

# 2018 Annual Report

## LRI Landfill Graham, Washington

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



**SCS ENGINEERS**

04219001.02 | April 1, 2019

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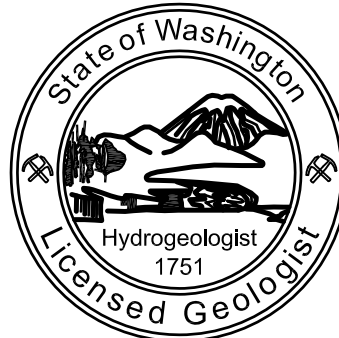
This 2018 Annual Report for the LRI Landfill located in Graham, Washington, was prepared by Sam Graber and Kevin Lakey, LHG and was reviewed by Dan Venchiarutti, LHG, of SCS Engineers.

April 1, 2019



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Kevin G. Lakey



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## 1.0 INTRODUCTION

This document is the annual report for the LRI Landfill for 2018. 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 2018 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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Operations Manager  
LRI Landfill  
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## 1.2 FACILITY DESCRIPTION

The landfill property is approximately 320 acres in size and lies 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.

Eight refuse disposal cells (Cell 1, 2A, 2B, 3A, 4A, 4B, 5 and 6) with a combined bottom liner area of approximately 105.5 acres have been constructed to date. Each of the eight 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 cell, was constructed in two phases and began accepting waste in May 2013; Cell 6, a 12-acre cell, was constructed in two phases and began accepting waste in June 2017.

Six final closure constructions, totaling 24.4 acres have been completed to date. The first phase of closure, referred to as the Phase I Closure, included approximately 4.7 acres over Cell 1 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 was completed over three construction seasons (2006, 2007 and 2008) and included approximately 13.3 acres over portions of Cell 1, Cell 2A and Cell 2B. 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 was completed in the summer of 2011 and included approximately 6.3 acres of cover system. This phase of closure covers the north end of cells 4A and 4B. 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 began in 2018 and will be completed in 2019. This phase of closure covers additional areas of cells 4A and 4B. Closure construction included a foundation layer, bedding layer, geosynthetic clay liner, HDPE geomembrane DrainLiner, a geotextile filter, and a vegetative soil layer.

### **1.3 2018 MONITORING AND REPORTING ACTIVITIES**

Groundwater monitoring activities were conducted quarterly in March, June, September, and December 2018 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 included in summary data tables in Appendix B and in the 2018 groundwater database in Appendix C. A geochemical evaluation including trilinear diagrams is included in Appendix D and groundwater statistical calculations are included in Appendix E. Water quality time trends for the leak detection and collection system are presented in Appendix F. Laboratory reports for the 2018 Fourth Quarter groundwater sampling event were provided to the TPCHD under separate cover.

Stormwater monitoring was conducted on a weekly, monthly and quarterly schedule in 2018 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 monitoring was conducted monthly and on-site buildings were monitored quarterly in 2018. 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.<br>04219001.02 | DES BY<br>LEL |
| SCALE<br>NOT TO SCALE      | CHK BY<br>KGL |
| CAD FILE<br>FIGURE 1       | APP BY<br>KGL |

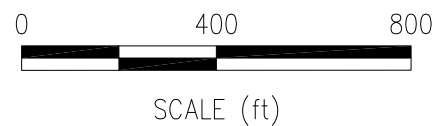
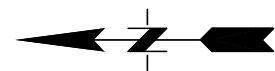
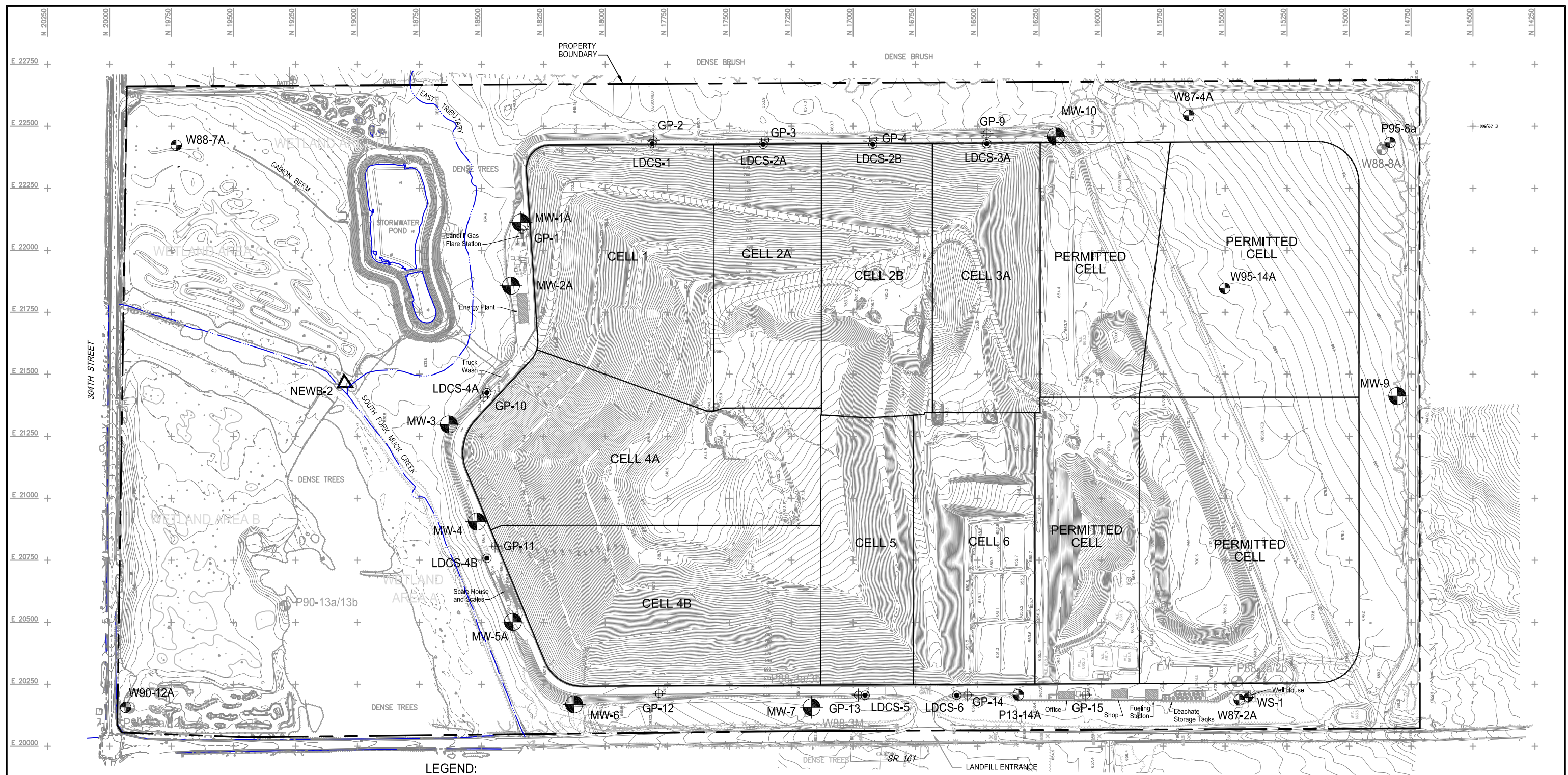
SITE LOCATION MAP  
 LRI LANDFILL  
 30919 MERIDIAN STREET E.  
 GRAHAM, WASHINGTON

DATE  
MARCH 2019

FIGURE  
1

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- |                                                                                     |        |                                   |
|-------------------------------------------------------------------------------------|--------|-----------------------------------|
|  | 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                         |

NOTES:

1. TOPOGRAPHIC BASE MAP PREPARED BY CONTINENTAL MAPPING CONSULTANTS, INC., USING PHOTOGRAMMETRIC SURVEY METHODS, DATE OF PHOTOGRAPH MARCH 07, 2018.
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. | 04219001.02 |
| SCALE       | AS SHOWN    |
| CAD FILE    | FIGURE 2    |

|        |     |
|--------|-----|
| DES BY | KGL |
| CHK BY | KGL |
| APP BY | KGL |

## SITE MAP

LRI LANDFILL  
30919 MERIDIAN STREET EAST  
GRAHAM, WASHINGTON

DATE MARCH 2019

FIGURE 2





## **2.0 2018 REPORT FORM AND FACILITY CAPACITY INFORMATION**

Landfilling operations were conducted over portions of Cells 2A, 2B, 3A, 4A, 4B, 5, and 6 in 2018. The tonnage of waste materials landfilled at the LRI Landfill during 2018 was approximately 1,162,667 tons. The total tonnage landfilled at the LRI Landfill since opening in December 1999 through December 31, 2018 is approximately 17,739,060 tons. The in-place density of combined waste placed between December 1999 and March 7, 2018 (the date of the last aerial topographic survey) is approximately 2,054 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 2,054 lbs/CY, the volume of airspace consumed through December 31, 2018 was approximately 17.3 million cubic yards, or approximately 49.9 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 2018 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 eight 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 2018 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, the City of Salem in Salem, Oregon, and to Bravo Environmental in Portland, 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 2018 leachate volumes truck-hauled off site for proper disposal is shown on Exhibit 1.

Exhibit 1. 2018 Leachate Volume Data

| Month                                                                                                                                       | Leachate Production (gallons) | Monthly Rainfall (inches) |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------|
| January                                                                                                                                     | 2,821,282                     | 7.62                      |
| February                                                                                                                                    | 2,443,589                     | 3.47                      |
| March                                                                                                                                       | 2,878,127                     | 2.25                      |
| April                                                                                                                                       | 2,464,653                     | 4.57                      |
| May                                                                                                                                         | 2,385,890                     | 1.99                      |
| June                                                                                                                                        | 1,939,654                     | 1.36                      |
| July                                                                                                                                        | 1,797,060                     | 0.68                      |
| August                                                                                                                                      | 1,863,724                     | 0.46                      |
| September                                                                                                                                   | 1,749,721                     | 0.78                      |
| October                                                                                                                                     | 2,137,613                     | 3.67                      |
| November                                                                                                                                    | 2,144,406                     | 3.16                      |
| December                                                                                                                                    | 2,183,558                     | 4.61                      |
| <b>Totals</b>                                                                                                                               | <b>26,809,277</b>             | <b>34.62</b>              |
| Notes:<br>Leachate was trucked off-site for proper disposal.<br>Leachate volumes were determined by trucking records kept on a daily basis. |                               |                           |

### 3.2 LEACHATE QUALITY

Leachate samples were collected in December at each individual sump location from sampling ports located near the leachate riser pipes. Additional leachate samples were collected from Cell 6 during the first, second, and third quarter 2018 monitoring events. Leachate samples were submitted to TestAmerica of Denver, Colorado and tested for the parameters listed in Appendix I and II of WAC 173-351. The results of leachate monitoring are included on summary tables in Appendix B and with the groundwater database in Appendix C. No significant changes in leachate quality were noted in 2018 (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 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 2018 were validated and input into a database utilizing Microsoft Office Access 2016 software. A data validation summary for Fourth Quarter 2018 groundwater monitoring is provided in Appendix B. A copy of the groundwater database for 2018 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 either not present, or present in very low concentrations, in the groundwater. Secondary leachate indicator parameters include ammonia and chloride. These constituents are consistently present in the leachate at elevated concentrations and 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 and dissolve readily in water.

### 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 directly 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 comparing 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 2018, operation and maintenance activities associated with LDCS included cleaning vaults, checking electrical connections, and replacing equipment as needed within the vaults (pumps and meters) and the onsite panels that operate the system and record data. Specific activities included the following:

- On/off pump settings were optimized over several occasions to keep water levels within the LDCS low and thereby minimize the potential for contact of groundwater with the overlying compacted clay liner, which can affect LDCS water quality. These efforts resulted in

decreasing conductivity values during the fourth quarter of 2018 at LDCS-1, -4A, -4B, -5, and -6.

- The water-level transducer at LDCS-4B was replaced on February 1, 2018.
- The LDCS-4A flowmeter operated intermittently from April 5 to July 4, 2018 and again from September 7 to September 30, 2018. Electrical connection issues experienced at this cell were subsequently resolved.
- New conductivity probes were installed at LDCS-1 on October 30, 2018 and LDCS-2A on September 3, 2018. Following installation of the new probes, recorded conductivity values more closely reflected readings taken in the field.
- The flowmeter at LDCS-2A malfunctioned beginning November 1, 2018 and was replaced on December 17, 2018.
- The conductivity probes at LDCS-2B and LDCS-3A were recalibrated by LRI staff on December 14, 2018. Following recalibration, recorded conductivity values more closely reflected readings taken in the field.
- New flowmeters were installed at LDCS-1 and LDCS-3A in early February of 2019. The previous flowmeters were not functioning properly and therefore, there is limited pumping data available for these two cells during 2018.

Conductivity levels at LDCS-4B trended higher beginning in early February. Site investigation found that the water level transducer that activates the dewatering pump at LDCS-4B had malfunctioned, which caused the pump to stop operating during January of 2018. Consequently, groundwater within the LDCS came in contact with the overlying clay liner, which in turn, caused the conductivity of the groundwater to rise. As noted above, the water-level transducer was replaced on February 1, 2018, and since then conductivity levels were typical of historical levels.

The recording range of the conductivity probe at LDCS-6 was increased during the first week of May 2018. Following that, the conductivity levels increased to approximately 1200 µS/cm.

The remaining conductivity data from the LDCS sumps generally trended within typical historical levels during 2018 (see Appendix F).

## **4.2 LDCS QUARTERLY MONITORING**

Groundwater samples were collected quarterly from each LDCS monitoring location. Samples were collected 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, and LDCS-6. Samples were submitted to 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 2018 were generally consistent with previously measured values (see Appendix F), except as noted below.

Low-level detections of ammonia (0.26 mg/L or less) were reported during one or more quarters at LDCS-1, LDCS-2A, LDCS-3A, LDCS-4A, LDCS-4B, and LDCS-6. Low-level detections of ammonia were also reported in nearly all of the groundwater monitoring wells in 2018, including upgradient well MW-10. Therefore, since ammonia was 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 the LDCS water quality.

Chloride concentrations were slightly elevated compared to previous levels at LDCS-4A, LDCS-4B, and LDCS-6 during 2018. Primary leachate indicator parameters, acetone and 2-butanone, were not detected at these LDCS locations in 2018. In addition, the trilinear plots of these LDCS sumps in Appendix D demonstrate the inherent water quality differences between the LDCS system and leachate. Therefore, the chloride fluctuations do not appear to be related to landfill leachate.

Dissolved manganese concentrations displayed slight increases at LDCS-5 and LDCS-6 in 2018. These fluctuations are likely due to changes in shallow background water quality.

Low levels of 1,4-dichlorobenzene were detected at LDCS-2A during the First Quarter monitoring event (0.56 µg/L) and Second Quarter monitoring event (0.68 µg/L). However, primary leachate indicator parameters acetone and 2-butanone were not detected, and secondary leachate indicator parameter concentrations of ammonia and chloride remained low at this location during 2018. Previous studies at the LRI Landfill have shown that 1,4-dichlorobenzene was not present in landfill gas. Therefore, this detection does not appear to be related to leachate or landfill gas.

The primary leachate indicator parameter acetone was reported in samples from LDCS-1 and LDCS-5 during the Third Quarter monitoring event at concentrations of 17 µg/L and 24 µg/L, respectively. Acetone is a common laboratory contaminant and there have been sporadic detections of acetone in field and trip blank samples in the past, including a trip blank sample during the first quarter 2018 monitoring event. Primary leachate indicator 2-butanone, was not detected at either LDCS-1 or LDCS-5 in 2018. At LDCS-1, secondary leachate indicator parameters chloride and ammonia remained low during 2018. Therefore, the source of acetone at LDCS-1 does not appear to be landfill leachate.

At LDCS-5, the secondary leachate indicator parameter ammonia was detected during each monitoring event in 2018 at concentrations ranging from 0.56 mg/L to 1.6 mg/L. The chloride concentration at LDCS-5 was slightly elevated during the first quarter monitoring event at 34 mg/L. Since, as noted above, the primary leachate indicator parameter 2-butanone was non-detect, and the concentrations of ammonia and chloride have remained relatively low, the ammonia and chloride concentrations do not appear to indicate a new leachate leak at LDCS-5. However, changes in water quality noted at LDCS-5 in 2018 may be due to remnant affects from the leachate forcemain leak that occurred at this location in 2016. This could result from flushing of the LDCS gravel during periods of higher than normal groundwater elevations. Groundwater withdrawn from LDCS-5 continues to be directed to the leachate collection system as a precautionary measure.

## **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**

Static water levels were measured quarterly in 2018. The water level database and water level contour maps for each quarter are included in Appendix C. 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  $1 \times 10^{-4}$  centimeters per second (cm/sec) to  $1 \times 10^{-2}$  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  $1 \times 10^{-3}$  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 2018 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 TestAmerica of Denver, Colorado. Groundwater sampling locations are shown 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 2018 were validated and input into a database utilizing Microsoft Office Access 2016 software, and uploaded into Ecology's Environmental Information Management (EIM) database system. A data validation summary for Fourth Quarter 2018 groundwater monitoring is provided in Appendix B. A copy of the groundwater database for 2018 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 2018, 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 2018.

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



were less than or equal to the ground water quality criteria listed in WAC 173-200, with the exceptions as noted on Exhibit 2. Metals results for arsenic, iron, and manganese are typical of previous results (see time-trend plots in Appendix B), are interpreted to be within natural, background variation and are less than 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, all reported arsenic detections were less than the prediction limit and the Federal primary drinking water maximum contaminant level (MCL) of 0.010 mg/L.

Exhibit 2. 2018 Groundwater Results Greater Than WAC 173-200 Criteria

| Parameter                                                                                                                                                                  | Event | Ground-<br>water<br>Criteria | MW-1A | MW-2A | MW-3 | MW-4   | MW-5A  | MW-6   | MW-7   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------|-------|-------|------|--------|--------|--------|--------|
| Arsenic                                                                                                                                                                    | Q1    | 0.00005                      | **    | **    | **   | 0.0090 | 0.0065 | 0.0075 | **     |
|                                                                                                                                                                            | Q2    |                              | **    | **    | **   | 0.0089 | 0.0058 | 0.0075 | **     |
|                                                                                                                                                                            | Q3    |                              | **    | **    | **   | 0.0088 | **     | 0.0063 | **     |
|                                                                                                                                                                            | Q4    |                              | **    | **    | **   | 0.0096 | **     | 0.0073 | 0.0050 |
| Iron                                                                                                                                                                       | Q1    | 0.30                         | 1.1   | 0.62  | *    | *      | *      | *      | *      |
|                                                                                                                                                                            | Q2    |                              | 1.3   | 0.62  | *    | *      | *      | *      | *      |
|                                                                                                                                                                            | Q3    |                              | 1.6   | 0.68  | 0.69 | *      | *      | *      | *      |
|                                                                                                                                                                            | Q4    |                              | 1.6   | 0.95  | *    | *      | *      | *      | *      |
| Manganese                                                                                                                                                                  | Q1    | 0.05                         | 0.22  | 0.31  | 0.35 | 0.21   | 0.23   | 0.16   | 0.25   |
|                                                                                                                                                                            | Q2    |                              | 0.25  | 0.31  | 0.30 | 0.21   | 0.17   | 0.17   | 0.24   |
|                                                                                                                                                                            | Q3    |                              | 0.25  | 0.30  | 0.26 | 0.22   | 0.17   | 0.17   | 0.24   |
|                                                                                                                                                                            | Q4    |                              | 0.25  | 0.38  | 0.26 | 0.24   | 0.18   | 0.20   | 0.22   |
| Notes:<br>* = concentration less than WAC 173-200 criterion<br>** = 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 F. 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 2018 were generally consistent with previously measured values. Chloride and nitrate concentrations remain higher at upgradient well MW-10 compared to downgradient water quality. The pH values at MW-10 were below the WAC 173-200 criterion of 6.5 during the Second, Third, and Fourth Quarter monitoring events. 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 event in 2018 at each well, except MW-9. Reported concentrations ranged up to 0.35 mg/L. Since ammonia was detected in background 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, 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. None of the monitoring wells exceeded their associated cation-anion balance threshold during 2018 (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 acetone (12 µg/L) and 2-butanone (MEK) (10 µg/L) were reported in the sample from monitoring well MW-4 during the First Quarter monitoring event. Acetone and 2-butanone are primary leachate indicator parameters. However, acetone and 2-butanone were also detected in the laboratory provided deionized water trip blank at concentrations of 14 µg/L and 11 µg/L, respectively, during the first quarter 2018 monitoring event. In addition, secondary leachate indicator parameters of ammonia and chloride remained low in the sample from MW-4 at concentrations of 0.14 mg/L and 3.4 mg/L, respectively. Therefore, since acetone and 2-butanone were detected in the trip blank, and the secondary leachate indicator parameters remained low, the source of these low-level volatile organic compound (VOC) detections appears to be the result of laboratory contamination.

No other VOC's were reported present in the groundwater samples collected from the monitoring wells in 2018

## **6.3 MONITORING WELL CONSTRUCTION/MAINTENANCE**

No significant well construction or well maintenance activities occurred in 2018.

## 7.0 SURFACE WATER MONITORING

Surface water monitoring was performed weekly and quarterly during periods of surface water discharge in accordance with the LRI Landfill Surface Water Monitoring Plan (July 2008), the National Pollution Discharge Elimination System (NPDES) Industrial Stormwater General Permit (ISGP [Permit No. WAR002557]), and the NPDES Construction Stormwater General Permit (CSGP [Permit No. WAR002603]). During 2018, the stormwater detention pond discharged continuously, except during the period between June 9 and October 28 when no discharges occurred. Surface water samples were collected at NEWB-2, located where Wetland Area C drains into South Creek (see Figure 2).

Weekly monitoring consisted of visual site inspections and stormwater sampling for field parameters of turbidity, pH and conductivity. Monthly monitoring included visual site inspections. Quarterly monitoring consisted of visual site inspections and stormwater sampling for field parameters of turbidity, pH, and conductivity and for 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 TestAmerica of Tacoma, Washington.

The CSGP turbidity benchmark of 25 NTU was exceeded on October 29, November 2, and November 30, 2018. Consistent with condition S4.C.5 of the CSGP, Mr. Moi, an employee of LRI and a Certified Erosion and Sediment Control Lead (CESCL), performed inspections of the facility to evaluate source control BMPs and the need for revisions to the stormwater pollution prevention plan (SWPPP). Resulting BMP maintenance activities included adding plastic sheeting to a soil borrow area, ditch stabilization, drain-inlet cleaning, and gravel surfacing.

The CSGP lower pH benchmark of 6.5 was exceeded on January 8, 2018 (see Appendix G). During this monitoring event, the field meter did not operate properly. Therefore, the analysis was performed by the analytical laboratory outside of the recommended holding time. No concrete work was performed during this time interval. pH levels measured in the field during the proceeding and following weeks were within the accepted range.

No other stormwater benchmarks or effluent limits were exceeded in 2018.

Copies of the 2018 Discharge Monitoring Reports (DMRs) for construction and industrial activities are included in Appendix G.

## **8.0 LANDFILL GAS MONITORING**

### **8.1 GAS PROBE MONITORING**

Landfill gas monitoring was conducted monthly during 2018 using a Landtec GEM 2000. Methane was not measured above the lower explosive limit of 5 percent methane by volume at performance gas probes GP-3, GP-4, GP-9, GP-11, GP-13, GP-14 and GP-15. Concentrations of methane greater than 5 percent by volume were recorded at least once at performance probes GP-1, GP-2, GP-10, and GP-12. Table H-1 in Appendix H provides a summary of landfill gas monitoring results for 2018.

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. Previous barhole monitoring surveys have shown that the methane levels reported above do not result in the migration of landfill gas to the property line.

### **8.2 ON-SITE BUILDING MONITORING**

On-site buildings were monitored once per quarter in 2018. Methane was not detected in any on-site structure in 2018 (see Appendix H). Measurements were obtained using a GasTech or Photovac MicroFID.

### **8.3 LANDFILL GAS EXTRACTION WELL CONSTRUCTION**

Fourteen vertical landfill gas extraction wells (WE-235 through E-248) were installed in 2018. The vertical wells were installed in July 2018. A summary of the gas well completion data are included in Appendix H.

## **9.0 FINANCIAL ASSURANCE COST ESTIMATES**

Cost estimates for constructing the final closure over the refuse, as well as performing annual monitoring and maintenance are included in Appendix I. As required in Chapter 173-351-600(3)(a), the estimates are in current dollars for the total cost of hiring a third party to perform the work. Costs for post-closure monitoring and maintenance are based on the most expensive costs of post-closure care during the post-closure period. The closure and post-closure cost estimates are reviewed annually and updated as appropriate. The closure and post-closure cost estimates included in this report are consistent with the estimates provided to the TPCHD in December 2018.

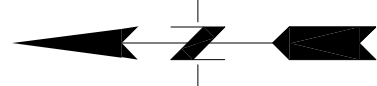
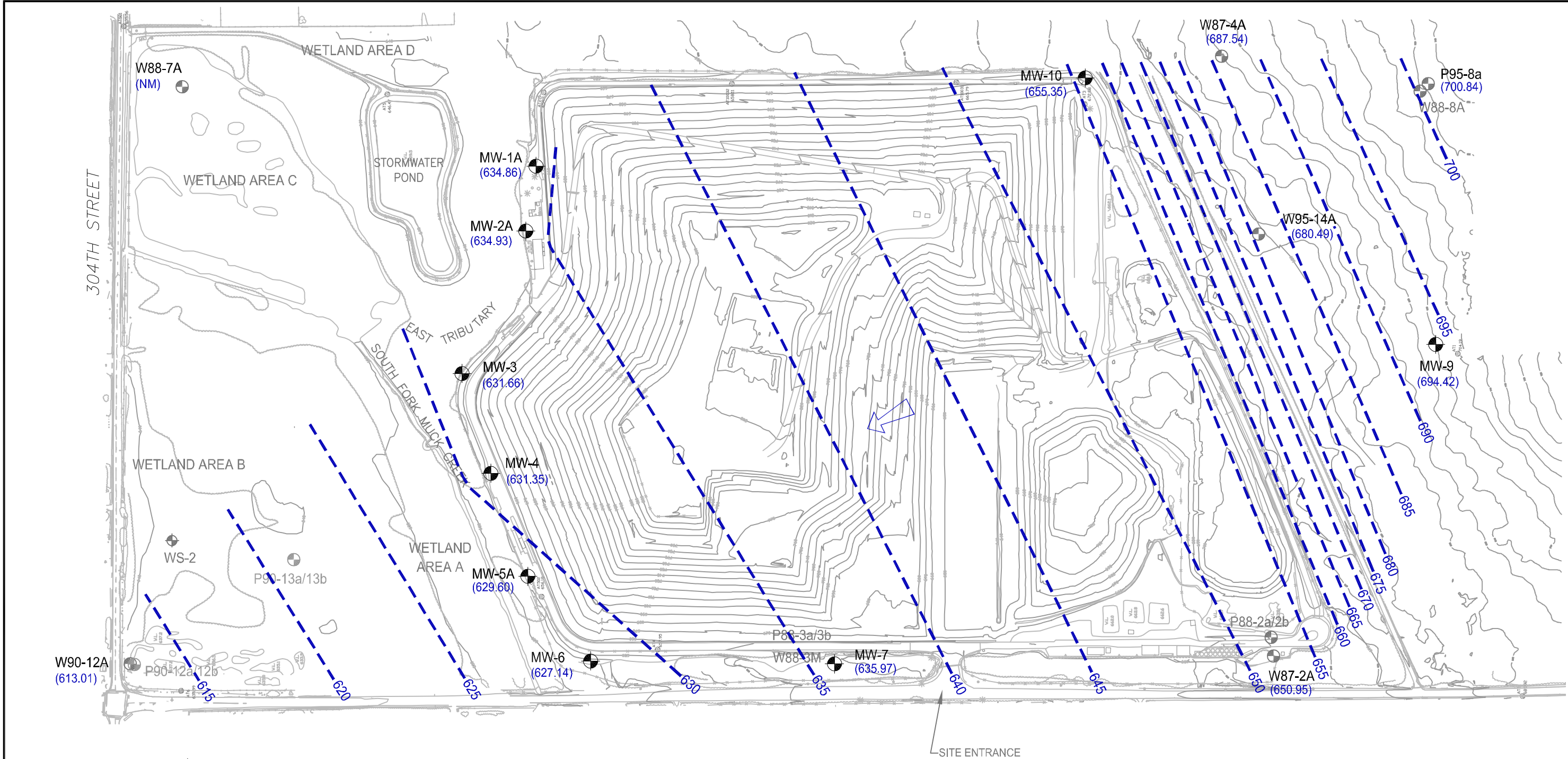




## Appendix A

### Water Level Data





NOTES:

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

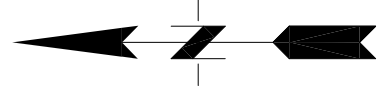
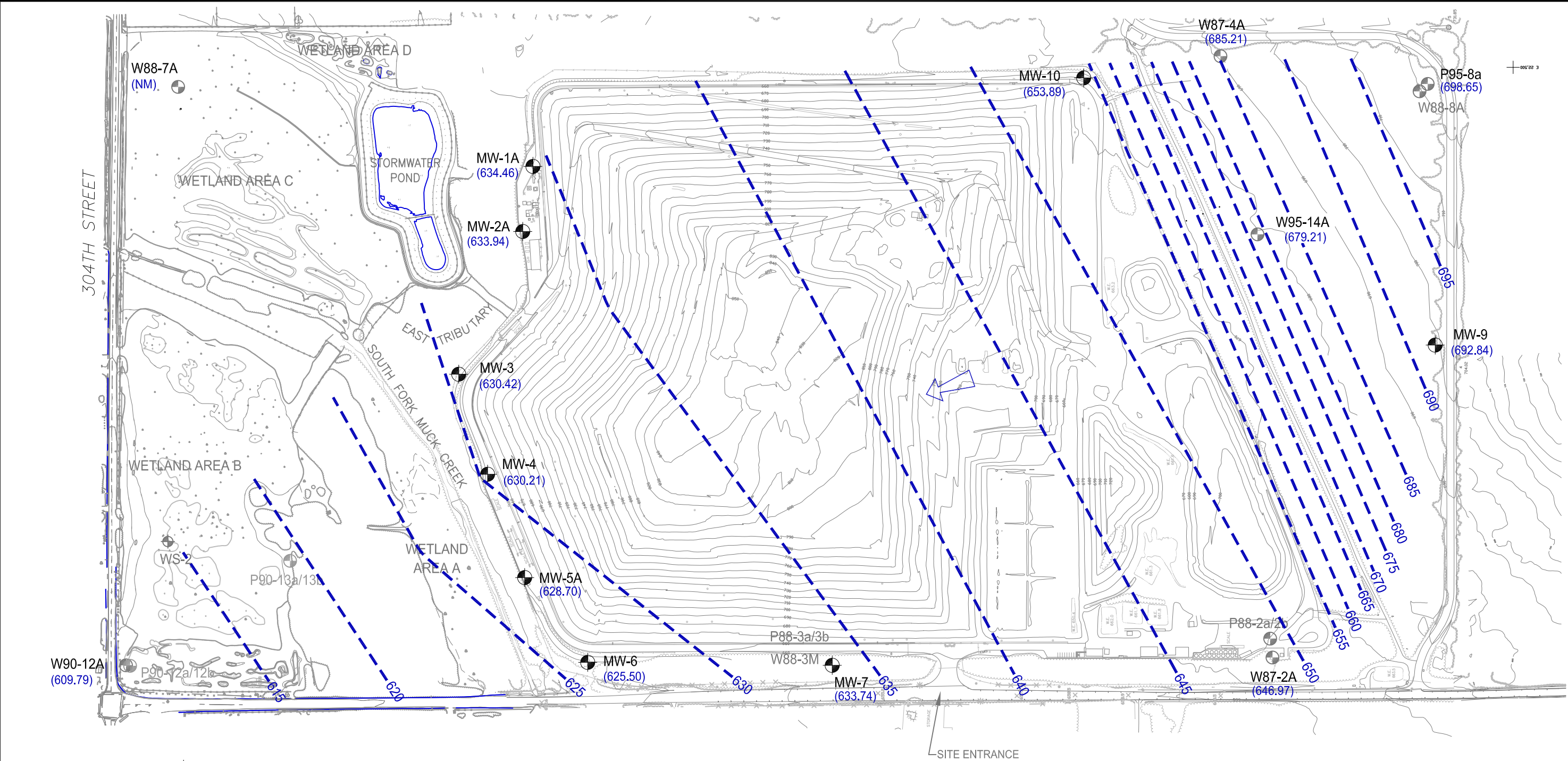
LEGEND:

-  MW-1A MONITORING WELL
-  W87-2A CHARACTERIZATION WELL/ PIEZOMETER
-  (650.95) GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
-  INFERRED GROUNDWATER FLOW DIRECTION
-  \* WATER LEVEL ELEVATION NOT USED IN CONTOURING



SCALE (ft)

|                                                                                                                                                                          |  |  |             |             |        |     |                                                                                                                            |        |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------|-------------|--------|-----|----------------------------------------------------------------------------------------------------------------------------|--------|----------|
| <b>SCS ENGINEERS</b><br>Environmental Consultants and Contractors<br>2405 140th Avenue NE, Suite 107<br>Bellevue, Washington 98005<br>(425) 746-4600 FAX: (425) 746-6747 |  |  | PROJECT NO. | 04218001.02 | DES BY | SG  | POTENTIOMETRIC SURFACE CONTOUR MAP<br>MARCH 21, 2018<br><br>LRI LANDFILL<br>30919 MERIDIAN STREET E.<br>GRAHAM, WASHINGTON | DATE   | MAY 2018 |
|                                                                                                                                                                          |  |  | SCALE       | AS SHOWN    | CHK BY | KGL |                                                                                                                            | FIGURE | 1        |
|                                                                                                                                                                          |  |  | CAD FILE    | FIGURE 1    | APP BY | KGL |                                                                                                                            |        |          |
|                                                                                                                                                                          |  |  |             |             |        |     |                                                                                                                            |        |          |



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

- LEGEND:
- MW-1A MONITORING WELL
  - W87-2A CHARACTERIZATION WELL/ PIEZOMETER
  - (646.97) GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
  - INFERRED GROUNDWATER FLOW DIRECTION
  - \* WATER LEVEL ELEVATION NOT USED IN CONTOURING

SCS ENGINEERS

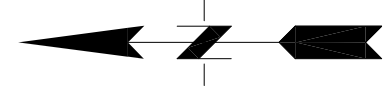
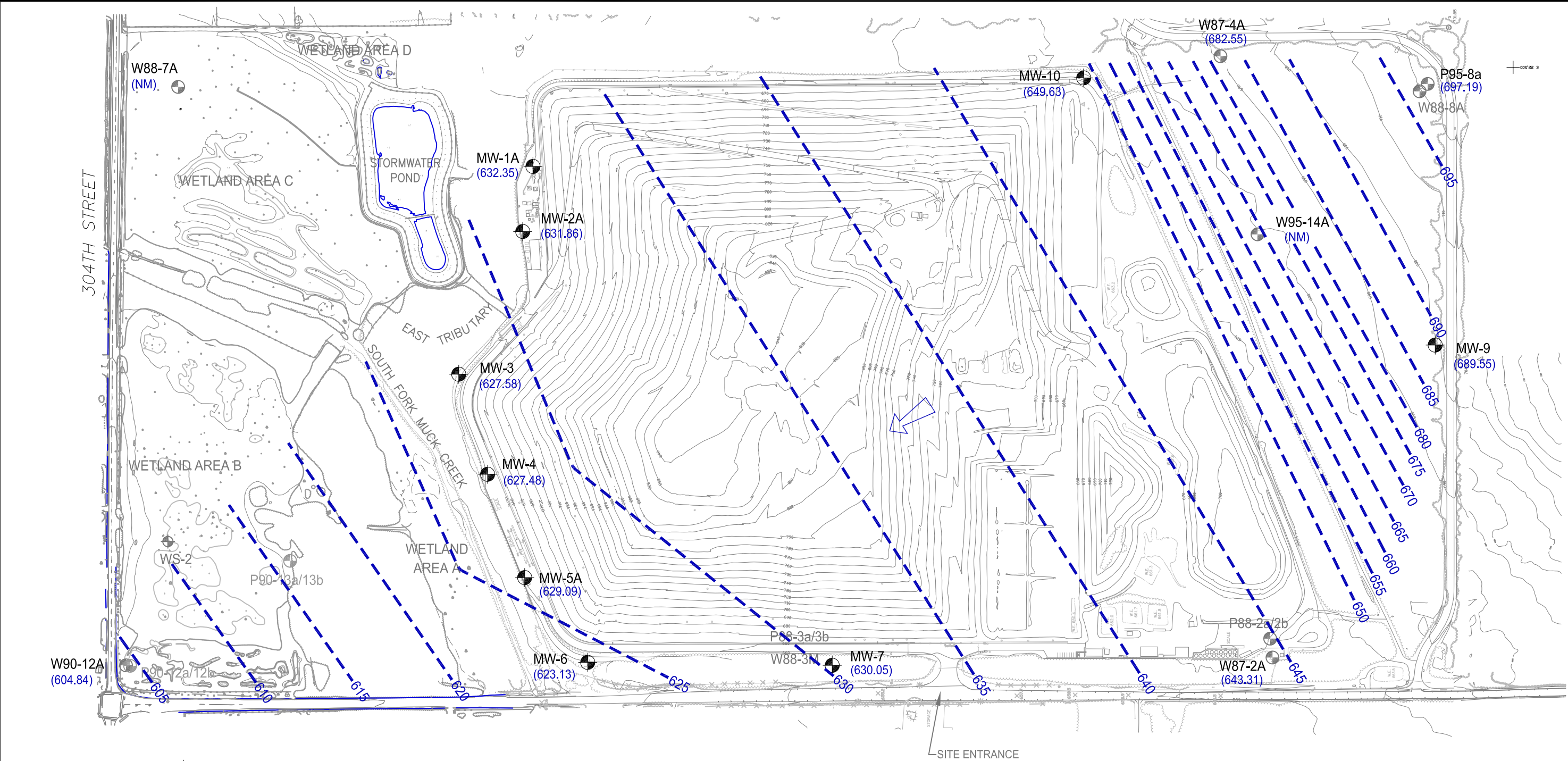
Environmental Consultants and Contractors  
2405 140th Avenue NE, Suite 107  
Bellevue, Washington 98005  
(425) 746-4600 FAX: (425) 746-6747

|             |             |        |     |
|-------------|-------------|--------|-----|
| PROJECT NO. | 04218001.02 | DES BY | SG  |
| SCALE       | AS SHOWN    | CHK BY | KGL |
| CAD FILE    | FIGURE 1    | APP BY | KGL |

POTENTIOMETRIC SURFACE CONTOUR MAP  
JUNE 20, 2018  
LRI LANDFILL  
30919 MERIDIAN STREET E.  
GRAHAM, WASHINGTON

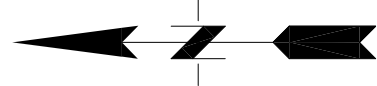
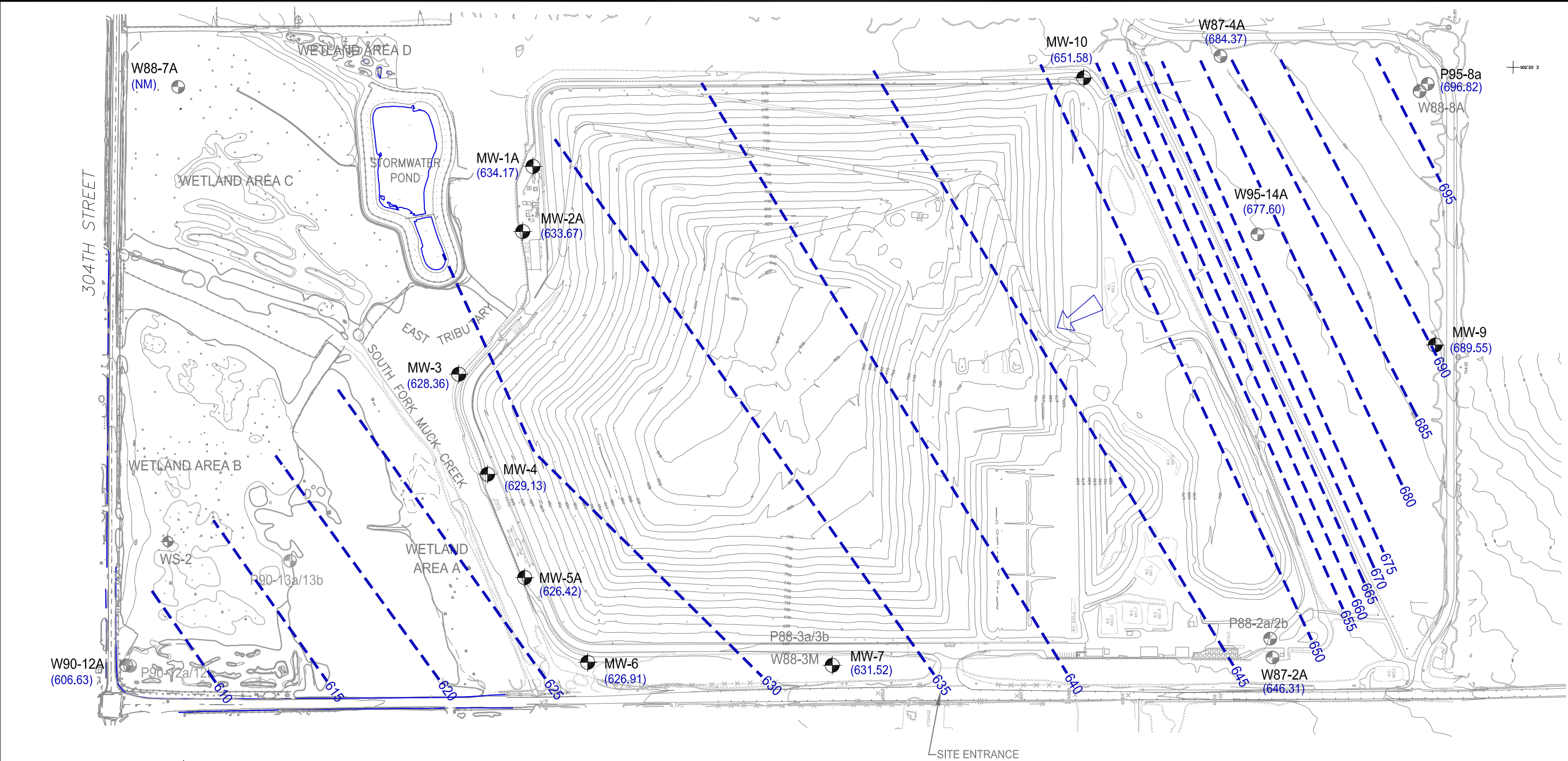
|        |                |
|--------|----------------|
| DATE   | SEPTEMBER 2018 |
| FIGURE | 1              |





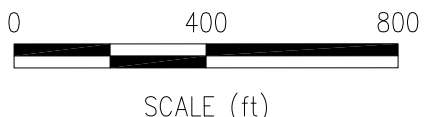
NOTES:  
VERTICAL DATUM - BASED ON  
PIERCE COUNTY BENCH NO. 112-28,  
ELEVATION 660.29 NGVD29

- LEGEND:
- MW-1A MONITORING WELL
  - W87-2A CHARACTERIZATION WELL/ PIEZOMETER
  - (643.31) GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
  - INFERRED GROUNDWATER FLOW DIRECTION
  - \* WATER LEVEL ELEVATION NOT USED IN CONTOURING



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

- LEGEND:
- MW-1A MONITORING WELL
  - W87-2A CHARACTERIZATION WELL/ PIEZOMETER
  - (646.31) GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
  - INFERRED GROUNDWATER FLOW DIRECTION
  - \* WATER LEVEL ELEVATION NOT USED IN CONTOURING



|                                                                                                                                                                                                              |  |  |             |             |        |     |                                                                                                                              |        |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------|-------------|--------|-----|------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| <div>SCS ENGINEERS</div> <div>Environmental Consultants and Contractors</div> <div>2405 140th Avenue NE, Suite 107</div> <div>Bellevue, Washington 98005</div> <div>(425) 746-4600 FAX: (425) 746-6747</div> |  |  | PROJECT NO. | 04218001.02 | DES BY | SG  | POTENTIOMETRIC SURFACE CONTOUR MAP<br>DECEMBER 5, 2018<br><br>LRI LANDFILL<br>30919 MERIDIAN STREET E.<br>GRAHAM, WASHINGTON | DATE   | MARCH 2019 |
|                                                                                                                                                                                                              |  |  | SCALE       | AS SHOWN    | CHK BY | KGL |                                                                                                                              | FIGURE | 1          |
|                                                                                                                                                                                                              |  |  | CAD FILE    | FIGURE 1    | APP BY | KGL |                                                                                                                              |        |            |
|                                                                                                                                                                                                              |  |  |             |             |        |     |                                                                                                                              |        |            |



Water Level Elevation Data  
LRI Landfill, Pierce County Washington

| WELL<br>NUMBER | WELL CASING<br>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 | 3/5/1990 |
|----------------|--------------------------|-----------|-----------|-----------|----------|------------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|------------|------------|-----------|------------|-----------|----------|
| 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    | 656.14   |
| 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    | 652.26   |
| 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    | 651.18   |
| 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    | 687.85   |
| 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    | 635.67   |
| 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    | 646.38   |
| W88-7A         | 632.51                   |           |           |           |          |            |           | 628.25    | 628.52    | 628.44    | 627.25    | 625.71   |           | 623.33    | 623.42     | 625.20     | 627.21    | 627.41     |           | 626.84   |
| 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    | 684.17   |
| 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    | 639.03   |
| MW-9           | 701.77                   |           |           |           |          |            |           |           |           |           |           |          |           |           |            |            |           |            |           |          |
| MW-10          | 673.87                   |           |           |           |          |            |           |           |           |           |           |          |           |           |            |            |           |            |           |          |
| 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    | 658.41   |
| 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    | 656.18   |
| 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    | 660.19   |
| 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    | 653.85   |
| 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    | 649.03   |
| 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    | 644.77   |
| 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    | 683.95   |
| 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    | 636.82   |
| 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    | 635.39   |
| 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     |           | 646.47   |
| 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    | 641.25   |
| 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    | 660.96   |
| 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    | 655.60   |
| 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                   |           |           |           |          |            |           |           |           |           |           |          |           |           |            |            |           |            |           |          |
| 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    | 617.21   |
| 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 674.17 to 673.87 on September 26, 2002  
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

Water Level Elevation Data  
LRI Landfill, Pierce County Washington

| WELL<br>NUMBER | 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 | 10/1/1992 |
|----------------|-----------|-----------|-----------|------------|------------|------------|-----------|-----------|----------|-----------|-----------|-----------|------------|------------|------------|-----------|-----------|----------|-----------|-----------|
| W87-1A         | 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    | 647.61    |
| W87-2A         | 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    | 646.32    |
| W88-3M         | 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    | 646.86    |
| W87-4a         | 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    | 681.74    |
| W88-5A         | 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    | 628.84    |
| W88-6A         | 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    | 637.43    |
| W88-7A         | 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    | 623.14    |
| W88-8M         | 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    | 681.34    |
| 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    | 605.29    |
| 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    | 625.27    |
| MW-7           | 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    | 630.50    |
| MW-9           |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| MW-10          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| P88-1a         | 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    | 649.59    |
| P88-1b         | 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    | 647.66    |
| P88-2a         | 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    | 652.67    |
| P88-2b         | 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    | 646.76    |
| P88-3a         | 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   | 637.93    |           |
| P88-3b         | 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    | 634.89    |
| P87-4M         | 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    | 681.12    |
| P88-5a         | 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    | 630.91    |
| P88-5b         | 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    | 629.05    |
| P95-8a         |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| P88-9a         | 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    | 638.18    |
| P88-9b         | 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    | 633.28    |
| P88-10a        | 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    | 651.03    |
| P88-10b        | 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    | 646.93    |
| 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    | 634.96    |
| 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    | 633.09    |
| 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    | 631.51    |
| 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    | 631.29    |
| P13-14a        |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-1P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-2P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-3P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-4P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-5P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-6P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-7P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-8P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-9P          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| GP-10          |           |           |           |            |            |            |           |           |          |           |           |           |            |            |            |           |           |          |           |           |
| WS-1           | 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<br>NUMBER | 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 | 7/17/1995 |
|----------------|------------|-----------|-----------|-----------|----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|------------|------------|-----------|----------|-----------|-----------|
| W87-1A         | 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         | 646.78     | 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         | 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         | 681.53     | 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         | 628.95     | 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         | 637.64     | 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         | 623.72     | 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         | 681.54     | 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        | 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           | 625.66     | 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           | 630.56     | 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           |            |           |           |           |          |           |           |            |           |           |           |           |            |           |            |            |           |          |           | 690.67    |
| MW-10          |            |           |           |           |          |           |           |            |           |           |           |           |            |           |            |            |           |          |           | 657.97    |
| P88-1a         | 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         | 647.63     | 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         | 652.50     | 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         | 646.90     | 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         | 637.54     | 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         | 634.68     | 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         | 681.03     | 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         | 630.64     | 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         | 629.10     | 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         | 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         | 633.24     | 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        | 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        | 646.87     | 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        | 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        | 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        | 631.03     | 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        | 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          |            |           |           |           |          |           |           |            |           |           |           |           |            |           |            |            |           |          |           |           |
| 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<br>NUMBER | 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 | 10/13/1997 |
|----------------|-----------|-----------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|------------|-----------|------------|----------|-----------|-----------|----------|----------|-----------|------------|
| 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    | 651.02     |
| 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    | 648.89     |
| 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    | 639.76     |
| 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    | 684.06     |
| 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    | 631.83     |
| 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    | 642.14     |
| 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    | 624.94     |
| 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    | 682.65     |
| 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    | 607.28     |
| 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    | 678.60     |
| 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    | 627.56     |
| 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    | 634.99     |
| MW-9           |           | 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    | 691.47     |
| MW-10          | 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    | 657.94     |
| 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    | 654.37     |
| 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    | 651.11     |
| 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    | 655.05     |
| 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    | 649.65     |
| 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    | 642.03     |
| 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    | 638.96     |
| 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    | 682.52     |
| 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    | 633.24     |
| 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    | 632.15     |
| 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    | 697.72     |
| 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    | 641.88     |
| 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    | 636.65     |
| 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    | 654.97     |
| 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    | 650.45     |
| 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    | 638.11     |
| 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    | 636.58     |
| 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    | 636.92     |
| 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    | 636.75     |
| P13-14a        |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-1P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-2P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-3P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-4P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-5P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-6P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-7P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-8P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-9P          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| GP-10          |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| WS-1           |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| SG-1           |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           | 629.63    |          | 629.45   | 629.09    | 629.86     |
| SG-2           |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           | 628.65    | 626.77   | 626.30   | 625.15    | 626.03     |
| LDCS-1         |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| LDCS-2A        |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |
| LDCS-2B        |           |           |           |           |            |            |            |           |           |           |            |           |            |          |           |           |          |          |           |            |

Water Level Elevation Data  
LRI Landfill, Pierce County Washington

| WELL<br>NUMBER | 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 | 3/29/2000 |
|----------------|------------|----------|-----------|-----------|----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|------------------------|-----------|-----------|-----------|
| W87-1A         | 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    | 655.35    |
| W87-2A         | 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    |           | 651.56    |
| W88-3M         | 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         | 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    |           | 687.54    |
| W88-5A         | 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    | 634.36    |
| W88-6A         | 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         | 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         | 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    |           | 684.18    |
| W90-12A        | 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   |                        |           |           | 610.84    |
| W95-14A        | 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    |           | 680.49    |
| 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    | 635.36    |
| MW-1A          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| MW-2           |            |          |           |           |          |            |           | 637.44    | 638.15    | 638.01    | 637.23    | 636.28    | 635.19    | 633.40    | 633.33    | 634.08   |                        |           | 636.12    | 636.67    |
| 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    | 632.39    |
| MW-4           |            |          |           |           |          |            |           | 633.90    | 633.86    | 633.90    | 633.24    | 633.17    | 632.00    |           |           | 630.08   | 626.72                 | 627.78    | 632.00    | 634.60    |
| MW-5           |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| MW-5A          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| MW-6           | 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    | 629.16    |
| MW-7           | 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    | 638.18    |
| MW-9           | 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    |           | 693.62    |
| MW-10          | 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    |           | 660.67    |
| P88-1a         | 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    | 658.81    |
| P88-1b         | 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    | 655.16    |
| P88-2a         | 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    |           | 660.21    |
| P88-2b         | 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    |           | 653.63    |
| P88-3a         | 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    | 648.88    |
| P88-3b         | 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    | 644.58    |
| P87-4M         | 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         | 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         | 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         | 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    |           | 701.27    |
| P88-9a         | 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    | 645.43    |
| P88-9b         | 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        | 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    |           | 660.95    |
| P88-10b        | 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        | 638.21     | 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   |                        |           |           | 637.64    |
| P90-12b        | 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   |                        |           |           | 636.38    |
| P90-13a        | 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   |                        |           |           | 639.39    |
| P90-13b        | 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   |                        |           |           | 639.18    |
| P13-14a        |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-1P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-2P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-3P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-4P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-5P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-6P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-7P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-8P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-9P          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| GP-10          |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          |                        |           |           |           |
| WS-1           |            |          |           |           |          |            |           |           |           |           |           |           |           |           |           |          | 602.10                 |           |           |           |
| SG-1           | 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           | 626.80     | 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<br>NUMBER | 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 | 12/19/2003 |        |
|----------------|----------|-----------|-----------|------------|-----------|------------|-----------|-----------|-----------|------------------------|------------|-----------|------------------------|-----------|------------|-----------|-----------|-----------|-----------|------------|--------|
| W87-1A         | 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         | 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    | 642.70     |        |
| 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    | 641.64     |        |
| W87-4a         | 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    | 686.02     |        |
| W88-5A         | 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    | 633.10     |        |
| W88-6A         |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            |           |           |           |           | 622.80     |        |
| 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    | 622.80     |        |
| W88-8M         | 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    | 683.00     |        |
| W90-12A        | 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    | 599.63     |        |
| W95-14A        | 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    | 679.08     |        |
| MW-1           | 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    | 634.79     |        |
| MW-2           | 636.75   | 635.48    |           |            |           |            |           |           |           |                        |            |           | Decommissioned 4/17/02 |           |            |           |           |           |           |            |        |
| MW-2A          |          |           |           |            |           |            |           |           |           |                        |            |           | 633.17                 | 630.89    | 633.58     |           | 635.14    | 633.24    | 630.64    | 630.63     |        |
| MW-3           | 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    | 630.93     |        |
| MW-4           | 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    | 633.04     |        |
| 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    | 628.93     |        |
| MW-5A          |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            |           |           |           |           |            |        |
| MW-6           | 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    | 628.93     |        |
| MW-7           | 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    | 633.93     |        |
| MW-9           | 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          | 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    | 658.05     |        |
| P88-1a         | 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         | 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         | 660.19   | 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    | 658.07     |        |
| P88-2b         | 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    | 647.11     |        |
| P88-3a         | 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    | 642.10     |        |
| P88-3b         | 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    | 638.67     |        |
| 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    | 682.93     |        |
| P88-5a         |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            |           |           |           |           |            |        |
| P88-5b         |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            |           |           |           |           |            |        |
| P95-8a         | 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    | 696.90     |        |
| P88-9a         | 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    | 644.25     |        |
| 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    | 636.37     |        |
| P88-10a        | 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    | 659.00     |        |
| 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    | 650.64     |        |
| P90-12a        | 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    | 637.75     |        |
| P90-12b        | 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    | 635.90     |        |
| P90-13a        | 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    | 638.78     |        |
| P90-13b        | 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    | 638.35     |        |
| 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    | 635.39     |        |
| 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    | 640.80     |        |
| 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    | 647.21     |        |
| GP-4P          |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            |           |           | 649.59    |           | 652.11     |        |
| GP-5P          |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            |           |           |           |           |            |        |
| GP-6P          |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            | 646.11    |           |           |           |            |        |
| GP-7P          |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            | 642.76    |           | 643.38    |           | 639.58     |        |
| GP-8P          |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            | 645.50    |           | 646.92    | 645.49    | 647.87     |        |
| GP-9P          |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            | 644.25    |           | 649.95    | 646.87    | 651.16     |        |
| GP-10          |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            |           |           |           |           |            |        |
| 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    | 629.94     |        |
| 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    | 632.44     |        |
| 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        |          |           |           |            |           |            |           |           |           |                        |            |           |                        |           |            |           |           | 633.71    | 634.16    | 633.60     | 634.44 |

Water Level Elevation Data  
LRI Landfill, Pierce County Washington

| WELL<br>NUMBER | 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         | 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         | 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         | 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         | 636.90    | 632.58    | 632.56    | 634.03     | 633.96    | 633.21    |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| W88-6A         |           |           |           | 636.90     |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| W88-7A         | 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         | 683.53    | 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        | 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        | 679.49    | 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          | 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          | 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           | 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           | 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           | 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           | 628.79    | 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           | 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          | 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         | 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         | 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         | 648.14    | 642.42    | 640.31    | 647.53     | 648.25    | 645.61    | 639.32    | 647.89                 | 648.21    | 646.32    |           | 647.67     | 648.68    | 643.38    | 648.32    | 648.45     | 646.79    | 638.26   |           |
| P88-3b         | 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         | 686.81    |           | 682.55    | 683.51     | 683.21    | 683.16    |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| P88-5a         |           |           |           |            |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| P88-5b         |           |           |           |            |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| P95-8a         | 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         | 644.67    | 643.57    | 643.88    | 645.09     | 644.61    | 644.23    |           | Decommissioned 8/24/05 |           |           |           |            |           |           |           |            |           |          |           |
| P88-9b         | 637.47    | 636.39    | 636.23    | 637.58     | 636.65    | 637.14    |           | Decommissioned 8/24/05 |           |           |           |            |           |           |           |            |           |          |           |
| P88-10a        | 662.45    | 656.61    | 656.54    |            |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| P88-10b        | 651.48    | 649.79    | 649.94    |            |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| P90-12a        | 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        | 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        | 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        | 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          | 635.59    | 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          | 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          | 647.82    | 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          | 652.50    | 651.34    | 652.11    |            |           |           |           |                        |           |           | 648.14    | 652.03     | 652.55    |           |           |            |           |          |           |
| GP-5P          |           |           |           |            |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| GP-6P          | 640.92    | 640.54    | 639.99    |            | 641.28    | 641.25    |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| GP-7P          | 648.27    | 647.46    | 647.35    |            | 647.97    | 648.03    |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| GP-8P          | 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          |           |           |           |            |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| WS-1           |           |           |           |            |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| SG-1           |           |           |           |            |           |           |           |                        |           |           |           |            |           |           |           |            |           |          |           |
| SG-2           |           |           |           |            |           | 630.94    | 629.89    | 631.69                 | 631.02    | 629.16    | 627.09    | 630.15     |           |           |           |            |           |          |           |
| LDCS-1         | 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        |           |           |           |            |           | 634.64    | 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<br>NUMBER | 12/8/2008 | 3/16/2009 | 6/23/2009 | 9/11/2009 | #####  | 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    | 653.96    | 652.42    |
| 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    |
| 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<br>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          | 654.47     | 654.92    | 653.93    | 648.9     | 654        | 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    |            |           |          |           |            |           |          |           |           |           |           |           |            |           |           |           |
| 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<br>NUMBER | 12/5/2018 |
|----------------|-----------|
| W87-1A         |           |
| W87-2A         | 646.31    |
| W88-3M         | 643.21    |
| W87-4a         | 684.37    |
| W88-5A         |           |
| W88-6A         |           |
| W88-7A         |           |
| W88-8M         | 680.40    |
| W90-12A        | 606.63    |
| W95-14A        | 677.60    |
| MW-1           |           |
| MW-1A          | 634.17    |
| MW-2           |           |
| MW-2A          | 633.67    |
| MW-3           | 628.36    |
| MW-4           | 629.13    |
| MW-5           |           |
| MW-5A          | 626.42    |
| MW-6           | 626.91    |
| MW-7           | 631.52    |
| MW-9           | 690.64    |
| MW-10          | 651.58    |
| P88-1a         |           |
| P88-1b         |           |
| P88-2a         |           |
| P88-2b         |           |
| P88-3a         | 636.10    |
| P88-3b         | 634.14    |
| P87-4M         |           |
| P88-5a         |           |
| P88-5b         |           |
| P95-8a         | 696.82    |
| P88-9a         |           |
| P88-9b         |           |
| P88-10a        |           |
| P88-10b        |           |
| P90-12a        | 634.83    |
| P90-12b        | 633.71    |
| P90-13a        |           |
| P90-13b        |           |
| P13-14a        | 642.81    |
| GP-1P          | 634.91    |
| GP-2P          | 641.38    |
| GP-3P          | 646.55    |
| GP-4P          | 650.29    |
| GP-5P          |           |
| GP-6P          |           |
| GP-7P          |           |
| GP-8P          |           |
| GP-9P          | 662.42    |
| GP-10          |           |
| WS-1           |           |
| SG-1           |           |
| SG-2           |           |
| LDCS-1         | 630.31    |
| LDCS-2A        | 630.01    |
| LDCS-2B        | 635.12    |



**Table 1. Groundwater Level Elevations**  
**March 21, 2018**  
**LRI Landfill, Pierce County, Washington**

| <b>Location</b>              | <b>Well Casing Elevation<br/>(ft)</b> | <b>Depth to Water<br/>(ft)</b> | <b>Water Level Elevation<br/>(ft, NGVD29)</b> |
|------------------------------|---------------------------------------|--------------------------------|-----------------------------------------------|
| <b>Wells</b>                 |                                       |                                |                                               |
| W87-2A                       | 664.01                                | 13.06                          | 650.95                                        |
| W87-4A                       | 693.29                                | 5.75                           | 687.54                                        |
| W88-3M                       | 658.11                                | 11.17                          | 646.94                                        |
| W88-7A                       | 632.51                                | NM                             | --                                            |
| W88-8M                       | 721.05                                | 38.58                          | 682.47                                        |
| W90-12A                      | 640.84                                | 27.83                          | 613.01                                        |
| W95-14A                      | 680.49                                | 0.00                           | 680.49                                        |
| MW-1A                        | 652.57                                | 17.71                          | 634.86                                        |
| MW-2A                        | 651.93                                | 17.00                          | 634.93                                        |
| MW-3                         | 637.41                                | 5.75                           | 631.66                                        |
| MW-4                         | 652.37                                | 21.02                          | 631.35                                        |
| MW-5A                        | 655.55                                | 25.95                          | 629.60                                        |
| MW-6                         | 635.71                                | 8.57                           | 627.14                                        |
| MW-7                         | 656.03                                | 20.06                          | 635.97                                        |
| MW-9                         | 701.77                                | 7.35                           | 694.42                                        |
| MW-10                        | 673.87                                | 18.52                          | 655.35                                        |
| <b>Piezometers</b>           |                                       |                                |                                               |
| P13-14A                      | 665.96                                | 19.18                          | 646.78                                        |
| P88-2A                       | 663.96                                | NM                             | --                                            |
| P88-2B                       | 663.48                                | NM                             | --                                            |
| P88-3A                       | 656.20                                | 10.00                          | 646.20                                        |
| P88-3B                       | 655.98                                | 13.85                          | 642.13                                        |
| P95-8A                       | 722.07                                | 21.23                          | 700.84                                        |
| P90-12A                      | 640.79                                | 2.84                           | 637.95                                        |
| P90-12B                      | 640.73                                | 4.04                           | 636.69                                        |
| P90-13A                      | 645.19                                | NM                             | --                                            |
| P90-13B                      | 643.63                                | NM                             | --                                            |
| GP-1P <sup>a</sup>           | 652.00                                | 16.76                          | 635.24                                        |
| GP-2P <sup>a</sup>           | 658.61                                | 15.79                          | 642.82                                        |
| GP-3P <sup>a</sup>           | 658.51                                | 11.32                          | 647.19                                        |
| GP-4P <sup>a</sup>           | 662.01                                | 9.27                           | 652.74                                        |
| GP-9P <sup>a</sup>           | 674.03                                | 11.81                          | 662.22                                        |
| <b>South Creek</b>           |                                       |                                |                                               |
| SWSC-1                       | 632.68                                | 0.45                           | 632.23                                        |
| SWSC-2                       | 629.98                                | 6.87                           | 623.11                                        |
| <b>Leak Detection System</b> |                                       |                                |                                               |
| LDCS-1                       | 657.26                                | 25.85                          | 631.41                                        |
| LDCS-2A                      | 659.24                                | 24.60                          | 634.64                                        |
| LDCS-2B                      | 661.70                                | 25.86                          | 635.84                                        |

Notes:

NM= not measured

-- = not applicable

Measurements taken on 3/21/2018 unless otherwise noted

a = Measurement taken on 3/20/2018

**Table 1. Groundwater Level Elevations**  
**June 20, 2018**  
**LRI Landfill, Pierce County, Washington**

| <b>Location</b>              | <b>Well Casing Elevation<br/>(ft)</b> | <b>Depth to Water<br/>(ft)</b> | <b>Water Level Elevation<br/>(ft, NGVD29)</b> |
|------------------------------|---------------------------------------|--------------------------------|-----------------------------------------------|
| <b>Wells</b>                 |                                       |                                |                                               |
| W87-2A                       | 664.01                                | 17.04                          | 646.97                                        |
| W87-4A                       | 693.29                                | 8.08                           | 685.21                                        |
| W88-3M                       | 658.11                                | 12.04                          | 646.07                                        |
| W88-7A                       | 632.51                                | NM                             | --                                            |
| W88-8M                       | 721.05                                | 40.26                          | 680.79                                        |
| W90-12A                      | 640.84                                | 31.05                          | 609.79                                        |
| W95-14A                      | 680.49                                | 1.28                           | 679.21                                        |
| MW-1A                        | 652.57                                | 18.11                          | 634.46                                        |
| MW-2A                        | 651.93                                | 17.99                          | 633.94                                        |
| MW-3                         | 637.41                                | 6.99                           | 630.42                                        |
| MW-4                         | 652.37                                | 22.16                          | 630.21                                        |
| MW-5A                        | 655.55                                | 26.85                          | 628.70                                        |
| MW-6                         | 635.71                                | 10.21                          | 625.50                                        |
| MW-7                         | 656.03                                | 22.29                          | 633.74                                        |
| MW-9                         | 701.77                                | 8.93                           | 692.84                                        |
| MW-10                        | 673.87                                | 19.98                          | 653.89                                        |
| <b>Piezometers</b>           |                                       |                                |                                               |
| P13-14A                      | 665.96                                | 21.64                          | 644.32                                        |
| P88-2A                       | 663.96                                | NM                             | --                                            |
| P88-2B                       | 663.48                                | NM                             | --                                            |
| P88-3A                       | 656.20                                | 14.90                          | 641.30                                        |
| P88-3B                       | 655.98                                | 17.78                          | 638.20                                        |
| P95-8A                       | 722.07                                | 23.42                          | 698.65                                        |
| P90-12A                      | 640.79                                | 4.35                           | 636.44                                        |
| P90-12B                      | 640.73                                | 5.48                           | 635.25                                        |
| P90-13A                      | 645.19                                | NM                             | --                                            |
| P90-13B                      | 643.63                                | NM                             | --                                            |
| GP-1P                        | 652.00                                | 17.46                          | 634.54                                        |
| GP-2P                        | 658.61                                | 16.28                          | 642.33                                        |
| GP-3P                        | 658.51                                | 11.23                          | 647.28                                        |
| GP-4P                        | 662.01                                | 10.14                          | 651.87                                        |
| GP-9P <sup>a</sup>           | 674.03                                | 12.69                          | 661.34                                        |
| <b>South Creek</b>           |                                       |                                |                                               |
| SWSC-1                       | 632.68                                | 0.80                           | 631.88                                        |
| SWSC-2                       | 629.98                                | 7.75                           | 622.23                                        |
| <b>Leak Detection System</b> |                                       |                                |                                               |
| LDCS-1                       | 657.26                                | 26.50                          | 630.76                                        |
| LDCS-2A                      | 659.24                                | 25.10                          | 634.14                                        |
| LDCS-2B                      | 661.70                                | 25.80                          | 635.90                                        |

Notes:

NM= not measured

-- = not applicable

Measurements taken on 6/20/2018 unless otherwise noted

a = Measurement taken on 6/27/2018

**Table 1. Groundwater Level Elevations  
September 19, 2018  
LRI Landfill, Pierce County, Washington**

| <b>Location</b>              | <b>Well Casing Elevation<br/>(ft)</b> | <b>Depth to Water<br/>(ft)</b> | <b>Water Level Elevation<br/>(ft, NGVD29)</b> |
|------------------------------|---------------------------------------|--------------------------------|-----------------------------------------------|
| <b>Wells</b>                 |                                       |                                |                                               |
| W87-2A                       | 664.01                                | 20.70                          | 643.31                                        |
| W87-4A                       | 693.29                                | 10.74                          | 682.55                                        |
| W88-3M                       | 658.11                                | 15.70                          | 642.41                                        |
| W88-7A                       | 632.51                                | NM                             | --                                            |
| W88-8M                       | 721.05                                | 41.36                          | 679.69                                        |
| W90-12A                      | 640.84                                | 36.00                          | 604.84                                        |
| W95-14A                      | 680.49                                | NM                             | --                                            |
| MW-1A                        | 652.57                                | 20.22                          | 632.35                                        |
| MW-2A                        | 651.93                                | 20.07                          | 631.86                                        |
| MW-3                         | 637.41                                | 9.83                           | 627.58                                        |
| MW-4                         | 652.37                                | 24.89                          | 627.48                                        |
| MW-5A                        | 655.55                                | 26.46                          | 629.09                                        |
| MW-6                         | 635.71                                | 12.58                          | 623.13                                        |
| MW-7                         | 656.03                                | 25.98                          | 630.05                                        |
| MW-9                         | 701.77                                | 12.22                          | 689.55                                        |
| MW-10                        | 673.87                                | 24.24                          | 649.63                                        |
| <b>Piezometers</b>           |                                       |                                |                                               |
| P13-14A                      | 665.96                                | 25.00                          | 640.96                                        |
| P88-2A                       | 663.96                                | NM                             | --                                            |
| P88-2B                       | 663.48                                | NM                             | --                                            |
| P88-3A                       | 656.20                                | 19.51                          | 636.69                                        |
| P88-3B                       | 655.98                                | 22.05                          | 633.93                                        |
| P95-8A                       | 722.07                                | 24.88                          | 697.19                                        |
| P90-12A                      | 640.79                                | 8.70                           | 632.09                                        |
| P90-12B                      | 640.73                                | 10.89                          | 629.84                                        |
| P90-13A                      | 645.19                                | NM                             | --                                            |
| P90-13B                      | 643.63                                | NM                             | --                                            |
| GP-1P <sup>a</sup>           | 652.00                                | 19.78                          | 632.22                                        |
| GP-2P <sup>a</sup>           | 658.61                                | 18.58                          | 640.03                                        |
| GP-3P <sup>a</sup>           | 658.51                                | 13.44                          | 645.07                                        |
| GP-4P <sup>a</sup>           | 662.01                                | 15.11                          | 646.90                                        |
| GP-9P <sup>a</sup>           | 674.03                                | 15.84                          | 658.19                                        |
| <b>South Creek</b>           |                                       |                                |                                               |
| SWSC-1                       | 632.68                                | 1.45                           | 631.23                                        |
| SWSC-2                       | 629.98                                | Dry                            | --                                            |
| <b>Leak Detection System</b> |                                       |                                |                                               |
| LDCS-1 <sup>b</sup>          | 657.26                                | 28.40                          | 628.86                                        |
| LDCS-2A <sup>b</sup>         | 659.24                                | 24.70                          | 634.54                                        |
| LDCS-2B <sup>c</sup>         | 661.70                                | 26.48                          | 635.22                                        |

Notes:

NM= not measured

-- = not applicable

Measurements taken on 9/19/2018 unless otherwise noted

a = Measurement taken on 9/27/2018

b = Measurement taken on 9/18/2018

c = Measurement taken on 9/20/2018

Dry = Stream bed dry at measuring point

**Table 1. Groundwater Level Elevations  
December 5, 2018  
LRI Landfill, Pierce County, Washington**

| <b>Location</b>              | <b>Well Casing Elevation<br/>(ft)</b> | <b>Depth to Water<br/>(ft)</b> | <b>Water Level Elevation<br/>(ft, NGVD29)</b> |
|------------------------------|---------------------------------------|--------------------------------|-----------------------------------------------|
| <b>Wells</b>                 |                                       |                                |                                               |
| W87-2A                       | 664.01                                | 17.70                          | 646.31                                        |
| W87-4A                       | 693.29                                | 8.92                           | 684.37                                        |
| W88-3M                       | 658.11                                | 14.90                          | 643.21                                        |
| W88-7A                       | 632.51                                | NM                             | --                                            |
| W88-8M                       | 721.05                                | 40.65                          | 680.40                                        |
| W90-12A                      | 640.84                                | 34.21                          | 606.63                                        |
| W95-14A                      | 680.49                                | 2.89                           | 677.60                                        |
| MW-1A                        | 652.57                                | 18.40                          | 634.17                                        |
| MW-2A                        | 651.93                                | 18.26                          | 633.67                                        |
| MW-3                         | 637.41                                | 9.05                           | 628.36                                        |
| MW-4                         | 652.37                                | 23.24                          | 629.13                                        |
| MW-5A                        | 655.55                                | 29.13                          | 626.42                                        |
| MW-6                         | 635.71                                | 8.80                           | 626.91                                        |
| MW-7                         | 656.03                                | 24.51                          | 631.52                                        |
| MW-9                         | 701.77                                | 11.13                          | 690.64                                        |
| MW-10                        | 673.87                                | 22.29                          | 651.58                                        |
| <b>Piezometers</b>           |                                       |                                |                                               |
| P13-14A                      | 665.96                                | 23.15                          | 642.81                                        |
| P88-2A                       | 663.96                                | NM                             | --                                            |
| P88-2B                       | 663.48                                | NM                             | --                                            |
| P88-3A                       | 656.20                                | 20.10                          | 636.10                                        |
| P88-3B                       | 655.98                                | 21.84                          | 634.14                                        |
| P95-8A                       | 722.07                                | 25.25                          | 696.82                                        |
| P90-12A                      | 640.79                                | 5.96                           | 634.83                                        |
| P90-12B                      | 640.73                                | 7.02                           | 633.71                                        |
| P90-13A                      | 645.19                                | NM                             | --                                            |
| P90-13B                      | 643.63                                | NM                             | --                                            |
| GP-1P <sup>a</sup>           | 652.00                                | 17.09                          | 634.91                                        |
| GP-2P <sup>a</sup>           | 658.61                                | 17.23                          | 641.38                                        |
| GP-3P <sup>a</sup>           | 658.51                                | 11.96                          | 646.55                                        |
| GP-4P <sup>a</sup>           | 662.01                                | 11.72                          | 650.29                                        |
| GP-9P <sup>a</sup>           | 674.03                                | 11.61                          | 662.42                                        |
| <b>South Creek</b>           |                                       |                                |                                               |
| SWSC-1                       | 632.68                                | 1.55                           | 631.13                                        |
| SWSC-2                       | 629.98                                | 7.40                           | 622.58                                        |
| <b>Leak Detection System</b> |                                       |                                |                                               |
| LDCS-1 <sup>b</sup>          | 657.26                                | 26.95                          | 630.31                                        |
| LDCS-2A <sup>b</sup>         | 659.24                                | 29.23                          | 630.01                                        |
| LDCS-2B <sup>b</sup>         | 661.70                                | 26.58                          | 635.12                                        |

Notes:

NM= not measured

-- = not applicable

Measurements taken on 12/5/2018 unless otherwise noted

a = Measurement taken on 12/13/2018

b = measurement taken on 12/3/2018



## Appendix B

### Groundwater Monitoring Data





**Table 1. Groundwater Level Elevations**  
**March 21, 2018**  
**LRI Landfill, Pierce County, Washington**

| <b>Location</b>              | <b>Well Casing Elevation<br/>(ft)</b> | <b>Depth to Water<br/>(ft)</b> | <b>Water Level Elevation<br/>(ft, NGVD29)</b> |
|------------------------------|---------------------------------------|--------------------------------|-----------------------------------------------|
| <b>Wells</b>                 |                                       |                                |                                               |
| W87-2A                       | 664.01                                | 13.06                          | 650.95                                        |
| W87-4A                       | 693.29                                | 5.75                           | 687.54                                        |
| W88-3M                       | 658.11                                | 11.17                          | 646.94                                        |
| W88-7A                       | 632.51                                | NM                             | --                                            |
| W88-8M                       | 721.05                                | 38.58                          | 682.47                                        |
| W90-12A                      | 640.84                                | 27.83                          | 613.01                                        |
| W95-14A                      | 680.49                                | 0.00                           | 680.49                                        |
| MW-1A                        | 652.57                                | 17.71                          | 634.86                                        |
| MW-2A                        | 651.93                                | 17.00                          | 634.93                                        |
| MW-3                         | 637.41                                | 5.75                           | 631.66                                        |
| MW-4                         | 652.37                                | 21.02                          | 631.35                                        |
| MW-5A                        | 655.55                                | 25.95                          | 629.60                                        |
| MW-6                         | 635.71                                | 8.57                           | 627.14                                        |
| MW-7                         | 656.03                                | 20.06                          | 635.97                                        |
| MW-9                         | 701.77                                | 7.35                           | 694.42                                        |
| MW-10                        | 673.87                                | 18.52                          | 655.35                                        |
| <b>Piezometers</b>           |                                       |                                |                                               |
| P13-14A                      | 665.96                                | 19.18                          | 646.78                                        |
| P88-2A                       | 663.96                                | NM                             | --                                            |
| P88-2B                       | 663.48                                | NM                             | --                                            |
| P88-3A                       | 656.20                                | 10.00                          | 646.20                                        |
| P88-3B                       | 655.98                                | 13.85                          | 642.13                                        |
| P95-8A                       | 722.07                                | 21.23                          | 700.84                                        |
| P90-12A                      | 640.79                                | 2.84                           | 637.95                                        |
| P90-12B                      | 640.73                                | 4.04                           | 636.69                                        |
| P90-13A                      | 645.19                                | NM                             | --                                            |
| P90-13B                      | 643.63                                | NM                             | --                                            |
| GP-1P <sup>a</sup>           | 652.00                                | 16.76                          | 635.24                                        |
| GP-2P <sup>a</sup>           | 658.61                                | 15.79                          | 642.82                                        |
| GP-3P <sup>a</sup>           | 658.51                                | 11.32                          | 647.19                                        |
| GP-4P <sup>a</sup>           | 662.01                                | 9.27                           | 652.74                                        |
| GP-9P <sup>a</sup>           | 674.03                                | 11.81                          | 662.22                                        |
| <b>South Creek</b>           |                                       |                                |                                               |
| SWSC-1                       | 632.68                                | 0.45                           | 632.23                                        |
| SWSC-2                       | 629.98                                | 6.87                           | 623.11                                        |
| <b>Leak Detection System</b> |                                       |                                |                                               |
| LDCS-1                       | 657.26                                | 25.85                          | 631.41                                        |
| LDCS-2A                      | 659.24                                | 24.60                          | 634.64                                        |
| LDCS-2B                      | 661.70                                | 25.86                          | 635.84                                        |

Notes:

NM= not measured

-- = not applicable

Measurements taken on 3/21/2018 unless otherwise noted

a = Measurement taken on 3/20/2018

**Table 2. Field Parameters**  
**First Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Location                          | Sample Number | Sample Date | Sampling Method | pH   | Conductivity (µS/cm) | Temperature (°C) |
|-----------------------------------|---------------|-------------|-----------------|------|----------------------|------------------|
| <b>Monitoring Wells</b>           |               |             |                 |      |                      |                  |
| MW-1A                             | 304-031918-01 | 3/19/2018   | DP              | 7.05 | 197                  | 13.3             |
| MW-2A                             | 304-031918-03 | 3/19/2018   | DP              | 7.19 | 245                  | 12.4             |
| MW-3                              | 304-031918-05 | 3/19/2018   | DP              | 6.88 | 390                  | 10.4             |
| MW-4                              | 304-032218-20 | 3/22/2018   | SP              | 7.66 | 311                  | 12.1             |
| MW-5A                             | 304-032018-11 | 3/20/2018   | DP              | 7.44 | 420                  | 11.7             |
| MW-6                              | 304-032018-13 | 3/20/2018   | DP              | 8.38 | 284                  | 10.8             |
| MW-7                              | 304-031918-07 | 3/19/2018   | DP              | 7.56 | 377                  | 10.2             |
| MW-9                              | 304-032118-19 | 3/21/2018   | DP              | 6.71 | 137                  | 9.7              |
| MW-10                             | 304-032018-16 | 3/20/2018   | DP              | 6.52 | 266                  | 10.6             |
| <b>Leak Detection System</b>      |               |             |                 |      |                      |                  |
| LDCS-1                            | 304-031918-08 | 3/19/2018   | DB              | 6.01 | 352                  | 21.5             |
| LDCS-2A                           | 304-031918-06 | 3/19/2018   | DB              | 6.30 | 742                  | 19.0             |
| LDCS-2B                           | 304-031918-04 | 3/19/2018   | DB              | 7.59 | 697                  | 19.6             |
| LDCS-3A                           | 304-031918-02 | 3/19/2018   | DP              | 6.29 | 762                  | 21.2             |
| LDCS-4A                           | 304-031918-10 | 3/19/2018   | DP              | 6.10 | 782                  | 22.6             |
| LDCS-4B                           | 304-032018-14 | 3/20/2018   | DP              | 6.54 | 1,090                | 24.6             |
| LDCS-5                            | 304-032018-12 | 3/20/2018   | DP              | 6.44 | 864                  | 18.7             |
| LDCS-6                            | 304-032018-15 | 3/20/2018   | DP              | 6.81 | 1,213                | 14.8             |
| <b>Leachate Collection System</b> |               |             |                 |      |                      |                  |
| Leachate, Cell 6                  | 304-032118-18 | 3/21/2018   | GB              | 7.80 | 18,448               | 13.1             |

Notes:

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

µS/cm = microsiemens per centimeter

°C = degrees celcius

**Table 3. Inorganic Parameters**  
**First Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                         | Alkalinity,<br>Total | Ammonia | Chloride | Nitrate | Nitrate-<br>Nitrite as N | Sulfate | Total<br>Dissolved<br>Solids | Total<br>Organic<br>Carbon | Total<br>Suspended<br>Solids |
|-----------------------------------|----------------------|---------|----------|---------|--------------------------|---------|------------------------------|----------------------------|------------------------------|
| MRL                               | 5.0                  | 0.1-4.4 | 0.2-120  | 0.50    | 0.50                     | 0.2-1.0 | 10-47                        | 1.0                        | 4.0                          |
| WAC 173-200 Criteria              | —                    | —       | 250      | 10      | —                        | 250     | 500                          | —                          | —                            |
| Prediction Limit                  | —                    | —       | —        | 6.4     | —                        | —       | —                            | —                          | —                            |
| <b>Monitoring Wells</b>           |                      |         |          |         |                          |         |                              |                            |                              |
| MW-1A                             | 93                   | *       | 2.2      | *       | *                        | 3.1     | 110                          | *                          | 5.2                          |
| MW-2A                             | 120                  | *       | 3.0      | *       | *                        | 6.1     | 160                          | *                          | *                            |
| MW-3                              | 170                  | *       | 3.3      | *       | *                        | 26      | 240                          | 1.1                        | *                            |
| MW-4                              | 140                  | 0.14    | 3.4      | *       | —                        | 11      | 190                          | 1.1                        | *                            |
| MW-5A                             | 190                  | 0.14    | 3.5      | *       | —                        | 24      | 240                          | *                          | *                            |
| MW-6                              | 140                  | *       | 4.8      | *       | —                        | 6.8     | 170                          | *                          | *                            |
| MW-7                              | 200                  | 0.16    | 2.9      | *       | *                        | 3.1     | 210                          | *                          | *                            |
| MW-9                              | 68                   | *       | 1.7      | *       | —                        | 1.7     | 120                          | *                          | *                            |
| MW-10                             | 91                   | *       | 8.9      | 5.3     | —                        | 7.4     | 180                          | *                          | *                            |
| <b>Leak Detection System</b>      |                      |         |          |         |                          |         |                              |                            |                              |
| LDCS-1                            | 170                  | *       | 3.9      | *       | *                        | 7.2     | 220                          | 2.5                        | —                            |
| LDCS-2A                           | 400                  | *       | 3.5      | *       | *                        | 23      | 460                          | 2.2                        | —                            |
| LDCS-2B                           | 310                  | *       | 3.4      | *       | *                        | 70      | 450                          | 1.7                        | —                            |
| LDCS-3A                           | 360                  | *       | 4.2      | *       | *                        | 71      | 450                          | 1.5                        | —                            |
| LDCS-4A                           | 340                  | *       | 25       | 1.1     | 1.3                      | 57      | 480                          | 5.1                        | —                            |
| LDCS-4B                           | 450                  | *       | 21       | *       | —                        | 140     | 670                          | 4.0                        | —                            |
| LDCS-5                            | 370                  | 0.93    | 34       | *       | —                        | 57      | 510                          | 4.5                        | —                            |
| LDCS-6                            | 420                  | *       | 12       | *       | —                        | 260     | 810                          | 5.9                        | —                            |
| <b>Leachate Collection System</b> |                      |         |          |         |                          |         |                              |                            |                              |
| Leachate, Cell 6                  | 7,400                | 730     | 2,000    | *       | —                        | 7.4     | 7,100                        | 1,600                      | —                            |

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.

\* indicates the sample result was not reported at or above the MRL

— = not applicable or not performed



Table 4. WAC 173-351 Appendix I Metals  
First Quarter 2018  
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                      | —          | *          | —         | *             | —        | 0.023    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | 0.010  |   |
| MW-2A                      | —          | *          | —         | *             | —        | 0.012    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-3                       | —          | *          | —         | *             | —        | 0.015    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-4                       | —          | *          | —         | <b>0.0090</b> | —        | 0.016    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | 0.014  |   |
| MW-5A                      | —          | *          | —         | <b>0.0065</b> | —        | 0.016    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-6                       | —          | *          | —         | <b>0.0075</b> | —        | 0.021    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-7                       | —          | *          | —         | *             | —        | 0.016    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| (BG) MW-9                  | —          | *          | —         | *             | —        | *        | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | 0.016      | —      | *      |   |
| (BG) MW-10                 | —          | *          | —         | *             | —        | 0.013    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| Leak Detection System      |            |            |           |               |          |          |             |             |           |           |            |            |          |          |          |          |        |        |          |          |            |            |          |          |            |            |            |            |        |        |   |
| LDCS-1                     | *          | —          | 0.0069    | —             | 0.017    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-2A                    | *          | —          | 0.0085    | —             | 0.026    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-2B                    | *          | —          | 0.0057    | —             | 0.018    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-3A                    | *          | —          | *         | —             | 0.013    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-4A                    | *          | —          | *         | —             | 0.028    | —        | —           | —           | —         | —         | *          | —          | 0.0012   | —        | 0.016    | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-4B                    | *          | —          | *         | —             | 0.031    | —        | —           | —           | —         | —         | *          | —          | 0.0017   | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-5                     | *          | —          | 0.0072    | —             | 0.047    | —        | *           | —           | *         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | *          | —          | *        | —        | *          | —          | *          | —          | *      | —      | — |
| LDCS-6                     | *          | —          | *         | —             | 0.030    | —        | *           | —           | *         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | *          | —          | *        | —        | *          | —          | *          | —          | 0.012  | —      | — |
| Leachate Collection System |            |            |           |               |          |          |             |             |           |           |            |            |          |          |          |          |        |        |          |          |            |            |          |          |            |            |            |            |        |        |   |
| Leachate, Cell 6           | —          | *          | —         | 0.13          | —        | 0.53     | —           | *           | —         | *         | —          | 0.38       | —        | 0.035    | —        | 0.084    | —      | 0.058  | —        | 0.33     | —          | 0.017      | —        | *        | —          | *          | —          | 0.081      | —      | 3.0    |   |

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.  
\* indicates 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 2018**  
**LRI Landfill, Pierce County, Washington**

| <b>Parameter</b>                              | <b>Calcium</b> | <b>Iron</b> | <b>Magnesium</b> | <b>Manganese</b> | <b>Potassium</b> | <b>Sodium</b> |
|-----------------------------------------------|----------------|-------------|------------------|------------------|------------------|---------------|
| 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            | —                | —             |
| <b>Monitoring Wells</b>                       |                |             |                  |                  |                  |               |
| MW-1A                                         | 12             | <b>1.1</b>  | 7                | <b>0.22</b>      | 2.8              | 9.2           |
| MW-2A                                         | 19             | <b>0.62</b> | 11               | <b>0.31</b>      | 3.0              | 15            |
| MW-3                                          | 38             | *           | 17               | <b>0.35</b>      | 4.1              | 15            |
| MW-4                                          | 27             | *           | 15               | <b>0.21</b>      | 5.6              | 14            |
| MW-5A                                         | 29             | 0.13        | 12               | <b>0.23</b>      | 4.6              | 46            |
| MW-6                                          | 27             | *           | 13               | <b>0.16</b>      | 4.5              | 11            |
| MW-7                                          | 31             | 0.17        | 22               | <b>0.25</b>      | 5.5              | 15            |
| (BG) MW-9                                     | 9.8            | *           | 6.7              | *                | 2.3              | 8             |
| (BG) MW-10                                    | 23             | *           | 10               | *                | 2.1              | 13            |
| <b>Leak Detection System</b>                  |                |             |                  |                  |                  |               |
| LDCS-1                                        | 33             | 0.26        | 13               | 1.3              | 5.1              | 18            |
| LDCS-2A                                       | 83             | *           | 31               | 1.8              | 9.8              | 33            |
| LDCS-2B                                       | 89             | *           | 28               | 0.014            | 7.5              | 23            |
| LDCS-3A                                       | 93             | *           | 33               | 0.74             | 4.8              | 22            |
| LDCS-4A                                       | 75             | 0.13        | 40               | 0.62             | 6.7              | 30            |
| LDCS-4B                                       | 120            | *           | 58               | 1.5              | 7.1              | 29            |
| LDCS-5                                        | 77             | 0.22        | 42               | 1.5              | 8.4              | 38            |
| LDCS-6                                        | 130            | *           | 58               | 0.51             | 4.3              | 53            |
| <b>Leachate Collection System<sup>^</sup></b> |                |             |                  |                  |                  |               |
| Leachate, Cell 6                              | 300            | 20          | 250              | 4.0              | 730              | 1900          |

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.

\* indicates result was not reported at or above the MRL.

<sup>^</sup> Leachate reported concentrations are total metals.

— = not applicable or not performed

BG = Background



**Table 6. Volatile Organic Compounds (µg/L)**  
**First Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                         | 1,4-Dichlorobenzene | 2-Butanone (MEK) | Acetone | Toluene |
|-----------------------------------|---------------------|------------------|---------|---------|
| Units                             | µg/L                | µg/L             | µg/L    | µg/L    |
| MRL                               | 0.5                 | 6.0-400          | 10-380  | 34      |
| WAC 173-200 Criteria              | 4.0                 | —                | —       | —       |
| <b>Monitoring Wells</b>           |                     |                  |         |         |
| MW-1A                             | *                   | *                | *       | *       |
| MW-2A                             | *                   | *                | *       | *       |
| MW-3                              | *                   | *                | *       | *       |
| MW-4                              | *                   | 10               | 12      | *       |
| MW-5A                             | *                   | *                | *       | *       |
| MW-6                              | *                   | *                | *       | *       |
| MW-7                              | *                   | *                | *       | *       |
| (BG) MW-9                         | *                   | *                | *       | *       |
| (BG) MW-10                        | *                   | *                | *       | *       |
| <b>Leak Detection System</b>      |                     |                  |         |         |
| LDCS-1                            | *                   | *                | *       | *       |
| LDCS-2A                           | 0.56                | *                | *       | *       |
| LDCS-2B                           | *                   | *                | *       | *       |
| LDCS-3A                           | *                   | *                | *       | *       |
| LDCS-4A                           | *                   | *                | *       | *       |
| LDCS-4B                           | *                   | *                | *       | *       |
| LDCS-5                            | *                   | *                | *       | *       |
| LDCS-6                            | *                   | *                | *       | *       |
| Field Blank                       | *                   | *                | *       | *       |
| <b>Leachate Collection System</b> |                     |                  |         |         |
| Leachate, Cell 6                  | *                   | 18,000           | 15,000  | 80      |

Notes:

Analyses performed by TestAmerica of Denver, Colorado.

MRL is typical and may be elevated for some samples.

\* = not reported at or above the MRL

— = not applicable or not performed

BG = Background

**Table 7. Cation-Anion Balance**  
**First Quarter 2018**  
**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 |
| MW-1A          | 12   | 7   | 2.8 | 9.2  | 31    | 0.60  | 0.58  | 0.06  | 0.40       | 1.64   | 28   | 37 |
| MW-2A          | 19   | 11  | 3.0 | 15   | 48    | 0.95  | 0.91  | 0.07  | 0.65       | 2.57   | 28   | 37 |
| MW-3           | 38   | 17  | 4.1 | 15   | 74.1  | 1.90  | 1.40  | 0.09  | 0.65       | 4.04   | 18   | 47 |
| MW-4           | 27   | 15  | 5.6 | 14   | 61.6  | 1.35  | 1.23  | 0.13  | 0.61       | 3.32   | 22   | 41 |
| MW-5A          | 29   | 12  | 4.6 | 46   | 91.6  | 1.45  | 0.99  | 0.10  | 2.00       | 4.54   | 46   | 32 |
| MW-6           | 27   | 13  | 4.5 | 11   | 55.5  | 1.35  | 1.07  | 0.10  | 0.48       | 3.00   | 19   | 45 |
| MW-7           | 31   | 22  | 5.5 | 15   | 73.5  | 1.55  | 1.81  | 0.12  | 0.65       | 4.13   | 19   | 37 |
| MW-9           | 9.8  | 6.7 | 2.3 | 8    | 26.8  | 0.49  | 0.55  | 0.05  | 0.35       | 1.44   | 28   | 34 |
| MW-10          | 23   | 10  | 2.1 | 13   | 48.1  | 1.15  | 0.82  | 0.05  | 0.57       | 2.58   | 24   | 44 |
| LDCS-1         | 33   | 13  | 5.1 | 18   | 69.1  | 1.65  | 1.07  | 0.12  | 0.78       | 3.61   | 25   | 46 |
| LDCS-2A        | 83   | 31  | 9.8 | 33   | 156.8 | 4.14  | 2.55  | 0.22  | 1.44       | 8.35   | 20   | 50 |
| LDCS-2B        | 89   | 28  | 7.5 | 23   | 147.5 | 4.44  | 2.30  | 0.17  | 1.00       | 7.92   | 15   | 56 |
| LDCS-3A        | 93   | 33  | 4.8 | 22   | 152.8 | 4.64  | 2.72  | 0.11  | 0.96       | 8.42   | 13   | 55 |
| LDCS-4A        | 75   | 40  | 6.7 | 30   | 151.7 | 3.74  | 3.29  | 0.15  | 1.31       | 8.49   | 17   | 44 |
| LDCS-4B        | 120  | 58  | 7.1 | 29   | 214.1 | 5.99  | 4.77  | 0.16  | 1.26       | 12.18  | 12   | 49 |
| LDCS-5         | 77   | 42  | 8.4 | 38   | 165.4 | 3.84  | 3.46  | 0.19  | 1.65       | 9.14   | 20   | 42 |
| LDCS-6         | 130  | 58  | 4.3 | 53   | 245.3 | 6.49  | 4.77  | 0.10  | 2.31       | 13.66  | 18   | 47 |
| Leadate Cell 6 | 300  | 250 | 730 | 1900 | 3180  | 14.97 | 20.58 | 16.48 | 82.65      | 134.68 | 74   | 11 |

| Anions          | mg/L  |       |                 |                 | meq/L |        |       |                 | % of Total      |        |    |     | Total Ions<br>(meq/L) | Cation - Anion<br>Balance | Applicable<br>Ratio (%) | Ratio<br>Exceedance |
|-----------------|-------|-------|-----------------|-----------------|-------|--------|-------|-----------------|-----------------|--------|----|-----|-----------------------|---------------------------|-------------------------|---------------------|
|                 | Alk   | Cl    | NO <sub>3</sub> | SO <sub>4</sub> | Total | Alk    | Cl    | NO <sub>3</sub> | SO <sub>4</sub> | Total  | Cl | Alk |                       |                           |                         |                     |
| MW-1A           | 111.6 | 2.2   | 0.5             | 3.1             | 117.4 | 1.83   | 0.06  | 0.008           | 0.06            | 1.96   | 3  | 93  | 3.60                  | 9.1                       | 10                      | O                   |
| MW-2A           | 144   | 3.0   | 0.5             | 6.1             | 153.6 | 2.36   | 0.08  | 0.008           | 0.13            | 2.58   | 3  | 91  | 5.15                  | 0.1                       | 5                       | O                   |
| MW-3            | 204   | 3.3   | 0.5             | 26              | 233.8 | 3.35   | 0.09  | 0.008           | 0.54            | 3.99   | 2  | 84  | 8.03                  | 0.7                       | 5                       | O                   |
| MW-4            | 168   | 3.4   | 0.5             | 11              | 182.9 | 2.76   | 0.10  | 0.008           | 0.23            | 3.09   | 3  | 89  | 6.41                  | 3.6                       | 5                       | O                   |
| MW-5A           | 228   | 3.5   | 0.5             | 24              | 256   | 3.74   | 0.10  | 0.008           | 0.50            | 4.35   | 2  | 86  | 8.88                  | 2.2                       | 5                       | O                   |
| MW-6            | 168   | 4.8   | 0.5             | 6.8             | 180.1 | 2.76   | 0.14  | 0.008           | 0.14            | 3.04   | 4  | 91  | 6.04                  | 0.7                       | 5                       | O                   |
| MW-7            | 240   | 2.9   | 0.5             | 3.1             | 246.5 | 3.94   | 0.08  | 0.008           | 0.06            | 4.09   | 2  | 96  | 8.22                  | 0.5                       | 5                       | O                   |
| MW-9            | 81.6  | 1.7   | 0.5             | 1.7             | 85.5  | 1.34   | 0.05  | 0.008           | 0.04            | 1.43   | 3  | 94  | 2.87                  | 0.4                       | 10                      | O                   |
| MW-10           | 109.2 | 8.9   | 5.3             | 7.4             | 130.8 | 1.79   | 0.25  | 0.085           | 0.15            | 2.28   | 11 | 79  | 4.86                  | 6.2                       | 10                      | O                   |
| LDCS-1          | 204   | 3.9   | 0.5             | 7.2             | 215.6 | 3.35   | 0.11  | 0.008           | 0.15            | 3.61   | 3  | 93  | 7.23                  | 0.0                       | 5                       | O                   |
| LDCS-2A         | 480   | 3.5   | 0.5             | 23              | 507   | 7.87   | 0.10  | 0.008           | 0.48            | 8.46   | 1  | 93  | 16.81                 | 0.6                       | 5                       | O                   |
| LDCS-2B         | 372   | 3.4   | 0.5             | 70              | 445.9 | 6.10   | 0.10  | 0.008           | 1.46            | 7.66   | 1  | 80  | 15.58                 | 1.6                       | 5                       | O                   |
| LDCS-3A         | 432   | 4.2   | 0.5             | 71              | 507.7 | 7.08   | 0.12  | 0.008           | 1.48            | 8.69   | 1  | 82  | 17.11                 | 1.6                       | 5                       | O                   |
| LDCS-4A         | 408   | 25    | 1.3             | 57              | 491.3 | 6.69   | 0.71  | 0.021           | 1.19            | 8.60   | 8  | 78  | 17.09                 | 0.7                       | 5                       | O                   |
| LDCS-4B         | 540   | 21    | 0.5             | 140             | 701.5 | 8.86   | 0.59  | 0.008           | 2.91            | 12.37  | 5  | 72  | 24.55                 | 0.8                       | 5                       | O                   |
| LDCS-5          | 444   | 34    | 0.5             | 57              | 535.5 | 7.28   | 0.96  | 0.008           | 1.19            | 9.43   | 10 | 77  | 18.58                 | 1.6                       | 5                       | O                   |
| LDCS-6          | 504   | 12    | 0.5             | 260             | 777   | 8.27   | 0.34  | 0.008           | 5.41            | 14.02  | 2  | 59  | 27.68                 | 1.3                       | 5                       | O                   |
| Leadate, Cell 6 | 8,880 | 2,000 | 2.1             | 7.4             | 10890 | 145.63 | 56.40 | 0.034           | 0.15            | 202.22 | 28 | 72  | 336.90                | 20.0                      | 5                       | Exceeds             |

Notes:  
Method 353.2 Nitrate/Nitrite combined data used for LDCS-4A  
mg/L = milligrams per liter  
meq/L = milliequivalents per liter  
Total alkalinity concentration, reported as calcium carbonate (CaCO<sub>3</sub>), is converted to the bicarbonate (HCO<sub>3</sub><sup>-</sup>) 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)/(cations+cations)\*100].  
The MRL was used for analytes that were non-detect  
A 10% difference threshold is used if the total cation-anion sums are < 5.0 meq/liter.  
A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/liter.

**Table 8. Duplicate Sample Results**  
**First Quarter 2018 Monitoring Report**  
**LRI Landfill, Pierce County, Washington**

| Parameter                                                 | MRL   | MW-7  | MW-7 (Duplicate) | RPD (%) |
|-----------------------------------------------------------|-------|-------|------------------|---------|
| <b>Volatile Organic Compounds (µg/L)</b><br>No Detections | -     | -     | -                | -       |
| <b>Inorganic Parameters (mg/L)</b>                        |       |       |                  |         |
| Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )           | 5.0   | 200   | 200              | 0.0%    |
| Ammonia                                                   | 0.10  | 0.16  | 0.19             | 17.1%   |
| Chloride                                                  | 0.20  | 2.9   | 2.8              | 3.5%    |
| Sulfate                                                   | 0.20  | 3.1   | 3.1              | 0.0%    |
| Total Dissolved Solids                                    | 10    | 210   | 210              | 0.0%    |
| <b>Dissolved Metals (mg/L)</b>                            |       |       |                  |         |
| Calcium                                                   | 0.20  | 31    | 30               | 3.3%    |
| Iron                                                      | 0.10  | 0.17  | 0.18             | 5.7%    |
| Magnesium                                                 | 0.10  | 22    | 21               | 4.7%    |
| Manganese                                                 | 0.005 | 0.25  | 0.24             | 4.1%    |
| Potassium                                                 | 2.0   | 5.5   | 5.5              | 0.0%    |
| Sodium                                                    | 1.0   | 15    | 15               | 0.0%    |
| <b>Total Metals (mg/L)</b>                                |       |       |                  |         |
| Arsenic                                                   | 0.005 | *     | 0.0053           | 5.8%    |
| Barium                                                    | 0.005 | 0.016 | 0.016            | 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.

\* = the sample results were not reported at or above the MRL

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

**Table 1. Groundwater Level Elevations**  
**June 20, 2018**  
**LRI Landfill, Pierce County, Washington**

| <b>Location</b>              | <b>Well Casing Elevation<br/>(ft)</b> | <b>Depth to Water<br/>(ft)</b> | <b>Water Level Elevation<br/>(ft, NGVD29)</b> |
|------------------------------|---------------------------------------|--------------------------------|-----------------------------------------------|
| <b>Wells</b>                 |                                       |                                |                                               |
| W87-2A                       | 664.01                                | 17.04                          | 646.97                                        |
| W87-4A                       | 693.29                                | 8.08                           | 685.21                                        |
| W88-3M                       | 658.11                                | 12.04                          | 646.07                                        |
| W88-7A                       | 632.51                                | NM                             | --                                            |
| W88-8M                       | 721.05                                | 40.26                          | 680.79                                        |
| W90-12A                      | 640.84                                | 31.05                          | 609.79                                        |
| W95-14A                      | 680.49                                | 1.28                           | 679.21                                        |
| MW-1A                        | 652.57                                | 18.11                          | 634.46                                        |
| MW-2A                        | 651.93                                | 17.99                          | 633.94                                        |
| MW-3                         | 637.41                                | 6.99                           | 630.42                                        |
| MW-4                         | 652.37                                | 22.16                          | 630.21                                        |
| MW-5A                        | 655.55                                | 26.85                          | 628.70                                        |
| MW-6                         | 635.71                                | 10.21                          | 625.50                                        |
| MW-7                         | 656.03                                | 22.29                          | 633.74                                        |
| MW-9                         | 701.77                                | 8.93                           | 692.84                                        |
| MW-10                        | 673.87                                | 19.98                          | 653.89                                        |
| <b>Piezometers</b>           |                                       |                                |                                               |
| P13-14A                      | 665.96                                | 21.64                          | 644.32                                        |
| P88-2A                       | 663.96                                | NM                             | --                                            |
| P88-2B                       | 663.48                                | NM                             | --                                            |
| P88-3A                       | 656.20                                | 14.90                          | 641.30                                        |
| P88-3B                       | 655.98                                | 17.78                          | 638.20                                        |
| P95-8A                       | 722.07                                | 23.42                          | 698.65                                        |
| P90-12A                      | 640.79                                | 4.35                           | 636.44                                        |
| P90-12B                      | 640.73                                | 5.48                           | 635.25                                        |
| P90-13A                      | 645.19                                | NM                             | --                                            |
| P90-13B                      | 643.63                                | NM                             | --                                            |
| GP-1P                        | 652.00                                | 17.46                          | 634.54                                        |
| GP-2P                        | 658.61                                | 16.28                          | 642.33                                        |
| GP-3P                        | 658.51                                | 11.23                          | 647.28                                        |
| GP-4P                        | 662.01                                | 10.14                          | 651.87                                        |
| GP-9P <sup>a</sup>           | 674.03                                | 12.69                          | 661.34                                        |
| <b>South Creek</b>           |                                       |                                |                                               |
| SWSC-1                       | 632.68                                | 0.80                           | 631.88                                        |
| SWSC-2                       | 629.98                                | 7.75                           | 622.23                                        |
| <b>Leak Detection System</b> |                                       |                                |                                               |
| LDCS-1                       | 657.26                                | 26.50                          | 630.76                                        |
| LDCS-2A                      | 659.24                                | 25.10                          | 634.14                                        |
| LDCS-2B                      | 661.70                                | 25.80                          | 635.90                                        |

Notes:

NM= not measured

-- = not applicable

Measurements taken on 6/20/2018 unless otherwise noted

a = Measurement taken on 6/27/2018

**Table 2. Field Parameters**  
**Second Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Location                          | Sample Number | Sample Date | Sampling Method | pH   | Conductivity (µS/cm) | Temperature (°C) |
|-----------------------------------|---------------|-------------|-----------------|------|----------------------|------------------|
| <b>Monitoring Wells</b>           |               |             |                 |      |                      |                  |
| MW-1A                             | 304-061818-02 | 6/18/2018   | DP              | 6.66 | 178                  | 14.0             |
| MW-2A                             | 304-061818-04 | 6/18/2018   | DP              | 6.98 | 244                  | 13.5             |
| MW-3                              | 304-061818-08 | 6/18/2018   | DP              | 7.09 | 336                  | 10.8             |
| MW-4                              | 304-062018-17 | 6/20/2018   | SP              | 7.48 | 314                  | 14.1             |
| MW-5A                             | 304-061918-14 | 6/19/2018   | DP              | 7.29 | 367                  | 12.3             |
| MW-6                              | 304-061918-12 | 6/19/2018   | DP              | 7.14 | 290                  | 10.5             |
| MW-7                              | 304-061918-16 | 6/19/2018   | DP              | 7.26 | 402                  | 10.5             |
| MW-9                              | 304-061918-18 | 6/19/2018   | DP              | 6.72 | 140                  | 10.7             |
| MW-10                             | 304-061818-10 | 6/18/2018   | DP              | 6.45 | 272                  | 11.0             |
| <b>Leak Detection System</b>      |               |             |                 |      |                      |                  |
| LDCS-1                            | 304-061818-07 | 6/18/2018   | DB              | 6.66 | 395                  | 30.5             |
| LDCS-2A                           | 304-061818-05 | 6/18/2018   | DB              | 6.96 | 774                  | 30.0             |
| LDCS-2B                           | 304-061818-03 | 6/18/2018   | DB              | 7.46 | 704                  | 30.8             |
| LDCS-3A                           | 304-061818-01 | 6/18/2018   | DP              | 6.96 | 757                  | 22.9             |
| LDCS-4A                           | 304-061918-09 | 6/19/2018   | DP              | 7.03 | 931                  | 23.7             |
| LDCS-4B                           | 304-061918-11 | 6/19/2018   | DP              | 6.85 | 1,226                | 27.6             |
| LDCS-5                            | 304-061918-15 | 6/19/2018   | DP              | 6.65 | 926                  | 26.6             |
| LDCS-6                            | 304-061918-13 | 6/19/2018   | DP              | 7.06 | 1,197                | 23.1             |
| <b>Leachate Collection System</b> |               |             |                 |      |                      |                  |
| Leachate, Cell 6                  | 304-062018-20 | 6/20/2018   | GB              | 7.67 | 23,148               | 29.1             |

Notes:

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

µS/cm = microsiemens per centimeter

°C = degrees celcius

**Table 3. Inorganic Parameters**  
**Second Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                         | Alkalinity,<br>Total | Ammonia | Chloride  | Nitrate   | Sulfate  | Total<br>Dissolved<br>Solids | Total<br>Organic<br>Carbon | Total<br>Suspended<br>Solids |
|-----------------------------------|----------------------|---------|-----------|-----------|----------|------------------------------|----------------------------|------------------------------|
| MRL                               | 5.0                  | 0.1-11  | 0.2 - 120 | 0.5 - 2.1 | 0.2 - 10 | 10 - 94                      | 1.0 - 6.0                  | 4.0                          |
| WAC 173-200 Criteria              | —                    | —       | 250       | 10        | 250      | 500                          | —                          | —                            |
| Prediction Limit                  | —                    | —       | —         | 6.4       | —        | —                            | —                          | —                            |
| <b>Monitoring Wells</b>           |                      |         |           |           |          |                              |                            |                              |
| MW-1A                             | 91                   | 0.12    | 2.0       | *         | 3.0      | 130                          | *                          | *                            |
| MW-2A                             | 120                  | 0.19    | 2.9       | *         | 5.7      | 160                          | *                          | *                            |
| MW-3                              | 140                  | 0.24    | 3.4       | *         | 28       | 210                          | *                          | *                            |
| MW-4                              | 140                  | 0.12    | 2.9       | *         | 8.6      | 190                          | *                          | 4.0                          |
| MW-5A                             | 170                  | 0.22    | 3.0       | *         | 15       | 200                          | 1.0                        | *                            |
| MW-6                              | 130                  | 0.20    | 4.8       | *         | 6.9      | 160                          | *                          | *                            |
| MW-7                              | 200                  | 0.35    | 3.1       | *         | 3.2      | 230                          | *                          | *                            |
| MW-9                              | 66                   | *       | 1.6       | *         | 1.8      | 110                          | *                          | *                            |
| MW-10                             | 95                   | 0.21    | 8.6       | 5.0       | 7.7      | 200                          | *                          | *                            |
| <b>Leak Detection System</b>      |                      |         |           |           |          |                              |                            |                              |
| LDCS-1                            | 190                  | 0.26    | 3.8       | *         | 7.4      | 250                          | 2.5                        | —                            |
| LDCS-2A                           | 400                  | 0.13    | 2.8       | *         | 21       | 460                          | 2.3                        | —                            |
| LDCS-2B                           | 320                  | *       | 3.4       | *         | 68       | 440                          | 1.8                        | —                            |
| LDCS-3A                           | 340                  | 0.19    | 4.1       | *         | 84       | 480                          | 1.8                        | —                            |
| LDCS-4A                           | 370                  | 0.11    | 24        | *         | 95       | 590                          | 5.1                        | —                            |
| LDCS-4B                           | 440                  | 0.19    | 23        | *         | 200      | 840                          | 3.3                        | —                            |
| LDCS-5                            | 400                  | 1.60    | 21        | *         | 74       | 590                          | 7.9                        | —                            |
| LDCS-6                            | 450                  | 0.11    | 13        | 0.64      | 280      | 950                          | 6.0                        | —                            |
| <b>Leachate Collection System</b> |                      |         |           |           |          |                              |                            |                              |
| Leachate, Cell 6                  | 8,800                | 1,300   | 2,500     | *         | 1.8      | 12,000                       | 1,400                      | —                            |

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.

\* indicates the sample result was not reported at or above the MRL

— = not applicable or not performed



Table 4. WAC 173-351 Appendix I Metals  
Second Quarter 2018  
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                       | —          | *          | —         | *             | —        | 0.012    | —           | *           | —         | *         | —          | *          | —             | *             | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *            | —            | *            |   |
| MW-4                       | —          | *          | —         | <b>0.0089</b> | —        | 0.015    | —           | *           | —         | *         | —          | *          | —             | *             | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *            | —            | <b>0.022</b> |   |
| MW-5A                      | —          | *          | —         | <b>0.0058</b> | —        | 0.012    | —           | *           | —         | *         | —          | *          | —             | <b>0.0013</b> | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *            | —            | *            |   |
| MW-6                       | —          | *          | —         | <b>0.0075</b> | —        | 0.011    | —           | *           | —         | *         | —          | *          | —             | <b>0.0013</b> | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *            | —            | *            |   |
| MW-7                       | —          | *          | —         | *             | —        | 0.014    | —           | *           | —         | *         | —          | *          | —             | *             | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *            | —            | *            |   |
| (BG) MW-9                  | —          | *          | —         | *             | —        | *        | —           | *           | —         | *         | —          | *          | —             | *             | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | <b>0.013</b> | —            | *            |   |
| (BG) MW-10                 | —          | *          | —         | *             | —        | 0.013    | —           | *           | —         | *         | —          | *          | —             | *             | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *            | —            | *            |   |
| Leak Detection System      |            |            |           |               |          |          |             |             |           |           |            |            |               |               |          |          |        |        |          |          |            |            |          |          |            |            |            |              |              |              |   |
| LDCS-1                     | *          | —          | 0.0085    | —             | 0.020    | —        | —           | —           | —         | —         | *          | —          | *             | —             | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *            | —            | *            | — |
| LDCS-2A                    | *          | —          | 0.0120    | —             | 0.025    | —        | —           | —           | —         | —         | *          | —          | *             | —             | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *            | —            | *            | — |
| LDCS-2B                    | *          | —          | *         | —             | 0.017    | —        | —           | —           | —         | —         | *          | —          | *             | —             | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *            | —            | *            | — |
| LDCS-3A                    | *          | —          | *         | —             | 0.014    | —        | —           | —           | —         | —         | *          | —          | *             | —             | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *            | —            | *            | — |
| LDCS-4A                    | *          | —          | 0.0072    | —             | 0.033    | —        | —           | —           | —         | —         | *          | —          | <b>0.0028</b> | —             | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *            | —            | *            | — |
| LDCS-4B                    | *          | —          | *         | —             | 0.037    | —        | —           | —           | —         | —         | *          | —          | <b>0.0017</b> | —             | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *            | —            | *            | — |
| LDCS-5                     | *          | —          | 0.0110    | —             | 0.072    | —        | *           | —           | *         | —         | *          | —          | <b>0.0020</b> | —             | *        | —        | *      | —      | *        | —        | *          | —          | *        | —        | *          | —          | *          | —            | *            | —            | — |
| LDCS-6                     | *          | —          | *         | —             | 0.034    | —        | *           | —           | *         | —         | *          | —          | *             | —             | *        | —        | *      | —      | *        | —        | *          | —          | *        | —        | *          | —          | *          | —            | <b>0.013</b> | —            | — |
| Leachate Collection System |            |            |           |               |          |          |             |             |           |           |            |            |               |               |          |          |        |        |          |          |            |            |          |          |            |            |            |              |              |              |   |
| Leachate, Cell 6           | —          | *          | —         | 0.15          | —        | 0.75     | —           | *           | —         | 0.0013    | —          | 0.69       | —             | 0.045         | —        | 0.066    | —      | 0.069  | —        | 0.44     | —          | 0.005      | —        | *        | —          | *          | —          | 0.12         | —            | 0.96         |   |

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.  
\* indicates 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 2018**  
**LRI Landfill, Pierce County, Washington**

| <b>Parameter</b>                              | <b>Calcium</b> | <b>Iron</b> | <b>Magnesium</b> | <b>Manganese</b> | <b>Potassium</b> | <b>Sodium</b> |
|-----------------------------------------------|----------------|-------------|------------------|------------------|------------------|---------------|
| 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            | —                | —             |
| <b>Monitoring Wells</b>                       |                |             |                  |                  |                  |               |
| MW-1A                                         | 13             | <b>1.3</b>  | 8.2              | <b>0.25</b>      | 3.6              | 11            |
| MW-2A                                         | 18             | <b>0.62</b> | 9.7              | <b>0.31</b>      | 3.1              | 15            |
| MW-3                                          | 30             | *           | 13               | <b>0.30</b>      | 3.7              | 13            |
| MW-4                                          | 24             | 0.12        | 14               | <b>0.21</b>      | 4.8              | 11            |
| MW-5A                                         | 23             | 0.10        | 9.9              | <b>0.17</b>      | 3.8              | 33            |
| MW-6                                          | 25             | *           | 12               | <b>0.17</b>      | 4.1              | 9.5           |
| MW-7                                          | 29             | 0.20        | 21               | <b>0.24</b>      | 4.9              | 14            |
| (BG) MW-9                                     | 9.1            | *           | 6.3              | *                | *                | 7.4           |
| (BG) MW-10                                    | 23             | <b>0.43</b> | 9.7              | *                | 2.2              | 14            |
| <b>Leak Detection System</b>                  |                |             |                  |                  |                  |               |
| LDCS-1                                        | 36             | 0.48        | 14               | 1.5              | 5.3              | 18            |
| LDCS-2A                                       | 80             | 0.16        | 30               | 1.7              | 9.6              | 33            |
| LDCS-2B                                       | 89             | *           | 27               | 0.03             | 7.1              | 21            |
| LDCS-3A                                       | 87             | *           | 37               | 0.50             | 5.8              | 22            |
| LDCS-4A                                       | 85             | 1.1         | 43               | 1.8              | 6.5              | 32            |
| LDCS-4B                                       | 140            | *           | 47               | 1.5              | 6.2              | 42            |
| LDCS-5                                        | 78             | 0.85        | 46               | 2.6              | 8.4              | 34            |
| LDCS-6                                        | 140            | *           | 67               | 0.73             | 4.0              | 56            |
| <b>Leachate Collection System<sup>^</sup></b> |                |             |                  |                  |                  |               |
| Leachate, Cell 6                              | 190            | 10          | 230              | 2.4              | 940              | 2,300         |

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.

\* indicates result was not reported at or above the MRL.

<sup>^</sup> Leachate reported concentrations are total metals.

— = not applicable or not performed

BG = Background

**Table 6. Volatile Organic Compounds (µg/L)**  
**Second Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                  | 1,2-Dichloroethane | 1,4-Dichlorobenzene | 2-Butanone (MEK) | 4-Methyl-2-pentanone (MIBK) | Acetone | Benzene | Ethylbenzene | Methylene Chloride | m-Xylene & p-Xylene | o-Xylene | Toluene | Vinyl Chloride |
|----------------------------|--------------------|---------------------|------------------|-----------------------------|---------|---------|--------------|--------------------|---------------------|----------|---------|----------------|
| Units                      | µg/L               | µg/L                | µg/L             | µg/L                        | µg/L    | µg/L    | µg/L         | µg/L               | µg/L                | µg/L     | µg/L    | µg/L           |
| WAC 173-200 Criteria       | 5.2                | 0.5                 | 80.0             | 39.0                        | 76.0    | 6.4     | 6.4          | 13.0               | 14.0                | 7.6      | 6.8     | 4.0            |
| Monitoring Wells           | 0.5                | 4.0                 | —                | —                           | —       | —       | —            | 5.0                | —                   | —        | —       | 0.02           |
| AW-1A                      | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| AW-2A                      | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| AW-3                       | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| AW-4                       | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| AW-5A                      | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| AW-6                       | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| AW-7                       | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| AW-9                       | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| (BG) MW-10                 | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| Leak Detection System      |                    |                     |                  |                             |         |         |              |                    |                     |          |         |                |
| LDCS-1                     | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| LDCS-2A                    | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| LDCS-2B                    | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| LDCS-3A                    | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| LDCS-4A                    | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| LDCS-4B                    | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| LDCS-5                     | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| LDCS-6                     | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| Field Blank                | *                  | *                   | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       | *              |
| Leachate Collection System |                    |                     |                  |                             |         |         |              |                    |                     |          |         |                |
| Leachate, Cell 6           | 17                 | *                   | 3,100            | 220                         | 3,000   | 21      | 21           | 18                 | 40                  | 18       | 200     | 5.5            |

Notes:

Analyses performed by TestAmerica of Denver, Colorado.

MRL displayed is value from leachate sample analysis with the exception of 1,4 Dichlorobenzene.

