SCS ENGINEERS







2017 Annual Report

Closed Leichner Landfill
Vancouver, Washington
Consent Decree 96-2-03081-7
Facility ID No. 1017

Prepared for:

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February 28, 2018
File No. 04218030.14

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A complete copy of this report is provided on the attached CD

1.0 INTRODUCTION

This report presents and evaluates the results of groundwater, stormwater, and landfill gas (LFG) compliance monitoring performed during 2017 at the closed Leichner Landfill located in Vancouver, Washington (Figure 1-1). The report also summarizes notable landfill maintenance, repair, and construction activities performed during 2017. SCS Engineers (SCS) performed the monitoring, maintenance, and repair activities and prepared this report on behalf of Clark County Public Health (County) and the Leichner Landfill Oversight Committee (LLOC), whose members include the County and City of Vancouver.

Compliance monitoring of groundwater, stormwater (i.e., surface water), and LFG is performed at Leichner Landfill to fulfill certain requirements of the 1996 Consent Decree and associated Cleanup Action Plan (CAP), as well as to concurrently fulfill the requirements of Leichner Landfill's post-closure monitoring under Minimum Functional Standards (MFS), Chapter 173-304 of the Washington Administrative Code (WAC).

Compliance monitoring is performed in accordance with the methods and procedures described in the site's Compliance Monitoring Plan (CMP) submitted to the Washington Department of Ecology (Ecology) and Clark County Public Health (CCPH) in July 2013 (SCS, 2013). The July 2013 CMP includes modifications to Leichner Landfill's monitoring programs approved by Ecology, as described in the 2013 annual report (SCS, 2014).

1.1 SITE DESCRIPTION

The Leichner Landfill is a closed, 70-acre municipal solid waste landfill located in Clark County, Washington, about 5 miles northeast of downtown Vancouver (see Figure 1-1). The landfill operated from the late 1930s until 1991. Landfill closure occurred in phases during the summer seasons of 1989, 1990, 1991, and 1992, and included an engineered composite cap, a landfill gas collection and control system (GCCS), and a stormwater collection and control system.

1.2 SITE HYDROGEOLOGY

The geology beneath the landfill site includes about 70 to 100 feet of alluvium, underlain by the upper member of the Troutdale Formation. The site hydrogeology consists of an approximately 10- to 40-foot thick unsaturated (vadose) zone, and an unconfined alluvial water-bearing zone (WBZ) which ranges in thickness from 35 to 45 feet. The alluvium generally consists of sand, and gravelly to silty sand. Underlying the alluvial WBZ is the upper member of the Troutdale Formation aquifer. The Troutdale Formation aquifer generally consists of sandy to cobbly gravel with minor amounts of silt and clay. The alluvial WBZ and Troutdale Formation aquifer are separated by a silt aquitard (sandy silt and clayey silt) east and south of the landfill. Southwest of the landfill, the silt aquitard is absent and the two aquifers are locally in hydraulic communication.

2.0 GROUNDWATER MONITORING

2.1 GROUNDWATER MONITORING NETWORK AND SCHEDULE

The groundwater monitoring network at the Leichner Landfill is comprised of monitoring wells screened in different depth-discrete zones in the alluvial WBZ and in the Troutdale Formation aquifer. The monitoring well locations are shown in Figure 2-1. The following describes the nomenclature used for monitoring well network components:

- Wells that monitor groundwater elevation and quality in the upper portion of the alluvial WBZ are denoted with an "S" in the well number (e.g., well LB-1S).
- Wells that monitor groundwater elevation and quality in the middle (or intermediate) portion of the alluvial WBZ are denoted with an "I" in the well number (e.g., LB-27I).
- Wells that monitor groundwater elevations and quality in the deeper Troutdale Formation aquifer are denoted with a "D" in the well number (e.g., well LB-1D).

The site groundwater monitoring wells were sampled annually or semiannually in 2017. Groundwater samples were collected from the following 18 wells during the annual monitoring event conducted in March 2017: LB-1S, LB-1D, LB-3S, LB-3D, LB-5S, LB-5D, LB-6S, LB-10SR, LB-10DR, LB-13I, LB-13D, LB-17I, LB-17D, LB-20S, LB-26I, LB-26D, LB-27I, and LB-27D. Groundwater samples were collected from the following seven wells during the semiannual monitoring event conducted in August 2017: LB-1S, LB-5S, LB-6S, LB-10SR, LB-13I, LB-26I, and LB-27I.

Field water-quality parameters (temperature, pH, specific conductance, dissolved oxygen) were monitored during sampling and recorded on field sampling data sheets (FSDSs) provided in Appendix A. Historical field parameter monitoring results are provided in Appendix B (see Table B-1).

Groundwater samples collected from the site monitoring wells were analyzed by TestAmerica Laboratories, Inc., (TAL) in Tacoma, Washington, for nitrate as nitrogen (nitrate), total dissolved solids (TDS), chloride (Cl), dissolved iron (Fe), dissolved manganese (Mn), and volatile organic compounds (VOCs), consistent with methods specified in the CMP (SCS, 2013). Laboratory analytical data reports are provided in Appendix C (included on the attached compact disk [CD]).

2.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Static depth-to-groundwater levels were measured on March 16 and August 15, 2017, and converted to groundwater elevations for interpreting groundwater potentiometric surface contours and groundwater flow in the alluvial WBZ and the Troutdale Formation water-bearing zones (see Figures 2-2 through 2-5). Groundwater elevation data are summarized in Appendix D, along with historical elevations.

Groundwater flow in the alluvial WBZ was generally towards the west to southwest (see Figures 2-2 and 2-4). Groundwater flow in the Troutdale Formation aquifer was generally towards the south (see Figures 2-3 and 2-5). The 2017 groundwater flow directions are consistent with historical interpretations of groundwater flow at Leichner Landfill.

Groundwater elevation hydrographs are provided in Appendix D. The 2017 groundwater elevation data are generally within the range of elevations measured historically and continued to show minor seasonal variations in some site wells. Differences in groundwater elevations in adjacent well pairs screened in the alluvial WBZ and Troutdale Formation aquifer (see groundwater elevation data and hydrographs in Appendix D) appear to be influenced by the presence of the silt aquitard (sandy silt and clayey silt). Where the silt aquitard is present east and south of the landfill (e.g., at existing well pair LB-5S/LB-5D south of the landfill), groundwater elevations are about 20 to 25 feet higher in the alluvial WBZ indicating hydraulic separation exists between the two groundwater zones. Monitoring well pairs located southwest of the landfill (i.e., at wells LB-1S/LB-1D, LB-13I/LB-13D, and LB-26I/LB-26D), where the silt aquitard is thin or absent, exhibited much smaller differences in groundwater elevations indicating that the two groundwater zones exhibit some degree of hydraulic connection.

2.3 DATA QUALITY REVIEW

Groundwater monitoring field quality control/quality assurance (QA/QC) procedures included collecting field duplicate samples, field blanks, equipment blanks, and carrying trip blanks into the field. Laboratory QA/QC procedures included analyzing surrogate spikes, method blanks, matrix spikes, and matrix spike duplicates. The laboratory QA/QC results are included with the laboratory reports. TAL incorporated its laboratory data quality review comments in the QA/QC narrative of each laboratory report (see Appendix C).

SCS reviewed field and laboratory data and QA/QC procedures to evaluate whether the data met U.S. Environmental Protection Agency (EPA) quality control requirements (see Appendix E). The QA/QC reviews indicated that the groundwater analytical data were acceptable for their intended use.

2.4 GROUNDWATER QUALITY RESULTS

Laboratory analytical results of groundwater samples collected from site monitoring wells in 2017 continue to indicate that there are little or no adverse effects on groundwater quality from the closed Leichner Landfill. Groundwater monitoring results supporting this conclusion are discussed in this section of the report and include the following:

- Laboratory results did not detect VOCs at concentrations above method reporting limits (or above compliance levels).

- The concentrations of most inorganic indicator parameters in groundwater samples collected from monitoring wells located downgradient of the former waste cells (1) are below regulatory compliance levels, with only a few exceptions, and (2) have either remained generally stable or showed decreasing trends.

2.4.1 Volatile Organic Compounds

No VOCs were detected above the laboratory method reporting limits (MRLs) in the groundwater samples collected in the first and third quarter 2017, including VOCs for which compliance levels were established in the 1996 Consent Decree and that are still part of the analytical testing program (i.e., 1,4-dichlorobenzene, tetrachloroethene, and trichloroethene) (see Appendix B, Table B-2).[1]

The 2017 VOC analytical results continued to demonstrate that the post-closure measures implemented at the closed Leichner Landfill (i.e., maintenance of the engineered landfill cap, operation of the GCCS, and stormwater controls) are effective at decreasing VOC concentrations to levels below the MRLs.

2.4.2 Inorganic Parameters and Dissolved Metals

The 2017 and historical analytical data for the inorganic parameters (nitrate, Cl, and TDS) and dissolved metals (Mn and Fe) are summarized in Appendix B (see Table B-3), and time-concentration diagrams for these parameters are provided in Appendix F. The 2017 groundwater analytical results for inorganic parameters and dissolved metals were generally consistent with historical data.

The 2017 laboratory analytical results indicated that Fe and/or Mn concentrations were above their respective compliance levels in groundwater collected from a few wells located downgradient and in close proximity to the landfill (i.e., LB-17I, LB-17D, and LB-20S), and also Fe at well LB-27I. However, Fe and/or Mn concentrations detected above the compliance levels in groundwater collected from these wells may be attributed, in part, to localized variations in natural groundwater chemistry, as previously reported to Ecology, based on the following:

- The concentrations of other leachate indicator parameters, including TDS and Cl, have not shown increasing or elevated concentrations in groundwater collected from these wells.

- Fe and Mn have occasionally been detected at concentrations above the compliance levels in groundwater samples collected from cross-gradient wells LB-3S, LB-5S, and LB-10SR (see Figures 2-2 and 2-4) screened in the shallow alluvium WBZ (see time-concentration diagrams in Appendix F).

- Fe concentrations in groundwater samples collected from well LB-20S since 2006 have shown significant variability and have typically been below the compliance level, with occasional concentrations above the compliance level.

- Concentrations of Fe and/or Mn in monitoring wells located hydraulically downgradient of LB-17I/17D (i.e., LB-6S, LB-13I/13D, and LB-26I/26) and well LB-20S (i.e., LB-1S/1D) are either below laboratory MRLs or significantly lower than concentrations detected in

[1] Laboratory analysis of two additional VOCs with established compliance levels, vinyl chloride and 1,1-dichloroethene, was discontinued in 2013 as approved by Ecology (Ecology, 2013) because after two years of testing for these two VOCs using a low-level EPA Method 8260B, these compounds were not detected above their respective compliance levels.

groundwater samples collected from LB-17I/17D and LB-20S. Additionally, Fe and Mn concentrations in these downgradient compliance wells have remained stable throughout most of their extensive monitoring history.

It should be noted that Fe concentrations in samples collected from well LB-27I have been historically above the compliance level but very stable since monitoring began at this well in 1996, ranging from approximately 0.1 to 0.5 milligrams per liter (mg/L).

2.4.2.1 *Statistical Analysis of Groundwater Analytical Data*

Leichner Landfill groundwater quality data from 2012 to 2017 for inorganic parameters (nitrate, Cl, and TDS) and dissolved cations (Mn and Fe) were statistically evaluated using the MTCA Stat 97 program.[2] The program identifies if the data show a normal, lognormal, or non-parametric distribution. For normally and lognormally distributed data, the 95th percent upper confidence limit (UCL-95) of the mean was calculated. For distributions that were non-parametric (i.e., data not distributed normally or lognormally), data values were ranked and an estimate of the UCL-95 was determined using the Van der Parren method, as described in Statistical Guidance for Ecology Site Managers (Ecology, 1992). For non-parametric data, the Van der Parren method defaults to the highest reported value.

The MTCA Stat97 program utilizes the Land Method for calculating the UCL-95 of the mean for lognormally distributed data. The Land Method is sensitive to data distributions that deviate from lognormal. If variance or skewness is large (U.S. Environmental Protection Agency [EPA], 2002), the method may commonly yield estimated UCL-95 values that are greater than predicted for data distributions are not truly lognormal (i.e., non-parametric data). When sample sizes are small and the variance is large, the method can be impractical. This resulted in UCL-95 values that exceeded the range of concentrations for the following inorganic parameters and monitoring wells: (1) Cl data for well LB-20S, (2) nitrate data for well LB-10DR, and (3) TDS data for wells LB-1D and LB-3D. In these cases, the highest reported values from the last 5 monitoring years (2013 to 2017) were selected (see Table 2-1).

Table 2-1 provides a summary of calculated UCL-95 of the mean values, along with groundwater compliance levels established in the Consent Decree and CAP. The following summarizes the results of the statistical evaluation:

- The calculated UCL-95 values for nitrate, Cl, and TDS were below their respective compliance levels.

- The calculated UCL-95 values for dissolved Fe were below the compliance of 0.3 mg/L, except the values for groundwater from well LB-17I (9.2 mg/L), LB-20S (0.5 mg/L), and LB-27D (1.4 mg/L).

[2] MTCA Stat97 was obtained from Ecology's website: http://www.ecy.wa.gov/programs/tcp/tools/Mtca.exe.

- The calculated UCL-95 values for dissolved Mn were below the compliance level of 0.05 mg/L, except the values for groundwater from wells LB-17I (1.4 mg/L), LB-17D (4.3 mg/L), LB-20S (3.0 mg/L), LB-27I (0.4 mg/L), and LB-27D (1.1 mg/L).

2.4.2.2 *Trend Analysis of Groundwater Data*

In addition to the statistical evaluation described in Section 2.4.2.1, time-series concentration plots were generated for each of the inorganic parameters tested (see Appendix F). The time-concentration plots were evaluated visually to assess whether groundwater parameter concentrations have increased, decreased or remained stable.

Inorganic parameter concentrations in groundwater samples collected from alluvial WBZ wells and Troutdale Formation wells show either generally stable or decreasing trends, except for nitrate concentrations in samples collected from wells LB-10DR, LB-26I, and LB-27D. Changes in nitrate concentrations detected in these wells are believed to be reflective of natural (i.e., non-landfill-impacted) groundwater conditions. It should be noted that the maximum detected nitrate concentrations in groundwater collected from these well are below the regulatory compliance level of 10 mg/L.

It is also noteworthy that Cl, TDS, Fe, and Mn in groundwater collected from wells LB-17I, LB-17D, and LB-20S located downgradient and in close proximity to the former landfilling areas exhibit pronounced decreasing concentration trends generally from about 1991 and 2001 (see time-concentration plots in Appendix F). These decreasing concentration trends were likely in response to the construction, operation, and maintenance of Leichner Landfill's post-closure systems, including the landfill cover system and the stormwater control and collection system, which significantly reduced the potential for leachate to be generated. The concentrations of these inorganic parameters in groundwater samples collected from these wells have remained relatively constant since about 2001 (except for Cl in well LB-20S as noted above). Additionally, as was previously discussed, the concentrations of these inorganic parameters in groundwater collected from monitoring wells downgradient of LB-17I/17D and LB-20S are substantially lower, and have remained stable throughout their extensive monitoring history (see time-concentration diagrams in Appendix F)

3.0 STORMWATER MONITORING

Ecology issued a renewed General Permit (No. WAR005572B) for industrial facilities, which became effective January 1, 2010, and allowed Leichner Landfill to continue to discharge stormwater from the facility to nearby Curtin Creek. Ecology issued a modified Industrial Stormwater General Permit (ISGP) that became effective date of January 2, 2015. In accordance with the ISGP and on behalf of the County, an updated Storm Water Pollution and Prevention Plan (SWPPP) was prepared in June 2017 (SCS, 2017a) to comply with changes made by Ecology to the Industrial Stormwater General Permit. A copy of the SWPPP is kept at the site.

Stormwater monitoring activities at the facility (described in this section) are performed consistent with the methods and schedule described in the ISGP and SWPPP.

3.1 STORMWATER MONITORING NETWORK AND SCHEDULE

3.1.1 Quarterly Stormwater Monitoring Station

One stormwater discharge location (designated Outfall 1) has been established for the Leichner Landfill. Outfall 1 is located at the pump station at the northern end of the North Detention Pond (see Figure 3-1) and receives stormwater runoff from the closed landfill surfaces. Stormwater discharge at the North Detention Pond pumps (i.e., Outfall 1) are water-level float activated or can be manually activated at the pump control box. If the Outfall 1 pumps are not activated by the water-level in the North Detention Pond during quarterly monitoring, then SCS manually turns on the pumps to collect a stormwater discharge sample.

Quarterly stormwater samples were collected for laboratory analyses at Outfall 1 in February, April, September, and October 2017. The stormwater samples were analyzed by TAL for permit-required parameters including turbidity, pH, total copper and zinc.

3.1.2 Monthly Visual Inspection

SCS performed monthly visual inspections in 2017 during storm events, if any occurred in a given month that could result in stormwater being potentially discharged at Outfall 1. The inspections included examining stormwater discharge at Outfall 1 (if observed) and inspecting the stormwater conveyance system (drainage ditches and culverts) and areas where equipment and materials are stored (primarily the blower-flare station [BFS]). Observations were documented on a SWPPP monthly inspection form.

3.2 STORMWATER MONITORING RESULTS

Stormwater discharge monitoring reports (DMRs) presenting the analytical results of quarterly stormwater samples collected in 2017 were submitted to Ecology on a quarterly basis using the Ecology WebDMR submittal system. The quarterly DMRs were submitted via WebDMR on March 31, May 8, July 28, and October 20, 2017. The analytical results of stormwater samples collected in 2017 showed that stormwater quality benchmark concentrations specified in the ISGP were not exceeded.

4.0 LANDFILL GAS MONITORING

A GCCS was initially installed at the Leichner Landfill in 1978 in response to offsite migration of LFG. The system has been modified several times over the years, including installation of a single, smaller enclosed flare station in 2007 in response to decreasing methane production. The current GCCS includes a LFG extraction well field with 102 gas extraction wells, a condensate collection system, a LFG blower and flare, and an integrated remote monitoring and control (RMC) system that monitors the operation and performance of the BFS and other components of the GCCS and stormwater collection system. The GCCS components are shown in Figure 4-1.

Compliance LFG monitoring at Leichner Landfill is performed to (1) fulfill compliance monitoring requirements in LFG monitoring probes along the perimeter of the landfill, (2) evaluate and adjust (i.e., balance) the LFG extraction well network, and (3) assess the performance and efficiency of the GCCS, including the LFG flare and blower.

4.1 COMPLIANCE LFG MONITORING PROBE NETWORK AND SCHEDULE

The LFG compliance monitoring network is comprised of 50 probes located along the perimeter of the landfill property boundary to monitor subsurface LFG migration, and in areas within the property, to more closely monitor the performance of the GCCS (see Figure 4-1). Compliance LFG monitoring probes constructed as dual-completion probes (i.e., a shallow and deep probe constructed within the same borehole) are designated with an "A" for the shallow probe and "B" for the deep probe. Compliance LFG monitoring probes with the same probe number but constructed in different boreholes are designated with an "S" for the shallow probe and "D" for the deep probe.

Compliance LFG monitoring was performed quarterly in 2017 (March, June, September, and December).[3]

4.2 COMPLIANCE LFG MONITORING RESULTS

The compliance LFG monitoring probe data for 2017 are provided in Appendix H (Table H-1). The data indicated that methane concentrations were below the MFS (Chapter 173-304 WAC) regulatory limit of 5 percent methane (by volume) in the site perimeter compliance probes, except for initial measurements in LFG probe GP-7 during the June 2017 quarterly monitoring event. In response to this exceedance, adjustments to the GCCS LFG extractions wells in the vicinity of these probes were performed and the probes were re-monitored. The re-monitoring data showed that methane concentrations were below the regulatory limit in both probes typically within a few days of the initial measurements (see Table H-1).

[3] Ecology approved modifying the compliance monitoring of the LFG perimeter probes from monthly to quarterly in 2011 (Ecology, 2011).

4.3 LFG EXTRACTION WELLS

The LFG extraction wells (see Figure 4-1) were monitored and adjusted (balanced) semi-monthly (twice a month) during 2017 to maintain balanced and efficient LFG extraction rates. There were no significant problems or concerns noted during monitoring and adjustment of the LFG extraction wells.

4.4 LFG FLARE MONITORING

The LFG flare system is operated pursuant to Air Discharge Permit (ADP) 07-2714 issued by the Southwest Clean Air Agency (SWCAA) on February 15, 2007. The LFG flare system was monitored regularly (typically on a weekly basis) in 2017 and continuous through the facility's RMC. The monitored parameters include LFG composition, static pressure, flow rate, and temperature measured at the flare inlet. In addition, the flare operating temperature was also measured and recorded. The flare system is equipped with a continuous monitoring system, which measures and records the flare operating temperature, inlet LFG flow rate, and inlet LFG oxygen concentration. The data are stored and periodically downloaded for permanent recordkeeping.

In accordance with the ADP, an initial emissions source test was conducted on May 15, 2007, and is required to be re-tested every 5 years, including in 2017. As such, SCS coordinated with SWCAA to conduct a flare emission source test to satisfy ADP requirements. The source test was conducted by Montrose Air Quality Services on April 11, 2017 with oversight and support from SCS Field Services technicians. The results of the source testing determined that the flare was operating within the specified emission limits required under ADP 07-2714. A source evaluation report summarizing the test results was submitted to SWCAA on June 7, 2012 (SCS, 2012b).

To meet the annual reporting requirements of the ADP, a separate 2017 annual flare emissions estimate report will be submitted to the SWCAA on or before March 15, 2018. The report will present flare monitoring data and evaluate flare performance in 2017.

4.5 GREENHOUSE GAS MONITORING

In November 2013, SCS completed an evaluation to determine if the Leichner Landfill is required to report greenhouse gas (GHG) monitoring results (and perform future weekly GHG monitoring) pursuant to the state of Washington GHG rule based on emissions data collected in 2013. The evaluation showed that the Leichner Landfill is exempt from GHG reporting (and from future weekly monitoring) per the Washington State's GHG Rule. Consequently, weekly GHG monitoring was suspended beginning in January 2014.

4.6 EVALUATION OF GCCS PERFORMANCE AND CONCEPTUAL REDESIGN OF GCCS

The GCCS at the Leichner Landfill will require future upgrades to operate efficiently. To that end, a project was initiated in 2015 and is on-going (conducted by SCS) that focuses on collecting performance data of the LFG extraction wells and BFS to support developing options for redesigning and upgrading the GCCS. The scope of work includes reviewing and understanding the existing

GCCS well field system and BFS and assessing whether additional monitoring and performance data needed to be collected to facilitate a redesign of the system. In general, whenever an existing system is upgraded, retrofitted, and/or replaced, the level of effort for the design is much greater than if a system is designed from scratch because of the coordination/tie-ins to the existing infrastructure.

The 2015 Annual Report (SCS, 2016) first described significant activities performed to evaluate the existing GCCS well field system and BFS. The scope of this effort involved collecting LFG flow data from 50 of the site's 102 LFG extraction wells. Deeper gas wells located in the interior of the landfill were targeted for flow monitoring because they are expected to collect more gas and have higher flow rates. The perimeter gas wells, in generally, are shallower, and will not collect as much landfill gas (i.e., lower flow rates) due to their proximity to native soil and potential to facilitate air intrusion. This work was ongoing in 2017.

Additional activities performed by SCS in 2017 related to assessing the performance of the GCCS and proposing upgrades to the system included the following:

- Revised the engineering design report for the GCCS design upgrade project that involve modifications to the LFG collection well network and replacing the above ground polyvinyl chloride (PVC) piping and well heads.

- Reviewed May 2016 to April 2017 LFG monitoring and flare operations data in support of the GCCS upgrade design project that involves modifying the LFG collection well network and replacing the above ground polyvinyl chloride (PVC) piping and well heads.

- Evaluated current (annual) O&M costs for operating the GCCS and included the information in the revised engineering report for the GCCS upgrade project.

- Finalized and submitted to the County a final report of the GCCS upgrade design project that involves modifying the LFG collection well network and replacing the above ground polyvinyl chloride (PVC) piping and well heads.

- Prepared and submitted to the County a final report dated October 26, 2017 (SCS, 2017b) presenting design options for upgrading the GCCS, including preliminary engineering design drawings and construction cost estimates. Based on discussion with the County, SCS also prepared revised engineering design drawings and cost estimates for an additional GCCS design upgrade scenario that involved modifications to the LFG collection well network and replacing the above ground PVC piping and well heads.

5.0 MAINTENANCE AND REPAIR OF LANDFILL POST-CLOSURE SYSTEMS

5.1 ROUTINE ACTIVITIES

Routine operations, maintenance, and repair of the GCCS and stormwater collection and control system performed in 2017 included the following:

- Performing checks and making adjustments to the operational settings of the LFG flare system as necessary.
- Performing maintenance and repairs (as needed) of the LFG flare system, condensate collection system, including the condensate sumps, airlines, discharge lines, and compressors.
- Performing minor maintenance and repairs (as needed) of the LFG extraction wells and conveyance piping (e.g., repair of hoses, fittings, and valves).
- Conducting semi-monthly adjustments (i.e., balancing) to the north and south LFG extraction wells field.
- Performing general maintenance of the (1) North and South Detention Pond pumps, (2) air compressor for the condensate collection and Module 2 stormwater pumping systems, and (3) Module 2 stormwater recovery system.
- Coordinating periodic pumping and disposal of condensate from the site condensate tank.
- Reviewing and uploading the LFG extraction well monitoring data and compliance probe monitoring data into SCS's site-specific DataServices database for the Leichner Landfill project.

Other noteworthy non-routine maintenance, repair, and replacement activities related to the Leichner Landfill's post-closure systems and equipment performed in 2017 are described below.

5.2 NON-ROUTINE ACTIVITIES

5.2.1 First Quarter 2017

- Obtained a bid to repair a backup diaphragm pump for the Phase 2 stormwater pumping vault. The bid was submitted to the County for approval.
- Performed troubleshooting and modifications to the remote monitoring control (RMC) system to fix problems transmitting North Detention Pond pumping and water level data.

- Prepared and submitted to the County on March 1, 2017, a draft 2016 Annual Flare Emission Estimate for review/comment. Submitted a final report to the Southwest Clean Air Agency (SWCAA) on March 9, 2017.

- Performed planning and coordination for a flare emissions source test (in April 2017). Activities including preparing a source test work plan (prepared by Montrose Engineering and reviewed by SCS) dated March 21, 2017 and submitting the plan to the SWCAA for approval. SWCAA approved the work plan on March 21 via an email correspondence.

- Resurveyed the top-of-casing elevation of monitoring well LB-3S because it was modified from an aboveground completion to flush-mount completion during the 94th Avenue enhancement project in 2016. The top-of-casing elevations of three additional monitoring wells were also resurveyed as part of this activity.

5.2.2 Second Quarter 2017

- Prepared for and performed a flare emissions source test on April 11, 2017. The test was conducted by Montrose Air Quality Services with oversight and support from SCS Field Services technicians.

- Evaluated and performed as-needed access modifications to select LFG extraction wells for installation of new wellheads.

- Prepared and submitted to the Southwest Clean Air Agency (SWCAA) on May 25, 2017, a report presenting and interpreting the results of the flare emissions source test (performed in April 2017).

- Measured the liquid levels in the LFG extraction wells and evaluated the integrity the well casing in June.

5.2.3 Third Quarter 2017

- Removed the South Detention Pond pump and entered the South Detention Pond vault to obtain pump specification information.

- Performed minor repair of the electrical panels for North Detention Pond pumps and flare station.

- Procured and transported two drums and overpacks to the site to be used to store liquids drained from the air compressor.

- Repaired and improved drainage of the stormwater ditch that runs along the base of the south-facing side slope along the former Module 5, north of the BFS. Activities performed included (1) scheduling equipment and materials, (2) performing excavation activities, (3) examining and evaluating ditch liner construction, and condition, and (4) restoring the ditch to closure design specifications.

- Removed debris from the North Detention Pond.

- Participated in a meeting on September 27, 2017 with Clark County Public Works (CCPW) 99th Street extension project team to discuss design strategies and options for modifying the Landfill's stormwater management system to accommodate construction of the 99th Street extension project.

5.2.4 Fourth Quarter 2017

- Coordinated disposal of LFG condensate stored in condensate holding tank with subcontractor.

- Coordinated and met with subcontractor for servicing of the air compressor for the LFG condensate pumps.

- Performed grass cutting along the perimeter of the property boundary.

- Participated in a meetings on October 19, 2017, with CCPW's 99th Street extension project team to discuss design strategies and options for modifying the Landfill's stormwater management system to accommodate construction of the 99th Street extension project.

- Participated in meetings on November 21 and 30, 2017, with CCPW's 99th Street extension project team to (1) evaluate feasibility of stormwater control options related to 99th Street extension project and (2) review presentation to be given at Ecology meeting in December.

- Replaced the blower carbon canisters.

- Assessed problems with the Module 2 stormwater vault pumping system. Procured temporary pump to perform repairs.

- Provided oversight of EC Electric for cold weather related electrical problems with the flare and North Detention Pond electrical control panel.

- Participated in a meeting on December 5, 2017, with Ecology and the CCPW's 99th Street extension project team regarding the stormwater management plan for the 99th Street extension project.

6.0 REFERENCES

SCS Engineers (SCS), 2013, Compliance Monitoring Plan, Leichner Landfill, Clark County, Washington, prepared by SCS, Inc., Portland, Oregon, for Clark County Department of Environmental Services, July 30.

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U.S. Environmental Protection Agency (EPA), 2002, Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites, EPA, office of Emergency and Remedial Response, December.

TABLE

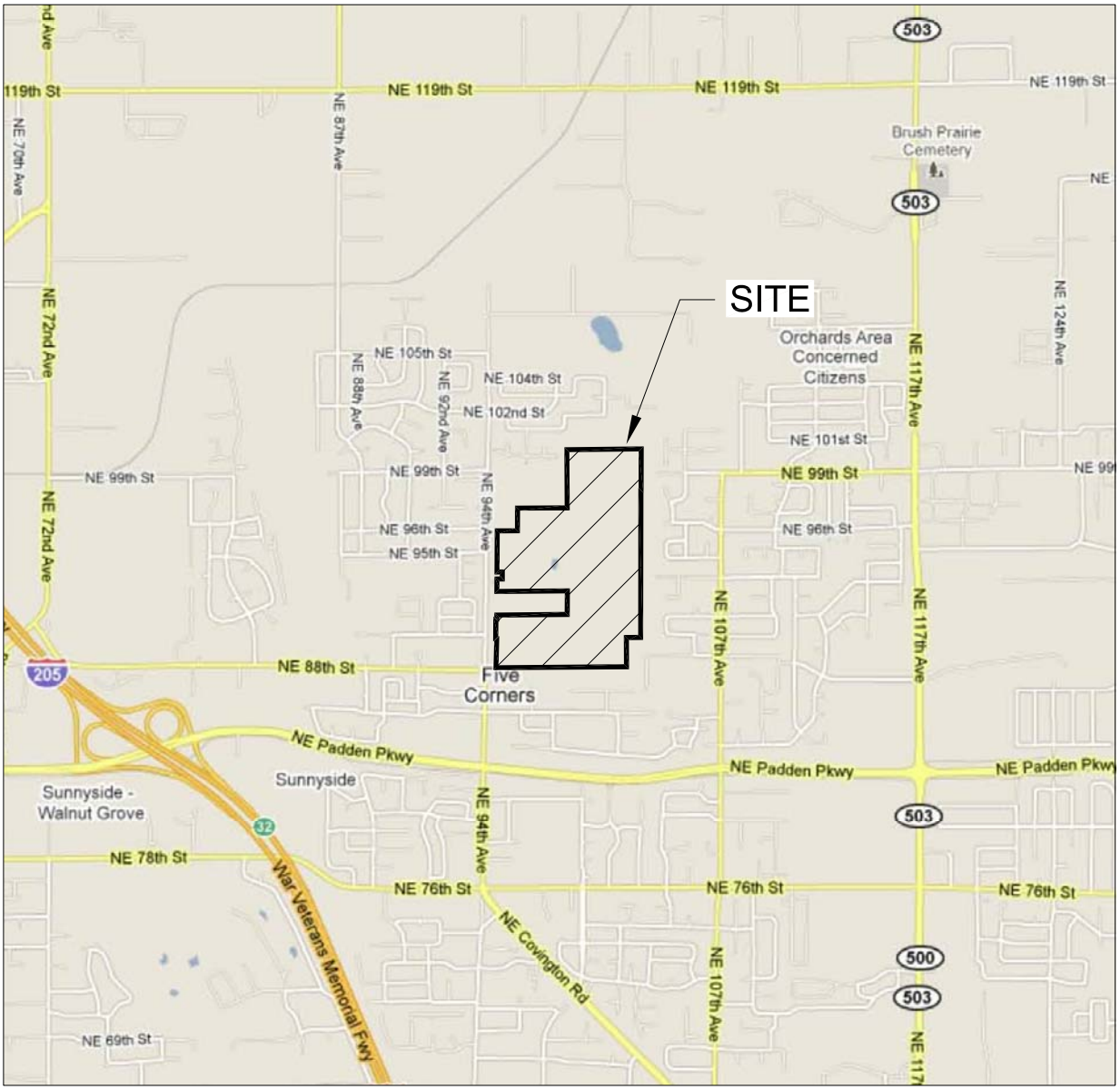
Table 2-1
Statistical Summary of Groundwater QualityData From 2012 to 2017
95 Percent Upper Confidence Limit of the Mean[a]
Leichner Landfill

Parameter	Compliance Level	Units	LB-1S	LB-1D	LB-3S	LB-3D	LB-5S	LB-5D	LB-6S	LB-10SR	LB-10DR	LB-13I	LB-13D	LB-17I	LB-17D	LB-20S	LB-26I	LB-26D	LB-27I	LB-27D
Inorganic Parameters																				
Chloride	250	mg/L	13.0	7.6	M(4.14)	M(5.32)	4.4	10.4	6.6	30.2	21.8	10.0	M(5.0)	12.10	M(19.0)	M(151)	0.3	M(5.88)	41.6	M(13.0)
Nitrate	10	mg/L	6.9	M(7.09)	M(6.6)	M(4.81)	M(6.6)	M(1.2)	M(2.7)	3.2	2.5	M(4.50)	5.3	All ND	All ND	M(0.40)	4.9	M(5.90)	M(0.91)	4.2
Total Dissolved Solids	500	mg/L	225.3	203.8	185.4	195.6	M(182)	238.8	169.7	292.2	M(290.0)	M(220)	190.2	M(250)	M230)	M(340.0)	M(210.0)	189.9	293.2	M(265)
Metals																				
Iron (dissolved)	0.3	mg/L	All ND	M(0.036)	All ND	All ND	All ND	All ND	M(0.028)	All ND	All ND	All ND	All ND	**9.9**	0.1	**0.9**	M(0.064)	All ND	M(0.032)	**0.7**
Manganese (dissolved)	0.05	mg/L	M(0.002)	M(0.0058)	All ND	All ND	All ND	M(0.0026)	M(0.0022)	M(0.0059)	M(0.002)	M(0.0049)	All ND	**1.5**	**4.3**	**M(3.5)**	M(0.004)	M(0.0034)	**0.5**	**0.1**
Volatile Organic Compounds																				
1,4-Dichlorobenzene	1.8	µg/L	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	M(0.23)	All ND	All ND	All ND	All ND
Tetrachloroethene	5	µg/L	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND
Trichloroethene	5	µg/L	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND

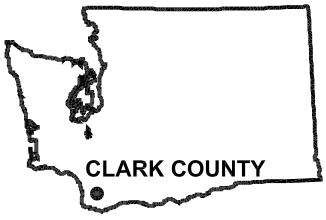
NOTE:
mg/L = milligrams per liter; µg/L = micrograms per liter; ND = indicates not detected at any sampling event; M = maximum value detected in last five years shown in parenthesis.
Values shown in **bold** are greater than the specified compliance level.

[a] Values shown are the 95 percent upper confidence limit on the mean (UCL-95) calculated using MTCA Stat 97 program and Statistical Guidance for Ecology Site Managers.

FIGURES



NOT TO SCALE



WASHINGTON

SOURCE: GOOGLE MAPS

SCS ENGINEERS
Environmental Consultants and Contractors
15940 S.W. 72nd Avenue
Portland, Oregon 97224
(503) 639-9201 FAX: (503) 684-6948

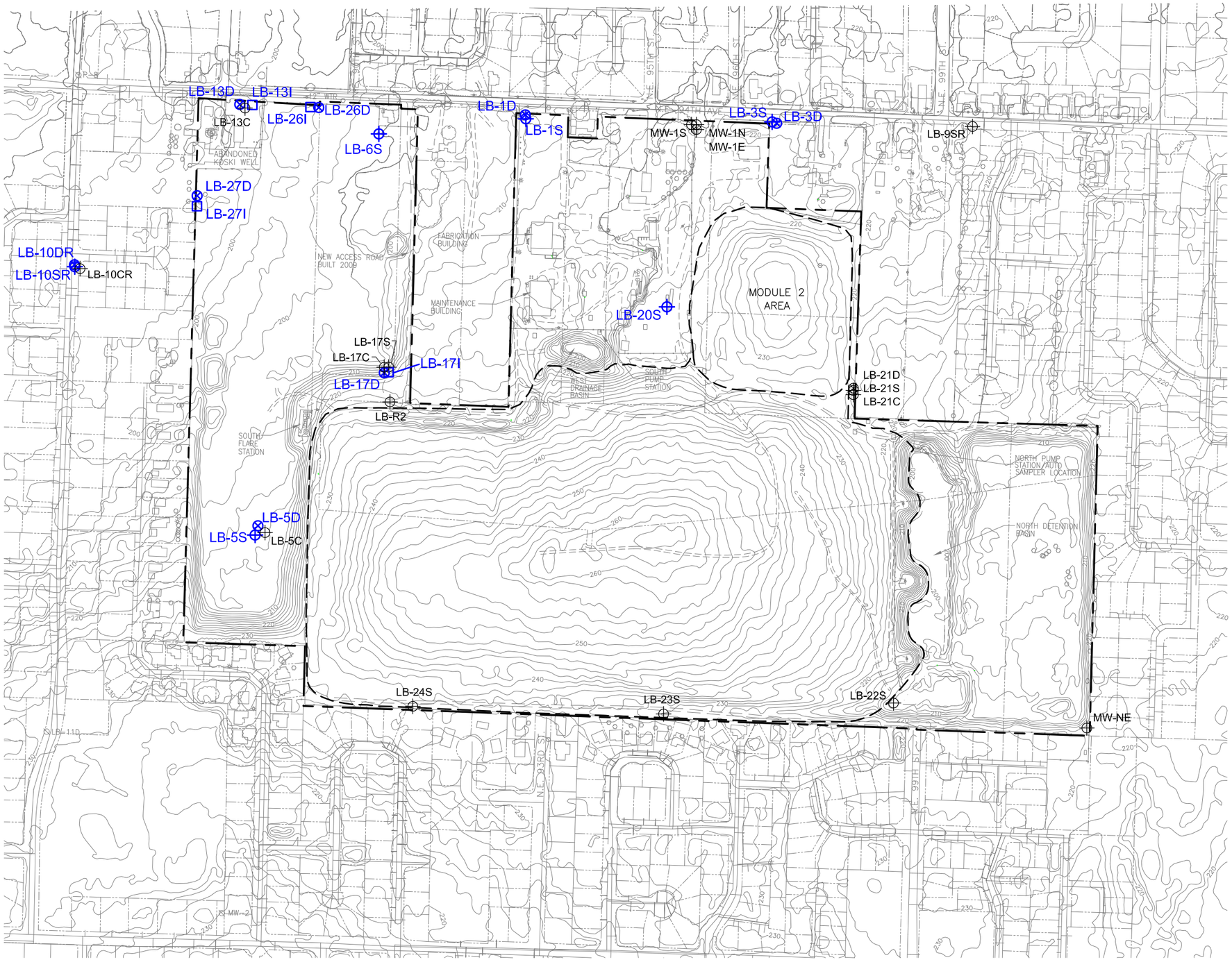
PROJECT NO.	DES BY
04218030.14	S.N.
SCALE	CHK BY
AS SHOWN	D.L.
CAD FILE	APP BY
FIGURE 1-1	L.C.

SITE LOCATION MAP

LEICHNER LANDFILL
CLARK COUNTY, WASHINGTON

DATE
MARCH 2018

FIGURE
1-1



LEGEND:

LB-5S ⊕	Monitoring Well Location, Alluvial Water–Bearing Zone
LB-5D ⊗	Monitoring Well Location, Troutdale Aquifer
LB-17I □	Monitoring Well Location, Middle of Alluvial Water–Bearing Zone
———	Property Boundary
– – – – –	Limit of Landfill Cover and Approximate Edge of Waste

NOTES:

1. Monitoring wells designated by blue color are compliance monitoring wells.
2. Topography taken from Clark County GIS, December 2008.

SCS ENGINEERS
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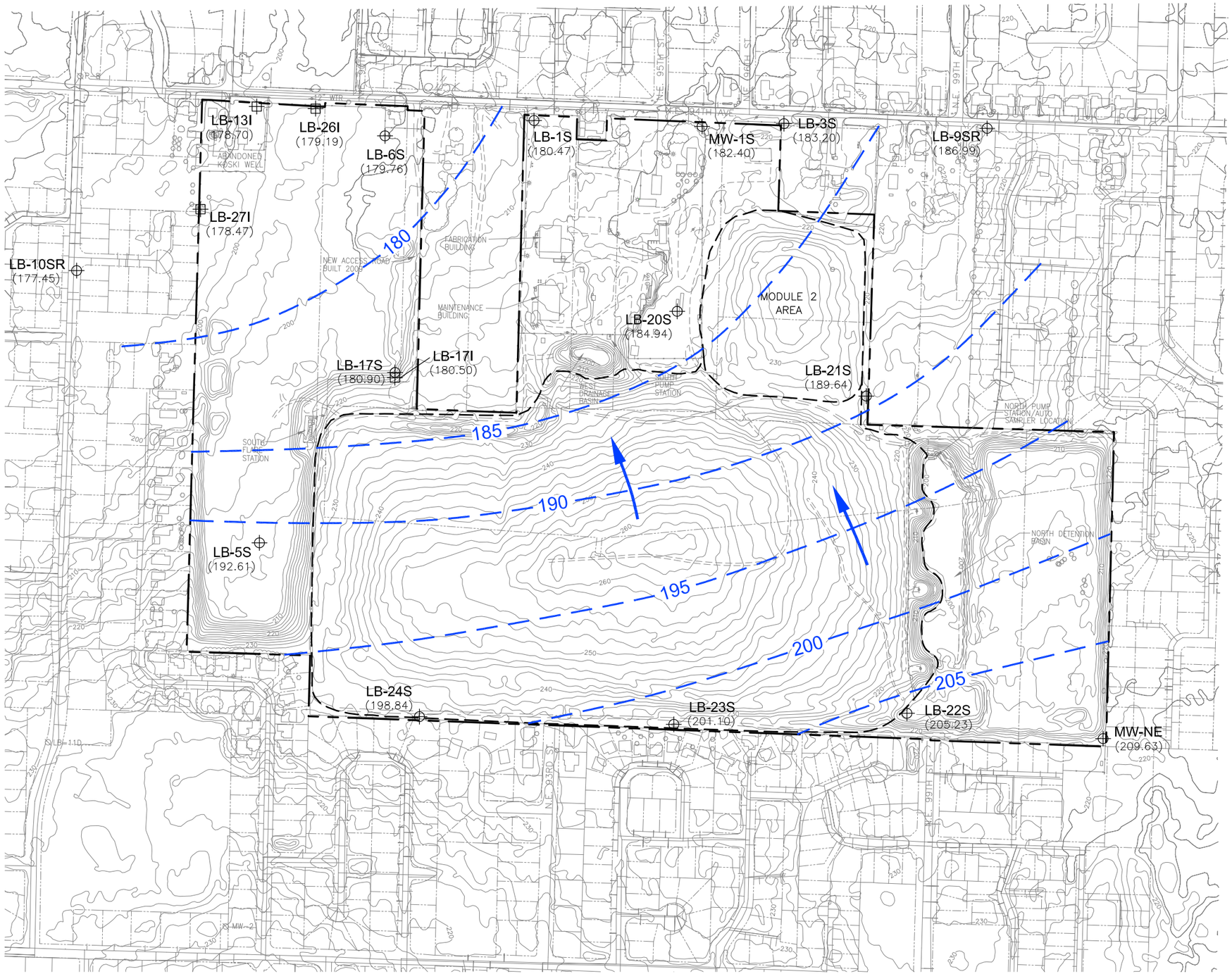
Portland, Oregon 97224
(503) 639-9201 FAX: (503) 684-6948

SCALE
0 400 800 FEET

PROJECT NO. 04218030.14	DES BY S.N.	GROUNDWATER MONITORING WELL LOCATIONS	DATE MARCH 2018
SCALE AS SHOWN	CHK BY D.L.	LEICHNER LANDFILL VANCOUVER, WASHINGTON	FIGURE 2-1
CAD FILE FIGURE 2-1	APP BY L.C.		



LEGEND:

LB-5S ⊕	Monitoring Well Location, Alluvial Water–Bearing Zone
LB-17I ⊕	Monitoring Well Location, Middle of Alluvial Water–Bearing Zone
— — —	Property Boundary
— — —	Limit of Landfill Cover and Approximate Edge of Waste
— —200— —	Groundwater Potentiometric Surface Contour, queried where uncertain
(186.99)	Groundwater Elevation Measured on March 16, 2017
→	Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008

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SCALE
0 400 800 FEET

PROJECT NO. 04218030.14	DES BY S.N.	GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS ALLUVIAL WATER BEARING ZONE MARCH 16, 2017 LEICHNER LANDFILL VANCOUVER, WASHINGTON	DATE MARCH 2018
SCALE AS SHOWN	CHK BY D.L.		FIGURE 2-2
CAD FILE FIGURE 2-2	APP BY L.C.		

LEGEND:

LB-5D ⊗	Monitoring Well Location, Troutdale Aquifer
— — — —	Property Boundary
— — — — —	Limit of Landfill Cover and Approximate Edge of Waste
— —180— —	Groundwater Potentiometric Surface Contour, queried where uncertain
(186.68)	Groundwater Elevation Measured on March 16, 2017
→	Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008

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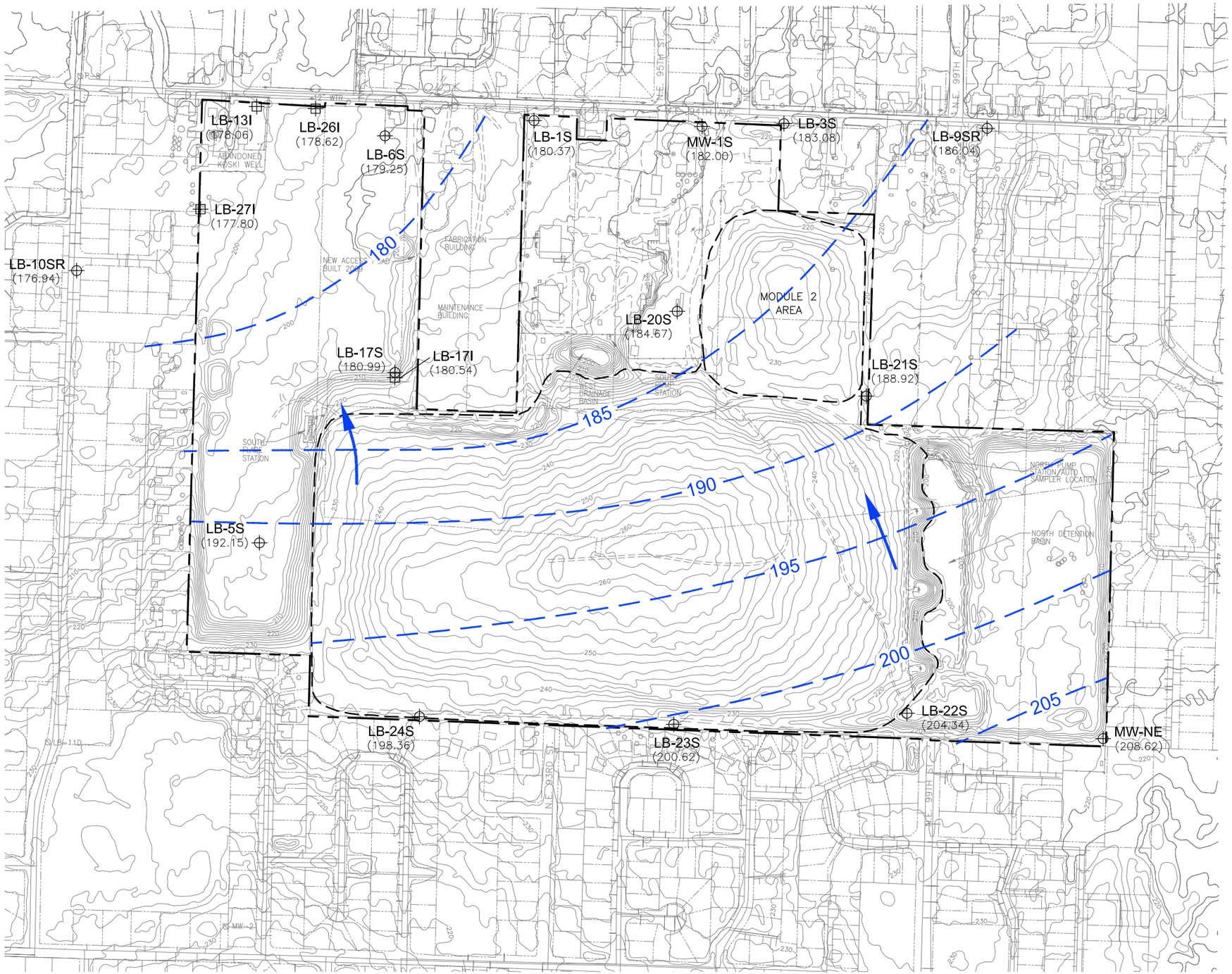
SCALE
0 400 800 FEET

PROJECT NO. 04218030.14	DES BY S.N.	GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS TROUTDALE FORMATION AQUIFER MARCH 16, 2017 LEICHNER LANDFILL VANCOUVER, WASHINGTON	DATE MARCH 2018
SCALE AS SHOWN	CHK BY D.L.		FIGURE 2-3
CAD FILE FIGURE 2-3	APP BY L.C.		



LEGEND:

LB-5S ⊕	Monitoring Well Location, Alluvial Water–Bearing Zone
LB-17I ⊞	Monitoring Well Location, Middle of Alluvial Water–Bearing Zone
— — —	Property Boundary
— — —	Limit of Landfill Cover and Approximate Edge of Waste
– –195– –	Groundwater Potentiometric Surface Contour, queried where uncertain
(182.00)	Groundwater Elevation Measured on August 15, 2017
→	Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008

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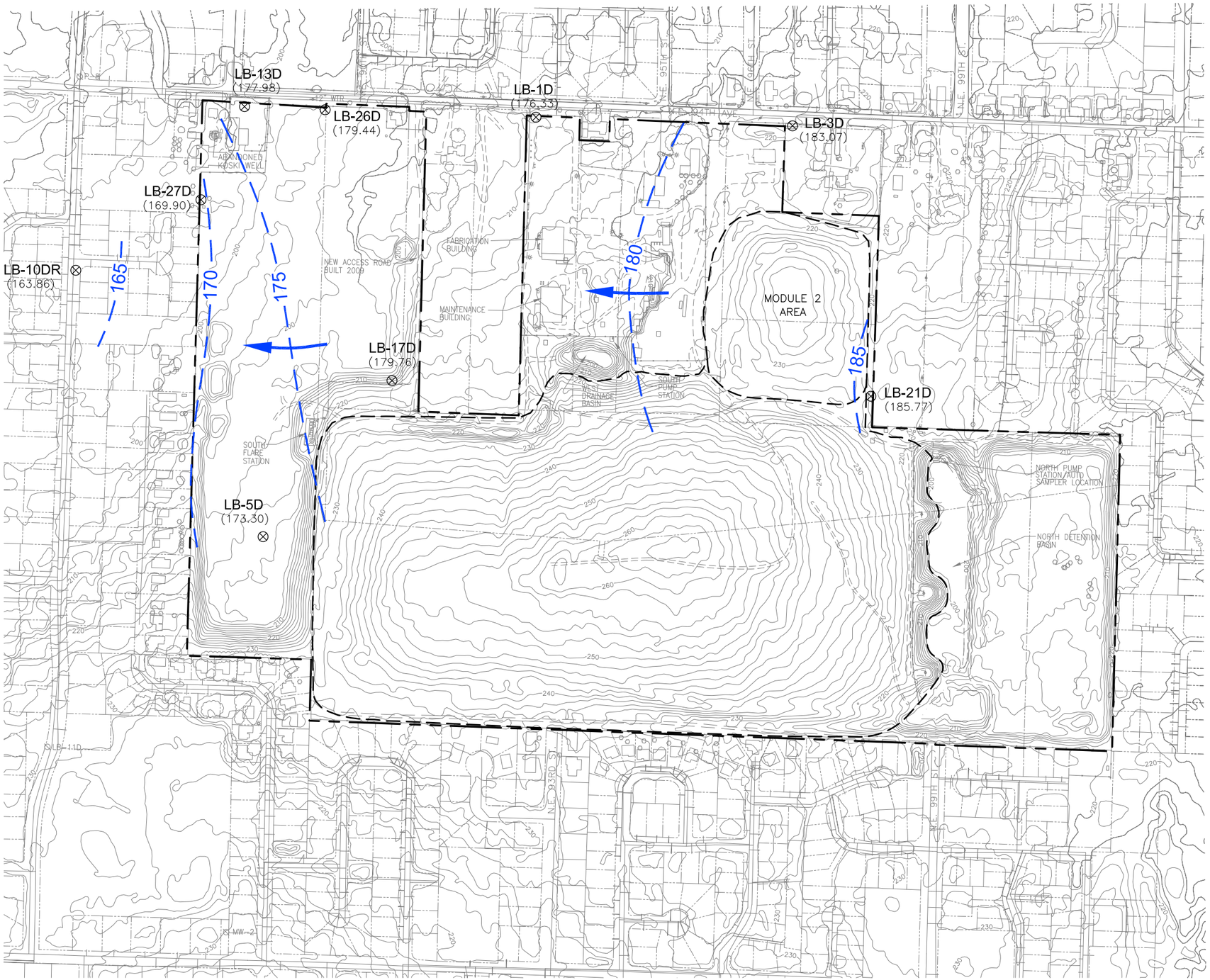
(503) 639-9201 FAX: (503) 684-6948

SCALE
0 400 800 FEET

PROJECT NO. 04218030.14	DES BY S.N.	GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS ALLUVIAL WATER BEARING ZONE AUGUST 15, 2017 LEICHNER LANDFILL VANCOUVER, WASHINGTON	DATE MARCH 2018
SCALE AS SHOWN	CHK BY D.L.		FIGURE 2-4
CAD FILE FIGURE 2-4	APP BY L.C.		



