	0	13.1	-	-
10/2/2020	-	10.2	22	10.9	1,727	8.7	13,166	15.6	6,606	15.9	6,709	16.1	11,184	13.5	9,535	12.0	0	13.7	-	-
10/3/2020	-	10.6	5,283	8.2	5,406	10.0	15,668	12.7	9,651	16.4	18,530	16.8	10,334	13.7	15,536	14.4	0	14.3	-	-
10/4/2020	-	11.1	29	7.1	0	9.0	14,182	9.3	29,333	10.3	18,530	18.1	10,528	13.6	12,503	8.6	0	14.7	-	-
10/5/2020	-	10.2	18	8.2	106	8.1	11,019	11.2	15,250	12.2	18,530	15.8	10,204	13.6	10,259	8.6	0	10.6	-	-
10/6/2020	-	10.6	33	9.7	295	8.8	13,269	9.6	28,742	7.3	14,377	18.4	10,550	13.6	8,479	8.8	0	8.7	-	-
10/7/2020	-	11.1	26	10.7	1,815	8.8	14,394	10.4	22,255	5.6	19,169	16.5	10,762	13.5	9,725	9.0	5	9.7	-	-
10/8/2020	-	11.2	49	11.0	255	9.3	13,550	10.1	6,212	4.2	12,460	16.4	10,762	13.6	11,617	8.9	32	10.3	-	-
10/9/2020	-	10.7	9,325	7.5	1,037	9.1	14,592	10.0	20,405	7.9	12,460	18.1	10,728	13.6	9,366	9.0	40	10.9	-	-
10/10/2020	-	11.0	3	7.9	2,417	8.8	17,193	10.3	13,174	7.7	12,619	16.4	15,000	13.3	58,945	21.5	20,581	12.8	-	-
10/11/2020	-	10.1	3	9.5	3,979	8.6	21,292	10.4	12,140	7.5	12,619	16.4	13,786	13.3	43,524	11.9	13,241	15.0	-	-
10/12/2020	-	10.4	124	9.9	3,285	7.9	11,186	10.4	2,650	12.1	12,619	17.5	11,350	13.4	30,689	12.1	31,662	14.1	-	-
10/13/2020	-	9.4	4,034	7.8	3,957	8.4	11,667	24.6	1,554	15.1	14,856	18.5	14,418	13.3	41,800	25.7	23,899	17.2	-	-
10/14/2020	-	10.9	340	7.4	3,966	8.8	7,469	26.9	1,696	16.1	1,438	18.0	11,544	13.4	17,730	25.2	13,053	17.0	-	-
10/15/2020	-	10.5	403	8.7	3,799	10.4	11,545	28.6	994	17.4	16,773	16.1	8,810	14.9	13,700	22.1	20,808	16.4	-	-
10/16/2020	3,140	9.9	487	10.2	3,955	10.0	27,023	14.7	11,640	16.2	24,440	17.5	11,624	13.4	14,932	16.9	7,921	11.8	-	-
10/17/2020	3,170	11.1	3,315	10.9	3,952	9.2	14,510	9.8	20,402	11.4	9,265	16.1	10,584	13.5	13,531	8.8	1	13.5	-	-
10/18/2020	3,170	11.4	1,411	6.8	3,970	8.9	17,580	9.9	18,902	10.1	9,265	17.9	10,882	13.5	25,589	8.5	18,586	13.4	-	-
10/19/2020	3,170	10.5	199	7.8	3,970	8.5	13,004	10.9	20,322	10.8	9,265	15.1	10,512	13.5	15,171	8.6	1,982	9.0	-	-
10/20/2020	2,390	10.6	43	9.0	3,464	9.0	10,493	9.8	23,231	6.2	22,523	17.3	8,762	13.6	9,981	8.8	2	10.3	-	-
10/21/2020	-	10.0	0	9.0	0	8.0	15,306	10.0	26,465	4.0	2,396	18.0	8,762	14.0	0	8.3	2	10.7	-	-
10/22/2020	-	10.3	5,883	8.6	3,063	8.5	13,476	9.7	17,710	6.6	32,587	17.4	9,540	13.8	12,242	8.5	13	12.1	-	-
10/23/2020	-	11.0	706	7.4	3,972	8.6	12,951	10.1	16,980	5.4	7,668	16.5	10,624	13.5	12,440	8.7	1	13.6	-	-
10/24/2020	-	11.2	2,379	8.7	1,105	9.3	10,481	9.5	0	14.4	15,655	16.6	11,112	13.3	26,591	8.5	14,020	13.9	-	-
10/25/2020	-	10.4	474	9.6	3,510	9.4	12,054	9.7	0	17.1	15,655	16.0	9,278	13.5	13,850	8.1	7,837	8.8	-	-
10/26/2020	-	10.4	4,156	10.4	3,973	9.3	8,389	9.7	0	19.1	15,655	16.5	9,448	13.5	11,028	8.4	0	9.5	-	13.2
10/27/2020	-	10.6	592	6.5	3,972	8.1	13,079	9.5	15,819	17.6	0	16.2	8,016	13.5	8,799	8.1	3	10.4	-	12.8
10/28/2020	-	10.8	354	7.4	3,971	8.9	10,515	9.8	32,117	10.4	23,961	17.6	5,138	13.5	2,971	6.5	0	11.2	-	12.8
10/29/2020	-	10.9	505	8.6	3,187	9.1	11,776	9.5	28,880	8.5	20,186	19.0	0	13.4	0	5.1	0	12.0	-	13.3
10/30/2020	-	10.8	327	9.1	3,970	8.9	11,772	10.4	18,773	9.9	20,186	19.8	0	13.3	1	8.9	0	12.7	-	12.0
10/31/2020	-	10.9	309	10.0	3,971	9.1	9,418	9.5	12,076	12.1	20,186	16.2	0	13.5	0	0.0	0	13.5	-	13.2
11/1/2020	-	10.5	4,624	6.9	4,137	9.0	13,691	9.4	18,543	11.4	17,423	10.0	0	13.5	8,108	0.0	0	14.2	-	11.3
11/2/2020	-	10.9	1,542	6.1	3,970	9.0	9,885	10.1	30,021	3.9	0	11.9	0	13.4	8,108	10.7	0	14.5	-	11.9
11/3/2020	-	11.0	351	6.2	3,971	9.0	12,404	9.7	6,658	11.0	0	15.0	0	13.1	8,108	10.3	2,756	18.6	-	12.2
11/4/2020	-	10.8	366	7.1	3,969	8.8	9,351	9.7	10,499	18.8	8,060	18.3	0	13.2	8,108	8.5	46,189	22.5	-	26.8
11/5/2020	-	10.6	213	8.4	3,970	3.0	10,402	9.6	13,856	16.6	13,027	16.9	0	14.1	47,108	9.4	54,073	25.6	-	12.8
11/6/2020	-	10.8	17,786	9.7	3,971	7.5	13,231	11.8	10,542	18.5	17,049	18.4	15,664	14.3	28,899	12.9	21,541	31.0	-	13.6
11/7/2020	-	10.5	12,715	8.0	3,975	9.2	6,623	10.9	9,887	16.2	1,972	18.4	0	15.1	105,589	12.6	81,775	28.9	-	12.2
11/8/2020	-	10.3	4,169	6.9	3,975	10.0	11,667	14.9	1,359	17.4	11,413	19.8	0	15.5	9,767	11.4	0	28.0	-	12.6
11/9/2020	-	10.5	270	8.3	3,975	9.8	9,156	12.8	5,497	17.5	18,711	19.1	0	15.2	9,767	10.9	0	25.9	-	11.3
11/10/2020	-	10.8	-	9.0	3,970	9.1	11,096	12.8	8,062	16.1	12,980	18.2	51,590	15.2	9,767	9.8	29,359	23.1	-	11.1
11/11/2020	-	10.5	-	9.7	3,970	8.7	12,406	11.6	7,200	17.4	14,438	18.2	12,312	14.8	23,285	9.6	27,738	21.4	-	11.6
11/12/2020	-	9.6	-	9.1	3,973	8.9	8,720	9.7	14,248	16.3	3,733	17.5	11,006	15.4	32,663	9.0	42,359	13.2	2,884	10.9
11/13/2020	-	11.0	-	0.3	151	0.3	1,927	17.7	13,141	13.1	25,952	17.3	15,132	14.4	11,917	8.5	32,696	8.5	2,834	10.9
11/14/2020	-	11.0	-	0.0	151	0.0	1,927	18.0	24,737	10.5	8,624	14.1	12,881	15.2	36,015	8.5	0	8.5	5,808	10.8
11/15/2020	-	11.0	-	0.0	151	0.0	1,927	18.0	29,264	6.3	0	16.7	12,881	14.8	36,015	7.9	0	8.5	15,099	10.7
11/16/2020	-	11.0	-	0.0	151	0.0	1,927	18.0	18,062	2.3	10,219	18.5	12,882	14.5	36,015	8.4	0	8.5	15,105	10.7
11/17/2020	-	10.8	-	3.8	2,620	5.6	6,864	12.8	7,812	9.4	31,356	14.4	14,752	14.2	18,044	8.7	0	18.3	6,686	10.8
11/18/2020	-	10.3	-	6.8	3,973	9.6	11,229	10.9	15,789	11.0	656	13.0	13,900	14.8	25,930	9.2	25,514	19.7	6,882	10.7
11/19/2020	-	11.0	-	7.0	2,103	9.0	11,230	9.1	12,700	10.0	0	15.7	14,440	16.1	43,698	11.3	39,271	14.0	2,688	10.4
11/20/2020	-	11.0	-	7.0	2,103	8.0	8,850	9.0	17,504	9.0	0	16.0	16,804	17.0	50,552	10.4	27,516	12.9	2,688	10.0
11/21/2020	-	11.0	-	7.0	2,103	8.0	9,853	9.0	13,615	9.0	0	16.0	11,058	17.0	25,269	10.4	0	12.9	2,688	10.0
11/22/2020	-	11.0	-	7.0	2,103	8.0	9,853	9.0	13,615	9.0	0	16.0	11,058	17.0	25,269	10.4	0	12.9	2,688	10.0
11/23/2020	-	11.0	-	7.0	2,103	8.0	9,852	9.0	13,615	9.0	47,677	16.0	11,058	17.0	25,269	10.4	25,631	12.9	2,688	10.0
11/24/2020	-	11.5	-	8.0	2,400	9.4	8,682	10.4	11,680	4.7	0	15.5	14,076	16.5	33,684	9.6	3,201	12.4	2,736	10.5
11/25/2020	-	11.3	-	9.0	2,442	10.7	9,500	11.3	10,152	1.6	0	16.5	14,632	16.6	33,158	8.4	23,954	10.5	5,568	10.5
11/26/2020	-	11.0	-	9.0	2,442	11.0	9,436	11.0	8	3.0	0	18.0	12,076	17.0	39,510	8.0	1,855	9.4	5,568	10.1
11/27/2020	-	11.0	-	9.0	2,442	11.0	4,598	11.0	11,464	3.0	25,476	18.0	10,766	17.0	14,125	8.0	0	9.4	5,568	10.1
11/28/2020	-	11.0	-	9.0	2,442	11.0	9,617	11.0	11,464	3.0	0	18.0	11,875	17.0	13,773	8.0	0	9.4	5,568	10.1
11/29/2020	-	11.0	-	9.0	2,442	11.0	9,617	11.0	11,464	3.0	0	18.0	11,875	17.0	13,773	8.0	0	9.4	5,568	10.1
11/30/2020	-	11.0	-	9.0	3,971	10.3	9,616	10.1	11,464	10.4	21,053	17.4	11,875	16.3	13,773	8.0	23,377	11.7	5,738	10.4

Summary of Leachate Volume and Depth Data
Fourth Quarter 2020
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.)
12/1/2020	-	10.8	-	9.9	3,973	8.8	8,843	9.4	18,590	14.7	0	18.4	11,784	14.9	42,077	8.5	21,977	9.2	3,484	10.9
12/2/2020	-	10.7	-	6.6	3,973	8.6	9,244	9.7	9,551	12.6	26,960	17.1	11,406	14.9	11,996	11.9	0	11.2	3,104	10.9
12/3/2020	459	10.8	-	6.1	3,972	9.0	8,727	9.6	16,679	10.8	22,558	10.9	11,050	14.7	12,765	20.2	0	13.1	6,048	10.6
12/4/2020	3,893	10.6	-	7.6	3,972	9.3	6,404	10.3	16,080	11.4	0	11.4	10,862	15.4	31,143	26.3	3	13.4	2,935	10.6
12/5/2020	3,306	10.7	27,158	9.6	3,972	8.8	11,526	10.0	16,712	9.3	0	14.3	8,982	14.7	10,553	7.3	0	9.7	2,808	10.6
12/6/2020	1	11.2	20,472	9.3	3,971	9.0	8,721	9.5	25,248	1.9	0	17.0	8,982	15.4	10,553	8.8	0	12.7	5,787	10.9
12/7/2020	0	12.0	4,385	11.0	3,965	9.2	8,505	9.8	4,084	8.2	10,212	18.5	8,982	15.4	10,553	8.4	0	13.7	2,945	10.5
12/8/2020	2	12.1	3,920	8.2	3,971	8.6	7,510	10.0	5,900	15.7	30,444	14.1	8,982	13.2	10,553	8.8	4,076	13.8	26,414	10.7
12/9/2020	0	12.0	60	7.0	3,974	9.5	5,530	10.4	3,241	16.2	2,851	12.0	13,576	14.8	0	12.5	3,516	23.9	31,757	12.4
12/10/2020	54	12.9	406	8.9	3,976	10.7	8,958	13.8	8,427	16.0	0	15.1	22,526	14.9	22,219	12.6	20,697	23.7	3,035	10.9
12/11/2020	-	13.0	811	9.8	3,974	11.0	8,067	13.9	14,253	14.0	0	18.0	14,106	14.7	10,399	38.0	8,570	20.0	2,824	10.6
12/12/2020	-	13.0	857	10.7	3,972	10.9	9,078	14.0	4,037	15.4	13,328	18.5	14,630	14.9	25,711	56.9	24,739	13.9	0	11.5
12/13/2020	-	13.0	4,902	8.3	3,971	10.6	9,685	14.5	5,804	16.1	10,453	18.5	0	14.7	31,552	53.2	0	10.1	3,891	11.0
12/14/2020	-	13.0	792	7.3	3,974	10.0	11,499	12.6	8,480	14.1	15,349	18.2	41,426	14.9	38,026	52.3	71,186	12.3	4,398	11.1
12/15/2020	-	13.0	0	9.0	3,972	9.1	7,995	10.1	18,289	12.7	0	18.1	11,626	14.8	35,619	43.4	0	13.4	3,128	11.1
12/16/2020	-	13.4	925	10.2	3,971	9.0	10,195	10.7	7,028	15.8	19,591	18.4	16,924	13.9	40,261	40.0	21,718	11.1	9,320	11.3
12/17/2020	-	13.0	854	10.0	3,971	10.3	7,812	10.9	17,140	13.1	3,302	17.2	17,886	14.6	46,453	35.6	17,408	14.1	8,167	11.2
12/18/2020	-	13.4	5,176	9.2	3,971	9.3	11,155	9.6	6,643	13.3	14,044	18.5	15,304	14.4	45,796	19.2	23,979	10.4	6,835	10.2
12/19/2020	-	13.5	0	6.4	3,971	9.4	4,192	10.0	20,009	11.1	668	18.1	17,437	14.9	31,180	27.5	0	13.5	14,310	11.0
12/20/2020	-	13.9	0	7.4	3,970	9.5	7,905	12.8	4,566	14.9	14,936	18.5	17,437	14.7	30,482	27.4	0	14.9	15,675	13.1
12/21/2020	-	14.0	0	9.3	3,970	10.9	11,312	12.5	1,809	18.3	8,386	18.7	17,437	16.5	15,697	17.5	61,621	16.7	33,799	12.1
12/22/2020	-	13.4	0	9.5	3,972	8.9	9,704	9.6	15,142	14.2	15,473	18.1	23,754	14.5	36,248	9.7	24,587	19.8	10,034	10.8
12/23/2020	-	14.0	1	8.3	3,973	9.0	4,288	9.8	21,316	12.5	5,416	16.6	26,178	15.3	16,596	9.0	71,353	18.5	3,355	10.4
12/24/2020	-	14.0	241	7.5	3,973	9.3	8,457	9.8	31,092	7.5	0	18.5	11,235	14.9	18,570	8.9	0	10.1	0	12.1
12/25/2020	-	14.3	0	8.8	3,972	10.2	9,455	9.9	8,675	8.4	22,975	16.8	11,235	14.5	17,656	9.7	0	13.4	0	14.4
12/26/2020	-	14.0	0	9.2	3,971	10.0	10,169	10.5	17,926	8.5	0	17.5	11,235	14.7	41,390	10.2	0	13.9	0	17.3
12/27/2020	-	14.0	2	10.7	3,971	9.0	5,210	9.9	15,986	2.0	20,271	18.0	11,235	14.3	26,695	8.7	0	11.3	0	19.5
12/28/2020	-	14.0	0	7.4	3,972	9.0	8,704	9.4	11,025	5.0	26,284	11.8	11,234	14.9	14,249	9.0	46,702	12.4	0	21.4
12/29/2020	-	14.1	0	7.5	3,973	9.0	8,559	9.7	6,604	3.7	0	11.0	0	15.3	21,881	8.7	23,654	10.6	0	22.6
12/30/2020	-	15.0	0	9.2	3,971	9.4	8,780	10.0	18,706	9.0	0	13.9	28,704	12.9	63,337	11.8	6,893	17.1	47,139	20.4
12/31/2020	-	15.0	724	9.3	3,971	8.7	4,378	9.9	17,216	7.5	1	16.8	22,050	14.6	42,082	14.2	45,452	18.4	6,003	10.9

- = No data collected
* = Flowmeter at Cell 1 was not functioning during fourth quarter
Pump and flowmeter installed at Cell 8A in November 2020
New flowmeter installed at Cell 2A on December 5, 2020

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: 01/01/2020 - 01/31/2020 **Outfall:** UNK - 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	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1	C7-2	C7-2	C7-3	C7-3	C7-4	C7-4
1-W	**1/1/20**	6.8	M						
1-Th	**1/2/20**	4.6	M						
1-F	**1/3/20**	1.0	M						
1-Sa	**1/4/20**	5.9	M						
2-Su	**1/5/20**	4.2	M						
2-M	**1/6/20**	5.6	M						
2-T	**1/7/20**	7.8	M						
2-W	**1/8/20**	5.1	M	C	M	C	M	15	M
2-Th	**1/9/20**	4.6	M						
2-F	**1/10/20**	3.8	M						
2-Sa	**1/11/20**	3.0	M						
3-Su	**1/12/20**	2.3	M						
3-M	**1/13/20**	4.5	M						
3-T	**1/14/20**	5.1	M						
3-W	**1/15/20**	4.5	M						
3-Th	**1/16/20**	2.1	M	C	M	C	M	6.9	M
3-F	**1/17/20**	2.4	M						
3-Sa	**1/18/20**	3.0	M						
4-Su	**1/19/20**	1.8	M						
4-M	**1/20/20**	1.3	M						
4-T	**1/21/20**	2.0	M						
4-W	**1/22/20**	7.3	M						
4-Th	**1/23/20**	4.9	M						
4-F	**1/24/20**	3.1	M	C	M	C	M	18	M
4-Sa	**1/25/20**	3.3	M						
5-Su	**1/26/20**	5.4	M						
5-M	**1/27/20**	4.2	M						
5-T	**1/28/20**	3.6	M						
5-W	**1/29/20**	2.0	M						
5-Th	**1/30/20**	3.3	M	C	M	C	M	7	M
5-F	**1/31/20**	6.8	M						
Minimum			M		M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		7.8	M	C	M	C	M	18	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Outfall: UNK - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters			Construction stormwater treatment using Chitosan Enhanced Sand Filtration (CESF). The averaged turbidity value is reported for each day that a discharge occurred.
C7-2	All Parameters			Anticipated construction activity within the area that drains to C7-2 did not occur during the most recent phase of construction (in 2019).

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
C7-2		Other
C7-3		Other
C7-4		Check Dams
C7-4		Other
C7-4		Silt Fence

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

George Duvendack
Signature

2/13/2020 6:36:32 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: 02/01/2020 - 02/29/2020 **Outfall:** UNK - 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	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1	C7-2	C7-2	C7-3	C7-3	C7-4	C7-4
1-Sa	**2/1/20**	7.1	M						
2-Su	**2/2/20**	8.7	M						
2-M	**2/3/20**	1.7	M						
2-T	**2/4/20**	3.8	M						
2-W	**2/5/20**	3.1	M						
2-Th	**2/6/20**	2.5	M						
2-F	**2/7/20**	3.2	M	C	M	C	M	11	M
2-Sa	**2/8/20**	7.4	M						
3-Su	**2/9/20**	1.3	M						
3-M	**2/10/20**	1.5	M						
3-T	**2/11/20**	0.2	M						
3-W	**2/12/20**	0.8	M						
3-Th	**2/13/20**	0.7	M	C	M	C	M	9	M
3-F	**2/14/20**	0.2	M						
3-Sa	**2/15/20**	0.1	M						
4-Su	**2/16/20**	0.2	M						
4-M	**2/17/20**	0.4	M						
4-T	**2/18/20**	1.2	M						
4-W	**2/19/20**	0.8	M						
4-Th	**2/20/20**	2.9	M	C	M	C	M	6	M
4-F	**2/21/20**	0.4	M						
4-Sa	**2/22/20**	0.1	M						
5-Su	**2/23/20**	0.1	M						
5-M	**2/24/20**	0.7	M						
5-T	**2/25/20**	1.2	M						
5-W	**2/26/20**		M						
5-Th	**2/27/20**	3.0	M						
5-F	**2/28/20**	4.5	M	C	M	C	M	5	M
5-Sa	**2/29/20**	7.7	M						
Minimum			M		M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		8.7	M	C	M	C	M	11	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Outfall: UNK - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters			Construction stormwater treatment using Chitosan Enhanced Sand Filtration (CESF). The averaged turbidity value is reported for each day that a discharge occurred. On February 7, 2020 untreated stormwater was discharged with a turbidity of 19 NTU.
C7-2	All Parameters			Anticipated construction activity within the area that drains to C7-2 did not occur during the most recent phase of construction (in 2019).

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
C7-2		Other
C7-3		Other
C7-4		Check Dams
C7-4		Other
C7-4		Silt Fence

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

George Duvendack
Signature

3/13/2020 3:16:47 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: 03/01/2020 - 03/31/2020 **Outfall:** UNK - 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	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1	C7-2	C7-2	C7-3	C7-3	C7-4	C7-4
1-Su	**3/1/20**	9.1	M						
1-M	**3/2/20**	5.3	M						
1-T	**3/3/20**	14.9	M						
1-W	**3/4/20**	13.3	M						
1-Th	**3/5/20**	3.3	M						
1-F	**3/6/20**	6.7	M	C	M	C	M	16	M
2-Su	**3/8/20**	0.1	M						
2-M	**3/9/20**	0.1	M						
2-F	**3/13/20**	17	M	C	M	C	M	10	M
3-W	**3/18/20**	16	M	C	M	C	M	7	M
4-W	**3/25/20**	10	M	C	M	C	M	11	M
5-M	**3/30/20**	22	M	C	M	C	M	7	M
Minimum			M		M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		22	M	C	M	C	M	16	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Outfall: UNK - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters			Construction stormwater treatment using Chitosan Enhanced Sand Filtration (CESF) occurred from 3/1 through 3/9. 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
C7-2		Other
C7-3		Other
C7-4		Check Dams
C7-4		Other
C7-4		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

4/15/2020 2:01:28 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: 04/01/2020 - 04/30/2020 **Outfall:** UNK - 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	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1	C7-2	C7-2	C7-3	C7-3	C7-4	C7-4
1-F	**4/3/20**	19	M	C	M	C	M	12	M
2-M	**4/6/20**	15	M	C	M	C	M	4	M
3-M	**4/13/20**	23	M	C	M	C	M	10	M
4-M	**4/20/20**	13	M	C	M	C	M	11	M
5-M	**4/27/20**	8	M	C	M	C	M	5	M
Minimum			M		M		M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		23	M	C	M	C	M	12	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Outfall: UNK - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters			Construction stormwater treatment using Chitosan Enhanced Sand Filtration (CESF) was not utilized during the month of April 2020.

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
C7-1		Other
C7-1		Sediment Trap
C7-1		Silt Fence
C7-2		Other
C7-3		Other
C7-4		Check Dams
C7-4		Other
C7-4		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**

5/13/2020 2:50:32 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: 05/01/2020 - 05/31/2020 **Outfall:** UNK - South Creek **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C7-1	C7-1
2-T	**5/5/20**	18	M
3-T	**5/12/20**	16	M
4-T	**5/19/20**	20	M
5-M	**5/25/20**	12	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		20	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Outfall: UNK - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C7-1	All Parameters			Construction stormwater treatment using Chitosan Enhanced Sand Filtration (CESF) was not utilized during the month of May 2020.

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
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**

6/9/2020 12:43:01 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: 06/01/2020 - 06/30/2020 **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	**6/3/20**	12	M
2-M	**6/8/20**	16	M
3-M	**6/15/20**	14	M
4-Su	**6/21/20**	12	M
4-Sa	**6/27/20**	11	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		16	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) was not utilized during the month of June 2020.

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
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**

7/13/2020 5:50:40 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: 07/01/2020 - 07/31/2020 **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 July

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		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

8/11/2020 10:36:50 AM

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: 08/01/2020 - 08/31/2020 **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 August.

BMPs

Monitoring Point	Week	BMP
C7-1		Check Dams
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**

9/8/2020 5:18:20 PM — **Date**

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

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

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

Monitoring Period: 09/01/2020 - 09/30/2020 **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-T	**9/1/20**	C	C
2-Su	**9/6/20**	C	C
3-Su	**9/13/20**	C	C
4-W	**9/23/20**	6.3	M
4-Th	**9/24/20**	4.6	M
4-F	**9/25/20**	3.2	M
4-Sa	**9/26/20**	6.9	M
5-Su	**9/27/20**	12.2	M
5-M	**9/28/20**	20.7	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		20.7	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)occurred for 6 days between September 23 and September 28. The averaged turbidity value is reported for each day that a discharge occurred. Turbidity results on September 27 and 28 were affected by automated backwash cycles. The system operator will make system modifications to preemptively close automated discharge valves prior to backwash cycles.

BMPs

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

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George Duvendack — **Signature**

10/15/2020 5:28:10 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: 10/01/2020 - 10/31/2020 **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	**10/1/20**	C	C
2-Su	**10/4/20**	C	C
3-T	**10/13/20**	17.4	M
4-Su	**10/18/20**	C	C
5-T	**10/27/20**	4.6	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		17.4	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) occurred on 2 days in October; October 13 and October 27. The averaged turbidity value is reported for each day that a discharge occurred. On October 13, the treatment system operated for less than an hour and included back-flushing the sand filters. During this time, the auto-activated valves diverted stormwater to the settling basin based on turbidity measurements, consistent with Ecology's General Use Designation for CESF systems when deployed on construction stormwater sites. However, the recorded turbidity result on October 13 of 17.4 NTU was affected by automated backwash cycles. The system operator has subsequently made system modifications to preemptively close automated discharge valves prior to backwash cycles.

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**

11/13/2020 3:54:54 PM — **Date**

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

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

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

Monitoring Period: 11/01/2020 - 11/30/2020 **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-T	**11/3/20**	7.5	M
1-W	**11/4/20**	8.6	M
1-Th	**11/5/20**	9.1	M
1-F	**11/6/20**	7.5	M
1-Sa	**11/7/20**	6.2	M
2-Su	**11/8/20**	5.0	M
2-T	**11/10/20**	4.8	M
2-W	**11/11/20**	6.2	M
2-Th	**11/12/20**	3.4	M
3-Su	**11/15/20**	1.8	M
3-M	**11/16/20**	4.0	M
3-T	**11/17/20**	1.6	M
3-W	**11/18/20**	4.2	M
3-Th	**11/19/20**	1.9	M
3-F	**11/20/20**	2.5	M
3-Sa	**11/21/20**	3.0	M
4-Su	**11/22/20**	4.7	M
4-M	**11/23/20**	8.8	M
4-T	**11/24/20**	4.5	M
4-W	**11/25/20**	5.1	M
4-Th	**11/26/20**	5.1	M
4-F	**11/27/20**	7.5	M
4-Sa	**11/28/20**	7.8	M
5-M	**11/30/20**	5.8	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		9.1	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) occurred on 24 days in November. 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**

12/14/2020 6:21:48 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: 12/01/2020 - 12/31/2020 **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-T	**12/1/20**	9.2	M
1-W	**12/2/20**	9.3	M
1-F	**12/4/20**	6.5	M
2-Su	**12/6/20**	9.4	M
2-M	**12/7/20**	10.0	M
2-T	**12/8/20**	0.8	M
2-W	**12/9/20**	0.8	M
2-Th	**12/10/20**	2.1	M
2-F	**12/11/20**	2.7	M
3-Su	**12/13/20**	1.4	M
3-M	**12/14/20**	1.4	M
3-T	**12/15/20**	2.2	M
3-W	**12/16/20**	3.8	M
3-Th	**12/17/20**	3.7	M
3-F	**12/18/20**	3.2	M
3-Sa	**12/19/20**	1.7	M
4-Su	**12/20/20**	1.1	M
4-M	**12/21/20**	1.0	M
4-T	**12/22/20**	2.2	M
4-W	**12/23/20**	7.1	M
4-Th	**12/24/20**	5.7	M
4-F	**12/25/20**	7.8	M
4-Sa	**12/26/20**	5.6	M
5-Su	**12/27/20**	5.5	M
5-M	**12/28/20**	5.8	M
5-T	**12/29/20**	4.1	M
5-W	**12/30/20**	3.5	M
5-Th	**12/31/20**	1.3	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		10	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

1/15/2021 10:00:36 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: 01/01/2020 - 03/31/2020 **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
3-Th	**1/16/20**	6.9	7.01	No	6.9	15	B|2.0	6.8	1.2	B|4.8	B|48	B|9.8
Minimum			7.01									
			BM: >= 5.0 (RO)									
Average		6.9			6.9	15						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			7.01									
			BM: <= 9.0 (RO)									
Month 1 Average							B|2	6.8	1.2	B|4.8	B|48	B|9.8
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							B|2	6.8	1.2	B|4.8	B|48	B|9.8
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							B|2	6.8	1.2	B|4.8	B|48	B|9.8
							<= 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

5/12/2020 9:37:31 AM
Date

Week	Monitoring Point	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	pH Standard Units Quarterly Grab
		SWPO	SWPO	SWPO
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
3-Th	**1/16/20**	B|3.9	15	7.01
Minimum				7.01
				>= 6.0 (RO)
Average				
Maximum				7.01
				<= 9.0 (RO)
Month 1 Average		B|3.9	15	
		<= 15	<= 110	
Month 2 Average		B|3.9	15	
		<= 15	<= 110	
Month 3 Average		B|3.9	15	
		<= 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: 04/01/2020 - 06/30/2020 **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-M	**4/6/20**	7.8	6.90	No	5.5	15	3.1	5.2	0.84	B|4.9	B|49	B|9.6
Minimum			6.9									
			BM: >= 5.0 (RO)									
Average		7.8			5.5	15						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			6.9									
			BM: <= 9.0 (RO)									
Month 1 Average							3.1	5.2	0.84	B|4.9	B|49	B|9.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							3.1	5.2	0.84	B|4.9	B|49	B|9.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							3.1	5.2	0.84	B|4.9	B|49	B|9.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14

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

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George Duvendack
Signature

8/11/2020 10:40:21 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-M	**4/6/20**	B|3.9	15	6.90
Minimum				6.9
				>= 6.0 (RO)
Average				
Maximum				6.9
				<= 9.0 (RO)
Month 1 Average		B|3.9	15	
		<= 15	<= 110	
Month 2 Average		B|3.9	15	
		<= 15	<= 110	
Month 3 Average		B|3.9	15	
		<= 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: 07/01/2020 - 09/30/2020 **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
14-M	**9/28/20**	23	6.9	No	12	32	5.2	36	B|0.5	B|7.2	B|500	B|1.8
Minimum			6.9									
			BM: >= 5.0 (RO)									
Average		23			12	32						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			6.9									
			BM: <= 9.0 (RO)									
Month 1 Average							C	C	C	C	C	C
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							C	C	C	C	C	C
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							5.2	36	B|0.5	B|7.2	B|500	B|1.8
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14

Reporting Codes Used: B - Below Detection Limit/No Detection, C - No Discharge

Overall DMR Notes/Comment

Alpha terpineol, benzoic acid, and phenol were analyzed by Method 8270 due to a lower than normal volume of sample collected. The resulting method detection limit for benzoic acid was above the non-hazardous landfill effluent limit. The lab prepared the sample, including p-cresol, through Method 3510C 10 days after the sample was collected, which exceeded the recommended 7-day holding time. The delay arose because the lab shipped the sample from the initial laboratory to an affiliated laboratory for analysis.