\* = not reported at or above the MRL

— = not applicable or not performed

BG = Background

**Table 7. Cation-Anion Balance**  
**Second Quarter 2018**  
**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 |
| MW-1A           | 13   | 8.2 | 3.6 | 11   | 35.8  | 0.65 | 0.67  | 0.08  | 0.48       | 1.88   | 30   | 34 |
| MW-2A           | 18   | 9.7 | 3.1 | 15   | 45.8  | 0.90 | 0.80  | 0.07  | 0.65       | 2.42   | 30   | 37 |
| MW-3            | 30   | 13  | 3.7 | 13   | 59.7  | 1.50 | 1.07  | 0.08  | 0.57       | 3.22   | 20   | 47 |
| MW-4            | 24   | 14  | 4.8 | 11   | 53.8  | 1.20 | 1.15  | 0.11  | 0.48       | 2.94   | 20   | 41 |
| MW-5A           | 23   | 9.9 | 3.8 | 33   | 69.7  | 1.15 | 0.81  | 0.09  | 1.44       | 3.48   | 44   | 33 |
| MW-6            | 25   | 12  | 4.1 | 9.5  | 50.6  | 1.25 | 0.99  | 0.09  | 0.41       | 2.74   | 18   | 46 |
| MW-7            | 29   | 21  | 4.9 | 14   | 68.9  | 1.45 | 1.73  | 0.11  | 0.61       | 3.90   | 18   | 37 |
| MW-9            | 9.1  | 6.3 | 2.0 | 7.4  | 24.8  | 0.45 | 0.52  | 0.05  | 0.32       | 1.34   | 27   | 34 |
| MW-10           | 23   | 9.7 | 2.2 | 14   | 48.9  | 1.15 | 0.80  | 0.05  | 0.61       | 2.60   | 25   | 44 |
| LDCS-1          | 36   | 14  | 5.3 | 18   | 73.3  | 1.80 | 1.15  | 0.12  | 0.78       | 3.85   | 23   | 47 |
| LDCS-2A         | 80   | 30  | 9.6 | 33   | 152.6 | 3.99 | 2.47  | 0.22  | 1.44       | 8.11   | 20   | 49 |
| LDCS-2B         | 89   | 27  | 7.1 | 21   | 144.1 | 4.44 | 2.22  | 0.16  | 0.91       | 7.74   | 14   | 57 |
| LDCS-3A         | 87   | 37  | 5.8 | 22   | 151.8 | 4.34 | 3.05  | 0.13  | 0.96       | 8.47   | 13   | 51 |
| LDCS-4A         | 85   | 43  | 6.5 | 32   | 166.5 | 4.24 | 3.54  | 0.15  | 1.39       | 9.32   | 17   | 46 |
| LDCS-4B         | 140  | 47  | 6.2 | 42   | 235.2 | 6.99 | 3.87  | 0.14  | 1.83       | 12.82  | 15   | 54 |
| LDCS-5          | 78   | 46  | 8.4 | 34   | 166.4 | 3.89 | 3.79  | 0.19  | 1.48       | 9.35   | 18   | 42 |
| LDCS-6          | 140  | 67  | 4.0 | 56   | 267   | 6.99 | 5.51  | 0.09  | 2.44       | 15.03  | 17   | 46 |
| Leachate Cell 6 | 190  | 230 | 940 | 2300 | 3660  | 9.48 | 18.93 | 21.23 | 100.05     | 149.69 | 81   | 6  |

| Anions           | mg/L   |       |                 |                 | meq/L |        |       |                 | % of Total      |        |    |     | Total Ions (meq/L) | Cation - Anion Balance | Applicable Ratio (%) | Ratio Exceedance |
|------------------|--------|-------|-----------------|-----------------|-------|--------|-------|-----------------|-----------------|--------|----|-----|--------------------|------------------------|----------------------|------------------|
|                  | Alk    | Cl    | NO <sub>3</sub> | SO <sub>4</sub> | Total | Alk    | Cl    | NO <sub>3</sub> | SO <sub>4</sub> | Total  | Cl | Alk |                    |                        |                      |                  |
| MW-1A            | 109.2  | 2.0   | 0.5             | 3.0             | 114.7 | 1.79   | 0.06  | 0.008           | 0.06            | 1.92   | 3  | 93  | 3.80               | 0.9                    | 10                   | O                |
| MW-2A            | 144    | 2.9   | 0.5             | 5.7             | 153.1 | 2.36   | 0.08  | 0.008           | 0.12            | 2.57   | 3  | 92  | 4.99               | 3.0                    | 10                   | O                |
| MW-3             | 168    | 3.4   | 0.5             | 28              | 199.9 | 2.76   | 0.10  | 0.008           | 0.58            | 3.44   | 3  | 80  | 6.66               | 3.4                    | 5                    | O                |
| MW-4             | 168    | 2.9   | 0.5             | 8.6             | 180.0 | 2.76   | 0.08  | 0.008           | 0.18            | 3.02   | 3  | 91  | 5.96               | 1.5                    | 5                    | O                |
| MW-5A            | 204    | 3.0   | 0.5             | 15              | 222.5 | 3.35   | 0.08  | 0.008           | 0.31            | 3.75   | 2  | 89  | 7.23               | 3.7                    | 5                    | O                |
| MW-6             | 156    | 4.8   | 0.5             | 6.9             | 168.2 | 2.56   | 0.14  | 0.008           | 0.14            | 2.85   | 5  | 90  | 5.59               | 1.9                    | 5                    | O                |
| MW-7             | 240    | 3.1   | 0.5             | 3.2             | 246.8 | 3.94   | 0.09  | 0.008           | 0.07            | 4.10   | 2  | 96  | 7.99               | 2.5                    | 5                    | O                |
| MW-9             | 79.2   | 1.6   | 0.5             | 1.8             | 83.1  | 1.30   | 0.05  | 0.008           | 0.04            | 1.39   | 3  | 93  | 2.73               | 1.8                    | 10                   | O                |
| MW-10            | 114    | 8.6   | 5.0             | 7.7             | 135.3 | 1.87   | 0.24  | 0.081           | 0.16            | 2.35   | 10 | 79  | 4.96               | 5.1                    | 10                   | O                |
| LDCS-1           | 228    | 3.8   | 0.5             | 7.4             | 239.7 | 3.74   | 0.11  | 0.008           | 0.15            | 4.01   | 3  | 93  | 7.86               | 2.0                    | 5                    | O                |
| LDCS-2A          | 480    | 2.8   | 0.5             | 21              | 504.3 | 7.87   | 0.08  | 0.008           | 0.44            | 8.40   | 1  | 94  | 16.51              | 1.7                    | 5                    | O                |
| LDCS-2B          | 384    | 3.4   | 0.5             | 68              | 455.9 | 6.30   | 0.10  | 0.008           | 1.41            | 7.82   | 1  | 81  | 15.55              | 0.5                    | 5                    | O                |
| LDCS-3A          | 408    | 4.1   | 0.5             | 84              | 496.6 | 6.69   | 0.12  | 0.008           | 1.75            | 8.56   | 1  | 78  | 17.04              | 0.5                    | 5                    | O                |
| LDCS-4A          | 444    | 24    | 0.5             | 95              | 563.5 | 7.28   | 0.68  | 0.008           | 1.98            | 9.94   | 7  | 73  | 19.26              | 3.2                    | 5                    | O                |
| LDCS-4B          | 528    | 23    | 0.5             | 200             | 751.5 | 8.66   | 0.65  | 0.008           | 4.16            | 13.48  | 5  | 64  | 26.30              | 2.5                    | 5                    | O                |
| LDCS-5           | 480    | 21    | 0.5             | 74              | 575.5 | 7.87   | 0.59  | 0.008           | 1.54            | 10.01  | 6  | 79  | 19.36              | 3.4                    | 5                    | O                |
| LDCS-6           | 540    | 13    | 0.64            | 280             | 834   | 8.86   | 0.37  | 0.010           | 5.82            | 15.06  | 2  | 59  | 30.08              | 0.1                    | 5                    | O                |
| Leachate, Cell 6 | 10,560 | 2,500 | 2.1             | 1.8             | 13064 | 173.18 | 70.50 | 0.034           | 0.04            | 243.76 | 29 | 71  | 393.44             | 23.9                   | 5                    | Exceeds          |

Notes:

mg/L = milligrams per liter

meq/L = milliequivalents per liter

Total alkalinity concentration, reported as calcium carbonate (CaCO<sub>3</sub>), is converted to the bicarbonate (HCO<sub>3</sub><sup>-</sup>) 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)/(cations+cations)\*100].

The MRL was used for analyses that were non-detect

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

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

**Table 8. Duplicate Sample Results**  
**Second Quarter 2018 Monitoring Report**  
**LRI Landfill, Pierce County, Washington**

| Parameter                                                 | MRL   | MW-2A | MW-2A<br>(Duplicate) | RPD (%) |
|-----------------------------------------------------------|-------|-------|----------------------|---------|
| <b>Volatile Organic Compounds (µg/L)</b><br>No Detections | -     | -     | -                    | -       |
| <b>Inorganic Parameters (mg/L)</b>                        |       |       |                      |         |
| Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )           | 5.0   | 120   | 120                  | 0.0     |
| Ammonia                                                   | 0.10  | 0.19  | 0.14                 | 19.2    |
| Chloride                                                  | 0.20  | 2.9   | 2.9                  | 0.0     |
| Sulfate                                                   | 0.20  | 5.7   | 5.7                  | 0.0     |
| Total Dissolved Solids                                    | 10    | 160   | 170                  | 4.1     |
| <b>Dissolved Metals (mg/L)</b>                            |       |       |                      |         |
| Calcium                                                   | 0.20  | 18    | 19                   | 3.6     |
| Iron                                                      | 0.10  | 0.62  | 0.65                 | 3.2     |
| Magnesium                                                 | 0.10  | 9.7   | 10                   | 2.0     |
| Manganese                                                 | 0.005 | 0.31  | 0.29                 | 4.4     |
| Potassium                                                 | 2.0   | 3.1   | 3.3                  | 4.2     |
| Sodium                                                    | 1.0   | 15    | 16                   | 4.3     |
| <b>Total Metals (mg/L)</b>                                |       |       |                      |         |
| Barium                                                    | 0.005 | 0.013 | 0.013                | 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.

\* = the sample results were 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  
September 19, 2018  
LRI Landfill, Pierce County, Washington**

| <b>Location</b>              | <b>Well Casing Elevation<br/>(ft)</b> | <b>Depth to Water<br/>(ft)</b> | <b>Water Level Elevation<br/>(ft, NGVD29)</b> |
|------------------------------|---------------------------------------|--------------------------------|-----------------------------------------------|
| <b>Wells</b>                 |                                       |                                |                                               |
| W87-2A                       | 664.01                                | 20.70                          | 643.31                                        |
| W87-4A                       | 693.29                                | 10.74                          | 682.55                                        |
| W88-3M                       | 658.11                                | 15.70                          | 642.41                                        |
| W88-7A                       | 632.51                                | NM                             | --                                            |
| W88-8M                       | 721.05                                | 41.36                          | 679.69                                        |
| W90-12A                      | 640.84                                | 36.00                          | 604.84                                        |
| W95-14A                      | 680.49                                | NM                             | --                                            |
| MW-1A                        | 652.57                                | 20.22                          | 632.35                                        |
| MW-2A                        | 651.93                                | 20.07                          | 631.86                                        |
| MW-3                         | 637.41                                | 9.83                           | 627.58                                        |
| MW-4                         | 652.37                                | 24.89                          | 627.48                                        |
| MW-5A                        | 655.55                                | 26.46                          | 629.09                                        |
| MW-6                         | 635.71                                | 12.58                          | 623.13                                        |
| MW-7                         | 656.03                                | 25.98                          | 630.05                                        |
| MW-9                         | 701.77                                | 12.22                          | 689.55                                        |
| MW-10                        | 673.87                                | 24.24                          | 649.63                                        |
| <b>Piezometers</b>           |                                       |                                |                                               |
| P13-14A                      | 665.96                                | 25.00                          | 640.96                                        |
| P88-2A                       | 663.96                                | NM                             | --                                            |
| P88-2B                       | 663.48                                | NM                             | --                                            |
| P88-3A                       | 656.20                                | 19.51                          | 636.69                                        |
| P88-3B                       | 655.98                                | 22.05                          | 633.93                                        |
| P95-8A                       | 722.07                                | 24.88                          | 697.19                                        |
| P90-12A                      | 640.79                                | 8.70                           | 632.09                                        |
| P90-12B                      | 640.73                                | 10.89                          | 629.84                                        |
| P90-13A                      | 645.19                                | NM                             | --                                            |
| P90-13B                      | 643.63                                | NM                             | --                                            |
| GP-1P <sup>a</sup>           | 652.00                                | 19.78                          | 632.22                                        |
| GP-2P <sup>a</sup>           | 658.61                                | 18.58                          | 640.03                                        |
| GP-3P <sup>a</sup>           | 658.51                                | 13.44                          | 645.07                                        |
| GP-4P <sup>a</sup>           | 662.01                                | 15.11                          | 646.90                                        |
| GP-9P <sup>a</sup>           | 674.03                                | 15.84                          | 658.19                                        |
| <b>South Creek</b>           |                                       |                                |                                               |
| SWSC-1                       | 632.68                                | 1.45                           | 631.23                                        |
| SWSC-2                       | 629.98                                | Dry                            | --                                            |
| <b>Leak Detection System</b> |                                       |                                |                                               |
| LDCS-1 <sup>b</sup>          | 657.26                                | 28.40                          | 628.86                                        |
| LDCS-2A <sup>b</sup>         | 659.24                                | 24.70                          | 634.54                                        |
| LDCS-2B <sup>c</sup>         | 661.70                                | 26.48                          | 635.22                                        |

Notes:

NM= not measured

-- = not applicable

Measurements taken on 9/19/2018 unless otherwise noted

a = Measurement taken on 9/27/2018

b = Measurement taken on 9/18/2018

c = Measurement taken on 9/20/2018

Dry = Stream bed dry at measuring point

**Table 2. Field Parameters**  
**Third Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Location                          | Sample Number | Sample Date | Sampling Method | pH   | Conductivity (µS/cm) | Temperature (°C) |
|-----------------------------------|---------------|-------------|-----------------|------|----------------------|------------------|
| <b>Monitoring Wells</b>           |               |             |                 |      |                      |                  |
| MW-1A                             | 304-091718-01 | 9/17/2018   | DP              | 6.66 | 183                  | 13.1             |
| MW-2A                             | 304-091718-02 | 9/17/2018   | DP              | 6.84 | 249                  | 13.3             |
| MW-3                              | 304-091718-04 | 9/17/2018   | DP              | 7.18 | 327                  | 10.5             |
| MW-4                              | 304-091918-11 | 9/19/2018   | SP              | 7.33 | 312                  | 13.2             |
| MW-5A                             | 304-091718-05 | 9/17/2018   | DP              | 7.31 | 281                  | 12.5             |
| MW-6                              | 304-091818-06 | 9/18/2018   | DP              | 7.04 | 287                  | 10.6             |
| MW-7                              | 304-091818-07 | 9/18/2018   | DP              | 7.42 | 364                  | 10.4             |
| MW-9                              | 304-091918-12 | 9/19/2018   | DP              | 6.51 | 138                  | 11.8             |
| MW-10                             | 304-091818-08 | 9/18/2018   | DP              | 6.38 | 272                  | 11.1             |
| <b>Leak Detection System</b>      |               |             |                 |      |                      |                  |
| LDCS-1                            | 304-091818-10 | 9/18/2018   | DB              | 6.11 | 543                  | 21.9             |
| LDCS-2A                           | 304-091818-09 | 9/18/2018   | DB              | 6.54 | 818                  | 25.0             |
| LDCS-2B                           | 304-092018-17 | 9/20/2018   | DB              | 6.74 | 736                  | 22.2             |
| LDCS-3A                           | 304-092018-16 | 9/20/2018   | DP              | 6.37 | 805                  | 22.0             |
| LDCS-4A                           | 304-092018-15 | 9/20/2018   | DP              | 6.25 | 858                  | 23.5             |
| LDCS-4B                           | 304-092118-18 | 9/21/2018   | DP              | 6.49 | 1,176                | 25.0             |
| LDCS-5                            | 304-092018-14 | 9/20/2018   | DP              | 6.47 | 985                  | 23.7             |
| LDCS-6                            | 304-092118-19 | 9/21/2018   | DP              | 6.91 | 1,389                | 20.0             |
| <b>Leachate Collection System</b> |               |             |                 |      |                      |                  |
| Leachate, Cell 6                  | 304-092118-20 | 9/21/2018   | GB              | 7.70 | 25,787               | 24.9             |

Notes:

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

µS/cm = microsiemens per centimeter

°C = degrees celcius

**Table 3. Inorganic Parameters**  
**Third Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                         | Alkalinity,<br>Total | Ammonia | Chloride  | Nitrate | Nitrate-<br>Nitrite as N | Sulfate   | Total<br>Dissolved<br>Solids | Total<br>Organic<br>Carbon | Total<br>Suspended<br>Solids |
|-----------------------------------|----------------------|---------|-----------|---------|--------------------------|-----------|------------------------------|----------------------------|------------------------------|
| MRL                               | 5.0                  | 0.1-11  | 0.2 - 120 | 0.50    | 0.50                     | 0.2 - 2.5 | 10 - 470                     | 1.0 - 7.8                  | 4.0                          |
| WAC 173-200 Criteria              | —                    | —       | 250       | 10      | —                        | 250       | 500                          | —                          | —                            |
| Prediction Limit                  | —                    | —       | —         | 6.4     | —                        | —         | —                            | —                          | —                            |
| <b>Monitoring Wells</b>           |                      |         |           |         |                          |           |                              |                            |                              |
| MW-1A                             | 90                   | *       | 2.3       | *       | —                        | 3.1       | 140                          | *                          | *                            |
| MW-2A                             | 120                  | *       | 3.6       | *       | —                        | 7.2       | 170                          | *                          | *                            |
| MW-3                              | 130                  | 0.10    | 3.8       | *       | —                        | 28        | 210                          | *                          | *                            |
| MW-4                              | 150                  | 0.15    | 2.8       | *       | *                        | 8.2       | 220                          | 2.0                        | *                            |
| MW-5A                             | 140                  | 0.11    | 2.8       | *       | —                        | 5.8       | 190                          | *                          | *                            |
| MW-6                              | 130                  | 0.11    | 5.1       | *       | —                        | 7.6       | 170                          | *                          | *                            |
| MW-7                              | 180                  | 0.22    | 3.5       | *       | —                        | 4.5       | 220                          | *                          | *                            |
| MW-9                              | 68                   | *       | 1.7       | *       | *                        | 1.8       | 150                          | 1.5                        | *                            |
| MW-10                             | 96                   | *       | 9.1       | 4.7     | —                        | 8.2       | 190                          | *                          | *                            |
| <b>Leak Detection System</b>      |                      |         |           |         |                          |           |                              |                            |                              |
| LDCS-1                            | 260                  | 0.16    | 3.4       | *       | —                        | 9.0       | 310                          | 3.5                        | —                            |
| LDCS-2A                           | 420                  | *       | 3.3       | *       | —                        | 19        | 470                          | 2.3                        | —                            |
| LDCS-2B                           | 330                  | *       | 3.6       | *       | —                        | 65        | 460                          | 5.0                        | —                            |
| LDCS-3A                           | 340                  | *       | 4.0       | *       | —                        | 82        | 490                          | 4.8                        | —                            |
| LDCS-4A                           | 350                  | 0.15    | 15        | *       | —                        | 87        | 520                          | 6.1                        | —                            |
| LDCS-4B                           | 430                  | 0.17    | 20        | *       | —                        | 180       | 770                          | 3.5                        | —                            |
| LDCS-5                            | 400                  | 1.0     | 19        | *       | —                        | 69        | 570                          | 7.6                        | —                            |
| LDCS-6                            | 470                  | *       | 10        | *       | —                        | 210       | 790                          | 5.7                        | —                            |
| <b>Leachate Collection System</b> |                      |         |           |         |                          |           |                              |                            |                              |
| Leachate, Cell 6                  | 10,000               | 1,300   | 2,900     | 5.0     | —                        | 3.0       | 15,000                       | 1,900                      | —                            |

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.

\* indicates the sample result was not reported at or above the MRL

— = not applicable or not performed





Table 4. WAC 173-351 Appendix I Metals  
Third Quarter 2018  
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                      | —          | *          | —         | *         | —        | 0.022    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-2A                      | —          | *          | —         | *         | —        | 0.014    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-3                       | —          | *          | —         | *         | —        | 0.010    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-4                       | —          | *          | —         | 0.0088    | —        | 0.014    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | 0.012  |   |
| MW-5A                      | —          | *          | —         | *         | —        | 0.015    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-6                       | —          | *          | —         | 0.0063    | —        | 0.011    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-7                       | —          | *          | —         | *         | —        | 0.014    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| (BG) MW-9                  | —          | *          | —         | *         | —        | *        | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | 0.013      | —      | *      |   |
| (BG) MW-10                 | —          | *          | —         | *         | —        | 0.016    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| Leak Detection System      |            |            |           |           |          |          |             |             |           |           |            |            |          |          |          |          |        |        |          |          |            |            |          |          |            |            |            |            |        |        |   |
| LDCS-1                     | *          | —          | 0.0110    | —         | 0.024    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-2A                    | *          | —          | 0.0095    | —         | 0.023    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-2B                    | *          | —          | *         | —         | 0.016    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-3A                    | *          | —          | *         | —         | 0.013    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-4A                    | *          | —          | 0.0068    | —         | 0.030    | —        | —           | —           | —         | —         | *          | —          | 0.0038   | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-4B                    | *          | —          | 0.0120    | —         | 0.032    | —        | —           | —           | —         | —         | *          | —          | 0.0019   | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-5                     | *          | —          | 0.0066    | —         | 0.073    | —        | *           | —           | *         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | *          | —          | *        | —        | *          | —          | *          | —          | *      | —      | — |
| LDCS-6                     | *          | —          | *         | —         | 0.034    | —        | *           | —           | *         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | *          | —          | *        | —        | *          | —          | *          | —          | 0.017  | —      | — |
| Leachate Collection System |            |            |           |           |          |          |             |             |           |           |            |            |          |          |          |          |        |        |          |          |            |            |          |          |            |            |            |            |        |        |   |
| Leachate, Cell 6           | —          | *          | —         | 0.16      | —        | 0.81     | —           | 0.0017      | —         | 0.0027    | —          | 0.69       | —        | 0.048    | —        | 0.076    | —      | 0.1    | —        | 0.51     | —          | *          | —        | *        | —          | *          | —          | 0.12       | —      | 0.99   |   |

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.  
\* indicates 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 2018**  
**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       | —         | —      |
| <b>Monitoring Wells</b>                       |         |             |           |             |           |        |
| MW-1A                                         | 14      | <b>1.6</b>  | 9.0       | <b>0.25</b> | 3.2       | 11     |
| MW-2A                                         | 19      | <b>0.68</b> | 10        | <b>0.30</b> | 2.6       | 15     |
| MW-3                                          | 32      | <b>0.69</b> | 14        | <b>0.26</b> | 3.2       | 12     |
| MW-4                                          | 27      | *           | 14        | <b>0.22</b> | 5.2       | 12     |
| MW-5A                                         | 26      | *           | 11        | <b>0.17</b> | 3.3       | 15     |
| MW-6                                          | 27      | *           | 13        | <b>0.17</b> | 4.1       | 10     |
| MW-7                                          | 27      | 0.17        | 21        | <b>0.24</b> | 4.6       | 12     |
| (BG) MW-9                                     | 10      | *           | 6.7       | *           | *         | 7.5    |
| (BG) MW-10                                    | 22      | *           | 10        | *           | *         | 14     |
| <b>Leak Detection System</b>                  |         |             |           |             |           |        |
| LDCS-1                                        | 51      | 0.63        | 22        | 2.4         | 5.6       | 20     |
| LDCS-2A                                       | 84      | *           | 33        | 1.6         | 8.6       | 33     |
| LDCS-2B                                       | 92      | *           | 31        | 0.036       | 7.6       | 22     |
| LDCS-3A                                       | 87      | *           | 39        | 0.27        | 6.3       | 24     |
| LDCS-4A                                       | 90      | 1.1         | 40        | 1.5         | 6.8       | 30     |
| LDCS-4B                                       | 140     | 0.42        | 46        | 1.5         | 6.9       | 44     |
| LDCS-5                                        | 85      | 0.21        | 50        | 1.6         | 9.0       | 32     |
| LDCS-6                                        | 120     | *           | 62        | 0.86        | 4.6       | 46     |
| <b>Leachate Collection System<sup>^</sup></b> |         |             |           |             |           |        |
| Leachate, Cell 6                              | 120     | 7.0         | 200       | 1.1         | 960       | 1,800  |

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.

\* indicates result was not reported at or above the MRL.

<sup>^</sup> Leachate reported concentrations are total metals.

— = not applicable or not performed

BG = Background

**Table 6. Volatile Organic Compounds (µg/L)**  
**Third Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                         | 2-Butanone (MEK) | 4-Methyl-2-pentanone (MIBK) | Acetone | Benzene | Ethylbenzene | Methylene Chloride | m-Xylene & p-Xylene | o-Xylene | Toluene |
|-----------------------------------|------------------|-----------------------------|---------|---------|--------------|--------------------|---------------------|----------|---------|
| Units                             | µg/L             | µg/L                        | µg/L    | µg/L    | µg/L         | µg/L               | µg/L                | µg/L     | µg/L    |
| MRL                               | 80.0             | 39.0                        | 76.0    | 6.4     | 6.4          | 13.0               | 14.0                | 7.6      | 6.8     |
| WAC 173-200 Criteria              | —                | —                           | —       | 1.0     | —            | 5.0                | —                   | —        | —       |
| <b>Monitoring Wells</b>           |                  |                             |         |         |              |                    |                     |          |         |
| MW-1A                             | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| MW-2A                             | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| MW-3                              | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| MW-4                              | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| MW-5A                             | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| MW-6                              | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| MW-7                              | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| (BG) MW-9                         | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| (BG) MW-10                        | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| <b>Leak Detection System</b>      |                  |                             |         |         |              |                    |                     |          |         |
| LDCS-1                            | *                | *                           | 17      | *       | *            | *                  | *                   | *        | *       |
| LDCS-2A                           | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| LDCS-2B                           | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| LDCS-3A                           | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| LDCS-4A                           | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| LDCS-4B                           | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| LDCS-5                            | *                | *                           | 24      | *       | *            | *                  | *                   | *        | *       |
| LDCS-6                            | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| Field Blank                       | *                | *                           | *       | *       | *            | *                  | *                   | *        | *       |
| <b>Leachate Collection System</b> |                  |                             |         |         |              |                    |                     |          |         |
| Leachate, Cell 6                  | 2,300            | 170                         | 1,600   | 17      | 20           | 19                 | 34                  | 16       | 170     |

Notes:

Analyzes performed by TestAmerica of Denver, Colorado.

MRL displayed is value from leachate sample analysis with the exception of 1,4 Dichlorobenzene.

\* = not reported at or above the MRL

— = not applicable or not performed

BG = Background

**Table 7. Cation-Anion Balance  
Third Quarter 2018  
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   | 9   | 3.2 | 11   | 37.2  | 0.70 | 0.74  | 0.07  | 0.48       | 1.99   | 28   | 35 | 37 |
| MW-2A           | 19   | 10  | 2.6 | 15   | 46.6  | 0.95 | 0.82  | 0.06  | 0.65       | 2.48   | 29   | 38 | 33 |
| MW-3            | 32   | 14  | 3.2 | 12   | 61.2  | 1.60 | 1.15  | 0.07  | 0.52       | 3.34   | 18   | 48 | 34 |
| MW-4            | 27   | 14  | 5.2 | 12   | 58.2  | 1.35 | 1.15  | 0.12  | 0.52       | 3.14   | 20   | 43 | 37 |
| MW-5A           | 26   | 11  | 3.3 | 15   | 55.3  | 1.30 | 0.91  | 0.07  | 0.65       | 2.93   | 25   | 44 | 31 |
| MW-6            | 27   | 13  | 4.1 | 10   | 54.1  | 1.35 | 1.07  | 0.09  | 0.44       | 2.94   | 18   | 46 | 36 |
| MW-7            | 27   | 21  | 4.6 | 12   | 64.6  | 1.35 | 1.73  | 0.10  | 0.52       | 3.70   | 17   | 36 | 47 |
| MW-9            | 10   | 6.7 | 2.0 | 7.5  | 26.2  | 0.50 | 0.55  | 0.05  | 0.33       | 1.42   | 26   | 35 | 39 |
| MW-10           | 22   | 10  | 2.0 | 14   | 48.0  | 1.10 | 0.82  | 0.05  | 0.61       | 2.57   | 25   | 43 | 32 |
| LDCS-1          | 51   | 22  | 5.6 | 20   | 98.6  | 2.54 | 1.81  | 0.13  | 0.87       | 5.35   | 19   | 48 | 34 |
| LDCS-2A         | 84   | 33  | 8.6 | 33   | 158.6 | 4.19 | 2.72  | 0.19  | 1.44       | 8.54   | 19   | 49 | 32 |
| LDCS-2B         | 92   | 31  | 7.6 | 22   | 152.6 | 4.59 | 2.55  | 0.17  | 0.96       | 8.27   | 14   | 56 | 31 |
| LDCS-3A         | 87   | 39  | 6.3 | 24   | 156.3 | 4.34 | 3.21  | 0.14  | 1.04       | 8.74   | 14   | 50 | 37 |
| LDCS-4A         | 90   | 40  | 6.8 | 30   | 166.8 | 4.49 | 3.29  | 0.15  | 1.31       | 9.24   | 16   | 49 | 36 |
| LDCS-4B         | 140  | 46  | 6.9 | 44   | 236.9 | 6.99 | 3.79  | 0.16  | 1.91       | 12.84  | 16   | 54 | 29 |
| LDCS-5          | 85   | 50  | 9.0 | 32   | 176.0 | 4.24 | 4.12  | 0.20  | 1.39       | 9.95   | 16   | 43 | 41 |
| LDCS-6          | 120  | 62  | 4.6 | 46   | 232.6 | 5.99 | 5.10  | 0.10  | 2.00       | 13.20  | 16   | 45 | 39 |
| Leachate Cell 6 | 120  | 200 | 960 | 1800 | 3080  | 5.99 | 16.46 | 21.68 | 78.30      | 122.42 | 82   | 5  | 13 |

| Anions           | mg/L   |       |                 |                 | meq/L  |        |       |                 | % of Total      |        |    |     | Total Ions<br>(meq/L) | Cation - Anion<br>Balance | Applicable<br>Ratio (%) | Ratio<br>Exceedance |
|------------------|--------|-------|-----------------|-----------------|--------|--------|-------|-----------------|-----------------|--------|----|-----|-----------------------|---------------------------|-------------------------|---------------------|
|                  | Alk    | Cl    | NO <sub>3</sub> | SO <sub>4</sub> | Total  | Alk    | Cl    | NO <sub>3</sub> | SO <sub>4</sub> | Total  | Cl | Alk |                       |                           |                         |                     |
| MW-1A            | 108    | 2.3   | 0.5             | 3.1             | 113.9  | 1.77   | 0.06  | 0.008           | 0.06            | 1.91   | 3  | 93  | 3                     | 2.1                       | 10                      | O                   |
| MW-2A            | 144    | 3.6   | 0.5             | 7.2             | 155.3  | 2.36   | 0.10  | 0.008           | 0.15            | 2.62   | 4  | 90  | 6                     | 2.7                       | 5                       | O                   |
| MW-3             | 156    | 3.8   | 0.5             | 28              | 188.3  | 2.56   | 0.11  | 0.008           | 0.58            | 3.26   | 3  | 79  | 18                    | 1.3                       | 5                       | O                   |
| MW-4             | 180    | 2.8   | 0.5             | 8.2             | 191.5  | 2.95   | 0.08  | 0.008           | 0.17            | 3.21   | 2  | 92  | 5                     | 1.1                       | 5                       | O                   |
| MW-5A            | 168    | 2.8   | 0.5             | 5.8             | 177.1  | 2.76   | 0.08  | 0.008           | 0.12            | 2.96   | 3  | 93  | 4                     | 0.6                       | 5                       | O                   |
| MW-6             | 156    | 5.1   | 0.5             | 7.6             | 169.2  | 2.56   | 0.14  | 0.008           | 0.16            | 2.87   | 5  | 89  | 6                     | 1.3                       | 5                       | O                   |
| MW-7             | 216    | 3.5   | 0.5             | 4.5             | 224.5  | 3.54   | 0.10  | 0.008           | 0.09            | 3.74   | 3  | 95  | 3                     | 0.6                       | 5                       | O                   |
| MW-9             | 81.6   | 1.7   | 0.5             | 1.8             | 85.6   | 1.34   | 0.05  | 0.008           | 0.04            | 1.43   | 3  | 93  | 3                     | 0.3                       | 10                      | O                   |
| MW-10            | 115.2  | 9.1   | 4.7             | 8.2             | 137.2  | 1.89   | 0.26  | 0.076           | 0.17            | 2.39   | 11 | 79  | 7                     | 3.7                       | 10                      | O                   |
| LDCS-1           | 312    | 3.4   | 0.5             | 9.0             | 324.9  | 5.12   | 0.10  | 0.008           | 0.19            | 5.41   | 2  | 95  | 3                     | 0.5                       | 5                       | O                   |
| LDCS-2A          | 504    | 3.3   | 0.5             | 19              | 526.8  | 8.27   | 0.09  | 0.008           | 0.40            | 8.76   | 1  | 94  | 5                     | 1.3                       | 5                       | O                   |
| LDCS-2B          | 396    | 3.6   | 0.5             | 65              | 465.1  | 6.49   | 0.10  | 0.008           | 1.35            | 7.96   | 1  | 82  | 17                    | 1.9                       | 5                       | O                   |
| LDCS-3A          | 408    | 4.0   | 0.5             | 82              | 494.5  | 6.69   | 0.11  | 0.008           | 1.71            | 8.52   | 1  | 79  | 20                    | 1.3                       | 5                       | O                   |
| LDCS-4A          | 420    | 15.0  | 0.5             | 87              | 522.5  | 6.89   | 0.42  | 0.008           | 1.81            | 9.13   | 5  | 75  | 20                    | 0.6                       | 5                       | O                   |
| LDCS-4B          | 516    | 20.0  | 0.5             | 180             | 716.5  | 8.46   | 0.56  | 0.008           | 3.74            | 12.78  | 4  | 66  | 29                    | 0.2                       | 5                       | O                   |
| LDCS-5           | 480    | 19.0  | 0.5             | 69              | 568.5  | 7.87   | 0.54  | 0.008           | 1.44            | 9.85   | 5  | 80  | 15                    | 0.5                       | 5                       | O                   |
| LDCS-6           | 564    | 10.0  | 0.5             | 210             | 785    | 9.25   | 0.28  | 0.008           | 4.37            | 13.91  | 2  | 67  | 31                    | 2.6                       | 5                       | O                   |
| Leachate, Cell 6 | 12,000 | 2,900 | 5.0             | 3.0             | 14,908 | 196.80 | 81.78 | 0.081           | 0.06            | 278.72 | 29 | 71  | 0                     | 39.0                      | 5                       | Exceeds             |

Notes:

mg/L = milligrams per liter

meq/L = milliequivalents per liter

Total alkalinity concentration, reported as calcium carbonate (CaCO<sub>3</sub>), is converted to the bicarbonate (HCO<sub>3</sub><sup>-</sup>) 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)/(cations+cations)\*100].

The MRL was used for analyses 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 2018 Monitoring Report**  
**LRI Landfill, Pierce County, Washington**

| Parameter                                                 | MRL   | MW-2A | MW-2A<br>(Duplicate) | RPD (%) |
|-----------------------------------------------------------|-------|-------|----------------------|---------|
| <b>Volatile Organic Compounds (µg/L)</b><br>No Detections | -     | -     | -                    | -       |
| <b>Inorganic Parameters (mg/L)</b>                        |       |       |                      |         |
| Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )           | 5.0   | 120   | 120                  | 0.0     |
| Chloride                                                  | 0.20  | 3.6   | 3.5                  | 2.8     |
| Sulfate                                                   | 0.20  | 7.2   | 7.1                  | 1.4     |
| Total Dissolved Solids                                    | 10    | 170   | 170                  | 0.0     |
| <b>Dissolved Metals (mg/L)</b>                            |       |       |                      |         |
| Calcium                                                   | 0.20  | 19    | 19                   | 0.0     |
| Iron                                                      | 0.10  | 0.68  | 0.70                 | 2.9     |
| Magnesium                                                 | 0.10  | 10    | 11                   | 9.5     |
| Manganese                                                 | 0.005 | 0.30  | 0.28                 | 6.9     |
| Potassium                                                 | 2.0   | 2.6   | 2.6                  | 0.0     |
| Sodium                                                    | 1.0   | 15    | 15                   | 0.0     |
| <b>Total Metals (mg/L)</b>                                |       |       |                      |         |
| Barium                                                    | 0.005 | 0.014 | 0.011                | 24.0    |

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.

\* = the sample results were 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 5, 2018  
LRI Landfill, Pierce County, Washington**

| <b>Location</b>              | <b>Well Casing Elevation<br/>(ft)</b> | <b>Depth to Water<br/>(ft)</b> | <b>Water Level Elevation<br/>(ft, NGVD29)</b> |
|------------------------------|---------------------------------------|--------------------------------|-----------------------------------------------|
| <b>Wells</b>                 |                                       |                                |                                               |
| W87-2A                       | 664.01                                | 17.70                          | 646.31                                        |
| W87-4A                       | 693.29                                | 8.92                           | 684.37                                        |
| W88-3M                       | 658.11                                | 14.90                          | 643.21                                        |
| W88-7A                       | 632.51                                | NM                             | --                                            |
| W88-8M                       | 721.05                                | 40.65                          | 680.40                                        |
| W90-12A                      | 640.84                                | 34.21                          | 606.63                                        |
| W95-14A                      | 680.49                                | 2.89                           | 677.60                                        |
| MW-1A                        | 652.57                                | 18.40                          | 634.17                                        |
| MW-2A                        | 651.93                                | 18.26                          | 633.67                                        |
| MW-3                         | 637.41                                | 9.05                           | 628.36                                        |
| MW-4                         | 652.37                                | 23.24                          | 629.13                                        |
| MW-5A                        | 655.55                                | 29.13                          | 626.42                                        |
| MW-6                         | 635.71                                | 8.80                           | 626.91                                        |
| MW-7                         | 656.03                                | 24.51                          | 631.52                                        |
| MW-9                         | 701.77                                | 11.13                          | 690.64                                        |
| MW-10                        | 673.87                                | 22.29                          | 651.58                                        |
| <b>Piezometers</b>           |                                       |                                |                                               |
| P13-14A                      | 665.96                                | 23.15                          | 642.81                                        |
| P88-2A                       | 663.96                                | NM                             | --                                            |
| P88-2B                       | 663.48                                | NM                             | --                                            |
| P88-3A                       | 656.20                                | 20.10                          | 636.10                                        |
| P88-3B                       | 655.98                                | 21.84                          | 634.14                                        |
| P95-8A                       | 722.07                                | 25.25                          | 696.82                                        |
| P90-12A                      | 640.79                                | 5.96                           | 634.83                                        |
| P90-12B                      | 640.73                                | 7.02                           | 633.71                                        |
| P90-13A                      | 645.19                                | NM                             | --                                            |
| P90-13B                      | 643.63                                | NM                             | --                                            |
| GP-1P <sup>a</sup>           | 652.00                                | 17.09                          | 634.91                                        |
| GP-2P <sup>a</sup>           | 658.61                                | 17.23                          | 641.38                                        |
| GP-3P <sup>a</sup>           | 658.51                                | 11.96                          | 646.55                                        |
| GP-4P <sup>a</sup>           | 662.01                                | 11.72                          | 650.29                                        |
| GP-9P <sup>a</sup>           | 674.03                                | 11.61                          | 662.42                                        |
| <b>South Creek</b>           |                                       |                                |                                               |
| SWSC-1                       | 632.68                                | 1.55                           | 631.13                                        |
| SWSC-2                       | 629.98                                | 7.40                           | 622.58                                        |
| <b>Leak Detection System</b> |                                       |                                |                                               |
| LDCS-1 <sup>b</sup>          | 657.26                                | 26.95                          | 630.31                                        |
| LDCS-2A <sup>b</sup>         | 659.24                                | 29.23                          | 630.01                                        |
| LDCS-2B <sup>b</sup>         | 661.70                                | 26.58                          | 635.12                                        |

Notes:

NM= not measured

-- = not applicable

Measurements taken on 12/5/2018 unless otherwise noted

a = Measurement taken on 12/13/2018

b = measurement taken on 12/3/2018



**Table 2. Field Parameters**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Location                          | Sample Number | Sample Date | Sampling Method | pH   | Conductivity (µS/cm) | Temperature (°C) |
|-----------------------------------|---------------|-------------|-----------------|------|----------------------|------------------|
| <b>Monitoring Wells</b>           |               |             |                 |      |                      |                  |
| MW-1A                             | 304-120518-22 | 12/5/2018   | DP              | 6.90 | 201                  | 13.6             |
| MW-2A                             | 304-120418-18 | 12/4/2018   | DP              | 6.98 | 324                  | 12.8             |
| MW-3                              | 304-120418-15 | 12/4/2018   | DP              | 7.13 | 320                  | 10.1             |
| MW-4                              | 304-120518-20 | 12/5/2018   | SP              | 7.20 | 330                  | 11.8             |
| MW-5A                             | 304-120418-21 | 12/4/2018   | DP              | 7.49 | 283                  | 11.7             |
| MW-6                              | 304-120418-19 | 12/4/2018   | DP              | 7.44 | 308                  | 10.3             |
| MW-7                              | 304-120418-25 | 12/4/2018   | DP              | 7.42 | 336                  | 10.1             |
| MW-9                              | 304-120418-27 | 12/4/2018   | DP              | 6.64 | 133                  | 9.6              |
| MW-10                             | 304-120418-23 | 12/4/2018   | DP              | 6.44 | 254                  | 10.0             |
| <b>Leak Detection System</b>      |               |             |                 |      |                      |                  |
| LDCS-1                            | 304-120318-08 | 12/3/2018   | DB              | 6.71 | 422                  | 14.5             |
| LDCS-2A                           | 304-120318-06 | 12/3/2018   | DB              | 7.68 | 770                  | 21.1             |
| LDCS-2B                           | 304-120318-04 | 12/3/2018   | DB              | 7.60 | 738                  | 16.8             |
| LDCS-3A                           | 304-120318-02 | 12/3/2018   | DP              | 6.45 | 834                  | 16.2             |
| LDCS-4A                           | 304-120318-10 | 12/3/2018   | DP              | 6.36 | 704                  | 21.4             |
| LDCS-4B                           | 304-120418-12 | 12/4/2018   | DP              | 6.26 | 909                  | 26.4             |
| LDCS-5                            | 304-120418-14 | 12/4/2018   | DP              | 6.16 | 684                  | 18.6             |
| LDCS-6                            | 304-120418-16 | 12/4/2018   | DP              | 6.30 | 1,147                | 9.4              |
| <b>Leachate Collection System</b> |               |             |                 |      |                      |                  |
| Leachate, Cell 1                  | 304-120318-07 | 12/3/2018   | GB              | 7.56 | 32,312               | 15.0             |
| Leachate, Cell 2A                 | 304-120318-05 | 12/3/2018   | GB              | 7.91 | 32,784               | 21.1             |
| Leachate, Cell 2B                 | 304-120318-03 | 12/3/2018   | GB              | 7.62 | 25,164               | 19.5             |
| Leachate, Cell 3A                 | 304-120318-01 | 12/3/2018   | GB              | 7.67 | 20,330               | 19.0             |
| Leachate, Cell 4A                 | 304-120318-09 | 12/3/2018   | GB              | 7.79 | 34,318               | 17.6             |
| Leachate, Cell 4B                 | 304-120318-11 | 12/3/2018   | GB              | 7.68 | 25,864               | 14.7             |
| Leachate, Cell 5                  | 304-120318-17 | 12/3/2018   | GB              | 7.96 | 27,694               | 9.3              |
| Leachate, Cell 6                  | 304-120318-13 | 12/3/2018   | GB              | 7.64 | 21,459               | 9.0              |

Notes:

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

µS/cm = microsiemens per centimeter

°C = degrees celcius

**Table 3. Inorganic Parameters**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                         | Alkalinity,<br>Total | Ammonia  | Chloride  | Nitrate    | Sulfate   | Total<br>Dissolved<br>Solids | Total<br>Organic<br>Carbon | Total<br>Suspended<br>Solids |
|-----------------------------------|----------------------|----------|-----------|------------|-----------|------------------------------|----------------------------|------------------------------|
| MRL                               | 5.0                  | 0.1 - 22 | 0.2 - 120 | 0.5 - 0.84 | 0.2 - 2.5 | 10 - 470                     | 1.0                        | 4.0                          |
| WAC 173-200 Criteria              | —                    | —        | 250       | 10         | 250       | 500                          | —                          | —                            |
| Prediction Limit                  | —                    | —        | —         | 6.4        | —         | —                            | —                          | —                            |
| <b>Monitoring Wells</b>           |                      |          |           |            |           |                              |                            |                              |
| MW-1A                             | 95                   | *        | 2.4       | *          | 3.5       | 150                          | *                          | *                            |
| MW-2A                             | 130                  | 0.14     | 4.9       | *          | 25        | 210                          | 1.1                        | *                            |
| MW-3                              | 140                  | 0.10     | 3.3       | *          | 26        | 200                          | *                          | *                            |
| MW-4                              | 150                  | 0.17     | 3.2       | *          | 18        | 220                          | 1.0                        | *                            |
| MW-5A                             | 140                  | 0.10     | 2.1       | *          | 5.4       | 170                          | *                          | *                            |
| MW-6                              | 150                  | 0.12     | 4.7       | *          | 7.3       | 190                          | 1.0                        | *                            |
| MW-7                              | 170                  | 0.19     | 2.7       | *          | 4.4       | 200                          | *                          | *                            |
| MW-9                              | 67                   | *        | 1.6       | *          | 1.8       | 140                          | *                          | *                            |
| MW-10                             | 93                   | *        | 7.4       | 4.3        | 6.7       | 190                          | *                          | *                            |
| <b>Leak Detection System</b>      |                      |          |           |            |           |                              |                            |                              |
| LDCS-1                            | 200                  | 0.11     | 3.9       | *          | 8.7       | 280                          | 2.6                        | —                            |
| LDCS-2A                           | 390                  | *        | 3.8       | *          | 23        | 490                          | 2.7                        | —                            |
| LDCS-2B                           | 320                  | *        | 4.3       | *          | 73        | 460                          | 1.9                        | —                            |
| LDCS-3A                           | 360                  | *        | 4.3       | *          | 75        | 510                          | 1.4                        | —                            |
| LDCS-4A                           | 290                  | 0.12     | 13        | *          | 52        | 430                          | 4.5                        | —                            |
| LDCS-4B                           | 350                  | 0.25     | 14        | *          | 110       | 580                          | 3.1                        | —                            |
| LDCS-5                            | 300                  | 0.56     | 8.4       | *          | 61        | 420                          | 3.3                        | —                            |
| LDCS-6                            | 450                  | *        | 7.3       | *          | 170       | 740                          | 3.8                        | —                            |
| <b>Leachate Collection System</b> |                      |          |           |            |           |                              |                            |                              |
| Leachate, Cell 1                  | 11,000               | 1,800    | 5,900     | *          | 0.92      | 21,000                       | 2,300                      | —                            |
| Leachate, Cell 2A                 | 13,000               | 1,900    | 3,800     | 4.9        | 0.81      | 18,000                       | 1,900                      | —                            |
| Leachate, Cell 2B                 | 9,900                | 1,600    | 2,500     | 3.1        | 2.0       | 13,000                       | 1,500                      | —                            |
| Leachate, Cell 3A                 | 7,800                | 1,100    | 2,000     | 0.6        | 6.4       | 9,500                        | 700                        | —                            |
| Leachate, Cell 4A                 | 12,000               | 1,600    | 4,200     | 4.5        | 3.5       | 17,000                       | 1,400                      | —                            |
| Leachate, Cell 4B                 | 10,000               | 1,400    | 2,900     | 2.9        | 6.3       | 13,000                       | 790                        | —                            |
| Leachate, Cell 5                  | 11,000               | 1,500    | 2,900     | 3.4        | 2.5       | 15,000                       | 920                        | —                            |
| Leachate, Cell 6                  | 9,000                | 1,000    | 2,300     | 2.3        | 2.3       | 12,000                       | 920                        | —                            |

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.

\* indicates the sample result was not reported at or above the MRL

— = not applicable or not performed



Table 4. WAC 173-351 Appendix I Metals  
Fourth Quarter 2018  
LRI Landfill, Pierce County, Washington

| Parameter                  | Antimony-D | Antimony-T | Arsenic-D | Arsenic-T | Barium-D | Barium-T | Beryllium-D | Beryllium-T | Cadmium-D | Cadmium-T | Chromium-D | Chromium-T | Cobalt-D | Cobalt-T | Copper-D | Copper-T | Lead-D | Lead-T | Nickel-D | Nickel-T | Selenium-D | Selenium-T | Silver-D | Silver-T | Thallium-D | Thallium-T | Vanadium-D | Vanadium-T | Zinc-D | Zinc-T |   |
|----------------------------|------------|------------|-----------|-----------|----------|----------|-------------|-------------|-----------|-----------|------------|------------|----------|----------|----------|----------|--------|--------|----------|----------|------------|------------|----------|----------|------------|------------|------------|------------|--------|--------|---|
| Units                      | mg/L       | mg/L       | mg/L      | mg/L      | mg/L     | mg/L     | mg/L        | mg/L        | mg/L      | mg/L      | mg/L       | mg/L       | mg/L     | mg/L     | mg/L     | mg/L     | mg/L   | mg/L   | mg/L     | mg/L     | mg/L       | mg/L       | mg/L     | mg/L     | mg/L       | mg/L       | mg/L       | mg/L       | mg/L   | mg/L   |   |
| MRL                        | 0.05       | 0.05       | 0.005     | 0.005     | 0.005    | 0.005    | 0.001       | 0.001       | 0.001     | 0.001     | 0.005      | 0.005      | 0.001    | 0.001    | 0.01     | 0.01     | 0.002  | 0.002  | 0.02     | 0.02     | 0.005      | 0.005      | 0.005    | 0.005    | 0.005      | 0.005      | 0.005      | 0.005      | 0.01   | 0.01   |   |
| WAC 173-200 Criteria       | —          | —          | —         | 0.00005   | —        | 1.0      | —           | —           | —         | 0.01      | —          | 0.05       | —        | —        | —        | 1.0      | —      | 0.05   | —        | —        | —          | 0.01       | —        | 0.05     | —          | —          | —          | —          | —      | 5.0    |   |
| Prediction Limit           | —          | 0.05       | —         | 0.011     | —        | 0.091    | —           | 0.005       | —         | 0.005     | —          | 0.011      | —        | 0.01     | —        | 0.063    | —      | 0.042  | —        | 0.020    | —          | 0.005      | —        | 0.01     | —          | 0.005      | —          | 0.016      | —      | 0.290  |   |
| Monitoring Wells           |            |            |           |           |          |          |             |             |           |           |            |            |          |          |          |          |        |        |          |          |            |            |          |          |            |            |            |            |        |        |   |
| MW-1A                      | —          | *          | —         | *         | —        | 0.017    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-2A                      | —          | *          | —         | *         | —        | 0.016    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-3                       | —          | *          | —         | *         | —        | 0.011    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-4                       | —          | *          | —         | 0.0096    | —        | 0.017    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | 0.021  |   |
| MW-5A                      | —          | *          | —         | *         | —        | 0.013    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-6                       | —          | *          | —         | 0.0073    | —        | 0.015    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| MW-7                       | —          | *          | —         | 0.0050    | —        | 0.014    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| (BG) MW-9                  | —          | *          | —         | *         | —        | 0.0051   | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | 0.014      | —      | *      |   |
| (BG) MW-10                 | —          | *          | —         | *         | —        | 0.013    | —           | *           | —         | *         | —          | *          | —        | *        | —        | *        | —      | *      | —        | *        | —          | *          | —        | *        | —          | *          | —          | *          | —      | *      |   |
| Leak Detection System      |            |            |           |           |          |          |             |             |           |           |            |            |          |          |          |          |        |        |          |          |            |            |          |          |            |            |            |            |        |        |   |
| LDCS-1                     | *          | —          | 0.0094    | —         | 0.022    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-2A                    | *          | —          | 0.0075    | —         | 0.020    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-2B                    | *          | —          | *         | —         | 0.014    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-3A                    | *          | —          | *         | —         | 0.016    | —        | —           | —           | —         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-4A                    | *          | —          | 0.0060    | —         | 0.039    | —        | —           | —           | —         | —         | *          | —          | 0.0033   | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | 0.014  | — |
| LDCS-4B                    | *          | —          | 0.0056    | —         | 0.041    | —        | —           | —           | —         | —         | *          | —          | 0.0010   | —        | *        | —        | *      | —      | *        | —        | —          | —          | —        | —        | —          | —          | —          | *          | —      | *      | — |
| LDCS-5                     | *          | —          | 0.0110    | —         | 0.051    | —        | *           | —           | *         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | *          | —          | *        | —        | *          | —          | *          | —          | *      | —      | * |
| LDCS-6                     | *          | —          | *         | —         | 0.027    | —        | *           | —           | *         | —         | *          | —          | *        | —        | *        | —        | *      | —      | *        | —        | *          | —          | *        | —        | *          | —          | *          | —          | *      | 0.012  | — |
| Leachate Collection System |            |            |           |           |          |          |             |             |           |           |            |            |          |          |          |          |        |        |          |          |            |            |          |          |            |            |            |            |        |        |   |
| Leachate, Cell 1           | —          | 0.096      | —         | 0.23      | —        | 1.7      | —           | *           | —         | *         | —          | 0.59       | —        | 0.047    | —        | 0.021    | —      | 0.016  | —        | 1.0      | —          | *          | —        | *        | —          | *          | —          | 0.34       | —      | 0.061  |   |
| Leachate, Cell 2A          | —          | *          | —         | 0.12      | —        | 1.1      | —           | *           | —         | *         | —          | 0.59       | —        | 0.050    | —        | 0.028    | —      | 0.022  | —        | 0.76     | —          | *          | —        | *        | —          | *          | —          | 0.36       | —      | 0.085  |   |
| Leachate, Cell 2B          | —          | 0.072      | —         | 0.21      | —        | 1.3      | —           | *           | —         | *         | —          | 0.54       | —        | 0.046    | —        | 0.040    | —      | 0.018  | —        | 0.56     | —          | *          | —        | *        | —          | *          | —          | 0.35       | —      | 0.13   |   |
| Leachate, Cell 3A          | —          | *          | —         | 0.076     | —        | 1.0      | —           | *           | —         | *         | —          | 0.40       | —        | 0.038    | —        | 0.250    | —      | 0.017  | —        | 0.35     | —          | *          | —        | *        | —          | *          | —          | 0.18       | —      | 0.13   |   |
| Leachate, Cell 4A          | —          | 0.066      | —         | 0.21      | —        | 1.6      | —           | *           | —         | *         | —          | 0.79       | —        | 0.064    | —        | 0.060    | —      | 0.027  | —        | 1.0      | —          | 0.0062     | —        | *        | —          | *          | —          | 0.46       | —      | 0.12   |   |
| Leachate, Cell 4B          | —          | 0.051      | —         | 0.16      | —        | 1.3      | —           | *           | —         | *         | —          | 0.85       | —        | 0.049    | —        | 0.079    | —      | 0.022  | —        | 0.72     | —          | *          | —        | *        | —          | *          | —          | 0.16       | —      | 0.12   |   |
| Leachate, Cell 5           | —          | *          | —         | 0.14      | —        | 1.2      | —           | *           | —         | *         | —          | 0.60       | —        | 0.042    | —        | 0.058    | —      | 0.021  | —        | 0.62     | —          | 0.0055     | —        | *        | —          | *          | —          | 0.18       | —      | 0.10   |   |
| Leachate, Cell 6           | —          | *          | —         | 0.16      | —        | 0.87     | —           | *           | —         | 0.0015    | —          | 0.79       | —        | 0.053    | —        | 0.094    | —      | 0.110  | —        | 0.59     | —          | *          | —        | *        | —          | *          | —          | *          | —      | 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.  
Analyses performed by TestAmerica of Denver, Colorado.  
Method Reporting Limit (MRL) is typical and may be elevated for some samples.  
\* indicates 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 2018  
LRI Landfill, Pierce County, Washington**

| <b>Parameter</b>                              | <b>Calcium</b> | <b>Iron</b> | <b>Magnesium</b> | <b>Manganese</b> | <b>Potassium</b> | <b>Sodium</b> |
|-----------------------------------------------|----------------|-------------|------------------|------------------|------------------|---------------|
| 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        | —                | 0.05             | —                | —             |
| <b>Monitoring Wells</b>                       |                |             |                  |                  |                  |               |
| MW-1A                                         | 14             | <b>1.6</b>  | 9.1              | <b>0.25</b>      | 3.8              | 15            |
| MW-2A                                         | 25             | <b>0.95</b> | 13               | <b>0.38</b>      | 3.6              | 19            |
| MW-3                                          | 32             | *           | 14               | <b>0.26</b>      | 3.5              | 13            |
| MW-4                                          | 31             | *           | 16               | <b>0.24</b>      | 5.7              | 14            |
| MW-5A                                         | 26             | *           | 11               | <b>0.18</b>      | 3.6              | 16            |
| MW-6                                          | 31             | *           | 13               | <b>0.20</b>      | 4.5              | 11            |
| MW-7                                          | 29             | 0.15        | 19               | <b>0.22</b>      | 5.0              | 12            |
| (BG) MW-9                                     | 10             | *           | 6.7              | *                | *                | 7.5           |
| (BG) MW-10                                    | 23             | <b>0.59</b> | 9.8              | *                | 2.0              | 14            |
| <b>Leak Detection System</b>                  |                |             |                  |                  |                  |               |
| LDCS-1                                        | 47             | 0.13        | 17               | 2.0              | 5.6              | 19            |
| LDCS-2A                                       | 96             | *           | 34               | 0.26             | 9.8              | 31            |
| LDCS-2B                                       | 100            | *           | 30               | 0.027            | 6.6              | 20            |
| LDCS-3A                                       | 110            | *           | 37               | 0.73             | 5.6              | 23            |
| LDCS-4A                                       | 76             | 1.3         | 36               | 1.5              | 5.8              | 21            |
| LDCS-4B                                       | 92             | 0.34        | 45               | 1.5              | 8.1              | 29            |
| LDCS-5                                        | 65             | 0.63        | 33               | 1.3              | 6.7              | 23            |
| LDCS-6                                        | 140            | *           | 53               | 0.73             | 4.0              | 46            |
| <b>Leachate Collection System<sup>^</sup></b> |                |             |                  |                  |                  |               |
| Leachate, Cell 1                              | 35             | 9.3         | 93               | 0.27             | 750              | 5,400         |
| Leachate, Cell 2A                             | 18             | 7.6         | 31               | 0.098            | 660              | 4,600         |
| Leachate, Cell 2B                             | 38             | 9.2         | 54               | 0.25             | 490              | 3,100         |
| Leachate, Cell 3A                             | 69             | 11          | 62               | 0.70             | 590              | 2,800         |
| Leachate, Cell 4A                             | 29             | 9.6         | 51               | 0.24             | 740              | 4,600         |
| Leachate, Cell 4B                             | 39             | 5.9         | 51               | 0.33             | 710              | 3,500         |
| Leachate, Cell 5                              | 36             | 4.9         | 50               | 0.29             | 770              | 3,400         |
| Leachate, Cell 6                              | 110            | 7.0         | 130              | 0.023            | 760              | 2,500         |

**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.

\* indicates result was not reported at or above the MRL.

<sup>^</sup> Leachate reported concentrations are total metals.

— = not applicable or not performed

BG = Background

**Table 6. Volatile Organic Compounds (µg/L)**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                         | 1,4-Dichlorobenzene | 2-Butanone (MEK) | 2-Hexanone | 4-Methyl-2-pentanone (MIBK) | Acetone | Benzene  | Carbon disulfide | Chlorobenzene | cis-1,2-Dichloroethene | Bhylbenzene | m-Xylene & p-Xylene | o-Xylene | Styrene | Toluene  | Vinyl chloride |
|-----------------------------------|---------------------|------------------|------------|-----------------------------|---------|----------|------------------|---------------|------------------------|-------------|---------------------|----------|---------|----------|----------------|
| Units                             | µg/L                | µg/L             | µg/L       | µg/L                        | µg/L    | µg/L     | µg/L             | µg/L          | µg/L                   | µg/L        | µg/L                | µg/L     | µg/L    | µg/L     | µg/L           |
| WAC 173-200 Criteria              | 0.64-5.0            | 8.0-100          | 6.6-34     | 5.0-49                      | 10-95   | 0.64-8.0 | 9.0              | 0.68          | 0.6                    | 1.0-8.0     | 1.4-17              | 0.76-9.3 | 0.68    | 0.68-6.5 | 1.0            |
| MRL                               | 4.0                 | —                | —          | —                           | —       | 1.0      | —                | —             | —                      | —           | —                   | —        | —       | —        | 0.02           |
| <b>Monitoring Wells</b>           |                     |                  |            |                             |         |          |                  |               |                        |             |                     |          |         |          |                |
| MW-1A                             | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| MW-2A                             | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| MW-3                              | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| MW-4                              | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| MW-5A                             | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| MW-6                              | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| MW-7                              | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| MW-8                              | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| (IG) MW-9                         | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| (IG) MW-10                        | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| <b>Leak Detection System</b>      |                     |                  |            |                             |         |          |                  |               |                        |             |                     |          |         |          |                |
| LDCS-1                            | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| LDCS-2A                           | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| LDCS-2B                           | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| LDCS-3A                           | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| LDCS-3A                           | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| LDCS-4A                           | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| LDCS-4B                           | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| LDCS-5                            | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| LDCS-6                            | *                   | *                | *          | *                           | *       | *        | *                | *             | *                      | *           | *                   | *        | *       | *        | *              |
| <b>Field Blank</b>                |                     |                  |            |                             |         |          |                  |               |                        |             |                     |          |         |          |                |
| <b>Leachate Collection System</b> |                     |                  |            |                             |         |          |                  |               |                        |             |                     |          |         |          |                |
| Leachate, Cell 1A                 | 1.4                 | 3,300            | *          | 170                         | 6,600   | 24       | *                | *             | *                      | 58          | 100                 | 47       | *       | 71       | *              |
| Leachate, Cell 2A                 | 5.7                 | 40               | 420        | 5.6                         | 79      | 5.8      | *                | 0.83          | 1.3                    | 24          | 38                  | 20       | 2.3     | 46       | *              |
| Leachate, Cell 2B                 | 8.4                 | 2,000            | 690        | 160                         | 2,900   | 6.5      | *                | *             | *                      | 33          | 55                  | 28       | *       | 32       | *              |
| Leachate, Cell 3A                 | 10                  | *                | 300        | *                           | 35      | 8.9      | *                | 1.3           | 0.94                   | 16          | 6.1                 | 32       | *       | 9.7      | *              |
| Leachate, Cell 4A                 | 18                  | 1,900            | *          | 88                          | 3,000   | 26       | *                | *             | *                      | 57          | 9.5                 | 41       | *       | 77       | *              |
| Leachate, Cell 4B                 | 9.3                 | 1,900            | 570        | 120                         | 4,100   | 29       | *                | *             | *                      | 41          | 6.4                 | 34       | *       | 55       | *              |
| Leachate, Cell 5                  | 16                  | 1,900            | 450        | 160                         | 2,900   | 40       | 23               | *             | *                      | 34          | 7.8                 | 34       | *       | 64       | *              |
| Leachate, Cell 6                  | 1.7                 | 49               | 340        | 5.6                         | 100     | 15       | *                | *             | *                      | 46          | 78                  | 34       | *       | 200      | 2.4            |

Notes:  
 Analytes performed by Tetrahedra of Denver, Colorado.  
 MRL is typical and may be elevated for some samples.  
 \* = not reported at or above the MRL  
 — = not applicable or not performed  
 BG = Background

**Table 7. Cation-Anion Balance**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Cations           | mg/L |     |     |       |       | mg/L |       |       |        |        | % of Total |    |    |  |  |
|-------------------|------|-----|-----|-------|-------|------|-------|-------|--------|--------|------------|----|----|--|--|
|                   | Ca   | Mg  | K   | Na    | Total | Ca   | Mg    | K     | Na     | Total  | Na+K       | Ca | Mg |  |  |
| MW-1A             | 14   | 9.1 | 3.8 | 15    | 41.9  | 0.70 | 0.75  | 0.09  | 0.65   | 2.19   | 34         | 32 | 34 |  |  |
| MW-2A             | 25   | 13  | 3.6 | 19    | 60.6  | 1.25 | 1.07  | 0.08  | 0.83   | 3.23   | 28         | 39 | 33 |  |  |
| MW-3              | 32   | 14  | 3.5 | 13    | 62.5  | 1.60 | 1.15  | 0.08  | 0.57   | 3.39   | 19         | 47 | 34 |  |  |
| MW-4              | 31   | 16  | 3.7 | 14    | 66.7  | 1.55 | 1.32  | 0.13  | 0.61   | 3.60   | 20         | 43 | 37 |  |  |
| MW-5A             | 26   | 11  | 3.6 | 16    | 56.6  | 1.30 | 0.91  | 0.08  | 0.70   | 2.98   | 26         | 44 | 30 |  |  |
| MW-6              | 31   | 13  | 4.5 | 11    | 59.5  | 1.55 | 1.07  | 0.10  | 0.48   | 3.20   | 18         | 48 | 33 |  |  |
| MW-7              | 29   | 19  | 5.0 | 12    | 65.0  | 1.45 | 1.56  | 0.11  | 0.52   | 3.65   | 17         | 40 | 43 |  |  |
| MW-9              | 10   | 6.7 | 2.0 | 7.5   | 26.2  | 0.50 | 0.55  | 0.05  | 0.33   | 1.42   | 26         | 35 | 39 |  |  |
| MW-10             | 23   | 9.8 | 2.0 | 14    | 48.8  | 1.15 | 0.81  | 0.05  | 0.61   | 2.61   | 25         | 44 | 31 |  |  |
| LDCS-1            | 47   | 17  | 5.6 | 19    | 88.6  | 2.35 | 1.40  | 0.13  | 0.83   | 4.70   | 20         | 50 | 30 |  |  |
| LDCS-2A           | 96   | 34  | 9.8 | 31    | 170.8 | 4.79 | 2.80  | 0.22  | 1.35   | 9.16   | 17         | 52 | 31 |  |  |
| LDCS-2B           | 100  | 30  | 6.6 | 20    | 156.6 | 4.99 | 2.47  | 0.15  | 0.87   | 8.48   | 12         | 59 | 29 |  |  |
| LDCS-3A           | 110  | 37  | 5.6 | 23    | 175.6 | 5.49 | 3.05  | 0.13  | 1.00   | 9.66   | 12         | 57 | 32 |  |  |
| LDCS-4A           | 76   | 36  | 5.8 | 21    | 138.8 | 3.79 | 2.96  | 0.13  | 0.91   | 7.80   | 13         | 49 | 38 |  |  |
| LDCS-4B           | 92   | 45  | 8.1 | 29    | 174.1 | 4.59 | 3.70  | 0.18  | 1.26   | 9.74   | 15         | 47 | 38 |  |  |
| LDCS-5            | 65   | 33  | 6.7 | 23    | 127.7 | 3.24 | 2.72  | 0.15  | 1.00   | 7.11   | 16         | 46 | 38 |  |  |
| LDCS-6            | 140  | 53  | 4.0 | 46    | 243.0 | 6.99 | 4.36  | 0.09  | 2.00   | 13.44  | 16         | 52 | 32 |  |  |
| Leachate, Cell 1  | 35   | 93  | 750 | 5,400 | 6,278 | 1.75 | 7.65  | 16.94 | 234.90 | 261.24 | 96         | 1  | 3  |  |  |
| Leachate, Cell 2A | 18   | 31  | 660 | 4,600 | 5,309 | 0.90 | 2.55  | 14.90 | 200.10 | 218.45 | 98         | 0  | 1  |  |  |
| Leachate, Cell 2B | 38   | 54  | 490 | 3,100 | 3,682 | 1.90 | 4.44  | 11.06 | 134.85 | 152.25 | 96         | 1  | 3  |  |  |
| Leachate, Cell 3  | 69   | 62  | 590 | 2,800 | 3,521 | 3.44 | 5.10  | 13.32 | 121.80 | 143.67 | 94         | 2  | 4  |  |  |
| Leachate, Cell 4A | 29   | 51  | 740 | 4,600 | 5,420 | 1.45 | 4.20  | 16.71 | 200.10 | 222.45 | 97         | 1  | 2  |  |  |
| Leachate, Cell 4B | 39   | 51  | 710 | 3,500 | 4,300 | 1.95 | 4.20  | 16.03 | 152.25 | 174.43 | 96         | 1  | 2  |  |  |
| Leachate, Cell 5  | 36   | 50  | 770 | 3,400 | 4,256 | 1.80 | 4.12  | 17.39 | 147.90 | 171.20 | 97         | 1  | 2  |  |  |
| Leachate, Cell 6  | 110  | 130 | 760 | 2,500 | 3,500 | 5.49 | 10.70 | 17.16 | 108.75 | 142.10 | 89         | 4  | 8  |  |  |

| Anions            | mg/L   |       |                 |                 |        | mg/L   |        |                 |                 |        | % of Total |     |                 |  |  | Total Ions<br>(meq/L) | Cation - Anion<br>Balance | Applicable<br>Ratio (%) | Ratio<br>Exceedance |
|-------------------|--------|-------|-----------------|-----------------|--------|--------|--------|-----------------|-----------------|--------|------------|-----|-----------------|--|--|-----------------------|---------------------------|-------------------------|---------------------|
|                   | Alk    | Cl    | NO <sub>3</sub> | SO <sub>4</sub> | Total  | Alk    | Cl     | NO <sub>3</sub> | SO <sub>4</sub> | Total  | Cl         | Alk | SO <sub>4</sub> |  |  |                       |                           |                         |                     |
| MW-1A             | 114    | 2.4   | 0.5             | 3.5             | 120.4  | 1.87   | 0.07   | 0.008           | 0.07            | 2.02   | 3          | 93  | 4               |  |  | 4.20                  | 4.0                       | 10                      | O                   |
| MW-2A             | 156    | 4.9   | 0.5             | 25              | 186.4  | 2.56   | 0.14   | 0.008           | 0.52            | 3.22   | 4          | 79  | 16              |  |  | 6.45                  | 0.0                       | 5                       | O                   |
| MW-3              | 168    | 3.3   | 0.5             | 26              | 197.8  | 2.76   | 0.09   | 0.008           | 0.34            | 3.40   | 3          | 86  | 11              |  |  | 6.79                  | 0.1                       | 5                       | O                   |
| MW-4              | 180    | 3.2   | 0.5             | 18              | 201.7  | 2.95   | 0.09   | 0.008           | 0.37            | 3.42   | 3          | 86  | 11              |  |  | 7.03                  | 2.5                       | 5                       | O                   |
| MW-5A             | 168    | 2.1   | 0.5             | 5.4             | 176.0  | 2.76   | 0.06   | 0.008           | 0.11            | 2.93   | 2          | 94  | 4               |  |  | 5.91                  | 0.8                       | 5                       | O                   |
| MW-6              | 180    | 4.7   | 0.5             | 7.3             | 192.5  | 2.95   | 0.13   | 0.008           | 0.15            | 3.24   | 4          | 91  | 5               |  |  | 6.44                  | 0.7                       | 5                       | O                   |
| MW-7              | 204    | 2.7   | 0.5             | 4.4             | 211.6  | 3.35   | 0.08   | 0.008           | 0.09            | 3.52   | 2          | 95  | 3               |  |  | 7.17                  | 1.7                       | 5                       | O                   |
| MW-9              | 80.4   | 1.6   | 0.5             | 1.8             | 84.3   | 1.32   | 0.05   | 0.008           | 0.04            | 1.41   | 3          | 94  | 3               |  |  | 2.83                  | 0.4                       | 10                      | O                   |
| MW-10             | 111.6  | 7.4   | 4.3             | 6.7             | 130.0  | 1.83   | 0.21   | 0.069           | 0.14            | 2.25   | 9          | 81  | 6               |  |  | 4.86                  | 7.4                       | 10                      | O                   |
| LDCS-1            | 240    | 3.9   | 0.5             | 8.7             | 253.1  | 3.94   | 0.11   | 0.008           | 0.18            | 4.23   | 3          | 93  | 4               |  |  | 8.93                  | 5.2                       | 5                       | Exceeds             |
| LDCS-2A           | 468    | 3.8   | 0.5             | 23              | 495.3  | 7.68   | 0.11   | 0.008           | 0.48            | 8.27   | 1          | 93  | 6               |  |  | 17.43                 | 5.1                       | 5                       | Exceeds             |
| LDCS-2B           | 384    | 4.3   | 0.5             | 73              | 461.8  | 6.30   | 0.12   | 0.008           | 1.52            | 7.95   | 2          | 79  | 19              |  |  | 16.42                 | 3.2                       | 5                       | O                   |
| LDCS-3A           | 432    | 4.3   | 0.5             | 75              | 511.8  | 7.08   | 0.12   | 0.008           | 1.56            | 8.77   | 1          | 81  | 18              |  |  | 18.44                 | 4.8                       | 5                       | O                   |
| LDCS-4A           | 348    | 13    | 0.5             | 52              | 413.5  | 5.71   | 0.37   | 0.008           | 1.08            | 7.16   | 5          | 80  | 15              |  |  | 14.96                 | 4.3                       | 5                       | O                   |
| LDCS-4B           | 420    | 1.4   | 0.5             | 110             | 544.5  | 6.89   | 0.39   | 0.008           | 2.29            | 9.58   | 4          | 72  | 24              |  |  | 19.32                 | 0.8                       | 5                       | O                   |
| LDCS-5            | 360    | 8.4   | 0.5             | 61              | 429.9  | 5.90   | 0.24   | 0.008           | 1.27            | 7.42   | 3          | 80  | 17              |  |  | 14.53                 | 2.1                       | 5                       | O                   |
| LDCS-6            | 540    | 7.3   | 0.5             | 170             | 717.8  | 8.86   | 0.21   | 0.008           | 3.54            | 12.61  | 2          | 70  | 28              |  |  | 26.05                 | 3.2                       | 5                       | O                   |
| Leachate, Cell 1  | 13,200 | 5,900 | 0.84            | 0.92            | 19,102 | 216.48 | 166.38 | 0.014           | 0.02            | 382.89 | 43         | 57  | 0               |  |  | 644.13                | 18.9                      | 5                       | Exceeds             |
| Leachate, Cell 2A | 15,600 | 3,800 | 4.9             | 0.81            | 19,406 | 255.84 | 107.16 | 0.079           | 0.02            | 363.10 | 30         | 70  | 0               |  |  | 581.55                | 24.9                      | 5                       | Exceeds             |
| Leachate, Cell 2B | 11,880 | 2,500 | 3.1             | 2.0             | 14,385 | 194.83 | 70.50  | 0.050           | 0.04            | 265.42 | 27         | 73  | 0               |  |  | 417.68                | 27.1                      | 5                       | Exceeds             |
| Leachate, Cell 3A | 9,360  | 2,000 | 0.6             | 6.4             | 11,367 | 153.50 | 56.40  | 0.010           | 0.13            | 210.05 | 27         | 73  | 0               |  |  | 353.71                | 18.8                      | 5                       | Exceeds             |
| Leachate, Cell 4A | 14,400 | 4,200 | 4.5             | 3.5             | 18,608 | 236.16 | 118.44 | 0.072           | 0.07            | 354.75 | 33         | 67  | 0               |  |  | 577.20                | 22.9                      | 5                       | Exceeds             |
| Leachate, Cell 4B | 12,000 | 2,900 | 2.9             | 6.3             | 14,909 | 196.80 | 81.78  | 0.047           | 0.13            | 278.76 | 29         | 71  | 0               |  |  | 453.18                | 23.0                      | 5                       | Exceeds             |
| Leachate, Cell 5  | 13,200 | 2,900 | 3.4             | 2.5             | 16,106 | 216.48 | 81.78  | 0.055           | 0.05            | 298.37 | 27         | 73  | 0               |  |  | 469.56                | 27.1                      | 5                       | Exceeds             |
| Leachate, Cell 6  | 10,800 | 2,300 | 2.3             | 2.3             | 13,105 | 177.12 | 64.86  | 0.037           | 0.05            | 242.06 | 27         | 73  | 0               |  |  | 384.16                | 26.0                      | 5                       | Exceeds             |

Notes:  
 meq/L = milligrams per liter  
 meq/L = milliequivalents per liter  
 Total alkalinity concentration, reported as calcium carbonate (CaCO<sub>3</sub>), is converted to the bicarbonate (HCO<sub>3</sub><sup>-</sup>) 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)/(cations+cations)\*100].  
 The MRL was used for analyses 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 = 5.0 meq/liter.



**Table 8. Duplicate Sample Results**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Parameter                                       | MRL   | MW-1A | DUP-1 (MW-1A) | RPD (%) |
|-------------------------------------------------|-------|-------|---------------|---------|
| <b>Volatile Organic Compounds (µg/L)</b>        |       |       |               |         |
| No Detections                                   | -     | -     | -             | -       |
| <b>Inorganic Parameters (mg/L)</b>              |       |       |               |         |
| Alkalinity, Bicarbonate (as CaCO <sub>3</sub> ) | 5.0   | 95    | 94            | 1.1%    |
| Chloride                                        | 0.20  | 2.4   | 2.4           | 0.0%    |
| Sulfate                                         | 0.20  | 3.5   | 3.5           | 0.0%    |
| Total Dissolved Solids                          | 10    | 150   | 150           | 0.0%    |
| <b>Dissolved Metals (mg/L)</b>                  |       |       |               |         |
| Calcium                                         | 0.20  | 14    | 14            | 0.0%    |
| Iron                                            | 0.10  | 1.6   | 1.6           | 0.0%    |
| Magnesium                                       | 0.10  | 9.1   | 9.2           | 1.1%    |
| Manganese                                       | 0.005 | 0.25  | 0.25          | 0.0%    |
| Potassium                                       | 2.0   | 3.8   | 3.9           | 2.6%    |
| Sodium                                          | 1.0   | 15    | 15            | 0.0%    |
| <b>Total Metals (mg/L)</b>                      |       |       |               |         |
| Barium                                          | 0.005 | 0.017 | 0.019         | 11.1%   |

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.

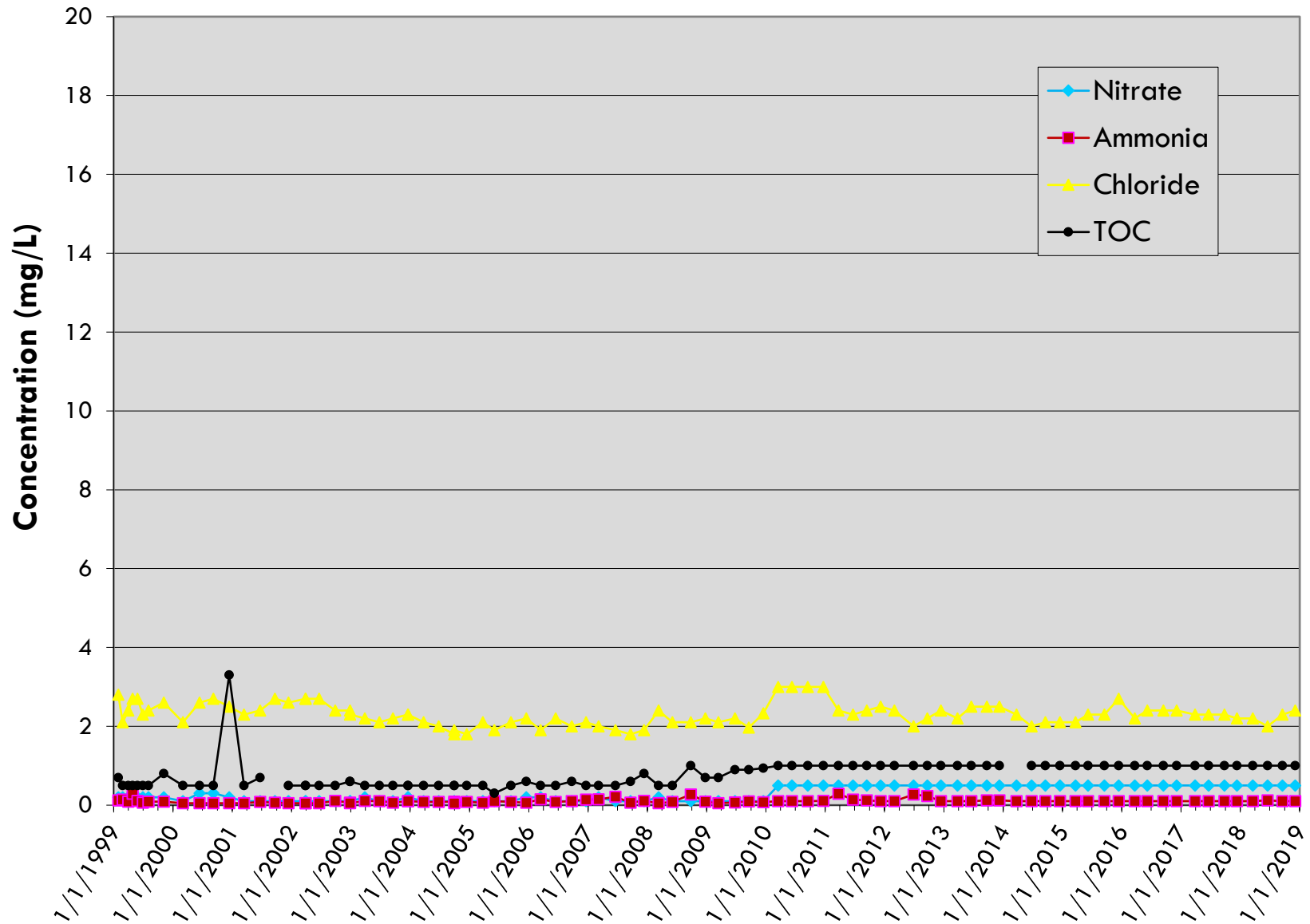
µg/L = micrograms per liter.

mg/L = milligrams per liter.

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

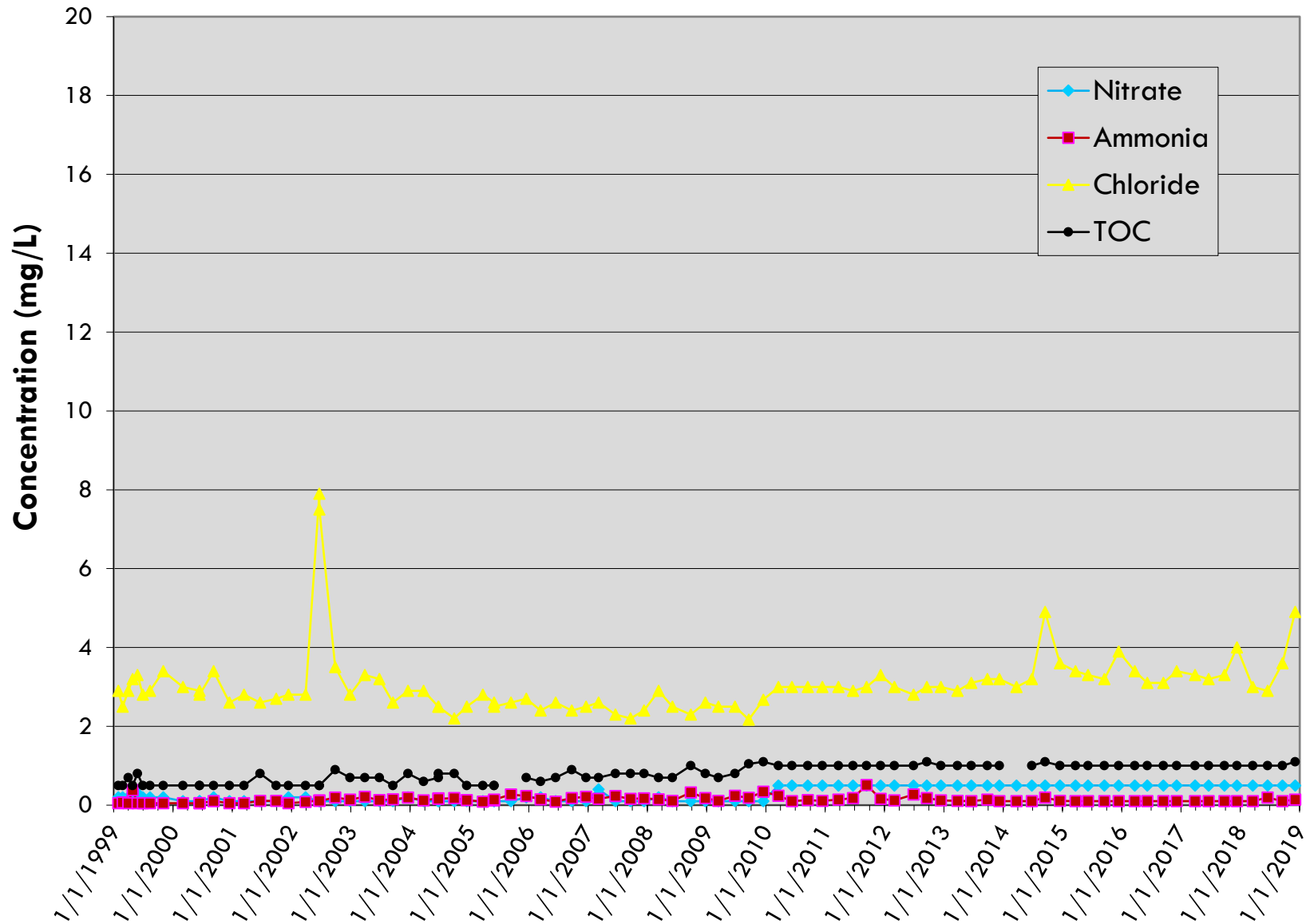
# MW-1A

## LRI Landfill, Pierce County, Washington



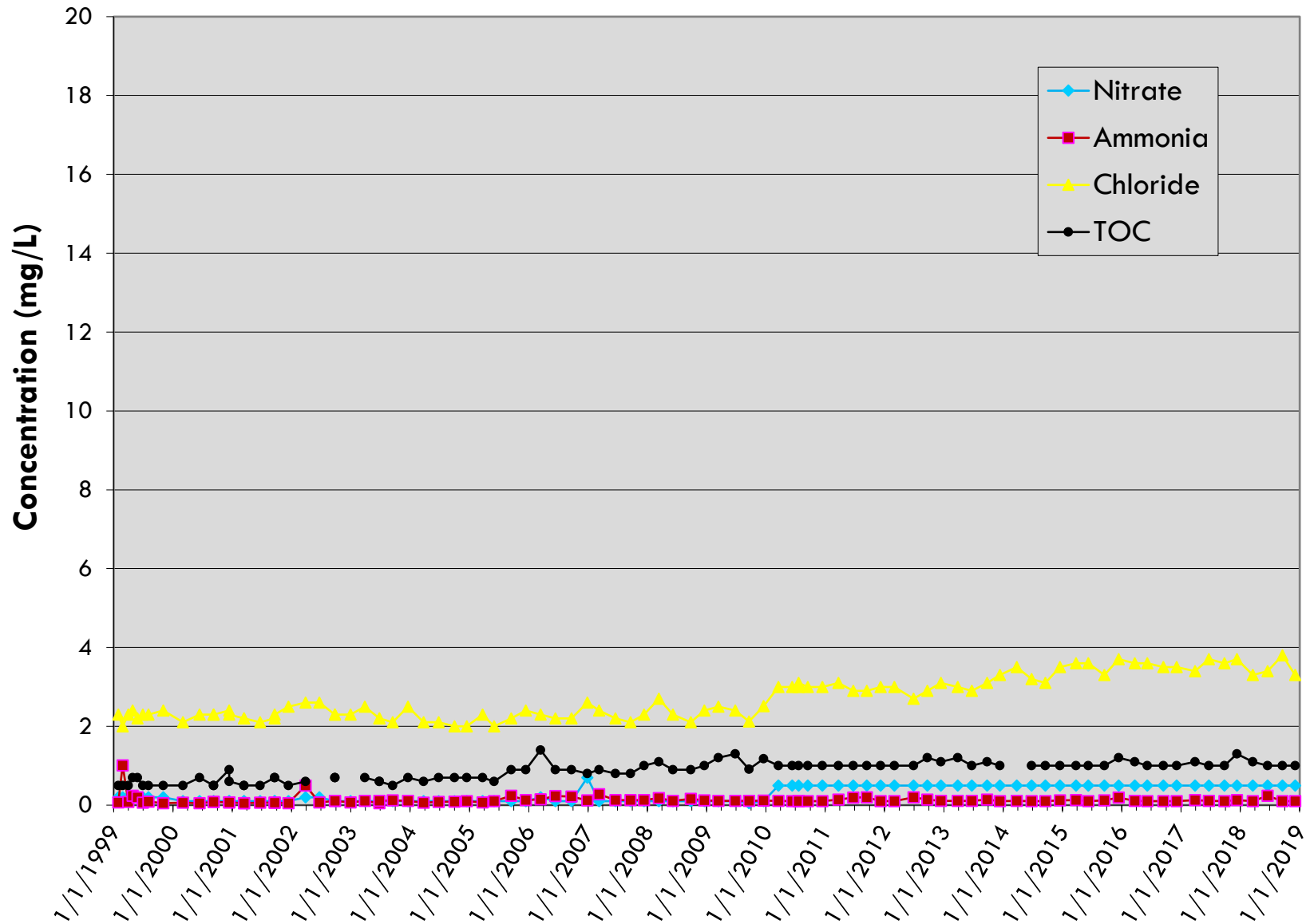
# MW-2A

## LRI Landfill, Pierce County, Washington



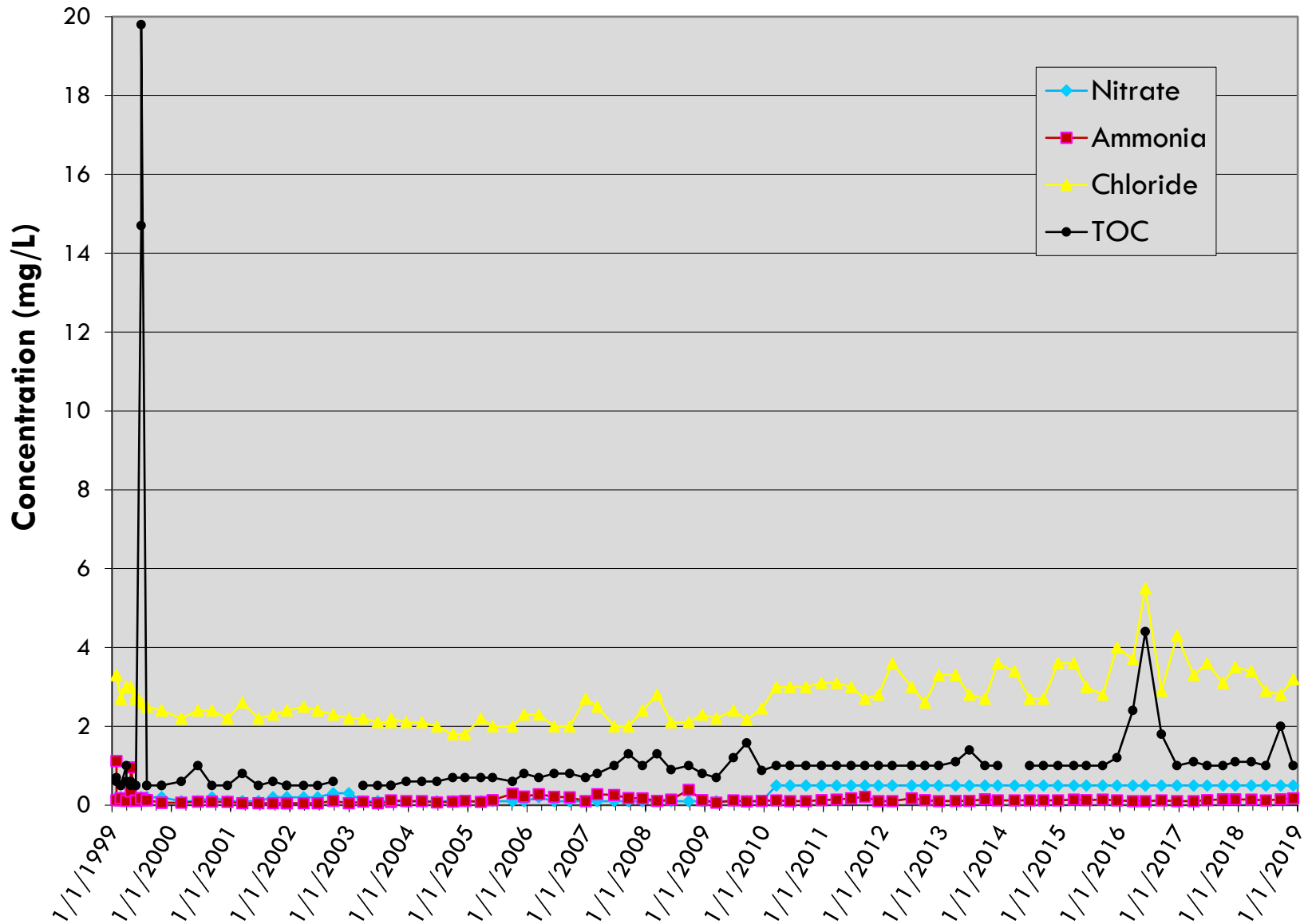
# MW-3

## LRI Landfill, Pierce County, Washington



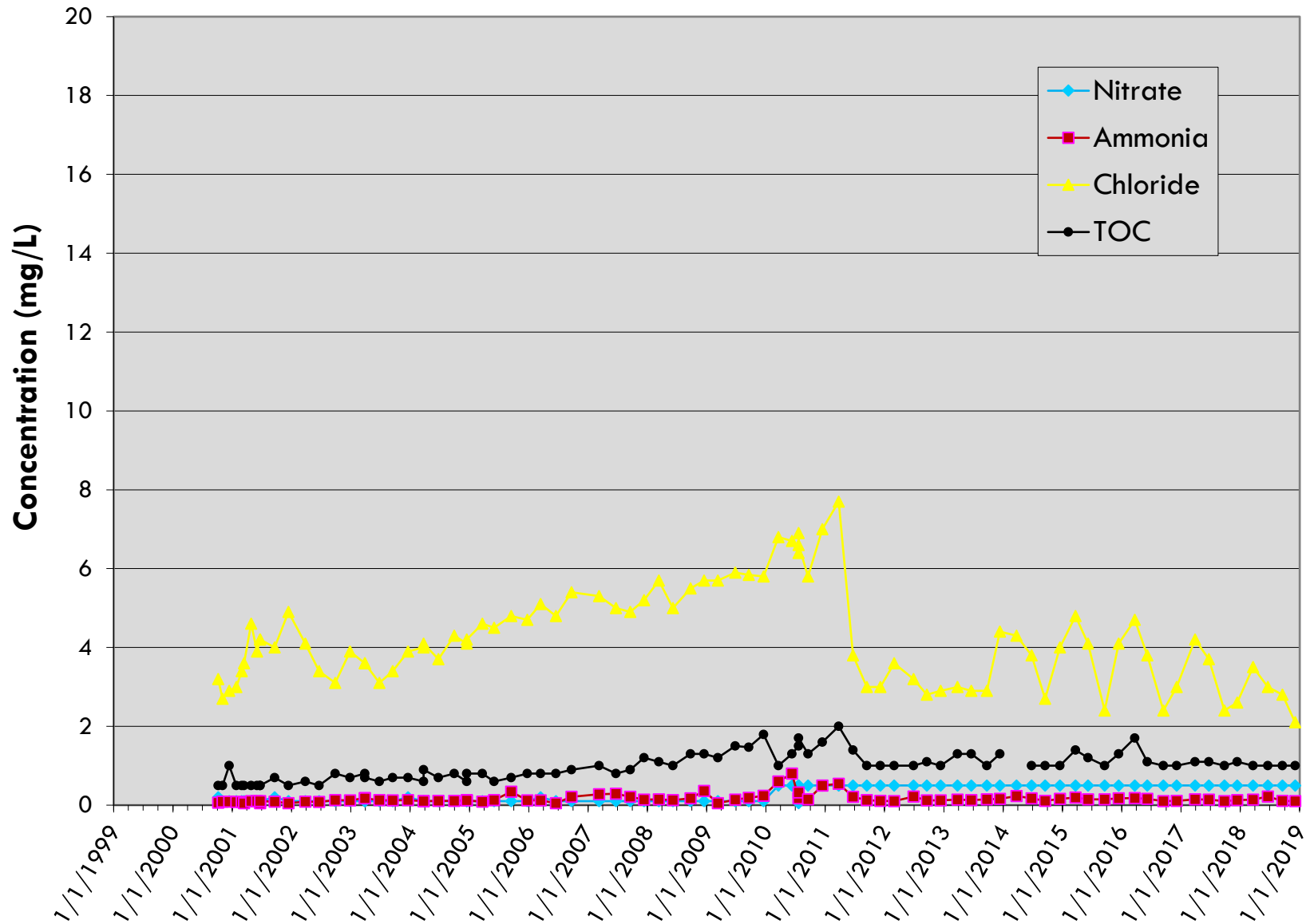
# MW-4

## LRI Landfill, Pierce County, Washington



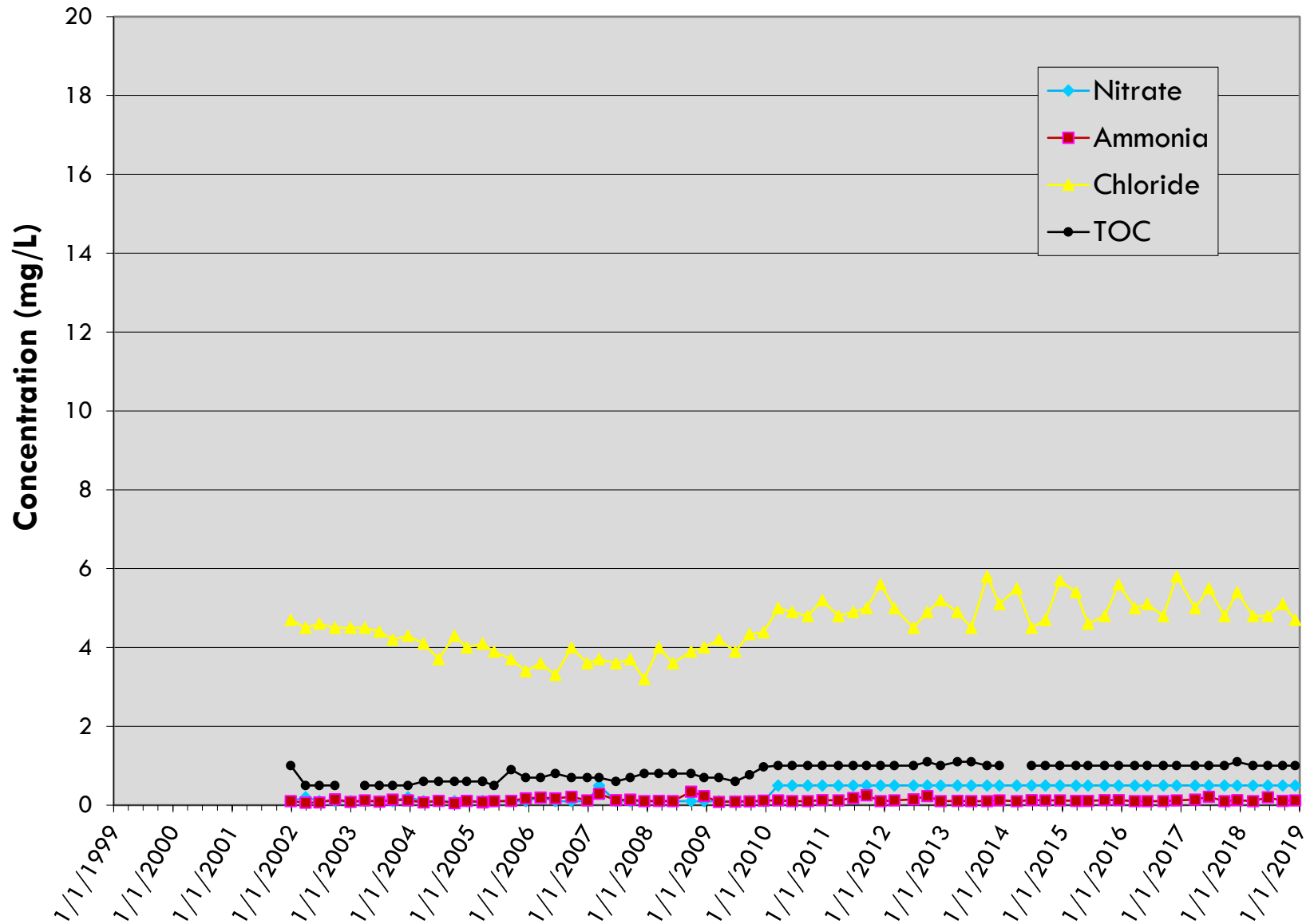
# MW-5A

## LRI Landfill, Pierce County, Washington



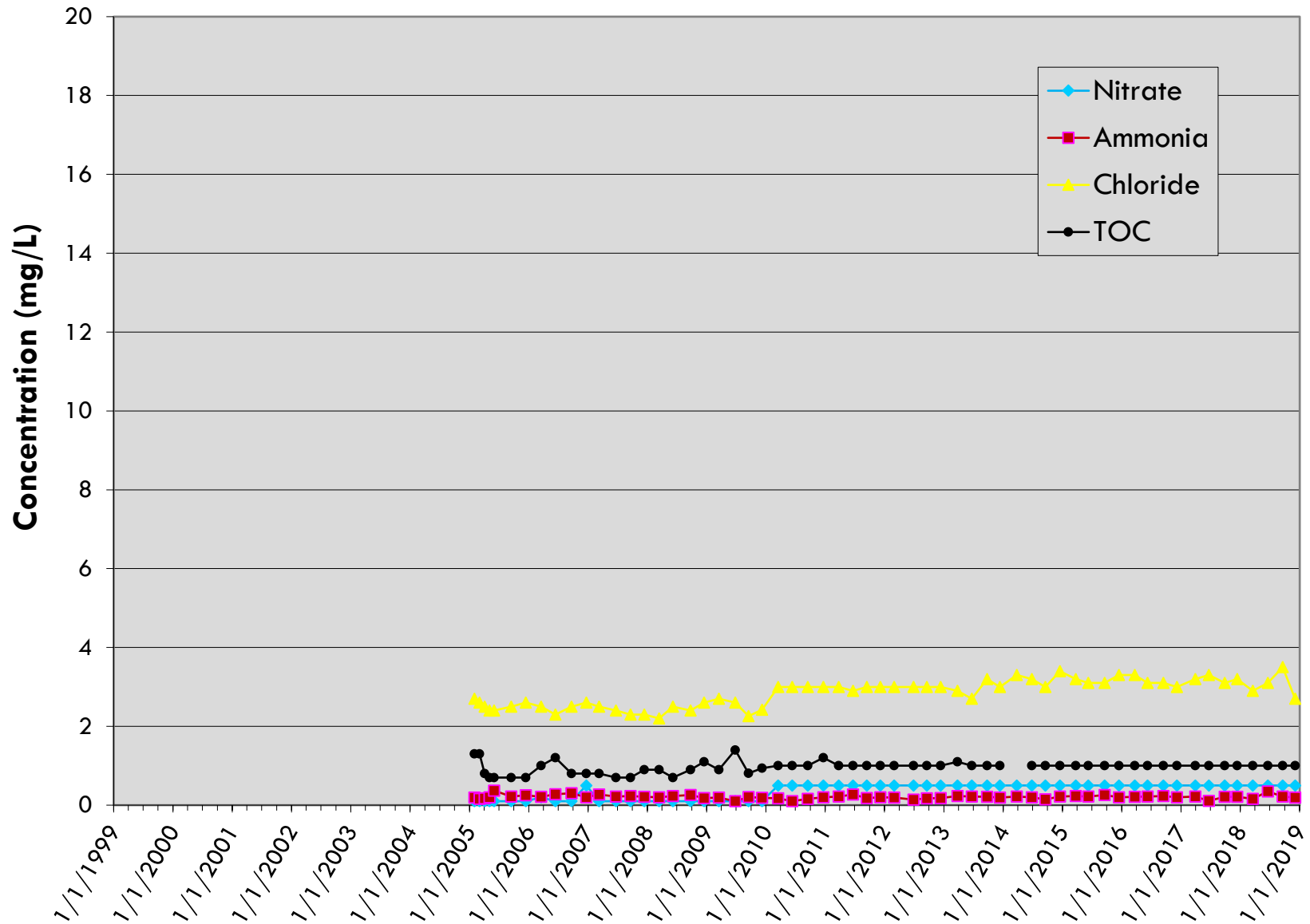
# MW-6

## LRI Landfill, Pierce County, Washington



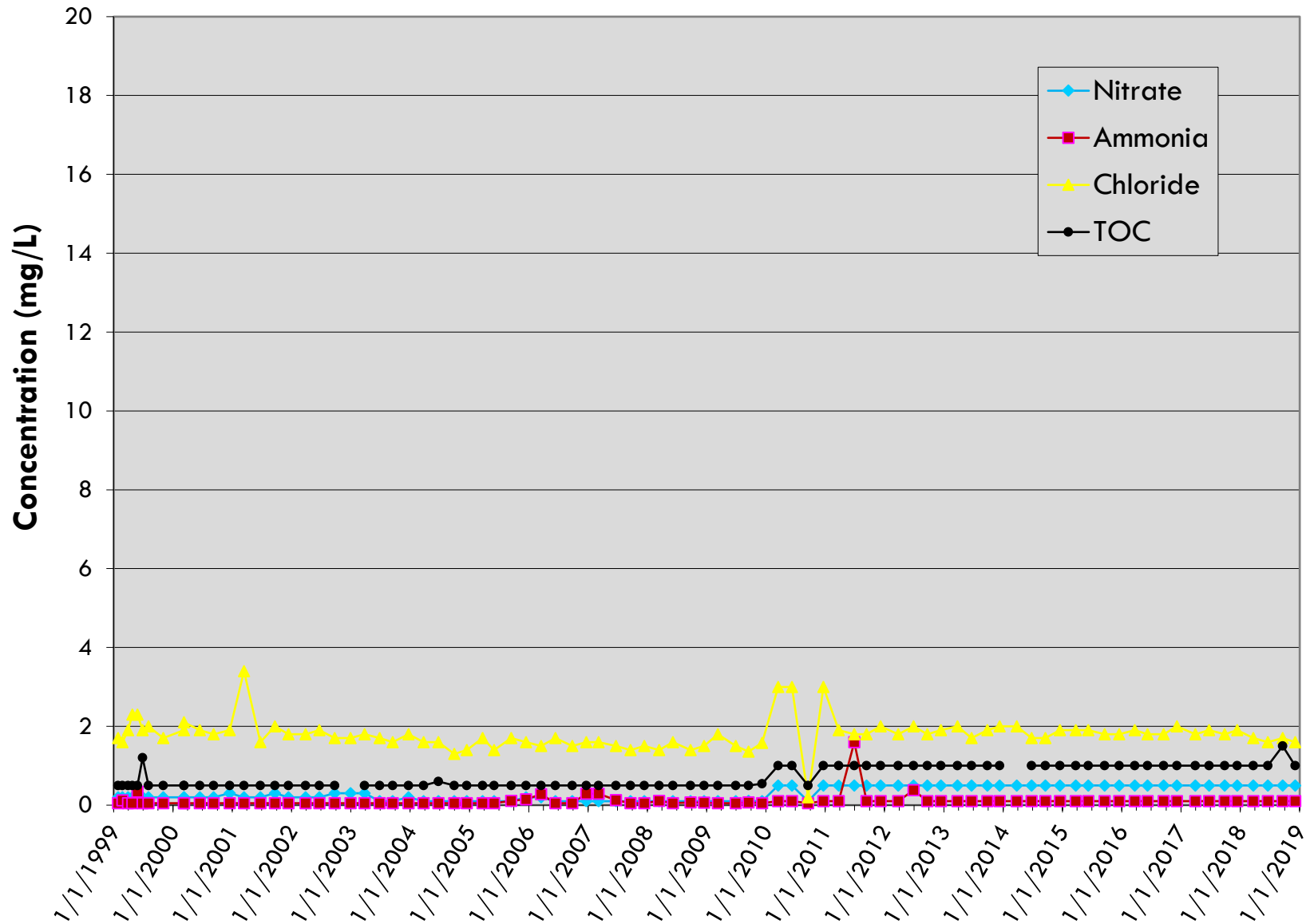
# MW-7

## LRI Landfill, Pierce County, Washington

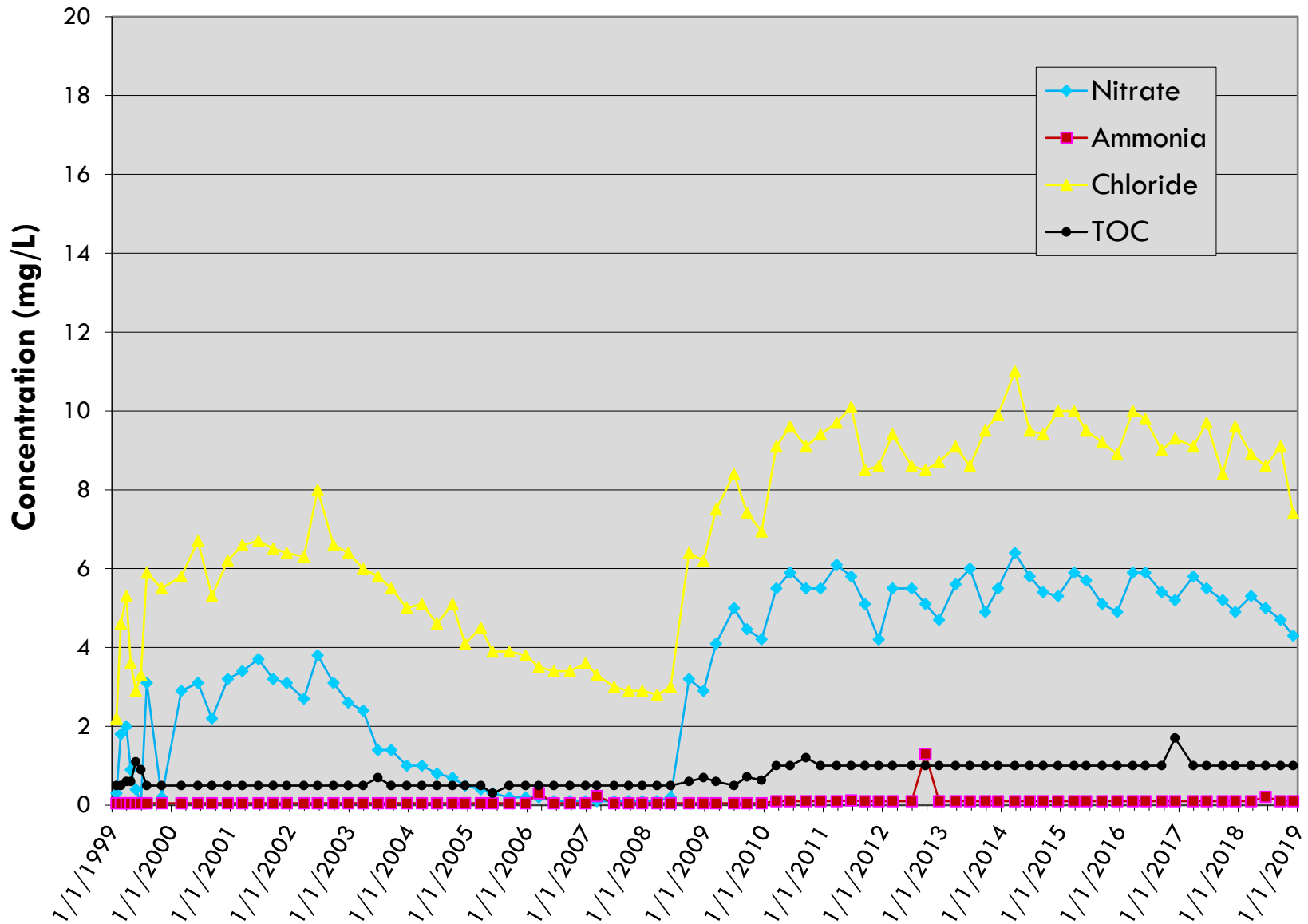




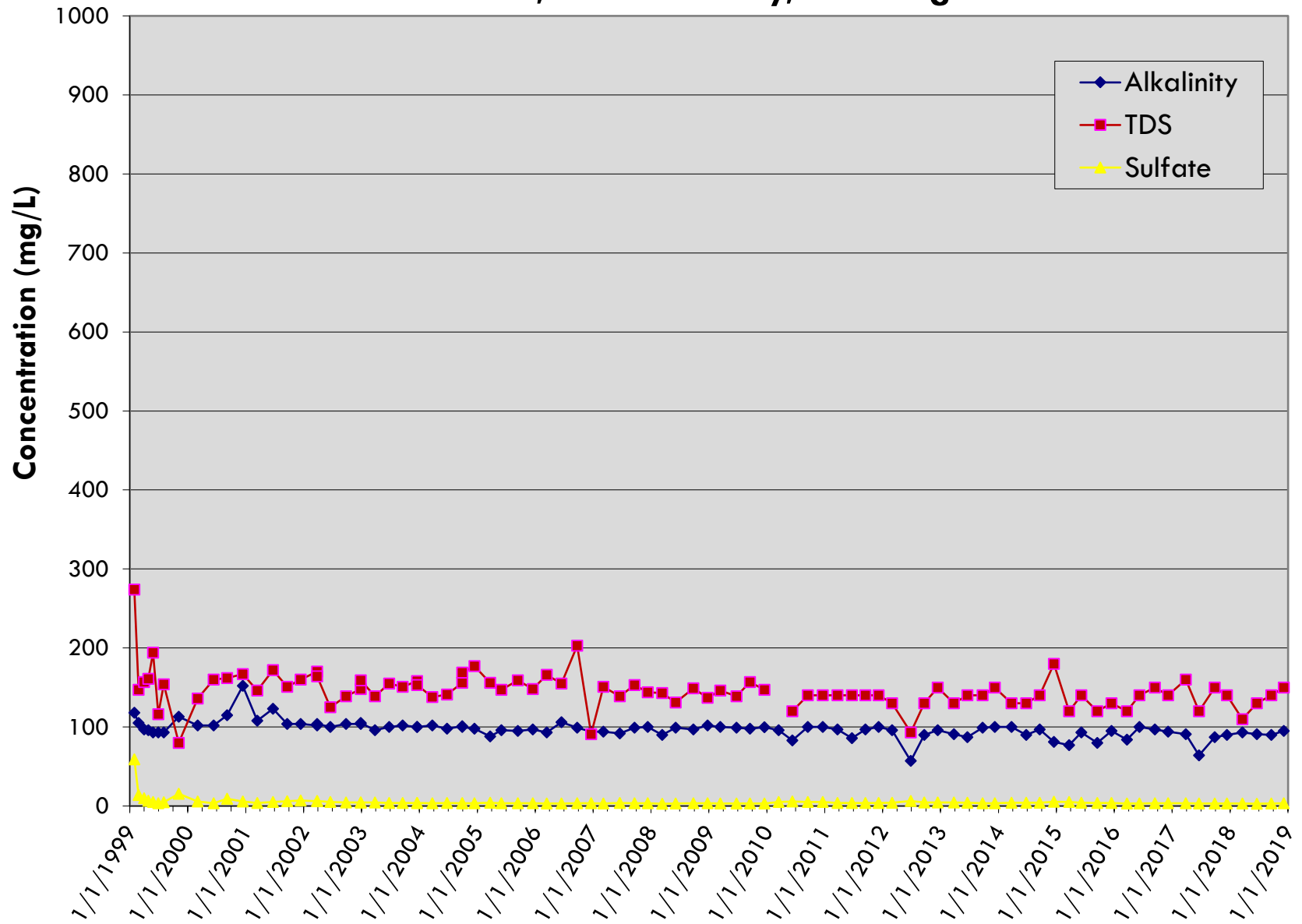
# MW-9 (Background) LRI Landfill, Pierce County, Washington



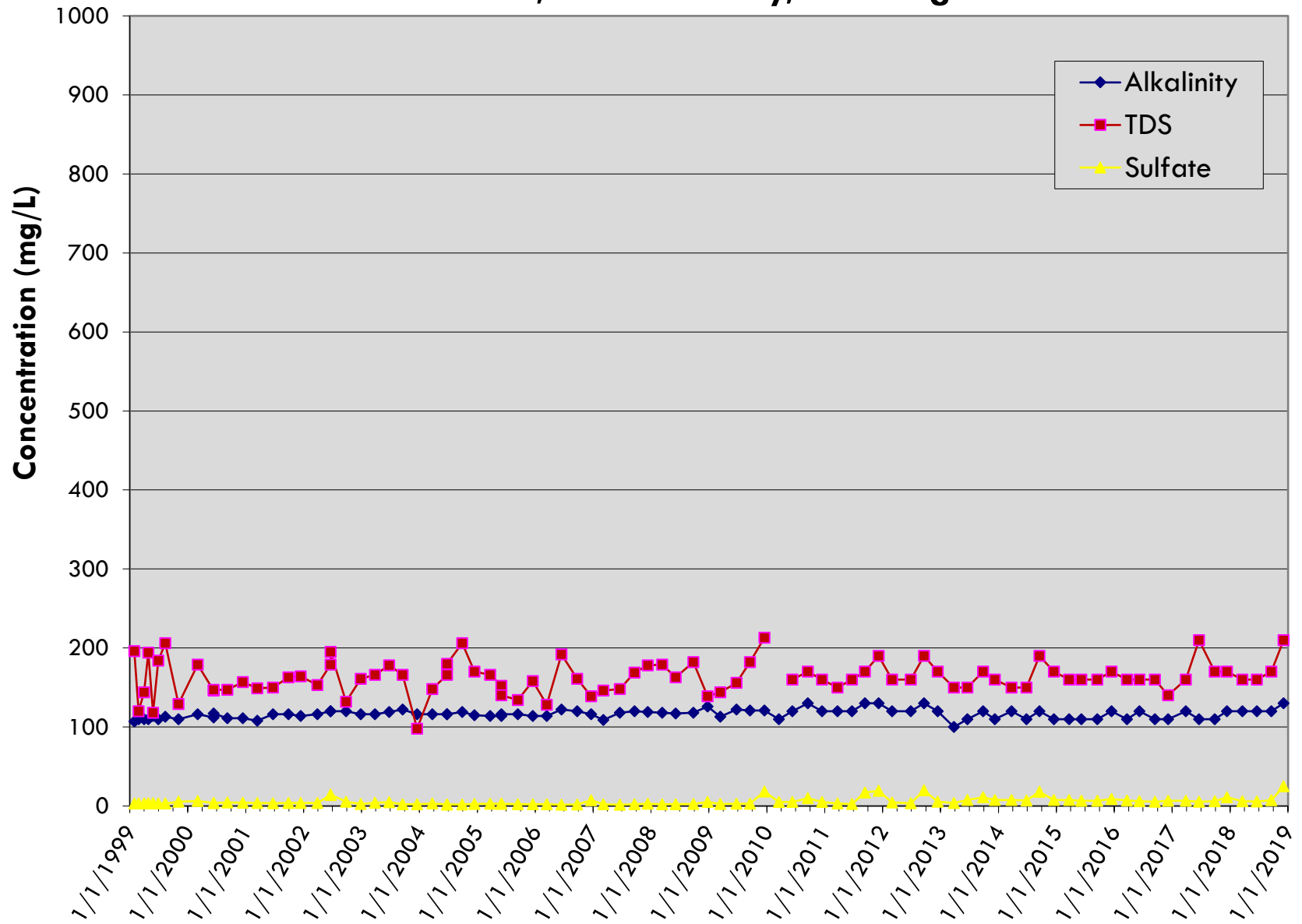
# MW-10 (Background) LRI Landfill, Pierce County, Washington



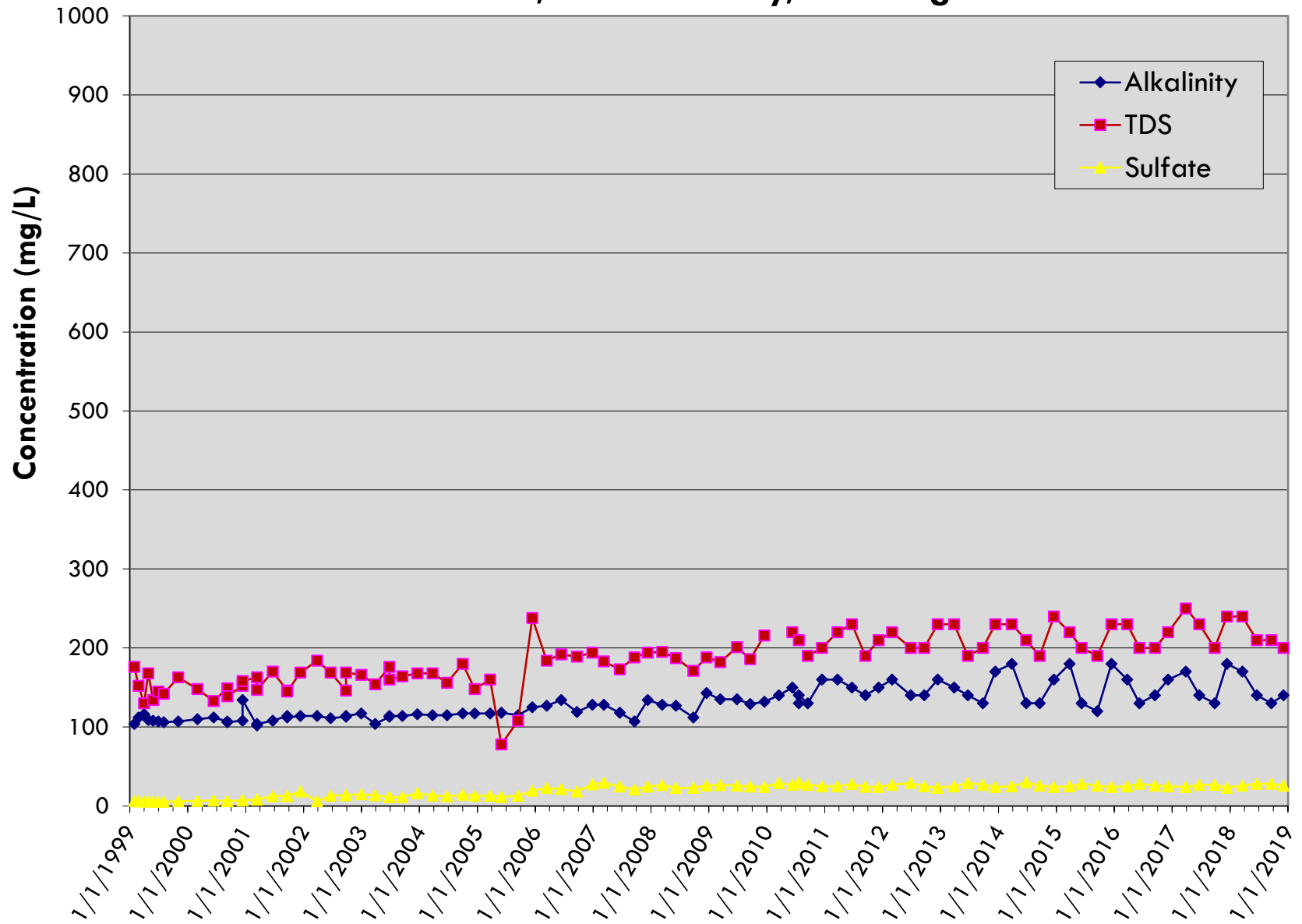
**MW-1A**  
**LRI Landfill, Pierce County, Washington**