LEGEND:

LB-5D ⊗	Monitoring Well Location, Troutdale Aquifer
— — — —	Property Boundary
— — — — —	Limit of Landfill Cover and Approximate Edge of Waste
— —175— —	Groundwater Potentiometric Surface Contour, queried where uncertain
(169.90)	Groundwater Elevation Measured on August 15, 2017
→	Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008

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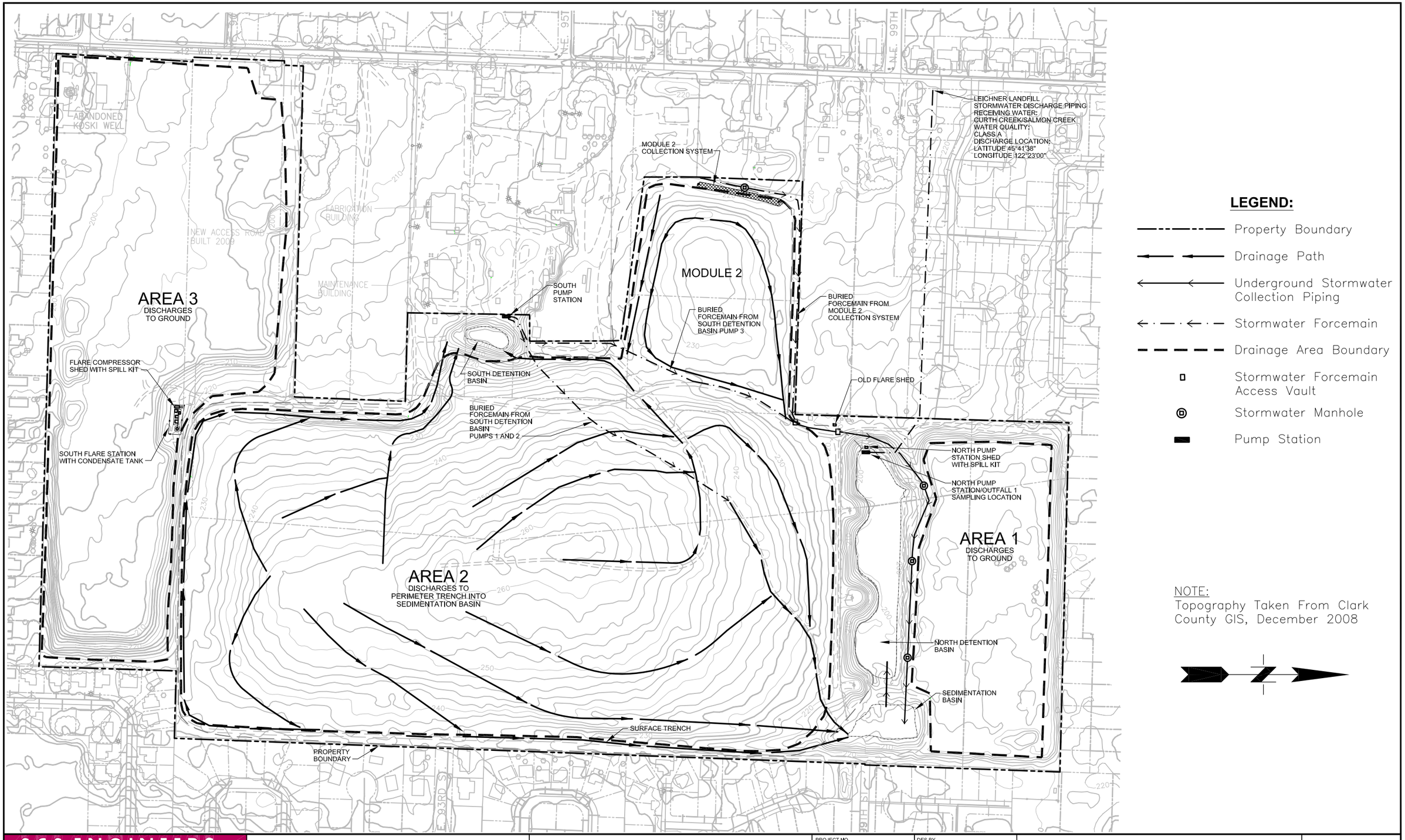
SCALE
0 400 800 FEET

PROJECT NO. 04218030.14	DES BY S.N.	GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS TROUTDALE FORMATION AQUIFER AUGUST 15, 2017 LEICHNER LANDFILL VANCOUVER, WASHINGTON	DATE MARCH 2018
SCALE AS SHOWN	CHK BY D.L.		FIGURE 2-5
CAD FILE FIGURE 2-5	APP BY L.C.		



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SCALE
0 300 600 FEET

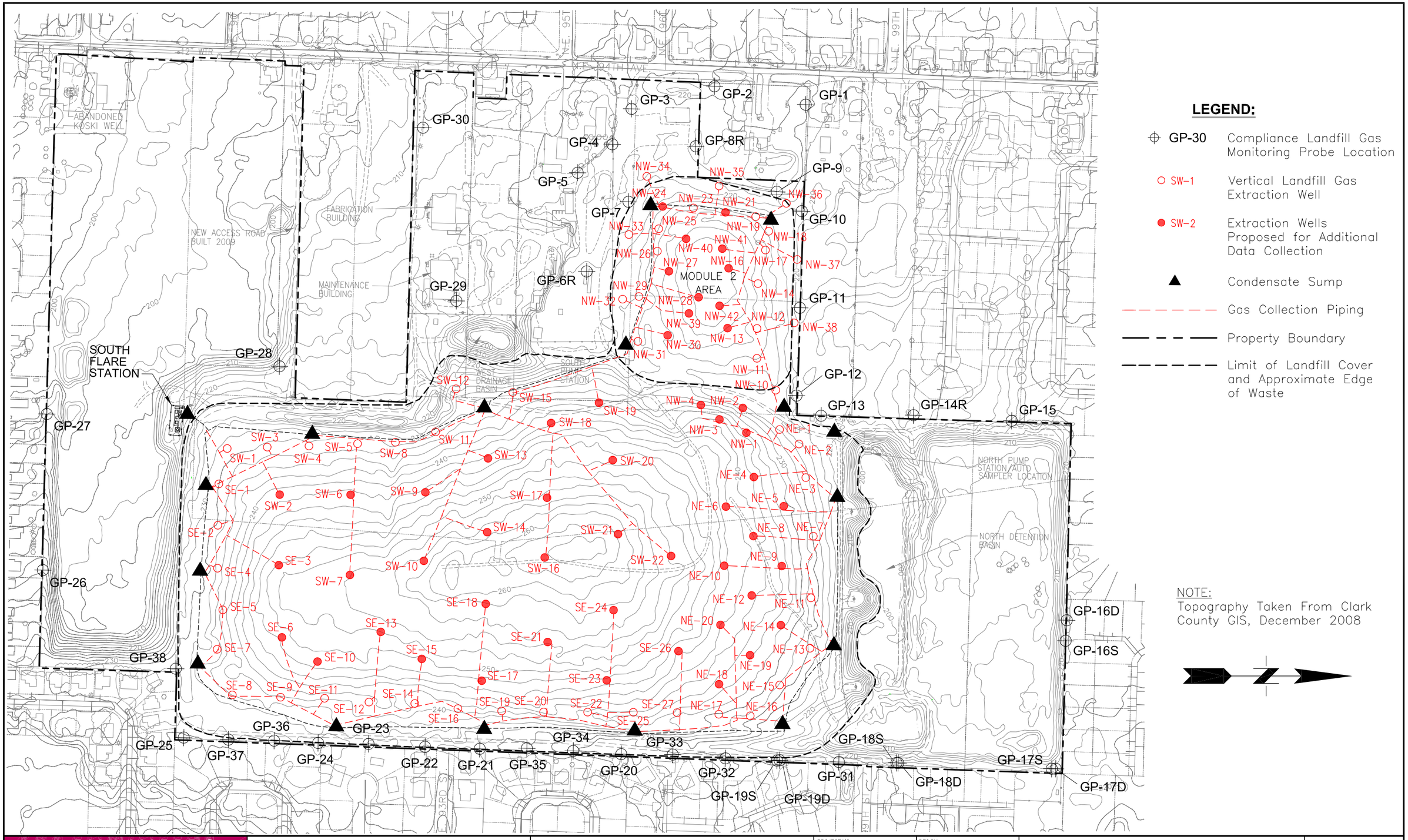
PROJECT NO. 04218030.14	DES BY S.N.
SCALE AS SHOWN	CHK BY D.L.
CAD FILE FIGURE 3-1	APP BY L.C.

SITE MAP AND STORMWATER SYSTEM

LEICHNER LANDFILL
VANCOUVER, WASHINGTON

DATE MARCH 2018

FIGURE 3-1



SCS ENGINEERS Environmental Consultants and Contractors 15940 S.W. 72nd Avenue Portland, Oregon 97224 (503) 639-9201 FAX: (503) 684-6948		PROJECT NO. 04218030.14	DES BY S.N.	LANDFILL GAS PROBE AND EXTRACTION WELL LOCATIONS LEICHNER LANDFILL VANCOUVER, WASHINGTON	DATE MARCH 2018
		SCALE AS SHOWN	CHK BY D.L.		FIGURE 4-1
		CAD FILE FIGURE 4-1	APP BY L.C.		

APPENDIX A

2017 Field Sampling Data Sheets (FSDSs)

First Quarter (March) 2017 FSDSs

Landfill Visual Inspection Program

	Yes	No
Are there any surface water impoundment's or erosion from heavy surface water runoff?		X
Are any monitoring wells or piezometers not clearly identified?		X
Are there any area's of distressed vegetation or unexplained animal remains?		X
Are there any areas of stained or tinted soils?		X
Is liquid seeping out of the slopes of the waste unit?		X
Are there any abnormal odors or observable vapors?		X
Are any of the monitoring wells damaged or unsecured?		X
Are there any abnormal conditions that are of concern to the Landfill operation?		X

Landfill Leichner Landfill
Inspector TAndrews
Date 3/16/17
Reason for inspection
(1st), 2nd, 3rd, or 4th groundwater monitoring event
Other

Notes: _____

Field Calibration Log
SCS Engineers

Equipment:			Serial Number:		Field Staff:			
YSI MP 556			08L101007		T Andrews			
Location/ Project Number	Date	Time	Temperature (°C)	Dissolved Oxygen (mg/L)	pH 4.0 Buffer (S.U.)	pH 7.0 Buffer (S.U.)	Conductivity 1413 µS/cm standard (µS/cm)	ORP 220 mV standard (mV)
04217030.13	March 8, 2017	930	14.59	9.81	4.0	7.0	1413uS/cm	220mV
↓	3/9/2017	830	15.06	9.99	4.0	7.0	1413uS/cm	220mV
↓	3/15/2017	930	15.38	9.89	4.0	7.0	1413uS/cm	220mV

Notes:

Leichner Landfill
Groundwater Elevation Survey

Project #: 04217030.13

Sampler: T Andrews

Quarter: (1) 2 3 4

Date: 3/16/17

Monitoring Point Designation	Reference Elevation (ft. msl)	DTB (ft. btoc)	DTW (ft. btoc)	Time	Comments
Monitoring Wells					
MW-1 N	216.58	15.00	NR		Dry @ 15.0'
MW-1 S	216.13	44.50	33.73		
MW-1 E	216.45	29.05	NR		Dry @ 29.05'
MW-NE	219.83	50.34	10.43		
LB-R2	222.27	77.36	41.16		
LB-1S	210.12	45.00	29.65		
LB-1D	209.74	137.45	32.65		
LB-3S	218.25	52.55	35.05		
LB-3D	219.29	117.28	36.11		
LB-5S	206.89	30.32	14.28		
LB-5C	206.70	74.71	29.07		
LB-5D	207.56	122.40	34.15		
LB-6S	202.80	39.07	23.04		
LB-9SR	217.94	49.60	30.95		
LB-10SR	204.04	42.35	26.59		
LB-10CR	203.05	71.95	25.54		
LB-10DR	203.36	121.10	39.24		
LB-13I	202.36	55.03	23.66		
LB-13C	202.68	66.00	24.07		
LB-13D	202.96	88.88	24.76		
LB-17S	207.97	34.38	27.28		
LB-17I	212.96	51.95	32.46		
LB-17C	206.55	72.35	26.11		
LB-17D	213.17	100.91	33.35		
LB-20S	221.22	61.50	36.28		
LB-21S	223.35	54.24	33.71		
LB-21C	223.32	79.10	34.06		
LB-21D	223.63	110.73	36.95		
LB-22S	208.42	36.97	3.19		
LB-23S	229.19	45.40	28.09		
LB-24S	235.13	54.16	36.29		
LB-26I	200.22	58.30	21.03		
LB-26D	200.75	101.78	21.20		
LB-27I	205.35	57.15	26.88		
LB-27D	204.65	115.10	33.25		

Notes: Cloudy ~ 45°F

Probe deconed between locations

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-13
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-030917-11
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 42.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/9/17	12:30	45.00	-	29.65	-	15.35	X 1	2.50
/ /	:	.	.	.	.		X 3	7.50

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/9/17	12:55	A	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/9/17	12:55	A	1	250, (500) 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/9/17	12:55	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 12:35 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1236)	0.00	6.58	143.3	319	8.42	29.65	7.44	clear/colorless
1	A (1241)	0.40	6.57	140.8	320	8.67	29.65	6.28	clear/colorless
2	A (1244)	0.75	6.57	139.5	318	8.70	29.65	6.10	clear/colorless
3	A (1247)	1.05	6.57	139.1	317	8.70	29.65	6.08	clear/colorless
4	A (1250)	1.40	6.57	138.7	315	8.70	29.65	6.01	clear/colorless
5		.	.			.	.	.	
6		.	.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 9/6/25 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB -10
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-030917-10
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 42.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/9/17	11:30	137.45	—	32.65	—	104.80	X 1	17.06
/ /	:	.	.	.	.		X 3	51.25

Gal/ft = (dia./2)² x 0.163	1" =	0.041	(2") =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/9/17	11:50	A	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/9/17	11:50	A	1	250, (500) 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/9/17	11:50	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [✓]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 11:32 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1135)	0.00	6.97	127.8	224	7.68	32.65	7.58	Clear/colorless
1	A (1138)	0.35	6.94	124.3	222	7.94	32.65	7.41	Clear/colorless
2	A (1141)	0.40	6.94	124.0	222	7.97	32.65	7.21	Clear/colorless
3	A (1144)	1.15	6.83	123.7	223	7.97	32.65	7.30	Clear/colorless
4	A (1147)	1.50	6.83	123.5	222	7.97	32.65	7.28	Clear/colorless
5	A (1150)	1.85	6.83	123.2	222	7.97	32.65	7.25	Clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/80 ⇒ 100 mL/pulse ⇒ 400 mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-35
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-030917-09
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 42.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/9/17	10:30	52.55	-	35.05	-	17.50	X 1	2.85
/ /	:	.	.	.	.	.	X 3	8.56

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/9/17	10:55	A	3	(40 ml)	(HCl)	YES	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/9/17	10:55	A	1	250, (500), 1L	(None)	YES	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/9/17	10:55	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 — Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 10:33 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (10:36)	0.00	6.58	126	200	7.53	35.05	7.89	clear/colorless
1	A (10:39)	0.35	6.57	125.9	200	8.03	35.05	6.85	clear/colorless
2	A (10:42)	0.75	6.57	125.8	198	8.06	35.05	6.54	clear/colorless
3	A (10:45)	1.00	6.57	125.8	203	8.06	35.05	6.46	clear/colorless
4	A (10:48)	1.35	6.56	125.8	199	8.06	35.05	6.50	clear/colorless
5	A (10:51)	1.70	6.56	125.5	199	8.06	35.05	6.42	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 6/7/30 → 100mL/puls. → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-30
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-030917-08
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 42.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/9/17	9:30	117.28	-	36.11	-	81.17	X 1	13.23
/ /	:	.	.	.	.		X 3	39.69

Gal/ft = (dia./2)² x 0.163	1" =	0.041	(2" =	0.163)	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/9/17	9:55	A	3	(40 ml)	(HCl)	YES	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/9/17	9:55	A	1	250, (500), 1L	(None)	YES	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/9/17	9:55	A	1	(250), 500, 1L	(HNO_3)	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 — Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(~~8260~~) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 9:37 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (939)	0.00	6.76	165.1	198	7.32	36.11	3.66	clear/colorless
1	A (943)	0.40	6.67	170.7	196	7.64	36.11	4.77	clear/colorless
2	A (946)	0.70	6.64	160.4	193	7.91	36.11	5.94	clear/colorless
3	A (948)	01.10	6.60	160.2	193	7.95	36.11	5.85	clear/colorless
4	A (951)	1.50	6.60	160.2	192	7.97	36.11	5.80	clear/colorless
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/10 → 100 mL/pulse → 400 mL/min

SAMPLER: T Andrews
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-58
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-031517-14
DUP ID: NA

WIND FROM:	N	NE	E	(SE)	S	SW	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	(RAIN)		?				**TEMPERATURE:** (°F) 54. °C		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product [Product Thickness]	DT-Water	DTP-DTW	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
3/15/17	10:20	30.32	—	14.05	—	16.27	X 1	2.65
/ /	:	.	.	.	.		X 3	7.96

Gal/ft = (dia./2)^2 x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/15/17	10:45	A	3	(40 ml)	(HCl)	(YES)	NO	
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO	
White Poly	3/15/17	10:45	A	1	250,(500) 1L	(None)	(YES)	NO	NA
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO	
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO	
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO	
Red Diss. Poly	3/15/17	10:45	A	1	(250) 500, 1L	(HNO_3)	(YES)	(YES)	
	/ /	:			250, 500, 1L		YES		

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Sllica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 10:22 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1024)	0.00	6.00	160.9	212	11.95	14.05	8.57	clear/colorless
1	A (1027)	0.35	6.12	144.1	205	12.03	14.05	8.03	clear/colorless
2	A (1030)	0.70	6.51	140.7	205	12.03	14.05	8.04	clear/colorless
3	A (1033)	1.10	6.68	138.7	205	12.04	14.05	8.00	clear/colorless
4	A (1036)	1.45	6.69	137.6	205	12.04	14.05	7.98	clear/colorless
5	A (1039)	1.80	6.70	137.1	205	12.04	14.05	7.95	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/20 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-5D
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-030817-01
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 45.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
3/8/17	10:35	122.40	—	34.15	—	88.25	X 1	14.38
/ /	:	.		.	.		X 3	43.15

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | (2" = 0.163) | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	3/8/17	11:10	A	3	(40 ml)	(HCl)	(YES)	NO		√
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/8/17	11:10	A	1	250, (500), 1L	(None)	(YES)	NO	NA	√
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/8/17	11:10	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		√
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 | 5 | Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 10:50 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	(1053) A	0.00	6.93	177.0	312	6.44	34.15	3.35	clear/colorless
1	A (1056)	0.30	6.87	171.0	299	7.04	34.15	1.90	clear/colorless
2	A (1054)	0.55	6.64	165.4	297	7.61	34.15	1.27	clear/colorless
3	A (1102)	0.90	6.63	164.3	296	7.69	34.15	1.25	clear/colorless
4	A (1105)	1.15	6.63	164.0	297	7.70	34.15	1.23	clear/colorless
5		.	.			.	.	.	
6		.	.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 11/9/60 → 100mL/pulse → 300mL/min

Low Flow Purge/Sampling

SAMPLER: TAndrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** DUP1

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-030817-02

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F 45.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
/ /	:	.	.	.	.	.	X 1	.
/ /	:	.	.	.	.	.	X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	3/8/17	1145	A	3	(40 ml)	(HCl)	(YES)	NO		√
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/8/17	11:15	A	1	250, (500), 1L	(None)	(YES)	NO	NA	√
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/8/17	11:15	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		√
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260) (8011) OR [ ] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
	YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0		0.00	.			.	.	.	
1		.	.			.	.	.	
2		.	.			.	.	.	
3		.	.			.	.	.	
4		.	.			.	.	.	
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~
Collected at LB-5D

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-6S
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-031517-20
DUP ID: NA

WIND FROM:	N	NE	E	(SE)	S	SW	W	NW	LIGHT	(MEDIUM)	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 52 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
3/15/17	15:35	39.07	.	23.04	.	16.03	X 1	2.61
/ /	:	.	.	.	.		X 3	7.84

Gal/ft = (dia./2)² x 0.163	1" =	0.041	(2" =)	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/15/17	15:55	A	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/15/17	15:55	A	1	250 (500), 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/15/17	15:55	A	1	(250, 500, 1L)	(HNO3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 15:37 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1539)	0.00	6.62	92.0	237	12.00	23.04	8.39	clear/colorless
1	A (1542)	0.40	6.58	94.8	254	12.03	23.04	5.70	clear/colorless
2	A (1545)	0.75	6.58	94.9	253	12.03	23.04	5.61	clear/colorless
3	A (1548)	1.15	6.58	95.0	253	12.03	23.04	5.60	clear/colorless
4	A (1551)	1.50	6.58	95.3	253	12.03	23.04	5.57	clear/colorless
5	A (1554)	1.85	6.57	95.8	253	12.04	23.04	5.56	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/1/25 ⇒ 100mL/pulse ⇒ 400mL/min

SAMPLER: TAndrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** DUP2
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-031517-21
DUP ID: NA

WIND FROM:	N	NE	E	(SE)	S	SW	W	NW	LIGHT	(MEDIUM)	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 52 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
/ /	:	.	.	.	.	.	X 1	.
/ /	:	.	.	.	.	.	X 3	.

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | (2") = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/15/17	16:00	A	3	(40 ml)	(HCl)	YES	NO		√
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/15/17	16:00	A	1	250, 500, 1L	(None)	YES	NO	NA	√
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/15/17	16:00	A	1	250, 500, 1L	(HNO_3)	YES	YES		√
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 | 5 | Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0		0.00	.			.	.	.	
1		.	.			.	.	.	
2		.	.			.	.	.	
3		.	.			.	.	.	
4		.	.			.	.	.	
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

~~Low Flow Purge Method~~ ~ Collected @ LB-65

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-10SR

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-030917-13

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 42.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product [Product Thickness]	DT-Water	DTP-DTW	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
3/9/17	14:35	42.35	—	26.59	—	15.76	X 1	2.57
/ /	:	.	.	.	.		X 3	7.71

Gal/ft = $(dia./2)^2$ x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/9/17	15:00	A	3	40 ml	HCl	YES	NO	
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO	
White Poly	3/9/17	15:00	A	1	250, 500, 1L	None	YES	NO	NA
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO	
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO	
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO	
Red Diss. Poly	3/9/17	15:00	A	1	250, 500, 1L	HNO_3	YES	YES	
	/ /	:			250, 500, 1L		YES		

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 14:39 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1443)	0.00	6.91	130.5	561	9.57	26.59	1.89	clear/colorless
1	A (1445)	0.35	6.70	124.1	572	9.49	26.59	0.39	clear/colorless
2	A (1448)	0.75	6.69	123.6	570	9.47	26.59	0.48	clear/colorless
3	A (1451)	1.05	6.68	122.5	568	9.46	26.59	0.50	clear/colorless
4	A (1454)	1.40	6.64	122.1	567	9.75	26.59	0.52	clear/colorless
5	A (1457)	1.75	6.67	121.6	567	9.44	26.59	0.56	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 9/6/25 ~) 100 mL/pulse ⇒ 400 mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-10DR

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-030917-12

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 42.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product [Product Thickness]	DT-Water	DTP-DTW [Water Column]	DTB-DTW		Volume (gal) [Water Column x Gal/ft]
3/9/17	13:25	121.10	—	39.24	—	81.86	X 1	13.34
/ /	:	.	.	.	.		X 3	40.03

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/9/17	14:05	A	3	(40 ml)	HCl	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L (None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/9/17	14:05	A	1	250, (500), 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/9/17	14:05	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 13:50 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (350)	0.00	7.01	1289	285	8.95	39.24	5.99	clear/colorless
1	A (1250)	0.40	6.93	1292	284	9.04	39.24	2.97	clear/colorless
2	A (1250)	0.75	6.92	1250	276	9.09	39.24	2.42	clear/colorless
3	A (1400)	1.10	6.92	1284	276	9.08	39.24	2.41	clear/colorless
4	A (1400)	1.40	6.92	1238	277	9.07	39.24	2.40	clear/colorless
5		.	.			.	.	.	
6		.	.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/1/20 → 100 mL/pulse → 400 mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-13E
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-031517-18
DUP ID: NA

WIND FROM:	N	NE	E	(SE)	S	SW	W	NW	LIGHT	(MEDIUM)	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		**TEMPERATURE:**	(°F) 52 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
3/15/17	13:45	55.03	—	23.66	—	31.37	X 1	5.11
/ /	:	.	.	.	.		X 3	15.33

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2") = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	3/15/17	14:10	A	3	(40 ml)	(HCl)	(YES)	NO		√
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/15/17	14:10	A	1	250, (500), 1L	(None)	(YES)	NO	NA	√
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/15/17	14:10	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		√
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(~~8260~~) (8011) OR [ ] WA [√]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 13:50 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1350)	0.00	7.03	67.4	244	11.84	23.66	6.27	clear/colorless
1	A (1355)	0.35	6.66	73.3	251	11.90	23.66	3.05	clear/colorless
2	A (1358)	0.75	6.64	74.0	252	11.90	23.66	2.82	clear/colorless
3	A (1401)	1.10	6.62	74.5	252	11.89	23.66	2.62	clear/colorless
4	A (1404)	1.45	6.61	74.6	253	11.89	23.66	2.59	clear/colorless
5	A (1407)	1.75	6.61	74.9	253	11.90	23.66	2.55	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/35 ⇒ 100 mL/pulse ⇒ 400 mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-13D
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-030817-04
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 40 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/8/17	12:50	88.88	-	24.76	.	64.12	X 1	10.45
/ /	:	.	.	.	.		X 3	31.35

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/8/17	13:10	A	3	(40 ml)	(HCl)	(YES)	NO		√
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/8/17	13:10	A	1	250, (500), 1L	(None)	(YES)	NO	NA	√
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/8/17	13:10	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		√
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 12:52 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1254)	0.00	6.70	177.7	208	8.01	24.76	6.08	clear/colorless
1	A (1257)	0.45	6.65	175.8	211	8.14	24.76	6.37	clear/colorless
2	A (1300)	0.90	6.64	175.3	208	8.13	24.76	6.45	clear/colorless
3	A (1303)	1.40	6.64	174.2	208	8.16	24.76	6.56	clear/colorless
4	A (1306)	1.75	6.64	174.1	208	8.17	24.76	6.51	clear/colorless
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/60 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-17I

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-030817-07

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 40 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/8/17	15:40	51.95	—	32.46	.	19.49	X 1	3.18
/ /	:	.	.	.	.		X 3	9.53

Gal/ft = (dia./2)² x 0.163	1" =	0.041	(2" =)	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/8/17	16:05	A	3	~~40 ml~~	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/8/17	16:05	A	1	250, (500), 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/8/17	16:05	A	1	(250, 500, 1L)	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 — Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 15:44 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1547)	0.00	6.94	-12.5	316	8.71	32.46	1.20	clear/colorless
1	A (1550)	0.35	6.96	-91.6	321	9.31	32.46	0.54	clear/colorless
2	A (1553)	0.75	6.96	-88.2	321	9.32	32.46	0.53	clear/colorless
3	A (1556)	1.10	6.96	-83.7	321	9.32	32.46	0.55	clear/colorless
4	A (1559)	1.45	6.96	-83.1	321	9.32	32.46	0.53	clear/colorless
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8 17 30 → 100 mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-17D
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-030817-06
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	°F 40 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/8/17	14:37	100.91	—	33.35	—	67.56	X 1	11.01
/ /	:	.	.	.	.		X 3	33.04

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/8/17	14:55	A	3	(40 ml)	HCl	YES	NO	
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO	
White Poly	3/8/17	14:55	A	1	250 (500) 1L	None	YES	NO	NA
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO	
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO	
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO	
Red Diss. Poly	3/8/17	14:55	A	1	250, 500, 1L	HNO_3	YES	YES	
	/ /	:			250, 500, 1L		YES		

White no acid, Yellow H2SO4, Red HNO3 — 5 — Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO_3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 14:40 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1442)	0.00	6.88	13.0	274	8.46	33.35	3.33	clear/colorless
1	A (1445)	0.40	6.86	21.9	297	8.99	33.35	1.00	clear/colorless
2	A (1448)	0.75	6.85	40.9	299	9.04	33.35	1.04	clear/colorless
3	A (1451)	1.10	6.85	32.2	299	9.07	33.35	1.07	clear/colorless
4	A (1454)	1.50	6.85	36.9	299	9.06	33.35	1.10	clear/colorless
5		.	.			.	.	.	
6		.	.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/15 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-20S
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-031517-17
DUP ID: NA

WIND FROM:	N	NE	E	(SE)	S	SW	W	NW	LIGHT	(MEDIUM)	HEAVY
WEATHER:	SUNNY	CLOUDY	(RAIN)		?				**TEMPERATURE:**	(°F) 54.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/15/17	12:45	61.50	—	36.28	—	25.22	X 1	4.11
/ /	:	.	.	.	.		X 3	12.33

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | (2" = 0.163) | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/15/17	13:10	A	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/15/17	13:10	A	1	250,(500), 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/15/17	13:10	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 12:50 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A(1252)	0.00	7.01	84.8	296	12.33	36.29	4.47	cloudy / pale orange
1	A(1255)	0.35	6.87	57.6	304	12.36	36.28	2.13	cloudy / pale orange
2	A(1258)	0.75	6.86	54.9	305	12.35	36.28	1.95	cloudy / pale orange
3	A(1301)	1.10	6.85	49.3	306	12.34	36.28	1.47	clear / colorless
4	A(1304)	1.45	6.86	47.0	306	12.35	36.28	1.45	clear / colorless
5	A(1307)	1.80	6.85	45.0	306	12.35	36.28	1.43	clear / colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/17/30 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-26I
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-031517-19
DUP ID: NA

WIND FROM:	N	NE	E	(SE)	S	SW	W	NW	LIGHT	(MEDIUM)	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 52 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
3/15/17	14:40	58.30	—	21.03	—	37.27	X 1	6.08
/ /	:	.	.	.	.		X 3	18.23

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | (2" = 0.163) | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	3/15/17	15:00	A	3	(40 ml)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L (None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/15/17	15:00	A	1	250, 500, 1L (None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500 HNO_3	YES	NO		
Red Diss. Poly	3/15/17	15:00	A	1	(250), 500, 1L (HNO3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L	YES			

White no acid, Yellow H2SO4, Red HNO3 | 5 | Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 14:42 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1414)	0.00	7.04	907	234	12.07	21.03	7.76	clear/colorless
1	A (1447)	0.35	6.59	84.6	245	11.92	21.03	4.70	clear/colorless
2	A (1450)	0.75	6.59	84.4	246	11.91	21.03	4.63	clear/colorless
3	A (1453)	1.10	6.58	84.2	245	11.92	21.03	4.60	clear/colorless
4	A (1456)	1.45	6.58	84.5	247	11.94	21.03	4.59	clear/colorless
5	A (1459)	1.80	6.57	84.8	247	11.94	21.03	4.57	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/40 → 100 mL/pulse ⇒ 400 mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-260
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-030817-05
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 40 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/8/17	13:35	101.78	-	81.20	-	20.58	X 1	13.13
/ /	:	.	.	.	.		X 3	39.40

Gal/ft = (dia./2)² x 0.163	1" =	0.041	(2" =)	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/8/17	13:55	A	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/8/17	13:55	A	1	250, (500,) 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/8/17	13:55	A	1	(250, 500, 1L)	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 13:37 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1339)	0.00	6.65	181.2	218	8.15	21.20	3.37	Clear/colorless
1	A (1342)	0.40	6.63	175.3	220	8.16	21.20	5.37	Clear/colorless
2	A (1345)	0.75	6.63	174.1	221	8.14	21.20	5.40	Clear/colorless
3	A (1348)	1.10	6.63	173.7	216	8.14	21.20	5.44	Clear/colorless
4	A (1351)	1.45	6.63	173.2	215	8.13	21.20	5.50	Clear/colorless
5	A (1354)	1.80	6.63	173.7	218	8.13	21.20	5.49	Clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/17/60 → 100 mL/pulse → 400 mL/min

SAMPLER: T Andrews (PRINTED NAME) T Andrews (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-27I
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-031517-16
DUP ID: NA

WIND FROM:	N	NE	E	(SE)	S	SW	W	NW	LIGHT	(MEDIUM)	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)			?	**TEMPERATURE:**	(°F) 54.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
3/15/17	11:25	57.15	—	26.88	—	30.27	X 1	4.93
/ /	:	.	.	.	.		X 3	14.80

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	3/15/17	11:50	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/15/17	11:50	A	1 250, (500), 1L	(None)	(YES)	(NO)	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/15/17	11:50	A	1 (250), 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 11:27 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1130)	0.00	6.48	126.2	505	11.96	26.88	5.58	clear/colorless
1	A (1133)	0.40	6.54	124.6	547	12.08	26.88	3.46	clear/colorless
2	A (1136)	0.75	6.64	119.4	575	12.11	26.88	2.06	clear/colorless
3	A (1139)	1.15	6.63	118.8	576	12.11	26.88	2.05	clear/colorless
4	A (1142)	1.50	6.63	118.3	578	12.11	26.88	2.10	clear/colorless
5	A (1145)	1.85	6.63	118.1	578	12.12	26.88	2.09	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/35 → 100 mL/pulse → 400 mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** FR1
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-031517-15
DUP ID: NA

WIND FROM:	N	NE	E	(SE)	S	SW	W	NW	LIGHT	(MEDIUM)	HEAVY
WEATHER:	SUNNY		CLOUDY	(RAIN)		?			**TEMPERATURE:**	(54 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
/ /	:	.	.	.	.	.	X 1	.
/ /	:	.	.	.	.	.	X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Transfer

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/15/17	11 :00	G	3	40 ml	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/15/17	11 :00	G	1	250,(500), 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/15/17	11 :00	G	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0		0.00	.			.	.	.	
1		.	.			.	.	.	
2		.	.			.	.	.	
3		.	.			.	.	.	
4		.	.			.	.	.	
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

~~Low-Flow Purge Method~~ Transfer Collected near LB-27I

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-270
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-030817-03
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	(°F) 42 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
3/8/17	12:00	115.10	—	33.25	—	81.85	X 1	13.34
/ /	:	.	.	.	.		X 3	40.02

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	3/8/17	12:20	A	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	3/8/17	12:20	A	1	250, (500), 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	3/8/17	12:20	A	1	(250), 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 12:05 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1208)	0.00	7.07	174.8	282	6.90	35.07	6.08	clear/colorless
1	A (1211)	0.25	6.91	167.5	288	7.78	35.82	5.06	clear/colorless
2	A (1214)	0.50	6.90	164.1	288	7.84	35.83	4.69	clear/colorless
3	A (1217)	0.75	6.90	166.9	287	7.80	35.85	4.77	clear/colorless
4	A (1220)	1.00	6.90	167.3	287	7.77	35.87	4.72	clear/colorless
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 11/9/60 ⇒ 100 mL/pulse ⇒ 300mL/min ⇒ 20/10/60 ⇒ 125mL/pulse

SAMPLER: T Andreos (PRINTED NAME) (SIGNATURE)

CHAIN OF CUSTODY

ALS Environmental

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PAGE 1 OF 1 — SR#

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 04217030.13
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE #: 503-639-9736 FAX #: —
SAMPLER'S SIGNATURE: [signature] Andrews

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS SIM PAH ☐ 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☒	Hydrocarbons (*see below) Gas ☐ 8021 ☐ Diesel ☐ Oil ☐	BTEX ☐ Oil & Grease/TRPH 1664 HEM ☐	PCBs Aroclors ☐ Congeners ☐	SGT ☐ 1664	Pesticides/Herbicides 608 ☐ 8081 ☐ 8141 ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	8151 ☐ Metals, Total or Dissolved (See List below)	Cyanide ☐	(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_3, BOD, TSS, TDS, Turb.	Hex-Chrom ☐	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2-NO_3, T-Phos	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	Alkalinity ☐ CO_3 ☐ HCO_3 ☐	Dioxins/Furans 1613 ☐ 8290 ☐	Dissolved Gases CO_2 ☐ RSK 175 ☐ Methane ☐ Ethane ☐ Ethene ☐	REMARKS
LB-030817-01	3/8/17	1110		W	5		X						X	X	X								
LB-030817-02	3/8/17	1115		W	5		X						X	X	X								
LB-030817-04	3/8/17	1310		W	5		X						X	X	X								
LB-030817-07	3/8/17	1605		W	5		X						X	X	X								
LB-030817-06	3/8/17	1455		W	5		X						X	X	X								
LB-030817-05	3/8/17	1355		W	5		X						X	X	X								
LB-030817-03	3/8/17	1220		W	5		X						X	X	X								
Trip Blank 1	3/8/17	—		W	2		X						X		X								

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
✓ Standard (15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS: Please Send EIMS Spreadsheet

CC Tiffany Andrews
tandrews@scsengineers.com

Metals are field filtered

☐ Sample Shipment contains USDA

RELINQUISHED BY:

Signature: [signature] 3/8/17

CHAIN OF CUSTODY

ALS Environmental

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

SR# _____ PAGE _____ OF _____ COC# _____

PROJECT NAME	Leichner Landfill
PROJECT NUMBER	04217030.13
PROJECT MANAGER	David Lamadrid
COMPANY NAME	SCS Engineers
ADDRESS	15940 SW 72nd Ave
CITY/STATE/ZIP	Portland, OR 97224
E-MAIL ADDRESS	dlamadrid@scsengineers.com
PHONE # / FAX #	503 639-9726 /
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO4, PO4, F, NO2, (NO3) BOD, TSS, TDS, Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO2☐ Methane☐ Ethane☐ Ethene☐				REMARKS
LB-030917-11	3/9/17	1255		W	5		X						X	X	X										
LB-030917-10	3/9/17	1150		W	5		X						X	X	X										
LB-030917-09	3/9/17	1055		W	5		X						X	X	X										
LB-030917-08	3/9/17	955		W	5		X						X	X	X										
LB-030917-13	3/9/17	1500		W	5		X						X	X	X										
LB-030917-12	3/9/17	1405		W	5		X						X	X	X										
Trip Blank 2	—	—		W	2		X						X	X(a)											

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.

____ 5 day

____ Standard (15 working days)

____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

***INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)**

SPECIAL INSTRUCTIONS/COMMENTS:

CC Tiffany Andrews
tandrews@scsengineers.com

Metals are field Filtered

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature 3/10/17 1122	Signature	Signature
Date/Time	Date/Time	Date/Time	Date/Time
Printed Name	Name # Chevrolle	Printed Name	Printed Name
Firm	Firm ALS	Firm	Firm

CHAIN OF CUSTODY

ALS Environmental

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

SR# _____

PAGE _____ OF _____ COC# _____

PROJECT NAME	Leichner Landfill
PROJECT NUMBER	042170230.13
PROJECT MANAGER	David Lamadrid
COMPANY NAME	SCS Engineers
ADDRESS	15940 SW 72nd Ave
CITY/STATE/ZIP	Portland, OR 97224
E-MAIL ADDRESS	dlamadrid@scsengineers.com
PHONE # / FAX #	503-639-9736 / —
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☐	Volatile Organics 624☐ 8260☐ 8270LL☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, (TDS) Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO_3☐ HCO_3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases CO_2☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐				REMARKS
LB-031517-14	3/15/17	1045		W	5		X						X		X										
LB-031517-20	3/15/17	1555		W	5		X						X		X										
LB-031517-21	3/15/17	1600		W	5		X						X		X										
LB-031517-18	3/15/17	1410		W	5		X						X		X										
LB-031517-17	3/15/17	1310		W	5		X						X		X										
LB-031517-19	3/15/17	1500		W	5		X						X		X										
LB-031517-16	3/15/17	1150		W	5		X						X		X										
LB-031517-15	3/15/17	1100		W	5		X						X		X										
Trip Blank 3	—	—		W	2		X																		

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.

____ 5 day

____ Standard (15 working days)

____ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

***INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)**

SPECIAL INSTRUCTIONS/COMMENTS:

CC Tiffany Andrews
tandrews@scsengineers.com

Metals are field filtered

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Date/Time: 3/16/17 1210	Date/Time: 3/16/17 1210	Date/Time:	Date/Time:
Printed Name: Vivian Davenport	Printed Name: Scott Chappelle	Printed Name:	Printed Name:
Firm: SCS	Firm: ALS	Firm:	Firm:

Third Quarter 2017 (August) FSDSs

Leichner Landfill
Groundwater Elevation Survey

Project #: 04217030.13

Sampler: T Andrews

Quarter: 1 2 (3) 4

Date: 8/15/17

Monitoring Point Designation	Reference Elevation (ft. msl)	DTB (ft. btoc)	DTW (ft. btoc)	Time	Comments
Monitoring Wells					
MW-1 N	216.58	15.00	Dry	1400	
MW-1 S	216.13	44.50	34.13	1355	
MW-1 E	216.45	29.05	Dry	1350	
MW-NE	219.83	50.34	11.44	1150	
LB-R2	222.27	77.36	41.42	1215	
LB-1S	210.12	45.00	29.75	1310	
LB-1D	209.74	137.45	33.41	1315	
LB-3S	218.25	52.55	35.17	1345	
LB-3D	219.29	117.28	36.22	1335	
LB-5S	206.89	30.32	14.74	1000	
LB-5C	206.70	74.71	29.05	1115	
LB-5D	207.56	122.40	34.26	1120	
LB-6S	202.80	39.07	23.55	1430	
LB-9SR	217.94	49.60	31.90	1235	Ant H.H
LB-10SR	204.04	42.35	27.10	1300	
LB-10CR	203.05	71.95	26.03	1255	
LB-10DR	203.36	121.10	39.50	1250	
LB-13I	202.36	55.03	24.30	1450	
LB-13C	202.68	66.00	24.71	1455	
LB-13D	202.96	88.88	24.98	1506	
LB-17S	207.97	34.38	27.19	1223	
LB-17I	212.96	51.95	32.42	1215	
LB-17C	206.55	72.35	26.09	1220	
LB-17D	213.17	100.91	33.41	1230	
LB-20S	221.22	61.50	36.55	1410	
LB-21S	223.35	54.24	34.43	1128	
LB-21C	223.32	79.10	34.81	1130	
LB-21D	223.63	110.73	37.86	1135	
LB-22S	208.42	36.97	4.04	1200	
LB-23S	229.19	45.40	28.57	1205	
LB-24S	235.13	54.16	36.77	1210	
LB-26I	200.22	58.30	21.60	1440	
LB-26D	200.75	101.78	21.31	1445	
LB-27I	205.35	57.15	27.55	1510	
LB-27D	204.65	115.10	34.73	1515	

Notes: Sunny ~ 87°F

Probe decon'd between locations

Field Calibration Log
SCS Engineers

Equipment:			Serial Number:		Field Staff:			
YSI Mp 556			08L101007		TAndrews			
Location/ Project Number	Date	Time	Temperature (°C)	Dissolved Oxygen (mg/L)	pH 4.0 Buffer (S.U.)	pH 7.0 Buffer (S.U.)	Conductivity 1413 µS/cm standard (µS/cm)	ORP 220 mV standard (mV)
04217030.13	8/15/17	915	21.10	8.57	4.0	7.0	1413 mS/cm	220
↓	8/16/17	830	20.41	8.35	4.0	7.0	1413 mS/cm	220

Notes:

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-1S
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-08617-07-1S
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)	CLOUDY	RAIN		?						

TEMPERATURE: (°F) 90 . °C [Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product [Product Thickness]	DT-Water	DTP-DTW	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
8/16/17	14:19	45.00	—	29.75	—	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = (0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	8/16/17	14:40	A	3 (40 ml)	(HCl)	(YES)	NO		√
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/16/17	14:40	A	1 250,(500,) 1L	(None)	(YES)	NO	NA	√
Yellow Poly	/ /	:		250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/16/17	14:40	A	1 (250,) 500, 1L	(HNO_3)	(YES)	(YES)		√
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS§) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 14:21 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1423)	0.00	6.88	74.5	252	15.24	29.75	5.09	Clear/Colorless
1	A (1426)	0.35	6.76	176.4	253	14.29	29.75	4.56	Clear/Colorless
2	A (1428)	0.75	6.78	173.6	252	14.27	29.75	4.52	Clear/Colorless
3	A (1430)	1.00	6.56	154.2	253	14.25	29.75	4.31	Clear/Colorless
4	A (1435)	1.30	6.56	149.6	252	14.25	29.75	4.32	Clear/Colorless
5	A (1438)	1.60	6.55	148.2	252	14.26	29.75	4.32	Clear/Colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Flow Purge Method ~ 9/6/30 ⇒ 100 mL/pulse ⇒ 400 mL/min

T Andrews
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-SS
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-081517-01-SS
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	(°F) 70.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
8/15/17	10:00	30.32	—	14.74	—	15.58	X 1	2.54
/ /	:	.	.	.	.		X 3	7.61

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	8/15/17	10:40	A	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/15/17	10:40	A	1	250 (500) 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/15/17	10:40	A	1	(250), 500, 1L	(HNO3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 10:20 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1022)	0.00	6.07	199	268	14.78	14.74	7.80	clear/colorless
1	A (1025)	0.35	6.64	260.7	227	14.02	14.74	7.64	clear/colorless
2	A (1028)	0.65	6.99	252.2	222	13.95	14.74	7.56	clear/colorless
3	A (1031)	0.95	6.99	225.9	222	13.94	14.74	7.55	clear/colorless
4	A (1034)	1.30	6.98	215.6	221	13.95	14.74	7.50	clear/colorless
5	A (1037)	1.60	6.98	207.9	221	13.95	14.74	7.48	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/20 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** DUP1
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-081517-02-DUP1
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	(SW)	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 70 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
/ /	:						X 1	
/ /	:						X 3	

Gal/ft = (dia./2)^2 x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	8/15/17	10:45	A	3	(40 ml)	(HCl)	YES	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/15/17	10:45	A	1	250, (500) 1L	(None)	YES	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/15/17	10:45	A	1	(250) 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0		0.00	.			.	.	.	
1		.	.			.	.	.	
2		.	.			.	.	.	
3		.	.			.	.	.	
4		.	.			.	.	.	
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-65
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-681617-09-65
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	(°F) 90 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
8/16/17	15:08	39.07	—	23.55	—	15.52	X 1	2.53
/ /	:	.	.	.	.		X 3	7.59

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2") = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	8/16/17	15:30	A	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/16/17	15:30	A	1	250, (500), 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/16/17	15:30	A	1	(250)/500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 15:10 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1512)	0.00	7.06	62.7	188	15.82	23.55	8.16	clear/colorless
1	A (1515)	0.30	6.95	180.4	194	13.38	23.55	6.14	clear/colorless
2	A (1518)	0.75	6.89	182.7	198	13.17	23.55	5.95	clear/colorless
3	A (1521)	1.05	6.72	180.8	198	13.17	23.55	5.96	clear/colorless
4	A (1524)	1.40	6.71	176.4	198	13.16	23.55	5.93	clear/colorless
5	A (1527)	1.75	6.71	176.9	198	13.14	23.55	5.95	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/25 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** FR1
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-081617-08-FR1
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	(°F) 90 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
/ /	:	.	.	.	.	.	X 1	.
/ /	:	.	.	.	.	.	X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Transfer

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	8/16/17	15:00	G	3	(40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/16/17	15:00	G	1	250 (500) 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/16/17	15:00	G	1	(250) 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0		0.00	.			.	.	.	
1		.	.			.	.	.	
2		.	.			.	.	.	
3		.	.			.	.	.	
4		.	.			.	.		
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method — Transfer Collected near LB-65

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-105R
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-08/17-06-105R
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)	CLOUDY	RAIN	?	**TEMPERATURE:**	(°F) 84 . °C					

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
8/16/17	13:15	42.35	—	27.10	—	15.25	X 1	2.49
/ /	:	.	.	.	.		X 3	7.46

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = (0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	8/16/17	13:40	A	3 (40 ml)	(HCl)	(YES)	NO		√
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/16/17	13:40	A	1 250, (500), 1L	(None)	(YES)	NO	NA	√
Yellow Poly	/ /	:		250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/16/17	13:40	A	1 (250), 500, 1L	(HNO_3)	(YES)	(YES)		√
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 13:18 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1320)	0.00	6.99	149.6	545	15.28	27.10	1.60	clear/colorless
1	A (1323)	0.35	6.80	153.3	549	15.14	27.10	2.44	clear/colorless
2	A (1326)	0.70	6.57	153.8	556	14.85	27.10	2.07	clear/colorless
3	A (1329)	1.05	6.56	151.6	557	14.80	27.10	1.86	clear/colorless
4	A (1332)	1.40	6.56	150.8	557	14.81	27.10	1.90	clear/colorless
5	A (1335)	1.75	6.56	150.1	557	14.80	27.10	1.87	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 9/6/25 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-13I
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-081617-04-13I
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	(°F) 75.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product [Product Thickness]	DT-Water	DTP-DTW [Water Column]	DTB-DTW		Volume (gal) [Water Column x Gal/ft]
8/16/17	10:40	55.03	—	24.30	—	30.73	X 1	5.01
/ /	:	.	.	.	.		X 3	15.03

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	8/16/17	11:05	A	3	(40 ml)	(HCl)	(YES)	NO		√
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/16/17	11:05	A	1	250 (500) 1L	(None)	(YES)	NO	NA	√
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/16/17	11:05	A	1	(250) 500, 1L	(HNO_3)	(YES)	(YES)		√
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 10:44 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1046)	0.00	7.08	74.0	294	14.20	24.30	1.84	clear/colorless
1	A (1049)	0.35	7.01	169.8	286	13.01	24.30	0.94	clear/colorless
2	A (1052)	0.80	6.92	165.3	284	13.03	24.30	0.77	clear/colorless
3	A (1055)	1.10	6.81	148.8	291	12.91	24.30	0.79	clear/colorless
4	A (1058)	1.45	6.81	147.4	291	12.90	24.30	0.78	clear/colorless
5	A (1101)	1.75	6.80	~~146.8~~ 146.8	291	12.92	24.30	0.75	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/17/35 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-26I
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-081617-05-26I
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	(°F) 80.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
8/16/17	11:44	58.30	—	21.60	—	36.70	X 1	5.98
/ /	:	.	.	.	.		X 3	17.95

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = (0.163)	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	8/16/17	12:05	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/16/17	12:05	A	1 250, (500), 1L	(None)	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/16/17	12:05	A	1 (250) 500, 1L	(HNO_3)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 11:45 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (1147)	0.00	7.07	64.2	245	15.35	21.62	7.09	clear/colorless
1	A (1150)	0.35	6.80	128.8	247	13.44	21.60	4.04	clear/colorless
2	A (1153)	0.75	6.68	173.7	256	13.33	21.60	3.64	clear/colorless
3	A (1156)	1.10	6.72	179.7	261	13.35	21.60	3.49	clear/colorless
4	A (1159)	1.45	6.73	178.5	263	13.35	21.60	3.43	clear/colorless
5	A (1202)	1.75	6.73	177.6	264	13.33	21.60	3.42	clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/40 ⇒ 100mL/pulse ⇒ 400mL/min

SAMPLER: T Andrews (PRINTED NAME) JM (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
15940 SW 72nd Avenue,
Portland, OR 97224
Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LR-27I

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-081617-03-27I

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	(°F) 73.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
8/16/17	9:40	57.15	—	27.55	—	29.60	X 1	4.82
/ /	:	.	.	.	.		X 3	14.47

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2") = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	8/16/17	10:05	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	8/16/17	10:05	A	1 (250, 500) 1L	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	8/16/17	10:05	A	1 (250, 500, 1L)	(HNO_3)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — 5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 9:45 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	A (947)	0.00	6.40	126.4	684	13.66	27.57	1.93	Clear/colorless
1	A (956)	0.35	6.60	168.4	570	13.36	27.55	1.22	Clear/colorless
2	A (953)	0.70	6.56	168.0	564	13.32	27.55	1.24	Clear/colorless
3	A (956)	1.00	6.58	166.1	564	13.27	27.55	1.23	Clear/colorless
4	A (959)	1.30	6.59	165.0	563	13.28	27.55	1.18	Clear/colorless
5	A (1003)	1.65	6.59	164.2	563	13.29	27.55	1.19	Clear/colorless
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Low Flow Purge Method ~ 8/7/35 → 100mL/pulse → 400mL/min

SAMPLER: T Andrews (PRINTED NAME) (SIGNATURE)

CHAIN OF CUSTODY

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

SR# _____ PAGE 1 OF 1 COC# _____

PROJECT NAME	Leichner Landfill
PROJECT NUMBER	04217030.17
PROJECT MANAGER	David Lamadrid
COMPANY NAME	SCS Engineers
ADDRESS	15940 SW 72nd Ave
CITY/STATE/ZIP	Portland, OR 97224
E-MAIL ADDRESS	dlamadrid@scsengineers.com
PHONE #	503 639 9736 FAX #
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☒ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond, Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS, Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO_3☐ HCO_3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO_2☐ Methane☐ Ethane☐ Ethene☐				REMARKS
LB-081517-01-SS	8/15/17	1040		W	5			X						X		X									
LB-081517-02-DUP	8/15/17	1045		W	5			X						X		X									

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.