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George Duvendack — **Signature**

11/13/2020 3:53:56 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
14-M	**9/28/20**	B|2.0	32	6.9
Minimum				6.9
				>= 6.0 (RO)
Average				
Maximum				6.9
				<= 9.0 (RO)
Month 1 Average		C	C	
		<= 15	<= 110	
Month 2 Average		C	C	
		<= 15	<= 110	
Month 3 Average		B|2.0	32	
		<= 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: 10/01/2020 - 12/31/2020 **Outfall:** SWPO - Discharge from SW pond **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Weasured 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
3-M	**10/12/20**	15	6.9	B|No	5.9	9.9	3.5	22	B|0.5	B|10	B|62	B|10
Minimum			6.9									
			BM: >= 5.0 (RO)									
Average		15			5.9	9.9						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			6.9									
			BM: <= 9.0 (RO)									
Month 1 Average							3.5	22	B|0.5	B|10	B|62	B|10
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							3.5	22	B|0.5	B|10	B|62	B|10
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							3.5	22	B|0.5	B|10	B|62	B|10
							<= 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

2/12/2021 8:21:51 AM
Date

Week	Monitoring Point	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	pH Standard Units Quarterly Grab
		SWPO	SWPO	SWPO
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
3-M	**10/12/20**	B|10	9.9	6.9
Minimum				6.9
				>= 6.0 (RO)
Average				
Maximum				6.9
				<= 9.0 (RO)
Month 1 Average		B|10	9.9	
		<= 15	<= 110	
Month 2 Average		B|10	9.9	
		<= 15	<= 110	
Month 3 Average		B|10	9.9	
		<= 15	<= 110	

Appendix H

Landfill Gas Monitoring Data

Table H-1. 2020 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[1]	GP-11	GP-12	GP-13	GP-14	GP-15	GP-16
January, 2020	5.0	17.7	0.0	0.0	0.0	0.0	21.2	0.0	19.1	0.6	0.0	0.0	0.0
Febuary, 2020	1.5	16.6	0.1	0.1	0.1	0.1	21.5	0.0	0.1	0.8	0.1	0.1	0.1
March, 2020	0.7	15.3	0.0	0.0	0.0	0.9	18.8	0.0	0.1	0.8	0.0	0.0	0.0
April, 2020	0.8	14.8	0.0	0.0	0.0	5.2	8.0	0.1	12.8	1.4	0.0	0.0	0.0
May, 2020	2.8	16.4	0.0	0.0	0.0	2.0	21.3	0.0	29.6	1.2	0.0	0.0	0.0
June, 2020	2.0	16.2	0.0	0.0	0.0	8.3	25.9	0.0	31.7	0.9	0.0	0.0	0.0
July, 2020	2.5	6.0	0.0	0.0	0.0	0.1	-	0.0	28.9	0.0	0.0	0.0	0.0
August, 2020	5.3	0.1	0.0	0.0	0.0	1.0	-	0.0	25.3	0.5	0.0	0.0	0.1
September, 2020	10.0	0.3	0.0	0.0	0.0	1.5	-	0.0	25.7	0.7	0.1	0.0	0.0
October, 2020	7.5	2.2	0.0	0.0	0.0	3.0	16.7	0.0	23.8	0.7	0.0	0.0	0.0
November, 2020	7.4	2.9	0.0	0.0	0.0	34.6	15.7	0.0	23.6	0.6	0.0	0.0	0.0
December, 2020	3.5	2.7	0.0	0.0	0.0	2.5	20.7	0.0	22.7	0.3	0.0	0.0	0.0

Notes:

All locations measured by SCS Engineeres.

(-) indicates no measurement taken.

[1]=GP-10P quick connection was broken during July, August and September monitoring events.

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

January-20

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	1/23/2020	7:46	0.1	7.2	5.0	3.5	10.1	81.4	16.3	9.3	100.0	
GP-2	1/23/2020	7:54	0.2	18.7	17.7	19.5	0.1	62.7	15.8	8.8	100.0	
GP-3	1/23/2020	7:59	0.2	--	0.0	9.5	9.5	81.0	11.5	7.5	100.0	
GP-4	1/23/2020	8:10	-2.4	--	0.0	0.3	20.1	79.6	8.9	4.9	98.4	
GP-9	1/23/2020	8:18	0.2	--	0.0	9.5	3.9	86.6	11.1	0.0	0.0	
GP-10	1/23/2020	7:37	0.3	--	0.0	15.7	6.1	78.2				
GP-10P	1/23/2020	7:34	0.2	21.8	21.2	34.0	0.2	44.6				
GP-11	1/23/2020	7:27	0.4	--	0.0	9.0	13.2	77.8				
GP-12	1/23/2020	7:17	0.0	27.2	19.1	48.9	4.5	27.5				
GP-13	1/23/2020	7:12	0.1	1.1	0.6	17.4	7.3	74.7				
GP-14	1/23/2020	8:43	0.2	--	0.0	0.1	21.1	78.8	10.7	0.0	0.0	
GP-15	1/23/2020	8:35	0.2	--	0.0	0.1	21.2	78.7	8.6	0.0	0.0	
GP-16	1/23/2020	8:26	0.2	--	0.0	0.7	20.4	78.9	19.6	12.6	84.2	

	Beginning	Ending	Average
Weather:	Raining	Raining	Raining
Temperature, T (deg F):	53	51	52
Wind Speed (mph):	12	6	9
Wind Direction:	165	180	172.5
Barometric Pressure, P (in Hg):	29.45	29.50	29.48
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	1/23/2020
Starting Time:	7:12
Finishing Date:	1/23/2020
Finishing Time:	8:43
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	1/23/2020

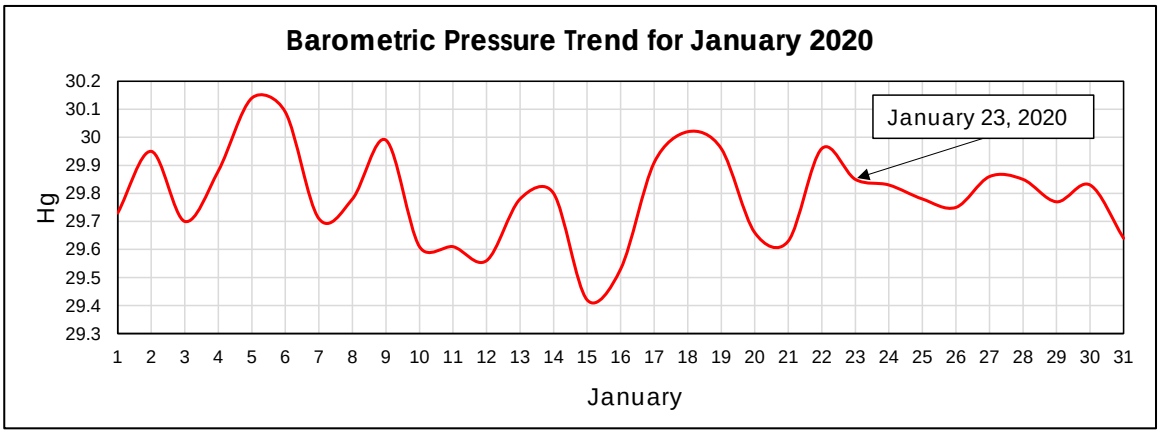
Headings:

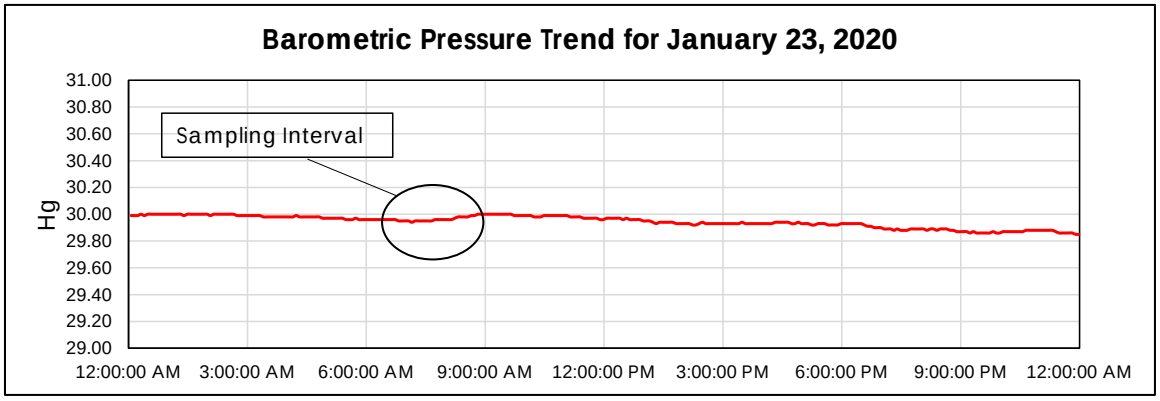
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. Reading based on field notes.

Barometric Pressure Trend - January 2020
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/2020-01-23/2020-01-23/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/2020-01-23/2020-01-23/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

February-20

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	2/10/2020	7:40	0.3	2.6	1.5	1.9	17.0	79.6	15.8	8.8	100.0	
GP-2	2/10/2020	7:49	-0.1	17.4	16.6	17.8	1.6	64.0	15.4	8.4	100.0	
GP-3	2/10/2020	7:54	0.3	--	0.1	8.9	10.8	80.2	11.5	7.5	100.0	
GP-4	2/10/2020	8:02	0.2	--	0.1	0.5	20.3	79.1	8.9	4.9	98.0	
GP-9	2/10/2020	8:09	0.2	--	0.1	9.5	4.1	86.3	10.9	0.0	0.0	
GP-10	2/10/2020	7:34	0.5	0.2	0.1	7.9	14.5	77.5				
GP-10P	2/10/2020	7:31	0.2	26.1	21.5	33.5	0.2	44.8				
GP-11	2/10/2020	7:24	0.2	0.1	0.0	7.8	7.7	84.5				
GP-12	2/10/2020	7:17	2.7	26.9	0.1	0.5	21.2	78.2				
GP-13	2/10/2020	7:12	0.1	1.2	0.8	17.7	6.8	74.7				
GP-14	2/10/2020	8:28	0.3	--	0.1	0.1	21.4	78.4	10.2	0.0	0.0	
GP-15	2/10/2020	8:33	0.2	--	0.1	0.1	21.4	78.4	8.6	0.0	0.0	
GP-16	2/10/2020	8:16	0.2	--	0.1	0.2	21.6	78.1	19.5	12.5	83.1	

	Beginning	Ending	Average
Weather:	Raining	Raining	Raining
Temperature, T (deg F):	30	41	35.5
Wind Speed (mph):	0	0	0
Wind Direction:	0	0	0
Barometric Pressure, P (in Hg):	30.45	30.47	30.46
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	2/10/2020
Starting Time:	7:12
Finishing Date:	2/10/2020
Finishing Time:	8:33
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	2/10/2020

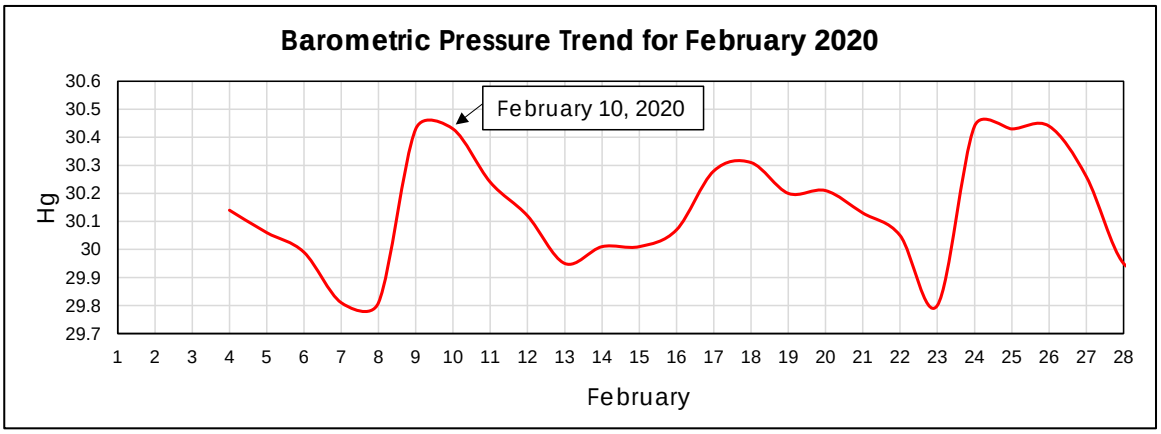
Headings:

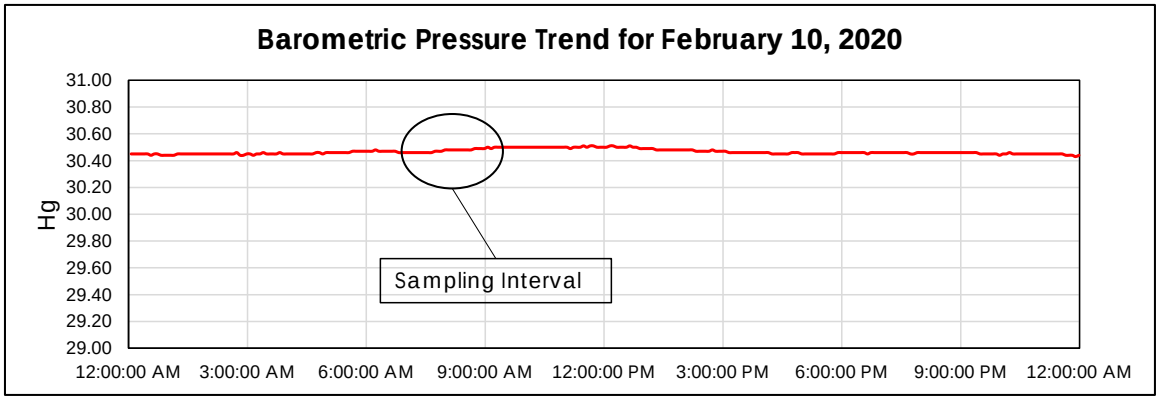
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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.

Barometric Pressure Trend - February 2020
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/2020-02-23/2020-02-23/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/2020-02-10/2020-02-10/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

March-20

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	3/19/2020	6:30	0.2	0.8	0.7	1.1	18.8	79.4	16.1	9.1	100.0	
GP-2	3/19/2020	6:36	-0.2	17.1	15.3	16.4	2.2	66.1	15.9	8.9	100.0	
GP-3	3/19/2020	6:41	0.2	--	0.0	8.3	10.7	81.0	11.4	7.4	100.0	
GP-4	3/19/2020	6:47	0.2	--	0.0	0.7	20.1	79.2	9.0	5.0	100.0	
GP-9	3/19/2020	6:52	0.2	--	0.0	7.7	5.9	86.4	11.1	0.0	0.0	
GP-10	3/19/2020	6:18	0.2	3.9	0.9	18.6	6.4	74.1				
GP-10P	3/19/2020	6:22	0.2	18.0	18.8	31.0	0.9	49.3				
GP-11	3/19/2020	6:12	0.2	0.1	0.0	12.0	11.3	76.7				
GP-12	3/19/2020	6:06	0.2	6.3	0.1	0.3	21.0	78.6				
GP-13	3/19/2020	6:01	0.2	1.1	0.8	15.4	8.3	75.5				
GP-14	3/19/2020	11:35	0.1	--	0.0	0.0	20.2	79.8	10.7	0.0	0.0	
GP-15	3/19/2020	11:25	-0.1	--	0.0	0.1	20.2	79.7	9.0	0.0	0.0	
GP-16	3/19/2020	6:58	0.2	--	0.0	0.3	21.3	78.4				*Note 5*

	Beginning	Ending	Average
Weather:	Clear	Clear	Clear
Temperature, T (deg F):	38	55	46.5
Wind Speed (mph):	0	0	0
Wind Direction:	0	0	0
Barometric Pressure, P (in Hg):	29.50	29.57	29.54
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	3/19/2020
Starting Time:	6:01
Finishing Date:	3/19/2020
Finishing Time:	11:35
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	3/19/2020

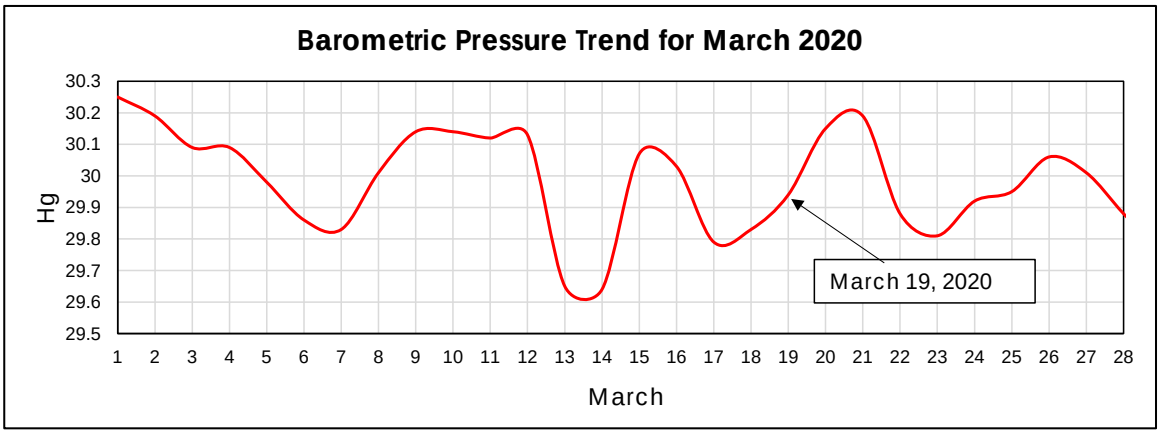
Headings:

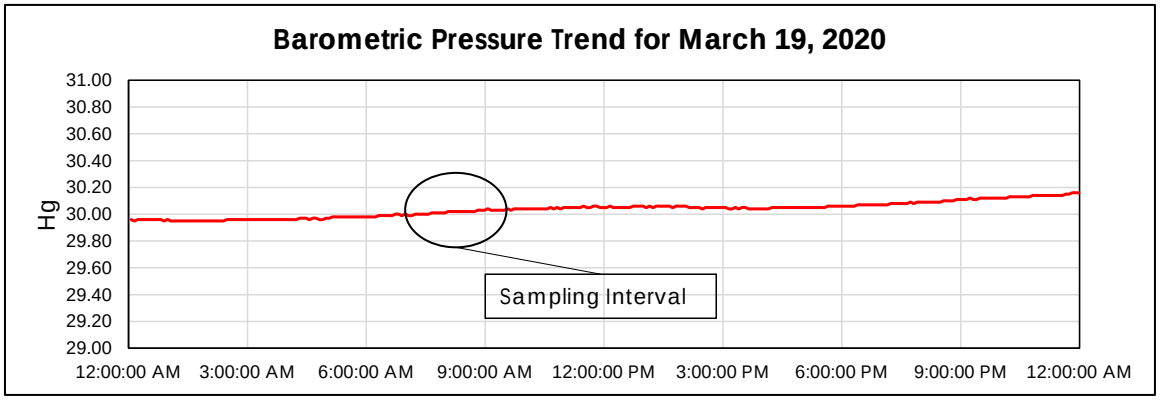
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. Unable to retrieve water level from GP-16 due to water level meter diameter being too large

Barometric Pressure Trend - March 2020
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/2020-03-19/2020-03-19/daily

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/2020-03-19/2020-03-19/monthly

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

April-20

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	4/17/2020	7:38	0.2	2.2	0.8	1.5	18.2	79.5	16.2	9.2	100.0	
GP-2	4/17/2020	7:46	0.0	15.9	14.8	15.4	2.8	67.0	15.9	8.9	100.0	
GP-3	4/17/2020	7:51	0.2	--	0.0	7.1	12.7	80.2	11.4	7.4	100.0	
GP-4	4/17/2020	7:58	0.2	--	0.0	2.4	13.1	84.5	8.9	4.9	98.4	
GP-9	4/17/2020	8:06	0.2	--	0.0	7.5	7.2	85.3	11.7	0.0	0.0	
GP-10	4/17/2020	7:28	0.2	1.1	5.2	19.9	3.2	71.7				
GP-10P	4/17/2020	7:25	0.2	7.1	8.0	20.8	6.9	64.3				
GP-11	4/17/2020	7:19	0.2	0.1	0.1	6.5	14.3	79.1				
GP-12	4/17/2020	7:13	0.2	33.4	12.8	20.4	12.7	54.1				
GP-13	4/17/2020	7:07	0.2	1.6	1.4	20.7	2.7	75.2				
GP-14	4/17/2020	8:26	0.3	--	0.0	0.1	21.0	78.9	11.1	0.0	0.0	
GP-15	4/17/2020	8:19	0.3	--	0.0	0.3	21.1	78.6	8.9	0.0	0.0	
GP-16	4/17/2020	8:12	0.2	--	0.0	3.3	17.4	79.3	19.9	12.9	86.0	

	Beginning	Ending	Average
Weather:	Clear	Clear	Clear
Temperature, T (deg F):	39	53	46
Wind Speed (mph):	0	0	0
Wind Direction:	0	0	0
Barometric Pressure, P (in Hg):	30.06	30.05	30.06
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	4/17/2020
Starting Time:	7:07
Finishing Date:	4/17/2020
Finishing Time:	8:26
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	4/17/2020

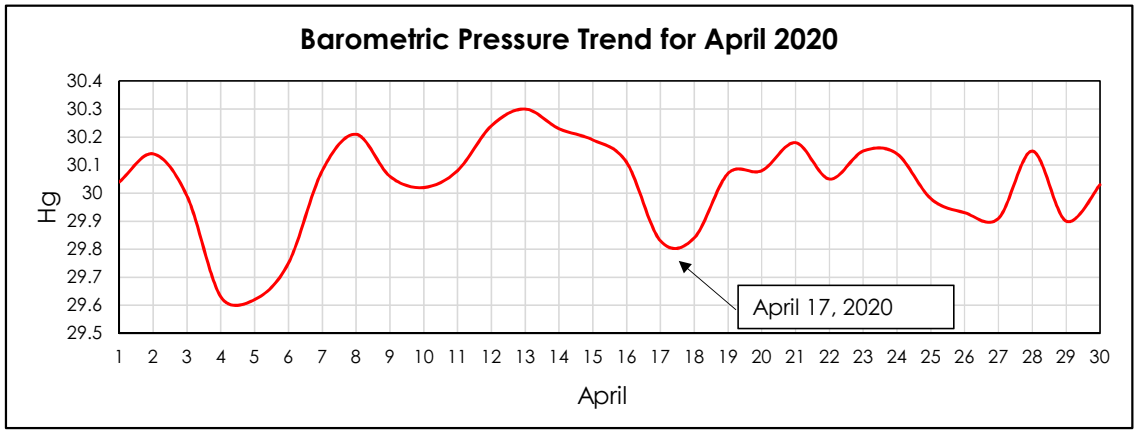
Headings:

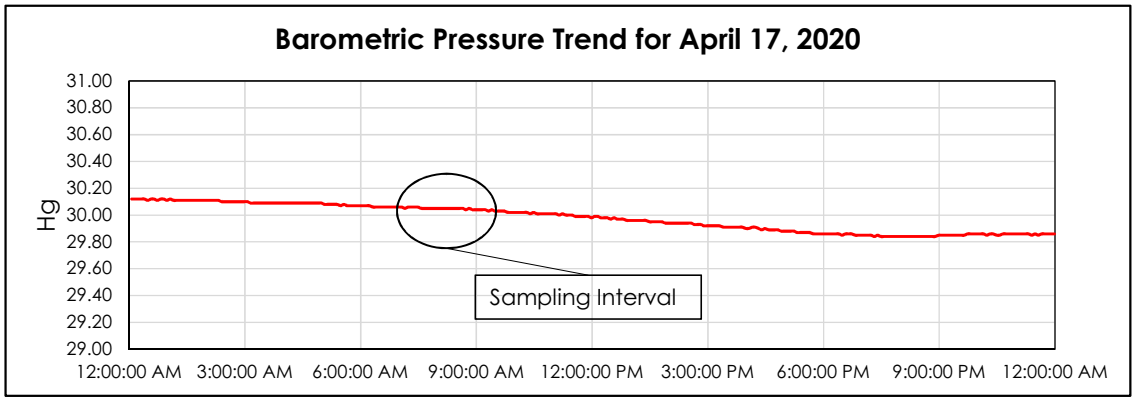
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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.

Barometric Pressure Trend - April 2020
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/2020-04-17/2020-04-17/daily

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/2020-04-17/2020-04-17/monthly

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

May-20

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	5/27/2020	7:30	0.1	3.3	2.8	4.5	12.6	80.1	16.4	9.4	100.0	
GP-2	5/27/2020	7:35	0.1	17.7	16.4	18.6	0.0	65.0	16.3	9.3	100.0	
GP-3	5/27/2020	7:40	0.1	--	0.0	9.2	10.9	79.9	11.4	7.4	100.0	
GP-4	5/27/2020	7:45	0.1	--	0.0	2.7	10.4	86.9	9.2	5.2	100.0	
GP-9	5/27/2020	7:50	0.1	--	0.0	9.0	5.2	85.8	12.1	0.0	0.0	
GP-10	5/27/2020	7:23	0.1	0.8	2.0	20.0	2.3	75.7				
GP-10P	5/27/2020	7:20	0.2	24.8	21.3	32.8	0.5	45.4				
GP-11	5/27/2020	7:16	0.2	--	0.0	17.2	3.9	78.9				
GP-12	5/27/2020	7:12	0.2	22.2	29.6	51.7	1.9	16.8				
GP-13	5/27/2020	9:37	-0.1	1.3	1.2	22.6	1.3	74.9				
GP-14	5/27/2020	8:14	0.2	--	0.0	0.1	20.8	79.1	11.4	0.0	0.0	
GP-15	5/27/2020	8:07	0.3	--	0.0	0.1	21.0	78.9	9.3	0.0	0.0	
GP-16	5/27/2020	7:55	0.1	--	0.0	0.4	20.8	78.8	20.3	13.3	88.3	

	Beginning	Ending	Average
Weather:	Clear	Clear	Clear
Temperature, T (deg F):	50	59	54.5
Wind Speed (mph):	0	1.5	0.75
Wind Direction:	0	315	157.5
Barometric Pressure, P (in Hg):	30.19	30.19	30.19
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	5/27/2020
Starting Time:	7:12
Finishing Date:	5/27/2020
Finishing Time:	9:37
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	5/27/2020

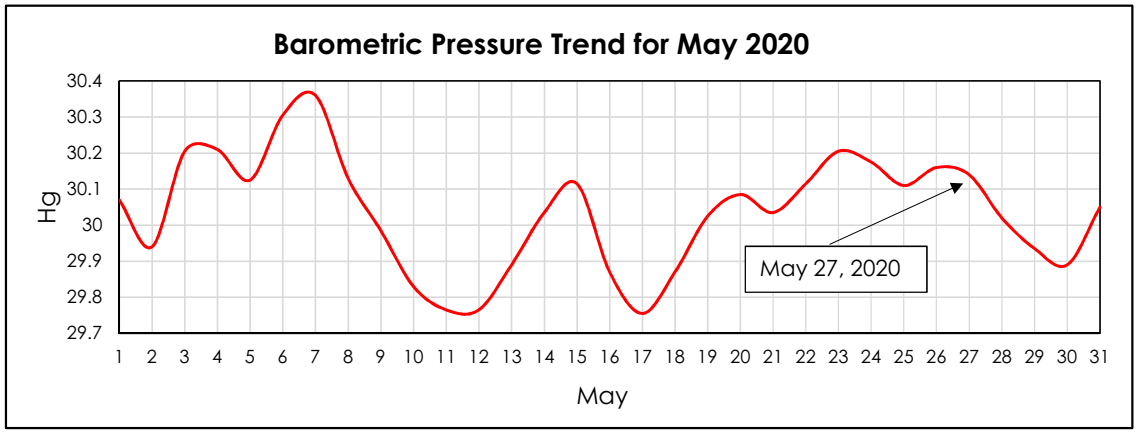
Headings:

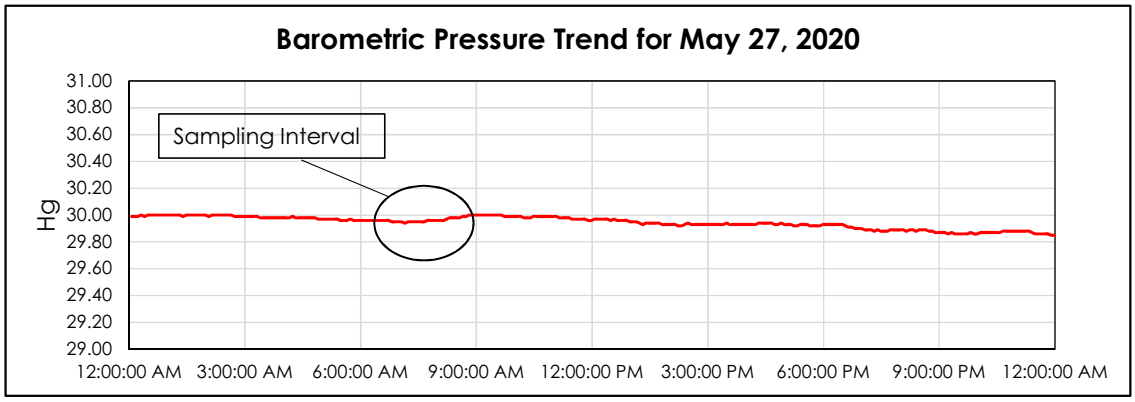
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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.