**MW-2A**  
**LRI Landfill, Pierce County, Washington**

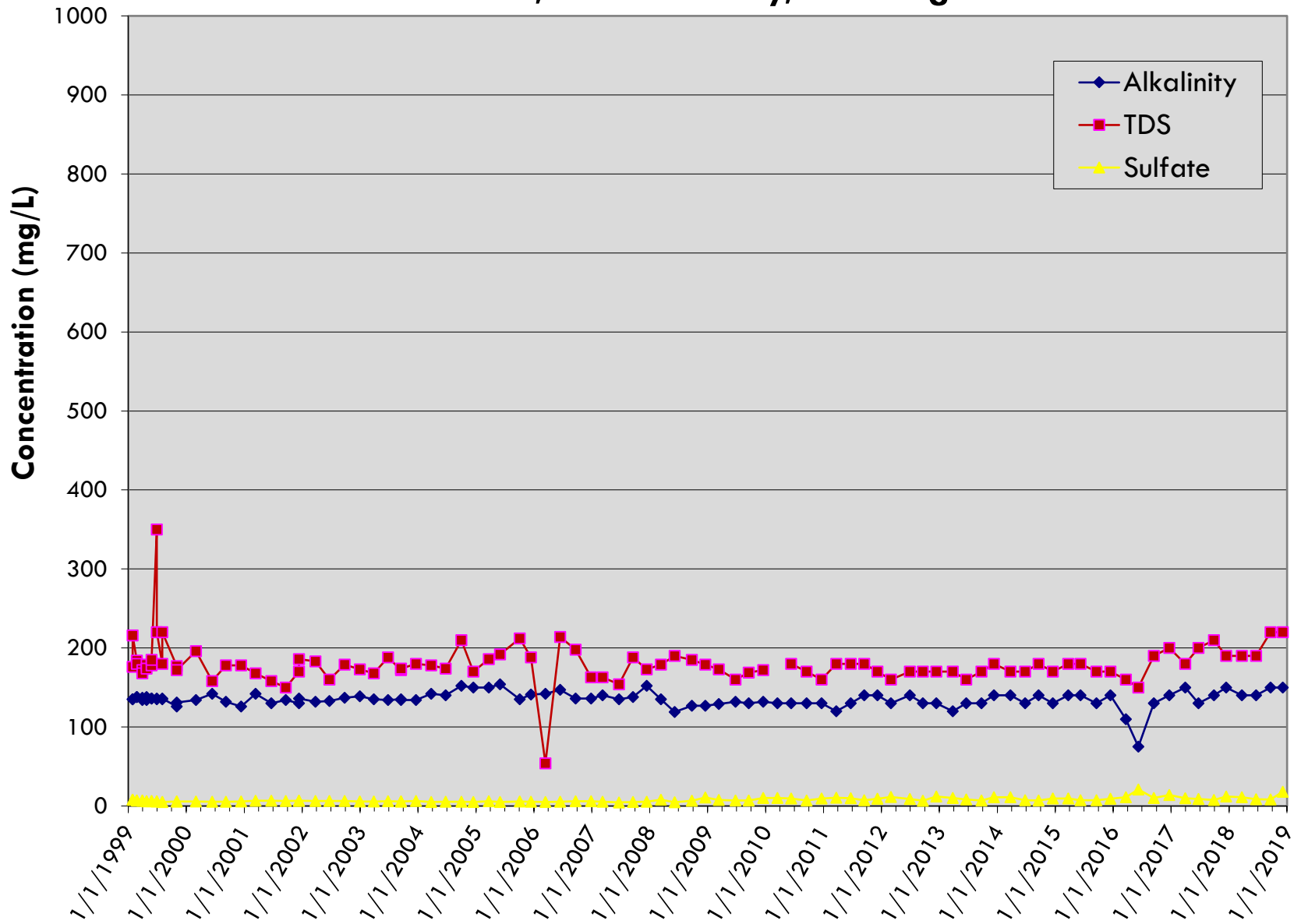


**MW-3**  
**LRI Landfill, Pierce County, Washington**

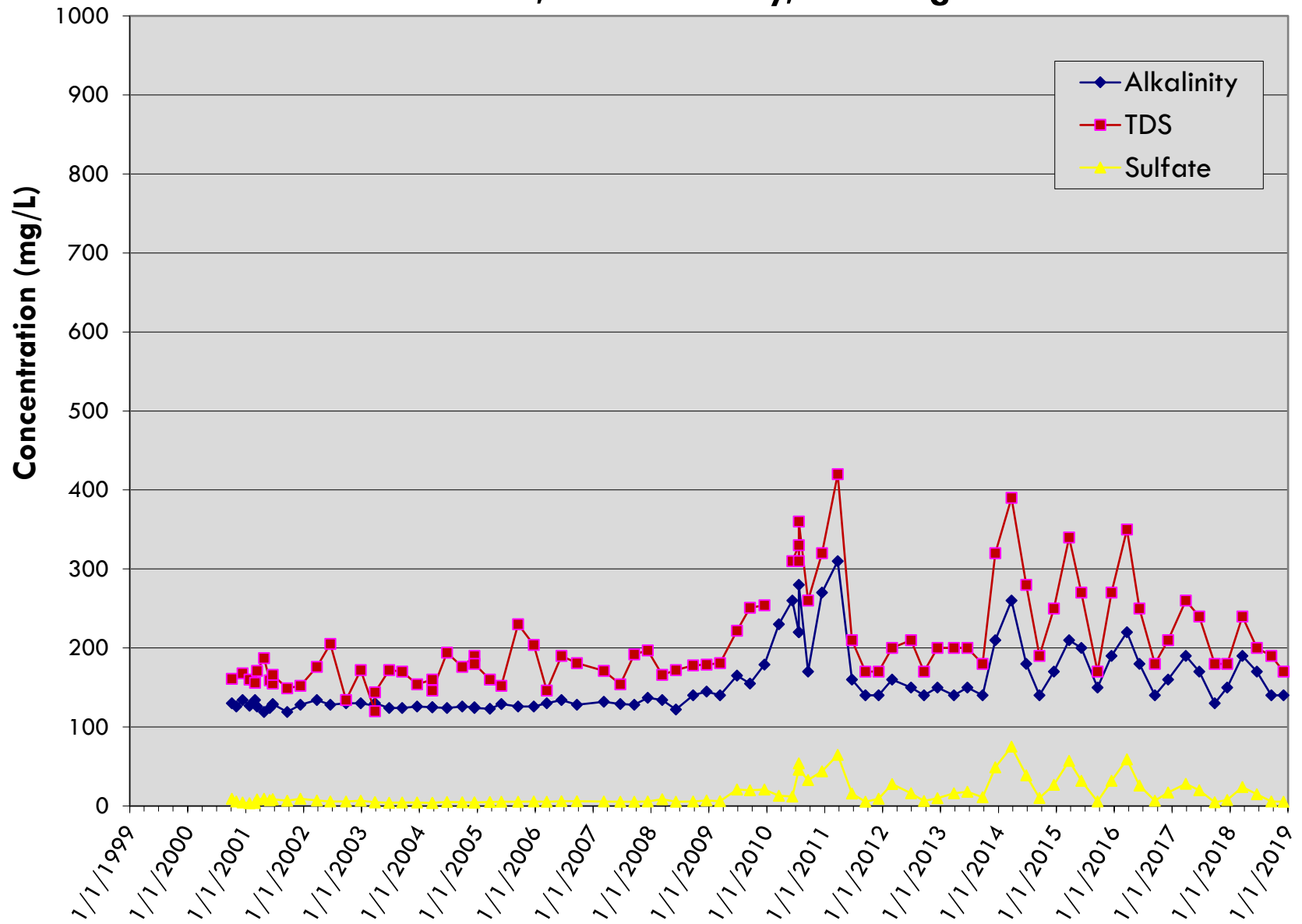


# MW-4

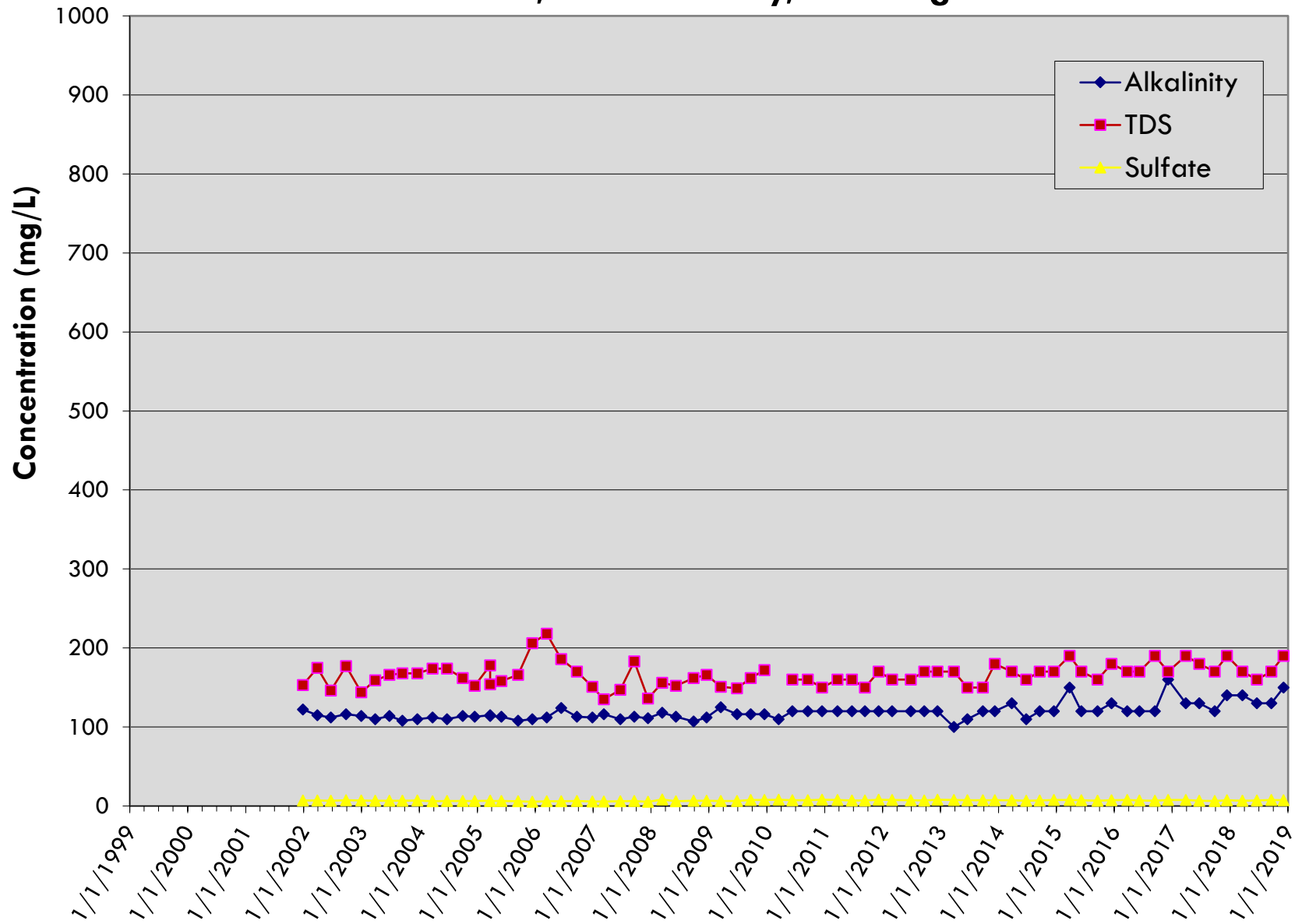
## LRI Landfill, Pierce County, Washington



**MW-5A**  
**LRI Landfill, Pierce County, Washington**

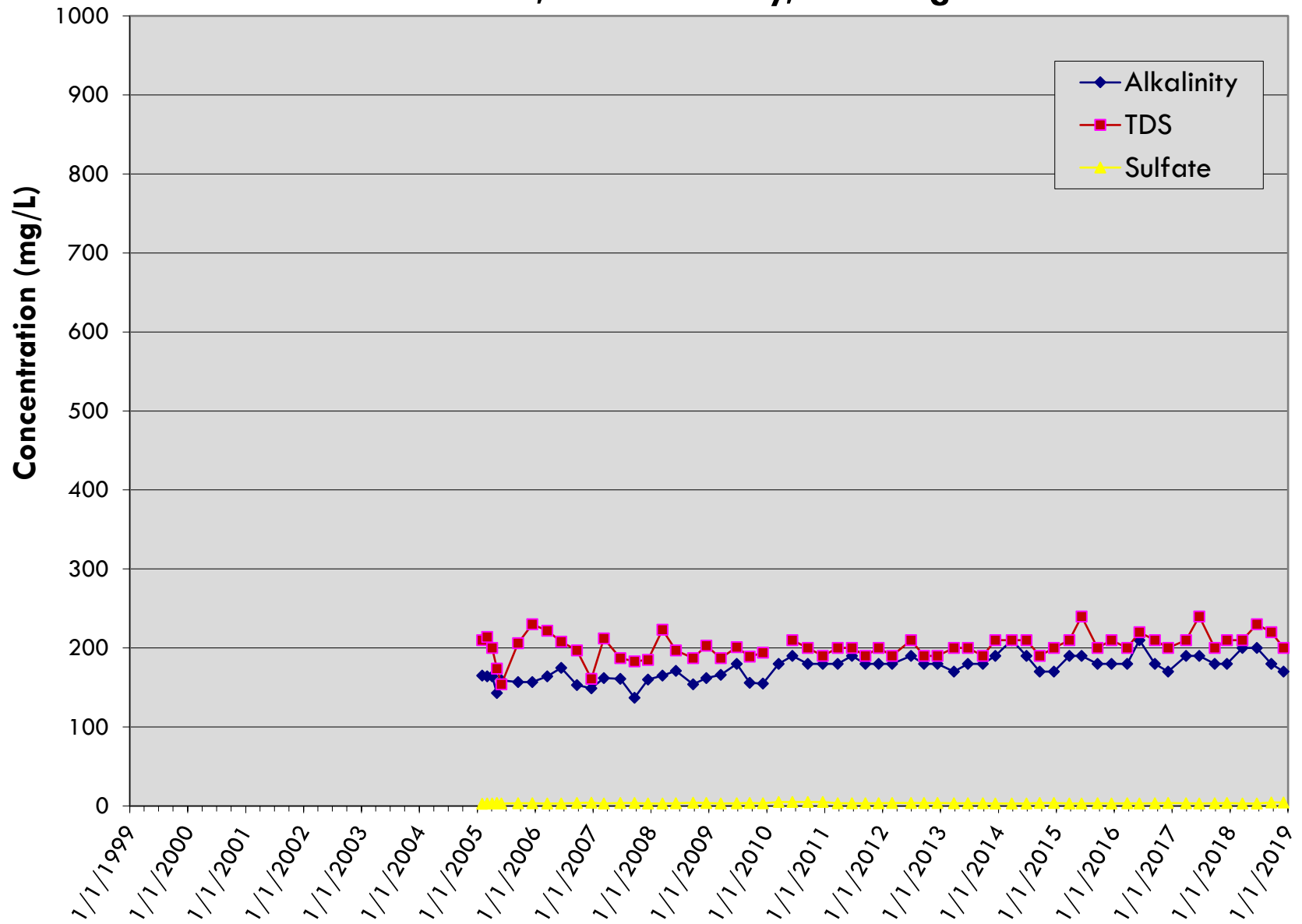


**MW-6**  
**LRI Landfill, Pierce County, Washington**

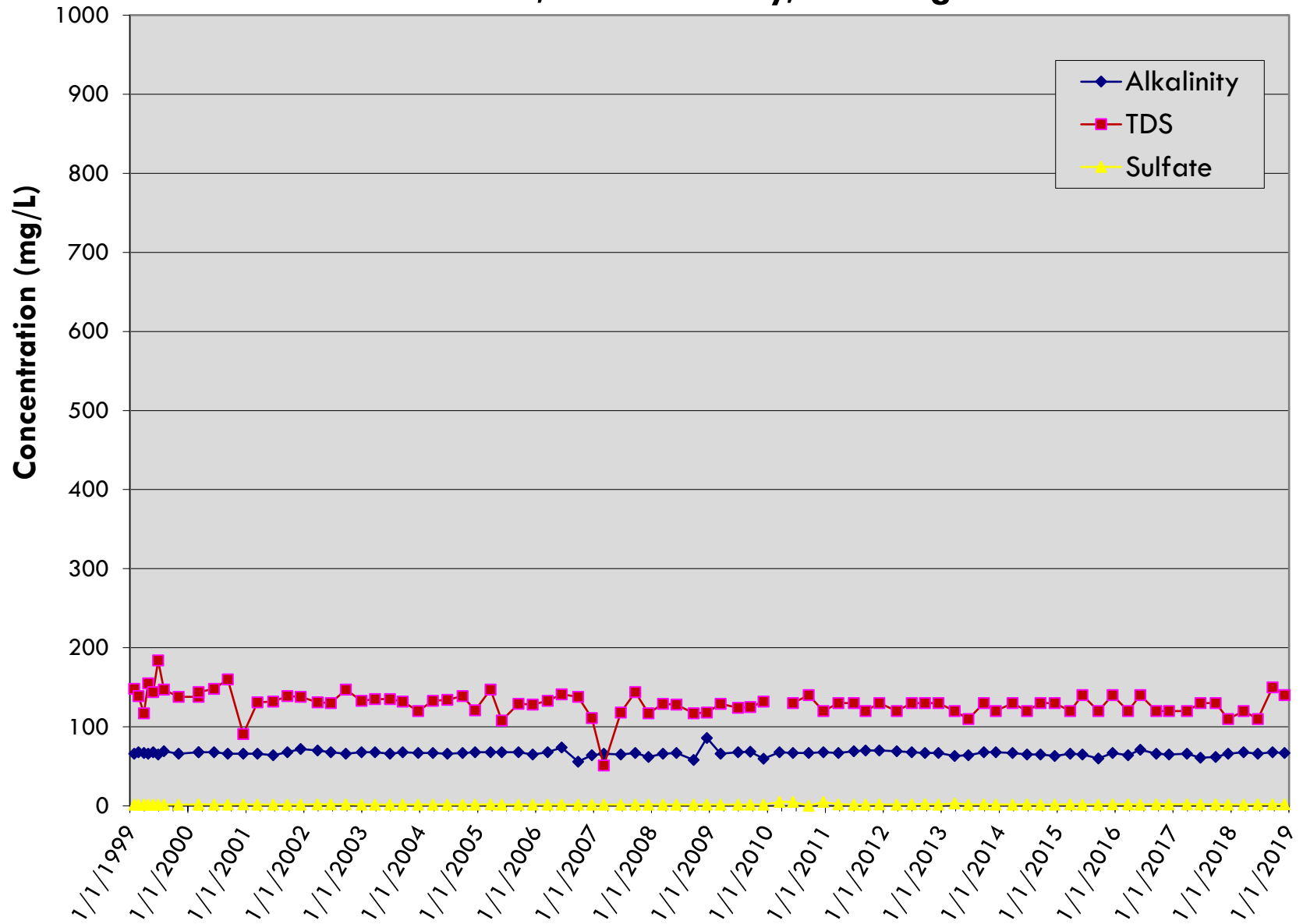




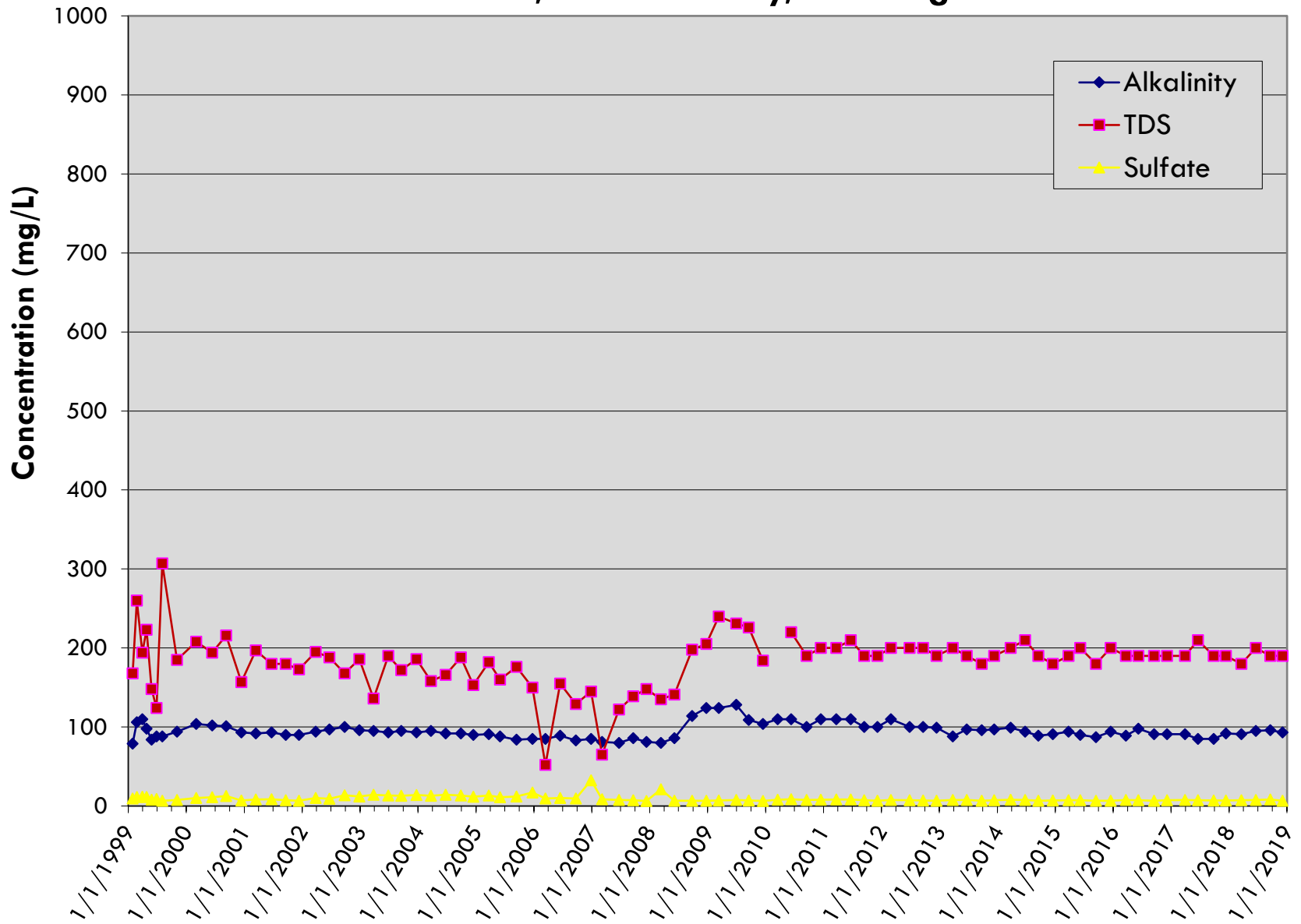
**MW-7**  
**LRI Landfill, Pierce County, Washington**



**MW-9 (Background)**  
**LRI Landfill, Pierce County, Washington**

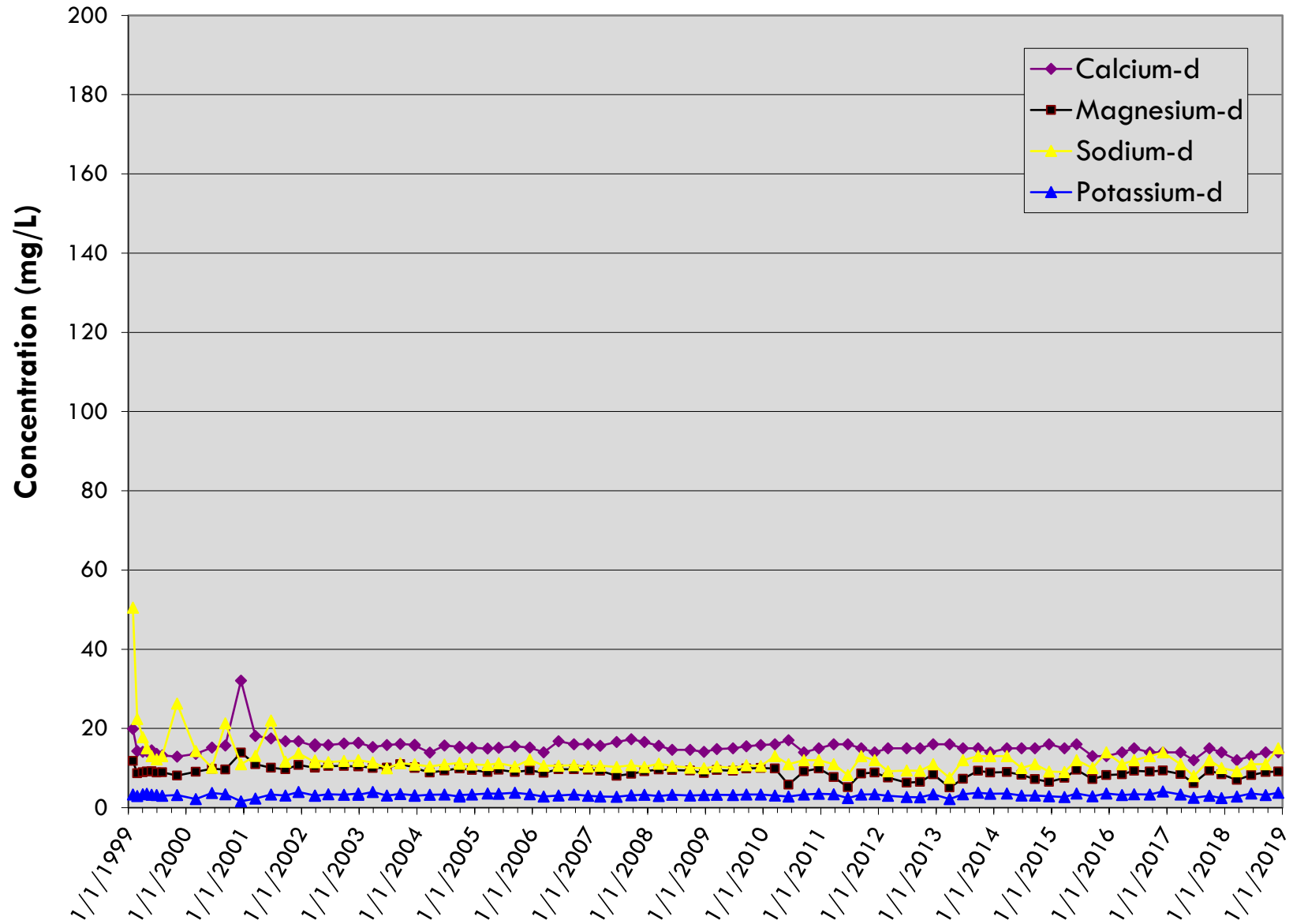


**MW-10 (Background)**  
**LRI Landfill, Pierce County, Washington**

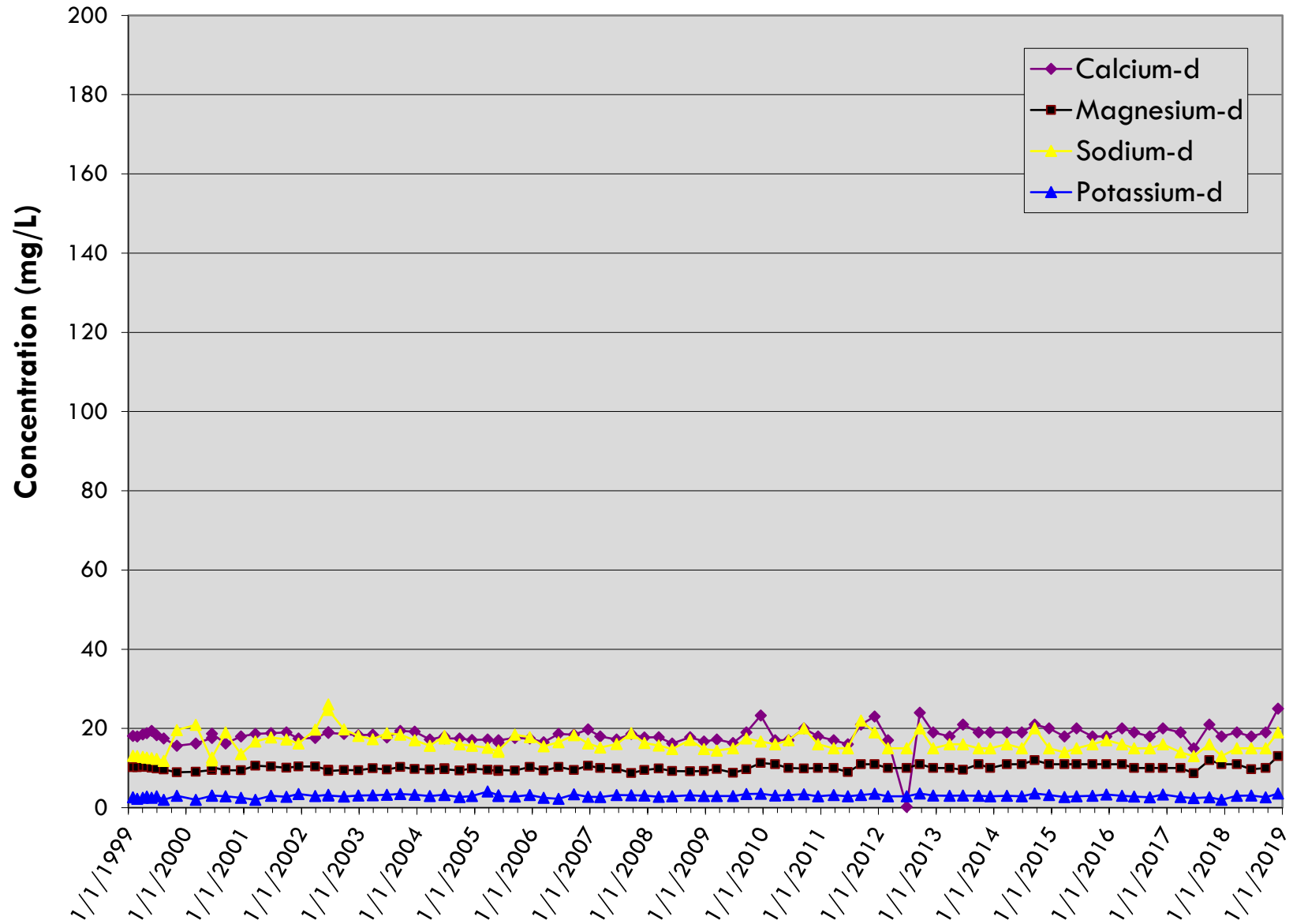


# MW-1A

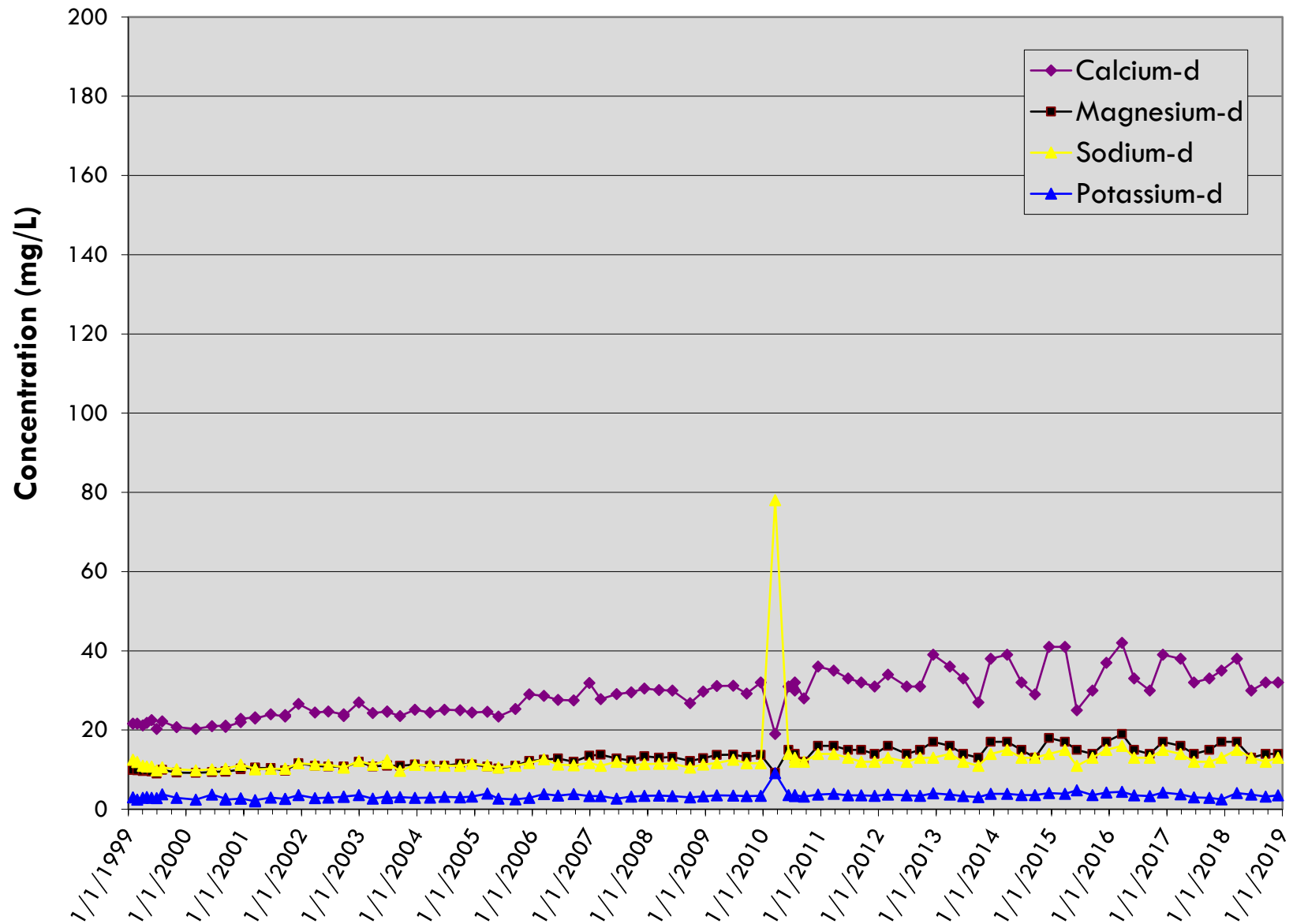
## LRI Landfill, Pierce County, Washington



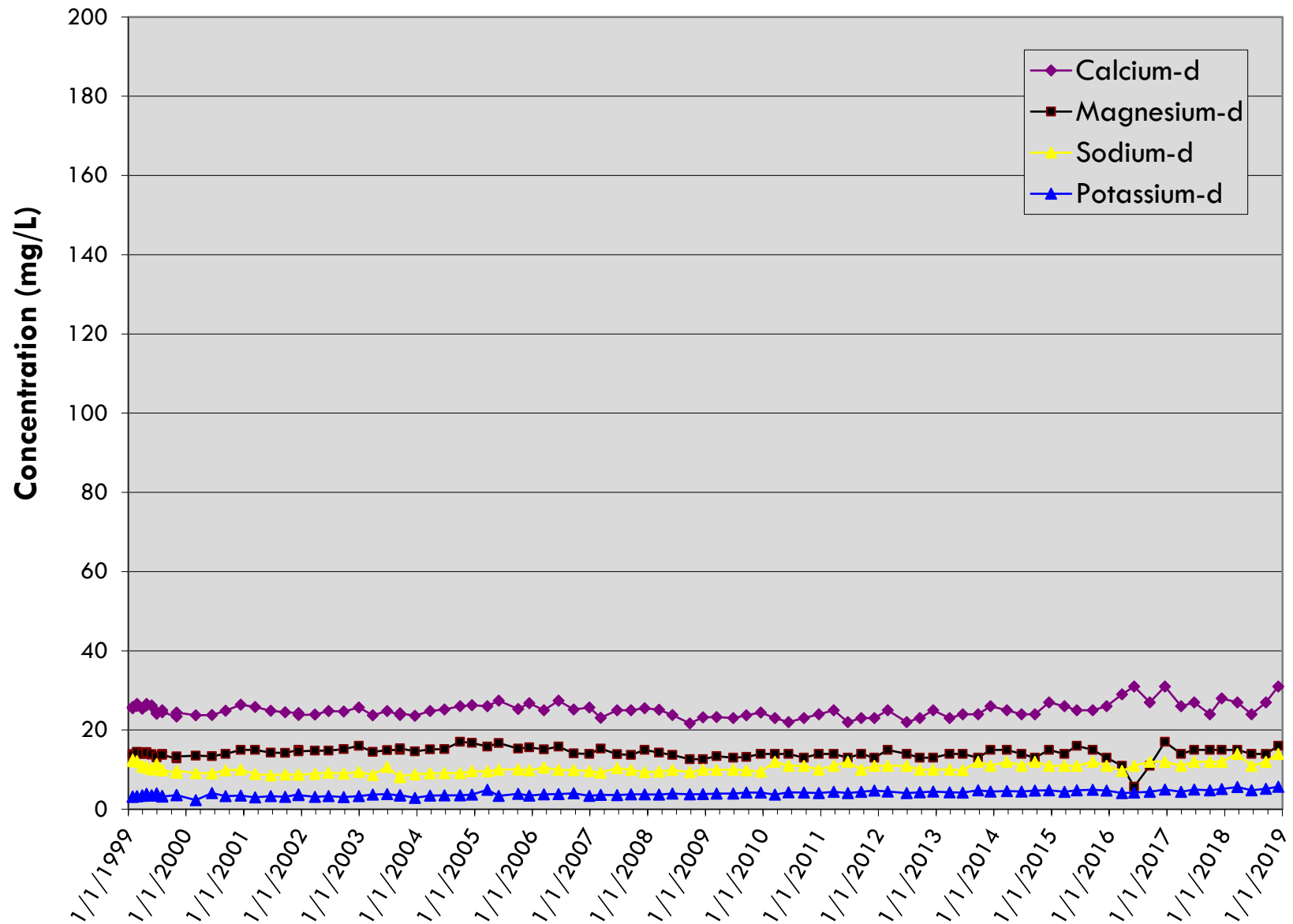
**MW-2A**  
**LRI Landfill, Pierce County, Washington**



**MW-3**  
**LRI Landfill, Pierce County, Washington**

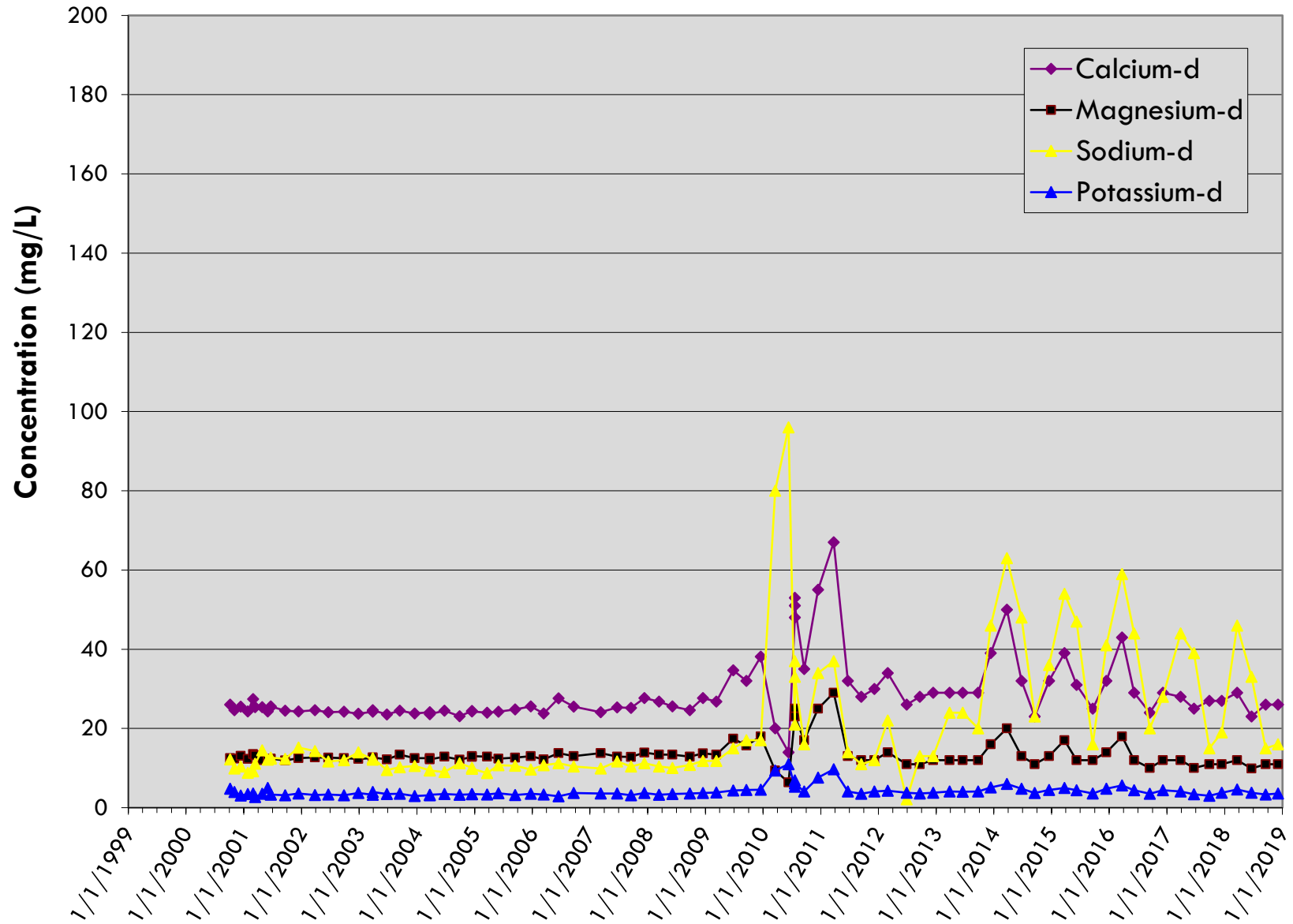


**MW-4**  
**LRI Landfill, Pierce County, Washington**



# MW-5A

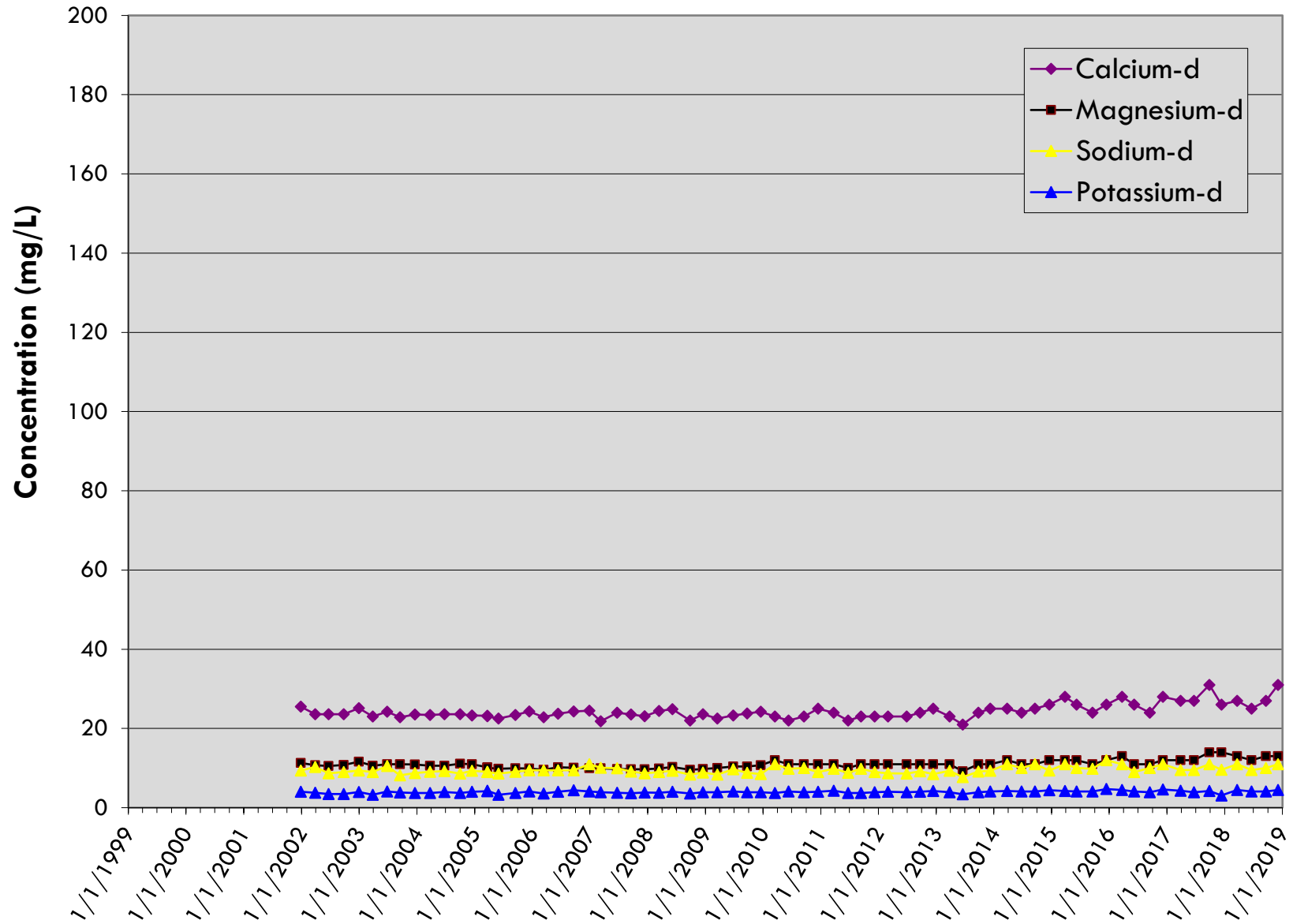
## LRI Landfill, Pierce County, Washington



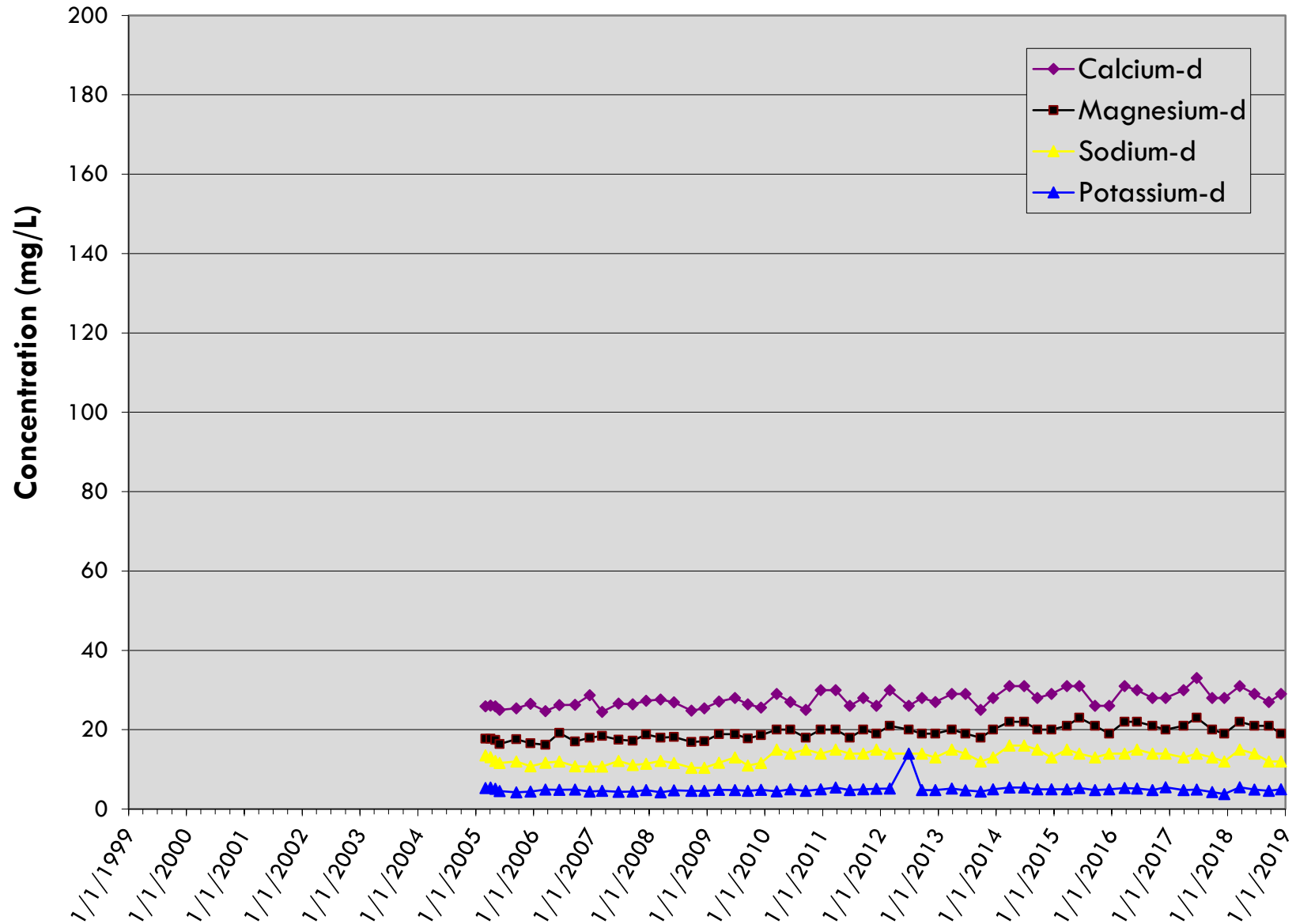


# MW-6

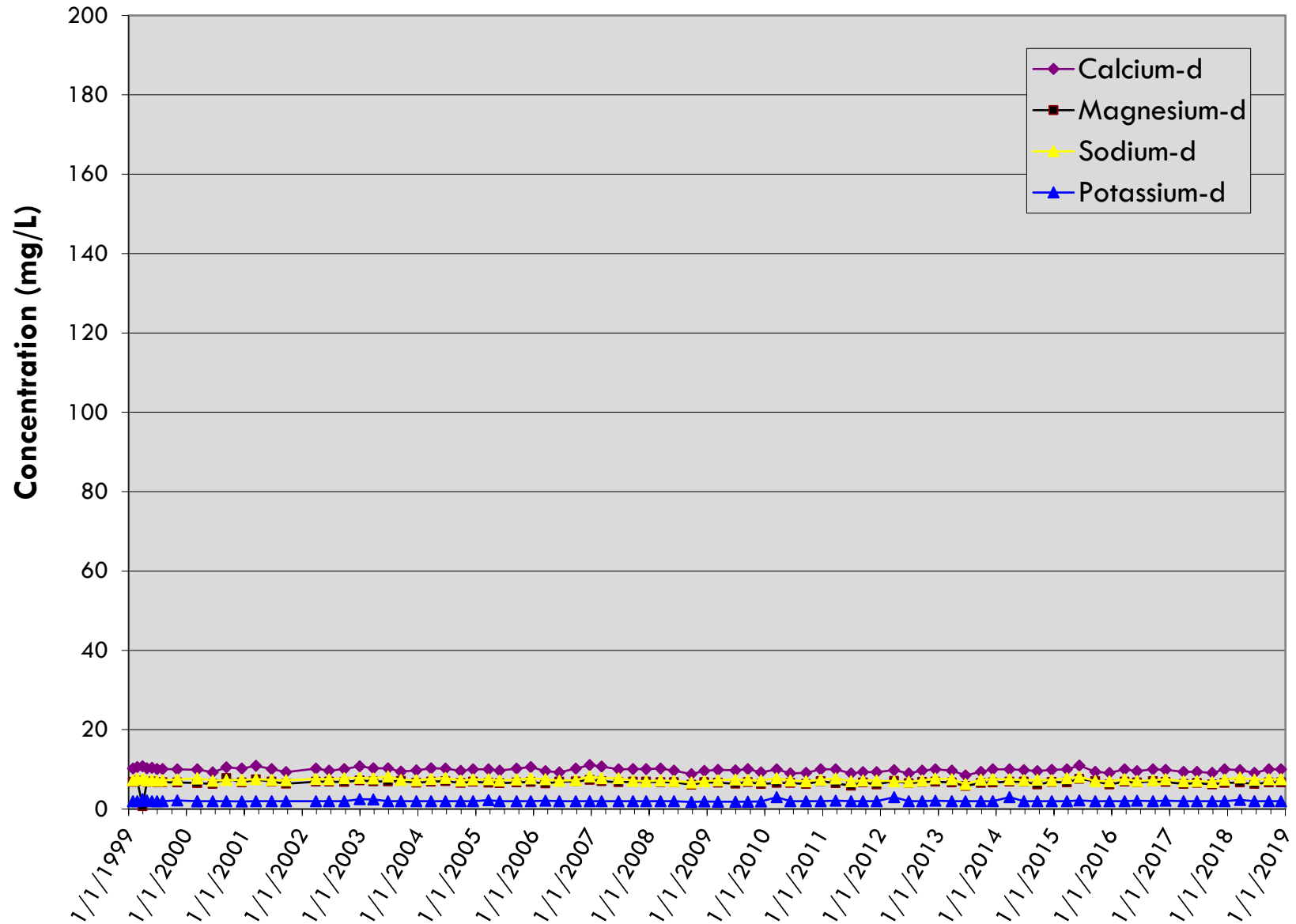
## LRI Landfill, Pierce County, Washington



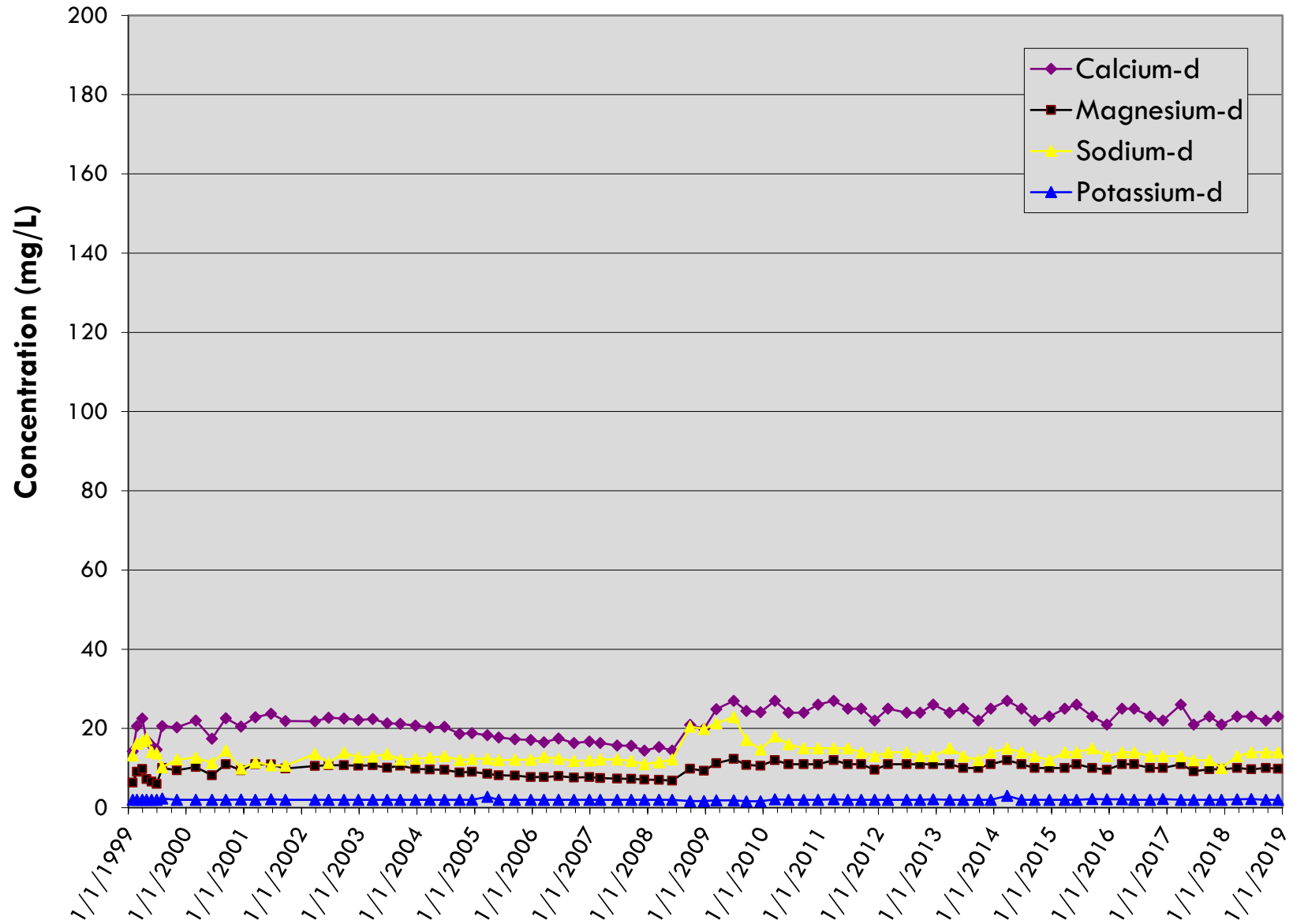
**MW-7**  
**LRI Landfill, Pierce County, Washington**



**MW-9 (Background)**  
**LRI Landfill, Pierce County, Washington**

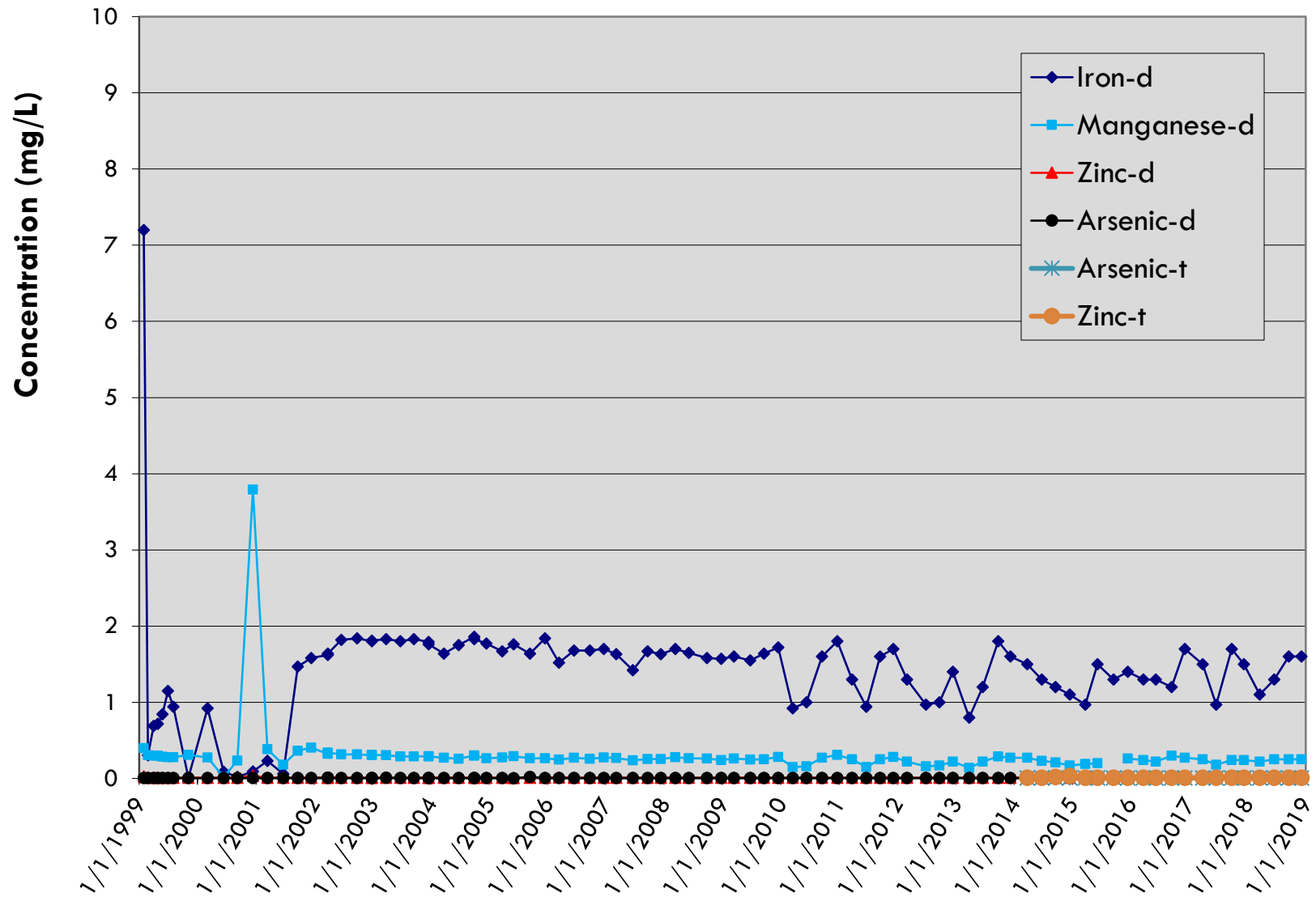


**MW-10 (Background)**  
**LRI Landfill, Pierce County, Washington**



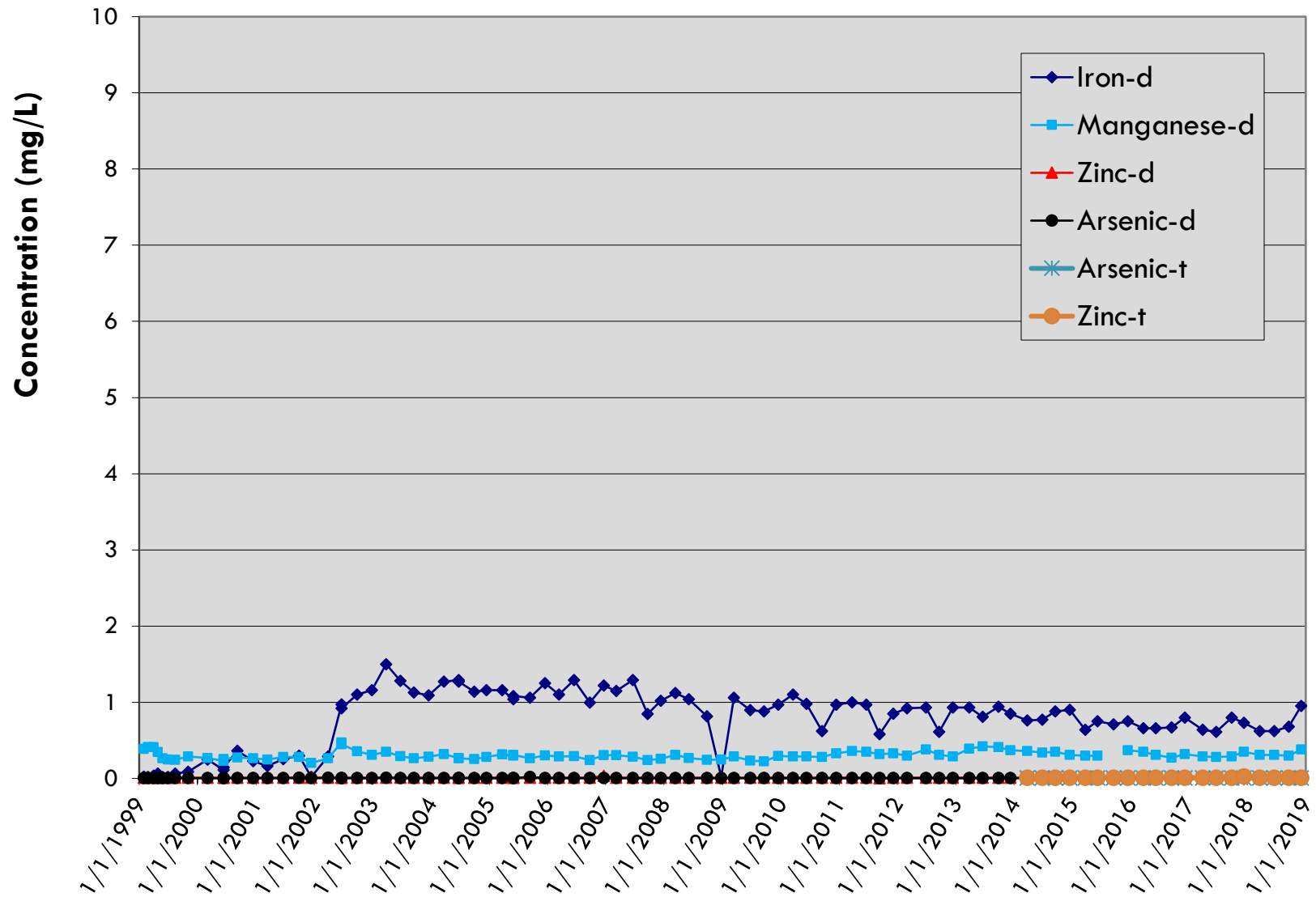
# MW-1A

## LRI Landfill, Pierce County, Washington

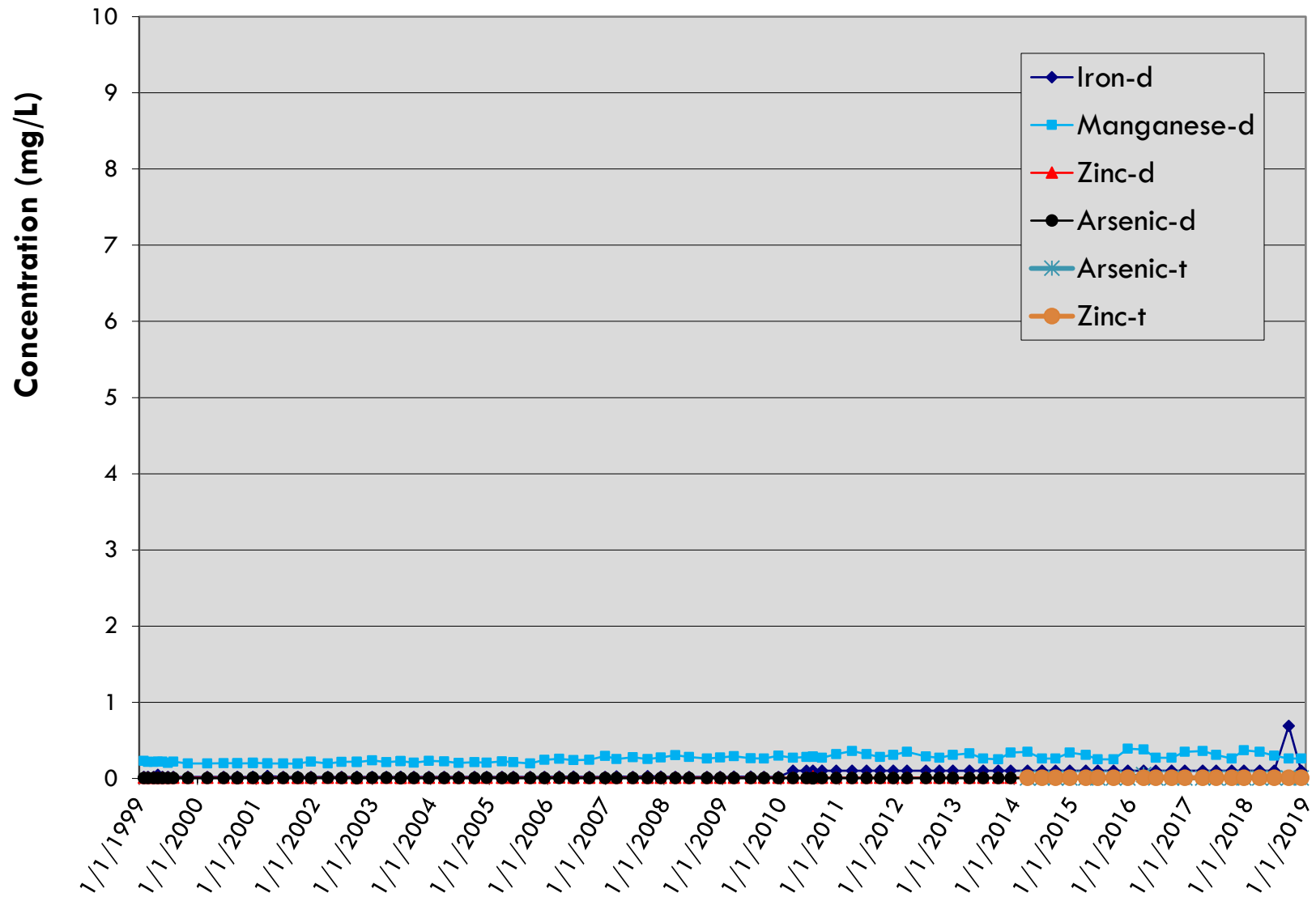


# MW-2A

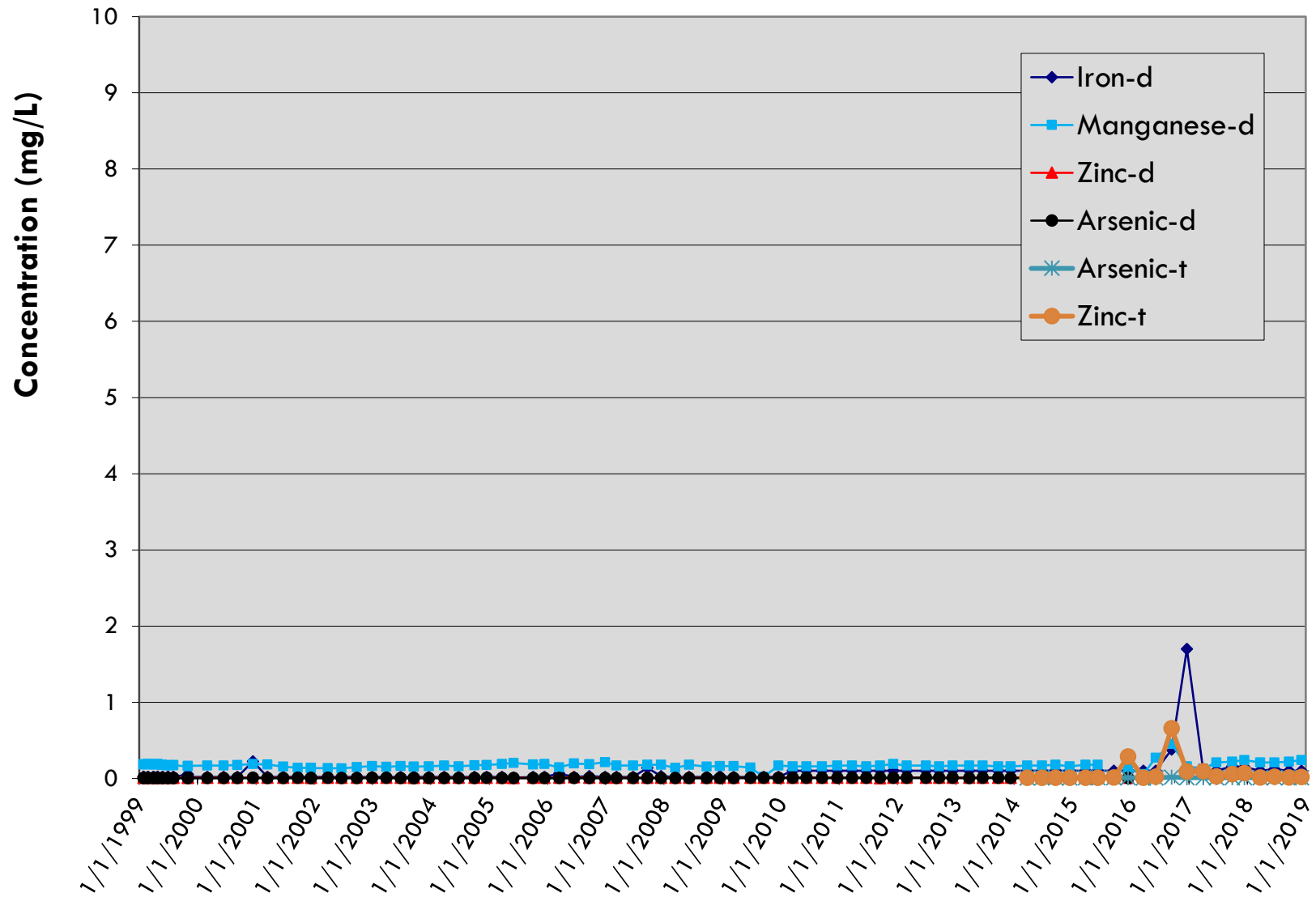
## LRI Landfill, Pierce County, Washington



**MW-3**  
**LRI Landfill, Pierce County, Washington**



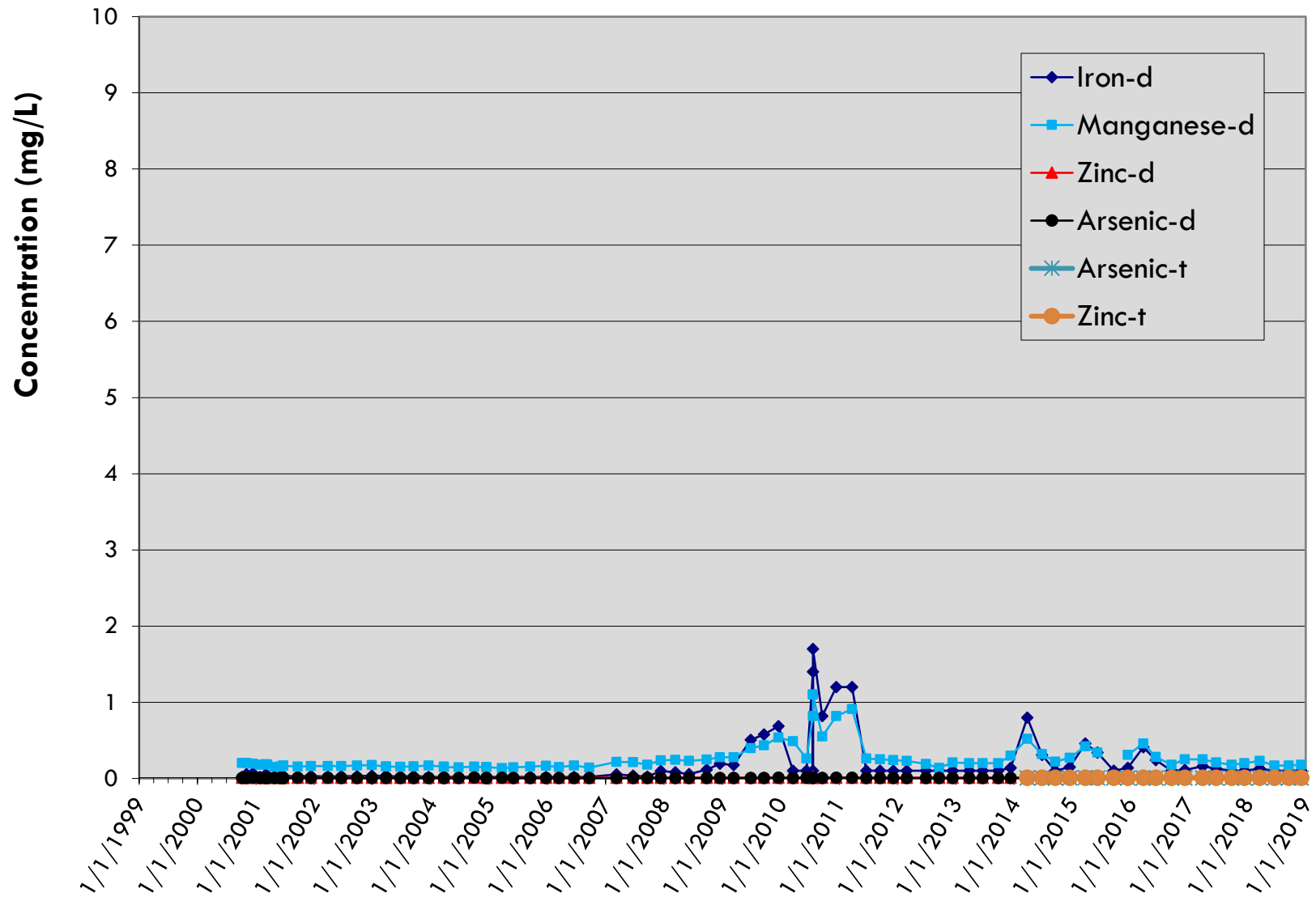
**MW-4**  
**LRI Landfill, Pierce County, Washington**





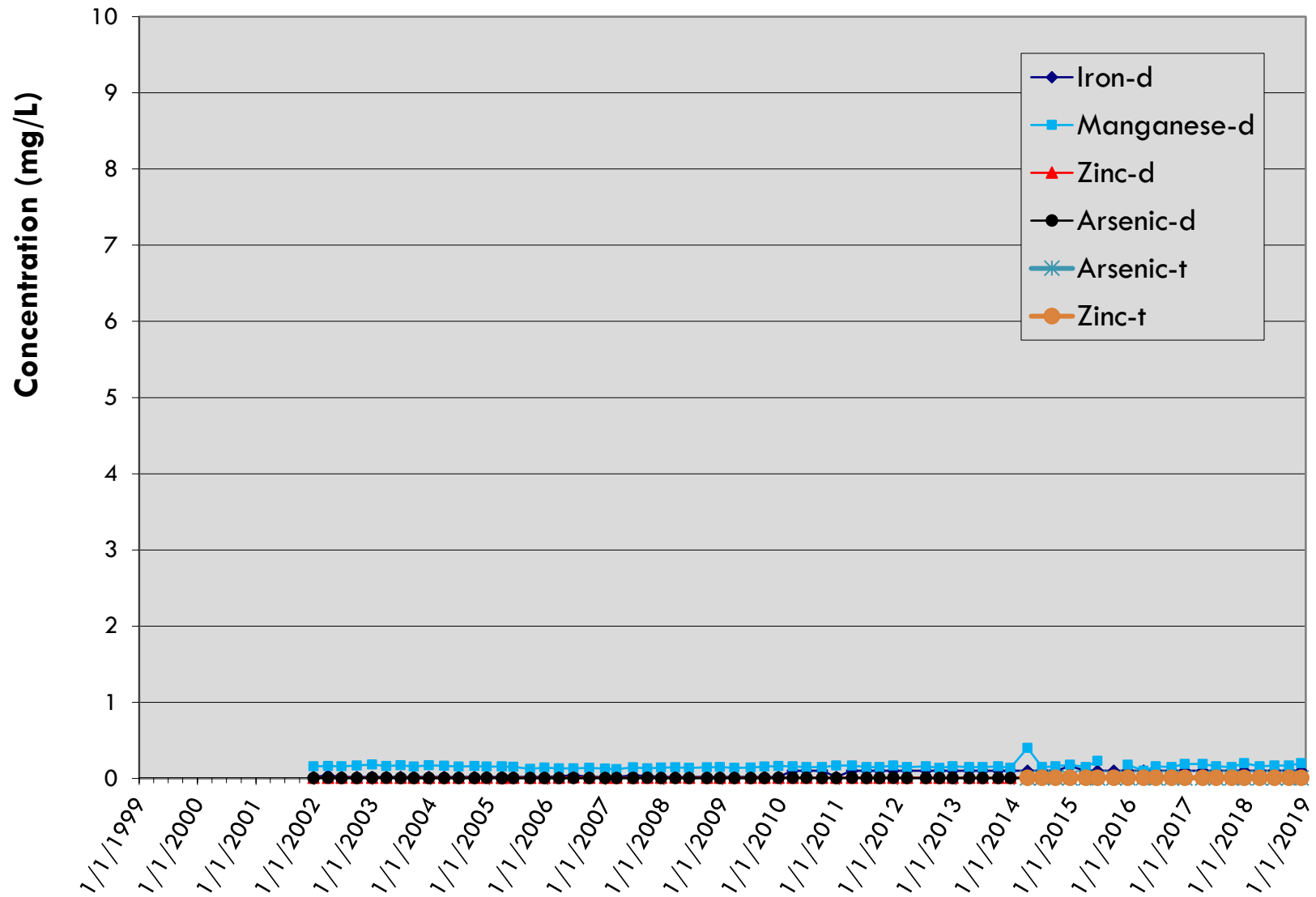
# MW-5A

## LRI Landfill, Pierce County, Washington

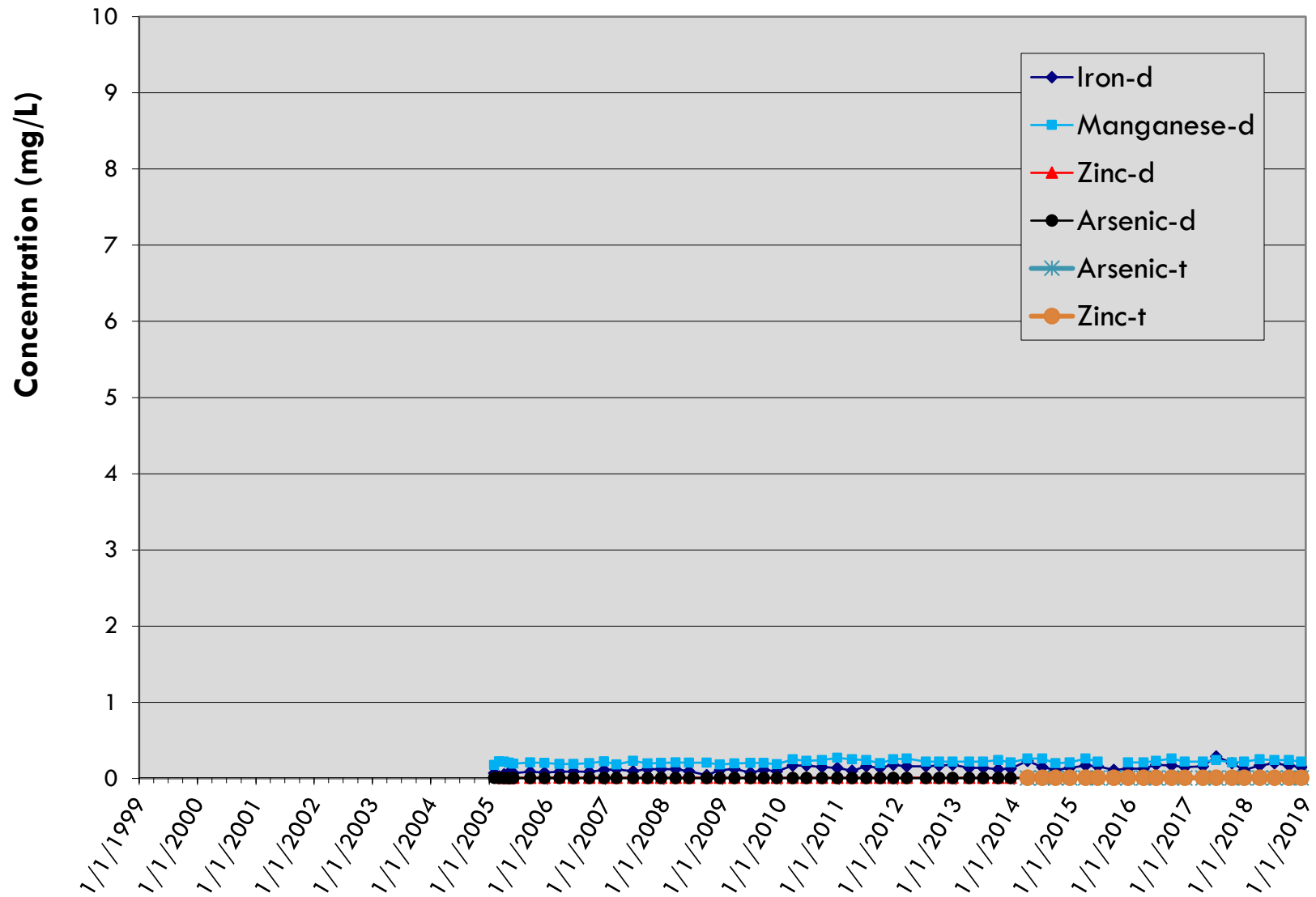


# MW-6

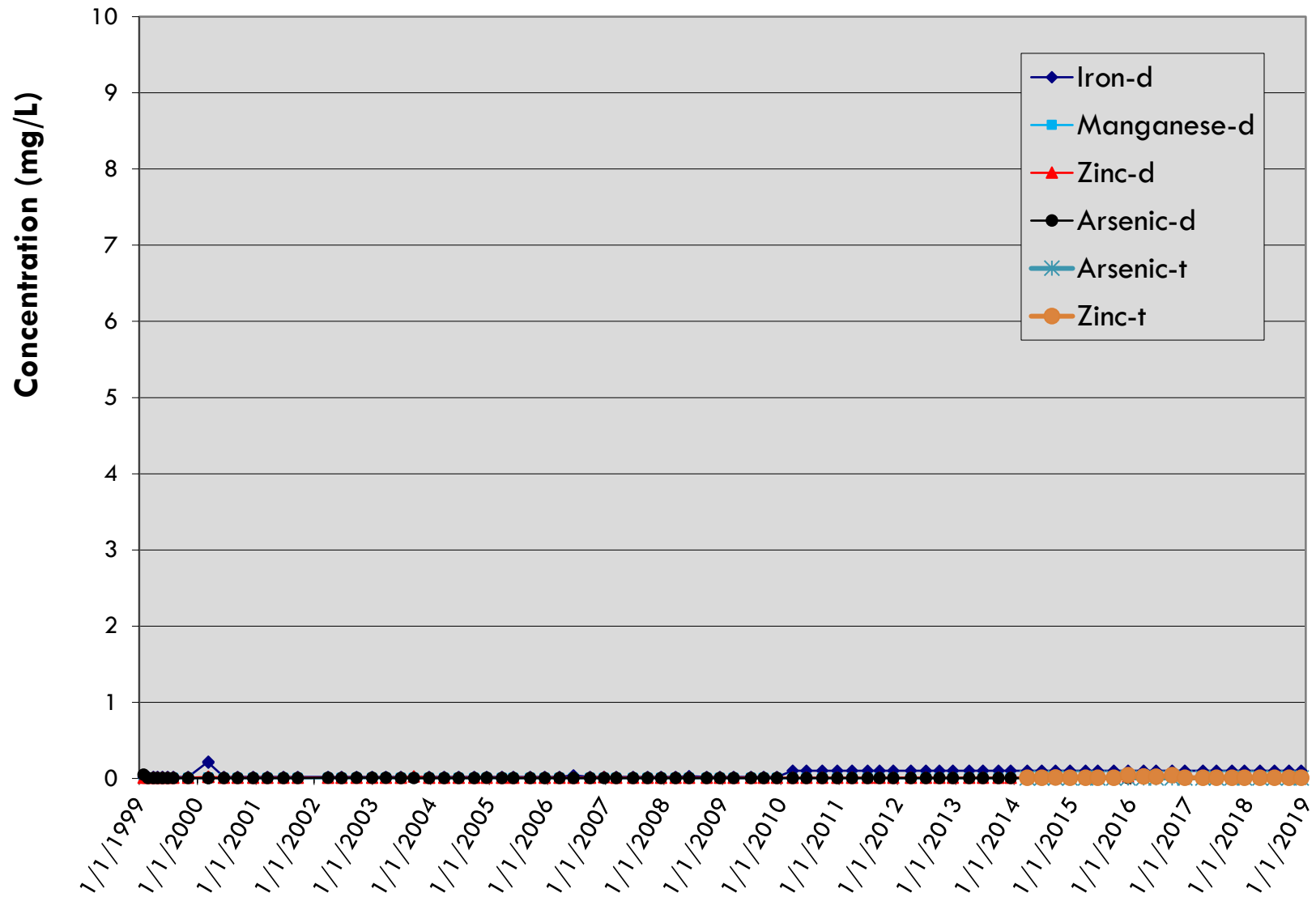
## LRI Landfill, Pierce County, Washington



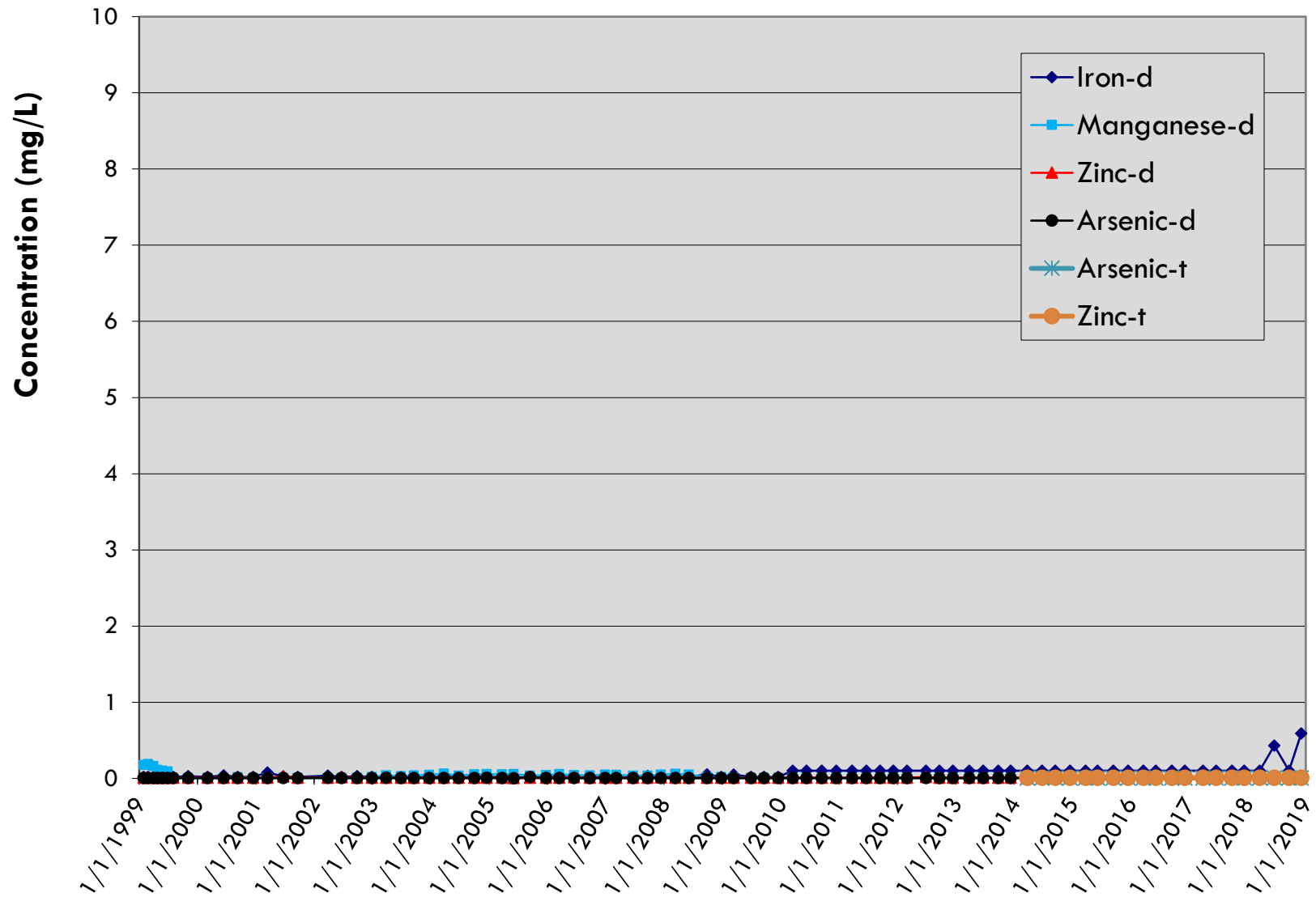
**MW-7**  
**LRI Landfill, Pierce County, Washington**



**MW-9 (Background)**  
**LRI Landfill, Pierce County, Washington**



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



## FOURTH QTR. 2018 DATA VALIDATION REPORT – LRI LANDFILL

## Project Details

|                       |                                                          |                   |                                 |
|-----------------------|----------------------------------------------------------|-------------------|---------------------------------|
| <b>Project No.</b>    | 04218001.02                                              | <b>Site Name</b>  | LRI 304 <sup>th</sup> Street LF |
| <b>Data Validator</b> | Travis Berndahl                                          | <b>Data Level</b> | Level 2                         |
| <b>Date</b>           | 01/23/2019                                               | <b>DV Tier</b>    | Tier 1                          |
| <b>QA Document</b>    | LRI Landfill Groundwater Monitoring Plan, March 10, 2014 |                   |                                 |

## Sample Login Summary

| Sample Group | Sample Login Comments                                                                                                                                                                                                                               | Analytical Lab (Primary) |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 280-117644-1 | No Comments.                                                                                                                                                                                                                                        | TestAmerica, Denver, CO  |
| 280-117662-1 | One of two coolers arrived without a custody seal.<br>Two of three hydrochloric preserved VOA vials for sample 304-120318-17 (280-117662-8) contained bubbles greater than 6 mm. Sufficient volume without headspace is available for the analysis. | TestAmerica, Denver, CO  |
| 280-117713-1 | No Comments.                                                                                                                                                                                                                                        | TestAmerica, Denver, CO  |
| 280-117714-1 | The Trip Blank received with these samples was reported in job 280-117713-1.                                                                                                                                                                        | TestAmerica, Denver, CO  |
| 280-117799-1 | No Comments.                                                                                                                                                                                                                                        | TestAmerica, Denver, CO  |

## Analytical Summary

| Sample Group | Analyses    |                |         |      |        |     |
|--------------|-------------|----------------|---------|------|--------|-----|
|              | TDS/Alk/NO3 | Metals         | NH4/TOC | VOCs | Anions | TSS |
| 280-117644-1 | X           | X <sup>1</sup> | X       | X    | X      | --  |
| 280-117662-1 | X           | X <sup>3</sup> | X       | X    | X      | --  |
| 280-117713-1 | X           | X <sup>1</sup> | X       | X    | X      | --  |
| 280-117714-1 | X           | X <sup>2</sup> | X       | X    | X      | X   |
| 280-117799-1 | X           | X <sup>2</sup> | X       | X    | X      | X   |

## Notes:

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

## Laboratory Quality Assurance Samples

| Lab QA Samples    | Results                                         | Comments                                                                    |
|-------------------|-------------------------------------------------|-----------------------------------------------------------------------------|
| Method Blank      | Acceptable.                                     | See case narrative (280-117662-1)                                           |
| LCS/LCSD          | Acceptable.                                     | See case narrative (280-117713-1)                                           |
| MS/MSD            | Possible matrix interferences. Data acceptable. | See case narrative (280-117662-1, 280-117713-1, 280-117714-1, 280-117799-1) |
| Duplicates        | Acceptable.                                     | See case narrative (280-117714-1, 280-117799-1)                             |
| Organics          | Significant headspace, otherwise acceptable.    | See case narrative (280-117662-1, 280-117714-1)                             |
| General Chemistry | Acceptable.                                     | No comments.                                                                |

| Lab QA Samples   | Results     | Comments                                                                                  |
|------------------|-------------|-------------------------------------------------------------------------------------------|
| General Comments | Acceptable. | See case narrative (280-117644-1, 280-117662-1, 280-117713-1, 280-117714-1, 280-117799-1) |
| Metals           | Acceptable. | See case narrative (280-117662-1, 280-117799-1)                                           |

### Field Quality Assurance Samples

| Field QA Samples | Sample Group | Analytes                                                                                                                                                    | Notes |
|------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| QC-FB            | 280-117799-1 | Alkalinity (7.2 mg/L)<br>Total Dissolved Solids (18 mg/L)<br>Dissolved Calcium (1.3 mg/L)<br>Dissolved Magnesium (0.38 mg/L)<br>Dissolved Sodium (1.8 mg/L) |       |
| QC-TB            | 280-117644-1 | None.                                                                                                                                                       |       |
| QC-TB            | 280-117662-1 | None.                                                                                                                                                       |       |
| QC-TB            | 280-117713-1 | None.                                                                                                                                                       |       |
| QC-TB            | 280-117799-1 | None.                                                                                                                                                       |       |

### Lab Quality Flags

| Flag | Sample Groups                                                        | Comments                                                                                                                                                             |
|------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| J    | 280-117644-1, 280-117662-1, 280-117713-1, 280-117714-1, 280-117799-1 | Result is <RL, >MDL and concentration is approximate value.                                                                                                          |
| B    | 280-117662-1                                                         | Compound was found in the blank and sample.                                                                                                                          |
| F1   | 280-117662-1, 280-117713-1, 280-117714-1, 280-117799-1               | MS and/or MSD recovery exceeds the control limits.                                                                                                                   |
| F3   | 280-117799-1                                                         | Duplicate RPD exceeds the control limit.                                                                                                                             |
| 4    | 280-117662-1, 280-117799-1                                           | MD, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration. Therefore the control limits are not applicable.         |
| ^    | 280-117662-1, 280-117799-1                                           | ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK, or MRL standard: instrument related QC is outside acceptance limits.                                                   |
| F5   | 280-117714-1                                                         | Duplicate RPD exceeds limit, and one or both sample results are less than 5 times the RL. Data considered valid because the absolute difference is less than the RL. |
| F2   | 280-117662-1                                                         | MS/MSD RPD exceeds control limits.                                                                                                                                   |
| *    | 280-117713-1                                                         | LCS or LCSD is outside acceptance limits.                                                                                                                            |
| X    | 280-117714-1                                                         | Surrogate is outside control limits.                                                                                                                                 |
| E    | 280-117799-1                                                         | Result exceeded calibration range.                                                                                                                                   |

### Duplicate Evaluation

| Analyte              | Units | MW-1A (304-120518-22) | MW-1A DUP (304-120518-24) | RPD (%) |
|----------------------|-------|-----------------------|---------------------------|---------|
| Alkalinity, Total    | mg/L  | 95                    | 94                        | 1.1     |
| Barium, Total        | mg/L  | 0.017                 | 0.019                     | 11.1    |
| Calcium, Dissolved   | mg/L  | 14                    | 14                        | 0.0     |
| Chloride             | mg/L  | 2.4                   | 2.4                       | 0.0     |
| Iron, Dissolved      | mg/L  | 1.6                   | 1.6                       | 0.0     |
| Magnesium, Dissolved | mg/L  | 9.1                   | 9.2                       | 1.1     |
| Manganese, Dissolved | mg/L  | 0.25                  | 0.25                      | 0.0     |

| Analyte                | Units | MW-1A (304-120518-22) | MW-1A DUP (304-120518-24) | RPD (%) |
|------------------------|-------|-----------------------|---------------------------|---------|
| Potassium, Dissolved   | mg/L  | 3.8                   | 3.9                       | 2.6     |
| Sodium, Dissolved      | mg/L  | 15                    | 15                        | 0.0     |
| Sulfate                | mg/L  | 3.5                   | 3.5                       | 0.0     |
| Total Dissolved Solids | mg/L  | 150                   | 150                       | 0.0     |

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

#### Additional Data Flags

| Flag | Description                                                       |
|------|-------------------------------------------------------------------|
| U    | Not detected above the method reporting limit.                    |
| B    | Compound was found in a laboratory or field blank and the sample. |
| H    | Sample was prepped or analyzed beyond the specified holding time. |

#### Qualified Data and Usability

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







## Appendix C

### Groundwater Database



**Groundwater Database - Waterlevels**  
**2018 Annual Monitoring Report**  
**LRI Landfill, Pierce County, Washington**

| Location                     | Sample Number | Field_Date | Well Casing<br>Elevation | Depth-To-Water | Water Level<br>Elevation | Notes |
|------------------------------|---------------|------------|--------------------------|----------------|--------------------------|-------|
| <i>Monitoring Well</i>       |               |            |                          |                |                          |       |
| <b>MW-1A</b>                 | 304-031918-01 | 3/21/2018  | 652.57                   | 17.71          | 634.86                   |       |
|                              | 304-061818-02 | 6/20/2018  | 652.57                   | 18.11          | 634.46                   |       |
|                              | 304-091718-01 | 9/19/2018  | 652.57                   | 20.22          | 632.35                   |       |
|                              | 304-120518-22 | 12/5/2018  | 652.57                   | 18.40          | 634.17                   |       |
| <b>MW-2A</b>                 | 304-031918-03 | 3/21/2018  | 651.93                   | 17.00          | 634.93                   |       |
|                              | 304-061818-04 | 6/20/2018  | 651.93                   | 17.99          | 633.94                   |       |
|                              | 304-091718-02 | 9/19/2018  | 651.93                   | 20.07          | 631.86                   |       |
|                              | 304-120418-18 | 12/5/2018  | 651.93                   | 18.26          | 633.67                   |       |
| <b>MW-3</b>                  | 304-031918-05 | 3/21/2018  | 637.41                   | 5.75           | 631.66                   |       |
|                              | 304-061818-08 | 6/20/2018  | 637.41                   | 6.99           | 630.42                   |       |
|                              | 304-091718-04 | 9/19/2018  | 637.41                   | 9.83           | 627.58                   |       |
|                              | 304-120418-15 | 12/5/2018  | 637.41                   | 9.05           | 628.36                   |       |
| <b>MW-4</b>                  | 304-032218-20 | 3/21/2018  | 652.37                   | 21.02          | 631.35                   |       |
|                              | 304-062018-17 | 6/20/2018  | 652.37                   | 22.16          | 630.21                   |       |
|                              | 304-091918-11 | 9/19/2018  | 652.37                   | 24.89          | 627.48                   |       |
|                              | 304-120518-20 | 12/5/2018  | 652.37                   | 23.24          | 629.13                   |       |
| <b>MW-5A</b>                 | 304-032018-11 | 3/21/2018  | 655.55                   | 25.95          | 629.60                   |       |
|                              | 304-061918-14 | 6/20/2018  | 655.55                   | 26.85          | 628.70                   |       |
|                              | 304-091718-05 | 9/19/2018  | 655.55                   | 26.46          | 629.09                   |       |
|                              | 304-120418-21 | 12/5/2018  | 655.55                   | 29.13          | 626.42                   |       |
| <b>MW-6</b>                  | 304-032018-13 | 3/21/2018  | 635.71                   | 8.57           | 627.14                   |       |
|                              | 304-061918-12 | 6/20/2018  | 635.71                   | 10.21          | 625.50                   |       |
|                              | 304-091818-06 | 9/19/2018  | 635.71                   | 12.58          | 623.13                   |       |
|                              | 304-120418-19 | 12/5/2018  | 635.71                   | 8.80           | 626.91                   |       |
| <b>MW-7</b>                  | 304-031918-07 | 3/21/2018  | 656.03                   | 20.06          | 635.97                   |       |
|                              | 304-061918-16 | 6/20/2018  | 656.03                   | 22.29          | 633.74                   |       |
|                              | 304-091818-07 | 9/19/2018  | 656.03                   | 25.98          | 630.05                   |       |
|                              | 304-120418-25 | 12/5/2018  | 656.03                   | 24.51          | 631.52                   |       |
| <b>MW-9</b>                  | 304-032118-19 | 3/21/2018  | 701.77                   | 7.35           | 694.42                   |       |
|                              | 304-061918-18 | 6/20/2018  | 701.77                   | 8.93           | 692.84                   |       |
|                              | 304-091918-12 | 9/19/2018  | 701.77                   | 12.22          | 689.55                   |       |
|                              | 304-120418-27 | 12/5/2018  | 701.77                   | 11.13          | 690.64                   |       |
| <b>MW-10</b>                 | 304-032018-16 | 3/21/2018  | 673.87                   | 18.52          | 655.35                   |       |
|                              | 304-061818-10 | 6/20/2018  | 673.87                   | 19.98          | 653.89                   |       |
|                              | 304-091818-08 | 9/19/2018  | 673.87                   | 24.24          | 649.63                   |       |
|                              | 304-120418-23 | 12/5/2018  | 673.87                   | 22.29          | 651.58                   |       |
| <i>Leak Detection System</i> |               |            |                          |                |                          |       |
| <b>LDCS-1</b>                | 304-031918-08 | 3/19/2018  | 657.26                   | 25.85          | 631.41                   |       |
|                              | 304-061818-07 | 6/18/2018  | 657.26                   | 26.50          | 630.76                   |       |
|                              | 304-091818-10 | 9/18/2018  | 657.26                   | 28.40          | 628.86                   |       |
|                              | 304-120318-08 | 12/3/2018  | 657.26                   | 26.95          | 630.31                   |       |
| <b>LDCS-2A</b>               | 304-031918-06 | 3/19/2018  | 659.24                   | 24.60          | 634.64                   |       |
|                              | 304-061818-05 | 6/18/2018  | 659.24                   | 25.10          | 634.14                   |       |
|                              | 304-091818-09 | 9/18/2018  | 659.24                   | 24.70          | 634.54                   |       |
|                              | 304-120318-06 | 12/3/2018  | 659.24                   | 29.23          | 630.01                   |       |
| <b>LDCS-2B</b>               | 304-031918-04 | 3/19/2018  | 661.70                   | 25.86          | 635.84                   |       |
|                              | 304-061818-03 | 6/18/2018  | 661.70                   | 25.80          | 635.90                   |       |
|                              | 304-092018-17 | 9/20/2018  | 661.70                   | 26.48          | 635.22                   |       |
|                              | 304-120318-04 | 12/3/2018  | 661.70                   | 26.58          | 635.12                   |       |

**Groundwater Database - Field Parameters**  
**2018 Annual Monitoring Report**  
**LRI Landfill, Pierce County, Washington**

| Location               | Sample Number | Sample Date | Sampling Method | pH   | Specific Conductivity | Temperature |
|------------------------|---------------|-------------|-----------------|------|-----------------------|-------------|
| <i>Monitoring Well</i> |               |             |                 |      |                       |             |
| <b>MW-1A</b>           | 304-031918-01 | 3/19/2018   | DP              | 7.05 | 197                   | 13.28       |
|                        | 304-061818-02 | 6/18/2018   | DP              | 6.66 | 178                   | 14.02       |
|                        | 304-091718-01 | 9/17/2018   | DP              | 6.66 | 183                   | 13.10       |
|                        | 304-120518-22 | 12/5/2018   | DP              | 6.90 | 201                   | 13.63       |
| <b>MW-2A</b>           | 304-031918-03 | 3/19/2018   | DP              | 7.19 | 245                   | 12.42       |
|                        | 304-061818-04 | 6/18/2018   | DP              | 6.98 | 244                   | 13.45       |
|                        | 304-091718-02 | 9/17/2018   | DP              | 6.84 | 249                   | 13.27       |
|                        | 304-120418-18 | 12/4/2018   | DP              | 6.98 | 324                   | 12.80       |
| <b>MW-3</b>            | 304-031918-05 | 3/19/2018   | DP              | 6.88 | 390                   | 10.42       |
|                        | 304-061818-08 | 6/18/2018   | DP              | 7.09 | 336                   | 10.76       |
|                        | 304-091718-04 | 9/17/2018   | DP              | 7.18 | 327                   | 10.51       |
|                        | 304-120418-15 | 12/4/2018   | DP              | 7.13 | 320                   | 10.10       |
| <b>MW-4</b>            | 304-032218-20 | 3/22/2018   | SP              | 7.66 | 311                   | 12.06       |
|                        | 304-062018-17 | 6/20/2018   | SP              | 7.48 | 314                   | 14.11       |
|                        | 304-091918-11 | 9/19/2018   | SP              | 7.33 | 312                   | 13.24       |
|                        | 304-120518-20 | 12/5/2018   | SP              | 7.20 | 330                   | 11.82       |
| <b>MW-5A</b>           | 304-032018-11 | 3/20/2018   | DP              | 7.44 | 420                   | 11.71       |
|                        | 304-061918-14 | 6/19/2018   | DP              | 7.29 | 367                   | 12.31       |
|                        | 304-091718-05 | 9/17/2018   | DP              | 7.31 | 281                   | 12.45       |
|                        | 304-120418-21 | 12/4/2018   | DP              | 7.49 | 283                   | 11.71       |
| <b>MW-6</b>            | 304-032018-13 | 3/20/2018   | DP              | 8.38 | 284                   | 10.78       |
|                        | 304-061918-12 | 6/19/2018   | DP              | 7.14 | 290                   | 10.51       |
|                        | 304-091818-06 | 9/18/2018   | DP              | 7.04 | 287                   | 10.55       |
|                        | 304-120418-19 | 12/4/2018   | DP              | 7.44 | 308                   | 10.29       |
| <b>MW-7</b>            | 304-031918-07 | 3/19/2018   | DP              | 7.56 | 377                   | 10.16       |
|                        | 304-061918-16 | 6/19/2018   | DP              | 7.26 | 402                   | 10.51       |
|                        | 304-091818-07 | 9/18/2018   | DP              | 7.42 | 364                   | 10.38       |
|                        | 304-120418-25 | 12/4/2018   | DP              | 7.42 | 336                   | 10.13       |
| <b>MW-9</b>            | 304-032118-19 | 3/21/2018   | DP              | 6.71 | 137                   | 9.70        |
|                        | 304-061918-18 | 6/19/2018   | DP              | 6.72 | 140                   | 10.68       |
|                        | 304-091918-12 | 9/19/2018   | DP              | 6.51 | 138                   | 11.77       |
|                        | 304-120418-27 | 12/4/2018   | DP              | 6.64 | 133                   | 9.56        |
| <b>MW-10</b>           | 304-032018-16 | 3/20/2018   | DP              | 6.52 | 266                   | 10.61       |
|                        | 304-061818-10 | 6/18/2018   | DP              | 6.45 | 272                   | 11.00       |
|                        | 304-091818-08 | 9/18/2018   | DP              | 6.38 | 272                   | 11.08       |
|                        | 304-120418-23 | 12/4/2018   | DP              | 6.44 | 254                   | 10.03       |

**Groundwater Database - Field Parameters**  
**2018 Annual Monitoring Report**  
**LRI Landfill, Pierce County, Washington**

| Location                     | Sample Number | Sample Date | Sampling Method | pH   | Specific Conductivity | Temperature |
|------------------------------|---------------|-------------|-----------------|------|-----------------------|-------------|
| <i>Leak Detection System</i> |               |             |                 |      |                       |             |
| <b>LDCS-1</b>                | 304-031918-08 | 3/19/2018   | DB              | 6.01 | 352                   | 21.53       |
|                              | 304-061818-07 | 6/18/2018   | DB              | 6.66 | 395                   | 30.45       |
|                              | 304-091818-10 | 9/18/2018   | DB              | 6.11 | 543                   | 21.89       |
|                              | 304-120318-08 | 12/3/2018   | DB              | 6.71 | 422                   | 14.50       |
| <b>LDCS-2A</b>               | 304-031918-06 | 3/19/2018   | DB              | 6.30 | 742                   | 18.97       |
|                              | 304-061818-05 | 6/18/2018   | DB              | 6.96 | 774                   | 29.99       |
|                              | 304-091818-09 | 9/18/2018   | DB              | 6.54 | 818                   | 25.03       |
|                              | 304-120318-06 | 12/3/2018   | DB              | 7.68 | 770                   | 21.10       |
| <b>LDCS-2B</b>               | 304-031918-04 | 3/19/2018   | DB              | 7.59 | 697                   | 19.61       |
|                              | 304-061818-03 | 6/18/2018   | DB              | 7.46 | 704                   | 30.79       |
|                              | 304-092018-17 | 9/20/2018   | DB              | 6.74 | 736                   | 22.22       |
|                              | 304-120318-04 | 12/3/2018   | DB              | 7.60 | 738                   | 16.80       |
| <b>LDCS-3A</b>               | 304-031918-02 | 3/19/2018   | DP              | 6.29 | 762                   | 21.18       |
|                              | 304-061818-01 | 6/18/2018   | DP              | 6.96 | 757                   | 22.94       |
|                              | 304-092018-16 | 9/20/2018   | DP              | 6.37 | 805                   | 22.00       |
|                              | 304-120318-02 | 12/3/2018   | DP              | 6.45 | 834                   | 16.20       |
| <b>LDCS-4A</b>               | 304-031918-10 | 3/19/2018   | DP              | 6.10 | 782                   | 22.63       |
|                              | 304-061918-09 | 6/19/2018   | DP              | 7.03 | 931                   | 23.74       |
|                              | 304-092018-15 | 9/20/2018   | DP              | 6.25 | 858                   | 23.50       |
|                              | 304-120318-10 | 12/3/2018   | DP              | 6.36 | 704                   | 21.40       |
| <b>LDCS-4B</b>               | 304-032018-14 | 3/20/2018   | DP              | 6.54 | 1,090                 | 24.56       |
|                              | 304-061918-11 | 6/19/2018   | DP              | 6.85 | 1,226                 | 27.61       |
|                              | 304-092118-18 | 9/21/2018   | DP              | 6.49 | 1,176                 | 25.03       |
|                              | 304-120418-12 | 12/4/2018   | DP              | 6.26 | 909                   | 26.40       |
| <b>LDCS-5</b>                | 304-032018-12 | 3/20/2018   | DP              | 6.44 | 864                   | 18.71       |
|                              | 304-061918-15 | 6/19/2018   | DP              | 6.65 | 926                   | 26.60       |
|                              | 304-092018-14 | 9/20/2018   | DP              | 6.47 | 985                   | 23.66       |
|                              | 304-120418-14 | 12/4/2018   | DP              | 6.16 | 684                   | 18.60       |
| <b>LDCS-6</b>                | 304-032018-15 | 3/20/2018   | DP              | 6.81 | 1,213                 | 14.80       |
|                              | 304-061918-13 | 6/19/2018   | DP              | 7.06 | 1,197                 | 23.13       |
|                              | 304-092118-19 | 9/21/2018   | DP              | 6.91 | 1,389                 | 20.02       |
|                              | 304-120418-16 | 12/4/2018   | DP              | 6.30 | 1,147                 | 9.40        |

**Groundwater Database - Field Parameters**  
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| Location                 | Sample Number | Sample Date | Sampling Method | pH   | Specific Conductivity | Temperature |
|--------------------------|---------------|-------------|-----------------|------|-----------------------|-------------|
| <i>Leachate</i>          |               |             |                 |      |                       |             |
| <b>Leachate, Cell 1</b>  | 304-120318-07 | 12/3/2018   | GB              | 7.56 | 32,312                | 15.04       |
| <b>Leachate, Cell 2A</b> | 304-120318-05 | 12/3/2018   | GB              | 7.91 | 32,784                | 21.12       |
| <b>Leachate, Cell 2B</b> | 304-120318-03 | 12/3/2018   | GB              | 7.62 | 25,164                | 19.51       |
| <b>Leachate, Cell 3A</b> | 304-120318-01 | 12/3/2018   | GB              | 7.67 | 20,330                | 19.03       |
| <b>Leachate, Cell 4A</b> | 304-120318-09 | 12/3/2018   | GB              | 7.79 | 34,318                | 17.64       |
| <b>Leachate, Cell 4B</b> | 304-120318-11 | 12/3/2018   | GB              | 7.68 | 25,864                | 14.71       |
| <b>Leachate, Cell 5</b>  | 304-120318-17 | 12/3/2018   | GB              | 7.96 | 27,694                | 9.33        |
| <b>Leachate, Cell 6</b>  | 304-032118-18 | 3/21/2018   | GB              | 7.80 | 18,448                | 13.05       |
| <b>Leachate, Cell 6</b>  | 304-062018-20 | 6/20/2018   | GB              | 7.67 | 23,148                | 29.08       |
| <b>Leachate, Cell 6</b>  | 304-092118-20 | 9/21/2018   | GB              | 7.70 | 25,787                | 24.86       |
| <b>Leachate, Cell 6</b>  | 304-120318-13 | 12/3/2018   | GB              | 7.64 | 21,459                | 8.96        |

**Groundwater Database - Inorganic Parameters**  
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**LRI Landfill, Pierce County, Washington**

| Location               | Sample ID     | Sample Date | Alkalinity,<br>Total | Ammonia | Chloride | Nitrate | Sulfate | Total<br>Dissolved<br>Solids | Total<br>Organic<br>Carbon | Total<br>Suspended<br>Solids |
|------------------------|---------------|-------------|----------------------|---------|----------|---------|---------|------------------------------|----------------------------|------------------------------|
| <i>Monitoring Well</i> |               |             |                      |         |          |         |         |                              |                            |                              |
| <b>MW-1A</b>           | 304-031918-01 | 3/19/2018   | 93                   | 0.1 U   | 2.2      | 0.5 U   | 3.1     | 110                          | 1 U                        | 5.2                          |
|                        | 304-061818-02 | 6/18/2018   | 91                   | 0.12    | 2.0      | 0.5 U   | 3.0     | 130                          | 1 U                        | 4 U                          |
|                        | 304-091718-01 | 9/17/2018   | 90                   | 0.1 U   | 2.3      | 0.5 U   | 3.1     | 140                          | 1 U                        | 4 U                          |
|                        | 304-120518-22 | 12/5/2018   | 95                   | 0.1 U   | 2.4      | 0.5 U   | 3.5     | 150                          | 1 U                        | 4 U                          |
|                        | 304-120518-24 | 12/5/2018   | 94                   | 0.1 U   | 2.4      | 0.5 U   | 3.5     | 150                          | 1 U                        | 4 U                          |
| <b>MW-2A</b>           | 304-031918-03 | 3/19/2018   | 120                  | 0.1 U   | 3.0      | 0.5 U   | 6.1     | 160                          | 1 U                        | 4 U                          |
|                        | 304-061818-04 | 6/18/2018   | 120                  | 0.19    | 2.9      | 0.5 U   | 5.7     | 160                          | 1 U                        | 4 U                          |
|                        | 304-061818-06 | 6/18/2018   | 120                  | 0.14    | 2.9      | 0.5 U   | 5.7     | 170                          | 1 U                        | 4 U                          |
|                        | 304-091718-02 | 9/17/2018   | 120                  | 0.1 U   | 3.6      | 0.5 U   | 7.2     | 170                          | 1 U                        | 4 U                          |
|                        | 304-091718-03 | 9/17/2018   | 120                  | 0.1 U   | 3.5      | 0.5 U   | 7.1     | 170                          | 1 U                        | 4 U                          |
|                        | 304-120418-18 | 12/4/2018   | 130                  | 0.14    | 4.9      | 0.5 U   | 25      | 210                          | 1.1                        | 4 U                          |
| <b>MW-3</b>            | 304-031918-05 | 3/19/2018   | 170                  | 0.1 U   | 3.3      | 0.5 U   | 26      | 240                          | 1.1                        | 4 U                          |
|                        | 304-061818-08 | 6/18/2018   | 140                  | 0.24    | 3.4      | 0.5 U   | 28      | 210                          | 1 U                        | 4 U                          |
|                        | 304-091718-04 | 9/17/2018   | 130                  | 0.1     | 3.8      | 0.5 U   | 28      | 210                          | 1 U                        | 4 U                          |
|                        | 304-120418-15 | 12/4/2018   | 140                  | 0.1     | 3.3      | 0.5 U   | 26      | 200                          | 1 U                        | 4 U                          |
| <b>MW-4</b>            | 304-032218-20 | 3/22/2018   | 140                  | 0.14    | 3.4      | 0.5 U   | 11      | 190                          | 1.1                        | 4 U                          |
|                        | 304-062018-17 | 6/20/2018   | 140                  | 0.12    | 2.9      | 0.5 U   | 8.6     | 190                          | 1 U                        | 4.0                          |
|                        | 304-091918-11 | 9/19/2018   | 150                  | 0.15    | 2.8      | 0.5 U   | 8.2     | 220                          | 2.0                        | 4 U                          |
|                        | 304-120518-20 | 12/5/2018   | 150                  | 0.17    | 3.2      | 0.5 U   | 18      | 220                          | 1.0                        | 4 U                          |
| <b>MW-5A</b>           | 304-032018-11 | 3/20/2018   | 190                  | 0.14    | 3.5      | 0.5 U   | 24      | 240                          | 1 U                        | 4 U                          |
|                        | 304-061918-14 | 6/19/2018   | 170                  | 0.22    | 3.0      | 0.5 U   | 15      | 200                          | 1.0                        | 4 U                          |
|                        | 304-091718-05 | 9/17/2018   | 140                  | 0.11    | 2.8      | 0.5 U   | 5.8     | 190                          | 1 U                        | 4 U                          |
|                        | 304-120418-21 | 12/4/2018   | 140                  | 0.1     | 2.1      | 0.5 U   | 5.4     | 170                          | 1 U                        | 4 U                          |
| <b>MW-6</b>            | 304-032018-13 | 3/20/2018   | 140                  | 0.1 U   | 4.8      | 0.5 U   | 6.8     | 170                          | 1 U                        | 4 U                          |
|                        | 304-061918-12 | 6/19/2018   | 130                  | 0.2     | 4.8      | 0.5 U   | 6.9     | 160                          | 1 U                        | 4 U                          |
|                        | 304-091818-06 | 9/18/2018   | 130                  | 0.11    | 5.1      | 0.5 U   | 7.6     | 170                          | 1 U                        | 4 U                          |
|                        | 304-120418-19 | 12/4/2018   | 150                  | 0.12    | 4.7      | 0.5 U   | 7.3     | 190                          | 1.0                        | 4 U                          |



**Groundwater Database - Inorganic Parameters**  
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| Location                     | Sample ID     | Sample Date | Alkalinity,<br>Total | Ammonia | Chloride | Nitrate | Sulfate | Total<br>Dissolved<br>Solids | Total<br>Organic<br>Carbon | Total<br>Suspended<br>Solids |
|------------------------------|---------------|-------------|----------------------|---------|----------|---------|---------|------------------------------|----------------------------|------------------------------|
| <b>MW-7</b>                  | 304-031918-07 | 3/19/2018   | 200                  | 0.16    | 2.9      | 0.5 U   | 3.1     | 210                          | 1 U                        | 4 U                          |
|                              | 304-031918-09 | 3/19/2018   | 200                  | 0.19    | 2.8      | 0.5 U   | 3.1     | 210                          | 1 U                        | 4 U                          |
|                              | 304-061918-16 | 6/19/2018   | 200                  | 0.35    | 3.1      | 0.5 U   | 3.2     | 230                          | 1 U                        | 4 U                          |
|                              | 304-091818-07 | 9/18/2018   | 180                  | 0.22    | 3.5      | 0.5 U   | 4.5     | 220                          | 1 U                        | 4 U                          |
|                              | 304-120418-25 | 12/4/2018   | 170                  | 0.19    | 2.7      | 0.5 U   | 4.4     | 200                          | 1 U                        | 4 U                          |
| <b>MW-9</b>                  | 304-032118-19 | 3/21/2018   | 68                   | 0.1 U   | 1.7      | 0.5 U   | 1.7     | 120                          | 1 U                        | 4 U                          |
|                              | 304-061918-18 | 6/19/2018   | 66                   | 0.1 U   | 1.6      | 0.5 U   | 1.8     | 110                          | 1 U                        | 4 U                          |
|                              | 304-091918-12 | 9/19/2018   | 68                   | 0.1 U   | 1.7      | 0.5 U   | 1.8     | 150                          | 1.5                        | 4 U                          |
|                              | 304-120418-27 | 12/4/2018   | 67                   | 0.1 U   | 1.6      | 0.5 U   | 1.8     | 140                          | 1 U                        | 4 U                          |
| <b>MW-10</b>                 | 304-032018-16 | 3/20/2018   | 91                   | 0.1 U   | 8.9      | 5.3     | 7.4     | 180                          | 1 U                        | 4 U                          |
|                              | 304-061818-10 | 6/18/2018   | 95                   | 0.21    | 8.6      | 5.0     | 7.7     | 200                          | 1 U                        | 4 U                          |
|                              | 304-091818-08 | 9/18/2018   | 96                   | 0.1 U   | 9.1      | 4.7     | 8.2     | 190                          | 1 U                        | 4 U                          |
|                              | 304-120418-23 | 12/4/2018   | 93                   | 0.1 U   | 7.4      | 4.3     | 6.7     | 190                          | 1 U                        | 4 U                          |
| <i>Leak Detection System</i> |               |             |                      |         |          |         |         |                              |                            |                              |
| <b>LDCS-1</b>                | 304-031918-08 | 3/19/2018   | 170                  | 0.1 U   | 3.9      | 0.5 U   | 7.2     | 220                          | 2.5                        |                              |
|                              | 304-061818-07 | 6/18/2018   | 190                  | 0.26    | 3.8      | 0.5 U   | 7.4     | 250                          | 2.5                        |                              |
|                              | 304-091818-10 | 9/18/2018   | 260                  | 0.16    | 3.4      | 0.5 U   | 9.0     | 310                          | 3.5                        |                              |
|                              | 304-120318-08 | 12/3/2018   | 200                  | 0.11    | 3.9      | 0.5 U   | 8.7     | 280                          | 2.6                        |                              |
| <b>LDCS-2A</b>               | 304-031918-06 | 3/19/2018   | 400                  | 0.1 U   | 3.5      | 0.5 U   | 23      | 460                          | 2.2                        |                              |
|                              | 304-061818-05 | 6/18/2018   | 400                  | 0.13    | 2.8      | 0.5 U   | 21      | 460                          | 2.3                        |                              |
|                              | 304-091818-09 | 9/18/2018   | 420                  | 0.1 U   | 3.3      | 0.5 U   | 19      | 470                          | 2.3                        |                              |
|                              | 304-120318-06 | 12/3/2018   | 390                  | 0.1 U   | 3.8      | 0.5 U   | 23      | 490                          | 2.7                        |                              |
| <b>LDCS-2B</b>               | 304-031918-04 | 3/19/2018   | 310                  | 0.1 U   | 3.4      | 0.5 U   | 70      | 450                          | 1.7                        |                              |
|                              | 304-061818-03 | 6/18/2018   | 320                  | 0.1 U   | 3.4      | 0.5 U   | 68      | 440                          | 1.8                        |                              |
|                              | 304-092018-17 | 9/20/2018   | 330                  | 0.1 U   | 3.6      | 0.5 U   | 65      | 460                          | 5.0                        |                              |
|                              | 304-120318-04 | 12/3/2018   | 320                  | 0.1 U   | 4.3      | 0.5 U   | 73      | 460                          | 1.9                        |                              |
| <b>LDCS-3A</b>               | 304-031918-02 | 3/19/2018   | 360                  | 0.1 U   | 4.2      | 0.5 U   | 71      | 450                          | 1.5                        |                              |
|                              | 304-061818-01 | 6/18/2018   | 340                  | 0.19    | 4.1      | 0.5 U   | 84      | 480                          | 1.8                        |                              |
|                              | 304-092018-16 | 9/20/2018   | 340                  | 0.1 U   | 4.0      | 0.5 U   | 82      | 490                          | 4.8                        |                              |
|                              | 304-120318-02 | 12/3/2018   | 360                  | 0.1 U   | 4.3      | 0.5 U   | 75      | 510                          | 1.4                        |                              |