____ 5 day

X Standard (15 working days)

____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

***INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)**

SPECIAL INSTRUCTIONS/COMMENTS:

CC Tiffany Andrews
tandrews@scsengineers.com

Samples for Metals are field filtered

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Date/Time: 8/16/17 0920	Date/Time: 8/16/17 0921	Date/Time:	Date/Time:
Printed Name: David Lamadrid	Printed Name: [signature]	Printed Name:	Printed Name:
Firm: SCS	Firm: ALS	Firm:	Firm:

CHAIN OF CUSTODY

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

SR# _____ PAGE 1 OF 1 COC# _____

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 042179036.13
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE # / FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☒ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., $ClSO_4$, PO_4, F, NO_2, NO_3 BOD, TSS, TDS, Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO_3☐ HCO_3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases CO_2☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐	REMARKS
LR-081617-07-19	8/16/17	1440		W	5			X					X		X							
LR-081617-08-FR1	8/16/17	1500		W	5			X					X		X							
LR-081617-09-GS	8/16/17	1530		W	5			X					X		X							
LR-081617-06-108R	8/16/17	1340		W	5			X					X		X							
LR-081617-04-13I	8/16/17	1105		W	5			X					X		X							
LR-081617-05-26I	8/16/17	1045		W	5			X					X		X							
LR-081617-03-27I	8/16/17	1005		W	5			X					X		X							

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
____ 5 day
__✓__ Standard (15 working days)
____ Provide FAX Results

Requested Report Date _____

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

CC tandraws@scsengineers.com

Samples are field filtered for Metals

Supplied trip blanks contained bubbles

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 8/17/17	Signature: [signature] Date/Time: 8/17/17 1000	Signature:	Signature:
Printed Name: JASON TANDRAW Firm: SCS	Printed Name: [illegible] Firm: ALS	Printed Name: Firm:	Printed Name: Firm:

APPENDIX B

Summary Tables of Historical Groundwater Field Parameter Measurements and Analytical Data

Field Parameters

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-1D	LB-289-W04	2/28/89	6.18	225	10.0	NT
LB-1D	LB-589-W03	5/23/89	7.01	220	11.5	NT
LB-1D	LB-1089-W01	10/17/89	6.60	213	10.5	NT
LB-1D	LB-1189-W04	11/14/89	7.25	191	10.5	NT
LB-1D	LB-1289-W22	12/19/89	7.01	190	9.0	NT
LB-1D	LB-390-W09	3/14/90	6.92	188	11.0	NT
LB-1D	LB-690-W11	6/20/90	7.11	188	13.0	NT
LB-1D	LB-990-W08	9/14/90	6.79	223	12.5	NT
LB-1D	LB-1290-W06	12/11/90	6.90	199	10.7	NT
LB-1D	LB-391-W11	3/20/91	6.95	171	13.2	NT
LB-1D	LB-691-W06	6/25/91	7.05	226	11.7	NT
LB-1D	LB-991-06	9/24/91	7.05	184	10.7	NT
LB-1D	LB-1291-14	12/23/91	7.26	202	10.3	NT
LB-1D	LB-392-14	3/23/92	7.17	200	13.0	NT
LB-1D	LB-63092-2	6/30/92	6.73	217	13.0	NT
LB-1D	LB-92292-3	9/22/92	7.09	202	12.0	NT
LB-1D	LB-121192-16	12/11/92	7.03	205	12.0	NT
LB-1D	LB-031093-4	3/10/93	7.06	202	12.0	NT
LB-1D	LB-060293-6	6/2/93	7.00	196	13.5	NT
LB-1D	LB-092393-8	9/23/93	7.21	195	13.0	8.00
LB-1D	LB-121593-2	12/15/93	7.00	206	10.0	7.40
LB-1D	LB-032494-2	3/24/94	7.11	203	14.0	7.60
LB-1D	LB-062194-1	6/21/94	7.02	206	16.0	7.70
LB-1D	LB-090694-2	9/6/94	7.01	201	14.5	NT
LB-1D	LB-121494-12	12/14/94	7.29	259	11.0	9.90
LB-1D	LB-030995-2	3/9/95	7.01	219	13.5	7.70
LB-1D	LB-062095-13	6/20/95	7.11	227	13.0	7.20
LB-1D	LB-092295-14	9/22/95	6.97	211	12.6	NT
LB-1D	LB-12995-6	12/19/95	7.21	196	8.4	NT
LB-1D	LB-032096-18	3/20/96	6.98	233	14.5	NT
LB-1D	LB-061896-10	6/18/96	7.25	188	14.0	NT
LB-1D	LB-091796-6	9/17/96	7.13	181	13.4	NT
LB-1D	LB121796-2	12/17/96	7.48	207	10.6	NT
LB-1D	LB-031997-4	3/19/97	6.90	228	12.0	NT
LB-1D	LB-061797-4	6/17/97	7.21	211	13.7	NT
LB-1D	LB-091697-1	9/16/97	6.80	118	12.3	NT
LB-1D	LB-121697-4	12/16/97	7.03	223	11.9	8.30
LB-1D	LB-031998-4	3/19/98	6.71	220	12.2	NT
LB-1D	LB-061698-6	6/16/98	7.10	198	12.5	NT
LB-1D	LB-091798-3	9/17/98	8.12	134.6	12.6	NT
LB-1D	LB-121898-10	12/18/98	7.18	231	11.3	NT
LB-1D	LB-031799-04	3/17/99	7.18	184	13.2	NT
LB-1D	LB-062399-15	6/23/99	7.08	157	13.3	NT
LB-1D	LB-091799-11	9/17/99	6.91	222	12.2	NT
LB-1D	LB-121699-12	12/16/99	7.02	170	12.2	NT
LB-1D	LB-091100-2	9/11/00	7.02	221	13.0	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-1D	LB-121500-10	12/15/00	7.06	188	11.8	NT
LB-1D	LB-031501-15	3/15/01	6.92	220	11.5	NT
LB-1D	LB-031902-2	3/19/02	7.17	216	11.8	NT
LB-1D	LB-031303-12	3/13/03	6.77	200	12.0	NT
LB-1D	LB-022404-1	2/24/04	7.54	158	52.5	NT
LB-1D	LB-030905-13	3/9/05	6.69	215	12.0	8.39
LB-1D	LB-031406-1	3/14/06	6.90	162	11.5	8.55
LB-1D	LB-030507-2	3/5/07	6.24	170	12.6	8.90
LB-1D	LB-032408-15	3/24/08	6.97	300	10.8	NT
LB-1D	LB-1D	3/17/09	6.89	221	11.4	10.18
LB-1D	LB-1D032310	3/23/10	7.15	266	11.6	NT
LB-1D	LB-1D	3/28/11	7.45	355	11.9	6.54
LB-1D	LB-031312-13	3/13/12	6.67	249	11.5	7.55
LB-1D	LB-020513-07	2/5/13	6.70	240	11.8	8.25
LB-1D	LB-021914-17	2/19/14	6.73	218	11.6	6.94
LB-1D	LB-021915-17	2/19/15	6.76	220	11.9	6.43
LB-1D	LB-021716-08	2/17/16	7.14	231	11.8	3.53
LB-1D	**LB-030917-10**	**3/9/17**	**6.83**	**222**	**8.0**	**7.25**
LB-1S	LB-589-W04	5/23/89	6.61	572	12.5	NT
LB-1S	LB-1289-W12	12/15/89	6.56	352	9.5	NT
LB-1S	LB-390-W10	3/14/90	6.26	367	11.5	NT
LB-1S	LB-690-W10	6/20/90	6.58	446	12.0	NT
LB-1S	LB-990-W06	9/14/90	6.40	416	13.0	NT
LB-1S	LB-1290-W05	12/11/90	6.38	554	11.2	NT
LB-1S	LB-391-W10	3/20/91	6.30	565	13.1	NT
LB-1S	LB-691-W05	6/25/91	6.63	546	12.5	NT
LB-1S	LB-991-05	9/24/91	6.67	316	11.7	NT
LB-1S	LB-1291-13	12/23/91	6.94	377	11.1	NT
LB-1S	LB-392-15	3/23/92	6.64	416	14.0	NT
LB-1S	LB-63092-1	6/30/92	6.71	414	14.0	NT
LB-1S	LB-92292-2	9/22/92	6.47	358	12.5	NT
LB-1S	LB-121192-15	12/11/92	6.51	353	12.0	NT
LB-1S	LB-031093-3	3/10/93	6.46	630	12.0	NT
LB-1S	LB-060293-5	6/2/93	6.20	565	14.5	NT
LB-1S	LB-092393-09	9/23/93	6.62	475	15.0	4.90
LB-1S	LB-121593-1	12/15/93	6.41	456	12.5	3.80
LB-1S	LB-032494-1	3/24/94	6.29	567	15.0	NT
LB-1S	LB-062194-4	6/21/94	6.30	554	16.5	4.70
LB-1S	LB-090694-1	9/6/94	6.36	516	14.5	NT
LB-1S	LB-121494-11	12/14/94	7.49	589	10.0	6.20
LB-1S	LB-030995-1	3/9/95	6.61	455	13.5	NT
LB-1S	LB-062095-12	6/20/95	6.74	553	13.5	7.30
LB-1S	LB-092295-13	9/22/95	6.98	448	13.1	NT
LB-1S	LB-121995-5	12/19/95	6.74	390	10.2	NT
LB-1S	LB-032096-17	3/20/96	6.71	496	18.0	NT
LB-1S	LB-061896-9	6/18/96	6.82	361	14.0	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-1S	LB-091796-5	9/17/96	6.73	401	12.6	NT
LB-1S	LB121796-1	12/17/96	7.40	398	11.5	NT
LB-1S	LB-031997-3	3/19/97	6.61	517	12.8	NT
LB-1S	LB-061797-3	6/17/97	6.55	350	14.7	NT
LB-1S	LB-091697-2	9/16/97	6.50	323	13.1	NT
LB-1S	LB-121697-5	12/16/97	6.52	465	13.1	6.30
LB-1S	LB-031998-3	3/19/98	6.78	538	13.0	NT
LB-1S	LB-061698-5	6/16/98	6.49	329	13.5	NT
LB-1S	LB-091798-4	9/17/98	6.76	281	13.8	NT
LB-1S	LB-121898-9	12/18/98	6.69	344	12.4	NT
LB-1S	LB-031799-3	3/17/99	6.85	327	14.6	NT
LB-1S	LB-062399-14	6/23/99	6.72	266	14.4	NT
LB-1S	LB-091799-9	9/17/99	6.57	442	13.3	NT
LB-1S	LB-121699-13	12/16/99	6.64	310	13.6	NT
LB-1S	LB-091100-1	9/11/00	6.59	371	13.9	NT
LB-1S	LB-121500-9	12/15/00	6.69	305	13.0	NT
LB-1S	LB-031401-14	3/14/01	6.58	276	13.3	NT
LB-1S	LB-092001-6	9/20/01	6.63	305	13.2	NT
LB-1S	LB-031902-1	3/19/02	7.45	288	12.7	6.89
LB-1S	LB-091802-1	9/18/02	7.20	240	14.0	5.50
LB-1S	LB-031303-10	3/13/03	6.97	230	12.0	NT
LB-1S	LB-092203-6	9/22/03	6.50	170	14.0	6.17
LB-1S	LB-022404-2	2/24/04	6.68	173	53.9	NT
LB-1S	LB-090104-1	9/1/04	6.50	225	13.2	NT
LB-1S	LB-030905-14	3/9/05	6.59	227	13.0	6.52
LB-1S	LB-091405-1	9/14/05	6.86	190	13.5	5.12
LB-1S	LB-031406-3	3/14/06	6.68	239	12.1	8.03
LB-1S	LB-091306-5	9/13/06	6.58	242	12.7	4.90
LB-1S	LB-030507-1	3/5/07	6.18	187	12.4	8.24
LB-1S	LB-091907-1	9/19/07	6.66	246	12.6	6.36
LB-1S	LB-032408-14	3/24/08	6.60	381	10.1	NT
LB-1S	LB-091608-1	9/16/08	6.79	267	12.4	NT
LB-1S	LB-1S	3/17/09	6.75	265	12.0	8.45
LB-1S	LBLF1S091109	9/11/09	7.10	261	13.1	5.86
LB-1S	LB-1S032310	3/23/10	6.89	345	12.1	NT
LB-1S	LB1S092310	9/23/10	7.20	170	11.7	NT
LB-1S	LB-1S	3/24/11	6.75	271	12.3	5.66
LB-1S	LB-090811-07	9/8/11	6.61	296	14.2	5.35
LB-1S	LB-031312-14	3/13/12	6.50	335	12.5	4.44
LB-1S	LB-091212-08	9/12/12	6.70	177	13.0	2.91
LB-1S	LB-020513-09	2/5/13	6.50	279	12.1	6.00
LB-1S	LB-082213-08	8/22/13	5.84	312	13.0	4.12
LB-1S	LB-021914-18	2/19/14	6.48	357	11.7	4.15
LB-1S	LB-081414-09	8/14/14	6.36	258	13.4	4.93
LB-1S	LB-021915-16	2/19/15	6.26	331	12.1	4.16
LB-1S	LB-081115-02	8/11/15	6.65	239	13.2	5.76
LB-1S	LB-021716-14	2/17/16	6.71	262	12.5	5.34

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-1S	LB-082416-05	8/24/16	6.37	294	13.3	5.04
LB-1S	**LB-030917-11**	**3/9/17**	**6.57**	**315**	**8.7**	**6.01**
LB-1S	**LB-081617-07-1S**	**8/16/17**	**6.55**	**252**	**14.3**	**4.32**
LB-3D	LB-1189-W01	11/13/89	6.77	240	10.0	NT
LB-3D	LB-1289-W20	12/18/89	6.71	225	9.5	NT
LB-3D	LB-032097-14	3/20/97	6.79	271	12.1	NT
LB-3D	LB-032098-21	3/20/98	6.70	242	12.1	NT
LB-3D	LB-031899-15	3/18/99	6.75	198	13.5	NT
LB-3D	LB-031501-17	3/15/01	6.68	220	11.3	NT
LB-3D	LB-032002-18	3/20/02	6.78	216	11.5	7.82
LB-3D	LB-031303-14	3/13/03	6.43	170	12.0	NT
LB-3D	LB-022404-5	2/24/04	6.74	129	51.9	NT
LB-3D	LB-030905-15	3/9/05	6.56	176	11.9	7.20
LB-3D	LB031606-21	3/16/06	6.73	158	11.0	8.84
LB-3D	LB-030507-4	3/5/07	5.94	138	12.0	7.43
LB-3D	LB-032408-17	3/24/08	6.74	292	12.1	NT
LB-3D	LB-3D	3/18/09	6.68	204	12.9	8.52
LB-3D	LB-3D032410	3/24/10	6.66	233	14.3	NT
LB-3D	LB-3D	3/28/11	7.37	336	11.8	5.46
LB-3D	LB-031312-09	3/13/12	6.48	231	10.3	5.38
LB-3D	LB-020713-18	2/7/13	6.49	221	11.2	5.14
LB-3D	LB-021914-22	2/19/14	6.38	209	11.2	5.18
LB-3D	LB-021715-07	2/17/15	6.55	208	12.7	5.77
LB-3D	LB-021616-06	2/16/16	6.65	220	11.7	5.49
LB-3D	**LB-030917-08**	**3/9/17**	**6.60**	**192**	**8.0**	**5.80**
LB-3S	LB-1089-W02	10/17/89	7.36	241	11.0	NT
LB-3S	LB-1189-W02	11/13/89	6.63	224	10.5	NT
LB-3S	LB-1289-W11	12/15/89	6.14	220	10.0	NT
LB-3S	LB-390-W11	3/14/90	6.57	216	11.0	NT
LB-3S	LB-690-W06	6/19/90	NT	208	13.0	NT
LB-3S	LB-990-W10	9/14/90	6.93	211	11.5	NT
LB-3S	LB-1290-W08	12/12/90	6.72	209	11.1	NT
LB-3S	LB-391-W07	3/20/91	6.36	214	11.3	NT
LB-3S	LB-691-W10	6/26/91	6.04	222	11.9	NT
LB-3S	LB-991-16	9/24/91	6.38	222	11.1	NT
LB-3S	LB-1291-06	12/20/91	6.65	239	10.7	NT
LB-3S	LB-392-10	3/20/92	6.74	227	13.5	NT
LB-3S	LB-62692-8	6/26/92	7.22	243	13.0	NT
LB-3S	LB-91792-3	9/17/92	7.90	262	12.0	NT
LB-3S	LB-121092-14	12/10/92	6.41	274	12.0	NT
LB-3S	LB-031593-25	3/15/93	6.61	303	11.5	NT
LB-3S	LB-060393-14	6/3/93	6.87	281	13.5	NT
LB-3S	LB-092393-01	9/23/93	6.18	266	14.0	1.50
LB-3S	LB-121593-5	12/15/93	9.51	277	10.5	3.00
LB-3S	LB-032594-11	3/25/94	6.83	284	13.0	5.80
LB-3S	LB-062394-13	6/23/94	6.64	290	14.5	5.40

Table B-1
Groundwater Chemistry, Field Parameters
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Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-3S	LB-090794-8	9/7/94	6.95	286	14.0	NT
LB-3S	LB-121494-13	12/14/94	6.62	356	11.5	3.30
LB-3S	LB-031395-20	3/13/95	6.48	348	13.0	6.10
LB-3S	LB-052095-14	6/20/95	6.58	352	13.0	4.80
LB-3S	LB-092195-11	9/21/95	6.77	280	12.2	NT
LB-3S	LB-121995-4	12/19/95	6.89	170	10.0	NT
LB-3S	LB-032096-21	3/20/96	6.70	312	11.4	NT
LB-3S	LB-061996-11	6/19/96	6.54	261	13.5	NT
LB-3S	LB-032097-13	3/20/97	6.73	274	11.6	NT
LB-3S	LB-032098-20	3/20/98	6.70	242	12.8	NT
LB-3S	LB-031899-14	3/18/99	6.72	173	13.3	NT
LB-3S	LB-031501-18	3/15/01	6.67	173	11.2	NT
LB-3S	LB-032002-17	3/20/02	6.89	182	11.4	7.48
LB-3S	LB-031303-13	3/13/03	6.53	150	11.7	NT
LB-3S	LB-022404-6	2/24/04	6.62	121	52.2	NT
LB-3S	LB-030905-16	3/9/05	6.50	164	11.9	6.12
LB-3S	LB-031606-22	3/16/06	6.71	142	11.1	8.30
LB-3S	LB-030507-3	3/5/07	5.93	134	12.0	7.44
LB-3S	LB-032408-18	3/24/08	6.62	302	11.6	NT
LB-3S	LB-3S	3/18/09	6.61	223	12.2	7.39
LB-3S	LB-3S032410	3/24/10	6.76	239	13.9	NT
LB-3S	LB-3S	3/28/11	7.29	352	11.6	5.73
LB-3S	LB-031312-10	3/13/12	6.44	239	11.1	4.57
LB-3S	LB-020713-17	2/7/13	6.46	236	11.5	5.36
LB-3S	LB-021914-22	2/19/14	6.22	215	11.6	6.39
LB-3S	LB-021915-19	2/19/15	6.53	200	11.8	4.81
LB-3S	LB-021716-12	2/17/16	6.64	206	11.8	5.00
LB-3S	**LB-030917-09**	**3/9/17**	**6.56**	**199**	**8.1**	**6.42**
LB-5D	LB-289-W13	3/1/89	6.36	635	10.0	NT
LB-5D	LB-589-W13	5/24/89	6.71	534	13.0	NT
LB-5D	LB-1289-W24	12/19/89	6.62	559	10.5	NT
LB-5D	LB-690-W14	6/20/90	6.69	531	13.0	NT
LB-5D	LB-990-W15	9/18/90	6.43	554	13.0	NT
LB-5D	LB-1290-W24	12/14/90	6.75	550	10.2	NT
LB-5D	LB-391-W18	3/21/91	6.50	546	12.0	NT
LB-5D	LB-691-W17	6/26/91	6.73	513	13.2	NT
LB-5D	LB-991-06	9/25/91	6.44	547	12.1	NT
LB-5D	LB-1291-11	12/20/91	6.83	569	10.7	NT
LB-5D	LB-392-03	3/19/92	6.73	526	13.0	NT
LB-5D	LB-63092-4	6/30/92	6.77	576	13.5	NT
LB-5D	LB-91892-2	9/18/92	6.99	566	11.0	NT
LB-5D	LB-121092-11	12/10/92	6.76	550	13.0	NT
LB-5D	LB-031193-12	3/11/93	6.71	547	13.0	NT
LB-5D	LB-060293-8	6/2/93	6.42	515	14.0	NT
LB-5D	LB-092793-19	9/27/93	6.72	544	14.0	7.00
LB-5D	LB-121593-4	12/15/93	6.73	523	12.5	1.20

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-5D	LB-032894-13	3/28/94	6.71	610	14.0	2.40
LB-5D	LB-062194-3	6/21/94	6.76	538	15.0	3.00
LB-5D	LB-090694-4	9/6/94	6.83	537	16.0	NT
LB-5D	LB-121394-8	12/13/94	6.84	577	13.5	2.20
LB-5D	LB-030995-4	3/9/95	6.98	563	14.0	2.90
LB-5D	LB-061995-7	6/19/95	6.87	600	13.0	4.70
LB-5D	LB-092195-9	9/21/95	6.50	582	13.3	NT
LB-5D	LB-121895-2	12/18/95	6.72	591	12.3	NT
LB-5D	LB-031996-9	3/19/96	6.65	519	13.0	NT
LB-5D	LB-061896-8	6/18/96	7.01	511	13.5	NT
LB-5D	LB-031997-9	3/19/97	6.81	509	12.3	NT
LB-5D	LB-031998-6	3/19/98	6.71	539	14.4	NT
LB-5D	LB-031899-11	3/18/99	6.76	343	15.2	NT
LB-5D	LB-031401-11	3/14/01	6.73	409	13.5	NT
LB-5D	LB-031902-13	3/19/02	6.85	430	12.7	4.29
LB-5D	LB-031303-9	3/13/03	6.53	410	12.0	NT
LB-5D	LB-022504-7	2/25/04	6.80	307	52.7	NT
LB-5D	LB-030805-1	3/8/05	6.82	400	15.2	3.91
LB-5D	LB-031606-14	3/16/06	6.75	339	12.3	7.38
LB-5D	LB-030507-7	3/5/07	6.34	275	13.4	4.40
LB-5D	LB-031908-2	3/19/08	6.88	0.566	11.8	NT
LB-5D	LB-5D	3/17/09	6.88	351	13.1	4.22
LB-5D	LB-5D032410	3/24/10	7.00	365	15.0	NT
LB-5D	LB-5D	3/23/11	7.69	338	12.8	2.43
LB-5D	LB-031212-03	3/12/12	6.63	363	11.4	0.33
LB-5D	LB-020513-03	2/5/13	6.69	333	11.3	0.39
LB-5D	LB-021714-01	2/17/14	6.42	256	11.1	0.68
LB-5D	LB-021715-01	2/17/15	6.27	309	13.8	0.79
LB-5D	LB-021816-16	2/18/16	6.90	298	12.1	0.52
LB-5D	**LB-030817-01**	**3/8/17**	**6.63**	**297**	**7.7**	**1.23**
LB-5S	LB-390-W17	3/15/90	6.41	135	10.0	NT
LB-5S	LB-690-W13	6/20/90	6.84	161	12.0	NT
LB-5S	LB-990-W14	9/18/90	6.59	186	11.5	NT
LB-5S	LB-1290-W25	12/14/90	6.61	187	10.6	NT
LB-5S	LB-391-W17	3/21/91	6.31	162	11.1	NT
LB-5S	LB-691-W16	6/26/91	7.16	162.3	12.0	NT
LB-5S	LB-991-09	9/25/91	6.61	206	10.8	NT
LB-5S	LB-1291-10	12/20/91	6.86	124	10.8	NT
LB-5S	LB-392-04	3/19/92	6.66	168	12.0	NT
LB-5S	LB-63092-3	6/30/92	6.19	206	13.0	NT
LB-5S	LB-91892-1	9/18/92	6.57	208	11.5	NT
LB-5S	LB-121092-10	12/10/92	6.70	182	12.5	NT
LB-5S	LB-031193-11	3/11/93	6.63	179	12.0	NT
LB-5S	LB-060293-7	6/2/93	6.33	198	13.0	NT
LB-5S	LB-092793-18	9/27/93	6.72	180	14.5	9.60
LB-5S	LB-121593-3	12/15/93	6.78	161	12.0	11.00

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-5S	LB-032894-12	3/28/94	6.28	200	13.0	11.00
LB-5S	LB-062194-2	6/21/94	6.59	219	15.0	10.50
LB-5S	LB-090694-3	9/6/94	6.50	178	15.5	NT
LB-5S	LB-121394-9	12/13/94	6.61	142	13.5	11.00
LB-5S	LB-030995-3	3/9/95	6.94	158	13.5	10.40
LB-5S	LB-051995-6	6/19/95	6.54	275	12.0	7.70
LB-5S	LB-092195-8	9/20/95	6.50	229	12.3	NT
LB-5S	LB-121895-1	12/18/95	7.49	89	11.7	NT
LB-5S	LB-031996-7	3/19/96	6.45	217	12.5	NT
LB-5S	LB-061896-7	6/18/96	6.65	238	12.5	NT
LB-5S	LB-031997-8	3/19/97	6.93	226	11.3	NT
LB-5S	LB-031998-5	3/19/98	6.39	226	12.1	NT
LB-5S	LB-031899-10	3/18/99	6.89	180	13.6	NT
LB-5S	LB-031401-12	3/14/01	6.53	177	11.9	NT
LB-5S	LB-092001-1	9/20/01	6.38	218	12.7	NT
LB-5S	LB-031902-12	3/19/02	6.76	185	11.6	8.89
LB-5S	LB-091802-6	9/18/02	6.90	220	14.0	NT
LB-5S	LB-031303-8	3/13/03	6.67	167	12.0	NT
LB-5S	LB-092203-1	9/22/03	6.08	190	13.5	7.00
LB-5S	LB-022504-9	2/25/04	6.45	146	54.3	NT
LB-5S	LB-090104-5	9/1/04	6.36	200	14.5	NT
LB-5S	LB-030805-2	3/8/05	6.19	200	12.8	9.26
LB-5S	LB-091405-4	9/14/05	6.37	180	13.3	8.16
LB-5S	LB-031606-16	3/16/06	6.60	203	11.4	11.18
LB-5S	LB-091206-1	9/12/06	6.27	264	13.6	7.18
LB-5S	LB-030507-6	3/5/07	5.82	175	12.4	9.72
LB-5S	LB-091907-3	9/19/07	6.27	223	13.0	9.42
LB-5S	LB-031908-1	3/19/08	6.45	0.457	10.7	NT
LB-5S	LB-091608-2	9/16/08	6.42	204	12.9	NT
LB-5S	LB-5S	3/17/09	6.55	213	11.9	9.21
LB-5S	LBLF5S091109	9/11/09	6.70	197	13.3	9.74
LB-5S	LB-5S032410	3/24/10	6.54	190	13.4	NT
LB-5S	LB-5S092310	9/23/10	6.70	174	12.4	NT
LB-5S	LB-5S	3/23/11	6.89	228	11.8	7.82
LB-5S	LB-090811-06	9/8/11	5.92	273	13.3	8.10
LB-5S	LB-032212-17	3/22/12	6.16	204	10.9	9.22
LB-5S	LB-091112-01	9/11/12	6.11	188	13.4	8.13
LB-5S	LB-020513-04	2/5/13	6.20	183	11.7	8.34
LB-5S	LB-082113-01	8/21/13	6.10	127	13.7	6.01
LB-5S	LB-021714-02	2/17/14	6.14	166	12.2	5.11
LB-5S	LB-081314-01	8/13/14	6.19	173	13.5	7.98
LB-5S	LB-021815-09	2/18/15	6.43	177	12.4	6.69
LB-5S	LB-081215-08	8/12/15	5.79	208	13.9	7.66
LB-5S	LB-021816-17	2/18/16	6.42	207	12.2	6.91
LB-5S	LB-082316-01	8/23/16	6.64	203	14.4	6.99
LB-5S	**LB-031517-14**	**3/15/17**	**6.70**	**205**	**12.0**	**7.95**
LB-5S	**LB-081517-01-5S**	**8/15/17**	**6.98**	**221**	**14.7**	**7.48**

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-6S	LB-289-W17	3/1/89	6.43	801	10.0	NT
LB-6S	LB-589-W17	5/24/89	6.80	630	13.5	NT
LB-6S	LB-1289-W13	12/15/89	6.89	835	10.5	NT
LB-6S	LB-390-W24	3/15/90	6.54	667	13.5	NT
LB-6S	LB-690-W22	6/21/90	6.99	567	13.0	NT
LB-6S	LB-990-W11	9/14/90	6.49	741	13.0	NT
LB-6S	LB-1290-W13	12/12/90	6.83	765	10.4	NT
LB-6S	LB-391-W16	3/21/91	6.44	522	12.4	NT
LB-6S	LB-691-W19	6/27/91	6.10	640	13.3	NT
LB-6S	LB-991-14	9/25/91	6.84	665	12.9	NT
LB-6S	LB-1291-08	12/20/91	6.69	694	11.9	NT
LB-6S	LB-392-07	3/20/92	6.69	520	14.0	NT
LB-6S	LB-62692-5	6/26/92	7.02	649	13.5	NT
LB-6S	LB-92192-4	9/21/92	6.76	676	12.0	NT
LB-6S	LB-12992-4	12/9/92	6.77	727	13.0	NT
LB-6S	LB-031093-7	3/10/93	6.90	614	12.5	NT
LB-6S	LB-060393-11	6/3/93	6.64	410	14.0	NT
LB-6S	LB-092493-13	9/24/93	6.64	470	14.0	5.20
LB-6S	LB-121593-6	12/15/93	6.68	579	13.0	3.40
LB-6S	LB-032994-18	3/29/94	6.37	390	14.5	7.40
LB-6S	LB-062394-11	6/23/94	6.62	505	13.5	5.90
LB-6S	LB-090694-5	9/6/94	6.69	531	18.0	NT
LB-6S	LB-121394-6	12/13/94	6.61	524	13.0	3.00
LB-6S	LB-031095-10	3/10/95	6.81	320	12.0	8.90
LB-6S	LB-062095-9	6/20/95	6.50	487	12.0	5.60
LB-6S	LB-092095-6	9/20/95	6.74	495	15.0	NT
LB-6S	LB-122095-12	12/20/95	6.21	386	12.1	NT
LB-6S	LB-031996-5	3/19/96	6.29	336	13.5	NT
LB-6S	LB-061996-12	6/19/96	6.54	367	13.0	NT
LB-6S	LB-091896-12	9/18/96	6.31	362	12.8	NT
LB-6S	LB121796-3	12/17/96	7.01	431	12.2	NT
LB-6S	LB-031997-7	3/19/97	6.89	430	12.5	NT
LB-6S	LB-061797-6	6/17/97	6.45	456	13.4	NT
LB-6S	LB-091697-3	9/16/97	6.50	351	12.1	NT
LB-6S	LB-121797-14	12/17/97	6.43	584	12.5	0.60
LB-6S	LB-031998-7	3/19/98	6.46	633	13.4	NT
LB-6S	LB-061698-7	6/16/98	6.54	384	13.1	NT
LB-6S	LB-091798-5	9/17/98	6.54	292	13.5	NT
LB-6S	LB-121798-01	12/17/98	6.74	398	12.5	NT
LB-6S	LB-031799-2	3/17/99	6.75	352	14.5	NT
LB-6S	LB-062399-11	6/23/99	6.77	298	13.7	NT
LB-6S	LB-091699-5	9/16/99	6.56	554	13.2	NT
LB-6S	LB-121599-10	12/14/99	6.66	440	12.5	NT
LB-6S	LB-091200-3	9/12/00	6.42	413	13.2	NT
LB-6S	LB-121200-1	12/12/00	6.61	467	13.0	NT
LB-6S	LB-031301-7	3/13/01	6.58	531	13.2	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-6S	LB-092001-5	9/20/01	6.69	405	13.6	NT
LB-6S	LB-032002-15	3/20/02	6.82	468	13.2	4.54
LB-6S	LB-091802-2	9/18/02	7.00	430	14.5	NT
LB-6S	LB-031303-21	3/13/03	6.70	497	13.0	NT
LB-6S	LB-092203-5	9/22/03	6.50	310	13.5	5.70
LB-6S	LB-022604-18	2/26/04	6.79	279	54.4	NT
LB-6S	LB-090104-6	9/1/04	6.69	335	13.3	NT
LB-6S	LB-030805-9	3/8/05	6.84	432	14.5	3.13
LB-6S	LB-091405-6	9/14/05	6.67	302	13.4	2.34
LB-6S	LB-0301506-13	3/15/06	6.67	287	12.1	8.38
LB-6S	LB-091206-4	9/12/06	6.66	344	13.1	5.80
LB-6S	LB-030507-12	3/5/07	6.20	249	13.0	9.40
LB-6S	LB-091907-6	9/19/07	6.72	349	12.6	3.59
LB-6S	LB-031908-9	3/19/08	6.69	418	13.0	NT
LB-6S	LB-091608-3	9/16/08	6.47	334	14.5	NT
LB-6S	LB-6S	3/18/09	6.63	304	12.4	4.61
LB-6S	LBLF6S091109	9/11/09	7.16	292	12.4	2.28
LB-6S	LB-6S032310	3/23/10	6.79	322	6.2	NT
LB-6S	LB6S092310	9/23/10	7.00	192	11.6	NT
LB-6S	LB-6S	3/22/11	7.58	241	12.2	7.52
LB-6S	LB-090711-05	9/7/11	6.76	219	15.0	7.01
LB-6S	LB-032212-23	3/22/12	6.54	240	11.7	6.65
LB-6S	LB-091212-06	9/12/12	6.40	214	12.7	4.02
LB-6S	LB-020613-15	2/6/13	6.66	200	11.7	3.23
LB-6S	LB-082113-07	8/21/13	6.03	181	13.6	4.61
LB-6S	LB-021914-23	2/19/14	6.39	179	11.5	3.44
LB-6S	LB-081314-06	8/13/14	6.33	152	12.6	6.43
LB-6S	LB-021815-14	2/18/15	6.86	211	12.0	3.79
LB-6S	LB-081115-03	8/11/15	6.83	179	13.0	6.60
LB-6S	LB-021816-21	2/18/16	6.72	214	11.9	6.43
LB-6S	LB-082416-08	8/24/16	6.65	182	14.4	8.60
LB-6S	**LB-031517-20**	**3/15/17**	**6.57**	**253**	**12.0**	**5.56**
LB-6S	**LB-081617-09-6S**	**8/16/17**	**6.71**	**198**	**13.1**	**5.95**
LB-10DR	LB-031005-19	3/10/05	7.15	523	13.6	1.61
LB10-DR	LB-031406-5	3/14/06	6.83	389	12.3	2.98
LB10-DR	LB-030607-20	3/6/07	6.39	375	13.3	6.33
LB10-DR	LB-032408-22	3/24/08	6.92	535	12.6	NT
LB10-DR	LB-10DR	3/17/09	6.86	495	12.4	5.12
LB-10DR	LB-10DR032310	3/23/10	6.95	525	12.2	NT
LB-10DR	LB-10DR	3/29/11	6.33	491	11.8	2.81
LB-10DR	LB-0313012-07	3/13/12	6.70	463	11.7	1.42
LB-10DR	LB-020713-19	2/7/13	6.68	458	12.5	0.89
LB-10DR	LB-021914-15	2/19/14	6.94	357	12.5	1.50
LB-10DR	LB-021915-20	2/19/15	6.85	339	13.1	1.47
LB-10DR	LB-021716-09	2/19/16	7.00	415	12.7	0.86
LB-10DR	**LB-030917-12**	**3/9/17**	**6.92**	**277**	**9.1**	**2.40**
LB-10SR	LB-031005-21	3/10/05	6.86	319	13.4	2.64

Table B-1
Groundwater Chemistry, Field Parameters
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Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-10SR	LB-091505-7	9/14/05	6.89	150	13.1	3.40
LB10-SR	LB-031406-6	3/14/06	6.79	160	12.6	9.40
LB10-SR	LB-091306-9	9/13/06	6.57	431	13.4	6.94
LB10-SR	LB-030607-19	3/6/07	5.97	119	13.1	10.60
LB10-SR	LB-091907-7	9/19/07	6.57	435	13.3	4.99
LB10-SR	LB-032408-21	3/24/08	6.40	291	12.3	NT
LB10-SR	LB-091608-4	9/16/08	6.54	278	14.1	NT
LB10-SR	LB-10SR	3/17/09	6.84	358	12.1	7.87
LB10-SR	LBLF10S091109	9/11/09	7.11	252	13.4	2.32
LB10-SR	LB-10S032310	3/23/10	6.87	286	12.9	NT
LB10-SR	LB10R092310	9/23/10	6.60	123	12.3	NT
LB-10SR	LB-10SR	3/29/11	6.01	360	12.5	2.05
LB-10SR	LB-090811-08	9/8/11	6.52	410	14.8	0.80
LB-10SR	LB-031312-08	3/13/12	6.62	550	11.8	0.26
LB-10SR	LB-091212-09	9/12/12	6.78	480	14.5	0.59
LB-10SR	LB-020713-20	2/7/13	6.66	473	12.7	0.26
LB-10SR	LB-082213-09	8/22/13	6.70	319	14.0	0.26
LB-10SR	LB-021914-16	2/19/14	6.77	353	12.8	0.60
LB-10SR	LB-081414-08	8/14/14	6.52	401	14.4	0.48
LB-10SR	LB-021915-21	2/19/15	6.64	221	13.3	1.08
LB-10SR	LB-081015-01	8/10/15	6.65	412	15.1	0.50
LB-10SR	LB-021716-11	2/17/16	6.73	445	13.3	0.92
LB-10SR	LB-082416-07	8/24/16	6.64	498	14.9	1.02
LB-10SR	**LB-030917-13**	**3/9/17**	**6.67**	**567**	**9.4**	**0.56**
LB-10SR	**LB-081617-06-10SR**	**8/16/17**	**6.56**	**557**	**14.8**	**1.87**
LB-13D	LB-1089-W15	10/19/89	6.90	237	11.0	NT
LB-13D	LB-1189-W20	11/16/89	6.56	249	11.0	NT
LB-13D	LB-1289-W18	12/18/89	6.62	229	9.5	NT
LB-13D	LB-390-W18	3/15/90	6.79	232	12.0	NT
LB-13D	LB-690-W20	6/21/90	7.27	277	12.0	NT
LB-13D	LB-990-W17	9/18/90	6.64	236	13.0	NT
LB-13D	LB-1290-W20	12/13/90	6.64	234	10.7	NT
LB-13D	LB-391-W15	3/20/91	6.76	232	11.8	NT
LB-13D	LB-691-W22	6/27/91	6.91	235	13.1	NT
LB-13D	LB-991-13	9/25/91	7.15	240	12.0	NT
LB-13D	LB-1291-19	12/23/91	6.97	249	10.7	NT
LB-13D	LB-392-19	3/24/92	6.88	247	13.0	NT
LB-13D	LB-7292-2	7/2/92	7.40	250	13.0	NT
LB-13D	LB-91792-2	9/17/92	7.40	246	12.0	NT
LB-13D	LB-121092-9	12/9/92	6.82	251	12.0	NT
LB-13D	LB-031293-20	3/12/93	6.92	264	11.0	NT
LB-13D	LB-060493-21	6/4/93	6.99	231	13.5	NT
LB-13D	LB-092393-07	9/23/93	6.75	251	13.0	6.10
LB-13D	LB-121693-12	12/16/93	6.78	252	11.0	6.90
LB-13D	LB-032894-17	3/28/94	6.73	290	15.0	8.20
LB-13D	LB-062894-20	6/28/94	6.77	274	14.0	6.80
LB-13D	LB-090794-10	9/7/94	6.94	265	13.0	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-13D	LB-121594-21	12/15/94	6.68	304	11.0	6.90
LB-13D	LB-031395-18	3/13/95	6.80	296	12.5	7.10
LB-13D	LB-062195-19	6/21/95	6.73	353	12.0	7.10
LB-13D	LB-092295-16	9/22/95	6.99	256	12.6	NT
LB-13D	LB-121995-8	12/19/95	7.02	234	10.2	NT
LB-13D	LB-132096-15	3/20/96	6.58	271	13.2	NT
LB-13D	LB-061996-16	6/19/96	6.78	258	13.0	NT
LB-13D	LB-091796-4	9/17/96	6.81	257	13.9	NT
LB-13D	LB121796-9	12/17/96	7.25	300	11.0	NT
LB-13D	LB-032097-18	3/20/97	6.96	323	11.8	NT
LB-13D	LB-061897-15	6/18/97	6.88	291	12.9	NT
LB-13D	LB-091897-11	9/18/97	6.46	310	12.0	NT
LB-13D	LB-121797-9	12/17/97	6.60	301	11.8	11.00
LB-13D	LB-032098-19	3/20/98	7.11	296	12.9	NT
LB-13D	LB-061798-14	6/17/98	6.69	238	13.2	NT
LB-13D	LB-091898-15	9/18/98	7.42	218	12.9	NT
LB-13D	LB-121898-12	12/18/98	6.76	270	11.7	NT
LB-13D	LB-031999-23	3/19/99	6.78	222	14.2	NT
LB-13D	LB-062399-12	6/23/99	6.81	195	12.7	NT
LB-13D	LB-091799-13	9/17/99	6.69	256	12.6	NT
LB-13D	LB-121499-3	12/14/99	6.75	252	12.1	NT
LB-13D	LB-091300-11	9/13/00	6.95	225	13.0	NT
LB-13D	LB-121500-12	12/15/00	6.80	198	12.1	NT
LB-13D	LB-031501-19	3/15/01	6.67	229	12.2	NT
LB-13D	LB-032002-20	3/20/02	6.87	223	12.3	6.53
LB-13D	LB-031303-16	3/13/03	6.93	197	13.0	NT
LB-13D	LB-022404-3	2/24/04	6.73	150	54.4	NT
LB-13D	LB-031005-17	3/10/05	6.62	194	12.3	7.65
LB-13D	LB-031506-9	3/15/06	6.75	175	11.8	8.09
LB-13D	LB-030607-18	3/6/07	6.26	143	12.2	11.33
LB-13D	LB-032008-13	3/20/08	6.76	263	11.7	NT
LB-13D	LB-13D	3/17/09	6.71	271	11.6	7.86
LB-13D	LB-13D032410	3/24/10	6.78	227	12.0	NT
LB-13D	LB-13D	3/25/11	6.99	216	11.6	6.18
LB-13D	LB-031212-01	3/12/12	6.27	235	11.5	5.32
LB-13D	LB-020713-22	2/7/13	6.46	228	11.7	5.88
LB-13D	LB-021814-08	2/18/14	6.70	220	11.6	5.84
LB-13D	LB-021715-03	2/17/15	6.53	211	12.0	5.98
LB-13D	LB-021616-02	2/16/16	6.68	210	11.8	5.78
LB-13D	**LB-030817-04**	**3/8/17**	**6.64**	**208**	**8.2**	**6.51**
LB-13I	LB-1089-W17	10/18/89	6.91	693	13.0	NT
LB-13I	LB-1189-W17	11/16/89	6.78	721	11.0	NT
LB-13I	LB-1289-W16	12/18/89	6.72	692	10.5	NT
LB-13I	LB-390-W19	3/15/90	6.61	676	12.5	NT
LB-13I	LB-690-W19	6/21/90	6.82	654	13.0	NT
LB-13I	LB-990-W16	9/18/90	6.83	706	13.0	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-13I	LB-1290-W21	12/13/90	6.82	744	11.5	NT
LB-13I	LB-391-W14	3/20/91	6.80	742	12.4	NT
LB-13I	LB-691-W21	6/27/91	6.74	619	13.2	NT
LB-13I	LB-991-12	9/25/91	7.05	757	11.8	NT
LB-13I	LB-1291-18	12/23/91	7.02	707	11.2	NT
LB-13I	LB-392-20	3/24/92	6.60	663	12.0	NT
LB-13I	LB-7292-1	7/2/92	6.88	679	13.0	NT
LB-13I	LB-91792-1	9/17/92	6.84	631	13.0	NT
LB-13I	LB-12992-8	12/9/92	6.92	671	12.0	NT
LB-13I	LB-031293-19	3/12/93	6.93	689	12.0	NT
LB-13I	LB-060493-20	6/4/93	6.80	640	15.0	NT
LB-13I	LB-092393-06	9/23/93	6.88	570	14.0	3.10
LB-13I	LB-121693-14	12/16/93	6.82	537	11.0	0.50
LB-13I	LB-032894-16	3/28/94	6.82	680	15.0	3.00
LB-13I	LB-062894-19	6/28/94	7.00	495	15.0	1.90
LB-13I	LB-090794-9	9/7/94	7.09	503	14.0	NT
LB-13I	LB-121994-20	12/15/94	6.84	543	12.5	4.40
LB-13I	LB-031395-17	3/13/95	6.93	486	13.5	4.50
LB-13I	LB-052195-18	6/21/95	6.80	509	12.5	3.50
LB-13I	LB-092295-15	9/22/95	6.87	408	14.5	NT
LB-13I	LB-121995-7	12/19/95	6.78	357	10.9	NT
LB-13I	LB-032096-14	3/20/96	6.84	504	13.2	NT
LB-13I	LB-061996-15	6/19/96	6.91	547	14.0	NT
LB-13I	LB-091796-3	9/17/96	6.63	501	14.0	NT
LB-13I	LB121796-10	12/17/96	7.24	630	12.2	NT
LB-13I	LB-032097-19	3/20/97	6.76	706	13.1	NT
LB-13I	LB-061897-14	6/18/97	6.87	540	13.8	NT
LB-13I	LB-091897-12	9/18/97	6.88	890	14.0	NT
LB-13I	LB-121797-8	12/17/97	6.88	624	12.4	NT
LB-13I	LB-032098-18	3/20/98	6.90	752	14.4	NT
LB-13I	LB-061798-15	6/17/98	6.88	447	14.7	NT
LB-13I	LB-091898-14	9/18/98	7.11	294	13.7	NT
LB-13I	LB-121898-11	12/18/98	6.82	425	12.6	NT
LB-13I	LB-031999-22	3/19/99	6.93	422	15.0	NT
LB-13I	LB-062399-13	6/23/99	7.05	348	14.3	NT
LB-13I	LB-091799-12	9/17/99	6.91	648	13.9	NT
LB-13I	LB-121499-4	12/14/99	7.03	657	13.3	NT
LB-13I	LB-091300-12	9/13/00	6.97	634	13.7	NT
LB-13I	LB-121500-11	12/15/00	6.89	496	13.0	NT
LB-13I	LB-031501-20	3/15/01	6.75	509	13.1	NT
LB-13I	LB-092001-8	9/20/01	6.71	360	13.4	NT
LB-13I	LB-032002-19	3/20/02	6.81	325	13.0	4.14
LB-13I	LB-091802-7	9/18/02	7.00	460	14.0	NT
LB-13I	LB-031303-15	3/13/03	6.80	306	12.0	NT
LB-13I	LB-092203-7	9/22/03	6.52	330	14.0	4.37
LB-13I	LB-022404-4	2/24/04	6.70	240	54.7	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-13I	LB-090104-13	9/1/04	6.60	315	14.0	NT
LB-13I	LB-031005-18	3/10/05	6.68	286	12.8	2.04
LB-13I	LB-091505-9	9/15/05	6.80	202	12.9	3.65
LB-13I	LB-031506-10	3/15/06	6.75	228	12.0	3.90
LB-13I	LB-091306-8	9/13/06	6.74	263	12.8	3.80
LB-13I	LB-030607-17	3/6/07	6.42	203	12.5	9.15
LB-13I	LB-091907-8	9/19/07	6.70	352	12.5	6.65
LB-13I	LB-032008-12	3/20/08	7.15	329	11.4	NT
LB-13I	LB-091608/5	9/16/08	6.91	290	14.6	NT
LB-13I	LB-13I	3/17/09	6.88	285	11.7	5.64
LB-13I	LBLF13i091109	9/11/09	7.70	301	12.8	4.76
LB-13I	LB-13I032410	3/24/10	7.09	297	12.2	NT
LB-13I	LB-13I092310	9/23/10	7.10	204	11.6	NT
LB-13I	LB-13I	3/23/11	7.91	276	12.1	2.96
LB-13I	LB-090711-02	9/7/11	6.85	252	13.9	1.38
LB-13I	LB-032212-19	3/22/12	6.58	255	11.7	2.40
LB-13I	LB-091112-03	9/11/12	6.47	266	14.1	2.40
LB-13I	LB-020613-13	2/6/13	6.74	290	11.7	1.75
LB-13I	LB-082113-05	8/21/13	6.01	280	14.5	2.31
LB-13I	LB-021814-10	2/18/14	6.61	305	11.6	0.81
LB-13I	LB-081314-04	8/13/14	6.63	281	13.4	1.82
LB-13I	LB-021815-11	2/18/15	6.96	274	11.8	1.25
LB-13I	LB-081115-05	8/11/15	7.02	247	13.7	2.18
LB-13I	LB-021816-20	2/18/16	6.81	252	11.5	3.19
LB-13I	LB-082316-03	8/23/16	6.75	260	13.8	2.94
LB-13I	**LB-031517-18**	**3/15/17**	**6.61**	**253**	**11.9**	**2.55**
LB-13I	**LB-081617-04-13I**	**8/16/17**	**6.80**	**291**	**12.9**	**0.75**
LB-17D	LB-1089-W10	10/18/89	6.95	830	13.0	NT
LB-17D	LB-1189-W12	11/15/89	6.82	890	13.0	NT
LB-17D	LB-1289-W28	12/20/89	6.76	930	13.0	NT
LB-17D	LB-390-W21	3/15/90	6.83	905	13.5	NT
LB-17D	LB-690-W18	6/21/90	6.91	882	15.5	NT
LB-17D	LB-990-W19	9/19/90	6.92	864	14.5	NT
LB-17D	LB-1290-W23	12/13/90	6.82	867	13.5	NT
LB-17D	LB-391-W19	3/21/91	6.74	829	14.2	NT
LB-17D	LB-691-W14	6/26/91	6.85	744	15.4	NT
LB-17D	LB-991-10	9/25/91	6.95	818	14.3	NT
LB-17D	LB-1291-16	12/23/91	7.09	1030	13.1	NT
LB-17D	LB-392-11	3/23/92	6.86	906	16.0	NT
LB-17D	LB-63092-5	6/30/92	6.72	919	16.5	NT
LB-17D	LB-031093-6	3/10/93	6.92	715	15.0	NT
LB-17D	LB-060493-22	6/4/93	6.65	637	15.5	NT
LB-17D	LB-092793-21	9/27/93	6.92	723	16.0	3.20
LB-17D	LB-121593-7	12/15/93	6.71	768	14.0	1.30
LB-17D	LB-032994-20	3/29/94	7.13	780	17.5	2.00
LB-17D	LB-052394-14	6/23/94	7.09	669	16.0	5.20

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-17D	LB-090794-7	9/7/94	7.06	657	17.0	NT
LB-17D	LB-121494-10	12/14/94	6.98	657	13.0	NT
LB-17D	LB-030995-5	3/9/95	7.01	593	14.0	1.00
LB-17D	LB-062095-11	6/20/95	6.90	681	14.5	6.00
LB-17D	LB-092195-10	9/21/95	6.50	732	16.3	NT
LB-17D	LB-121895-3	12/18/95	7.21	542	12.0	NT
LB-17D	LB-031996-10	3/19/96	5.84	586	14.1	NT
LB-17D	LB-061996-14	6/19/96	6.98	587	12.0	NT
LB-17D	LB-032097-16	3/20/97	7.08	571	15.1	NT
LB-17D	LB-031998-14	3/19/98	6.97	573	15.5	NT
LB-17D	LB-031899-13	3/18/99	6.98	352	16.6	NT
LB-17D	LB-031401-9	3/14/01	6.98	333	15.1	NT
LB-17D	LB-031902-7	3/19/02	7.17	335	15.0	2.22
LB-17D	LB-031203-7	3/12/03	7.33	337	14.7	3.60
LB-17D	LB-022504-10	2/25/04	6.97	257	57.6	NT
LB-17D	LB-030905-10	3/9/05	7.06	313	15.4	0.74
LB-17D	LB-031506-7	3/15/06	7.06	301	13.7	3.45
LB-17D	LB-030607-14	3/6/07	6.39	258	15.1	9.31
LB-17D	LB-032008-11	3/20/08	7.07	353	12.9	NT
LB-17D	LB-17D	3/18/09	7.14	295	14.2	3.53
LB-17D	LB-17D032410	3/24/10	7.00	299	15.2	NT
LB-17D	LB-17D	3/22/11	7.45	278	13.8	2.42
LB-17D	LB-031212-04	3/12/12	6.68	388	13.1	0.20
LB-17D	LB-020513-05	2/5/13	6.73	344	13.5	0.14
LB-17D	LB-021714-03	2/17/14	6.48	330	13.3	0.40
LB-17D	LB-021715-05	2/17/15	6.82	296	14.4	0.96
LB-17D	LB-021616-01	2/16/16	6.83	292	13.0	0.37
LB-17D	**LB-030817-06**	**3/8/17**	**6.85**	**299**	**9.1**	**1.10**
LB-17I	LB-1089-W14	10/19/89	6.83	1231	14.0	NT
LB-17I	LB-1189-W14	11/15/89	6.65	1192	14.0	NT
LB-17I	LB-1289-W29	12/20/89	6.57	1167	13.5	NT
LB-17I	LB-390-W20	3/15/90	6.59	807	13.0	NT
LB-17I	LB-690-W17	6/21/90	6.48	1202	16.0	NT
LB-17I	LB-990-W18	9/19/90	6.47	1200	15.0	NT
LB-17I	LB-1290-W22	12/13/90	6.62	1125	13.4	NT
LB-17I	LB-391-W20	3/21/91	6.40	1069	14.2	NT
LB-17I	LB-392-13	3/23/92	6.71	1036	16.0	NT
LB-17I	LB-63092-6	6/30/92	6.57	1337	16.0	NT
LB-17I	LB-91892-3	9/18/92	6.72	1300	14.0	NT
LB-17I	LB-121192-18	12/11/92	6.85	992	15.0	NT
LB-17I	LB-031093-5	3/10/93	6.79	930	15.0	NT
LB-17I	LB-032994-21	3/29/94	6.85	960	18.0	2.80
LB-17I	LB-030995-6	3/9/95	6.93	695	14.0	2.60
LB-17I	LB-031996-11	3/19/96	6.87	782	13.2	NT
LB-17I	LB-032097-17	3/20/97	6.99	674	15.9	NT
LB-17I	LB-031998-13	3/19/98	6.87	567	17.2	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-17I	LB-031899-12	3/18/99	6.86	410	17.5	NT
LB-17I	LB-031401-10	3/14/01	6.80	359	16.4	NT
LB-17I	LB-031902-6	3/19/02	7.03	478	15.9	2.23
LB-17I	LB-031203-6	3/12/03	6.93	510	16.0	1.00
LB-17I	LB-022504-11	2/25/04	6.90	362	59.9	NT
LB-17I	LB-030905-11	3/9/05	7.08	507	15.8	1.68
LB-17I	LB-031506-8	3/15/06	6.80	538	14.5	2.03
LB-17I	LB-030607-13	3/6/07	6.36	458	15.4	12.80
LB-17I	LB-032008-10	3/20/08	7.04	483	13.0	NT
LB-17I	LB-17I	3/18/09	6.95	343	14.8	3.85
LB-17I	LB-171032410	3/24/10	7.13	476	4.1	NT
LB-17I	LB-17I	3/22/11	7.74	528	14.0	2.35
LB-17I	LB-031312-16	3/13/12	6.85	414	12.9	0.15
LB-17I	LB-020513-06	2/5/13	6.89	362	14.1	0.10
LB-17I	LB-021714-04	2/17/14	6.77	376	13.8	0.40
LB-17I	LB-021815-15	2/18/15	7.11	408	13.7	0.48
LB-17I	LB-021816-15	2/18/16	7.00	423	13.0	0.29
LB-17I	**LB-030817-07**	**3/8/17**	**6.96**	**321**	**9.3**	**0.53**
LB-20S	LB-1289-W36	12/21/89	6.69	817	11.5	NT
LB-20S	LB-390-W12	3/14/90	6.32	1255	13.0	NT
LB-20S	LB-690-W08	6/19/90	NT	1312	13.5	NT
LB-20S	LB-990-W09	9/14/90	6.68	881	14.0	NT
LB-20S	LB-1290-W10	12/12/90	6.62	1164	13.2	NT
LB-20S	LB-391-W08	3/20/91	6.62	716	13.1	NT
LB-20S	LB-691-W11	6/26/91	6.44	869	13.8	NT
LB-20S	LB-991-19	9/26/91	6.68	942	13.2	NT
LB-20S	LB-1291-05	12/19/91	6.08	1130	12.7	NT
LB-20S	LB-392-18	3/24/92	6.62	770	15.0	NT
LB-20S	LB-031593-26	3/15/93	6.75	686	14.0	NT
LB-20S	LB-032994-23	3/29/94	6.77	890	17.0	4.90
LB-20S	LB-031395-19	3/13/95	6.86	1020	16.0	8.30
LB-20S	LB-032096-20	3/20/96	6.91	796	15.0	NT
LB-20S	LB-032097-15	3/20/97	6.94	798	13.7	NT
LB-20S	LB-032098-23	3/20/98	6.93	542	14.6	NT
LB-20S	LB-031899-16	3/18/99	6.89	287	15.4	NT
LB-20S	LB-031401-13	3/14/01	6.65	424	13.6	NT
LB-20S	LB-032002-14	3/20/02	6.63	481	12.8	2.21
LB-20S	LB-031203-20	3/12/03	6.47	377	13.0	NT
LB-20S	LB-022604-19	2/26/04	6.87	281	53.7	NT
LB-20S	LB-030905-12	3/9/05	6.85	517	12.6	12.06
LB-20S	LB-031406-4	3/14/06	6.41	246	12.5	3.94
LB-20S	LB-030607-16	3/6/07	6.17	300	13.0	9.53
LB-20S	LB-032408-16	3/24/08	6.83	504	12.1	NT
LB-20S	LB-20S	3/18/09	7.02	457	13.3	4.93
LB-20S	LB-20S032410	3/24/10	6.83	405	12.9	NT
LB-20S	LB-20S	3/24/11	6.81	586	12.1	2.09