Barometric Pressure Trend - May 2020
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/graph/2020-05-23/2020-05-23/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/2020-05-27/2020-05-27/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

June-20

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	6/17/2020	7:45	0.1	3.4	2.0	2.0	16.4	79.6	16.1	9.1	100.0	
GP-2	6/17/2020	7:54	0.2	17.9	16.2	19.1	0.7	64.0	16.1	9.1	100.0	*Note 6*
GP-3	6/17/2020	8:00	0.1	--	0.0	9.1	11.7	79.2	11.3	7.3	100.0	
GP-4	6/17/2020	8:05	0.0	--	0.0	2.8	11.2	86.0	8.9	4.9	97.4	
GP-9	6/17/2020	8:12	0.1	--	0.0	8.0	7.8	84.2	11.7	0.0	0.0	
GP-10	6/17/2020	7:38	0.1	7.1	8.3	26.9	0.0	64.8				
GP-10P	6/17/2020	7:35	0.2	26.5	25.9	36.1	0.0	38.0				
GP-11	6/17/2020	7:30	0.3	0.2	0.0	20.0	1.7	78.3				*Note 1, Note 5, Note 7*
GP-12	6/17/2020	7:22	0.1	37.2	31.7	60.4	2.1	5.8				*Note 5, Note 6, Note 7*
GP-13	6/17/2020	7:12	0.1	0.4	0.9	26.3	0.5	72.3				
GP-14	6/17/2020	9:32	0.1	--	0.0	0.0	20.5	79.5	10.6	0.0	0.0	
GP-15	6/17/2020	9:16	0.1	--	0.0	0.1	20.8	79.1	8.9	0.0	0.0	
GP-16	6/17/2020	8:19	0.1	--	0.0	0.3	20.7	79.0	20.0	13.0	86.5	

	Beginning	Ending	Average
Weather:	Clear	Clear	Clear
Temperature, T (deg F):	50.5	57.1	53.8
Wind Speed (mph):	2.2	3.8	3
Wind Direction:	225	225	225
Barometric Pressure, P (in Hg):	30.30	30.32	30.31
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	6/17/2020
Starting Time:	7:12
Finishing Date:	6/17/2020
Finishing Time:	9:32
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	6/17/2020

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:

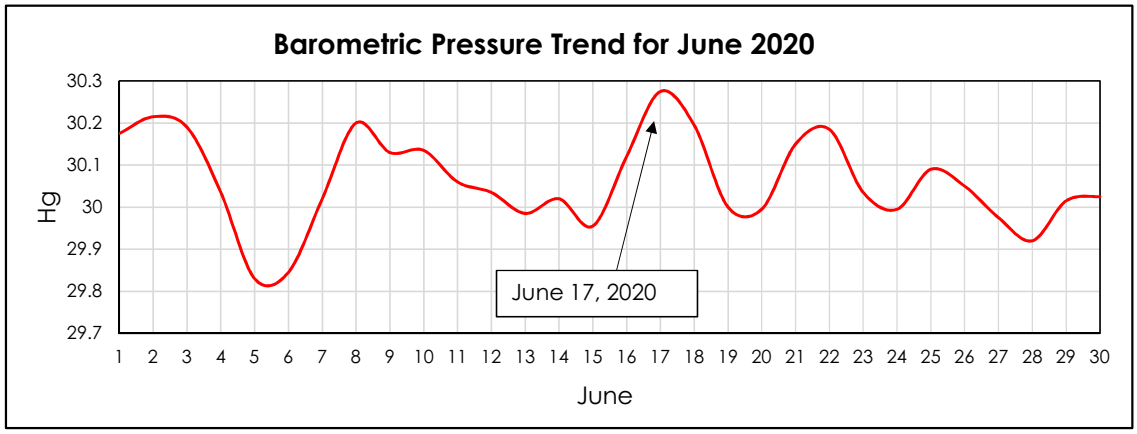
1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section 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.

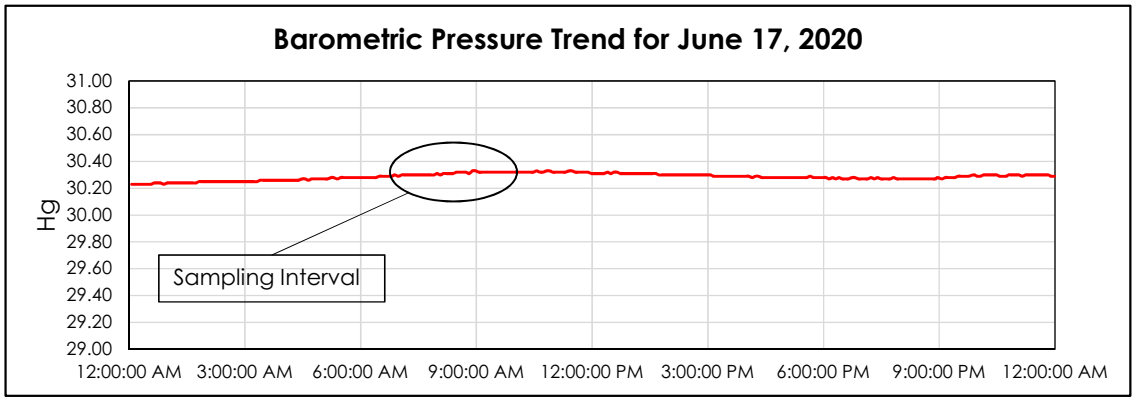
5 Heavy sediment in monument affecting probe access.

6 Water present in monument.

7 Missing Bolts for the flush mount.

Barometric Pressure Trend - June 2020
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/2020-06-17/2020-06-17/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/2020-06-17/2020-06-17/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

July-20

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	7/30/2020	7:55	0.2	7.8	2.5	1.9	17.0	78.6	18.3	11.3	100.0	
GP-2	7/30/2020	8:05	0.1	6.3	6.0	18.4	0.4	75.2	16.6	9.6	100.0	
GP-3	7/30/2020	8:11	0.1	--	0.0	10.9	10.9	78.2	11.7	7.7	100.0	
GP-4	7/30/2020	11:53	0.0	--	0.0	7.3	7.9	84.8	9.0	5.0	100.0	
GP-9	7/30/2020	8:21	0.1	--	0.0	9.7	6.2	84.1	13.6	0.0	0.0	
GP-10	7/30/2020	7:46	0.1	--	0.1	20.4	3.0	76.5				
GP-10P												*Note 5*
GP-11	7/30/2020	7:34	0.1	--	0.0	16.1	7.6	76.3				*Note 6*
GP-12	7/30/2020	7:29	0.2	36.1	28.9	69.2	0.2	1.7				*Note 6*
GP-13	7/30/2020	7:23	0.1	--	0.0	25.9	1.4	72.7				
GP-14	7/30/2020	8:54	0.1	--	0.0	0.0	20.6	79.4	15.0	0.0	0.0	
GP-15	7/30/2020	9:02	0.1	--	0.0	0.0	20.4	79.6	21.0	5.0	100.0	
GP-16	7/30/2020	8:27	0.1	--	0.0	0.4	20.5	79.1	21.2	14.2	94.9	

	Beginning	Ending	Average
Weather:	Clear	Clear	Clear
Temperature, T (deg F):	65	82	73.5
Wind Speed (mph):	7	6	6.5
Wind Direction:	0	225	112.5
Barometric Pressure, P (in Hg):	29.52	29.51	29.52
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	7/30/2020
Starting Time:	7:23
Finishing Date:	7/30/2020
Finishing Time:	11:53
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	7/30/2020

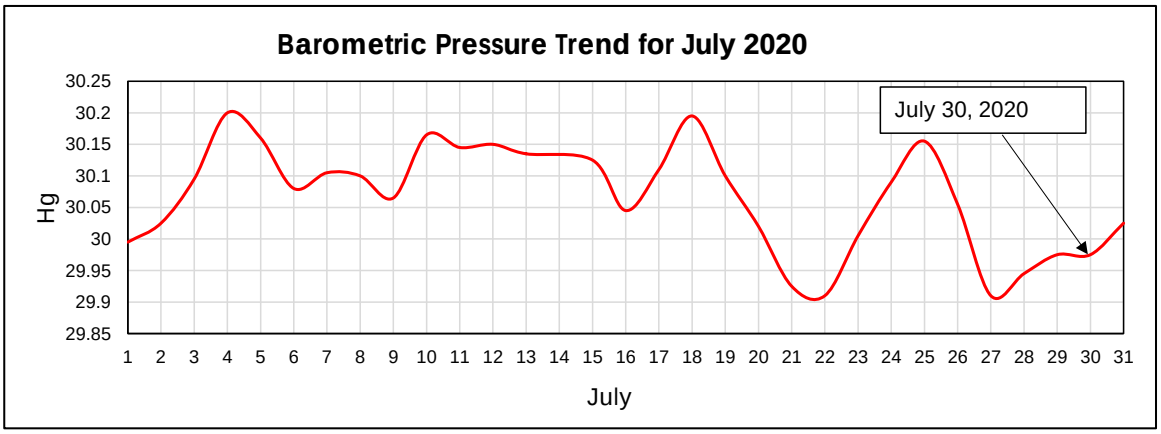
Headings:

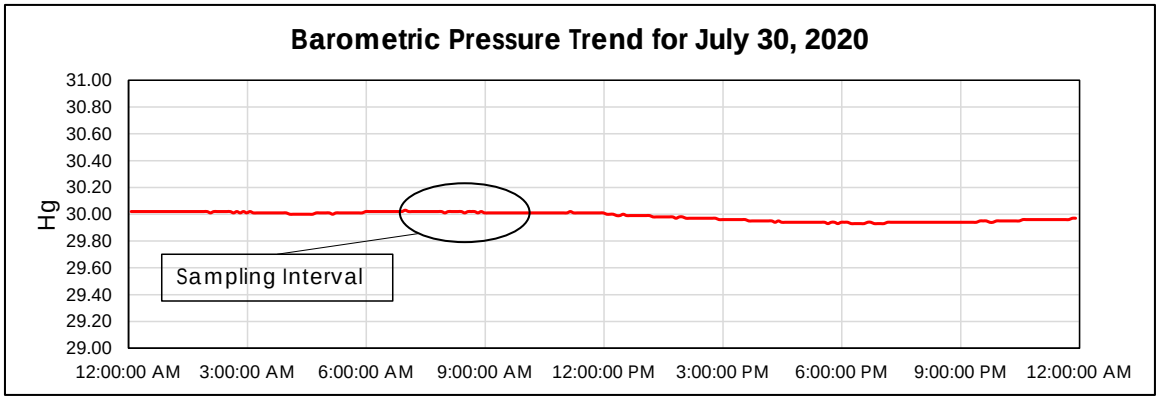
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. Quick connect broken. Could not monitor.
6. Missing Bolts for the flush mount.

Barometric Pressure Trend - July 2020
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/2020-07-30/2020-07-30/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/2020-07-30/2020-07-30/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

August-20

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	8/27/2020	8:08	0.1	11.6	5.3	3.5	15.5	75.7	19.1	12.1	100.0	
GP-2	8/27/2020	12:46	0.1	--	0.1	18.7	0.2	81.0	17.1	10.1	100.0	
GP-3	8/27/2020	8:17	-0.4	--	0.0	10.6	11.7	77.7	10.1	6.1	100.0	
GP-4	8/27/2020	8:26	0.1	--	0.0	8.8	10.9	80.3	13.3	9.3	100.0	
GP-9	8/27/2020	8:32	0.1	--	0.0	10.0	8.4	81.6	14.0	0.0	0.0	
GP-10	8/27/2020	7:59	0.1	--	1.0	21.7	2.0	75.3				
GP-10P												*Note 5*
GP-11	8/27/2020	7:54	0.1	--	0.0	23.4	0.7	75.9				*Note 6*
GP-12	8/27/2020	7:49	0.1	30.5	25.3	62.8	2.6	9.3				*Note 6*
GP-13	8/27/2020	7:38	0.1	0.2	0.5	28.5	0.8	70.2				
GP-14	8/27/2020	8:58	0.2	--	0.0	6.3	11.7	82.0	16.6	0.6	11.0	
GP-15	8/27/2020	9:06	-0.4	--	0.0	0.1	20.6	79.3	12.2	0.0	0.0	
GP-16	8/27/2020	8:38	0.1	--	0.1	0.2	21.1	78.6	22.0	15.0	99.7	

	Beginning	Ending	Average
Weather:	Clear	Clear	Clear
Temperature, T (deg F):	56	76	66
Wind Speed (mph):	0	8	4
Wind Direction:	0	270	135
Barometric Pressure, P (in Hg):	29.54	29.58	29.56
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	8/27/2020
Starting Time:	7:38
Finishing Date:	8/27/2020
Finishing Time:	12:46
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	8/27/2020

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

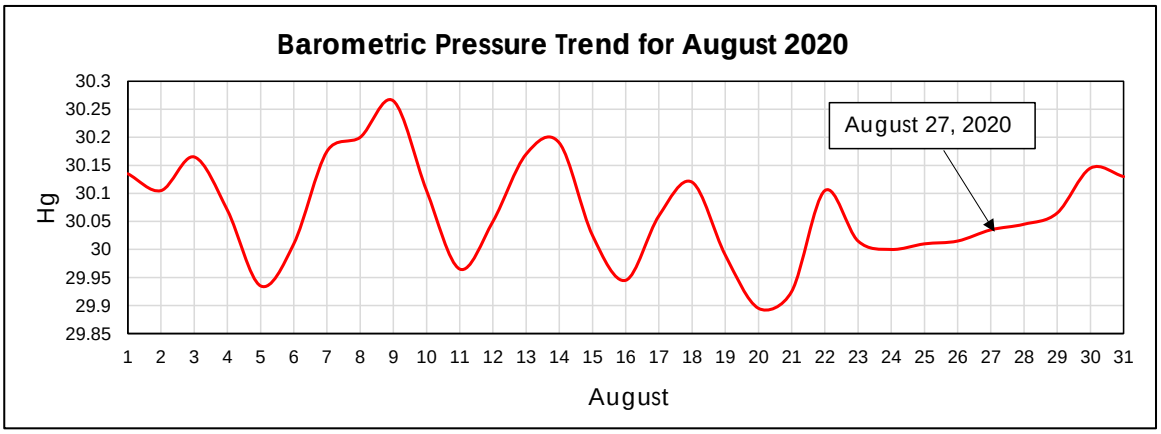
Notes:

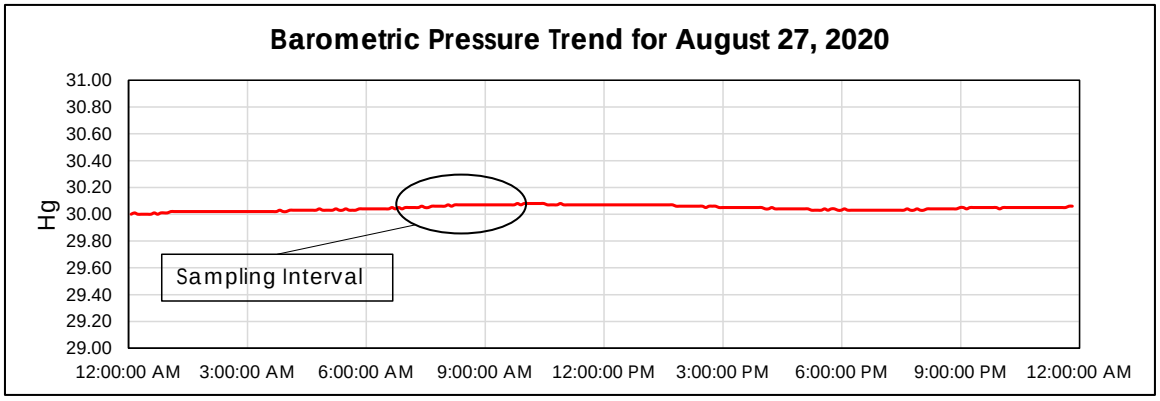
1. Measurement for spike concentrations of CH_4 and CO_2 are recorded as a comment if observed during sampling.
2. Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
3. Exposed Perforation = perforated pipe section 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 Quick connect broken. Could not monitor.

6 Missing Bolts for the flush mount.

Barometric Pressure Trend - August 2020
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/2020-08-27/2020-08-27/daily

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/2020-08-30/2020-08-30/monthly

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

September-20

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	9/29/2020	8:05	0.1	13.9	10.0	6.0	11.9	72.1	18.4	11.4	100.0	
GP-2	9/29/2020	8:10	0.2	0.3	0.3	12.8	6.9	80.0	17.7	10.7	100.0	
GP-3	9/29/2020	8:18	0.3	--	0.0	7.7	15.0	77.3	10.3	6.3	100.0	
GP-4	9/29/2020	8:28	0.2	--	0.0	8.8	12.6	78.6	14.1	10.1	100.0	
GP-9	9/29/2020	8:33	0.2	--	0.0	9.4	9.1	81.5	12.4	0.0	0.0	
GP-10	9/29/2020	7:58	0.1	0.4	1.5	18.6	3.9	76.0				
GP-10P												*Note 5*
GP-11	9/29/2020	7:53	0.1	--	0.0	21.1	3.5	75.4				*Note 6*
GP-12	9/29/2020	7:48	0.1	31.3	25.7	67.3	0.8	6.2				*Note 6*
GP-13	9/29/2020	7:39	0.1	0.4	0.7	29.2	0.9	69.2				
GP-14	9/29/2020	8:56	0.2	--	0.1	15.5	0.5	83.9	16.8	0.8	15.6	
GP-15	9/29/2020	8:48	0.2	--	0.0	0.1	21.1	78.8	13.1	0.0	0.0	
GP-16	9/29/2020	8:39	0.2	--	0.0	1.5	20.2	78.3	22.3	15.3	100.0	

	Beginning	Ending	Average
Weather:	Clear	Clear	Clear
Temperature, T (deg F):	54	59	56.5
Wind Speed (mph):	8	12	10
Wind Direction:	0	270	135
Barometric Pressure, P (in Hg):	29.63	29.63	29.63
24hr Baro.Trend (rising / falling / steady / unsteady)		Steady	

Starting Date:	9/29/2020
Starting Time:	7:39
Finishing Date:	9/29/2020
Finishing Time:	8:56
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	9/29/2020

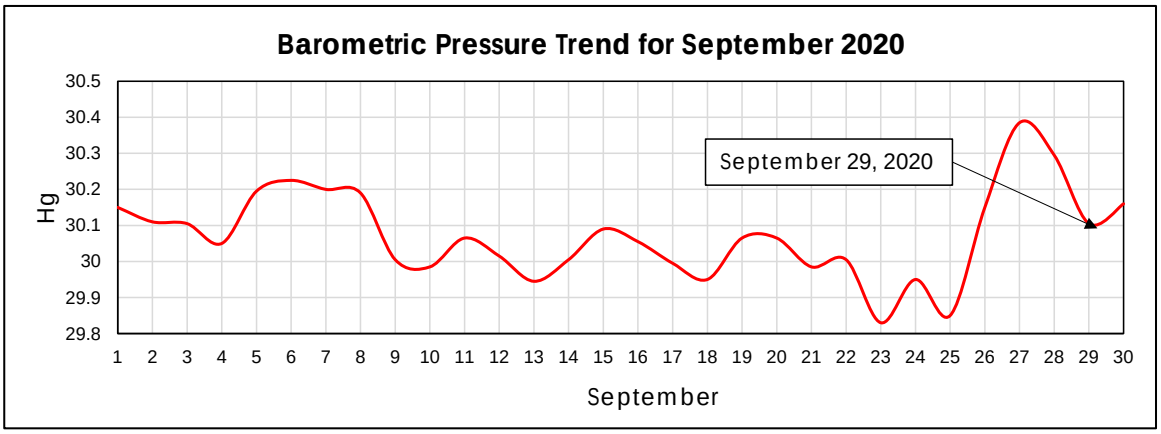
Headings:

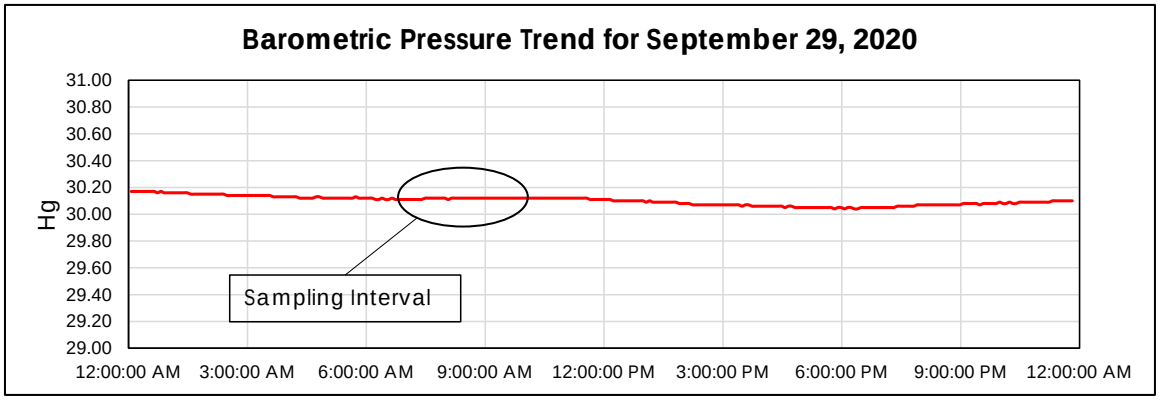
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

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. Quick connect broken. Could not monitor.
6. Missing Bolts for the flush mount.

Barometric Pressure Trend - September 2020
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/2020-09-29/2020-09-29/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/2020-09-29/2020-09-29/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

October-20

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	10/21/2020	9:39	0.1	8.1	7.5	4.9	13.1	74.5	17.8	10.8	100.0	
GP-2	10/21/2020	8:26	0.2	2.2	2.2	19.5	1.0	77.3	16.8	9.8	100.0	
GP-3	10/21/2020	8:35	0.3	--	0.0	10.5	11.8	77.7	7.9	3.9	78.4	
GP-4	10/21/2020	8:42	0.2	--	0.0	10.0	9.5	80.5	14.7	10.7	100.0	
GP-9	10/21/2020	8:48	0.2	--	0.0	10.5	7.7	81.8	12.6	0.0	0.0	
GP-10	10/21/2020	8:10	0.1	3.0	3.0	24.2	2.5	70.3				
GP-10P	10/23/2020	9:58	0.0	16.7	16.7	34.6	0.6	48.1				*Note 5*
GP-11	10/21/2020	8:03	0.1	--	0.0	15.4	8.2	76.4				
GP-12	10/21/2020	7:46	0.1	23.8	23.8	65.2	2.4	8.6				
GP-13	10/21/2020	7:38	0.1	0.7	0.7	30.5	1.2	67.6				
GP-14	10/21/2020	9:08	0.2	--	0.0	0.5	20.5	79.0	14.9	0.0	0.0	
GP-15	10/21/2020	9:00	0.2	--	0.0	0.2	21.1	78.7	10.2	0.0	0.0	
GP-16	10/21/2020	9:21	0.2	--	0.0	0.6	20.7	78.7	21.6	14.6	97.1	

	Beginning	Ending	Average
Weather:	Fair	Mostly Cloudy	Fair
Temperature, T (deg F):	37	50	43.5
Wind Speed (mph):	0	6	3
Wind Direction:	0	180	90
Barometric Pressure, P (in Hg):	29.75	29.77	29.76
24hr Baro.Trend (rising / falling / steady / unsteady)		Steady	

Starting Date:	10/21/2020
Starting Time:	7:38
Finishing Date:	10/23/2020
Finishing Time:	9:58
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	10/21/2020

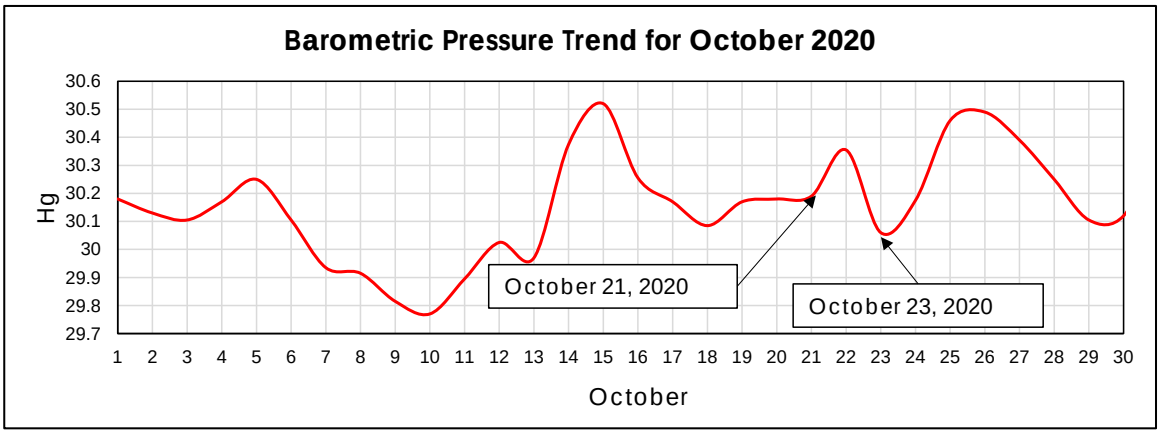
Headings:

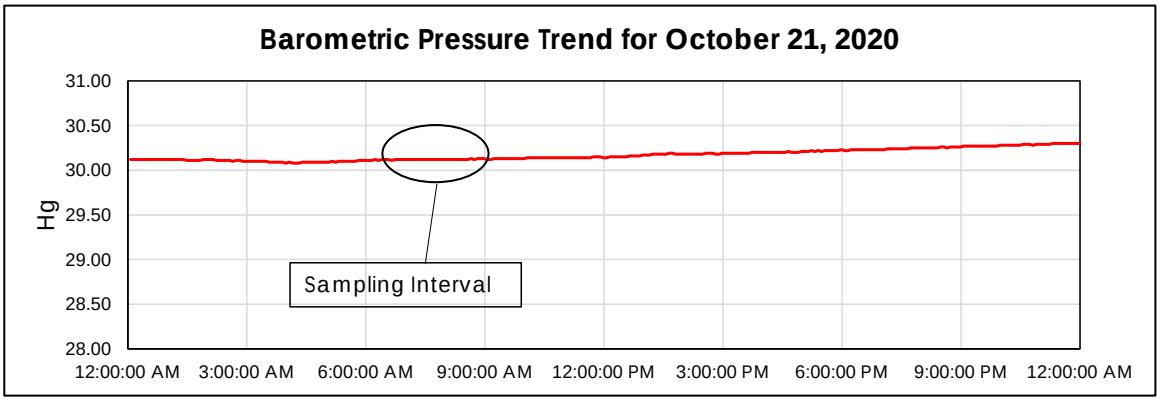
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

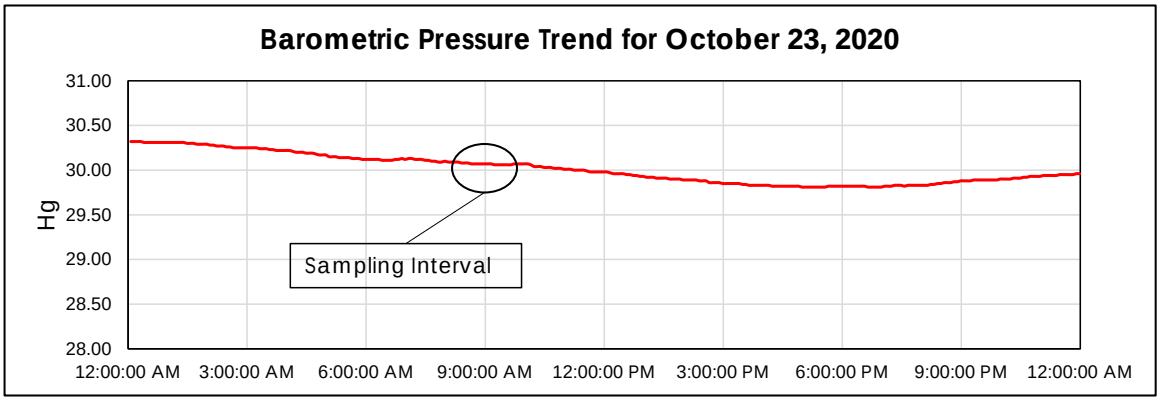
Notes:

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 and monitored on October 23rd, 2020.