**Groundwater Database - Inorganic Parameters**  
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| Location                 | Sample ID         | Sample Date | Alkalinity,<br>Total | Ammonia | Chloride | Nitrate | Sulfate | Total<br>Dissolved<br>Solids | Total<br>Organic<br>Carbon | Total<br>Suspended<br>Solids |
|--------------------------|-------------------|-------------|----------------------|---------|----------|---------|---------|------------------------------|----------------------------|------------------------------|
| <b>LDCS-4A</b>           | 304-031918-10     | 3/19/2018   | 340                  | 0.1 U   | 25       | 1.1     | 57      | 480                          | 5.1                        |                              |
|                          | 304-061918-09     | 6/19/2018   | 370                  | 0.11    | 24       | 0.5 U   | 95      | 590                          | 5.1                        |                              |
|                          | 304-092018-15     | 9/20/2018   | 350                  | 0.15    | 15       | 0.5 U   | 87      | 520                          | 6.1                        |                              |
|                          | 304-120318-10     | 12/3/2018   | 290                  | 0.12    | 13       | 0.5 U   | 52      | 430                          | 4.5                        |                              |
| <b>LDCS-4B</b>           | 304-032018-14     | 3/20/2018   | 450                  | 0.1 U   | 21       | 0.5 U   | 140     | 670                          | 4.0                        |                              |
|                          | 304-052118-LDCS4B | 5/21/2018   | 500                  | 0.1 U   | 19       | 0.5 U   | 130     | 770                          | 5.1                        |                              |
|                          | 304-061918-11     | 6/19/2018   | 440                  | 0.19    | 23       | 0.5 U   | 200     | 840                          | 3.3                        |                              |
|                          | 304-092118-18     | 9/21/2018   | 430                  | 0.17    | 20       | 0.5 U   | 180     | 770                          | 3.5                        |                              |
|                          | 304-120418-12     | 12/4/2018   | 350                  | 0.25    | 14       | 0.5 U   | 110     | 580                          | 3.1                        |                              |
| <b>LDCS-5</b>            | 304-032018-12     | 3/20/2018   | 370                  | 0.93    | 34       | 0.5 U   | 57      | 510                          | 4.5                        |                              |
|                          | 304-061918-15     | 6/19/2018   | 400                  | 1.6     | 21       | 0.5 U   | 74      | 590                          | 7.9                        |                              |
|                          | 304-092018-14     | 9/20/2018   | 400                  | 1.0     | 19       | 0.5 U   | 69      | 570                          | 7.6                        |                              |
|                          | 304-120418-14     | 12/4/2018   | 300                  | 0.56    | 8.4      | 0.5 U   | 61      | 420                          | 3.3                        |                              |
| <b>LDCS-6</b>            | 304-032018-15     | 3/20/2018   | 420                  | 0.1 U   | 12.0     | 0.5 U   | 260     | 810                          | 5.9                        |                              |
|                          | 304-061918-13     | 6/19/2018   | 450                  | 0.11    | 13       | 0.64    | 280     | 950                          | 6.0                        |                              |
|                          | 304-092118-19     | 9/21/2018   | 470                  | 0.1 U   | 10.0     | 0.5 U   | 210     | 790                          | 5.7                        |                              |
|                          | 304-120418-16     | 12/4/2018   | 450                  | 0.1 U   | 7.3      | 0.5 U   | 170     | 740                          | 3.8                        |                              |
| <i>Leachate</i>          |                   |             |                      |         |          |         |         |                              |                            |                              |
| <b>Leachate, Cell 1</b>  | 304-120318-07     | 12/3/2018   | 11000                | 1800    | 5900     | 0.84 U  | 0.92    | 21000                        | 2300                       |                              |
| <b>Leachate, Cell 2A</b> | 304-120318-05     | 12/3/2018   | 13000                | 1900    | 3800     | 4.9     | 0.81    | 18000                        | 1900                       |                              |
| <b>Leachate, Cell 2B</b> | 304-120318-03     | 12/3/2018   | 9900                 | 1600    | 2500     | 3.1     | 2.0     | 13000                        | 1500                       |                              |
| <b>Leachate, Cell 3A</b> | 304-120318-01     | 12/3/2018   | 7800                 | 1100    | 2000     | 0.6     | 6.4     | 9500                         | 700                        |                              |
| <b>Leachate, Cell 4A</b> | 304-120318-09     | 12/3/2018   | 12000                | 1600    | 4200     | 4.5     | 3.5     | 17000                        | 1400                       |                              |
| <b>Leachate, Cell 4B</b> | 304-120318-11     | 12/3/2018   | 10000                | 1400    | 2900     | 2.9     | 6.3     | 13000                        | 790                        |                              |
| <b>Leachate, Cell 5</b>  | 304-120318-17     | 12/3/2018   | 11000                | 1500    | 2900     | 3.4     | 2.5     | 15000                        | 920                        |                              |
| <b>Leachate, Cell 6</b>  | 304-032118-18     | 3/21/2018   | 7400                 | 730     | 2000     | 2.1 U   | 7.4     | 7100                         | 1600                       |                              |
| <b>Leachate, Cell 6</b>  | 304-062018-20     | 6/20/2018   | 8800 B               | 1300    | 2500     | 2.1 U   | 1.8     | 12000                        | 1400                       |                              |
| <b>Leachate, Cell 6</b>  | 304-092118-20     | 9/21/2018   | 10000                | 1300    | 2900     | 5.0     | 3.0     | 15000                        | 1900                       |                              |
| <b>Leachate, Cell 6</b>  | 304-120318-13     | 12/3/2018   | 9000                 | 1000    | 2300     | 2.3     | 2.3     | 12000                        | 920                        |                              |

**Groundwater Database - Inorganic Parameters**  
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**LRI Landfill, Pierce County, Washington**

| Location               | Sample ID     | Sample Date | Alkalinity,<br>Total | Ammonia | Chloride | Nitrate | Sulfate | Total<br>Dissolved<br>Solids | Total<br>Organic<br>Carbon | Total<br>Suspended<br>Solids |
|------------------------|---------------|-------------|----------------------|---------|----------|---------|---------|------------------------------|----------------------------|------------------------------|
| <i>Quality Control</i> |               |             |                      |         |          |         |         |                              |                            |                              |
| <b>QC, FB</b>          | 304-032018-17 | 3/20/2018   | 5 U                  | 0.1 U   | 0.2 U    | 0.5 U   | 0.2 U   | 10 U                         | 1 U                        | 4 U                          |
|                        | 304-062018-19 | 6/20/2018   | 5 U                  | 0.1 U   | 0.2 U    | 0.5 U   | 0.2 U   | 10 U                         | 1 U                        | 4 U                          |
|                        | 304-091918-13 | 9/19/2018   | 6.0                  | 0.1 U   | 0.2 U    | 0.5 U   | 0.2 U   | 23                           | 1 U                        | 4 U                          |
|                        | 304-120518-26 | 12/5/2018   | 7.2                  | 0.1 U   | 0.2 U    | 0.5 U   | 0.2 U   | 18                           | 1 U                        | 4 U                          |

**Groundwater Database - Appendix I Metals**  
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**LRI Landfill, Pierce County, Washington**

| Location         | Sample Number | Sample Date | Antimony,<br>Dissolved | Antimony,<br>Total | Arsenic,<br>Dissolved | Arsenic,<br>Total | Barium,<br>Dissolved | Barium,<br>Total | Beryllium,<br>Dissolved | Beryllium,<br>Total | Cadmium,<br>Dissolved | Cadmium,<br>Total |
|------------------|---------------|-------------|------------------------|--------------------|-----------------------|-------------------|----------------------|------------------|-------------------------|---------------------|-----------------------|-------------------|
| Monitoring Wells |               |             |                        |                    |                       |                   |                      |                  |                         |                     |                       |                   |
| <b>MW-1A</b>     | 304-031918-01 | 3/19/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.023            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-061818-02 | 6/18/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.019            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-091718-01 | 9/17/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.022            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-120518-22 | 12/5/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.017            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-120518-24 | 12/5/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.019            |                         | 0.001 U             |                       | 0.001 U           |
| <b>MW-2A</b>     | 304-031918-03 | 3/19/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.012            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-061818-04 | 6/18/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.013            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-061818-06 | 6/18/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.013            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-091718-02 | 9/17/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.014            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-091718-03 | 9/17/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.011            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-120418-18 | 12/4/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.016            |                         | 0.001 U             |                       | 0.001 U           |
| <b>MW-3</b>      | 304-031918-05 | 3/19/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.015            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-061818-08 | 6/18/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.012            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-091718-04 | 9/17/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.01             |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-120418-15 | 12/4/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.011            |                         | 0.001 U             |                       | 0.001 U           |
| <b>MW-4</b>      | 304-032218-20 | 3/22/2018   |                        | 0.05 U             |                       | 0.009             |                      | 0.016            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-062018-17 | 6/20/2018   |                        | 0.05 U             |                       | 0.0089            |                      | 0.015            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-091918-11 | 9/19/2018   |                        | 0.05 U             |                       | 0.0088            |                      | 0.014            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-120518-20 | 12/5/2018   |                        | 0.05 U             |                       | 0.0096            |                      | 0.017            |                         | 0.001 U             |                       | 0.001 U           |
| <b>MW-5A</b>     | 304-032018-11 | 3/20/2018   |                        | 0.05 U             |                       | 0.0065            |                      | 0.016            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-061918-14 | 6/19/2018   |                        | 0.05 U             |                       | 0.0058            |                      | 0.012            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-091718-05 | 9/17/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.015            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-120418-21 | 12/4/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.013            |                         | 0.001 U             |                       | 0.001 U           |
| <b>MW-6</b>      | 304-032018-13 | 3/20/2018   |                        | 0.05 U             |                       | 0.0075            |                      | 0.021            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-061918-12 | 6/19/2018   |                        | 0.05 U             |                       | 0.0075            |                      | 0.011            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-091818-06 | 9/18/2018   |                        | 0.05 U             |                       | 0.0063            |                      | 0.011            |                         | 0.001 U             |                       | 0.001 U           |
|                  | 304-120418-19 | 12/4/2018   |                        | 0.05 U             |                       | 0.0073            |                      | 0.015            |                         | 0.001 U             |                       | 0.001 U           |

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| Location         | Sample Number | Sample Date | Chromium,<br>Dissolved | Chromium,<br>Total | Cobalt,<br>Dissolved | Cobalt,<br>Total | Copper,<br>Dissolved | Copper,<br>Total | Lead,<br>Dissolved | Lead, Total | Nickel,<br>Dissolved | Nickel,<br>Total |
|------------------|---------------|-------------|------------------------|--------------------|----------------------|------------------|----------------------|------------------|--------------------|-------------|----------------------|------------------|
| Monitoring Wells |               |             |                        |                    |                      |                  |                      |                  |                    |             |                      |                  |
| <b>MW-1A</b>     | 304-031918-01 | 3/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-061818-02 | 6/18/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-091718-01 | 9/17/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-120518-22 | 12/5/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-120518-24 | 12/5/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
| <b>MW-2A</b>     | 304-031918-03 | 3/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-061818-04 | 6/18/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-061818-06 | 6/18/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-091718-02 | 9/17/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-091718-03 | 9/17/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-120418-18 | 12/4/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
| <b>MW-3</b>      | 304-031918-05 | 3/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-061818-08 | 6/18/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-091718-04 | 9/17/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-120418-15 | 12/4/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
| <b>MW-4</b>      | 304-032218-20 | 3/22/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-062018-17 | 6/20/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-091918-11 | 9/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-120518-20 | 12/5/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
| <b>MW-5A</b>     | 304-032018-11 | 3/20/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-061918-14 | 6/19/2018   |                        | 0.005 U            |                      | 0.0013           |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-091718-05 | 9/17/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-120418-21 | 12/4/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
| <b>MW-6</b>      | 304-032018-13 | 3/20/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-061918-12 | 6/19/2018   |                        | 0.005 U            |                      | 0.0013           |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-091818-06 | 9/18/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                  | 304-120418-19 | 12/4/2018   |                        | 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,<br>Dissolved | Selenium,<br>Total | Silver,<br>Dissolved | Silver,<br>Total | Thallium,<br>Dissolved | Thallium,<br>Total | Vanadium,<br>Dissolved | Vanadium,<br>Total | Zinc,<br>Dissolved | Zinc, Total |
|------------------|---------------|-------------|------------------------|--------------------|----------------------|------------------|------------------------|--------------------|------------------------|--------------------|--------------------|-------------|
| Monitoring Wells |               |             |                        |                    |                      |                  |                        |                    |                        |                    |                    |             |
| <b>MW-1A</b>     | 304-031918-01 | 3/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01        |
|                  | 304-061818-02 | 6/18/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-091718-01 | 9/17/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-120518-22 | 12/5/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-120518-24 | 12/5/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
| <b>MW-2A</b>     | 304-031918-03 | 3/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-061818-04 | 6/18/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-061818-06 | 6/18/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-091718-02 | 9/17/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-091718-03 | 9/17/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-120418-18 | 12/4/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
| <b>MW-3</b>      | 304-031918-05 | 3/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-061818-08 | 6/18/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-091718-04 | 9/17/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-120418-15 | 12/4/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
| <b>MW-4</b>      | 304-032218-20 | 3/22/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.014       |
|                  | 304-062018-17 | 6/20/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.022       |
|                  | 304-091918-11 | 9/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.012       |
|                  | 304-120518-20 | 12/5/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.021       |
| <b>MW-5A</b>     | 304-032018-11 | 3/20/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-061918-14 | 6/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-091718-05 | 9/17/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-120418-21 | 12/4/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
| <b>MW-6</b>      | 304-032018-13 | 3/20/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-061918-12 | 6/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-091818-06 | 9/18/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                  | 304-120418-19 | 12/4/2018   |                        | 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,<br>Dissolved | Antimony,<br>Total | Arsenic,<br>Dissolved | Arsenic,<br>Total | Barium,<br>Dissolved | Barium,<br>Total | Beryllium,<br>Dissolved | Beryllium,<br>Total | Cadmium,<br>Dissolved | Cadmium,<br>Total |
|-----------------------|---------------|-------------|------------------------|--------------------|-----------------------|-------------------|----------------------|------------------|-------------------------|---------------------|-----------------------|-------------------|
| <b>MW-7</b>           | 304-031918-07 | 3/19/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.016            |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-031918-09 | 3/19/2018   |                        | 0.05 U             |                       | 0.0053            |                      | 0.016            |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-061918-16 | 6/19/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.014            |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-091818-07 | 9/18/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.014            |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-120418-25 | 12/4/2018   |                        | 0.05 U             |                       | 0.005             |                      | 0.014            |                         | 0.001 U             |                       | 0.001 U           |
| <b>MW-9</b>           | 304-032118-19 | 3/21/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.005 U          |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-061918-18 | 6/19/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.005 U          |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-091918-12 | 9/19/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.005 U          |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-120418-27 | 12/4/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.0051           |                         | 0.001 U             |                       | 0.001 U           |
| <b>MW-10</b>          | 304-032018-16 | 3/20/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.013            |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-061818-10 | 6/18/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.013            |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-091818-08 | 9/18/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.016            |                         | 0.001 U             |                       | 0.001 U           |
|                       | 304-120418-23 | 12/4/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.013            |                         | 0.001 U             |                       | 0.001 U           |
| <i>Leak Detection</i> |               |             |                        |                    |                       |                   |                      |                  |                         |                     |                       |                   |
| <b>LDCS-1</b>         | 304-031918-08 | 3/19/2018   | 0.05 U                 |                    | 0.0069                |                   | 0.017                |                  |                         |                     |                       |                   |
|                       | 304-061818-07 | 6/18/2018   | 0.05 U                 |                    | 0.0085                |                   | 0.02                 |                  |                         |                     |                       |                   |
|                       | 304-091818-10 | 9/18/2018   | 0.05 U                 |                    | 0.011                 |                   | 0.024                |                  |                         |                     |                       |                   |
|                       | 304-120318-08 | 12/3/2018   | 0.05 U                 |                    | 0.0094                |                   | 0.022                |                  |                         |                     |                       |                   |
| <b>LDCS-2A</b>        | 304-031918-06 | 3/19/2018   | 0.05 U                 |                    | 0.0085                |                   | 0.026                |                  |                         |                     |                       |                   |
|                       | 304-061818-05 | 6/18/2018   | 0.05 U                 |                    | 0.012                 |                   | 0.025                |                  |                         |                     |                       |                   |
|                       | 304-091818-09 | 9/18/2018   | 0.05 U                 |                    | 0.0095                |                   | 0.023                |                  |                         |                     |                       |                   |
|                       | 304-120318-06 | 12/3/2018   | 0.05 U                 |                    | 0.0075                |                   | 0.02                 |                  |                         |                     |                       |                   |
| <b>LDCS-2B</b>        | 304-031918-04 | 3/19/2018   | 0.05 U                 |                    | 0.0057                |                   | 0.018                |                  |                         |                     |                       |                   |
|                       | 304-061818-03 | 6/18/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.017                |                  |                         |                     |                       |                   |
|                       | 304-092018-17 | 9/20/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.016                |                  |                         |                     |                       |                   |
|                       | 304-120318-04 | 12/3/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.014                |                  |                         |                     |                       |                   |
| <b>LDCS-3A</b>        | 304-031918-02 | 3/19/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.013                |                  |                         |                     |                       |                   |
|                       | 304-061818-01 | 6/18/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.014                |                  |                         |                     |                       |                   |
|                       | 304-092018-16 | 9/20/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.013                |                  |                         |                     |                       |                   |
|                       | 304-120318-02 | 12/3/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.016                |                  |                         |                     |                       |                   |

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| Location              | Sample Number | Sample Date | Chromium,<br>Dissolved | Chromium,<br>Total | Cobalt,<br>Dissolved | Cobalt,<br>Total | Copper,<br>Dissolved | Copper,<br>Total | Lead,<br>Dissolved | Lead, Total | Nickel,<br>Dissolved | Nickel,<br>Total |
|-----------------------|---------------|-------------|------------------------|--------------------|----------------------|------------------|----------------------|------------------|--------------------|-------------|----------------------|------------------|
| <b>MW-7</b>           | 304-031918-07 | 3/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-031918-09 | 3/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-061918-16 | 6/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-091818-07 | 9/18/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-120418-25 | 12/4/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
| <b>MW-9</b>           | 304-032118-19 | 3/21/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-061918-18 | 6/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-091918-12 | 9/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-120418-27 | 12/4/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
| <b>MW-10</b>          | 304-032018-16 | 3/20/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-061818-10 | 6/18/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-091818-08 | 9/18/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                       | 304-120418-23 | 12/4/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
| <i>Leak Detection</i> |               |             |                        |                    |                      |                  |                      |                  |                    |             |                      |                  |
| <b>LDCS-1</b>         | 304-031918-08 | 3/19/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-061818-07 | 6/18/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-091818-10 | 9/18/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-120318-08 | 12/3/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
| <b>LDCS-2A</b>        | 304-031918-06 | 3/19/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-061818-05 | 6/18/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-091818-09 | 9/18/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-120318-06 | 12/3/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
| <b>LDCS-2B</b>        | 304-031918-04 | 3/19/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-061818-03 | 6/18/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-092018-17 | 9/20/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-120318-04 | 12/3/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
| <b>LDCS-3A</b>        | 304-031918-02 | 3/19/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-061818-01 | 6/18/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-092018-16 | 9/20/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                       | 304-120318-02 | 12/3/2018   | 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,<br>Dissolved | Selenium,<br>Total | Silver,<br>Dissolved | Silver,<br>Total | Thallium,<br>Dissolved | Thallium,<br>Total | Vanadium,<br>Dissolved | Vanadium,<br>Total | Zinc,<br>Dissolved | Zinc, Total |
|-----------------------|---------------|-------------|------------------------|--------------------|----------------------|------------------|------------------------|--------------------|------------------------|--------------------|--------------------|-------------|
| <b>MW-7</b>           | 304-031918-07 | 3/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                       | 304-031918-09 | 3/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                       | 304-061918-16 | 6/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                       | 304-091818-07 | 9/18/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                       | 304-120418-25 | 12/4/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
| <b>MW-9</b>           | 304-032118-19 | 3/21/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.016              |                    | 0.01 U      |
|                       | 304-061918-18 | 6/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.013              |                    | 0.01 U      |
|                       | 304-091918-12 | 9/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.013              |                    | 0.01 U      |
|                       | 304-120418-27 | 12/4/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.014              |                    | 0.01 U      |
| <b>MW-10</b>          | 304-032018-16 | 3/20/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                       | 304-061818-10 | 6/18/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                       | 304-091818-08 | 9/18/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                       | 304-120418-23 | 12/4/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
| <i>Leak Detection</i> |               |             |                        |                    |                      |                  |                        |                    |                        |                    |                    |             |
| <b>LDCS-1</b>         | 304-031918-08 | 3/19/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-061818-07 | 6/18/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-091818-10 | 9/18/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-120318-08 | 12/3/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
| <b>LDCS-2A</b>        | 304-031918-06 | 3/19/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-061818-05 | 6/18/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-091818-09 | 9/18/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-120318-06 | 12/3/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
| <b>LDCS-2B</b>        | 304-031918-04 | 3/19/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-061818-03 | 6/18/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-092018-17 | 9/20/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-120318-04 | 12/3/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
| <b>LDCS-3A</b>        | 304-031918-02 | 3/19/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-061818-01 | 6/18/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-092018-16 | 9/20/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                       | 304-120318-02 | 12/3/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |

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| Location                 | Sample Number     | Sample Date | Antimony,<br>Dissolved | Antimony,<br>Total | Arsenic,<br>Dissolved | Arsenic,<br>Total | Barium,<br>Dissolved | Barium,<br>Total | Beryllium,<br>Dissolved | Beryllium,<br>Total | Cadmium,<br>Dissolved | Cadmium,<br>Total |
|--------------------------|-------------------|-------------|------------------------|--------------------|-----------------------|-------------------|----------------------|------------------|-------------------------|---------------------|-----------------------|-------------------|
| <b>LDCS-4A</b>           | 304-031918-10     | 3/19/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.028                |                  |                         |                     |                       |                   |
|                          | 304-061918-09     | 6/19/2018   | 0.05 U                 |                    | 0.0072                |                   | 0.033                |                  |                         |                     |                       |                   |
|                          | 304-092018-15     | 9/20/2018   | 0.05 U                 |                    | 0.0068                |                   | 0.03                 |                  |                         |                     |                       |                   |
|                          | 304-120318-10     | 12/3/2018   | 0.05 U                 |                    | 0.0060                |                   | 0.039                |                  |                         |                     |                       |                   |
| <b>LDCS-4B</b>           | 304-032018-14     | 3/20/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.031                |                  |                         |                     |                       |                   |
|                          | 304-052118-LDCS4B | 5/21/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.033                |                  |                         |                     |                       |                   |
|                          | 304-061918-11     | 6/19/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.037                |                  |                         |                     |                       |                   |
|                          | 304-092118-18     | 9/21/2018   | 0.05 U                 |                    | 0.012                 |                   | 0.032                |                  |                         |                     |                       |                   |
|                          | 304-120418-12     | 12/4/2018   | 0.05 U                 |                    | 0.0056                |                   | 0.041                |                  |                         |                     |                       |                   |
| <b>LDCS-5</b>            | 304-032018-12     | 3/20/2018   | 0.05 U                 |                    | 0.0072                |                   | 0.047                |                  | 0.001 U                 |                     | 0.001 U               |                   |
|                          | 304-061918-15     | 6/19/2018   | 0.05 U                 |                    | 0.011                 |                   | 0.072                |                  | 0.001 U                 |                     | 0.001 U               |                   |
|                          | 304-092018-14     | 9/20/2018   | 0.05 U                 |                    | 0.0066                |                   | 0.073                |                  | 0.001 U                 |                     | 0.001 U               |                   |
|                          | 304-120418-14     | 12/4/2018   | 0.05 U                 |                    | 0.0110                |                   | 0.051                |                  | 0.001 U                 |                     | 0.001 U               |                   |
| <b>LDCS-6</b>            | 304-032018-15     | 3/20/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.03                 |                  | 0.001 U                 |                     | 0.001 U               |                   |
|                          | 304-061918-13     | 6/19/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.034                |                  | 0.001 U                 |                     | 0.001 U               |                   |
|                          | 304-092118-19     | 9/21/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.034                |                  | 0.001 U                 |                     | 0.001 U               |                   |
|                          | 304-120418-16     | 12/4/2018   | 0.05 U                 |                    | 0.005 U               |                   | 0.027                |                  | 0.001 U                 |                     | 0.001 U               |                   |
| <i>Leachate</i>          |                   |             |                        |                    |                       |                   |                      |                  |                         |                     |                       |                   |
| <b>Leachate, Cell 1</b>  | 304-120318-07     | 12/3/2018   |                        | 0.096              |                       | 0.23              |                      | 1.7              |                         | 0.001 U             |                       | 0.001 U           |
| <b>Leachate, Cell 2A</b> | 304-120318-05     | 12/3/2018   |                        | 0.05 U             |                       | 0.120             |                      | 1.1              |                         | 0.001 U             |                       | 0.001 U           |
| <b>Leachate, Cell 2B</b> | 304-120318-03     | 12/3/2018   |                        | 0.072              |                       | 0.210             |                      | 1.3              |                         | 0.001 U             |                       | 0.001 U           |
| <b>Leachate, Cell 3A</b> | 304-120318-01     | 12/3/2018   |                        | 0.05 U             |                       | 0.076             |                      | 1                |                         | 0.001 U             |                       | 0.001 U           |
| <b>Leachate, Cell 4A</b> | 304-120318-09     | 12/3/2018   |                        | 0.066              |                       | 0.210             |                      | 1.6              |                         | 0.001 U             |                       | 0.001 U           |
| <b>Leachate, Cell 4B</b> | 304-120318-11     | 12/3/2018   |                        | 0.051              |                       | 0.160             |                      | 1.3              |                         | 0.001 U             |                       | 0.001 U           |
| <b>Leachate, Cell 5</b>  | 304-120318-17     | 12/3/2018   |                        | 0.05 U             |                       | 0.140             |                      | 1.2              |                         | 0.001 U             |                       | 0.001 U           |
| <b>Leachate, Cell 6</b>  | 304-032118-18     | 3/21/2018   |                        | 0.05 U             |                       | 0.130             |                      | 0.53             |                         | 0.001 U             |                       | 0.001 U           |
| <b>Leachate, Cell 6</b>  | 304-062018-20     | 6/20/2018   |                        | 0.05 U             |                       | 0.15              |                      | 0.75             |                         | 0.001 U             |                       | 0.0013            |
| <b>Leachate, Cell 6</b>  | 304-092118-20     | 9/21/2018   |                        | 0.05 U             |                       | 0.16              |                      | 0.81             |                         | 0.0017              |                       | 0.0027            |
| <b>Leachate, Cell 6</b>  | 304-120318-13     | 12/3/2018   |                        | 0.05 U             |                       | 0.16              |                      | 0.87             |                         | 0.001 U             |                       | 0.0015            |
| <i>Quality Control</i>   |                   |             |                        |                    |                       |                   |                      |                  |                         |                     |                       |                   |
| <b>QC, FB</b>            | 304-032018-17     | 3/20/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.005 U          |                         | 0.001 U             |                       | 0.001 U           |
|                          | 304-062018-19     | 6/20/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.005 U          |                         | 0.001 U             |                       | 0.001 U           |
|                          | 304-091918-13     | 9/19/2018   |                        | 0.05 U             |                       | 0.005 U           |                      | 0.005 U          |                         | 0.001 U             |                       | 0.001 U           |
|                          | 304-120518-26     | 12/5/2018   |                        | 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,<br>Dissolved | Chromium,<br>Total | Cobalt,<br>Dissolved | Cobalt,<br>Total | Copper,<br>Dissolved | Copper,<br>Total | Lead,<br>Dissolved | Lead, Total | Nickel,<br>Dissolved | Nickel,<br>Total |
|--------------------------|-------------------|-------------|------------------------|--------------------|----------------------|------------------|----------------------|------------------|--------------------|-------------|----------------------|------------------|
| <b>LDCS-4A</b>           | 304-031918-10     | 3/19/2018   | 0.005 U                |                    | 0.0012               |                  | 0.016                |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-061918-09     | 6/19/2018   | 0.005 U                |                    | 0.0028               |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-092018-15     | 9/20/2018   | 0.005 U                |                    | 0.0038               |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-120318-10     | 12/3/2018   | 0.005 U                |                    | 0.0033               |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
| <b>LDCS-4B</b>           | 304-032018-14     | 3/20/2018   | 0.005 U                |                    | 0.0017               |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-052118-LDCS4B | 5/21/2018   | 0.005 U                |                    | 0.0023               |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-061918-11     | 6/19/2018   | 0.005 U                |                    | 0.0017               |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-092118-18     | 9/21/2018   | 0.005 U                |                    | 0.0019               |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-120418-12     | 12/4/2018   | 0.005 U                |                    | 0.001                |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
| <b>LDCS-5</b>            | 304-032018-12     | 3/20/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-061918-15     | 6/19/2018   | 0.005 U                |                    | 0.002                |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-092018-14     | 9/20/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-120418-14     | 12/4/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
| <b>LDCS-6</b>            | 304-032018-15     | 3/20/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-061918-13     | 6/19/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-092118-19     | 9/21/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
|                          | 304-120418-16     | 12/4/2018   | 0.005 U                |                    | 0.001 U              |                  | 0.01 U               |                  | 0.002 U            |             | 0.02 U               |                  |
| <i>Leachate</i>          |                   |             |                        |                    |                      |                  |                      |                  |                    |             |                      |                  |
| <b>Leachate, Cell 1</b>  | 304-120318-07     | 12/3/2018   |                        | 0.59               |                      | 0.047            |                      | 0.021            |                    | 0.016       |                      | 1.0              |
| <b>Leachate, Cell 2A</b> | 304-120318-05     | 12/3/2018   |                        | 0.59               |                      | 0.05             |                      | 0.028            |                    | 0.022       |                      | 0.76             |
| <b>Leachate, Cell 2B</b> | 304-120318-03     | 12/3/2018   |                        | 0.54               |                      | 0.046            |                      | 0.04             |                    | 0.018       |                      | 0.56             |
| <b>Leachate, Cell 3A</b> | 304-120318-01     | 12/3/2018   |                        | 0.4                |                      | 0.038            |                      | 0.25             |                    | 0.017       |                      | 0.35             |
| <b>Leachate, Cell 4A</b> | 304-120318-09     | 12/3/2018   |                        | 0.79               |                      | 0.064            |                      | 0.06             |                    | 0.027       |                      | 1.0              |
| <b>Leachate, Cell 4B</b> | 304-120318-11     | 12/3/2018   |                        | 0.85               |                      | 0.049            |                      | 0.079            |                    | 0.022       |                      | 0.72             |
| <b>Leachate, Cell 5</b>  | 304-120318-17     | 12/3/2018   |                        | 0.6                |                      | 0.042            |                      | 0.058            |                    | 0.021       |                      | 0.62             |
| <b>Leachate, Cell 6</b>  | 304-032118-18     | 3/21/2018   |                        | 0.38               |                      | 0.035            |                      | 0.084            |                    | 0.058       |                      | 0.33             |
| <b>Leachate, Cell 6</b>  | 304-062018-20     | 6/20/2018   |                        | 0.69               |                      | 0.045            |                      | 0.066            |                    | 0.069       |                      | 0.44             |
| <b>Leachate, Cell 6</b>  | 304-092118-20     | 9/21/2018   |                        | 0.69               |                      | 0.048            |                      | 0.076            |                    | 0.1         |                      | 0.51             |
| <b>Leachate, Cell 6</b>  | 304-120318-13     | 12/3/2018   |                        | 0.79               |                      | 0.053            |                      | 0.094            |                    | 0.11        |                      | 0.59             |
| <i>Quality Control</i>   |                   |             |                        |                    |                      |                  |                      |                  |                    |             |                      |                  |
| <b>QC, FB</b>            | 304-032018-17     | 3/20/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                          | 304-062018-19     | 6/20/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                          | 304-091918-13     | 9/19/2018   |                        | 0.005 U            |                      | 0.001 U          |                      | 0.01 U           |                    | 0.002 U     |                      | 0.02 U           |
|                          | 304-120518-26     | 12/5/2018   |                        | 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,<br>Dissolved | Selenium,<br>Total | Silver,<br>Dissolved | Silver,<br>Total | Thallium,<br>Dissolved | Thallium,<br>Total | Vanadium,<br>Dissolved | Vanadium,<br>Total | Zinc,<br>Dissolved | Zinc, Total |
|--------------------------|-------------------|-------------|------------------------|--------------------|----------------------|------------------|------------------------|--------------------|------------------------|--------------------|--------------------|-------------|
| <b>LDCS-4A</b>           | 304-031918-10     | 3/19/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-061918-09     | 6/19/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-092018-15     | 9/20/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-120318-10     | 12/3/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.014              |             |
| <b>LDCS-4B</b>           | 304-032018-14     | 3/20/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-052118-LDCS4B | 5/21/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-061918-11     | 6/19/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-092118-18     | 9/21/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-120418-12     | 12/4/2018   |                        |                    |                      |                  |                        |                    | 0.005 U                |                    | 0.01 U             |             |
| <b>LDCS-5</b>            | 304-032018-12     | 3/20/2018   | 0.005 U                |                    | 0.005 U              |                  | 0.005 U                |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-061918-15     | 6/19/2018   | 0.005 U                |                    | 0.005 U              |                  | 0.005 U                |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-092018-14     | 9/20/2018   | 0.005 U                |                    | 0.005 U              |                  | 0.005 U                |                    | 0.005 U                |                    | 0.01 U             |             |
|                          | 304-120418-14     | 12/4/2018   | 0.005 U                |                    | 0.005 U              |                  | 0.005 U                |                    | 0.005 U                |                    | 0.01 U             |             |
| <b>LDCS-6</b>            | 304-032018-15     | 3/20/2018   | 0.005 U                |                    | 0.005 U              |                  | 0.005 U                |                    | 0.005 U                |                    | 0.012              |             |
|                          | 304-061918-13     | 6/19/2018   | 0.005 U                |                    | 0.005 U              |                  | 0.005 U                |                    | 0.005 U                |                    | 0.013              |             |
|                          | 304-092118-19     | 9/21/2018   | 0.005 U                |                    | 0.005 U              |                  | 0.005 U                |                    | 0.005 U                |                    | 0.017              |             |
|                          | 304-120418-16     | 12/4/2018   | 0.005 U                |                    | 0.005 U              |                  | 0.005 U                |                    | 0.005 U                |                    | 0.012              |             |
| <i>Leachate</i>          |                   |             |                        |                    |                      |                  |                        |                    |                        |                    |                    |             |
| <b>Leachate, Cell 1</b>  | 304-120318-07     | 12/3/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.34               |                    | 0.061       |
| <b>Leachate, Cell 2A</b> | 304-120318-05     | 12/3/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.360              |                    | 0.085       |
| <b>Leachate, Cell 2B</b> | 304-120318-03     | 12/3/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.350              |                    | 0.13        |
| <b>Leachate, Cell 3A</b> | 304-120318-01     | 12/3/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.180              |                    | 0.130       |
| <b>Leachate, Cell 4A</b> | 304-120318-09     | 12/3/2018   |                        | 0.0062             |                      | 0.005 U          |                        | 0.005 U            |                        | 0.460              |                    | 0.12        |
| <b>Leachate, Cell 4B</b> | 304-120318-11     | 12/3/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.160              |                    | 0.120       |
| <b>Leachate, Cell 5</b>  | 304-120318-17     | 12/3/2018   |                        | 0.0055             |                      | 0.005 U          |                        | 0.005 U            |                        | 0.180              |                    | 0.100       |
| <b>Leachate, Cell 6</b>  | 304-032118-18     | 3/21/2018   |                        | 0.017              |                      | 0.005 U          |                        | 0.005 U            |                        | 0.081              |                    | 3.000       |
| <b>Leachate, Cell 6</b>  | 304-062018-20     | 6/20/2018   |                        | 0.005              |                      | 0.005 U          |                        | 0.005 U            |                        | 0.120              |                    | 0.960       |
| <b>Leachate, Cell 6</b>  | 304-092118-20     | 9/21/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.120              |                    | 0.99        |
| <b>Leachate, Cell 6</b>  | 304-120318-13     | 12/3/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 1.1         |
| <i>Quality Control</i>   |                   |             |                        |                    |                      |                  |                        |                    |                        |                    |                    |             |
| <b>QC, FB</b>            | 304-032018-17     | 3/20/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                          | 304-062018-19     | 6/20/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                          | 304-091918-13     | 9/19/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |
|                          | 304-120518-26     | 12/5/2018   |                        | 0.005 U            |                      | 0.005 U          |                        | 0.005 U            |                        | 0.005 U            |                    | 0.01 U      |

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| Location                     | Sample Number | Sample Date | Calcium,<br>Dissolved | Calcium, Total | Iron, Dissolved | Iron, Total | Magnesium,<br>Dissolved | Magnesium,<br>Total | Manganese,<br>Dissolved | Manganese,<br>Total | Potassium,<br>Dissolved | Potassium,<br>Total | Sodium,<br>Dissolved | Sodium, Total |
|------------------------------|---------------|-------------|-----------------------|----------------|-----------------|-------------|-------------------------|---------------------|-------------------------|---------------------|-------------------------|---------------------|----------------------|---------------|
| <i>Monitoring Wells</i>      |               |             |                       |                |                 |             |                         |                     |                         |                     |                         |                     |                      |               |
| <b>MW-1A</b>                 | 304-031918-01 | 3/19/2018   | 12                    |                | 1.1             |             | 7.0                     |                     | 0.22                    |                     | 2.8                     |                     | 9.2                  |               |
|                              | 304-061818-02 | 6/18/2018   | 13                    |                | 1.3             |             | 8.2                     |                     | 0.25                    |                     | 3.6                     |                     | 11                   |               |
|                              | 304-091718-01 | 9/17/2018   | 14                    |                | 1.6             |             | 9.0                     |                     | 0.25                    |                     | 3.2                     |                     | 11                   |               |
|                              | 304-120518-22 | 12/5/2018   | 14                    |                | 1.6             |             | 9.1                     |                     | 0.25                    |                     | 3.8                     |                     | 15                   |               |
|                              | 304-120518-24 | 12/5/2018   | 14                    |                | 1.6             |             | 9.2                     |                     | 0.25                    |                     | 3.9                     |                     | 15                   |               |
| <b>MW-2A</b>                 | 304-031918-03 | 3/19/2018   | 19                    |                | 0.62            |             | 11                      |                     | 0.31                    |                     | 3.0                     |                     | 15                   |               |
|                              | 304-061818-04 | 6/18/2018   | 18                    |                | 0.62            |             | 9.7                     |                     | 0.31                    |                     | 3.1                     |                     | 15                   |               |
|                              | 304-061818-06 | 6/18/2018   | 19                    |                | 0.65            |             | 10                      |                     | 0.29                    |                     | 3.3                     |                     | 16                   |               |
|                              | 304-091718-02 | 9/17/2018   | 19                    |                | 0.68            |             | 10                      |                     | 0.30                    |                     | 2.6                     |                     | 15                   |               |
|                              | 304-091718-03 | 9/17/2018   | 19                    |                | 0.70            |             | 11                      |                     | 0.28                    |                     | 2.6                     |                     | 15                   |               |
|                              | 304-120418-18 | 12/4/2018   | 25                    |                | 0.95            |             | 13                      |                     | 0.38                    |                     | 3.6                     |                     | 19                   |               |
| <b>MW-3</b>                  | 304-031918-05 | 3/19/2018   | 38                    |                | 0.1 U           |             | 17                      |                     | 0.35                    |                     | 4.1                     |                     | 15                   |               |
|                              | 304-061818-08 | 6/18/2018   | 30                    |                | 0.1 U           |             | 13                      |                     | 0.30                    |                     | 3.7                     |                     | 13                   |               |
|                              | 304-091718-04 | 9/17/2018   | 32                    |                | 0.69            |             | 14                      |                     | 0.26                    |                     | 3.2                     |                     | 12                   |               |
|                              | 304-120418-15 | 12/4/2018   | 32                    |                | 0.1 U           |             | 14                      |                     | 0.26                    |                     | 3.5                     |                     | 13                   |               |
| <b>MW-4</b>                  | 304-032218-20 | 3/22/2018   | 27                    |                | 0.1 U           |             | 15                      |                     | 0.21                    |                     | 5.6                     |                     | 14                   |               |
|                              | 304-062018-17 | 6/20/2018   | 24                    |                | 0.12            |             | 14                      |                     | 0.21                    |                     | 4.8                     |                     | 11                   |               |
|                              | 304-091918-11 | 9/19/2018   | 27                    |                | 0.1 U           |             | 14                      |                     | 0.22                    |                     | 5.2                     |                     | 12                   |               |
|                              | 304-120518-20 | 12/5/2018   | 31                    |                | 0.1 U           |             | 16                      |                     | 0.24                    |                     | 5.7                     |                     | 14                   |               |
| <b>MW-5A</b>                 | 304-032018-11 | 3/20/2018   | 29                    |                | 0.13            |             | 12                      |                     | 0.23                    |                     | 4.6                     |                     | 46                   |               |
|                              | 304-061918-14 | 6/19/2018   | 23                    |                | 0.10            |             | 9.9                     |                     | 0.17                    |                     | 3.8                     |                     | 33                   |               |
|                              | 304-091718-05 | 9/17/2018   | 26                    |                | 0.1 U           |             | 11                      |                     | 0.17                    |                     | 3.3                     |                     | 15                   |               |
|                              | 304-120418-21 | 12/4/2018   | 26                    |                | 0.1 U           |             | 11                      |                     | 0.18                    |                     | 3.6                     |                     | 16                   |               |
| <b>MW-6</b>                  | 304-032018-13 | 3/20/2018   | 27                    |                | 0.1 U           |             | 13                      |                     | 0.16                    |                     | 4.5                     |                     | 11                   |               |
|                              | 304-061918-12 | 6/19/2018   | 25                    |                | 0.1 U           |             | 12                      |                     | 0.17                    |                     | 4.1                     |                     | 9.5                  |               |
|                              | 304-091818-06 | 9/18/2018   | 27                    |                | 0.1 U           |             | 13                      |                     | 0.17                    |                     | 4.1                     |                     | 10                   |               |
|                              | 304-120418-19 | 12/4/2018   | 31                    |                | 0.1 U           |             | 13                      |                     | 0.20                    |                     | 4.5                     |                     | 11                   |               |
| <b>MW-7</b>                  | 304-031918-07 | 3/19/2018   | 31                    |                | 0.17            |             | 22                      |                     | 0.25                    |                     | 5.5                     |                     | 15                   |               |
|                              | 304-031918-09 | 3/19/2018   | 30                    |                | 0.18            |             | 21                      |                     | 0.24                    |                     | 5.5                     |                     | 15                   |               |
|                              | 304-061918-16 | 6/19/2018   | 29                    |                | 0.20            |             | 21                      |                     | 0.24                    |                     | 4.9                     |                     | 14                   |               |
|                              | 304-091818-07 | 9/18/2018   | 27                    |                | 0.17            |             | 21                      |                     | 0.24                    |                     | 4.6                     |                     | 12                   |               |
|                              | 304-120418-25 | 12/4/2018   | 29                    |                | 0.15            |             | 19                      |                     | 0.22                    |                     | 5.0                     |                     | 12                   |               |
| <b>MW-9</b>                  | 304-032118-19 | 3/21/2018   | 9.8                   |                | 0.1 U           |             | 6.7                     |                     | 0.005 U                 |                     | 2.3                     |                     | 8.0                  |               |
|                              | 304-061918-18 | 6/19/2018   | 9.1                   |                | 0.1 U           |             | 6.3                     |                     | 0.005 U                 |                     | 2 U                     |                     | 7.4                  |               |
|                              | 304-091918-12 | 9/19/2018   | 10                    |                | 0.1 U           |             | 6.7                     |                     | 0.005 U                 |                     | 2 U                     |                     | 7.5                  |               |
|                              | 304-120418-27 | 12/4/2018   | 10                    |                | 0.1 U           |             | 6.7                     |                     | 0.005 U                 |                     | 2 U                     |                     | 7.5                  |               |
| <b>MW-10</b>                 | 304-032018-16 | 3/20/2018   | 23                    |                | 0.1 U           |             | 10                      |                     | 0.005 U                 |                     | 2.1                     |                     | 13                   |               |
|                              | 304-061818-10 | 6/18/2018   | 23                    |                | 0.43            |             | 9.7                     |                     | 0.005 U                 |                     | 2.2                     |                     | 14                   |               |
|                              | 304-091818-08 | 9/18/2018   | 22                    |                | 0.1 U           |             | 10                      |                     | 0.005 U                 |                     | 2 U                     |                     | 14                   |               |
|                              | 304-120418-23 | 12/4/2018   | 23                    |                | 0.59            |             | 9.8                     |                     | 0.005 U                 |                     | 2.0                     |                     | 14                   |               |
| <i>Leak Detection System</i> |               |             |                       |                |                 |             |                         |                     |                         |                     |                         |                     |                      |               |
| <b>LDCS-1</b>                | 304-031918-08 | 3/19/2018   | 33                    |                | 0.26            |             | 13                      |                     | 1.3                     |                     | 5.1                     |                     | 18                   |               |
|                              | 304-061818-07 | 6/18/2018   | 36                    |                | 0.48            |             | 14                      |                     | 1.5                     |                     | 5.3                     |                     | 18                   |               |
|                              | 304-091818-10 | 9/18/2018   | 51                    |                | 0.63            |             | 22                      |                     | 2.4                     |                     | 5.6                     |                     | 20                   |               |
|                              | 304-120318-08 | 12/3/2018   | 47                    |                | 0.13            |             | 17                      |                     | 2.0                     |                     | 5.6                     |                     | 19                   |               |

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| Location                 | Sample Number     | Sample Date | Calcium,<br>Dissolved | Calcium, Total | Iron, Dissolved | Iron, Total | Magnesium,<br>Dissolved | Magnesium,<br>Total | Manganese,<br>Dissolved | Manganese,<br>Total | Potassium,<br>Dissolved | Potassium,<br>Total | Sodium,<br>Dissolved | Sodium, Total |
|--------------------------|-------------------|-------------|-----------------------|----------------|-----------------|-------------|-------------------------|---------------------|-------------------------|---------------------|-------------------------|---------------------|----------------------|---------------|
| <b>LDCS-2A</b>           | 304-031918-06     | 3/19/2018   | 83                    |                | 0.1 U           |             | 31                      |                     | 1.8                     |                     | 9.8                     |                     | 33                   |               |
|                          | 304-061818-05     | 6/18/2018   | 80                    |                | 0.16            |             | 30                      |                     | 1.7                     |                     | 9.6                     |                     | 33                   |               |
|                          | 304-091818-09     | 9/18/2018   | 84                    |                | 0.1 U           |             | 33                      |                     | 1.6                     |                     | 8.6                     |                     | 33                   |               |
|                          | 304-120318-06     | 12/3/2018   | 96                    |                | 0.1 U           |             | 34                      |                     | 0.26                    |                     | 9.8                     |                     | 31                   |               |
| <b>LDCS-2B</b>           | 304-031918-04     | 3/19/2018   | 89                    |                | 0.1 U           |             | 28                      |                     | 0.014                   |                     | 7.5                     |                     | 23                   |               |
|                          | 304-061818-03     | 6/18/2018   | 89                    |                | 0.1 U           |             | 27                      |                     | 0.032                   |                     | 7.1                     |                     | 21                   |               |
|                          | 304-092018-17     | 9/20/2018   | 92                    |                | 0.1 U           |             | 31                      |                     | 0.036                   |                     | 7.6                     |                     | 22                   |               |
|                          | 304-120318-04     | 12/3/2018   | 100                   |                | 0.1 U           |             | 30                      |                     | 0.027                   |                     | 6.6                     |                     | 20                   |               |
| <b>LDCS-3A</b>           | 304-031918-02     | 3/19/2018   | 93                    |                | 0.1 U           |             | 33                      |                     | 0.74                    |                     | 4.8                     |                     | 22                   |               |
|                          | 304-061818-01     | 6/18/2018   | 87                    |                | 0.1 U           |             | 37                      |                     | 0.50                    |                     | 5.8                     |                     | 22                   |               |
|                          | 304-092018-16     | 9/20/2018   | 87                    |                | 0.1 U           |             | 39                      |                     | 0.27                    |                     | 6.3                     |                     | 24                   |               |
|                          | 304-120318-02     | 12/3/2018   | 110                   |                | 0.1 U           |             | 37                      |                     | 0.73                    |                     | 5.6                     |                     | 23                   |               |
| <b>LDCS-4A</b>           | 304-031918-10     | 3/19/2018   | 75                    |                | 0.13            |             | 40                      |                     | 0.62                    |                     | 6.7                     |                     | 30                   |               |
|                          | 304-061918-09     | 6/19/2018   | 85                    |                | 1.1             |             | 43                      |                     | 1.8                     |                     | 6.5                     |                     | 32                   |               |
|                          | 304-092018-15     | 9/20/2018   | 90                    |                | 1.1             |             | 40                      |                     | 1.5                     |                     | 6.8                     |                     | 30                   |               |
|                          | 304-120318-10     | 12/3/2018   | 76                    |                | 1.3             |             | 36                      |                     | 1.5                     |                     | 5.8                     |                     | 21                   |               |
| <b>LDCS-4B</b>           | 304-032018-14     | 3/20/2018   | 120                   |                | 0.1 U           |             | 58                      |                     | 1.5                     |                     | 7.1                     |                     | 29                   |               |
|                          | 304-052118-LDCS4B | 5/21/2018   | 130                   |                | 0.1 U           |             | 81                      |                     | 2.2                     |                     | 6.2                     |                     | 27                   |               |
|                          | 304-061918-11     | 6/19/2018   | 140                   |                | 0.1 U           |             | 47                      |                     | 1.5                     |                     | 6.2                     |                     | 42                   |               |
|                          | 304-092118-18     | 9/21/2018   | 140                   |                | 0.42            |             | 46                      |                     | 1.5                     |                     | 6.9                     |                     | 44                   |               |
|                          | 304-120418-12     | 12/4/2018   | 92                    |                | 0.34            |             | 45                      |                     | 1.5                     |                     | 8.1                     |                     | 29                   |               |
| <b>LDCS-5</b>            | 304-032018-12     | 3/20/2018   | 77                    |                | 0.22            |             | 42                      |                     | 1.50                    |                     | 8.4                     |                     | 38                   |               |
|                          | 304-061918-15     | 6/19/2018   | 78                    |                | 0.85            |             | 46                      |                     | 2.6                     |                     | 8.4                     |                     | 34                   |               |
|                          | 304-092018-14     | 9/20/2018   | 85                    |                | 0.21            |             | 50                      |                     | 1.6                     |                     | 9.0                     |                     | 32                   |               |
|                          | 304-120418-14     | 12/4/2018   | 65                    |                | 0.63            |             | 33                      |                     | 1.3                     |                     | 6.7                     |                     | 23                   |               |
| <b>LDCS-6</b>            | 304-032018-15     | 3/20/2018   | 130                   |                | 0.1 U           |             | 58                      |                     | 0.51                    |                     | 4.3                     |                     | 53                   |               |
|                          | 304-061918-13     | 6/19/2018   | 140                   |                | 0.1 U           |             | 67                      |                     | 0.73                    |                     | 4.0                     |                     | 56                   |               |
|                          | 304-092118-19     | 9/21/2018   | 120                   |                | 0.1 U           |             | 62                      |                     | 0.86                    |                     | 4.6                     |                     | 46                   |               |
|                          | 304-120418-16     | 12/4/2018   | 140                   |                | 0.1 U           |             | 53                      |                     | 0.73                    |                     | 4.0                     |                     | 46                   |               |
| <i>Leachate</i>          |                   |             |                       |                |                 |             |                         |                     |                         |                     |                         |                     |                      |               |
| <b>Leachate, Cell 1</b>  | 304-120318-07     | 12/3/2018   |                       | 35             |                 | 9.3         |                         | 93                  |                         | 0.27                |                         | 750                 |                      | 5400          |
| <b>Leachate, Cell 2A</b> | 304-120318-05     | 12/3/2018   |                       | 18             |                 | 7.6         |                         | 31                  |                         | 0.098               |                         | 660                 |                      | 4600          |
| <b>Leachate, Cell 2B</b> | 304-120318-03     | 12/3/2018   |                       | 38             |                 | 9.2         |                         | 54                  |                         | 0.25                |                         | 490                 |                      | 3100          |
| <b>Leachate, Cell 3A</b> | 304-120318-01     | 12/3/2018   |                       | 69             |                 | 11          |                         | 62                  |                         | 0.70                |                         | 590                 |                      | 2800          |
| <b>Leachate, Cell 4A</b> | 304-120318-09     | 12/3/2018   |                       | 29             |                 | 9.6         |                         | 51                  |                         | 0.24                |                         | 740                 |                      | 4600          |
| <b>Leachate, Cell 4B</b> | 304-120318-11     | 12/3/2018   |                       | 39             |                 | 5.9         |                         | 51                  |                         | 0.33                |                         | 710                 |                      | 3500          |
| <b>Leachate, Cell 5</b>  | 304-120318-17     | 12/3/2018   |                       | 36             |                 | 4.9         |                         | 50                  |                         | 0.29                |                         | 770                 |                      | 3400          |
| <b>Leachate, Cell 6</b>  | 304-032118-18     | 3/21/2018   |                       | 300            |                 | 20          |                         | 250                 |                         | 4.0                 |                         | 730                 |                      | 1900          |
| <b>Leachate, Cell 6</b>  | 304-062018-20     | 6/20/2018   |                       | 190            |                 | 10          |                         | 230                 |                         | 2.4                 |                         | 940                 |                      | 2300          |
| <b>Leachate, Cell 6</b>  | 304-092118-20     | 9/21/2018   |                       | 120            |                 | 7.0         |                         | 200                 |                         | 1.1                 |                         | 960                 |                      | 1800          |
| <b>Leachate, Cell 6</b>  | 304-120318-13     | 12/3/2018   |                       | 110            |                 | 7.0         |                         | 130                 |                         | 0.023               |                         | 760                 |                      | 2500          |
| <i>Quality Control</i>   |                   |             |                       |                |                 |             |                         |                     |                         |                     |                         |                     |                      |               |
| <b>QC, FB</b>            | 304-032018-17     | 3/20/2018   | 0.26                  |                | 0.1 U           |             | 0.1 U                   |                     | 0.005 U                 |                     | 2 U                     |                     | 1 U                  |               |
|                          | 304-062018-19     | 6/20/2018   | 0.41                  |                | 0.1 U           |             | 0.1 U                   |                     | 0.005 U                 |                     | 2 U                     |                     | 1.1                  |               |
|                          | 304-091918-13     | 9/19/2018   | 1.2                   |                | 0.1 U           |             | 0.38                    |                     | 0.005 U                 |                     | 2 U                     |                     | 1.5                  |               |
|                          | 304-120518-26     | 12/5/2018   | 1.3                   |                | 0.1 U           |             | 0.38                    |                     | 0.005 U                 |                     | 2 U                     |                     | 1.8                  |               |

**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) |
|-------------------------|---------------|-------------|---------------------------|-----------------------|---------------------------|-----------------------|--------------------|--------------------|------------------------|-----------------------------|-------------------|---------------------|--------------------|---------------------|---------------------|------------------|
| <i>Monitoring Wells</i> |               |             |                           |                       |                           |                       |                    |                    |                        |                             |                   |                     |                    |                     |                     |                  |
| <b>MW-1A</b>            | 304-031918-01 | 3/19/2018   | 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              |
|                         | 304-061818-02 | 6/18/2018   | 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              |
|                         | 304-091718-01 | 9/17/2018   | 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              |
|                         | 304-120518-22 | 12/5/2018   | 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              |
|                         | 304-120518-24 | 12/5/2018   | 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              |
| <b>MW-2A</b>            | 304-031918-03 | 3/19/2018   | 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              |
|                         | 304-061818-04 | 6/18/2018   | 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              |
|                         | 304-061818-06 | 6/18/2018   | 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              |
|                         | 304-091718-02 | 9/17/2018   | 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              |
|                         | 304-091718-03 | 9/17/2018   | 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              |
|                         | 304-120418-18 | 12/4/2018   | 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              |
| <b>MW-3</b>             | 304-031918-05 | 3/19/2018   | 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              |
|                         | 304-061818-08 | 6/18/2018   | 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              |
|                         | 304-091718-04 | 9/17/2018   | 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              |
|                         | 304-120418-15 | 12/4/2018   | 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              |
| <b>MW-4</b>             | 304-032218-20 | 3/22/2018   | 0.5 U                     | 0.5 U                 | 0.5 U                     | 0.5 U                 | 0.5 U              | 0.5 U              | 1 U                    | 2 U                         | 1 U               | 0.5 U               | 0.5 U              | 0.5 U               | 0.5 U               | 10               |
|                         | 304-062018-17 | 6/20/2018   | 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              |
|                         | 304-091918-11 | 9/19/2018   | 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              |
|                         | 304-120518-20 | 12/5/2018   | 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              |
| <b>MW-5A</b>            | 304-032018-11 | 3/20/2018   | 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              |
|                         | 304-061918-14 | 6/19/2018   | 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              |
|                         | 304-091718-05 | 9/17/2018   | 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              |
|                         | 304-120418-21 | 12/4/2018   | 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 |
|-------------------------|---------------|-------------|------------|-----------------------------|---------|---------------|---------|--------------------|----------------------|-----------|--------------|------------------|----------------------|---------------|--------------|------------|---------------|
| <i>Monitoring Wells</i> |               |             |            |                             |         |               |         |                    |                      |           |              |                  |                      |               |              |            |               |
| <b>MW-1A</b>            | 304-031918-01 | 3/19/2018   | 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         |
|                         | 304-061818-02 | 6/18/2018   | 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         |
|                         | 304-091718-01 | 9/17/2018   | 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         |
|                         | 304-120518-22 | 12/5/2018   | 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         |
|                         | 304-120518-24 | 12/5/2018   | 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         |
| <b>MW-2A</b>            | 304-031918-03 | 3/19/2018   | 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         |
|                         | 304-061818-04 | 6/18/2018   | 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         |
|                         | 304-061818-06 | 6/18/2018   | 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         |
|                         | 304-091718-02 | 9/17/2018   | 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         |
|                         | 304-091718-03 | 9/17/2018   | 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         |
|                         | 304-120418-18 | 12/4/2018   | 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         |
| <b>MW-3</b>             | 304-031918-05 | 3/19/2018   | 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         |
|                         | 304-061818-08 | 6/18/2018   | 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         |
|                         | 304-091718-04 | 9/17/2018   | 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         |
|                         | 304-120418-15 | 12/4/2018   | 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         |
| <b>MW-4</b>             | 304-032218-20 | 3/22/2018   | 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         |
|                         | 304-062018-17 | 6/20/2018   | 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         |
|                         | 304-091918-11 | 9/19/2018   | 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         |
|                         | 304-120518-20 | 12/5/2018   | 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         |
| <b>MW-5A</b>            | 304-032018-11 | 3/20/2018   | 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         |
|                         | 304-061918-14 | 6/19/2018   | 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         |
|                         | 304-091718-05 | 9/17/2018   | 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         |
|                         | 304-120418-21 | 12/4/2018   | 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 |
|-------------------------|---------------|-------------|------------------------|-------------------------|----------------------|----------------|--------------|-------------|--------------------|---------------------|----------|---------|-------------------|---------|--------------------------|---------------------------|-----------------------------|
| <i>Monitoring Wells</i> |               |             |                        |                         |                      |                |              |             |                    |                     |          |         |                   |         |                          |                           |                             |
| <b>MW-1A</b>            | 304-031918-01 | 3/19/2018   | 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                         |
|                         | 304-061818-02 | 6/18/2018   | 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                         |
|                         | 304-091718-01 | 9/17/2018   | 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                         |
|                         | 304-120518-22 | 12/5/2018   | 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                         |
|                         | 304-120518-24 | 12/5/2018   | 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                         |
| <b>MW-2A</b>            | 304-031918-03 | 3/19/2018   | 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                         |
|                         | 304-061818-04 | 6/18/2018   | 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                         |
|                         | 304-061818-06 | 6/18/2018   | 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                         |
|                         | 304-091718-02 | 9/17/2018   | 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                         |
|                         | 304-091718-03 | 9/17/2018   | 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                         |
|                         | 304-120418-18 | 12/4/2018   | 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                         |
| <b>MW-3</b>             | 304-031918-05 | 3/19/2018   | 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                         |
|                         | 304-061818-08 | 6/18/2018   | 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                         |
|                         | 304-091718-04 | 9/17/2018   | 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                         |
|                         | 304-120418-15 | 12/4/2018   | 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                         |
| <b>MW-4</b>             | 304-032218-20 | 3/22/2018   | 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                         |
|                         | 304-062018-17 | 6/20/2018   | 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                         |
|                         | 304-091918-11 | 9/19/2018   | 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                         |
|                         | 304-120518-20 | 12/5/2018   | 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                         |
| <b>MW-5A</b>            | 304-032018-11 | 3/20/2018   | 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                         |
|                         | 304-061918-14 | 6/19/2018   | 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                         |
|                         | 304-091718-05 | 9/17/2018   | 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                         |
|                         | 304-120418-21 | 12/4/2018   | 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 |
|-------------------------|---------------|-------------|-----------------|------------------------|---------------|----------------|
| <i>Monitoring Wells</i> |               |             |                 |                        |               |                |
| <b>MW-1A</b>            | 304-031918-01 | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-061818-02 | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-091718-01 | 9/17/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-120518-22 | 12/5/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-120518-24 | 12/5/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>MW-2A</b>            | 304-031918-03 | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-061818-04 | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-061818-06 | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-091718-02 | 9/17/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-091718-03 | 9/17/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-120418-18 | 12/4/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>MW-3</b>             | 304-031918-05 | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-061818-08 | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-091718-04 | 9/17/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-120418-15 | 12/4/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>MW-4</b>             | 304-032218-20 | 3/22/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-062018-17 | 6/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-091918-11 | 9/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-120518-20 | 12/5/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>MW-5A</b>            | 304-032018-11 | 3/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-061918-14 | 6/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-091718-05 | 9/17/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                         | 304-120418-21 | 12/4/2018   | 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) |
|------------------------------|---------------|-------------|---------------------------|-----------------------|---------------------------|-----------------------|--------------------|--------------------|------------------------|-----------------------------|-------------------|---------------------|--------------------|---------------------|---------------------|------------------|
| <b>MW-6</b>                  | 304-032018-13 | 3/20/2018   | 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              |
|                              | 304-061918-12 | 6/19/2018   | 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              |
|                              | 304-091818-06 | 9/18/2018   | 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              |
|                              | 304-120418-19 | 12/4/2018   | 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              |
| <b>MW-7</b>                  | 304-031918-07 | 3/19/2018   | 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              |
|                              | 304-031918-09 | 3/19/2018   | 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              |
|                              | 304-061918-16 | 6/19/2018   | 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              |
|                              | 304-091818-07 | 9/18/2018   | 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              |
|                              | 304-120418-25 | 12/4/2018   | 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              |
| <b>MW-9</b>                  | 304-032118-19 | 3/21/2018   | 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              |
|                              | 304-061918-18 | 6/19/2018   | 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              |
|                              | 304-091918-12 | 9/19/2018   | 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              |
|                              | 304-120418-27 | 12/4/2018   | 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              |
| <b>MW-10</b>                 | 304-032018-16 | 3/20/2018   | 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              |
|                              | 304-061818-10 | 6/18/2018   | 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              |
|                              | 304-091818-08 | 9/18/2018   | 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              |
|                              | 304-120418-23 | 12/4/2018   | 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              |
| <i>Leak Detection System</i> |               |             |                           |                       |                           |                       |                    |                    |                        |                             |                   |                     |                    |                     |                     |                  |
| <b>LDGS-1</b>                | 304-031918-08 | 3/19/2018   | 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              |
|                              | 304-061818-07 | 6/18/2018   | 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              |
|                              | 304-091818-10 | 9/18/2018   | 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              |
|                              | 304-120318-08 | 12/3/2018   | 0.5 U                     | 0.5 U                 | 0.5 U                     | 0.5 U                 | 0.5 U              | 0.5 U              | 1 U                    | 2 U                         | 1 U               | 0.5 U               | 0.5 U              | 0.5 U               | 0.5 U               | 6 U              |

**Groundwater Database - Appendix I VOCs**  
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| Location                     | Sample Number | Sample Date | 2-Hexanone | 4-Methyl-2-pentanone (MIBK) | Acetone | Acrylonitrile | Benzene | Bromochloromethane | Bromodichloromethane | Bromoform | Bromomethane | Carbon disulfide | Carbon tetrachloride | Chlorobenzene | Chloroethane | Chloroform | Chloromethane |
|------------------------------|---------------|-------------|------------|-----------------------------|---------|---------------|---------|--------------------|----------------------|-----------|--------------|------------------|----------------------|---------------|--------------|------------|---------------|
| <b>MW-6</b>                  | 304-032018-13 | 3/20/2018   | 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         |
|                              | 304-061918-12 | 6/19/2018   | 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         |
|                              | 304-091818-06 | 9/18/2018   | 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         |
|                              | 304-120418-19 | 12/4/2018   | 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         |
| <b>MW-7</b>                  | 304-031918-07 | 3/19/2018   | 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         |
|                              | 304-031918-09 | 3/19/2018   | 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         |
|                              | 304-061918-16 | 6/19/2018   | 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         |
|                              | 304-091818-07 | 9/18/2018   | 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         |
|                              | 304-120418-25 | 12/4/2018   | 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         |
| <b>MW-9</b>                  | 304-032118-19 | 3/21/2018   | 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         |
|                              | 304-061918-18 | 6/19/2018   | 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         |
|                              | 304-091918-12 | 9/19/2018   | 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         |
|                              | 304-120418-27 | 12/4/2018   | 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         |
| <b>MW-10</b>                 | 304-032018-16 | 3/20/2018   | 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         |
|                              | 304-061818-10 | 6/18/2018   | 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         |
|                              | 304-091818-08 | 9/18/2018   | 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         |
|                              | 304-120418-23 | 12/4/2018   | 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         |
| <i>Leak Detection System</i> |               |             |            |                             |         |               |         |                    |                      |           |              |                  |                      |               |              |            |               |
| <b>LDCS-1</b>                | 304-031918-08 | 3/19/2018   | 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         |
|                              | 304-061818-07 | 6/18/2018   | 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         |
|                              | 304-091818-10 | 9/18/2018   | 5 U        | 5 U                         | 17      | 5 U           | 0.5 U   | 0.5 U              | 0.5 U                | 0.5 U     | 0.5 U        | 0.5 U            | 0.5 U                | 0.5 U         | 0.5 U        | 0.5 U      | 0.5 U         |
|                              | 304-120318-08 | 12/3/2018   | 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 |
|------------------------------|---------------|-------------|------------------------|-------------------------|----------------------|----------------|--------------|-------------|--------------------|---------------------|----------|---------|-------------------|---------|--------------------------|---------------------------|-----------------------------|
| <b>MW-6</b>                  | 304-032018-13 | 3/20/2018   | 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                         |
|                              | 304-061918-12 | 6/19/2018   | 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                         |
|                              | 304-091818-06 | 9/18/2018   | 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                         |
|                              | 304-120418-19 | 12/4/2018   | 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                         |
| <b>MW-7</b>                  | 304-031918-07 | 3/19/2018   | 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                         |
|                              | 304-031918-09 | 3/19/2018   | 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                         |
|                              | 304-061918-16 | 6/19/2018   | 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                         |
|                              | 304-091818-07 | 9/18/2018   | 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                         |
|                              | 304-120418-25 | 12/4/2018   | 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                         |
| <b>MW-9</b>                  | 304-032118-19 | 3/21/2018   | 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                         |
|                              | 304-061918-18 | 6/19/2018   | 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                         |
|                              | 304-091918-12 | 9/19/2018   | 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                         |
|                              | 304-120418-27 | 12/4/2018   | 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                         |
| <b>MW-10</b>                 | 304-032018-16 | 3/20/2018   | 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                         |
|                              | 304-061818-10 | 6/18/2018   | 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                         |
|                              | 304-091818-08 | 9/18/2018   | 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                         |
|                              | 304-120418-23 | 12/4/2018   | 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                         |
| <i>Leak Detection System</i> |               |             |                        |                         |                      |                |              |             |                    |                     |          |         |                   |         |                          |                           |                             |
| <b>LDGS-1</b>                | 304-031918-08 | 3/19/2018   | 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                         |
|                              | 304-061818-07 | 6/18/2018   | 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                         |
|                              | 304-091818-10 | 9/18/2018   | 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                         |
|                              | 304-120318-08 | 12/3/2018   | 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 |
|------------------------------|---------------|-------------|-----------------|------------------------|---------------|----------------|
| <b>MW-6</b>                  | 304-032018-13 | 3/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-061918-12 | 6/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-091818-06 | 9/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-120418-19 | 12/4/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>MW-7</b>                  | 304-031918-07 | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-031918-09 | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-061918-16 | 6/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-091818-07 | 9/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-120418-25 | 12/4/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>MW-9</b>                  | 304-032118-19 | 3/21/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-061918-18 | 6/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-091918-12 | 9/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-120418-27 | 12/4/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>MW-10</b>                 | 304-032018-16 | 3/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-061818-10 | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-091818-08 | 9/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-120418-23 | 12/4/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <i>Leak Detection System</i> |               |             |                 |                        |               |                |
| <b>LDCS-1</b>                | 304-031918-08 | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-061818-07 | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-091818-10 | 9/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                              | 304-120318-08 | 12/3/2018   | 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) |
|----------------|-------------------|-------------|---------------------------|-----------------------|---------------------------|-----------------------|--------------------|--------------------|------------------------|-----------------------------|-------------------|---------------------|--------------------|---------------------|---------------------|------------------|
| <b>LDCS-2A</b> | 304-031918-06     | 3/19/2018   | 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               | 0.56                | 6 U              |
|                | 304-061818-05     | 6/18/2018   | 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               | 0.68                | 6 U              |
|                | 304-091818-09     | 9/18/2018   | 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              |
|                | 304-120318-06     | 12/3/2018   | 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              |
| <b>LDCS-2B</b> | 304-031918-04     | 3/19/2018   | 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              |
|                | 304-061818-03     | 6/18/2018   | 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              |
|                | 304-092018-17     | 9/20/2018   | 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              |
|                | 304-120318-04     | 12/3/2018   | 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              |
| <b>LDCS-3A</b> | 304-031918-02     | 3/19/2018   | 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              |
|                | 304-061818-01     | 6/18/2018   | 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              |
|                | 304-092018-16     | 9/20/2018   | 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              |
|                | 304-120318-02     | 12/3/2018   | 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              |
| <b>LDCS-4A</b> | 304-031918-10     | 3/19/2018   | 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              |
|                | 304-061918-09     | 6/19/2018   | 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              |
|                | 304-092018-15     | 9/20/2018   | 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              |
|                | 304-120318-10     | 12/3/2018   | 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              |
| <b>LDCS-4B</b> | 304-032018-14     | 3/20/2018   | 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              |
|                | 304-052118-LDCS4B | 5/21/2018   | 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              |
|                | 304-061918-11     | 6/19/2018   | 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              |
|                | 304-092118-18     | 9/21/2018   | 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              |
|                | 304-120418-12     | 12/4/2018   | 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              |
| <b>LDCS-5</b>  | 304-032018-12     | 3/20/2018   | 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              |
|                | 304-061918-15     | 6/19/2018   | 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              |
|                | 304-092018-14     | 9/20/2018   | 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              |
|                | 304-120418-14     | 12/4/2018   | 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 |
|----------------|-------------------|-------------|------------|-----------------------------|---------|---------------|---------|--------------------|----------------------|-----------|--------------|------------------|----------------------|---------------|--------------|------------|---------------|
| <b>LDCS-2A</b> | 304-031918-06     | 3/19/2018   | 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         |
|                | 304-061818-05     | 6/18/2018   | 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         |
|                | 304-091818-09     | 9/18/2018   | 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         |
|                | 304-120318-06     | 12/3/2018   | 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         |
| <b>LDCS-2B</b> | 304-031918-04     | 3/19/2018   | 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         |
|                | 304-061818-03     | 6/18/2018   | 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         |
|                | 304-092018-17     | 9/20/2018   | 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         |
|                | 304-120318-04     | 12/3/2018   | 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         |
| <b>LDCS-3A</b> | 304-031918-02     | 3/19/2018   | 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         |
|                | 304-061818-01     | 6/18/2018   | 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         |
|                | 304-092018-16     | 9/20/2018   | 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         |
|                | 304-120318-02     | 12/3/2018   | 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         |
| <b>LDCS-4A</b> | 304-031918-10     | 3/19/2018   | 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         |
|                | 304-061918-09     | 6/19/2018   | 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         |
|                | 304-092018-15     | 9/20/2018   | 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         |
|                | 304-120318-10     | 12/3/2018   | 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         |
| <b>LDCS-4B</b> | 304-032018-14     | 3/20/2018   | 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         |
|                | 304-052118-LDCS4B | 5/21/2018   | 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         |
|                | 304-061918-11     | 6/19/2018   | 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         |
|                | 304-092118-18     | 9/21/2018   | 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         |
|                | 304-120418-12     | 12/4/2018   | 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         |
| <b>LDCS-5</b>  | 304-032018-12     | 3/20/2018   | 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         |
|                | 304-061918-15     | 6/19/2018   | 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         |
|                | 304-092018-14     | 9/20/2018   | 5 U        | 5 U                         | 24      | 5 U           | 0.5 U   | 0.5 U              | 0.5 U                | 0.5 U     | 0.5 U        | 0.5 U            | 0.5 U                | 0.5 U         | 0.5 U        | 0.5 U      | 0.5 U         |
|                | 304-120418-14     | 12/4/2018   | 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 |
|----------------|-------------------|-------------|------------------------|-------------------------|----------------------|----------------|--------------|-------------|--------------------|---------------------|----------|---------|-------------------|---------|--------------------------|---------------------------|-----------------------------|
| <b>LDCS-2A</b> | 304-031918-06     | 3/19/2018   | 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                         |
|                | 304-061818-05     | 6/18/2018   | 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                         |
|                | 304-091818-09     | 9/18/2018   | 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                         |
|                | 304-120318-06     | 12/3/2018   | 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                         |
| <b>LDCS-2B</b> | 304-031918-04     | 3/19/2018   | 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                         |
|                | 304-061818-03     | 6/18/2018   | 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                         |
|                | 304-092018-17     | 9/20/2018   | 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                         |
|                | 304-120318-04     | 12/3/2018   | 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                         |
| <b>LDCS-3A</b> | 304-031918-02     | 3/19/2018   | 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                         |
|                | 304-061818-01     | 6/18/2018   | 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                         |
|                | 304-092018-16     | 9/20/2018   | 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                         |
|                | 304-120318-02     | 12/3/2018   | 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                         |
| <b>LDCS-4A</b> | 304-031918-10     | 3/19/2018   | 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                         |
|                | 304-061918-09     | 6/19/2018   | 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                         |
|                | 304-092018-15     | 9/20/2018   | 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                         |
|                | 304-120318-10     | 12/3/2018   | 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                         |
| <b>LDCS-4B</b> | 304-032018-14     | 3/20/2018   | 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                         |
|                | 304-052118-LDCS4B | 5/21/2018   | 0.5 U                  | 0.5 U                   | 0.5 U                | 0.5 U          | 1 U          | 2 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                         |
|                | 304-061918-11     | 6/19/2018   | 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                         |
|                | 304-092118-18     | 9/21/2018   | 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                         |
|                | 304-120418-12     | 12/4/2018   | 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                         |
| <b>LDCS-5</b>  | 304-032018-12     | 3/20/2018   | 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                         |
|                | 304-061918-15     | 6/19/2018   | 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                         |
|                | 304-092018-14     | 9/20/2018   | 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                         |
|                | 304-120418-14     | 12/4/2018   | 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 |
|----------------|-------------------|-------------|-----------------|------------------------|---------------|----------------|
| <b>LDCS-2A</b> | 304-031918-06     | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-061818-05     | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-091818-09     | 9/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-120318-06     | 12/3/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>LDCS-2B</b> | 304-031918-04     | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-061818-03     | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-092018-17     | 9/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-120318-04     | 12/3/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>LDCS-3A</b> | 304-031918-02     | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-061818-01     | 6/18/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-092018-16     | 9/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-120318-02     | 12/3/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>LDCS-4A</b> | 304-031918-10     | 3/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-061918-09     | 6/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-092018-15     | 9/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-120318-10     | 12/3/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>LDCS-4B</b> | 304-032018-14     | 3/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-052118-LDCS4B | 5/21/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-061918-11     | 6/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-092118-18     | 9/21/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-120418-12     | 12/4/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <b>LDCS-5</b>  | 304-032018-12     | 3/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-061918-15     | 6/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-092018-14     | 9/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                | 304-120418-14     | 12/4/2018   | 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) |
|--------------------------|---------------|-------------|---------------------------|-----------------------|---------------------------|-----------------------|--------------------|--------------------|------------------------|-----------------------------|-------------------|---------------------|--------------------|---------------------|---------------------|------------------|
| <b>LDCS-6</b>            | 304-032018-15 | 3/20/2018   | 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              |
|                          | 304-061918-13 | 6/19/2018   | 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              |
|                          | 304-092118-19 | 9/21/2018   | 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              |
|                          | 304-120418-16 | 12/4/2018   | 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              |
| <i>Leachate</i>          |               |             |                           |                       |                           |                       |                    |                    |                        |                             |                   |                     |                    |                     |                     |                  |
| <b>Leachate, Cell 1</b>  | 304-120318-07 | 12/3/2018   | 11 U                      | 8 U                   | 11 U                      | 14 U                  | 11 U               | 12 U               | 17 U                   | 24 U                        | 9 U               | 7.5 U               | 6.5 U              | 9 U                 | 14                  | 3300             |
| <b>Leachate, Cell 2A</b> | 304-120318-05 | 12/3/2018   | 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              | 5.7                 | 40               |
| <b>Leachate, Cell 2B</b> | 304-120318-03 | 12/3/2018   | 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               | 8.4                 | 2000             |
| <b>Leachate, Cell 3A</b> | 304-120318-01 | 12/3/2018   | 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              | 10                  | 8 U              |
| <b>Leachate, Cell 4A</b> | 304-120318-09 | 12/3/2018   | 8.4 U                     | 6.4 U                 | 8.4 U                     | 11 U                  | 8.8 U              | 9.2 U              | 13 U                   | 19 U                        | 7.2 U             | 6 U                 | 5.2 U              | 7.2 U               | 18                  | 1900             |
| <b>Leachate, Cell 4B</b> | 304-120318-11 | 12/3/2018   | 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               | 9.3                 | 1900             |
| <b>Leachate, Cell 5</b>  | 304-120318-17 | 12/3/2018   | 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               | 8.3                 | 1300             |
| <b>Leachate, Cell 6</b>  | 304-032118-18 | 3/21/2018   | 42 U                      | 32 U                  | 42 U                      | 54 U                  | 44 U               | 46 U               | 66 U                   | 94 U                        | 36 U              | 30 U                | 26 U               | 36 U                | 32 U                | 18000            |
| <b>Leachate, Cell 6</b>  | 304-062018-20 | 6/20/2018   | 8.4 U                     | 6.4 U                 | 8.4 U                     | 11 U                  | 8.8 U              | 9.2 U              | 13 U                   | 19 U                        | 7.2 U             | 6 U                 | 17                 | 7.2 U               | 6.4 U               | 3100             |
| <b>Leachate, Cell 6</b>  | 304-092118-20 | 9/21/2018   | 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               | 2300             |
| <b>Leachate, Cell 6</b>  | 304-120318-13 | 12/3/2018   | 2.1 U                     | 1.6 U                 | 2.1 U                     | 2.7 U                 | 2.2 U              | 2.3 U              | 3.3 U                  | 4.7 U                       | 1.8 U             | 1.5 U               | 1.3 U              | 1.8 U               | 1.7                 | 69               |
| <i>Quality Control</i>   |               |             |                           |                       |                           |                       |                    |                    |                        |                             |                   |                     |                    |                     |                     |                  |
| <b>QC, FB</b>            | 304-032018-17 | 3/20/2018   | 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              |
|                          | 304-062018-19 | 6/20/2018   | 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              |
|                          | 304-091918-13 | 9/19/2018   | 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              |
|                          | 304-120518-26 | 12/5/2018   | 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 |
|--------------------------|---------------|-------------|------------|-----------------------------|---------|---------------|---------|--------------------|----------------------|-----------|--------------|------------------|----------------------|---------------|--------------|------------|---------------|
| <b>LDCS-6</b>            | 304-032018-15 | 3/20/2018   | 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         |
|                          | 304-061918-13 | 6/19/2018   | 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         |
|                          | 304-092118-19 | 9/21/2018   | 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         |
|                          | 304-120418-16 | 12/4/2018   | 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         |
| <i>Leachate</i>          |               |             |            |                             |         |               |         |                    |                      |           |              |                  |                      |               |              |            |               |
| <b>Leachate, Cell 1</b>  | 304-120318-07 | 12/3/2018   | 85 U       | 170                         | 4600    | 70 U          | 24      | 5 U                | 8.5 U                | 9.5 U     | 11 U         | 23 U             | 9.5 U                | 8.5 U         | 21 U         | 8 U        | 15 U          |
| <b>Leachate, Cell 2A</b> | 304-120318-05 | 12/3/2018   | 420        | 5.6                         | 79      | 5.6 U         | 5.8     | 0.5 U              | 0.68 U               | 0.76 U    | 0.84 U       | 1.8 U            | 0.76 U               | 0.83          | 1.6 U        | 0.64 U     | 1.2 U         |
| <b>Leachate, Cell 2B</b> | 304-120318-03 | 12/3/2018   | 690        | 160                         | 2900    | 28 U          | 6.5     | 2 U                | 3.4 U                | 3.8 U     | 4.2 U        | 9 U              | 3.8 U                | 3.4 U         | 8.2 U        | 3.2 U      | 6 U           |
| <b>Leachate, Cell 3A</b> | 304-120318-01 | 12/3/2018   | 300        | 5 U                         | 35      | 5.6 U         | 8.9     | 0.5 U              | 0.68 U               | 0.76 U    | 0.84 U       | 1.8 U            | 0.76 U               | 1.3           | 1.6 U        | 0.64 U     | 1.2 U         |
| <b>Leachate, Cell 4A</b> | 304-120318-09 | 12/3/2018   | 68 U       | 88                          | 3000    | 56 U          | 26      | 4 U                | 6.8 U                | 7.6 U     | 8.4 U        | 18 U             | 7.6 U                | 6.8 U         | 16 U         | 6.4 U      | 12 U          |
| <b>Leachate, Cell 4B</b> | 304-120318-11 | 12/3/2018   | 570        | 120                         | 4100    | 28 U          | 29      | 2 U                | 3.4 U                | 3.8 U     | 4.2 U        | 9 U              | 3.8 U                | 3.4 U         | 8.2 U        | 3.2 U      | 6 U           |
| <b>Leachate, Cell 5</b>  | 304-120318-17 | 12/3/2018   | 470        | 86                          | 2100    | 28 U          | 26      | 2 U                | 3.4 U                | 3.8 U     | 4.2 U        | 23               | 3.8 U                | 3.4 U         | 8.2 U        | 3.2 U      | 6 U           |
| <b>Leachate, Cell 6</b>  | 304-032118-18 | 3/21/2018   | 340 U      | 200 U                       | 15000   | 280 U         | 32 U    | 20 U               | 34 U                 | 38 U      | 42 U         | 90 U             | 38 U                 | 34 U          | 82 U         | 32 U       | 60 U          |
| <b>Leachate, Cell 6</b>  | 304-062018-20 | 6/20/2018   | 68 U       | 220                         | 3000    | 56 U          | 21      | 4 U                | 6.8 U                | 7.6 U     | 8.4 U        | 18 U             | 7.6 U                | 6.8 U         | 16 U         | 6.4 U      | 12 U          |
| <b>Leachate, Cell 6</b>  | 304-092118-20 | 9/21/2018   | 34 U       | 170                         | 1600    | 28 U          | 17      | 2 U                | 3.4 U                | 3.8 U     | 4.2 U        | 9 U              | 3.8 U                | 3.4 U         | 8.2 U        | 3.2 U      | 6 U           |
| <b>Leachate, Cell 6</b>  | 304-120318-13 | 12/3/2018   | 340        | 56                          | 100     | 14 U          | 15      | 1 U                | 1.7 U                | 1.9 U     | 2.1 U        | 4.5 U            | 1.9 U                | 1.7 U         | 4.1 U        | 1.6 U      | 3 U           |
| <i>Quality Control</i>   |               |             |            |                             |         |               |         |                    |                      |           |              |                  |                      |               |              |            |               |
| <b>QC, FB</b>            | 304-032018-17 | 3/20/2018   | 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         |
|                          | 304-062018-19 | 6/20/2018   | 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         |
|                          | 304-091918-13 | 9/19/2018   | 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         |
|                          | 304-120518-26 | 12/5/2018   | 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 |
|--------------------------|---------------|-------------|------------------------|-------------------------|----------------------|----------------|--------------|-------------|--------------------|---------------------|----------|---------|-------------------|---------|--------------------------|---------------------------|-----------------------------|
| <b>LDCS-6</b>            | 304-032018-15 | 3/20/2018   | 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                         |
|                          | 304-061918-13 | 6/19/2018   | 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                         |
|                          | 304-092118-19 | 9/21/2018   | 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                         |
|                          | 304-120418-16 | 12/4/2018   | 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                         |
| <i>Leachate</i>          |               |             |                        |                         |                      |                |              |             |                    |                     |          |         |                   |         |                          |                           |                             |
| <b>Leachate, Cell 1</b>  | 304-120318-07 | 12/3/2018   | 7.5 U                  | 8 U                     | 8.5 U                | 8.5 U          | 58           | 12 U        | 16 U               | 100                 | 47       | 8.5 U   | 10 U              | 71      | 7.5 U                    | 9.5 U                     | 40 U                        |
| <b>Leachate, Cell 2A</b> | 304-120318-05 | 12/3/2018   | 1.3                    | 0.64 U                  | 0.68 U               | 0.68 U         | 24           | 1 U         | 2 U                | 38                  | 20       | 2.3     | 0.8 U             | 46      | 0.6 U                    | 0.76 U                    | 3.2 U                       |
| <b>Leachate, Cell 2B</b> | 304-120318-03 | 12/3/2018   | 3 U                    | 3.2 U                   | 3.4 U                | 3.4 U          | 33           | 4.6 U       | 6.4 U              | 55                  | 28       | 3.4 U   | 4 U               | 32      | 3 U                      | 3.8 U                     | 16 U                        |
| <b>Leachate, Cell 3A</b> | 304-120318-01 | 12/3/2018   | 0.94                   | 0.64 U                  | 0.68 U               | 0.68 U         | 16           | 1 U         | 2 U                | 61                  | 32       | 0.68 U  | 0.8 U             | 9.7     | 0.6 U                    | 0.76 U                    | 3.2 U                       |
| <b>Leachate, Cell 4A</b> | 304-120318-09 | 12/3/2018   | 6 U                    | 6.4 U                   | 6.8 U                | 6.8 U          | 57           | 9.2 U       | 13 U               | 95                  | 41       | 6.8 U   | 8 U               | 77      | 6 U                      | 7.6 U                     | 32 U                        |
| <b>Leachate, Cell 4B</b> | 304-120318-11 | 12/3/2018   | 3 U                    | 3.2 U                   | 3.4 U                | 3.4 U          | 41           | 4.6 U       | 6.4 U              | 64                  | 34       | 3.4 U   | 4 U               | 55      | 3 U                      | 3.8 U                     | 16 U                        |
| <b>Leachate, Cell 5</b>  | 304-120318-17 | 12/3/2018   | 3 U                    | 3.2 U                   | 3.4 U                | 3.4 U          | 34           | 4.6 U       | 6.4 U              | 57                  | 29       | 3.4 U   | 4 U               | 52      | 3 U                      | 3.8 U                     | 16 U                        |
| <b>Leachate, Cell 6</b>  | 304-032118-18 | 3/21/2018   | 30 U                   | 32 U                    | 34 U                 | 34 U           | 32 U         | 46 U        | 64 U               | 68 U                | 38 U     | 34 U    | 40 U              | 80      | 30 U                     | 38 U                      | 160 U                       |
| <b>Leachate, Cell 6</b>  | 304-062018-20 | 6/20/2018   | 6 U                    | 6.4 U                   | 6.8 U                | 6.8 U          | 21           | 9.2 U       | 18                 | 40                  | 18       | 6.8 U   | 8 U               | 200     | 6 U                      | 7.6 U                     | 32 U                        |
| <b>Leachate, Cell 6</b>  | 304-092118-20 | 9/21/2018   | 3 U                    | 3.2 U                   | 3.4 U                | 3.4 U          | 20           | 4.6 U       | 19                 | 34                  | 16       | 3.4 U   | 4 U               | 170     | 3 U                      | 3.8 U                     | 16 U                        |
| <b>Leachate, Cell 6</b>  | 304-120318-13 | 12/3/2018   | 1.5 U                  | 1.6 U                   | 1.7 U                | 1.7 U          | 46           | 2.3 U       | 3.2 U              | 78                  | 34       | 1.7 U   | 2 U               | 200     | 1.5 U                    | 1.9 U                     | 8 U                         |
| <i>Quality Control</i>   |               |             |                        |                         |                      |                |              |             |                    |                     |          |         |                   |         |                          |                           |                             |
| <b>QC, FB</b>            | 304-032018-17 | 3/20/2018   | 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                         |
|                          | 304-062018-19 | 6/20/2018   | 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                         |
|                          | 304-091918-13 | 9/19/2018   | 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                         |
|                          | 304-120518-26 | 12/5/2018   | 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                         |

**Groundwater Database - Appendix I VOCs**  
**2018 Annual Monitoring Report**  
**LRI Landfill, Pierce County, Washington**

| Location                 | Sample Number | Sample Date | Trichloroethene | Trichlorofluoromethane | Vinyl acetate | Vinyl Chloride |
|--------------------------|---------------|-------------|-----------------|------------------------|---------------|----------------|
| <b>LDCS-6</b>            | 304-032018-15 | 3/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                          | 304-061918-13 | 6/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                          | 304-092118-19 | 9/21/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                          | 304-120418-16 | 12/4/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
| <i>Leachate</i>          |               |             |                 |                        |               |                |
| <b>Leachate, Cell 1</b>  | 304-120318-07 | 12/3/2018   | 8 U             | 15 U                   | 47 U          | 5 U            |
| <b>Leachate, Cell 2A</b> | 304-120318-05 | 12/3/2018   | 0.64 U          | 1.2 U                  | 3.8 U         | 0.5 U          |
| <b>Leachate, Cell 2B</b> | 304-120318-03 | 12/3/2018   | 3.2 U           | 5.8 U                  | 19 U          | 2 U            |
| <b>Leachate, Cell 3A</b> | 304-120318-01 | 12/3/2018   | 0.64 U          | 1.2 U                  | 3.8 U         | 0.5 U          |
| <b>Leachate, Cell 4A</b> | 304-120318-09 | 12/3/2018   | 6.4 U           | 12 U                   | 38 U          | 4 U            |
| <b>Leachate, Cell 4B</b> | 304-120318-11 | 12/3/2018   | 3.2 U           | 5.8 U                  | 19 U          | 2 U            |
| <b>Leachate, Cell 5</b>  | 304-120318-17 | 12/3/2018   | 3.2 U           | 5.8 U                  | 19 U          | 2 U            |
| <b>Leachate, Cell 6</b>  | 304-032118-18 | 3/21/2018   | 32 U            | 58 U                   | 190 U         | 20 U           |
| <b>Leachate, Cell 6</b>  | 304-062018-20 | 6/20/2018   | 6.4 U           | 12 U                   | 38 U          | 5.5            |
| <b>Leachate, Cell 6</b>  | 304-092118-20 | 9/21/2018   | 3.2 U           | 5.8 U                  | 19 U          | 2 U            |
| <b>Leachate, Cell 6</b>  | 304-120318-13 | 12/3/2018   | 1.6 U           | 2.9 U                  | 9.4 U         | 2.4            |
| <i>Quality Control</i>   |               |             |                 |                        |               |                |
| <b>QC, FB</b>            | 304-032018-17 | 3/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                          | 304-062018-19 | 6/20/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                          | 304-091918-13 | 9/19/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |
|                          | 304-120518-26 | 12/5/2018   | 0.5 U           | 0.5 U                  | 3 U           | 0.5 U          |





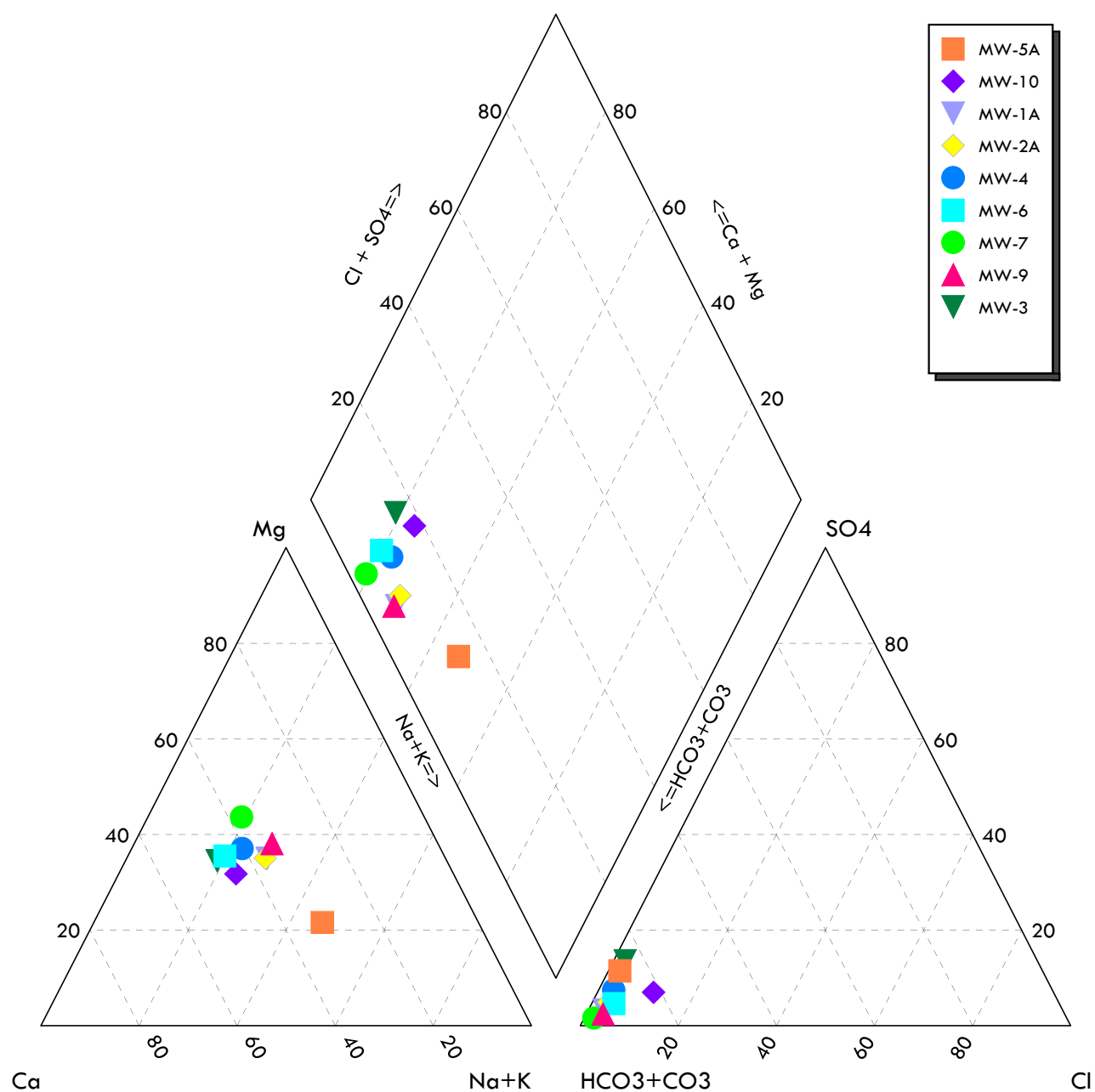
## Appendix D

### Geochemical Evaluation





# LRI Landfill First Quarter 2018 Monitoring Wells



DESCRIPTION: LRILF Groundwater 1Q18 Trilinear Diagram

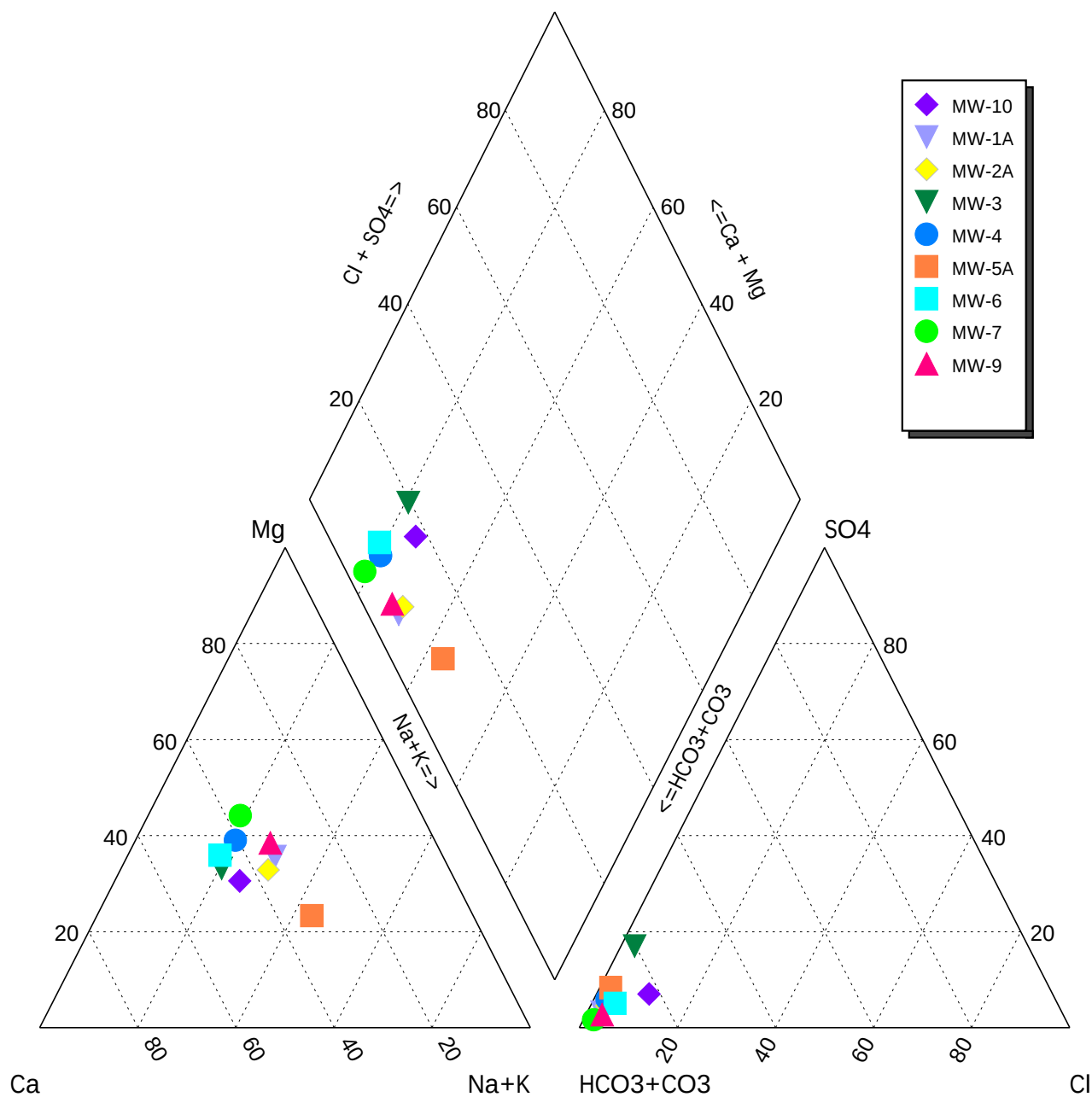
PROJECT: LRI Landfill

PROJECT NO: 04218001.02

CLIENT: LRI, Inc.

DATE: May 2018

# LRI Landfill Second Quarter 2018 Monitoring Wells



DESCRIPTION: LRILF Groundwater 2Q18 Trilinear Diagram

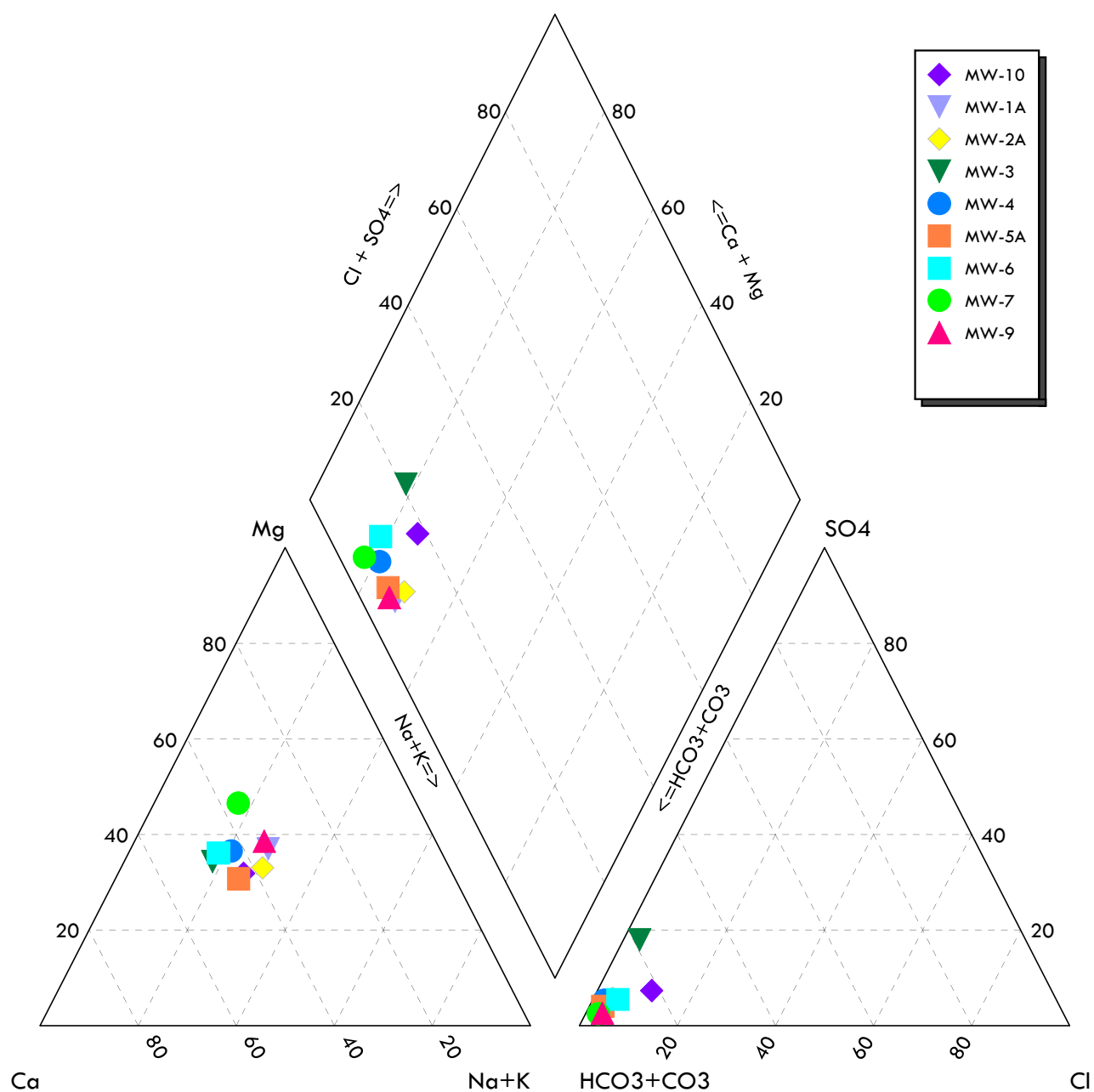
PROJECT: LRI Landfill

PROJECT NO: 04218001.02

CLIENT: LRI, Inc.

DATE: August 2018

# LRI Landfill Third Quarter 2018, Groundwater



DESCRIPTION: LRILF 3Q18 Groundwater Trilinear Diagram

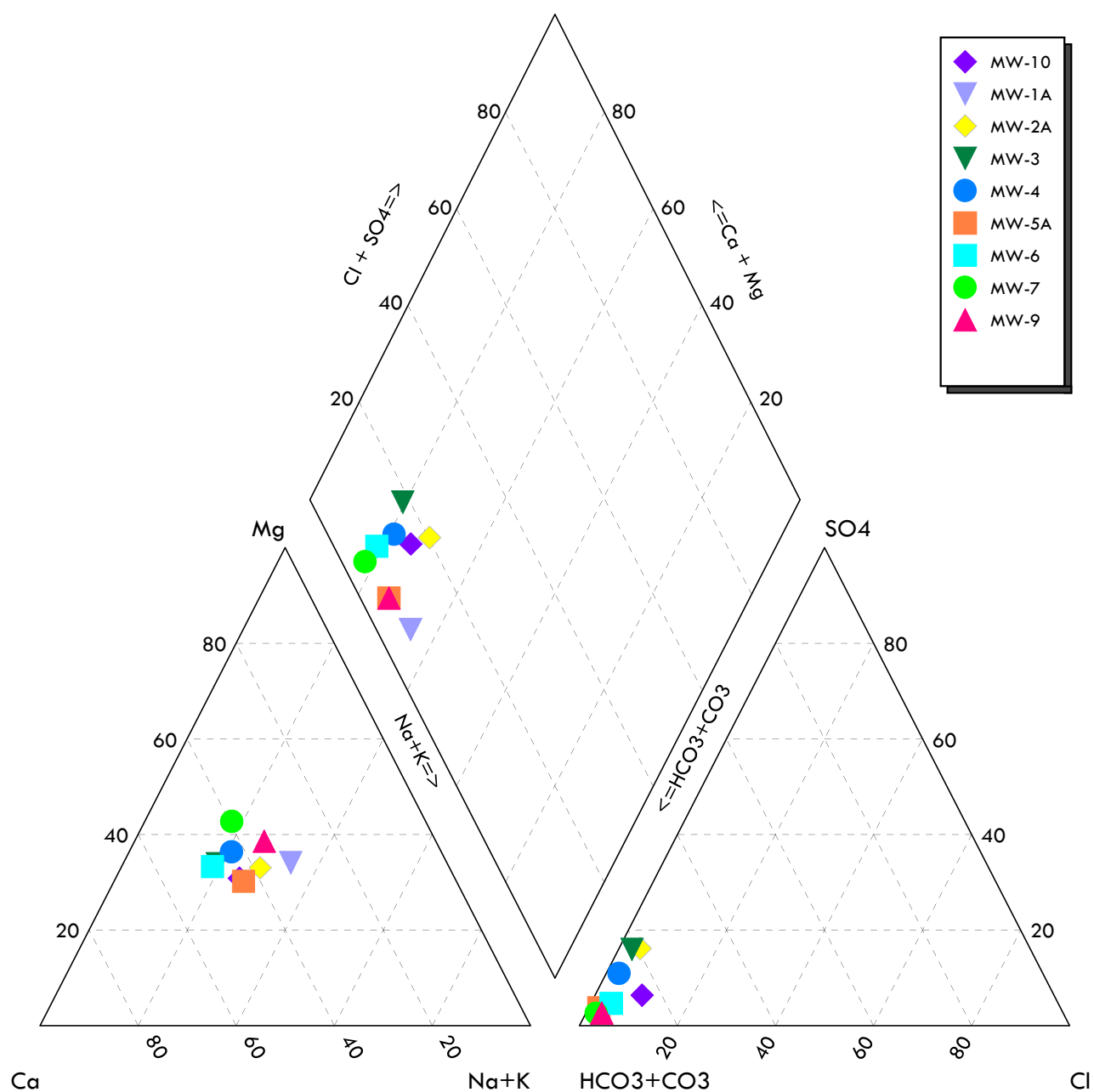
PROJECT: LRI Landfill

PROJECT NO: 04218001.02

CLIENT: LRI, Inc.

DATE: October 2018

# LRI Landfill Fourth Quarter 2018, Groundwater



DESCRIPTION: LRILF Groundwater 4Q18 Piper Plot

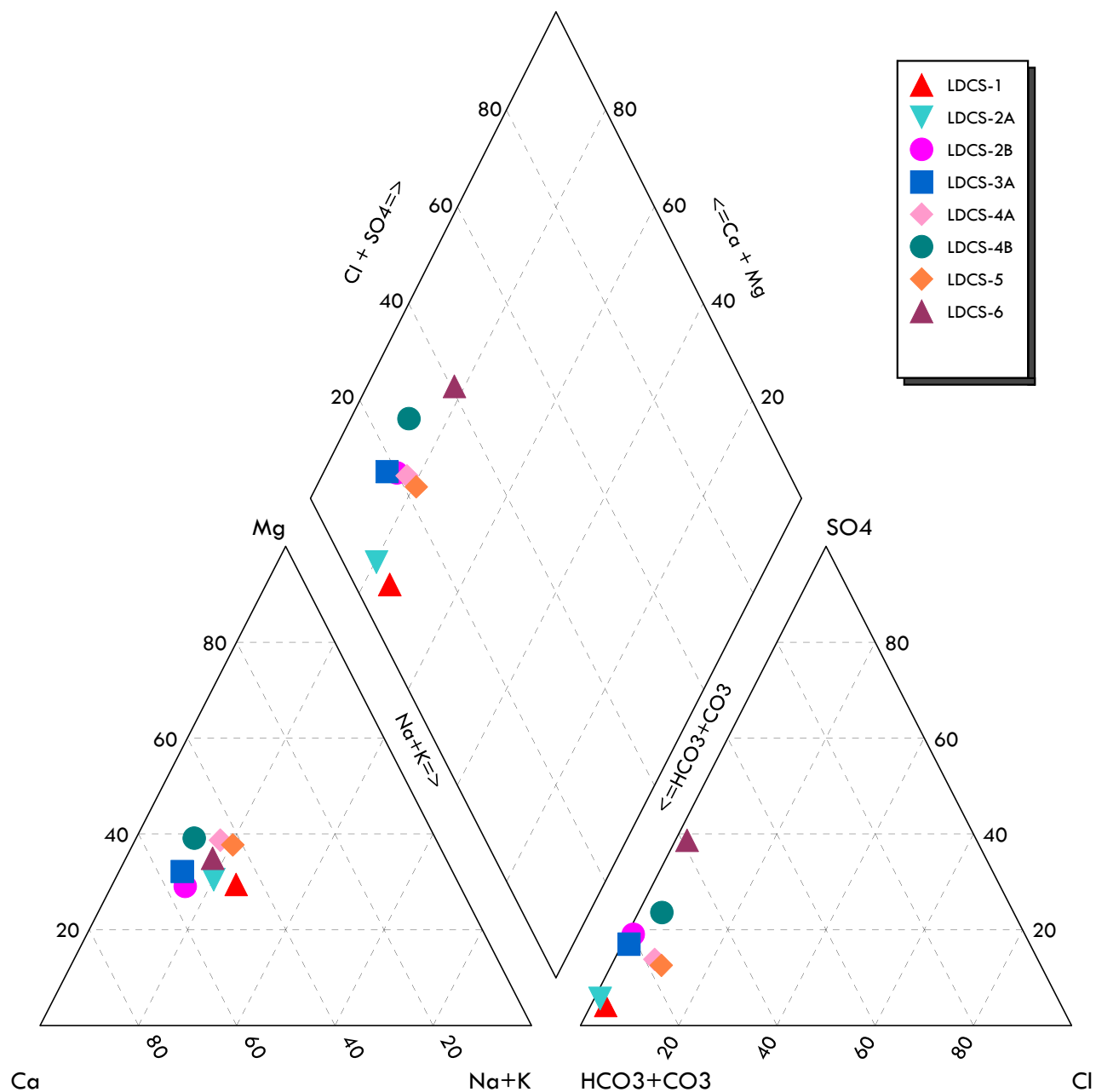
PROJECT: LRI Landfill

PROJECT NO: 04219001.02

CLIENT: LRI, Inc.

DATE: March 2019

# LRI Landfill First Quarter 2018 Leak Detection Collection Recovery System



DESCRIPTION: LRILF LDCRS 1Q18 Trilinear Diagram

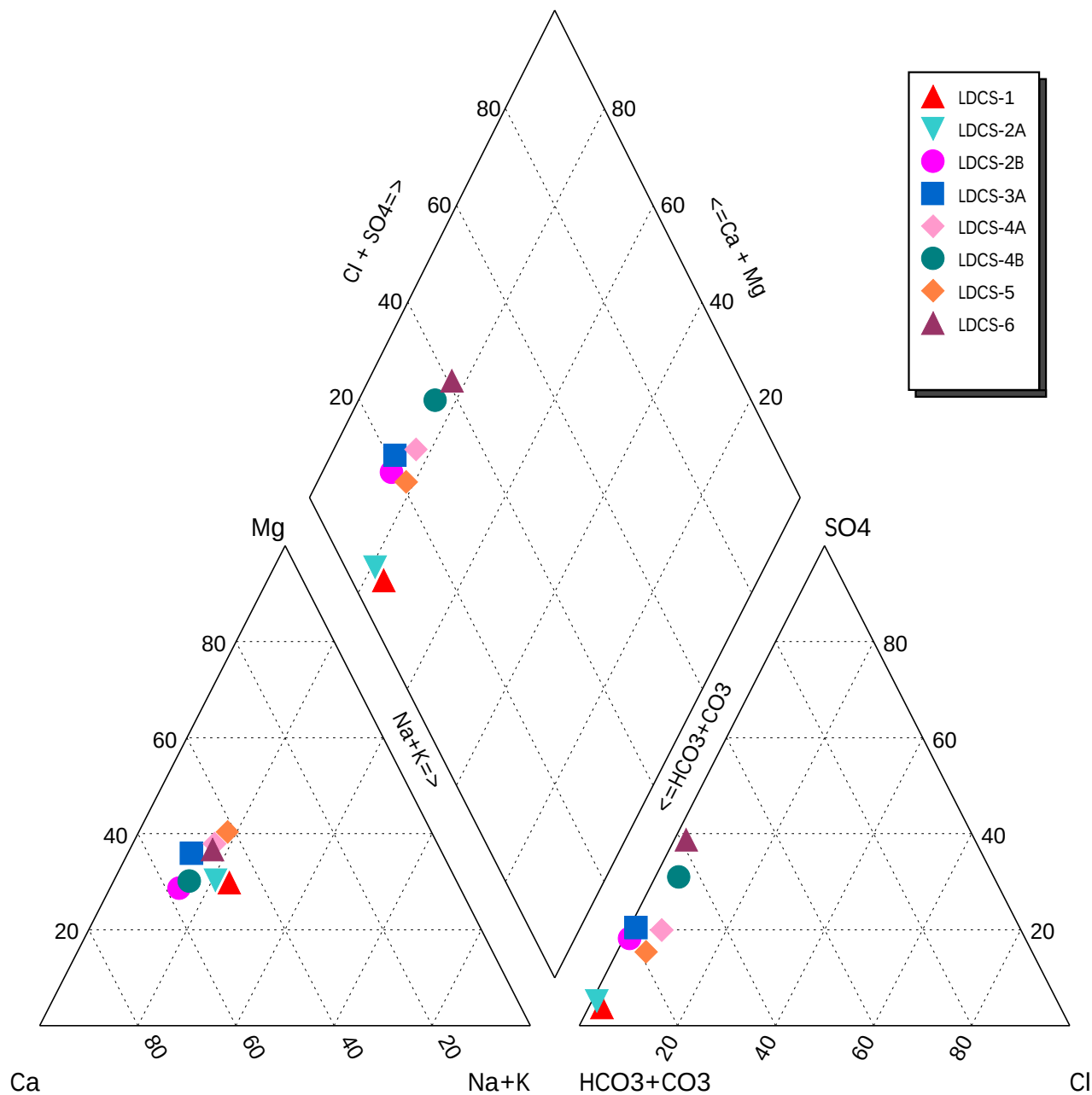
PROJECT: LRI Landfill

PROJECT NO: 04218001.02

CLIENT: LRI, Inc.