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-20S	LB-031312-15	3/13/12	6.78	385	11.6	0.17
LB-20S	LB-020513-10	2/5/13	6.76	574	12.2	0.15
LB-20S	LB-021914-20	2/19/14	6.80	400	12.0	0.51
LB-20S	LB-021915-18	2/19/15	6.99	281	12.6	0.79
LB-20S	LB-021716-13	2/17/16	7.04	320	12.7	0.48
LB-20S	**LB-031517-17**	**3/15/17**	**6.85**	**306**	**12.4**	**1.43**
LB-26D	LB-0892-2	8/27/92	6.51	364	13.5	NT
LB-26D	LB-92192-7	9/21/92	6.60	370	13.0	NT
LB-26D	LB-121092-13	12/10/92	6.72	326	11.5	NT
LB-26D	LB-031193-14	3/11/93	7.16	302	11.5	NT
LB-26D	LB-060193-3	6/1/93	6.36	280	13.0	NT
LB-26D	LB-092493-12	9/24/93	6.55	295	13.5	6.60
LB-26D	LB-121693-16	12/16/93	6.76	295	13.0	6.50
LB-26D	LB-032494-7	3/24/94	6.70	307	14.0	6.90
LB-26D	LB-062294-6	6/22/94	6.66	325	15.0	6.50
LB-26D	LB-090894-15	9/8/94	6.70	309	14.0	NT
LB-26D	LB-121394-5	12/13/94	6.59	343	13.0	5.90
LB-26D	LB-031095-14	3/10/95	6.66	302	13.0	8.00
LB-26D	LB-061995-2	6/19/95	6.72	343	13.0	4.30
LB-26D	LB-092095-4	9/20/95	6.68	324	15.0	NT
LB-26D	LB-122095-15	12/20/95	6.76	291	10.2	NT
LB-26D	LB-031996-2	3/19/96	6.06	330	12.5	NT
LB-26D	LB-061896-2	6/18/96	6.60	335	12.0	NT
LB-26D	LB-091896-11	9/18/96	6.71	320	12.1	NT
LB-26D	LB-121796-4	12/17/96	7.09	352	11.5	NT
LB-26D	LB-031997-6	3/19/97	6.67	366	11.8	NT
LB-26D	LB-061797-8	6/17/97	6.58	329	12.7	NT
LB-26D	LB-091697-4	9/16/97	6.84	285	11.7	NT
LB-26D	LB-121697-6	12/16/97	6.61	350	12.0	5.00
LB-26D	LB-031998-9	3/19/98	6.93	355	13.2	NT
LB-26D	LB-061698-9	6/16/98	6.62	281	12.9	NT
LB-26D	LB-091798-6	9/17/98	6.81	230	13.0	NT
LB-26D	LB-121798-3	12/17/98	6.98	279	11.9	NT
LB-26D	LB-031899-6	3/18/99	6.60	287	14.5	NT
LB-26D	LB-062399-9	6/23/99	6.79	214	13.0	NT
LB-26D	LB-091699-3	9/16/99	6.54	290	12.2	NT
LB-26D	LB-121599-9	12/15/99	6.90	285	12.0	NT
LB-26D	LB-091200-4	9/12/00	6.69	252	12.3	NT
LB-26D	LB-121500-7	12/15/00	6.72	222	11.7	NT
LB-26D	LB-031301-5	3/13/01	6.72	247	11.9	NT
LB-26D	LB-031902-8	3/19/02	6.87	226	11.9	5.92
LB-26D	LB-031203-5	3/12/03	7.43	210	12.0	NT
LB-26D	LB-022504-12	2/25/04	6.56	149	52.4	NT
LB-26D	LB-030805-7	3/8/05	6.62	199	12.3	7.22
LB-26D	LB-031606-19	3/16/06	6.81	183	11.4	8.60
LB-26D	LB-030507-11	3/5/07	6.38	156	12.1	8.93

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-26D	LB-031908-8	3/19/08	6.79	319	12.5	NT
LB-26D	LB-26D	3/17/09	6.83	230	11.5	8.02
LB-26D	LB-26D032410	3/24/10	6.86	237	11.7	NT
LB-26D	LB-26D	3/23/11	7.60	230	12.3	6.13
LB-26D	LB-031212-05	3/12/12	6.39	234	11.6	4.92
LB-26D	LB-020713-23	2/7/13	6.45	236	11.8	4.43
LB-26D	LB-021714-05	2/17/14	6.43	226	11.9	2.09
LB-26D	LB-021715-04	2/17/15	6.57	221	12.2	3.00
LB-26D	LB-021616-04	2/16/16	6.66	231	11.8	2.71
LB-26D	**LB-030817-05**	**3/8/17**	**6.63**	**218**	**8.1**	**5.49**
LB-26I	LB-0892-1	8/27/92	6.64	571	14.0	NT
LB-26I	LB-92192-6	9/21/92	6.88	576	13.0	NT
LB-26I	LB-121092-12	12/10/92	6.89	616	12.0	NT
LB-26I	LB-031193-13	3/11/93	6.89	626	13.0	NT
LB-26I	LB-060193-1	6/1/93	6.78	544	13.5	NT
LB-26I	LB-092493-11	9/24/93	6.76	525	14.0	4.20
LB-26I	LB-121693-15	12/16/93	6.96	547	13.0	1.90
LB-26I	LB-032494-6	3/24/94	6.90	508	14.0	2.90
LB-26I	LB-062294-5	6/22/94	6.89	550	16.0	1.90
LB-26I	LB-09894-16	9/8/94	6.96	492	15.0	NT
LB-26I	LB-121394-4	12/13/94	6.78	536	13.5	4.40
LB-26I	LB-031095-12	3/10/95	6.98	499	13.0	0.80
LB-26I	LB-061995-1	6/19/95	6.81	503	13.5	3.20
LB-26I	LB-092095-5	9/20/95	6.91	437	15.0	NT
LB-26I	LB-122095-14	12/20/95	7.05	395	10.4	NT
LB-26I	LB-031996-1	3/19/96	6.25	428	12.0	NT
LB-26I	LB-061896-1	6/18/96	6.93	412	12.0	NT
LB-26I	LB-091896-10	9/18/96	6.96	426	12.6	NT
LB-26I	LB121796-5	12/17/96	7.18	437	12.1	NT
LB-26I	LB-031997-5	3/19/97	6.75	468	12.2	NT
LB-26I	LB-061797-7	6/17/97	6.75	415	14.0	NT
LB-26I	LB-091697-5	9/16/97	6.82	359	12.0	NT
LB-26I	LB-121697-7	12/16/97	6.86	607	12.9	0.80
LB-26I	LB-031998-8	3/19/98	6.81	590	13.3	NT
LB-26I	LB-061698-8	6/16/98	6.88	391	13.1	NT
LB-26I	LB-091798-7	9/17/98	6.67	287	13.4	NT
LB-26I	LB-121798-2	12/17/98	7.13	369	12.6	NT
LB-26I	LB-031799-1	3/17/99	7.29	328	14.8	NT
LB-26I	LB-062399-10	6/23/99	6.96	281	13.6	NT
LB-26I	LB-091699-4	9/16/99	6.78	541	13.0	NT
LB-26I	LB-121599-8	12/15/99	7.01	510	12.6	NT
LB-26I	LB-091200-5	9/12/00	6.93	448	13.1	NT
LB-26I	LB-121500-8	12/15/00	7.01	385	12.5	NT
LB-26I	LB-031301-6	3/13/01	6.94	407	12.5	NT
LB-26I	LB-092001-3	9/20/01	6.87	384	13.6	NT
LB-26I	LB-031902-9	3/19/02	6.96	353	12.4	4.11

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-26I	LB-091802-4	9/18/02	7.10	350	13.0	NT
LB-26I	LB-031203-4	3/12/03	6.68	293	13.0	NT
LB-26I	LB-092203-4	9/22/03	7.30	250	15.0	5.37
LB-26I	LB-022504-13	2/25/04	6.80	200	53.5	NT
LB-26I	LB-090104-26	9/1/04	6.77	288	13.5	NT
LB-26I	LB-030805-8	3/8/05	6.80	306	12.7	3.23
LB-26I	LB-091405-5	9/14/05	6.76	239	13.7	3.69
LB-26I	LB-031606-20	3/16/06	6.90	267	11.7	7.18
LB-26I	LB-091206-3	9/12/06	7.00	297	13.3	3.02
LB-26I	LB-030507-10	3/5/07	6.37	223	12.6	5.78
LB-26I	LB-091907-5	9/19/07	6.94	315	12.3	4.67
LB-26I	LB-031908-7	3/19/08	7.00	385	13.2	NT
LB-26I	LB-091608-6	9/16/08	6.40	220	17.8	NT
LB-26I	LB-26I	3/17/09	6.92	328	11.6	7.05
LB-26I	LBLF26I091109	9/11/09	7.39	234	12.9	7.06
LB-26I	LB-23I032410	3/24/10	7.07	331	12.0	NT
LB-26I	LB26I092310	9/23/10	7.10	229	11.6	NT
LB-26I	LB-26I	3/23/11	7.75	300	12.1	4.41
LB-26I	LB-090711-03	9/7/11	6.77	230	15.1	4.41
LB-26I	LB-032212-21	3/22/12	6.57	274	11.5	4.96
LB-26I	LB-091112-04	9/11/12	6.31	253	13.1	5.07
LB-26I	LB-020613-14	2/6/13	6.61	250	11.8	4.65
LB-26I	LB-082113-06	8/21/13	6.00	244	13.7	4.25
LB-26I	LB-021714-06	2/17/14	6.30	255	11.7	2.88
LB-26I	LB-081314-05	8/13/14	6.50	234	13.9	4.92
LB-26I	LB-021815-12	2/18/15	6.87	270	11.9	3.54
LB-26I	LB-081115-06	8/11/15	6.71	215	13.7	4.48
LB-26I	LB-021616-05	2/16/16	6.73	252	11.8	4.63
LB-26I	LB-082316-04	8/23/16	6.70	266	13.9	4.30
LB-26I	**LB-031517-19**	**3/15/17**	**6.57**	**247**	**11.9**	**4.57**
LB-26I	**LB-081617-05-26I**	**8/16/17**	**6.73**	**264**	**13.3**	**3.42**
LB-27D	LB-0892-4	8/27/92	6.85	289	14.0	NT
LB-27D	LB-92292-5	9/22/92	7.34	258	13.0	NT
LB-27D	LB-121192-21	12/11/92	7.12	321	13.0	NT
LB-27D	LB-031193-16	3/11/93	6.50	311	11.5	NT
LB-27D	LB-060193-4	6/1/93	7.28	305	13.5	NT
LB-27D	LB-092493-16	9/24/93	7.24	273	14.0	4.60
LB-27D	LB-121693-17	12/16/93	7.24	315	13.0	5.00
LB-27D	LB-032494-4	3/24/94	7.25	306	13.0	5.10
LB-27D	LB-062294-9	6/22/94	7.19	321	15.5	5.30
LB-27D	LB-090894-12	9/8/94	7.09	319	13.5	NT
LB-27D	LB-121394-2	12/12/94	7.48	337	11.5	6.60
LB-27D	LB-031095-8	3/10/95	7.18	339	13.5	7.60
LB-27D	LB-051995.4	6/19/95	7.20	343	14.0	5.60
LB-27D	LB-092095-1	9/20/95	7.16	301	16.0	NT
LB-27D	LB-122095-17	12/20/95	7.05	270	11.2	NT

Table B-1
Groundwater Chemistry, Field Parameters
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Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-27D	LB-031996-3	3/19/96	7.26	295	13.0	NT
LB-27D	LB-061896-4	6/18/96	7.16	280	14.0	NT
LB-27D	LB-091796-9	9/17/96	7.02	290	14.2	NT
LB-27D	LB121796-8	12/17/96	7.61	290	13.1	NT
LB-27D	LB-031997-12	3/19/97	7.01	302	12.3	NT
LB-27D	LB-061797-11	6/17/97	7.00	260	15.3	NT
LB-27D	LB-091697-8	9/16/97	7.24	258	12.5	NT
LB-27D	LB-121797-13	12/17/97	6.97	300	12.0	4.20
LB-27D	LB-031998-12	3/19/98	6.97	292	13.6	NT
LB-27D	LB-061798-10	6/17/98	6.92	254	13.0	NT
LB-27D	LB-091798-8	9/17/98	7.07	224	14.9	NT
LB-27D	LB-121798-6	12/17/98	7.19	276	12.8	NT
LB-27D	LB-031899-9	3/18/99	7.04	238	14.5	NT
LB-27D	LB-062399-7	6/23/99	6.99	199	13.7	NT
LB-27D	LB-091599-1	9/15/99	6.85	270	12.9	NT
LB-27D	LB-121599-7	12/15/99	7.13	282	12.6	NT
LB-27D	LB-091300-8	9/13/00	6.95	268	13.2	NT
LB-27D	LB-091300-9	9/13/00	6.95	268	13.2	NT
LB-27D	LB-121500-5	12/15/00	7.03	254	12.5	NT
LB-27D	LB-031301-3	3/13/01	6.97	288	12.9	NT
LB-27D	LB-031902-11	3/19/02	6.99	308	12.9	5.02
LB-27D	LB-031203-3	3/12/03	6.96	293	13.0	NT
LB-27D	LB-022604-15	2/26/04	6.88	237	54.7	NT
LB-27D	LB-030805	3/8/05	6.82	322	13.0	4.20
LB-27D	LB-031606-17	3/16/06	6.90	298	12.4	6.81
LB-27D	LB-030507-9	3/5/07	6.20	270	13.5	9.54
LB-27D	LB-031908-5	3/19/08	7.00	0.489	12.4	NT
LB-27D	LB-27D	3/18/09	6.98	315	13.3	7.65
LB-27D	LB-27D032410	3/24/10	7.01	331	13.0	NT
LB-27D	LB-27D	3/25/11	7.43	317	11.3	4.47
LB-27D	LB-031212-02	3/12/12	6.60	338	12.1	3.32
LB-27D	LB-020713-21	2/7/13	6.77	330	11.0	3.64
LB-27D	LB-021814-13	2/18/14	6.66	313	11.3	3.32
LB-27D	LB-021715-02	2/17/15	6.50	299	12.4	3.82
LB-27D	LB-021816-18	2/18/16	6.92	287	11.7	3.61
LB-27D	**LB-030817-03**	**3/8/17**	**6.90**	**287**	**7.8**	**4.72**
LB-27I	LB-0892-3	8/27/92	6.60	811	14.0	NT
LB-27I	LB-92292-4	9/22/92	7.36	836	14.0	NT
LB-27I	LB-121192-20	12/11/92	6.62	783	13.5	NT
LB-27I	LB-031293-21	3/12/93	7.24	756	13.0	NT
LB-27I	LB-060193-2	6/1/93	6.77	664	14.0	NT
LB-27I	LB-092493-14	9/24/93	6.97	769	14.0	7.20
LB-27I	LB-121693-14	12/16/93	6.81	707	13.0	2.30
LB-27I	LB-032494-3	3/24/94	6.67	718	15.5	6.00
LB-27I	LB-062294-8	6/22/94	6.73	649	17.0	2.40
LB-27I	LB-090894-11	9/8/94	6.84	568	14.0	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-27I	LB-121394-1	12/13/94	8.12	671	12.0	11.00
LB-27I	LB-031095-7	3/10/95	6.77	661	13.5	4.20
LB-27I	LB-061995-3	6/19/95	6.83	673	14.0	3.20
LB-27I	LB-092095-3	9/20/95	6.85	585	14.5	NT
LB-27I	LB-122095-16	12/20/95	6.89	482	11.6	NT
LB-27I	LB-031996-4	3/19/96	7.05	640	14.7	NT
LB-27I	LB-061896-3	6/18/96	6.94	609	14.0	NT
LB-27I	LB-091796-7	9/17/96	6.99	752	14.3	NT
LB-27I	LB121796-6	12/17/96	7.31	947	12.9	NT
LB-27I	LB-031997-10	3/19/97	6.87	771	12.8	NT
LB-27I	LB-061797-9	6/17/97	6.98	548	14.1	NT
LB-27I	LB-091697-6	9/16/97	6.93	544	12.6	NT
LB-27I	LB-121797-11	12/17/97	6.86	750	12.8	0.80
LB-27I	LB-031998-10	3/19/98	6.80	917	15.7	NT
LB-27I	LB-061798-11	6/17/98	6.85	494	14.1	NT
LB-27I	LB-091798-9	9/17/98	6.82	327	15.6	NT
LB-27I	LB-121798-4	12/17/98	6.96	446	13.8	NT
LB-27I	LB-031899-7	3/18/99	6.83	476	15.5	NT
LB-27I	LB-062399-8	6/23/99	7.00	396	14.5	NT
LB-27I	LB-091599-2	9/15/99	6.76	914	14.3	NT
LB-27I	LB-121599-6	12/15/99	7.02	940	12.8	NT
LB-27I	LB-091300-10	9/13/00	6.86	741	14.4	NT
LB-27I	LB-121500-6	12/15/00	6.85	778	13.3	NT
LB-27I	LB-031301-4	3/13/01	6.81	665	13.8	NT
LB-27I	LB-092001-2	9/20/01	6.68	612	14.1	NT
LB-27I	LB-031902-10	3/19/02	6.82	685	13.5	2.62
LB-27I	LB-091802-5	9/18/02	7.30	590	15.0	NT
LB-27I	LB-031203-1	3/12/03	6.88	563	14.0	NT
LB-27I	LB-092203-2	9/22/03	6.10	540	14.5	2.40
LB-27I	LB-022604-17	2/26/04	6.82	382	55.7	NT
LB-27I	LB-090104-27	9/1/04	6.76	554	14.2	NT
LB-27I	LB-030805-5	3/8/05	6.85	525	13.7	2.81
LB-27I	LB-091405-3	9/14/05	6.91	353	14.0	2.80
LB-27I	LB-031606-18	3/16/06	6.98	376	12.6	6.90
LB-27I	LB-091206-2	9/12/06	6.78	564	13.8	1.50
LB-27I	LB-030507-8	3/5/07	6.05	445	13.7	3.88
LB-27I	LB-091907-4	9/19/07	6.78	486	13.2	2.30
LB-27I	LB-031908-4	3/19/08	6.91	0.786	12.9	NT
LB-27I	LB-091608-7	9/16/08	7.00	531	14.3	NT
LB-27I	LB-27I	3/18/09	6.94	557	13.4	4.44
LB-27I	LBLF27i091109	9/11/09	7.01	538	14.5	3.07
LB-27I	LB-27I032410	3/24/10	6.97	419	12.7	NT
LB-27I	LB27I092310	9/23/10	7.00	401	12.3	NT
LB-27I	LB-27I	3/25/11	7.39	523	11.6	3.20
LB-27I	LB-090711-01	9/7/11	6.46	707	14.2	1.11
LB-27I	LB-032212-18	3/22/12	6.82	643	11.7	0.32

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (^{o}C)	Dissolved Oxygen (mg/L)
LB-27I	LB-091112-02	9/11/12	6.72	706	14.0	1.02
LB-27I	LB-020613-11	2/6/13	6.81	670	12.1	0.29
LB-27I	LB-082113-03	8/21/13	6.00	720	14.5	0.38
LB-27I	LB-021814-14	2/18/14	6.85	574	11.9	0.81
LB-27I	LB-081314-03	8/13/14	6.79	576	13.6	0.66
LB-27I	LB-021815-10	2/18/15	6.94	613	12.2	1.96
LB-27I	LB-081215-09	8/12/15	6.75	575	14.0	0.54
LB-27I	LB-021816-19	2/18/16	6.95	512	11.6	1.10
LB-27I	LB-082316-02	8/23/16	6.62	590	13.6	2.18
LB-27I	**LB-031517-16**	**3/15/17**	**6.63**	**578**	**12.1**	**2.09**
LB-27I	**LB-081617-03-27I**	**3/16/17**	**6.59**	**563**	**13.3**	**1.19**
FIELDQC	**LB-031517-15**	**3/15/17**	**N/A**	**N/A**	**N/A**	**N/A**
FIELDQC	**LB-081617-08-FB1**	**8/16/17**	**N/A**	**N/A**	**N/A**	**N/A**

Notes:
NT = not tested; N/A = Not Applicable

Volatile Organic Compounds

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1D	LB-01D	6/2/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-1D	LB-01D	7/21/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-1D	LB-01D	9/4/87	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1D	LB-01D	11/6/87	0.6	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1D	LB-01D	6/22/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1D	LB-01D	8/30/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0 L	1.0 L	1.0 L
LB-1D	LB-01D	9/1/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0 L	1.0 L	1.0 L
LB-1D	LB-01D	12/5/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1D	LB-289-W04	2/28/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-589-W03	5/23/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-989-W16	9/12/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1089-W01	10/17/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1189-W04	11/14/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1289-W22	12/19/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-390-W09	3/14/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-690-W11	6/20/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-990-W08	9/14/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1290-W06	12/11/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-391-W11	3/21/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-691-W06	6/26/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-991-06	9/24/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1291-14	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-392-14	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-63092-2	6/30/92	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-92292-3	9/22/92	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-121192-16	12/11/92	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-031093-4	3/10/93	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-060293-6	6/2/93	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-092393-8	9/23/93	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-092393-8	9/23/93	0.2 L	0.2 L	0.2 L	0.2 L	NT	0.3 L	0.2 L	NT
LB-1D	LB-121593-2	12/15/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-032494-2	3/24/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-062194-1	6/21/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1D	LB-090694-2	9/6/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1D	LB-121494-12	12/14/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1D	LB-030995-2	3/9/95	0.3 L	0.2	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-1D	LB-062095-13	6/20/95	0.3 L	0.2 L	0.1 L	0.1 L	0.3 B	0.1 L	0.1 L	0.1 L
LB-1D	LB-092295-14	9/22/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-1D	LB-121995-6	12/19/95	0.2	0.2 L	0.1 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L
LB-1D	LB-032096-18	3/20/96	0.3 L	0.2 L	0.1 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L
LB-1D	LB-061896-10	6/18/96	0.2	0.1 L	0.0 L	0.1 L	0.2	0.1 L	0.2 L	0.1 L
LB-1D	LB-091796-6	9/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.2	0.1 L	0.2 L	0.1 L
LB-1D	LB121796-2	12/17/96	0.2	0.1 L	0.0 L	0.1 L	0.2	0.1 L	0.2 L	0.1 L
LB-1D	LB-031997-4	3/19/97	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-061797-4	6/17/97	0.2	0.1	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L
LB-1D	LB-091697-1	9/16/97	0.2	0.5 L	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L
LB-1D	LB-121697-4	12/16/97	0.1	0.5 L	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L
LB-1D	LB-031998-4	3/19/98	0.2	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-061698-6	6/16/98	0.1	0.1 L	0.0 L	0.1 L	0.4	0.1 L	0.2 L	0.1 L
LB-1D	LB-091798-3	9/17/98	0.2 L	0.3 L	0.2 B	0.2 L	0.5	0.2 L	0.3 L	0.2 L
LB-1D	LB-121898-10	12/18/98	0.2 L	0.3 L	0.2 L	0.2 L	0.4	0.2 L	0.3 L	0.2 L
LB-1D	LB-031799-4	3/17/99	0.2 L	0.3 L	0.2 L	0.2 L	0.5	0.2 L	0.3 L	0.2 L
LB-1D	LB-062399-15	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.6	0.2 L	0.3 L	0.2 L
LB-1D	LB-091799-11	9/17/99	0.2 L	0.3 L	0.3 J	NT	0.5	0.2 L	NT	NT
LB-1D	LB-121699-12	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-1D	LB-031700-16	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB-061300-8	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.8	0.5 L	0.5 L	0.5 L
LB-1D	LB-091100-2	9/11/00	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-121500-10	12/15/00	0.2 J	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB-031501-15	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-031501-16	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-031902-2	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-031303-12	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-022404-1	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB030905-13	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB-031406-1	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D (Dup)	LB-031406-2	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB-030507-2	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1D	LB-032408-15	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-1D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-1D032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-1D	3/24/11	0.1 L	0.1 L	0.2 L	0.1 L	0.28	0.25 L	0.1 L	0.1 L
LB-1D	LB-031312-13	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1D	LB-020513-07	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-1D	LB-021914-17	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1D	LB-021915-17	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-1D	LB-021716-08	2/17/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-1D	**LB-030917-10**	**3/9/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-1S	LB-01S	5/11/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-1S	LB-01S	7/21/87	2.0 L	2.0 L	NT	1.0 L	2.0 L	5.0 L	NT	2.0 L
LB-1S	LB-01S	9/4/87	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-01S	11/6/87	0.9	1.1	1.0 L	1.8	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-01S	2/11/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-01S	6/22/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-01S	8/30/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0 L	5.0	1.0 L
LB-1S	LB-01S	12/5/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-289-W05	2/28/89	1.0 L	1.0 L	1.0 L	1.0	1.0 L	1.0 L	4.5	1.0 L
LB-1S	LB-589-W04	5/23/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	8.3	1.0 L
LB-1S	LB-989-W15	9/12/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	8.0	1.0 L
LB-1S	LB-1289-W12	12/15/89	1.0 L	1.0 L	1.0 L	1.0	1.0 L	1.0 L	8.5	1.0 L
LB-1S	LB-390-W10	3/14/90	1.0 L	1.0 L	1.0 L	1.1	1.0 L	1.0 L	9.1	1.0 L
LB-1S	LB-690-W10	6/20/90	1.0 L	1.0 L	1.0 L	1.3	1.0 L	1.0 L	5.5	1.0 L
LB-1S	LB-990-W06	9/14/90	1.0 L	1.0 L	1.0 L	1.5	1.0 L	1.8	3.1	1.0 L
LB-1S	LB-1290-W05	12/11/90	1.0 L	1.0 L	1.0 L	3.7	1.0 L	1.0 L	2.6	1.0 L
LB-1S	LB-391-W10	3/20/91	1.0 L	1.0 L	1.0 L	2.2	1.0 L	1.0 L	3.7	1.0 L
LB-1S	LB-691-W05	6/26/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.4	1.0 L
LB-1S	LB-991-05	9/24/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0	1.0 L
LB-1S	LB-1291-13	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0	1.0 L
LB-1S	LB-392-15	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1S	LB-63092-1	6/30/92	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.8 B	0.2 L
LB-1S	LB-92292-2	9/22/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-1S	LB-121192-15	12/11/92	0.2 L	0.2 L	0.2 L	0.3	0.5 L	0.3 L	0.3	0.2 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1S	LB-031093-3	3/10/93	0.2 L	0.2 L	0.2 L	1.8	0.5 L	0.3 L	0.9	0.2 L
LB-1S	LB-060293-5	6/2/93	0.2 L	0.2	0.2 L	0.7	0.5 L	0.3 L	0.6	0.2 L
LB-1S	LB-092393-9	9/23/93	0.2 L	0.2 L	0.2 L	0.3	0.5 L	0.3 L	0.2	0.2 L
LB-1S	LB-092393-9	9/23/93	0.2 L	0.2 L	0.2 L	NT	NT	0.3 L	NT	NT
LB-1S	LB-121593-1	12/15/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-1S	LB-032494-1	3/24/94	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.2	0.2 L
LB-1S	LB-062194-4	6/21/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1S	LB-090694-1	9/6/94	0.2 L	0.3 L	0.4 L	0.3	0.3 L	0.3 L	0.3 L	0.3 L
LB-1S	LB-121494-11	12/14/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1S	LB-121995-5	2/19/95	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-030995-1	3/9/95	0.3 L	0.2 L	0.1 L	0.1 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-062095-12	6/20/95	0.3 L	0.2 L	0.1 L	0.1 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-092295-13	9/22/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-121995-5	12/19/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-032096-17	3/20/96	0.3 L	0.2 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-061896-9	6/18/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-1S	LB-091796-5	9/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-1S	LB121796-1	12/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-1S	LB-031997-3	3/19/97	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-061797-3	6/17/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091697-2	9/16/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-121697-5	12/16/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031998-3	3/19/98	0.5 L	0.5 L	0.5 L	0.1 B	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-061698-5	6/16/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-1S	LB-091798-4	9/17/98	0.2 L	0.3 L	0.3 B	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-1S	LB-121898-9	12/18/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-1S	LB-031799-3	3/17/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-1S	LB-062399-14	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-1S	LB-091799-10	9/17/99	0.2 L	0.3 L	0.3 J	NT	NT	0.2 L	NT	0.2 L
LB-1S	LB-091799-9	9/17/99	0.2 L	0.3 L	0.3 J	NT	NT	0.2 L	NT	0.2 L
LB-1S	LB-121699-13	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	0.2 L	NT	0.2 L
LB-1S	LB-031700-15	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-061300-7	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091100-1	9/11/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1S	LB-121500-9	12/15/00	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031401-14	3/14/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031902-1	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091802-1	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031303-10	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031303-11	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-092203-6	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-022404-2	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-090104-1	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S (Dup)	LB-090104-30	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-030905-14	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091405-1	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S (Dup)	LB-091405-2	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031406-3	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091306-5	9/13/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S (Dup)	LB-091306-6	9/13/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-030507-1	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091907-1	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S (Dup)	LB-091907-2	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-032408-14	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091608-1	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-1S	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LBLF1S091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-1S032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB1S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-1S	3/24/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1S	LB-090811-07	9/8/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1S	LB-031312-14	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1S	LB-091212-08	9/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1S	LB-020513-09	2/5/2013	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1S	LB-082213-08	8/22/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1S	LB-021914-18	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1S (Dup)	LB-021914-19	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1S	LB-081414-09	8/14/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1S	LB-021915-16	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-1S	LB-081115-02	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-1S	LB-021716-14	2/17/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-1S	LB-082416-05	8/24/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-1S	**LB-030917-11**	**3/9/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-1S	**LB-081617-07-1S**	**8/16/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-3D	LB-03D	5/28/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-3D	LB-1189-W01	11/13/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3D	LB-1289-W20	12/18/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3D	LB-032097-14	3/20/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-032098-21	3/20/98	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-031899-15	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-3D	LB-031600-9	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-031501-17	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-032002-18	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-031303-14	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-022404-5	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-030905-15	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-031606-21	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-030507-4	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-030507-5	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-032408-17	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-3D	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-3D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-3D	3/28/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-3D	LB-031312-09	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-3D	LB-020713-18	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-3D	LB-021914-22	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-3D	LB-021715-07	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-3D	LB-021616-06	2/16/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-3D	**LB-030917-08**	**3/9/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-3S	LB-03S	5/12/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-3S	LB-03S	7/16/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-3S	LB-1089-W02	10/17/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3S	LB-1189-W02	11/13/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3S	LB-1289-W11	12/15/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3S	LB-032594-11	3/25/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-3S	LB-032097-13	3/20/97	0.6	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-032098-20	3/20/98	0.5	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-031899-14	3/18/99	0.4	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-3S	LB-031600-8	3/16/00	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-031501-18	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-032002-17	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-031303-13	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-022404-6	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB030905-16	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-031606-22	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-030507-3	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-032408-18	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-3S	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-3S032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-3S	3/28/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-3S	LB-031312-10	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-3S	LB-020713-17	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-3S	LB-021914-22	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-3S	LB-021915-19	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-3S	LB-021716-12	2/17/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-3S	**LB-030917-09**	**3/9/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-5D	LB-05D	5/27/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-5D	LB-05D	7/20/87	1.0 L	1.0 L	NT	1.0 L	2.0 L	4.0 L	NT	1.0 L
LB-5D	LB-05D	2/11/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-5D	LB-05D	8/30/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0 L	1.0 L	1.0 L
LB-5D	LB-1289-W24	12/19/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-5D	LB-032894-13	3/28/94	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.2 L	0.2 L
LB-5D	LB-031997-9	3/19/97	0.5 L	0.5 L	0.5 L	0.2	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031998-6	3/19/98	0.5 L	0.5 L	0.5 L	0.2	0.5 L	0.2	0.5 L	0.5 L
LB-5D	LB-031899-11	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-5D	LB-031600-5	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031401-11	3/14/01	0.5 L	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031902-13	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031303-9	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-022504-7	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D (Dup)	LB-022504-8	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-030805-1	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031606-14	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D (Dup)	LB-031606-15	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-030507-7	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031908-2	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D (Dup)	LB-031908-3	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-5D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-5D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-5D	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5D	LB-031212-03	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5D	LB-020513-03	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-5D	LB-021714-01	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-5D	LB-021715-01	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5D	LB-021816-16	2/18/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5D	**LB-030817-01**	**3/8/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-5D (Dup)	**LB-030817-02**	**3/8/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-5S	LB-05S	5/29/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-5S	LB-05S	7/19/87	1.0 L	1.0 L	NT	2.0 L	2.0 L	4.0 L	NT	1.0 L
LB-5S	LB-05S	9/10/87	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-5S	LB-05S	11/11/87	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-5S	LB-05S	2/10/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-5S	LB-032894-12	3/28/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-5S	LB-031997-8	3/19/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031998-5	3/19/98	2.4	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031899-10	3/18/99	2.6	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-5S	LB-031600-4	3/16/00	1.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031401-12	3/14/01	0.4 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031902-12	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-5S	LB-091802-6	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031303-8	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-092203-1	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-022504-9	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-090104-5	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB030805-2	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S (Dup)	LB030805-3	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091405-4	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031606-16	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091206-1	9/12/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-030507-6	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091907-3	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031908-1	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091608-2	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S (Dup)	LB-091608-8	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-5S	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LBLF5S091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-5S032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S (Dup)	LB-DUP2032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB5S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S (Dup)	LB51S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-5S	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5S	LB-090811-06	9/8/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5S	LB-032212-17	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5S	LB-091112-01	9/11/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5S	LB-020513-04	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-5S	LB-082113-01	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-5S	LB-021714-02	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-5S	LB-081314-01	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-5S	LB-021815-09	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5S	LB-081215-08	8/12/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5S	LB-021816-17	2/18/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5S	LB-082316-01	8/23/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5S	**LB-031517-14**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-5S	**LB-081517-01-5S**	**8/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-5S (Dup)	**LB-081517-02-DUP**	**8/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-6S	LB-06S	7/17/87	1.0 L	1.0 L	NT	3.0	2.0	4.0 L	NT	1.0 L
LB-6S	LB-06S	9/10/87	1.0 L	1.1	1.0 L	1.0 L	8.0	1.0 L	NT	1.0 L
LB-6S	LB-06S	11/11/87	1.0 L	2.6	1.0 L	4.2	7.1	1.0 L	NT	1.0 L
LB-6S	LB-06S	2/11/88	1.0 L	1.5	1.0 L	1.4	1.0 L	1.0 L	NT	1.0 L
LB-6S	LB-06S	6/22/88	1.0 L	4.0	1.0 L	6.0	1.0 L	1.0 L	NT	1.0 L
LB-6S	LB-06S	8/31/88	1.0 L	1.0	1.0 L	3.0	1.0 L	2.0 L	40.0	1.0 L
LB-6S	LB-06S	12/6/88	1.0 L	1.0 L	1.0 L	6.0	1.0 L	2.0	NT	1.0 L
LB-6S	LB-289-W17	3/1/89	1.0 L	1.0 L	1.0 L	6.9	1.0 L	2.6	24.1	1.0 L
LB-6S	LB-589-W17	5/24/89	1.0 L	1.0 L	1.0 L	5.2	1.0	1.0 L	21.0	1.0 L
LB-6S	LB-989-W07	9/7/89	1.0 L	1.0 L	1.0 L	5.6	1.0 L	1.5	20.0	1.0 L
LB-6S	LB-1289-W13	12/15/89	1.0	2.0	1.0 L	13.0	1.0 L	1.7	51.0	1.0 L
LB-6S	LB-390-W24	3/15/90	1.0 L	1.5	1.0 L	11.0	1.0 L	1.0 L	37.0	1.0 L
LB-6S	LB-690-W22	6/21/90	1.0 L	1.0 L	1.0 L	9.7	1.0 L	1.0 L	31.0	1.0 L
LB-6S	LB-990-W11	9/14/90	1.1	1.7	1.0 L	12.0	1.0 L	6.2	37.0	1.0 L
LB-6S	LB-1290-W13	12/12/90	1.0 L	1.0 L	1.0 L	10.0	1.0 L	4.5	34.0	1.0 L
LB-6S	LB-391-W16	3/21/91	1.0 L	1.0 L	1.0 L	4.3	1.0 L	1.0 L	14.0	1.0 L
LB-6S	LB-691-W19	6/26/91	1.0 L	1.0 L	1.0 L	3.7	1.0 L	1.0 L	13.0	1.0 L
LB-6S	LB-691-W20	6/26/91	1.0 L	1.0 L	1.0 L	4.1	1.0 L	1.0 L	15.0	1.0 L
LB-6S	LB-991-14	9/25/91	1.0 L	1.0 L	1.0 L	5.0	1.0 L	1.0 L	18.0	1.0 L
LB-6S	LB-991-15	9/25/91	1.0 L	1.0 L	1.0 L	4.0	1.0 L	1.0	15.0	1.0 L
LB-6S	LB-1291-08	12/20/91	1.0 L	1.0 L	1.0 L	5.0	1.0 L	1.0 L	29.0	1.0 L
LB-6S	LB-1291-09	12/20/91	1.0 L	1.0 L	1.0 L	4.0	1.0 L	1.0 L	28.0	1.0 L
LB-6S	LB-392-07	3/20/92	1.0 L	1.0 L	1.0 L	2.0	1.0 L	1.0 L	4.0	1.0 L
LB-6S	LB-392-08	3/20/92	1.0 L	1.0 L	1.0 L	2.0	1.0 L	1.0 L	4.0	1.0 L
LB-6S	LB-62692-5	6/26/92	0.4	NT	0.2 L	NT	0.5 L	NT	NT	0.2 L
LB-6S	LB-62692-5	6/26/92	NT	0.4 B	0.2 L	2.6	NT	0.9	6.1 B	NT
LB-6S	LB-62692-6	6/26/92	NT	NT	0.2 L	NT	0.5 L	0.8	5.2 B	0.2 L
LB-6S	LB-62692-6	6/26/92	0.4	0.4 B	0.2 L	2.6	NT	NT	NT	NT
LB-6S	LB-92192-4	9/21/92	0.5	0.4	0.2 L	NT	0.5 L	2.1	5.9	0.2 L
LB-6S	LB-92192-4	9/21/92	NT	NT	0.2 L	3.0	NT	NT	NT	NT
LB-6S	LB-92192-5	9/21/92	NT	NT	0.2 L	NT	0.5 L	NT	NT	0.2 L
LB-6S	LB-92192-5	9/21/92	0.5	0.4	0.2 L	3.0	NT	1.9	5.6	NT

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-6S	LB-12992-4	12/9/92	0.6 B	NT	0.2	NT	7.8 B	0.3 L	NT	0.2 L
LB-6S	LB-12992-4	12/9/92	NT	0.2	NT	3.6	NT	0.3 L	5.8	NT
LB-6S	LB-12992-5	12/9/92	NT	0.2 L	NT	3.9	3.1 B	0.3 L	6.6	0.2
LB-6S	LB-12992-5	12/9/92	0.4 B	0.2 L	0.2	NT	NT	0.3 L	NT	NT
LB-6S	LB-031093-7	3/10/93	0.2 L	0.2 L	0.2 L	NT	0.5 L	0.9	2.3	0.2 L
LB-6S	LB-031093-7	3/10/93	0.2 L	0.2 L	0.2 L	2.6	NT	NT	NT	NT
LB-6S	LB-031093-8	3/10/93	0.2 L	0.2 L	0.2 L	NT	0.5 L	0.3 L	2.1	0.2 L
LB-6S	LB-031093-8	3/10/93	0.2 L	0.2 L	0.2 L	2.4	NT	0.3 L	NT	NT
LB-6S	LB-060393-11	6/3/93	0.4	NT	0.2 L	1.3	0.5 L	NT	1.2	0.2 L
LB-6S	LB-060393-11	6/3/93	NT	0.3	0.2 L	NT	NT	0.6	NT	NT
LB-6S	LB-060393-12	6/3/93	0.4	NT	0.2 L	NT	0.5 L	NT	NT	0.2 L
LB-6S	LB-060393-12	6/3/93	NT	0.3	0.2 L	1.1	NT	0.4	1.0	NT
LB-6S	LB-092493-13	9/24/93	0.2 L	0.2 L	0.2 L	1.8	0.5 L	2.9	1.4	0.2 L
LB-6S	LB-092493-13	9/24/93	0.2 L	0.2 L	0.2 L	NT	NT	NT	NT	NT
LB-6S	LB-121593-6	12/15/93	0.2 L	0.2 L	0.2 L	1.6	0.5 L	1.3	1.8	0.2 L
LB-6S	LB-032994-18	3/29/94	0.2 L	0.2 L	0.2 L	0.9	0.5 L	0.6	0.5	0.2 L
LB-6S	LB-032994-19	3/29/94	0.2 L	0.2 L	0.2 L	0.9	0.5 L	0.5	0.5	0.2 L
LB-6S	LB-062394-11	6/23/94	0.2 L	0.3 L	0.4 L	0.5	0.3 L	0.3 L	0.3 L	0.3 L
LB-6S	LB-062394-12	6/23/94	0.2 L	0.3 L	0.4 L	0.6	0.3 L	0.3 L	0.3 L	0.3 L
LB-6S	LB-090694-5	9/6/94	0.2 L	0.3 L	0.4 L	0.8	0.3 L	0.8	0.4	0.3 L
LB-6S	LB-090694-6	9/6/94	0.2 L	0.3 L	0.4 L	0.8	0.3 L	0.8	0.4	0.3 L
LB-6S	LB-121394-6	12/13/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-6S	LB-121394-7	12/13/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-6S	LB-031095-10	3/10/95	0.3 L	0.2 L	0.1 L	0.2 B	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-031095-11	3/10/95	0.3 L	0.2 L	0.1	0.2 B	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-062095-10	6/20/95	0.3 L	0.2 L	0.1 L	0.3 B	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-062095-9	6/20/95	0.3 L	0.2 L	0.1 L	0.3 B	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-092095-6	9/20/95	0.3 L	0.3 L	0.1 L	0.3	0.1 L	0.1	0.2	0.1 L
LB-6S	LB-092095-7	9/20/95	0.3 L	0.3 L	0.1 L	0.3	0.1 L	0.1	0.2	0.1 L
LB-6S	LB-122095-12	12/20/95	0.3 L	0.2 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L	0.1 L
LB-6S	LB-122095-13	12/20/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1	0.1 L
LB-6S	LB-031996-5	3/19/96	0.3 L	0.2 L	0.1 L	0.2	0.1 L	0.1 L	0.1	0.1 L
LB-6S	LB-031996-6	3/19/96	0.3 L	0.2 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L	0.1 L
LB-6S	LB-061996-12	6/19/96	0.1 L	0.1 L	0.0 L	0.3	0.1 L	0.1 L	0.2	0.1 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-6S	LB-061996-13	6/19/96	0.1	0.1 L	0.0 L	0.3	0.1 L	0.1 L	0.3	0.1 L
LB-6S	LB-091896-12	9/18/96	0.1 L	0.1 L	0.0 L	0.4	0.1 L	0.1 L	0.3	0.1 L
LB-6S	LB121796-3	12/17/96	0.1 L	0.1 L	0.0 L	0.4	0.1 L	0.1	0.2	0.1 L
LB-6S	LB-031997-7	3/19/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-061797-6	6/17/97	0.2	0.1	0.0	0.5	0.5 L	0.5 L	0.9	0.5 L
LB-6S	LB-091697-3	9/16/97	0.5 L	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.6	0.5 L
LB-6S	LB-121797-14	12/17/97	0.4	0.2	0.5 L	1.0	0.5 L	0.5 L	1.7	0.5 L
LB-6S	LB-031998-7	3/19/98	0.3	0.2	0.1	0.5	0.5 L	0.2	0.5 L	0.5 L
LB-6S	LB-061698-7	6/16/98	0.1	0.1	0.1	0.2	0.1 L	0.1 L	0.3	0.1 L
LB-6S	LB-091798-5	9/17/98	0.2	0.3 L	0.2 B	0.5	0.3 L	0.2 L	0.6	0.2 L
LB-6S	LB-121798-1	12/17/98	0.2 L	0.3 L	0.2 L	0.2	0.3 L	0.2 L	0.3 L	0.2 L
LB-6S	LB-031799-2	3/17/99	0.2 L	0.3 L	0.2 L	0.4	0.3 L	0.2 L	0.4	0.2 L
LB-6S	LB-062399-11	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-6S	LB-121599-10	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-6S	LB-031700-10	3/17/00	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031700-11	3/17/00	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-061300-6	6/13/00	0.5 L	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091200-3	9/12/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-121200-1	12/12/00	0.2 J	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.3 J	0.5 L
LB-6S	LB-121200-2	12/12/00	0.5 L	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.2 J	0.5 L
LB-6S	LB-031301-7	3/13/01	0.2 J	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031301-8	3/13/01	0.5 L	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-032002-15	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-032002-16	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091802-2	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091802-3	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031303-21	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-092203-5	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-022604-18	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-090104-6	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-030805-9	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091405-6	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031506-13	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091206-4	9/12/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-6S	LB-030507-12	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091907-6	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031908-9	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091608-3	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-6S	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LBLF6S091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S (Dup)	LBLFDUP1091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-6S032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB6S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-6S	3/22/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S (Dup)	DUP1	3/22/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S	LB-090711-05	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S (Dup)	LB-090711-04	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S	LB-032212-23	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S (Dup)	LB-032212-22	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S	LB-091212-06	9/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S (Dup)	LB-091212-07	9/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S	LB-020613-15	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-6S (Dup)	LB-020613-16	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-6S	LB-082113-07	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-6S	LB-021914-23	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-6S	LB-081314-06	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-6S (Dup)	LB-081314-07	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-6S	LB-021815-14	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S (Dup)	LB-021815-13	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S	LB-081115-03	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S (Dup)	LB-081115-04	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S	LB-021816-21	2/18/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S	LB-082416-08	8/24/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S (Dup)	LB-082416-09	8/24/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S	**LB-031517-20**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-6S (Dup)	**LB-031517-21**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-6S	**LB-081617-09-6S**	**8/16/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB10-DR	LB-031005-19	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB10-DR (Dup)	LB-031005-20	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-031406-5	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-030607-20	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-032408-22	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-10D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-10D032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10DR	LB-10DR	3/29/11	0.1 L	0.1 L	0.2 L	0.18	0.1 L	0.25 L	0.1 L	0.1 L
LB-10DR	LB-0313012-07	3/13/12	0.1 L	0.1 L	0.2 L	0.12	0.1 L	0.25 L	0.1 L	0.1 L
LB-10DR	LB-020713-19	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-10DR	LB-021914-15	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-10DR	LB-021915-20	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10DR	LB-021716-09	2/17/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10DR (Dup)	LB-021716-10	2/17/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10DR	**LB-030917-12**	**3/9/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-10SR	LB-031005-21	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-091505-7	9/15/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-031406-6	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-091306-9	9/13/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-030607-19	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-091907-7	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-032408-21	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR (Re)	MW10SR-043008	4/30/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-091608-4	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-10S	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR (Dup)	Dup-1	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LBLF10S091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-10SR032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB10S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-10SR	3/29/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR (Dup)	DUP2	3/29/11	0.1 L	0.15	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR	LB-090811-08	9/8/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR	LB-031312-08	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR	LB-091212-09	9/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR	LB-020713-20	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-10SR	LB-082213-09	8/22/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-10SR	LB-021914-16	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-10SR	LB-081414-08	8/14/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-10SR	LB-021915-21	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10SR	LB-081015-01	8/10/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10SR	LB-021716-11	2/17/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10SR	LB-082416-07	8/23/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10SR	**LB-030917-13**	**3/9/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-10SR	**LB-081617-06-10SR**	**8/16/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-13D	LB-989-W20	9/13/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-1089-W15	10/19/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-1189-W20	11/16/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-1289-W18	12/18/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-390-W18	3/15/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-690-W20	6/21/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-990-W17	9/18/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0	1.0 L	1.0 L	1.0 L
LB-13D	LB-1290-W20	12/13/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-391-W15	3/20/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-691-W22	6/26/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-991-13	9/25/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-1291-19	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-392-19	3/24/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-7292-2	7/2/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-91792-2	9/17/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-121092-9	12/10/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-031293-20	3/12/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-060493-21	6/4/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-092393-7	9/23/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-092393-7	9/23/93	0.2 L	0.2 L	0.2 L	0.2 L	NT	0.3 L	0.2 L	NT
LB-13D	LB-121693-12	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-032894-17	3/28/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-062394-20	6/28/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-13D	LB-090794-10	9/7/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-13D	LB-121594-21	12/15/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-13D	LB-031395-18	3/13/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-062195-19	6/21/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-092295-16	9/22/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-121995-8	12/19/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-032096-15	3/20/96	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-032096-16	3/20/96	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-061996-16	6/19/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-13D	LB-091796-4	9/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-13D	LB121796-9	12/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-13D	LB-032097-18	3/20/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-061897-15	6/18/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-091897-11	9/18/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-121797-9	12/17/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.8 L	0.5 L	0.5 L
LB-13D	LB-032098-19	3/20/98	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-061798-14	6/17/98	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-13D	LB-091898-15	9/18/98	0.2 L	0.3 L	0.3 B	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13D	LB-121898-12	12/18/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13D	LB-031999-23	3/19/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13D	LB-062399-12	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13D	LB-091799-13	9/17/99	0.2 L	0.3 L	0.3 J	NT	NT	NT	NT	NT
LB-13D	LB-121699-3	12/14/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-13D	LB-031700-18	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-061400-10	6/14/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-091300-11	9/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-121500-12	12/15/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-031501-19	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-032002-20	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-031303-16	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-022404-3	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-031005-17	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-031506-9	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-030607-18	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-032008-13	3/20/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-13D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-13D	LB-13D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-13D	3/25/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13D	LB-031212-01	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13D	LB-020713-22	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-13D	LB-021814-08	2/18/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-13D	LB-021715-03	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13D	LB-021616-02	2/16/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13D (Dup)	LB-021616-03	2/16/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13D	**LB-030817-04**	**3/8/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-13I	LB-989-W22	9/13/89	1.0 L	1.0 L	1.0 L	6.5	1.0 L	1.8	13.0	1.0 L
LB-13I	LB-989-W23	9/13/89	1.0 L	1.0 L	1.0 L	5.6	1.0 L	1.3	11.0	1.0 L
LB-13I	LB-1089-W17	10/19/89	1.0 L	1.0 L	1.0 L	6.0	1.0 L	2.3	10.0	1.0 L
LB-13I	LB-1189-W17	11/16/89	1.0 L	1.0 L	1.0 L	4.9	1.0 L	2.3	1.0 L	1.0 L
LB-13I	LB-1289-W16	12/18/89	1.0 L	1.0 L	1.0 L	5.7	1.0 L	1.9	10.0	1.0 L
LB-13I	LB-390-W19	3/15/90	1.0 L	1.0 L	1.0 L	2.0	1.0 L	3.7	2.2	1.0 L
LB-13I	LB-690-W19	6/21/90	1.0 L	1.0 L	1.0 L	3.6	1.0 L	1.4	8.1	1.0 L
LB-13I	LB-990-W16	9/18/90	1.0 L	1.0 L	1.0 L	5.1	1.0 L	2.4	8.3	1.0 L
LB-13I	LB-1290-W21	12/13/90	1.0 L	1.0 L	1.0 L	4.6	1.0 L	2.9	7.9	1.0 L
LB-13I	LB-391-W14	3/20/91	1.0 L	1.0 L	1.0 L	3.1	1.0 L	1.0 L	7.1	1.0 L
LB-13I	LB-691-W21	6/26/91	1.0 L	2.1	1.0 L	2.4	1.0 L	1.2	4.1	1.0 L
LB-13I	LB-991-12	9/25/91	1.0 L	1.0 L	1.0 L	3.0	1.0 L	1.0	9.0	1.0 L
LB-13I	LB-1291-18	12/23/91	1.0 L	1.0 L	1.0 L	1.0	1.0 L	1.0 L	9.0	1.0 L
LB-13I	LB-392-20	3/24/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0	1.0 L
LB-13I	LB-7292-1	7/2/92	0.2 L	0.2 L	0.2 L	0.4	0.5 L	1.4	0.2 L	0.2 L
LB-13I	LB-91792-1	9/17/92	0.2 L	0.2 L	0.2 L	1.6	0.5 L	6.6	2.5	0.2 L
LB-13I	LB-121092-8	12/10/92	0.2 L	0.2 L	0.2 L	1.6	0.5 L	0.3 L	1.9	0.2 L
LB-13I	LB-031293-19	3/12/93	0.2 L	0.2 L	0.2 L	1.3	0.5 L	1.2	1.7	0.2 L
LB-13I	LB-060493-20	6/4/93	0.2 L	0.2	0.2 L	0.8	0.5 L	0.5	0.9	0.2 L
LB-13I	LB-092393-6	9/23/93	0.2 L	0.2 L	0.2 L	0.8	0.5 L	1.6	0.6	0.2 L
LB-13I	LB-092393-6	9/23/93	0.2 L	0.2 L	0.2 L	NT	NT	NT	NT	NT
LB-13I	LB-121693-14	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13I	LB-032894-16	3/28/94	0.2 L	0.2 L	0.2 L	0.9	0.5 L	0.3 L	0.5	0.2 L
LB-13I	LB-0624894-19	6/28/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.6	0.3 L	0.3 L
LB-13I	LB-090794-9	9/7/94	0.2 L	0.3 L	0.4 L	0.2	0.3 L	0.6	0.3 L	0.3 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-13I	LB-121594-20	12/15/94	0.2 L	0.3 L	0.4 L	0.3	0.3 L	0.3 L	0.3 L	0.3 L
LB-13I	LB-031395-17	3/13/95	0.3 L	0.2 L	0.1 L	0.2 B	0.1 L	0.2	0.1 L	0.1 L
LB-13I	LB-062195-18	6/21/95	0.3 L	0.2 L	0.1 L	0.2 B	0.1 L	0.1 L	0.1	0.1 L
LB-13I	LB-092295-15	9/22/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.2	0.1 L	0.1 L
LB-13I	LB-121995-7	12/19/95	0.3 L	0.1	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13I	LB-032096-14	3/20/96	0.3 L	0.2 L	0.1 L	0.4	0.1 L	0.1 L	0.2 B	0.1 L
LB-13I	LB-061996-15	6/19/96	0.1 L	0.1 L	0.0	0.6	0.1 L	1.1	0.2	0.1 L
LB-13I	LB-091796-3	9/17/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.8	0.2 L	0.1 L
LB-13I	LB121796-10	12/17/96	0.1 L	0.1 L	0.0	0.1 L	0.1 L	1.1	0.2 L	0.1 L
LB-13I	LB-032097-19	3/20/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5	0.5 L	0.5 L
LB-13I	LB-061897-14	6/18/97	0.5 L	0.5 L	0.1	0.1	0.5 L	0.9	0.5 L	0.5 L
LB-13I	LB-091897-12	9/18/97	0.5 L	0.5 L	0.2	0.2	0.5 L	0.9	0.5 L	0.5 L
LB-13I	LB-121797-8	12/17/97	0.5 L	0.5 L	0.1	0.1	0.5 L	0.8	0.5 L	0.5 L
LB-13I	LB-032098-18	3/20/98	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L
LB-13I	LB-061798-15	6/17/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.6	0.2 L	0.1 L
LB-13I	LB-091898-14	9/18/98	0.2 L	0.3 L	0.3 B	0.2 L	0.3 L	0.7	0.3 L	0.2 L
LB-13I	LB-121898-11	12/18/98	0.2 L	0.3 L	0.2 L	0.3	0.3 L	0.2 L	0.3 L	0.2 L
LB-13I	LB-031999-22	3/19/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.4	0.3 L	0.2 L
LB-13I	LB-062399-13	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13I	LB-091799-12	9/17/99	0.2 L	0.3 L	0.3 J	NT	NT	0.4 J	NT	NT
LB-13I	LB-121699-4	12/14/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-13I	LB-031700-17	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-061400-9	6/14/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091300-12	9/13/00	0.3 J	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-121500-11	12/15/00	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-031501-20	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-032002-19	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091802-7	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-031303-15	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-092203-7	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-022404-4	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-090104-13	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-031005-18	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091505-9	9/15/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-13I	LB-031506-10	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091306-8	9/13/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-030607-17	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091907-8	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-032008-12	3/20/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091608-5	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-13I	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LBLF13i091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-13I032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-13I092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-13I	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I	LB-090711-02	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I	LB-032212-19	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I (Dup)	LB-032212-20	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I	LB-091112-03	9/11/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I	LB-020613-13	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-13I	LB-082113-05	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-13I	LB-021814-10	2/18/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-13I	LB-081314-04	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-13I	LB-021815-11	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13I	LB-081115-05	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13I	LB-021816-20	2/18/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13I	LB-082316-03	8/23/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13I	**LB-031517-18**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-13I	**LB-081617-04-13I**	**8/16/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-17D	LB-989-W08	9/7/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1089-W10	10/18/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1089-W11	10/18/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1189-W12	11/15/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1189-W13	11/15/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1289-W28	12/20/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-390-W21	3/15/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-390-W22	3/15/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-690-W18	6/21/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-17D	LB-990-W19	9/19/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-990-W20	9/19/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1290-W23	12/13/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-391-W19	3/21/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-391-W21	3/21/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-691-W14	6/11/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-691-W15	6/11/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-991-10	9/25/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-991-11	9/25/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1291-16	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1291-17	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-392-11	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-392-12	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-63092-5	6/30/92	0.2 L	0.2 L	0.5	0.2 L	0.5 L	0.9	0.2 L	0.2 L
LB-17D	LB-031093-6	3/10/93	0.2 L	0.2 L	0.3	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-17D	LB-060493-22	6/4/93	0.2 L	0.2 L	0.3	0.2 L	0.5 L	0.4	0.2 L	0.2 L
LB-17D	LB-092793-21	9/27/93	0.2 L	0.2 L	0.3	0.2 L	0.5 L	2.3	0.2 L	0.2 L
LB-17D	LB-092793-21	9/27/93	0.2 L	0.2 L	NT	0.2 L	NT	NT	0.2 L	NT
LB-17D	LB-121593-7	12/15/93	0.2 L	0.2 L	0.3	0.2 L	0.5 L	0.7	0.2 L	0.2 L
LB-17D	LB-032994-20	3/29/94	0.2 L	0.2 L	0.3	0.5 L	0.5 L	0.8	0.2 L	0.2 L
LB-17D	LB-062394-14	6/23/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-17D	LB-090794-7	9/7/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.7	0.3 L	0.3 L
LB-17D	LB-121494-10	12/14/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.4	0.3 L	0.3 L
LB-17D	LB-030995-5	3/9/95	0.3 L	0.4	0.2	0.1 L	0.1 L	0.4	0.2	0.1 L
LB-17D	LB-062095-11	6/20/95	0.3 L	0.2 L	0.3	0.1 L	0.1 L	0.3	0.1 L	0.1 L
LB-17D	LB-092095-10	9/20/95	0.3 L	0.3 L	0.4	0.1 L	0.1 L	0.1 L	0.1	0.1 L
LB-17D	LB-121895-3	12/18/95	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.4	0.5 L	0.5 L
LB-17D	LB-121895-3	12/18/95	0.3 L	0.2 L	NT	0.1 L	0.1 L	NT	0.1 L	0.1 L
LB-17D	LB-031996-11	3/19/96	0.3 L	0.2 L	0.3 B	0.1 L	0.1 L	0.4	0.1 L	0.1 L
LB-17D	LB-061996-14	6/19/96	0.1 L	0.1 L	0.3	0.1 L	0.1 L	0.6	0.2 L	0.1
LB-17D	LB-032097-16	3/20/97	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031998-14	3/19/98	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031899-13	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-17D	LB-031600-7	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-17D	LB-031401-9	3/14/01	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031902-7	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031203-7	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-022504-10	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-030905-10	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031506-7	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-030607-14	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D (Dup)	LB-030607-15	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-032008-11	3/20/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-17D	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-17D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-17D	3/22/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LN-17D	LB-031212-04	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-17D	LB-020513-05	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-17D	LB-021714-03	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-17D	LB-021715-05	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-17D (Dup)	LB-021715-06	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-17D	LB-021616-01	2/16/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-17D	**LB-030817-06**	**3/8/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-17I	LB-989-W04	9/6/89	1.0 L	1.0 L	1.4	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-1089-W14	10/19/89	1.0 L	1.0 L	1.6	1.0 L	1.0 L	1.0 L	1.0 L	1.4
LB-17I	LB-1189-W14	11/15/89	1.0 L	1.0 L	1.3	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-1289-W29	12/20/89	1.0 L	1.0 L	1.4	1.0 L	1.0 L	1.0 L	1.0 L	1.1
LB-17I	LB-1289-W30	12/20/89	1.0 L	1.0 L	1.4	1.0 L	1.0 L	1.0 L	1.0 L	1.1
LB-17I	LB-390-W20	3/15/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-690-W17	6/21/90	1.0 L	1.0 L	1.0	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-990-W18	9/19/90	1.0 L	1.0 L	1.2	1.0 L	1.0 L	1.0 L	1.0 L	1.1
LB-17I	LB-1290-W22	12/13/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-391-W20	3/21/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-392-13	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-63092-6	6/30/92	0.2 L	0.2 L	0.7		0.5 L	NT	0.2 L	0.8
LB-17I	LB-63092-6	6/30/92	0.2 L	0.2 L	NT	0.2	NT	1.0	0.2 L	NT
LB-17I	LB-63092-7	6/30/92	0.2 L	0.2 L	0.7	0.3	0.5 L	1.0		0.9
LB-17I	LB-63092-7	6/30/92	0.2 L	0.2 L	NT		NT	NT	0.3 B	NT