Barometric Pressure Trend - October 2020
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/2020-10-23/2020-10-22/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/2020-10-21/2020-10-21/daily
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2020-10-23/2020-10-23/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

November-20

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	11/2/2020	9:46	0.1	9.0	7.4	5.1	11.9	75.6	19.0	12.0	100.0	
GP-2	11/2/2020	9:54	0.2	2.9	2.9	18.7	0.2	78.2	16.6	9.6	100.0	
GP-3	11/2/2020	10:00	0.3	--	0.0	7.8	12.6	79.6	8.7	4.7	94.8	
GP-4	11/2/2020	10:06	0.2	--	0.0	9.4	7.6	83.0	13.3	9.3	100.0	
GP-9	11/2/2020	10:20	0.2	--	0.0	9.6	7.6	82.8	12.8	0.0	0.0	
GP-10	11/17/2020	9:32	0.1	34.6	34.6	41.6	0.4	23.4				
GP-10P	11/2/2020	9:38	0.0	16.7	15.7	34.7	0.3	49.3				*Note 5*
GP-11	11/2/2020	9:30	0.1	--	0.0	0.8	20.1	79.1				
GP-12	11/2/2020	9:23	0.1	23.6	23.6	61.2	1.9	13.3				
GP-13	11/2/2020	9:15	0.1	0.6	0.6	27.1	2.3	70.0				
GP-14	11/2/2020	10:54	0.2	--	0.0	0.3	20.2	79.5	15.0	0.0	0.0	
GP-15	11/2/2020	10:36	0.2	--	0.0	0.1	20.5	79.4	11.1	0.0	0.0	
GP-16	11/2/2020	10:26	0.2	--	0.0	0.9	19.6	79.5	15.0	8.0	53.3	

	Beginning	Ending	Average
Weather:	Mostly Sunn	Mostly Sunn	Clear
Temperature, T (deg F):	57	59	58
Wind Speed (mph):	3	5	4
Wind Direction:	180	147	163.5
Barometric Pressure, P (in Hg):	29.34	29.35	29.35
24hr Baro.Trend (rising / falling / steady / unsteady)	Steady		

Starting Date:	11/2/2020
Starting Time:	9:15
Finishing Date:	11/17/2020
Finishing Time:	9:32
Monitored by:	A. Lopez
Instruments:	GEM 2000
Calibration Date:	11/2/2020

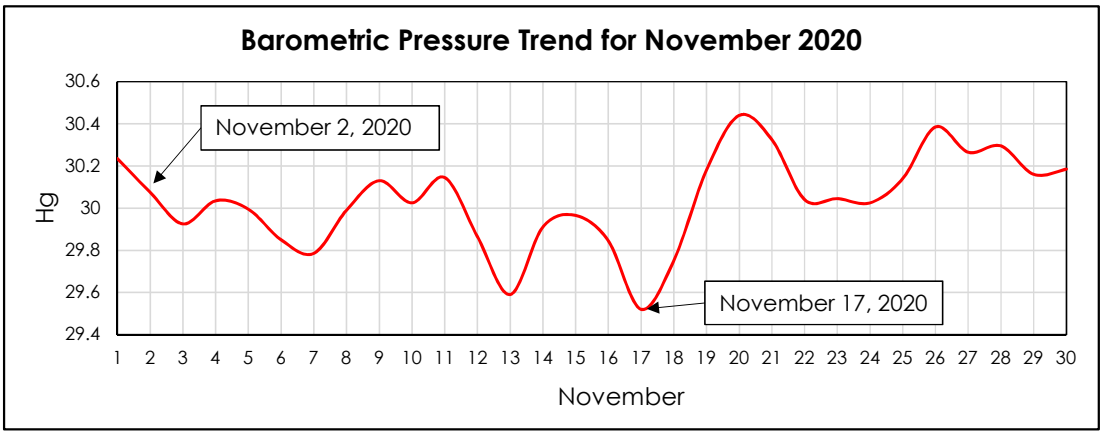
Headings:

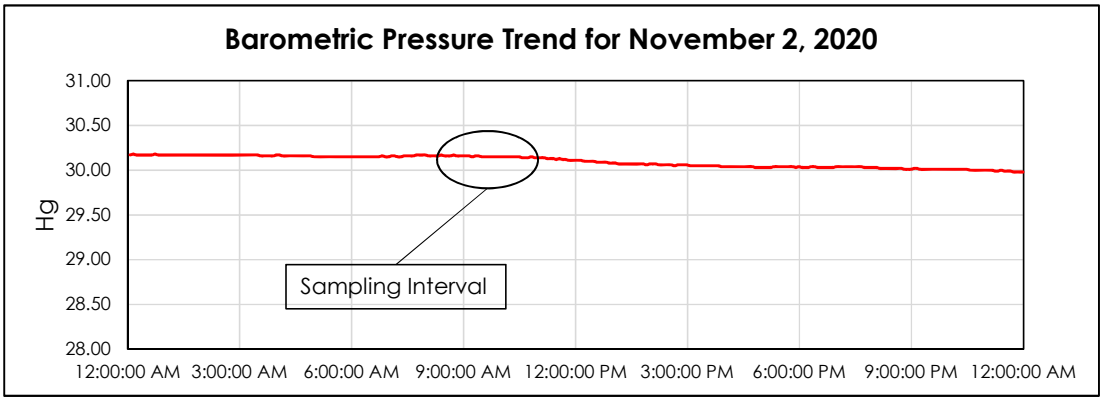
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

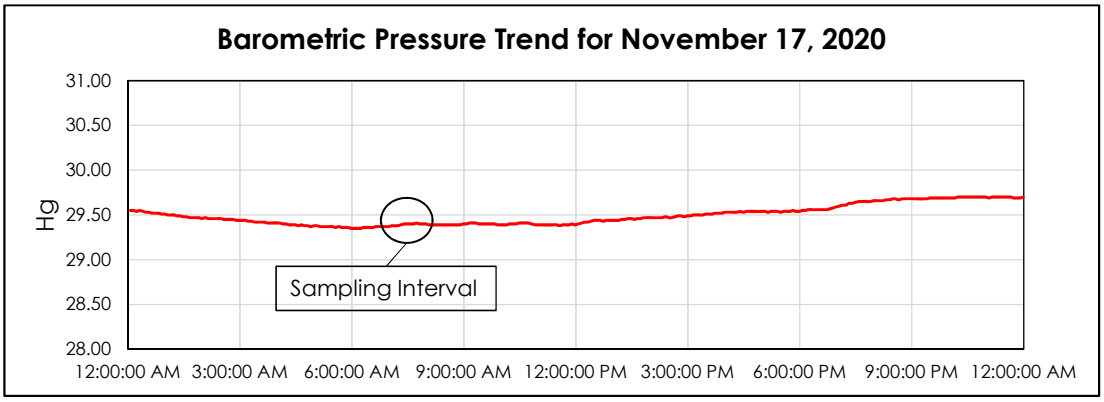
Notes:

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 - November 2020
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/2020-11-3/2020-11-3/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/2020-11-2/2020-11-2/daily
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2020-11-17/2020-11-17/daily

Exhibit 3 - Results of Landfill Gas Probe Monitoring

SCS Engineers

Landfill Gas Control System

04220001.04

LRI Landfill

December-20

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	12/17/2020	9:06	0.1	3.7	3.5	2.5	14.9	79.1	16.2	9.2	100.0	
GP-2	12/17/2020	9:13	0.2	3.1	2.7	16.2	2.1	79.0	15.9	8.9	100.0	
GP-3	12/17/2020	9:18	0.3	--	0.0	6.5	11.7	81.8	7.3	3.3	66.0	
GP-4	12/17/2020	9:23	0.2	--	0.0	8.1	11.2	80.7	6.3	2.3	46.6	
GP-9	12/17/2020	9:28	0.2	--	0.0	10.8	4.9	84.3	10.6	0.0	0.0	
GP-10	12/17/2020	8:58	0.1	18.7	2.5	20.4	6.9	70.2				
GP-10P	12/17/2020	8:56	0.0	21.9	20.7	28.3	5.7	45.3				*Note 5*
GP-11	12/17/2020	8:38	0.1	--	0.0	0.3	21.1	78.6				
GP-12	12/17/2020	8:50	0.1	28.9	22.7	62.4	0.0	14.9				
GP-13	12/17/2020	8:24	0.1	0.1	0.3	27.1	0.3	72.3				
GP-14	12/21/2020	11:51	0.2	--	0.0	0.2	20.6	79.2				
GP-15	12/17/2020	9:46	0.2	--	0.0	0.2	21.3	78.5	15.0	0.0	0.0	
GP-16	12/17/2020	9:59	0.2	--	0.0	0.8	20.9	78.3	19.4	12.4	82.7	

	Beginning	Ending	Average
Weather:	Cloudy	Cloudy	Cloudy
Temperature, T (deg F):	43.2	45.2	44.2
Wind Speed (mph):	8.5	9.3	8.9
Wind Direction:	203	203	203
Barometric Pressure, P (in Hg):	29.85	29.89	29.87
24hr Baro.Trend (rising / falling / steady / unsteady)		Rising	

Starting Date:	12/17/2020
Starting Time:	8:24
Finishing Date:	12/21/2020
Finishing Time:	11:51
Monitored by:	T. Berndahl
Instruments:	GEM 2000
Calibration Date:	12/17/2020

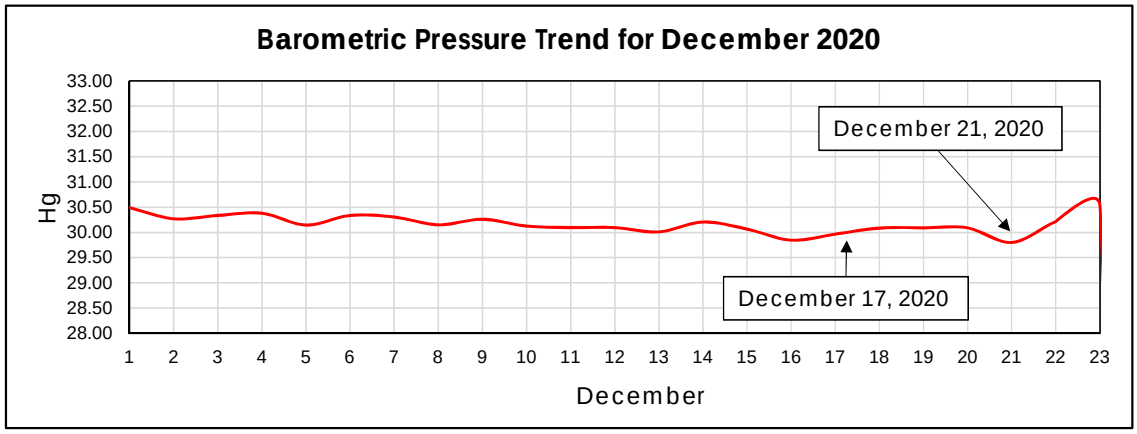
Headings:

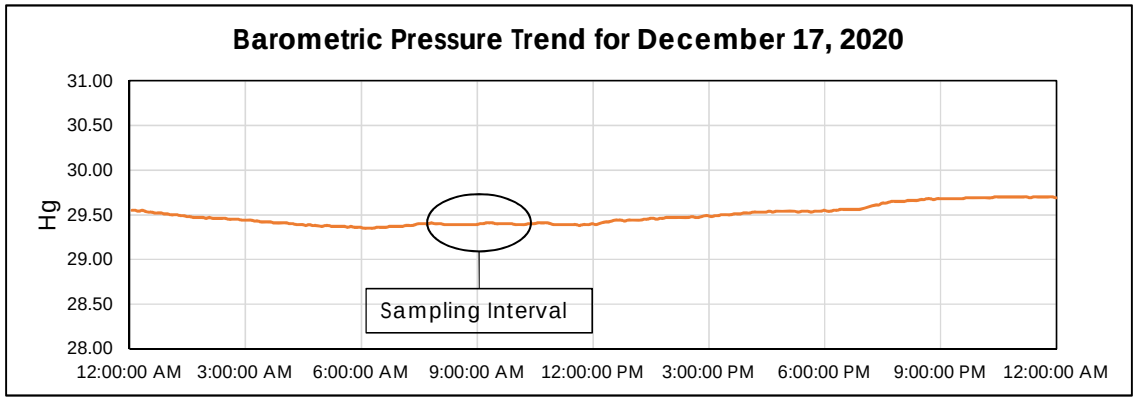
$P_{(well)}$	Relative Pressure
CH_4	Methane
CO_2	Carbon Dioxide
O_2	Oxygen
H_2O	Water Vapor
N_2	Nitrogen
TOC	Top of Casing

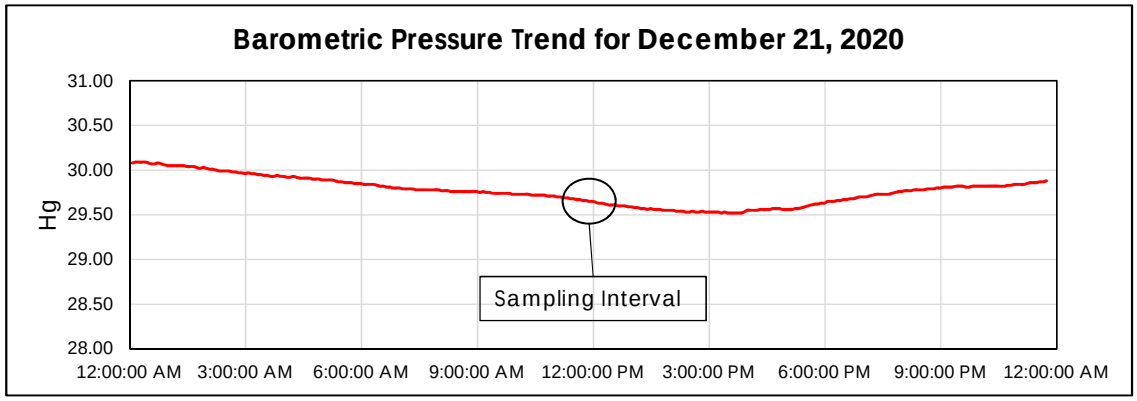
Notes:

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 - December 2020
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/2020-12-3/2020-12-3/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/2020-12-17/2020-12-17/daily
Data Source: https://www.wunderground.com/dashboard/pws/KWAPUYAL102/table/2020-12-21/2020-12-21/daily

Project Number: ~~04219001.04~~ 04220001.04

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

Date: 2/25/20
Weather Conditions: Cloudy
Instrument: MicroFID
Measured By: Travis Berndahl

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

- [X] Main Office - individual office spaces, storage areas and within open crawl-space area.
- [X] Repair Shop – survey atmosphere conditions throughout (lower height levels).
- [X] Pay/Scale Booth – interior of building. 1.1 ppm
- [X] Work Shop - interior of shed adjacent to stormwater ponds.

Signature

Background
Upwind → 0.0 ppm
Downwind → 0.3 ppm

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

Project Number: 04220001.04

Date: 6-18-20
Weather Conditions: Sunny
Instrument: MicroFID
Measured By: Travis B.

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**.

- ☐ A Main Office - individual office spaces, storage areas and within open crawl-space area. 51.9 ppm
- ☒ Repair Shop – survey atmosphere conditions throughout (lower height levels). 7.1 ppm
- ☐ AA Pay/Scale Booth – interior of building. 81.6 ppm
- ☒ Work Shop - interior of shed adjacent to stormwater ponds. 0.0 ppm

Background

upwind → 0.6 ppm
Downwind → 3.7 ppm

Signature

A Strong smell of air freshener. Detection in sink cabinet.

AA Strong smell of air freshener, Meters in the back of scale house read 0.0% LEL. Calibrated correctly earlier this month according to LRI site staff.

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

Project Number: 04220001.04

Date: 9/29/20
Weather Conditions: Sunny
Instrument: Micro FID
Measured By: Travis B / Andres L.

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:

- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

- [X] Main Office - individual office spaces, storage areas and within open crawl-space area. 15.0 ppm conference room
- [X] Repair Shop – survey atmosphere conditions throughout (lower height levels). 13.0 ppm eye wash
- [X] Pay/Scale Booth – interior of building.
- [X] Work Shop - interior of shed adjacent to stormwater ponds. 11.5 west side

Signature

Background
Upwind → 0.2 ppm
Downwind → 16.9 ppm

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

Project Number: 04220001.04

Date: 12/21/20
Weather Conditions: Overcast
Instrument: FID
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**.

0.0ppm outside

- [x] Main Office - individual office spaces, storage areas and within open crawl-space area. 1.4ppm spike men's bathroom closet room
- [x] Repair Shop – survey atmosphere conditions throughout (lower height levels). 16.3 ppm spike lightswitch electrical 15.0 ppm Kitchen faucet
- [x] Pay/Scale Booth – interior of building.
- [x] Work Shop - interior of shed adjacent to stormwater ponds. 1.2ppm spike under desk (west side) 0.3ppm around transformer disconnect

kitchen's cabinents 0.4ppm inside

Constant Stable 3 ppm inside
13.7 ppm spike outside

Signature

December 23, 2020
File No. 04220001.13

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

Subject: **2020 Gas Extraction Well Installation Report**
LRI Landfill, Graham, Washington

Dear George:

This letter report presents a summary of field activities performed by SCS Engineers (SCS) during the installation of 17 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 2020 Gas System Expansion design plans, approved well construction variance, and well completion schedule issued by SCS on September 4, 2020. Following completion of the well installation work, each well was given a standard well designation consistent with LRI naming convention as shown in Table 1.

Summary

SCS personnel were onsite from September 14, 2020 through September 28, 2020 to observe drilling and installation of the 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 and construction logs prepared by SCS. The following table presents a summary of the completed well installation data.

Table 1: Summary of Well Completion

Well ID	Design ID	Surface Elevation (ft-msl)(1)	Well Material	ECY Well Tag(2)	Design Depth (ft)	Installed Depth (ft)	Length of Screen (ft)
WE-264	2020-03	839.44	PVC	BKM-949	130.0	128.0	110.0
WE-265	2020-04	843.08	PVC	BKM-946	100.0	98.0	73.0
WE-266	2020-05	842.18	PVC	BKM-945	130.0	130.0	103.0
WE-267	2020-09	838.85	PVC	BKM-943	100.0	99.0	80.0
WE-268	2020-10	834.42	PVC	BKM-944	100.0	100.0	80.0
WE-269	2020-12	838.01	PVC	BKM-942	100.0	101.0	66.0
WE-270	2020-15	826.58	PVC	BKM-948	130.0	131.0	110.0
WE-271	2020-16	831.38	PVC	BKM-947	100.0	100.0	71.0
WE-272	2020-17	831.50	PVC	BKM-941	130.0	130.0	110.0
WE-273	2020-33	773.38	PVC	BKM-937	103.0	103.0	83.0
WE-274	2020-32	761.10	PVC	BKM-934	94.0	93.0	74.0
WE-275	2020-31	749.60	PVC	BKM-933	77.0	77.0	57.0
WE-276	2020-30	737.70	HDPE	BKM-936	49.0	49.0	29.0
WE-277	2020-29	727.28	HDPE	BKM-935	41.0	41.0	21.0

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-278	2020-27	707.72	HDPE	BKM-938	28.0	28.0	10.0
WE-279	2020-26	708.95	HDPE	BKM-939	30.0	30.0	10.0
WE-280	2020-25	709.89	PVC	BKM-940	30.0	31.0	10.0

Notes:

1. Designed well locations with drawing identification numbers 2020-11, 2020-21, and 2020-22 were not installed.
2. Survey data provided by HRK prior to drilling and installation. Elevations are for the original staked locations and do not account for minor relocation at time of installation.
3. Survey data for relocated wells 2020-25, 2020-26, and 2020-27 were provided by HRK.
4. Survey data for relocated wells 2020-29, 2020-30, and 2020-31 were provided by Scarsella Brothers Inc.
5. 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, and a 36-inch diameter full flight auger as conditions dictated. 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 and 8-inch diameter Schedule 80 polyvinyl chloride (PVC) pipe and fittings or 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, except for well WE-265, which was drilled to depth and constructed in accordance to design specifications, but was missing an additional 4 feet of pipe stickup above the ground surface. The following day, DBM attached PVC couplings and extended the height of the pipes to meet the 5 feet of pipe stickup requirement. Though left uncompleted on the day drilling and installation began, well WE-265 constructed up to ground level. No boreholes were left open overnight.

The wells were completed with 5 feet of pipe stickup above the ground surface to allow for grading, landfill cover/closure, and connection to the existing LFG collection system. Upon completion, each well was issued a Washington State Department of Ecology (ECY) Well Tag in accordance with state regulations.

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-272** (2020-17): The boring location was moved northwest by LRI to provide DBM better access to the well location. The well stake was re-surveyed by HRK Engineering and Field Services (HRK) on September 17, 2020 with the location ID of 2020-17. The relocated boring was completed to 130 feet-bgs as designed in the September 9, 2020 drawings, resulting in a clearance of 52.4 feet from the operations layer.

- **WE-275** (2020-31): The boring location was moved southwest by SCS to provide DBM better access to the well location. The well stake was re-surveyed by Scarsella on September 23, 2020 with the location ID of 2020-29. The relocated boring was completed to 77 feet-bgs as designed in the September 9, 2020 drawings, resulting in a clearance of 20.3 feet from the operations layer.
- **WE-276** (2020-30): The boring location was moved southwest by SCS to provide DBM better access to the well location. The well stake was re-surveyed by Scarsella on September 23, 2020 with the location ID of 2020-29. The relocated boring was completed to 49 feet-bgs as designed in the September 9, 2020 drawings, resulting in a clearance of 24.7 feet from the operations layer.
- **WE-277** (2020-29): The boring location was moved southwest by SCS to provide DBM better access to the well location. The well stake was re-surveyed by Scarsella Brothers, Inc. (Scarsella) on September 23, 2020 with the location ID of 2020-29. The relocated boring was completed to 41 feet-bgs as designed in the September 9, 2020 drawings, resulting in a clearance of 25.2 feet from the operations layer.
- **WE-278** (2020-27): The boring location was moved north by LRI to attain the required 15 feet clearance from the operations layer. The well stake was re-surveyed by HRK on September 17, 2020 with the location ID of 2020-27. The relocated boring was completed to 28 feet-bgs as designed in the September 9, 2020 drawings, resulting in a clearance of 15.6 feet from the operations layer.
- **WE-279** (2020-26): The boring location was moved north by LRI to attain the required 15 feet clearance from the operations layer. The well stake was re-surveyed by HRK on September 17, 2020 with the location ID of 2020-26. The relocated boring location was moved again due to hard drilling conditions. The relocated boring, approximately 5 feet east from its previous location, was completed to 30 feet-bgs as designed in the September 9, 2020 drawings, resulting in a clearance of 15.1 feet from the operations layer.
- **WE-280** (2020-25): The boring location was moved north by LRI to attain the required 15 feet clearance from the operations layer. The well stake was re-surveyed by HRK on September 17, 2020 with the location ID of 2020-25. The relocated boring was completed to 31 feet-bgs as designed in the September 9, 2020 drawings, resulting in a clearance of 16.0 feet from the operations layer.

Other notes regarding the vertical well drilling include the following:

- **WE-265** (2019-04) **and WE-266** (2020-05): The boring locations had multiple temperature readings exceeding 130 degrees Fahrenheit. This was attributed to the presence of compost and mulch, which maintains high temperatures due to their insulation properties.

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
Associate Professional
SCS Engineers

Alexa Deep, EIT
Staff Engineer
SCS Engineers

Kevin Lakey, PE, LHG,
Project Director
SCS Engineers

AL/AD

cc: David Bosch, TPCDH
Olivier Moi, LRI

Attachments:

2020 LFG Extraction Well Completion Logs
Updated LRI LF GCCS Site Plan

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
- WE-249 2020 Vertical Gas Extraction Well

WELLS RE-STAKED ON 2020-09-23.

WELLS RE-STAKED ON 2020-09-18.

WELLS RE-STAKED ON 2020-09-18.

FLARE STATION

ENERGY PLANT

TRUCK WASH

SCALE HOUSE

OFFICE

SHOP

FUELING STATION

LEACHATE STORAGE TANKS

WELL HOUSE

CELL 2A

CELL 2B

CELL 3A

CELL 5

CELL 6

FUTURE CELL

SURVEY NOTES:

1. TOPOGRAPHIC BASE MAP PREPARED BY MILLER CREEK ASSOCIATES ON 3/18/2020 (DATE OF PHOTOGRAPHY 2/20/2020).
2. LFG WELL LOCATIONS AND GCCS BY SCS ENGINEERS, BELLEVUE, WA. BASED ON AS-BUILT LOCATIONS AND FIELD LOCATIONS BY LRI STAFF. UPDATED APRIL 4, 2020.
3. AS STAKED WELL LOCATIONS BY HRKUS ON AUGUST 27, 2020 and SEPTEMBER 18, 2020, and BY SCARCELLA BROTHERS INC. ON September 23, 2020.

120 0 120 240

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 DRAWINGS.

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	08/13/2020
B	ISSUED FOR BID	08/24/2020
C	ISSUED FOR CONSTRUCTION	09/08/2020
D	RECORD DRAWING	12/15/2020

SHEET TITLE: SITE PLAN

PROJECT TITLE: 2020 GAS SYSTEM EXPANSION
LRI LANDFILL
GRAHAM, WASHINGTON

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

PROJ. NO.	DWN. BY:	CHK. BY:	DSN. BY:	ACAD FILE:	APP. BY:
04220001.12	GDB	AED	GDB	C1	KGL

DATE: DECEMBER 2020

SCALE: AS SHOWN

DRAWING NO. C1

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
- WE-249 — 2020 Vertical Gas Extraction Well

WELLS RE-STAKED ON 2020-09-23.

WELLS RE-STAKED ON 2020-09-18.

WELLS RE-STAKED ON 2020-09-18.

FLARE STATION

ENERGY PLANT

TRUCK WASH

SCALE HOUSE

OFFICE

SHOP

FUELING STATION

LEACHATE STORAGE TANKS

WELL HOUSE

CELL 1

CELL 2A

CELL 2B

CELL 3A

CELL 4A

CELL 4B

CELL 5

CELL 6

FUTURE CELL

SURVEY NOTES:

1. TOPOGRAPHIC BASE MAP PREPARED BY MILLER CREEK ASSOCIATES ON 3/18/2020 (DATE OF PHOTOGRAPHY 2/20/2020).
2. LFG WELL LOCATIONS AND GCCS BY SCS ENGINEERS, BELLEVUE, WA. BASED ON AS-BUILT LOCATIONS AND FIELD LOCATIONS BY LRI STAFF. UPDATED APRIL 4, 2020.
3. AS STAKED WELL LOCATIONS BY HRKUS ON AUGUST 27, 2020 and SEPTEMBER 18, 2020, and BY SCARCELLA BROTHERS INC. ON September 23, 2020.

120 0 120 240

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 REVIEW	08/13/2020
B	ISSUED FOR BID	08/24/2020
C	ISSUED FOR CONSTRUCTION	09/08/2020
D	RECORD DRAWING	12/15/2020

SHEET TITLE: SITE PLAN - TOP OF OPERATIONS LAYER

PROJECT TITLE: 2020 GAS SYSTEM EXPANSION
LRI LANDFILL
GRAHAM, WASHINGTON

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

PROJ. NO.	DWN. BY:	CHK. BY:	DSN. BY:	ACAD FILE:	APP. BY:
04220001.12	GDB	AED	GDB	C2	KQL

DATE: DECEMBER 2020

SCALE: AS SHOWN

DRAWING NO. C2

SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-264

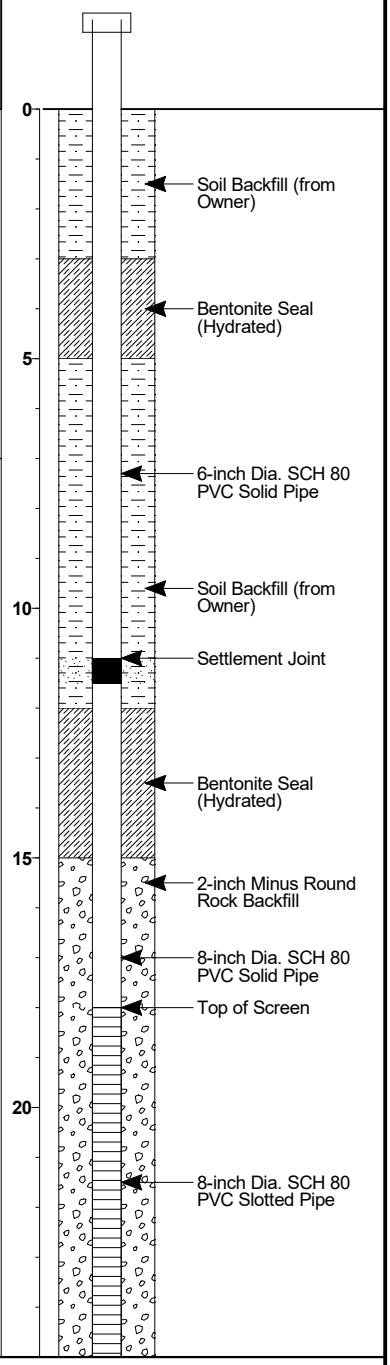
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-949. Drawing ID: 2020-03. 5 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-black soil. Dry.
3	10					REFUSE		Brown-black soil with refuse. Dry. 85 °F.
6	20					REFUSE		Brown-black refuse. 104 °F.