DATE: May 2018

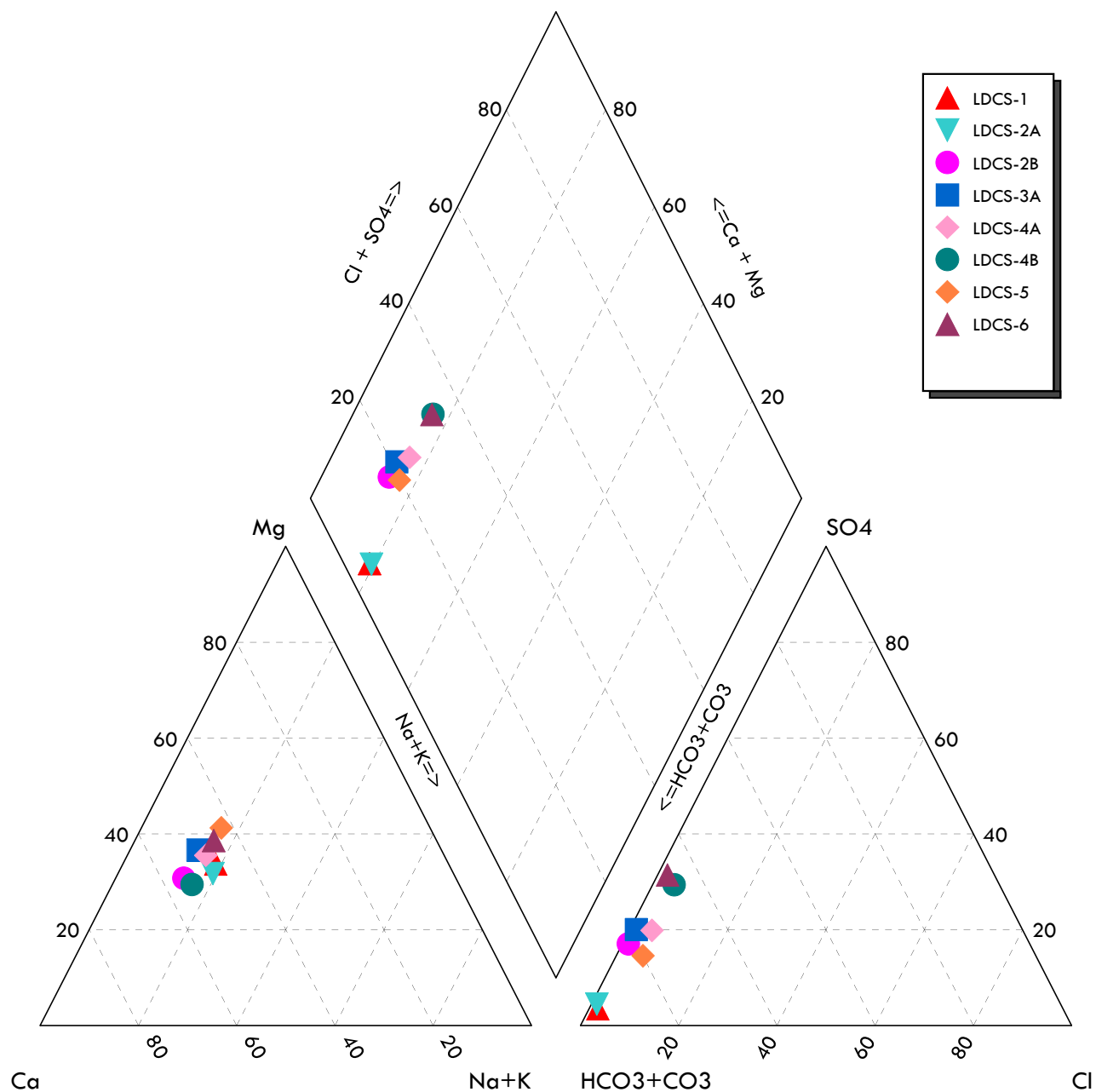
LRI Landfill Second Quarter 2018 Leak Detection Collection Recovery System



DESCRIPTION: LRILF LDCRS 2Q18 Trilinear Diagram

|  |                       |                         |
|--|-----------------------|-------------------------|
|  | PROJECT: LRI Landfill | PROJECT NO: 04218001.02 |
|  | CLIENT: LRI, Inc.     | DATE: August 2018       |

# LRI Landfill Third Quarter 2018, Leak Detection Collection Recovery System

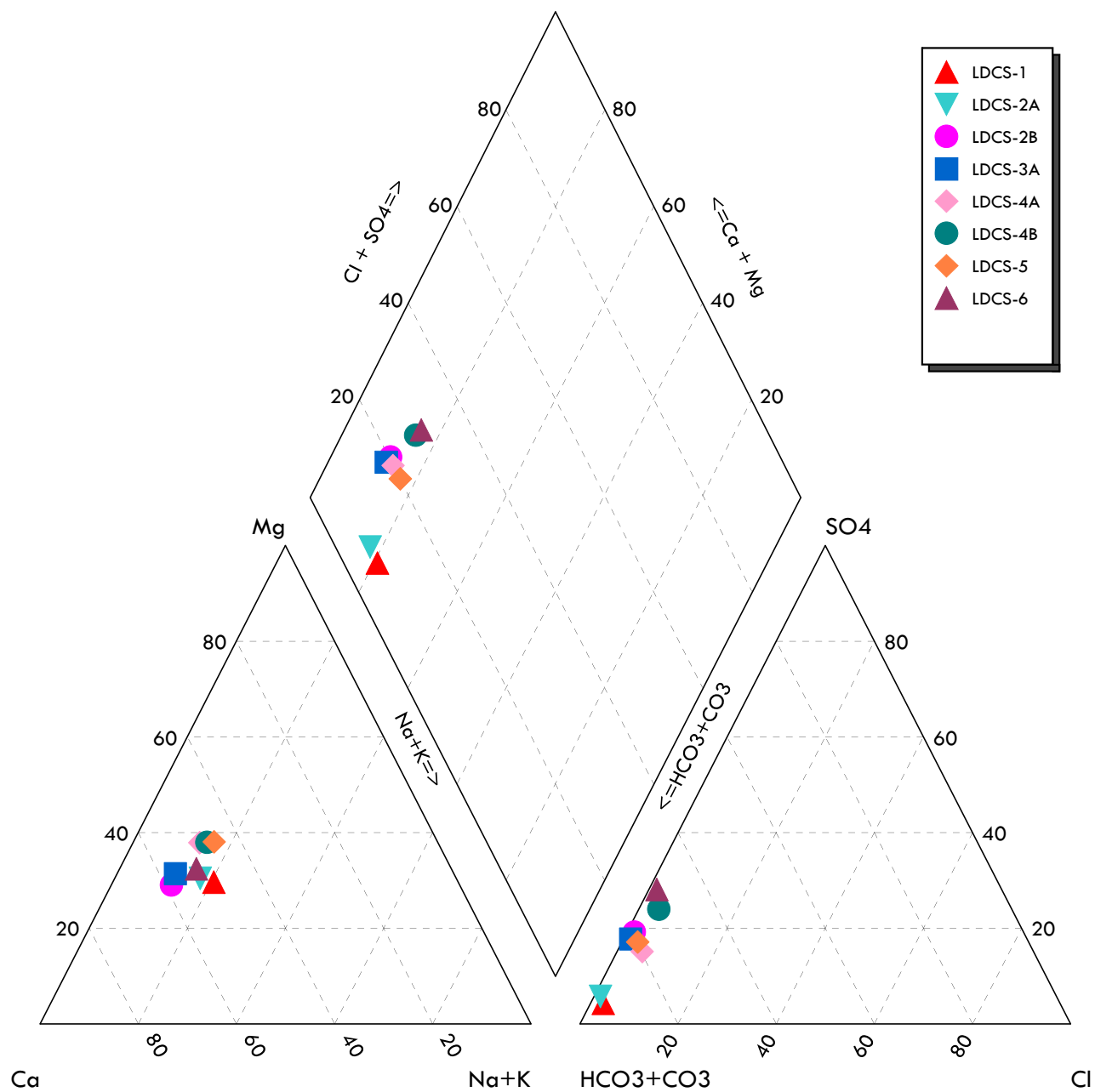


DESCRIPTION: LRILF LDCRS 3Q18 Piper Plot

|  |                       |                         |
|--|-----------------------|-------------------------|
|  | PROJECT: LRI Landfill | PROJECT NO: 04218001.02 |
|  | CLIENT: LRI, Inc.     | DATE: October 2018      |



# LRI Landfill Fourth Quarter 2018, Leak Detection Collection Recovery System



DESCRIPTION: LRILF LDCRS 4Q18 Piper Plot

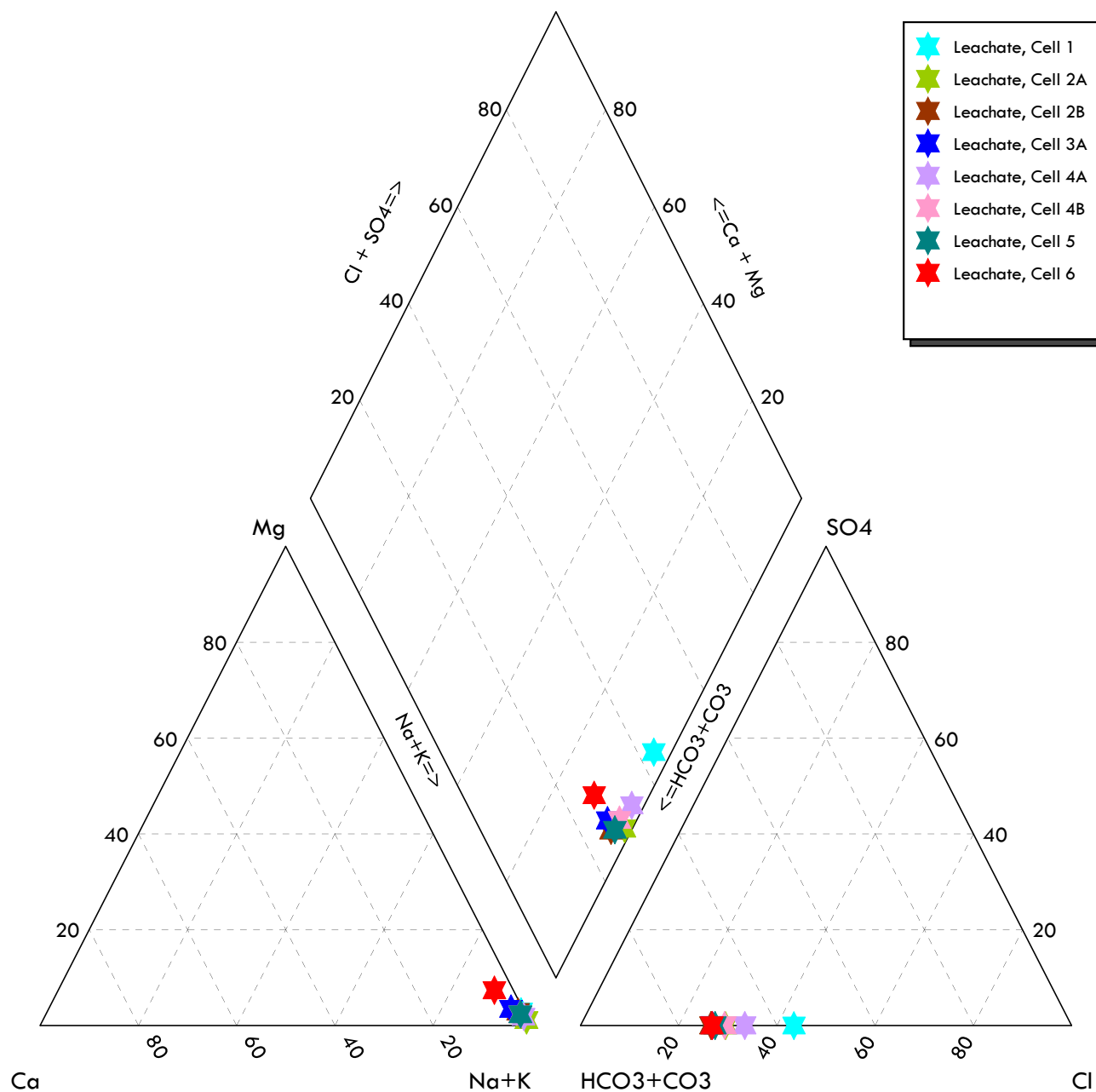
PROJECT: LRI Landfill

PROJECT NO: 04219001.02

CLIENT: LRI, Inc.

DATE: March 2019

# LRI Landfill Fourth Quarter 2018, Leachate



DESCRIPTION: LRILF Leachate 4Q18 Piper Plot

PROJECT: LRI Landfill

PROJECT NO: 04219001.02

CLIENT: LRI, Inc.

DATE: March 2019





## Appendix E

### Statistical Calculations



**Groundwater Prediction Limits (mg/L)**  
**Appendix I Parameters, Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

|                     | <b>MRL<br/>(typical)</b> | <b>Prediction<br/>Limit</b> | <b>MW-1/<br/>MW-1A</b> | <b>MW-2/<br/>MW-2A</b> | <b>MW-3</b> | <b>MW-4</b>  | <b>MW-5/<br/>MW-5A</b> | <b>MW-6</b> | <b>MW-7</b> | <b>MW-9</b>  | <b>MW-10</b> |
|---------------------|--------------------------|-----------------------------|------------------------|------------------------|-------------|--------------|------------------------|-------------|-------------|--------------|--------------|
| Antimony            | 0.050                    | <b>0.050 L</b>              | <b>0.050 L</b>         | 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                    | <b>0.011</b>                | 0.005 L                | 0.005 L                | 0.005 L     | <b>0.011</b> | 0.008                  | 0.008       | 0.006       | 0.005 L      | 0.005 L      |
| Barium              | 0.005                    | <b>0.091</b>                | 0.030                  | 0.018                  | 0.015       | <b>0.091</b> | 0.036                  | 0.014       | 0.016       | 0.0057       | 0.016        |
| Beryllium           | 0.005                    | <b>0.005 L</b>              | <b>0.005 L</b>         | 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                    | <b>0.005 L</b>              | <b>0.005 L</b>         | 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                    | <b>0.011</b>                | 0.005 L                | 0.005 L                | 0.005 L     | <b>0.011</b> | 0.005                  | 0.005 L     | 0.005 L     | 0.005 L      | 0.005 L      |
| Cobalt              | 0.010                    | <b>0.010 L</b>              | <b>0.010 L</b>         | 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                    | <b>0.063</b>                | 0.010 L                | 0.010 L                | 0.010 L     | <b>0.063</b> | 0.010 L                | 0.010 L     | 0.010 L     | 0.010 L      | 0.010 L      |
| Lead                | 0.002                    | <b>0.042</b>                | 0.002 L                | 0.002 L                | 0.002 L     | <b>0.042</b> | 0.002 L                | 0.002 L     | 0.002 L     | 0.002 L      | 0.002 L      |
| Nickel              | 0.020                    | <b>0.020 L</b>              | <b>0.020 L</b>         | 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                    | <b>0.005 L</b>              | <b>0.005 L</b>         | 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                    | <b>0.010 L</b>              | <b>0.010 L</b>         | 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                    | <b>0.005 L</b>              | <b>0.005 L</b>         | 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                    | <b>0.016</b>                | 0.010 L                | 0.010 L                | 0.010 L     | 0.014        | 0.010 L                | 0.010 L     | 0.010 L     | <b>0.016</b> | 0.010 L      |
| Zinc                | 0.01                     | <b>0.290</b>                | 0.032                  | 0.010 L                | 0.010 L     | <b>0.290</b> | 0.010                  | 0.010 L     | 0.010 L     | 0.043        | 0.011        |
| Nitrate as Nitrogen | 0.50                     | <b>6.40</b>                 | 0.500 L                | 0.500 L                | 0.500 L     | 0.500 L      | 0.500 L                | 0.500 L     | 0.500 L     | 0.500 L      | <b>6.40</b>  |

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 Groundwater Data  
Appendix I Parameters, Fourth Quarter 2018  
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 <sub>3</sub> ) |         |     |        |
|------------------------------|---------------|---------|--------------|----------|-------------|----------|----------------|----------|--------------|----------|---------------|----------|-------------|----------|-------------|----------|-----------|----------|-------------|---------|---------------|----------|-------------|----------|---------------|----------|--------------|----------|-----------|---------|----------------------------|---------|-----|--------|
| 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 | 0.01                       | 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 | 0.01                       | 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  | 0.005       | L 0.0025 | 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       |             | 0.022875 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC       |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC      |                            | NC      |     |        |
| Variance                     |               | NC      |              | NC       |             | 1.07E-05 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC       |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC      |                            | NC      |     |        |
| Standard Deviation           |               | NC      |              | NC       |             | 0.003271 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC       |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC      |                            | NC      |     |        |
| Coefficient of Variation (%) |               | NC      |              | NC       |             | 14.29744 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC       |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC      |                            | NC      |     |        |
| Standard Error               |               | NC      |              | NC       |             | 0.001156 |                | 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 | 0.01                       | 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 | 0.01                       | 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  | 0.005       | L 0.0025 | 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 | 0.01                       | 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 | 0.005        | L 0.0005 | 0.005         | L 0.0025 | 0.001       | L 0.0005 | 0.01        | L 0.005  | 0.002     | 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       |             | 0.014125 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC       |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC      |                            | NC      |     |        |
| Variance                     |               | NC      |              | NC       |             | 3.27E-06 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC       |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC      |                            | NC      |     |        |
| Standard Deviation           |               | NC      |              | NC       |             | 0.001808 |                | NC       |              |          |               |          |             |          |             |          |           |          |             |         |               |          |             |          |               |          |              |          |           |         |                            |         |     |        |

Statistical Summary of Total Metals Groundwater Data  
Appendix I Parameters, Fourth Quarter 2018  
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 <sub>3</sub> ) |         |     |        |
|------------------------------|---------------|---------|--------------|----------|-------------|----------|----------------|----------|--------------|----------|---------------|----------|-------------|----------|-------------|----------|-----------|----------|-------------|----------|---------------|----------|-------------|----------|---------------|----------|--------------|----------|-----------|---------|----------------------------|---------|-----|--------|
| 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 | 0.01                       | 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 | 0.01                       | 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 | 0.009        | L 0.0025 | 0.005         | L 0.0025 | 0.01        | L 0.005  | 0.002       | L 0.001  | 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 | 0.01                       | 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 | 0.002       | L 0.001  | 0.02      | L 0.01   | 0.005       | L 0.0025 | 0.005         | L 0.0025 | 0.005       | L 0.0025 | 0.005         | L 0.0025 | 0.005        | L 0.0025 | 0.01      | L 0.005 | 0.5                        | L 0.25  |     |        |
| 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 | 0.002       | L 0.001  | 0.02      | L 0.01   | 0.005       | L 0.0025 | 0.005         | L 0.0025 | 0.005       | L 0.0025 | 0.005         | L 0.0025 | 0.005        | L 0.0025 | 0.01      | L 0.005 | 0.5                        | L 0.25  |     |        |
| 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 | 0.005        | 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                          |         | 8   |        |
| Number Detected              | 0             |         | 8            |          | 8           |          | 0              |          | 0            |          | 1             |          | 1           |          | 1           |          | 1         |          | 0           |          | 0             |          | 0           |          | 0             |          | 1            |          | 2         |         | 0                          |         | 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            |         | NC           | 0.0089   | NC          | 0.02275  | NC             | NC       | NC           | NC       | NC            | NC       | NC          | NC       | NC          | NC       | NC        | NC       | NC          | NC       | 0.0025        | NC       | 0.005       | NC       | NC            | NC       | NC           | NC       | NC        | NC      | NC                         | NC      |     |        |
| Variance                     | NC            |         | NC           | 1.56E-06 | NC          | 0.000764 | NC             | NC       | NC           | NC       | NC            | NC       | NC          | NC       | NC          | NC       | NC        | NC       | NC          | NC       | NC            | NC       | NC          | NC       | NC            | NC       | NC           | NC       | NC        | NC      | NC                         | NC      | NC  |        |
| Standard Deviation           | NC            |         | NC           | 0.00125  | NC          | 0.027634 | NC             | NC       | NC           | NC       | NC            | NC       | NC          | NC       | NC          | NC       | NC        | NC       | NC          | NC       | NC            | NC       | NC          | NC       | NC            | NC       | NC           | NC       | NC        | NC      | NC                         | NC      | NC  |        |
| Coefficient of Variation (%) | NC            |         | NC           | 14.04655 | NC          | 121.4685 | NC             | NC       | NC           | NC       | NC            | NC       | NC          | NC       | NC          | NC       | NC        | NC       | NC          | NC       | NC            | NC       | NC          | NC       | NC            | NC       | NC           | NC       | NC        | NC      | NC                         | NC      | NC  |        |
| Standard Error               | NC            |         | NC           | 0.000442 | NC          | 0.00977  | NC             | NC       | NC           | NC       | NC            | NC       | NC          | NC       | NC          | NC       | NC        | NC       | NC          | NC       | 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 | 0.01                       | 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 | 0.01                       | 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      | L 0.005 | 0.01                       | L 0.005 | 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 | 0.005       | L 0.0025 | 0.001     | L 0.0005 | 0.002       | L 0.001  | 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                          |         | 8   |        |
| Number Detected              | 0             |         | 7            |          | 8           |          | 0              |          | 0            |          | 2             |          | 0           |          | 1           |          | 0         |          | 1           |          | 0             |          | 0           |          | 0             |          | 0            |          | 1         |         | 0                          |         | 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            |         | NC           | 0.006313 | NC          | 0.026    | NC             | NC       | NC           | NC       | NC            | NC       | NC          | NC       | NC          | NC       | NC        | NC       |             |          |               |          |             |          |               |          |              |          |           |         |                            |         |     |        |



# Statistical Summary of Total Metals Groundwater Data

## Appendix I Parameters, Fourth Quarter 2018

### 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 <sub>3</sub> ) |         |        |        |
|------------------------------|---------------|---------|--|--------------|----------|-------------|----------|----------------|----------|--------------|----------|---------------|----------|-------------|----------|-------------|---------|-----------|----------|-------------|---------|---------------|----------|-------------|----------|---------------|----------|--------------|----------|-----------|----------|----------------------------|---------|--------|--------|
| 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-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  | 0.01                       | 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  | 0.01                       | 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  | 0.01                       | 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 | 0.005     | 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 | 0.005     | 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 | 0.005     | 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 | 0.005     | 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 | 0.005     | 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                          |         | 8      |        |
| Number Detected              | 0             |         |  | 6            |          | 8           |          | 0              |          | 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            |         |  | NC           | 0.0046   |             | 0.014875 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC      |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC       |                            | NC      |        |        |
| Variance                     | NC            |         |  | NC           | 1.7E-06  |             | 1.84E-06 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC      |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC       |                            | NC      |        |        |
| Standard Deviation           | NC            |         |  | NC           | 0.001305 |             | 0.001356 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC      |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC       |                            | NC      |        |        |
| Coefficient of Variation (%) | NC            |         |  | NC           | 28.36817 |             | 9.117329 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC      |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC       |                            | NC      |        |        |
| Standard Error               | NC            |         |  | NC           | 0.000461 |             | 0.000479 |                | NC       |              | NC       |               | NC       |             | NC       |             | NC      |           | NC       |             | NC      |               | NC       |             | NC       |               | NC       |              | NC       |           | NC       |                            | NC      |        |        |
| 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</       |          |             |          |               |          |              |          |           |          |                            |         |        |        |



## Appendix F

### Leak Detection System Data



**Summary of LDCS Volumes Pumped and Conductivity Data**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Date       | Rainfall | LDCS-1 Vol.<br>(Gal) | LDCS-1 Cond.<br>(µS/cm) | LDCS-2A Vol.<br>(Gal) | LDCS-2A Cond.<br>(µS/cm) | LDCS-2B Vol.<br>(Gal) | LDCS-2B Cond.<br>(µS/cm) | LDCS-3A Vol.<br>(Gal) | LDCS-3A Cond.<br>(µS/cm) | LDCS-4A Vol.<br>(Gal) | LDCS-4A Cond.<br>(µS/cm) | LDCS-4B Vol.<br>(Gal) | LDCS-4B Cond.<br>(µS/cm) | LDCS-5 Vol.<br>(Gal) | LDCS-5 Cond.<br>(µS/cm) | LDCS-6 Vol.<br>(Gal) | LDCS-6 Cond.<br>(µS/cm) |
|------------|----------|----------------------|-------------------------|-----------------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|----------------------|-------------------------|----------------------|-------------------------|
| 10/1/2018  | 0.13     | -                    | -                       | 2690                  | -                        | 300                   | 245                      | -                     | 582                      | 490                   | 860                      | 2,392                 | 1,200                    | 123                  | 930                     | 742                  | 1,099                   |
| 10/2/2018  | 0.01     | -                    | 498                     | 0                     | 761                      | 300                   | 263                      | -                     | 604                      | 2,310                 | 475                      | 3,860                 | 1,120                    | 398                  | 930                     | 675                  | 1,116                   |
| 10/3/2018  | 0.00     | -                    | 501                     | 0                     | 765                      | 250                   | 274                      | -                     | 615                      | 2,470                 | 555                      | 5,050                 | 1,079                    | 405                  | 930                     | 682                  | 1,101                   |
| 10/4/2018  | 0.26     | -                    | 499                     | 10                    | 774                      | 200                   | 277                      | -                     | 621                      | 2,520                 | 752                      | 1,119                 | 1,067                    | 246                  | 930                     | 667                  | 1,089                   |
| 10/5/2018  | 0.01     | -                    | 505                     | 0                     | 770                      | 300                   | 277                      | -                     | 624                      | 1,900                 | 820                      | 85                    | 1,072                    | 458                  | 931                     | 682                  | 1,090                   |
| 10/6/2018  | 0.04     | -                    | -                       | 0                     | -                        | 300                   | 278                      | -                     | 624                      | 2,520                 | 836                      | 80                    | 1,108                    | 808                  | 934                     | 864                  | 1,091                   |
| 10/7/2018  | 0.05     | -                    | -                       | 0                     | -                        | 250                   | 278                      | -                     | 626                      | 2,170                 | 829                      | 0                     | 1,140                    | 553                  | 936                     | 881                  | 1,103                   |
| 10/8/2018  | 0.62     | -                    | 510                     | 0                     | 802                      | 300                   | 279                      | -                     | 625                      | 3,690                 | 821                      | 39                    | 1,165                    | 1,116                | 935                     | 884                  | 1,120                   |
| 10/9/2018  | 0.00     | -                    | 502                     | 2,600                 | 813                      | 350                   | 284                      | -                     | 624                      | 3,500                 | 779                      | 45                    | 1,183                    | 1,808                | 937                     | 1,344                | 1,106                   |
| 10/10/2018 | 0.00     | -                    | 502                     | 460                   | 777                      | 100                   | 285                      | -                     | 629                      | 2,670                 | 761                      | 32                    | 1,190                    | 666                  | 934                     | 1,440                | 1,108                   |
| 10/11/2018 | 0.01     | -                    | 506                     | 420                   | 783                      | 300                   | 283                      | -                     | 633                      | 2,060                 | 769                      | 34                    | 1,194                    | 536                  | 928                     | 1,341                | 1,118                   |
| 10/12/2018 | 0.00     | -                    | 511                     | 420                   | 789                      | 300                   | 281                      | -                     | 631                      | 1,630                 | 797                      | 45                    | 1,196                    | 541                  | 923                     | 1,170                | 1,124                   |
| 10/13/2018 | 0.00     | -                    | -                       | 360                   | -                        | 250                   | 279                      | -                     | 627                      | 1,610                 | 824                      | 43                    | 1,196                    | 533                  | 919                     | 1,037                | 1,124                   |
| 10/14/2018 | 0.00     | -                    | -                       | 350                   | -                        | 200                   | 277                      | -                     | 626                      | 1,320                 | 842                      | 45                    | 1,196                    | 500                  | 915                     | 933                  | 1,118                   |
| 10/15/2018 | 0.00     | -                    | 528                     | 420                   | 793                      | 300                   | 275                      | -                     | 329                      | 1,320                 | 853                      | 31                    | 1,199                    | 384                  | 913                     | 876                  | 1,112                   |
| 10/16/2018 | 0.00     | -                    | 522                     | 360                   | 790                      | 300                   | 274                      | -                     | 401                      | 1,180                 | 860                      | 11                    | 1,203                    | 739                  | 915                     | 828                  | 1,108                   |
| 10/17/2018 | 0.01     | -                    | 511                     | 360                   | 788                      | 200                   | 274                      | -                     | 539                      | 1,180                 | 863                      | 8                     | 1,208                    | 712                  | 906                     | 827                  | 1,106                   |
| 10/18/2018 | 0.00     | -                    | 508                     | 360                   | 782                      | 250                   | 274                      | -                     | 589                      | 1,180                 | 863                      | 17                    | 1,212                    | 666                  | 782                     | 823                  | 1,107                   |
| 10/19/2018 | 0.01     | -                    | 510                     | 300                   | 783                      | 300                   | 273                      | -                     | 608                      | 1,060                 | 867                      | 8                     | 1,215                    | 407                  | 723                     | 828                  | 1,110                   |
| 10/20/2018 | 0.00     | -                    | -                       | 350                   | -                        | 300                   | 272                      | -                     | 615                      | 1,040                 | 867                      | 1                     | 1,217                    | 883                  | 709                     | 780                  | 1,113                   |
| 10/21/2018 | 0.01     | -                    | -                       | 360                   | -                        | 200                   | 275                      | -                     | 616                      | 1,040                 | 863                      | 1                     | 1,217                    | 597                  | 706                     | 775                  | 1,113                   |
| 10/22/2018 | 0.05     | -                    | 506                     | 300                   | 776                      | 300                   | 276                      | -                     | 616                      | 900                   | 861                      | 1                     | 1,220                    | 566                  | 705                     | 769                  | 1,117                   |
| 10/23/2018 | 0.01     | -                    | 514                     | 360                   | 777                      | 250                   | 277                      | -                     | 615                      | 1,030                 | 856                      | 14,343                | 1,217                    | 595                  | 707                     | 844                  | 415                     |
| 10/24/2018 | 0.37     | -                    | 518                     | 320                   | 777                      | 200                   | 277                      | -                     | 616                      | 1,040                 | 413                      | 11,271                | 1,129                    | 621                  | 716                     | 783                  | 535                     |
| 10/25/2018 | 0.15     | -                    | 524                     | 360                   | 783                      | 300                   | 276                      | -                     | 618                      | 1,330                 | 592                      | 3,755                 | 1,109                    | 635                  | 719                     | 732                  | 915                     |
| 10/26/2018 | 0.53     | -                    | 541                     | 310                   | 793                      | 200                   | 280                      | -                     | 618                      | 1,790                 | 754                      | 933                   | 1,097                    | 1,368                | 717                     | 873                  | 1,043                   |
| 10/27/2018 | 0.50     | -                    | -                       | 310                   | -                        | 300                   | 282                      | -                     | 619                      | 2,120                 | 806                      | 117                   | 1,066                    | 840                  | 713                     | 1,030                | 1,079                   |
| 10/28/2018 | 0.50     | -                    | -                       | 190                   | -                        | 200                   | 283                      | -                     | 618                      | 3,060                 | 819                      | 101                   | 1,022                    | 3,521                | 686                     | 1,548                | 1,112                   |
| 10/29/2018 | 0.40     | -                    | 520                     | 20                    | 786                      | 300                   | 282                      | -                     | 620                      | 3,050                 | 792                      | 3,607                 | 966                      | 1,478                | 635                     | 2,110                | 1,112                   |
| 10/30/2018 | 0.00     | -                    | 509                     | 100                   | 783                      | 200                   | 195                      | -                     | 435                      | 2,700                 | 539                      | 1,776                 | 934                      | 564                  | 607                     | 1,947                | 619                     |
| 10/31/2018 | 0.00     | -                    | 525                     | 60                    | 767                      | 300                   | 156                      | -                     | 356                      | 2,840                 | 427                      | 149                   | 930                      | 716                  | 598                     | 1,795                | 402                     |
| 11/1/2018  | 0.11     | -                    | 516                     | *                     | 773                      | 150                   | 236                      | -                     | 530                      | 3,340                 | 629                      | 3,547                 | 926                      | 1,495                | 590                     | 1,900                | 840                     |
| 11/2/2018  | 0.13     | -                    | 517                     | *                     | 784                      | 300                   | 267                      | -                     | 597                      | 3,050                 | 679                      | 4,841                 | 913                      | 899                  | 584                     | 1,882                | 992                     |
| 11/3/2018  | 0.14     | -                    | -                       | *                     | -                        | 200                   | 279                      | -                     | 623                      | 2,710                 | 688                      | 2,045                 | 913                      | 614                  | 584                     | 1,586                | 1,049                   |
| 11/4/2018  | 0.14     | -                    | -                       | *                     | -                        | 300                   | 283                      | -                     | 629                      | 2,830                 | 713                      | 2,819                 | 908                      | 1,574                | 581                     | 1,884                | 1,065                   |
| 11/5/2018  | 0.24     | -                    | 488                     | *                     | 783                      | 550                   | 285                      | -                     | 632                      | 5,210                 | 716                      | 7,015                 | 899                      | 2,123                | 578                     | 1,884                | 1,064                   |
| 11/6/2018  | 0.06     | -                    | 492                     | *                     | 787                      | 850                   | 284                      | -                     | 635                      | 2,260                 | 720                      | 4,381                 | 900                      | 583                  | 583                     | 1,852                | 1,063                   |
| 11/7/2018  | 0.00     | -                    | 490                     | 120                   | 786                      | 200                   | 283                      | -                     | 636                      | 2,360                 | 732                      | 3,628                 | 914                      | 507                  | 602                     | 1,777                | 1,066                   |
| 11/8/2018  | 0.05     | -                    | 481                     | 90                    | -                        | 300                   | 281                      | -                     | 635                      | 2,080                 | 743                      | 3,408                 | 905                      | 408                  | 613                     | 1,623                | 1,067                   |
| 11/9/2018  | 0.01     | -                    | 491                     | 100                   | 716                      | 250                   | 278                      | -                     | 632                      | 2,060                 | 757                      | 3,075                 | 909                      | 316                  | 625                     | 1,421                | 1,072                   |
| 11/10/2018 | 0.00     | -                    | -                       | 60                    | -                        | 400                   | 276                      | -                     | 627                      | 2,067                 | -                        | 2,960                 | -                        | 266                  | -                       | 1,272                | 1,077                   |
| 11/11/2018 | 0.01     | -                    | -                       | 120                   | -                        | 300                   | 274                      | -                     | 625                      | 2,067                 | -                        | 2,960                 | -                        | 266                  | -                       | 1,272                | 1,079                   |
| 11/12/2018 | 0.03     | -                    | 485                     | *                     | 786                      | 250                   | 272                      | -                     | 624                      | 2,067                 | 784                      | 2,960                 | 926                      | 266                  | 654                     | 1,272                | 1,082                   |
| 11/13/2018 | 0.07     | -                    | 486                     | *                     | 785                      | 400                   | 273                      | -                     | 623                      | 1,980                 | 773                      | 2,805                 | 940                      | 223                  | 662                     | 1,073                | 1,083                   |
| 11/14/2018 | 0.00     | -                    | 488                     | *                     | 785                      | 400                   | 278                      | -                     | 621                      | 2,020                 | 783                      | 1,998                 | 962                      | 256                  | 671                     | 1,030                | 1,085                   |
| 11/15/2018 | 0.11     | -                    | 483                     | *                     | 764                      | 350                   | 282                      | -                     | 621                      | 1,830                 | 785                      | 2,274                 | 944                      | 224                  | 682                     | 1,018                | 1,077                   |
| 11/16/2018 | 0.00     | -                    | 490                     | 90                    | 774                      | 400                   | 286                      | -                     | 621                      | 1,930                 | 785                      | 2,624                 | 961                      | 289                  | 685                     | 966                  | 1,075                   |
| 11/17/2018 | 0.00     | -                    | -                       | *                     | -                        | 350                   | 288                      | -                     | 623                      | 2,333                 | -                        | 3,576                 | -                        | 352                  | -                       | 1,098                | 1,063                   |
| 11/18/2018 | 0.01     | -                    | -                       | *                     | -                        | 400                   | 286                      | -                     | 626                      | 2,333                 | -                        | 3,576                 | -                        | 352                  | -                       | 1,098                | 1,068                   |
| 11/19/2018 | 0.01     | -                    | 474                     | *                     | 769                      | 400                   | 284                      | -                     | 625                      | 2,333                 | 474                      | 3,576                 | 906                      | 352                  | 595                     | 1,098                | 1,077                   |
| 11/20/2018 | 0.08     | -                    | 475                     | *                     | 769                      | 450                   | 284                      | -                     | 623                      | 1,240                 | 460                      | 1,601                 | 933                      | 174                  | 655                     | 1,062                | 1,084                   |
| 11/21/2018 | 0.43     | -                    | 470                     | *                     | 770                      | 500                   | 287                      | -                     | 621                      | 1,090                 | 662                      | 1,035                 | 951                      | 128                  | 690                     | 50                   | 1,092                   |
| 11/22/2018 | 0.34     | -                    | -                       | *                     | -                        | 450                   | 290                      | -                     | 621                      | 1,100                 | 739                      | 2,734                 | 958                      | 549                  | 701                     | 1,645                | 1,094                   |
| 11/23/2018 | 0.01     | -                    | 463                     | *                     | 788                      | 500                   | 292                      | -                     | 624                      | 1,400                 | 768                      | 4,102                 | 927                      | 950                  | 685                     | 1,645                | 1,080                   |
| 11/24/2018 | 0.00     | -                    | -                       | *                     | -                        | 450                   | 289                      | -                     | 635                      | 1,250                 | 774                      | 2,230                 | 889                      | 288                  | 668                     | 1,717                | 1,067                   |
| 11/25/2018 | 0.12     | -                    | -                       | *                     | -                        | 550                   | 286                      | -                     | 645                      | 1,100                 | 770                      | 1,997                 | 888                      | 194                  | 672                     | 1,717                | 1,068                   |
| 11/26/2018 | 0.54     | -                    | 463                     | *                     | 782                      | 450                   | 288                      | -                     | 644                      | 1,250                 | 762                      | 2,812                 | 898                      | 355                  | 683                     | 1,717                | 1,068                   |
| 11/27/2018 | 0.42     | -                    | 465                     | *                     | 784                      | 600                   | 296                      | -                     | 639                      | 1,890                 | 754                      | 4,737                 | 894                      | 977                  | 679                     | 1,577                | 1,050                   |
| 11/28/2018 | 0.00     | -                    | -                       | *                     | -                        | 550                   | 297                      | -                     | 643                      | 1,900                 | 728                      | 4,851                 | 850                      | 1,208                | 657                     | 1,947                | 1,043                   |
| 11/29/2018 | 0.04     | -                    | 455                     | *                     | 770                      | 550                   | 294                      | -                     | 647                      | 1,410                 | 708                      | 3,434                 | 785                      | 377                  | 640                     | 2,781                | 1,056                   |
| 11/30/2018 | 0.06     | -                    | -                       | *                     | -                        | 600                   | 290                      | -                     | 651                      | 1,560                 | 710                      | 2,708                 | 775                      | 379                  | 642                     | 2,212                | 341                     |

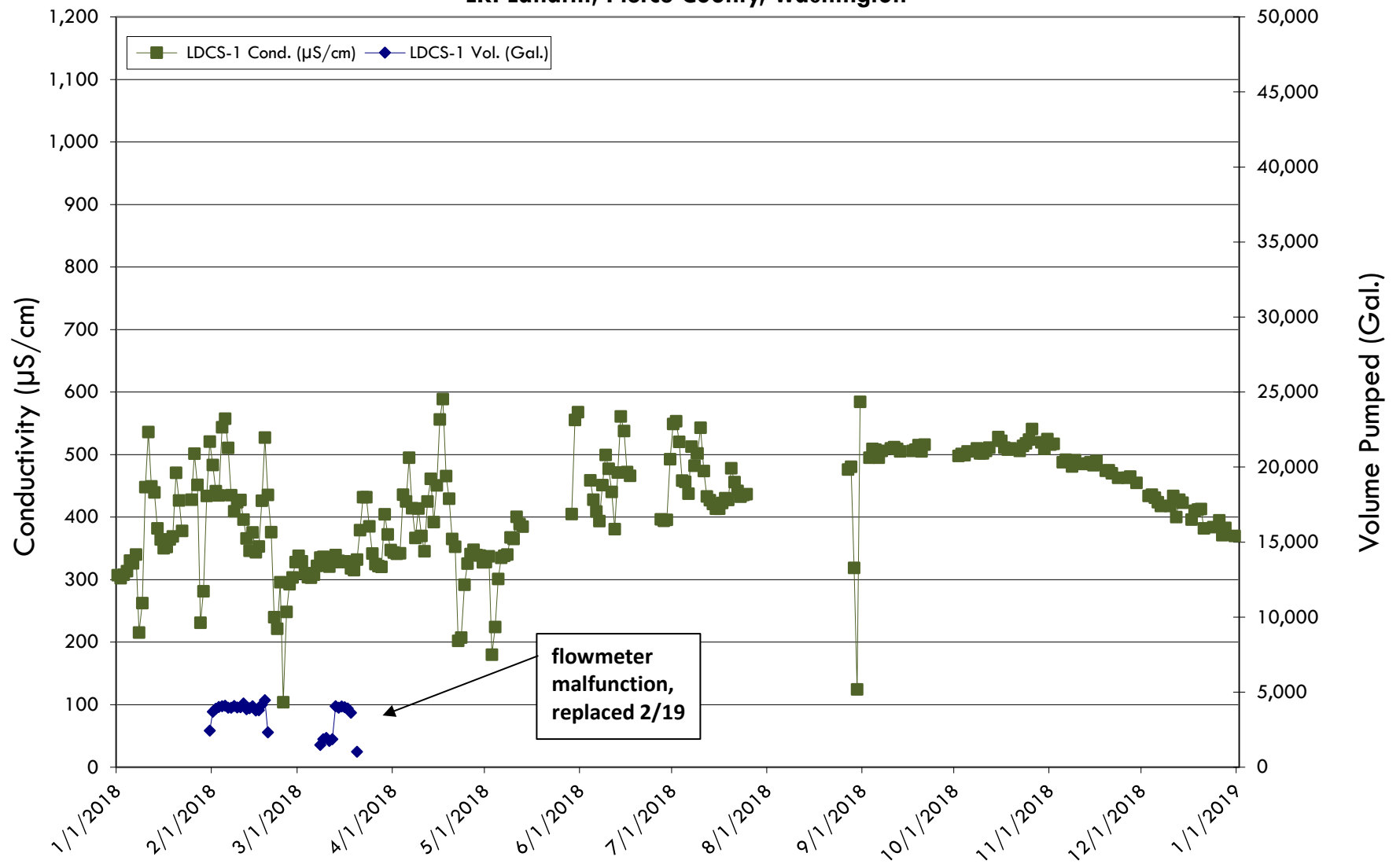
**Summary of LDCS Volumes Pumped and Conductivity Data**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

| Date       | Rainfall | LDCS-1 Vol.<br>(Gal.) | LDCS-1 Cond.<br>(µS/cm) | LDCS-2A Vol.<br>(Gal) | LDCS-2A Cond.<br>(µS/cm) | LDCS-2B Vol.<br>(Gal) | LDCS-2B Cond.<br>(µS/cm) | LDCS-3A Vol.<br>(Gal) | LDCS-3A Cond.<br>(µS/cm) | LDCS-4A Vol.<br>(Gal) | LDCS-4A Cond.<br>(µS/cm) | LDCS-4B Vol.<br>(Gal) | LDCS-4B Cond.<br>(µS/cm) | LDCS-5 Vol.<br>(Gal) | LDCS-5 Cond.<br>(µS/cm) | LDCS-6 Vol.<br>(Gal) | LDCS-6 Cond.<br>(µS/cm) |
|------------|----------|-----------------------|-------------------------|-----------------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|----------------------|-------------------------|----------------------|-------------------------|
| 12/1/2018  | 0.00     | -                     | -                       | *                     | -                        | 550                   | 287                      | -                     | 652                      | 1,550                 | 712                      | 2,974                 | 778                      | 295                  | 649                     | 2,212                | 524                     |
| 12/2/2018  | 0.01     | -                     | -                       | *                     | -                        | 600                   | 284                      | -                     | 653                      | 1,410                 | 713                      | 2,708                 | 781                      | 347                  | 657                     | 2,212                | 852                     |
| 12/3/2018  | 0.01     | -                     | 434                     | *                     | 763                      | 500                   | 279                      | -                     | 653                      | 1,490                 | 719                      | 2,326                 | 786                      | 261                  | 662                     | 2,212                | 967                     |
| 12/4/2018  | 0.00     | -                     | 436                     | *                     | 764                      | 600                   | 280                      | -                     | 649                      | 1,250                 | 737                      | 2,345                 | 796                      | 217                  | 677                     | 1,614                | 1,009                   |
| 12/5/2018  | 0.01     | -                     | 431                     | *                     | 761                      | 650                   | 287                      | -                     | 641                      | 1,260                 | 750                      | 2,047                 | 823                      | 192                  | 693                     | 1,528                | 1,023                   |
| 12/6/2018  | 0.01     | -                     | 424                     | *                     | 756                      | 600                   | 287                      | -                     | 633                      | 1,090                 | 764                      | 1,746                 | 850                      | 192                  | 705                     | 1,385                | 1,030                   |
| 12/7/2018  | 0.02     | -                     | 418                     | *                     | 757                      | 550                   | 285                      | -                     | 628                      | 1,090                 | 777                      | 1,703                 | 868                      | 191                  | 716                     | 1,332                | 1,034                   |
| 12/8/2018  | 0.44     | -                     | -                       | *                     | -                        | 600                   | 281                      | -                     | 626                      | 1,110                 | 792                      | 1,763                 | 883                      | 193                  | 725                     | 1,204                | 1,038                   |
| 12/9/2018  | 0.26     | -                     | -                       | *                     | -                        | 600                   | 280                      | -                     | 624                      | 1,250                 | 799                      | 3,033                 | 893                      | 1,140                | 734                     | 1,204                | 1,035                   |
| 12/10/2018 | 0.90     | -                     | 418                     | *                     | 763                      | 550                   | 285                      | -                     | 626                      | 1,420                 | 791                      | 4,546                 | 872                      | 751                  | 717                     | 1,204                | 1,002                   |
| 12/11/2018 | 0.06     | -                     | 434                     | *                     | 767                      | 650                   | 287                      | -                     | 632                      | 2,070                 | 766                      | 4,251                 | 846                      | 3,079                | 695                     | 1,741                | 993                     |
| 12/12/2018 | 0.11     | -                     | 400                     | *                     | 762                      | 550                   | 290                      | -                     | 636                      | 1,410                 | 723                      | 3,179                 | 803                      | 349                  | 655                     | 2,720                | 307                     |
| 12/13/2018 | 0.08     | -                     | 428                     | *                     | 766                      | 600                   | 291                      | -                     | 637                      | 1,580                 | 702                      | 3,655                 | 795                      | 477                  | 648                     | 3,108                | 505                     |
| 12/14/2018 | 0.00     | -                     | 423                     | *                     | 770                      | -                     | -                        | -                     | 632                      | -                     | -                        | -                     | -                        | -                    | -                       | 2,581                | -                       |
| 12/15/2018 | 0.05     | -                     | -                       | *                     | -                        | -                     | -                        | -                     | 643                      | -                     | -                        | -                     | -                        | -                    | -                       | 2,169                | -                       |
| 12/16/2018 | 0.03     | -                     | -                       | *                     | -                        | 600                   | 646                      | -                     | 811                      | 1,250                 | 715                      | 2,574                 | 812                      | 317                  | 677                     | 2,169                | 992                     |
| 12/17/2018 | 0.86     | -                     | 396                     | 350                   | 759                      | 650                   | 675                      | -                     | 828                      | 1,400                 | 730                      | 2,780                 | 818                      | 317                  | 680                     | 2,169                | 1,007                   |
| 12/18/2018 | 0.21     | -                     | 410                     | 480                   | 769                      | 650                   | 685                      | -                     | 833                      | 2,050                 | 729                      | 4,042                 | 809                      | 1,770                | 664                     | 1,849                | 1,008                   |
| 12/19/2018 | 0.00     | -                     | 412                     | 410                   | 762                      | 700                   | 686                      | -                     | 838                      | 1,890                 | 709                      | 5,483                 | 761                      | 733                  | 632                     | 2,312                | 999                     |
| 12/20/2018 | 0.08     | -                     | 413                     | 480                   | 762                      | 650                   | 687                      | -                     | 504                      | 1,580                 | 692                      | 3,453                 | 742                      | 316                  | 633                     | 2,634                | 998                     |
| 12/21/2018 | 0.00     | -                     | 382                     | 490                   | 758                      | 600                   | 684                      | -                     | 479                      | 1,250                 | 679                      | 2,763                 | 751                      | 253                  | 647                     | 2,512                | 993                     |
| 12/22/2018 | 0.09     | -                     | -                       | 500                   | -                        | 650                   | 676                      | -                     | 705                      | 1,290                 | 695                      | 2,845                 | 765                      | 220                  | 659                     | 2,141                | 990                     |
| 12/23/2018 | 0.43     | -                     | -                       | 520                   | -                        | 650                   | 678                      | -                     | 782                      | 1,400                 | 723                      | 4,308                 | 779                      | 902                  | 673                     | 2,141                | 989                     |
| 12/24/2018 | 0.00     | -                     | 384                     | 480                   | 754                      | 700                   | 677                      | -                     | 810                      | 1,420                 | 722                      | 3,708                 | 777                      | 351                  | 659                     | 2,141                | 980                     |
| 12/25/2018 | 0.00     | -                     | -                       | 540                   | -                        | 750                   | 669                      | -                     | 823                      | 1,570                 | 709                      | 2,552                 | 783                      | 252                  | 660                     | 2,120                | 980                     |
| 12/26/2018 | 0.42     | -                     | 395                     | 460                   | 757                      | 650                   | 663                      | -                     | 826                      | 1,830                 | 699                      | 3,495                 | 796                      | 837                  | 671                     | 2,120                | 986                     |
| 12/27/2018 | 0.04     | -                     | 371                     | 530                   | 753                      | 700                   | 665                      | -                     | 825                      | 1,450                 | 691                      | 3,854                 | 794                      | 473                  | 664                     | 2,003                | 982                     |
| 12/28/2018 | 0.03     | -                     | 383                     | 480                   | 753                      | 650                   | 661                      | -                     | 828                      | 2,060                 | 688                      | 4,862                 | 793                      | 1,155                | 659                     | 2,002                | 979                     |
| 12/29/2018 | 0.45     | -                     | -                       | 530                   | -                        | 800                   | 674                      | -                     | 827                      | 2,280                 | 678                      | 4,611                 | 785                      | 1,569                | 649                     | 2,314                | 966                     |
| 12/30/2018 | 0.01     | -                     | -                       | 560                   | -                        | 750                   | 678                      | -                     | 825                      | 1,570                 | 656                      | 3,923                 | 773                      | 377                  | 634                     | 2,314                | 956                     |
| 12/31/2018 | 0.00     | -                     | 370                     | 490                   | 752                      | 650                   | 670                      | -                     | 828                      | 1,410                 | 656                      | 2,875                 | 777                      | 252                  | 638                     | 2,314                | 958                     |

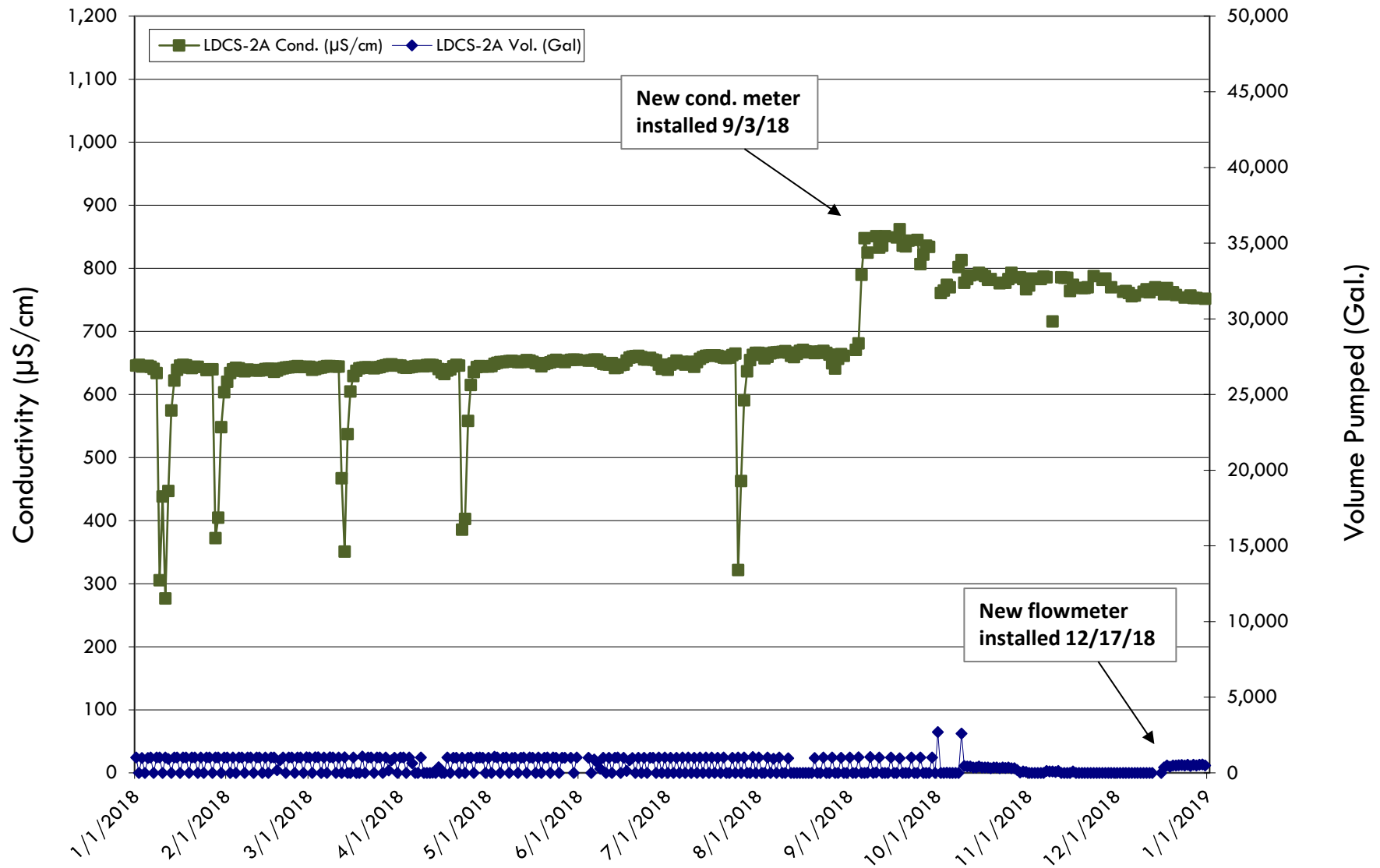
- = No data collected

\* = Meter malfunction

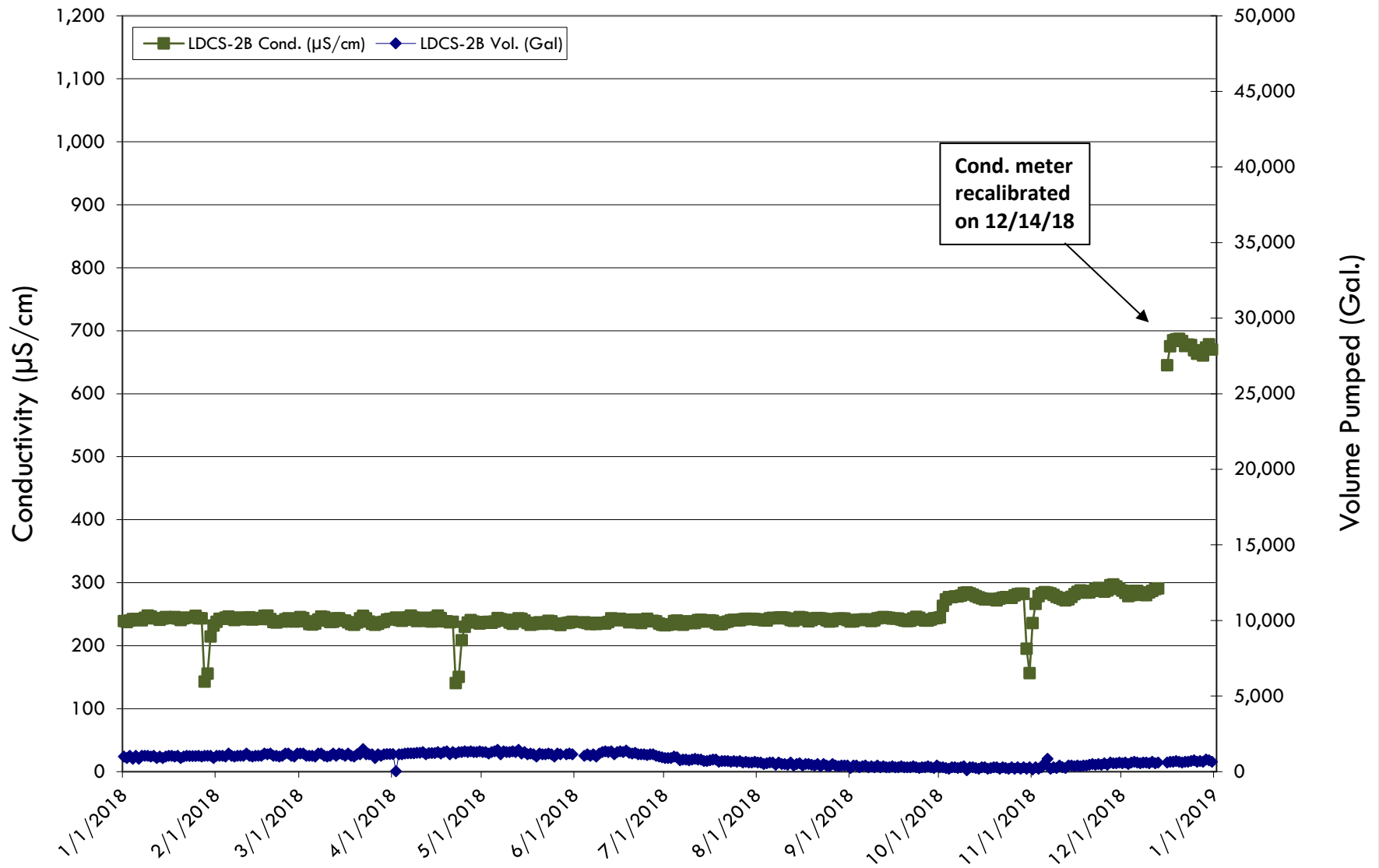
**LDCS-1 (DailyTotals)**  
**Conductivity vs Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



**LDCS-2A (Daily Totals)  
Conductivity vs Volume Pumped  
Fourth Quarter 2018  
LRI Landfill, Pierce County, Washington**

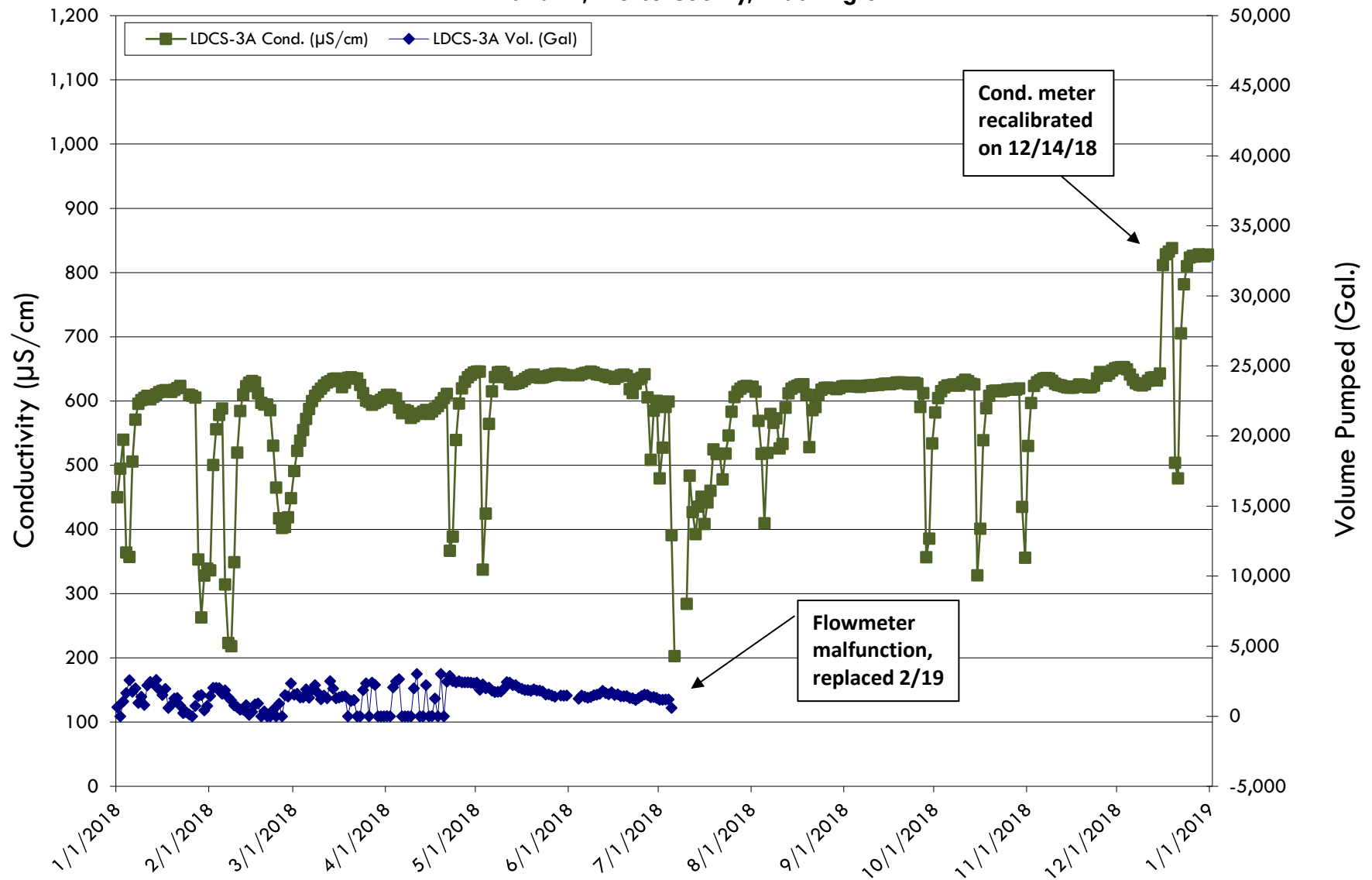


**LDCS-2B (Daily Totals)**  
**Conductivity vs Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

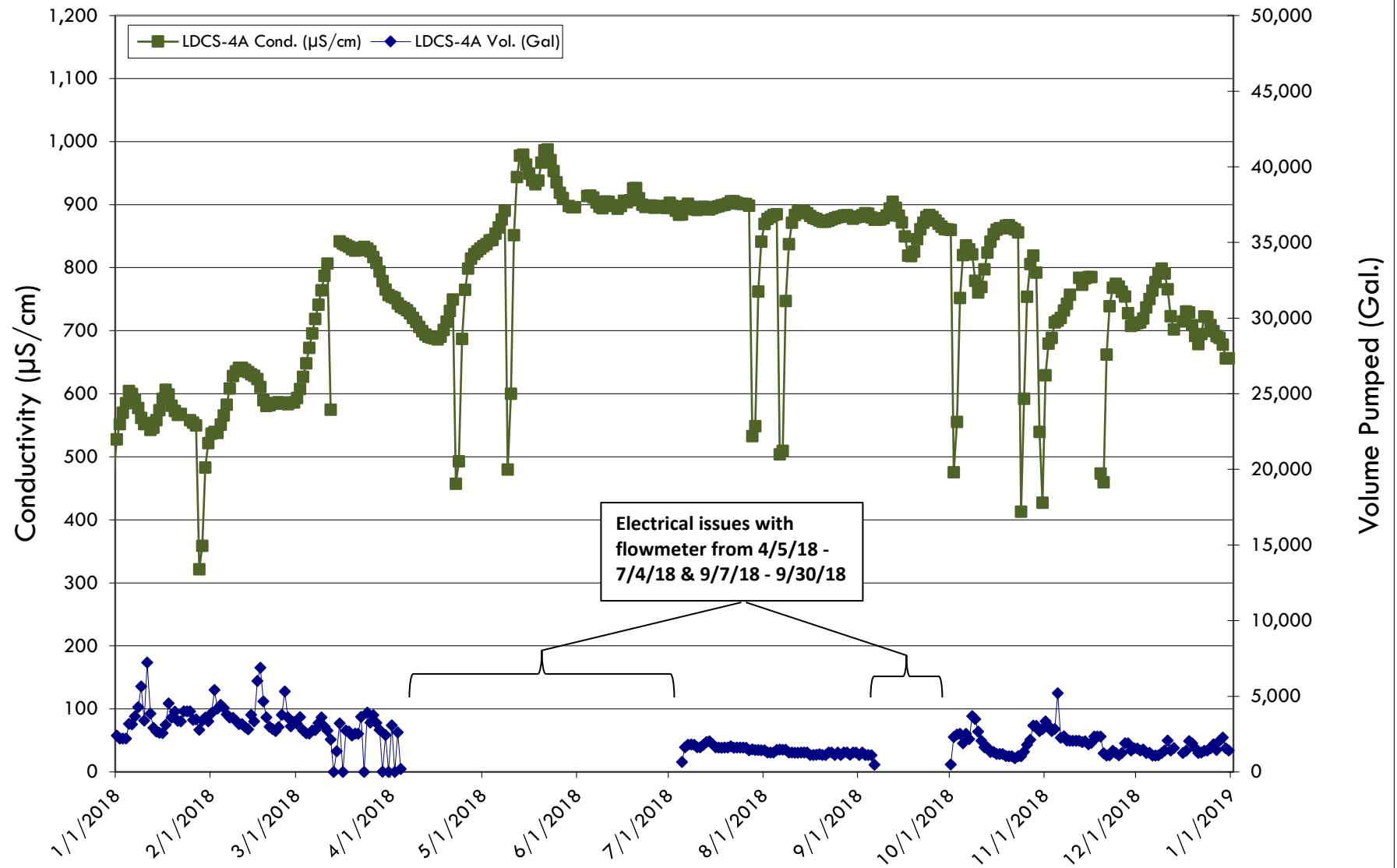




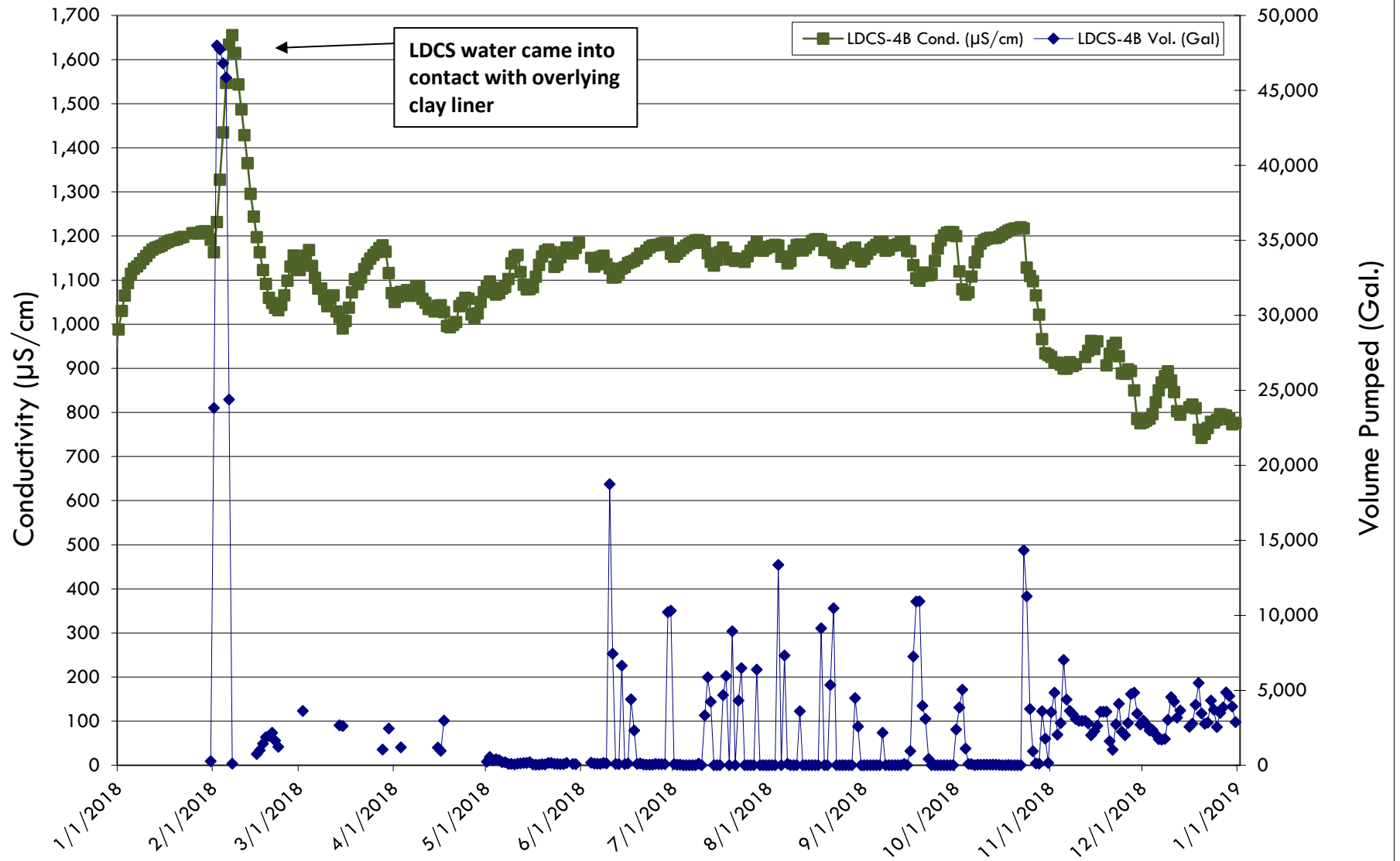
**LDCS-3A (Daily Totals)**  
**Conductivity vs Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



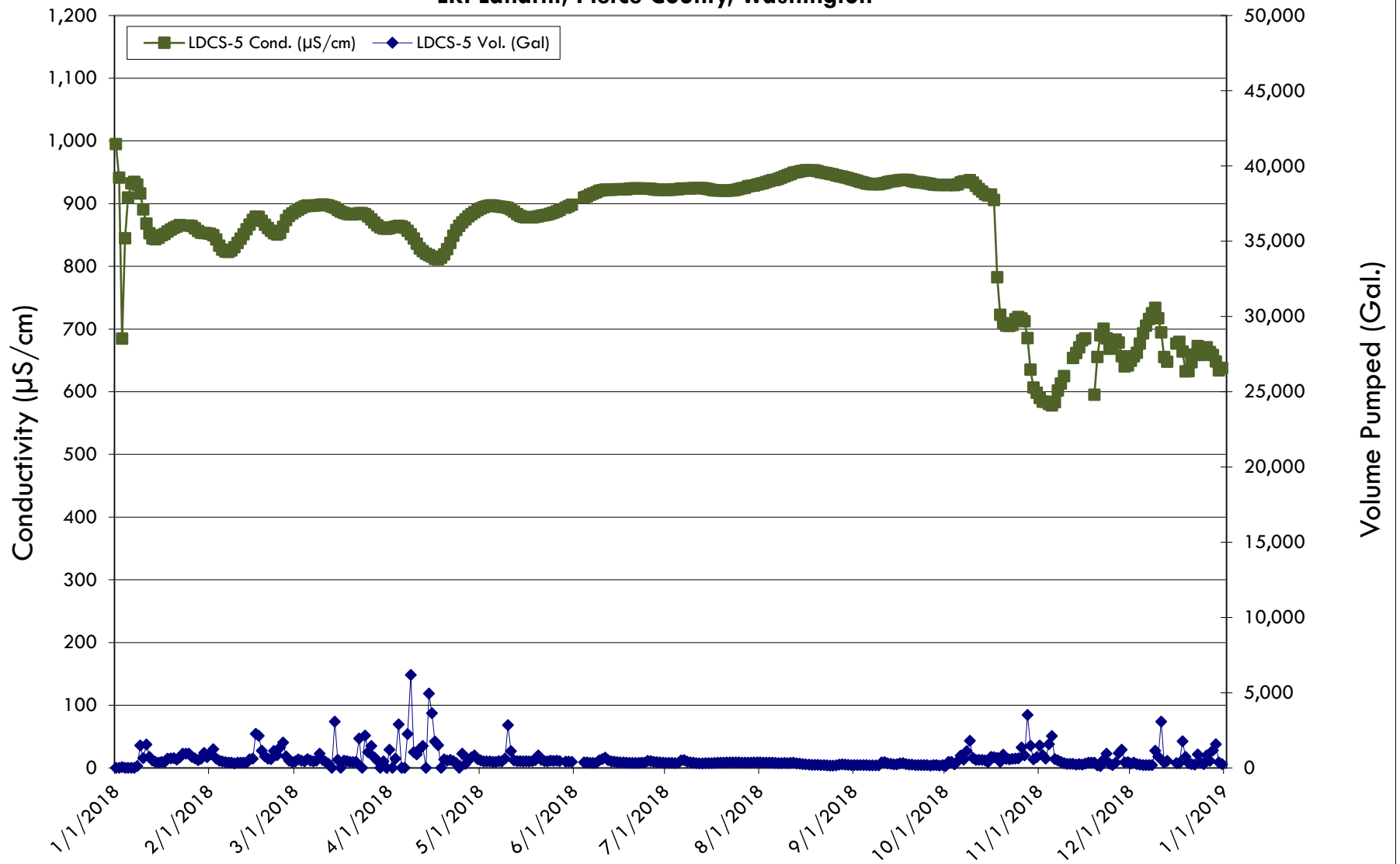
**LDCS-4A (Daily Totals)**  
**Conductivity vs Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



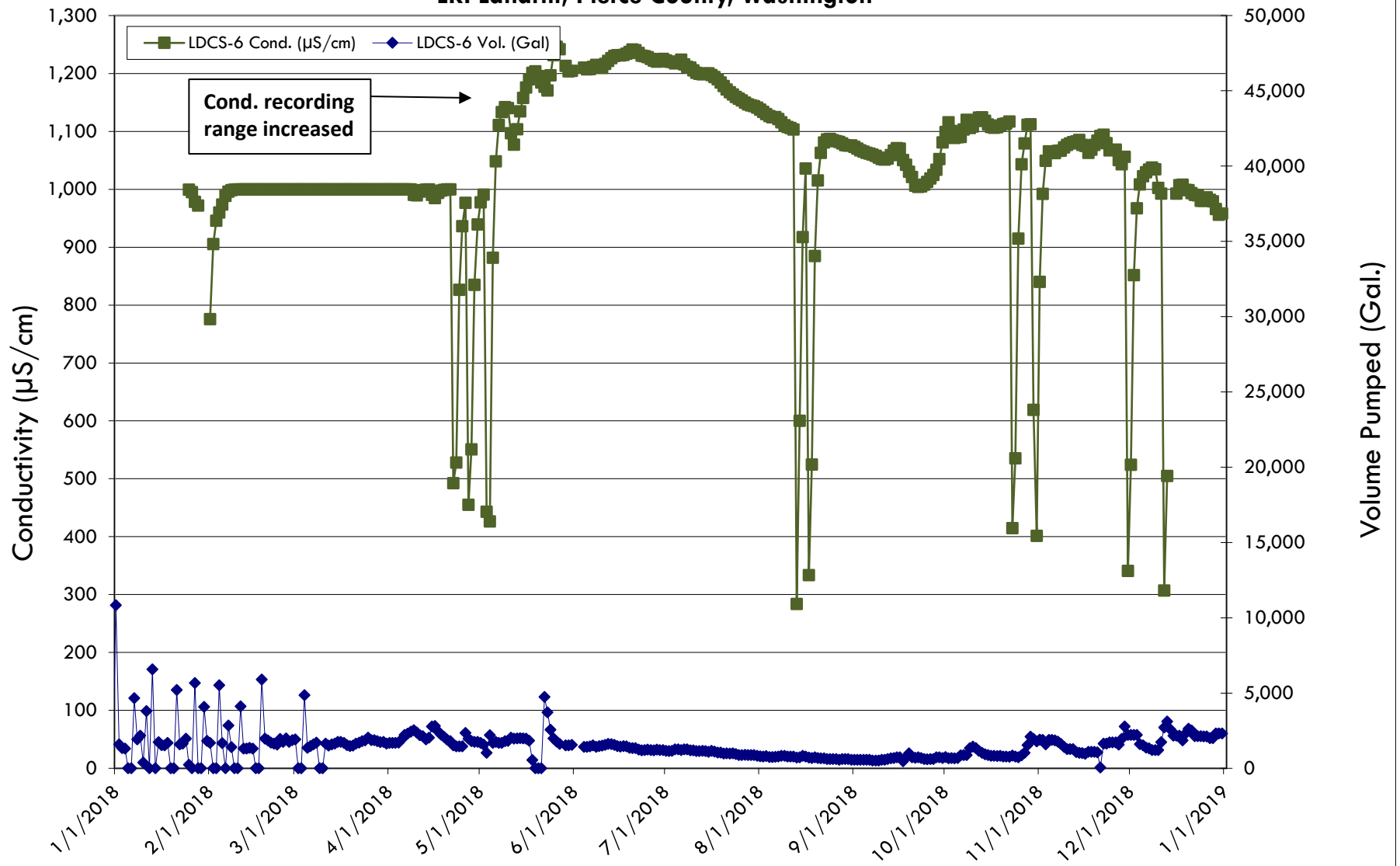
**LDCS-4B (Daily Totals)**  
**Conductivity vs Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



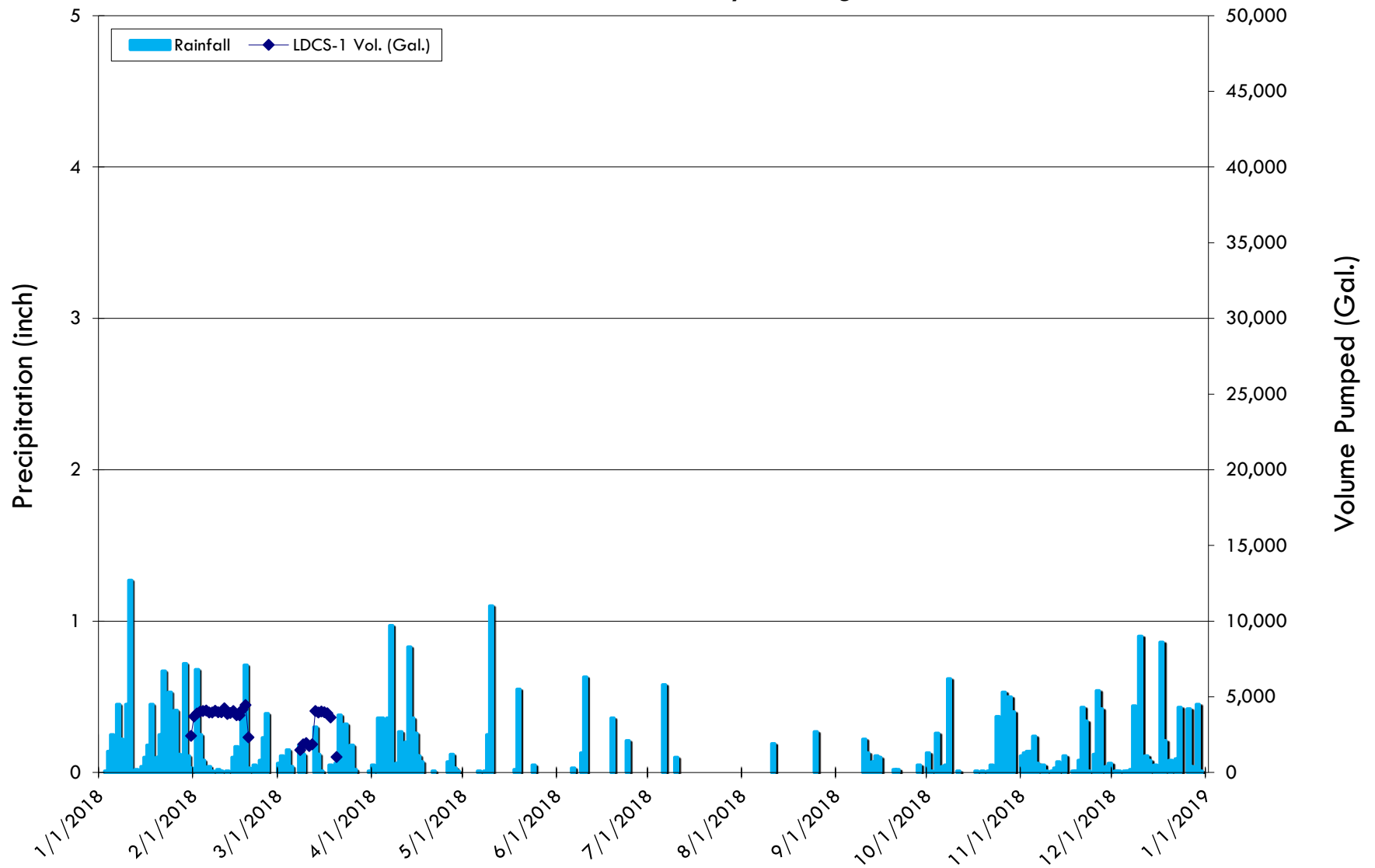
**LDCS-5 (Daily Totals)**  
**Conductivity vs Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



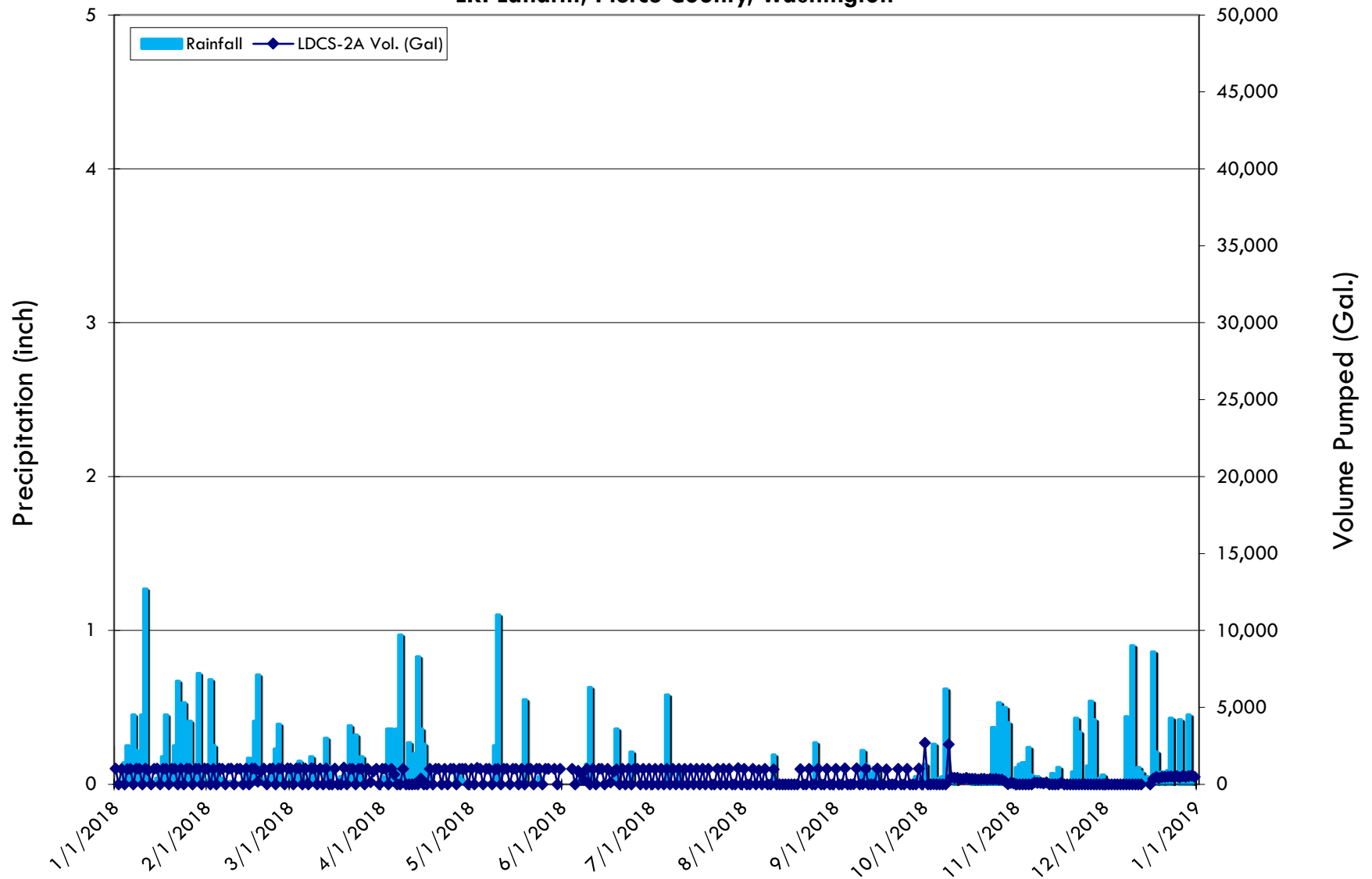
**LDCS-6 (Daily Totals)**  
**Conductivity vs Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



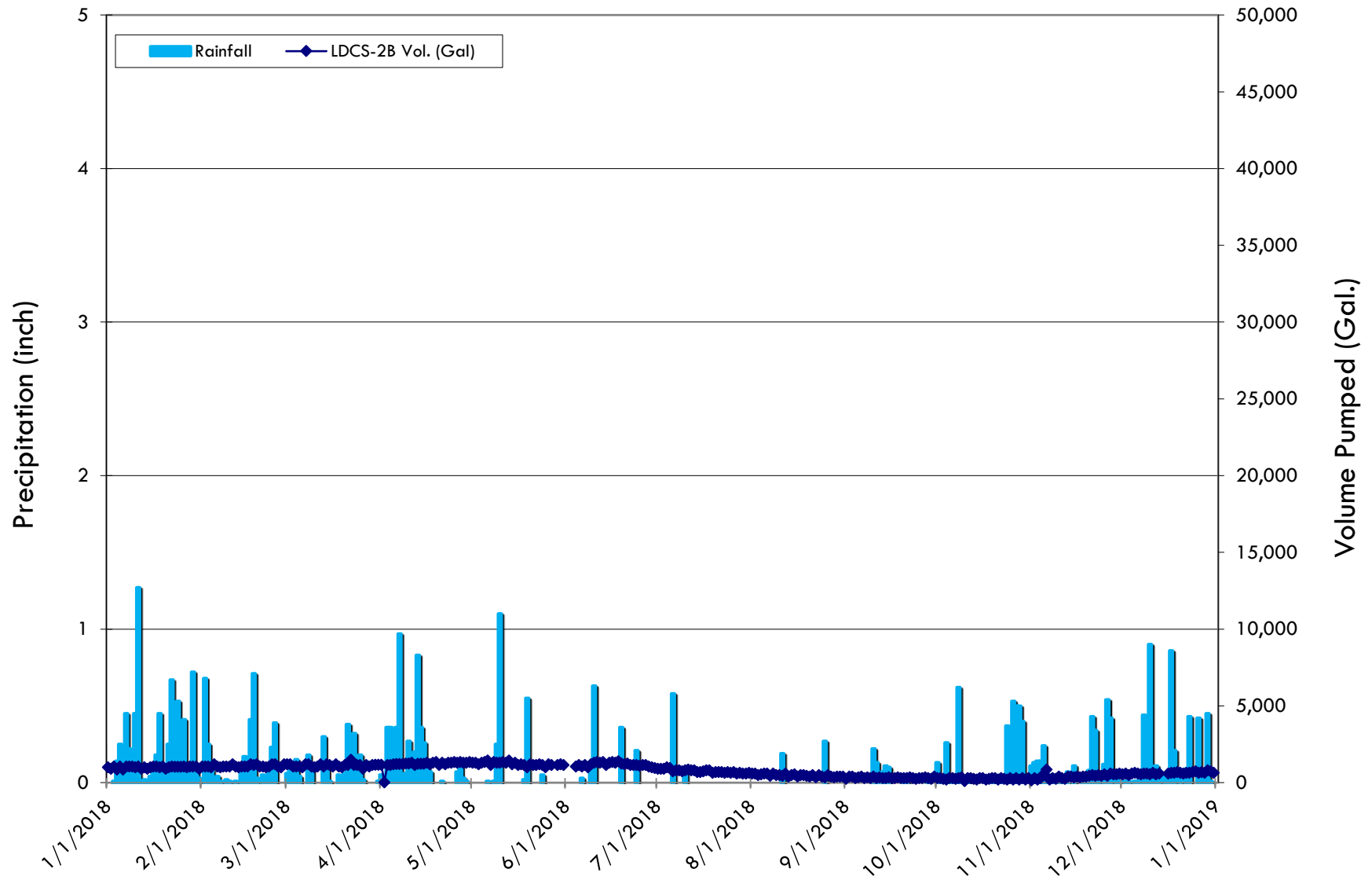
**LDCS-1 (Daily Totals)  
Volume Pumped vs Precipitation  
Fourth Quarter 2018  
LRI Landfill, Pierce County, Washington**



**LDCS-2A (Daily Totals)**  
**Volume Pumped vs Precipitation**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

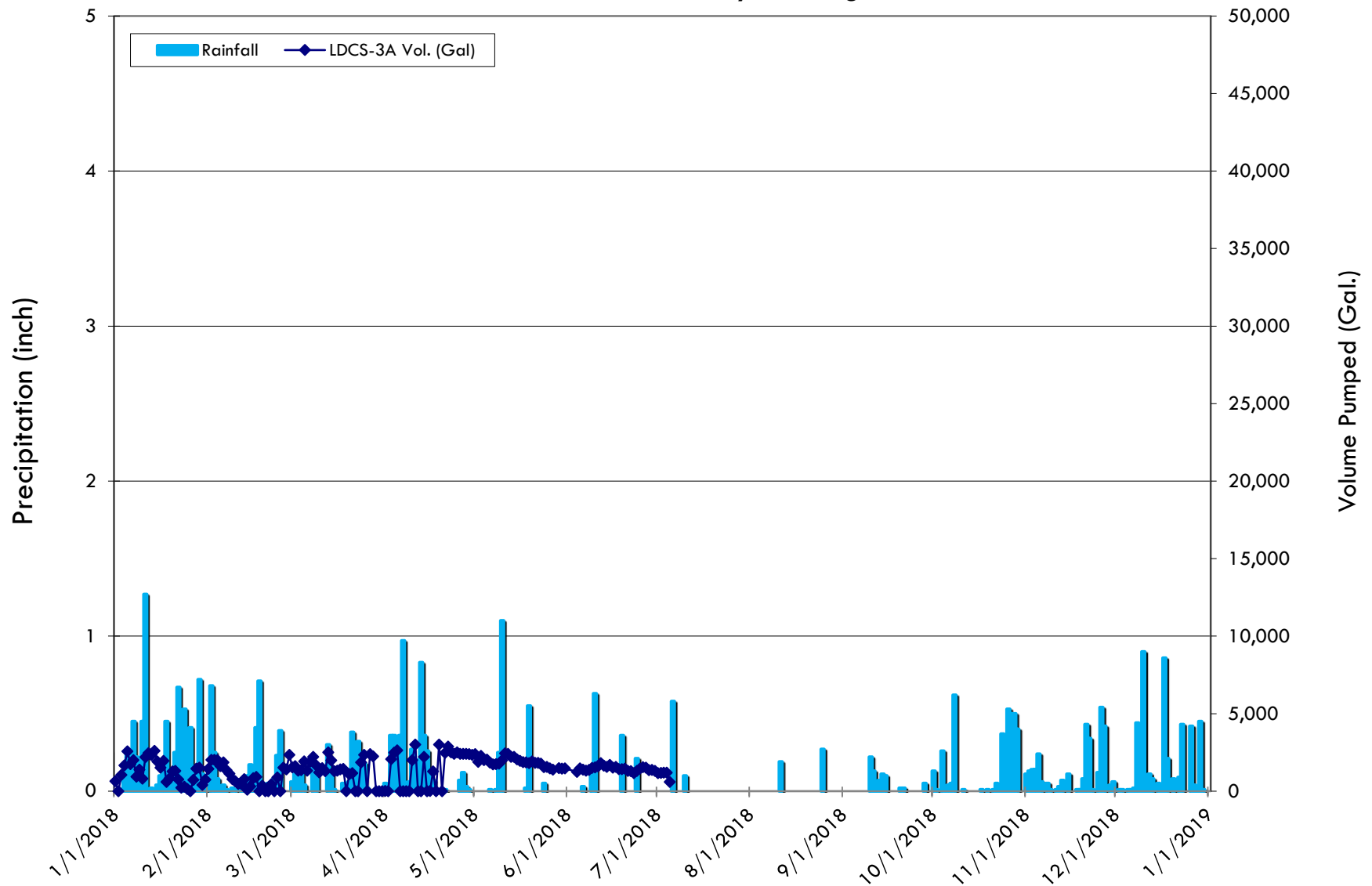


**LDCS-2B (Daily Totals)  
Volume Pumped vs Precipitation  
Fourth Quarter 2018  
LRI Landfill, Pierce County, Washington**

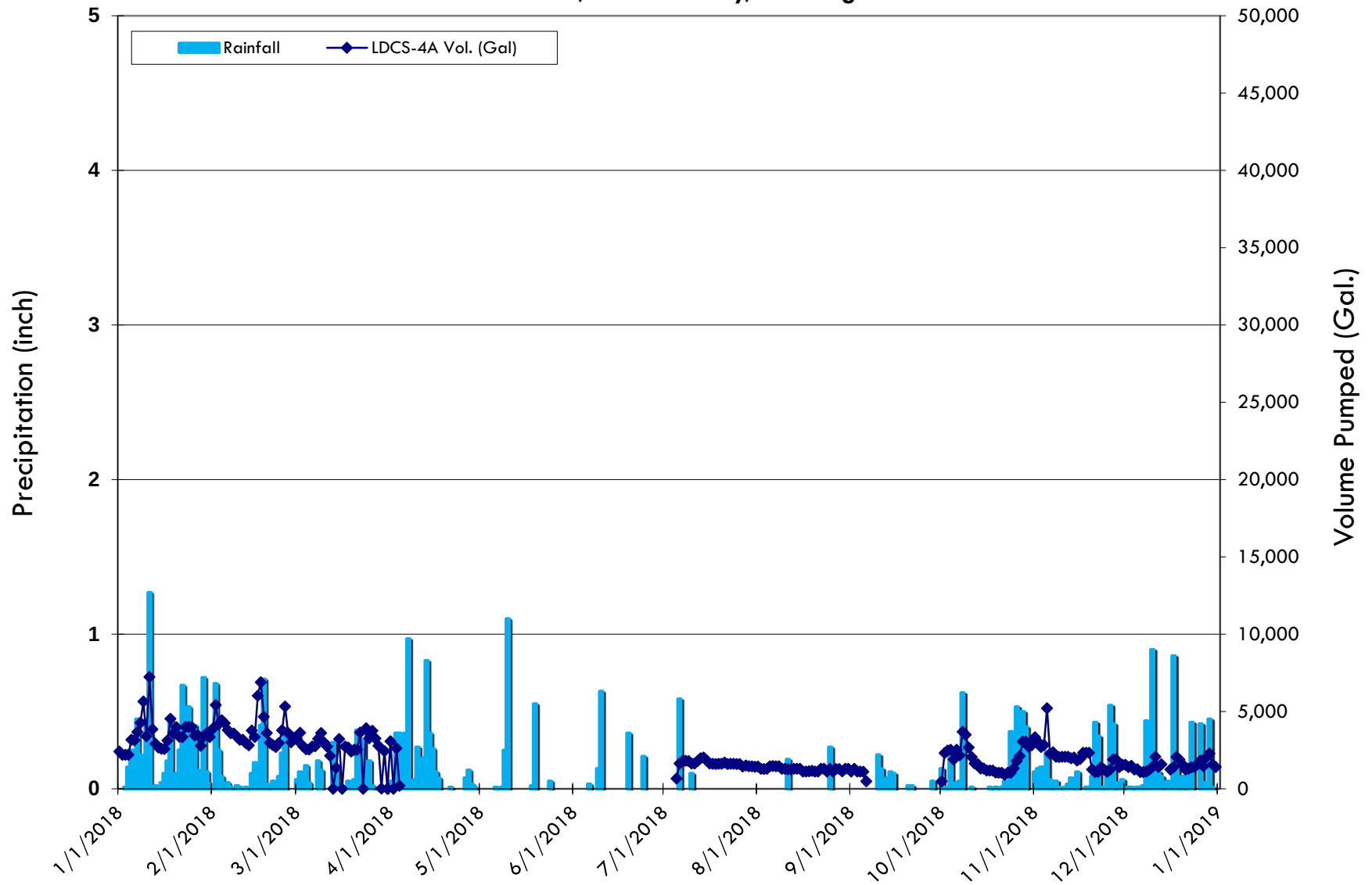




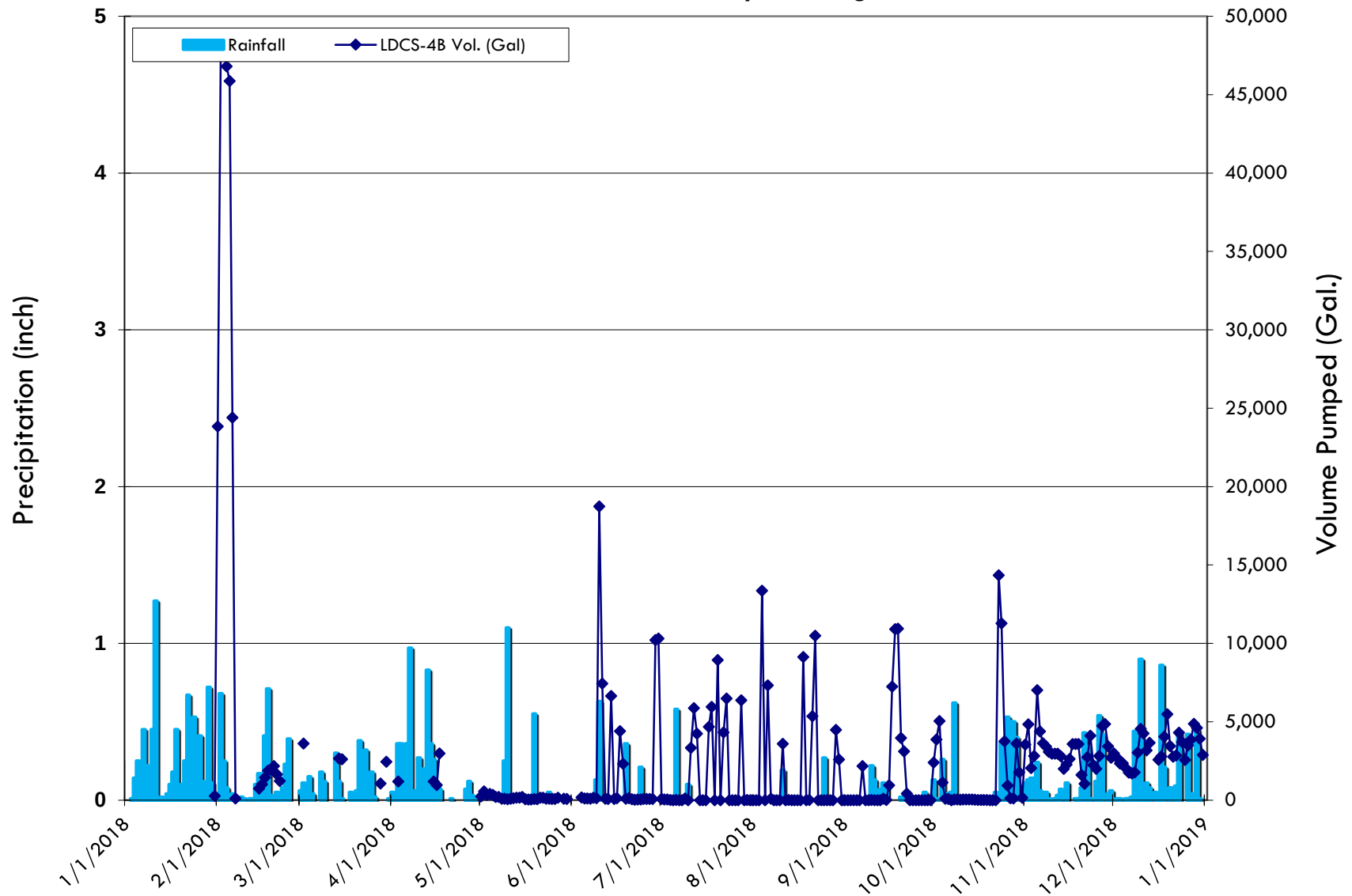
**LDCS-3A (Daily Totals)**  
**Volume Pumped vs Precipitation**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



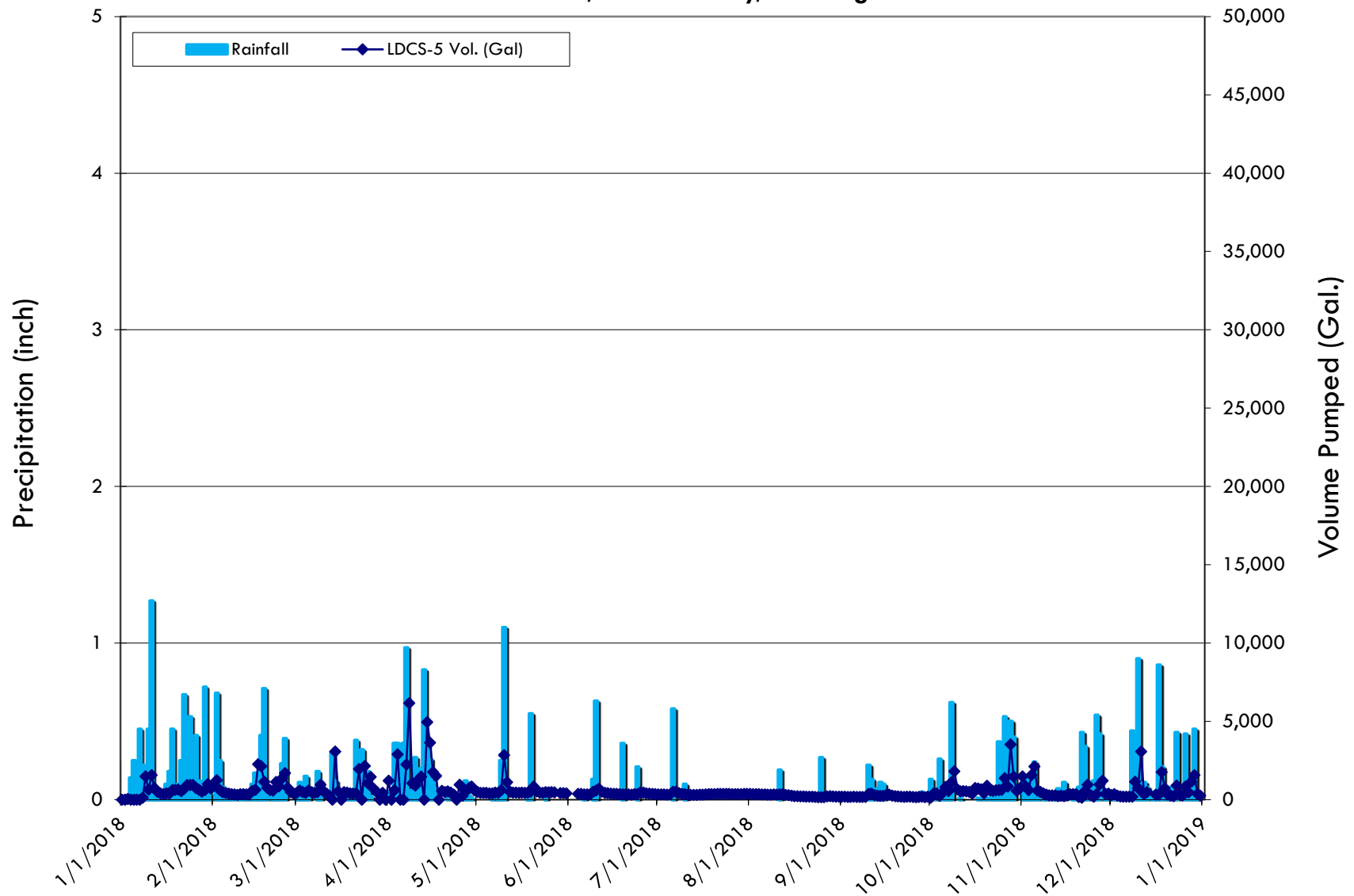
**LDCS-4A (Daily Totals)**  
**Volume Pumped vs Precipitation**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



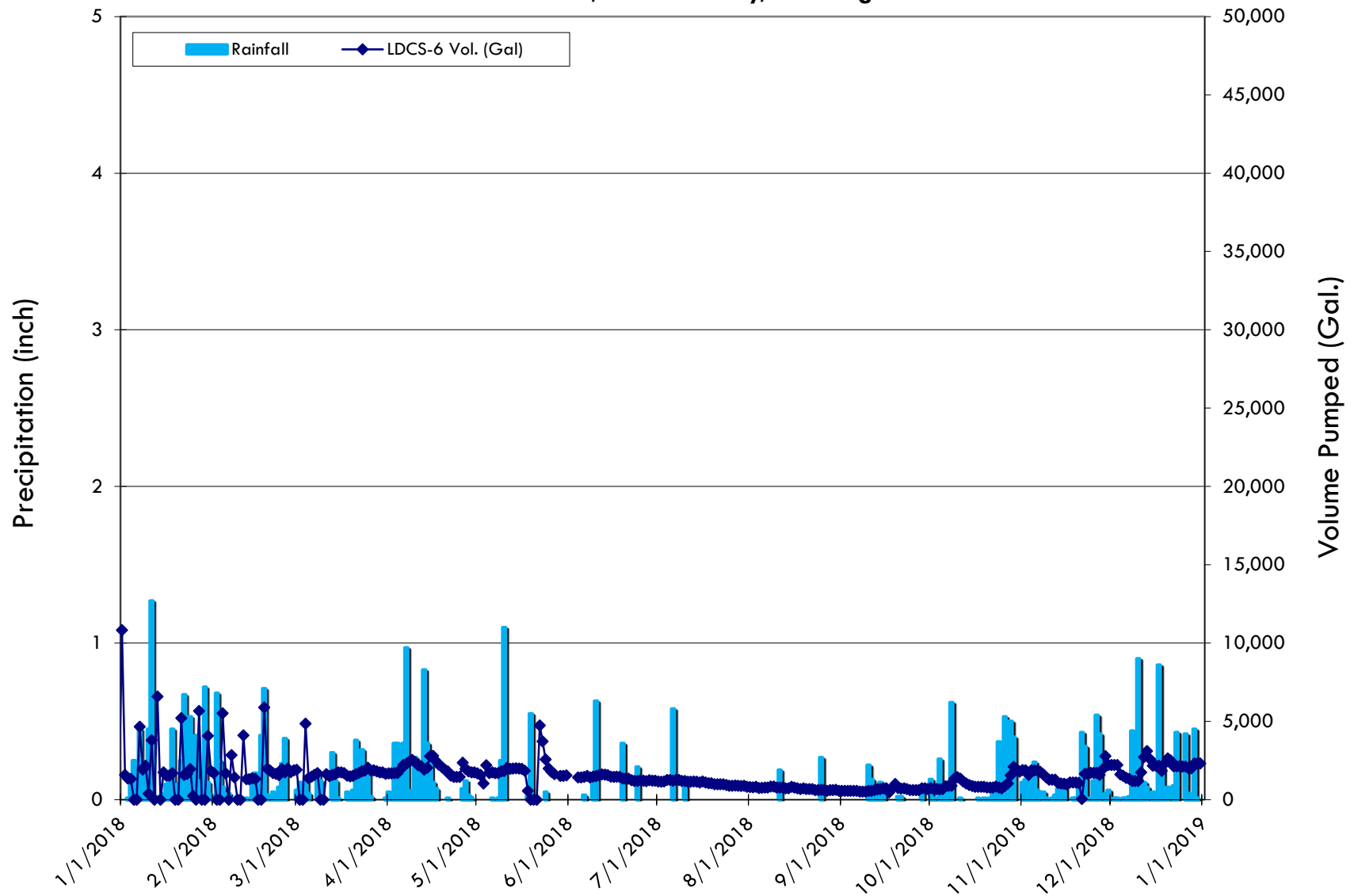
**LDCS-4B (Daily Totals)**  
**Volume Pumped vs Precipitation**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



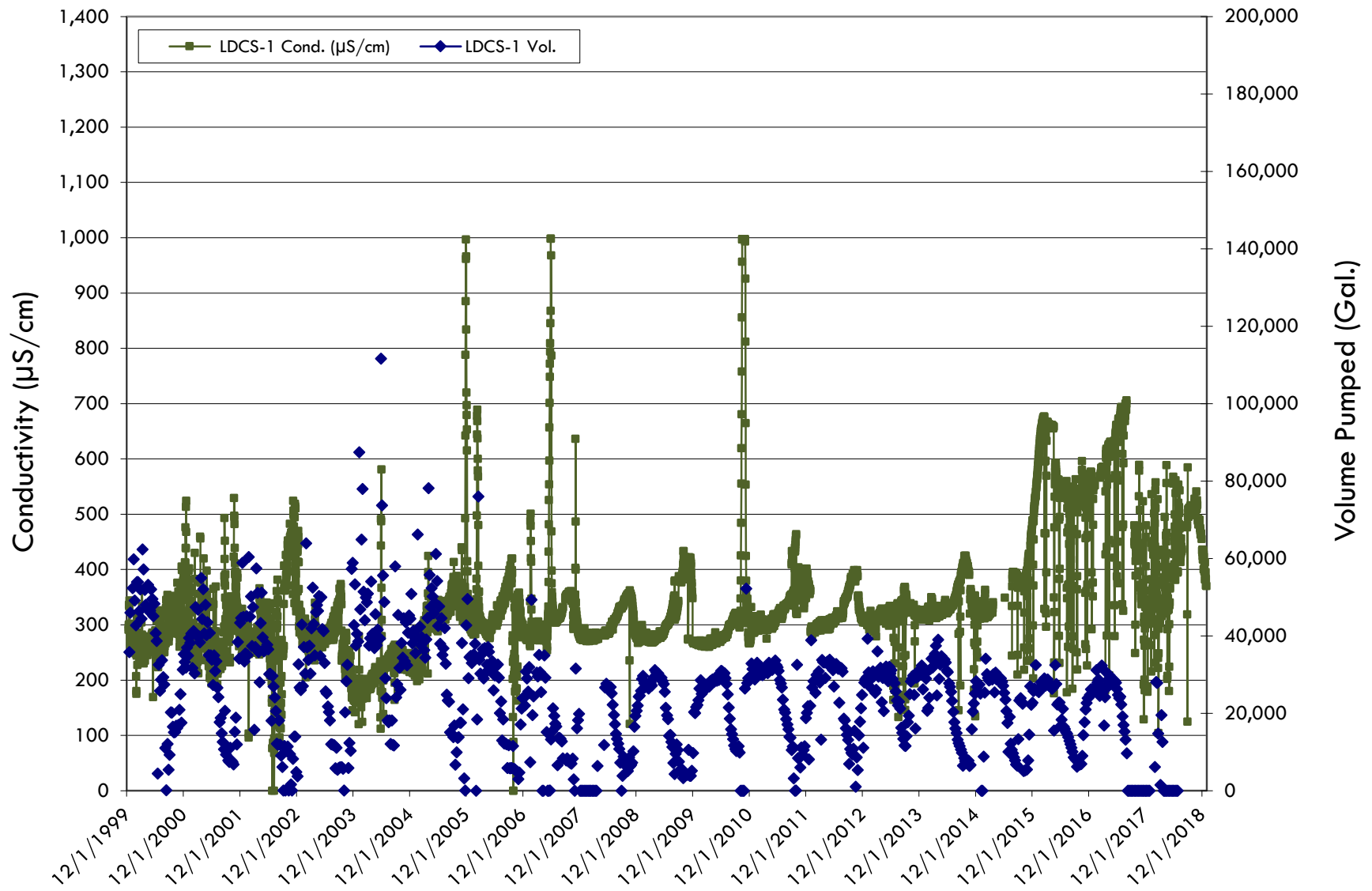
**LDCS-5 (Daily Totals)**  
**Volume Pumped vs Precipitation**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



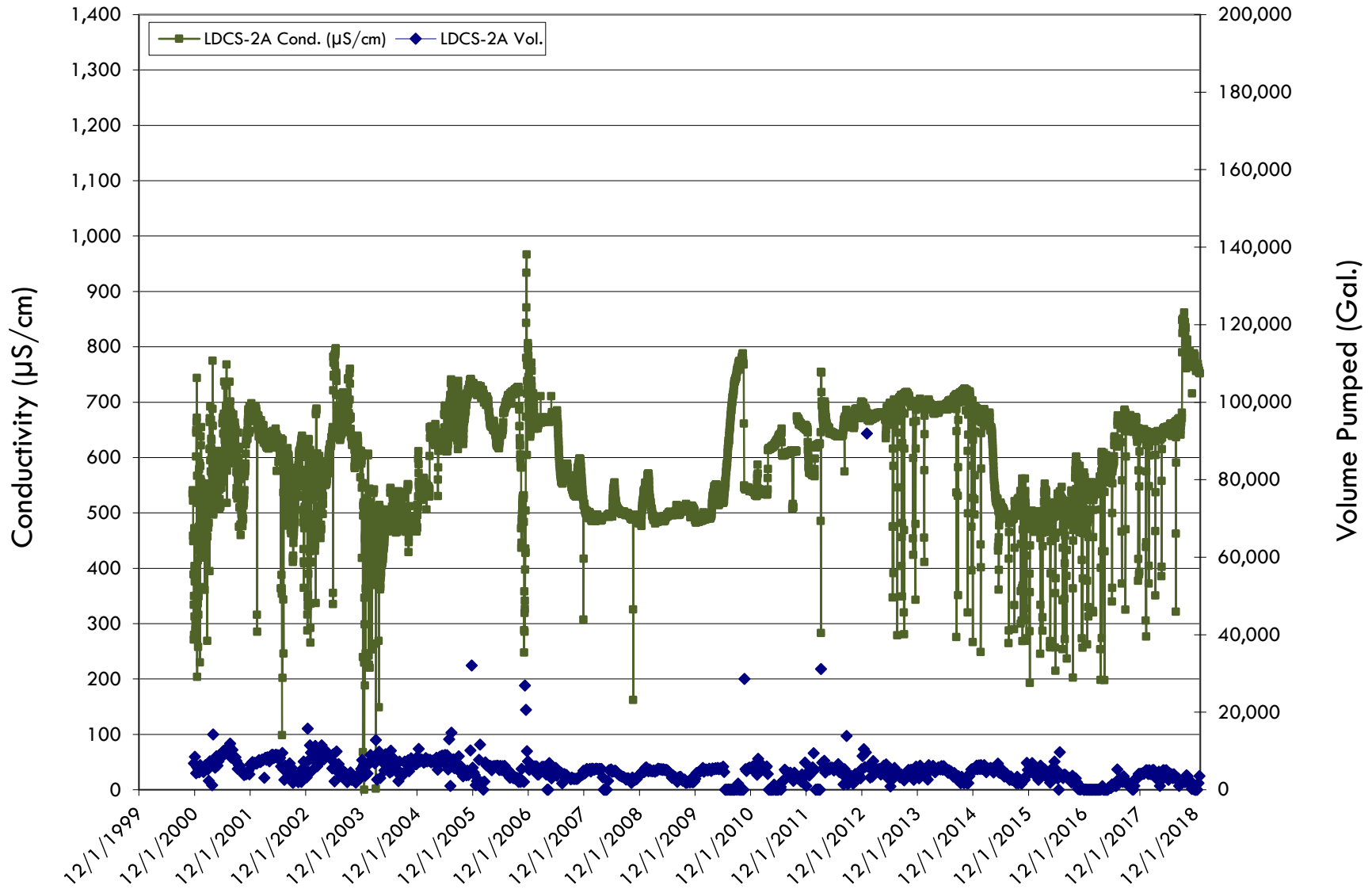
**LDCS-6 (Daily Totals)**  
**Volume Pumped vs Precipitation**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



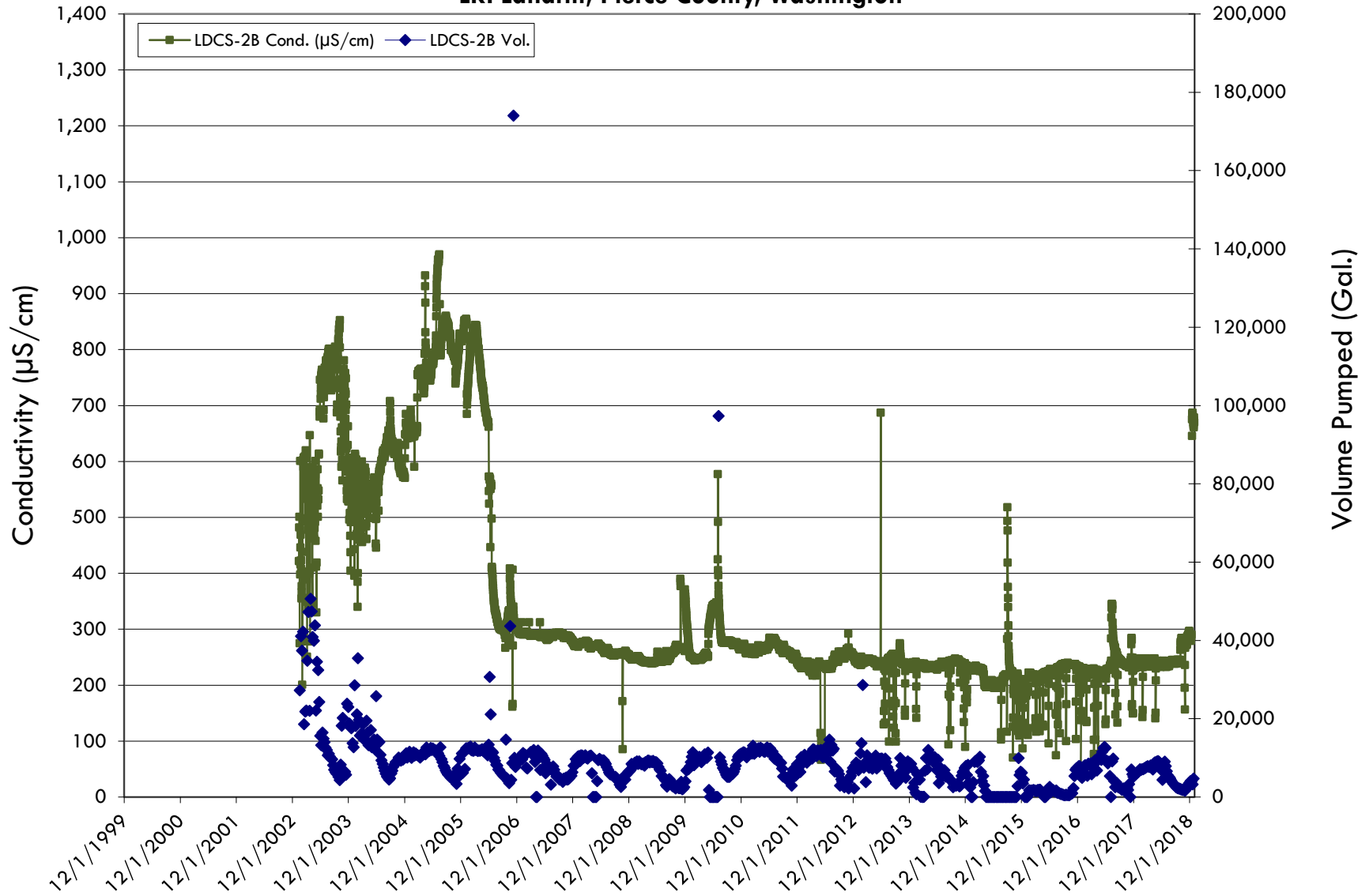
**LDCS-1**  
**Daily Conductivity vs Weekly Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



**LDCS-2A**  
**Daily Conductivity vs Weekly Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

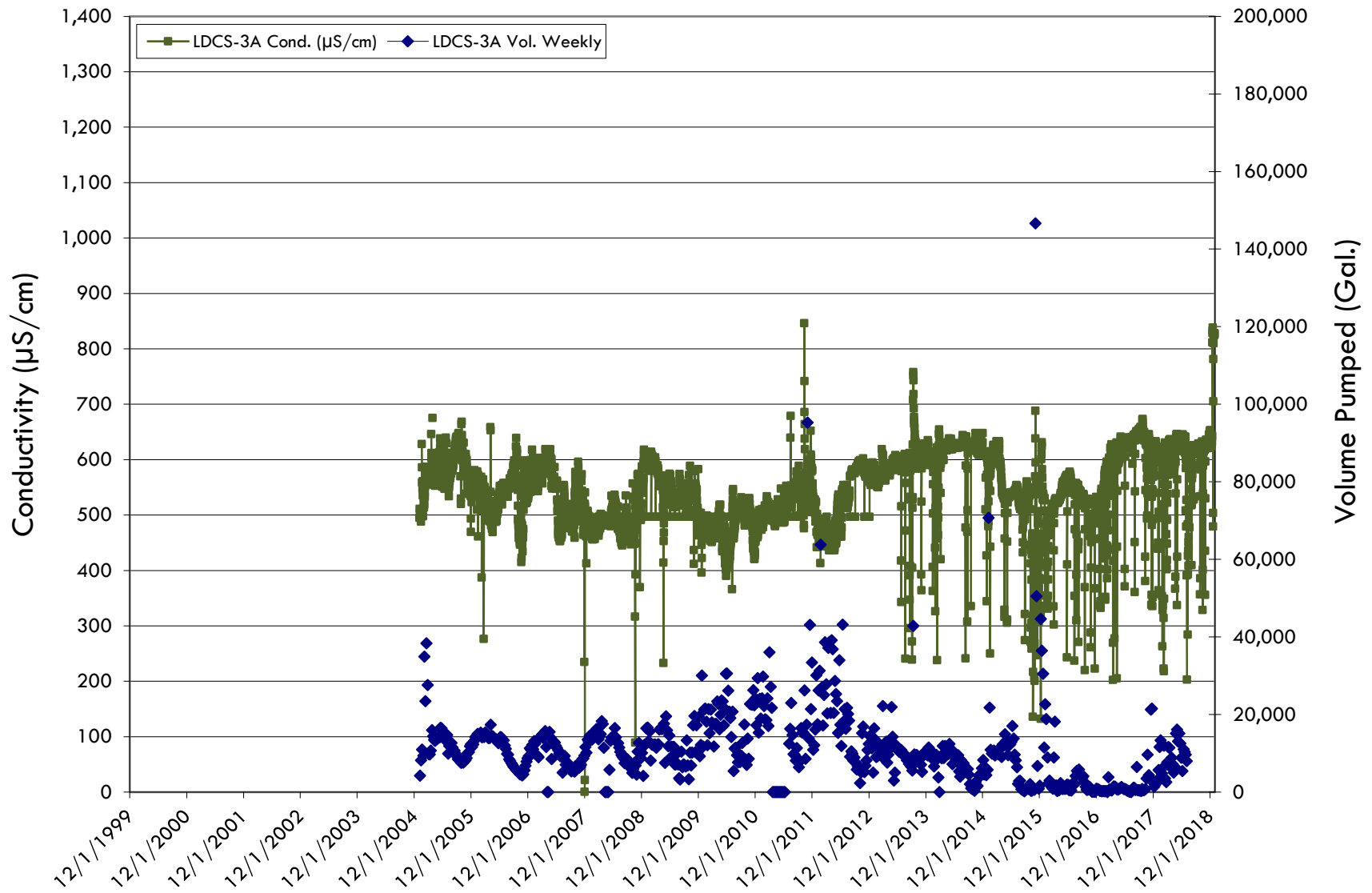


**LDCS-2B**  
**Daily Conductivity vs Weekly Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

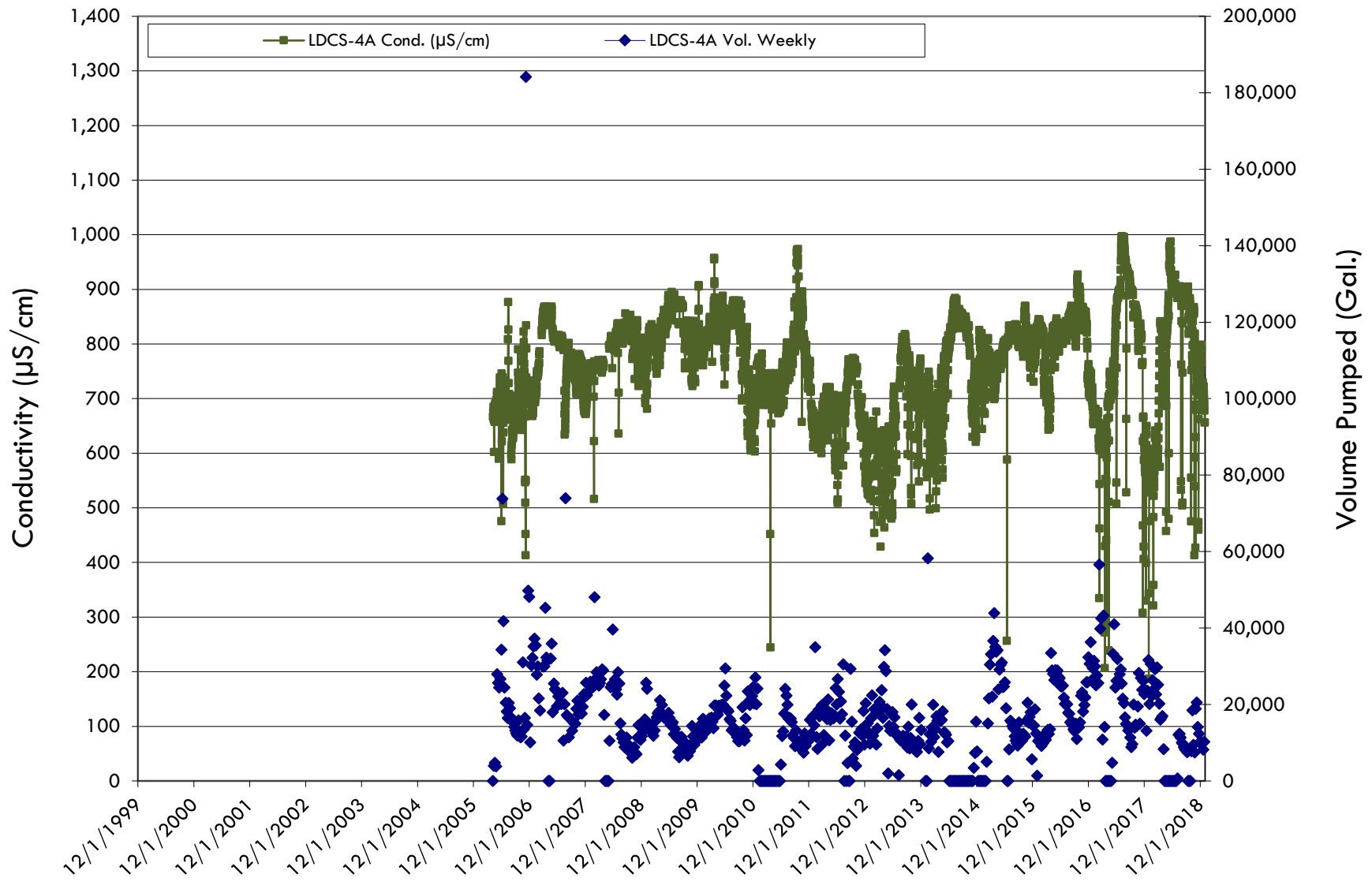




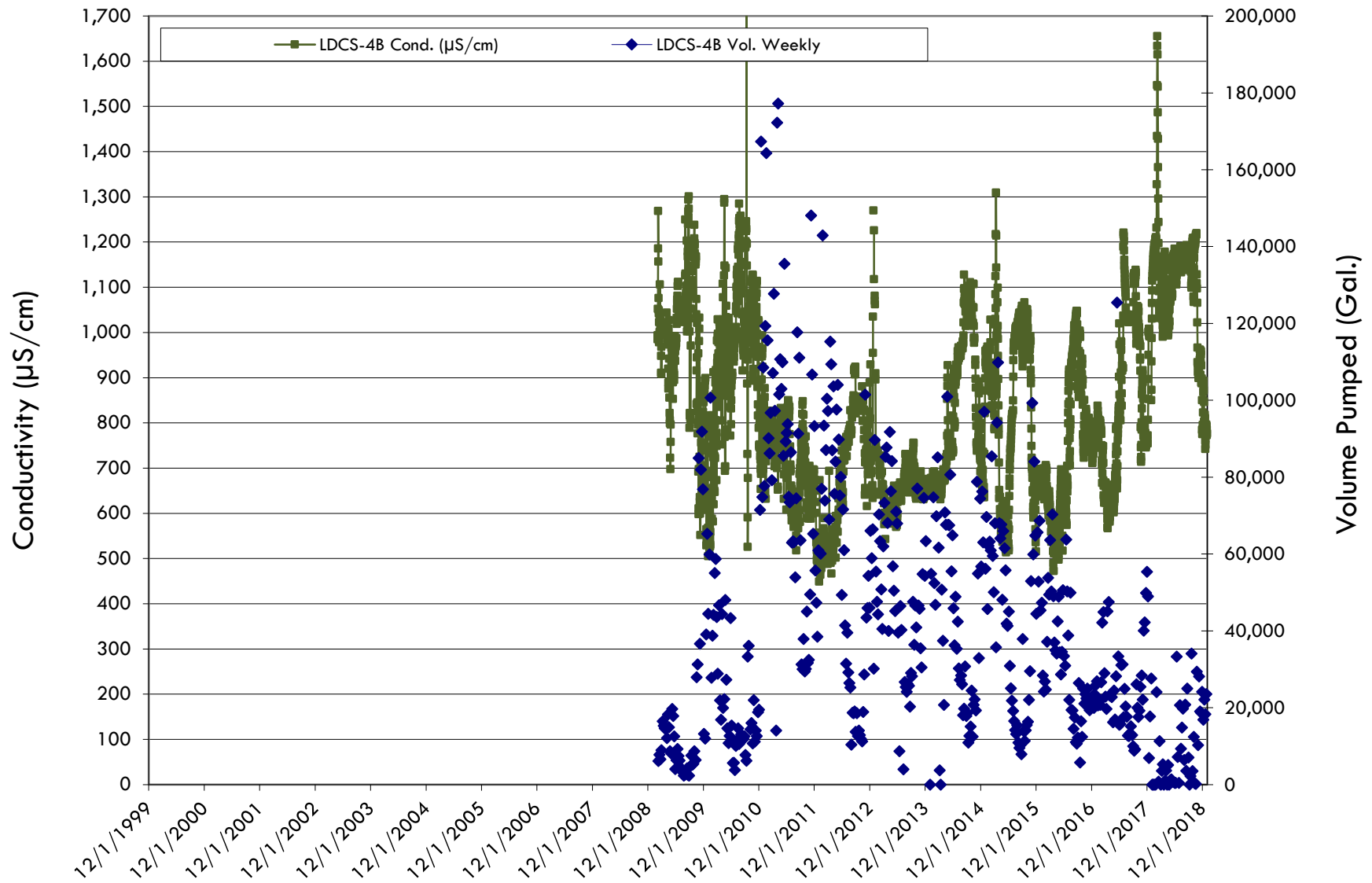
**LDCS-3A**  
**Daily Conductivity vs Weekly Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