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-17I	LB-91892-3	9/18/92	0.2 L	0.2 L	1.0	0.2	0.5 L	4.1	0.2 L	1.3
LB-17I	LB-91892-3	9/18/92	0.2 L	0.2 L	NT		NT	NT	0.2 L	NT
LB-17I	LB-91892-4	9/18/92	0.2 L	0.2 L	0.9		0.5 L	NT	0.2 L	1.2
LB-17I	LB-91892-4	9/18/92	0.2 L	0.2 L	NT	0.2	NT	4.1	0.2 L	NT
LB-17I	LB-121192-18	12/11/92	0.2 L	0.2 L	NT	0.2 L	0.5 L	1.0	0.2 L	1.5
LB-17I	LB-121192-18	12/11/92	0.2 L	0.2 L	1.3	0.2 L	NT	NT	0.2 L	NT
LB-17I	LB-121192-19	12/11/92	0.2 L	0.2 L	1.3	0.2 L	0.5 L	NT	0.2 L	1.6
LB-17I	LB-121192-19	12/11/92	0.2 L	0.2 L	NT	0.2 L	NT	1.1	0.2 L	NT
LB-17I	LB-031093-5	3/10/93	0.2 L	0.2 L	1.5	0.2 L	0.5 L	0.8	0.2 L	1.9
LB-17I	LB-032994-21	3/29/94	0.2 L	0.2 L	0.9	0.5 L	0.5 L	0.4	0.2 L	0.8
LB-17I	LB-030995-6	3/9/95	0.3 L	0.2 L	0.8	0.1 L	0.1 L	0.2	0.1 L	1.0
LB-17I	LB-031996-10	3/19/96	0.3 L	0.2 L	0.7	0.1 L	0.1 L	0.4	0.1 L	0.9
LB-17I	LB-032097-17	3/20/97	0.5 L	0.5 L	1.3	0.5 L	0.5 L	0.5 L	0.5 L	1.5
LB-17I	LB-031998-13	3/19/98	0.5 L	0.5 L	0.8 J	0.5 L	0.5 L	0.1 J	0.5 L	1.1 J
LB-17I	LB-031899-12	3/18/99	0.2 L	0.3 L	0.6	0.2 L	0.3 L	0.2 L	0.3 L	0.8
LB-17I	LB-031600-6	3/16/00	0.5 L	0.5 L	0.4 J	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J
LB-17I	LB-031401-10	3/14/01	0.5 L	0.5 L	0.4 J	0.5 L	0.5 L	0.5 L	0.5 L	0.3 J
LB-17I	LB-031902-6	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-031203-6	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-022504-11	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB030905-11	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-031506-8	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-030607-13	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-032008-10	3/20/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-17I	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-17I032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I (Dup)	LB-DUP1032410	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-17I	3/22/11	0.1 L	0.81	0.26	0.1 L	0.1 L	0.25 L	0.27	0.1 L
LB-17I	LB-031312-16	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-17I	LB-020513-06	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-17I	LB-021714-04	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-17I	LB-021815-15	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-17I	LB-021816-15	2/18/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-17I	**LB-030817-07**	**3/8/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-20S	LB-1289-W36	12/21/89	1.0 L	1.0 L	1.0 L	1.0	22.0	2.6	1.3	1.0 L
LB-20S	LB-390-W12	3/14/90	1.0 L	1.0 L	1.0 L	2.5	1.0 L	10.0	2.0	1.1
LB-20S	LB-690-W08	6/19/90	1.0 L	1.0 L	1.0 L	1.8	1.0 L	12.0	1.1	2.2
LB-20S	LB-690-W09	6/19/90	1.0 L	1.0 L	1.0 L	2.2	1.0 L	14.0	1.8	2.4
LB-20S	LB-990-W09	9/14/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	4.9	1.0 L	1.3
LB-20S	LB-1290-W10	12/12/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	5.8	1.0 L	1.7
LB-20S	LB-1290-W11	12/12/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.5
LB-20S	LB-391-W08	3/20/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-20S	LB-392-18	3/24/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-20S	LB-031593-26	3/15/93	0.2 L	0.2 L	NT	NT	0.5 L	1.3	0.2 L	1.3
LB-20S	LB-031593-26	3/15/93	0.2 L	0.2 L	0.4	0.2	NT	NT	0.2 L	NT
LB-20S	LB-031593-27	3/15/93	0.2 L	0.2 L	0.4	NT	0.5 L	NT	0.2 L	1.5
LB-20S	LB-031593-27	3/15/93	0.2 L	0.2 L	NT	0.2	NT	1.6	0.2 L	NT
LB-20S	LB-032994-23	3/29/94	0.2 L	0.2 L	0.5	0.3	0.5 L	1.6	0.2 L	1.1
LB-20S	LB-031395-19	3/13/95	0.3 L	0.2 L	0.3	0.2 B	0.1 L	1.2	0.2	1.4
LB-20S	LB-032096-20	3/20/96	0.3 L	0.3	1.0	0.2	0.1 L	1.9	0.1 B	1.9
LB-20S	LB-032097-15	3/20/97	0.5 L	0.5 L	1.6	0.5 L	0.5 L	2.0	0.5 L	2.3
LB-20S	LB-032098-23	3/20/98	0.5 L	0.5 L	0.8	0.5 L	0.5 L	0.5	0.5 L	1.0
LB-20S	LB-031899-16	3/18/99	0.2 L	0.3 L	0.5	0.2 L	0.3 L	0.9	0.3 L	0.6
LB-20S	LB-031700-14	3/17/00	0.5 L	0.5 L	0.5	0.5 L	0.5 L	0.8	0.5 L	0.8
LB-20S	LB-031401-13	3/14/01	0.5 L	0.5 L	0.4 J	0.5 L	0.5 L	0.5 L	0.5 L	0.6
LB-20S	LB-032002-14	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-031303-20	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-022604-19	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB030905-12	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-031406-4	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-030607-16	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5
LB-20S	LB-032408-16	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5
LB-20S	LB-20S	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-20S032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-20S	3/24/11	0.1 L	0.1 L	0.25	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-20S	LB-031312-15	3/13/12	0.1 L	0.1 L	0.2	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-20S	LB-020613-10	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-20S	LB-021914-20	2/19/14	0.15 L	0.13 L	0.23 J	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-20S	LB-021915-18	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-20S	LB-021716-13	2/17/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-20S	**LB-031517-17**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-26D	LB-0892-2	8/27/92	0.2 L J	0.2 L J	0.2 L J	0.2 L J	0.5 L J	0.3 L J	0.3 J	0.2 L J
LB-26D	LB-92192-7	9/21/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-121092-13	12/10/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-031193-14	3/11/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-060193-3	6/1/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-092493-12	9/24/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-092493-12	9/24/93	0.2 L	0.2 L	0.2 L	0.2 L	NT	0.3 L	0.2 L	NT
LB-26D	LB-121693-16	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-032594-7	3/25/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-062294-6	6/22/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-26D	LB-090894-15	9/8/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-26D	LB-121394-5	12/13/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-26D	LB-031095-14	3/10/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-061995-2	6/19/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-092095-4	9/20/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-122095-15	12/20/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-031996-2	3/19/96	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-061896-2	6/18/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.1 L	0.2 L	0.1 L
LB-26D	LB-091896-10	9/18/96	0.1 L	0.1 L	0.0 L	4.0 B	0.1 L	0.1 L	0.2 L	0.1 L
LB-26D	LB121796-4	12/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-26D	LB-031997-6	3/19/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-061797-8	6/17/97	0.5 L	0.5 L	0.1	0.1	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-091697-4	9/16/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-121697-5	12/16/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031998-9	3/19/98	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-061698-9	6/16/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-26D	LB-091798-6	9/17/98	0.2 L	0.3 L	0.2 B	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26D	LB-121798-3	12/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26D	LB-031899-6	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26D	LB-062399-9	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26D	LB-121599-9	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-26D	LB-031700-13	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-061300-5	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-091200-4	9/12/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-121500-7	12/15/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031301-5	3/13/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031902-8	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031203-5	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-022504-12	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-030805-7	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031606-19	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-030507-11	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031908-8	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-26D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-26D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-26D	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26D	LB-031212-05	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26D	LB-020713-23	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-26D	LB-021714-05	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26D	LB-021715-04	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	**0.50 L**
LB-26D	LB-021616-04	2/16/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-26D	**LB-030817-05**	**3/8/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-26I	LB-0892-1	8/27/92	0.2 L J	0.2 L J	0.2 L J	0.5 J	0.5 L J	1.3 J	0.2 L J	0.2 L J
LB-26I	LB-92192-6	9/21/92	0.2 L	0.2 L	0.2 L	0.6	0.5 L	2.1	0.2 L	0.2 L
LB-26I	LB-121092-12	12/10/92	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.2 L	0.2 L
LB-26I	LB-031193-13	3/11/93	0.2 L	0.2 L	0.2 L	0.6	0.5 L	1.1	0.2 L	0.2 L
LB-26I	LB-060193-1	6/1/93	0.2 L	0.2 L	0.2 L	0.3	0.5 L	1.6	0.2 L	0.2 L
LB-26I	LB-092493-11	9/24/93	0.2 L	0.2 L	0.2 L	0.3	0.5 L	3.0	0.2 L	0.2 L
LB-26I	LB-092493-11	9/24/93	0.2 L	0.2 L	0.2 L	NT	NT	NT	0.2 L	NT
LB-26I	LB-121693-15	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.8	0.2 L	0.2 L
LB-26I	LB-032594-6	3/25/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.8	0.2 L	0.2 L
LB-26I	LB-062294-5	6/22/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-26I	LB-090894-16	9/8/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	1.0	0.3 L	0.3 L
LB-26I	LB-121394-4	12/13/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.6	0.3 L	0.3 L
LB-26I	LB-031095-13	3/10/95	0.3 L	0.2 L	0.1 L	0.1 B	0.1 L	0.5	0.1 L	0.1 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-26I	LB-061995-1	6/19/95	0.3 L	0.2 L	0.1 L	0.1 B	0.1 L	0.5	0.1 L	0.1 L
LB-26I	LB-092095-5	9/20/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.3	0.1 L	0.1 L
LB-26I	LB-122095-14	12/20/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26I	LB-031996-1	3/19/96	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.7	0.1 L	0.1 L
LB-26I	LB-061896-1	6/18/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.5	0.2 L	0.1 L
LB-26I	LB-091896-10	9/18/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.8	0.2 L	0.1 L
LB-26I	LB-121796-5	12/17/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.1 L	0.2 L	0.1 L
LB-26I	LB-031997-4	3/19/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-061797-7	6/17/97	0.5 L	0.5 L	0.1	0.1	0.5 L	0.4	0.5 L	0.5 L
LB-26I	LB-091697-5	9/16/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-121697-7	12/16/97	0.1	0.1	0.1	0.5	0.5 L	0.5 L	0.6	0.5 L
LB-26I	LB-031998-8	3/19/98	0.5 L	0.5 L	0.1	0.1	0.5 L	0.4	0.5 L	0.5 L
LB-26I	LB-061698-8	6/16/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-26I	LB-091798-7	9/17/98	0.2 L	0.3 L	0.3 B	0.2 L	0.3 L	0.3	0.3 L	0.2 L
LB-26I	LB-121798-2	12/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26I	LB-031799-1	3/17/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.4	0.3 L	0.2 L
LB-26I	LB-062399-10	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26I	LB-121599-8	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-26I	LB-031700-12	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-061300-4	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L
LB-26I	LB-091200-5	9/12/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-121500-8	12/15/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031301-6	3/13/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031902-9	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091802-4	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031203-4	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-092203-4	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-022504-13	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-090104-26	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-030805-8	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091405-5	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031606-20	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091206	9/12/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-030507-10	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-26I	LB-091907-5	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031908-7	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091608-6	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-26I	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LBLF26i091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-26I032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB26I092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-26I	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26I	LB-090711-03	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26I	LB-032212-21	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26I	LB-091112-04	9/11/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26I	LB-020613-14	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-26I	LB-082113-06	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26I	LB-021714-06	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26I (Dup)	LB-021714-07	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26I	LB-081314-05	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26I	LB-021815-12	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-26I	LB-081115-06	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-26I	LB-021616-05	2/16/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-26I	LB-082316-04	8/23/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-26I	**LB-031517-19**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-26I	**LB-081617-05-26I**	**8/16/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-27D	LB-0892-4	8/27/92	0.2 L J	0.2 L J	0.2 L J	0.4 J	0.5 L J	0.3 L J	0.2 L J	0.2 L J
LB-27D	LB-92202-5	9/22/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	1.6 J	0.2 L	0.2 L
LB-27D	LB-121192-21	12/11/92	0.2 L	0.2	0.2 L	0.7	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-031193-16	3/11/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-060193-4	6/1/93	0.2 L	0.2 L	0.2 L	0.4	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-092493-16	9/24/93	0.2 L	0.2 L	0.2 L	NT	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-092493-16	9/24/93	0.2 L	0.2 L	0.2 L	0.4	NT	0.3 L	0.2 L	NT
LB-27D	LB-092493-17	9/24/93	0.2 L	0.2 L	0.2 L	NT	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-092493-17	9/24/93	0.2 L	0.2 L	0.2 L	0.4	NT	0.3 L	0.2 L	NT
LB-27D	LB-121693-17	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-121693-18	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-032494-4	3/24/94	0.2 L	0.2 L	0.2 L	0.4	0.5 L	0.3 L	0.2 L	0.2 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27D	LB-032494-5	3/24/94	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-062294-10	6/22/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-062294-9	6/22/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-090894-12	9/8/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-090894-13	9/8/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-121394-2	12/13/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-121394-3	12/13/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-031095-8	3/10/95	0.3 L	0.2 L	0.1 L	0.4 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-031095-9	3/10/95	0.3	0.2 L	0.1 L	0.4 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-061995-4	6/19/95	0.3 L	0.2 L	0.1 L	0.4 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-061995-5	6/19/95	0.3 L	0.2 L	0.1 L	3.6 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-092095-1	9/20/95	0.3 L	0.3 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-092095-2	9/20/95	0.3 L	0.3 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-122095-17	12/20/95	0.3 L	0.2 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-122095-18	12/20/95	0.3 L	0.2 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-031996-3	3/19/96	0.3 L	0.2 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-061896-4	6/18/96	0.1 L	0.1 L	0.0 L	0.5	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB-061896-5	6/18/96	0.1 L	0.1	0.0 L	0.5	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB-091796-9	9/17/96	0.1 L	0.1 L	0.0 L	0.5	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB121796-8	12/17/96	0.1 L	0.1	0.0 L	0.6	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB-031997-12	3/19/97	0.5 L	0.5 L	0.5 L	0.4	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-061797-11	6/17/97	0.5 L	0.1	0.5 L	0.4	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-091697-8	9/16/97	0.5 L	0.5 L	0.5 L	0.4	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-121797-13	12/17/97	0.5 L	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031998-12	3/19/98	0.5 L	0.1	0.5 L	0.3	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-061798-10	6/17/98	0.1 L	0.1 L	0.0 L	0.3	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB-091798-8	9/17/98	0.2 L	0.3 L	0.2 L	0.3	0.3 L	0.2 L	0.3 L	0.2 L
LB-27D	LB-121798-6	12/17/98	0.2 L	0.3 L	0.2 L	0.2	0.3 L	0.2 L	0.3 L	0.2 L
LB-27D	LB-031899-9	3/18/99	0.2 L	0.3 L	0.2 L	0.3	0.3 L	0.2 L	0.3 L	0.2 L
LB-27D	LB-062399-7	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27D	LB-091599-1	9/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-27D	LB-121599-7	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-27D	LB-031600-3	3/16/00	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-061300-3	6/13/00	0.5 L	0.5 L	0.5 L	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27D	LB-091300-8	9/13/00	0.5 L	0.5 L	0.5 L	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-091300-9	9/13/00	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-121500-5	12/15/00	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031301-3	3/13/01	0.5 L	0.5 L	0.5 L	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031902-11	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031203-3	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-022604-15	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D (Dup)	LB-022604-16	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-030805-6	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031606-17	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-030507-9	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031908-5	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D (Dup)	LB-031908-6	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-27D	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-27D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-27D	3/25/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27D	LB-031212-02	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27D	LB-020713-21	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-27D	LB-021814-13	2/18/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-27D	LB-021715-02	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27D	LB-021816-18	2/18/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27D	**LB-030817-03**	**3/8/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-27I	LB-0892-3	8/27/92	0.8 J	0.5 J	0.2 L J	2.1 J	0.5 L J	1.6 J	0.9 J	0.2 J
LB-27I	LB-92292-4	9/22/92	1.1	0.6	0.2 L	1.9	0.5 L	1.5	1.2	0.2 L
LB-27I	LB-121192-20	12/11/92	0.9	0.5	0.2 L	2.4	0.5 L	0.3 L	1.6	0.2
LB-27I	LB-031293-21	3/12/93	0.9	0.5	0.2 L	1.3	0.5 L	0.8	1.7	0.2 L
LB-27I	LB-060193-2	6/1/93	0.7	0.4	0.2 L	1.0	0.5 L	1.3	1.0	0.2 L
LB-27I	LB-092493-14	9/24/93	NT	NT	0.2 L	0.7	0.5 L	NT	0.4	0.2 L
LB-27I	LB-092493-14	9/24/93	0.5	0.2	0.2 L	NT	NT	1.2	NT	NT
LB-27I	LB-092493-15	9/24/93	NT	0.2	0.2 L	0.7	0.5 L	1.2	0.4	0.2 L
LB-27I	LB-092493-15	9/24/93	0.6	NT	0.2 L	NT	NT	NT	NT	NT
LB-27I	LB-121693-19	12/16/93	0.5	0.2 L	0.2 L	0.2 L	0.5 L	0.6	0.5	0.2 L
LB-27I	LB-121693-20	12/16/93	0.5	0.2	0.2 L	0.2 L	0.5 L	0.6	0.5	0.2 L
LB-27I	LB-032494-3	3/24/94	0.6	0.3	0.2 L	1.0	0.5 L	0.3 L	1.2	0.2 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27I	LB-062294-8	6/22/94	0.5	0.3 L	0.4 L	0.9	0.3 L	0.3 L	1.0	0.3 L
LB-27I	LB-090894-11	9/8/94	0.5	0.3 L	0.4 L	1.0	0.3 L	0.5	1.0	0.3 L
LB-27I	LB-121394-1	12/13/94	0.6	0.3 L	0.4 L	0.6	0.3 L	0.3 L	0.6	0.3 L
LB-27I	LB-031095-7	3/10/95	0.7	0.3	0.1	0.6 B	0.1 B	0.3	0.5	0.1 L
LB-27I	LB-061995-3	6/19/95	0.7	0.2	0.1	0.6 B	0.1 L	0.5	0.2	0.1 L
LB-27I	LB-092095-3	9/20/95	0.3	0.3 L	0.1	0.3	0.1 L	0.7	0.2	0.1 L
LB-27I	LB-122095-16	12/20/95	0.3	0.2 L	0.1 L	0.1 L	0.1 L	0.8	0.1 L	0.1 L
LB-27I	LB-031996-4	3/19/96	0.4	0.2 L	0.1 B	0.3	0.1 L	1.4	0.1 L	0.1 L
LB-27I	LB-061896-3	6/18/96	0.2	0.1 L	0.2	0.1 L	0.1 L	2.0	0.3	0.1 L
LB-27I	LB-091796-7	9/17/96	0.4	0.2	0.1	1.1	0.1 L	2.6	0.3	0.2
LB-27I	LB-091796-8	9/17/96	0.1 L	0.1	0.1	1.2	0.1 L	2.9	0.3	0.4
LB-27I	LB121796-6	12/17/96	0.2	0.1	0.2	0.7	0.1 L	1.7	0.2 L	0.1
LB-27I	LB121796-7	12/17/96	0.2	0.1	0.2	0.6	0.1 L	1.6	0.2 L	0.1
LB-27I	LB-031997-10	3/19/97	0.5 L	0.5 L	0.2	0.2	0.5 L	0.8	0.5 L	0.5 L
LB-27I	LB-031997-11	3/19/97	0.5 L	0.5 L	0.2	0.2	0.5 L	0.8	0.5 L	0.5 L
LB-27I	LB-061797-9	6/17/97	0.5 L	0.5 L	0.1	0.2	0.5 L	1.0	0.5 L	0.5 L
LB-27I	LB-061797-9	6/17/97	0.5 L	0.5 L	NT	NT	0.5 L	1.1	0.5 L	0.5 L
LB-27I	LB-091697-6	9/16/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091697-7	9/16/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-121797-11	12/17/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.2	0.5 L	0.5 L
LB-27I	LB-121797-12	12/17/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.4	0.5 L	0.5 L
LB-27I	LB-031998-10	3/19/98	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.3	0.5 L	0.5 L
LB-27I	LB-031998-11	3/19/98	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.3	0.5 L	0.5 L
LB-27I	LB-061798-11	6/17/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-27I	LB-061798-12	6/17/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-27I	LB-091798-10	9/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-091798-9	9/17/98	0.2 L	0.3 L	0.2 B	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-121798-4	12/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-121798-5	12/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-031899-7	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-031899-8	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-062399-8	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-091599-2	9/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-27I	LB-121599-6	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)

1987 through 2017

Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27I	LB-031600-1	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031600-2	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-061300-1	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L
LB-27I	LB-061300-2	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091300-10	9/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L
LB-27I	LB-121500-6	12/15/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L
LB-27I	LB-031301-4	3/13/01	0.3 J	0.5 L	0.5 L	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031902-10	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091802-5	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031203-1	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031203-2	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-092203-2	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-092203-3	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-022604-17	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-090104-27	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB030805-5	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091405-3	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031606-18	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091206-2	9/12/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-030507-8	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-0919-07-4	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031908-4	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091608-7	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-27I	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LBLF27i091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-27I032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-27I092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-27I	3/25/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27I	LB-090711-01	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27I	LB-032212-18	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27I	LB-091112-02	9/11/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27I	LB-020613-11	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-27I (Dup)	LB-020613-12	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-27I	LB-082113-03	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L

Table B-2

Groundwater Chemistry, Volatile Organic Compounds[a] (µg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27I (Dup)	LB-082113-04	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.18 J	0.16 L	0.11 L
LB-27I	LB-021814-14	2/18/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-27I	LB-081314-03	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-27I	LB-021815-10	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27I	LB-081215-09	8/12/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27I	LB-021816-19	2/18/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27I	LB-082316-02	8/23/16	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27I	**LB-031517-16**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
LB-27I	**LB-081617-03-27I**	**8/16/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
FIELDQC	**LB-031517-15**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
FIELDQC	**LB-081617-08-FB1**	**8/16/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
FIELDQC	**Trip Blank**	**3/8/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
FIELDQC	**Trip Blank**	**3/9/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
FIELDQC	**Trip Blank**	**3/15/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
FIELDQC	**Trip Blank**	**8/16/17**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**	**0.50 L**
Well KOSKI	Well KOSKI	9/14/87	1.0 L	1.0 L	1.0 L	6.8	1.4	1.0 L		1.0 L
Well OSLUND	Well OSLUND	9/14/87	3.7	2.8	1.0 L	3.7	1.0 L	1.0 L		1.0 L
Well OSLUND	Well OSLUND	11/12/87	1.0 L	1.2	1.0 L	2.9	1.0 L	1.0 L		1.0 L

Notes:

PCE = tetrachloroethene; TCE = trichloroethene; ; 1,4-DCB = 1,4-dichlorobenzene; 1,1-DCA = 1,1-dichloroethane; 1,1,1-TCA = 1,1,1-trichloroethane; cis-1,2-DCE = cis-1,2-dichloroethene

B = analyte detected above the laboratory method detection limit (MDL) but below the method reporting limit (MRL)

Dup = field duplicate sample; J = estimated concentration; L = not detected at or above MRL; Re = resample.; NT = not tested

[a] Only VOCs historically detected in groundwater samples are listed, except for vinyl chloride and 1,1-dichloroethene that have not been analyzed for since 2013 as approved by the Washington State Department of Ecology (Ecology, 2013).

Inorganic Parameters (Nitrate, Cl, and TDS)
And Dissolved Metals (Fe and Mn)

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-1D	LB-01D	6/2/87	234	4.0	4.7	NT	0.05 L	0.01 L
LB-1D	LB-01D	7/21/87	NT	5.0	4.5	NT	0.05 L	0.005 L
LB-1D	LB-01D	9/4/87	NT	5.0	2.6	NT	0.05 L	0.01 L
LB-1D	LB-01D	11/6/87	NT	5.9	4.7	NT	0.05 L	0.01 L
LB-1D	LB-01D	2/9/88	224	5.0	4.5	NT	0.05 L	0.01 L
LB-1D	LB-01D	6/22/88	214	5.0	3.8	NT	0.05 L	0.05 L
LB-1D	LB-01D	8/30/88	250	5.0	4.6	NT	0.05 L	0.01 L
LB-1D	LB-01D	9/1/88	206	5.0	4.5	NT	0.05 L	0.01 L
LB-1D	LB-01D	12/5/88	193	5.4	4.2	NT	0.01 L	0.01 L
LB-1D	LB-289-W04	2/28/89	210	5.0	4.5	NT	0.01 L	0.01 L
LB-1D	LB-589-W03	5/23/89	212	6.3	4.9	NT	0.05 L	0.01 L
LB-1D	LB-989-W16	9/12/89	168	4.0	5.0	NT	0.02 L	0.005 L
LB-1D	LB-1089-W01	10/17/89	188	4.2	4.5	161	0.05 L	0.005 L
LB-1D	LB-1189-W04	11/14/89	141	5.5	4.9	150	0.02 L	0.005 L
LB-1D	LB-1289-W22	12/19/89	174	5.0	4.6	NT	NT	NT
LB-1D	LB-390-W09	3/14/90	204	5.3	4.7	143	NT	NT
LB-1D	LB-690-W11	6/20/90	195	4.9	4.8	180	NT	NT
LB-1D	LB-990-W08	9/14/90	187	5.3	4.8	196	NT	NT
LB-1D	LB-1290-W06	12/11/90	203	5.5	4.7	125	NT	NT
LB-1D	LB-391-W11	3/20/91	202	5.2	4.6	187	NT	NT
LB-1D	LB-691-W06	6/26/91	200	5.0	4.5	157	NT	NT
LB-1D	LB-991-06	9/24/91	176	5.1	4.4	172	NT	NT
LB-1D	LB-1291-14	12/23/91	201	4.3	4.6	162	NT	NT
LB-1D	LB-392-14	3/23/92	197	5.5	4.6	163	NT	NT
LB-1D	LB-63092-2	6/30/92	196	4.7	5.7	167	NT	NT
LB-1D	LB-92292-3	9/22/92	201	5.1	4.7	160	NT	NT
LB-1D	LB-121192-16	12/11/92	204	5.9	4.7	176	NT	NT
LB-1D	LB-031093-3	3/10/93	199	5.7	4.2	169	NT	NT
LB-1D	LB-060293-6	6/2/93	199	5.5	4.3	156	NT	NT
LB-1D	LB-092393-8	9/23/93	187	5.5	4.3	163	NT	NT
LB-1D	LB-121593-2	12/15/93	170	6.1	4.6	163	NT	NT
LB-1D	LB-032494-2	3/24/94	208	5.8	4.6	159	NT	NT
LB-1D	LB-062194-1	6/21/94	171	5.6	4.4	167	NT	NT
LB-1D	LB-090694-2	9/6/94	186	5.1	5.1	172	NT	NT
LB-1D	LB-121494-12	12/14/94	168	5.1	4.9	147	NT	NT
LB-1D	LB-030995-02	3/9/95	160	5.8	4.6	171	NT	NT
LB-1D	LB-062095-13	6/20/95	184	5.8	5.4	145	NT	NT
LB-1D	LB-092295-14	9/22/95	239	6.1	4.6	128	NT	NT
LB-1D	LB-121995-6	12/19/95	196	6.1	5.3	162	NT	NT
LB-1D	LB-032096-18	3/20/96	193	6.0	5.2	177	NT	NT
LB-1D	LB-061896-10	6/18/96	174	6.1	5.2	169	NT	NT
LB-1D	LB-091796-6	9/17/96	190	6.6	5.1	160	0.02 L	0.005 L
LB-1D	LB121796-2	12/17/96	214	6.4	5.3	183	0.02 L	0.005 L
LB-1D	LB-031997-4	3/19/97	174	7.0	5.8	183	0.02 L	0.005 L
LB-1D	LB-061797-4	6/17/97	214	6.2	5.2	183	0.02 L	0.005 L
LB-1D	LB-091697-1	9/16/97	208	6.5	5.3	185	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-1D	LB-121697-4	12/16/97	206	6.7	5.7	173	0.02 L	0.005 L
LB-1D	LB-031998-4	3/19/98	227	7.1	6.2	184	0.02 L	0.005 L
LB-1D	LB-061698-6	6/16/98	158	6.7	6.1	184	0.02 L	0.005 L
LB-1D	LB-091798-3	9/17/98	224	6.7	5.7	196	0.02 L	0.005 L
LB-1D	LB-121898-10	12/18/98	178	7.4	6.3	201	0.02	0.005 L
LB-1D	LB-031799-4	3/17/99	182	7.4	6.1	161	0.02 L	0.005 L
LB-1D	LB-062399-15	6/23/99	187	7.2	6.2	187	0.02 L	0.005 L
LB-1D	LB-091799-11	9/17/99	204	7.6	6.0	157	0.02 L	0.005 L
LB-1D	LB-121699-12	12/16/99	190	6.9	5.6	178	0.02 L	0.005 L
LB-1D	LB-031700-16	3/17/00	180	7.0	5.8	170	0.02 L	0.005 L
LB-1D	LB-061300-8	6/13/00	190	7.3	6.0	184	0.01 B	0.005 L
LB-1D	LB-091100-2	9/11/00	215	7.6	6.4	192	0.02 L	0.005 L
LB-1D	LB-121500-10	12/15/00	219	7.0	5.7	146	0.02 L	0.005 L
LB-1D	LB-031501-15	3/15/01	NT	7.2	5.9	180	0.02 L	0.005 L
LB-1D	LB-031501-16	3/15/01	NT	7.0	5.9	166	0.02 L	0.005 L
LB-1D	LB-031902-02	3/19/02	NT	6.9	5.9	159	0.02 L	0.005 L
LB-1D	LB-031303-12	3/13/03	NT	6.6	5.7	198	0.02 L	0.005 L
LB-1D	LB-022404-1	2/24/04	NT	6.7	5.6	188	0.07	0.006
LB-1D	LB030905-13	3/9/05	NT	6.7	5.5	224	0.02 L	0.005 L
LB-1D	LB-031406-1	3/14/06	NT	6.0	5.3	168	0.02 L	0.005 L
LB-1D (Dup)	LB-031406-2	3/14/06	NT	6.1	5.3	144	0.02 L	0.005 L
LB-1D	LB-030507-2	3/5/07	NT	6.1	5.6	194	0.02 L	0.005 L
LB-1D	LB-032408-15	3/24/08	NT	6.6	5.7	154	0.02 L	0.005 L
LB-1D	LB-1D	3/17/09	NT	7.0	5.9	147	0.02 L	0.005 L
LB-1D	LB-1D032310	3/23/10	NT	6.39	6.14	162	0.02 L	0.005 L
LB-1D	LB-1D	3/28/11	220	7.49	5.87	195	0.025 L	0.002 L
LB-1D	LB-031312-13	3/13/12	NT	7.4	6.0	190	0.025 L	0.002 L
LB-1D	LB-020513-07	2/5/13	NT	7.6	6.0	160	0.036	0.0058
LB-1D	LB-021914-17	2/19/14	NT	7.7	6.0	200	0.025 L	0.0020 L
LB-1D	LB-021915-17	2/19/15	NT	7.23	7.09	210	0.025 L	0.0020 L
LB-1D	LB-021716-08	2/17/16	NT	7.13	6.15	183	0.040 L	0.0020 L
LB-1D	**LB-030917-10**	**3/9/17**	**NT**	**6.72**	**5.79**	**156**	**0.021 L**	**0.0011**
LB-1S	LB-01S	5/11/87	602	16.0	1.1	NT	0.05 L	0.031
LB-1S	LB-01S	7/21/87	NT	20.0	2.7	NT	0.05 L	0.006
LB-1S	LB-01S	9/4/87	NT	15.0	1.8	NT	0.05 L	0.01 L
LB-1S	LB-01S	11/6/87	NT	14.0	3.3	NT	0.05 L	0.01 L
LB-1S	LB-01S	2/11/88	410	15.0	2.3	NT	0.05 L	0.01 L
LB-1S	LB-01S	6/22/88	496	20.0	2.0	NT	0.05 L	0.05 L
LB-1S	LB-01S	8/30/88	478	18.0	3.3	NT	0.05 L	0.01 L
LB-1S	LB-01S	12/5/88	348	17.0	3.5	NT	0.01 L	0.01 L
LB-1S	LB-289-W05	2/28/89	408	14.0	3.7	NT	0.29	0.01 L
LB-1S	LB-589-W04	5/23/89	510	22.0	3.8	NT	0.05 L	0.01 L
LB-1S	LB-989-W15	9/12/89	334	13.0	4.0	NT	0.20 L	0.005 L
LB-1S	LB-1289-W12	12/15/89	300	12.0	4.7	NT	NT	NT
LB-1S	LB-390-W10	3/14/90	388	13.6	4.7	152	NT	NT
LB-1S	LB-690-W10	6/20/90	526	17.8	4.0	302	NT	NT

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-1S	LB-990-W06	9/14/90	531	20.2	3.8	325	NT	NT
LB-1S	LB-1290-W05	12/11/90	456	23.6	2.5	328	NT	NT
LB-1S	LB-391-W10	3/20/91	602	17.7	3.1	320	NT	NT
LB-1S	LB-691-W05	6/26/91	472	14.8	4.4	294	NT	NT
LB-1S	LB-991-05	9/24/91	350	10.2	5.4	253	NT	NT
LB-1S	LB-1291-13	12/23/91	382	10.0	4.0	290	NT	NT
LB-1S	LB-392-15	3/23/92	421	13.0	4.0	287	NT	NT
LB-1S	LB-63092-1	6/30/92	367	10.0	5.7	259	NT	NT
LB-1S	LB-92292-2	9/22/92	367	11.0	5.0	252	NT	NT
LB-1S	LB-121192-15	12/11/92	378	12.0	5.0	246	NT	NT
LB-1S	LB-031093-4	3/10/93	675	17.0	1.8	388	NT	NT
LB-1S	LB-060293-5	6/2/93	616	12.0	3.5	388	NT	NT
LB-1S	LB-092393-9	9/23/93	487	15.0	3.9	309	NT	NT
LB-1S	LB-121593-1	12/15/93	382	17.0	4.2	291	NT	NT
LB-1S	LB-032494-1	3/24/94	591	20.0	3.3	373	NT	NT
LB-1S	LB-052194-4	6/21/94	463	14.0	5.1	305	NT	NT
LB-1S	LB-090694-1	9/6/94	481	15.0	5.4	369	NT	NT
LB-1S	LB-121494-11	12/14/94	499	16.0	5.2	357	NT	NT
LB-1S	LB-030995-01	3/9/95	330	14.0	7.1	296	NT	NT
LB-1S	LB-062095-12	6/20/95	410	12.0	8.8	307	NT	NT
LB-1S	LB-092295-13	9/22/95	494	19.0	7.0	248	NT	NT
LB-1S	LB-121995-5	12/19/95	422	17.0	8.0	291	NT	NT
LB-1S	LB-032096-17	3/20/96	488	21.0	6.8	312	NT	NT
LB-1S	LB-061896-9	6/18/96	325	15.0	9.1	275	NT	NT
LB-1S	LB-091796-5	9/17/96	377	15.0	8.7	303	0.02 L	0.005 L
LB-1S	LB121796-1	12/17/96	455	17.0	7.9	298	0.02 L	0.005 L
LB-1S	LB-031997-3	3/19/97	444	35.0	7.2	370	0.03	0.005 L
LB-1S	LB-061797-3	6/17/97	348	12.0	7.5	279	0.02 L	0.005 L
LB-1S	LB-091697-2	9/16/97	382	21.6	7.4	291	0.02 L	0.005 L
LB-1S	LB-121697-5	12/16/97	456	22.0	8.9	310	0.03	0.005 L
LB-1S	LB-031998-3	3/19/98	526	35.1	8.7	306	0.02 L	0.005 L
LB-1S	LB-061698-5	6/16/98	303	19.6	10.2	307	0.02 L	0.005 L
LB-1S	LB-091798-4	9/17/98	448	21.6	9.0	298	0.02	0.005 L
LB-1S	LB-121898-9	12/18/98	363	18.1	9.0	332	0.34	0.008
LB-1S	LB-031799-3	3/17/99	465	29.7	9.1	355	0.02	0.005 L
LB-1S	LB-062399-14	6/23/99	363	21.0	8.1	277	0.02 L	0.005 L
LB-1S	LB-091799-10	9/17/99	447	19.6	8.3	279	0.10	0.005 L
LB-1S	LB-091799-9	9/17/99	457	21.1	7.4	285	0.03	0.005 L
LB-1S	LB-121699-13	12/16/99	358	12.1	8.1	255	0.02 L	0.005 L
LB-1S	LB-031700-15	3/17/00	383	18.5	7.3	249	0.02 L	0.005 L
LB-1S	LB-061300-7	6/13/00	297	9.8	9.8	222	0.02 L	0.005 L
LB-1S	LB-091100-1	9/11/00	365	14.2	8.9	264	0.02 L	0.005 L
LB-1S	LB-121500-9	12/15/00	362	10.2	7.4	213	0.02 L	0.005 L
LB-1S	LB-031401-14	3/14/01	NT	8.6	9.8	227	0.02 L	0.005 L
LB-1S	LB-092001-6	9/20/01	NT	8.3	7.3	212	0.02 L	0.005 L
LB-1S	LB-031902-01	3/19/02	NT	7.5	4.3	206	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-1S	LB-091802-01	9/17/02	NT	6.0	7.0	206	0.02 L	0.005 L
LB-1S	LB-031303-10	3/13/03	NT	5.2	4.7	216	0.02 L	0.005 L
LB-1S	LB-031303-11	3/13/03	NT	5.1	4.7	198	0.03	0.005 L
LB-1S	LB-092203-6	9/22/03	NT	4.5	5.2	208	2.32	0.069
LB-1S	LB-022404-2	2/24/04	NT	4.4	4.0	184	0.12	0.005 L
LB-1S	LB-090104-1	9/1/04	NT	4.0	3.6	179	0.02 L	0.005 L
LB-1S (Dup)	LB-090104-30	9/1/04	NT	4.0	3.6	186	0.02 L	0.005 L
LB-1S	LB030905-14	3/9/05	NT	4.7	3.7	220	0.24	0.203
LB-1S	LB-091405-1	9/14/05	NT	5.0	4.4	148	0.02 L	0.005 L
LB-1S (Dup)	LB-091405-2	9/14/05	NT	5.0	4.5	188	0.02 L	0.005 L
LB-1S	LB-031406-3	3/14/06	NT	6.6	2.5	234	1.62	0.045
LB-1S	LB-091306-5	9/13/06	NT	4.6	5.0	174	0.02 L	0.005 L
LB-1S (Dup)	LB-091306-6	9/13/06	NT	4.6	5.0	176	0.104	0.005 L
LB-1S	LB-030507-1	3/5/07	NT	4.6	4.9	196	1.62	0.045
LB-1S	LB-091907-1	9/19/07	NT	4.6	4.6	168	0.02 L	0.005 L
LB-1S (Dup)	LB-091907-2	9/19/07	NT	4.6	4.7	187	0.104	0.005 L
LB-1S	LB-032408-14	3/24/08	NT	8.9	4.3	196	0.020 L	0.005 L
LB-1S	LB-091608-1	9/16/08	NT	5.2	5.6	209	0.024	0.005 L
LB-1S	LB-1S	3/17/09	NT	6.0	4.8	159	0.020 L	0.005 L
LB-1S	LBLF1S091109	9/11/09	NT	4.99	4.94	202	0.051	0.005 L
LB-1S	LB-1S032310	3/23/10	NT	6.53	4.08	201	0.020 L	0.005 L
LB-1S	LB-1092310	9/23/10	NT	6.96	6.21	185	0.020 L	0.005 L
LB-1S	LB-1S	3/24/11	248	5.92	5.70	220	0.025 L	0.002 L
LB-1S	LB-090811-07	9/8/11	NT	5.71	6.87	205	0.025 L	0.002 L
LB-1S	LB-031312-14	3/13/12	NT	5.2	6.0	210	0.025 L	0.002 L
LB-1S	LB-091212-08	9/12/12	NT	14	5.9	210	0.025 L	0.002
LB-1S	LB-020513-09	2/5/13	NT	7.9	6.3	200	0.025 L	0.0020 L
LB-1S	LB-082213-08	8/22/13	NT	13.0	8.7	250	0.025 L	0.0020 L
LB-1S	LB-021914-18	2/19/14	NT	19.0	3.9	240	0.025 L	0.0020 L
LB-1S (Dup)	LB-021914-19	2/19/14	NT	19.0	3.9	260	0.025 L	0.0020 L
LB-1S	LB-081414-09	8/14/14	NT	7.1	6.7	200	0.025 L	0.0020 L
LB-1S	LB-021915-16	2/19/15	NT	7.23	7.09	210	0.025 L	0.0020 L
LB-1S	LB-081115-02	8/11/15	NT	6.79	5.66	204	0.040 L	0.0020 L
LB-1S	LB-021716-14	2/17/16	NT	7.19	4.86	194	0.040 L	0.0020 L
LB-1S	LB-082416-05	8/24/16	NT	11	5.4	190	0.040 L	0.0020 L
LB-1S	**LB-030917-11**	**3/9/17**	**NT**	**6.66**	**8.49**	**221**	**0.021 L**	**0.0011 L**
LB-1S	**LB-081617-07-1S**	**8/16/17**	**NT**	**5.71**	**4.13**	**172**	**0.021 L**	**0.0011 L**
LB-3D	LB-03D	5/28/87	270	8.0	4.3	NT	0.05 L	0.01 L
LB-3D	LB-03D	7/17/87	NT	8.0	4.1	NT	0.05 L	0.005 L
LB-3D	LB-03D	9/8/87	NT	8.0	2.2	NT	0.05 L	0.05 L
LB-3D	LB-03D	11/6/87	NT	8.2	4.9	NT	0.05 L	0.01 L
LB-3D	LB-1189-W01	11/13/89	176	5.5	5.0	179	0.02 L	0.005 L
LB-3D	LB-1289-W20	12/18/89	206	6.2	4.8	173	0.02 L	0.005 L
LB-3D	LB-032097-14	3/20/97	204	5.3	6.2	196	0.02 L	0.005 L
LB-3D	LB-032098-21	3/20/98	236	5.2	7.3	175	0.02 L	0.005 L
LB-3D	LB-031899-15	3/18/99	193	5.2	7.7	182	0.03	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-3D	LB-031600-9	3/16/00	199	4.7	8.0	222	0.02 L	0.005 L
LB-3D	LB-031501-17	3/15/01	NT	5.2	7.6	171	0.02 L	0.005 L
LB-3D	LB-032002-18	3/20/02	NT	5.6	6.7	157	0.02 L	0.005 L
LB-3D	LB-031303-14	3/13/03	NT	4.1	5.5	181	0.02 L	0.005 L
LB-3D	LB-022404-5	2/24/04	NT	3.3	4.4	164	0.02 L	0.005 L
LB-3D	LB-030905-15	3/9/05	NT	3.2	4.1	169	0.02 L	0.005 L
LB-3D	LB-031606-21	3/16/06	NT	3.0	4.2	122	0.02 L	0.005 L
LB-3D	LB-030507-4	3/5/07	NT	3.2	4.4	156	0.02 L	0.005 L
LB-3D (Dup)	LB-030507-5	3/5/07	NT	3.2	4.4	161	0.02 L	0.005 L
LB-3D	LB-032408-17	3/24/08	NT	3.3	4.2	145	0.02 L	0.005 L
LB-3D	LB-3D	3/18/09	NT	3.5	4.5	147	0.02 L	0.005 L
LB-3D	LB-3D032410	3/24/10	NT	3.60	5.76	152	0.02 L	0.005 L
LB-3D	LB-3D	3/28/11	210	4.23	5.05	201	0.025 L	0.002 L
LB-3D	LB-031312-09	3/13/12	NT	4.1	4.6	180	0.025 L	0.002 L
LB-3D	LB-020713-18	2/7/13	NT	4.4	4.5	170	0.025 L	0.0020 L
LB-3D	LB-021914-22	2/19/14	NT	4.6	4.7	200	0.025 L	0.0020 L
LB-3D	LB-021715-07	2/17/15	NT	4.41	4.81	194	0.025 L	0.0020 L
LB-3D	LB-021616-06	2/16/16	NT	5.32	4.81	166	0.040 L	0.0020 L
LB-3D	**LB-030917-08**	**3/9/17**	**NT**	**4.41**	**3.88**	**143**	**0.021 L**	**0.0011 L**
LB-3S	LB-03S	5/11/87	308	9.0	1.9	NT	0.05 L	0.01
LB-3S	LB-03S	7/16/87	NT	7.0	2.1	NT	0.05 L	0.005 L
LB-3S	LB-03S	9/4/87	NT	7.0	1.5	NT	0.05 L	0.01 L
LB-3S	LB-03S	11/5/87	NT	6.4	3.4	NT	0.05 L	0.01 L
LB-3S	LB-1089-W02	10/17/89	192	4.0	4.0	193	0.05 L	0.005 L
LB-3S	LB-1189-W02	11/13/89	160	4.5	4.1	144	0.02	0.005 L
LB-3S	LB-1289-W11	12/15/89	190	5.0	4.0	176	0.03	0.064
LB-3S	LB-390-W11	3/14/90	218	5.3	3.8	164	NT	NT
LB-3S	LB-690-W06	6/19/90	212	4.7	3.7	148	NT	NT
LB-3S	LB-990-W10	9/14/90	213	4.9	3.6	219	NT	NT
LB-3S	LB-1290-W08	12/12/90	377	4.6	3.5	194	NT	NT
LB-3S	LB-391-W07	3/20/91	217	4.5	3.4	150	NT	NT
LB-3S	LB-691-W10	6/11/91	226	4.9	3.3	188	NT	NT
LB-3S	LB-991-16	9/26/91	250	4.6	2.4	193	NT	NT
LB-3S	LB-1291-06	12/20/91	333	4.5	3.3	186	NT	NT
LB-3S	LB-392-10	3/20/92	230	4.4	3.3	195	NT	NT
LB-3S	LB-62692-8	6/26/92	253	4.9	2.6	204	NT	NT
LB-3S	LB-91792-3	9/17/92	266	4.4	2.9	205	NT	NT
LB-3S	LB-121092-14	12/10/92	273	4.3	3.2	202	NT	NT
LB-3S	LB-031593-25	3/15/93	309	4.7	2.7	218	NT	NT
LB-3S	LB-060393-14	6/3/93	296	4.5	2.6	214	NT	NT
LB-3S	LB-092393-1	9/23/93	278	4.2	3.0	212	NT	NT
LB-3S	LB-121593-5	12/15/93	255	4.1	3.1	212	NT	NT
LB-3S	LB-032594-11	3/25/94	281	3.8	3.0	204	NT	NT
LB-3S	LB-062394-13	6/23/94	276	4.1	2.9	208	NT	NT
LB-3S	LB-090794-8	9/7/94	235	3.3	3.3	213	NT	NT
LB-3S	LB-121494-13	12/14/94	274	3.6	2.5	215	NT	NT