Completion Detail



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

Date Started: **9/14/20**
Date Ended: **9/14/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**
Time Started: **10:30**
Time Ended: **15:30**
Total Depth: **128.0 ft.**

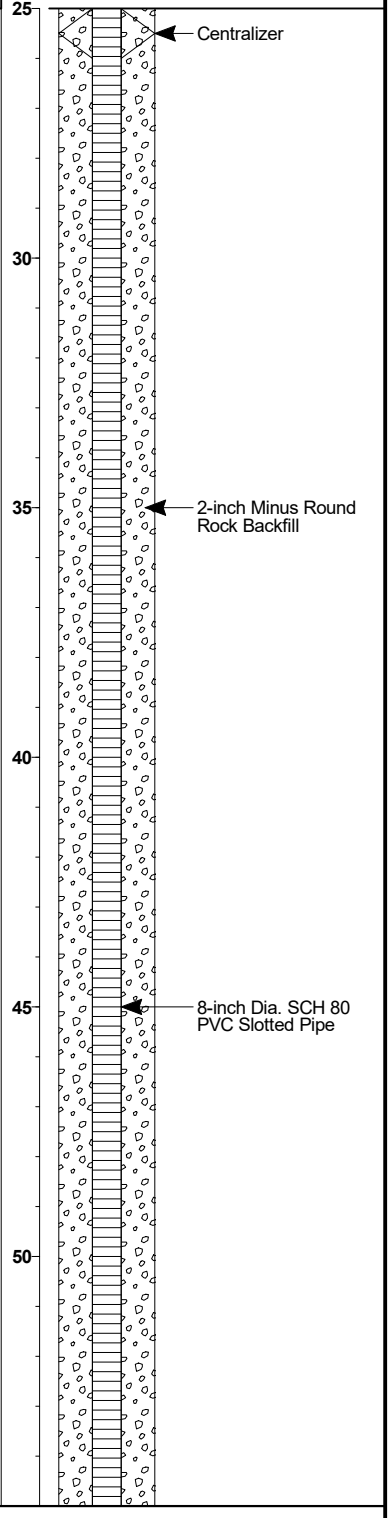
STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25					REFUSE		Brown-black refuse. Dry. 113 °F.
9	30							
10								
	35							
11						REFUSE		Brown-black refuse. Dry to moist. 111 °F.
12	40							
13								
14	45							
15						REFUSE		Brown-black refuse. Dry to moist. 111 °F.
	50							
16								
	55							

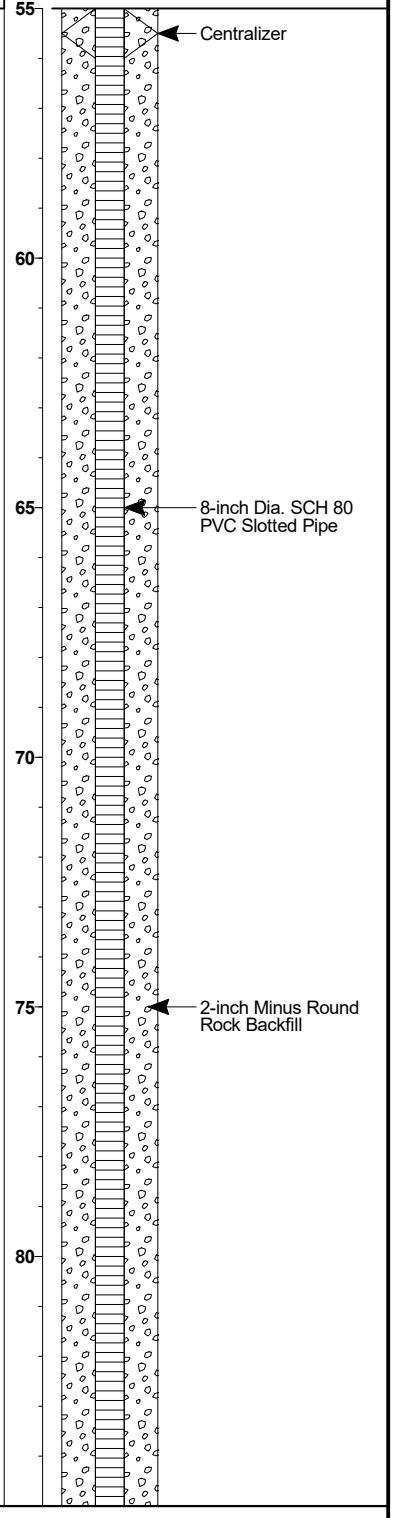
Completion Detail



LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55					REFUSE		Brown-black refuse. Moist. 124 °F.
18	60							
19								
20	65							
21								
22	70					REFUSE		Brown-black refuse. Moist. 119 °F.
23	75					REFUSE		Brown-black refuse. Moist. 114 °F.
24								
25	80					REFUSE		
						REFUSE		Brown-black refuse. Moist. 119 °F.
	85							



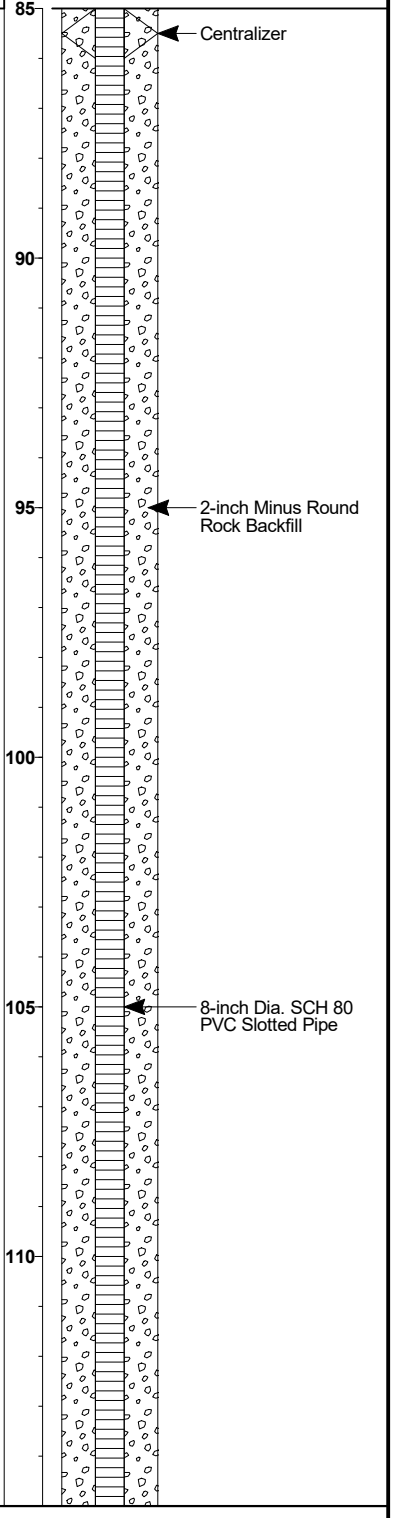
Completion Detail

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
26	85							
27								
	90							
28						REFUSE		Black refuse. Moist. 119 °F.
29	95							
30								
	100					REFUSE		Black refuse. Moist. 119 °F.
31								
32	105							
33								
	110					REFUSE		Black refuse. Moist to wet. 115 °F.
34						REFUSE		Black refuse. Wet to saturated. 117 °F.
35	115							



Completion Detail

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

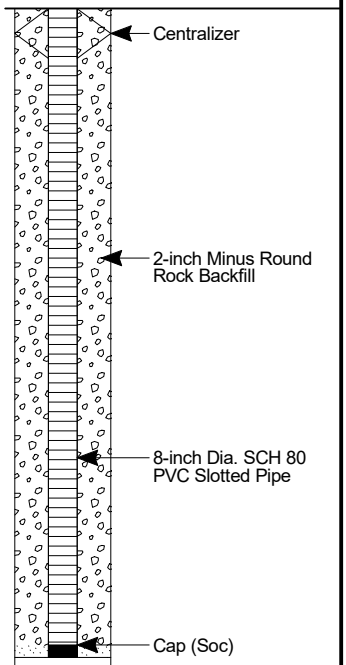
BORING NUMBER: WE-264

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	115							
	36							
	120					REFUSE		Black refuse. Saturated. 120 °F.
	37							
	38							
	125					REFUSE		Black sludge/liquid refuse. Saturated. 118 °F.
	39							
						REFUSE		Black refuse. Wet. 129 °F. End of boring.
	130							
	40							
	41							
	135							
	42							
	140							
	43							
	44							
	145							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-265

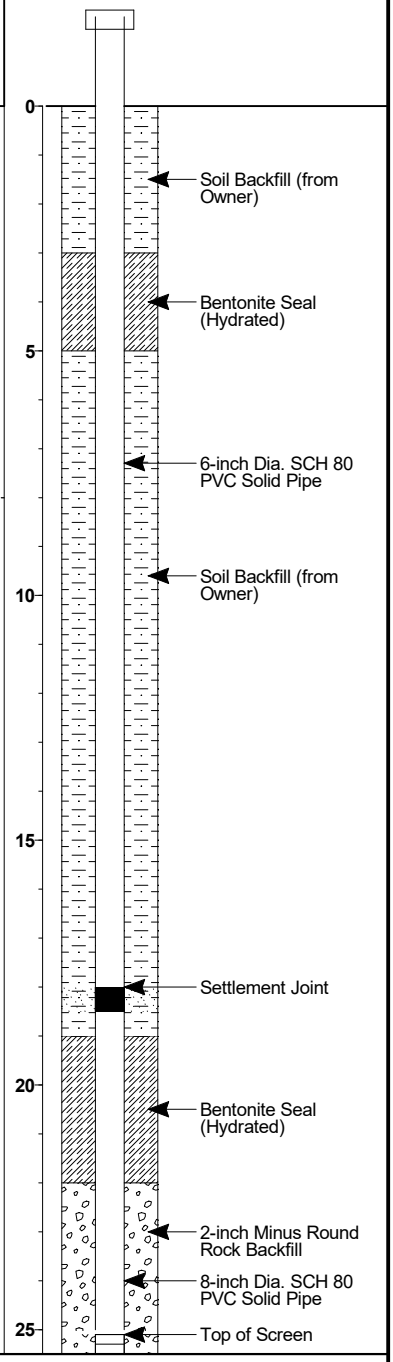
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-946. Drawing ID: 2020-04. 5 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.
						REFUSE		Brown-black refuse. Dry.
						REFUSE		Black-brown refuse. Moist. 79 °F.

Completion Detail



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

Date Started: **9/16/20**
Date Ended: **9/17/20**
Time Started: **12:40**
Boring Diameter: **36-inch**
Total Depth: **98.0 ft.**
Well Diameter: **8-inch**

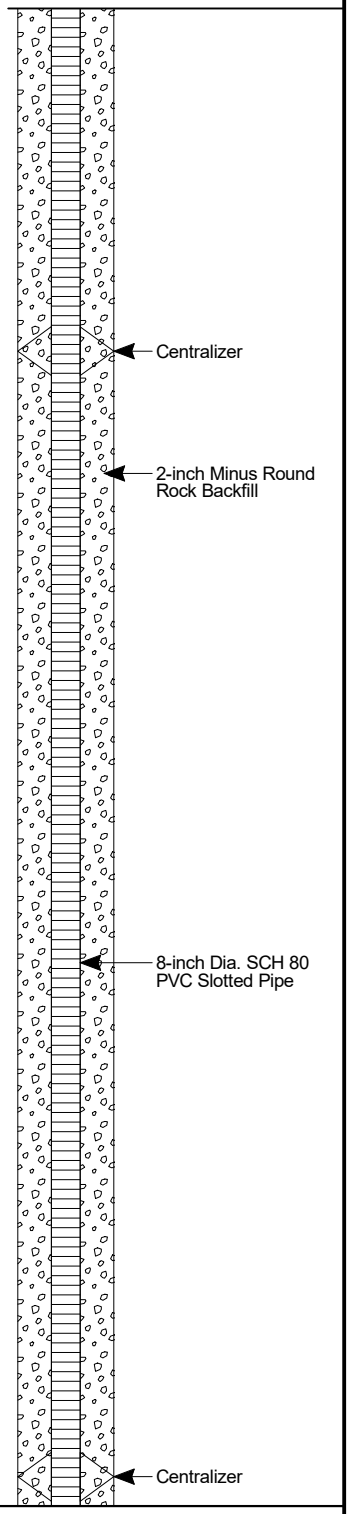
STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	30					REFUSE		Black-brown refuse. Moist. 102 °F.
9								
10								
11	35							
12								
13	40					REFUSE		Black-brown refuse. Moist. 112 °F.
14								
15	45							
16	50					REFUSE		Black-brown refuse. Moist. 128 °F.
17								
	55							

Completion Detail



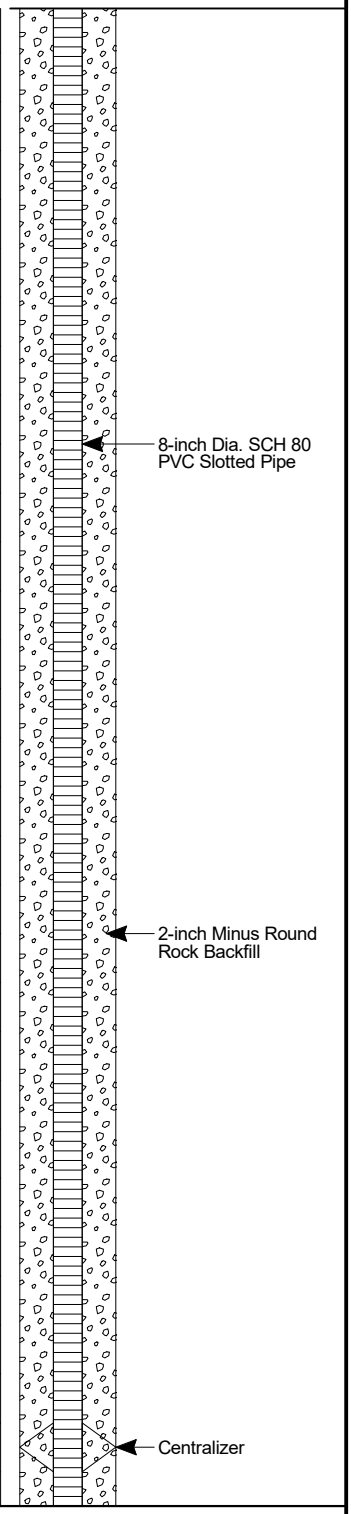
STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
18	60					REFUSE		Black-brown refuse. Moist. 128 °F.
19								
20	65					REFUSE		Black-brown refuse. Moist. 132 °F.
21								
22	70							
23	75					REFUSE		Black-brown refuse. Moist. 128 °F.
24								
25	80							
26	85							

Completion Detail



SCS ENGINEERS

BORING LOG

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

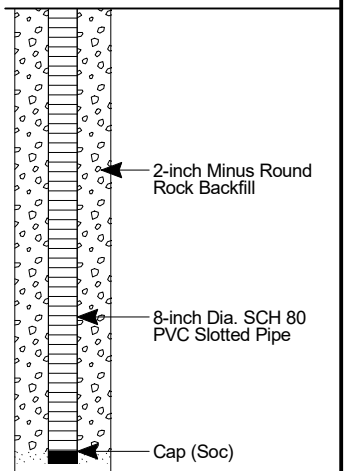
BORING NUMBER: WE-265

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
27	90					REFUSE		Black-brown refuse. Saturated. 154 °F.
28								
29	95					REFUSE		Black-brown refuse. Saturated. 141 °F.
30						REFUSE		Black-brown refuse. Saturated. 140 °F. End of boring.
31	100							
32	105							
33								
34	110							
35	115							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-266

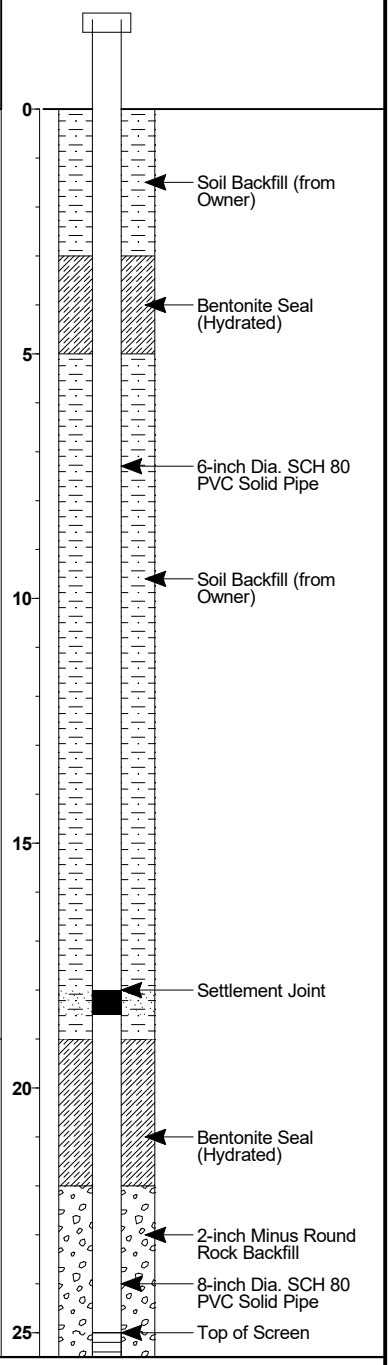
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-945. Drawing ID: 2020-05. 5 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		Dark brown soil. Dry.
1	5							
2								
3	10							
4								
	15							
5								
6	20					REFUSE		Brown-black refuse. Dry.
7								
	25							

Completion Detail



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

Date Started: **9/17/20**
Date Ended: **9/17/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

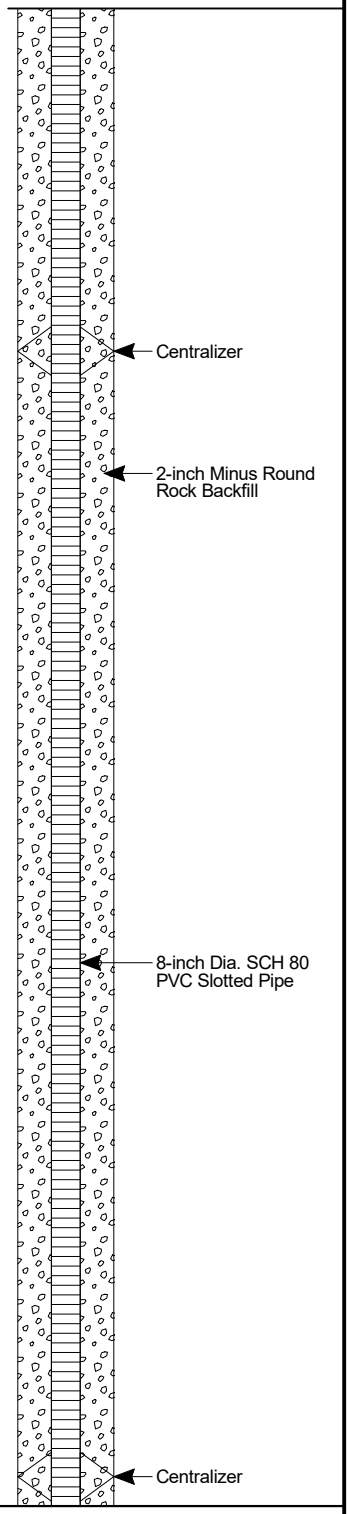
Time Started: **08:12**
Time Ended: **12:20**
Total Depth: **130.0 ft.**

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8								
9	30					REFUSE		Black-brown refuse. Moist. 88 °F.
10								
11	35							
12								
13	40					REFUSE		Black-brown refuse. Moist. 101 °F.
14								
15	45							
16	50					REFUSE		Black-brown refuse. Moist. 91 °F.
17						REFUSE		Brown wood debris. Moist.
	55							

Completion Detail

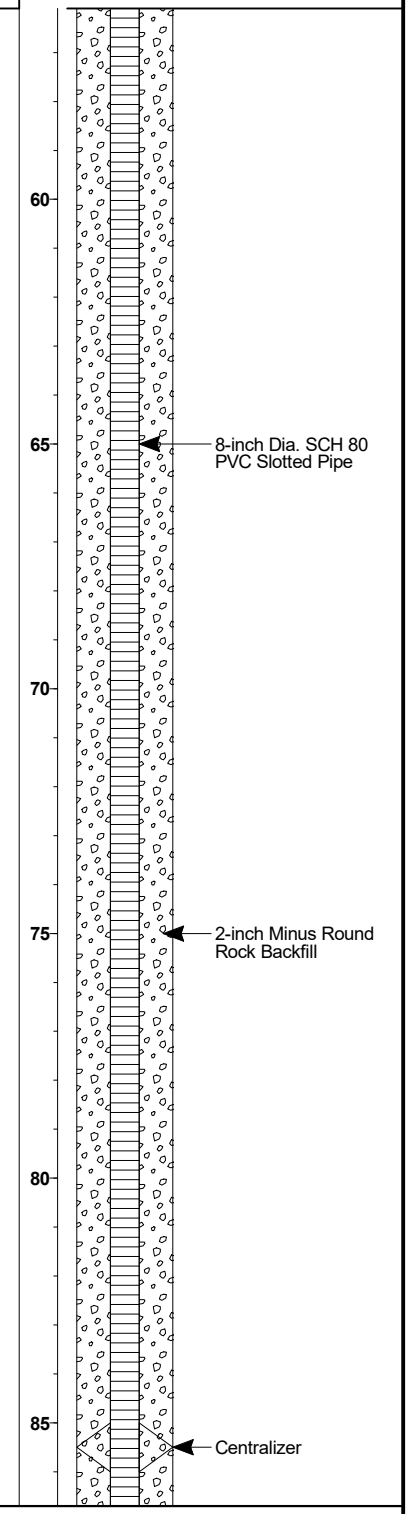


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
18	60							
19								
20	65							
21						REFUSE		Black-brown refuse. Moist. 113 °F.
	70							
22								
23	75							
24								
	80					REFUSE		Black-brown refuse. Moist. 118 °F.
25								
26	85							

Completion Detail

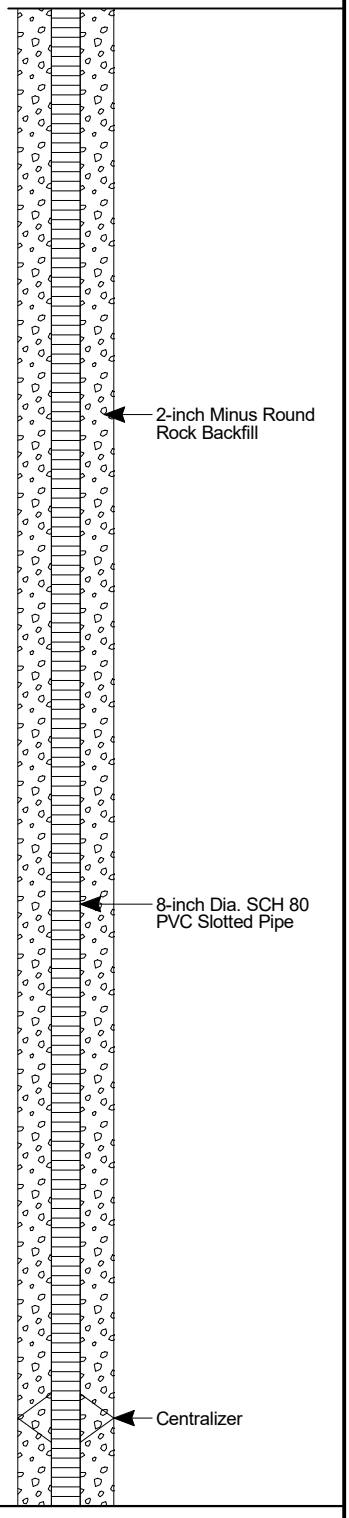


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
27	90					REFUSE		Black-brown refuse. Wet. 136 °F.
28								
29	95							
30								
31	100					REFUSE		Black-brown refuse. Saturated. 146 °F.
32	105					REFUSE		Black refuse. Saturated. 145 °F.
33								
34	110							
35	115							

Completion Detail

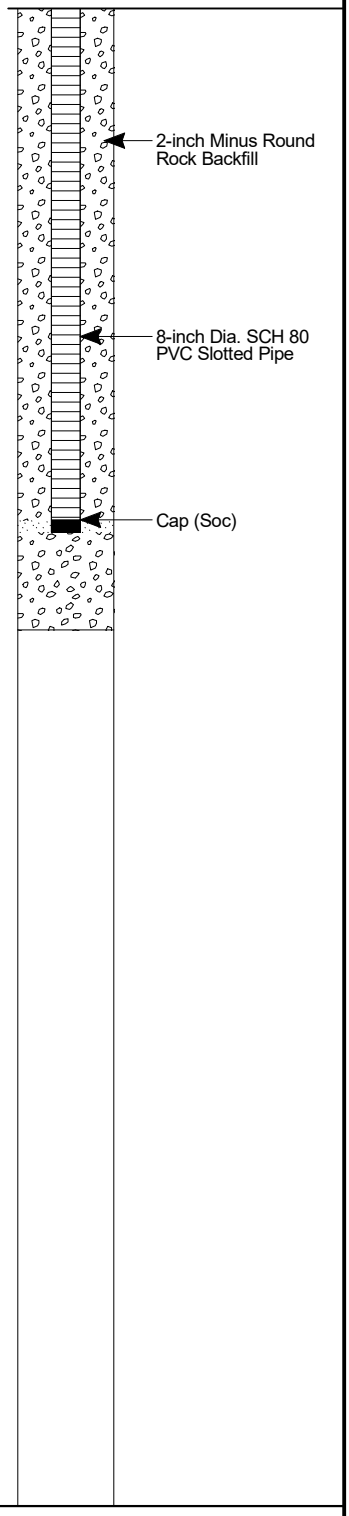


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
36	120					REFUSE		Black refuse. Saturated. 145 °F.
37								
38	125							
39								
130						REFUSE		Black refuse. Saturated. 143 °F. End of boring.
40								
41	135							
42								
140								
43								
44								
145								
45								

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-267

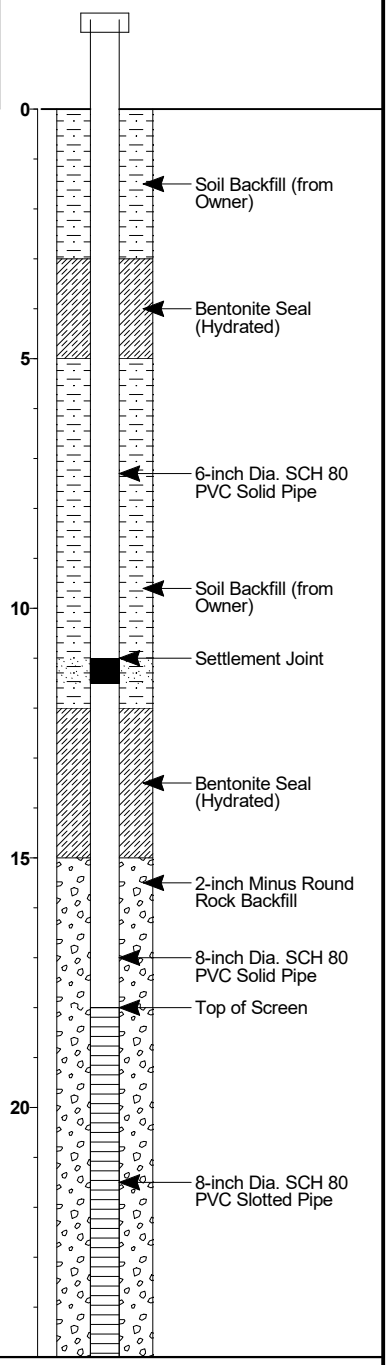
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-943. Drawing ID: 2020-09. 5 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.
						REFUSE		Brown-black refuse. Dry.
1	5							
2								
3	10							
4						REFUSE		Black-brown refuse. Moist. 96 °F.
5	15							
6	20							
7	25							

Completion Detail



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

Date Started: **9/18/20**
Date Ended: **9/18/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**
Time Started: **11:30**
Time Ended: **13:52**
Total Depth: **99.0 ft.**

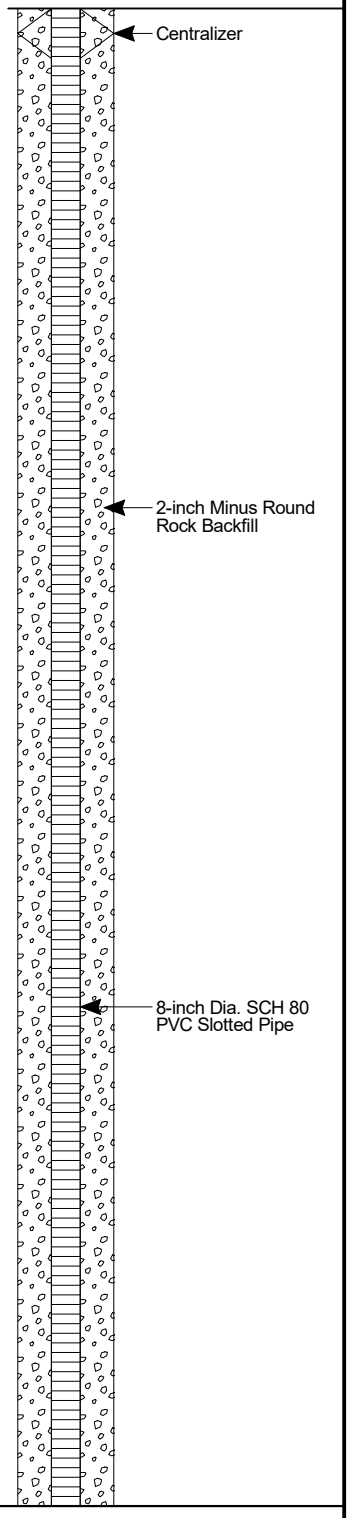
STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25							
9	30					REFUSE		Black-brown refuse. Moist. 118 °F.
10								
11	35							
12	40							
13								
14	45					REFUSE		Black-brown refuse. Moist. 115 °F.
15						REFUSE		Black-brown refuse. Moist. 112 °F.
16	50							
	55							

Completion Detail

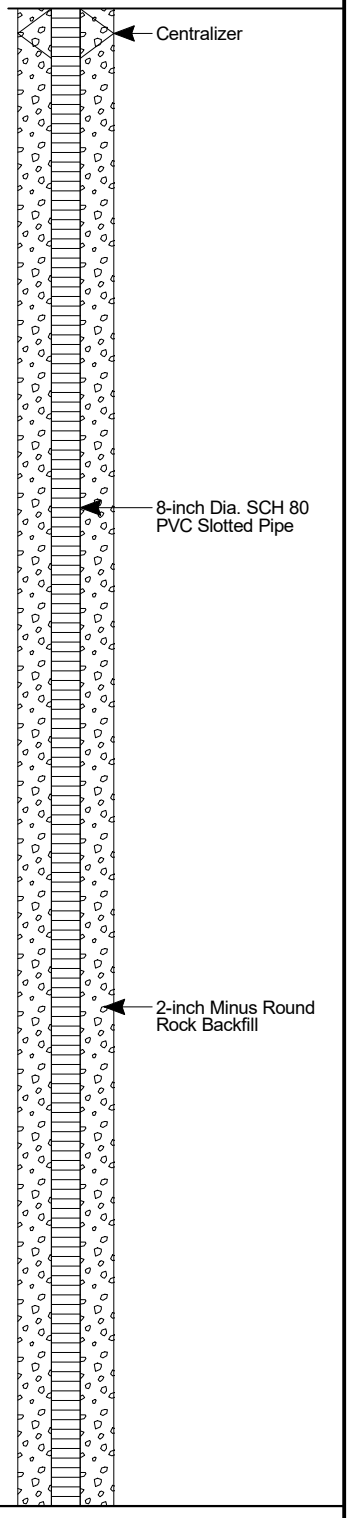


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55					REFUSE		Black-brown refuse. Wet. 119 °F.
18	60							
19						REFUSE		Black-brown refuse. Wet. 125 °F.
20	65							
21	70							
22						REFUSE		Black-brown refuse. Wet.
23	75							
24								
25	80							
						REFUSE		Black-brown refuse. Wet. 131 °F.
	85							

Completion Detail



SCS ENGINEERS

BORING LOG

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

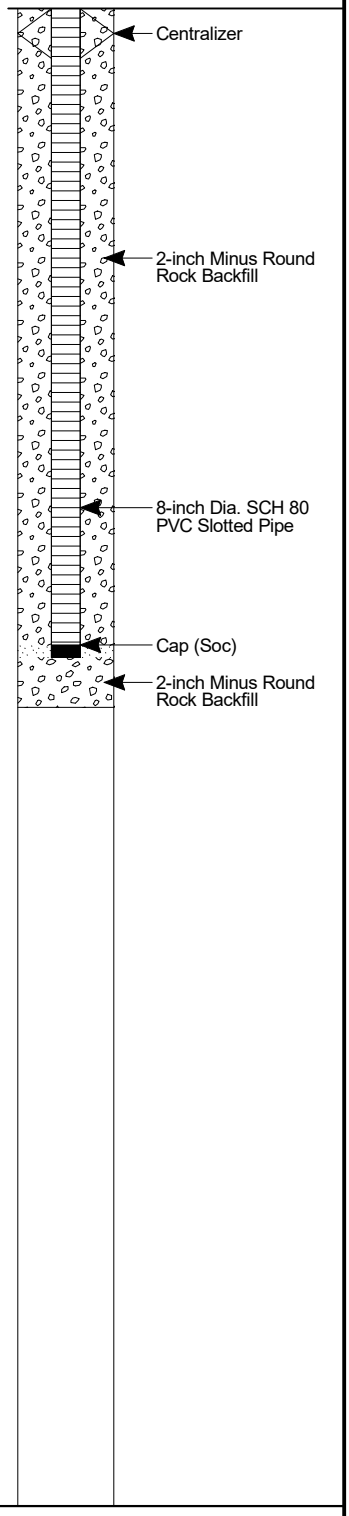
BORING NUMBER: WE-267

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
26	85					REFUSE		Black-brown refuse. Wet. 149 °F.
27								
	90							
28								
29	95							
30								
	100					REFUSE		Black-brown refuse. Wet. 112 °F. End of boring.
31								
32	105							
33								
	110							
34								
35	115							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-268