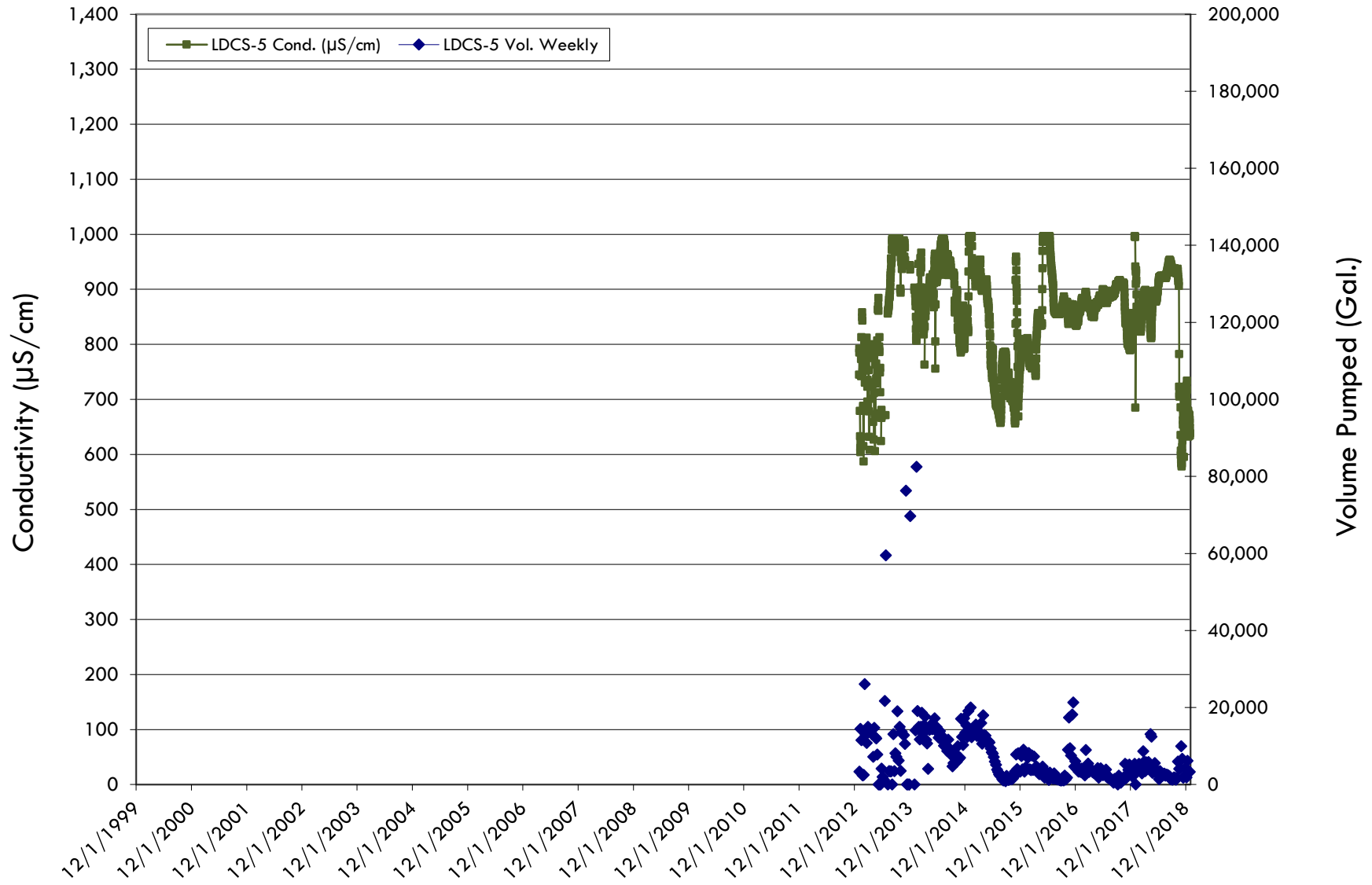
**LDCS-4A**  
**Daily Conductivity vs Weekly Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



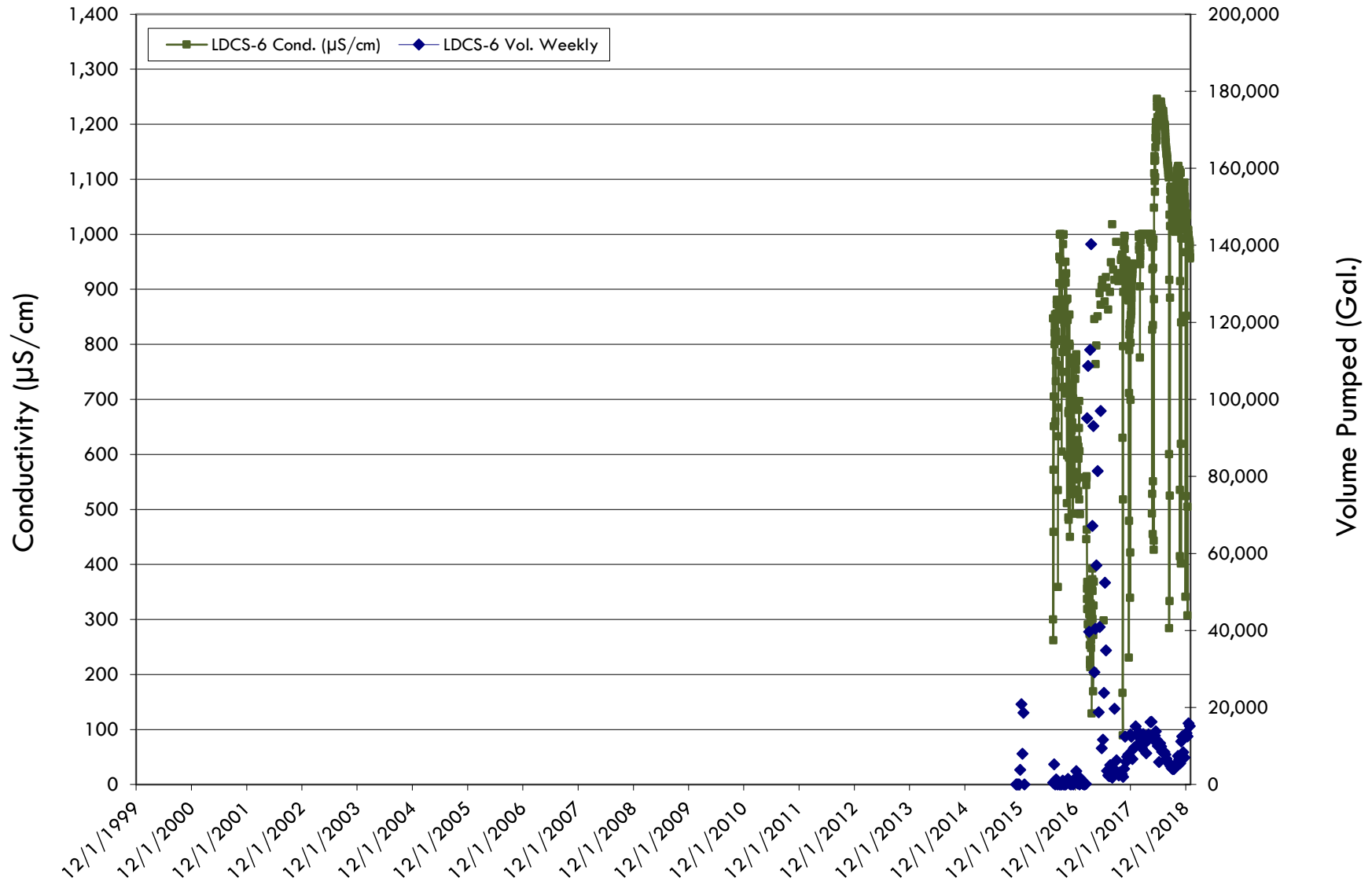
**LDCS-4B**  
**Daily Conductivity vs Weekly Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



**LDCS-5**  
**Daily Conductivity vs Weekly Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**

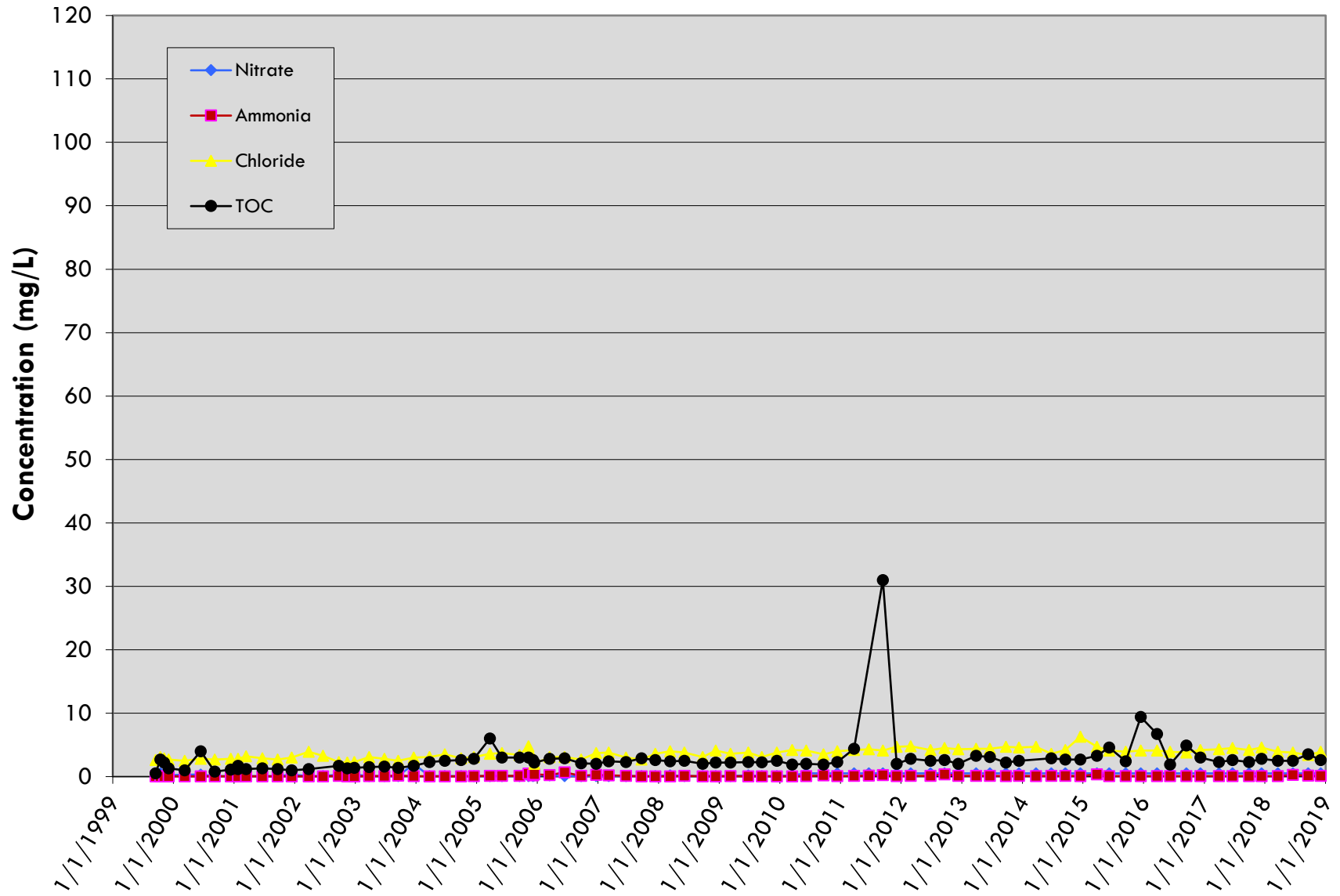


**LDCS-6**  
**Daily Conductivity vs Weekly Volume Pumped**  
**Fourth Quarter 2018**  
**LRI Landfill, Pierce County, Washington**



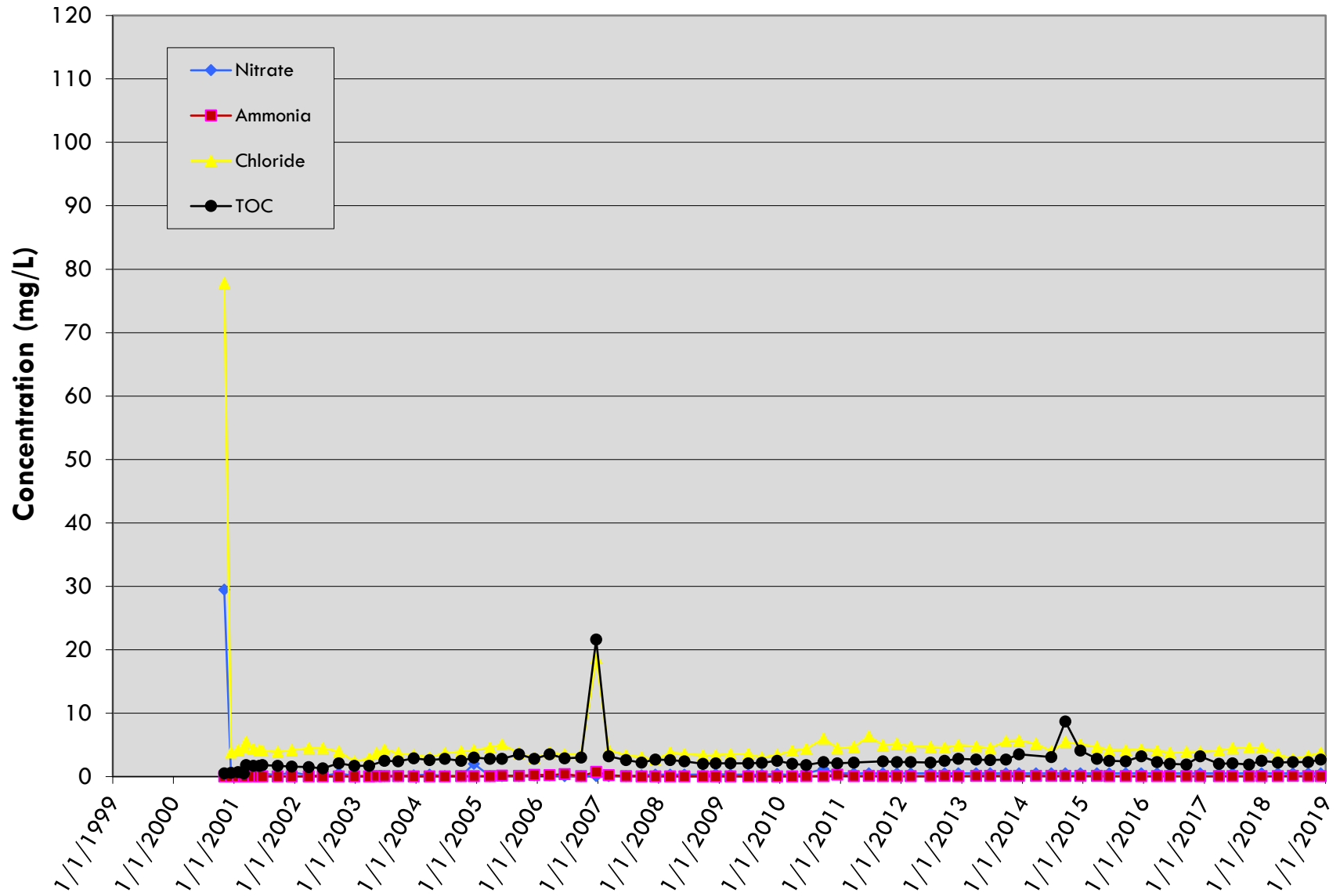
# LDCS-1

## LRI Landfill, Pierce County, Washington



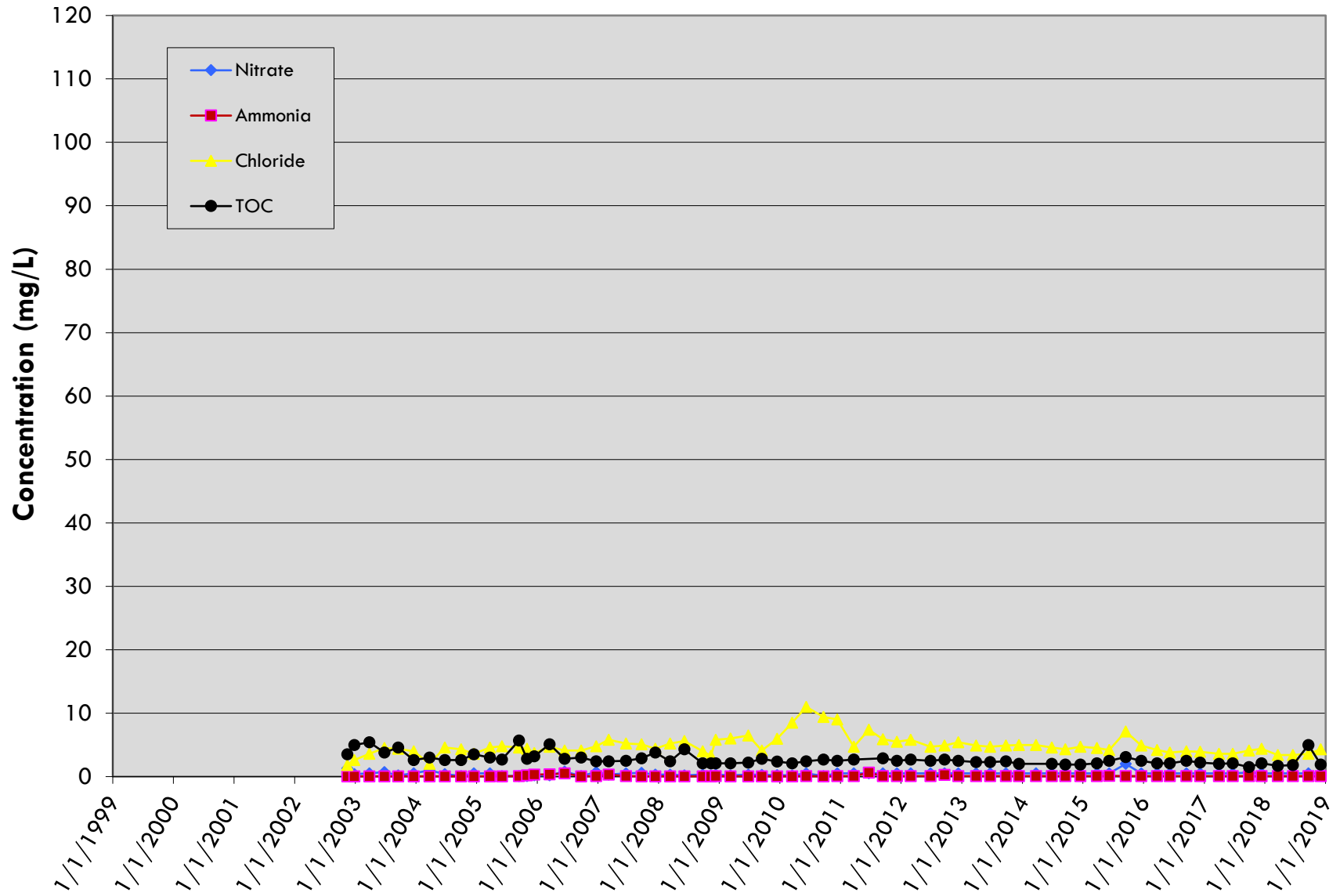
# LDCS-2A

## LRI Landfill, Pierce County, Washington



# LDCS-2B

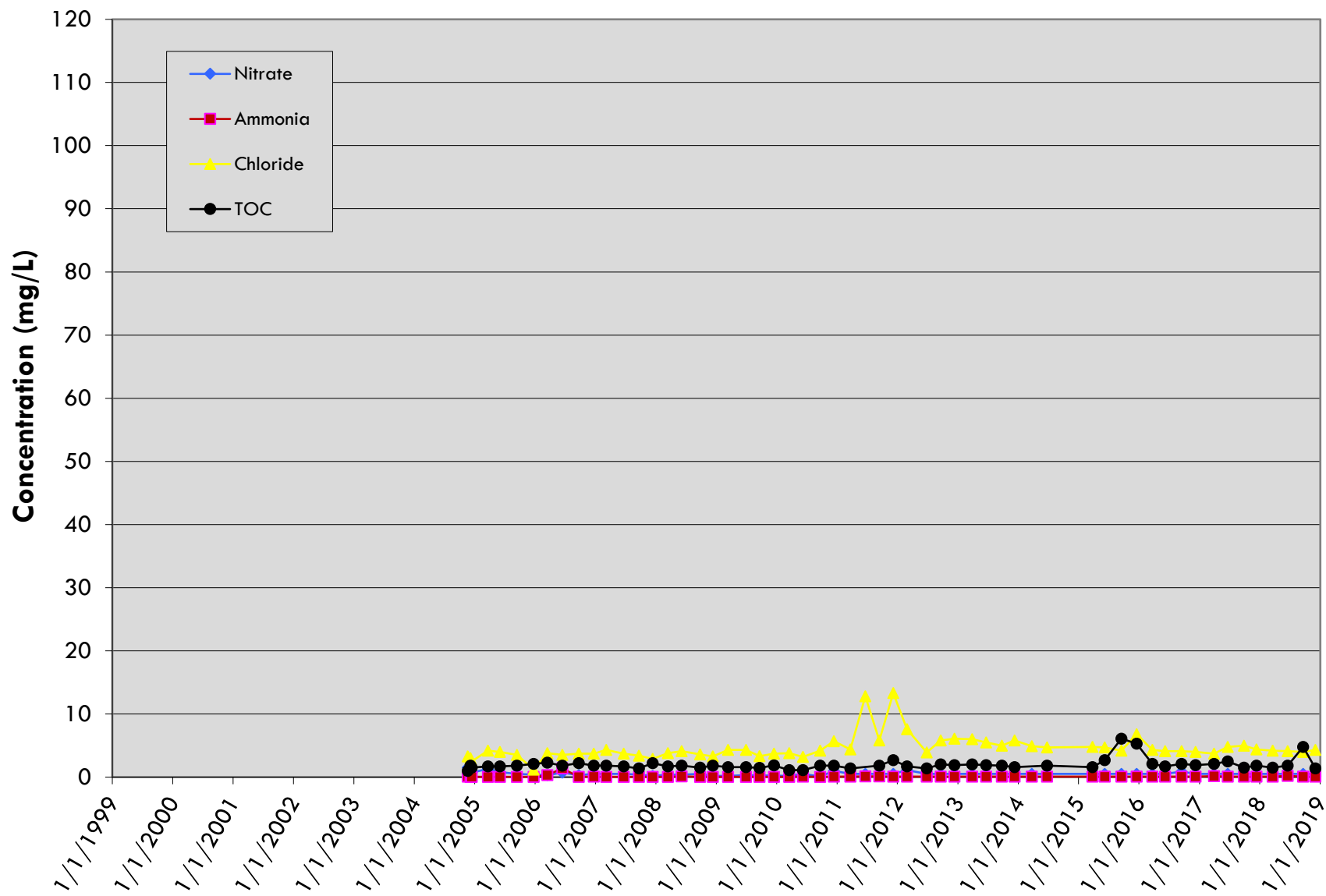
## LRI Landfill, Pierce County, Washington





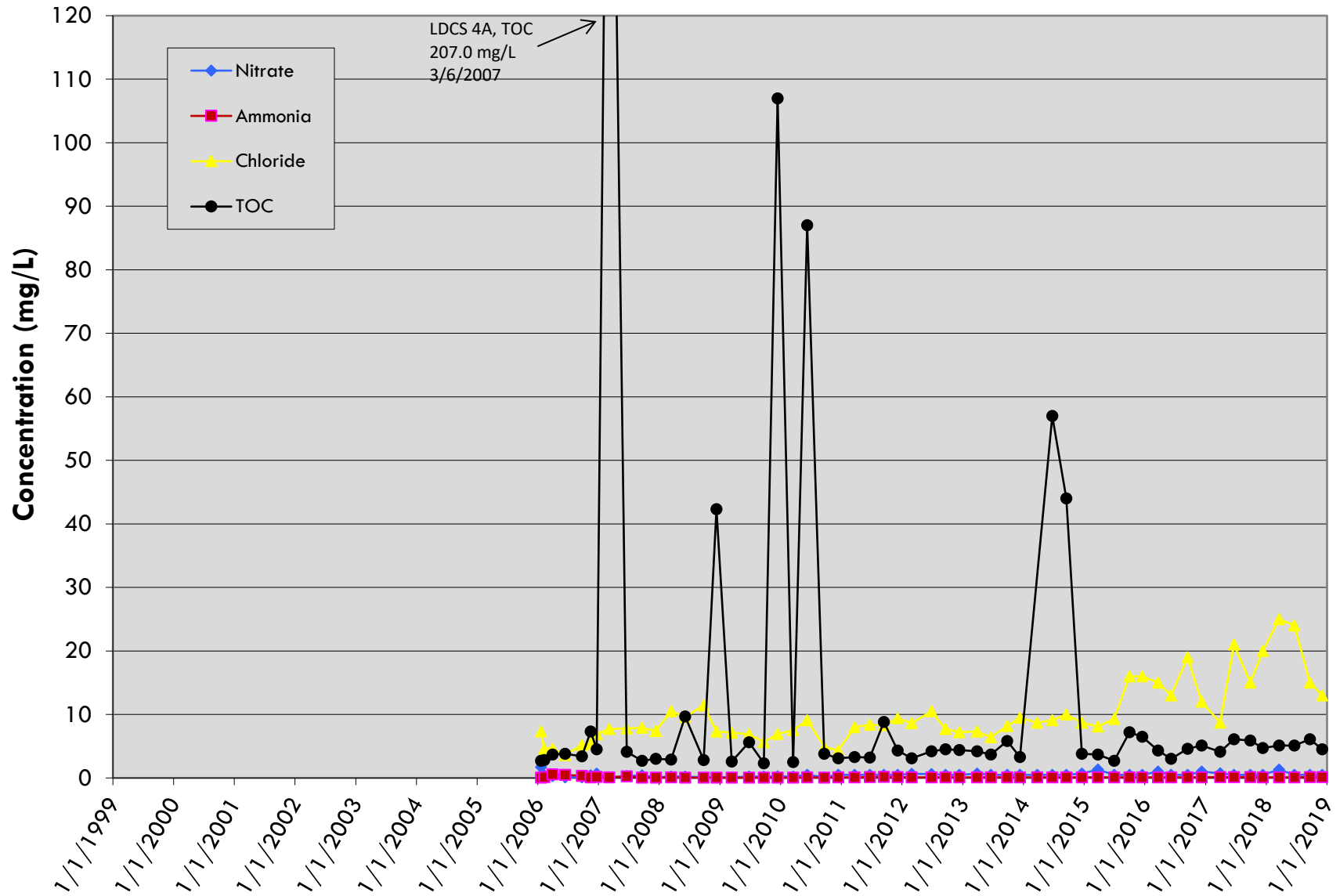
# LDCS-3A

## LRI Landfill, Pierce County, Washington



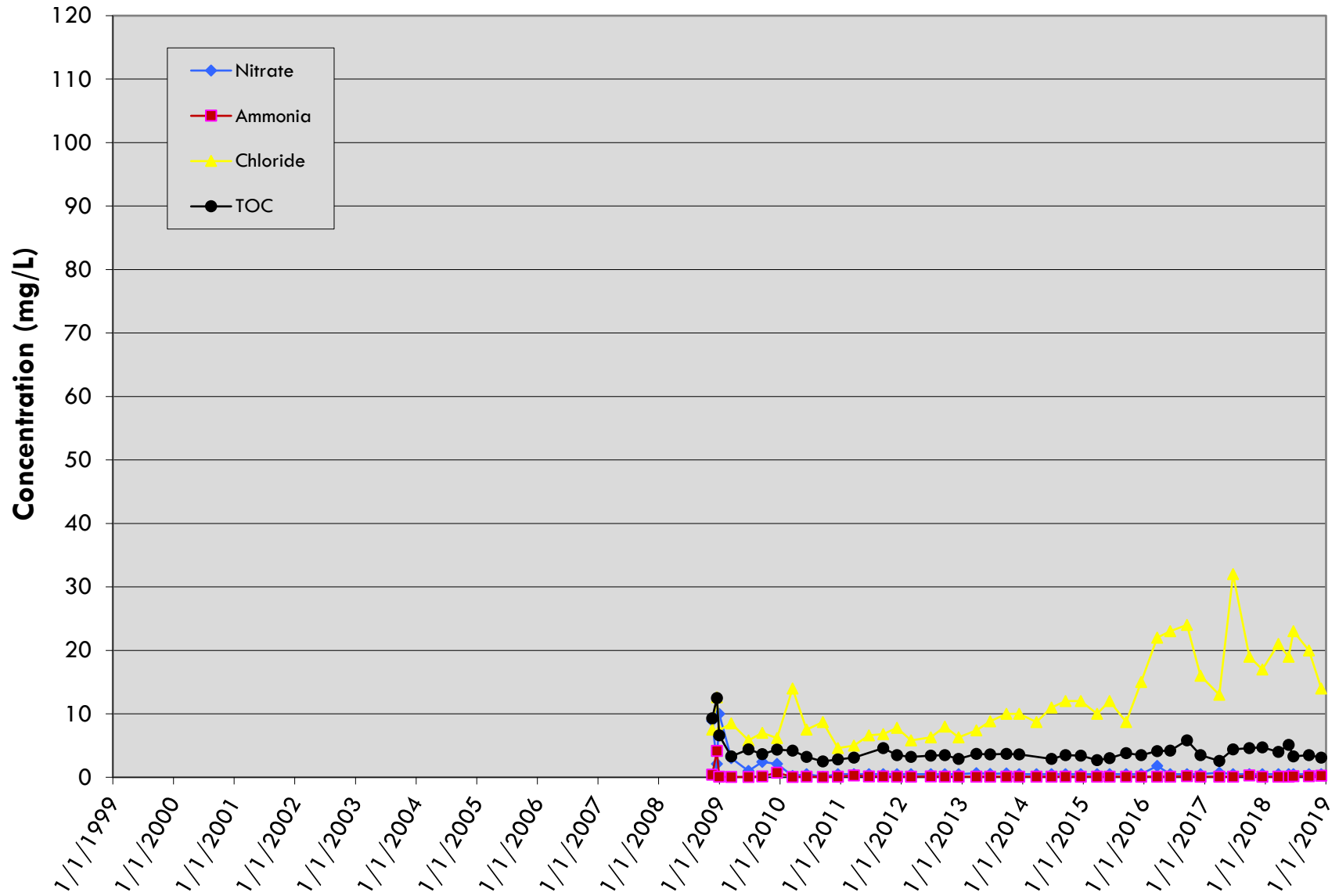
# LDCS-4A

## LRI Landfill, Pierce County, Washington



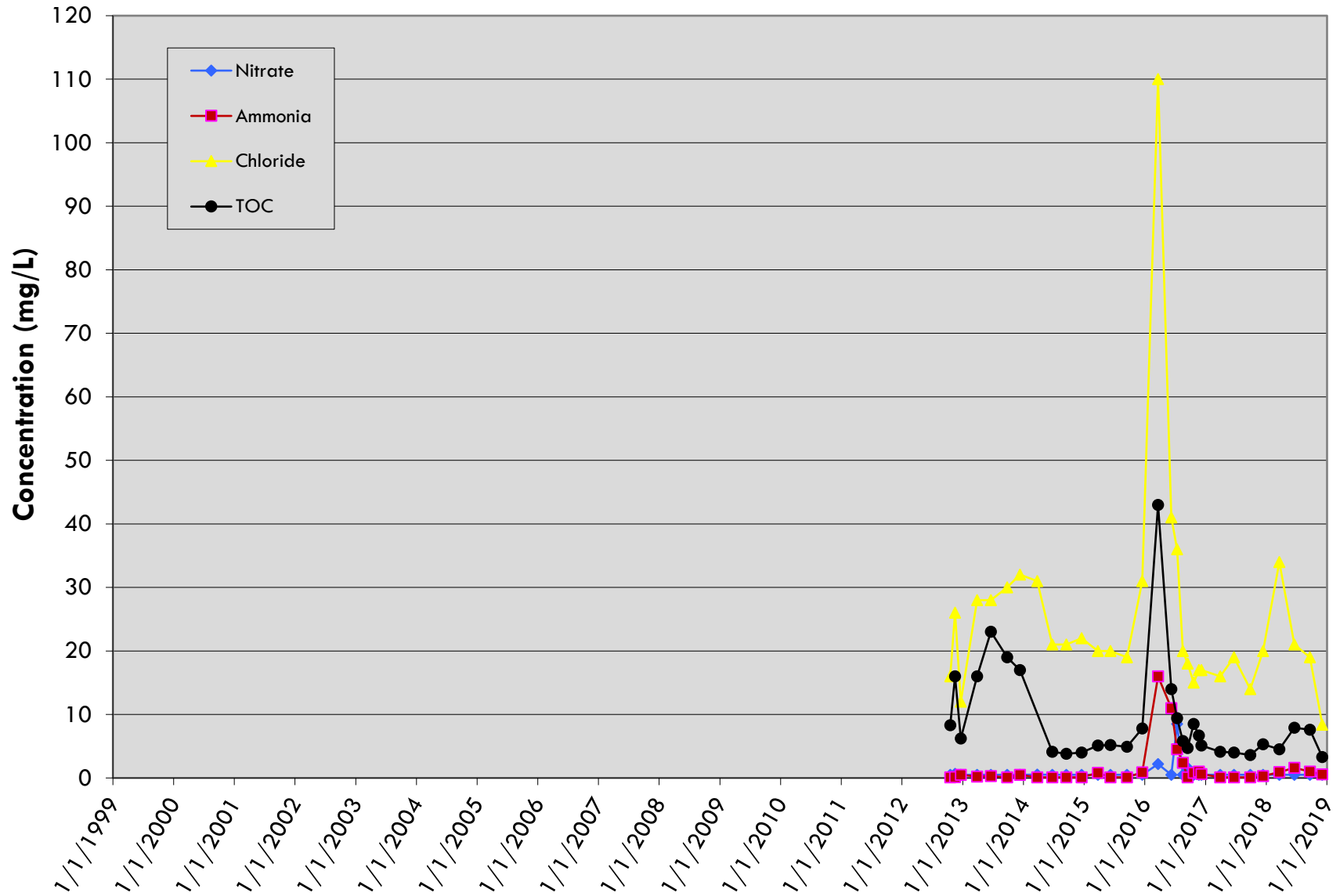
# LDCS-4B

## LRI Landfill, Pierce County, Washington



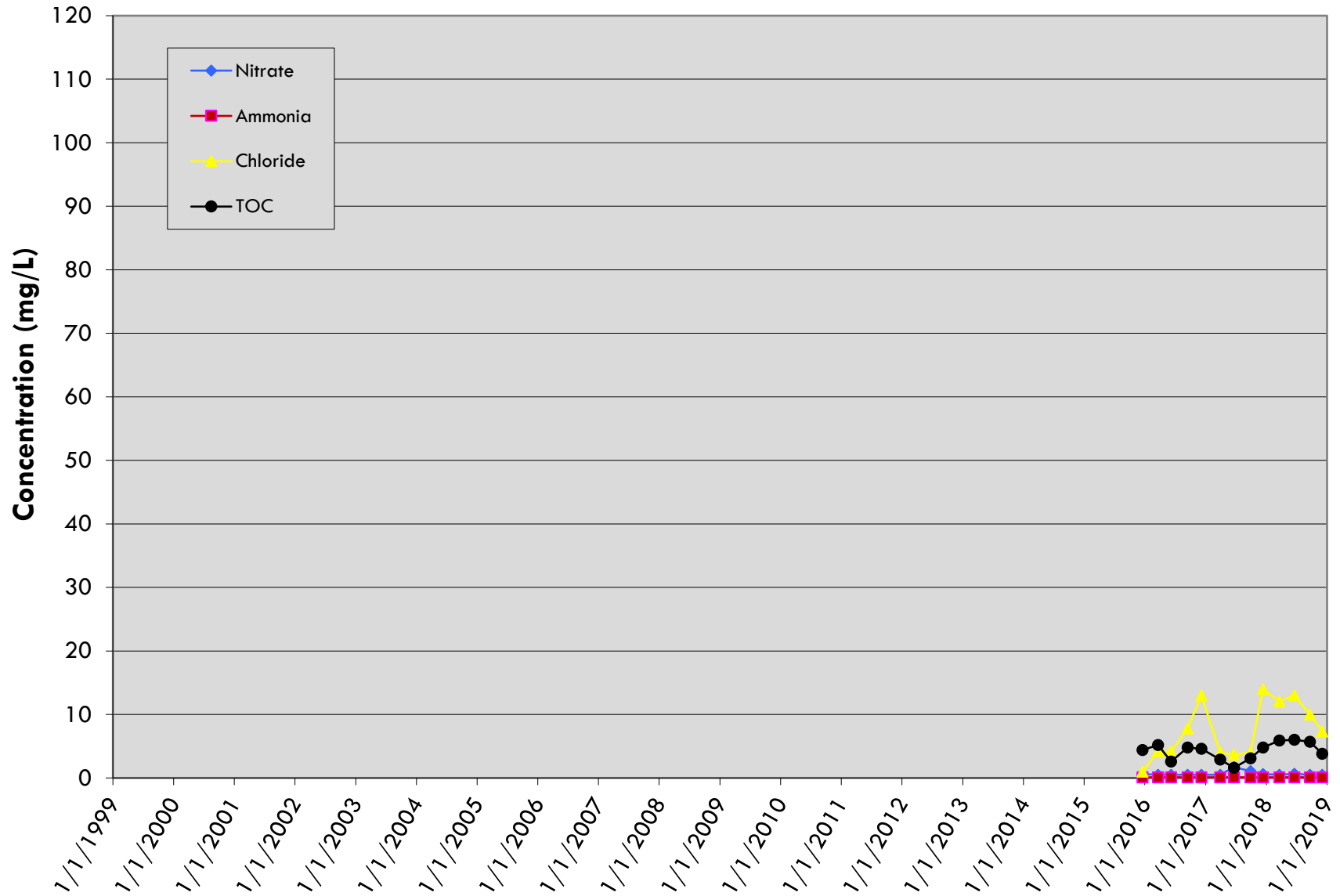
# LDCS-5

## LRI Landfill, Pierce County, Washington



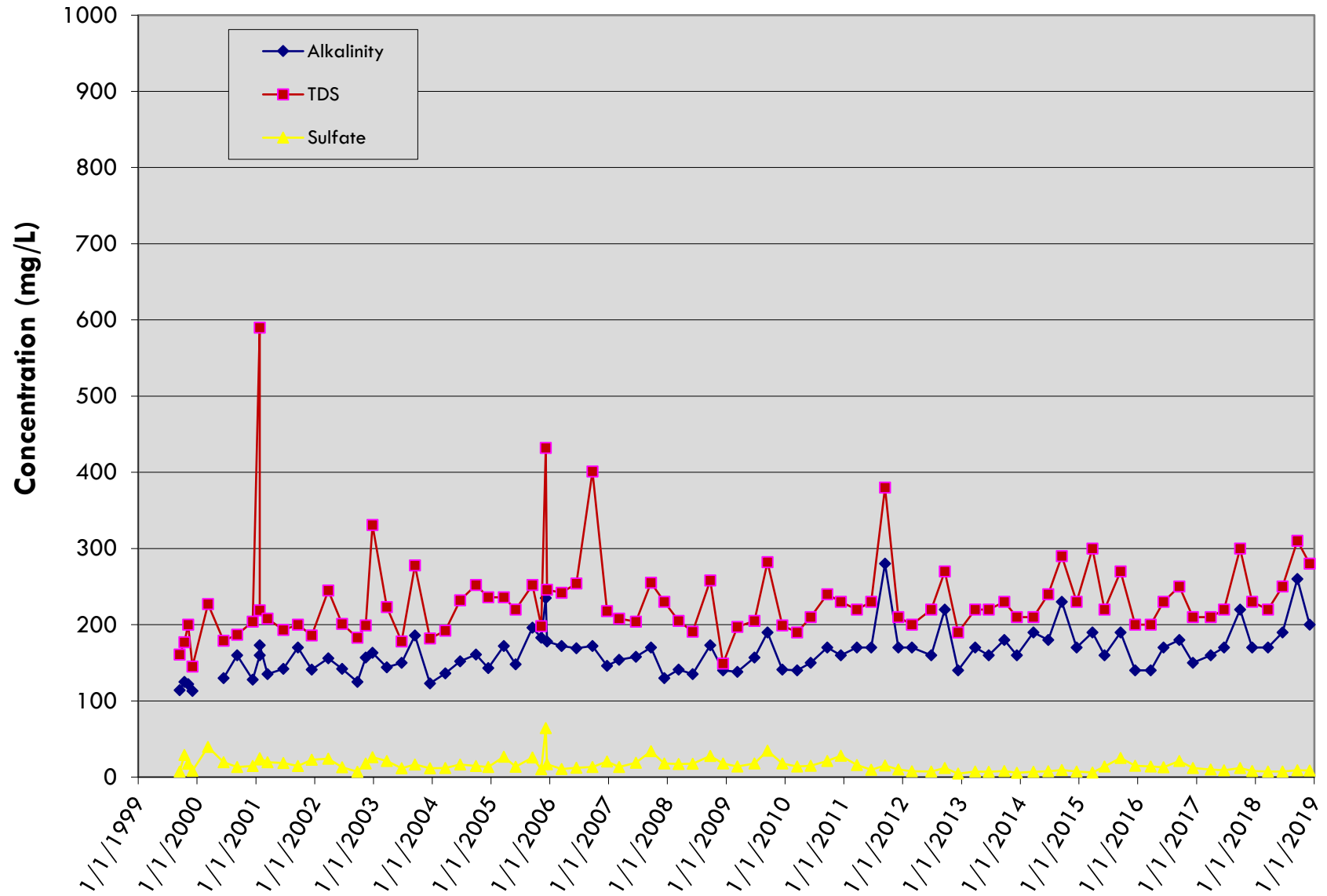
# LDCS-6A

## LRI Landfill, Pierce County, Washington



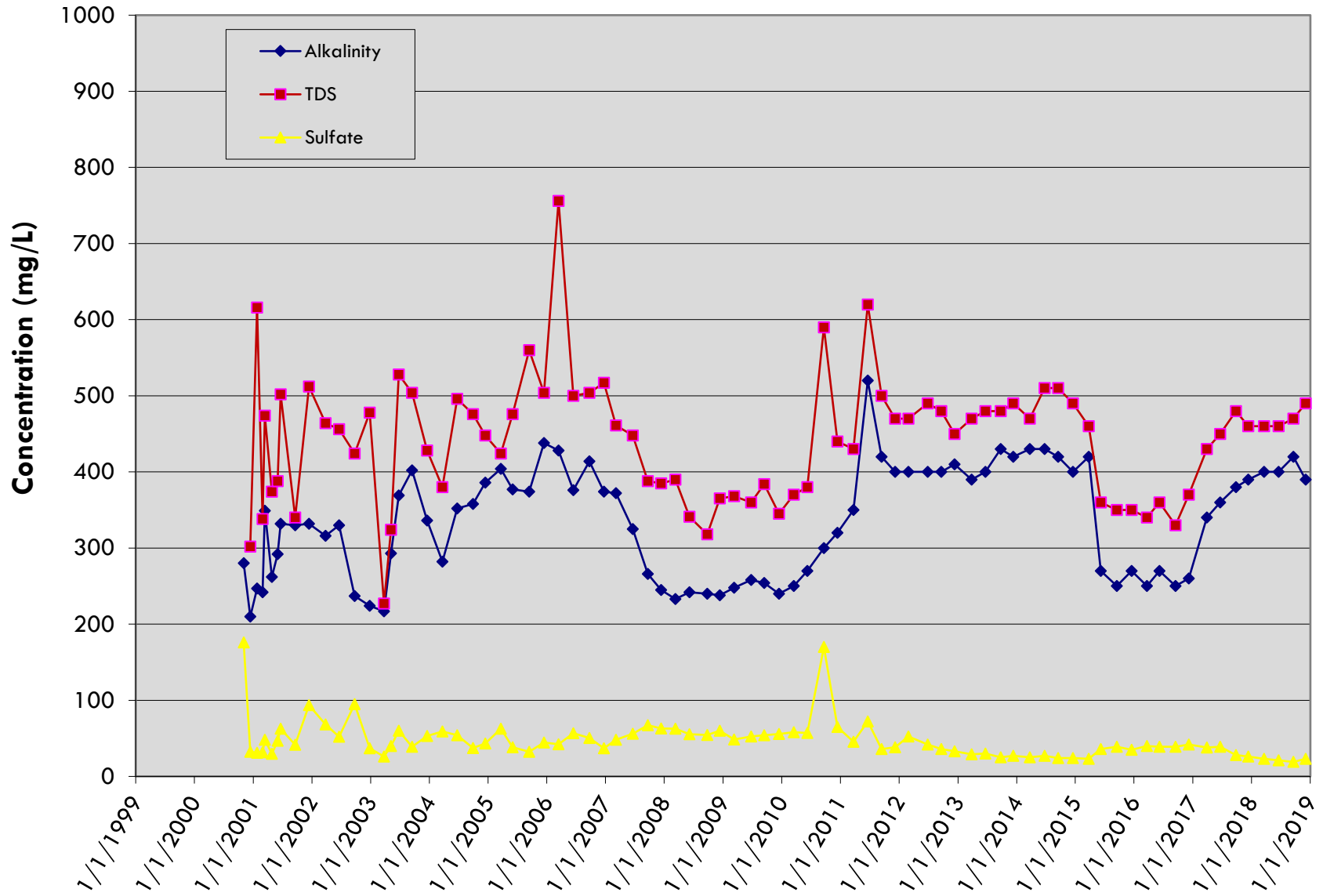
# LDCS-1

## LRI Landfill, Pierce County, Washington



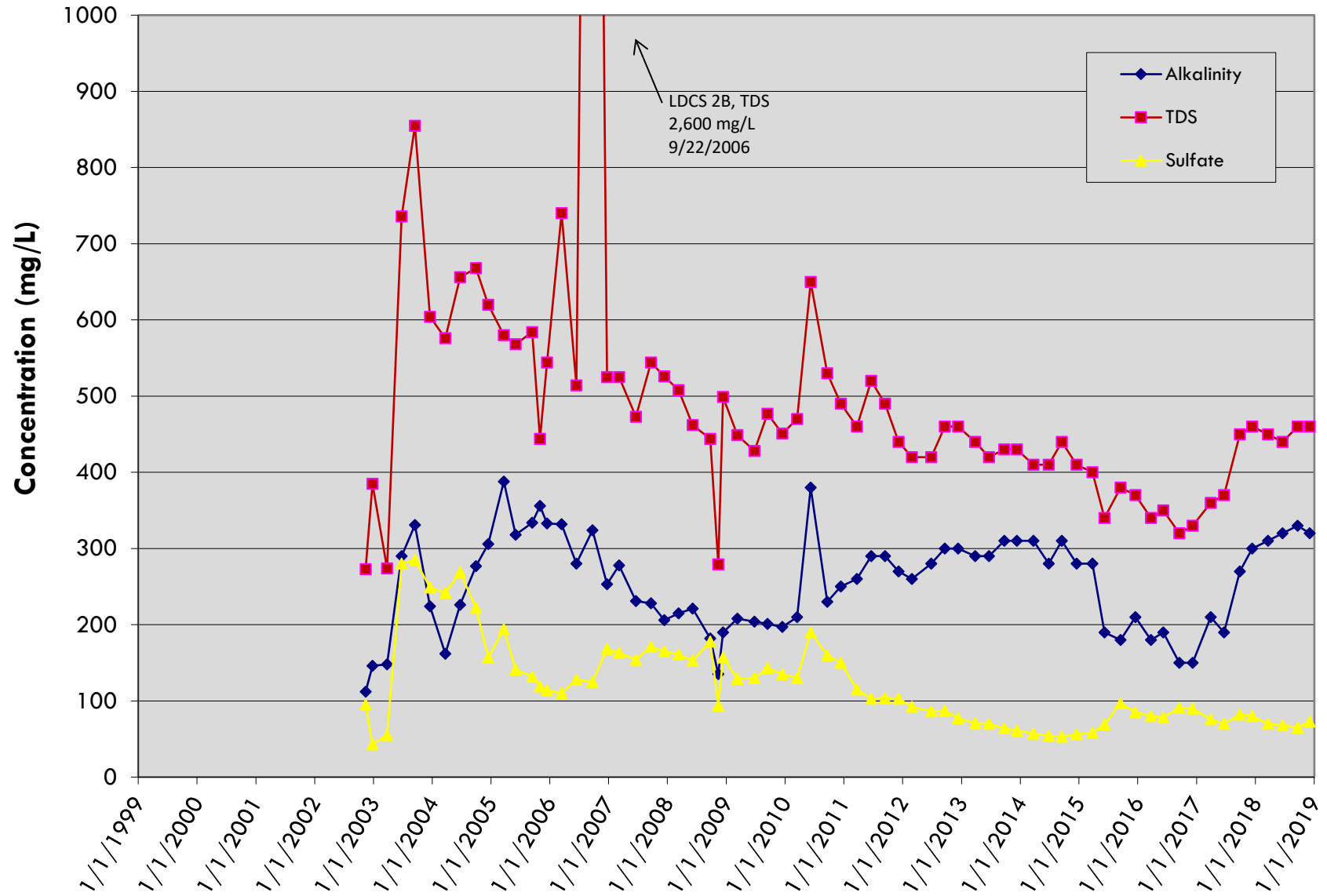
# LDCS-2A

## LRI Landfill, Pierce County, Washington



# LDCS-2B

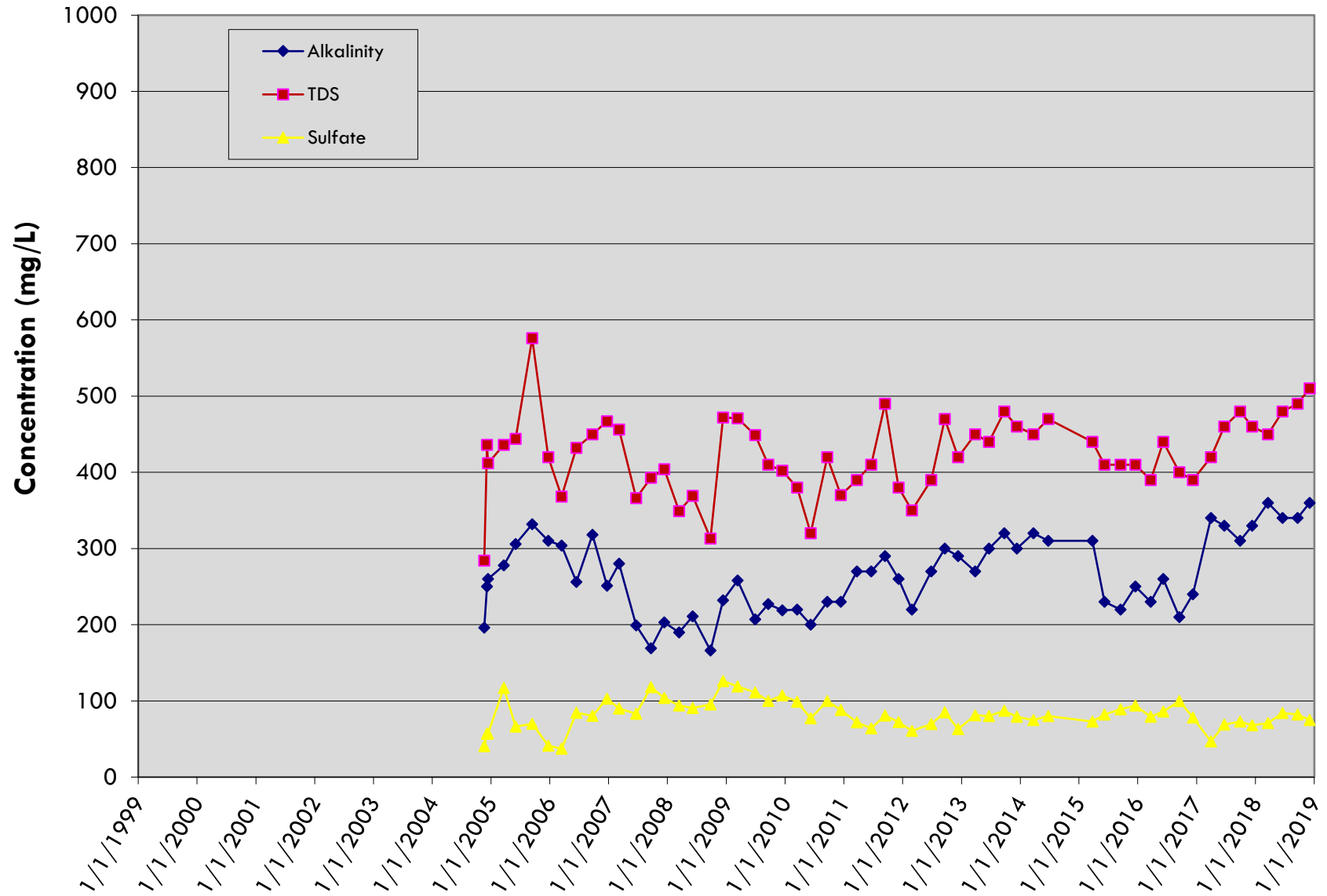
## LRI Landfill, Pierce County, Washington





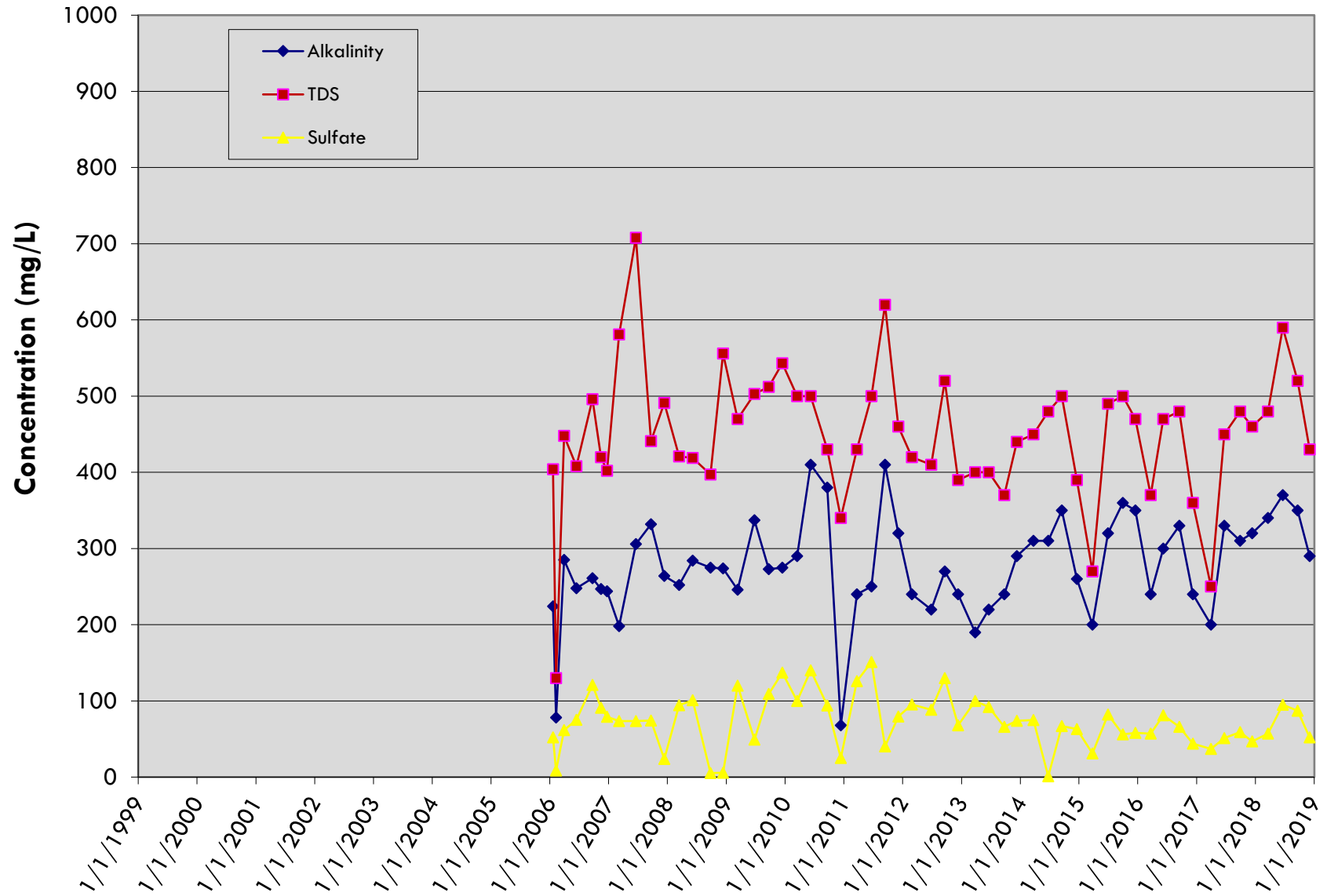
# LDCS-3A

## LRI Landfill, Pierce County, Washington



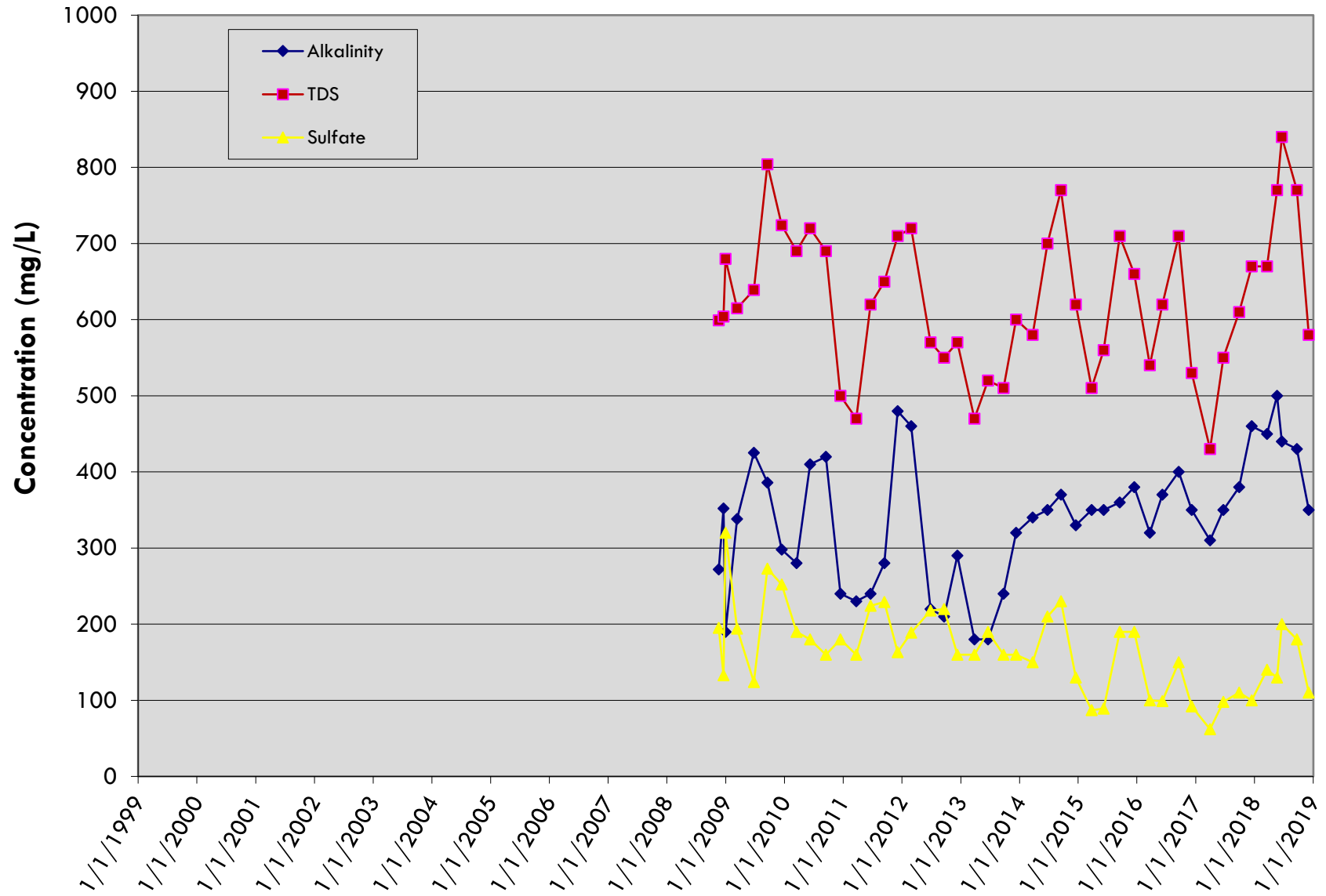
# LDCS-4A

## LRI Landfill, Pierce County, Washington



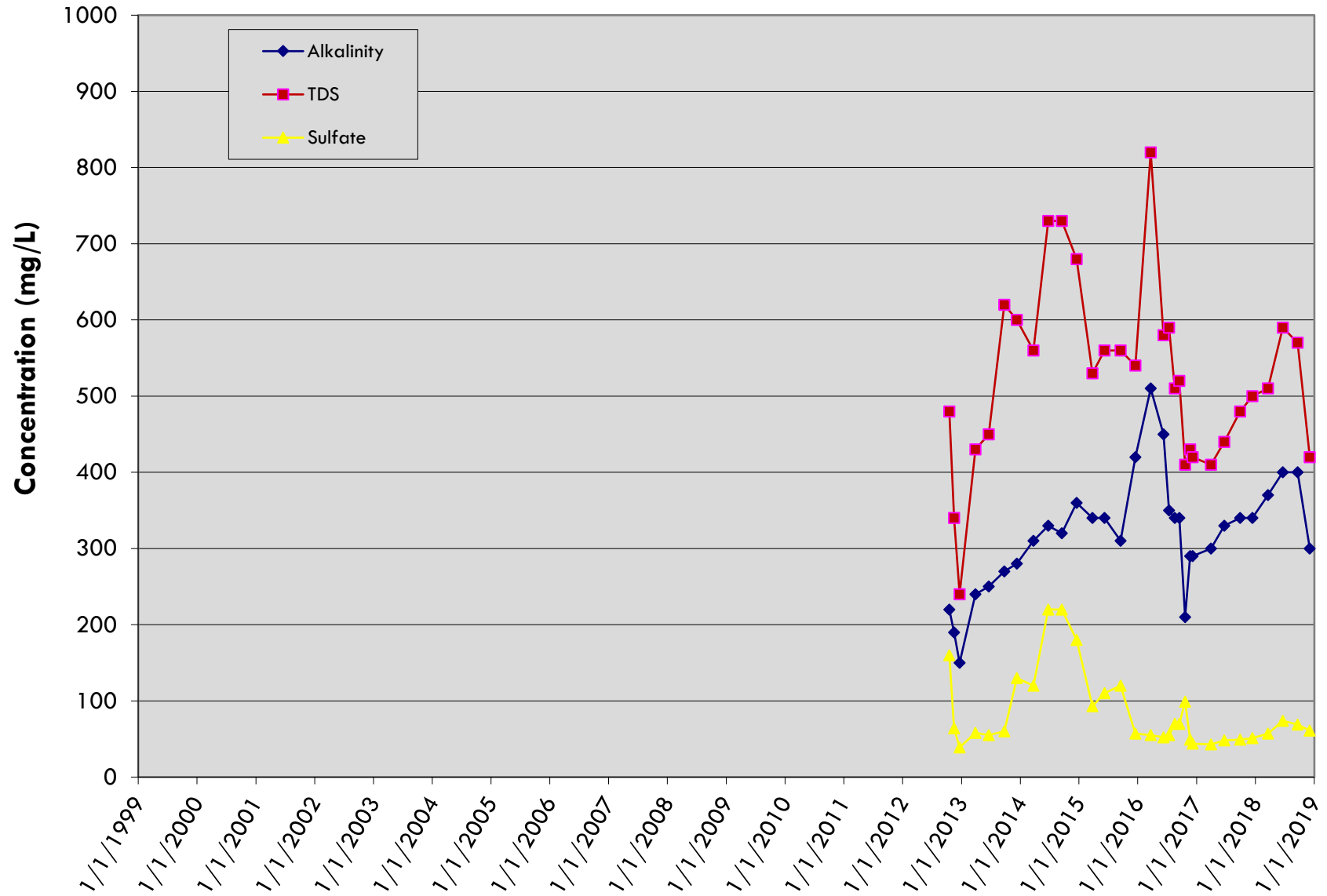
# LDCS-4B

## LRI Landfill, Pierce County, Washington



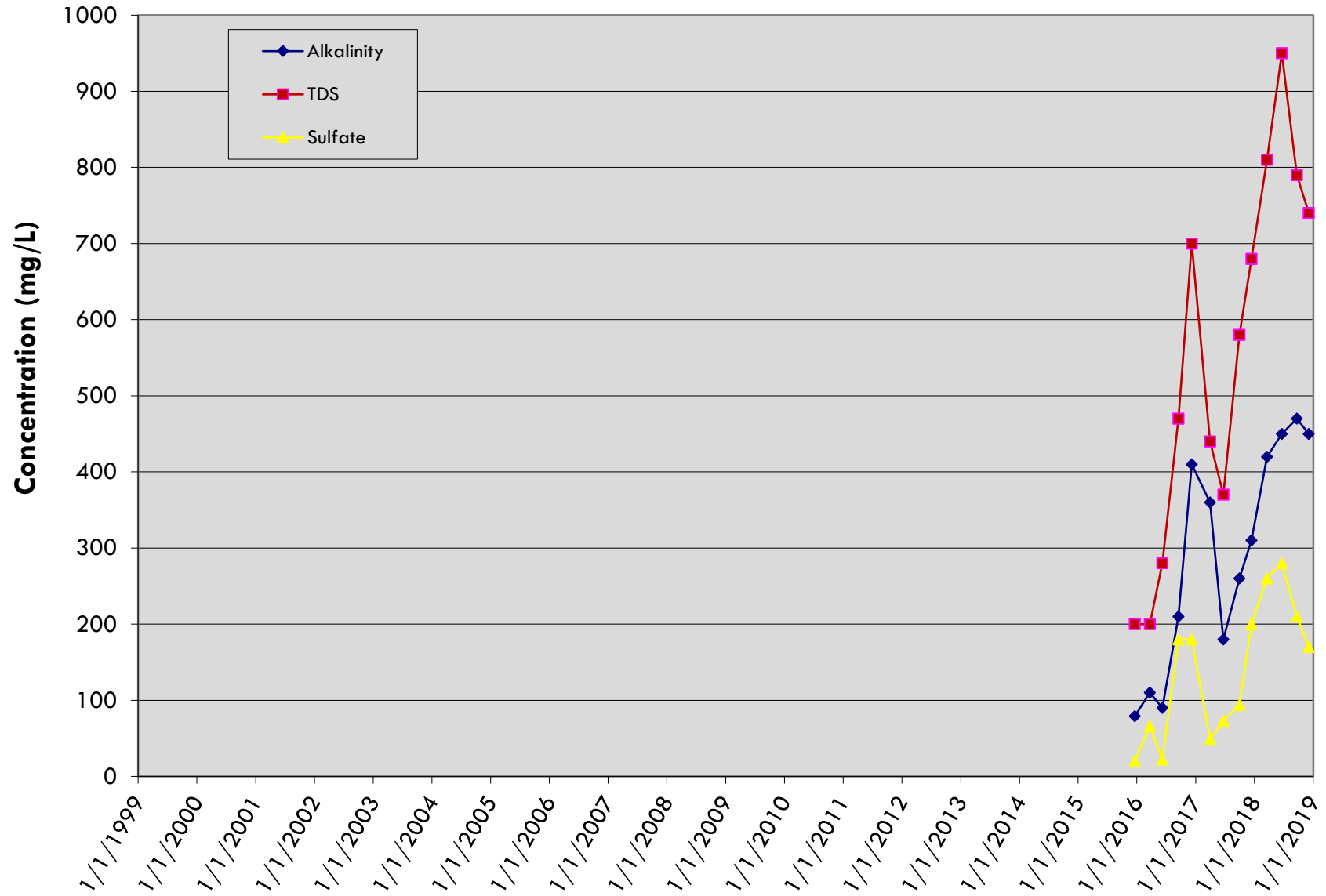
# LDCS-5

## LRI Landfill, Pierce County, Washington



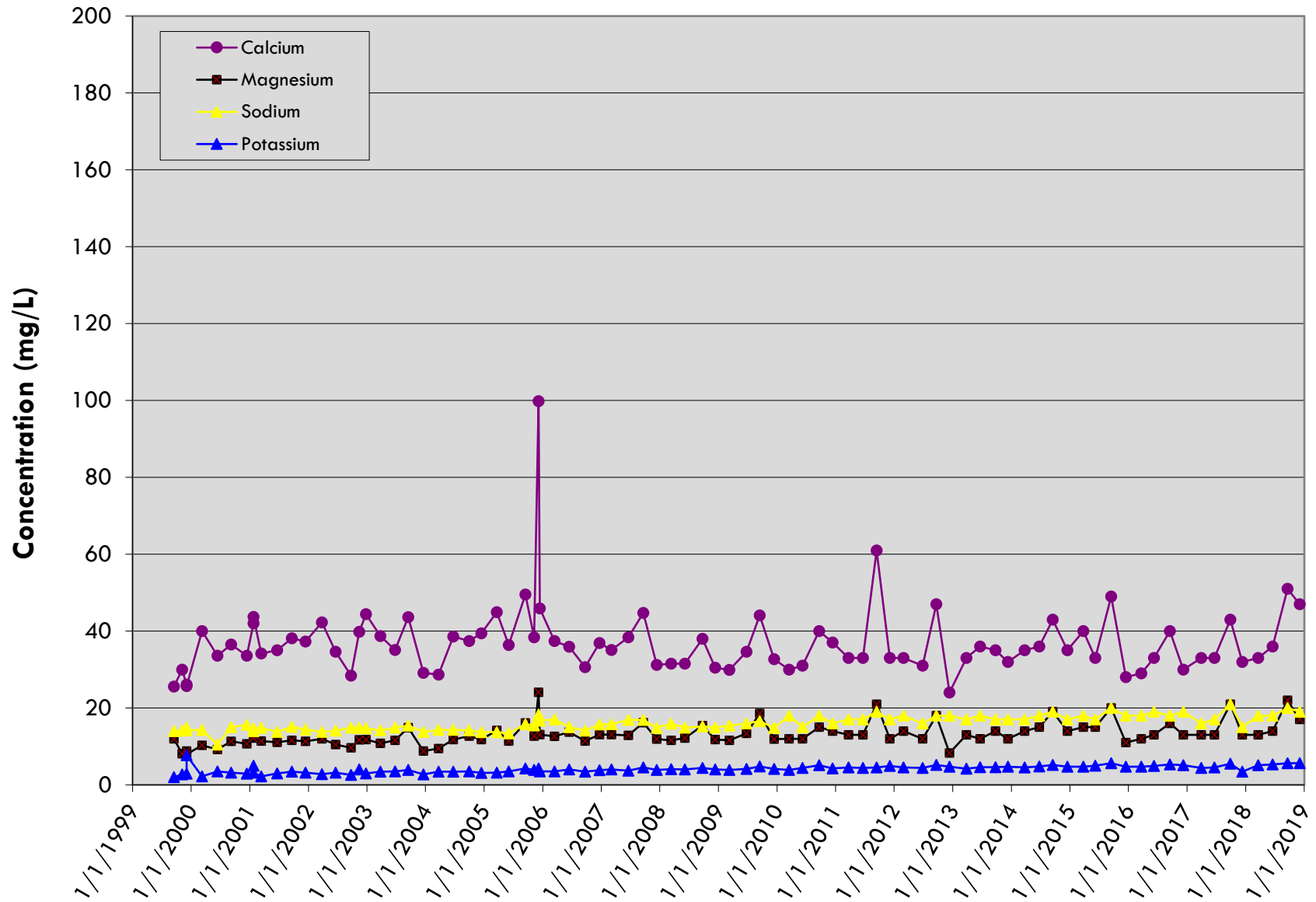
# LDCS-6A

## LRI Landfill, Pierce County, Washington



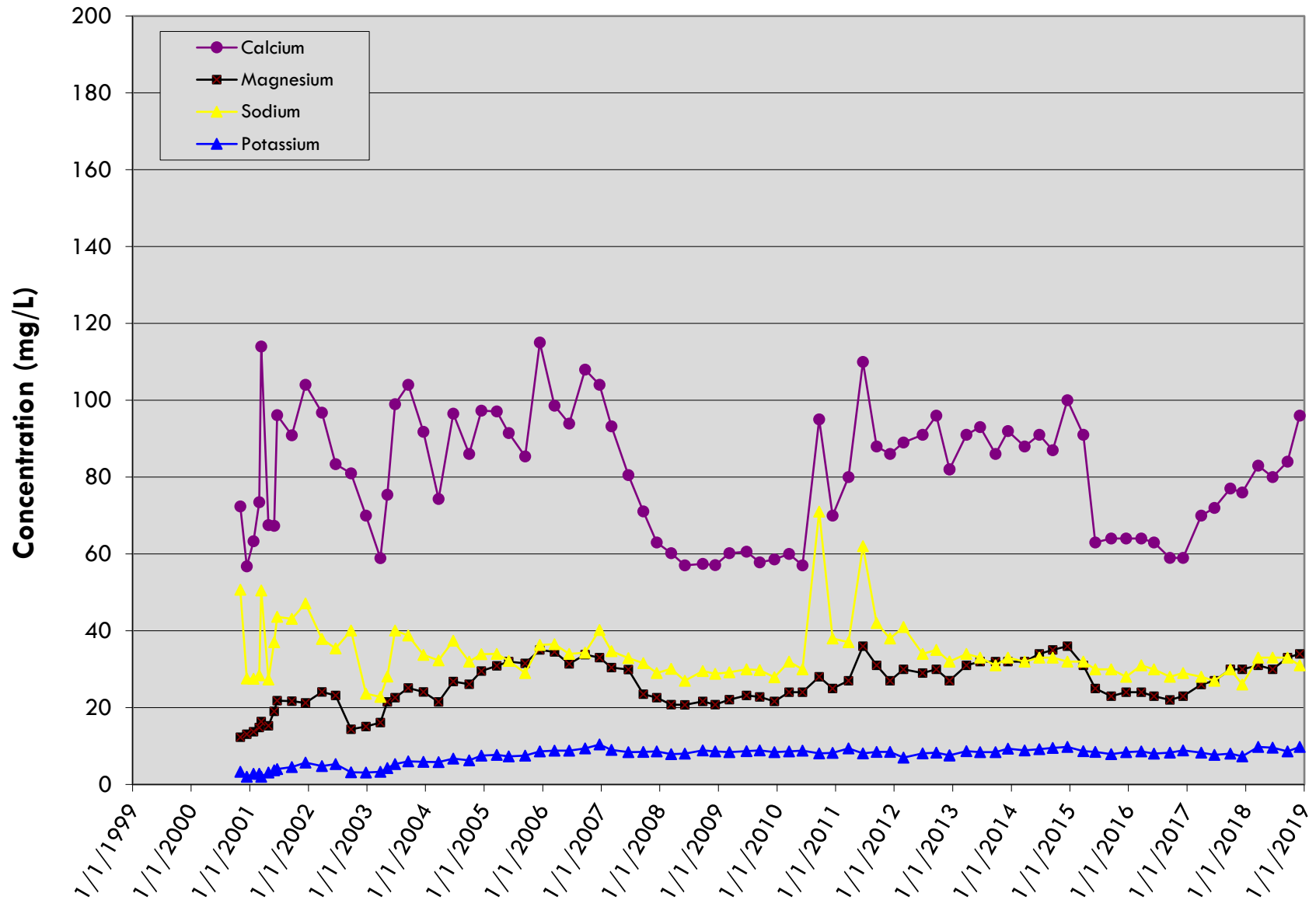
# LDCS-1

## LRI Landfill, Pierce County, Washington



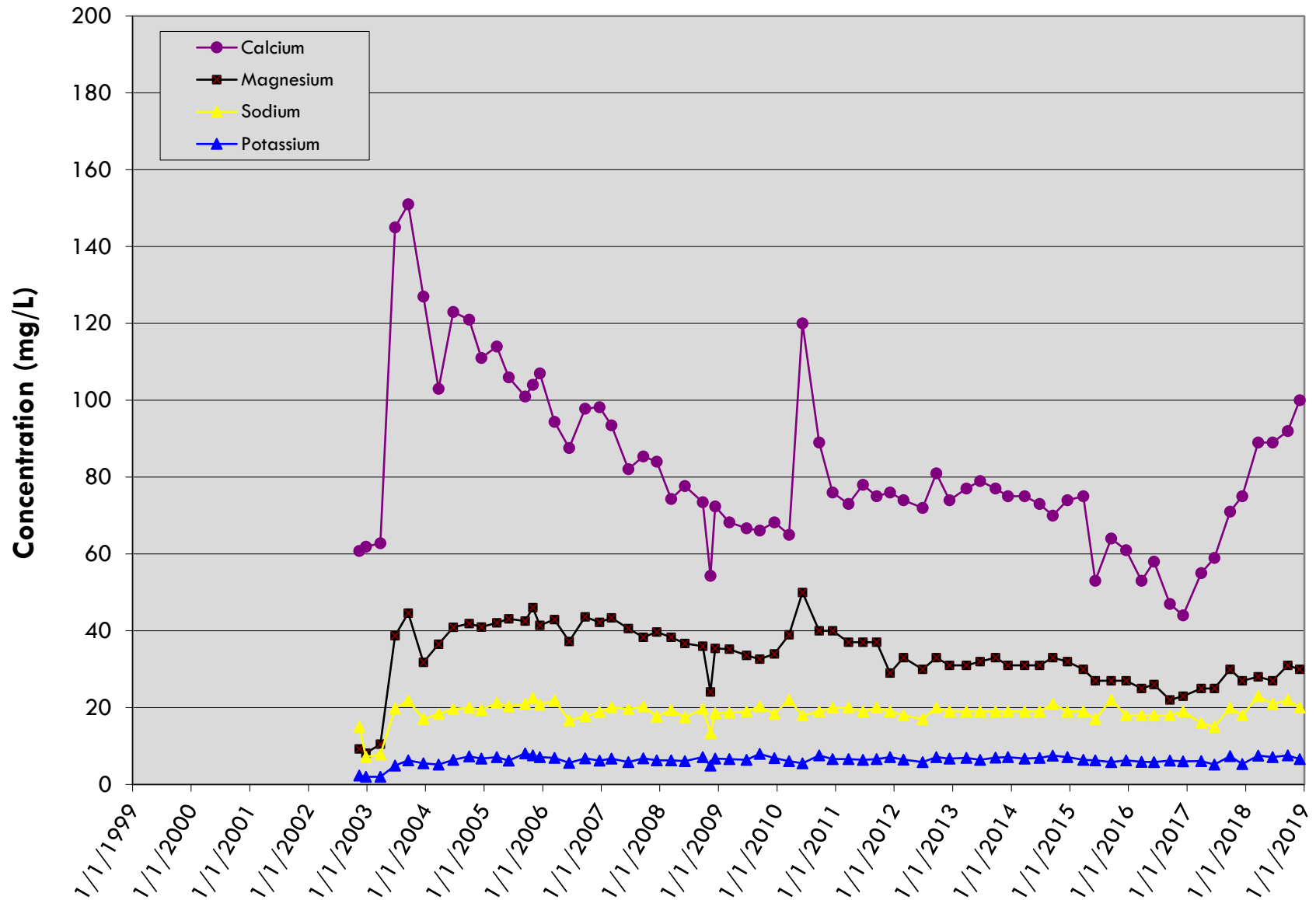
# LDCS-2A

## LRI Landfill, Pierce County, Washington



# LDCS-2B

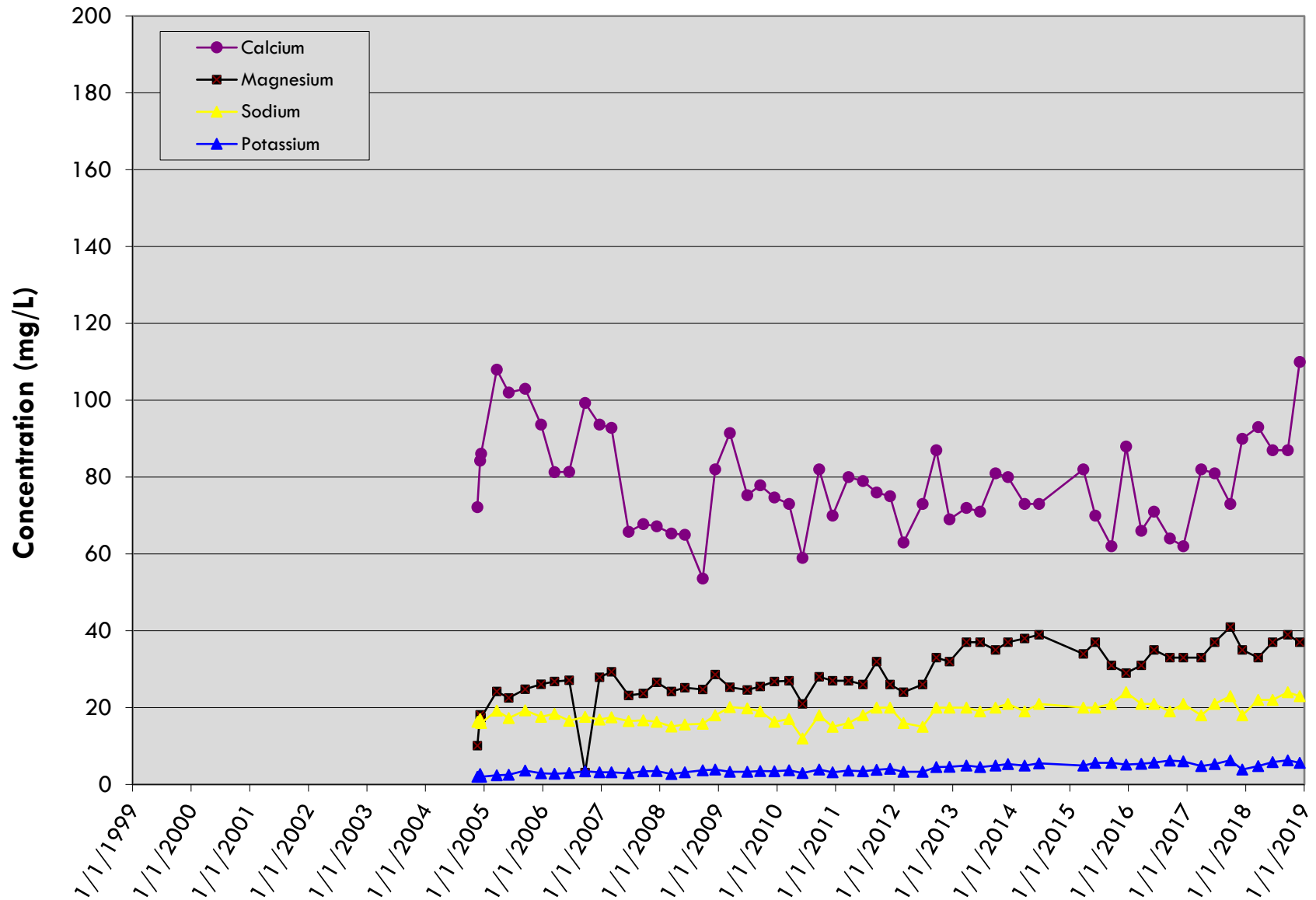
## LRI Landfill, Pierce County, Washington





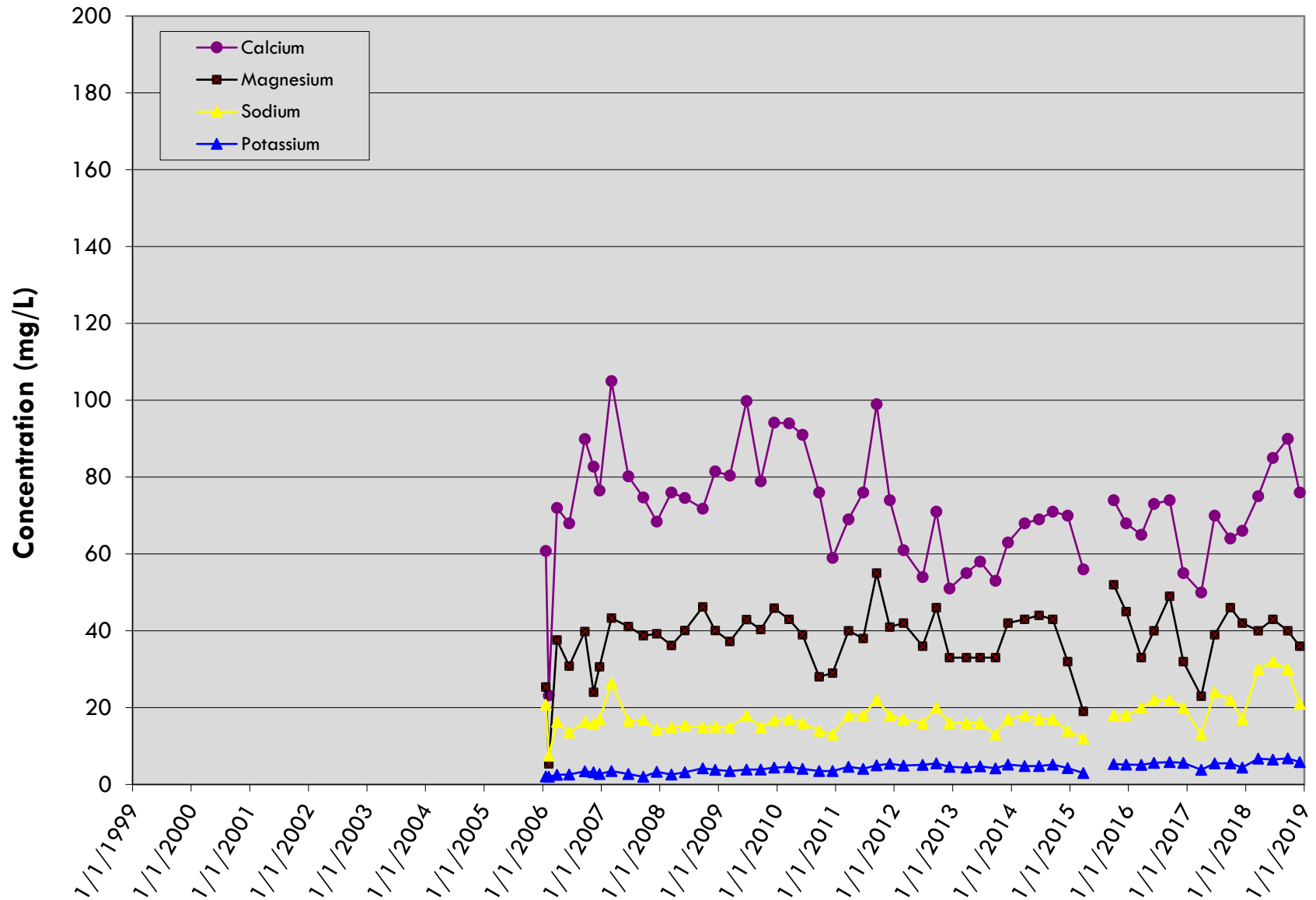
# LDCS-3A

## LRI Landfill, Pierce County, Washington



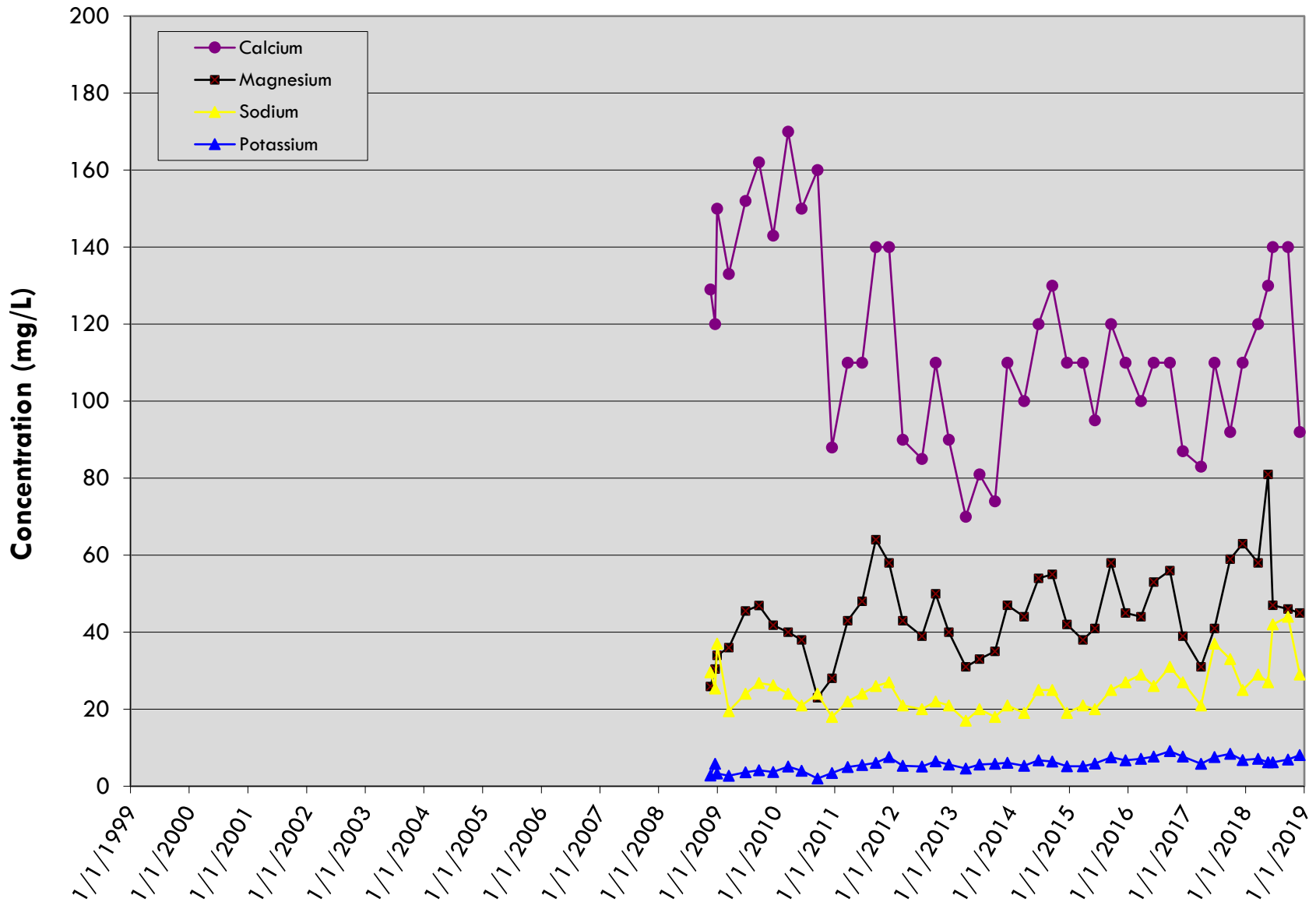
# LDCS-4A

## LRI Landfill, Pierce County, Washington



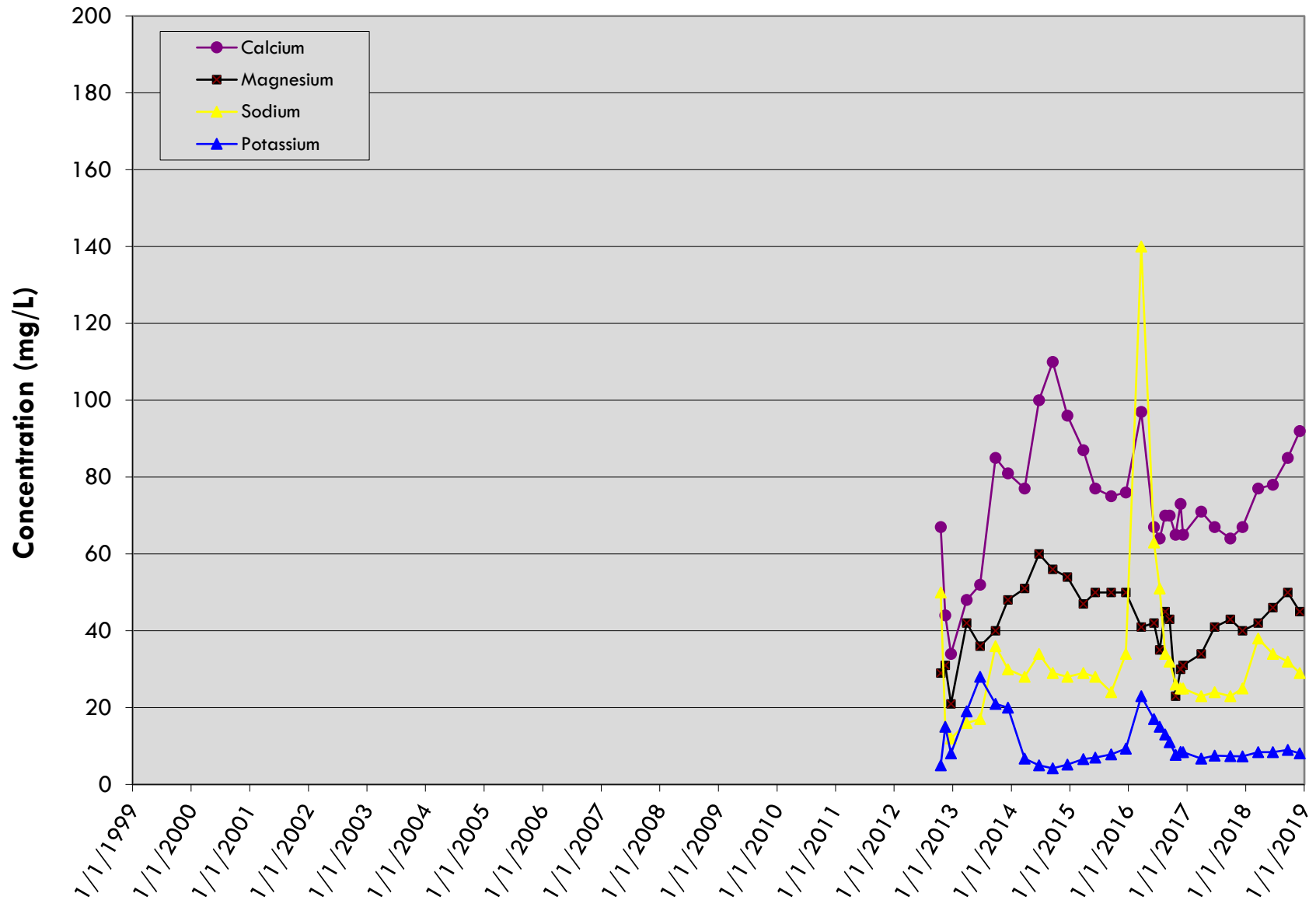
# LDCS-4B

## LRI Landfill, Pierce County, Washington



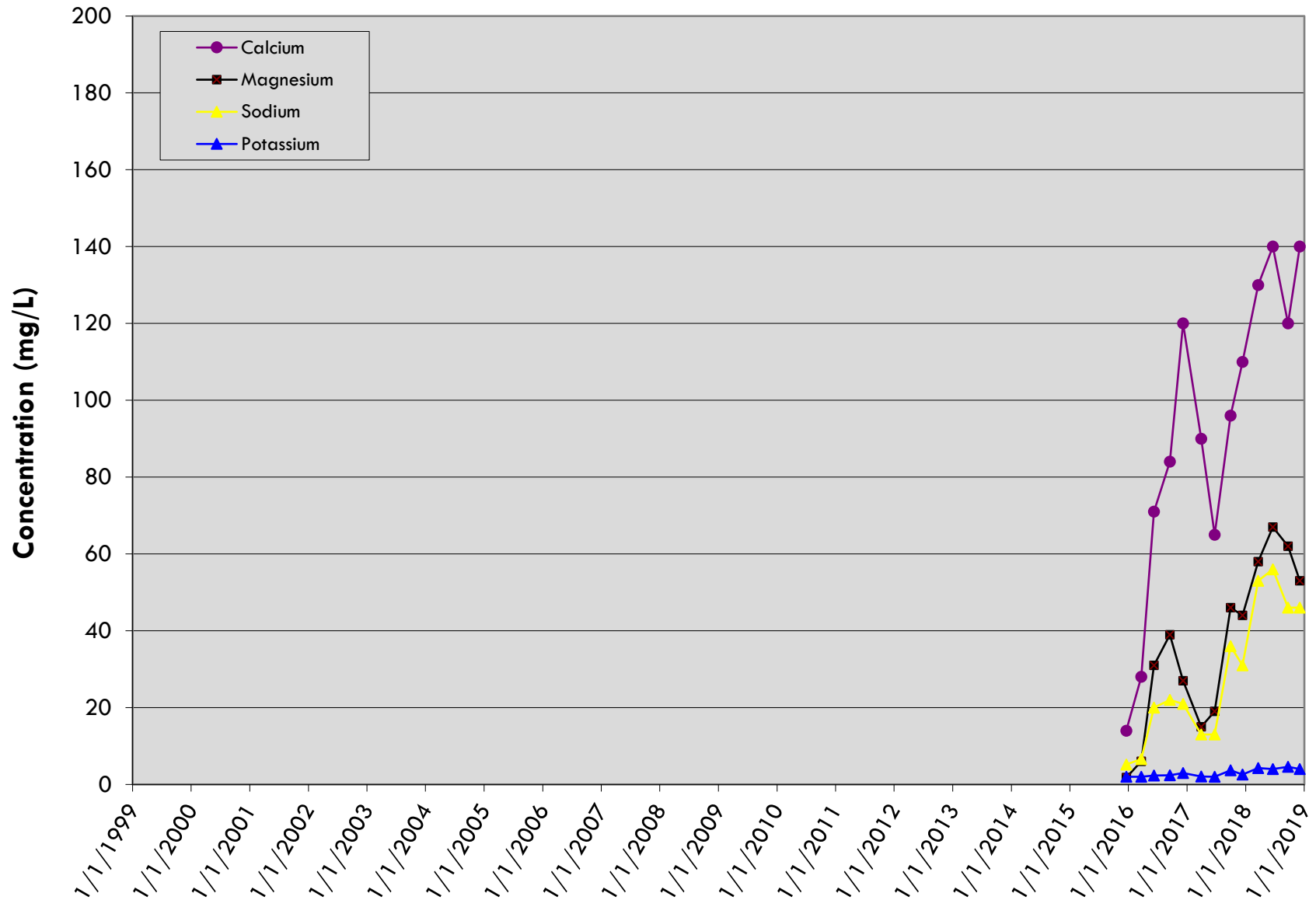
# LDCS-5

## LRI Landfill, Pierce County, Washington



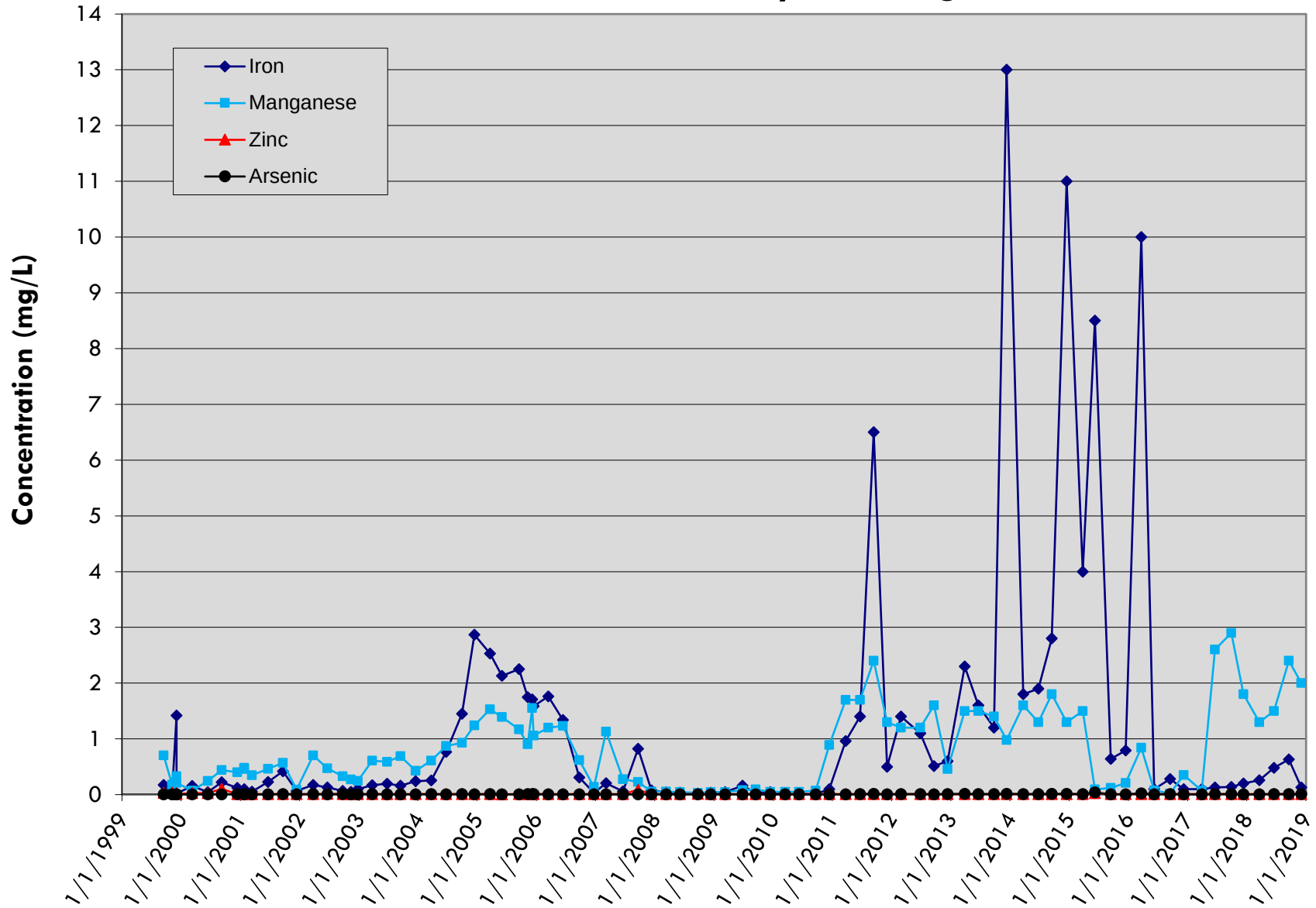
# LDCS-6A

## LRI Landfill, Pierce County, Washington



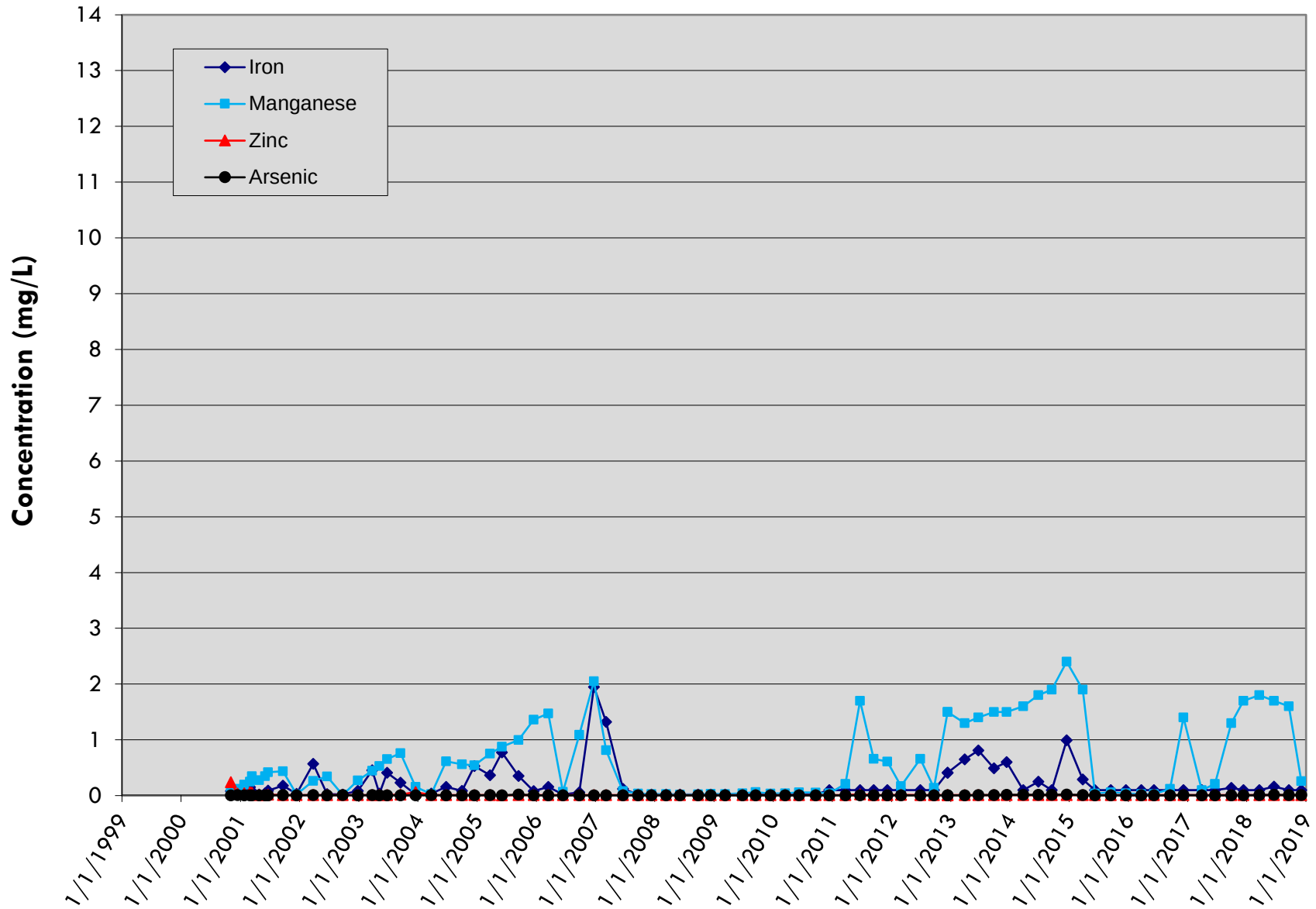
# LDCS-1

## LRI Landfill, Pierce County, Washington



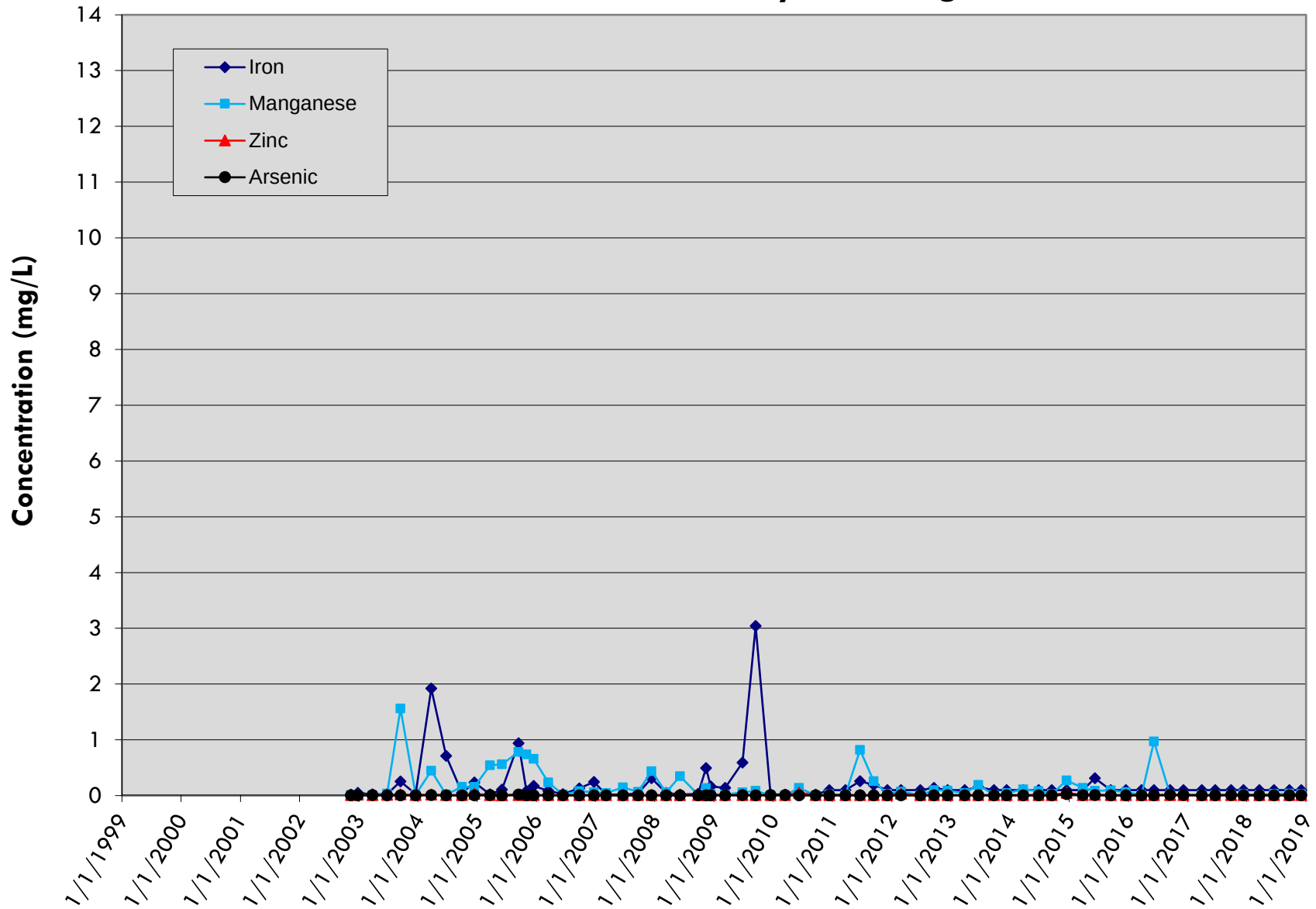
# LDCS-2A

## LRI Landfill, Pierce County, Washington



# LDCS-2B

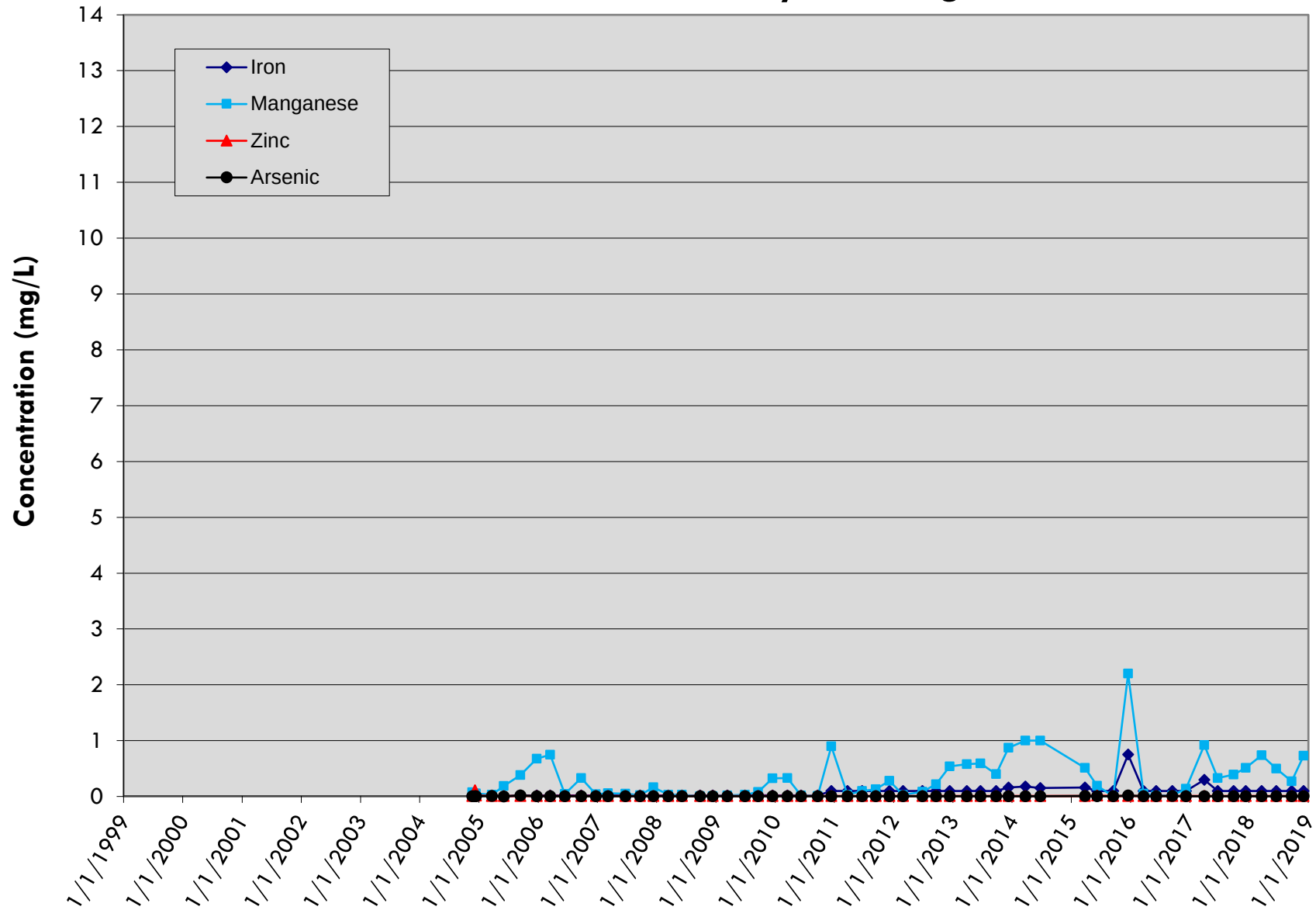
## LRI Landfill, Pierce County, Washington





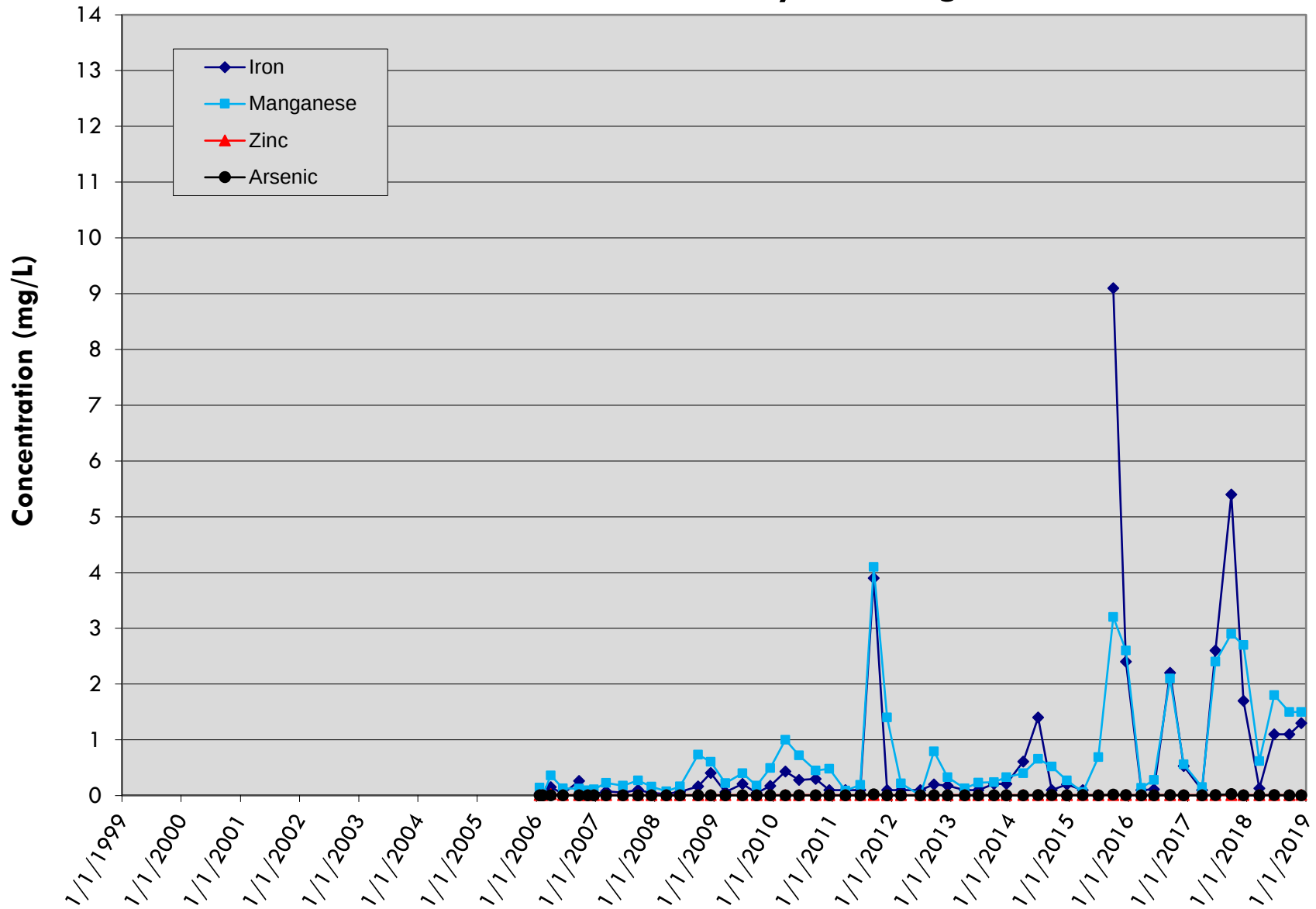
# LDCS-3A

## LRI Landfill, Pierce County, Washington



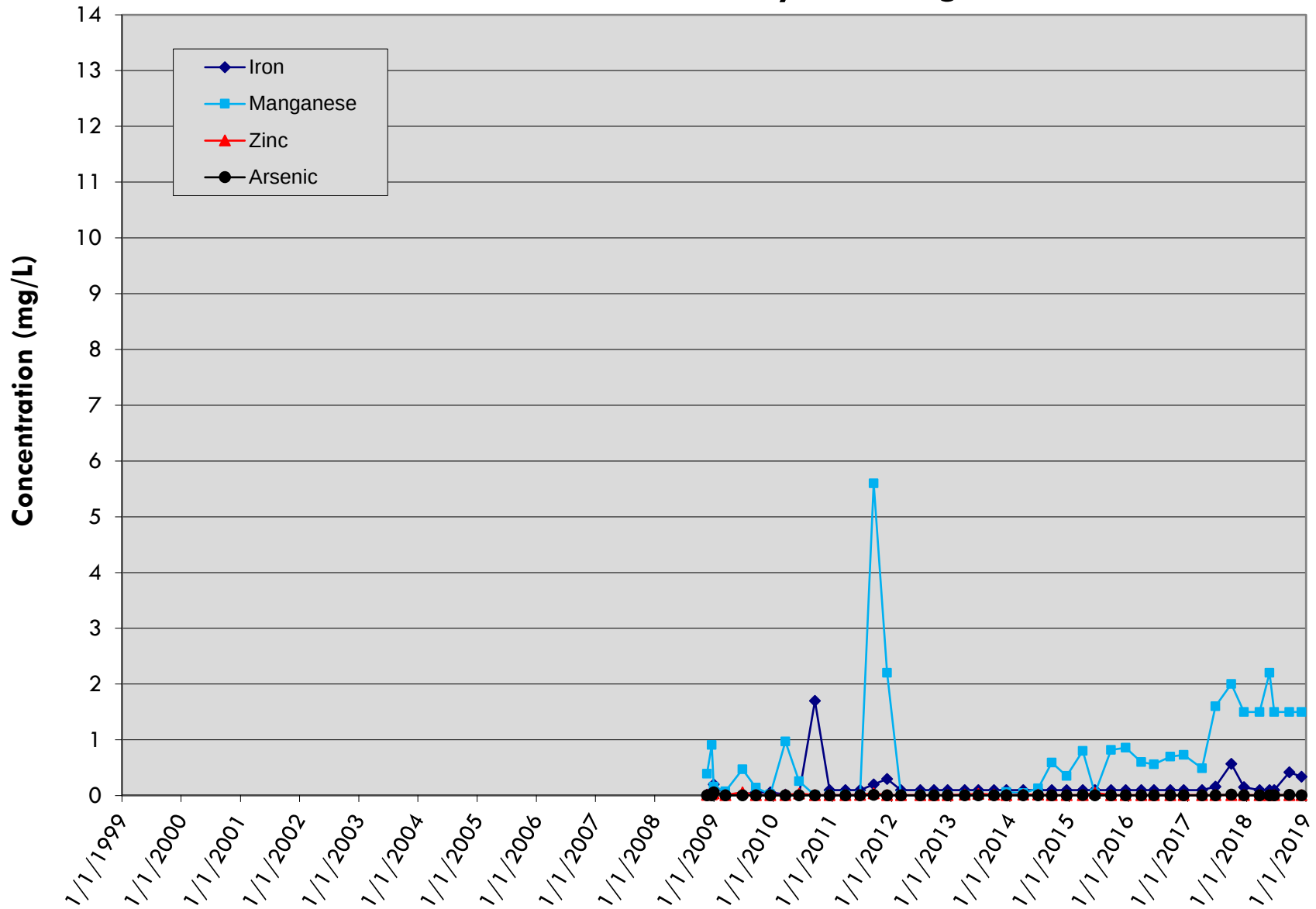
# LDCS-4A

## LRI Landfill, Pierce County, Washington



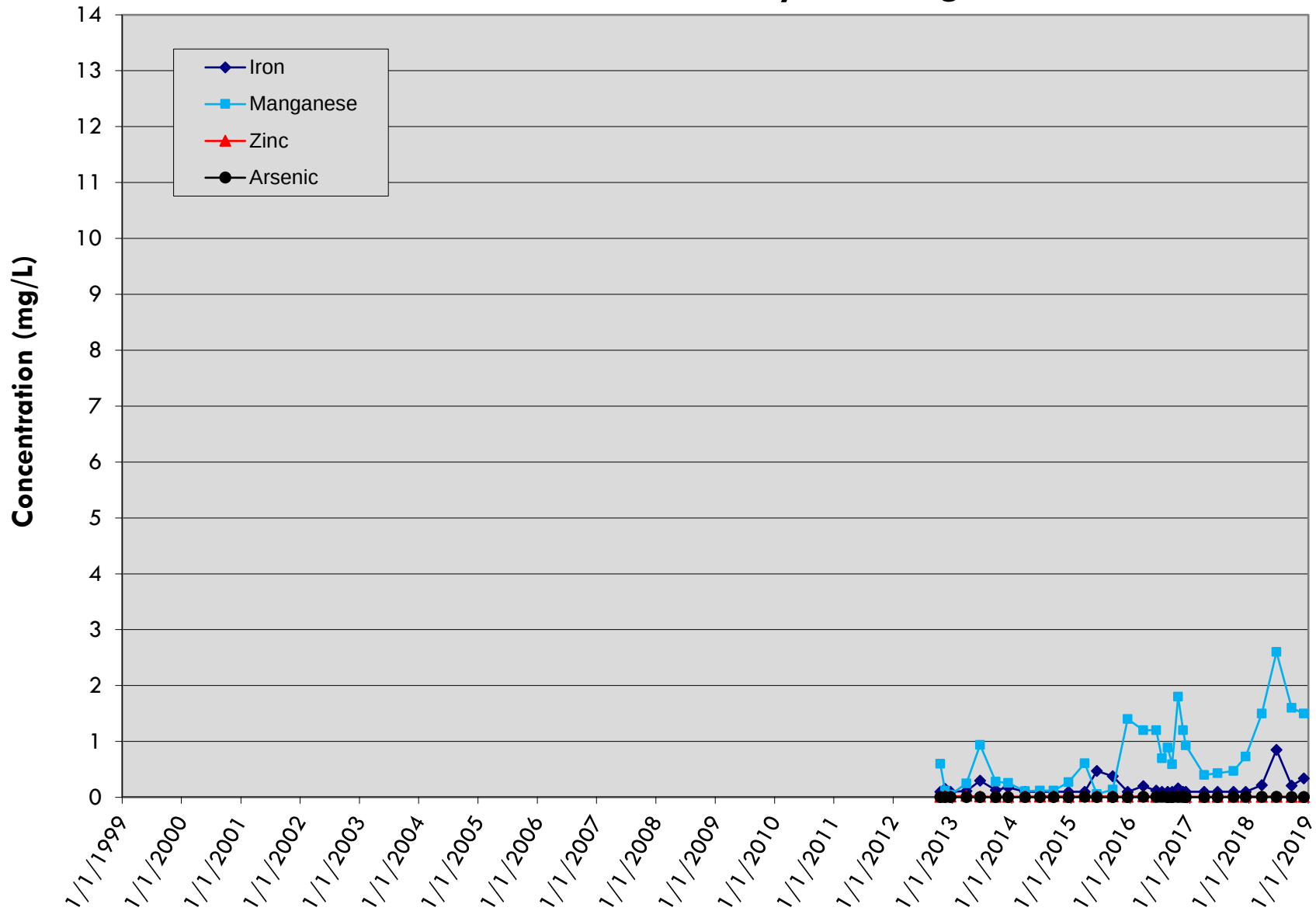
# LDCS-4B

## LRI Landfill, Pierce County, Washington



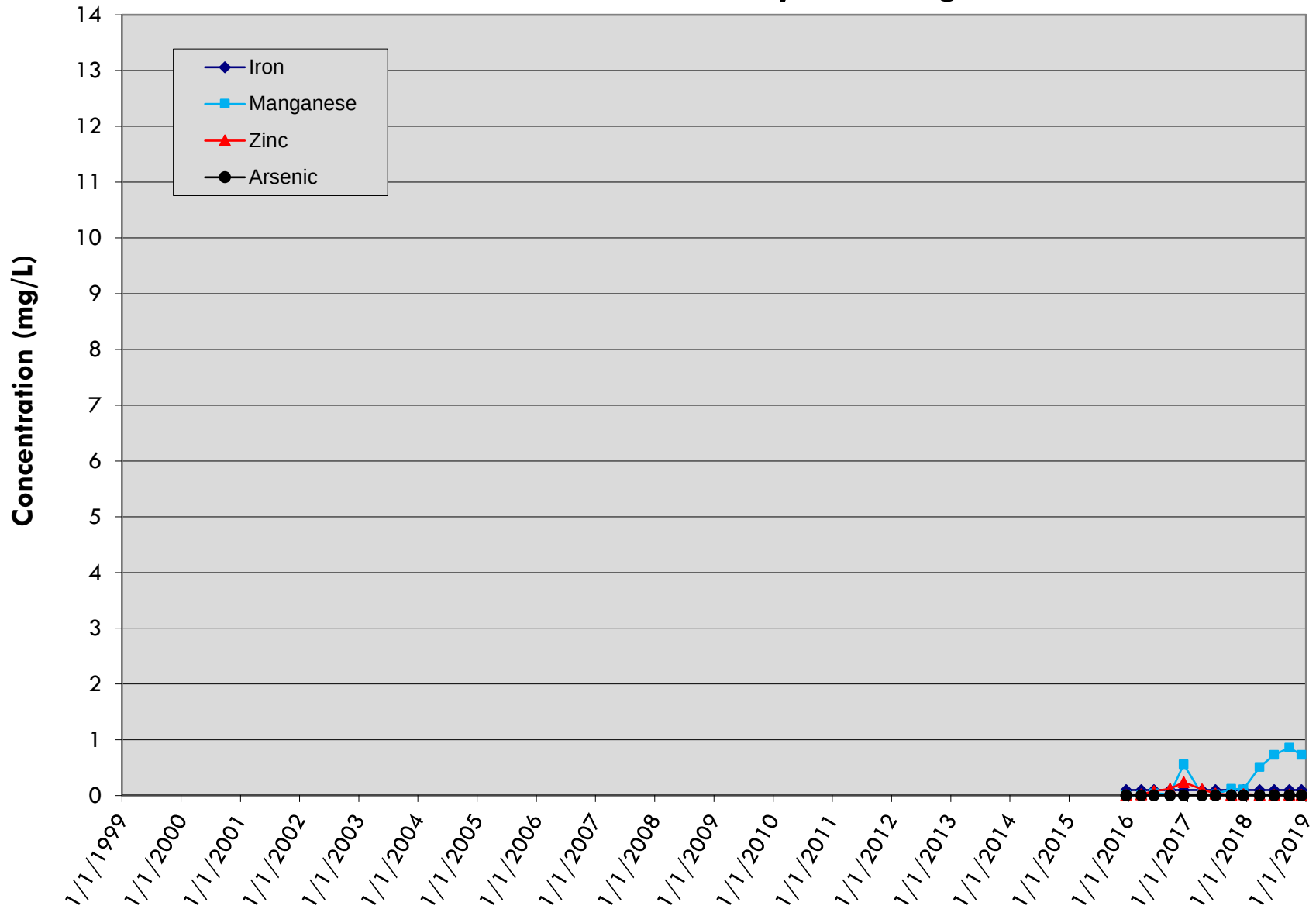
# LDCS-5

## LRI Landfill, Pierce County, Washington



# LDCS-6A

## LRI Landfill, Pierce County, Washington





## Appendix G

### Surface Water Monitoring Data





Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 01/01/2018 - 01/31/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 1-F     | 1/5/18           | Q                                                      |                                                               | Q                                        |
| 2-M     | 1/8/18           | 21.2                                                   |                                                               | 6.3                                      |
| 3-T     | 1/16/18          | 23.1                                                   |                                                               | 6.6                                      |
| 4-F     | 1/26/18          | 19.5                                                   |                                                               | 6.9                                      |
| Minimum |                  |                                                        |                                                               | 6.3                                      |
|         |                  |                                                        | BM: >= 33 (RO)                                                | BM: >= 6.5 (RO)                          |
| Maximum |                  | 23.1                                                   |                                                               | 6.9                                      |
|         |                  | BM: <= 25 (RO)                                         |                                                               | BM: <= 8.5 (RO)                          |

Reporting Codes Used: Q - Flooding

**Overall DMR Notes/Comment**

Listed BMP's were in operation for the entire month.