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-3S	LB-031395-20	3/13/95	267	3.9	3.4	214	NT	NT
LB-3S	LB-062095-14	6/20/95	259	3.7	3.8	221	NT	NT
LB-3S	LB-092095-11	9/20/95	328	3.9	3.7	202	NT	NT
LB-3S	LB-121995-4	12/19/95	272	5.0	4.2	206	NT	NT
LB-3S	LB-032096-21	3/20/96	254	5.1	4.3	199	NT	NT
LB-3S	LB-061996-11	6/19/96	257	4.5	4.4	213	NT	NT
LB-3S	LB-032097-13	3/20/97	211	3.6	5.0	207	0.30	0.008
LB-3S	LB-032098-20	3/20/98	228	3.1	4.4	185	0.02 L	0.005 L
LB-3S	LB-031899-14	3/18/99	159	3.1	4.0	154	0.02 L	0.005 L
LB-3S	LB-031600-8	3/16/00	148	2.4	4.4	169	0.02	0.007
LB-3S	LB-031501-18	3/15/01	NT	3.2	4.6	148	0.02 L	0.005 L
LB-3S	LB-032002-17	3/20/02	NT	3.7	4.8	155	0.02 L	0.005 L
LB-3S	LB-031303-13	3/13/03	NT	3.1	4.1	220	0.02 L	0.005 L
LB-3S	LB-022404-6	2/24/04	NT	2.7	3.3	159	4.59	0.07
LB-3S	LB-030905-16	3/9/05	NT	2.7	2.7	163	0.10	0.005 L
LB-3S	LB-031606-22	3/16/06	NT	2.4	2.5	134	0.02 L	0.005 L
LB-3S	LB-030507-3	3/5/07	NT	2.7	2.9	160	0.02 L	0.005 L
LB-3S	LB-032408-18	3/24/08	NT	2.8	3.2	145	0.02 L	0.005 L
LB-3S	LB-3S	3/18/09	NT	3.3	3.3	162	0.02 L	0.005 L
LB-3S	LB-3S032310	3/23/10	NT	2.83	3.56	144	0.02 L	0.005 L
LB-3S	LB-3S	3/28/11	214	3.40	3.63	188	0.025 L	0.002 L
LB-3S	LB-031312-10	3/13/12	NT	3.7	3.8	170	0.025 L	0.002 L
LB-3S	LB-020713-17	2/7/13	NT	4.1	4.3	180	0.025 L	0.0020 L
LB-3S	LB-021914-22	2/19/14	NT	3.7	4.0	180	0.025 L	0.0020 L
LB-3S	LB-021915-19	2/19/15	NT	3.38	3.90	190	0.025 L	0.0020 L
LB-3S	LB-021716-12	2/17/16	NT	4.14	3.44	155	0.025 L	0.0020 L
LB-3S	**LB-030917-09**	**3/9/17**	**NT**	**3.70**	**3.48**	**149**	**0.021 L**	**0.0011 L**
LB-5D	LB-05D	5/27/87	606	38.0	2.6	NT	0.05 L	1.5
LB-5D	LB-05D	7/20/87	NT	45.0	0.1	NT	0.05 L	0.016
LB-5D	LB-05D	9/10/87	NT	44.0	0.1	NT	0.05 L	0.01 L
LB-5D	LB-05D	11/11/87	NT	43.0	0.1	NT	0.05 L	0.01 L
LB-5D	LB-05D	2/10/88	624	41.0	0.1	NT	0.05 L	0.01 L
LB-5D	LB-05D	6/23/88	593	42.0	0.1	NT	0.05 L	0.05 L
LB-5D	LB-05D	8/31/88	616	43.0	0.1 L	NT	0.07	0.01 L
LB-5D	LB-05D	12/6/88	494	40.0	0.6	NT	0.01 L	0.01 L
LB-5D	LB-289-W03	3/1/89	548	40.0	0.2 L	NT	0.01 L	0.025
LB-5D	LB-589-W13	5/24/89	576	51.0	0.2 L	NT	0.05 L	0.01 L
LB-5D	LB-989-W11	9/8/89	460	38.0	0.2 L	NT	0.02 L	0.006
LB-5D	LB-1289-W24	12/19/89	470	40.0	0.2	325	NT	NT
LB-5D	LB-390-W16	3/15/90	562	39.8	0.2	368	NT	NT
LB-5D	LB-690-W14	6/20/90	550	39.4	0.2 L	367	NT	NT
LB-5D	LB-990-W15	9/18/90	545	37.8	0.2	394	NT	NT
LB-5D	LB-1290-W24	12/14/90	472	40.8	0.2	346	NT	NT
LB-5D	LB-391-W14	3/21/91	615	45.9	0.3	521	NT	NT
LB-5D	LB-691-W17	6/26/91	551	39.6	0.3	372	NT	NT
LB-5D	LB-991-08	9/25/91	580	42.1	0.2	336	NT	NT

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-5D	LB-1291-11	12/20/91	527	37.7	0.3	336	NT	NT
LB-5D	LB-392-03	3/19/92	582	44.0	0.2 L	348	NT	NT
LB-5D	LB-63092-4	6/30/92	548	42.0	0.2	356	NT	NT
LB-5D	LB-91892-2	9/18/92	549	44.0	0.2 L	351	NT	NT
LB-5D	LB-121092-11	12/10/92	562	45.0	0.2 L	NT	NT	NT
LB-5D	LB-031193-12	3/11/93	552	45.0	0.2	340	NT	NT
LB-5D	LB-060293-8	6/2/93	548	45.0	0.3	332	NT	NT
LB-5D	LB-092793-19	9/27/93	511	41.0	0.3	339	NT	NT
LB-5D	LB-121593-4	12/15/93	522	48.0	0.3	360	NT	NT
LB-5D	LB-032894-13	3/28/94	553	47.0	0.4	349	NT	NT
LB-5D	LB-062194-3	6/21/94	447	44.0	0.4	359	NT	NT
LB-5D	LB-090694-4	9/6/94	529	45.0	0.4	364	NT	NT
LB-5D	LB-121394-8	12/13/94	509	46.0	0.4	364	NT	NT
LB-5D	LB-030995-04	3/9/95	486	46.0	0.3	364	NT	NT
LB-5D	LB-61995-7	6/19/95	511	46.0	0.4	345	NT	NT
LB-5D	LB-092195-9	9/21/95	571	43.0	0.2 L	350	NT	NT
LB-5D	LB-121895-2	12/18/95	541	44.0	0.4	354	NT	NT
LB-5D	LB-031996-9	3/19/96	570	41.0	0.3	321	NT	NT
LB-5D	LB-061896-8	6/18/96	473	42.0	0.3	369	NT	NT
LB-5D	LB-031997-9	3/19/97	419	38.0	0.3	355	0.03	0.005 L
LB-5D	LB-031998-6	3/19/98	541	33.8	0.2 L	319	0.02	0.005 L
LB-5D	LB-031899-11	3/18/99	419	32.6	0.4	332	0.02	0.005 L
LB-5D	LB-031600-5	3/16/00	411	26.4	0.3	292	0.02 L	0.005 L
LB-5D	LB-031401-11	3/14/01	NT	25.1	0.3	278	0.02 L	0.005 L
LB-5D	LB-031902-13	3/19/02	NT	23.0	0.5	269	0.02 L	0.005 L
LB-5D	LB-031303-9	3/13/03	NT	20.0	0.8	256	0.02 L	0.005 L
LB-5D	LB-022504-7	2/25/04	NT	18.0	0.6	276	0.02 L	0.005 L
LB-5D (Dup)	LB-022504-8	2/25/04	NT	18.0	0.6	296	0.08	0.005 L
LB-5D	LB030805-1	3/8/05	NT	16.7	1.1	282	0.02 L	0.005 L
LB-5D	LB-031606-14	3/16/06	NT	17.0	0.6	324	0.03	0.005 L
LB-5D (Dup)	LB-031606-15	3/16/06	NT	16.9	0.6	344	0.02 L	0.005 L
LB-5D	LB-030507-7	3/5/07	NT	13.7	0.7	249	0.02 L	0.005 L
LB-5D	LB-031908-2	3/19/08	NT	13.3	1.0	242	0.02 L	0.005 L
LB-5D (Dup)	LB-031908-3	3/19/08	NT	13.3	1.0	225	0.02 L	0.005 L
LB-5D	LB-5D	3/17/09	NT	13.0	1.2	209	0.02 L	0.005 L
LB-5D	LB-5D032410	3/24/10	NT	11.3	1.7	228	0.02 L	0.005 L
LB-5D	LB-5D	3/23/11	328	10.8	0.78	238	0.025 L	0.002 L
LB-5D	LB-031212-03	3/12/12	NT	11	1.2	240	0.025 L	0.002 L
LB-5D	LB-020513-03	2/5/13	NT	9.3	0.68	210	0.025 L	0.0022
LB-5D	LB-021714-01	2/17/14	NT	9.3	0.74	230	0.025 L	0.0026
LB-5D	LB-021715-01	2/17/15	NT	10.0	0.78	231	0.025 L	0.00256
LB-5D	LB-021816-16	2/18/16	NT	9.1	0.834	214	0.040 L	0.00200 L
LB-5D	**LB-030817-01**	**3/8/17**	**NT**	**8.0**	**0.82**	**219**	**0.021 L**	**0.00180**
LB-5D (Dup)	**LB-030817-02**	**3/8/17**	**NT**	**8.2**	**0.82**	**207**	**0.021 L**	**0.00170**
LB-5S	LB-05S	5/26/87	152	6.0	2.4	NT	0.07	0.007
LB-5S	LB-05S	7/19/87	NT	4.0	2.7	NT	0.05 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-5S	LB-05S	9/10/87	NT	4.0	1.7	NT	0.05 L	0.01 L
LB-5S	LB-05S	11/11/87	NT	6.3	1.9	NT	0.05 L	0.01 L
LB-5S	LB-05S	2/10/88	149	5.0	2.7	NT	0.05 L	0.01 L
LB-5S	LB-390-W17	3/15/90	156	4.8	4.9	184	NT	NT
LB-5S	LB-690-W13	6/20/90	161	5.0	4.8	153	NT	NT
LB-5S	LB-990-W14	9/18/90	192	6.1	6.1	202	NT	NT
LB-5S	LB-1290-W25	12/14/90	207	7.4	5.8	148	NT	NT
LB-5S	LB-391-W17	3/21/91	1410	4.4	4.0	704	NT	NT
LB-5S	LB-691-W16	6/26/91	168	4.4	3.4	175	NT	NT
LB-5S	LB-991-09	9/25/91	211	6.8	7.7	161	NT	NT
LB-5S	LB-1291-10	12/20/91	126	2.7	2.9	122	NT	NT
LB-5S	LB-392-04	3/19/92	160	4.3	4.1	142	NT	NT
LB-5S	LB-63092-3	6/30/92	179	5.1	5.7	183	NT	NT
LB-5S	LB-91892-1	9/18/92	182	5.5	6.1	181	NT	NT
LB-5S	LB-121092-10	12/10/92	170	6.3	6.5		NT	NT
LB-5S	LB-031193-11	3/11/93	181	7.0	5.4	175	NT	NT
LB-5S	LB-060293-7	6/2/93	195	7.6	5.0	173	NT	NT
LB-5S	LB-092793-18	9/27/93	170	4.8	4.5	147	NT	NT
LB-5S	LB-121593-3	12/15/93	162	4.9	3.9	152	NT	NT
LB-5S	LB-032894-12	3/28/94	154	4.9	4.6	148	NT	NT
LB-5S	LB-062194-2	6/21/94	163	5.6	5.0	176	NT	NT
LB-5S	LB-090694-3	9/6/94	167	4.7	4.1	159	NT	NT
LB-5S	LB-121394-9	12/13/94	95	2.6	1.7	114	NT	NT
LB-5S	LB-030995-03	3/9/95	141	6.6	3.5	147	NT	NT
LB-5S	LB-061995-6	6/19/95	201	5.7	3.8	168	NT	NT
LB-5S	LB-092195-8	9/21/95	596	7.1	5.0	184	NT	NT
LB-5S	LB-121895-1	12/18/95	111	1.8	1.3	114	NT	NT
LB-5S	LB-031996-7	3/19/96	223	6.0	4.4	170	NT	NT
LB-5S	LB-061896-7	6/18/96	174	8.5	3.1	175	NT	NT
LB-5S	LB-031997-8	3/19/97	177	7.5	5.3	184	0.02	0.005 L
LB-5S	LB-031998-5	3/19/98	229	9.1	7.1	183	0.04	0.005 L
LB-5S	LB-031899-10	3/18/99	162	4.9	5.5	164	0.02 L	0.005 L
LB-5S	LB-031600-4	3/16/00	237	4.0	6.2	194	0.02 L	0.005 L
LB-5S	LB-031401-12	3/14/01	NT	4.3	4.7	159	0.02 L	0.005 L
LB-5S	LB-092001-1	9/20/01	NT	4.3	3.8	176	0.02 L	0.005 L
LB-5S	LB-031902-12	3/19/02	NT	3.1	2.7	137	0.02 L	0.005 L
LB-5S	LB-091802-06	9/17/02	NT	6.0	6.0	185	1.26	0.03
LB-5S	LB-031303-8	3/13/03	NT	4.1	3.7	138	0.02 L	0.005 L
LB-5S	LB-092203-1	9/22/03	NT	4.6	4.4	180	9.52	0.22
LB-5S	LB-022504-9	2/25/04	NT	4.0	2.7	159	14.80	0.407
LB-5S	LB-090104-5	9/1/04	NT	4.1	3.3	168	0.02 L	0.005 L
LB-5S	LB030805-2	3/8/05	NT	4.2	3.8	182	0.21	0.005 L
LB-5S (Dup)	LB030805-3	3/8/05	NT	4.0	3.6	186	0.05	0.005 L
LB-5S	LB-091405-4	9/14/05	NT	4.5	4.5	204	0.75	0.005 L
LB-5S	LB-031606-16	3/16/06	NT	3.5	3.6	192	0.02 L	0.005 L
LB-5S	LB-091206-1	9/12/06	NT	4.1	4.5	203	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-5S	LB-030507-6	3/5/07	NT	3.6	4.5	169	0.02 L	0.005 L
LB-5S	LB-091907-3	9/19/07	NT	4.4	5.5	191	0.02 L	0.005 L
LB-5S	LB-031908-1	3/19/08	NT	4.9	5.2	186	0.14	0.005 L
LB-5S	LB-091608-2	9/16/08	NT	5.1	4.7	147	0.076	0.005 L
LB-5S (Dup)	LB-091608-8	9/16/08	NT	5.0	4.5	168	0.02 L	0.005 L
LB-5S	LB-5S	3/17/09	NT	6.1	5.3	159	0.092	0.005 L
LB-5S	LBLF5S091109	9/11/09	NT	4.42	3.91	164	0.707	0.0157
LB-5S	LB-5S032410	3/24/10	NT	7.30	4.09	163	0.020 L	0.005 L
LB-5S (Dup)	LBDUP2032410	3/24/10	NT	5.61	3.31	151	0.020 L	0.005 L
LB-5S	LB5S092310	9/23/10	NT	3.86	4.58	158	0.020 L	0.005 L
LB-5S (Dup)	LB5S1092310	9/23/10	NT	3.91	4.61	151	0.020 L	0.005 L
LB-5S	LB-5S	3/23/11	222	5.07	5.15	184	0.025 L	0.002 L
LB-5S	LB-090811-06	9/8/11	NT	7.08	6.19	210	0.025 L	0.002 L
LB-5S	LB-032212-17	3/22/12	NT	4.1	3.7	160	0.025 L	0.002 L
LB-5S	LB-091112-01	9/11/12	NT	4.2	4.7	160	0.025 L	0.002 L
LB-5S	LB-020513-04	2/5/13	NT	4.0	3.5	150	0.025 L	0.0020 L
LB-5S	LB-082113-01	8/21/13	NT	3.9	4.8	150	0.025 L	0.0020 L
LB-5S	LB-021714-02	2/17/14	NT	4.1	3.6	150	0.025 L	0.0020 L
LB-5S	LB-081314-01	8/13/14	NT	3.9	3.7	160	0.025 L	0.0020 L
LB-5S	LB-021815-09	2/18/15	NT	3.81	4.27	150	0.025 L	0.0020 L
LB-5S	LB-081215-08	8/12/15	NT	3.35	4.38	179	0.040 L	0.0020 L
LB-5S	LB-021816-17	2/18/16	NT	4.67	6.36	168	0.040 L	0.0020 L
LB-5S	LB-082316-01	8/23/16	NT	5.1	6.6	170	0.040 L	0.0020 L
LB-5S	**LB-031517-14**	**3/15/17**	**NT**	**3.32**	**5.95**	**182**	**0.021 L**	**0.0011 L**
LB-5S	**LB-081517-01-5S**	**8/15/17**	**NT**	**5.51**	**5.96**	**172**	**0.021 L**	**0.0011 L**
LB-5S (Dup)	**LB-081517-02-DUP1**	**8/15/17**	**NT**	**5.54**	**6.01**	**170**	**0.021 L**	**0.0011 L**
LB-6S	LB-06S	7/17/87	NT	18.0	2.5	NT	0.05 L	0.012
LB-6S	LB-06S	9/10/87	NT	NT	1.0	NT	0.05 L	0.01 L
LB-6S	LB-06S	11/11/87	NT	28.0	0.7	NT	0.05 L	0.01 L
LB-6S	LB-06S	2/12/88	692	35.0	1.1	NT	0.05 L	0.06
LB-6S	LB-06S	6/22/88	502	18.0	2.1	NT	0.05 L	0.05 L
LB-6S	LB-06S	8/31/88	586	27.0	2.0	NT	0.05 L	0.01 L
LB-6S	LB-06S	12/6/88	594	21.0	0.7	NT	0.02	0.073
LB-6S	LB-289-W13	3/1/89	655	28.0	2.5	NT	NT	NT
LB-6S	LB-289-W17	3/1/89	NT	NT	NT	NT	0.01	0.01 L
LB-6S	LB-589-W17	5/24/89	560	20.0	6.1	NT	0.05 L	0.01 L
LB-6S	LB-989-W07	9/7/89	500	32.0	1.0	NT	0.02 L	0.026
LB-6S	LB-1289-W13	12/15/89	680	34.0	0.6	462	0.02	0.078
LB-6S	LB-390-W24	3/15/90	616	17.0	2.3	376	0.03	0.923
LB-6S	LB-690-W22	6/21/90	597	24.0	1.1	401	0.02 L	0.039
LB-6S	LB-990-W11	11/21/90	713	31.1	0.8	604	0.02	0.35
LB-6S	LB-1290-W13	12/12/90	678	33.5	0.4	494	0.02 L	0.14
LB-6S	LB-391-W16	3/20/91	711	21.4	2.2	440	0.03 L	1.39
LB-6S	LB-691-W19	6/26/91	696	24.2	1.9	386	0.04 L	0.009
LB-6S	LB-691-W20	6/26/91	706	23.1	1.8	375	0.04 L	0.011
LB-6S	LB-991-14	9/25/91	676	28.2	0.8	392	0.02 L	0.017

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-6S	LB-991-15	9/25/91	629	13.5	1.1	397	NT	NT
LB-6S	LB-1291-08	12/20/91	621	21.4	0.9	403	0.04 B	0.005 L
LB-6S	LB-1291-09	12/20/91	634	22.2	0.9	400	0.03 B	0.005 L
LB-6S	LB-392-07	3/20/92	497	16.0	2.8	333	0.02 L	0.537
LB-6S	LB-392-08	3/20/92	539	19.0	2.3	348	0.02 L	0.546
LB-6S	LB-62692-5	6/26/92	631	26.0	2.5	404	0.03	0.026
LB-6S	LB-62692-6	6/26/92	620	26.0	2.3	400	0.03	0.029
LB-6S	LB-92192-4	9/21/92	735	29.0	0.7	444	0.02	0.077
LB-6S	LB-92192-5	9/21/92	731	28.0	0.7	453	0.02	0.066
LB-6S	LB-12992-4	12/9/92	760	33.0	0.7	439	0.02 L	0.144
LB-6S	LB-12992-5	12/9/92	736	30.0	0.7	435	0.02 L	0.142
LB-6S	LB-030193-7	3/10/93	592	20.0	2.6	369	0.02 L	0.114
LB-6S	LB-030193-8	3/10/93	625	22.0	2.2	386	0.02 L	0.106
LB-6S	LB-060393-11	6/3/93	517	17.0	2.5	328	0.03	0.018
LB-6S	LB-060393-12	6/3/93	467	13.0	2.9	302	0.02 L	0.019
LB-6S	LB-092493-13	9/24/93	529	19.0	3.7	328	0.02 L	0.025
LB-6S	LB-121593-6	12/15/93	580	27.0	2.1	393	0.02	0.077
LB-6S	LB-032994-18	3/29/94	391	12.0	3.7	256	0.02 L	0.052
LB-6S	LB-032994-19	3/29/94	450	15.0	3.4	306	0.02 L	0.038
LB-6S	LB-062394-11	6/23/94	509	21.0	3.1	347	0.02 L	0.013
LB-6S	LB-062394-12	6/23/94	477	20.0	3.2	358	0.02 L	0.013
LB-6S	LB-090694-5	9/6/94	563	19.0	3.6	366	0.02 L	0.054
LB-6S	LB-090694-6	9/6/94	496	19.0	3.5	360	0.04	0.054
LB-6S	LB-121394-6	12/13/94	475	19.0	3.4	316	0.52	0.124
LB-6S	LB-121394-7	12/13/94	485	19.0	3.4	335	0.20	0.093
LB-6S	LB-031095-10	3/10/95	307	5.3	2.3	217	0.04	0.005 L
LB-6S	LB-031095-11	3/10/95	282	8.2	2.3	196	0.06	0.006
LB-6S	LB-062095-10	6/20/95	397	16.0	4.3	290	0.02 L	0.005 L
LB-6S	LB-062095-9	6/20/95	386	14.0	4.4	234	0.02 L	0.005 L
LB-6S	LB-092095-6	9/20/95	530	20.0	4.3	313	0.02 L	0.005 L
LB-6S	LB-092095-7	9/20/95	518	21.0	4.3	308	0.02	0.005 L
LB-6S	LB-122095-12	12/20/95	407	10.0	3.2	289	0.03	0.005 L
LB-6S	LB-122095-13	12/20/95	448	12.0	3.3	286	0.02 L	0.005 L
LB-6S	LB-031996-5	3/19/96	316	6.2	3.3	222	0.02 L	0.005 L
LB-6S	LB-031996-6	3/19/96	326	5.4	3.6	226	0.02 L	0.005 L
LB-6S	LB-061996-12	6/19/96	NT	21.0	4.0	NT	NT	NT
LB-6S	LB-061996-13	6/19/96	451	23.0	3.8	320	0.03	0.005 L
LB-6S	LB-091896-12	9/18/96	426	22.0	2.4	280	0.02 L	0.005 L
LB-6S	LB-121796-3	12/17/96	460	20.0	1.5	312	0.02 L	0.005 L
LB-6S	LB-031997-7	3/19/97	360	26.0	3.8	318	0.03	0.005 L
LB-6S	LB-061797-6	6/17/97	578	30.0	1.3	349	0.02	0.005 L
LB-6S	LB-091697-3	9/16/97	436	28.6	1.3	364	0.02 L	0.005 L
LB-6S	LB-121797-14	12/17/97	516	22.5	3.2	340	0.16	0.005 L
LB-6S	LB-031998-7	3/19/98	628	22.6	4.9	388	0.03	0.005 L
LB-6S	LB-061698-7	6/16/98	422	30.8	2.6	375	0.02 L	0.005 L
LB-6S	LB-091798-5	9/17/98	625	22.0	3.5	372	0.03	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-6S	LB-121798-1	12/17/98	519	28.0	5.1	407	0.03	0.005 L
LB-6S	LB-031799-2	3/17/99	521	25.1	3.7	389	0.03	0.005 L
LB-6S	LB-062399-11	6/23/99	443	20.6	2.1	323	0.03	0.005 L
LB-6S	LB-091699-5	9/16/99	557	26.1	3.0	350	0.03	0.005 L
LB-6S	LB-121599-11	12/15/99	518	23.8	4.9	324	0.02 L	0.005 L
LB-6S	LB-031700-10	3/17/00	397	23.0	4.9	295	0.02 L	0.008
LB-6S	LB-031700-11	3/17/00	407	25.4	5.2	328	0.02 L	0.005 L
LB-6S	LB-061300-6	6/13/00	445	28.4	4.6	318	0.01 B	0.005 L
LB-6S	LB-091200-3	9/12/00	441	29.8	4.2	313	0.02 L	0.005 L
LB-6S	LB-121200-1	12/12/00	578	31.7	3.3	352	0.02 L	0.005 L
LB-6S	LB-121200-2	12/12/00	585	35.5	2.9	338	0.02 L	0.0073
LB-6S	LB-031301-7	3/13/01	NT	36.8	3.0	326	0.02 L	0.006
LB-6S	LB-031301-8	3/13/01	NT	35.9	3.2	352	0.02 L	0.0055
LB-6S	LB-092001-5	9/20/01	NT	19.0	3.3	246	0.02 L	0.035
LB-6S	LB-032002-15	3/20/02	NT	17.7	4.3	291	0.02 L	0.005 L
LB-6S	LB-032002-16	3/20/02	NT	21.1	4.4	305	0.02 L	0.005 L
LB-6S	LB-091802-02	9/17/02	NT	16.0	5.0	302	0.02 L	0.005 L
LB-6S	LB-091802-03	9/17/02	NT	16.0	5.0	306	0.02 L	0.005 L
LB-6S	LB-031303-21	3/13/03	NT	26.0	2.9	348	0.02 L	0.005 L
LB-6S	LB-092203-5	9/22/03	NT	11.9	2.7	274	0.13	0.014
LB-6S	LB-022604-18	2/26/04	NT	13.4	2.7	284	0.02 L	0.005 L
LB-6S	LB-090104-6	9/1/04	NT	9.6	2.1	268	0.02 L	0.005 L
LB-6S	LB030805-9	3/8/05	NT	13.0	1.6	328	0.02 L	0.017
LB-6S	LB-091405-6	9/14/05	NT	9.3	2.1	254	0.02 L	0.005 L
LB-6S	LB-031506-13	3/15/06	NT	5.1	2.4	132	0.02 L	0.005 L
LB-6S	LB-091206-4	9/12/06	NT	6.9	2.9	228	0.02 L	0.005 L
LB-6S	LB-030507-12	3/5/07	NT	5.6	2.7	238	0.02 L	0.005 L
LB-6S	LB-091907-6	9/19/07	NT	7.1	1.7	245	0.297	0.0369
LB-6S	LB-031908-9	3/19/08	NT	6.1	2.9	240	0.029	0.005 L
LB-6S	LB-091608-3	9/16/08	NT	5.7	1.4	222	0.02 L	0.005 L
LB-6S	LB-6S	3/18/09	NT	5.2	2.2	194	0.02 L	0.005 L
LB-6S	LBLF6S091109	9/11/09	NT	6.72	2.82	244	0.061	0.0059
LB-6S (Dup)	LBLFDUP1091109	9/11/09	NT	6.89	2.83	220	0.035	0.005 L
LB-6S	LB-6S032310	3/23/10	NT	6.64	3.53	194	0.024	0.005 L
LB-6S	LB6S092310	9/23/10	NT	5.67	2.60	192	0.379	0.031
LB-6S	LB-6S	3/22/11	248	6.29	2.79	218 H	0.025 L	0.00218
LB-6S (Dup)	DUP1	3/22/11	266	7.05	2.90	229 H	0.025 L	0.002 L
LB-6S	LB-090711-05	9/7/11	NT	9.09	0.73	178	0.025 L	0.002 L
LB-6S (Dup)	LB-090711-04	9/7/11	NT	8.97	0.73	177	0.025 L	0.002 L
LB-6S	LB-032212-23	3/22/12	NT	5.5	1.7	180	0.025 L	0.002 L
LB-6S (Dup)	LB-032212-22	3/22/12	NT	5.6	1.7	180	0.025 L	0.002 L
LB-6S	LB-091212-06	9/12/12	NT	5.5	0.78	160	0.025 L	0.002 L
LB-6S (Dup)	LB-091212-07	9/12/12	NT	9.8	0.75	160	0.025 L	0.002 L
LB-6S	LB-020613-15	2/6/13	NT	4.9	1.1	130	0.025 L	0.0020 L
LB-6S (Dup)	LB-020613-16	2/6/13	NT	8.0	1.0	150	0.028	0.0021
LB-6S	LB-082113-07	8/21/13	NT	3.7	1.5	150	0.025 L	0.0020 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-6S	LB-021914-23	2/19/14	NT	4.9	1.1	170	0.025 L	0.0020 L
LB-6S	LB-081314-06	8/13/14	NT	2.4	0.89	140	0.025 L	0.0020 L
LB-6S (Dup)	LB-081314-07	8/13/14	NT	2.3	0.88	130	0.025 L	0.0020 L
LB-6S	LB-021815-14	2/18/15	NT	6.98	2.23	190	0.025 L	0.0020 L
LB-6S (Dup)	LB-021815-13	2/18/15	NT	6.98	2.18	190	0.025 L	0.0020 L
LB-6S	LB-081115-03	8/11/15	NT	4.52	2.65	164	0.040 L	0.0020 L
LB-6S (Dup)	LB-081115-04	8/11/15	NT	4.51	2.65	158	0.040 L	0.0020 L
LB-6S	LB-021816-21	2/18/16	NT	6.15	0.100 L	162	0.040 L	0.0020 L
LB-6S	LB-082416-08	8/24/16	NT	4.8	1.7	160	0.040 L	0.0020 L
LB-6S (Dup)	LB-082416-09	8/24/16	NT	4.9	1.6	150	0.040 L	0.0020 L
LB-6S	**LB-031517-20**	**3/15/17**	**NT**	**4.13**	**3.09**	**182**	**0.021 L**	**0.0011 L**
LB-6S (Dup)	**LB-031517-21**	**3/15/17**	**NT**	**4.20**	**3.14**	**189**	**0.021 L**	**0.0011 L**
LB-6S	**LB-081617-09-6S**	**8/16/17**	**NT**	**6.47**	**0.66**	**109**	**0.021 L**	**0.0011 L**
LB10-DR	LB-031005-19	3/10/05	NT	26.8	0.7	428	1.03	0.879
LB10-DR (Dup)	LB-031005-20	3/8/05	NT	27.0	0.7	432	0.93	0.771
LB10-DR	LB-031406-5	3/14/06	NT	31.3	0.6	492	0.763	0.417
LB10-DR	LB-030607-20	3/6/07	NT	24.9	0.9	332	0.022	0.197
LB10-DR	LB-032408-22	3/24/08	NT	28.3	0.8	320	0.02 L	0.155
LB10-DR	LB-10D	3/17/09	NT	26.8	1.0	286	0.032	0.0677
LB10-DR	LB10-DR032310	3/23/10	NT	23.9	1.1	295	0.047	0.0320
LB-10DR	LB-10DR	3/29/11	479	26.0	1.27	329	0.025 L	0.00696
LB-10DR	LB-0313012-07	3/13/12	NT	20	1.8	280	0.025 L	0.002 L
LB-10DR	LB-020713-19	2/6/13	NT	22	1.7	290	0.025 L	0.0020 L
LB-10DR	LB-021914-15	2/19/14	NT	15	2.3	260	0.025 L	0.0020 L
LB-10DR	LB-021915-20	2/19/15	NT	14	2.63	290	0.025 L	0.0020 L
LB-10DR	LB-021716-09	2/17/16	NT	17.2	2.02	258	0.040 L	0.00217
LB-10DR (Dup)	LB-021716-10	2/17/16	NT	17.1	2.05	264	0.040 L	0.0020 L
LB-10DR	**LB-030917-12**	**3/9/17**	**NT**	**9.5**	**3.70**	**186**	**0.021 L**	**0.0011 L**
LB10-SR	LB031005-21	3/10/05	NT	3.8	9.8	272	0.13	2.050
LB10-SR	LB-091505-7	9/15/05	NT	4.6	6.5	506	1.04	0.0187
LB10-SR	LB-031406-6	3/14/06	NT	4.8	2.6	116	0.02 L	0.006
LB10-SR	LB-091306-9	9/13/06	NT	13.5	0.7	298	0.02 L	0.005 L
LB10-SR	LB-030607-19	3/6/07	NT	3.6	1.2	105	0.02 L	0.006
LB10-SR	LB-091907-7	9/19/07	NT	14.3	1.1	297	0.02 L	0.005 L
LB10-SR	LB-032408-21	3/24/08	NT	6.3	0.9	202	0.02 L	0.005 L
LB10-SR	LB-091608-4	9/16/08	NT	6.1	2.5	225	0.02 L	0.005 L
LB10-SR	LB-10S	3/17/09	NT	10.0	2.3	216	0.02 L	0.005 L
LB10-SR (Dup)	Dup-1	3/17/09	NT	10.6	2.3	207	0.02 L	0.005 L
LB10-SR	LBLF10S091190	9/11/09	NT	5.55	5.13	233	1.15	0.0138
LB10-SR	LB10-SR032310	3/23/10	NT	8.53	5.97	196	0.02 L	0.005 L
LB10-SR	LB10S092310	9/23/10	NT	3.90	2.80	176	0.02 L	0.005 L
LB-10SR	LB-10SR	3/29/11	341	15.30	1.53	270	0.025 L	0.002 L
LB-10SR (Dup)	DUP2	3/29/11	341	15.30	1.57	270	0.025 L	0.002 L
LB-10SR	LB-090811-08	9/8/11	NT	17.70	1.15	251	0.025 L	0.00205
LB-10SR	LB-031312-08	3/13/12	NT	26	1.8	330	0.025 L	0.0023
LB-10SR	LB-091212-09	9/12/12	NT	30	0.91	310	0.025 L	0.0033

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-10SR	LB-020713-20	2/7/13	NT	32	1.1	290	0.025 L	0.0058
LB-10SR	LB-082213-09	8/22/13	NT	18	0.8	270	0.025 L	0.0025
LB-10SR	LB-021914-16	2/19/14	NT	8.1	2.5	240	0.025 L	0.0026
LB-10SR	LB-081414-08	8/14/14	NT	24	1.2	250	0.025 L	0.0023
LB-10SR	LB-021915-21	2/19/15	NT	10	4.15	220	0.025 L	0.0059
LB-10SR	LB-081015-01	8/10/15	NT	12.4	4.12	265	0.040 L	0.00207
LB-10SR	LB-021716-11	2/17/16	NT	21.4	2.19	260	0.040 L	0.0020 L
LB-10SR	LB-082416-07	8/24/16	NT	26	1.1	280	0.040 L	0.0020 L
LB-10SR	**LB-030917-13**	**3/9/17**	**NT**	**31.1**	**0.35**	**323**	**0.021 L**	**0.0026**
LB-10SR	**LB-081617-06-10SR**	**8/16/17**	**NT**	**26.0**	**0.96**	**288**	**0.021 L**	**0.0041**
LB-13D	LB-989-W20	9/13/89	199	6.0	4.0	244	0.02 L	0.05
LB-13D	LB-1089-W15	10/19/89	200	6.5	4.5	197	0.05 L	0.028
LB-13D	LB-1189-W20	11/16/89	176	6.0	4.7	91	0.02	0.014
LB-13D	LB-1289-W18	12/18/89	210	5.0	4.7	134	0.02 L	0.007
LB-13D	LB-390-W18	3/15/90	244	8.2	4.9	206	0.02 L	0.005 L
LB-13D	LB-690-W20	6/21/90	235	6.8	4.9	242	0.02 L	0.005 L
LB-13D	LB-990-W17	9/18/90	230	6.9	4.9	225	0.02	0.005 L
LB-13D	LB-1290-W20	12/13/90	238	6.8	4.8	160	0.02 L	0.005 L
LB-13D	LB-391-W15	3/20/91	241	6.4	4.8	179	0.03 L	0.005 L
LB-13D	LB-691-W22	6/26/91	314	6.3	4.4	258	NT	NT
LB-13D	LB-991-13	9/25/91	248	6.1	5.0	183	NT	NT
LB-13D	LB-1291-19	12/23/91	243	5.1	4.9	186	NT	NT
LB-13D	LB-392-19	3/24/92	246	5.9	4.9	190	NT	NT
LB-13D	LB-7292-2	7/2/92	239	5.7	4.8	194	NT	NT
LB-13D	LB-91792-2	9/17/92	240	5.3	4.5	190	NT	NT
LB-13D	LB-121092-9	12/10/92	240	6.2	5.1	179	NT	NT
LB-13D	LB-031293-20	3/12/93	245	6.0	4.6	180	NT	NT
LB-13D	LB-060493-21	6/4/93	238	6.1	4.4	182	NT	NT
LB-13D	LB-092393-7	9/23/93	240	5.8	4.3	178	NT	NT
LB-13D	LB-121693-12	12/16/93	220	6.1	4.9	193	NT	NT
LB-13D	LB-032894-17	3/28/94	242	6.2	4.8	188	NT	NT
LB-13D	LB-052894-20	6/28/94	220	6.0	4.8	186	NT	NT
LB-13D	LB-090794-10	9/7/94	217	5.8	5.5	191	NT	NT
LB-13D	LB-121594-21	12/15/94	216	6.3	5.3	176	NT	NT
LB-13D	LB-031395-18	3/13/95	222	6.0	5.2	170	NT	NT
LB-13D	LB-062195-19	6/21/95	239	6.5	5.7	205	NT	NT
LB-13D	LB-092295-16	9/22/95	299	6.5	5.8	165	NT	NT
LB-13D	LB-121995-8	12/19/95	249	6.9	6.4	185	NT	NT
LB-13D	LB-032096-15	3/20/96	262	6.6	6.8	200	NT	NT
LB-13D	LB-032096-16	3/20/96	253	6.6	6.7	178	NT	NT
LB-13D	LB-061996-16	6/19/96	267	7.0	7.1	224	NT	NT
LB-13D	LB-091796-4	9/17/96	261	7.8	7.2	201	0.02 L	0.005 L
LB-13D	LB121796-9	12/17/96	312	9.9	7.4	223	0.02 L	0.005 L
LB-13D	LB-032097-18	3/20/97	241	9.8	0.2 L	217	0.02 L	0.005 L
LB-13D	LB-061897-15	6/18/97	305	8.8	7.1	223	0.02 L	0.005 L
LB-13D	LB-091897-11	9/18/97	310	8.8	8.1	246	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-13D	LB-121797-9	12/17/97	239	8.3	8.0	133	0.02	0.005 L
LB-13D	LB-032098-19	3/20/98	296	7.8	7.9	207	0.05 B	0.005 L
LB-13D	LB-061798-14	6/17/98	242	7.6	8.4	210	0.02 L	0.005 L
LB-13D	LB-091898-15	9/18/98	277	7.0	7.8	172	0.02 L	0.005 L
LB-13D	LB-121898-12	12/18/98	223	7.1	8.1	245	0.02	0.005 L
LB-13D	LB-031999-23	3/19/99	219	6.5	7.6	207	0.02	0.005 L
LB-13D	LB-062399-12	6/23/99	222	6.7	7.6	198	0.02	0.005 L
LB-13D	LB-091799-13	9/17/99	246	7.2	7.5	176	0.02 L	0.005 L
LB-13D	LB-121499-3	12/14/99	243	6.3	7.4	161	0.02 L	0.005 L
LB-13D	LB-031700-18	3/17/00	210	6.0	6.8	200	0.02 L	0.005 L
LB-13D	LB-061400-10	6/14/00	215	5.9	7.8	222	0.02 L	0.005 L
LB-13D	LB-091300-11	9/13/00	231	6.0	7.5	204	0.02 L	0.005 L
LB-13D	LB-121500-12	12/15/00	233	5.2	7.5	165	2.06	0.0053
LB-13D	LB-031501-19	3/15/01	NT	5.2	7.1	170	0.02 L	0.005 L
LB-13D	LB-032002-20	3/20/02	NT	5.0	6.3	174	0.02 L	0.005 L
LB-13D	LB-031303-16	3/13/03	NT	4.3	5.8	224	0.02 L	0.005 L
LB-13D	LB-022404-3	2/24/04	NT	4.0	5.2	179	0.02 L	0.005 L
LB-13D	LB-031005-17	3/10/05	NT	3.8	4.9	190	0.02	0.005
LB-13D	LB-031506-9	3/15/06	NT	3.4	4.6	115	0.02 L	0.005 L
LB-13D	LB-030607-18	3/6/07	NT	3.6	5.0	118	0.02 L	0.005 L
LB-13D	LB-032008-13	3/20/08	NT	3.6	4.8	190	0.02 L	0.005 L
LB-13D	LB-13-D	3/17/09	NT	4.0	5.1	148	0.02 L	0.005 L
LB-13D	LB-13D032410	3/24/10	NT	3.59	5.4	167	0.02 L	0.005 L
LB-13D	LB-13D	3/25/11	214	4.36	5.3	193	0.025 L	0.002 L
LB-13D	LB-031212-01	3/12/12	NT	4.4	5.3	190	0.025 L	0.002 L
LB-13D	LB-020713-22	2/5/13	NT	5.0	5.1	170	0.025 L	0.0020 L
LB-13D	LB-021814-08	2/18/14	NT	4.6	4.9	150	0.025 L	0.0020 L
LB-13D	LB-021715-03	2/17/15	NT	4.49	4.99	185	0.025 L	0.0020 L
LB-13D	LB-021616-02	2/16/16	NT	5.03	5.23	170	0.040 L	0.0020 L
LB-13D (Dup)	LB-021616-03	2/16/16	NT	5.03	5.06	176	0.040 L	0.0020 L
LB-13D	**LB-030817-04**	**3/8/17**	**NT**	**4.74**	**4.57**	**128**	**0.021 L**	**0.0011 L**
LB-13I	LB-989-W22	9/13/89	600	28.0	1.4	402	0.02 L	0.017
LB-13I	LB-989-W23	9/13/89	576	28.0	1.3	478	0.02 L	0.013
LB-13I	LB-1089-W17	10/17/89	600	33.0	1.3	460	0.05 L	0.012
LB-13I	LB-1189-W17	11/16/89	530	31.0	1.2	404	0.04	0.091
LB-13I	LB-1289-W16	12/18/89	596	34.0	0.8	377	0.02	0.009
LB-13I	LB-390-W19	3/15/90	704	40.0	0.2 L	462	0.02	0.009
LB-13I	LB-690-W19	6/21/90	695	38.4	0.3	481	0.02 L	0.018
LB-13I	LB-990-W16	9/18/90	703	40.5	0.6	491	0.02	0.012
LB-13I	LB-1290-W21	12/13/90	629	36.9	0.6	433	0.02 L	0.01
LB-13I	LB-391-W14	3/20/91	740	43.4	0.4	486	0.03 L	0.012
LB-13I	LB-691-W21	6/26/91	738	26.6	0.9	454	0.04 L	0.018
LB-13I	LB-991-12	9/25/91	765	35.3	0.6	444	0.02	0.016
LB-13I	LB-1291-18	12/23/91	707	32.9	0.2 L	347	0.10	0.047
LB-13I	LB-392-20	3/24/92	661	33.0	0.2 L	422	0.02 L	0.017
LB-13I	LB-7292-1	7/2/92	659	37.0	0.2 L	402	1.16	0.039

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-13I	LB-91792-1	9/17/92	680	31.0	0.6	429	0.48	0.025
LB-13I	LB-121092-8	12/10/92	687	33.0	0.8	393	0.02 L	0.014
LB-13I	LB-031293-19	3/12/93	681	27.0	0.9	410	0.02 L	0.014
LB-13I	LB-060493-20	6/4/93	620	23.0	1.5	376	0.02 L	0.016
LB-13I	LB-092393-6	9/23/93	568	20.0	1.5	339	0.05	0.017
LB-13I	LB-121693-14	12/16/93	511	21.0	1.8	352	0.03	0.12
LB-13I	LB-032894-16	3/28/94	590	22.0	2.2	364	0.02 L	0.017
LB-13I	LB-052894-19	6/28/94	430	22.0	0.6	309	0.02 L	0.013
LB-13I	LB-090794-9	9/7/94	418	22.0	0.8	329	0.21	0.14
LB-13I	LB-121594-20	12/15/94	453	21.0	2.6	339	0.04	0.017
LB-13I	LB-031395-17	3/13/95	468	17.0	3.1	287	0.02	0.014
LB-13I	LB-061996-15	6/19/95	NT	NT	NT	NT	0.03	0.005 L
LB-13I	LB-052195-18	6/21/95	424	18.0	2.5	289	0.02 L	0.014
LB-13I	LB-092295-15	9/22/95	469	18.0	0.9	248	0.02	0.012
LB-13I	LB-121995-7	12/19/95	463	18.0	3.6	193	0.02 L	0.005 L
LB-13I	LB-032096-14	3/20/96	477	20.0	0.9	349	0.02	0.01
LB-13I	LB-061996-15	6/19/96	549	29.0	1.3	371	0.03 L	0.005 L
LB-13I	LB-091796-3	9/17/96	548	37.0	0.2 L	348	0.02 L	0.01
LB-13I	LB121796-10	12/17/96	708	52.0	0.2 L	418	0.02 L	0.013
LB-13I	LB-032097-19	3/20/97	579	70.0	0.2 L	458	0.02	0.014
LB-13I	LB-061897-14	6/18/97	729	63.0	0.2 L	462	0.03	0.019
LB-13I	LB-091897-12	9/18/97	814	68.1	0.2 L	514	0.02	0.021
LB-13I	LB-121797-8	12/17/97	578	63.0	0.2 L	444	0.03	0.021
LB-13I	LB-032098-18	3/20/98	695	58.8	0.3	428	0.02 L	0.02
LB-13I	LB-061798-15	6/17/98	624	66.4	0.2 L	444	0.03	0.02
LB-13I	LB-091898-14	9/18/98	763	62.4	0.3	394	0.03	0.022
LB-13I	LB-121898-11	12/18/98	616	32.4	3.2	464	0.04	0.022
LB-13I	LB-031999-22	3/19/99	582	51.1	0.5	457	0.03	0.022
LB-13I	LB-062399-13	6/23/99	576	44.7	0.3	389	0.02	0.02
LB-13I	LB-091799-12	9/17/99	626	44.6	0.2	383	0.03	0.021
LB-13I	LB-121499-4	12/14/99	637	29.2	2.6	357	0.02 L	0.022
LB-13I	LB-121499-5	12/14/99	634	30.0	2.6	378	0.02 L	0.022 L
LB-13I	LB-031700-17	3/17/00	552	28.1	0.8	392	0.02 L	0.02
LB-13I	LB-061400-9	6/14/00	525	29.3	0.5	372	0.02 L	0.02
LB-13I	LB-091300-12	9/13/00	680	42.7	2.7	417	0.02 L	0.0246
LB-13I	LB-121500-11	12/15/00	577	30.0	3.5	306	0.02 L	0.0284
LB-13I	LB-031501-20	3/15/01	NT	26.1	3.4	318	0.02 L	0.0252
LB-13I	LB-092001-8	9/20/01	NT	12.9	3.3	241	0.02 L	0.023
LB-13I	LB-032002-19	3/20/02	NT	10.2	4.7	219	0.02 L	0.016
LB-13I	LB-091802-07	9/17/02	NT	22.0	6.0	292	0.31	0.042
LB-13I	LB-031303-15	3/13/03	NT	13.2	3.4	168	0.22	0.039
LB-13I	LB-092203-7	9/22/03	NT	13.7	2.9	272	0.15	0.052
LB-13I	LB-022404-4	2/24/04	NT	9.8	2.4	232	0.09	0.028
LB-13I	LB-090104-13	9/1/04	NT	7.0	1.8	232	0.03	0.024
LB-13I	LB031005-18	3/10/05	NT	7.2	2.7	232	0.02 L	0.006
LB-13I	LB-091505-9	9/15/05	NT	5.8	3.8	202	0.03	0.014

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-13I	LB-031506-10	3/15/06	NT	4.9	4.2	152	0.02 L	0.007
LB-13I	LB-091306-8	9/13/06	NT	5.4	4.0	182	0.02 L	0.006
LB-13I	LB-030607-17	3/5/07	NT	5.5	3.2	170	0.02 L	0.006
LB-13I	LB-091907-8	9/19/07	NT	5.6	2.9	260	0.02 L	0.005 L
LB-13I	LB-032008-12	3/20/08	NT	6.6	3.4	207	0.02 L	0.0054
LB-13I	LB-091608-5	9/16/08	NT	7.0	3.9	193	0.02 L	0.005 L
LB-13I	LB-13I	3/17/09	NT	6.9	4.3	186	0.02 L	0.005 L
LB-13I	LBLF13i091109	9/11/09	NT	6.06	4.82	192	0.02 L	0.005 L
LB-13I	LB-13I032410	3/24/10	NT	5.53	5.21	193	0.02 L	0.005 L
LB-13I	LB13I092310	9/23/10	NT	5.24	5.31	196	0.02 L	0.005 L
LB-13I	LB-13I	3/23/11	270	5.56	4.58	202	0.025 L	0.00296
LB-13I	LB-090711-02	9/7/11	NT	5.99	4.53	204	0.025 L	0.002 L
LB-13I	LB-032212-19	3/22/12	NT	6.1	4.1	200	0.025 L	0.002 L
LB-13I (Dup)	LB-032212-20	3/22/12	NT	6.1	4.0	190	0.025 L	0.002 L
LB-13I	LB-091112-03	9/11/12	NT	12	4.4	220	0.025 L	0.002 L
LB-13I	LB-020613-13	2/7/13	NT	8.8	3.6	190	0.025 L	0.0031
LB-13I	LB-082113-05	8/21/13	NT	11.0	4.3	210	0.025 L	0.0020 L
LB-13I	LB-021814-10	2/18/14	NT	10.0	2.8	190	0.025 L	0.0034
LB-13I	LB-081314-04	8/13/14	NT	8.3	4.0	220	0.025 L	0.0041
LB-13I	LB-021815-11	2/18/15	NT	11.0	3.82	210	0.025 L	0.0045
LB-13I	LB-081115-05	8/11/15	NT	7.64	4.09	198	0.040 L	0.00499
LB-13I	LB-021816-20	2/18/16	NT	7.39	3.65	193	0.040 L	0.00448
LB-13I	LB-082316-03	8/23/16	NT	6.6	4.5	190	0.040 L	0.0020 L
LB-13I	**LB-031517-18**	**3/15/17**	**NT**	**7.21**	**2.68**	**191**	**0.021 L**	**0.00290**
LB-13I	**LB-081617-04-13I**	**8/16/17**	**NT**	**8.27**	**0.97**	**167**	**0.021 L**	**0.0030**
LB-17D	LB-989-W08	9/7/89	640	46.0	0.2 L	518	0.33	9.73
LB-17D	LB-1089-W10	10/18/89	780	58.0	0.2 L	492	0.24	10.6
LB-17D	LB-1089-W11	10/18/89	780	60.0	0.2 L	508	0.25	10.7
LB-17D	LB-1189-W12	11/15/89	644	70.0	0.2 L	479	0.02 L	10.9
LB-17D	LB-1189-W13	11/15/89	682	70.0	0.2 L	465	0.32	10.8
LB-17D	LB-1289-W28	12/20/89	740	68.0	0.2 L	532	0.33	10.8
LB-17D	LB-390-W21	3/15/90	918	70.8	0.2 L	566	0.36	11.4
LB-17D	LB-390-W22	3/15/90	922	71.0	0.2 L	594	0.35	11.5
LB-17D	LB-690-W18	6/21/90	843	59.6	0.2 L	540	0.30	11
LB-17D	LB-990-W19	9/19/90	839	65.2	0.2 L	577	0.33	11.4
LB-17D	LB-990-W20	9/19/90	895	66.2	0.2 L	575	0.30	11.4
LB-17D	LB-1290-W23	12/14/90	945	65.6	0.2 L	538	0.19	11.3
LB-17D	LB-391-W19	3/21/91	870	56.2	0.2 L	653	0.21	10.9
LB-17D	LB-391-W21	3/21/91	1060	58.7	0.2 L	530	0.20	10.3
LB-17D	LB-691-W14	6/11/91	786	47.3	0.2 L	423	0.19	10.1
LB-17D	LB-691-W15	6/11/91	812	47.3	0.2 L	441	0.18	10.1
LB-17D	LB-991-10	9/25/91	895	58.5	0.2 L	489	0.26	10.4
LB-17D	LB-991-11	9/25/91	895	58.7	0.2 L	503	0.26	10.5
LB-17D	LB-1291-16	12/23/91	1020	19.6	0.2 L	593	0.44	13.3
LB-17D	LB-1291-17	12/23/91	1010	18.6	0.2 L	586	0.36	13.4
LB-17D	LB-392-11	3/23/92	934	68.0	0.2 L	570	0.34	12.6