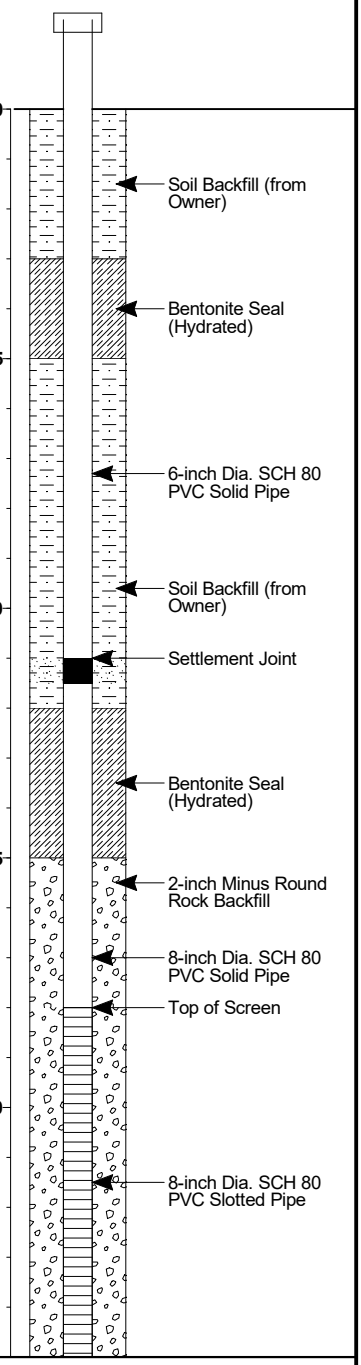
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-944. Drawing ID: 2020-10. 5 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	5							
2						REFUSE		Brown-black refuse. Dry.
3	10					REFUSE		Black-brown refuse. Moist. 75 °F.
4								
5	15							
6	20					REFUSE		Black-brown refuse. Moist. 86 °F.
7								
	25							

Completion Detail



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

Date Started: **9/18/20**
Date Ended: **9/18/20**
Time Started: **07:53**
Boring Diameter: **36-inch**
Total Depth: **100.0 ft.**
Well Diameter: **8-inch**

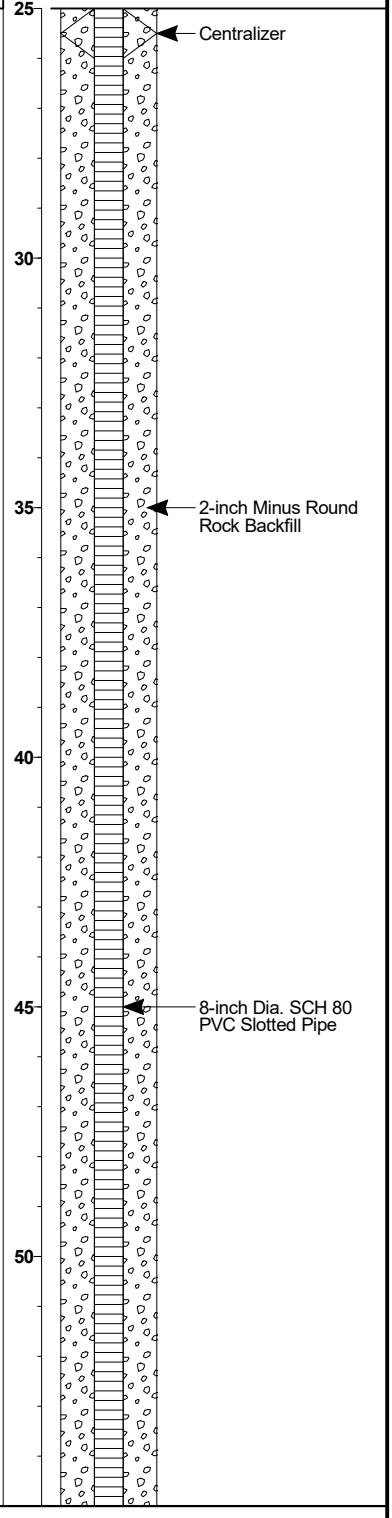
STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25							
9	30					REFUSE		Black-brown refuse. Moist. 125 °F.
10								
11	35							
12	40							
13								
14	45					REFUSE		Black-brown refuse. Moist. 104 °F.
15								
16	50							
	55							

Completion Detail

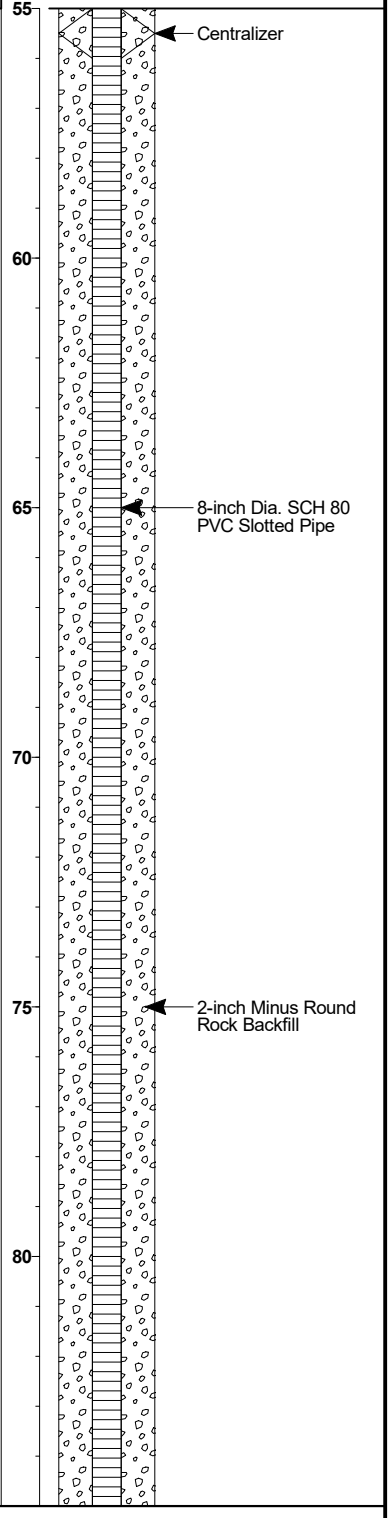


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55					REFUSE		Black-brown refuse. Moist. 107 °F.
18	60							
19								
20	65					REFUSE		Black-brown refuse. Moist. 119 °F.
21								
22	70							
23	75					REFUSE		Black-brown refuse. Wet. 106 °F.
24								
25	80							
	85							

Completion Detail



SCS ENGINEERS

BORING LOG

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

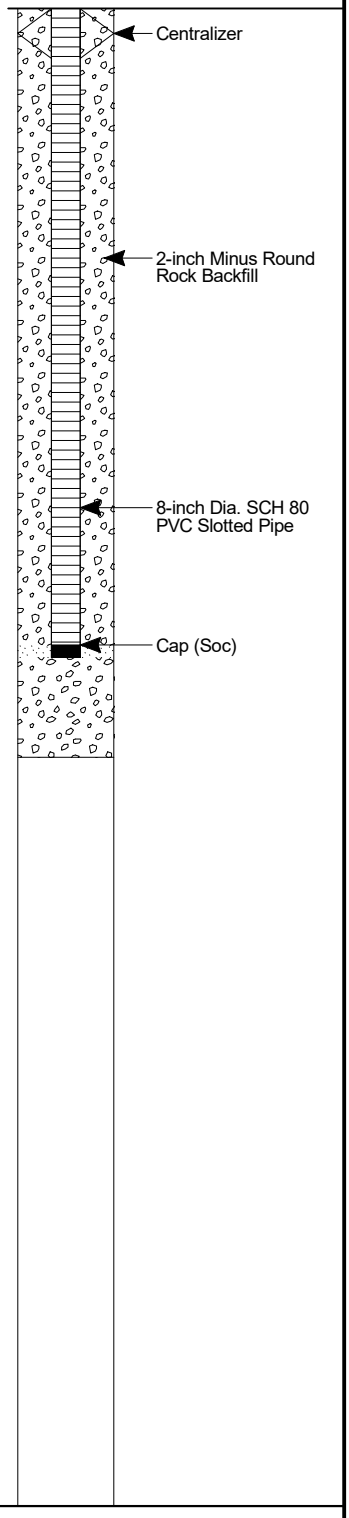
BORING NUMBER: WE-268

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
26	85							
27								
	90					REFUSE		Black refuse. Saturated. 120 °F.
28								
29	95					REFUSE		Black refuse. Saturated. 129 °F.
30								
	100					REFUSE		Black refuse. Saturated. 128 °F. End of boring.
31								
32	105							
33								
	110							
34								
35	115							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-269

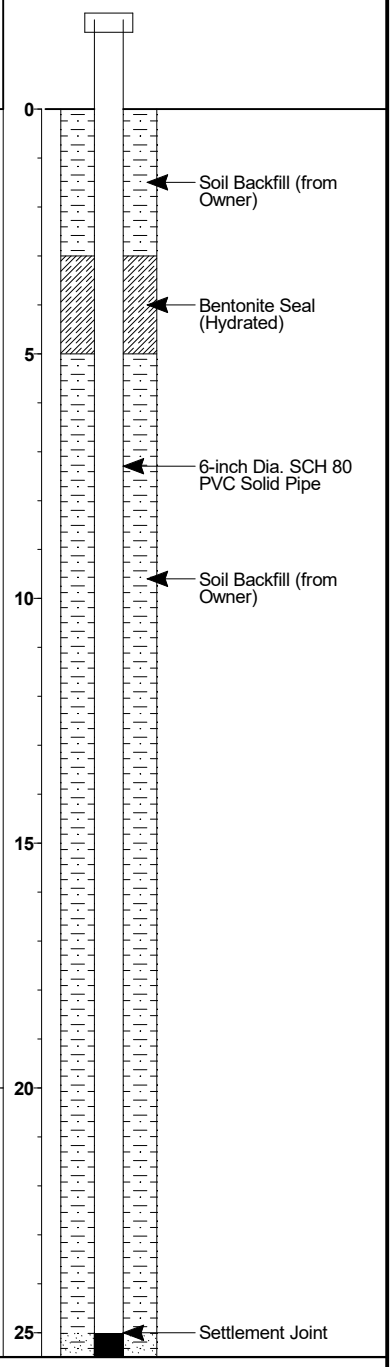
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-942. Drawing ID: 2020-12. 5 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.
20						REFUSE		Brown-black refuse. Dry.
						REFUSE		Black-brown refuse. Moist. 74 °F.

Completion Detail



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

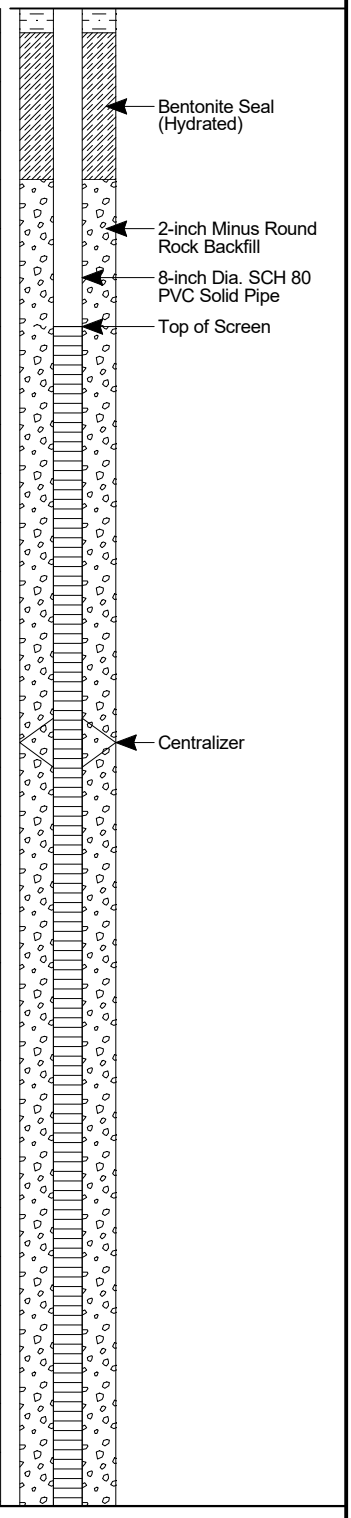
Date Started: **9/21/20**
Date Ended: **9/21/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**
Time Started: **07:37**
Time Ended: **10:12**
Total Depth: **101.0 ft.**

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8						REFUSE		Black-brown refuse. Moist. 100 °F.
9	30							
						REFUSE		Black-brown refuse. Moist. 116 °F.
10								
	35							
11								
12								
	40							
13								
	45							
14								
15						REFUSE		Black-brown refuse. Moist. 112 °F.
	50							
16								
	55							
17								

Completion Detail

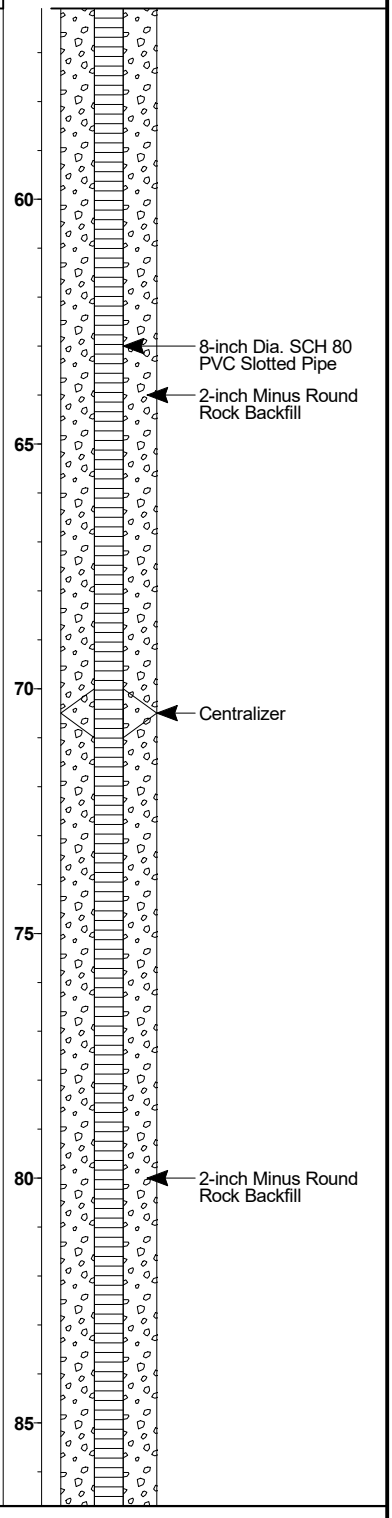


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
18	60					REFUSE		Black-brown refuse. Moist. 112 °F.
19								
20	65					REFUSE		Black-brown refuse. Moist. 91 °F.
21								
22	70							
23	75					REFUSE		Black-brown refuse. Wet. 109 °F.
24						REFUSE		Black-brown refuse. Wet. 119 °F.
25	80							
26	85							

Completion Detail

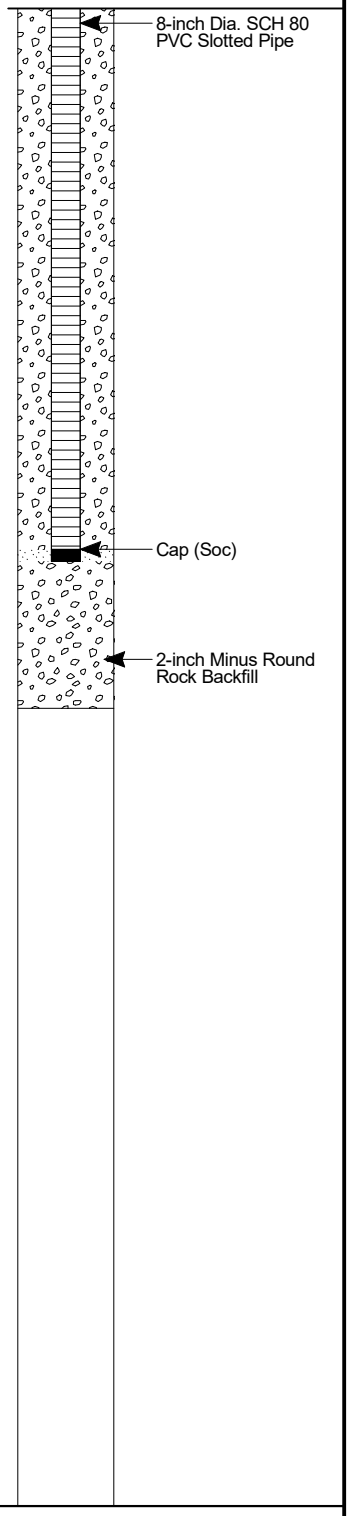


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
27	90					REFUSE		Black-brown refuse. Wet. 120 °F.
28								
29	95					REFUSE		Black-brown refuse. Saturated. 120 °F.
30								
31	100					REFUSE		Black-brown refuse. Saturated. 126 °F. End of boring.
32	105							
33								
34	110							
35	115							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-270

LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-948. Drawing ID: 2020-15. 5 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. Moist.	Soil Backfill (from Owner)
1	5								Bentonite Seal (Hydrated)
2									6-inch Dia. SCH 80 PVC Solid Pipe
						REFUSE		Brown refuse. Dry. 75 °F.	
3	10								Soil Backfill (from Owner)
									Settlement Joint
4									Bentonite Seal (Hydrated)
5	15					REFUSE		Brown refuse with soil. Dry.	2-inch Minus Round Rock Backfill
									8-inch Dia. SCH 80 PVC Solid Pipe
6	20								Top of Screen
7	25								8-inch Dia. SCH 80 PVC Slotted Pipe

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

Date Started: **9/15/20**
Date Ended: **9/15/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **08:00**
Time Ended: **12:30**
Total Depth: **131.0 ft.**

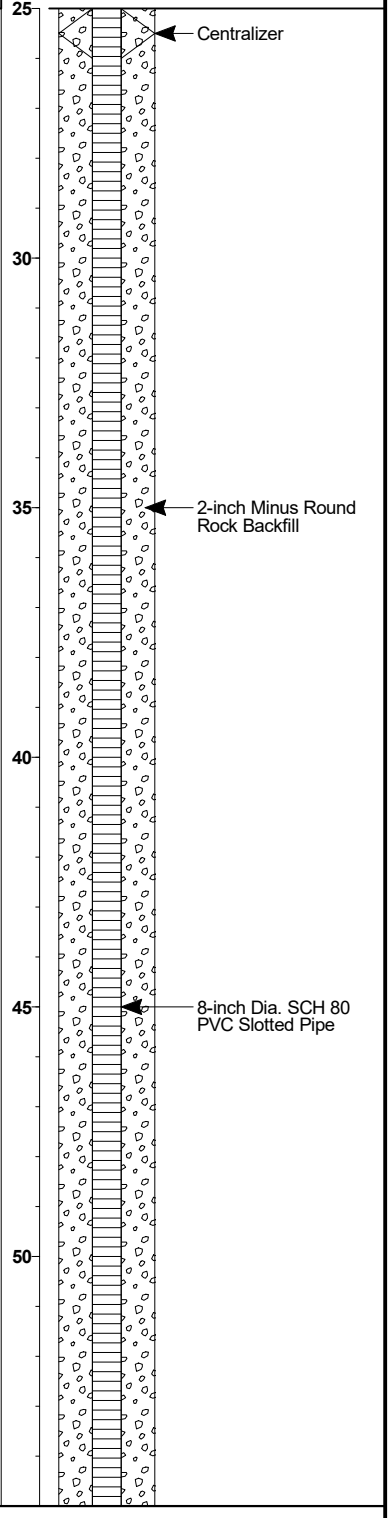
STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25					REFUSE		Brown refuse woth soil. Dry. 110 °F.
9	30							
10								
	35					REFUSE		Brown refuse woth soil. Dry. 122 °F.
11								
12	40							
13						REFUSE		Brown refuse. Dry to moist. 95 °F.
	45							
14								
15								
	50							
16								
	55							

Completion Detail

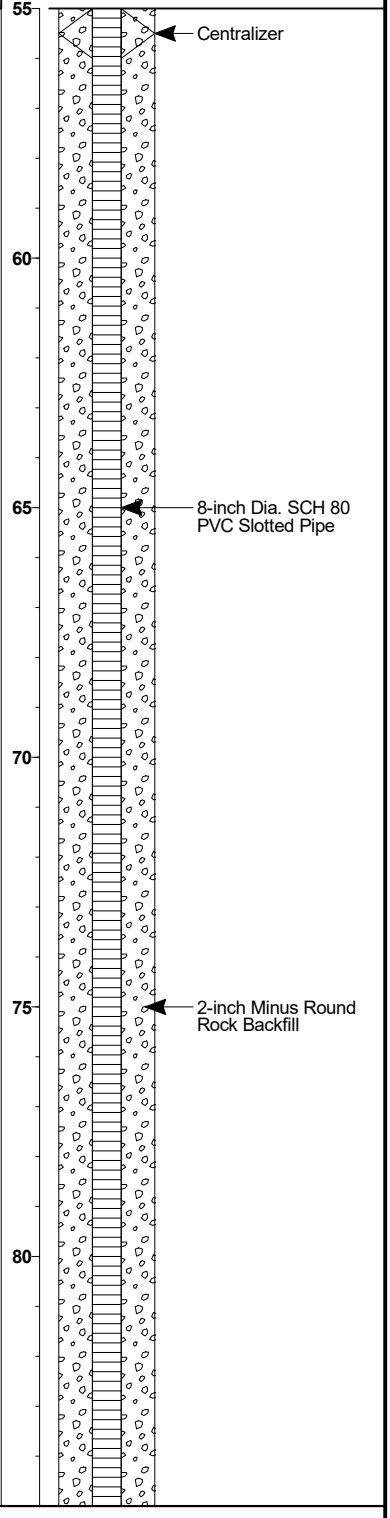


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55					REFUSE		Brown-black refuse. Dry to moist. 95 °F.
18	60							
19						REFUSE		Brown-black refuse. Dry to moist. 126 °F.
20	65							
21								
22	70					REFUSE		Brown-black refuse. Moist. 105 °F.
23	75							
24								
25	80					REFUSE		Brown-black refuse. Moist. 105 °F.
	85							

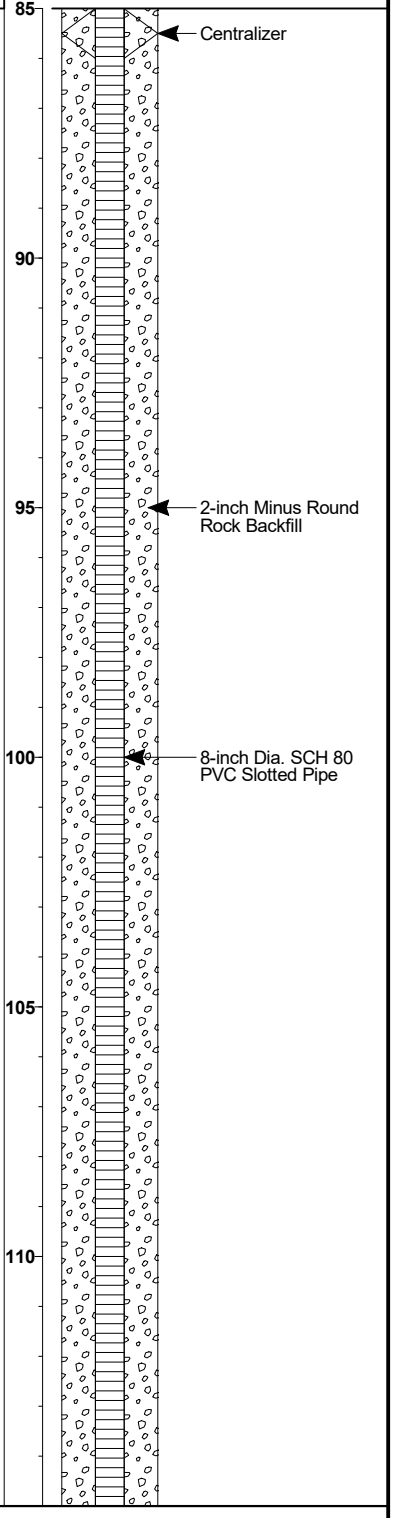
Completion Detail



LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
26	85							
27								
	90					REFUSE		Brown-black refuse. Moist to wet. 106 °F.
28								
29	95							
30								
	100					REFUSE		Brown-black refuse. Moist to wet. 95 °F.
31								
32	105							
33								
	110					REFUSE		Brown-black refuse. Wet. 113 °F.
34								
35	115							



SCS ENGINEERS

BORING LOG

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

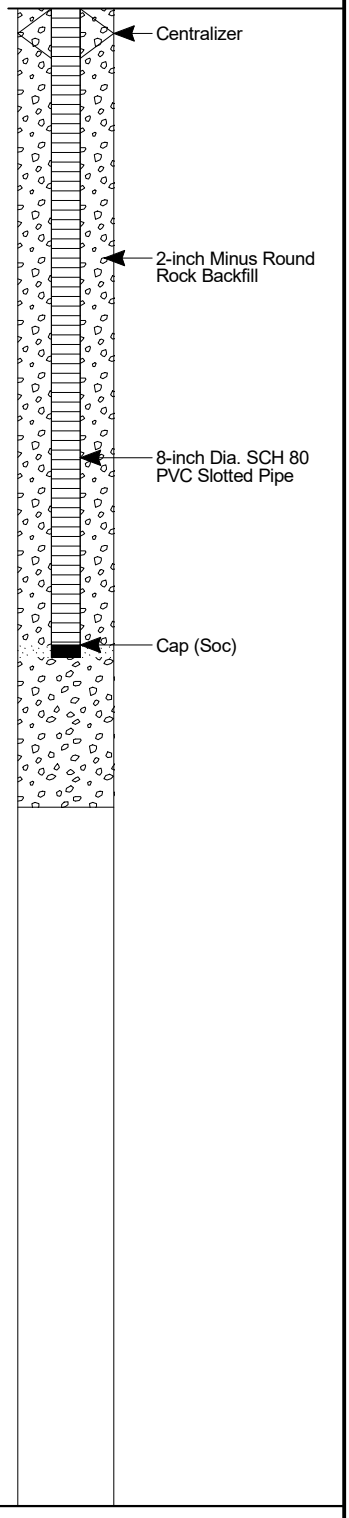
BORING NUMBER: WE-270

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	115							
	36					REFUSE		Brown-black refuse. Wet. 105 °F.
	120							
	37							
	38							
	125							
	39					REFUSE		Brown-black refuse. Wet. 120 °F.
	130							
	40					REFUSE		Brown-black refuse. Wet. 120 °F. End of boring.
	41							
	135							
	42							
	140							
	43							
	44							
	145							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-271

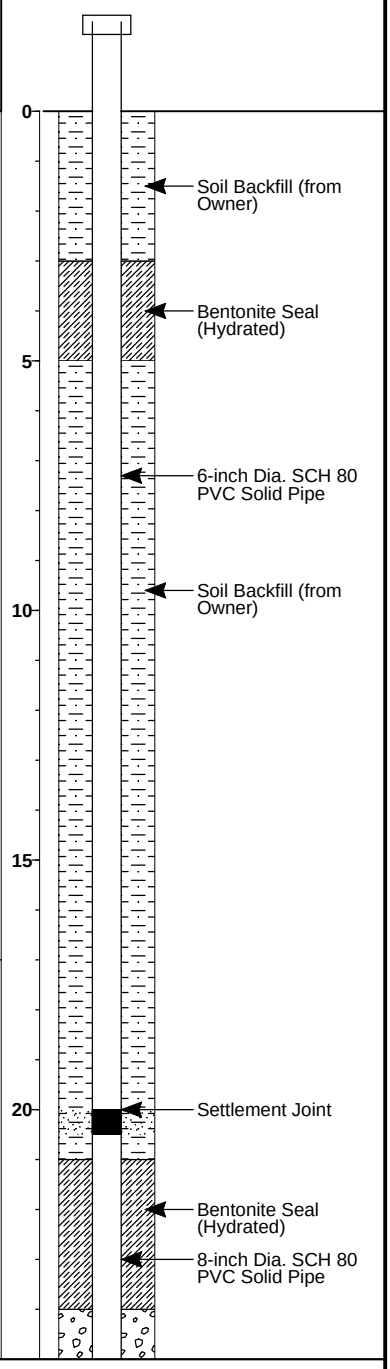
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-947. Drawing ID: 2020-16. 5 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	5							
2								
3	10							
4								
5	15					REFUSE		Brown-black refuse. Dry to moist.
6	20							
7								
	25							

Completion Detail



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

Date Started: **9/16/20**
Date Ended: **9/16/20**
Time Started: **07:30**
Boring Diameter: **36-inch**
Total Depth: **100.0 ft.**
Well Diameter: **8-inch**

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/23/20

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

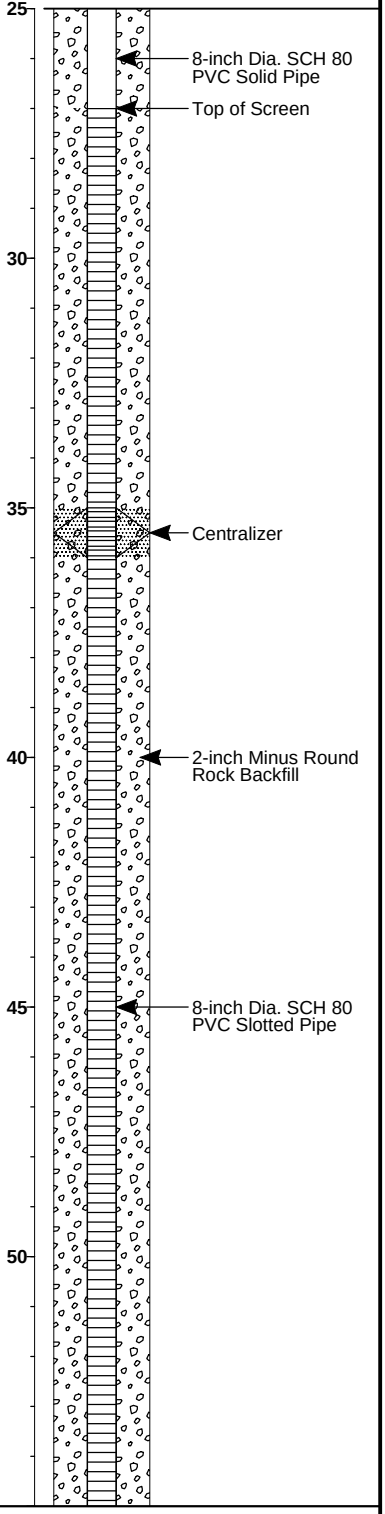
BORING NUMBER: WE-271

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25							
9	30					REFUSE		Black-brown refuse. Moist. 89 °F.
10								
11	35							
12	40							
13						REFUSE		Black-brown refuse. Moist. 97 °F.
14	45							
15						REFUSE		Black-brown refuse. Moist. 99 °F.
16	50							
						REFUSE		Black-brown refuse. Moist.
	55							