**BMPs**

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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

2/15/2018 3:30:02 PM

Date





Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 02/01/2018 - 02/28/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 1-F     | 2/2/18           | 16                                                     |                                                               | 7.1                                      |
| 2-Th    | 2/8/18           | 12                                                     |                                                               | 7.0                                      |
| 3-F     | 2/16/18          | 18                                                     |                                                               | 7.0                                      |
| 4-F     | 2/23/18          | 10                                                     |                                                               | 6.9                                      |
| 5-W     | 2/28/18          | 17                                                     |                                                               | 6.8                                      |
| Minimum |                  |                                                        |                                                               | 6.8                                      |
|         |                  |                                                        | BM: >= 33 (RO)                                                | BM: >= 6.5 (RO)                          |
| Maximum |                  | 18                                                     |                                                               | 7.1                                      |
|         |                  | BM: <= 25 (RO)                                         |                                                               | BM: <= 8.5 (RO)                          |

## Overall DMR Notes/Comment

Listed BMP's were in operation for the entire month.

## BMPs

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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George Duvendack

3/14/2018 5:49:37 PM

Signature

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 03/01/2018 - 03/31/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 2-W     | 3/7/18           | 12                                                     |                                                               | 6.9                                      |
| 3-Th    | 3/15/18          | 14                                                     |                                                               | 7.0                                      |
| 4-T     | 3/20/18          | 4                                                      |                                                               | 7.0                                      |
| 5-Th    | 3/29/18          | 5                                                      |                                                               | 7.5                                      |
| Minimum |                  |                                                        |                                                               |                                          |
|         |                  |                                                        | BM: >= 33<br>(RO)                                             | BM: >= 6.5<br>(RO)                       |
| Maximum |                  |                                                        |                                                               |                                          |
|         |                  | BM: <= 25<br>(RO)                                      |                                                               | BM: <= 8.5<br>(RO)                       |

## Overall DMR Notes/Comment

Listed BMP's were in operation for the entire month.

## BMPs

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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George Duvendack

Signature

4/13/2018 9:28:14 AM

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 04/01/2018 - 04/30/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 1-Th    | 4/5/18           | 4.6                                                    |                                                               | 7.01                                     |
| 2-Th    | 4/12/18          | 9                                                      |                                                               | 6.9                                      |
| 3-T     | 4/17/18          | 13                                                     |                                                               | 7.0                                      |
| 4-W     | 4/25/18          | 4                                                      |                                                               | 6.8                                      |
| Minimum |                  |                                                        |                                                               | 6.8                                      |
|         |                  |                                                        | BM: >= 33<br>(RO)                                             | BM: >= 6.5<br>(RO)                       |
| Maximum |                  | 13                                                     |                                                               | 7.01                                     |
|         |                  | BM: <= 25<br>(RO)                                      |                                                               | BM: <= 8.5<br>(RO)                       |

## Overall DMR Notes/Comment

Listed BMP's were in operation for the entire month.

## BMPs

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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

5/11/2018 9:39:55 AM

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 05/01/2018 - 05/31/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 1-W     | 5/2/18           | 6                                                      |                                                               | 6.9                                      |
| 2-T     | 5/8/18           | 5                                                      |                                                               | 6.8                                      |
| 3-W     | 5/16/18          | 7                                                      |                                                               | 6.9                                      |
| 4-T     | 5/22/18          | 7                                                      |                                                               | 6.9                                      |
| 5-M     | 5/28/18          | 5                                                      |                                                               | 6.8                                      |
| Minimum |                  |                                                        |                                                               | 6.8                                      |
|         |                  |                                                        | BM: >= 33 (RO)                                                | BM: >= 6.5 (RO)                          |
| Maximum |                  | 7                                                      |                                                               | 6.9                                      |
|         |                  | BM: <= 25 (RO)                                         |                                                               | BM: <= 8.5 (RO)                          |

## Overall DMR Notes/Comment

Listed BMP's were in operation for the entire month.

## BMPs

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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George Duvendack

6/14/2018 5:44:48 PM

Signature

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 06/01/2018 - 06/30/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 2-F     | 6/8/18           | 7                                                      |                                                               | 6.9                                      |
| 3-F     | 6/15/18          | C                                                      |                                                               | C                                        |
| 4-Th    | 6/21/18          | C                                                      |                                                               | C                                        |
| 5-Th    | 6/28/18          | C                                                      |                                                               | C                                        |
| Minimum |                  |                                                        |                                                               | 6.9                                      |
|         |                  |                                                        | BM: >= 33<br>(RO)                                             | BM: >= 6.5<br>(RO)                       |
| Maximum |                  | 7                                                      |                                                               | 6.9                                      |
|         |                  | BM: <= 25<br>(RO)                                      |                                                               | BM: <= 8.5<br>(RO)                       |

Reporting Codes Used: C - No Discharge

**Overall DMR Notes/Comment**

Listed BMP's were in operation for the entire month.

**BMPs**

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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George Duvendack

Signature

7/13/2018 9:35:17 AM

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 07/01/2018 - 07/31/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| Minimum |                  |                                                        | BM: >= 33<br>(RO)                                             | BM: >= 6.5<br>(RO)                       |
| Maximum |                  | BM: <= 25<br>(RO)                                      |                                                               | BM: <= 8.5<br>(RO)                       |

Reporting Codes Used: C - No Discharge

**Overall DMR Notes/Comment**

Reporting Code: C - No Discharge

Listed BMP's were in operation for the entire month.

**Outfall: 001 - NEWB 2**

| Monitoring Point | Parameter      | Sample Date/<br>Statistical Base | Value | Notes/Comment |
|------------------|----------------|----------------------------------|-------|---------------|
| 001              | All Parameters |                                  | C     |               |

**BMPs**

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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George Duvendack

Signature

8/13/2018 11:47:58 AM

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 08/01/2018 - 08/31/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| Minimum |                  |                                                        | BM: >= 33<br>(RO)                                             | BM: >= 6.5<br>(RO)                       |
| Maximum |                  | BM: <= 25<br>(RO)                                      |                                                               | BM: <= 8.5<br>(RO)                       |

Reporting Codes Used: C - No Discharge

**Overall DMR Notes/Comment**

Reporting Code: C - No Discharge

Listed BMP's were in operation for the entire month.

**Outfall: 001 - NEWB 2**

| Monitoring Point | Parameter      | Sample Date/<br>Statistical Base | Value | Notes/Comment |
|------------------|----------------|----------------------------------|-------|---------------|
| 001              | All Parameters |                                  | C     |               |

**BMPs**

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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George Duvendack

Signature

9/14/2018 4:46:14 PM

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 09/01/2018 - 09/30/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| Minimum |                  |                                                        | BM: >= 33<br>(RO)                                             | BM: >= 6.5<br>(RO)                       |
| Maximum |                  | BM: <= 25<br>(RO)                                      |                                                               | BM: <= 8.5<br>(RO)                       |

Reporting Codes Used: C - No Discharge

**Overall DMR Notes/Comment**

Reporting Code: C - No Discharge

Listed BMP's were in operation for the entire month.

**Outfall: 001 - NEWB 2**

| Monitoring Point | Parameter      | Sample Date/<br>Statistical Base | Value | Notes/Comment |
|------------------|----------------|----------------------------------|-------|---------------|
| 001              | All Parameters |                                  | C     |               |

**BMPs**

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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George Duvendack

10/15/2018 8:37:02 AM

Signature

Date





Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 10/01/2018 - 10/31/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 1-M     | 10/1/18          | C                                                      | C                                                             | C                                        |
| 2-Su    | 10/7/18          | C                                                      | C                                                             | C                                        |
| 3-Su    | 10/14/18         | C                                                      | C                                                             | C                                        |
| 4-Su    | 10/21/18         | C                                                      | C                                                             | C                                        |
| 5-M     | 10/29/18         | 44                                                     |                                                               | 7.4                                      |
| Minimum |                  |                                                        |                                                               | 7.4                                      |
|         |                  |                                                        | BM: >= 33 (RO)                                                | BM: >= 6.5 (RO)                          |
| Maximum |                  | 44                                                     |                                                               | 7.4                                      |
|         |                  | BM: <= 25 (RO)                                         |                                                               | BM: <= 8.5 (RO)                          |

Reporting Codes Used: C - No Discharge

## Overall DMR Notes/Comment

Listed BMP's were in operation for the entire month.

## BMPs

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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

11/14/2018 6:11:52 AM

Signature

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 11/01/2018 - 11/30/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 1-F     | 11/2/18          | 29                                                     |                                                               | 6.9                                      |
| 2-W     | 11/7/18          | 18                                                     |                                                               | 7.0                                      |
| 3-T     | 11/13/18         | 14                                                     |                                                               | 7.0                                      |
| 4-T     | 11/20/18         | 11                                                     |                                                               | 7.1                                      |
| 5-F     | 11/30/18         | 26                                                     |                                                               | 7.0                                      |
| Minimum |                  |                                                        |                                                               | 6.9                                      |
|         |                  |                                                        | BM: >= 33 (RO)                                                | BM: >= 6.5 (RO)                          |
| Maximum |                  | 29                                                     |                                                               | 7.1                                      |
|         |                  | BM: <= 25 (RO)                                         |                                                               | BM: <= 8.5 (RO)                          |

## Overall DMR Notes/Comment

Listed BMP's were in operation for the entire month.

## BMPs

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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

12/14/2018 8:10:17 AM

Signature

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 12/01/2018 - 12/31/2018

Outfall: 001 - NEWB 2

Version: 1

| Week    | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Optional<br>Grab | Turbidity (cm)<br>Measured<br>Centimeters<br>Optional<br>Grab | pH<br>Standard Units<br>Optional<br>Grab |
|---------|------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------|
|         |                  | 001                                                    | 001                                                           | 001                                      |
| 2-Th    | 12/6/18          | 14                                                     |                                                               | 6.9                                      |
| 3-M     | 12/10/18         | 9                                                      |                                                               | 6.9                                      |
| 4-M     | 12/17/18         | 12                                                     |                                                               | 7.0                                      |
| 5-Th    | 12/27/18         | 16                                                     |                                                               | 7.0                                      |
| Minimum |                  |                                                        |                                                               | 6.9                                      |
|         |                  |                                                        | BM: >= 33<br>(RO)                                             | BM: >= 6.5<br>(RO)                       |
| Maximum |                  | 16                                                     |                                                               | 7                                        |
|         |                  | BM: <= 25<br>(RO)                                      |                                                               | BM: <= 8.5<br>(RO)                       |

## Overall DMR Notes/Comment

Listed BMP's were in operation for the entire month.

## BMPs

| Monitoring Point | Week | BMP           |
|------------------|------|---------------|
| 001              |      | Check Dams    |
| 001              |      | Other         |
| 001              |      | Sediment Trap |
| 001              |      | Silt Fence    |
| 001              |      | Straw Wattles |

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

1/11/2019 3:55:20 PM

Date



Permit Number: WAR002557

Permittee: Pierce County Recycling - 304th Street L

Facility County: Pierce

Receiving Waterbody: South Creek

Monitoring Period: 01/01/2018 - 03/31/2018

Outfall: NEWB - NEWB 2

Version: 1

| Week            | Monitoring Point | Turbidity (NTU)<br>Measured NTU<br>Quarterly Grab | pH<br>Standard Units<br>Quarterly Grab | Oil & Grease<br>Yes/No<br>Quarterly Visual Observation | Copper<br>Total Micrograms/L (ug/L)<br>Quarterly Grab | Zinc<br>Total Micrograms/L (ug/L)<br>Quarterly Grab | Total BOD5<br>Total Milligrams/L (mg/L)<br>Quarterly Grab           | Solids (Residue)<br>Total suspended (TSS)<br>Milligrams/L (mg/L)<br>Quarterly Grab | Ammonia<br>Total Milligrams/L (mg/L)<br>Quarterly Grab              | Alpha-terpineol (3-Cyclohexene-1-methanol, alpha, alpha, trimethyl-)<br>Micrograms/L (ug/L)<br>Quarterly Grab | Benzoic Acid<br>Micrograms/L (ug/L)<br>Quarterly Grab               | p-Cresol (4-methylphenol)<br>Micrograms/L (ug/L)<br>Quarterly Grab  |
|-----------------|------------------|---------------------------------------------------|----------------------------------------|--------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
|                 |                  | NEWB                                              | NEWB                                   | NEWB                                                   | NEWB                                                  | NEWB                                                | NEWB                                                                | NEWB                                                                               | NEWB                                                                | NEWB                                                                                                          | NEWB                                                                | NEWB                                                                |
| Limit Set       |                  | ISGP Western WA - 2015 Permit                     | ISGP Western WA - 2015 Permit          | ISGP Western WA - 2015 Permit                          | ISGP Western WA - 2015 Permit                         | ISGP Western WA - 2015 Permit                       | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit                | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit                                           | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit |
| 2-M             | 1/8/18           | 21.2                                              | 6.3                                    | No                                                     | J 4.4                                                 | J 11                                                | B 2                                                                 | 7                                                                                  | J 0.44                                                              | B 5.5                                                                                                         | B 55                                                                | B 11                                                                |
| 3-T             | 1/16/18          | 23.1                                              | 6.6                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 4-F             | 1/26/18          | 19.5                                              | 6.9                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 5-F             | 2/2/18           | 16                                                | 7.1                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 6-Th            | 2/8/18           | 12                                                | 7.0                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 7-F             | 2/16/18          | 18                                                | 7.0                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 8-F             | 2/23/18          | 10                                                | 6.9                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 9-W             | 2/28/18          | 17                                                | 6.8                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 10-W            | 3/7/18           | 12                                                | 6.9                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 11-Th           | 3/15/18          | 14                                                | 7.0                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 12-T            | 3/20/18          | 4                                                 | 7.0                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 13-Th           | 3/29/18          | 5                                                 | 7.5                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Minimum         |                  |                                                   | 6.3<br>BM: >= 5.0 (RO)                 |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Average         |                  | 14.3<br>BM: <= 25                                 |                                        |                                                        | 4.4<br>BM: <= 14                                      | 11<br>BM: <= 117                                    |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Maximum         |                  |                                                   | 7.5<br>BM: <= 9.0 (RO)                 |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Month 1 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | B 2<br><= 37                                                        | 7<br><= 27                                                                         | J 0.44<br><= 4.9                                                    | B 5.5<br><= 16                                                                                                | B 55<br><= 71                                                       | B 11<br><= 14                                                       |
| Month 2 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | B 2<br><= 37                                                        | 7<br><= 27                                                                         | J 0.44<br><= 4.9                                                    | B 5.5<br><= 16                                                                                                | B 55<br><= 71                                                       | B 11<br><= 14                                                       |
| Month 3 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | B 2<br><= 37                                                        | 7<br><= 27                                                                         | J 0.44<br><= 4.9                                                    | B 5.5<br><= 16                                                                                                | B 55<br><= 71                                                       | B 11<br><= 14                                                       |

Reporting Codes Used: B - Below Detection Limit/No Detection, J - Estimated Value/Below Quantitation Limit



| Week            | Monitoring Point | Phenol<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab                  | Zinc<br>Total<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab           | pH<br>Standard Units<br>Quarterly<br>Grab                           |
|-----------------|------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
|                 |                  | NEWB                                                                | NEWB                                                                | NEWB                                                                |
| Limit Set       |                  | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit |
| 2-M             | 1/8/18           | B 4.4                                                               | J 11                                                                | 6.3                                                                 |
| 3-T             | 1/16/18          |                                                                     |                                                                     | 6.6                                                                 |
| 4-F             | 1/26/18          |                                                                     |                                                                     | 6.9                                                                 |
| 5-F             | 2/2/18           |                                                                     |                                                                     | 7.1                                                                 |
| 6-Th            | 2/8/18           |                                                                     |                                                                     | 7.0                                                                 |
| 7-F             | 2/16/18          |                                                                     |                                                                     | 7.0                                                                 |
| 8-F             | 2/23/18          |                                                                     |                                                                     | 6.9                                                                 |
| 9-W             | 2/28/18          |                                                                     |                                                                     | 6.8                                                                 |
| 10-W            | 3/7/18           |                                                                     |                                                                     | 6.9                                                                 |
| 11-Th           | 3/15/18          |                                                                     |                                                                     | 7.0                                                                 |
| 12-T            | 3/20/18          |                                                                     |                                                                     | 7.0                                                                 |
| 13-Th           | 3/29/18          |                                                                     |                                                                     | 7.5                                                                 |
| Minimum         |                  |                                                                     |                                                                     | 6.3                                                                 |
|                 |                  |                                                                     |                                                                     | >= 6.0 (RO)                                                         |
| Average         |                  |                                                                     |                                                                     |                                                                     |
|                 |                  |                                                                     |                                                                     |                                                                     |
| Maximum         |                  |                                                                     |                                                                     | 7.5                                                                 |
|                 |                  |                                                                     |                                                                     | <= 9.0 (RO)                                                         |
| Month 1 Average |                  | B 4.4                                                               | J 11                                                                |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |
| Month 2 Average |                  | B 4.4                                                               | J 11                                                                |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |
| Month 3 Average |                  | B 4.4                                                               | J 11                                                                |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |



*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

5/10/2018 6:04:45 PM

Date



Permit Number: WAR002557

Permittee: Pierce County Recycling - 304th Street L

Facility County: Pierce

Receiving Waterbody: South Creek

Monitoring Period: 04/01/2018 - 06/30/2018

Outfall: NEWB - NEWB 2

Version: 1

| Week            | Monitoring Point | Turbidity (NTU)<br>Measured<br>NTU<br>Quarterly<br>Grab | pH<br>Standard Units<br>Quarterly<br>Grab | Oil & Grease<br>Yes/No<br>Quarterly<br>Visual Observation | Copper<br>Total<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab | Zinc<br>Total<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab | Total BOD5<br>Total<br>Milligrams/L (mg/L)<br>Quarterly<br>Grab                        | Solids (Residue)<br>Total suspended (TSS)<br>Milligrams/L (mg/L)<br>Quarterly<br>Grab  | Ammonia<br>Total<br>Milligrams/L (mg/L)<br>Quarterly<br>Grab                           | Alpha-terpineol (3-Cyclohexene-1-methanol, alpha, alpha, trimethyl-)<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab | Benzoic Acid<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab                               | p-Cresol (4-methylphenol)<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab                  |
|-----------------|------------------|---------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|                 |                  | NEWB                                                    | NEWB                                      | NEWB                                                      | NEWB                                                        | NEWB                                                      | NEWB                                                                                   | NEWB                                                                                   | NEWB                                                                                   | NEWB                                                                                                             | NEWB                                                                                   | NEWB                                                                                   |
| Limit Set       |                  | ISGP<br>Western WA<br>- 2015<br>Permit                  | ISGP<br>Western WA<br>- 2015<br>Permit    | ISGP<br>Western WA<br>- 2015<br>Permit                    | ISGP<br>Western WA<br>- 2015<br>Permit                      | ISGP<br>Western WA<br>- 2015<br>Permit                    | ISGP Non-<br>Haz Waste<br>Landfill<br>(40CFR part<br>445 subpart<br>B)- 2015<br>permit | ISGP Non-<br>Haz Waste<br>Landfill<br>(40CFR part<br>445 subpart<br>B)- 2015<br>permit | ISGP Non-<br>Haz Waste<br>Landfill<br>(40CFR part<br>445 subpart<br>B)- 2015<br>permit | ISGP Non-<br>Haz Waste<br>Landfill<br>(40CFR part<br>445 subpart<br>B)- 2015<br>permit                           | ISGP Non-<br>Haz Waste<br>Landfill<br>(40CFR part<br>445 subpart<br>B)- 2015<br>permit | ISGP Non-<br>Haz Waste<br>Landfill<br>(40CFR part<br>445 subpart<br>B)- 2015<br>permit |
| 1-Th            | 4/5/18           | 4.6                                                     | 7.01                                      |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| 2-Th            | 4/12/18          | 9                                                       | 6.9                                       |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| 3-T             | 4/17/18          | 13                                                      | 7.0                                       |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| 4-W             | 4/25/18          | 4                                                       | 6.8                                       | No                                                        | B 10                                                        | B 35                                                      | B 2                                                                                    | 5                                                                                      | J 0.093                                                                                | B 4.9                                                                                                            | B 49                                                                                   | B 9.8                                                                                  |
| 5-W             | 5/2/18           | 6                                                       | 6.9                                       |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| 6-T             | 5/8/18           | 5                                                       | 6.8                                       |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| 7-W             | 5/16/18          | 7                                                       | 6.9                                       |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| 8-T             | 5/22/18          | 7                                                       | 6.9                                       |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| 9-M             | 5/28/18          | 5                                                       | 6.8                                       |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| 10-F            | 6/8/18           | 7                                                       | 6.9                                       |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| Minimum         |                  |                                                         | 6.8<br>BM: >= 5.0<br>(RO)                 |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| Average         |                  | 6.76<br>BM: <= 25                                       |                                           |                                                           | B 10<br>BM: <= 14                                           | B 35<br>BM: <= 117                                        |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| Maximum         |                  |                                                         | 7.01<br>BM: <= 9.0<br>(RO)                |                                                           |                                                             |                                                           |                                                                                        |                                                                                        |                                                                                        |                                                                                                                  |                                                                                        |                                                                                        |
| Month 1 Average |                  |                                                         |                                           |                                                           |                                                             |                                                           | B 2<br><= 37                                                                           | 5<br><= 27                                                                             | J 0.093<br><= 4.9                                                                      | B 4.9<br><= 16                                                                                                   | B 49<br><= 71                                                                          | B 9.8<br><= 14                                                                         |
| Month 2 Average |                  |                                                         |                                           |                                                           |                                                             |                                                           | B 2<br><= 37                                                                           | 5<br><= 27                                                                             | J 0.093<br><= 4.9                                                                      | B 4.9<br><= 16                                                                                                   | B 49<br><= 71                                                                          | B 9.8<br><= 14                                                                         |
| Month 3 Average |                  |                                                         |                                           |                                                           |                                                             |                                                           | B 2<br><= 37                                                                           | 5<br><= 27                                                                             | J 0.093<br><= 4.9                                                                      | B 4.9<br><= 16                                                                                                   | B 49<br><= 71                                                                          | B 9.8<br><= 14                                                                         |

Reporting Codes Used: B - Below Detection Limit/No Detection, J - Estimated Value/Below Quantitation Limit



| Week            | Monitoring Point | Phenol<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab                  | Zinc<br>Total<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab           | pH<br>Standard Units<br>Quarterly<br>Grab                           |
|-----------------|------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
|                 |                  | NEWB                                                                | NEWB                                                                | NEWB                                                                |
| Limit Set       |                  | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit |
| 1-Th            | 4/5/18           |                                                                     |                                                                     | 7.01                                                                |
| 2-Th            | 4/12/18          |                                                                     |                                                                     | 6.9                                                                 |
| 3-T             | 4/17/18          |                                                                     |                                                                     | 7.0                                                                 |
| 4-W             | 4/25/18          | B 3.9                                                               | B 35                                                                | 6.8                                                                 |
| 5-W             | 5/2/18           |                                                                     |                                                                     | 6.9                                                                 |
| 6-T             | 5/8/18           |                                                                     |                                                                     | 6.8                                                                 |
| 7-W             | 5/16/18          |                                                                     |                                                                     | 6.9                                                                 |
| 8-T             | 5/22/18          |                                                                     |                                                                     | 6.9                                                                 |
| 9-M             | 5/28/18          |                                                                     |                                                                     | 6.8                                                                 |
| 10-F            | 6/8/18           |                                                                     |                                                                     | 6.9                                                                 |
| Minimum         |                  |                                                                     |                                                                     | 6.8                                                                 |
|                 |                  |                                                                     |                                                                     | >= 6.0 (RO)                                                         |
| Average         |                  |                                                                     |                                                                     |                                                                     |
|                 |                  |                                                                     |                                                                     |                                                                     |
| Maximum         |                  |                                                                     |                                                                     | 7.01                                                                |
|                 |                  |                                                                     |                                                                     | <= 9.0 (RO)                                                         |
| Month 1 Average |                  | B 3.9                                                               | B 35                                                                |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |
| Month 2 Average |                  | B 3.9                                                               | B 35                                                                |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |
| Month 3 Average |                  | B 3.9                                                               | B 35                                                                |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |





*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.*

|                         |                              |
|-------------------------|------------------------------|
| <u>George Duvendack</u> | <u>8/13/2018 11:46:22 AM</u> |
| Signature               | Date                         |



Permit Number: WAR002557

Permittee: Pierce County Recycling - 304th Street L

Facility County: Pierce

Receiving Waterbody: South Creek

Monitoring Period: 07/01/2018 - 09/30/2018

Outfall: NEWB - NEWB 2

Version: 1

| Week            | Monitoring Point | Turbidity (NTU)<br>Measured NTU<br>Quarterly Grab | pH<br>Standard Units<br>Quarterly Grab | Oil & Grease<br>Yes/No<br>Quarterly Visual Observation | Copper<br>Total Micrograms/L (ug/L)<br>Quarterly Grab | Zinc<br>Total Micrograms/L (ug/L)<br>Quarterly Grab | Total BOD5<br>Total Milligrams/L (mg/L)<br>Quarterly Grab           | Solids (Residue)<br>Total suspended (TSS)<br>Milligrams/L (mg/L)<br>Quarterly Grab | Ammonia<br>Total Milligrams/L (mg/L)<br>Quarterly Grab              | Alpha-terpineol (3-Cyclohexene-1-methanol, alpha, alpha, trimethyl-)<br>Micrograms/L (ug/L)<br>Quarterly Grab | Benzoic Acid<br>Micrograms/L (ug/L)<br>Quarterly Grab               | p-Cresol (4-methylphenol)<br>Micrograms/L (ug/L)<br>Quarterly Grab  |
|-----------------|------------------|---------------------------------------------------|----------------------------------------|--------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
|                 |                  | NEWB                                              | NEWB                                   | NEWB                                                   | NEWB                                                  | NEWB                                                | NEWB                                                                | NEWB                                                                               | NEWB                                                                | NEWB                                                                                                          | NEWB                                                                | NEWB                                                                |
|                 |                  | ISGP Western WA - 2015 Permit                     | ISGP Western WA - 2015 Permit          | ISGP Western WA - 2015 Permit                          | ISGP Western WA - 2015 Permit                         | ISGP Western WA - 2015 Permit                       | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit                | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit                                           | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit |
| Minimum         |                  |                                                   | BM: >= 5.0 (RO)                        |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Average         |                  | BM: <= 25                                         |                                        |                                                        | BM: <= 14                                             | BM: <= 117                                          |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Maximum         |                  |                                                   | BM: <= 9.0 (RO)                        |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Month 1 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | <= 37                                                               | <= 27                                                                              | <= 4.9                                                              | <= 16                                                                                                         | <= 71                                                               | <= 14                                                               |
| Month 2 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | <= 37                                                               | <= 27                                                                              | <= 4.9                                                              | <= 16                                                                                                         | <= 71                                                               | <= 14                                                               |
| Month 3 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | <= 37                                                               | <= 27                                                                              | <= 4.9                                                              | <= 16                                                                                                         | <= 71                                                               | <= 14                                                               |

Reporting Codes Used: C - No Discharge

## Overall DMR Notes/Comment

Reporting Code: C - No Discharge

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

George Duvendack

11/14/2018 6:10:33 AM

Signature

Date



| Week            | Monitoring Point | Phenol<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab                  | Zinc<br>Total<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab           | pH<br>Standard Units<br>Quarterly<br>Grab                           |
|-----------------|------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
|                 |                  | NEWB                                                                | NEWB                                                                | NEWB                                                                |
| Limit Set       |                  | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit |
| Minimum         |                  |                                                                     |                                                                     |                                                                     |
|                 |                  |                                                                     |                                                                     | >= 6.0 (RO)                                                         |
| Average         |                  |                                                                     |                                                                     |                                                                     |
|                 |                  |                                                                     |                                                                     |                                                                     |
| Maximum         |                  |                                                                     |                                                                     |                                                                     |
|                 |                  |                                                                     |                                                                     | <= 9.0 (RO)                                                         |
| Month 1 Average |                  |                                                                     |                                                                     |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |
| Month 2 Average |                  |                                                                     |                                                                     |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |
| Month 3 Average |                  |                                                                     |                                                                     |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |



Permit Number: WAR002557

Permittee: Pierce County Recycling - 304th Street L

Facility County: Pierce

Receiving Waterbody: South Creek

Monitoring Period: 10/01/2018 - 12/31/2018

Outfall: NEWB - NEWB 2

Version: 1

| Week            | Monitoring Point | Turbidity (NTU)<br>Measured NTU<br>Quarterly Grab | pH<br>Standard Units<br>Quarterly Grab | Oil & Grease<br>Yes/No<br>Quarterly Visual Observation | Copper<br>Total Micrograms/L (ug/L)<br>Quarterly Grab | Zinc<br>Total Micrograms/L (ug/L)<br>Quarterly Grab | Total 50 D5<br>Total Milligrams/L (mg/L)<br>Quarterly Grab          | Solids (Residue)<br>Total suspended (TSS)<br>Milligrams/L (mg/L)<br>Quarterly Grab | Ammonia<br>Total Milligrams/L (mg/L)<br>Quarterly Grab              | Alpha-terpineol (3-Cyclohexene-1-methanol, alpha, alpha, trimethyl-)<br>Micrograms/L (ug/L)<br>Quarterly Grab | Benzoic Acid<br>Micrograms/L (ug/L)<br>Quarterly Grab               | p-Cresol (4-methylphenol)<br>Micrograms/L (ug/L)<br>Quarterly Grab  |
|-----------------|------------------|---------------------------------------------------|----------------------------------------|--------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
|                 |                  | NEWB                                              | NEWB                                   | NEWB                                                   | NEWB                                                  | NEWB                                                | NEWB                                                                | NEWB                                                                               | NEWB                                                                | NEWB                                                                                                          | NEWB                                                                | NEWB                                                                |
| Limit Set       |                  | ISGP Western WA - 2015 Permit                     | ISGP Western WA - 2015 Permit          | ISGP Western WA - 2015 Permit                          | ISGP Western WA - 2015 Permit                         | ISGP Western WA - 2015 Permit                       | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit                | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit                                           | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit |
| 5-M             | 10/29/18         | 44                                                | 7.4                                    | No                                                     | 7.1                                                   | 41                                                  | 110                                                                 | 28                                                                                 | 0.67                                                                | B 4.9                                                                                                         | B 49                                                                | B 9.8                                                               |
| 5-F             | 11/2/18          | 29                                                | 6.9                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 6-W             | 11/7/18          | 18                                                | 7.0                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 7-T             | 11/13/18         | 14                                                | 7.0                                    |                                                        |                                                       |                                                     | B 2                                                                 | 7                                                                                  |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 8-T             | 11/20/18         | 11                                                | 7.1                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 9-F             | 11/30/18         | 26                                                | 7.0                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 10-Th           | 12/6/18          | 14                                                | 6.9                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 11-T            | 12/11/18         | 9                                                 | 6.9                                    |                                                        |                                                       |                                                     | 2.1                                                                 | 5                                                                                  |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 12-M            | 12/17/18         | 12                                                | 7.0                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| 13-Th           | 12/27/18         | 16                                                | 7.0                                    |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Minimum         |                  |                                                   | 6.9<br>BM: >= 5.0 (RO)                 |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Average         |                  | 19.3<br>BM: <= 25                                 |                                        |                                                        | 7.1<br>BM: <= 14                                      | 41<br>BM: <= 117                                    |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Maximum         |                  |                                                   | 7.4<br>BM: <= 9.0 (RO)                 |                                                        |                                                       |                                                     |                                                                     |                                                                                    |                                                                     |                                                                                                               |                                                                     |                                                                     |
| Month 1 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | 110<br><= 37                                                        | 28<br><= 27                                                                        | 0.67<br><= 4.9                                                      | B 4.9<br><= 16                                                                                                | B 49<br><= 71                                                       | B 9.8<br><= 14                                                      |
| Month 2 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | 2<br><= 37                                                          | 7<br><= 27                                                                         | 0.67<br><= 4.9                                                      | B 4.9<br><= 16                                                                                                | B 49<br><= 71                                                       | B 9.8<br><= 14                                                      |
| Month 3 Average |                  |                                                   |                                        |                                                        |                                                       |                                                     | 2.1<br><= 37                                                        | 5<br><= 27                                                                         | 0.67<br><= 4.9                                                      | B 4.9<br><= 16                                                                                                | B 49<br><= 71                                                       | B 9.8<br><= 14                                                      |

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

## Overall DMR Notes/Comment

Ammonia was analyzed using Method 350.1. The method reporting limit was 0.10 mg/L.



| Week            | Monitoring Point | Phenol<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab                  | Zinc<br>Total<br>Micrograms/L (ug/L)<br>Quarterly<br>Grab           | pH<br>Standard Units<br>Quarterly<br>Grab                           |
|-----------------|------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
|                 |                  | NEWB                                                                | NEWB                                                                | NEWB                                                                |
| Limit Set       |                  | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit | ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2015 permit |
| 5-M             | 10/29/18         | B 3.9                                                               | 41                                                                  | 7.4                                                                 |
| 5-F             | 11/2/18          |                                                                     |                                                                     | 6.9                                                                 |
| 6-W             | 11/7/18          |                                                                     |                                                                     | 7.0                                                                 |
| 7-T             | 11/13/18         |                                                                     |                                                                     | 7.0                                                                 |
| 8-T             | 11/20/18         |                                                                     |                                                                     | 7.1                                                                 |
| 9-F             | 11/30/18         |                                                                     |                                                                     | 7.0                                                                 |
| 10-Th           | 12/6/18          |                                                                     |                                                                     | 6.9                                                                 |
| 11-T            | 12/11/18         |                                                                     |                                                                     | 6.9                                                                 |
| 12-M            | 12/17/18         |                                                                     |                                                                     | 7.0                                                                 |
| 13-Th           | 12/27/18         |                                                                     |                                                                     | 7.0                                                                 |
| Minimum         |                  |                                                                     |                                                                     | 6.9                                                                 |
|                 |                  |                                                                     |                                                                     | >= 6.0 (RO)                                                         |
| Average         |                  |                                                                     |                                                                     |                                                                     |
|                 |                  |                                                                     |                                                                     |                                                                     |
| Maximum         |                  |                                                                     |                                                                     | 7.4                                                                 |
|                 |                  |                                                                     |                                                                     | <= 9.0 (RO)                                                         |
| Month 1 Average |                  | B 3.9                                                               | 41                                                                  |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |
| Month 2 Average |                  | B 3.9                                                               | 41                                                                  |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |
| Month 3 Average |                  | B 3.9                                                               | 41                                                                  |                                                                     |
|                 |                  | <= 15                                                               | <= 110                                                              |                                                                     |



*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

2/14/2019 8:17:04 AM

Date





## Appendix H

### Landfill Gas Monitoring Data





**Table H-1. 2018 Landfill Gas Probe Monitoring Summary**  
**Methane (% vol.)**  
**LRI Landfill, Pierce County, Washington**

| <b>Monitoring Date</b> | <b>GP-1</b> | <b>GP-2</b> | <b>GP-3</b> | <b>GP-4</b> | <b>GP-9</b> | <b>GP-10</b> | <b>GP-11</b> | <b>GP-12</b> | <b>GP-13</b> | <b>GP-14</b> | <b>GP-15</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| January 29, 2018       | 1.4         | 14.4        | 0.0         | 0.0         | 0.0         | 4.5          | 0.0          | —            | 2.0          | 0.0          | 0.0          |
| February 27, 2018      | 1.0         | 16.2        | 0.0         | 0.0         | 0.0         | 3.9          | 0.0          | 34.0         | 2.2          | 0.0          | 0.0          |
| March 20, 2018         | 1.6         | 16.4        | 0.0         | 0.0         | 0.0         | 6.7          | 0.0          | 35.9         | 2.3          | 0.0          | 0.0          |
| April 12, 2018         | 0.6         | 15.3        | 0.0         | 0.0         | 0.0         | 19.6         | 0.0          | 35.8         | 2.1          | 0.0          | 0.0          |
| May 22, 2018           | 2.3         | 14.9        | 0.0         | 0.0         | 0.0         | 21.9         | 0.0          | 34.6         | 2.3          | 0.0          | 0.0          |
| June 27, 2018          | 1.4         | 14.4        | 0.0         | 0.0         | 0.0         | 16.1         | 0.0          | 33.3         | 0.8          | 0.0          | 0.0          |
| July 25, 2018          | 4.0         | 15.1        | 0.0         | 0.0         | 0.0         | 20.6         | 0.0          | 18.3         | 0.4          | 0.0          | 0.0          |
| August 30, 2018        | 8.2         | 15.7        | 0.0         | 0.0         | 0.0         | 24.3         | 0.0          | 25.1         | 1.2          | 0.2          | 0.0          |
| September 27, 2018     | 4.9         | 14.4        | 0.0         | 0.0         | 0.0         | 14.7         | 0.0          | 21.0         | 0.9          | 0.6          | 0.0          |
| October 25, 2018       | 7.0         | 16.6        | 0.0         | 0.0         | 0.0         | 12.2         | 0.0          | 23.7         | 0.7          | 1.0          | 0.0          |
| November 28, 2018      | 6.2         | 15.0        | 0.0         | 0.0         | 0.0         | 18.9         | 0.0          | 23.5         | 0.6          | 0.0          | 0.0          |
| December 13, 2018      | 0.4         | 1.3         | 0.0         | 0.0         | 0.0         | 0.0          | 0.0          | 7.9          | 0.3          | 0.0          | 0.0          |

Notes:

All locations measured by SCS Engineeress.

(—) indicates no measurement taken.

**Exhibit 3 - Results of Landfill Gas Probe Monitoring**

SCS Engineers

**Landfill Gas Control System**

04217001.04

LRI Landfill

January-18

| Location<br>Refer<br><i>Design.</i> | Date      | Time  | P <sub>(well)</sub><br>(in W.C.) | Gas Composition - <i>Note 1</i>      |                                |                                |                               |                                                               | Depth to<br>Water<br><i>Note 2</i><br>(ft-TOC) | Exposed Portion of<br>Perforations - <i>Note 3</i> |       | Comments     |
|-------------------------------------|-----------|-------|----------------------------------|--------------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------------------------------------|------------------------------------------------|----------------------------------------------------|-------|--------------|
|                                     |           |       |                                  | CH <sub>4</sub> Spike<br>(% by vol.) | CH <sub>4</sub><br>(% by vol.) | CO <sub>2</sub><br>(% by vol.) | O <sub>2</sub><br>(% by vol.) | Balance<br>(N <sub>2</sub> & H <sub>2</sub> O)<br>(% by vol.) |                                                | (ft)                                               | (%)   |              |
|                                     |           |       |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |              |
| Normal Operating Range:             |           |       |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |              |
| (min)                               |           |       | -                                |                                      | 0.3                            | 0.3                            | -                             |                                                               |                                                |                                                    | 20.0  |              |
| (max)                               |           |       | 5.00                             |                                      | 5.0                            | 5.0                            | 20.3                          |                                                               |                                                |                                                    | 90.0  |              |
| Perimter Gas Probes                 |           |       |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |              |
| GP-1                                | 1/29/2018 | 8:57  | 0.0                              | 3.6                                  | 1.4                            | 2.2                            | 16.7                          | 79.7                                                          | 16.4                                           | 9.4                                                | 100.0 |              |
| GP-2                                | 1/29/2018 | 9:13  | 0.0                              | 17.0                                 | 14.4                           | 16.7                           | 2.4                           | 66.5                                                          |                                                |                                                    |       |              |
| GP-3                                | 1/29/2018 | 9:22  | 0.0                              |                                      | 0.0                            | 8.9                            | 8.8                           | 82.3                                                          | 11.3                                           | 7.3                                                | 100.0 |              |
| GP-4                                | 1/29/2018 | 9:31  | 0.0                              |                                      | 0.0                            | 1.8                            | 18.9                          | 79.3                                                          | 9.1                                            | 5.1                                                | 100.0 |              |
| GP-9                                | 1/29/2018 | 9:40  | 0.0                              |                                      | 0.0                            | 9.0                            | 4.1                           | 86.9                                                          | 10.8                                           | 0.0                                                | 0.0   |              |
| GP-10                               | 1/29/2018 | 8:43  | 0.0                              |                                      | 0.0                            | 1.7                            | 20.5                          | 77.8                                                          |                                                |                                                    |       |              |
| GP-10P                              | 1/29/2018 | 8:39  | 0.1                              | 22.1                                 | 19.6                           | 29.7                           | 0.0                           | 50.7                                                          |                                                |                                                    |       |              |
| GP-11                               | 1/29/2018 | 8:28  | 0.0                              |                                      | 0.0                            | 20.3                           | 1.7                           | 78.0                                                          |                                                |                                                    |       |              |
| GP-12                               |           |       |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       | Not Measured |
| GP-13                               | 1/29/2018 | 8:08  | 0.1                              | 2.2                                  | 2.0                            | 24.5                           | 1.9                           | 71.6                                                          |                                                |                                                    |       |              |
| GP-14                               | 1/29/2018 | 10:07 | 0.5                              |                                      | 0.0                            | 0.2                            | 20.9                          | 78.9                                                          |                                                |                                                    |       |              |
| GP-15                               | 1/29/2018 | 9:58  | 1.0                              |                                      | 0.0                            | 0.7                            | 20.8                          | 78.5                                                          | 10.0                                           | 0.0                                                | 0.0   |              |

**General Data:**

|                                                        | Beginning | Ending   | Average  | Starting Date:    | 1/29/2018 |
|--------------------------------------------------------|-----------|----------|----------|-------------------|-----------|
| Weather:                                               | Cloudy    | Lt. Rain | Lt. Rain | Starting Time:    | 8:08      |
| Temperature, T (deg C):                                | 42        | 59       | 50.5     | Finishing Date:   | 1/29/2018 |
| Wind Speed (kmh):                                      | 4         | 17       | 10.5     | Finishing Time:   | 10:07     |
| Wind Direction:                                        | 180       | 180      | 180      | Monitored by:     | A. Deep   |
| Barometric Pressure, P (in Hg):                        | 30.01     | 30.01    | 30.01    | Instruments:      | GM07210   |
| 24hr Baro.Trend (rising / falling / steady / unsteady) | Falling   |          |          | Calibration Date: | 1/29/2018 |

**Headings:****Notes:**

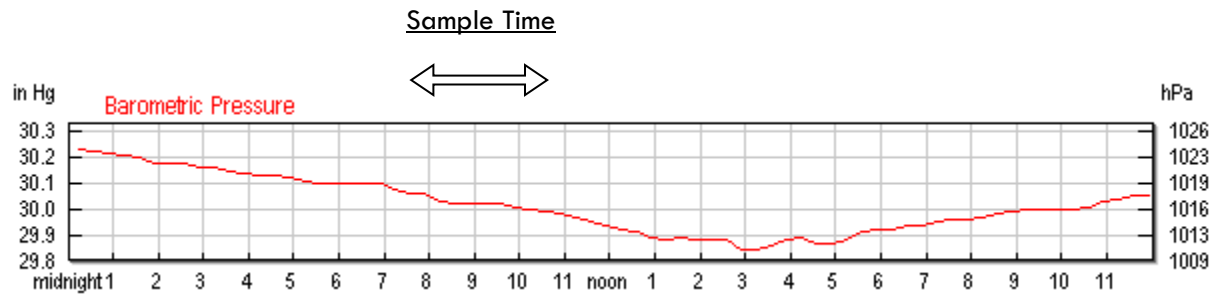
|                     |                   |    |                                                                                                                                             |
|---------------------|-------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------|
| P <sub>(well)</sub> | Relative Pressure | 1. | Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded as a comment if observed during sampling.          |
| CH <sub>4</sub>     | Methane           | 2. | Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer. |
| CO <sub>2</sub>     | Carbon Dioxide    |    |                                                                                                                                             |
| O <sub>2</sub>      | Oxygen            | 3. | Exposed Perforation = perforated pipe section not submerged by liquid.                                                                      |
| H <sub>2</sub> O    | Water Vapor       | 4. | GP-10P added in January 2018. Monitoring performed at waterlevel piezometer installed in the same boring as GP-10.                          |
| N <sub>2</sub>      | Nitrogen          |    |                                                                                                                                             |
| TOC                 | Top of Casing     |    |                                                                                                                                             |

## Barometric Pressure Trend – January 2018 LRI Landfill, Pierce County, Washington

Barometric Pressure Trend for January 2018



Barometric Pressure Trend for January 29, 2018



Source :

[https://www.wunderground.com/history/airport/KPLU/2018/1/29/DailyHistory.html?req\\_city=Graham&req\\_state=WA&req\\_statename=&reqdb.zip=98338&reqdb.magic=1&reqdb.wmo=99999](https://www.wunderground.com/history/airport/KPLU/2018/1/29/DailyHistory.html?req_city=Graham&req_state=WA&req_statename=&reqdb.zip=98338&reqdb.magic=1&reqdb.wmo=99999)

**Exhibit 3 - Results of Landfill Gas Probe Monitoring****Landfill Gas Control System**

LRI Landfill

SCS Engineers

04217001.04

February-18

| Location<br>Refer<br><i>Design.</i> | Date      | Time | P <sub>(well)</sub><br>(in W.C.) | Gas Composition - <i>Note 1</i>      |                                |                                |                               |                                                               | Depth to<br>Water<br><i>Note 2</i><br>(ft-TOC) | Exposed Portion of<br>Perforations - <i>Note 3</i> |       | Comments |
|-------------------------------------|-----------|------|----------------------------------|--------------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------------------------------------|------------------------------------------------|----------------------------------------------------|-------|----------|
|                                     |           |      |                                  | CH <sub>4</sub> Spike<br>(% by vol.) | CH <sub>4</sub><br>(% by vol.) | CO <sub>2</sub><br>(% by vol.) | O <sub>2</sub><br>(% by vol.) | Balance<br>(N <sub>2</sub> & H <sub>2</sub> O)<br>(% by vol.) |                                                | (ft)                                               | (%)   |          |
|                                     |           |      |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |          |
| Normal Operating Range:             |           |      |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |          |
| (min)                               |           |      | -                                |                                      | 0.3                            | 0.3                            | -                             |                                                               |                                                |                                                    | 20.0  |          |
| (max)                               |           |      | 5.00                             |                                      | 5.0                            | 5.0                            | 20.3                          |                                                               |                                                |                                                    | 90.0  |          |
| Perimter Gas Probes                 |           |      |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |          |
| GP-1                                | 2/27/2018 | 7:40 | 0.0                              | 1.5                                  | 1.0                            | 1.6                            | 17.4                          | 80.0                                                          | 16.6                                           | 9.6                                                | 100.0 |          |
| GP-2                                | 2/27/2018 | 7:46 | 0.1                              | 18.2                                 | 16.2                           | 18.1                           | 0.1                           | 65.6                                                          | 15.6                                           | 8.6                                                | 100.0 |          |
| GP-3                                | 2/27/2018 | 7:51 | 0.3                              |                                      | 0.0                            | 8.8                            | 9.4                           | 81.8                                                          | 11.3                                           | 7.3                                                | 100.0 |          |
| GP-4                                | 2/27/2018 | 7:58 | 0.0                              |                                      | 0.0                            | 1.2                            | 19.3                          | 79.5                                                          | 9.1                                            | 5.1                                                | 100.0 |          |
| GP-9                                | 2/27/2018 | 8:02 | 0.0                              |                                      | 0.0                            | 8.5                            | 4.7                           | 86.8                                                          | 10.9                                           | 0.0                                                | 0.0   |          |
| GP-10                               | 2/27/2018 | 7:33 | 0.1                              | 1.2                                  | 0.1                            | 7.8                            | 14.8                          | 77.3                                                          |                                                |                                                    |       |          |
| GP-10P                              | 2/27/2018 | 7:29 | 0.0                              | 23.2                                 | 21.9                           | 27.1                           | 0.0                           | 51.0                                                          |                                                |                                                    |       |          |
| GP-11                               | 2/27/2018 | 7:22 | 0.0                              | 0.3                                  | 0.0                            | 7.0                            | 15.0                          | 78.0                                                          |                                                |                                                    |       |          |
| GP-12                               | 2/27/2018 | 7:16 | 0.0                              | 35.1                                 | 34.0                           | 58.7                           | 0.2                           | 7.1                                                           |                                                |                                                    |       |          |
| GP-13                               | 2/27/2018 | 7:11 | 0.2                              | 2.6                                  | 2.2                            | 25.4                           | 0.4                           | 72.0                                                          |                                                |                                                    |       |          |
| GP-14                               | 2/27/2018 | 8:19 | 0.1                              |                                      | 0.0                            | 0.1                            | 21.2                          | 78.7                                                          | 10.4                                           | 0.0                                                | 0.0   |          |
| GP-15                               | 2/27/2018 | 8:12 | 0.0                              |                                      | 0.0                            | 0.2                            | 21.3                          | 78.5                                                          | 8.5                                            | 0.0                                                | 0.0   |          |

**General Data:**

|                                                        |           |        |         |                   |              |
|--------------------------------------------------------|-----------|--------|---------|-------------------|--------------|
|                                                        | Beginning | Ending | Average | Starting Date:    | 2/27/2018    |
| Weather:                                               | Cloudy    | Cloudy | Cloudy  | Starting Time:    | 7:11         |
| Temperature, T (deg C):                                | 36        | 47     | 41.5    | Finishing Date:   | 2/27/2018    |
| Wind Speed (kmh):                                      | 3         | 11     | 7       | Finishing Time:   | 8:19         |
| Wind Direction:                                        | 180       | 270    | 225     | Monitored by:     | S. Adlington |
| Barometric Pressure, P (in Hg):                        | 30.08     | 30.08  | 30.08   | Instruments:      | GM10922      |
| 24hr Baro.Trend (rising / falling / steady / unsteady) | Falling   |        |         | Calibration Date: | 2/27/2018    |

**Headings:**

|                     |                   |
|---------------------|-------------------|
| P <sub>(well)</sub> | Relative Pressure |
| CH <sub>4</sub>     | Methane           |
| CO <sub>2</sub>     | Carbon Dioxide    |
| O <sub>2</sub>      | Oxygen            |
| H <sub>2</sub> O    | Water Vapor       |
| N <sub>2</sub>      | Nitrogen          |
| TOC                 | Top of Casing     |

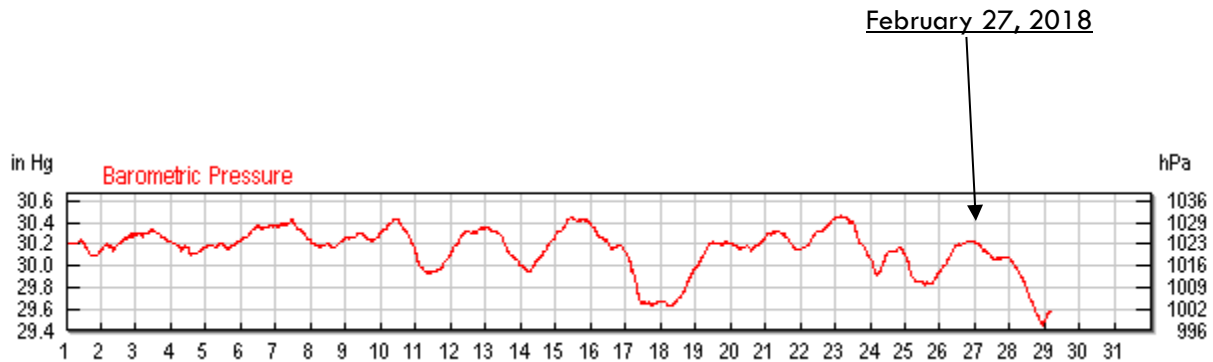
**Notes:**

1. Measurement for spike concentrations of CH<sub>4</sub> and CO<sub>2</sub> 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 waterlevel piezometer installed in the same boring as GP-10.

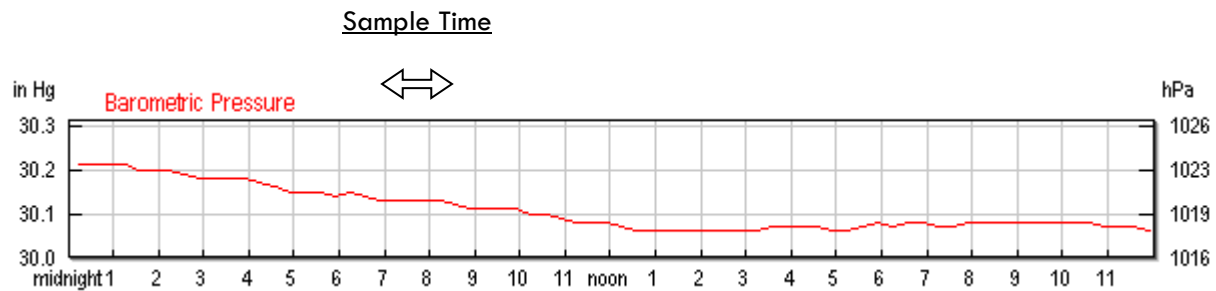
## Barometric Pressure Trend – February 2018

### LRI Landfill, Pierce County, Washington

Barometric Pressure Trend for February 2018



Barometric Pressure Trend for February 27, 2018



Source :

<https://www.wunderground.com/history/airport/KPLU/2018/2/27/MonthlyHistory.html?&reqdb.zip=&reqdb.magic=&reqdb.wmo=>

**SCS Engineers**

## 04218001.04

March-18

| Perimeter Gas Probes |           |      |      |      |      |      |      |      |      |     |       |
|----------------------|-----------|------|------|------|------|------|------|------|------|-----|-------|
| GP-1                 | 3/20/2018 | 8:22 | -0.1 | 1.5  | 1.6  | 2.3  | 14.8 | 81.3 | 16.8 | 9.8 | 100.0 |
| GP-2                 | 3/20/2018 | 8:34 | -0.5 | 18.2 | 16.4 | 18.0 | 0.0  | 65.6 | 15.8 | 8.8 | 100.0 |
| GP-3                 | 3/20/2018 | 8:43 | 1.1  |      | 0.0  | 9.2  | 8.5  | 82.3 | 11.3 | 7.3 | 100.0 |
| GP-4                 | 3/20/2018 | 9:02 | 0.0  |      | 0.0  | 1.9  | 18.5 | 79.6 | 9.3  | 5.3 | 100.0 |
| GP-9                 | 3/20/2018 | 9:10 | 0.7  |      | 0.0  | 8.1  | 4.4  | 87.5 | 11.8 | 0.0 | 0.0   |
| GP-10                | 3/20/2018 | 8:05 | 0.0  | 1.2  | 0.9  | 17.7 | 0.0  | 81.4 |      |     |       |
| GP-10P               | 3/20/2018 | 8:02 | 0.1  | 23.2 | 16.1 | 25.7 | 0.0  | 58.2 |      |     |       |
| GP-11                | 3/20/2018 | 7:48 | 0.0  | 0.3  | 0.0  | 8.2  | 11.2 | 80.6 |      |     |       |
| GP-12                | 3/20/2018 | 9:42 | 0.0  | 35.1 | 35.9 | 59.7 | 0.0  | 4.4  |      |     |       |
| GP-13                | 3/20/2018 | 7:35 | 0.0  | 2.6  | 2.3  | 24.7 | 0.0  | 73.0 |      |     |       |
| GP-14                | 3/20/2018 | 9:30 | 0.1  |      | 0.0  | 0.1  | 20.8 | 79.1 |      |     |       |
| GP-15                | 3/20/2018 | 9:22 | 0.0  |      | 0.0  | 0.3  | 21.0 | 78.7 |      |     |       |

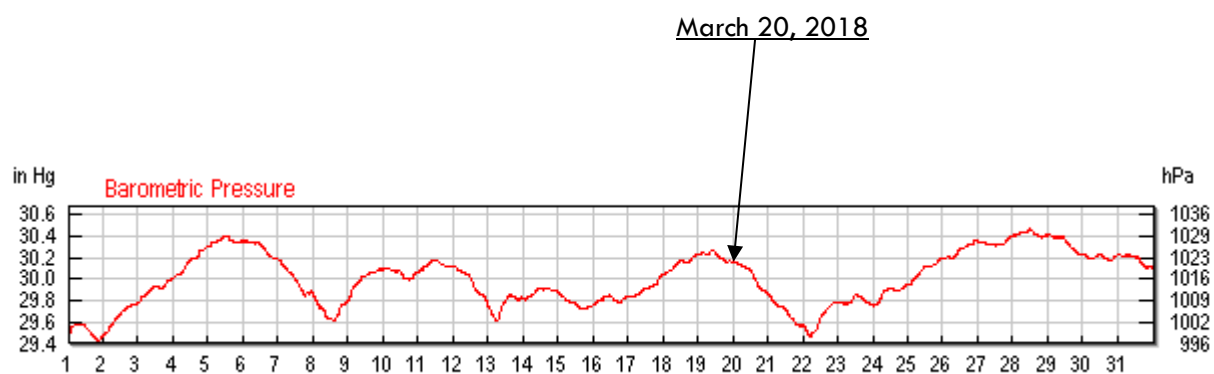
|                                                        |           |        |         |                   |           |
|--------------------------------------------------------|-----------|--------|---------|-------------------|-----------|
|                                                        | Beginning | Ending | Average | Starting Date:    | 3/20/2018 |
| Weather:                                               | Sunny     | Sunny  | Sunny   | Starting Time:    | 7:35      |
| Temperature, T (deg C):                                | 28        | 55     | 41.5    | Finishing Date:   | 3/20/2018 |
| Wind Speed (kmh):                                      | 0         | 7      | 3.5     | Finishing Time:   | 9:42      |
| Wind Direction:                                        | 270       | 360    | 315     | Monitored by:     | A. Deep   |
| Barometric Pressure, P (in Hg):                        | 30.11     | 30.1   | 30.11   | Instruments:      | GM10922   |
| 24hr Baro.Trend (rising / falling / steady / unsteady) | Falling   |        |         | Calibration Date: | 3/20/2018 |

| Headings:           |                   | Notes: |                                                                                                                                             |
|---------------------|-------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|
| P <sub>(well)</sub> | Relative Pressure | 1.     | Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded as a comment if observed during sampling.          |
| CH <sub>4</sub>     | Methane           | 2.     | Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer. |
| CO <sub>2</sub>     | Carbon Dioxide    |        |                                                                                                                                             |
| O <sub>2</sub>      | Oxygen            | 3.     | Exposed Perforation = perforated pipe section not submerged by liquid.                                                                      |
| H <sub>2</sub> O    | Water Vapor       | 4.     | GP-10P added in January 2018. Monitoring performed at waterlevel piezometer installed in the same boring as GP-10.                          |
| N <sub>2</sub>      | Nitrogen          |        |                                                                                                                                             |
| TOC                 | Top of Casing     |        |                                                                                                                                             |

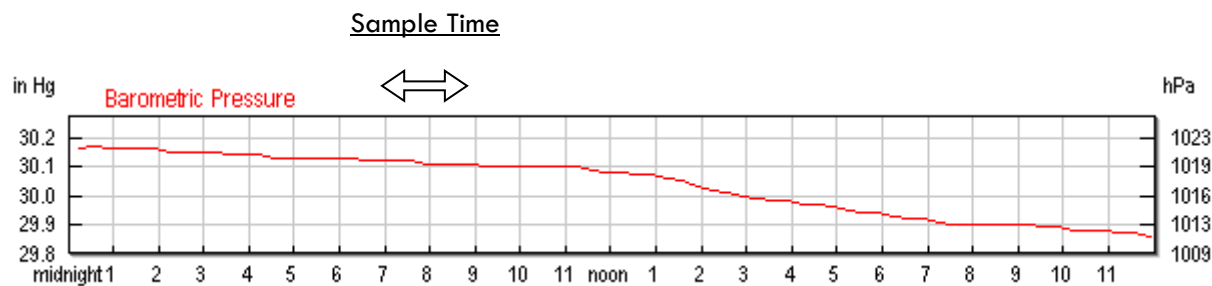
## Barometric Pressure Trend – March 2018

### LRI Landfill, Pierce County, Washington

Barometric Pressure Trend for March 2018



Barometric Pressure Trend for March 20, 2018



Source :

<https://www.wunderground.com/history/airport/KPLU/2018/3/20/DailyHistory.html?&reqdb.zip=&reqdb.magic=&reqdb.wmo=>



# Exhibit 3 - Results of Landfill Gas Probe Monitoring

## Landfill Gas Control System

LRI Landfill

SCS Engineers

04218001.04

April-18

| Location<br>Refer<br><i>Design.</i> | Date      | Time  | P <sub>(well)</sub><br>(in W.C.) | Gas Composition - <i>Note 1</i>      |                                |                                |                               |                                                               | Depth to<br>Water<br><i>Note 2</i><br>(ft-TOC) | Exposed Portion of<br>Perforations - <i>Note 3</i> |       | Comments |
|-------------------------------------|-----------|-------|----------------------------------|--------------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------------------------------------|------------------------------------------------|----------------------------------------------------|-------|----------|
|                                     |           |       |                                  | CH <sub>4</sub> Spike<br>(% by vol.) | CH <sub>4</sub><br>(% by vol.) | CO <sub>2</sub><br>(% by vol.) | O <sub>2</sub><br>(% by vol.) | Balance<br>(N <sub>2</sub> & H <sub>2</sub> O)<br>(% by vol.) |                                                | (ft)                                               | (%)   |          |
|                                     |           |       |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |          |
| Normal Operating Range:             |           |       |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |          |
| (min)                               |           |       | -                                |                                      | 0.3                            | 0.3                            | -                             |                                                               |                                                |                                                    | 20.0  |          |
| (max)                               |           |       | 5.00                             |                                      | 5.0                            | 5.0                            | 20.3                          |                                                               |                                                |                                                    | 90.0  |          |
| Perimter Gas Probes                 |           |       |                                  |                                      |                                |                                |                               |                                                               |                                                |                                                    |       |          |
| GP-1                                | 4/12/2018 | 8:09  | 0.0                              | 2.6                                  | 0.6                            | 0.7                            | 19.1                          | 79.6                                                          | 16.6                                           | 9.6                                                | 100.0 |          |
| GP-2                                | 4/12/2018 | 8:26  | 1.3                              | 15.8                                 | 15.3                           | 17.7                           | 0.0                           | 67.0                                                          | 15.8                                           | 8.8                                                | 100.0 |          |
| GP-3                                | 4/12/2018 | 8:37  | 0.0                              | 0.2                                  | 0.0                            | 9.3                            | 8.5                           | 82.2                                                          | 10.2                                           | 6.2                                                | 100.0 |          |
| GP-4                                | 4/12/2018 | 8:45  | 0.0                              |                                      | 0.0                            | 0.7                            | 20.0                          | 79.3                                                          | 8.7                                            | 4.7                                                | 94.2  |          |
| GP-9                                | 4/12/2018 | 8:53  | 0.0                              |                                      | 0.0                            | 6.6                            | 9.4                           | 84.0                                                          |                                                |                                                    |       |          |
| GP-10                               | 4/24/2018 | 13:04 | 0.0                              |                                      | 7.8                            | 22.5                           | 0.0                           | 69.7                                                          |                                                |                                                    |       |          |
| GP-10P                              | 4/24/2018 | 11:39 | 0.2                              |                                      | 20.6                           | 26.0                           | 0.0                           | 53.4                                                          |                                                |                                                    |       |          |
| GP-11                               | 4/12/2018 | 7:54  | 0.1                              |                                      | 0.0                            | 5.8                            | 16.7                          | 77.5                                                          | 11.4                                           | 7.4                                                | 100.0 |          |
| GP-12                               | 4/12/2018 | 7:46  | 0.0                              | 41.7                                 | 35.8                           | 58.2                           | 0.0                           | 6.0                                                           |                                                |                                                    |       |          |
| GP-13                               | 4/12/2018 | 7:38  | 0.0                              | 2.8                                  | 2.1                            | 23.0                           | 1.2                           | 73.7                                                          |                                                |                                                    |       |          |
| GP-14                               | 4/12/2018 | 9:31  | -0.3                             |                                      | 0.0                            | 0.1                            | 21.2                          | 78.7                                                          | 10.4                                           | 0.0                                                | 0.0   |          |
| GP-15                               | 4/12/2018 | 9:23  | 0.0                              |                                      | 0.0                            | 0.1                            | 21.1                          | 78.8                                                          | 8.5                                            | 0.0                                                | 0.0   |          |

### General Data:

|                                                        | Beginning | Ending   | Average  | Starting Date:    | 4/12/2018 |
|--------------------------------------------------------|-----------|----------|----------|-------------------|-----------|
| Weather:                                               | Overcast  | Lt. Rain | Lt. Rain | Starting Time:    | 7:38      |
| Temperature, T (deg C):                                | 47.7      | 37.4     | 42.55    | Finishing Date:   | 4/24/2018 |
| Wind Speed (kmh):                                      | 2.5       | 4.9      | 3.7      | Finishing Time:   | 13:04     |
| Wind Direction:                                        | 0         | 90       | 45       | Monitored by:     | SEA & AED |
| Barometric Pressure, P (in Hg):                        | 29.58     | 30.05    | 29.82    | Instruments:      | GM10922   |
| 24hr Baro.Trend (rising / falling / steady / unsteady) | Rising    |          |          | Calibration Date: | 4/12/2018 |

### Headings:

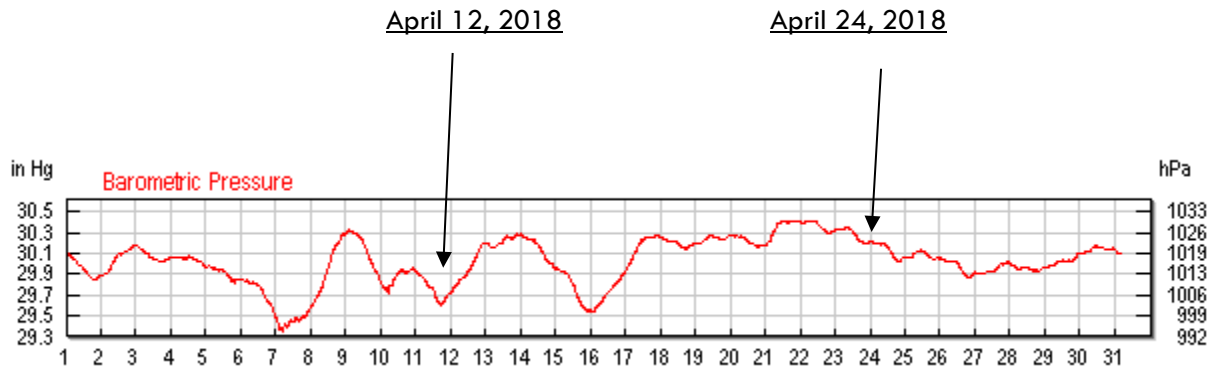
|                     |                   |
|---------------------|-------------------|
| P <sub>(well)</sub> | Relative Pressure |
| CH <sub>4</sub>     | Methane           |
| CO <sub>2</sub>     | Carbon Dioxide    |
| O <sub>2</sub>      | Oxygen            |
| H <sub>2</sub> O    | Water Vapor       |
| N <sub>2</sub>      | Nitrogen          |
| TOC                 | Top of Casing     |

### Notes:

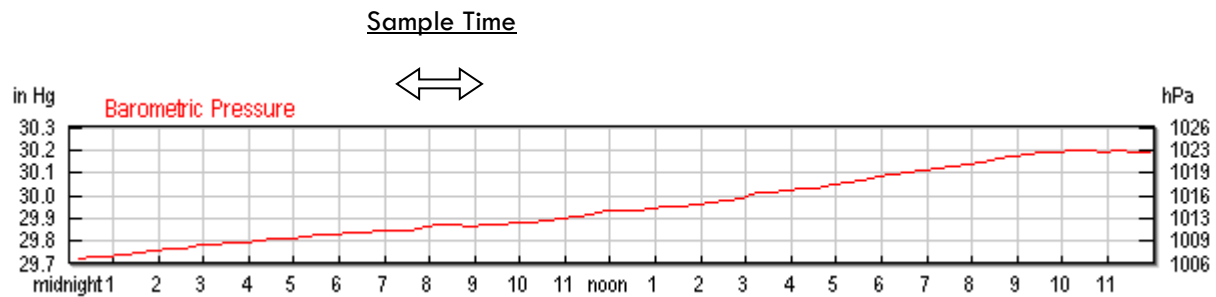
- Measurement for spike concentrations of CH<sub>4</sub> and CO<sub>2</sub> are recorded as a comment if observed during sampling.
- Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
- Exposed Perforation = perforated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

## Barometric Pressure Trend – April 2018 LRI Landfill, Pierce County, Washington

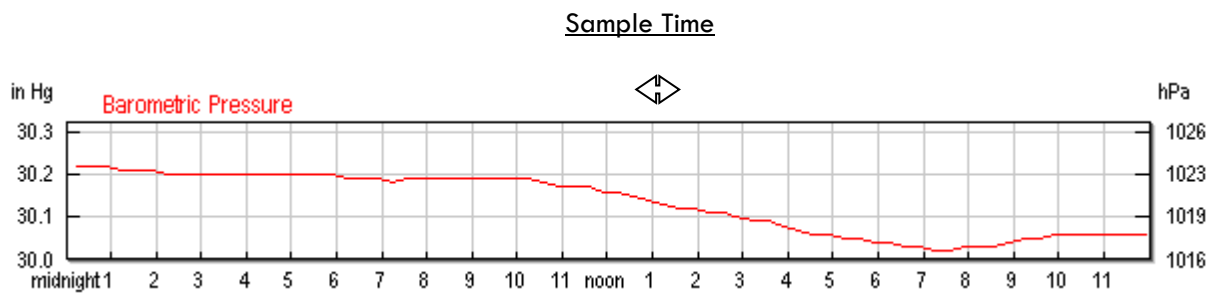
Barometric Pressure Trend for April 2018



Barometric Pressure Trend for April 12, 2018



Barometric Pressure Trend for April 24, 2018 (GP-10 Monitoring)



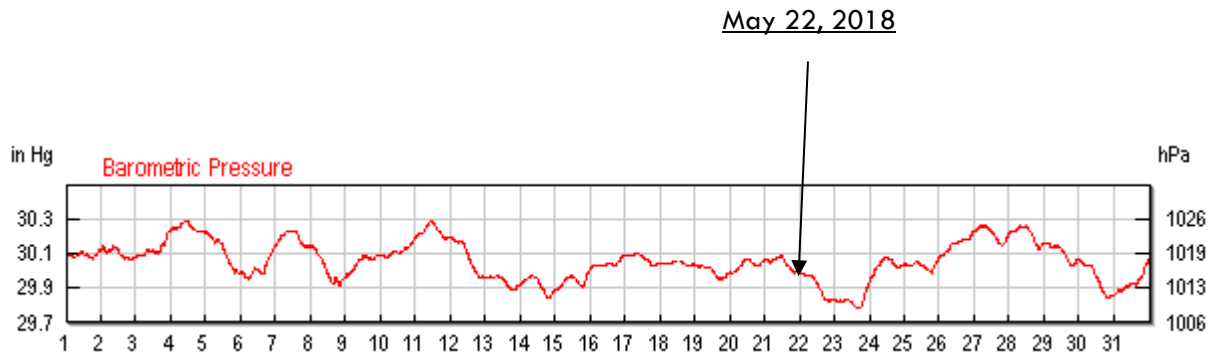
Source :

[https://www.wunderground.com/history/airport/KPLU/2018/4/12/DailyHistory.html?req\\_city=&req\\_state=&req\\_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=](https://www.wunderground.com/history/airport/KPLU/2018/4/12/DailyHistory.html?req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=)

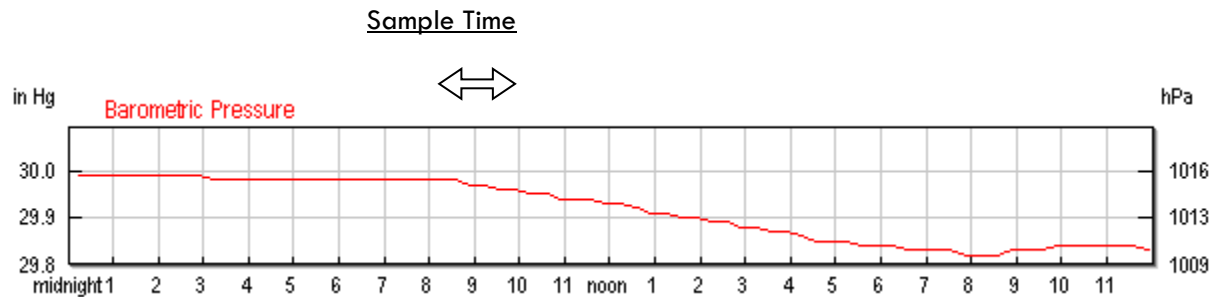


## Barometric Pressure Trend – May 2018 LRI Landfill, Pierce County, Washington

Barometric Pressure Trend for May 2018



Barometric Pressure Trend for May 22, 2018



Source :

[https://www.wunderground.com/history/airport/KPLU/2018/5/22/DailyHistory.html?req\\_city=&req\\_state=&req\\_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=](https://www.wunderground.com/history/airport/KPLU/2018/5/22/DailyHistory.html?req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=)

**SCS Engineers**

04218001.04

June-18

|                         |  |  |      |  |     |     |      |  |  |  |      |
|-------------------------|--|--|------|--|-----|-----|------|--|--|--|------|
| Normal Operating Range: |  |  |      |  |     |     |      |  |  |  |      |
| (min)                   |  |  | -    |  | 0.3 | 0.3 | -    |  |  |  | 20.0 |
| (max)                   |  |  | 5.00 |  | 5.0 | 5.0 | 20.3 |  |  |  | 90.0 |

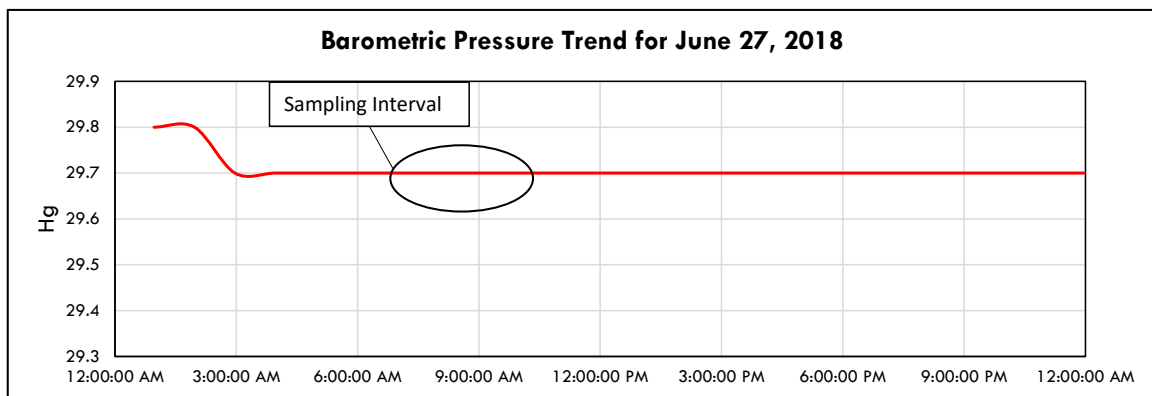
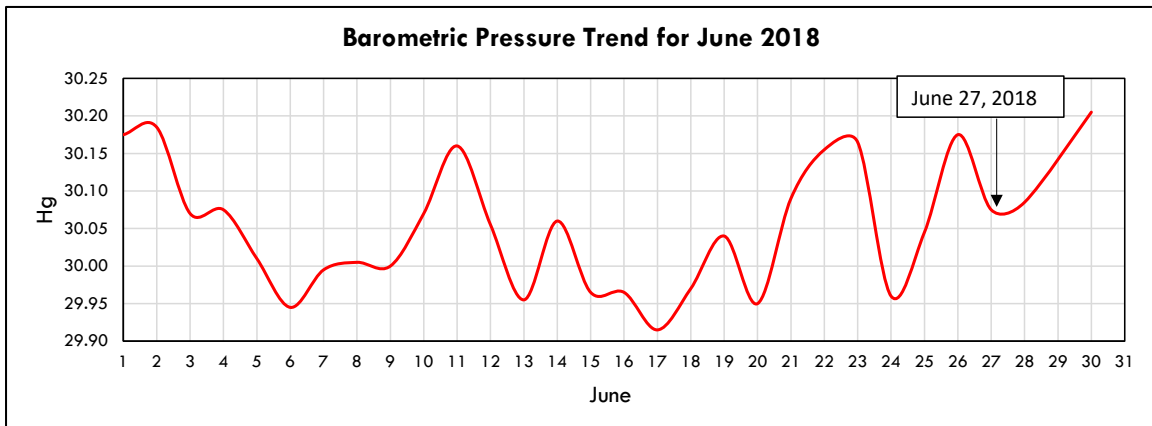
|        |           |      |     |      |      |      |      |      |      |      |       |  |
|--------|-----------|------|-----|------|------|------|------|------|------|------|-------|--|
| GP-1   | 6/27/2018 | 8:44 | 0.7 | 4.6  | 1.4  | 1.4  | 17.4 | 79.8 | 17.7 | 10.7 | 100.0 |  |
| GP-2   | 6/27/2018 | 8:54 | 1.1 | 14.6 | 14.4 | 19.1 | 0.0  | 66.5 | 16.4 | 9.4  | 100.0 |  |
| GP-3   | 6/27/2018 | 9:03 | 0.4 | -    | 0.0  | 10.5 | 9.9  | 79.6 | 17.5 | 13.5 | 100.0 |  |
| GP-4   | 6/27/2018 | 9:11 | 0.3 | -    | 0.0  | 6.1  | 5.9  | 88.0 | 10.8 | 6.8  | 100.0 |  |
| GP-9   | 6/27/2018 | 9:18 | 0.7 | -    | 0.0  | 9.0  | 5.6  | 85.4 | 12.7 | 0.0  | 0.0   |  |
| GP-10  | 6/27/2018 | 8:33 | 0.1 | 1.8  | 1.8  | 21.4 | 0.2  | 76.6 |      |      |       |  |
| GP-10P | 6/27/2018 | 8:25 | 0.0 | 14.9 | 14.7 | 24.8 | 0.0  | 60.5 |      |      |       |  |
| GP-11  | 6/27/2018 | 7:54 | 0.0 | -    | 0.0  | 17.9 | 3.9  | 78.2 |      |      |       |  |
| GP-12  | 6/27/2018 | 8:05 | 0.2 | 33.3 | 33.3 | 63.6 | 0.0  | 3.1  |      |      |       |  |
| GP-13  | 6/27/2018 | 8:13 | 0.1 | 0.8  | 0.8  | 26.0 | 0.4  | 72.8 |      |      |       |  |
| GP-14  | 6/27/2018 | 9:42 | 0.1 | -    | 0.0  | 0.0  | 20.6 | 79.4 | 14.1 | 0.0  | 0.0   |  |
| GP-15  | 6/27/2018 | 9:31 | 0.2 | -    | 0.0  | 0.0  | 20.9 | 79.1 | 11.1 | 0.0  | 0.0   |  |

|                                                        |           |        |         |                   |           |
|--------------------------------------------------------|-----------|--------|---------|-------------------|-----------|
|                                                        | Beginning | Ending | Average | Starting Date:    | 6/27/2018 |
| Weather:                                               | Sunny     | Sunny  | Sunny   | Starting Time:    | 7:54      |
| Temperature, T (deg C):                                | 56        | 65     | 60.5    | Finishing Date:   | 6/27/2018 |
| Wind Speed (kmh):                                      | 0         | 8      | 4       | Finishing Time:   | 9:42      |
| Wind Direction:                                        | -         | -      | -       | Monitored by:     | AED & TAB |
| Barometric Pressure, P (in Hg):                        | 29.7      | 29.7   | 29.70   | Instruments:      | GM10922   |
| 24hr Baro.Trend (rising / falling / steady / unsteady) | Rising    |        |         | Calibration Date: | 6/27/2018 |

**Notes:**

|                     |                   |    |                                                                                                                                             |
|---------------------|-------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------|
| P <sub>(well)</sub> | Relative Pressure | 1. | Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded as a comment if observed during sampling.          |
| CH <sub>4</sub>     | Methane           | 2. | Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer. |
| CO <sub>2</sub>     | Carbon Dioxide    |    |                                                                                                                                             |
| O <sub>2</sub>      | Oxygen            | 3. | Exposed Perforation = perforated pipe section not submerged by liquid.                                                                      |
| H <sub>2</sub> O    | Water Vapor       | 4. | GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.                         |
| N <sub>2</sub>      | Nitrogen          |    |                                                                                                                                             |
| TOC                 | Top of Casing     |    |                                                                                                                                             |

**Barometric Pressure Trend - June 2018**  
**LRI Landfill, Pierce County, Washington**



Source: Pierce County - Thun Field Station  
Lat: 47.1 Long: 122.29 Elev: 538 ft-AMSL

Data Source: <https://www.wunderground.com/history/daily/us/wa/puyallup/KPLU/date/2018-6-27>

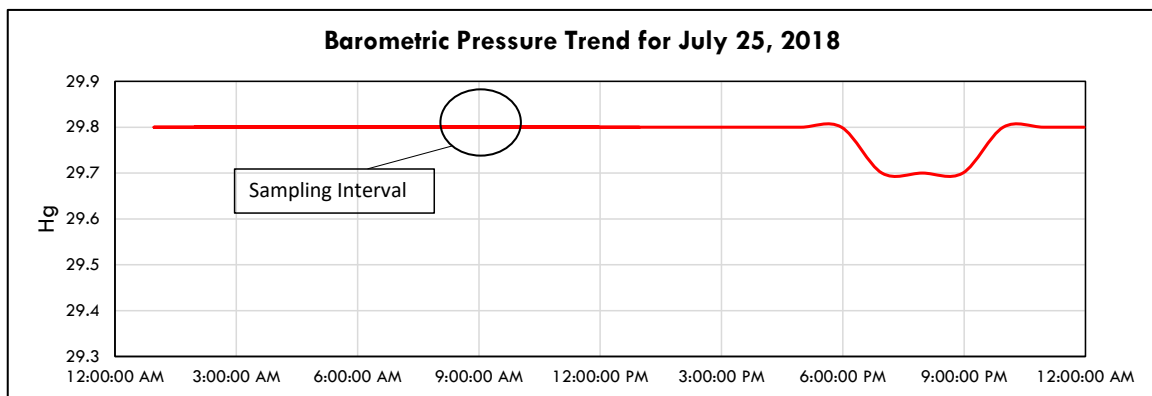
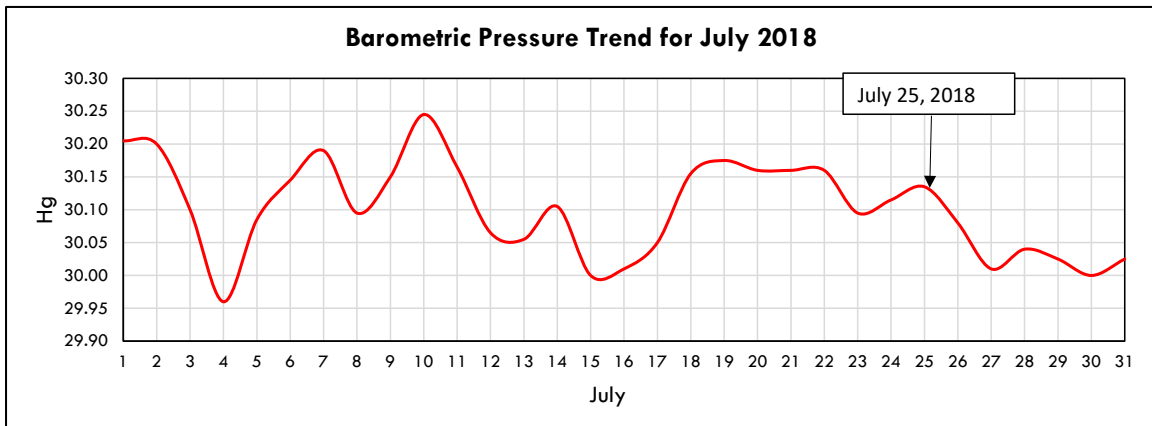
**SCS Engineers**

04218001.04

July-18

|                     |                   |    |                                                                                                                                             |
|---------------------|-------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------|
| P <sub>(well)</sub> | Relative Pressure | 1. | Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded as a comment if observed during sampling.          |
| CH <sub>4</sub>     | Methane           | 2. | Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer. |
| CO <sub>2</sub>     | Carbon Dioxide    |    |                                                                                                                                             |
| O <sub>2</sub>      | Oxygen            | 3. | Exposed Perforation = perforated pipe section not submerged by liquid.                                                                      |
| H <sub>2</sub> O    | Water Vapor       | 4. | GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.                         |
| N <sub>2</sub>      | Nitrogen          |    |                                                                                                                                             |
| TOC                 | Top of Casing     |    |                                                                                                                                             |

**Barometric Pressure Trend - July 2018**  
**LRI Landfill, Pierce County, Washington**



Source: Pierce County - Thun Field Station  
Lat: 47.1 Long: 122.29 Elev: 538 ft-AMSL

Data Source: <https://www.wunderground.com/history/daily/us/wa/puyallup/KPLU/date/2018-7-25>



**SCS Engineers**

## 04218001.04

August-18

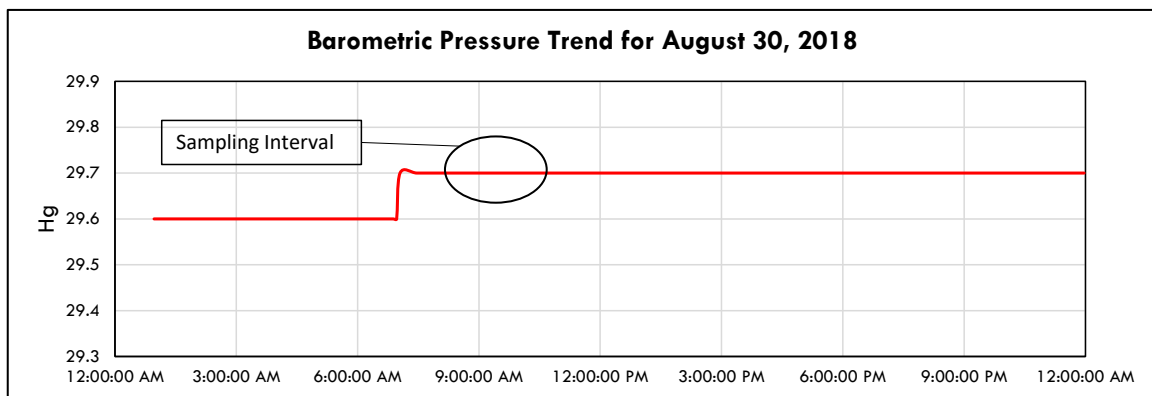
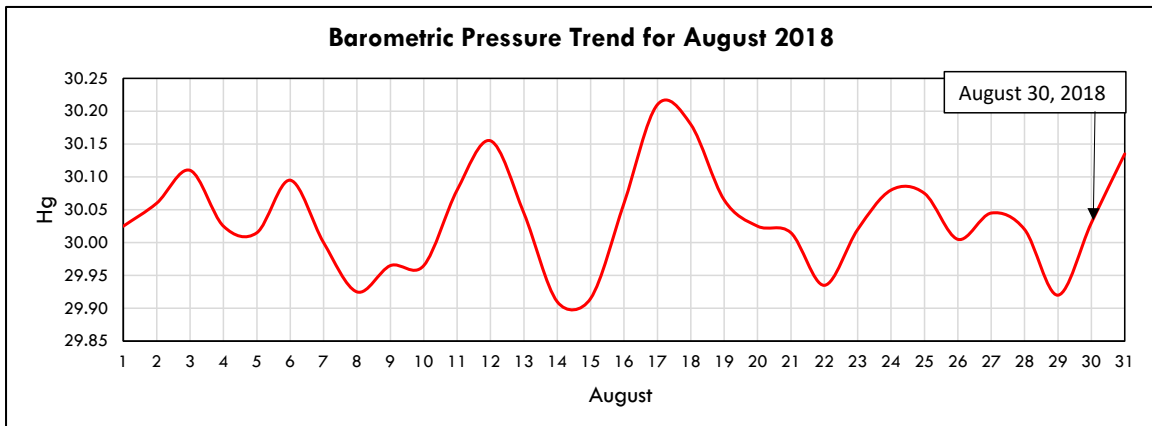
| Perimter Gas Probes |           |       |     |      |      |      |      |      |      |      |       |  |
|---------------------|-----------|-------|-----|------|------|------|------|------|------|------|-------|--|
| GP-1                | 8/30/2018 | 8:52  | 0.9 | 6.2  | 8.2  | 7.3  | 12.6 | 71.9 | 19.6 | 12.6 | 100.0 |  |
| GP-2                | 8/30/2018 | 9:02  | 0.6 | 15.8 | 15.7 | 21.7 | 0.0  | 62.6 | 17.9 | 10.9 | 100.0 |  |
| GP-3                | 8/30/2018 | 9:12  | 0.0 | -    | 0.0  | 12.0 | 11.0 | 77.0 | 13.0 | 9.0  | 100.0 |  |
| GP-4                | 8/30/2018 | 9:21  | 0.2 | -    | 0.0  | 8.6  | 13.8 | 77.6 | 13.8 | 9.8  | 100.0 |  |
| GP-9                | 8/30/2018 | 9:28  | 0.2 | -    | 0.0  | 10.2 | 8.6  | 81.2 | 15.2 | 0.2  | 4.0   |  |
| GP-10               | 8/30/2018 | 8:39  | 0.0 | 1.1  | 0.0  | 16.3 | 5.5  | 78.2 |      |      |       |  |
| GP-10P              | 8/30/2018 | 8:36  | 0.0 | 6.1  | 4.5  | 25.9 | 0.0  | 69.6 |      |      |       |  |
| GP-11               | 8/30/2018 | 9:41  | 0.0 | -    | 0.0  | 14.8 | 7.7  | 77.5 |      |      |       |  |
| GP-12               | 8/30/2018 | 9:48  | 0.1 | 29.5 | 25.1 | 74.8 | 0.0  | 0.1  |      |      |       |  |
| GP-13               | 8/30/2018 | 8:25  | 0.0 | 0.5  | 1.2  | 28.9 | 0.7  | 69.2 |      |      |       |  |
| GP-14               | 8/30/2018 | 9:57  | 0.0 | -    | 0.2  | 8.7  | 5.1  | 86.0 |      |      |       |  |
| GP-15               | 8/30/2018 | 10:07 | 0.0 | -    | 0.0  | 0.5  | 20.8 | 78.7 | 16.8 | 0.8  | 16.2  |  |

|                                                        |           |          |          |                   |           |
|--------------------------------------------------------|-----------|----------|----------|-------------------|-----------|
|                                                        | Beginning | Ending   | Average  | Starting Date:    | 8/30/2018 |
| Weather:                                               | Overcast  | Overcast | Overcast | Starting Time:    | 8:25      |
| Temperature, T (deg C):                                | 61        | 62       | 61.5     | Finishing Date:   | 8/30/2018 |
| Wind Speed (kmh):                                      | 5         | 0        | 2.5      | Finishing Time:   | 10:07     |
| Wind Direction:                                        | 270       | -        | -        | Monitored by:     | AED       |
| Barometric Pressure, P (in Hg):                        | 29.7      | 29.7     | 29.70    | Instruments:      | GEM 2000  |
| 24hr Baro.Trend (rising / falling / steady / unsteady) | -         |          |          | Calibration Date: | 8/30/2018 |

**Notes:**

|                     |                   |    |                                                                                                                                             |
|---------------------|-------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------|
| P <sub>(well)</sub> | Relative Pressure | 1. | Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded as a comment if observed during sampling.          |
| CH <sub>4</sub>     | Methane           | 2. | Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer. |
| CO <sub>2</sub>     | Carbon Dioxide    |    |                                                                                                                                             |
| O <sub>2</sub>      | Oxygen            | 3. | Exposed Perforation = perforated pipe section not submerged by liquid.                                                                      |
| H <sub>2</sub> O    | Water Vapor       | 4. | GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.                         |
| N <sub>2</sub>      | Nitrogen          |    |                                                                                                                                             |
| TOC                 | Top of Casing     |    |                                                                                                                                             |

**Barometric Pressure Trend - August 2018**  
**LRI Landfill, Pierce County, Washington**



Source: Pierce County - Thun Field Station  
Lat: 47.1 Long: 122.29 Elev: 538 ft-AMSL

Data Source: <https://www.wunderground.com/history/daily/us/wa/puyallup/KPLU/date/2018-8-30>

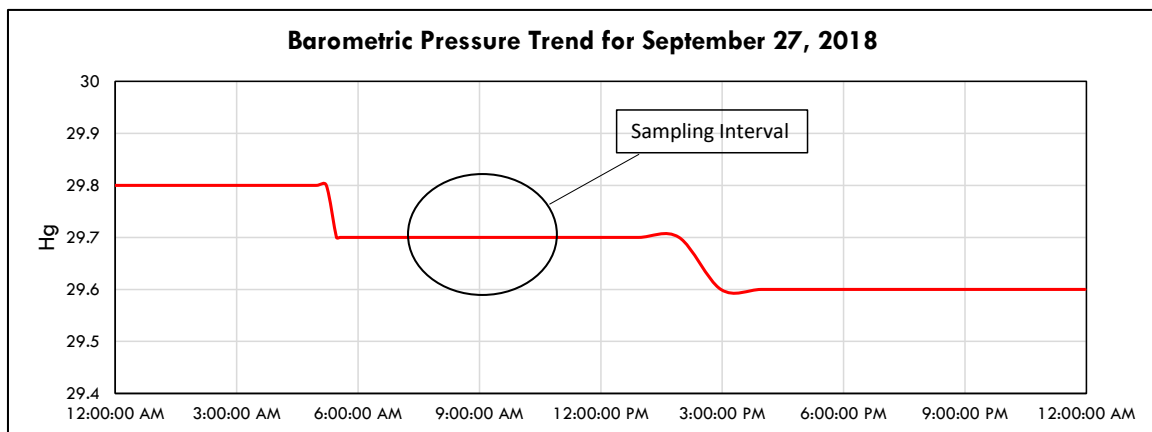
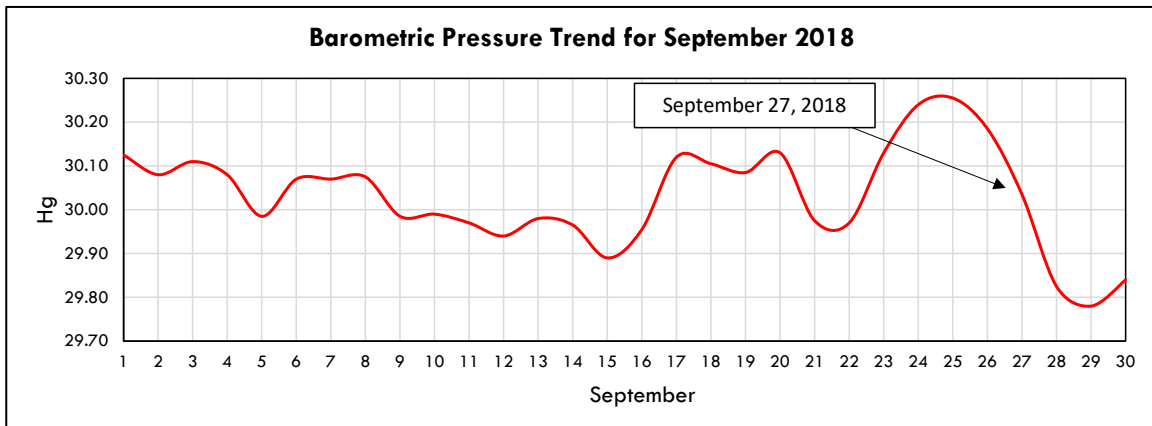
**SCS Engineers**

04218001.04

September-18

|                     |                   |    |                                                                                                                                             |
|---------------------|-------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------|
| P <sub>(well)</sub> | Relative Pressure | 1. | Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded as a comment if observed during sampling.          |
| CH <sub>4</sub>     | Methane           | 2. | Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer. |
| CO <sub>2</sub>     | Carbon Dioxide    |    |                                                                                                                                             |
| O <sub>2</sub>      | Oxygen            | 3. | Exposed Perforation = perforated pipe section not submerged by liquid.                                                                      |
| H <sub>2</sub> O    | Water Vapor       | 4. | GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.                         |
| N <sub>2</sub>      | Nitrogen          |    |                                                                                                                                             |
| TOC                 | Top of Casing     |    |                                                                                                                                             |

**Barometric Pressure Trend - September 2018**  
**LRI Landfill, Pierce County, Washington**



Source: Pierce County - Thun Field Station  
Lat: 47.1 Long: 122.29 Elev: 538 ft-AMSL

Data Sources: <https://www.wunderground.com/history/daily/us/wa/puyallup/KPLU/date/2018-9-27>

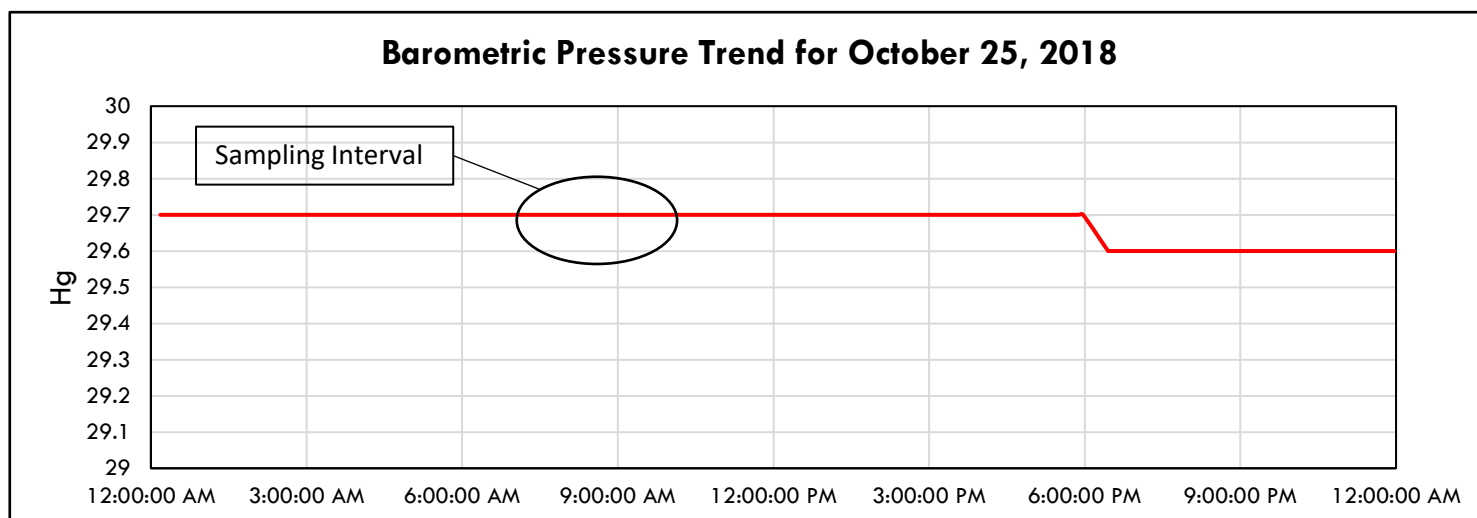
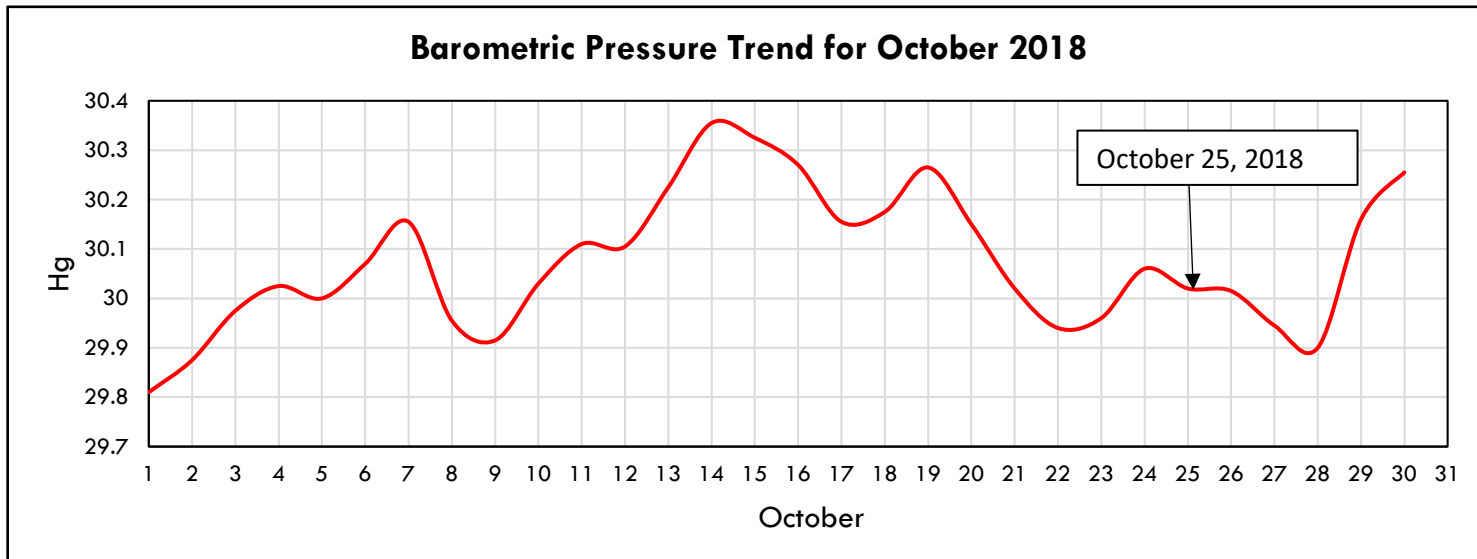
**SCS Engineers**

## 04218001.04

October-18

| Headings:           |                   | Notes: |                                                                                                                                             |
|---------------------|-------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|
| P <sub>(well)</sub> | Relative Pressure | 1.     | Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded as a comment if observed during sampling.          |
| CH <sub>4</sub>     | Methane           | 2.     | Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer. |
| CO <sub>2</sub>     | Carbon Dioxide    |        |                                                                                                                                             |
| O <sub>2</sub>      | Oxygen            | 3.     | Exposed Perforation = perforated pipe section not submerged by liquid.                                                                      |
| H <sub>2</sub> O    | Water Vapor       | 4.     | GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.                         |
| N <sub>2</sub>      | Nitrogen          |        |                                                                                                                                             |
| TOC                 | Top of Casing     |        |                                                                                                                                             |

**Barometric Pressure Trend - October 2018**  
**LRI 304th Landfill, Pierce County, Washington**



Source: Pierce County - Thun Field Station  
Lat: 47.1 Long: 122.29 Elev: 538 ft-AMSL

Data Source: <https://www.wunderground.com/history/daily/us/wa/puyallup/KPLU/date/2018-10-25>

## SCS Engineers

04218001.04

November-18

[illegible]

Normal Operating Range:

|       |  |  |      |  |     |     |      |  |  |  |      |  |
|-------|--|--|------|--|-----|-----|------|--|--|--|------|--|
| (min) |  |  | -    |  | 0.3 | 0.3 | -    |  |  |  | 20.0 |  |
| (max) |  |  | 5.00 |  | 5.0 | 5.0 | 20.3 |  |  |  | 90.0 |  |

## Perimeter Gas Probes

|        |            |      |      |      |      |      |      |      |      |      |       |  |
|--------|------------|------|------|------|------|------|------|------|------|------|-------|--|
| GP-1   | 11/28/2018 | 8:30 | -0.6 | 12.6 | 6.2  | 5.3  | 13.7 | 74.8 | 18.1 | 11.1 | 100.0 |  |
| GP-2   | 11/28/2018 | 8:48 | -0.8 | 16.9 | 15.0 | 17.4 | 2.8  | 64.8 | 18.0 | 11.0 | 100.0 |  |
| GP-3   | 11/28/2018 | 8:56 | 0.0  | --   | 0.0  | 8.1  | 12.1 | 79.8 | 12.2 | 8.2  | 100.0 |  |
| GP-4   | 11/28/2018 | 9:04 | 0.0  | --   | 0.0  | 6.4  | 10.3 | 83.3 | 13.3 | 9.3  | 100.0 |  |
| GP-9   | 11/28/2018 | 9:11 | 0.0  | --   | 0.0  | 1.3  | 18.4 | 80.3 | 11.8 | 0.0  | 0.0   |  |
| GP-10  | 11/28/2018 | 8:19 | 0.0  | 12.0 | 10.9 | 25.7 | 0.4  | 63.0 |      |      |       |  |
| GP-10P | 11/28/2018 | 8:12 | 0.0  | 20.9 | 18.9 | 30.1 | 0.6  | 50.4 |      |      |       |  |
| GP-11  | 11/28/2018 | 8:01 | 0.0  | 0.2  | 0.0  | 10.3 | 14.2 | 75.5 |      |      |       |  |
| GP-12  | 11/28/2018 | 7:54 | 0.2  | 27.0 | 23.5 | 71.1 | 0.0  | 5.4  |      |      |       |  |
| GP-13  | 11/28/2018 | 7:47 | 0.0  | 0.6  | 0.6  | 29.6 | 0.0  | 69.8 |      |      |       |  |
| GP-14  | 11/28/2018 | 9:34 | 0.2  | --   | 0.0  | 0.1  | 20.5 | 79.4 | 14.7 | 0.0  | 0.0   |  |
| GP-15  | 11/28/2018 | 9:25 | 0.0  | --   | 0.0  | 0.3  | 20.5 | 79.2 | 11.8 | 0.0  | 0.0   |  |

**General Data:**

|                                                        | Beginning | Ending   | Average  | Starting Date:    | 11/28/2018 |
|--------------------------------------------------------|-----------|----------|----------|-------------------|------------|
| Weather:                                               | Cloudy    | Lt. Rain | Lt. Rain | Starting Time:    | 7:47       |
| Temperature, T (deg C):                                | 44        | 50       | 47       | Finishing Date:   | 11/28/2018 |
| Wind Speed (kmh):                                      | 0         | 6        | 3        | Finishing Time:   | 9:34       |
| Wind Direction:                                        | 180       | 180      | 180      | Monitored by:     | TAB        |
| Barometric Pressure, P (in Hg):                        | 29.4      | 29.4     | 29.40    | Instruments:      | GEM 2000   |
| 24hr Baro.Trend (rising / falling / steady / unsteady) | -         |          |          | Calibration Date: | 11/28/2018 |

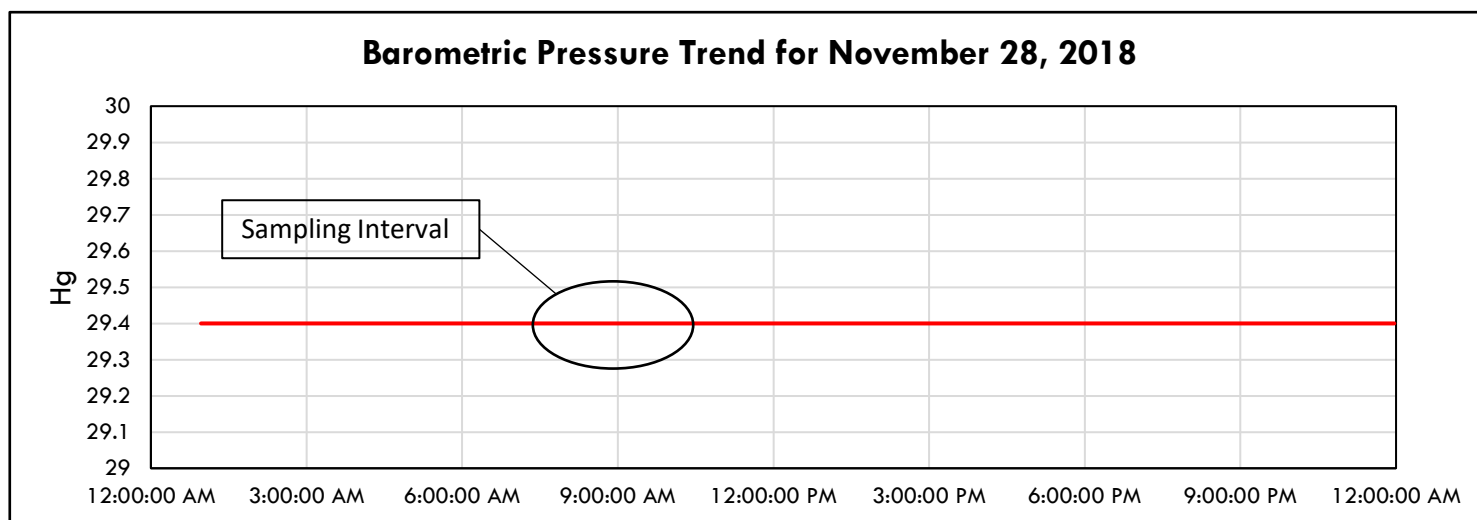
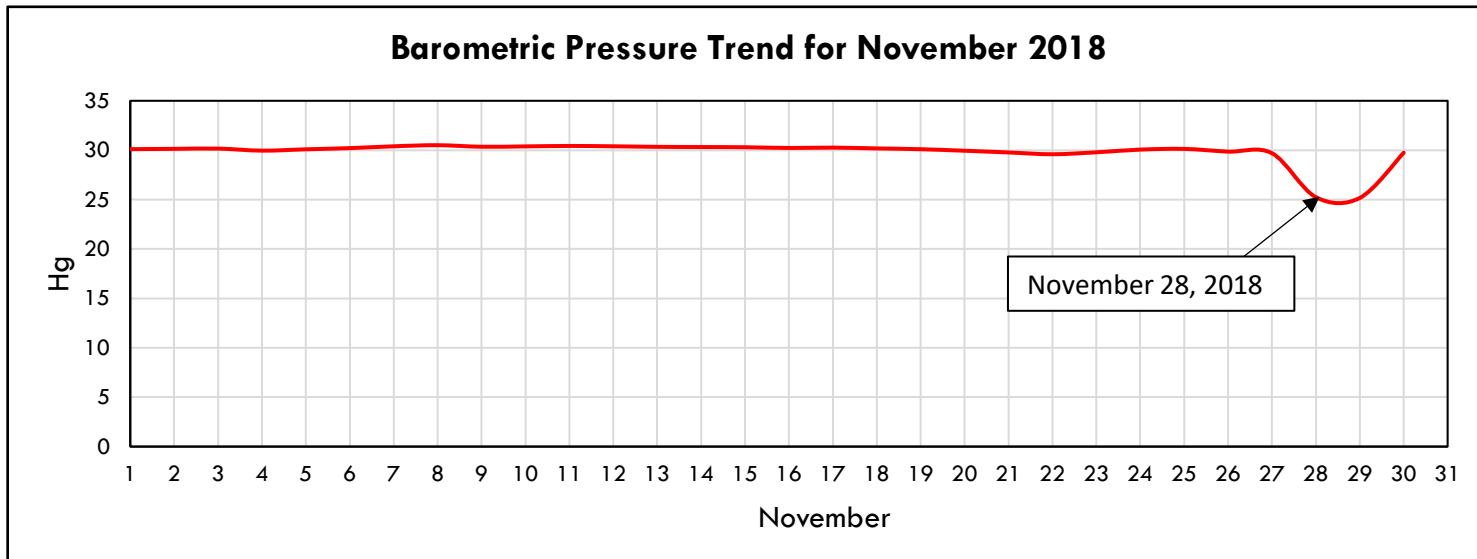
**Headings:**

|              |                   |
|--------------|-------------------|
| $P_{(well)}$ | 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<sub>4</sub> and CO<sub>2</sub> 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 - November 2018**  
**LRI 304th Landfill, Pierce County, Washington**



Source: Pierce County - Thun Field Station  
Lat: 47.1 Long: 122.29 Elev: 538 ft-AMSL

Data Source: <https://www.wunderground.com/history/daily/us/wa/puyallup/KPLU/date/2018-11-17>



**SCS Engineers**

04218001.04

December-18

[illegible]

|                         |  |
|-------------------------|--|
| Normal Operating Range: |  |
|-------------------------|--|

|       |  |  |      |  |     |     |      |  |  |  |      |  |
|-------|--|--|------|--|-----|-----|------|--|--|--|------|--|
| (min) |  |  | -    |  | 0.3 | 0.3 | -    |  |  |  | 20.0 |  |
| (max) |  |  | 5.00 |  | 5.0 | 5.0 | 20.3 |  |  |  | 90.0 |  |

## Perimeter Gas Probes

|        |            |      |      |      |     |      |      |      |      |      |       |  |
|--------|------------|------|------|------|-----|------|------|------|------|------|-------|--|
| GP-1   | 12/13/2018 | 8:21 | 0.0  | 0.5  | 0.4 | 0.6  | 19.9 | 79.1 | 17.1 | 10.1 | 100.0 |  |
| GP-2   | 12/13/2018 | 8:37 | 0.0  | 4.3  | 1.3 | 1.4  | 18.9 | 78.4 | 17.2 | 10.2 | 100.0 |  |
| GP-3   | 12/13/2018 | 8:44 | 0.0  | --   | 0.0 | 5.9  | 13.9 | 80.2 | 12.0 | 8.0  | 100.0 |  |
| GP-4   | 12/13/2018 | 8:51 | -0.1 | --   | 0.0 | 2.1  | 17.6 | 80.3 | 11.7 | 7.7  | 100.0 |  |
| GP-9   | 12/13/2018 | 8:58 | 0.0  | --   | 0.0 | 4.3  | 14.2 | 81.5 | 11.6 | 0.0  | 0.0   |  |
| GP-10  | 12/13/2018 | 8:11 | 0.0  | 3.1  | 2.7 | 7.0  | 14.9 | 75.4 |      |      |       |  |
| GP-10P | 12/13/2018 | 8:09 | 0.0  | --   | 0.0 | 0.0  | 20.6 | 79.4 |      |      |       |  |
| GP-11  | 12/13/2018 | 8:01 | 0.0  | --   | 0.0 | 0.1  | 20.5 | 79.4 |      |      |       |  |
| GP-12  | 12/13/2018 | 7:55 | 0.0  | 15.3 | 7.9 | 23.7 | 13.3 | 55.1 |      |      |       |  |
| GP-13  | 12/13/2018 | 7:48 | 0.0  | 0.4  | 0.3 | 7.8  | 14.8 | 77.1 |      |      |       |  |
| GP-14  | 12/13/2018 | 9:27 | 0.0  | --   | 0.0 | 0.0  | 20.5 | 79.5 | 12.5 | 0.0  | 0.0   |  |
| GP-15  | 12/13/2018 | 9:20 | 0.0  | --   | 0.0 | 0.0  | 20.4 | 79.6 | 10.0 | 0.0  | 0.0   |  |

**General Data:**

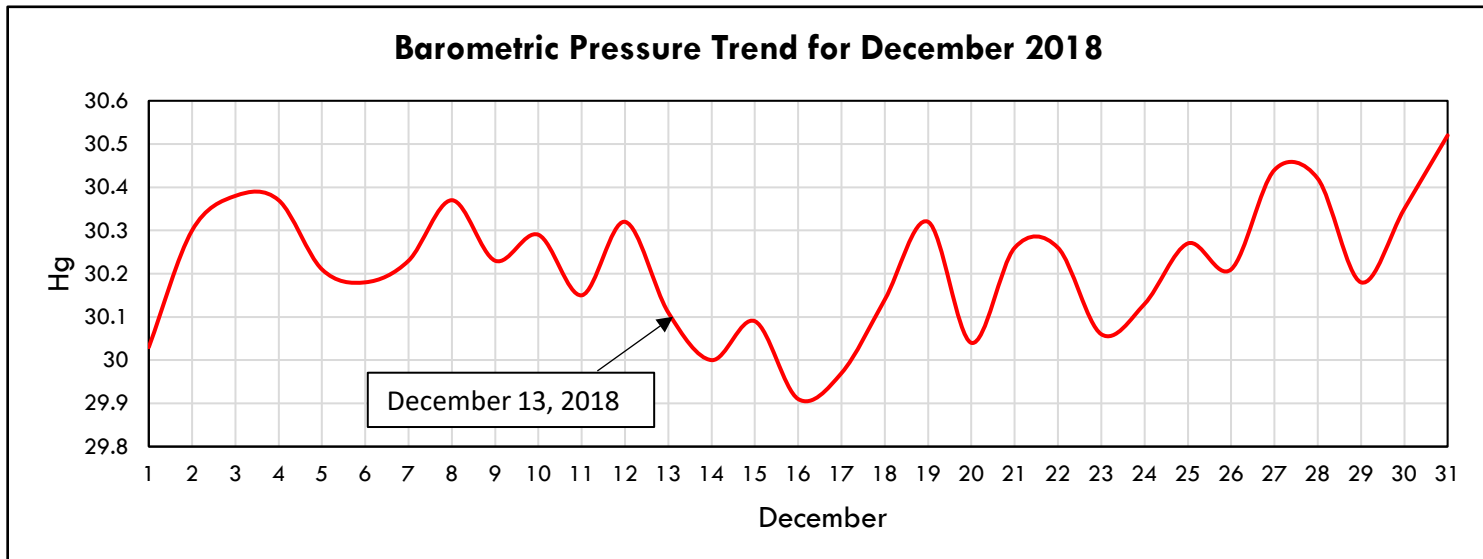
|                                                        |  |  | Beginning | Ending   | Average  |                   |            |
|--------------------------------------------------------|--|--|-----------|----------|----------|-------------------|------------|
| Weather:                                               |  |  | Cloudy    | Lt. Rain | Lt. Rain | Starting Date:    | 12/13/2018 |
| Temperature, T (deg C):                                |  |  | 50        | 51       | 50.5     | Starting Time:    | 7:48       |
| Wind Speed (kmh):                                      |  |  | 15        | 9        | 12       | Finishing Date:   | 12/13/2018 |
| Wind Direction:                                        |  |  | 180       | 180      | 180      | Finishing Time:   | 9:27       |
| Barometric Pressure, P (in Hg):                        |  |  | 29.7      | 29.7     | 29.70    | Monitored by:     | TAB        |
| 24hr Baro.Trend (rising / falling / steady / unsteady) |  |  | -         |          |          | Instruments:      | GEM 2000   |
|                                                        |  |  |           |          |          | Calibration Date: | 12/13/2018 |

**Headings:**

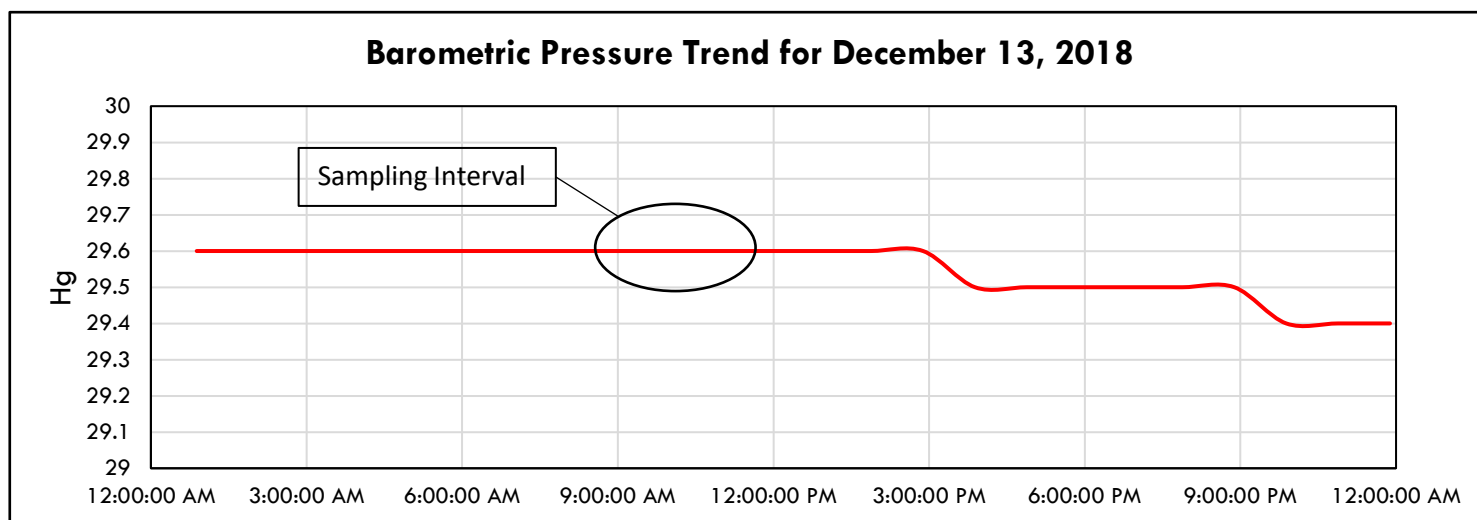
**Notes:**

|                     |                   |    |                                                                                                                                             |
|---------------------|-------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------|
| P <sub>(well)</sub> | Relative Pressure | 1. | Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded as a comment if observed during sampling.          |
| CH <sub>4</sub>     | Methane           | 2. | Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer. |
| CO <sub>2</sub>     | Carbon Dioxide    |    |                                                                                                                                             |
| O <sub>2</sub>      | Oxygen            | 3. | Exposed Perforation = perforated pipe section not submerged by liquid.                                                                      |
| H <sub>2</sub> O    | Water Vapor       | 4. | GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.                         |
| N <sub>2</sub>      | Nitrogen          |    |                                                                                                                                             |
| TOC                 | Top of Casing     |    |                                                                                                                                             |

**Barometric Pressure Trend - December 2018**  
**LRI 304th Landfill, Pierce County, Washington**



weather un



Source: Pierce County - Thun Field Station  
Lat: 47.1 Long: 122.29 Elev: 538 ft-AMSL

Data Source: <https://www.wunderground.com/history/daily/us/wa/puyallup/KPLU/date/2018-12-13>

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

Project Number: 04216001.04

Date: 3/21/18  
Weather Conditions: sunny  
Instrument: MicroPID  
Measured By: A. Deep

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

The areas monitored included:

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

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

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

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

  
Signature

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

Project Number: 04218001.04

Date: 5/22/18  
Weather Conditions: Sunny  
Instrument: Micro FID  
Measured By: A. Deep & T. 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**.