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-17D	LB-392-12	3/23/92	927	69.0	0.2 L	542	0.33	12.5
LB-17D	LB-63092-5	6/30/92	842	58.0	0.2 L	522	0.20	11.6
LB-17D	LB-031093-6	3/10/93	712	52.0	0.2 L	432	0.18	9.57
LB-17D	LB-060493-22	6/4/93	682	44.0	0.2 L	422	0.28	9.41
LB-17D	LB-092793-21	9/27/93	719	48.0	0.2 L	424	0.25	9.54
LB-17D	LB-121593-7	12/15/93	769	59.0	0.2 L	461	0.25	9.86
LB-17D	LB-032994-20	3/29/94	695	51.0	0.2 L	425	0.25	9.75
LB-17D	LB-062394-14	6/23/94	646	43.0	0.1	401	0.20	8.21
LB-17D	LB-090794-7	9/7/94	659	39.0	0.3	390	0.17	8.57
LB-17D	LB-121494-10	12/14/94	534	41.0	0.2 L	367	0.24	8.45
LB-17D	LB-030995-05	3/9/95	511	36.0	0.2 L	366	0.21	7.62
LB-17D	LB-062095-11	6/20/95	595	44.0	1.8	377	0.20	8.37
LB-17D	LB-092095-10	9/20/95	854	55.0	0.2 L	416	0.25	9.96
LB-17D	LB-121895-3	12/18/95	611	52.0	0.2 L	394	0.25	8.75
LB-17D	LB-031996-11	3/19/96	662	43.0	0.2 L	342	0.27	8.63
LB-17D	LB-061996-14	6/19/96	593	47.0	0.2 L	387	0.22	8.59
LB-17D	LB-032097-16	3/20/97	512	50.0	0.2 L	345	0.20	7.63
LB-17D	LB-031998-14	3/19/98	540	37.2	0.2 L	340	0.25	7.09
LB-17D	LB-031899-13	3/18/99	390	19.2	0.3	304	0.17	5.62
LB-17D	LB-031600-7	3/16/00	363	16.0	0.2 L	246	0.13	4.98
LB-17D	LB-031401-9	3/14/01	NT	12.5	0.2 L	243	0.07	4.47
LB-17D	LB-031902-07	3/19/02	NT	9.4	0.2 L	192	0.02 L	3.89
LB-17D	LB-031203-7	3/12/03	NT	10.3	0.2 L	226	0.07	4.05
LB-17D	LB-022504-10	2/25/04	NT	10.9	0.2 L	208	0.06	3.76
LB-17D	LB-030905-10	3/9/05	NT	10.3	0.2 L	264	0.06	3.70
LB-17D	LB-031506-7	3/15/06	NT	8.8	0.2 L	184	0.07	3.71
LB-17D	LB-030607-14	3/6/07	NT	11.0	0.1 L	155	0.08	3.93
LB-17D (Dup)	LB-030607-15	3/6/07	NT	11.0	0.1 L	141	0.10	3.98
LB-17D	LB-032008-11	3/20/08	NT	10.1	0.1 L	205	0.078	4.04
LB-17D	LB-17D	3/18/09	NT	7.8	0.1 L	190	0.082	3.57
LB-17D	LB-17D032410	3/24/10	NT	5.8	0.1 L	185	0.090	3.66
LB-17D	LB-17D	3/22/11	277	7.97	0.1 L	209 H	0.0623	3.38
LB-17D	LB-031212-04	3/12/12	NT	19	0.1 L	230	0.12	4.6
LB-17D	LB-020513-05	2/5/13	NT	13	0.1 L	220	0.11	4.2
LB-17D	LB-021714-03	2/17/14	NT	10	0.1 L	230	0.11	4.1
LB-17D	LB-021715-05	2/17/15	NT	6.51	0.005 L	212	0.0965	3.82
LB-17D (DUP)	LB-021715-06	2/17/15	NT	6.51	0.005 L	207	0.0965	3.71
LB-17D	LB-021616-01	2/16/16	NT	5.99	0.10 L	179	0.115	3.59
LB-17D	**LB-030817-06**	**3/8/17**	**NT**	**9.30**	**0.10 L**	**195**	**0.090**	**4.19**
LB-17I	LB-989-W04	9/6/89	1020	85.0	0.2 L	770	45.70	13.3
LB-17I	LB-1089-W14	10/19/89	1080	125.0	0.2 L	692	46.00	10.1
LB-17I	LB-1189-W14	11/15/89	872	115.0	0.2 L	613	41.50	8.07
LB-17I	LB-1289-W29	12/20/89	920	90.0	0.2	585	36.50	7.67
LB-17I	LB-1289-W30	12/20/89	910	90.0	0.2	591	34.70	8
LB-17I	LB-390-W20	3/15/90	724	26.9	0.2 L	484	29.30	4.01
LB-17I	LB-690-W17	6/21/90	1140	96.0	0.2 L	766	48.50	6.74

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-17I	LB-990-W18	9/19/90	1090	92.0	0.2 L	710	37.30	8.09
LB-17I	LB-1290-W22	12/13/90	967	38.4	0.2 L	666	41.50	7.17
LB-17I	LB-391-W20	3/21/91	1240	36.6	0.2 L	663	46.40	6.14
LB-17I	LB-392-13	3/23/92	1010	40.0	0.2 L	545	45.90	3.86
LB-17I	LB-63092-6	6/30/92	1210	71.0	0.2 L	708	56.20	6.5
LB-17I	LB-63092-7	6/30/92	1230	71.0	0.2 L	697	56.50	6.49
LB-17I	LB-91892-3	9/18/92	1290	71.0	0.2 L	746	58.60	7.88
LB-17I	LB-91892-4	9/18/92	1380	74.0	0.2 L	781	59.90	7.73
LB-17I	LB-121192-18	12/11/92	1030	61.0	0.2 L	562	31.20	8.34
LB-17I	LB-121192-19	12/11/92	1040	62.0	0.2 L	544	31.30	8.51
LB-17I	LB-031093-5	3/10/93	896	51.0	0.2 L	501	32.30	7.34
LB-17I	LB-032994-21	3/29/94	719	35.0	0.2 L	450	25.90	4.89
LB-17I	LB-030995-06	3/9/95	562	27.0	0.2 L	361	21.00	3.58
LB-17I	LB-031996-10	3/19/96	869	48.0	0.2 L	484	27.00	1.82
LB-17I	LB-032097-17	3/20/97	557	56.0	0.2 L	366	16.60	1.08
LB-17I	LB-031998-13	3/19/98	464	30.8	0.2 L	284	14.00	0.913
LB-17I	LB-031899-12	3/18/99	418	18.4	0.2	297	14.40	0.987
LB-17I	LB-031600-6	3/16/00	304	12.8	0.2 L	220	8.90	0.776
LB-17I	LB-031401-10	3/14/01	NT	13.6	0.2 L	241	8.86	0.918
LB-17I	LB-031902-06	3/19/02	NT	15.8	0.2	252	8.96	1.1
LB-17I	LB-031203-6	3/12/03	NT	18.0	0.2	278	9.99	1.37
LB-17I	LB-022504-11	2/25/04	NT	18.0	0.2 L	242	8.73	1.12
LB-17I	LB-030905-11	3/9/05	NT	21.0	0.2	288	10.80	1.79
LB-17I	LB-031506-8	3/15/06	NT	22.8	0.2 L	344	12.00	1.59
LB-17I	LB-030607-13	3/6/07	NT	24.2	0.1 L	291	11.30	1.51
LB-17I	LB-032008-10	3/20/08	NT	19.2	0.1 L	221	8.5	1.3
LB-17I	LB-17I	3/18/09	NT	10.0	0.1 L	193	6.77	1.12
LB-17I	LB-17I032310	3/23/10	NT	11.8	0.1 L	217	8.44	1.52
LB-17I (Dup)	LBDUP1032310	3/23/10	NT	11.7	0.1 L	231	8.41	1.51
LB-17I	LB-17I	3/22/11	498	27.4	0.1 L	306 H	8.95	1.55
LB-17I	LB-031312-16	3/13/12	NT	12	0.1 L	240	6.8	0.98
LB-17I	LB-020513-06	2/5/13	NT	10	0.1 L	190	6.0	0.92
LB-17I	LB-021714-04	2/17/14	NT	12	0.1 L	230	7.2	1.10
LB-17I	LB-021815-15	2/18/15	NT	9.71	0.005 L	250	9.2	1.4
LB-17I	LB-021816-15	2/18/16	NT	10.8	0.10 L	229	9.8	1.55
LB-17I	**LB-030817-07**	**3/8/17**	**NT**	**9.5**	**0.10 L**	**180**	**7.1**	**1.23**
LB-20S	LB-991-19	9/26/81	NT	NT	NT	NT	2.81	7.64
LB-20S	LB-1289-W36	12/21/89	600	27.0	0.2 L	470	0.09	2.14
LB-20S	LB-390-W12	3/14/90	1340	45.7	0.2 L	892	2.72	13.4
LB-20S	LB-690-W08	6/19/90	1250	42.6	0.2 L	880	21.70	13.2
LB-20S	LB-690-W09	6/19/90	1220	41.8	0.2 L	832	21.00	13.3
LB-20S	LB-990-W09	9/14/90	844	22.8	0.2 L	574	0.78	6.88
LB-20S	LB-1290-W10	12/12/90	983	4.1	0.2 L	682	0.17	9
LB-20S	LB-1290-W11	12/12/90	988	21.3	0.2 L	708	0.16	9.32
LB-20S	LB-391-W08	3/20/91	667	9.9	0.2 L	374	0.09	5.07
LB-20S	LB-691-W11	6/11/91	960	NT	NT	583	4.16	9.44

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
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Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-20S	LB-991-19	9/26/91	NT	NT	NT	620	2.81	7.64
LB-20S	LB-1291-5	12/19/91	1160	NT	NT	667	0.63	9.69
LB-20S	LB-392-18	3/24/92	778	20.0	0.2 L	485	0.10	7.34
LB-20S	LB-031593-26	3/15/93	713	10.0	0.2 L	411	1.36	5.34
LB-20S	LB-031593-27	3/15/93	720	11.0	0.2 L	415	1.30	5.28
LB-20S	LB-032994-23	3/29/94	753	20.0	0.2 L	464	2.08	6.4
LB-20S	LB-031395-19	3/13/95	933	45.0	0.2	636	0.37	5.45
LB-20S	LB-032096-20	3/20/96	1020	42.0	0.2 L	620	6.06	7.49
LB-20S	LB-032097-15	3/20/97	625	46.0	0.2 L	459	25.60	3.98
LB-20S	LB-032098-23	3/20/98	467	39.0	0.2 L	297	15.90	1.83
LB-20S	LB-031899-16	3/18/99	279	13.8	0.3	210	11.80	1.28
LB-20S	LB-031700-14	3/17/00	279	14.6	0.2	228	10.60	1.53
LB-20S	LB-031401-13	3/14/01	NT	8.8	0.2 L	278	17.30	2.21
LB-20S	LB-032002-14	3/20/02	NT	3.3	0.2	283	2.07	2.09
LB-20S	LB-031303-20	3/13/03	NT	2.4	0.2 L	194	2.99	1.3
LB-20S	LB-022604-19	2/26/04	NT	2.9	0.2 L	236	0.41	1.01
LB-20S	LB-030905-12	3/9/05	NT	3.3	0.2	388	6.79	2.290
LB-20S	LB-031406-4	3/14/06	NT	2.1	0.2 L	148	0.16	0.026
LB-20S	LB-030607-16	3/6/07	NT	7.3	0.1 L	219	0.031	0.967
LB-20S	LB-032408-16	3/24/08	NT	7.9	0.1 L	186	0.08	1.22
LB-20S	LB-20S	3/18/09	NT	9.2	0.1 L	271	0.281	1.48
LB-20S	LB-20S032410	3/24/10	NT	3.0	0.1	237	0.027	0.34
LB-20S	LB-20S	3/24/11	544	22.1	0.1 L	361	0.368	2.20
LB-20S	LB-031312-15	3/13/12	NT	6.2	0.1 L	210	0.076	2.4
LB-20S	LB-020513-10	2/5/13	NT	17	0.1 L	340	0.18	3.5
LB-20S	LB-021914-20	2/19/14	NT	13	0.1 L	250	0.075	2.4
LB-20S	LB-021915-18	2/19/15	NT	35	0.42	220	0.43	2.0
LB-20S	LB-021716-13	2/17/16	NT	3.02	0.10 L	195	0.226	2.1
LB-20S	**LB-031517-17**	**3/15/17**	**NT**	**7.81**	**0.10 L**	**195**	**0.179**	**1.56**
LB-26D	LB-031193-14	3/11/93	307	NT	4.7	226	0.02 L	0.024
LB-26D	LB-060193-3	6/1/93	290	NT	4.7	226	0.02 L	0.017
LB-26D	LB-092493-12	9/24/93	293	NT	5.3	216	0.02 L	0.009
LB-26D	LB-121693-16	12/16/93	285	NT	5.2	240	0.14	0.007
LB-26D	LB-032594-7	3/25/94	297	8.3	5.7	223	0.02 L	0.007
LB-26D	LB-062294-6	6/22/94	277	NT	5.4	226	0.03	0.005 L
LB-26D	LB-090894-15	9/8/94	296	NT	7.0	228	0.02 L	0.005 L
LB-26D	LB-121394-5	12/13/94	274	8.5	6.5	233	0.15	0.006
LB-26D	LB-031095-14	3/10/95	252	NT	6.2	199	0.02 L	0.005 L
LB-26D	LB-061995-2	6/19/95	270	NT	7.4	230	0.02 L	0.005 L
LB-26D	LB-092095-4	9/20/95	338	NT	7.5	218	0.00 L	0.005 L
LB-26D	LB-122095-15	12/20/95	325	NT	8.1	233	0.02 L	0.002 J
LB-26D	LB-031996-2	3/19/96	336	NT	8.7	241	0.02 L	0.005 L
LB-26D	LB-061896-2	6/18/96	281	NT	7.7 J	251	0.02	0.005 L
LB-26D	LB-091896-11	9/18/96	347	10.0	8.1	246	0.02 L	0.005 L
LB-26D	LB121796-4	12/17/96	391	12.0	7.9	272	0.02 L	0.005 L
LB-26D	LB-031997-6	3/19/97	306	14.0	8.4	284	0.03	0.005 L

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Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
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Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-26D	LB-061797-8	6/17/97	379	12.0	7.6	256	0.02 L	0.005 L
LB-26D	LB-091697-4	9/16/97	307	12.8	8.2	251	0.02 L	0.005 L
LB-26D	LB-121697-6	12/16/97	331	12.0	9.3	244	0.02	0.005 L
LB-26D	LB-031998-9	3/19/98	358	11.8	10.0	251	0.02 L	0.005 L
LB-26D	LB-061698-9	6/16/98	247	11.5	9.2	260	0.02	0.005 L
LB-26D	LB-091798-6	9/17/98	324	10.2	8.8	230	0.02 L	0.005 L
LB-26D	LB-121798-3	12/17/98	264	10.3	9.7	272	0.02 L	0.005 L
LB-26D	LB-031899-6	3/18/99	252	10.7	8.9	241	0.02 L	0.005 L
LB-26D	LB-062399-9	6/23/99	251	9.8	9.3	235	0.02 L	0.005 L
LB-26D	LB-091699-3	9/16/99	282	9.3	9.1	234	0.02 L	0.005 L
LB-26D	LB-121599-9	12/15/99	278	8.0	9.0	191	0.04	0.005 L
LB-26D	LB-031700-13	3/17/00	236	7.5	8.4	209	0.02 L	0.005 L
LB-26D	LB-061300-5	6/13/00	240	7.6	9.5	206	0.02 L	0.005 L
LB-26D	LB-091200-4	9/12/00	258	8.1	9.3	203	0.02 L	0.005 L
LB-26D	LB-121500-7	12/15/00	262	6.7	8.2	168	0.02 L	0.005 L
LB-26D	LB-031301-5	3/13/01	NT	6.6	8.1	198	0.02 L	0.005 L
LB-26D	LB-031902-8	3/19/02	NT	5.5	7.2	165	0.02 L	0.005 L
LB-26D	LB-031203-5	3/12/03	NT	4.7	6.0	216	0.02 L	0.005 L
LB-26D	LB-022504-12	2/25/04	NT	4.3	5.1	173	0.02 L	0.005 L
LB-26D	LB-030805-7	3/8/05	NT	4.0	4.8	170	0.02 L	0.005 L
LB-26D	LB-031606-19	3/16/06	NT	3.6	4.9	190	0.02 L	0.005 L
LB-26D	LB-030507-11	3/5/07	NT	4.1	5.3	145	0.02 L	0.005 L
LB-26D	LB-031908-8	3/19/08	NT	4.0	5.2	177	0.02 L	0.005 L
LB-26D	LB-26D	3/17/09	NT	4.3	5.9	144	0.02 L	0.005 L
LB-26D	LB-26D032410	3/24/10	NT	3.9	6.5	194	0.02 L	0.005 L
LB-26D	LB-26D	3/23/11	224	4.97	6.3	196	0.025 L	0.002 L
LB-26D	LB-031212-05	3/12/12	NT	4.8	5.9	190	0.025 L	0.0034
LB-26D	LB-020713-23	2/6/13	NT	5.1	5.5	180	0.025 L	0.0020 L
LB-26D	LB-021714-05	2/17/14	NT	5.2	5.5	190	0.025 L	0.0020 L
LB-26D	LB-021715-04	2/17/15	NT	4.88	5.58	183	0.025 L	0.0020 L
LB-26D	LB-021616-04	2/16/16	NT	5.88	5.76	176	0.025 L	0.0020 L
LB-26D	**LB-030817-05**	**3/8/17**	**NT**	**5.21**	**4.54**	**142**	**0.021 L**	**0.0011 L**
LB-26I	LB-121092-12	12/10/92	NT	NT	0.7	NT	0.03	0.075
LB-26I	LB-031193-13	3/11/93	638	NT	0.7	380	0.02 L	0.053
LB-26I	LB-060193-1	6/1/93	577	NT	1.0	352	0.02 L	0.027
LB-26I	LB-092493-11	9/24/93	587	NT	1.0	363	0.03	0.039
LB-26I	LB-121693-15	12/16/93	531	NT	0.8	377	0.03	0.031
LB-26I	LB-032594-6	3/25/94	528	NT	1.2	326	0.02 L	0.024
LB-26I	LB-062294-5	6/22/94	488	NT	1.2	329	0.03	0.028
LB-26I	LB-090894-16	9/8/94	519	NT	1.3	327	0.03	0.031
LB-26I	LB-121394-4	12/13/94	465	25.0	1.3	307	0.02 L	0.022
LB-26I	LB-031095-13	3/10/95	499	NT	1.1	311	0.02	0.023
LB-26I	LB-061995-1	6/19/95	434	NT	1.6	296	0.02	0.025
LB-26I	LB-092095-5	9/20/95	493	NT	1.8	274	0.03	0.026
LB-26I	LB-122095-14	12/20/95	458	NT	1.9	289	0.02 L	0.013
LB-26I	LB-031996-1	3/19/96	479	NT	1.7	302	0.02 L	0.02

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Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-26I	LB-061896-1	6/18/96	387	NT	2.0 J	301	0.02	0.02
LB-26I	LB-091896-10	9/18/96	469	25.0	2.0	298	0.02 L	0.016
LB-26I	LB121796-5	12/17/96	498	24.0	2.2	323	0.02 L	0.014
LB-26I	LB-031997-5	3/19/97	424	30.0	3.0	329	0.04	0.014
LB-26I	LB-061797-7	6/17/97	525	30.0	2.3	323	0.02 L	0.018
LB-26I	LB-091697-5	9/16/97	436	33.4	2.1	312	0.02 L	0.019
LB-26I	LB-121697-7	12/16/97	647	26.8	3.0	444	0.03	0.032
LB-26I	LB-031998-8	3/19/98	605	34.3	3.6	379	0.02 L	0.013
LB-26I	LB-061698-8	6/16/98	406	35.7	2.7	356	0.02 L	0.015
LB-26I	LB-091798-7	9/17/98	557	34.2	2.4	304	0.03	0.014
LB-26I	LB-121798-2	12/17/98	456	35.1	2.8	368	0.04	0.013
LB-26I	LB-031799-1	3/17/99	456	33.7	2.9	347	0.02	0.014
LB-26I	LB-062399-10	6/23/99	361	22.6	5.1	280	0.02 L	0.008
LB-26I	LB-091699-4	9/16/99	535	32.9	2.2	340	0.03	0.013
LB-26I	LB-121599-8	12/15/99	499	30.7	2.9	293	0.02 L	0.01
LB-26I	LB-031700-12	3/17/00	445	28.9	2.4	298	0.02 L	0.011
LB-26I	LB-061300-4	6/13/00	440	30.0	2.6	342	0.02 L	0.01
LB-26I	LB-091200-5	9/12/00	470	26.8	2.7	304	0.02 L	0.0131
LB-26I	LB-121500-8	12/15/00	376	15.2	5.0	217	0.02 L	0.005 L
LB-26I	LB-031301-6	3/13/01	NT	18.3	2.8	284	0.02 L	0.0069
LB-26I	LB-092001-3	9/20/01	NT	15.3	3.4	251	0.02 L	0.011
LB-26I	LB-092001-4	9/20/01	NT	15.5	3.5	266	0.02 L	0.011
LB-26I	LB-031902-09	3/19/02	NT	13.0	3.2	230	0.02 L	0.006
LB-26I	LB-091802-04	9/17/02	NT	11.0	4.0	237	0.02 L	0.014
LB-26I	LB-031203-4	3/12/03	NT	10.0	2.6	238	0.02 L	0.008
LB-26I	LB-092203-4	9/22/03	NT	9.5	2.0	248	0.03	0.015
LB-26I	LB-022504-13	2/25/04	NT	8.3	2.5	192	0.02 L	0.005
LB-26I	LB-090104-26	9/1/04	NT	6.7	2.2	190	0.02 L	0.009
LB-26I	LB-030805-8	3/8/05	NT	8.5	2.3	206	0.02 L	0.006
LB-26I	LB-091405-5	9/14/05	NT	7.4	2.7	190	0.02 L	0.005 L
LB-26I	LB-031606-20	3/16/06	NT	7.1	2.7	230	0.02 L	0.009
LB-26I	LB-091206	9/12/06	NT	6.6	3.2	199	0.02 L	0.010
LB-26I	LB-030507-10	3/5/07	NT	6.7	2.6	193	0.02 L	0.009
LB-26I	LB-091907-5	9/19/07	NT	7.7	2.3	207	0.02 L	0.011
LB-26I	LB-031908-7	3/19/08	NT	10.1	2.1	213	0.02 L	0.011
LB-26I	LB-091608-6	9/16/08	NT	4.1	5.6	168	0.02 L	0.005 L
LB-26I	LB-26I	3/17/09	NT	11.6	2.5	202	0.02 L	0.0057
LB-26I	LB-26I	9/11/09	NT	4.05	5.85	173	0.02 L	0.005 L
LB-26I	LB-26I032410	3/24/10	NT	8.52	3.41	211	0.02 L	0.010
LB-26I	LB26092310	9/23/10	NT	7.71	3.76	229	0.02 L	0.010
LB-26I	LB-26I	3/23/11	226	7.97	3.71	226	0.025 L	0.00743
LB-26I	LB-090711--3	9/7/11	NT	6.22	5.02	200	0.0392	0.00356
LB-26I	LB-032212-21	3/22/12	NT	8.4	4.8	200	0.037	0.0026
LB-26I	LB-091112-04	9/11/12	NT	5.8	5.2	200	0.025 L	0.0020
LB-26I	LB-020613-14	2/6/13	NT	6.0	4.9	200	0.064	0.0020 L
LB-26I	LB-082113-06	8/21/13	NT	7.5	5.0	200	0.025 L	0.0020 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-26I	LB-021714-06	2/17/14	NT	6.8	4.6	200	0.036	0.0020 L
LB-26I (Dup)	LB-021714-07	2/17/14	NT	6.9	4.6	200	0.025 L	0.0020 L
LB-26I	LB-081314-05	8/13/14	NT	6.5	5.1	190	0.025 L	0.0040
LB-26I	LB-021815-12	2/18/15	NT	11.0	3.87	210	0.025 L	0.0024
LB-26I	LB-081115-06	8/11/15	NT	8.12	4.10	204	0.040 L	0.0020 L
LB-26I	LB-021616-05	2/16/16	NT	7.53	4.27	190	0.040 L	0.0020 L
LB-26I	LB-082316-04	8/23/16	NT	7.5	4.2	180	0.040 L	0.0026
LB-26I	**LB-031517-19**	**3/15/17**	**NT**	**6.90**	**3.53**	**201**	**0.021 L**	**0.0024**
LB-26I	**LB-081617-05-26I**	**8/16/17**	**NT**	**7.38**	**2.92**	**161**	**0.021 L**	**0.0011 L**
LB-27D	LB-031193-16	3/11/93	309	NT	1.6	217	0.02 L	0.034
LB-27D	LB-060193-4	6/1/93	302	NT	1.7	196	0.02 L	0.005 L
LB-27D	LB-092493-16	9/24/93	297	NT	1.9	205	0.02 L	0.005 L
LB-27D	LB-092493-17	9/24/93	296	NT	1.8	202	0.02 L	0.005 L
LB-27D	LB-121693-17	12/16/93	270	NT	2.0	235	0.04	0.005 L
LB-27D	LB-121693-18	12/16/93	282	NT	1.9	225	0.02	0.005 L
LB-27D	LB-032494-4	3/24/94	290	NT	0.2 L	210	0.02 L	0.005 L
LB-27D	LB-032494-5	3/24/94	293	NT	0.2 L	209	0.02 L	0.005 L
LB-27D	LB-062294-10	6/22/94	291	NT	1.9	219	0.02 L	0.005 L
LB-27D	LB-062294-9	6/22/94	284	NT	1.9	214	0.02 L	0.005 L
LB-27D	LB-090894-12	9/8/94	303	NT	2.3	214	0.02 L	0.005 L
LB-27D	LB-090894-13	9/8/94	299	NT	2.1	214	0.02 L	0.005 L
LB-27D	LB-121394-2	12/13/94	264	12.0	1.9	215	0.02 L	0.005 L
LB-27D	LB-121394-3	12/13/94	259	12.0	1.9	222	0.02 L	0.005 L
LB-27D	LB-031095-7	3/10/95	274	NT	0.7	193	0.02 L	0.005 L
LB-27D	LB-031095-9	3/10/95	265	NT	1.9	190	0.02	0.005 L
LB-27D	LB-061995-4	6/19/95	272	NT	2.3	217	0.02 L	0.005 L
LB-27D	LB-061995-5	6/19/95	277	NT	2.2	208	0.02 L	0.005 L
LB-27D	LB-092095-1	9/20/95	334	NT	2.1	195	0.00 L	0.005 L
LB-27D	LB-092095-2	9/20/95	326	NT	2.0	205	0.00 L	0.005 L
LB-27D	LB-122095-17	12/20/95	306	NT	2.1	209	0.02 L	0.005 L
LB-27D	LB-122095-18	12/20/95	302	NT	2.1	210	0.06	0.001 J
LB-27D	LB-031996-3	3/19/96	302	NT	2.1	208	0.02 L	0.005 L
LB-27D	LB-061896-4	6/18/96	260	NT	2.2	220	0.10	0.005 L
LB-27D	LB-061896-5	6/18/96	251	NT	NT	217	0.09	0.005 L
LB-27D	LB-091796-9	9/17/96	286	11.0	2.1	214	0.02 L	0.005 L
LB-27D	LB121796-8	12/17/96	303	11.0	2.1	204	0.02 L	0.005 L
LB-27D	LB-031997-12	3/19/97	235	13.0	2.2	221	0.02	0.005 L
LB-27D	LB-061797-11	6/17/97	283	10.0	1.8	210	0.03	0.005 L
LB-27D	LB-091697-8	9/16/97	235	8.4	2.3	216	0.02 L	0.005 L
LB-27D	LB-121797-14	12/17/97	231	11.0	2.2	160	0.02 L	0.005 L
LB-27D	LB-031998-12	3/19/98	301	11.2	2.2	214	0.02 L	0.005 L
LB-27D	LB-061798-10	6/17/98	286	11.1	2.1	218	0.02 L	0.005 L
LB-27D	LB-091798-8	9/17/98	286	10.8	2.2	172	0.02 L	0.005 L
LB-27D	LB-121798-6	12/17/98	251	12.6	2.6	240	0.21	0.008
LB-27D	LB-031899-9	3/18/99	226	11.4	2.1	213	0.02 L	0.005 L
LB-27D	LB-062399-7	6/23/99	231	10.4	2.3	193	0.02	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-27D	LB-091599-1	9/15/99	206	11.1	2.4	216	0.16	0.005 L
LB-27D	LB-121599-7	12/15/99	270	10.7	2.5	195	0.02 L	0.005 L
LB-27D	LB-031600-3	3/16/00	248	10.2	2.4	221	0.02 L	0.005 L
LB-27D	LB-061300-3	6/13/00	249	11.4	2.5	225	0.02 L	0.005 L
LB-27D	LB-091300-8	9/13/00	283	11.9	2.8	198	0.02 L	0.005 L
LB-27D	LB-091300-9	9/13/00	272	11.2	2.6	209	0.02 L	0.005 L
LB-27D	LB-121500-5	12/15/00	294	11.4	2.5	207	0.02 L	0.005 L
LB-27D	LB-031301-3	3/13/01	NT	12.2	2.7	226	0.02 L	0.005 L
LB-27D	LB-031902-11	3/19/02	NT	13.5	2.8	187	0.02 L	0.005 L
LB-27D	LB-031203-3	3/12/03	NT	12.7	3.0	218	0.02 L	0.005 L
LB-27D	LB-022604-15	2/26/04	NT	12.7	2.9	236	0.02 L	0.005 L
LB-27D (Dup)	LB-022604-16	2/26/04	NT	12.5	2.9	238	0.02 L	0.005 L
LB-27D	LB-030805-6	3/8/05	NT	13.6	3.0	248	0.02 L	0.017
LB-27D	LB-031606-17	3/16/06	NT	12.4	3.2	242	0.02 L	0.005 L
LB-27D	LB-030507-9	3/5/07	NT	11.5	3.3	209	0.02 L	0.005 L
LB-27D	LB-031908-5	3/19/08	NT	11.1	3.4	241	0.02 L	0.005 L
LB-27D	LB-031908-6	3/19/08	NT	11.9	1.4	364	0.02 L	0.285
LB-27D	LB-27D	3/18/09	NT	10.7	3.5	217	0.02 L	0.005 L
LB-27D	LB-27D032410	3/24/10	NT	9.8	3.9	238	0.02 L	0.005 L
LB-27D	LB-27D	3/25/11	307	10.4	3.77	245	0.025 L	0.002 L
LB-27D	LB-031212-02	3/12/12	NT	10	4.0	220	0.033	0.0054
LB-27D	LB-020713-21	2/7/13	NT	10	4.2	230	0.083	0.018
LB-27D	LB-021814-13	2/18/14	NT	13	4.1	230	0.057	0.0075
LB-27D	LB-021715-02	2/17/15	NT	8.88	4.09	265	0.228	0.0127
LB-27D	LB-021816-18	2/18/16	NT	8.86	4.11	216	0.040 L	0.0020 L
LB-27D	**LB-030817-03**	**3/8/17**	**NT**	**8.01**	**3.97**	**182**	**0.021 L**	**0.0011 L**
LB-27I	LB-121192-20	12/11/92	NT	NT	6.2	NT	0.04	0.471
LB-27I	LB-031293-21	3/12/93	729	NT	4.5	459	0.02 L	0.343
LB-27I	LB-060193-2	6/1/93	706	NT	3.8	436	0.02 L	0.283
LB-27I	LB-092493-14	9/24/93	785	NT	21.0	526	0.07	0.413
LB-27I	LB-092493-15	9/24/93	771	NT	20.0	504	0.08	0.381
LB-27I	LB-121693-19	12/16/93	676	NT	22.0	499	0.03	0.284
LB-27I	LB-121693-20	12/16/93	711	NT	22.0	506	0.04	0.28
LB-27I	LB-032494-3	3/24/94	685	NT	NT	469	0.02 L	0.276
LB-27I	LB-062294-8	6/22/94	582	NT	5.3	397	0.02	0.213
LB-27I	LB-090894-11	9/8/94	573	NT	6.2	402	0.03	0.238
LB-27I	LB-121394-1	12/13/94	519	13.0	16.0	410	0.02	0.267
LB-27I	LB-031095-7	3/10/95	573	NT	9.0	346	0.02	0.198
LB-27I	LB-061995-3	6/19/95	566	NT	7.5	394	0.02	0.188
LB-27I	LB-092095-3	9/20/95	651	NT	1.2	377	0.03	0.247
LB-27I	LB-122095-16	12/20/95	584	NT	0.8	353	0.02 L	0.236
LB-27I	LB-031996-4	3/19/96	653	NT	0.2 L	392	0.10	0.273
LB-27I	LB-061896-3	6/18/96	532	NT	0.0 J	414	0.03	0.282
LB-27I	LB-091796-7	9/17/96	859	38.0	0.2 L	555	0.08	0.352
LB-27I	LB-091796-8	9/17/96	874	39.0	0.2 L	552	0.03	0.356
LB-27I	LB121796-6	12/17/96	1150	30.0	30.0	650	0.04	0.373

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-27I	LB121796-7	12/17/96	1140	29.0	60.0	650	0.02 L	0.364
LB-27I	LB-031997-10	3/19/97	681	49.0	1.1	530	0.04	0.312
LB-27I	LB-031997-11	3/19/97	747	49.0	1.1	523	0.04	0.288
LB-27I	LB-061797-10	6/17/97	762	44.0	0.1	459	0.03	0.277
LB-27I	LB-061797-9	6/17/97	764	43.0	0.1	459	0.03	0.273
LB-27I	LB-091697-6	9/16/97	844	48.9	0.2 L	690	0.03	0.396
LB-27I	LB-091697-7	9/16/97	860	49.3	0.2 L	671	0.03	0.396
LB-27I	LB-121797-11	12/17/97	720	30.7	0.2 L	609	0.03	0.406
LB-27I	LB-121797-12	12/17/97	738	30.5	0.2 L	589	0.03	0.397
LB-27I	LB-031998-10	3/19/98	877	25.9	0.2 L	576	0.04	0.381
LB-27I	LB-031998-11	3/19/98	896	26.6	0.2 L	573	0.03	0.373
LB-27I	LB-061798-11	6/17/98	869	37.0	0.4	602	0.04	0.342
LB-27I	LB-061798-12	6/17/98	729	36.7	0.4	599	0.04	0.342
LB-27I	LB-091798-10	9/17/98	1030	47.0	0.2	620	0.04	0.375
LB-27I	LB-091798-9	9/17/98	1030	46.5	0.2 L	586	0.04	0.388
LB-27I	LB-121798-4	12/17/98	714	36.0	0.2 L	545	0.04	0.354
LB-27I	LB-121798-5	12/17/98	710	36.3	0.2 L	522	0.04	0.36
LB-27I	LB-031899-7	3/18/99	712	39.3	0.7	565	0.04	0.335
LB-27I	LB-031899-8	3/18/99	707	39.5	0.7	565	0.04	0.29
LB-27I	LB-062399-8	6/23/99	693	46.4	1.0	502	0.03	0.305
LB-27I	LB-091599-2	9/15/99	691	56.7	0.3	602	0.03	0.336
LB-27I	LB-121599-6	12/15/99	910	81.4	0.2	553	0.04	3.72
LB-27I	LB-031600-1	3/16/00	803	69.4	0.2 L	675	0.02 L	0.356
LB-27I	LB-031600-2	3/16/00	810	69.1	0.2 L	598	0.21	0.349
LB-27I	LB-061300-1	6/13/00	743	70.9	0.1 L	532	0.03	0.305
LB-27I	LB-061300-2	6/13/00	738	70.5	0.1 L	662	0.02	0.322
LB-27I	LB-091300-10	9/13/00	819	47.5	0.7	368	0.02	0.289
LB-27I	LB-121500-6	12/15/00	885	66.0	1.2	504	0.02 L	0.0851
LB-27I	LB-031301-4	3/13/01	NT	42.8	0.1 L	226	0.02 L	0.268
LB-27I	LB-092001-2	9/20/01	NT	39.7	0.1 L	378	0.02 L	0.186
LB-27I	LB-031902-10	3/19/02	NT	42.1	0.6	403	0.02 L	0.277
LB-27I	LB-091802-05	9/17/02	NT	25.0	8.0	382	0.02 L	0.243
LB-27I	LB-031203-1	3/12/03	NT	23.0	1.4	384	0.02 L	0.187
LB-27I	LB-031203-2	3/12/03	NT	23.0	1.4	312	0.02 L	0.206
LB-27I	LB-092203-2	9/22/03	NT	26.0	1.2	424	0.02 L	0.516
LB-27I	LB-092203-3	9/22/03	NT	25.0	1.2	388	0.02 L	0.545
LB-27I	LB-022604-17	2/26/04	NT	18.5	0.2 L	288	0.02 L	0.193
LB-27I	LB-090104-27	9/1/04	NT	20.4	1.1	268	0.02 L	0.217
LB-27I	LB-030805-5	3/8/05	NT	10.9	2.8	312	0.02 L	0.195
LB-27I	LB-091405-3	9/14/05	NT	12.4	2.4	316	0.02 L	0.131
LB-27I	LB-031606-18	3/16/06	NT	9.7	4.2	346	0.02 L	0.121
LB-27I	LB-091206-2	9/12/06	NT	14.8	1.9	346	0.02 L	0.185
LB-27I	LB-030507-8	3/5/07	NT	14.2	2.2	363	0.02 L	0.238
LB-27I	LB-091907-4	9/19/07	NT	16.7	0.1 L	295	0.04	0.530
LB-27I	LB-031908-4	3/19/08	NT	11.9	1.4	340	0.02 L	0.282
LB-27I	LB-091608-7	9/16/08	NT	17.0	1.0	311	0.02 L	0.196

Table B-3
Groundwater Chemistry, Inorganic Parameters and Dissolved Metals Concentrations (mg/L)
1987 through 2017
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-27I	LB-27I	3/18/09	NT	14.3	2.1	322	0.02 L	0.186
LB-27I	LBLF27i091109	9/11/09	NT	19.3	0.86	309	0.02 L	0.173
LB-27I	LB-27I032410	3/24/10	NT	7.7	1.82	266	0.02 L	0.121
LB-27I	LB27I092310	9/23/10	NT	19.4	0.62	311	0.02 L	0.196
LB-27I	LB-27I	3/25/11	512	20.1	0.14	335	0.025 L	0.191
LB-27I	LB-090711-01	9/7/11	NT	41.2	0.10 L	464	0.050 L	0.456
LB-27I	LB-032212-18	3/22/12	NT	23	0.2	370	0.025 L	0.38
LB-27I	LB-091112-02	9/11/12	NT	32	0.2 L, H	420	0.032	0.54
LB-27I	LB-020613-11	2/6/13	NT	41	0.22	380	0.025 L	0.52
LB-27I (Dup)	LB-020613-12	2/6/13	NT	42	0.21	380	0.025 L	0.52
LB-27I	LB-082113-03	8/21/13	NT	51	0.10 L	420	0.025 L	0.41
LB-27I (Dup)	LB-082113-05	8/21/13	NT	51	0.10 L	420	0.025 L	0.42
LB-27I	LB-021814-14	2/18/14	NT	30	0.40	340	0.025 L	0.43
LB-27I	LB-081314-03	8/13/14	NT	34	0.10 L	360	0.025 L	0.33
LB-27I	LB-021815-10	2/18/15	NT	36	0.30	390	0.025 L	0.46
LB-27I	LB-081215-09	8/12/15	NT	35.1	0.20 L	352	0.040 L	0.328
LB-27I	LB-021816-19	2/18/16	NT	21.7	0.91	329	0.040 L	0.253
LB-27I	LB-082316-02	8/23/16	NT	29.0	0.20 L	350	0.040 L	0.310
LB-27I	**LB-031517-16**	**3/15/17**	**NT**	**28.3**	**0.10 L**	**352**	**0.021 L**	**0.288**
LB-27I	**LB-081617-03-27I**	**8/16/17**	**NT**	**22.1**	**0.10 L**	**296**	**0.021 L**	**0.252**
FIELDQC	**LB-031517-15**	**3/15/17**	**NT**	**0.20 L**	**0.100 L**	**1.0 L**	**0.210 L**	**0.0011 L**
FIELDQC	**LB-081617-08-FB1**	**8/16/17**	**NT**	**0.20 L**	**0.050 L**	**1.0 L**	**0.210 L**	**0.0011 L**

Notes:

Conductivity = umhos/cm; B = analyte detected above the MDL but below the MRL; L = not detected at or above method reporting limit; J = estimated concentration; H = due to laboratory error, sample was extracted and analyzed past the recommended 7-day hold time; NT = not tested.

APPENDIX C

2017 Laboratory Analytical Data
(Provided on attached CD only)

First Quarter (March) 2017 Laboratory Reports

ALS Environmental
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April 26, 2017

Analytical Report for Service Request No: K1702344

Jason Davendonis
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

RE: Leichner Landfill, WA / 04217030.13

Dear Jason,

Enclosed are the results of the sample(s) submitted to our laboratory March 09, 2017
For your reference, these analyses have been assigned our service request number **K1702344.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

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Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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ALS ENVIRONMENTAL

Client:	SCS Engineers	**Service Request No.:**	K1702344
Project:	Leichner Landfill, WA / 04217030.13	**Date Received:**	03/09/2017
Sample Matrix:	Ground Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Eight ground water samples were received for analysis at ALS Environmental on 03/09/2017. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

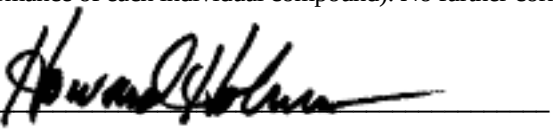
Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Manganese and Iron for the Batch QC sample were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS13\0310F004.D: 2,2-Dichloropropane. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

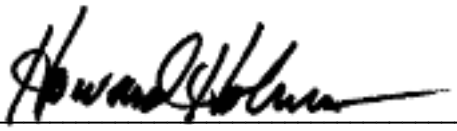
Lab Control Sample Exceptions:
The advisory criterion was exceeded for Isopropylbenzene, n-Propylbenzene, sec-Butylbenzene, and 1,3-Dichlorobenzene in Laboratory Control Sample (LCS) KWG1701976-1. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

Approved by 

Sample Notes and Discussion:

The Trip Blank analyzed with these samples contained low levels of Toluene above the Method Reporting Limit (MRL). The associated samples did not contain the analyte in question.

No other anomalies associated with the analysis of these samples were observed.

Approved by 

Chain of Custody

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ALS Environmental

K1702344

CHAIN OF CUSTODY

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PAGE 1 OF 1 COC#

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 04217030.13
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE #: 503-639-9736 FAX #: —
SAMPLER'S SIGNATURE: JAM Andrews

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260X	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond, NO_3, SO_4, PO_4, F, NO_2; BOD, TSS, (TDS), Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO_3 ☐ HCO_3 ☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases CO_2☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐	REMARKS
LB-030817-01	3/8/17	1110		W	5		X						X		X						
LB-030817-02	3/8/17	1115		W	5		X						X		X						
LB-030817-04	3/8/17	1310		W	5		X						X		X						
LB-030817-07	3/8/17	1605		W	5		X						X		X						
LB-030817-06	3/8/17	1455		W	5		X						X		X						
LB-030817-05	3/8/17	1355		W	5		X						X		X						
LB-030817-03	3/8/17	1220		W	5		X						X		X						
Trip Blank 1	~~3/8/17~~	—		W	2		X														

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
✓ Standard (15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS: Please send ETMS spreadsheet
CC Tiffany Andrews
tandrews@scsengineers.com
Metals are field filtered

Container Supply Number

76504

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: JAM	Signature:	Signature:	Signature: At LAB
Date/Time: 3/9/17 @945	Date/Time: 3-9-17 945	Date/Time:	Date/Time: 3/9/17 1330
Printed Name: J Andrews	Printed Name:	Printed Name:	Printed Name: CODY GRAVES
Firm: SCS	Firm:	Firm:	Firm: ALS

PC 42

Cooler Receipt and Preservation Form

Client SCS Engineers Service Request K17 02344

Received: 3/9/17 Opened: 3/9/17 By: CG Unloaded: 3/9/17 By: CG

. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*

. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*

. Were custody seals on coolers? NA Y N If yes, how many and where? _____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
1.8	1.7	—	—	-0.1	375			

Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____

Were custody papers properly filled out (ink, signed, etc.)? NA Y N

Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N

Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N

Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N

. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N

. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N

. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

tes, Discrepancies, & Resolutions: _____

SHORT HOLD TIME

7/25/16 *Page* ____ *of* ____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/8/17
Sample Matrix:	Ground Water	**Date Received:**	03/9/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Chloride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-030817-01	K1702344-001	**7.98**	0.20	2	03/09/17 15:00	3/9/17	
LB-030817-02	K1702344-002	**8.22**	0.20	2	03/09/17 15:09	3/9/17	
LB-030817-04	K1702344-003	**4.74**	0.20	2	03/09/17 15:19	3/9/17	
LB-030817-07	K1702344-004	**9.51**	0.20	2	03/09/17 15:58	3/9/17	
LB-030817-06	K1702344-005	**9.30**	0.20	2	03/09/17 16:08	3/9/17	
LB-030817-05	K1702344-006	**5.21**	0.20	2	03/09/17 16:17	3/9/17	
LB-030817-03	K1702344-007	**8.01**	0.20	2	03/09/17 16:27	3/9/17	
Method Blank	K1702344-MB1	ND U	0.10	1	03/09/17 09:42	3/9/17	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17
Sample Matrix:	Ground Water	**Date Received:**	03/09/17
		Date Analyzed:	03/09/17

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	LB-030817-01	**Units:**	mg/L
Lab Code:	K1702344-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1702344-001DUP Result	Average	RPD	RPD Limit
Chloride	300.0	0.20	7.98	7.93	7.96	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17
Sample Matrix:	Ground Water	**Date Received:**	03/09/17
		Date Analyzed:	03/9/17
		Date Extracted:	03/9/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	LB-030817-01	**Units:**	mg/L
Lab Code:	K1702344-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702344-001MS			K1702344-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	7.98	17.3	10.0	93	17.4	10.0	94	90-110	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Analyzed:**	03/09/17
Sample Matrix:	Ground Water	**Date Extracted:**	03/09/17

Lab Control Sample Summary
Chloride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	537771

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702344-LCS	4.84	5.00	97	90-110

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/8/17
Sample Matrix:	Ground Water	**Date Received:**	03/9/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-030817-01	K1702344-001	**0.82**	0.10	2	03/09/17 15:00	3/9/17	
LB-030817-02	K1702344-002	**0.82**	0.10	2	03/09/17 15:09	3/9/17	
LB-030817-04	K1702344-003	**4.57**	0.10	2	03/09/17 15:19	3/9/17	
LB-030817-07	K1702344-004	ND U	0.10	2	03/09/17 15:58	3/9/17	
LB-030817-06	K1702344-005	ND U	0.10	2	03/09/17 16:08	3/9/17	
LB-030817-05	K1702344-006	**4.54**	0.10	2	03/09/17 16:17	3/9/17	
LB-030817-03	K1702344-007	**3.97**	0.10	2	03/09/17 16:27	3/9/17	
Method Blank	K1702344-MB1	ND U	0.050	1	03/09/17 09:42	3/9/17	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17
Sample Matrix:	Ground Water	**Date Received:**	03/09/17
		Date Analyzed:	03/09/17

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	LB-030817-01	**Units:**	mg/L
Lab Code:	K1702344-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1702344-001DUP Result	Average	RPD	RPD Limit
Nitrate as Nitrogen	300.0	0.10	0.82	0.82	0.819	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17
Sample Matrix:	Ground Water	**Date Received:**	03/09/17
		Date Analyzed:	03/9/17
		Date Extracted:	03/9/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	LB-030817-01	**Units:**	mg/L
Lab Code:	K1702344-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike K1702344-001MS			**Duplicate Matrix Spike** K1702344-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	0.82	10.4	10.0	96	10.6	10.0	98	90-110	1	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Analyzed:**	03/09/17
Sample Matrix:	Ground Water	**Date Extracted:**	03/09/17

Lab Control Sample Summary
Nitrate as Nitrogen

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	537771

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702344-LCS	2.37	2.50	95	90-110

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/8/17
Sample Matrix:	Ground Water	**Date Received:**	03/9/17
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Solids, Total Dissolved

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
LB-030817-01	K1702344-001	**219**	5.0	1	03/14/17 16:08	
LB-030817-02	K1702344-002	**207**	5.0	1	03/14/17 16:08	
LB-030817-04	K1702344-003	**128**	5.0	1	03/14/17 16:08	
LB-030817-07	K1702344-004	**180**	5.0	1	03/14/17 16:08	
LB-030817-06	K1702344-005	**195**	5.0	1	03/14/17 16:08	
LB-030817-05	K1702344-006	**142**	5.0	1	03/14/17 16:08	
LB-030817-03	K1702344-007	**182**	5.0	1	03/14/17 16:08	
Method Blank	K1702344-MB1	ND U	5.0	1	03/14/17 16:08	
Method Blank	K1702344-MB2	ND U	5.0	1	03/14/17 16:08	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Replicate Sample Summary
Solids, Total Dissolved

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1702314-001DUP	5.0	407	417	412	3	10	03/14/17
Batch QC	K1702430-002DUP	5.0	226	237	231	5	10	03/14/17

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Analyzed:**	03/14/17
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	538046

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702344-LCS	1630	1640	99	85-115

Metals

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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17 11:10
Sample Matrix:	Ground Water	**Date Received:**	03/09/17 13:10
Sample Name:	LB-030817-01	**Basis:**	NA
Lab Code:	K1702344-001		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/17/17 19:10	03/16/17	
Manganese	6010C	**1.8**	ug/L	1.1	1	03/17/17 19:10	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17 11:15
Sample Matrix:	Ground Water	**Date Received:**	03/09/17 13:10
Sample Name:	LB-030817-02	**Basis:**	NA
Lab Code:	K1702344-002		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/17/17 19:13	03/16/17	
Manganese	6010C	**1.7**	ug/L	1.1	1	03/17/17 19:13	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17 13:10
Sample Matrix:	Ground Water	**Date Received:**	03/09/17 13:10
Sample Name:	LB-030817-04	**Basis:**	NA
Lab Code:	K1702344-003		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/17/17 19:15	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/17/17 19:15	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17 16:05
Sample Matrix:	Ground Water	**Date Received:**	03/09/17 13:10
Sample Name:	LB-030817-07	**Basis:**	NA
Lab Code:	K1702344-004		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	**7110**	ug/L	21	1	03/17/17 19:18	03/16/17	
Manganese	6010C	**1230**	ug/L	1.1	1	03/17/17 19:18	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17 14:55
Sample Matrix:	Ground Water	**Date Received:**	03/09/17 13:10
Sample Name:	LB-030817-06	**Basis:**	NA
Lab Code:	K1702344-005		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	**90**	ug/L	21	1	03/17/17 19:20	03/16/17	
Manganese	6010C	**4190**	ug/L	1.1	1	03/17/17 19:20	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17 13:55
Sample Matrix:	Ground Water	**Date Received:**	03/09/17 13:10
Sample Name:	LB-030817-05	**Basis:**	NA
Lab Code:	K1702344-006		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/17/17 19:23	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/17/17 19:23	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/17 12:20
Sample Matrix:	Ground Water	**Date Received:**	03/09/17 13:10
Sample Name:	LB-030817-03	**Basis:**	NA
Lab Code:	K1702344-007		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/17/17 19:25	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/17/17 19:25	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1702860-04		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/17/17 18:04	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/17/17 18:04	03/16/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702344
Project	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	03/17/17

Replicate Sample Summary

Total Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1702303-002	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1702860-06 Result	Average	RPD	RPD Limit
Iron	6010C	21	6270	6410	6340	2	20
Manganese	6010C	1.1	5310	5250	5280	<1	20

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Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	03/17/17
		Date Extracted:	03/16/17

Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1702303-002	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA CLP-METALS ILM04.0		

Matrix Spike
KQ1702860-07

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	6270	7230	1000	96 #	75-125
Manganese	5310	5560	500	51 #	75-125

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground Water

Service Request: K1702344
Date Analyzed: 03/17/17

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1702860-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2450	2500	98	80-120
Manganese	6010C	1240	1250	100	80-120

Volatile Organic Compounds

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Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702344
Date Collected: 03/08/2017
Date Received: 03/09/2017

Volatile Organic Compounds

Sample Name: LB-030817-01
Lab Code: K1702344-001

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-01	**Units:**	ug/L
Lab Code:	K1702344-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-01	**Units:**	ug/L
Lab Code:	K1702344-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	73-122	03/10/17	Acceptable
Toluene-d8	110	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	91	68-117	03/10/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702344
Date Collected: 03/08/2017
Date Received: 03/09/2017