Completion Detail



SCS ENGINEERS

BORING LOG

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

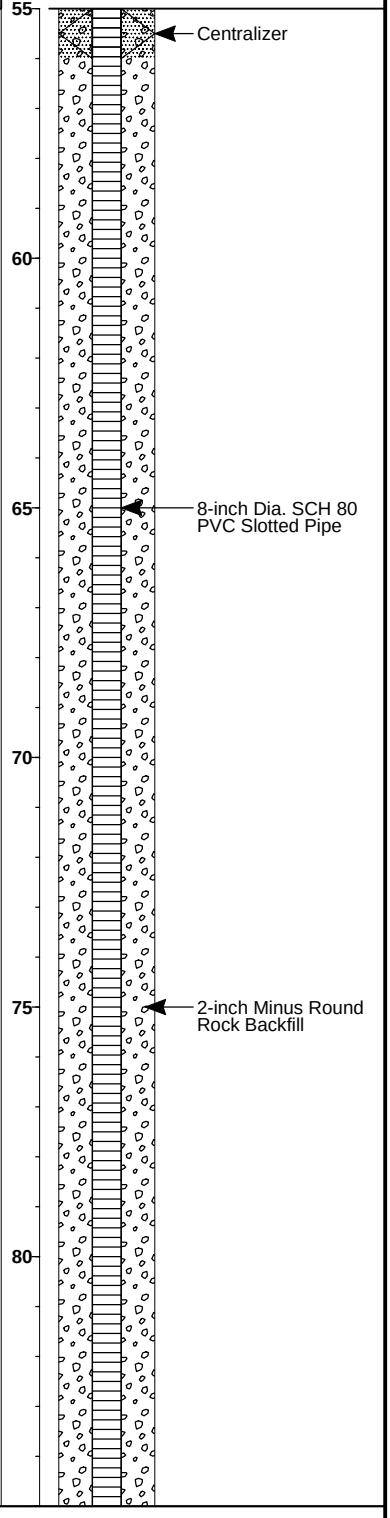
BORING NUMBER: WE-271

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55							
18	60					REFUSE		Black-brown refuse. Moist. 108 °F.
19								
20	65					REFUSE		Black-brown refuse. Wet. 123 °F.
21	70							
22						REFUSE		Black-brown refuse. Wet. 119 °F.
23	75							
24						REFUSE		Black-brown refuse. Wet. 110 °F.
25	80							
	85							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/23/20

SCS ENGINEERS

BORING LOG

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

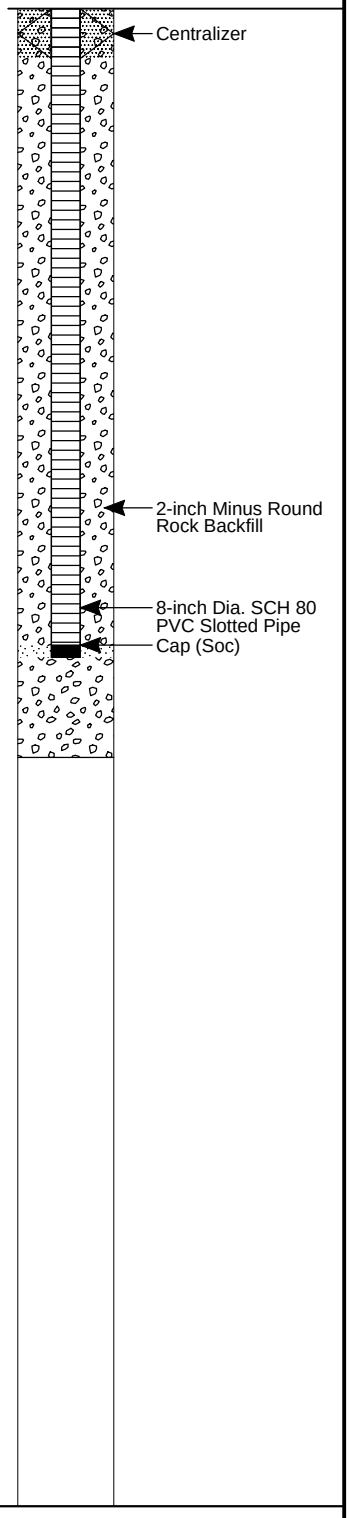
BORING NUMBER: WE-271

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
26	85					REFUSE		Black-brown refuse. Wet. 119 °F.
27								
	90					REFUSE		Black-brown refuse. Wet. 106 °F.
28								
29	95							
30								
	100					REFUSE		Black-brown refuse. Wet. 106 °F.
31								
32	105							
33								
	110							
34								
35	115							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-272

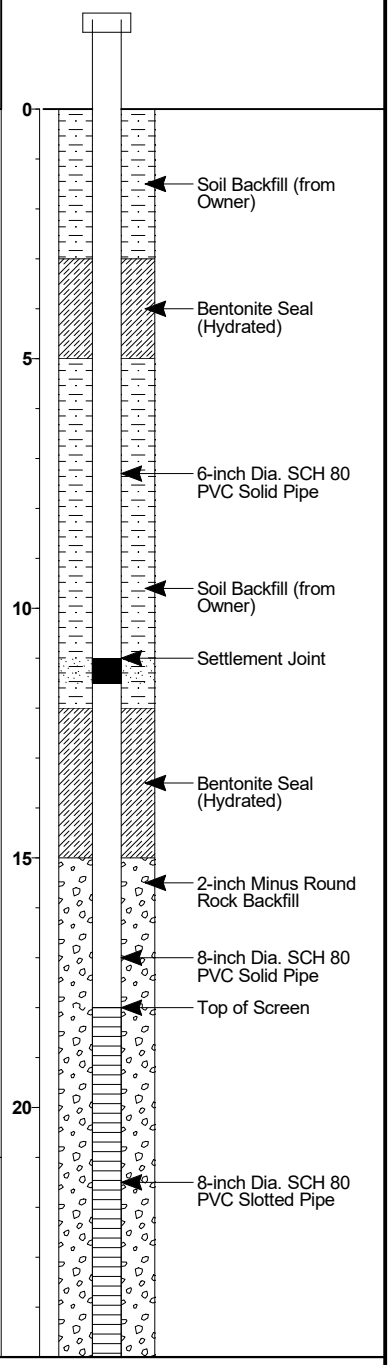
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-941. Drawing ID: 2020-17. 5 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	5							
2								
3	10							
4								
	15							
5						SM-GM		Dark brown soil. Moist.
6	20							
						REFUSE		Black-brown refuse. Moist. 78 °F.
7								
	25							

Completion Detail



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

Date Started: **9/22/20**
Date Ended: **9/22/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **07:40**
Time Ended: **11:23**
Total Depth: **130.0 ft.**

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

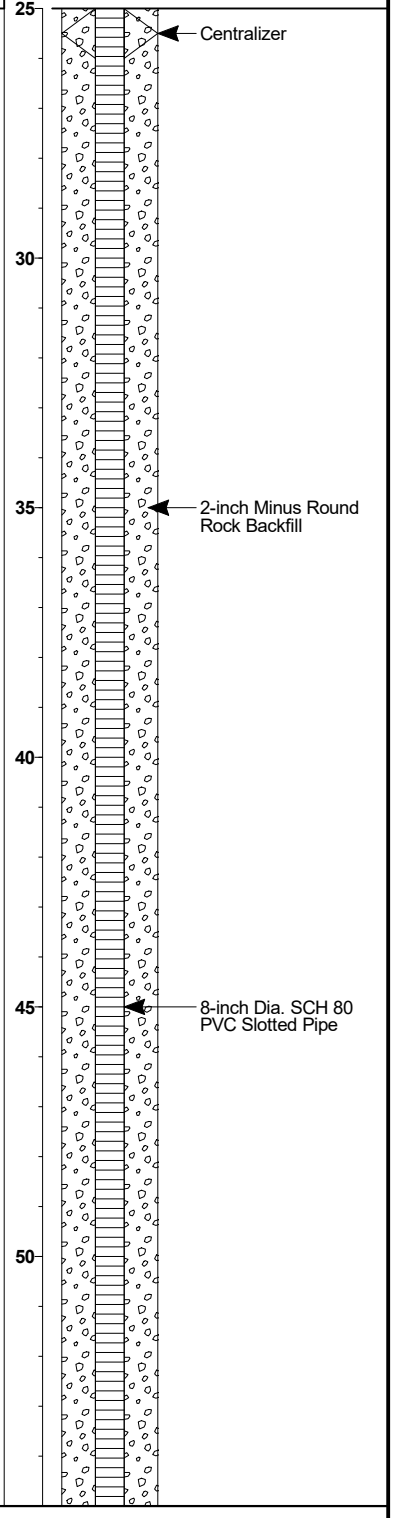
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005-1877

BORING NUMBER: WE-272

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

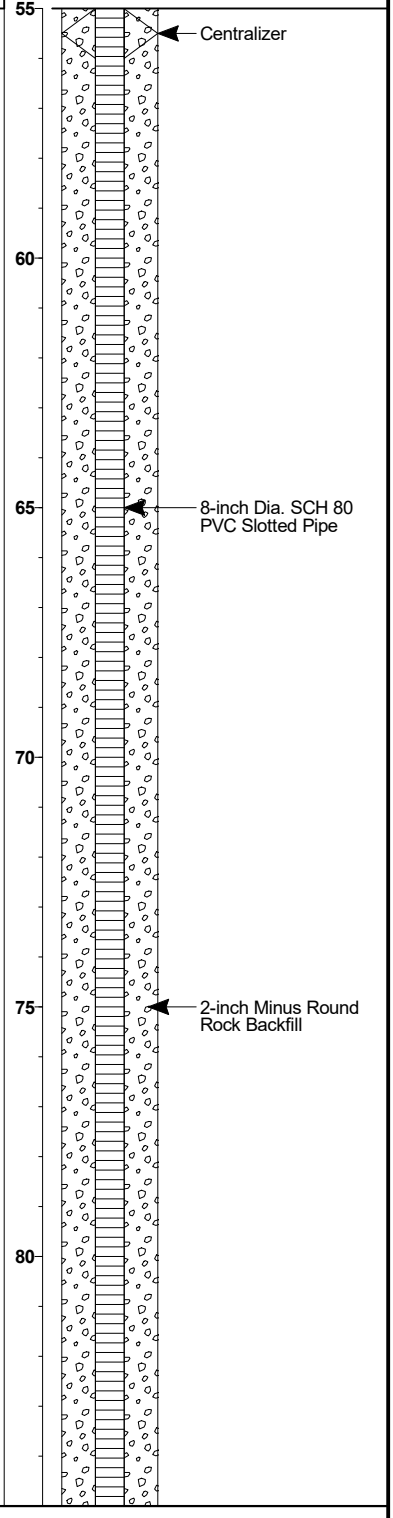
Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25							
9	30							
10								
11	35					REFUSE		Black-brown refuse. Moist. 106 °F.
12	40					REFUSE		Black-brown refuse. Moist. 101 °F.
13						REFUSE		Black-brown refuse. Wet. 114 °F.
14	45							
15								
16	50							
						REFUSE		Black-brown refuse. Wet. 111 °F.
	55							



LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55							
18	60							
19								
20	65					REFUSE		Black-brown refuse. Wet. 115 °F.
21								
22	70					REFUSE		Black-brown refuse. Wet. 115 °F.
23	75							
24								
25	80					REFUSE		Black-brown refuse. Saturated. 110 °F.
	85							



Completion Detail

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

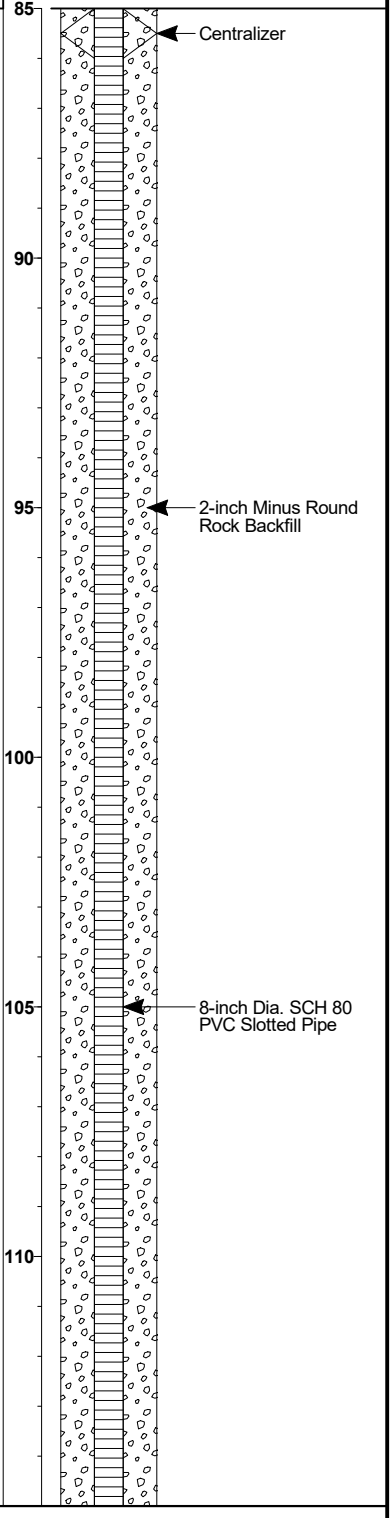
BORING NUMBER: WE-272

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
26	85							
27	90					REFUSE		Black-brown refuse. Saturated. 113 °F.
28								
29	95					REFUSE		Black-brown refuse. Saturated. 107 °F.
30								
31	100							
32	105							
33						REFUSE		Black refuse. Saturated. 114 °F.
34	110							
35	115							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

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

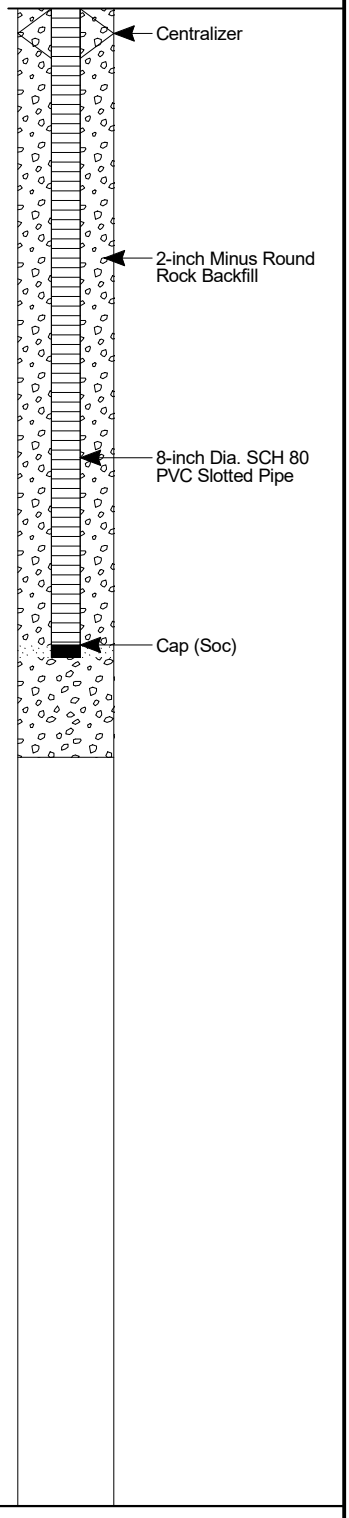
BORING NUMBER: WE-272

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
	115					REFUSE		Black refuse. Saturated. 122 °F.
	120					REFUSE		Black refuse. Saturated. 122 °F.
	125					REFUSE		Black refuse. Saturated. 121 °F. End of boring.
	130					REFUSE		
	135					REFUSE		
	140							
	145							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-273

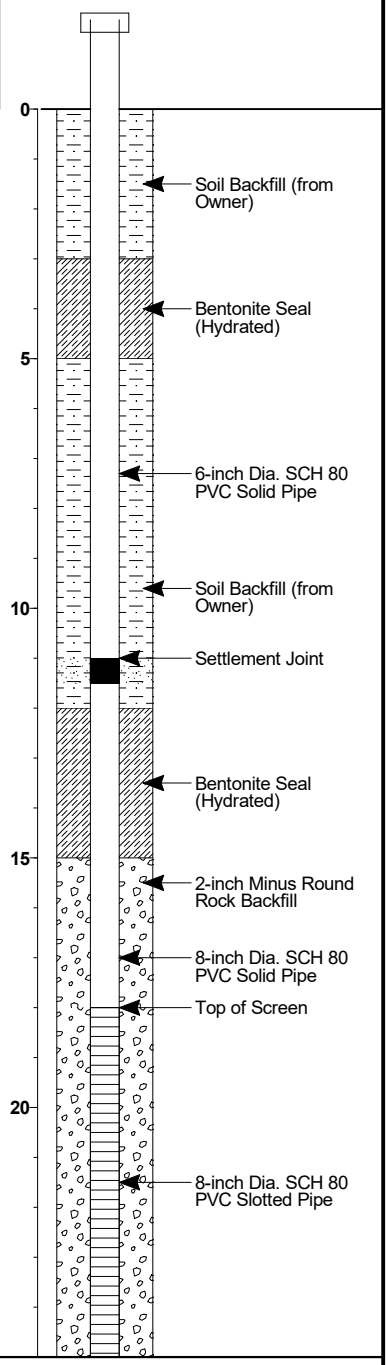
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-937. Drawing ID: 2020-33. 5 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		Dark brown soil. Dry.
1	5							
2								
3	10							
4								
	15							
5								
6	20					SM-GM		Dark brown soil. Dry.
7								
	25							

Completion Detail



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

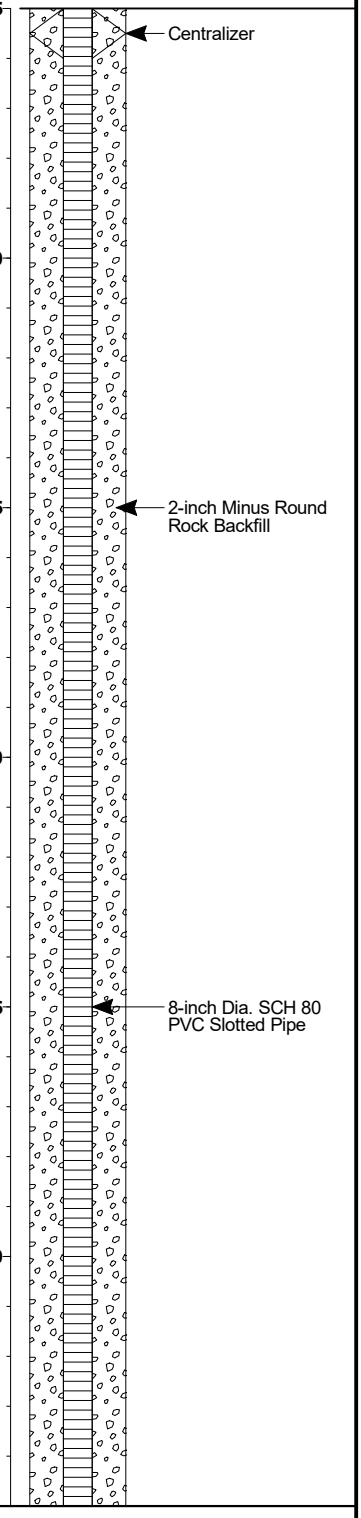
Date Started: **9/23/20**
Date Ended: **9/23/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**
Time Started: **11:58**
Time Ended: **14:20**
Total Depth: **103.0 ft.**

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25							
9	30							
10								
	35					REFUSE		Brown-black refuse. Dry. 84 °F.
11						REFUSE		Black-brown refuse. Moist. 97 °F.
12	40							
13								
14	45					REFUSE		Black-brown refuse. Moist. 105 °F.
15								
	50							
16								
	55							

Completion Detail

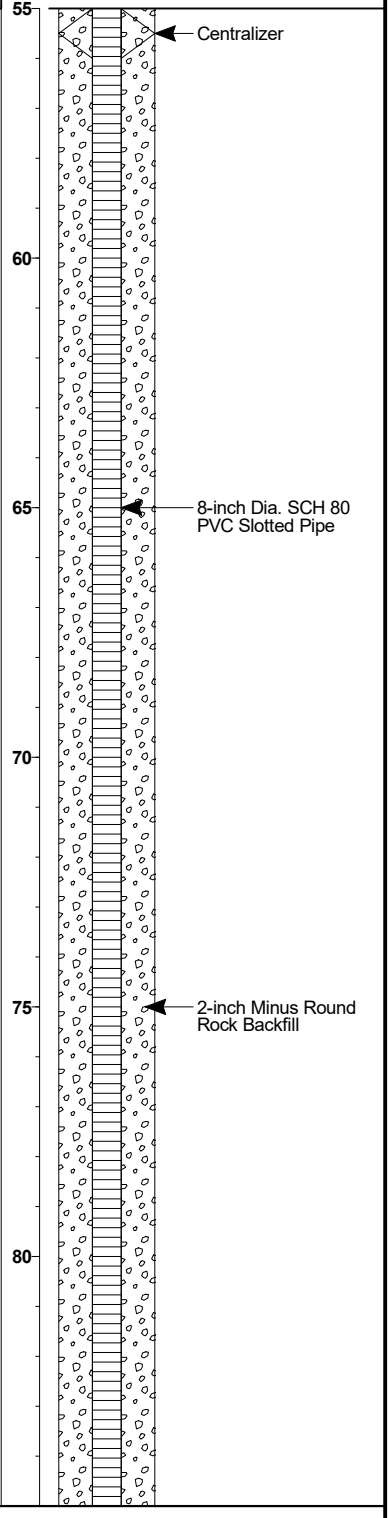


LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55							
18	60					REFUSE		Black-brown refuse. Moist. 115 °F.
19								
20	65							
21								
22	70					REFUSE		Black-brown refuse. Moist. 121 °F.
23	75							
24						REFUSE		Black-brown refuse. Moist. 115 °F.
25	80							
	85							

Completion Detail



SCS ENGINEERS

BORING LOG

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

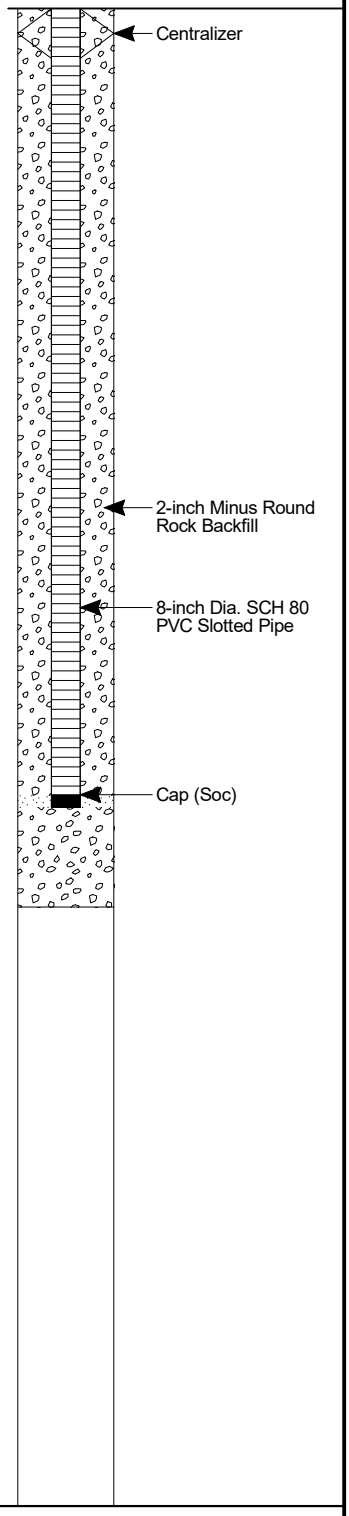
BORING NUMBER: WE-273

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
26	85							
27								
	90					REFUSE		Black-brown refuse. Moist. 121 °F.
28								
29	95							
30								
	100							
31						REFUSE		Black refuse. Wet. 106 °F. End of boring.
32	105							
33								
	110							
34								
35	115							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-274

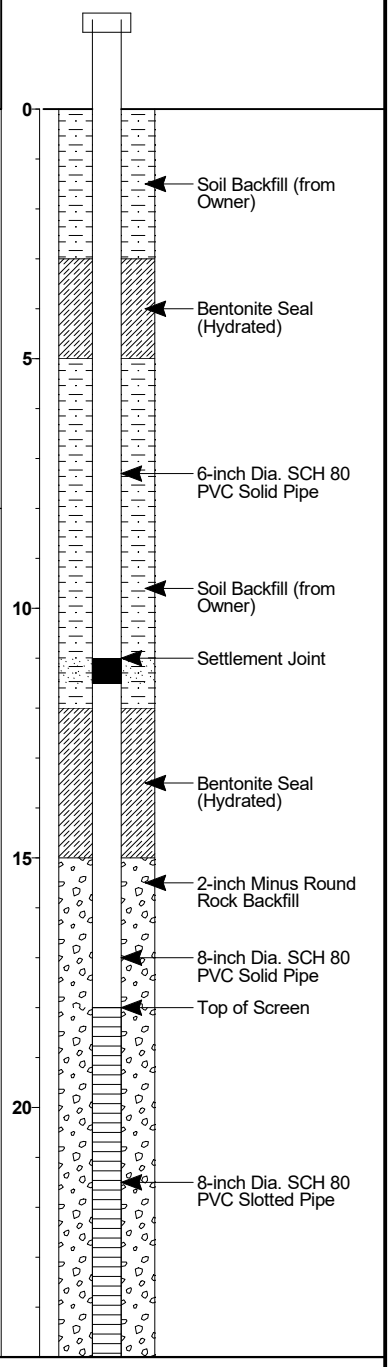
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-934. Drawing ID: 2020-32. 5 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.
						REFUSE		Brown-black refuse. Dry.
						REFUSE		Black-brown refuse. Moist. 98 °F.

Completion Detail



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

Date Started: **9/24/20**
Date Ended: **9/24/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**
Time Started: **07:45**
Time Ended: **09:45**
Total Depth: **93.0 ft.**

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

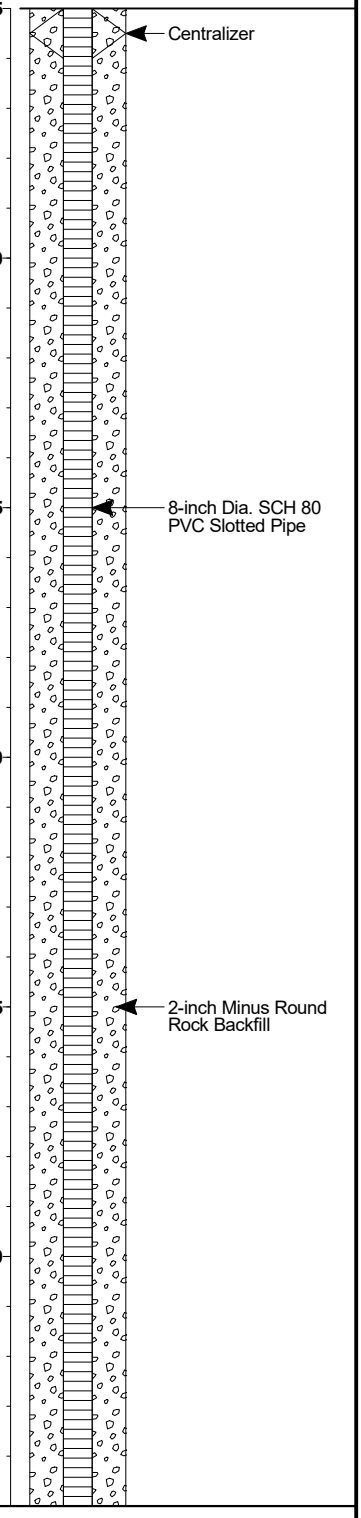
Depth		Sample Information							Completion Detail
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description	
8	25								25 — Centralizer
9	30								30
10						REFUSE		Dark brown soil. Moist. 85 °F.	
	35								35 — 2-inch Minus Round Rock Backfill
11									
12	40								40
13						REFUSE		Black-brown refuse. Moist. 84 °F.	
14	45								45 — 8-inch Dia. SCH 80 PVC Slotted Pipe
15									
	50								50
16						REFUSE		Black-brown refuse. Moist. 96 °F.	
	55								

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55					REFUSE		Black-brown refuse. Wet. 100 °F.
18	60							
19								
20	65							
21								
22	70					REFUSE		Black-brown refuse. Wet. 110 °F.
23	75							
24						REFUSE		Black-brown refuse. Wet. 120 °F.
25	80							
	85							

Completion Detail



SCS ENGINEERS

BORING LOG

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

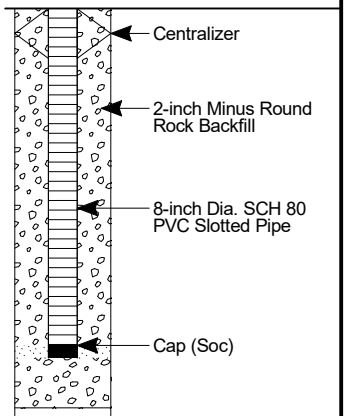
BORING NUMBER: WE-274

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
26	85					REFUSE		Black-brown refuse. Wet. 104 °F.
27	90							
28						REFUSE		Black-brown refuse. Wet. 111 °F. End of boring.
29	95							
30								
31	100							
32	105							
33								
34	110							
35	115							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-275

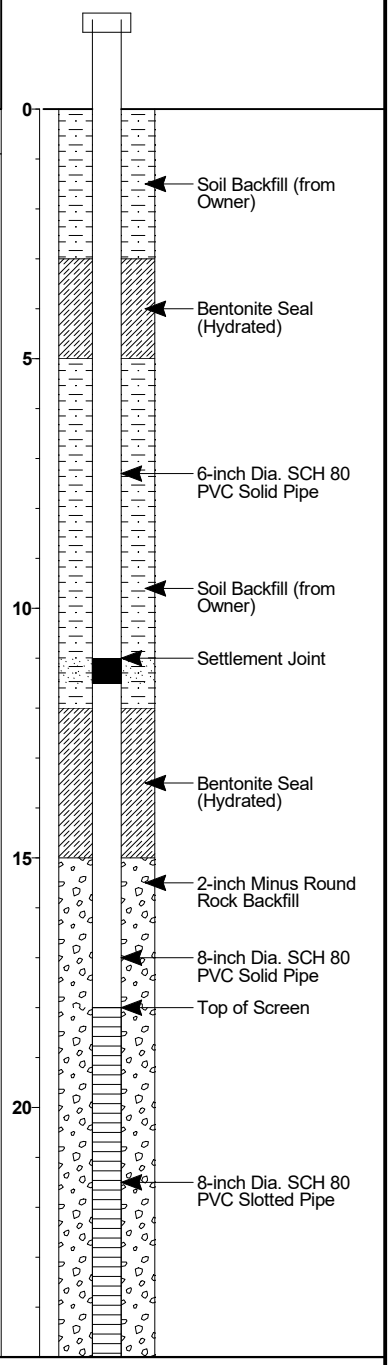
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-933. Drawing ID: 2020-31. 5 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.
						REFUSE		Brown-black refuse. Dry.
1								
	5							
2								
3	10							
4								
15						REFUSE		Black-brown refuse. Moist. 114 °F.
5								
6	20							
7								
25								