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

main office (near active fill)  
upwind (pre) - 30 ppm  
downwind (pre) - 35 ppm

Alex Ray  
Signature

upwind (post) - 0.2 ppm  
downwind (post) - 0.3 ppm

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

Project Number: 04218001.04

Date: 8/30/18  
Weather Conditions: OVERCAST  
Instrument: MICRO FLD  
Measured By: A. Deep

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

The areas monitored included:

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

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

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

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

Background (Main Office)

upwind → 0.00 ppm  
downwind → 0.00 ppm

Alex Deep  
Signature

# LRI 304th Street Landfill

## Landfill Gas Monitoring of On-site Buildings

Project Number: 04218001.04

Date: 11/28/18

Weather Conditions: Rainy

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**.

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

Background (Main Office)

Upwind → 0.00 ppm

Downwind → 0.00 ppm



Signature

August 8, 2018  
File No. 04218001.14

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

Subject: **July 2018 Gas Extraction Well Installation Report  
LRI Landfill, Graham, Washington**

Dear George:

This letter presents a summary of the field activities performed by SCS Engineers (SCS) regarding the installation of 14 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 2018 Gas System Expansion design plans, approved well construction variance, and well completion schedule issued by SCS on June 4, 2018.

## **Summary**

SCS personnel were onsite from July 9 to 19, 2018, to observe drilling and installation of 14 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.

## **LFG Extraction Well Drilling and Installation**

The borings for the LFG extraction wells were drilled using an IMT AF 240 drill rig with a 10 foot long, 36-inch diameter bucket auger, except where noted on the attached logs. For each of the extraction wells, the borings were advanced to design depths, except where noted otherwise. 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, with the exception of the clean soil backfill which was obtained from onsite sources, were provided by DBM and verified by SCS prior to use. Drilling and installation of each well was completed in one day, except well 2018-13, which was drilled to depth, but constructed the following day. Cover was provided for 2018-13 overnight consistent with recommendations from site personnel.

The wells were completed with either 5 or 8-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:

- 2018-02: The boring was moved approximately 3-feet south so the drill rig could properly reach the location from the drilling platform. This did not result in a significant change in surface elevation from the staked location. The boring was completed to a depth of 56.0-feet bgs. The increased boring depth maintained a clearance of 89.8-feet from the top of operations layer constructed as a part of Cell 4A.
- 2018-05: The boring was moved approximately 7-feet southeast so the drill rig could properly reach the location from the drilling platform. This did not result in a significant change in surface elevation. The boring was completed to a depth of 31.5-feet bgs. The increased boring depth maintained a clearance of 82.9-feet from the top of operations layer constructed as a part of Cell 4A.
- 2018-06: The boring was completed to a depth of 133.0-feet bgs. The increased boring depth maintained a clearance of 31.8-feet from the top of operations layer constructed as a part of Cell 4A.
- 2018-12: The boring was moved approximately 3-feet east so the drill rig could properly reach the location from the drilling platform. This did not result in a significant change in surface elevation. The boring was completed to a depth of 132-feet bgs. The increased boring depth maintained a clearance of 49.6-feet from the top of operations layer constructed as a part of Cell 4B.
- 2018-13: The boring was moved approximately 20-feet northeast to create separation from a nearby temporary vertical gas well installed by LRI. This did not result in a significant change in surface elevation. The boring was completed to a depth of 129.5-feet bgs. The decreased boring depth maintained a clearance of 29.1-feet from the top of operations layer constructed as a part of Cell 4B.
- 2018-14: The boring was moved approximately 6-feet southeast so the drill rig could properly reach the location from the drilling platform. This did not result in a significant change in surface elevation. The boring was drilled to the same design depth and maintained an approximate clearance of 16.1-feet from the top of operations layer constructed as part of Cell 4B.
- 2018-15: The boring was moved approximately 8-feet east off of a ridge so the drill rig could properly reach the location from the drilling platform. The relocated position was approximately 2 feet lower than the staked location and the boring was subsequently completed to a depth of 127-feet bgs. The decreased boring depth maintained a clearance of 18.7-feet from the top of operations layer constructed as a part of Cell 4B.
- 6BSF-6: The boring was completed to a depth of 24.0-feet bgs. The decreased boring depth maintained a clearance of 17.0-feet from the top of operations layer constructed as a part of Cell 6.
- 6BSF-8: The boring was completed to a depth of 30.0-feet bgs. The decreased boring depth maintained a clearance of 16.7-feet from the top of operations layer constructed as a part of Cell 6.
- 6BSF-10: The boring was completed to a depth of 39.5-feet bgs. The decreased boring depth maintained a clearance of 16.4-feet from the top of operations layer constructed as a part of Cell 6.

Other notes from the vertical well drilling include the following:

- 2018-06: Elevated temperatures, greater than or equal to 130°F, were observed in the cuttings at a depth of 110-feet bgs. (133°F). No signs of combustion, such as charred or



blackened materials or smoke, were observed. The well was completed as shown in the construction drawings with the bottom of the screen at 128-feet bgs.

- 2018-12: Elevated temperatures, greater than or equal to 130°F, were observed in the cuttings at depths of 127-feet bgs. (135°F) and 132-feet bgs. (135°F). No signs of combustion, such as charred or blackened materials or smoke, were observed. The well was completed as shown in the construction drawings with the bottom of the screen at 128-feet bgs.
- 2018-15: Elevated temperatures, greater than or equal to 130°F, were observed in the cuttings at a depth of 86-feet bgs. (133°F). No signs of combustion, such as charred or blackened materials or smoke, were observed. The well was completed as shown in the construction drawings with the bottom of the screen at 123-feet bgs.

Following completion of the well installation, each well was given a standard well designation consistent with LRI naming convention. The following table presents a summary of the completed well installation data.

Table 1: Summary of Well Completion

| Drawing ID | Well Designation | Surface Elevation (ft-msl) <sup>(1)</sup> | Installation Date | ECY Well Tag <sup>(2)</sup> | Design Depth (ft) | Completed Depth (ft) | Length of Screen (ft) |
|------------|------------------|-------------------------------------------|-------------------|-----------------------------|-------------------|----------------------|-----------------------|
| 2018-01    | WE-235           | 728.6                                     | 7/10/2018         | BKM-792                     | 40.0              | 39.0                 | 20.0                  |
| 2018-02    | WE-236           | 727.9                                     | 7/11/2018         | BKM-793                     | 55.0              | 56.0                 | 35.0                  |
| 2018-03    | WE-237           | 729.6                                     | 7/11/2018         | BKM-794                     | 35.0              | 35.0                 | 15.0                  |
| 2018-04    | WE-238           | 729.1                                     | 7/12/2018         | BKS-056                     | 75.0              | 74.0                 | 55.0                  |
| 2018-05    | WE-239           | 719.9                                     | 7/12/2018         | BKM-795                     | 30.0              | 31.5                 | 10.0                  |
| 2018-06    | WE-240           | 679.4                                     | 7/18/2018         | BKM-800                     | 130.0             | 133.0                | 110.0                 |
| 2018-07    | WE-241           | 669.6                                     | 7/18/2018         | BKM-799                     | 128.0             | 127.0                | 108.0                 |
| 2018-12    | WE-242           | 686.2                                     | 7/16/2018         | BKM-797                     | 130.0             | 132.0                | 110.0                 |
| 2018-13    | WE-243           | 668.2                                     | 7/10/2018         | BKM-791                     | 130.0             | 129.5                | 110.0                 |
| 2018-14    | WE-244           | 654.9                                     | 7/17/2018         | BKM-798                     | 130.0             | 130.0                | 110.0                 |
| 2018-15    | WE-245           | 659.5                                     | 7/13/2018         | BKM-796                     | 130.0             | 127.0                | 110.0                 |
| 6BSF-6     | WE-246           | 668.0                                     | 7/19/2018         | BKS-053                     | 26.0              | 24.0                 | 6.0                   |
| 6BSF-8     | WE-247           | 667.3                                     | 7/19/2018         | BKS-054                     | 31.0              | 30.0                 | 11.0                  |
| 6BSF-10    | WE-248           | 666.6                                     | 7/19/2018         | BKS-055                     | 40.0              | 39.5                 | 20.0                  |

Notes:

1. Survey data provided by Vista GeoEnvironmental Services prior to drilling and installation. Elevations are for the original staked locations, and do not account for relocation at time of installation.
2. ECY Well Tags were provided by DBM upon completion of each well.

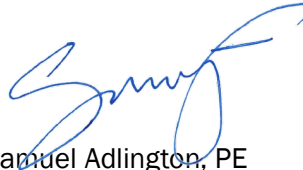
## Closing

If you have any questions regarding the information presented in this letter or the attached boring logs, please do not hesitate to contact the undersigned.

Sincerely,



Alexa Deep, EIT  
Staff Engineer  
SCS Engineers  
TAB/AED



Samuel Adlington, PE  
Senior Project Engineer  
SCS Engineers

cc: Keith Johnston, TPCDH  
Jim Crandall, LRI  
Olivier Moi, LRI  
Kevin Lakey, SCS

## Attachments:

Attachment A 2018 LFG Extraction Well Completion Logs

2405 140th Avenue NE, Suite 107  
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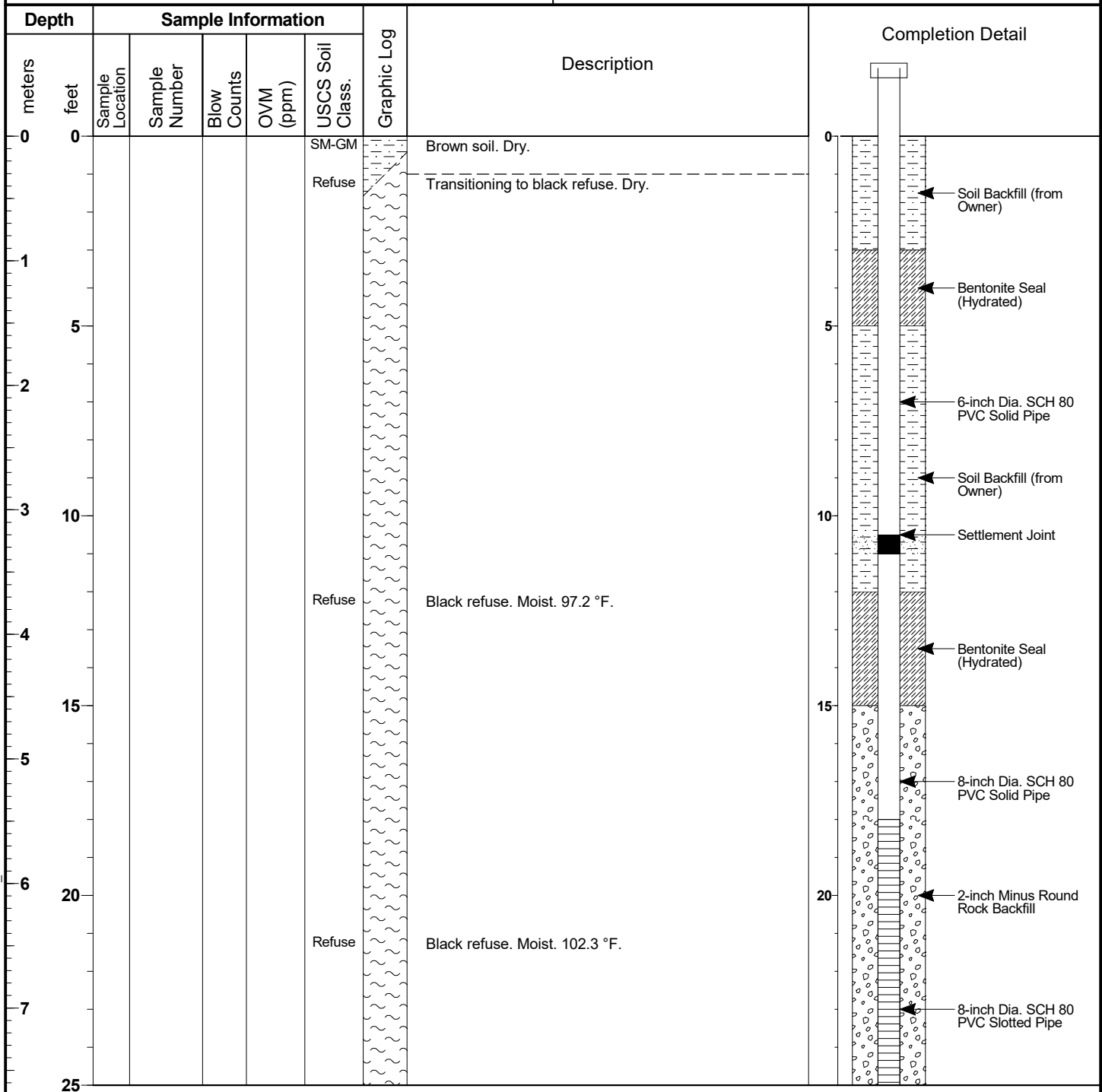
**BORING NUMBER: WE-235**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-792. Drawing ID: 2018-01



STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/7/18

Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/10/18**

Date Ended: **7/10/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **12:04**

Time Ended: **15:30**

Total Depth: **39.0 ft.**

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**BORING NUMBER: WE-235**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                  | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | QVM (ppm) | USCS Soil Class. |             |                              |                   |
| 25     | 8    |                    |               |             |           |                  |             |                              | 25                |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 9      | 30   |                    |               |             |           |                  |             |                              | 30                |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 10     |      |                    |               |             |           |                  |             |                              |                   |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 35     |      |                    |               |             |           |                  |             |                              | 35                |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 11     |      |                    |               |             |           | Refuse           |             | Black refuse. Moist. 113 °F. |                   |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 12     | 40   |                    |               |             |           |                  |             | Bottom of boring.            | 40                |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 13     |      |                    |               |             |           |                  |             |                              |                   |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 45     |      |                    |               |             |           |                  |             |                              | 45                |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 14     |      |                    |               |             |           |                  |             |                              |                   |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 50     |      |                    |               |             |           |                  |             |                              | 50                |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 16     |      |                    |               |             |           |                  |             |                              |                   |
|        |      |                    |               |             |           |                  |             |                              |                   |
| 55     |      |                    |               |             |           |                  |             |                              |                   |

Centralizer

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

Cap (Soc)

Geotextile

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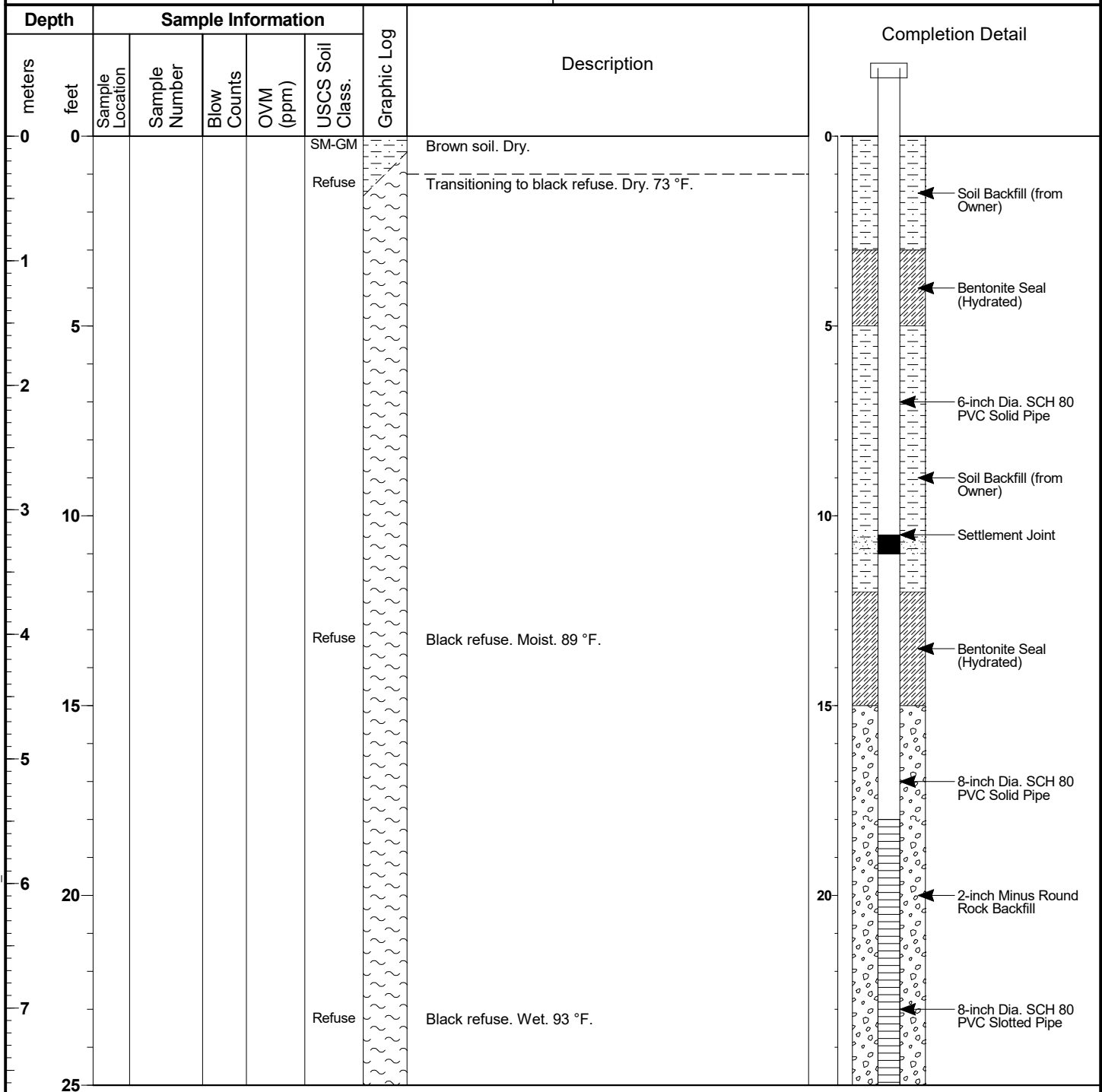
**BORING NUMBER: WE-236**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-793. Drawing ID: 2018-02



STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/7/18

Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/11/18**

Date Ended: **7/11/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **09:05**

Time Ended: **12:35**

Total Depth: **56.0 ft.**

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**BORING NUMBER: WE-236**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                                           | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|-----------------------------------------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | QVM (ppm) | USCS Soil Class. |             |                                                                       |                   |
| 8      | 25   |                    |               |             |           |                  |             |                                                                       | 25                |
| 9      | 30   |                    |               |             |           |                  |             |                                                                       | 30                |
| 10     |      |                    |               |             |           |                  |             |                                                                       |                   |
| 11     | 35   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 106 °F.                                            | 35                |
| 12     | 40   |                    |               |             |           |                  |             |                                                                       | 40                |
| 13     |      |                    |               |             |           |                  |             |                                                                       |                   |
| 14     | 45   |                    |               |             |           | Refuse           |             | Black refuse with some soils (~5%) and compost (~10%). Moist. 120 °F. | 45                |
| 15     | 50   |                    |               |             |           |                  |             |                                                                       | 50                |
| 16     |      |                    |               |             |           |                  |             |                                                                       |                   |
| 55     |      |                    |               |             |           |                  |             |                                                                       | 55                |

Centralizer

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

Cap (Soc)

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**BORING NUMBER: WE-236**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log                                                                       | Description                                                      | Completion Detail                                                                   |
|--------|------|--------------------|---------------|-------------|----------|------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |                                                                                   |                                                                  |                                                                                     |
| 55     | 17   |                    |               |             |          | Refuse           |  | Black refuse. Highly degraded. Wet. 115 °F.<br>Bottom of boring. |  |
| 60     |      |                    |               |             |          |                  |                                                                                   |                                                                  |                                                                                     |
| 65     |      |                    |               |             |          |                  |                                                                                   |                                                                  |                                                                                     |
| 70     |      |                    |               |             |          |                  |                                                                                   |                                                                  |                                                                                     |
| 75     |      |                    |               |             |          |                  |                                                                                   |                                                                  |                                                                                     |
| 80     |      |                    |               |             |          |                  |                                                                                   |                                                                  |                                                                                     |
| 85     |      |                    |               |             |          |                  |                                                                                   |                                                                  |                                                                                     |

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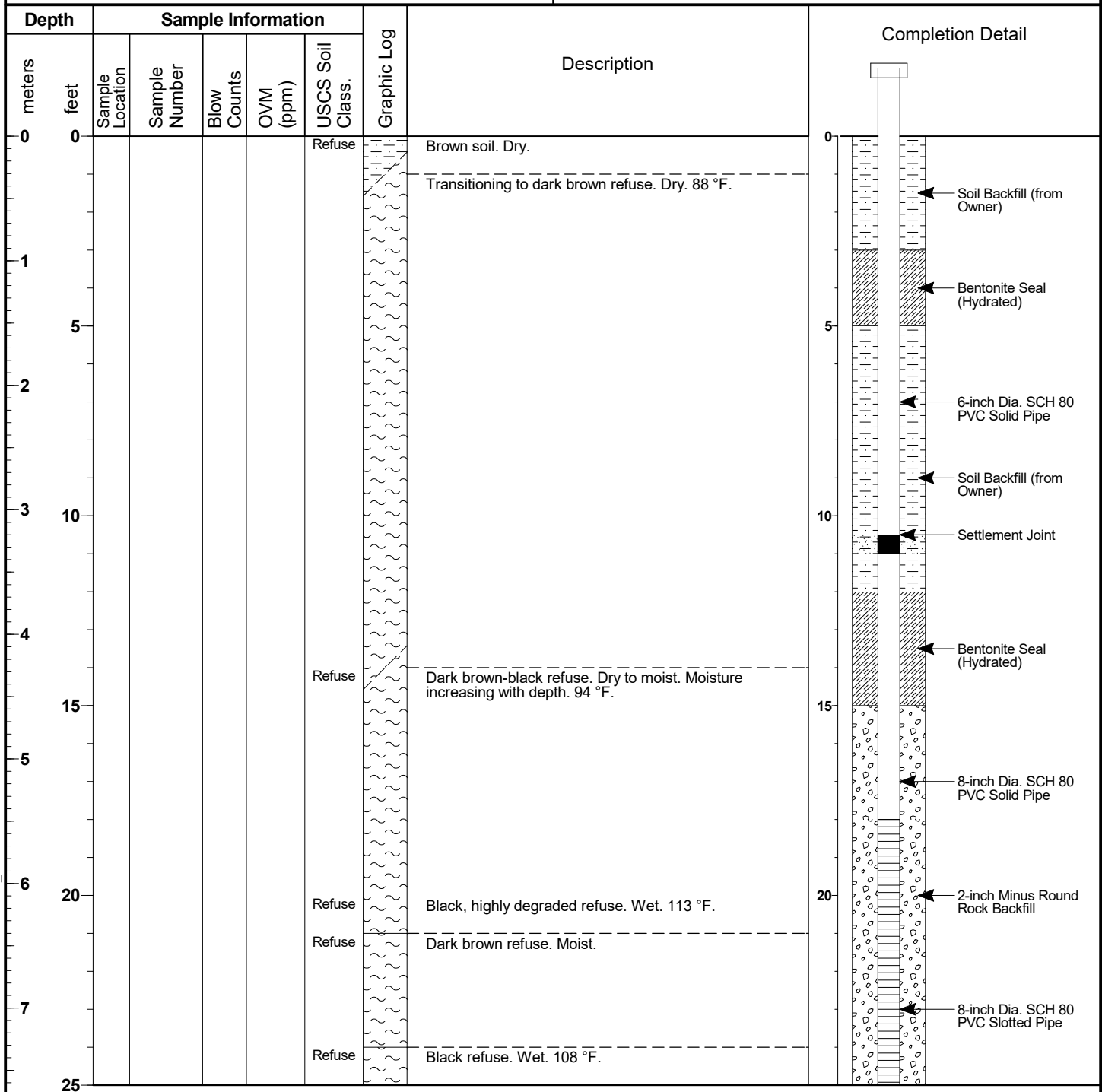
**BORING NUMBER: WE-237**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-794. Drawing ID: 2018-03



Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/11/18**

Date Ended: **7/11/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **13:06**

Time Ended: **15:30**

Total Depth: **35.0 ft.**

STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/8/18



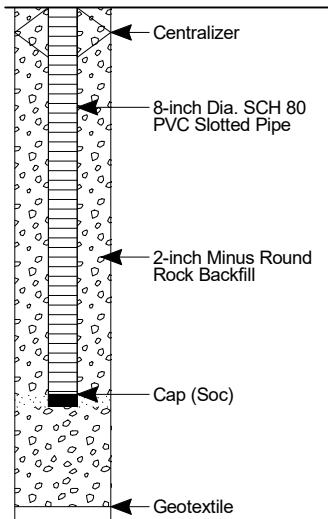
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**BORING NUMBER: WE-237**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                                                      | Completion Detail                                                                                                                                                                                                            |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                                                  |                                                                                                                                                                                                                              |
| 8      | 25   |                    |               |             |          |                  |             |                                                                  |                                                                                                                                                                                                                              |
| 9      | 30   |                    |               |             |          | Refuse           |             | Black refuse. Highly degraded. Wet. 113 °F.                      |  <p>Centralizer</p> <p>8-inch Dia. SCH 80 PVC Slotted Pipe</p> <p>2-inch Minus Round Rock Backfill</p> <p>Cap (Soc)</p> <p>Geotextile</p> |
| 11     | 35   |                    |               |             |          | Refuse           |             | Black refuse. Highly degraded. Wet. 113 °F.<br>Bottom of boring. |                                                                                                                                                                                                                              |
| 12     | 40   |                    |               |             |          |                  |             |                                                                  |                                                                                                                                                                                                                              |
| 13     | 45   |                    |               |             |          |                  |             |                                                                  |                                                                                                                                                                                                                              |
| 14     | 50   |                    |               |             |          |                  |             |                                                                  |                                                                                                                                                                                                                              |
| 15     | 55   |                    |               |             |          |                  |             |                                                                  |                                                                                                                                                                                                                              |

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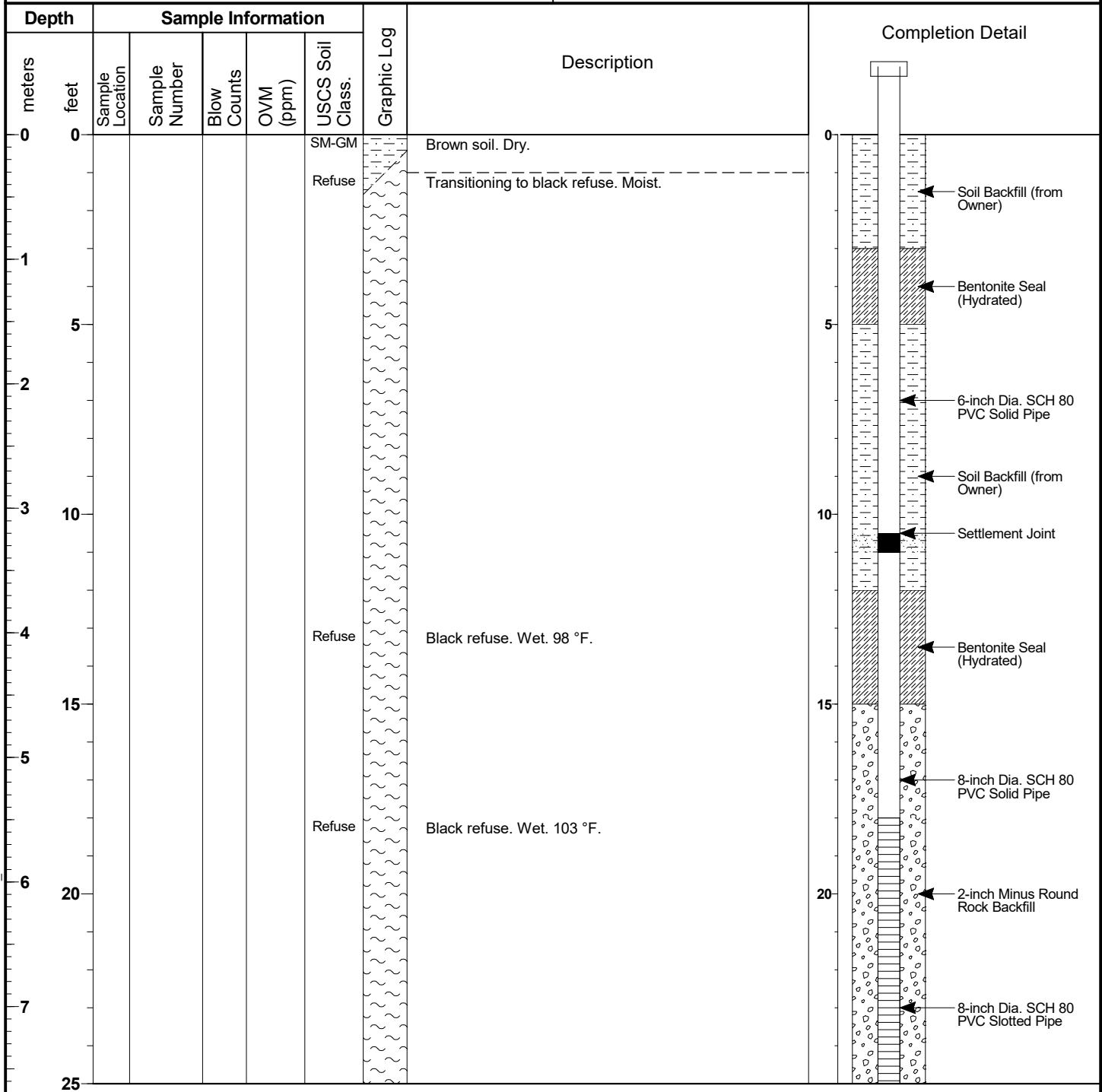
**BORING NUMBER: WE-238**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKS-056. Drawing ID: 2018-04



Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/12/18**

Date Ended: **7/12/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **11:00**

Time Ended: **15:05**

Total Depth: **74.0 ft.**

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**BORING NUMBER: WE-238**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|----------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                            |                   |
| 8      | 25   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 113 °F. | 25                |
| 9      | 30   |                    |               |             |           |                  |             |                            |                   |
| 10     |      |                    |               |             |           |                  |             |                            |                   |
| 11     | 35   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 116 °F. | 35                |
| 12     | 40   |                    |               |             |           |                  |             |                            |                   |
| 13     |      |                    |               |             |           |                  |             |                            |                   |
| 14     | 45   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 110 °F. | 45                |
| 15     | 50   |                    |               |             |           |                  |             |                            |                   |
| 16     |      |                    |               |             |           |                  |             |                            |                   |
|        | 55   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 107 °F. |                   |

Centralizer

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

**BORING NUMBER: WE-238**

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**JOB NUMBER: 04218001.14**

[illegible]

STANDARD\_LOG 04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/7/18

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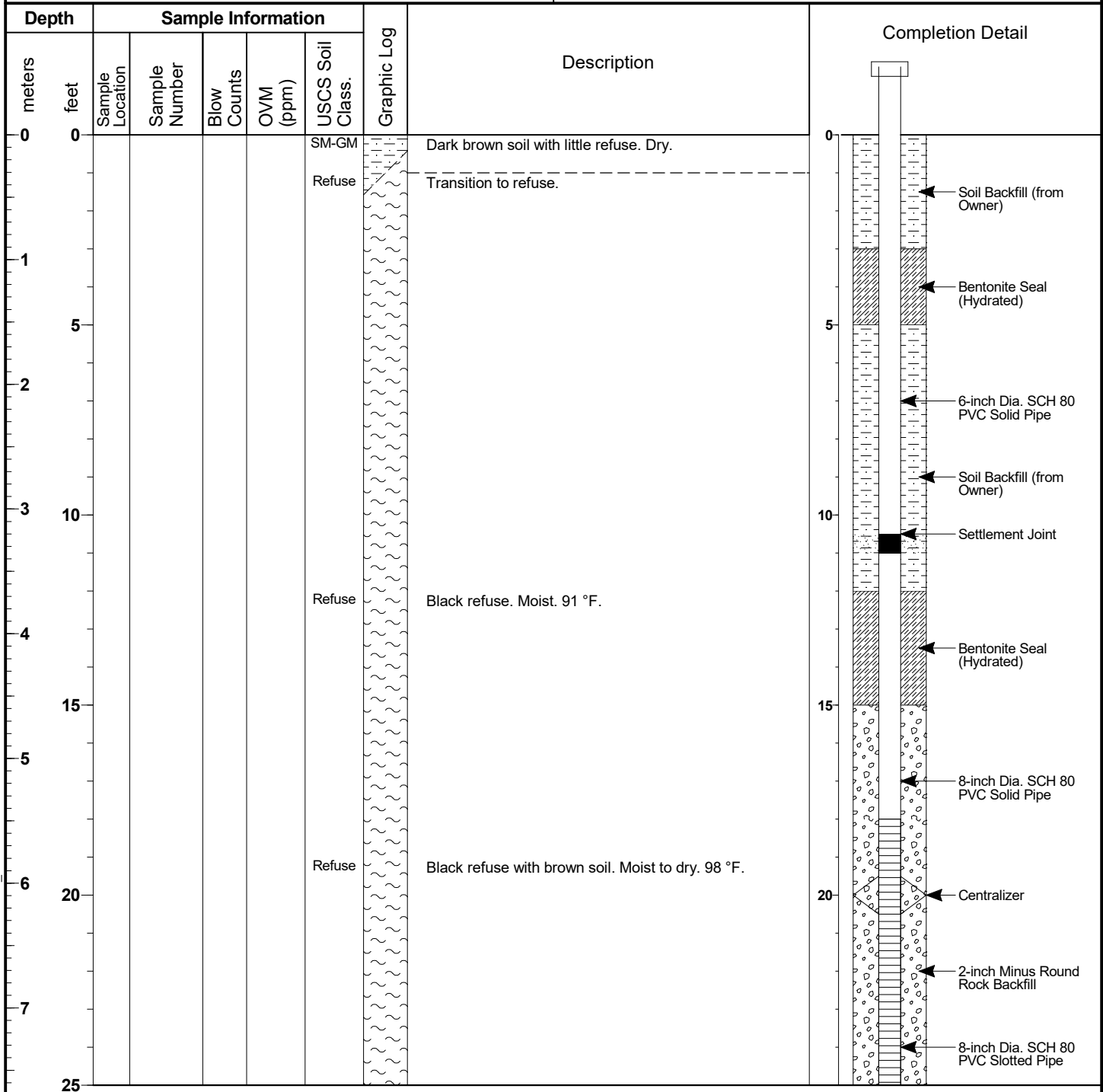
**BORING NUMBER: WE-239**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-795. Drawing ID: 2018-05



Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/12/18**

Date Ended: **7/12/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **08:11**

Time Ended: **10:40**

Total Depth: **31.5 ft.**

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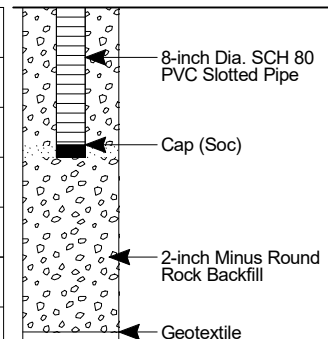
**BORING NUMBER: WE-239**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                                                  | Completion Detail |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|--------------------------------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                                              |                   |
| 8      | 25   |                    |               |             |          |                  |             |                                                              | 25                |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 9      | 30   |                    |               |             |          |                  |             |                                                              | 30                |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 10     |      |                    |               |             |          | Refuse           |             | Black refuse. Degraded. Moist. 93.5 °F.<br>Bottom of boring. |                   |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 11     |      |                    |               |             |          |                  |             |                                                              |                   |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 12     | 40   |                    |               |             |          |                  |             |                                                              | 40                |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 13     |      |                    |               |             |          |                  |             |                                                              |                   |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 14     | 45   |                    |               |             |          |                  |             |                                                              | 45                |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 15     | 50   |                    |               |             |          |                  |             |                                                              | 50                |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 16     |      |                    |               |             |          |                  |             |                                                              |                   |
|        |      |                    |               |             |          |                  |             |                                                              |                   |
| 55     |      |                    |               |             |          |                  |             |                                                              |                   |



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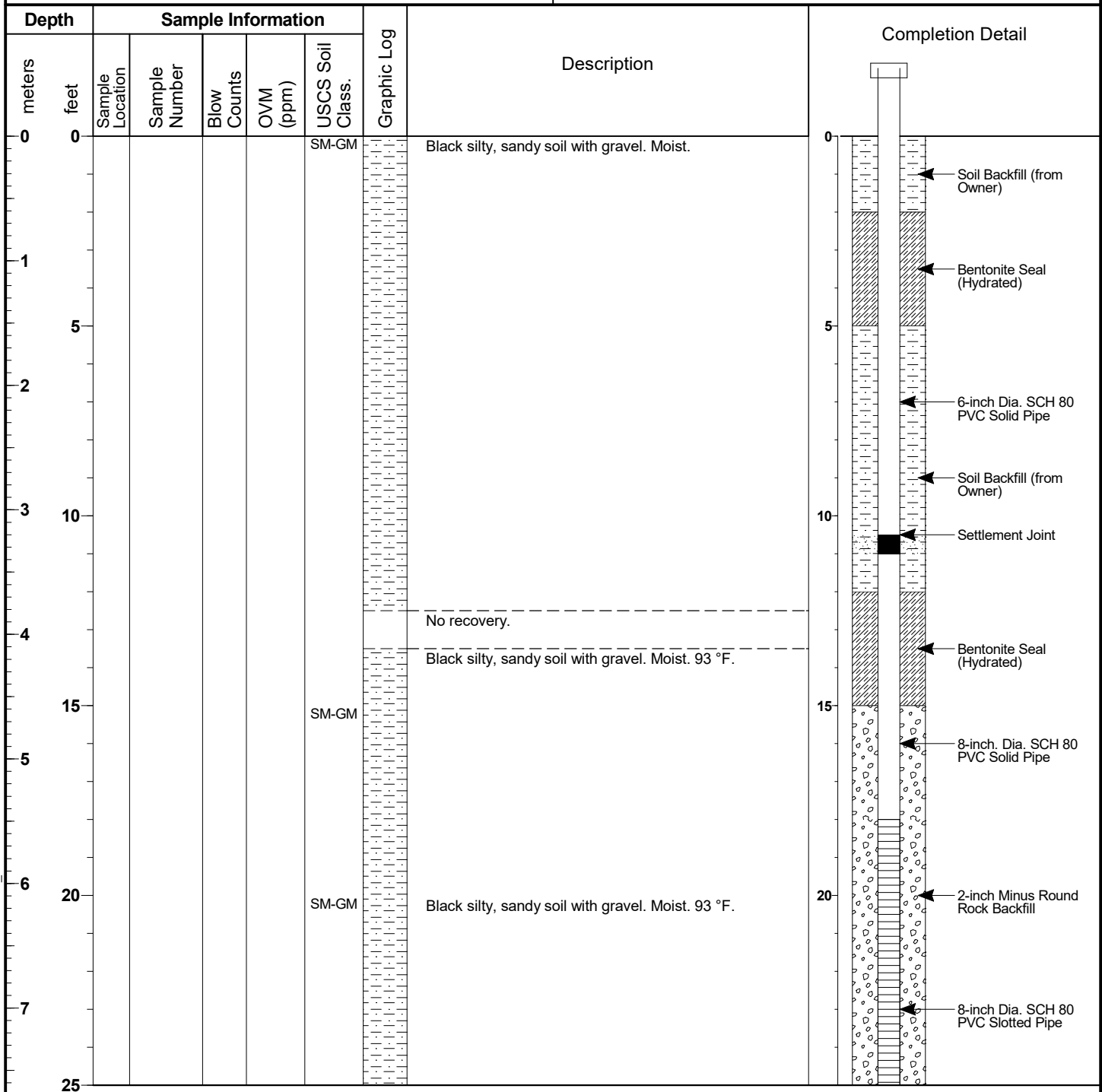
**BORING NUMBER: WE-240**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-800. Drawing ID: 2018-06



STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/8/18

Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/18/18**

Date Ended: **7/18/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **12:03**

Time Ended: **17:15**

Total Depth: **133.0 ft.**

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**BORING NUMBER: WE-240**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                                                 | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|-----------------------------------------------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                                                             |                   |
| 8      | 25   |                    |               |             |           | SM-GM            |             | Black silty, sandy soil with some refuse (~5%). Moist. 90 °F.               | 25                |
| 9      | 30   |                    |               |             |           | SM-GM            |             | Black-grey silty, sandy soil. Moist.                                        | 30                |
| 10     | 35   |                    |               |             |           | SM-GM            |             | Grey-black silty, sandy soil. 90 °F.                                        | 35                |
| 11     | 40   |                    |               |             |           | Refuse           |             | Dark grey silty, sandy soil. Moist. Transition to black refuse. Wet. 96 °F. | 40                |
| 12     | 45   |                    |               |             |           |                  |             |                                                                             | 45                |
| 13     | 50   |                    |               |             |           |                  |             |                                                                             | 50                |
| 14     | 55   |                    |               |             |           |                  |             |                                                                             | 55                |

Centralizer

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/8/18



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

**BORING NUMBER: WE-240**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                                               | Completion Detail                   |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|-----------------------------------------------------------|-------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                                           |                                     |
| 17     | 55   |                    |               |             |          |                  |             |                                                           | 55                                  |
| 18     | 60   |                    |               |             |          | Refuse           |             | Black refuse. Wet. 103 °F.                                | Centralizer                         |
| 19     | 65   |                    |               |             |          |                  |             |                                                           | 8-inch Dia. SCH 80 PVC Slotted Pipe |
| 20     | 70   |                    |               |             |          | Refuse           |             | Black refuse. Wet. 110 °F.                                |                                     |
| 21     | 75   |                    |               |             |          |                  |             |                                                           | 2-inch Minus Round Rock Backfill    |
| 22     | 80   |                    |               |             |          | SM-GM            |             | Black refuse. Wet. Transition to black soil. Wet. 113 °F. |                                     |
| 23     | 85   |                    |               |             |          | Refuse           |             | Black refuse. Wet.                                        |                                     |

STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/8/18

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                           | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|---------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                       |                   |
| 26     | 85   |                    |               |             |           |                  |             |                                       | 85                |
| 27     | 90   |                    |               |             |           |                  |             |                                       | 90                |
| 28     |      |                    |               |             |           |                  |             |                                       |                   |
| 29     | 95   |                    |               |             |           |                  |             |                                       | 95                |
| 30     |      |                    |               |             |           |                  |             |                                       |                   |
| 31     | 100  |                    |               |             |           | Refuse           |             | Dark brown-black refuse. Wet.         | 100               |
| 32     | 105  |                    |               |             |           |                  |             |                                       | 105               |
| 33     |      |                    |               |             |           |                  |             |                                       |                   |
| 34     | 110  |                    |               |             |           | Refuse           |             | Dark brown-black refuse. Wet. 133 °F. | 110               |
| 35     | 115  |                    |               |             |           |                  |             |                                       |                   |

Centralizer

2-inch Minus Round Rock Backfill

8-inch Dia. SCH 80 PVC Slotted Pipe

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**BORING NUMBER: WE-240**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                             | Completion Detail |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|-----------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                         |                   |
| 115    |      |                    |               |             |          |                  |             |                                         | 115               |
| 36     |      |                    |               |             |          |                  |             |                                         |                   |
| 120    |      |                    |               |             |          |                  |             |                                         | 120               |
| 37     |      |                    |               |             |          | Refuse           |             | Black refuse. Wet. 128 °F.              |                   |
| 38     |      |                    |               |             |          |                  |             |                                         |                   |
| 125    |      |                    |               |             |          | Refuse           |             | Black refuse. Wet. 126 °F.              | 125               |
| 39     |      |                    |               |             |          |                  |             |                                         |                   |
| 130    |      |                    |               |             |          |                  |             |                                         | 130               |
| 40     |      |                    |               |             |          |                  |             |                                         |                   |
| 41     |      |                    |               |             |          | Refuse           |             | Black refuse. Wet.<br>Bottom of boring. |                   |
| 42     |      |                    |               |             |          |                  |             |                                         | 135               |
| 140    |      |                    |               |             |          |                  |             |                                         | 140               |
| 43     |      |                    |               |             |          |                  |             |                                         |                   |
| 44     |      |                    |               |             |          |                  |             |                                         |                   |
| 145    |      |                    |               |             |          |                  |             |                                         |                   |

Centralizer

2-inch Minus Round Rock Backfill

8-inch Dia. SCH 80 PVC Slotted Pipe

Cap (Soc)

Geotextile

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

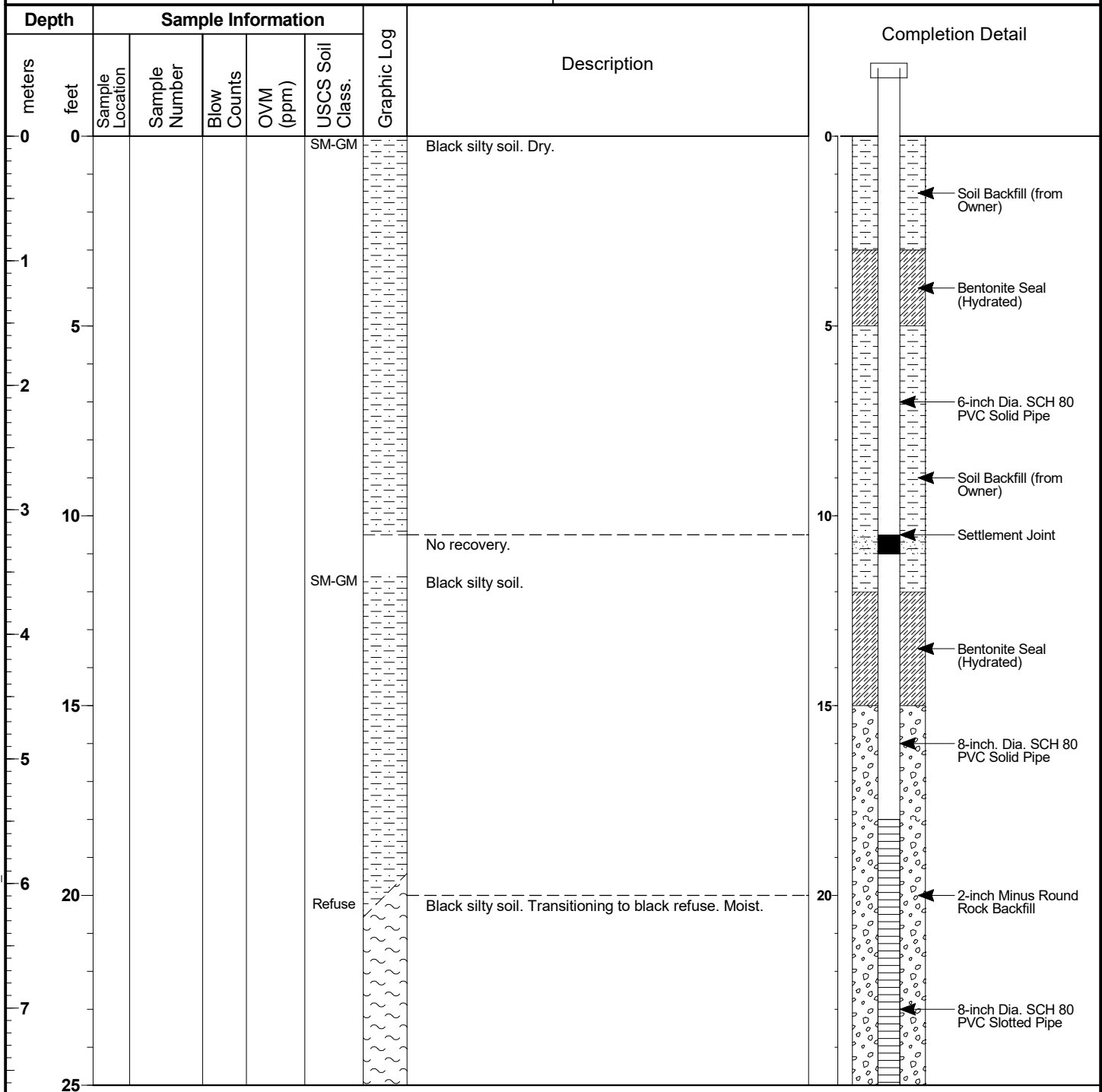
**BORING NUMBER: WE-241**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-799. Drawing ID: 2018-07



Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/18/18**

Date Ended: **7/18/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **08:00**

Time Ended: **13:09**

Total Depth: **127.0 ft.**

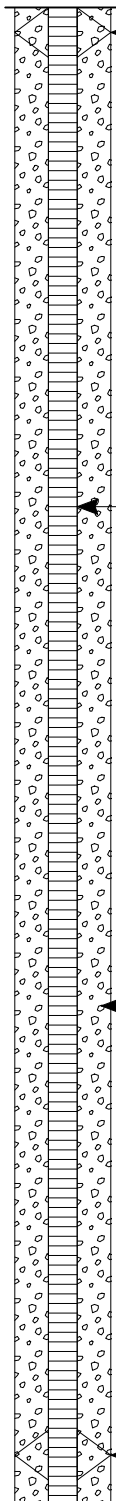
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**BORING NUMBER: WE-241**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                                              | Completion Detail                                                                                                                                                                                             |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                                                          |                                                                                                                                                                                                               |
| 8      | 25   |                    |               |             |           |                  |             |                                                                          |                                                                                                                                                                                                               |
| 9      | 30   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 81 °F.                                              |  <p>Centralizer</p> <p>8-inch Dia. SCH 80 PVC Slotted Pipe</p> <p>2-inch Minus Round Rock Backfill</p> <p>Centralizer</p> |
| 12     | 40   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 95 °F.                                                |                                                                                                                                                                                                               |
| 14     | 50   |                    |               |             |           | Refuse           |             | Brown-black refuse with dark brown compost (~30%). Wet to moist. 105 °F. |                                                                                                                                                                                                               |
| 16     |      |                    |               |             |           |                  |             |                                                                          |                                                                                                                                                                                                               |
| 55     |      |                    |               |             |           |                  |             |                                                                          |                                                                                                                                                                                                               |

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**BORING NUMBER: WE-241**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                      | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|----------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                  |                   |
| 55     | 17   |                    |               |             |           | Refuse           |             | Brown-black refuse. Wet. 110 °F. |                   |
| 60     | 18   |                    |               |             |           |                  |             |                                  |                   |
| 65     | 19   |                    |               |             |           |                  |             |                                  |                   |
| 70     | 20   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 123 °F.       |                   |
| 75     | 21   |                    |               |             |           |                  |             |                                  |                   |
| 80     | 22   |                    |               |             |           |                  |             |                                  |                   |
| 85     | 23   |                    |               |             |           |                  |             |                                  |                   |
|        | 24   |                    |               |             |           |                  |             |                                  |                   |
|        | 25   |                    |               |             |           |                  |             |                                  |                   |
|        |      |                    |               |             |           |                  |             |                                  |                   |
|        |      |                    |               |             |           |                  |             |                                  |                   |
|        |      |                    |               |             |           |                  |             |                                  |                   |

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                                 | Completion Detail                   |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|---------------------------------------------|-------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                             |                                     |
| 26     | 85   |                    |               |             |          |                  |             |                                             | 85                                  |
| 27     | 90   |                    |               |             |          | Refuse           |             | Black refuse. Wet. 125 °F.                  | Centralizer                         |
| 28     |      |                    |               |             |          |                  |             |                                             |                                     |
| 29     | 95   |                    |               |             |          |                  |             |                                             | 2-inch Minus Round Rock Backfill    |
| 30     |      |                    |               |             |          |                  |             |                                             |                                     |
| 31     | 100  |                    |               |             |          | Refuse           |             | Black, highly degraded refuse. Wet. 123 °F. |                                     |
| 32     | 105  |                    |               |             |          | Refuse           |             | Black, highly degraded refuse. Wet. 121 °F. | 8-inch Dia. SCH 80 PVC Slotted Pipe |
| 33     |      |                    |               |             |          |                  |             |                                             |                                     |
| 34     | 110  |                    |               |             |          |                  |             |                                             |                                     |
| 35     | 115  |                    |               |             |          |                  |             |                                             |                                     |

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                              | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|----------------------------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | QVM (ppm) | USCS Soil Class. |             |                                                          |                   |
| 115    |      |                    |               |             |           | Refuse           |             | Black, highly degraded refuse. Wet. 121 °F.              | 115               |
| 36     |      |                    |               |             |           |                  |             |                                                          |                   |
| 120    |      |                    |               |             |           |                  |             |                                                          |                   |
| 37     |      |                    |               |             |           |                  |             |                                                          |                   |
| 38     |      |                    |               |             |           |                  |             |                                                          |                   |
| 125    |      |                    |               |             |           | Refuse           |             | Black, highly degraded refuse. Wet. 129 °F.              | 125               |
| 39     |      |                    |               |             |           | Refuse           |             | Black, highly degraded refuse. Overly saturated. 127 °F. |                   |
| 130    |      |                    |               |             |           |                  |             | Bottom of boring.                                        |                   |
| 40     |      |                    |               |             |           |                  |             |                                                          |                   |
| 41     |      |                    |               |             |           |                  |             |                                                          |                   |
| 135    |      |                    |               |             |           |                  |             |                                                          |                   |
| 42     |      |                    |               |             |           |                  |             |                                                          |                   |
| 140    |      |                    |               |             |           |                  |             |                                                          |                   |
| 43     |      |                    |               |             |           |                  |             |                                                          |                   |
| 44     |      |                    |               |             |           |                  |             |                                                          |                   |
| 145    |      |                    |               |             |           |                  |             |                                                          |                   |

Centralizer

2-inch Minus Round Rock Backfill

8-inch Dia. SCH 80 PVC Slotted Pipe

Cap (Soc)

Geotextile



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

**BORING NUMBER: WE-242**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-797. Drawing ID: 2018-12

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                         | Completion Detail                                                                                                                                                                                                                                                                                                                   |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |
| 0      | 0    |                    |               |             |           | SM-GM            |             | Brown silty, sandy soil with gravel. Dry.           | <p>Soil Backfill (from Owner)</p> <p>Bentonite Seal (Hydrated)</p> <p>6-inch Dia. SCH 80 PVC Solid Pipe</p> <p>Soil Backfill (from Owner)</p> <p>Settlement Joint</p> <p>Bentonite Seal (Hydrated)</p> <p>8-inch. Dia. SCH 80 PVC Solid Pipe</p> <p>2-inch Minus Round Rock Backfill</p> <p>8-inch Dia. SCH 80 PVC Slotted Pipe</p> |
| 1      |      |                    |               |             |           |                  |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |
| 5      |      |                    |               |             |           |                  |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |
| 2      |      |                    |               |             |           |                  |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |
| 3      | 10   |                    |               |             |           |                  |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |
| 4      |      |                    |               |             |           | SM-GM            |             | Brown silty, sandy soil with gravel. Dry.           |                                                                                                                                                                                                                                                                                                                                     |
| 15     |      |                    |               |             |           |                  |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |
| 5      |      |                    |               |             |           |                  |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |
| 6      | 20   |                    |               |             |           |                  |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |
| 7      |      |                    |               |             |           | SM-GM            |             | Dark brown-grey silty, sandy soil with gravel. Dry. |                                                                                                                                                                                                                                                                                                                                     |
| 25     |      |                    |               |             |           |                  |             |                                                     |                                                                                                                                                                                                                                                                                                                                     |

Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/16/18**

Date Ended: **7/16/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **08:40**

Time Ended: **15:45**

Total Depth: **132.0 ft.**

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**BORING NUMBER: WE-242**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                                                              | Completion Detail                   |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|------------------------------------------------------------------------------------------|-------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                                                                          |                                     |
| 8      | 25   |                    |               |             |           | Refuse           |             | Dark brown silty, sandy soil with gravel. Dry. Transition to black refuse. Moist. 99 °F. | Centralizer                         |
| 9      | 30   |                    |               |             |           |                  |             |                                                                                          |                                     |
| 10     |      |                    |               |             |           |                  |             |                                                                                          |                                     |
| 11     | 35   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 111 °F.                                                             | 8-inch Dia. SCH 80 PVC Slotted Pipe |
| 12     | 40   |                    |               |             |           |                  |             |                                                                                          |                                     |
| 13     |      |                    |               |             |           |                  |             |                                                                                          |                                     |
| 14     | 45   |                    |               |             |           |                  |             |                                                                                          | 2-inch Minus Round Rock Backfill    |
| 15     | 50   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 119 °F.                                                               |                                     |
| 16     |      |                    |               |             |           |                  |             |                                                                                          |                                     |
| 55     |      |                    |               |             |           |                  |             |                                                                                          |                                     |

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|----------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                            |                   |
| 17     | 55   |                    |               |             |           |                  |             |                            | 55                |
| 18     | 60   |                    |               |             |           |                  |             |                            | 60                |
| 19     |      |                    |               |             |           | Refuse           |             | Black refuse. Wet. 117 °F. |                   |
| 20     | 65   |                    |               |             |           |                  |             |                            | 65                |
| 21     |      |                    |               |             |           | Refuse           |             | Black refuse. Wet. 121 °F. |                   |
| 22     | 70   |                    |               |             |           |                  |             |                            | 70                |
| 23     | 75   |                    |               |             |           |                  |             |                            | 75                |
| 24     |      |                    |               |             |           | Refuse           |             | Black refuse. Wet. 125 °F. |                   |
| 25     | 80   |                    |               |             |           |                  |             |                            | 80                |
|        | 85   |                    |               |             |           |                  |             |                            |                   |

Centralizer

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

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

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                           | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|---------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                       |                   |
| 26     | 85   |                    |               |             |           |                  |             |                                       | 85                |
| 27     | 90   |                    |               |             |           |                  |             |                                       | 90                |
| 28     |      |                    |               |             |           |                  |             |                                       |                   |
| 29     | 95   |                    |               |             |           | Refuse           |             | Dark brown-black refuse. Wet. 118 °F. | 95                |
| 30     |      |                    |               |             |           |                  |             |                                       |                   |
| 31     | 100  |                    |               |             |           |                  |             |                                       | 100               |
| 32     | 105  |                    |               |             |           | Refuse           |             | Dark brown-black refuse. Wet. 117 °F. | 105               |
| 33     |      |                    |               |             |           |                  |             |                                       |                   |
| 34     | 110  |                    |               |             |           |                  |             |                                       | 110               |
| 35     | 115  |                    |               |             |           |                  |             |                                       |                   |

Centralizer

2-inch Minus Round Rock Backfill

8-inch Dia. SCH 80 PVC Slotted Pipe

2405 140th Avenue NE, Suite 107  
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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                 | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|---------------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                             |                   |
| 115    |      |                    |               |             |           | Refuse           |             | Dark brown-black refuse. Moist. 126 °F.     | 115               |
| 36     |      |                    |               |             |           |                  |             |                                             |                   |
| 120    |      |                    |               |             |           |                  |             |                                             |                   |
| 37     |      |                    |               |             |           |                  |             |                                             |                   |
| 38     |      |                    |               |             |           |                  |             |                                             |                   |
| 125    |      |                    |               |             |           |                  |             |                                             |                   |
| 39     |      |                    |               |             |           | Refuse           |             | Dark brown-black degraded refuse. 135 °F.   |                   |
| 130    |      |                    |               |             |           |                  |             |                                             |                   |
| 40     |      |                    |               |             |           |                  |             |                                             |                   |
| 41     |      |                    |               |             |           | Refuse           |             | Black, highly degraded refuse. Wet. 135 °F. |                   |
| 135    |      |                    |               |             |           |                  |             | Bottom of boring.                           |                   |
| 42     |      |                    |               |             |           |                  |             |                                             |                   |
| 140    |      |                    |               |             |           |                  |             |                                             |                   |
| 43     |      |                    |               |             |           |                  |             |                                             |                   |
| 44     |      |                    |               |             |           |                  |             |                                             |                   |
| 145    |      |                    |               |             |           |                  |             |                                             |                   |

Centralizer

2-inch Minus Round Rock Backfill

8-inch Dia. SCH 80 PVC Slotted Pipe

Cap (Soc)

Geotextile

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

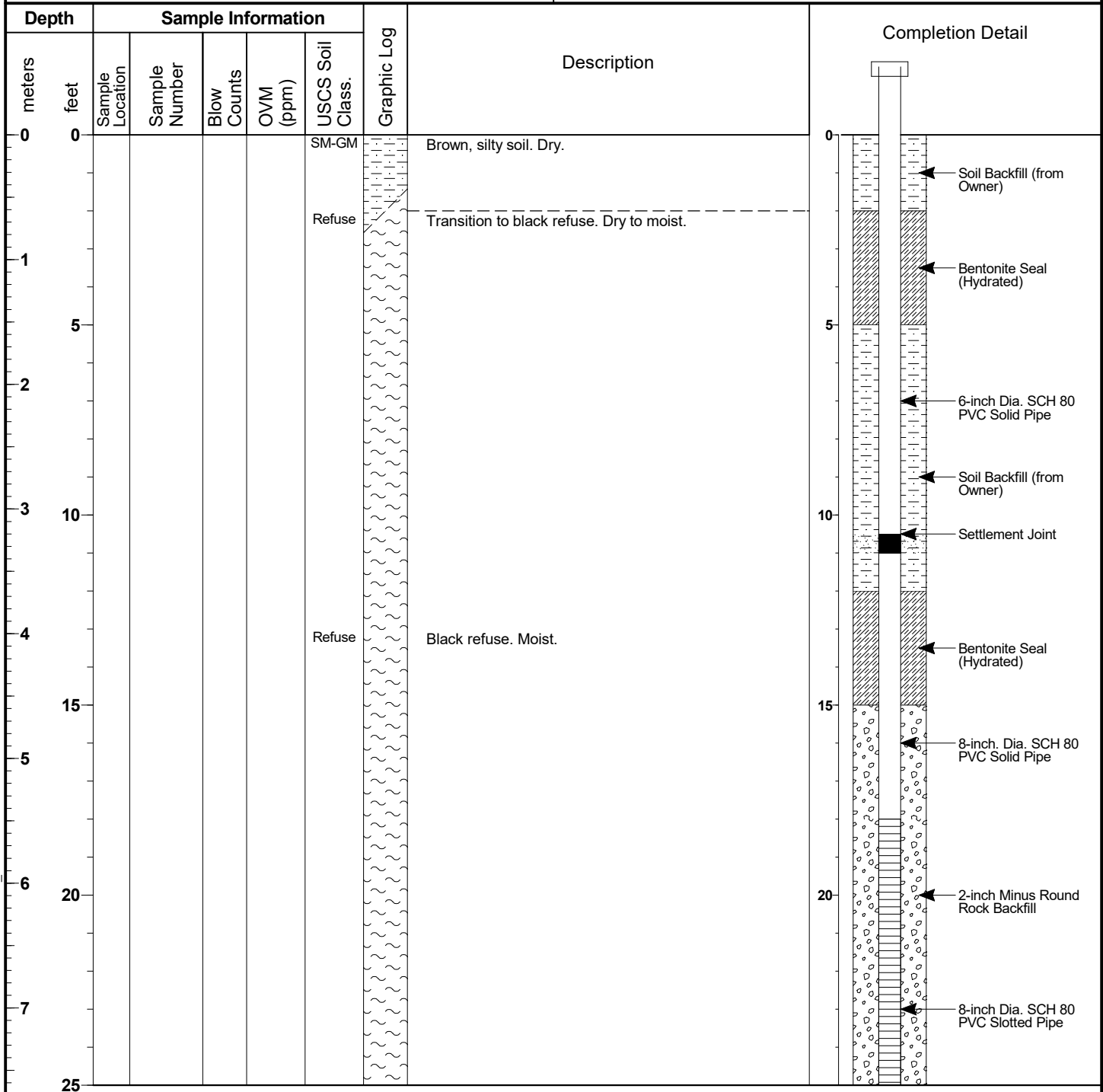
**BORING NUMBER: WE-243**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-791. Drawing ID: 2018-13



STANDARD\_LOG 04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/7/18

Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/9/18**

Date Ended: **7/10/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **09:50**

Time Ended: **11:35**

Total Depth: **129.5 ft.**

2405 140th Avenue NE, Suite 107  
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**BORING NUMBER: WE-243**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                                        | Completion Detail                   |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|----------------------------------------------------|-------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                                    |                                     |
| 25     | 8    |                    |               |             |          | Refuse           |             | Black refuse. Moist.                               |                                     |
| 30     | 9    |                    |               |             |          | SM-GM            |             | Black silty, sandy soil layer. Moist.              | Centralizer                         |
| 35     | 11   |                    |               |             |          | Refuse           |             | Transition to black refuse. Wet.                   | 8-inch Dia. SCH 80 PVC Slotted Pipe |
| 40     | 12   |                    |               |             |          | Refuse           |             | Black refuse. Wet. Moisture increasing with depth. | 2-inch Minus Round Rock Backfill    |
| 45     | 13   |                    |               |             |          |                  |             |                                                    |                                     |
| 50     | 14   |                    |               |             |          |                  |             |                                                    |                                     |
| 55     | 15   |                    |               |             |          |                  |             |                                                    |                                     |
|        | 16   |                    |               |             |          |                  |             |                                                    |                                     |

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**BORING NUMBER: WE-243**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description          | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|----------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVN (ppm) | USCS Soil Class. |             |                      |                   |
| 55     | 17   |                    |               |             |           |                  |             |                      | 55                |
| 18     | 60   |                    |               |             |           | Refuse           |             | Black refuse. Moist. | 60                |
| 19     | 65   |                    |               |             |           |                  |             |                      | 65                |
| 20     | 70   |                    |               |             |           | Refuse           |             | Black refuse. Wet.   | 70                |
| 21     | 75   |                    |               |             |           |                  |             |                      | 75                |
| 22     | 80   |                    |               |             |           | Refuse           |             | Black refuse. Wet.   | 80                |
| 23     | 85   |                    |               |             |           |                  |             |                      | 85                |

Centralizer

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill



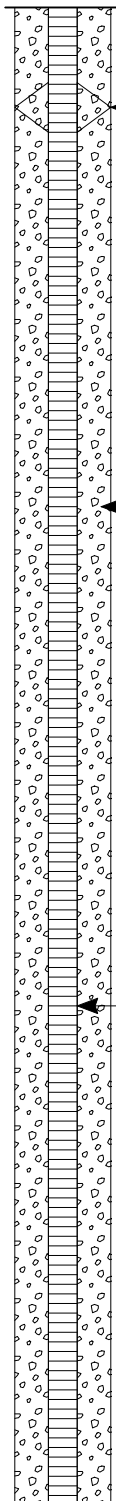
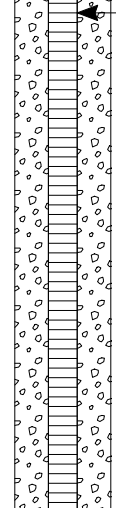
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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                  | Completion Detail                                                                                                                               |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                              |                                                                                                                                                 |
| 26     | 85   |                    |               |             |           | Refuse           |             | Black refuse. Wet.           |  <p>Centralizer</p> <p>2-inch Minus Round Rock Backfill</p> |
| 27     | 90   |                    |               |             |           |                  |             |                              |                                                                                                                                                 |
| 28     |      |                    |               |             |           |                  |             |                              |                                                                                                                                                 |
| 29     | 95   |                    |               |             |           |                  |             |                              |                                                                                                                                                 |
| 30     | 100  |                    |               |             |           |                  |             |                              |                                                                                                                                                 |
| 31     |      |                    |               |             |           |                  |             |                              |  <p>8-inch Dia. SCH 80 PVC Slotted Pipe</p>                |
| 32     | 105  |                    |               |             |           | SM-GM            |             | Grey silty, sandy soil. Wet. |                                                                                                                                                 |
| 33     | 110  |                    |               |             |           | Refuse           |             | Brown refuse. Wet.           |                                                                                                                                                 |
| 34     |      |                    |               |             |           |                  |             |                              |                                                                                                                                                 |
| 35     | 115  |                    |               |             |           |                  |             |                              |                                                                                                                                                 |

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                         | Completion Detail |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|-------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                     |                   |
| 115    |      |                    |               |             |          | Refuse           |             | Black, highly degraded refuse. Wet. | 115               |
| 36     |      |                    |               |             |          |                  |             |                                     |                   |
| 120    |      |                    |               |             |          |                  |             |                                     | 120               |
| 37     |      |                    |               |             |          |                  |             |                                     |                   |
| 38     |      |                    |               |             |          |                  |             |                                     |                   |
| 125    |      |                    |               |             |          |                  |             |                                     | 125               |
| 39     |      |                    |               |             |          | Refuse           |             | Black, highly degraded refuse. Wet. |                   |
| 130    |      |                    |               |             |          |                  |             | Bottom of boring.                   | 130               |
| 40     |      |                    |               |             |          |                  |             |                                     |                   |
| 41     |      |                    |               |             |          |                  |             |                                     | 135               |
| 42     |      |                    |               |             |          |                  |             |                                     |                   |
| 140    |      |                    |               |             |          |                  |             |                                     | 140               |
| 43     |      |                    |               |             |          |                  |             |                                     |                   |
| 44     |      |                    |               |             |          |                  |             |                                     |                   |
| 145    |      |                    |               |             |          |                  |             |                                     |                   |

Centralizer

2-inch Minus Round Rock Backfill

8-inch Dia. SCH 80 PVC Slotted Pipe

Cap (Soc)

Geotextile

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Bellevue, Washington 98005-1877

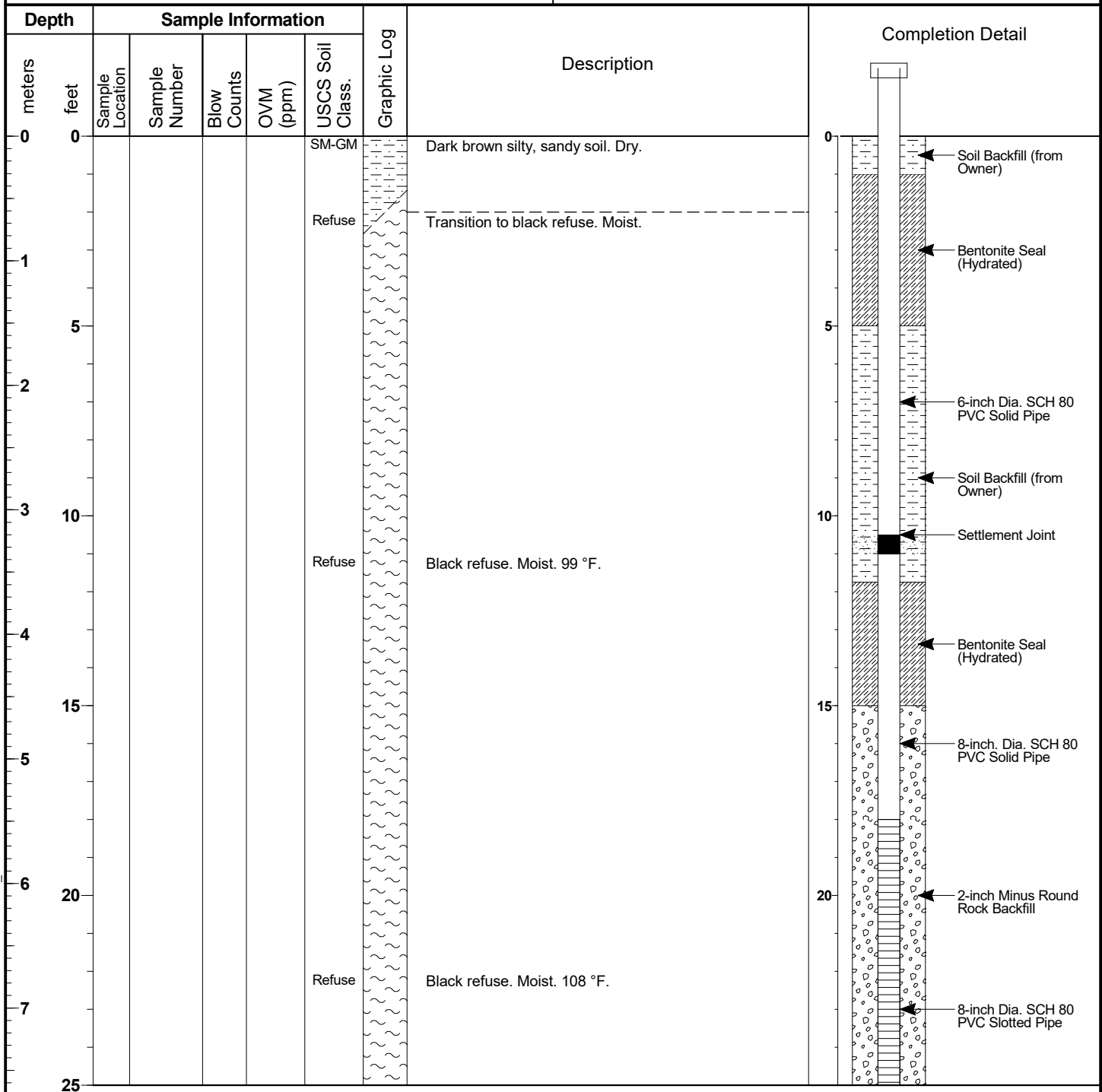
**BORING NUMBER: WE-244**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-798. Drawing ID: 2018-14



Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/17/18**

Date Ended: **7/17/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **08:26**

Time Ended: **14:47**

Total Depth: **130.0 ft.**

STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/7/18

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**BORING NUMBER: WE-244**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                  | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVN (ppm) | USCS Soil Class. |             |                              |                   |
| 8      | 25   |                    |               |             |           |                  |             |                              | 25                |
| 9      | 30   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 109 °F. | 30                |
| 10     | 35   |                    |               |             |           |                  |             |                              | 35                |
| 11     | 40   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 112 °F. | 40                |
| 12     | 45   |                    |               |             |           |                  |             |                              | 45                |
| 13     | 50   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 118 °F. | 50                |
| 14     | 55   |                    |               |             |           |                  |             |                              | 55                |

Centralizer

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

Centralizer

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                             | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|-----------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                         |                   |
| 17     | 55   |                    |               |             |           | Refuse           |             | Dark brown-black refuse. Moist. 121 °F. | 55                |
| 18     | 60   |                    |               |             |           |                  |             |                                         |                   |
| 19     |      |                    |               |             |           |                  |             |                                         |                   |
| 20     | 65   |                    |               |             |           |                  |             |                                         |                   |
| 21     | 70   |                    |               |             |           | Refuse           |             | Dark brown-black refuse. 123 °F.        |                   |
| 22     |      |                    |               |             |           |                  |             |                                         |                   |
| 23     | 75   |                    |               |             |           |                  |             |                                         |                   |
| 24     | 80   |                    |               |             |           |                  |             |                                         |                   |
| 25     |      |                    |               |             |           | Refuse           |             | Dark brown-black refuse. 126 °F.        |                   |
|        | 85   |                    |               |             |           |                  |             |                                         |                   |

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

Centralizer

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                           | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|---------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVN (ppm) | USCS Soil Class. |             |                                       |                   |
| 26     | 85   |                    |               |             |           |                  |             |                                       | 85                |
| 27     | 90   |                    |               |             |           | Refuse           |             | Black degraded refuse. Moist. 123 °F. |                   |
| 28     |      |                    |               |             |           |                  |             |                                       |                   |
| 29     | 95   |                    |               |             |           |                  |             |                                       | 95                |
| 30     |      |                    |               |             |           |                  |             |                                       |                   |
| 31     | 100  |                    |               |             |           | Refuse           |             | Black degraded refuse. Moist. 123 °F. |                   |
| 32     | 105  |                    |               |             |           |                  |             |                                       | 105               |
| 33     |      |                    |               |             |           |                  |             |                                       |                   |
| 34     | 110  |                    |               |             |           |                  |             |                                       | 110               |
| 35     | 115  |                    |               |             |           | Refuse           |             | Black degraded refuse. Moist. 128 °F. |                   |

2-inch Minus Round Rock Backfill

8-inch Dia. SCH 80 PVC Slotted Pipe

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                                                | Completion Detail |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|------------------------------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                                            |                   |
| 115    |      |                    |               |             |          |                  |             |                                                            | 115               |
| 36     |      |                    |               |             |          |                  |             |                                                            |                   |
| 120    |      |                    |               |             |          |                  |             |                                                            | 120               |
| 37     |      |                    |               |             |          | Refuse           |             | Light brown-black refuse with some compost (~10%). 123 °F. |                   |
| 38     |      |                    |               |             |          | Refuse           |             | Black, highly degraded refuse. Wet. 129 °F.                |                   |
| 125    |      |                    |               |             |          |                  |             |                                                            | 125               |
| 39     |      |                    |               |             |          |                  |             |                                                            |                   |
| 130    |      |                    |               |             |          | Refuse           |             | Black, highly degraded refuse. Wet. 122 °F.                |                   |
| 40     |      |                    |               |             |          |                  |             | Bottom of boring.                                          |                   |
| 41     |      |                    |               |             |          |                  |             |                                                            | 135               |
| 42     |      |                    |               |             |          |                  |             |                                                            |                   |
| 140    |      |                    |               |             |          |                  |             |                                                            | 140               |
| 43     |      |                    |               |             |          |                  |             |                                                            |                   |
| 44     |      |                    |               |             |          |                  |             |                                                            |                   |
| 145    |      |                    |               |             |          |                  |             |                                                            |                   |

Centralizer

2-inch Minus Round Rock Backfill

8-inch Dia. SCH 80 PVC Slotted Pipe

Cap (Soc)

Geotextile

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Bellevue, Washington 98005-1877

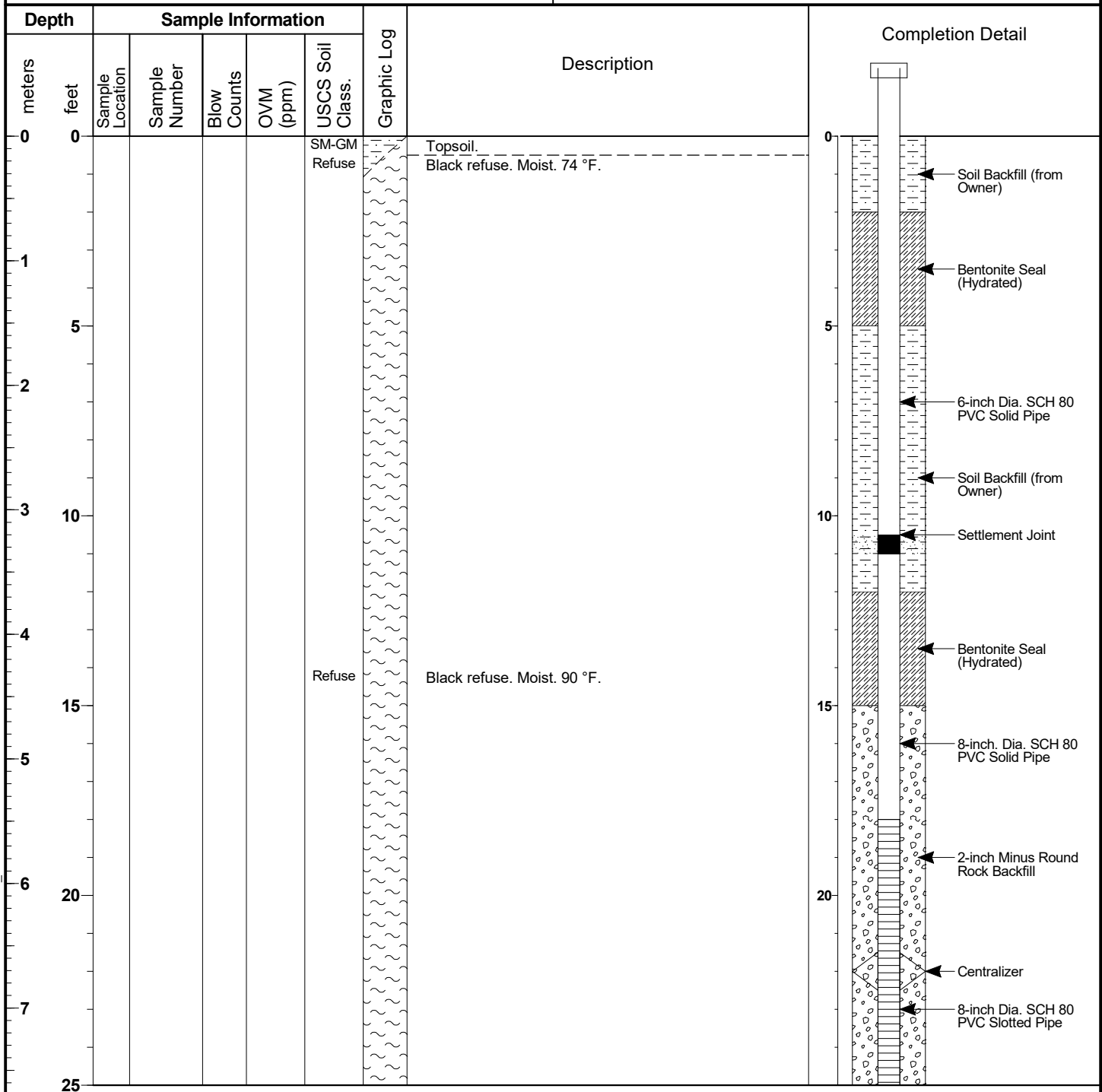
**BORING NUMBER: WE-245**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKM-796. Drawing ID: 2018-15



Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/13/18**

Date Ended: **7/13/18**

Boring Diameter: **36-inch**

Well Diameter: **8-inch**

Time Started: **08:16**

Time Ended: **16:30**

Total Depth: **127.0 ft.**

STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/7/18



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**BORING NUMBER: WE-245**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                   | Completion Detail                   |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|-------------------------------|-------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                               |                                     |
| 8      | 25   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 98 °F.   |                                     |
| 9      | 30   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 102 °F.  |                                     |
| 11     | 35   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 109 °F.  | 8-inch Dia. SCH 80 PVC Slotted Pipe |
| 12     | 40   |                    |               |             |           |                  |             |                               |                                     |
| 13     | 45   |                    |               |             |           |                  |             |                               | 2-inch Minus Round Rock Backfill    |
| 14     | 50   |                    |               |             |           |                  |             |                               |                                     |
| 15     | 55   |                    |               |             |           | SM-GM            |             | Black silty, sandy soil. Dry. | Centralizer                         |

STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/7/18

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|--------------------------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                            |                   |
| 55     | 17   |                    |               |             |           | Refuse           |             | Transition to black refuse. Moist. 111 °F. | 55                |
| 18     | 60   |                    |               |             |           |                  |             |                                            |                   |
| 19     |      |                    |               |             |           |                  |             |                                            |                   |
| 20     | 65   |                    |               |             |           | Refuse           |             | Black refuse. Moist. 118 °F.               | 65                |
| 21     | 70   |                    |               |             |           |                  |             |                                            |                   |
| 22     |      |                    |               |             |           |                  |             |                                            |                   |
| 23     | 75   |                    |               |             |           |                  |             |                                            | 75                |
| 24     | 80   |                    |               |             |           |                  |             |                                            |                   |
| 25     |      |                    |               |             |           |                  |             |                                            |                   |
| 85     |      |                    |               |             |           |                  |             |                                            | 85                |

8-inch Dia. SCH 80  
PVC Slotted Pipe

2-inch Minus Round  
Rock Backfill

Centralizer

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                | Completion Detail |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|----------------------------|-------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                            |                   |
| 26     | 85   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 133 °F. |                   |
| 27     | 90   |                    |               |             |           |                  |             |                            |                   |
| 28     |      |                    |               |             |           |                  |             |                            |                   |
| 29     | 95   |                    |               |             |           | Refuse           |             | Black refuse. Wet. 119 °F. |                   |
| 30     | 100  |                    |               |             |           |                  |             |                            |                   |
| 31     |      |                    |               |             |           |                  |             |                            |                   |
| 32     | 105  |                    |               |             |           |                  |             |                            |                   |
| 33     | 110  |                    |               |             |           |                  |             |                            |                   |
| 34     |      |                    |               |             |           |                  |             |                            |                   |
| 35     | 115  |                    |               |             |           |                  |             |                            |                   |

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                     | Completion Detail                                                                                                                        |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                                 |                                                                                                                                          |
| 115    |      |                    |               |             |           | Refuse           |             | Black refuse. Wet. 109 °F.                      | <p>Centralizer</p> <p>8-inch Dia. SCH 80 PVC Slotted Pipe</p> <p>Cap (Soc)</p> <p>2-inch Minus Round Rock Backfill</p> <p>Geotextile</p> |
| 36     |      |                    |               |             |           | Refuse           |             | Black refuse. Wet. 123 °F.<br>Bottom of boring. |                                                                                                                                          |
| 120    |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 37     |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 38     |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 125    |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 39     |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 130    |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 40     |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 41     |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 135    |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 42     |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 140    |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 43     |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 44     |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |
| 145    |      |                    |               |             |           |                  |             |                                                 |                                                                                                                                          |

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**BORING NUMBER: WE-246**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKS-053. Drawing ID: 6BSF-06

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                                                  | Completion Detail                       |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|------------------------------------------------------------------------------|-----------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                                                              |                                         |
| 0      | 0    |                    |               |             |           | SM-GM            |             | Brown silty, sandy soil. Moist.                                              |                                         |
|        |      |                    |               |             |           | Refuse           |             | Transition to multi-colored, recently placed refuse.                         | Soil Backfill (from Owner)              |
| 1      |      |                    |               |             |           |                  |             |                                                                              | Bentonite Seal (Hydrated)               |
| 5      |      |                    |               |             |           |                  |             |                                                                              | 6-inch Dia. SDR 11 HDPE Solid Pipe      |
| 2      |      |                    |               |             |           | Refuse           |             | Multi-colored, recently placed refuse. 75 °F.                                | Soil Backfill (from Owner)              |
| 3      | 10   |                    |               |             |           | Refuse           |             | Multi-colored, recently placed refuse, transitioning to brown. Moist. 80 °F. | Bentonite Seal (Hydrated)               |
| 4      |      |                    |               |             |           |                  |             |                                                                              | 2-inch Minus Round Rock Backfill        |
| 15     |      |                    |               |             |           |                  |             |                                                                              | 6-inch Dia. SDR 11 HDPE Perforated Pipe |
| 5      |      |                    |               |             |           | Refuse           |             | Light brown, recently placed refuse. Moist. 88 °F.                           | Cap (Soc) Geotextile                    |
| 6      | 20   |                    |               |             |           |                  |             |                                                                              |                                         |
| 7      |      |                    |               |             |           | Refuse           |             | Light brown, recently placed refuse. Moist. 85 °F.                           |                                         |
| 25     |      |                    |               |             |           |                  |             | Bottom of boring.                                                            |                                         |

Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/19/18**

Date Ended: **7/19/18**

Boring Diameter: **36-inch**

Well Diameter: **6-inch**

Time Started: **08:41**

Time Ended: **10:25**

Total Depth: **24.0 ft.**

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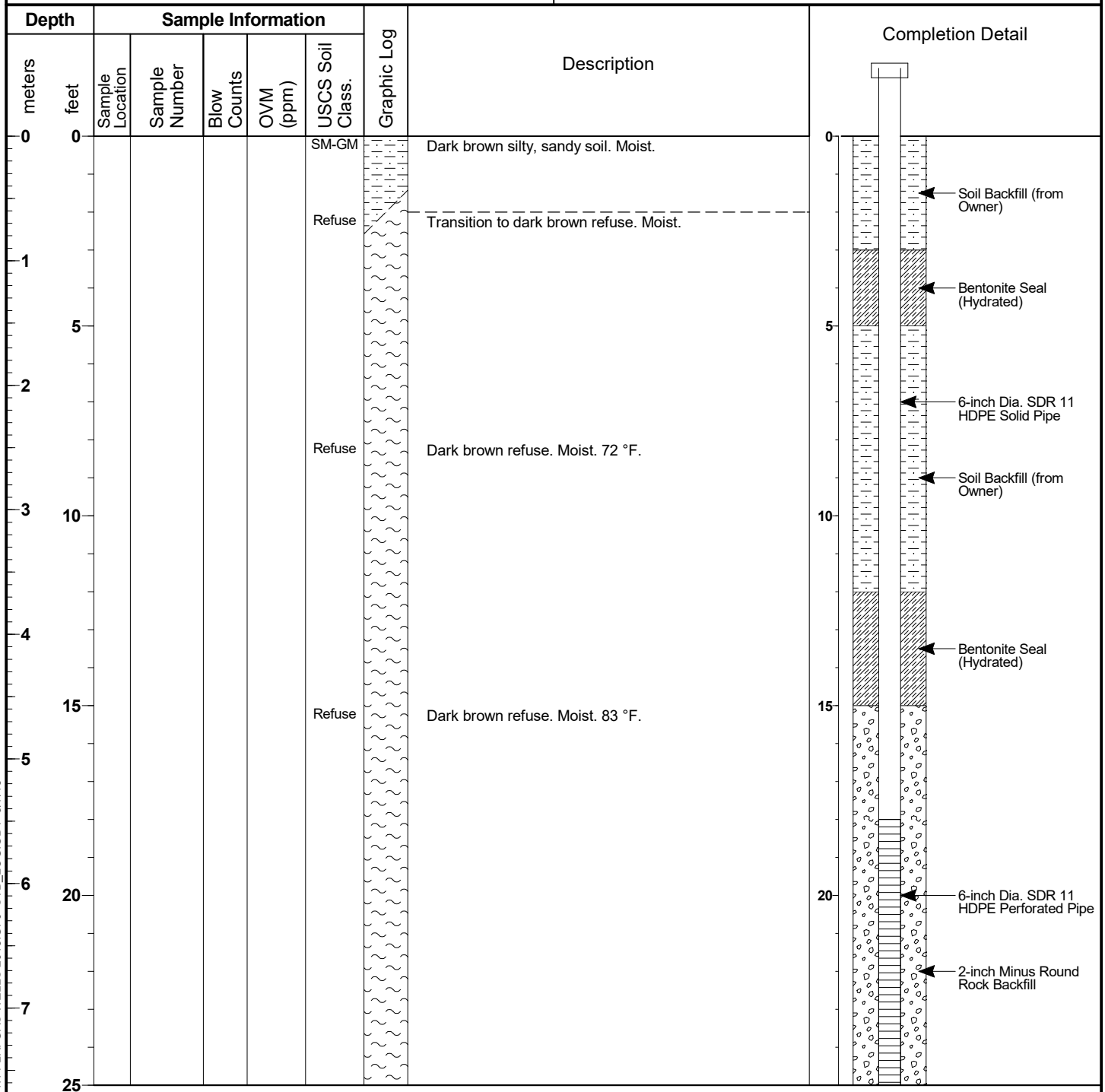
**BORING NUMBER: WE-247**

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**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKS-054. Drawing ID: 6BSF-08



Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/19/18**

Date Ended: **7/19/18**

Boring Diameter: **36-inch**

Well Diameter: **6-inch**

Time Started: **10:37**

Time Ended: **11:44**

Total Depth: **30.0 ft.**

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**BORING NUMBER: WE-247**

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**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |           |                  | Graphic Log | Description                                           | Completion Detail                                                                                                  |
|--------|------|--------------------|---------------|-------------|-----------|------------------|-------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OVM (ppm) | USCS Soil Class. |             |                                                       |                                                                                                                    |
| 8      | 25   |                    |               |             |           | Refuse           |             | Dark brown refuse. Moist. 88 °F.                      | <p>2-inch Minus Round Rock Backfill</p> <p>6-inch Dia. SDR 11 HDPE Perforated Pipe Cap (Soc)</p> <p>Geotextile</p> |
| 9      | 30   |                    |               |             |           | Refuse           |             | Dark brown refuse. Moist. 91 °F.<br>Bottom of boring. |                                                                                                                    |
| 10     | 35   |                    |               |             |           |                  |             |                                                       |                                                                                                                    |
| 11     | 40   |                    |               |             |           |                  |             |                                                       |                                                                                                                    |
| 12     | 45   |                    |               |             |           |                  |             |                                                       |                                                                                                                    |
| 13     | 50   |                    |               |             |           |                  |             |                                                       |                                                                                                                    |
| 14     | 55   |                    |               |             |           |                  |             |                                                       |                                                                                                                    |

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

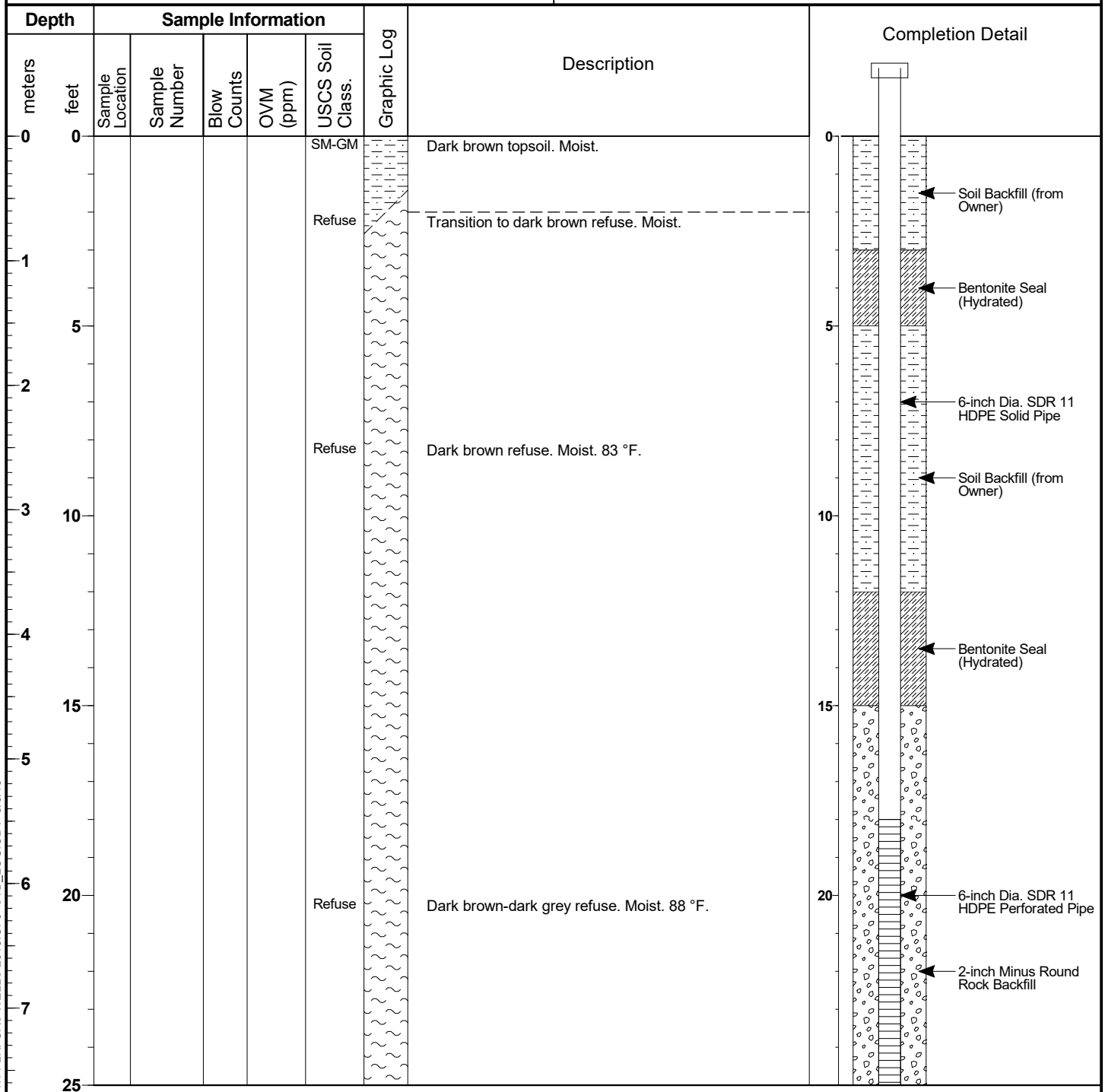
**BORING NUMBER: WE-248**

Page 1 of 2

**LRI, 2018 Gas System Expansion**  
**30919 Meridian St. East**  
**Graham, Washington**

**JOB NUMBER: 04218001.14**

REMARKS:  
Start Card BKS-055. Drawing ID: 6BSF-10



Drilling Company: **DBM Contractors, Inc.**

Drilling Method: **IMT AF 240**

Logged By: **T. Berndahl**

Date Started: **7/19/18**

Date Ended: **7/19/18**

Boring Diameter: **36-inch**

Well Diameter: **6-inch**

Time Started: **12:09**

Time Ended: **13:25**

Total Depth: **39.5 ft.**

STANDARD\_LOG\_04218001.14 LRI GAS WELLS 2018.GPJ STD\_LOG.GDT 8/8/18



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

**BORING NUMBER: WE-248**

Page 2 of 2

**LRI, 2018 Gas System Expansion**

**JOB NUMBER: 04218001.14**

| Depth  |      | Sample Information |               |             |          |                  | Graphic Log | Description                                                         | Completion Detail                       |
|--------|------|--------------------|---------------|-------------|----------|------------------|-------------|---------------------------------------------------------------------|-----------------------------------------|
| meters | feet | Sample Location    | Sample Number | Blow Counts | OM (ppm) | USCS Soil Class. |             |                                                                     |                                         |
| 8      | 25   |                    |               |             |          |                  |             |                                                                     |                                         |
| 9      | 30   |                    |               |             |          | Refuse           |             | Dark brown refuse with some dark brown compost. Moist. 98 °F.       | 6-inch Dia. SDR 11 HDPE Perforated Pipe |
| 10     | 35   |                    |               |             |          | Refuse           |             | Dark brown-black refuse with some dark brown compost. Moist. 88 °F. | 2-inch Minus Round Rock Backfill        |
| 11     | 40   |                    |               |             |          | Refuse           |             | Black refuse. Moist to wet.<br>Bottom of boring.                    | Cap (Soc)                               |
| 12     | 45   |                    |               |             |          |                  |             |                                                                     | Geotextile                              |
| 13     | 50   |                    |               |             |          |                  |             |                                                                     |                                         |
| 14     | 55   |                    |               |             |          |                  |             |                                                                     |                                         |



## Appendix I

### Financial Assurance Cost Estimates



**Table 1**  
**Estimated Closure Costs**  
**LRI Landfill, Pierce County, Washington**

December 19, 2018 Update

Total Acreage at Full Build-Out: 175.50 Acres  
 Remaining Closure at Full Build-Out: 141.66 Acres  
 Remaining Closure at Full Build-Out: 6,170,710 SF

| Item                                                | Description                                         | Unit   | Unit Price  | Quantity  | Cost                 |
|-----------------------------------------------------|-----------------------------------------------------|--------|-------------|-----------|----------------------|
| 1                                                   | Subgrade Preparation                                | SF     | \$ 0.10     | 6,170,710 | \$ 617,070.96        |
| 2                                                   | Bedding Layer                                       | SF     | \$ 0.45     | 6,170,710 | \$ 2,776,819.32      |
| 3                                                   | Geosynthetic Clay Liner                             | SF     | \$ 0.61     | 6,170,710 | \$ 3,764,132.86      |
| 4                                                   | Geomembrane - Micro DrainLiner                      | SF     | \$ 0.87     | 6,170,710 | \$ 5,368,517.35      |
| 5                                                   | Geotextile Filter                                   | SF     | \$ 0.21     | 6,170,710 | \$ 1,295,849.02      |
| 6                                                   | Vegetative / Topsoil Layer / (14-inch layer)        | SF     | \$ 0.65     | 6,170,710 | \$ 4,010,961.24      |
| 7                                                   | Erosion Control Blanket                             | SF     | \$ 0.14     | 6,170,710 | \$ 863,899.34        |
| 8                                                   | Hydroseed                                           | acre   | \$ 2,200.00 | 141.7     | \$ 311,652.00        |
| 9                                                   | Access Road (24 ft wide w/ 4-in asphalt layer)      | LF     | \$ 73.07    | 1,060     | \$ 77,454.20         |
| 10                                                  | Stormwater Ditches                                  | LF     | \$ 36.00    | 11,165    | \$ 401,940.00        |
| 11                                                  | 4-inch gas collection headers                       | LF     | \$ 29.14    | 1,500     | \$ 43,711.50         |
| 12                                                  | 6-inch gas collection headers                       | LF     | \$ 39.10    | 5,250     | \$ 205,275.00        |
| 13                                                  | 10-inch gas collection headers                      | LF     | \$ 51.42    | 1,600     | \$ 82,266.40         |
| 14                                                  | 12-inch gas collection headers                      | LF     | \$ 61.10    | 1,150     | \$ 70,264.43         |
| 15                                                  | 18-inch gas collection headers                      | LF     | \$ 110.89   | 1,060     | \$ 117,548.17        |
| 16                                                  | 24-inch gas collection headers                      | LF     | \$ 205.32   | 2,000     | \$ 410,642.00        |
| 17                                                  | Condensate Sumps                                    | EA     | \$ 3,500.00 | 8         | \$ 28,000.00         |
| 18                                                  | Vertical Gas Extraction Wells (avg. depth = 50 ft.) | EA     | \$ 6,500.00 | 100       | \$ 650,000.00        |
| Subtotal                                            |                                                     |        |             |           | \$ 21,096,004        |
| Mobilization @ 5.0%                                 |                                                     |        |             |           | \$ 1,054,800         |
| Sales Tax @ 7.9%                                    |                                                     |        |             |           | \$ 1,666,584         |
| Engineering and Construction Management @ 10.0%     |                                                     |        |             |           | \$ 2,109,600         |
| <b>Estimated Closure Cost:</b>                      |                                                     |        |             |           | <b>\$ 25,926,989</b> |
| Total Acreage at Full Build-Out:                    |                                                     | 175.50 |             |           |                      |
| Acreage with Final Closure through 2018:            |                                                     | 33.84  |             |           |                      |
| Acres Remaining to be Closed at Full Build-out:     |                                                     | 141.66 |             |           |                      |
| <b>Estimated Per Acre Unit Cost:</b>                |                                                     |        |             |           | <b>\$ 183,022.65</b> |
| Constructed Acreage through 2018:                   |                                                     | 105.54 |             |           |                      |
| Acreage Closed through 2018:                        |                                                     | 33.84  |             |           |                      |
| Remaining Acres to be Closed as of January 1, 2019: |                                                     | 71.70  |             |           |                      |
| <b>Estimated 2018 Closure Cost:</b>                 |                                                     |        |             |           | <b>\$ 13,122,724</b> |

Note: Closure acreages are corrected for actual slope areas.

Table 2

## Estimated Annual Post-Closure Costs

LRI Landfill, Pierce County, Washington

December 19, 2018 Update

Total Acreage at Full Build-Out: 175.50

Constructed Acreage through 2018: 105.54

| Description                                        | Frequency | Quantity  | Unit Cost    | Total Cost        |
|----------------------------------------------------|-----------|-----------|--------------|-------------------|
| <b>LDCRS Monitoring (8 sumps)</b>                  |           |           |              |                   |
| sample collection                                  | quarter   | 4         | \$ 1,659.00  | \$ 6,636.00       |
| laboratory testing                                 | quarter   | 4         | \$ 3,042.00  | \$ 12,168.00      |
| data analysis and reporting                        | quarter   | 4         | \$ 2,212.00  | \$ 8,848.00       |
| <b>Groundwater Monitoring</b>                      |           |           |              |                   |
| sample collection                                  | quarter   | 4         | \$ 6,637.00  | \$ 26,548.00      |
| laboratory testing                                 | quarter   | 4         | \$ 6,858.00  | \$ 27,432.00      |
| data analysis and reporting                        | quarter   | 4         | \$ 8,849.00  | \$ 35,396.00      |
| <b>Surface Water Monitoring</b>                    |           |           |              |                   |
| sample collection                                  | quarter   | 4         | \$ 608.00    | \$ 2,432.00       |
| laboratory analysis                                | quarter   | 4         | \$ 553.00    | \$ 2,212.00       |
| data analysis and reporting                        | quarter   | 4         | \$ 1,659.00  | \$ 6,636.00       |
| <b>Gas System Monitoring</b>                       |           |           |              |                   |
| surface emission monitoring                        | quarterly | 4         | \$ 1,106.00  | \$ 4,424.00       |
| probe monitoring                                   | month     | 12        | \$ 1,383.00  | \$ 16,596.00      |
| data analysis and reporting                        | annual    | 1         | \$ 22,124.00 | \$ 22,124.00      |
| <b>General Facility Maintenance</b>                |           |           |              |                   |
| gas system maintenance                             | annual    | 1         | \$ 2,651.00  | \$ 2,651.00       |
| gas flare replacement, 30 year amortization        | annual    | 1         | \$ 11,854.00 | \$ 11,854.00      |
| gas system operation                               | annual    | 1         | \$ 13,254.00 | \$ 13,254.00      |
| cover maintenance                                  | acre      | 105.54    | \$ 307.00    | \$ 32,400.78      |
| cover replacement & repair                         | annual    | 1         | \$ 2,651.00  | \$ 2,651.00       |
| sedimentation basin                                | annual    | 1         | \$ 3,064.00  | \$ 3,064.00       |
| ditch / erosion maintenance                        | annual    | 1         | \$ 1,325.00  | \$ 1,325.00       |
| buildings                                          | month     | 12        | \$ 307.00    | \$ 3,684.00       |
| equipment                                          | month     | 12        | \$ 307.00    | \$ 3,684.00       |
| <b>General Operating Expenses</b>                  |           |           |              |                   |
| administration                                     | month     | 12        | \$ 1,226.00  | \$ 14,712.00      |
| support services / accounting                      | month     | 12        | \$ 1,226.00  | \$ 14,712.00      |
| real estate taxes                                  | year      | 1         | \$ 49,034.00 | \$ 49,034.00      |
| electricity                                        | month     | 12        | \$ 1,190.00  | \$ 14,280.00      |
| legal                                              | year      | 1         | \$ 1,226.00  | \$ 1,226.00       |
| engineering                                        | year      | 1         | \$ 1,226.00  | \$ 1,226.00       |
| <b>Leachate System Operation &amp; Maintenance</b> |           |           |              |                   |
| pumps                                              | year      | 2         | \$ 4,069.00  | \$ 8,138.00       |
| collection pipe and force main                     | year      | 1         | \$ 2,543.00  | \$ 2,543.00       |
| storage and load facility                          | year      | 1         | \$ 2,543.00  | \$ 2,543.00       |
| trucking                                           | gal       | 1,000,000 | 0.03         | \$ 30,000         |
| treatment                                          | gal       | 1,000,000 | 0.04         | \$ 40,000         |
| <b>Estimated Annual Cost:</b>                      |           |           |              | <b>\$ 424,434</b> |

Notes: 1) LDCRS monitoring costs assume sample collection, lab testing, and reporting for 8 sumps (LDCRS-1, -2A, -2B, -3A, -4A, -4B, -5, and -6).

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 8 leachate sumps (LCRS-1, -2A, -2B, -3A, -4A, -4B, -5, and -6).

3) Surface water monitoring costs assume samples will be collected by LRI staff.



Appendix J

LRI Landfill 2018 Tonnage Report Form





# ANNUAL REPORT MUNICIPAL SOLID WASTE LANDFILL

|                                                                                                 |                                                       |                                                              |                            |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------|----------------------------|
| FACILITY NAME:<br><b>LRI Landfill</b>                                                           | CALENDAR YEAR OF REPORT: <b>2018</b>                  | PERMIT NUMBER:<br><b>27-050</b>                              | FACILITY ID:<br><b>484</b> |
| FACILITY LOCATION (street address):<br><b>30919 Meridian E., Graham, WA 98338</b>               | COUNTY:<br><b>Pierce</b>                              |                                                              |                            |
| FACILITY CONTACT (name):<br><b>Jim Crandall</b>                                                 | FACILITY PHONE:<br><b>(253) 875-5017</b>              |                                                              |                            |
| FACILITY CONTACT MAILING ADDRESS (if different):<br><b>17925 Meridian E. Puyallup, WA 98375</b> | FACILITY CONTACT PHONE (if different):<br><b>Same</b> | FACILITY CONTACT EMAIL:<br><b>JimCr@WasteConnections.com</b> |                            |

Did you operate in 2018 ?

☒ 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<br>Please check: <input type="checkbox"/> Cubic Yards or <input checked="" type="checkbox"/> Tons |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Municipal/Commercial Solid Waste          | 623,952                                                                                                           |
| <input checked="" type="checkbox"/> Construction/Demolition Waste             | 6,780                                                                                                             |
| <input checked="" type="checkbox"/> Yard Waste (disposed)                     | 49,631                                                                                                            |
| <input type="checkbox"/> Food Processing Waste (disposed)                     | 0                                                                                                                 |
| <input type="checkbox"/> Landclearing Debris                                  | 0                                                                                                                 |
| <input checked="" type="checkbox"/> Industrial Waste                          | 61,832                                                                                                            |
| <input type="checkbox"/> Inert Waste                                          | 0                                                                                                                 |
| <input type="checkbox"/> Wood Waste                                           | 0                                                                                                                 |
| <input checked="" type="checkbox"/> Ash (other than special incinerator ash)  | 29,382                                                                                                            |
| <input type="checkbox"/> Dredged Materials                                    | 0                                                                                                                 |
| <input checked="" type="checkbox"/> Sewage Sludge                             | 514                                                                                                               |
| <input checked="" type="checkbox"/> Asbestos                                  | 358                                                                                                               |
| <input type="checkbox"/> Petroleum Contaminated Soils                         | 0                                                                                                                 |
| <input checked="" type="checkbox"/> Other Contaminated Soils                  | 168,061                                                                                                           |
| <input checked="" type="checkbox"/> Tires (disposed)                          | 5,366                                                                                                             |
| <input checked="" type="checkbox"/> Medical Waste                             | 1,355                                                                                                             |
| <input checked="" type="checkbox"/> Other (specify): Sawdust                  | 527                                                                                                               |
| <input checked="" type="checkbox"/> Other (specify): Fluff                    | 158,186                                                                                                           |
| <input checked="" type="checkbox"/> Other (specify): Hog Fuel & Compost Overs | 56,723                                                                                                            |
| <b>Total</b>                                                                  | <b>1,162,667</b>                                                                                                  |



| DID YOU RECEIVE MATERIALS FOR RECYCLING? <input checked="" type="checkbox"/> Yes <u>(Please specify on pages 3-4.)</u> <input type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |                                                                                                                 |                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| ADDITIONAL INFORMATION (please check if attached):<br><input checked="" type="checkbox"/> Attach results of ground water monitoring in accordance with WAC 173-351-415(1). See LRI Landfill 2018 Annual Report<br><input checked="" type="checkbox"/> Attach applicable financial assurance information in accordance with WAC 173-351-600. See LRI Landfill 2018 Annual Report<br><input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            | Tip fees (Attach schedule if available):<br>MSW \$163.05 per ton                                                |                                                                                          |
| REMAINING PERMITTED CAPACITY:<br>In tons: <u>16,884,500</u><br>Estimated Date of Closure: <u>2037</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            | Are you planning an expansion this year?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |                                                                                          |
| ENERGY RECOVERY FROM LANDFILL:<br>Power Produced Annually <u>34,441,544</u> kilowatt hours<br><b>(Information provided by Emerald City Renewables, FACILITY ID: 3095)</b>                                                                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                 |                                                                                          |
| During the reporting year, were there any changes in your management practices that would impact your operations?<br><input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (specify) _____<br><br>Are there any new solid waste activities planned at your site for this calendar year? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (specify) _____<br>_____<br><br>Planned start date: _____                                                                                                                                                       |            |                                                                                                                 |                                                                                          |
| DID YOU RECEIVE MATERIALS FOR DISPOSAL FROM:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | WHERE FROM | TYPE OF WASTE                                                                                                   | ESTIMATE AMOUNT<br><input type="checkbox"/> Tons or <input type="checkbox"/> Cubic Yards |
| Out of County?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |                                                                                                                 |                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |                                                                                                                 |                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |                                                                                                                 |                                                                                          |
| Out of State?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                                                                 |                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |                                                                                                                 |                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |                                                                                                                 |                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |                                                                                                                 |                                                                                          |
| Out of Country?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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<br><u>RECYCLING or COMPOSTING</u>       | COMMERCIAL<br>Please check:<br><input type="checkbox"/> Cubic Yards/Year or<br><input checked="" type="checkbox"/> Scaled Tons/Year | RESIDENTIAL<br>Please check:<br><input type="checkbox"/> Cubic Yards/Year or<br><input type="checkbox"/> Scaled Tons/Year | TOTAL AMOUNT<br>RECEIVED<br>Please check:<br><input type="checkbox"/> Cubic Yards/Year or<br><input checked="" type="checkbox"/> Scaled Tons/Year |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Newspaper                                   |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Corrugated Paper                            |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Mixed Waste Paper                           |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Container Glass                             |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> PET Plastics                                |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> HDPE Plastics                               |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> LDPE Plastics                               |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Other Recyclable Plastics                   |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Aluminum Cans                               |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Tin Cans                                    |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input checked="" type="checkbox"/> Ferrous Metals (iron, steel)     | 7                                                                                                                                   |                                                                                                                           | 7                                                                                                                                                 |
| <input type="checkbox"/> Nonferrous Metals (excluding aluminum cans) |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Appliances (white goods)                    |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Electronics (computers, CPUs, hard drives)  |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Electronics (monitors, TVs)                 |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Tires (collected)                           |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Asphalt                                     |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Concrete                                    |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Construction/Demolition                     |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Wood Waste                                  |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Landclearing Debris                         |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Yard Debris                                 |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Food/Food Scraps                            |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Textiles (rags, clothing)                   |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Co-Mingled Recyclables (specify):           |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <input type="checkbox"/> Other (specify):                            |                                                                                                                                     |                                                                                                                           |                                                                                                                                                   |
| <b>Total</b>                                                         | <b>7</b>                                                                                                                            |                                                                                                                           | <b>7</b>                                                                                                                                          |

**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 |     |
|---------------------------------------------------------------------------------------|-----|
| 1                                                                                     | 2   |
| 3                                                                                     | 4   |
| 5                                                                                     | 6   |
| 7                                                                                     | 8   |
| 9                                                                                     | 10  |
| 11                                                                                    | 12  |
| 13                                                                                    | 14  |
| 15                                                                                    | 16  |
| 17                                                                                    | 18  |
| 19                                                                                    | 20  |
| 21                                                                                    | 22  |
| 23                                                                                    | 24  |
| 25                                                                                    | 26  |
| 27                                                                                    | 28  |
| 29                                                                                    | 30  |
| 31                                                                                    | 32  |
| 33                                                                                    | 34  |
| 35                                                                                    | 36  |
| 37                                                                                    | 38  |
| 39                                                                                    | 40  |
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| 43                                                                                    | 44  |
| 45                                                                                    | 46  |
| 47                                                                                    | 48  |
| 49                                                                                    | 50  |
| 51                                                                                    | 52  |
| 53                                                                                    | 54  |
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| 57                                                                                    | 58  |
| 59                                                                                    | 60  |
| 61                                                                                    | 62  |
| 63                                                                                    | 64  |
| 65                                                                                    | 66  |
| 67                                                                                    | 68  |
| 69                                                                                    | 70  |
| 71                                                                                    | 72  |
| 73                                                                                    | 74  |
| 75                                                                                    | 76  |
| 77                                                                                    | 78  |
| 79                                                                                    | 80  |
| 81                                                                                    | 82  |
| 83                                                                                    | 84  |
| 85                                                                                    | 86  |
| 87                                                                                    | 88  |
| 89                                                                                    | 90  |
| 91                                                                                    | 92  |
| 93                                                                                    | 94  |
| 95                                                                                    | 96  |
| 97                                                                                    | 98  |
| 99                                                                                    | 100 |

| MATERIAL                       | OUTGOING AMOUNT<br>Please specify tons or cubic yards. | DESTINATION FACILITY<br>Please specify name, city, state. | FINAL USE<br>Please specify: disposed, recycled, reused, composted, treated, burned for energy, stockpiled, etc. |
|--------------------------------|--------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Ferrous Metals (iron, steel)   | 7 Tons                                                 | Simon Metals Tacoma, Washington 98421                     | Recycle                                                                                                          |
|                                |                                                        |                                                           |                                                                                                                  |
|                                |                                                        |                                                           |                                                                                                                  |
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