Completion Detail



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

Date Started: **9/24/20**
Date Ended: **9/24/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**
Time Started: **10:10**
Time Ended: **11:42**
Total Depth: **77.0 ft.**

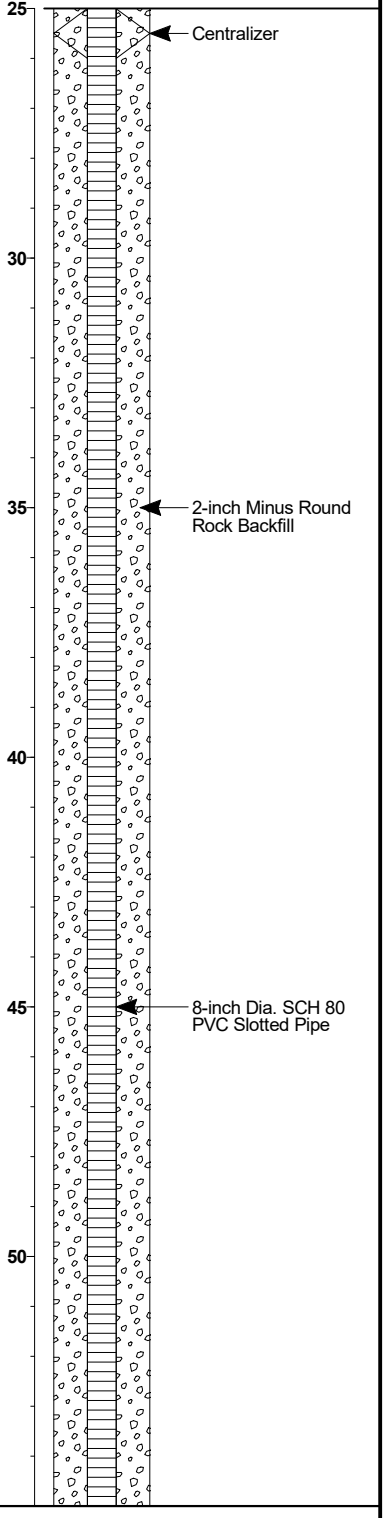
STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25					REFUSE		Black-brown refuse. Moist. 107 °F.
9	30							
10								
11	35					REFUSE		Black-brown refuse. Moist. 106 °F.
12	40							
13								
14	45					REFUSE		Black-brown refuse. Moist. 109 °F.
15	50							
16								
	55							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

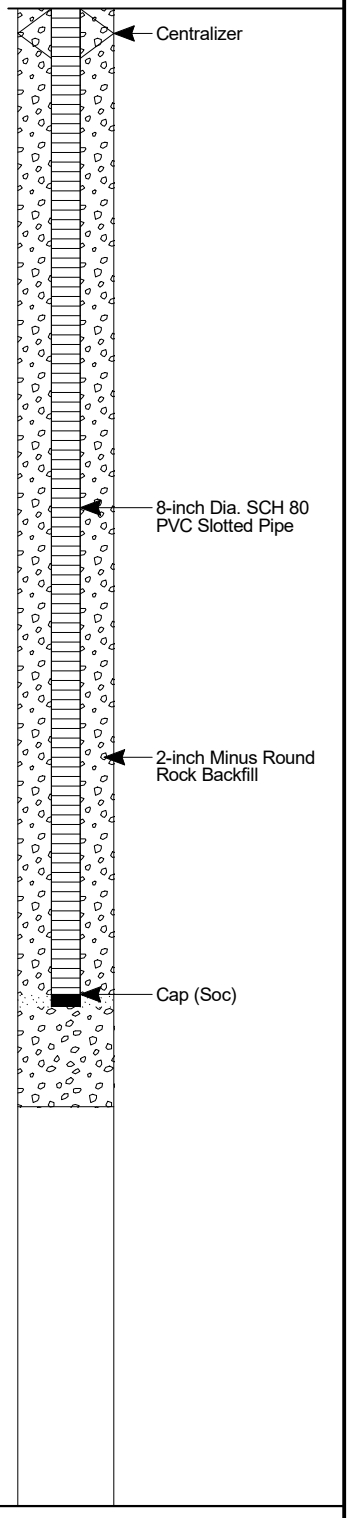
BORING NUMBER: WE-275

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
17	55					REFUSE		Black-brown refuse. Moist. 90 °F.
18	60					REFUSE		Black-brown refuse. Moist. 104 °F.
19								
20	65							
21								
22	70							
23	75					REFUSE		Black refuse. Wet. 99 °F. End of boring.
24								
25	80							
	85							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-276

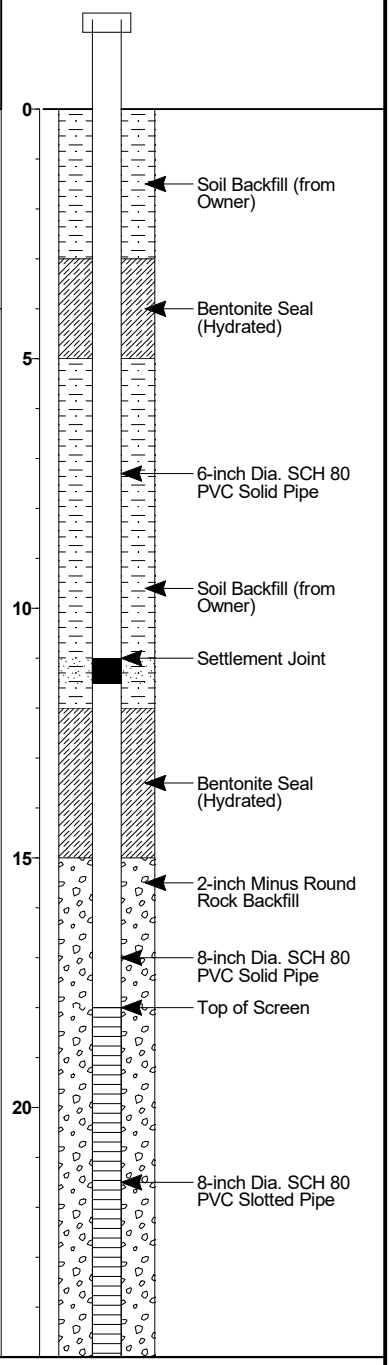
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-936. Drawing ID: 2020-30. 5 ft-bgs stickup.

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Description
0	0					SM-GM	Brown soil. Dry.
1							
	5					REFUSE	Brown-black refuse. Dry.
2						REFUSE	Black-brown refuse. Moist.
3	10						
						REFUSE	Black-brown refuse. Moist. 96 °F.
4							
	15						
5							
6	20						
						REFUSE	Black-brown refuse. Moist. 99 °F.
7							
	25						

Completion Detail



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

Date Started: **9/28/20**
Date Ended: **9/28/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**
Time Started: **08:20**
Time Ended: **09:30**
Total Depth: **49.0 ft.**

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

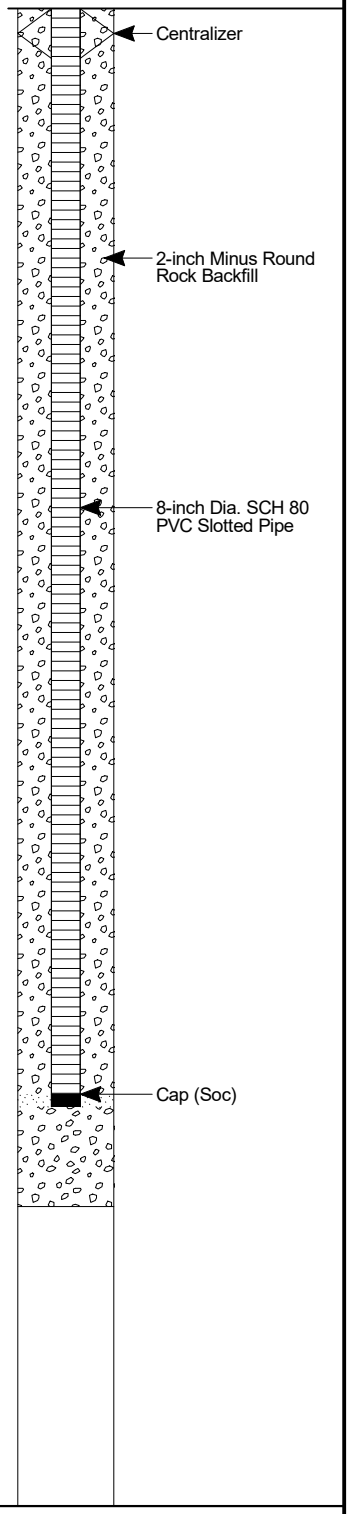
BORING NUMBER: WE-276

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25							
9	30					REFUSE		Black-brown refuse. Moist. 86 °F.
10								
11	35					REFUSE		Black-brown refuse. Moist. 84 °F.
12	40							
13								
14	45					REFUSE		Black-brown refuse. Moist. 91 °F.
15	50					REFUSE		Black-brown refuse. Moist. 101 °F. End of boring.
16								
	55							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-277

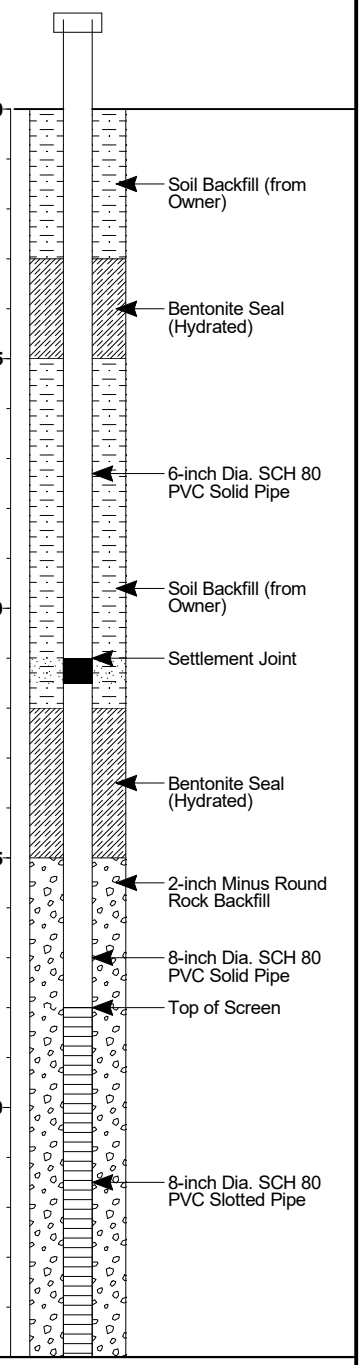
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-935. Drawing ID: 2020-29. 5 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.
						REFUSE		Brown-black refuse. Dry.
3	10					REFUSE		Black-brown refuse. Moist. 91 °F.
6	20							
7	25							

Completion Detail



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

Date Started: **9/28/20**
Date Ended: **9/28/20**
Boring Diameter: **36-inch**
Well Diameter: **8-inch**

Time Started: **10:24**
Time Ended: **11:20**
Total Depth: **41.0 ft.**

SCS ENGINEERS

BORING LOG

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

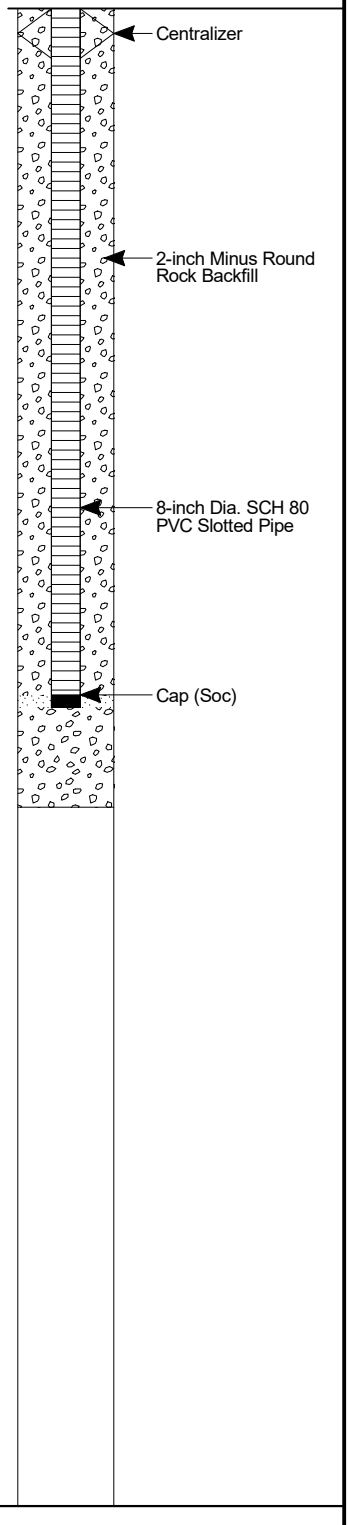
BORING NUMBER: WE-277

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25					REFUSE		Black-brown refuse. Moist. 106 °F.
9	30							
10								
11	35					REFUSE		Black-brown refuse. Moist. 113 °F.
						REFUSE		Black-brown refuse. Moist. 119 °F.
12						REFUSE		Black-brown refuse. Moist. 131 °F.
	40							
13						REFUSE		Brown-black refuse. Moist. 128 °F. End of boring.
14	45							
15								
16	50							
	55							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-278

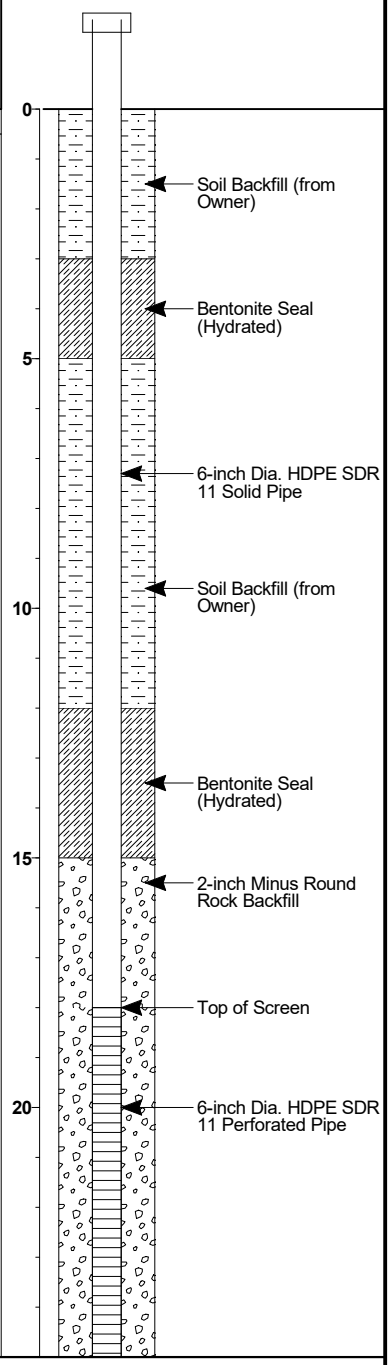
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-938. Drawing ID: 2020-27. 5 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.
						REFUSE		Brown refuse. Dry.
1	5					REFUSE		Brown-black refuse. Dry.
2						REFUSE		Black-brown refuse. Moist. 101 °F.
3	10							
4								
5	15							
6	20					REFUSE		Black-brown refuse. Moist. 84 °F.
7								
	25							

Completion Detail



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

Date Started: **9/23/20**
Date Ended: **9/23/20**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**
Time Started: **10:42**
Time Ended: **11:12**
Total Depth: **28.0 ft.**

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

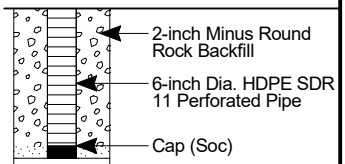
BORING NUMBER: WE-278

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25							
						REFUSE		Black-brown refuse. Moist. 82 °F.
9	30							End of boring.
10								
	35							
11								
12	40							
13								
14	45							
15								
	50							
16								
	55							

Completion Detail



STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-279

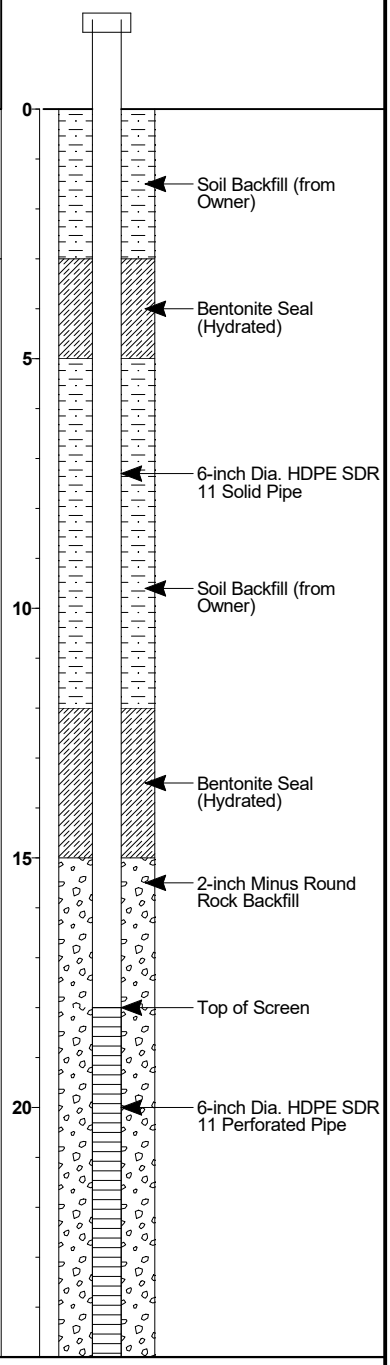
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-939. Drawing ID: 2020-26. 5 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								
	5					REFUSE		Brown-black refuse. Dry.
2								
3	10					REFUSE		Black-brown refuse. Moist. 119 °F.
4								
	15					REFUSE		Black-brown refuse. Moist. 103 °F.
5								
6	20					REFUSE		Black-brown refuse. Moist. 104 °F.
7								
	25							

Completion Detail



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

Date Started: **9/23/20**
Date Ended: **9/23/20**
Boring Diameter: **36-inch**
Well Diameter: **6-inch**
Time Started: **09:35**
Time Ended: **10:10**
Total Depth: **30.0 ft.**

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

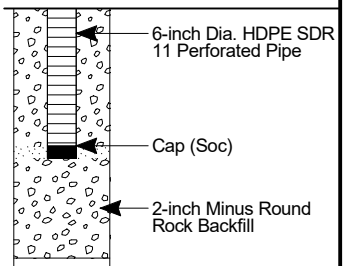
BORING NUMBER: WE-279

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25					REFUSE		Black-brown refuse. Moist. 104 °F.
9	30					REFUSE		Black-brown refuse. Moist. 112 °F. End of boring.
10	35							
11								
12	40							
13								
14	45							
15								
16	50							
	55							

Completion Detail



SCS ENGINEERS

BORING LOG

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

BORING NUMBER: WE-280

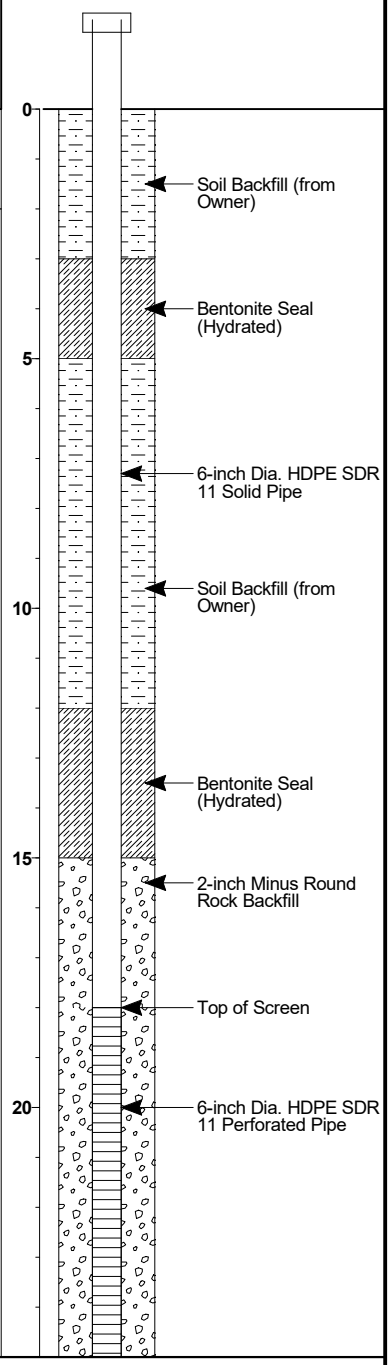
LRI Landfill, Gas Wells, September 2020
30919 Meridian East
Graham, Washington

JOB NUMBER: 04220001.13

REMARKS:
Start Card BKM-940. Drawing ID: 2020-25. 5 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	5					REFUSE		Brown-black refuse. Dry.
2								
3	10					REFUSE		Black-brown refuse. Moist. 99 °F.
4								
5	15							
6	20							
7						REFUSE		Black-brown refuse. Moist. 115 °F.
	25							

Completion Detail



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

Date Started: **9/23/20**
Date Ended: **9/23/20**
Time Started: **07:53**
Boring Diameter: **36-inch**
Total Depth: **31.0 ft.**
Well Diameter: **6-inch**

STANDARD_LOG 04220001.13 - LRI GAS WELLS AUG 2020.GPJ STD_LOG.GDT 12/15/20

SCS ENGINEERS

BORING LOG

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

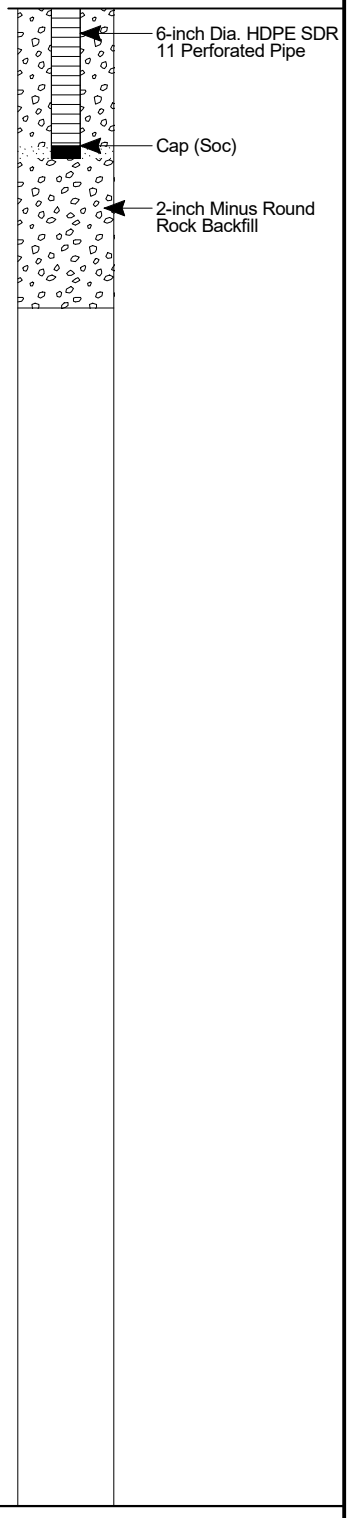
BORING NUMBER: WE-280

LRI Landfill, Gas Wells, September 2020

JOB NUMBER: 04220001.13

Depth (meters)	Depth (feet)	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.	Graphic Log	Description
8	25					REFUSE		Black-brown refuse. Moist. 96 °F.
9	30					REFUSE		Black-brown refuse. Moist. End of boring.
10								
	35							
11								
12	40							
13								
14	45							
15								
	50							
16								
	55							

Completion Detail



Appendix I

Financial Assurance Cost Estimates

Table 1
Estimated Closure Costs
LRI Landfill, Pierce County, Washington
March 31, 2021 Update

Total Acreage at Full Build-Out: 169.20 Acres
Remaining Closure at Full Build-Out: 138.00 Acres
Remaining Closure at Full Build-Out: 6,011,280 SF

Item	Description	Unit	Unit Price	Quantity	Cost
1	Subgrade Preparation	SF	$ 0.10	6,011,280	$ 601,128.00
2	Bedding Layer	SF	$ 0.45	6,011,280	$ 2,705,076.00
3	Geosynthetic Clay Liner	SF	$ -	6,011,280	$ -
4	Geomembrane - Micro DrainLiner	SF	$ 0.79	6,011,280	$ 4,750,857.03
5	Geotextile Filter	SF	$ 0.20	6,011,280	$ 1,226,301.12
6	Vegetative / Topsoil Layer / (14-inch layer)	SF	$ 0.65	6,011,280	$ 3,907,332.00
7	Erosion Control Blanket	SF	$ 0.30	6,011,280	$ 1,803,384.00
8	Hydroseed	acre	$ 2,500.00	138.0	$ 345,000.00
9	Access Road (24 ft wide w/ 3-in asphalt layer)	LF	$ 126.53	1,060	$ 134,121.80
10	Storwater Ditches	LF	$ 36.00	11,024	$ 396,864.00
11	4-inch gas collection piping	LF	$ 29.00	18,385	$ 533,165.00
12	6-inch gas collection piping	LF	$ 50.20	4,480	$ 224,896.00
13	8-inch gas collection piping	LF	$ 55.05	722	$ 39,746.10
14	10-inch gas collection headers	LF	$ 51.42	1,588	$ 81,649.40
15	24-inch gas collection headers	LF	$ 205.32	6,792	$ 1,394,540.23
16	Condensate Sumps	EA	$ 3,500.00	8	$ 28,000.00
17	Vertical Gas Extraction Wells (avg. depth = 102 ft.)	EA	$ 7,752.00	144	$ 1,116,288.00
	Subtotal				$ 19,288,349
	Mobilization @	5.0%			$ 964,417
	Sales Tax @	7.9%			$ 1,523,780
	Engineering and Construction Management @	10.0%			$ 1,928,835
				Estimated Closure Cost:	**$ 23,705,381**
	Total Acreage at Full Build-Out:	169.20			
	Acreage with Final Closure through 2020:	31.20			
	Acres Remaining to be Closed at Full Build-Out:	138.00			
				Estimated Per Acre Unit Cost:	**$ 171,778.12**
	Constructed Acreage through 2020:	123.08			
	Acreage Closed through 2020:	31.20			
	Remaining Acres to be Closed as of January 1, 2021:	91.88			
				Estimated 2020 Closure Cost:	**$ 15,782,974**

Note: Closure acreages are plan-view.

Table 2

Estimated Annual Post-Closure Costs

LRI Landfill, Pierce County, Washington

March 31, 2021 Update

Total Acreage at Full Build-Out: 169.20
Constructed Acreage through 2020: 123.08

Description	Frequency	Quantity	Unit Cost	Total Cost
LDCRS Monitoring (10 sumps)				
sample collection	quarter	4	$ 1,697.00	$ 6,788.00
laboratory testing	quarter	4	$ 3,110.00	$ 12,440.00
data analysis and reporting	quarter	4	$ 2,262.00	$ 9,048.00
Groundwater Monitoring				
sample collection	quarter	4	$ 6,784.00	$ 27,136.00
laboratory testing	quarter	4	$ 7,010.00	$ 28,040.00
data analysis and reporting	quarter	4	$ 9,045.00	$ 36,180.00
Surface Water Monitoring				
sample collection	quarter	4	$ 623.00	$ 2,492.00
laboratory analysis	quarter	4	$ 566.00	$ 2,264.00
data analysis and reporting	quarter	4	$ 1,697.00	$ 6,788.00
Gas System Monitoring				
surface emission monitoring	quarterly	4	$ 1,132.00	$ 4,528.00
probe monitoring	month	12	$ 1,414.00	$ 16,968.00
data analysis and reporting	annual	1	$ 22,611.00	$ 22,611.00
General Facility Maintenance				
gas system maintenance	annual	1	$ 2,710.00	$ 2,710.00
gas flare replacement, 30 year amortization	annual	1	$ 12,116.00	$ 12,116.00
gas system operation	annual	1	$ 13,547.00	$ 13,547.00
cover maintenance	acre	123.08	$ 315.00	$ 38,770.20
cover replacement & repair	annual	1	$ 2,710.00	$ 2,710.00
sedimentation basin	annual	1	$ 3,133.00	$ 3,133.00
ditch / erosion maintenance	annual	1	$ 1,355.00	$ 1,355.00
buildings	month	12	$ 315.00	$ 3,780.00
equipment	month	12	$ 315.00	$ 3,780.00
General Operating Expenses				
administration	month	12	$ 1,254.00	$ 15,048.00
support services / accounting	month	12	$ 1,254.00	$ 15,048.00
real estate taxes	year	1	$ 50,114.00	$ 50,114.00
electricity	month	12	$ 1,217.00	$ 14,604.00
legal	year	1	$ 1,254.00	$ 1,254.00
engineering	year	1	$ 1,254.00	$ 1,254.00
Leachate System Operation & Maintenance				
pumps	year	2	$ 4,160.00	$ 8,320.00
collection pipe and force main	year	1	$ 2,600.00	$ 2,600.00
storage and load facility	year	1	$ 2,600.00	$ 2,600.00
trucking	gal	1,000,000	0.03	$ 30,000
treatment	gal	1,000,000	0.04	$ 40,000
			Estimated Annual Cost:	**$ 438,026**

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 2020 Tonnage Report Form

DEPARTMENT OF ECOLOGY
State of Washington

ANNUAL REPORT
MUNICIPAL SOLID WASTE LANDFILL

FACILITY NAME: **LRI Landfill**	CALENDAR YEAR OF REPORT: **2020**	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) 282-5584**		
FACILITY CONTACT MAILING ADDRESS (if different): **Same**	FACILITY CONTACT PHONE (if different): **Same**	FACILITY CONTACT EMAIL: **George.duvendack@wasteconnections.com**	

Did you operate in 2020?

☒ 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	642,731
☒ Construction/Demolition Waste	21,003
☒ Yard Waste (disposed)	26,132
☐ Food Processing Waste (disposed)	
☐ Landclearing Debris	
☒ Industrial Waste	232,958
☐ Inert Waste	
☐ Wood Waste	
☒ Ash (other than special incinerator ash)	32,704
☐ Dredged Materials	
☐ Sewage Sludge	
☒ Asbestos	723
☐ Petroleum Contaminated Soils	
☒ Other Contaminated Soils	162,660
☐ Tires (disposed)	
☒ Medical Waste	2,292
☒ Other (specify): auto fluff	140,129
☒ Other (specify): saw dust	365
☒ Other (specify): compost overs	44,105
Total	**1,305,802**

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): $173.41

REMAINING PERMITTED CAPACITY:

In tons: 15,036,059

Estimated Date of Closure: 2037

Are you planning an expansion this year?

☐ Yes ☒ No

ENERGY RECOVERY FROM LANDFILL:

Power Produced Annually 31,502,878 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: March 31, 2021	PHONE: (425) 681-2189
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.