Volatile Organic Compounds

Sample Name: LB-030817-02
Lab Code: K1702344-002

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-02	**Units:**	ug/L
Lab Code:	K1702344-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-02	**Units:**	ug/L
Lab Code:	K1702344-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	73-122	03/10/17	Acceptable
Toluene-d8	109	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	91	68-117	03/10/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702344
Date Collected: 03/08/2017
Date Received: 03/09/2017

Volatile Organic Compounds

Sample Name: LB-030817-04
Lab Code: K1702344-003

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-04	**Units:**	ug/L
Lab Code:	K1702344-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-04	**Units:**	ug/L
Lab Code:	K1702344-003	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	73-122	03/10/17	Acceptable
Toluene-d8	110	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	93	68-117	03/10/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-07	**Units:**	ug/L
Lab Code:	K1702344-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-07	**Units:**	ug/L
Lab Code:	K1702344-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-07	**Units:**	ug/L
Lab Code:	K1702344-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	73-122	03/10/17	Acceptable
Toluene-d8	108	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	91	68-117	03/10/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702344
Date Collected: 03/08/2017
Date Received: 03/09/2017

Volatile Organic Compounds

Sample Name: LB-030817-06
Lab Code: K1702344-005

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-06	**Units:**	ug/L
Lab Code:	K1702344-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-06	**Units:**	ug/L
Lab Code:	K1702344-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	73-122	03/10/17	Acceptable
Toluene-d8	109	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	93	68-117	03/10/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-05	**Units:**	ug/L
Lab Code:	K1702344-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-05	**Units:**	ug/L
Lab Code:	K1702344-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-05	**Units:**	ug/L
Lab Code:	K1702344-006	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	73-122	03/10/17	Acceptable
Toluene-d8	109	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	92	68-117	03/10/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702344
Date Collected: 03/08/2017
Date Received: 03/09/2017

Volatile Organic Compounds

Sample Name: LB-030817-03
Lab Code: K1702344-007

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-03	**Units:**	ug/L
Lab Code:	K1702344-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	LB-030817-03	**Units:**	ug/L
Lab Code:	K1702344-007	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	73-122	03/10/17	Acceptable
Toluene-d8	110	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	91	68-117	03/10/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702344
Date Collected: 03/08/2017
Date Received: 03/09/2017

Volatile Organic Compounds

Sample Name: Trip Blank 1
Lab Code: K1702344-008

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	**0.71**		0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	Trip Blank 1	**Units:**	ug/L
Lab Code:	K1702344-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/08/2017
Sample Matrix:	Ground water	**Date Received:**	03/09/2017

Volatile Organic Compounds

Sample Name:	Trip Blank 1	**Units:**	ug/L
Lab Code:	K1702344-008	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	73-122	03/10/17	Acceptable
Toluene-d8	110	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	92	68-117	03/10/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Water

Service Request: K1702344
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1701976-3

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichlorofluoromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Acetone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Carbon Disulfide	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Methylene Chloride	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
cis-1,2-Dichloroethene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Butanone (MEK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Bromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Chloroform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Carbon Tetrachloride	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Benzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Trichloroethene (TCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromomethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromodichloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
Toluene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,2-Trichloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Hexanone	ND	U	20	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Dibromochloromethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1701976-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Ethylbenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
m,p-Xylenes	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
o-Xylene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Styrene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromoform	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Isopropylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
Bromobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
n-Propylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
1,2,3-Trichloropropane	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
2-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
4-Chlorotoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
tert-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
sec-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	*
4-Isopropyltoluene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,3-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	*
1,4-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
n-Butylbenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2-Dichlorobenzene	ND	U	0.50	1	03/10/17	03/10/17	KWG1701976	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Hexachlorobutadiene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
Naphthalene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/10/17	03/10/17	KWG1701976	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1701976-3	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	73-122	03/10/17	Acceptable
Toluene-d8	110	65-144	03/10/17	Acceptable
4-Bromofluorobenzene	93	68-117	03/10/17	Acceptable

Comments:

Client: SCS Engineers **Service Request:** K1702344
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
LB-030817-01	K1702344-001	96	110	91
LB-030817-02	K1702344-002	97	109	91
LB-030817-04	K1702344-003	97	110	93
LB-030817-07	K1702344-004	97	108	91
LB-030817-06	K1702344-005	98	109	93
LB-030817-05	K1702344-006	97	109	92
LB-030817-03	K1702344-007	98	110	91
Trip Blank 1	K1702344-008	96	110	92
Method Blank	KWG1701976-3	98	110	93
Lab Control Sample	KWG1701976-1	99	113	99
Duplicate Lab Control Sample	KWG1701976-2	100	113	99

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Water

Service Request: K1702344
Date Extracted: 03/10/2017
Date Analyzed: 03/10/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1701976

	Lab Control Sample KWG1701976-1 Lab Control Spike			Duplicate Lab Control Sample KWG1701976-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	10.8	10.0	108	9.41	10.0	94	32-124	14	30
Chloromethane	9.32	10.0	93	8.60	10.0	86	34-130	8	30
Bromomethane	8.31	10.0	83	8.08	10.0	81	35-113	3	30
Chloroethane	10.5	10.0	105	9.50	10.0	95	58-134	10	30
Trichlorofluoromethane	10.7	10.0	107	9.45	10.0	95	52-141	12	30
Acetone	51.6	50.0	103	49.8	50.0	100	68-135	4	30
Carbon Disulfide	23.5	20.0	117	21.2	20.0	106	46-144	10	30
Methylene Chloride	9.56	10.0	96	9.03	10.0	90	71-122	6	30
Methyl tert-Butyl Ether	9.35	10.0	94	9.27	10.0	93	54-126	1	30
trans-1,2-Dichloroethene	11.1	10.0	111	10.3	10.0	103	67-125	8	30
1,1-Dichloroethane	10.1	10.0	101	9.35	10.0	94	68-132	7	30
2,2-Dichloropropane	7.84	10.0	78	7.19	10.0	72	37-145	9	30
cis-1,2-Dichloroethene	9.13	10.0	91	8.52	10.0	85	71-118	7	30
2-Butanone (MEK)	52.7	50.0	105	52.7	50.0	105	71-149	0	30
Bromochloromethane	9.57	10.0	96	9.26	10.0	93	75-131	3	30
Chloroform	10.4	10.0	104	10.0	10.0	100	70-129	4	30
1,1,1-Trichloroethane (TCA)	10.2	10.0	102	9.30	10.0	93	59-136	9	30
Carbon Tetrachloride	10.0	10.0	100	9.03	10.0	90	55-140	10	30
1,1-Dichloropropene	10.2	10.0	102	9.38	10.0	94	59-134	8	30
Benzene	10.2	10.0	102	9.52	10.0	95	69-124	7	30
1,2-Dichloroethane (EDC)	9.57	10.0	96	9.31	10.0	93	56-142	3	30
Trichloroethene (TCE)	10.9	10.0	109	9.98	10.0	100	67-128	8	30
1,2-Dichloropropane	10.8	10.0	108	10.1	10.0	101	67-126	7	30
Dibromomethane	10.2	10.0	102	9.93	10.0	99	69-128	3	30
Bromodichloromethane	12.3	10.0	123	11.7	10.0	117	63-129	5	30
cis-1,3-Dichloropropene	9.32	10.0	93	8.94	10.0	89	62-132	4	30
4-Methyl-2-pentanone (MIBK)	52.4	50.0	105	51.2	50.0	102	64-134	2	30
Toluene	10.8	10.0	108	10.3	10.0	103	69-124	5	30
trans-1,3-Dichloropropene	9.44	10.0	94	9.23	10.0	92	59-125	2	30
1,1,2-Trichloroethane	11.2	10.0	112	11.1	10.0	111	74-118	1	30
Tetrachloroethene (PCE)	11.4	10.0	114	10.7	10.0	107	62-126	7	30
2-Hexanone	46.7	50.0	93	46.6	50.0	93	59-131	0	30
1,3-Dichloropropane	10.3	10.0	103	9.94	10.0	99	75-116	4	30
Dibromochloromethane	12.0	10.0	120	11.6	10.0	116	67-126	4	30
1,2-Dibromoethane (EDB)	11.0	10.0	110	10.9	10.0	109	74-118	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1702344
Project:	Leichner Landfill, WA/04217030.13	**Date Extracted:**	03/10/2017
Sample Matrix:	Water	**Date Analyzed:**	03/10/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1701976

	Lab Control Sample KWG1701976-1 Lab Control Spike				Duplicate Lab Control Sample KWG1701976-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	11.4	10.0	114		10.9	10.0	109	72-116	5	30
Ethylbenzene	11.6	10.0	116		10.8	10.0	108	67-121	7	30
1,1,1,2-Tetrachloroethane	12.0	10.0	120		11.8	10.0	118	66-124	2	30
m,p-Xylenes	23.6	20.0	118		22.2	20.0	111	69-121	6	30
o-Xylene	11.7	10.0	117		11.0	10.0	110	71-119	6	30
Styrene	12.0	10.0	120		11.3	10.0	113	74-121	6	30
Bromoform	12.5	10.0	125		12.2	10.0	122	52-144	3	30
Isopropylbenzene	13.1	10.0	131	*	12.3	10.0	123	67-129	6	30
1,1,2,2-Tetrachloroethane	10.8	10.0	108		10.2	10.0	102	70-127	5	30
Bromobenzene	10.6	10.0	106		9.96	10.0	100	72-116	6	30
n-Propylbenzene	12.5	10.0	125	*	11.3	10.0	113	61-124	9	30
1,2,3-Trichloropropane	10.1	10.0	101		9.80	10.0	98	69-123	3	30
2-Chlorotoluene	11.6	10.0	116		10.8	10.0	108	55-131	8	30
1,3,5-Trimethylbenzene	12.3	10.0	123		11.3	10.0	113	62-126	8	30
4-Chlorotoluene	10.9	10.0	109		10.0	10.0	100	66-121	8	30
tert-Butylbenzene	12.5	10.0	125		11.4	10.0	114	61-127	9	30
1,2,4-Trimethylbenzene	11.8	10.0	118		11.0	10.0	110	63-122	7	30
sec-Butylbenzene	13.2	10.0	132	*	11.9	10.0	119	59-128	11	30
4-Isopropyltoluene	11.9	10.0	119		10.9	10.0	109	61-128	9	30
1,3-Dichlorobenzene	11.7	10.0	117	*	10.9	10.0	109	70-116	7	30
1,4-Dichlorobenzene	10.8	10.0	108		10.2	10.0	102	73-115	6	30
n-Butylbenzene	10.8	10.0	108		9.91	10.0	99	55-130	8	30
1,2-Dichlorobenzene	11.1	10.0	111		10.5	10.0	105	72-115	6	30
1,2-Dibromo-3-chloropropane	9.64	10.0	96		10.3	10.0	103	55-132	7	30
1,2,4-Trichlorobenzene	10.2	10.0	102		10.3	10.0	103	58-126	2	30
Hexachlorobutadiene	10.8	10.0	108		10.5	10.0	105	57-119	3	30
Naphthalene	10.0	10.0	100		10.4	10.0	104	64-126	3	30
1,2,3-Trichlorobenzene	11.2	10.0	112		11.7	10.0	117	68-120	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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April 26, 2017

Analytical Report for Service Request No: K1702428

Jason Davendonis
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

RE: Leichner Landfill, WA / 04217030.13

Dear Jason,

Enclosed are the results of the sample(s) submitted to our laboratory March 10, 2017
For your reference, these analyses have been assigned our service request number **K1702428.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

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Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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ALS ENVIRONMENTAL

Client:	SCS Engineers	**Service Request No.:**	K1702428
Project:	Leichner Landfill, WA / 04217030.13	**Date Received:**	03/10/2017
Sample Matrix:	Ground Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Seven ground water samples were received for analysis at ALS Environmental on 03/10/2017. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

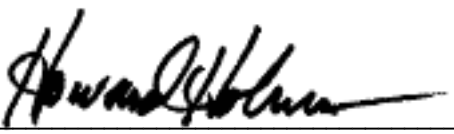
No anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS18\0313F004.D: Dichlorodifluoromethane. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Sample Notes and Discussion:
The Trip Blank analyzed with these samples contained low levels of Toluene above the Method Reporting Limit (MRL). The associated samples did not contain the analyte in question.

No other anomalies associated with the analysis of these sampels were observed.

Approved by 

Chain of Custody

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CHAIN OF CUSTODY

ALS Environmental

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SR# KL702428

PAGE _____ OF _____ COC# _____

PROJECT NAME	Leichner Landf.11
PROJECT NUMBER	042170.30.13
PROJECT MANAGER	David Lamadrid
COMPANY NAME	SCS Engineers
ADDRESS	15940 SW 72nd Ave
CITY/STATE/ZIP	Portland, OR 97224
E-MAIL ADDRESS	dlamadrid@scsengineers.com
PHONE # / FAX #	503 639-9736 /
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☐	Volatile Organics 624☐ 8260☐ BTEX☐	Hydrocarbons Gas☐ Diesel☐ (*see below) Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, (NO_3) BOD, TSS, TDS, Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO_3☐ HCO_3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ Methane☐ Ethane☐ Ethene☐ CO_2☐	REMARKS
LB-030917-11	3/9/17	1255		W	5		X						X		X						
LB-030917-10	3/9/17	1150		W	5		X						X		X						
LB-030917-09	3/9/17	1055		W	5		X						X		X						
LB-030917-08	3/9/17	955		W	5		X						X		X						
LB-030917-13	3/9/17	1500		W	5		X						X		X						
LB-030917-12	3/9/17	1405		W	5		X						X		X						
Trip Blank 2	—	—		W	2		X						X	Na								

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 day

___ Standard (15 working days)

___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

CC Tiffany Andrews
tandrews@scsengineers.com

Metals are field Filtered

Container Supply Number

76504

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date/Time: 3/10/17	Date/Time: 3/10/17 1122	Date/Time:	Date/Time: 3/10/17 1345
Printed Name: T Andrews	Printed Name: Scott Cloquille	Printed Name:	Printed Name:
Firm: SCS 1120	Firm: ALS	Firm:	Firm: ALS

PC 412

Cooler Receipt and Preservation Form

Client SCS Service Request K17 021478

Received: 3/10/17 Opened: 3/10/17 By: [illegible] Unloaded: 3/10/17 By: [illegible]

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
1.7	1.6	5.9	5.8	-0.1	378			

4. Packing material: (*Inserts*) (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N

   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: SHORT HOLD TIME

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/9/17
Sample Matrix:	Ground Water	**Date Received:**	03/10/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Chloride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-030917-11	K1702428-001	**6.66**	0.20	2	03/10/17 17:50	3/13/17	
LB-030917-10	K1702428-002	**6.72**	0.20	2	03/10/17 18:28	3/13/17	
LB-030917-09	K1702428-003	**3.70**	0.20	2	03/10/17 18:38	3/13/17	
LB-030917-08	K1702428-004	**4.41**	0.20	2	03/10/17 18:47	3/13/17	
LB-030917-13	K1702428-005	**31.1**	1.0	10	03/13/17 12:56	3/13/17	
LB-030917-12	K1702428-006	**9.53**	0.20	2	03/10/17 19:26	3/13/17	
Method Blank	K1702428-MB1	ND U	0.10	1	03/10/17 10:45	3/13/17	
Method Blank	K1702428-MB2	ND U	0.10	1	03/13/17 10:02	3/13/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17
Sample Matrix:	Ground Water	**Date Received:**	03/10/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Replicate Sample Summary

Chloride

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1702404-003DUP	5.0	91.7	89.4	90.6	3	20	03/13/17
LB-030917-11	K1702428-001DUP	0.20	6.66	6.60	6.63	<1	20	03/10/17

Results flagged with an asterisk (*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/13/17
		Date Extracted:	03/13/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1702404-003	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702404-003MS			K1702404-003DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	91.7	187	100	95	187	100	95	90-110	<1	20

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Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17
Sample Matrix:	Ground Water	**Date Received:**	03/10/17
		Date Analyzed:	03/10/17
		Date Extracted:	03/13/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	LB-030917-11	**Units:**	mg/L
Lab Code:	K1702428-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702428-001MS			K1702428-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	6.66	16.3	10.0	97	16.2	10.0	96	90-110	<1	20

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Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Analyzed:**	03/10/17
Sample Matrix:	Ground Water	**Date Extracted:**	03/13/17

Lab Control Sample Summary
Chloride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	537799

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702428-LCS1	4.85	5.00	97	90-110

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Analyzed:**	03/13/17
Sample Matrix:	Ground Water	**Date Extracted:**	03/13/17

Lab Control Sample Summary
Chloride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	537837

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702428-LCS2	4.82	5.00	96	90-110

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/9/17
Sample Matrix:	Ground Water	**Date Received:**	03/10/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-030917-11	K1702428-001	**8.49**	0.10	2	03/10/17 17:50	3/13/17	
LB-030917-10	K1702428-002	**5.79**	0.10	2	03/10/17 18:28	3/13/17	
LB-030917-09	K1702428-003	**3.48**	0.10	2	03/10/17 18:38	3/13/17	
LB-030917-08	K1702428-004	**3.88**	0.10	2	03/10/17 18:47	3/13/17	
LB-030917-13	K1702428-005	**0.35**	0.10	2	03/10/17 19:16	3/13/17	
LB-030917-12	K1702428-006	**3.70**	0.10	2	03/10/17 19:26	3/13/17	
Method Blank	K1702428-MB1	ND U	0.050	1	03/10/17 10:45	3/13/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17
Sample Matrix:	Ground Water	**Date Received:**	03/10/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Replicate Sample Summary

Nitrate as Nitrogen

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1702404-003DUP	0.50	13.4	13.3	13.3	<1	20	03/10/17
LB-030917-11	K1702428-001DUP	0.10	8.49	8.42	8.45	<1	20	03/10/17

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Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/10/17
		Date Extracted:	03/13/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1702404-003	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702404-003MS			K1702404-003DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	13.4	33.7	20.0	102	33.7	20.0	102	90-110	<1	20

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Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17
Sample Matrix:	Ground Water	**Date Received:**	03/10/17
		Date Analyzed:	03/10/17
		Date Extracted:	03/13/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	LB-030917-11	**Units:**	mg/L
Lab Code:	K1702428-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702428-001MS			K1702428-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	8.49	18.7	10.0	102	18.5	10.0	101	90-110	<1	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Analyzed:**	03/10/17
Sample Matrix:	Ground Water	**Date Extracted:**	03/13/17

Lab Control Sample Summary
Nitrate as Nitrogen

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	537799

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702428-LCS1	2.35	2.50	94	90-110

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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/9/17
Sample Matrix:	Ground Water	**Date Received:**	03/10/17
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Solids, Total Dissolved

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
LB-030917-11	K1702428-001	**221**	5.0	1	03/15/17 16:24	
LB-030917-10	K1702428-002	**156**	5.0	1	03/15/17 16:24	
LB-030917-09	K1702428-003	**149**	5.0	1	03/15/17 16:24	
LB-030917-08	K1702428-004	**143**	5.0	1	03/15/17 16:24	
LB-030917-13	K1702428-005	**323**	5.0	1	03/15/17 16:24	
LB-030917-12	K1702428-006	**186**	5.0	1	03/15/17 16:24	
Method Blank	K1702428-MB1	ND U	5.0	1	03/15/17 16:24	
Method Blank	K1702428-MB2	ND U	5.0	1	03/15/17 16:24	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Replicate Sample Summary
Solids, Total Dissolved

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1702400-003DUP	5.0	617	618	617	<1	10	03/15/17
Batch QC	K1702425-004DUP	5.0	695	689	692	<1	10	03/15/17

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Analyzed:**	03/15/17
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	538193

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702428-LCS1	1620	1640	99	85-115

Metals

ALS Environmental—Kelso Laboratory
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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17 12:55
Sample Matrix:	Ground Water	**Date Received:**	03/10/17 13:45
Sample Name:	LB-030917-11	**Basis:**	NA
Lab Code:	K1702428-001		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/21/17 11:10	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/21/17 11:10	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17 11:50
Sample Matrix:	Ground Water	**Date Received:**	03/10/17 13:45
Sample Name:	LB-030917-10	**Basis:**	NA
Lab Code:	K1702428-002		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/21/17 11:13	03/16/17	
Manganese	6010C	**1.1**	ug/L	1.1	1	03/21/17 11:13	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17 10:55
Sample Matrix:	Ground Water	**Date Received:**	03/10/17 13:45
Sample Name:	LB-030917-09	**Basis:**	NA
Lab Code:	K1702428-003		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/21/17 11:15	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/21/17 11:15	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17 09:55
Sample Matrix:	Ground Water	**Date Received:**	03/10/17 13:45
Sample Name:	LB-030917-08	**Basis:**	NA
Lab Code:	K1702428-004		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/21/17 11:18	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/21/17 11:18	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17 15:00
Sample Matrix:	Ground Water	**Date Received:**	03/10/17 13:45
Sample Name:	LB-030917-13	**Basis:**	NA
Lab Code:	K1702428-005		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/21/17 11:20	03/16/17	
Manganese	6010C	**2.6**	ug/L	1.1	1	03/21/17 11:20	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/17 14:05
Sample Matrix:	Ground Water	**Date Received:**	03/10/17 13:45
Sample Name:	LB-030917-12	**Basis:**	NA
Lab Code:	K1702428-006		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/21/17 11:23	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/21/17 11:23	03/16/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1702911-02		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/21/17 11:05	03/16/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/21/17 11:05	03/16/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	03/21/17

Replicate Sample Summary
Dissolved Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1702430-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1702911-03 Result	Average	RPD	RPD Limit
Iron	6010C	21	498	501	499	<1	20
Manganese	6010C	1.1	74.3	75.6	75.0	2	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	03/21/17
		Date Extracted:	03/16/17

Matrix Spike Summary
Dissolved Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1702430-001	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA CLP-METALS ILM04.0		

Matrix Spike
KQ1702911-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	498	1480	1000	98	75-125
Manganese	74.3	557	500	97	75-125

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground Water

Service Request: K1702428
Date Analyzed: 03/21/17

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1702911-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2510	2500	100	80-120
Manganese	6010C	1220	1250	98	80-120

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-11	**Units:**	ug/L
Lab Code:	K1702428-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	*
Chloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichlorofluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Acetone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Carbon Disulfide	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Methylene Chloride	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Butanone (MEK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Bromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Carbon Tetrachloride	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Benzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichloroethene (TCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromodichloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Toluene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,2-Trichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Hexanone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-11	**Units:**	ug/L
Lab Code:	K1702428-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Ethylbenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
m,p-Xylenes	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
o-Xylene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Styrene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromoform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Isopropylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
n-Propylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
tert-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
sec-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Isopropyltoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,4-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
n-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Hexachlorobutadiene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Naphthalene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-11	**Units:**	ug/L
Lab Code:	K1702428-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	86	73-122	03/13/17	Acceptable
Toluene-d8	103	65-144	03/13/17	Acceptable
4-Bromofluorobenzene	89	68-117	03/13/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-10	**Units:**	ug/L
Lab Code:	K1702428-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	*
Chloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichlorofluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Acetone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Carbon Disulfide	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Methylene Chloride	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Butanone (MEK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Bromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Carbon Tetrachloride	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Benzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichloroethene (TCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromodichloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Toluene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,2-Trichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Hexanone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-10	**Units:**	ug/L
Lab Code:	K1702428-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Ethylbenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
m,p-Xylenes	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
o-Xylene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Styrene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromoform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Isopropylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
n-Propylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
tert-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
sec-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Isopropyltoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,4-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
n-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Hexachlorobutadiene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Naphthalene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-10	**Units:**	ug/L
Lab Code:	K1702428-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	87	73-122	03/13/17	Acceptable
Toluene-d8	103	65-144	03/13/17	Acceptable
4-Bromofluorobenzene	89	68-117	03/13/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-09	**Units:**	ug/L
Lab Code:	K1702428-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	*
Chloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichlorofluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Acetone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Carbon Disulfide	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Methylene Chloride	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Butanone (MEK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Bromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Carbon Tetrachloride	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Benzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichloroethene (TCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromodichloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Toluene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,2-Trichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Hexanone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-09	**Units:**	ug/L
Lab Code:	K1702428-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Ethylbenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
m,p-Xylenes	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
o-Xylene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Styrene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromoform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Isopropylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
n-Propylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
tert-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
sec-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Isopropyltoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,4-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
n-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Hexachlorobutadiene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Naphthalene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-09	**Units:**	ug/L
Lab Code:	K1702428-003	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	87	73-122	03/13/17	Acceptable
Toluene-d8	102	65-144	03/13/17	Acceptable
4-Bromofluorobenzene	89	68-117	03/13/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-08	**Units:**	ug/L
Lab Code:	K1702428-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	*
Chloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichlorofluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Acetone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Carbon Disulfide	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Methylene Chloride	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Butanone (MEK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Bromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Carbon Tetrachloride	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Benzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichloroethene (TCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromodichloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Toluene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,2-Trichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Hexanone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702428
Date Collected: 03/09/2017
Date Received: 03/10/2017

Volatile Organic Compounds

Sample Name: LB-030917-08
Lab Code: K1702428-004

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Ethylbenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
m,p-Xylenes	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
o-Xylene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Styrene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromoform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Isopropylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
n-Propylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
tert-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
sec-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Isopropyltoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,4-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
n-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Hexachlorobutadiene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Naphthalene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-08	**Units:**	ug/L
Lab Code:	K1702428-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	87	73-122	03/13/17	Acceptable
Toluene-d8	103	65-144	03/13/17	Acceptable
4-Bromofluorobenzene	89	68-117	03/13/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-13	**Units:**	ug/L
Lab Code:	K1702428-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	*
Chloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichlorofluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Acetone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Carbon Disulfide	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Methylene Chloride	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Butanone (MEK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Bromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Carbon Tetrachloride	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Benzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichloroethene (TCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromodichloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Toluene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,2-Trichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Hexanone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-13	**Units:**	ug/L
Lab Code:	K1702428-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Ethylbenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
m,p-Xylenes	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
o-Xylene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Styrene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromoform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Isopropylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
n-Propylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
tert-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
sec-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Isopropyltoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,4-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
n-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Hexachlorobutadiene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Naphthalene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-13	**Units:**	ug/L
Lab Code:	K1702428-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	89	73-122	03/13/17	Acceptable
Toluene-d8	102	65-144	03/13/17	Acceptable
4-Bromofluorobenzene	88	68-117	03/13/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702428
Date Collected: 03/09/2017
Date Received: 03/10/2017

Volatile Organic Compounds

Sample Name: LB-030917-12
Lab Code: K1702428-006

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	*
Chloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichlorofluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Acetone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Carbon Disulfide	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Methylene Chloride	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Butanone (MEK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Bromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Carbon Tetrachloride	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Benzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichloroethene (TCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromodichloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Toluene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,2-Trichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Hexanone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-12	**Units:**	ug/L
Lab Code:	K1702428-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Ethylbenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
m,p-Xylenes	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
o-Xylene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Styrene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromoform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Isopropylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
n-Propylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
tert-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
sec-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Isopropyltoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,4-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
n-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Hexachlorobutadiene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Naphthalene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	LB-030917-12	**Units:**	ug/L
Lab Code:	K1702428-006	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	88	73-122	03/13/17	Acceptable
Toluene-d8	102	65-144	03/13/17	Acceptable
4-Bromofluorobenzene	87	68-117	03/13/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1702428-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	*
Chloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichlorofluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Acetone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Carbon Disulfide	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Methylene Chloride	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Butanone (MEK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Bromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Carbon Tetrachloride	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Benzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichloroethene (TCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromodichloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Toluene	**0.72**		0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,2-Trichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Hexanone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702428
Date Collected: 03/09/2017
Date Received: 03/10/2017

Volatile Organic Compounds

Sample Name: Trip Blank
Lab Code: K1702428-007

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Ethylbenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
m,p-Xylenes	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
o-Xylene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Styrene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromoform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Isopropylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
n-Propylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
tert-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
sec-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Isopropyltoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,4-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
n-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Hexachlorobutadiene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Naphthalene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	03/09/2017
Sample Matrix:	Ground water	**Date Received:**	03/10/2017

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1702428-007	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	90	73-122	03/13/17	Acceptable
Toluene-d8	103	65-144	03/13/17	Acceptable
4-Bromofluorobenzene	88	68-117	03/13/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1702021-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	*
Chloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichlorofluoromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Acetone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Carbon Disulfide	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Methylene Chloride	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Butanone (MEK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Bromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Chloroform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Carbon Tetrachloride	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Benzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Trichloroethene (TCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromomethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromodichloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
Toluene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,2-Trichloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Hexanone	ND	U	20	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Dibromochloromethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702428
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702021-3

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Ethylbenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
m,p-Xylenes	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
o-Xylene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Styrene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromoform	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Isopropylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
Bromobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
n-Propylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichloropropane	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
2-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Chlorotoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
tert-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
sec-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
4-Isopropyltoluene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,3-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,4-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
n-Butylbenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2-Dichlorobenzene	ND	U	0.50	1	03/13/17	03/13/17	KWG1702021	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Hexachlorobutadiene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
Naphthalene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/13/17	03/13/17	KWG1702021	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1702021-3	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	73-122	03/13/17	Acceptable
Toluene-d8	103	65-144	03/13/17	Acceptable
4-Bromofluorobenzene	87	68-117	03/13/17	Acceptable

Comments:

Client: SCS Engineers **Service Request:** K1702428
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
LB-030917-11	K1702428-001	86	103	89
LB-030917-10	K1702428-002	87	103	89
LB-030917-09	K1702428-003	87	102	89
LB-030917-08	K1702428-004	87	103	89
LB-030917-13	K1702428-005	89	102	88
LB-030917-12	K1702428-006	88	102	87
Trip Blank	K1702428-007	90	103	88
Method Blank	KWG1702021-3	92	103	87
Lab Control Sample	KWG1702021-1	100	107	96
Duplicate Lab Control Sample	KWG1702021-2	101	107	95

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: SCS Engineers
Project: Leichner Landfill, WA/04217030.13
Sample Matrix: Ground water

Service Request: K1702428
Date Extracted: 03/13/2017
Date Analyzed: 03/13/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702021

	Lab Control Sample KWG1702021-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702021-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	7.99	10.0	80	8.11	10.0	81	32-124	1	30
Chloromethane	8.61	10.0	86	7.89	10.0	79	34-130	9	30
Bromomethane	6.87	10.0	69	7.50	10.0	75	35-113	9	30
Chloroethane	9.12	10.0	91	9.23	10.0	92	58-134	1	30
Trichlorofluoromethane	6.81	10.0	68	6.91	10.0	69	52-141	1	30
Acetone	53.4	50.0	107	54.6	50.0	109	68-135	2	30
Carbon Disulfide	20.3	20.0	102	20.8	20.0	104	46-144	2	30
Methylene Chloride	9.05	10.0	91	9.18	10.0	92	71-122	1	30
Methyl tert-Butyl Ether	10.0	10.0	100	10.4	10.0	104	54-126	4	30
trans-1,2-Dichloroethene	8.99	10.0	90	9.24	10.0	92	67-125	3	30
1,1-Dichloroethane	10.3	10.0	103	10.7	10.0	107	68-132	4	30
2,2-Dichloropropane	8.33	10.0	83	8.57	10.0	86	37-145	3	30
cis-1,2-Dichloroethene	9.35	10.0	94	9.60	10.0	96	71-118	3	30
2-Butanone (MEK)	49.2	50.0	98	50.7	50.0	101	71-149	3	30
Bromochloromethane	9.70	10.0	97	9.92	10.0	99	75-131	2	30
Chloroform	10.2	10.0	102	10.5	10.0	105	70-129	2	30
1,1,1-Trichloroethane (TCA)	8.48	10.0	85	8.79	10.0	88	59-136	4	30
Carbon Tetrachloride	8.88	10.0	89	9.06	10.0	91	55-140	2	30
1,1-Dichloropropene	8.63	10.0	86	8.89	10.0	89	59-134	3	30
Benzene	9.22	10.0	92	9.43	10.0	94	69-124	2	30
1,2-Dichloroethane (EDC)	9.72	10.0	97	10.0	10.0	100	56-142	3	30
Trichloroethene (TCE)	9.43	10.0	94	9.84	10.0	98	67-128	4	30
1,2-Dichloropropane	10.9	10.0	109	11.2	10.0	112	67-126	3	30
Dibromomethane	10.2	10.0	102	10.5	10.0	105	69-128	3	30
Bromodichloromethane	10.3	10.0	103	10.8	10.0	108	63-129	4	30
cis-1,3-Dichloropropene	10.1	10.0	101	10.5	10.0	105	62-132	4	30
4-Methyl-2-pentanone (MIBK)	50.7	50.0	101	51.6	50.0	103	64-134	2	30
Toluene	9.80	10.0	98	10.1	10.0	101	69-124	3	30
trans-1,3-Dichloropropene	10.0	10.0	100	10.2	10.0	102	59-125	2	30
1,1,2-Trichloroethane	11.4	10.0	114	11.7	10.0	117	74-118	2	30
Tetrachloroethene (PCE)	9.37	10.0	94	9.65	10.0	97	62-126	3	30
2-Hexanone	45.2	50.0	90	47.6	50.0	95	59-131	5	30
1,3-Dichloropropane	10.8	10.0	108	11.2	10.0	112	75-116	3	30
Dibromochloromethane	9.60	10.0	96	9.95	10.0	100	67-126	4	30
1,2-Dibromoethane (EDB)	10.7	10.0	107	11.0	10.0	110	74-118	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1702428
Project:	Leichner Landfill, WA/04217030.13	**Date Extracted:**	03/13/2017
Sample Matrix:	Ground water	**Date Analyzed:**	03/13/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1702021

	Lab Control Sample KWG1702021-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702021-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	10.6	10.0	106	11.0	10.0	110	72-116	4	30
Ethylbenzene	10.4	10.0	104	10.7	10.0	107	67-121	3	30
1,1,1,2-Tetrachloroethane	10.5	10.0	105	10.6	10.0	106	66-124	1	30
m,p-Xylenes	21.1	20.0	105	21.8	20.0	109	69-121	3	30
o-Xylene	10.9	10.0	109	11.1	10.0	111	71-119	2	30
Styrene	10.9	10.0	109	10.9	10.0	109	74-121	0	30
Bromoform	10.4	10.0	104	10.7	10.0	107	52-144	2	30
Isopropylbenzene	10.8	10.0	108	11.1	10.0	111	67-129	2	30
1,1,2,2-Tetrachloroethane	12.2	10.0	122	12.3	10.0	123	70-127	0	30
Bromobenzene	10.8	10.0	108	11.1	10.0	111	72-116	4	30
n-Propylbenzene	11.0	10.0	110	11.3	10.0	113	61-124	3	30
1,2,3-Trichloropropane	10.7	10.0	107	10.9	10.0	109	69-123	1	30
2-Chlorotoluene	11.2	10.0	112	11.4	10.0	114	55-131	2	30
1,3,5-Trimethylbenzene	11.4	10.0	114	11.9	10.0	119	62-126	4	30
4-Chlorotoluene	11.3	10.0	113	11.5	10.0	115	66-121	2	30
tert-Butylbenzene	10.9	10.0	109	11.1	10.0	111	61-127	2	30
1,2,4-Trimethylbenzene	11.9	10.0	119	12.2	10.0	122	63-122	3	30
sec-Butylbenzene	11.2	10.0	112	11.4	10.0	114	59-128	2	30
4-Isopropyltoluene	11.3	10.0	113	11.6	10.0	116	61-128	2	30
1,3-Dichlorobenzene	11.0	10.0	110	11.3	10.0	113	70-116	3	30
1,4-Dichlorobenzene	10.6	10.0	106	10.8	10.0	108	73-115	2	30
n-Butylbenzene	11.2	10.0	112	11.5	10.0	115	55-130	3	30
1,2-Dichlorobenzene	10.9	10.0	109	11.2	10.0	112	72-115	3	30
1,2-Dibromo-3-chloropropane	10.7	10.0	107	11.0	10.0	110	55-132	3	30
1,2,4-Trichlorobenzene	9.85	10.0	99	10.3	10.0	103	58-126	5	30
Hexachlorobutadiene	10.2	10.0	102	10.6	10.0	106	57-119	3	30
Naphthalene	10.0	10.0	100	10.8	10.0	108	64-126	7	30
1,2,3-Trichlorobenzene	9.71	10.0	97	10.3	10.0	103	68-120	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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April 26, 2017

Analytical Report for Service Request No: K1702609

Jason Davendonis
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

RE: Leichner Landfill / 04217030.13

Dear Jason,

Enclosed are the results of the sample(s) submitted to our laboratory March 16, 2017
For your reference, these analyses have been assigned our service request number **K1702609.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

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Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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ALS ENVIRONMENTAL

Client:	SCS Engineers	**Service Request No.:**	K1702609
Project:	Leichner Landfill, WA/ 04217030.13	**Date Received:**	03/16/17
Sample Matrix:	Ground Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Nine ground water samples were received for analysis at ALS Environmental on 03/16/17. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Dissolved Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Iron for the Batch QC sample were not applicable. The analyzed concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

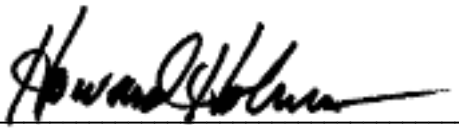
Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS46\0317F004.D: Napthalene. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Lab Control Sample Exceptions:
The advisory criterion was exceeded for Dichlorodifluoromethane in Laboratory Control Sample (LCS) KWG1702174-1. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

Approved by 

Sample Notes and Discussion:
The Trip Blank analyzed with these samples contained low levels of Toluene above the Method Reporting Limit (MRL). The associated samples did not contain the analyte in question.

No other anomalies associated with the analysis of these samples were observed.

Approved by 

Chain of Custody

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CHAIN OF CUSTODY

ALS Environmental

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SR# K1702009

PAGE ____ OF ____ COC# ____

PROJECT NAME	Leichner Landfill
PROJECT NUMBER	04217030.13
PROJECT MANAGER	David Lamadrid
COMPANY NAME	SCS Engineers
ADDRESS	15940 SW 72nd Ave
CITY/STATE/ZIP	Portland, OR 97224
E-MAIL ADDRESS	dlamadrid@scsengineers.com
PHONE #	503-639-9736 FAX # —
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☐	Volatile Organics 624☐ 8260☒ 8270LL☐ 8021☐ BTEX☐	Hydrocarbons Gas☐ Diesel☐ Oil☐ (*see below)	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or (Dissolved) (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond, (Cl) SO_4, PO_4, F, NO_2, NO_3 BOD, TSS, (TDS) Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO_3 ☐ HCO_3 ☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases CO_2☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐	REMARKS
LB-031517-14	3/15/17	1045		W	5		X						X		X						
LB-031517-20	3/15/17	1555		W	5		X						X		X						
LB-031517-21	3/15/17	1600		W	5		X						X		X						
LB-031517-18	3/15/17	1410		W	5		X						X		X						
LB-031517-17	3/15/17	1310		W	5		X						X		X						
LB-031517-19	3/15/17	1500		W	5		X						X		X						
LB-031517-16	3/15/17	1150		W	5		X						X		X						
LB-031517-15	3/15/17	1100		W	5		X						X		X						
Trip Blank 3	—	—		W	2		X														

REPORT REQUIREMENTS

- ___ I. Routine Report: Method Blank, Surrogate, as required
- ___ II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- ___ IV. Data Validation Report
- ___ V. EDD

INVOICE INFORMATION

P.O. # ____

Bill To: ____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 day

___ Standard (15 working days)

___ Provide FAX Results

Requested Report Date ____

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

CC Tiffany Andrews
tandrews@scsengineers.com

Metals are field filtered

Container Supply Number

76504

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Jason Dennewitz	Signature: Scott Chappille	Signature:	Signature:
Date/Time: 3/16/17 1210	Date/Time: 3/16/17 1210	Date/Time:	Date/Time:
Printed Name: Jason Dennewitz	Printed Name: Scott Chappille	Printed Name:	Printed Name:
Firm: SCS	Firm: ALS	Firm:	Firm:

PC #2

Cooler Receipt and Preservation Form

Client SCS Eng. Service Request K17 02609

Received: 3/16/17 Opened: 3/16/17 By: KD Unloaded: 3/16/17 By: KD

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
6.0	6.0	5.7	5.7	0	323			

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17
Sample Matrix:	Ground Water	**Date Received:**	03/16/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Chloride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-031517-14	K1702609-001	**3.32**	0.20	2	03/16/17 16:43	3/16/17	
LB-031517-20	K1702609-002	**4.13**	0.20	2	03/16/17 16:52	3/16/17	
LB-031517-21	K1702609-003	**4.20**	0.20	2	03/16/17 17:02	3/16/17	
LB-031517-18	K1702609-004	**7.21**	0.20	2	03/16/17 17:11	3/16/17	
LB-031517-17	K1702609-005	**7.81**	0.20	2	03/16/17 17:21	3/16/17	
LB-031517-19	K1702609-006	**6.90**	0.20	2	03/16/17 18:01	3/16/17	
LB-031517-16	K1702609-007	**28.3**	1.0	10	03/17/17 10:16	3/17/17	
LB-031517-15	K1702609-008	ND U	0.20	2	03/16/17 18:20	3/16/17	
Method Blank	K1702609-MB1	ND U	0.10	1	03/16/17 09:25	3/16/17	
Method Blank	K1702609-MB2	ND U	0.10	1	03/17/17 09:09	3/17/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project	Leichner Landfill/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Replicate Sample Summary

Chloride

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1702583-006DUP	5.0	49.7	49.7	49.7	<1	20	03/16/17
Batch QC	K1702607-001DUP	0.20	ND U	ND U	NC	NC	20	03/17/17
Batch QC	KQ1703020-03DUP	0.20	3.69	3.74	3.71	1	20	03/16/17

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/16/17
		Date Extracted:	03/16/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1702583-006	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702583-006MS			K1702583-006DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	49.7	146	100	96	147	100	97	90-110	<1	20

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Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/17/17
		Date Extracted:	03/17/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1702607-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702607-001MS			K1702607-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	ND U	3.72	4.00	93	3.89	4.00	97	90-110	5	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/16/17
		Date Extracted:	03/16/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1703020-03	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike KQ1703020-03MS			**Duplicate Matrix Spike** KQ1703020-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	3.69	13.1	10.0	94	13.4	10.0	97	90-110	2	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Analyzed:**	03/16/17
Sample Matrix:	Ground Water	**Date Extracted:**	03/16/17

Lab Control Sample Summary
Chloride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	538423

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702609-LCS1	4.81	5.00	96	90-110

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Analyzed:**	03/17/17
Sample Matrix:	Ground Water	**Date Extracted:**	03/17/17

Lab Control Sample Summary
Chloride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	538605

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702609-LCS2	4.76	5.00	95	90-110

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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17
Sample Matrix:	Ground Water	**Date Received:**	03/16/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-031517-14	K1702609-001	**5.95**	0.10	2	03/16/17 16:43	3/16/17	
LB-031517-20	K1702609-002	**3.09**	0.10	2	03/16/17 16:52	3/16/17	
LB-031517-21	K1702609-003	**3.14**	0.10	2	03/16/17 17:02	3/16/17	
LB-031517-18	K1702609-004	**2.68**	0.10	2	03/16/17 17:11	3/16/17	
LB-031517-17	K1702609-005	ND U	0.10	2	03/16/17 17:21	3/16/17	
LB-031517-19	K1702609-006	**3.53**	0.10	2	03/16/17 18:01	3/16/17	
LB-031517-16	K1702609-007	ND U	0.10	2	03/16/17 18:11	3/16/17	
LB-031517-15	K1702609-008	ND U	0.10	2	03/16/17 18:20	3/16/17	
Method Blank	K1702609-MB1	ND U	0.050	1	03/16/17 09:25	3/16/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project	Leichner Landfill/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Replicate Sample Summary

Nitrate as Nitrogen

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1702556-001DUP	0.10	0.79	0.79	0.790	<1	20	03/16/17
Batch QC	K1702556-002DUP	0.10	0.54	0.53	0.536	2	20	03/16/17
Batch QC	K1702583-006DUP	2.5	15.2	15.2	15.2	<1	20	03/16/17
Batch QC	KQ1703018-03DUP	0.10	0.79	0.79	0.790	<1	20	03/16/17

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/16/17
		Date Extracted:	03/16/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1702556-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike K1702556-001MS			**Duplicate Matrix Spike** K1702556-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	0.79	11.0	10.0	102	11.0	10.0	102	90-110	<1	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/16/17
		Date Extracted:	03/16/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1702556-002	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702556-002MS			K1702556-002DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	0.54	10.7	10.0	102	10.8	10.0	102	90-110	<1	20

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Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/16/17
		Date Extracted:	03/16/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1702583-006	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1702583-006MS			K1702583-006DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	15.2	119	100	104	119	100	104	90-110	<1	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/16/17
		Date Extracted:	03/16/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1703018-03	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike KQ1703018-03MS			Duplicate Matrix Spike KQ1703018-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	0.79	11.0	10.0	102	11.0	10.0	102	90-110	<1	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Analyzed:**	03/16/17
Sample Matrix:	Ground Water	**Date Extracted:**	03/16/17

Lab Control Sample Summary
Nitrate as Nitrogen

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	538423

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702609-LCS1	2.42	2.50	97	90-110

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17
Sample Matrix:	Ground Water	**Date Received:**	03/16/17
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Solids, Total Dissolved

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
LB-031517-14	K1702609-001	**182**	5.0	1	03/20/17 15:58	
LB-031517-20	K1702609-002	**182**	5.0	1	03/20/17 15:58	
LB-031517-21	K1702609-003	**189**	5.0	1	03/20/17 15:58	
LB-031517-18	K1702609-004	**191**	5.0	1	03/20/17 15:58	
LB-031517-17	K1702609-005	**195**	5.0	1	03/20/17 15:58	
LB-031517-19	K1702609-006	**201**	5.0	1	03/20/17 15:58	
LB-031517-16	K1702609-007	**352**	5.0	1	03/21/17 16:03	
LB-031517-15	K1702609-008	ND U	1.0	1	03/21/17 16:23	
Method Blank	K1702609-MB1	ND U	5.0	1	03/20/17 15:58	
Method Blank	K1702609-MB2	ND U	5.0	1	03/21/17 16:03	
Method Blank	K1702609-MB3	ND U	1.0	1	03/21/17 16:23	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17
Sample Matrix:	Ground Water	**Date Received:**	03/16/17
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Replicate Sample Summary
Solids, Total Dissolved

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1702572-001DUP	5.0	219	232	226	6	10	03/20/17
LB-031517-15	K1702609-008DUP	1.0	ND U	ND U	NC	NC	10	03/21/17
Batch QC	K1702713-001DUP	5.0	416	419	418	<1	10	03/21/17

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Analyzed:**	03/20/17
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	538686

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702609-LCS1	1640	1640	100	85-115

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Analyzed:**	03/21/17
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	538857

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702609-LCS2	1630	1640	100	85-115

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Analyzed:**	03/21/17
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	538858

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1702609-LCS3	1640	1640	100	85-115

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17 10:45
Sample Matrix:	Ground Water	**Date Received:**	03/16/17 12:10
Sample Name:	LB-031517-14	**Basis:**	NA
Lab Code:	K1702609-001		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/23/17 14:45	03/20/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/23/17 14:45	03/20/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17 15:55
Sample Matrix:	Ground Water	**Date Received:**	03/16/17 12:10
Sample Name:	LB-031517-20	**Basis:**	NA
Lab Code:	K1702609-002		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/23/17 14:47	03/20/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/23/17 14:47	03/20/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17 16:00
Sample Matrix:	Ground Water	**Date Received:**	03/16/17 12:10
Sample Name:	LB-031517-21	**Basis:**	NA
Lab Code:	K1702609-003		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/23/17 14:50	03/20/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/23/17 14:50	03/20/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17 14:10
Sample Matrix:	Ground Water	**Date Received:**	03/16/17 12:10
Sample Name:	LB-031517-18	**Basis:**	NA
Lab Code:	K1702609-004		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/23/17 15:00	03/20/17	
Manganese	6010C	**2.9**	ug/L	1.1	1	03/23/17 15:00	03/20/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17 13:10
Sample Matrix:	Ground Water	**Date Received:**	03/16/17 12:10
Sample Name:	LB-031517-17	**Basis:**	NA
Lab Code:	K1702609-005		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	**179**	ug/L	21	1	03/23/17 15:02	03/20/17	
Manganese	6010C	**1560**	ug/L	1.1	1	03/23/17 15:02	03/20/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17 15:00
Sample Matrix:	Ground Water	**Date Received:**	03/16/17 12:10
Sample Name:	LB-031517-19	**Basis:**	NA
Lab Code:	K1702609-006		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/23/17 15:05	03/20/17	
Manganese	6010C	**2.4**	ug/L	1.1	1	03/23/17 15:05	03/20/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17 11:50
Sample Matrix:	Ground Water	**Date Received:**	03/16/17 12:10
Sample Name:	LB-031517-16	**Basis:**	NA
Lab Code:	K1702609-007		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/23/17 15:08	03/20/17	
Manganese	6010C	**288**	ug/L	1.1	1	03/23/17 15:08	03/20/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/17 11:00
Sample Matrix:	Ground Water	**Date Received:**	03/16/17 12:10
Sample Name:	LB-031517-15	**Basis:**	NA
Lab Code:	K1702609-008		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/23/17 15:10	03/20/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/23/17 15:10	03/20/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1703048-02		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/23/17 14:26	03/20/17	
Manganese	6010C	ND U	ug/L	1.1	1	03/23/17 14:26	03/20/17	

ALS Group USA, Corp.

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project	Leichner Landfill/04217030.13	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
		Date Analyzed:	03/23/17

Replicate Sample Summary
Dissolved Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1702572-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1703048-03 Result	Average	RPD	RPD Limit
Iron	6010C	21	4050	4000	4020	1	20
Manganese	6010C	1.1	143	142	143	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	03/23/17
		Date Extracted:	03/20/17

Matrix Spike Summary
Dissolved Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1702572-001	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA CLP-METALS ILM04.0		

Matrix Spike
KQ1703048-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	4050	5020	1000	98 #	75-125
Manganese	143	623	500	96	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04217030.13
Sample Matrix: Ground Water

Service Request: K1702609
Date Analyzed: 03/23/17

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1703048-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2540	2500	102	80-120
Manganese	6010C	1220	1250	97	80-120

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-14	**Units:**	ug/L
Lab Code:	K1702609-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-14	**Units:**	ug/L
Lab Code:	K1702609-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-14	**Units:**	ug/L
Lab Code:	K1702609-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	73-122	03/17/17	Acceptable
Toluene-d8	97	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	99	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-20	**Units:**	ug/L
Lab Code:	K1702609-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-20	**Units:**	ug/L
Lab Code:	K1702609-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-20	**Units:**	ug/L
Lab Code:	K1702609-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	73-122	03/17/17	Acceptable
Toluene-d8	98	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	97	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-21	**Units:**	ug/L
Lab Code:	K1702609-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-21	**Units:**	ug/L
Lab Code:	K1702609-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-21	**Units:**	ug/L
Lab Code:	K1702609-003	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	73-122	03/17/17	Acceptable
Toluene-d8	98	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	101	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill/04217030.13
Sample Matrix: Ground water

Service Request: K1702609
Date Collected: 03/15/2017
Date Received: 03/16/2017

Volatile Organic Compounds

Sample Name: LB-031517-18
Lab Code: K1702609-004

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-18	**Units:**	ug/L
Lab Code:	K1702609-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-18	**Units:**	ug/L
Lab Code:	K1702609-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	73-122	03/17/17	Acceptable
Toluene-d8	97	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	100	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-17	**Units:**	ug/L
Lab Code:	K1702609-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-17	**Units:**	ug/L
Lab Code:	K1702609-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-17	**Units:**	ug/L
Lab Code:	K1702609-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	73-122	03/17/17	Acceptable
Toluene-d8	97	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	99	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-19	**Units:**	ug/L
Lab Code:	K1702609-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-19	**Units:**	ug/L
Lab Code:	K1702609-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-19	**Units:**	ug/L
Lab Code:	K1702609-006	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	73-122	03/17/17	Acceptable
Toluene-d8	98	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	100	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-16	**Units:**	ug/L
Lab Code:	K1702609-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-16	**Units:**	ug/L
Lab Code:	K1702609-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-16	**Units:**	ug/L
Lab Code:	K1702609-007	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	73-122	03/17/17	Acceptable
Toluene-d8	97	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	98	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-15	**Units:**	ug/L
Lab Code:	K1702609-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-15	**Units:**	ug/L
Lab Code:	K1702609-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	LB-031517-15	**Units:**	ug/L
Lab Code:	K1702609-008	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	73-122	03/17/17	Acceptable
Toluene-d8	98	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	97	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill/04217030.13
Sample Matrix: Ground water

Service Request: K1702609
Date Collected: 03/15/2017
Date Received: 03/16/2017

Volatile Organic Compounds

Sample Name: Trip Blank
Lab Code: K1702609-009

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	**0.61**		0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1702609-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	03/15/2017
Sample Matrix:	Ground water	**Date Received:**	03/16/2017

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1702609-009	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	73-122	03/17/17	Acceptable
Toluene-d8	98	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	99	68-117	03/17/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1702174-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	*
Chloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichlorofluoromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Acetone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Carbon Disulfide	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Methylene Chloride	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Butanone (MEK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Bromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Chloroform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Carbon Tetrachloride	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Benzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Trichloroethene (TCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromomethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromodichloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
Toluene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,2-Trichloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Tetrachloroethene (PCE)	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Hexanone	ND	U	20	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Dibromochloromethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1702174-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Ethylbenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
m,p-Xylenes	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
o-Xylene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Styrene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromoform	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Isopropylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
Bromobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
n-Propylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,3-Trichloropropane	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
2-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Chlorotoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
tert-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
sec-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
4-Isopropyltoluene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,3-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,4-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
n-Butylbenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2-Dichlorobenzene	ND	U	0.50	1	03/17/17	03/17/17	KWG1702174	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Hexachlorobutadiene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	
Naphthalene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	*
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/17/17	03/17/17	KWG1702174	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1702609
Project:	Leichner Landfill/04217030.13	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1702174-3	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	73-122	03/17/17	Acceptable
Toluene-d8	99	65-144	03/17/17	Acceptable
4-Bromofluorobenzene	100	68-117	03/17/17	Acceptable

Comments:

Client: SCS Engineers **Service Request:** K1702609
Project: Leichner Landfill/04217030.13
Sample Matrix: Ground water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
LB-031517-14	K1702609-001	104	97	99
LB-031517-20	K1702609-002	104	98	97
LB-031517-21	K1702609-003	103	98	101
LB-031517-18	K1702609-004	103	97	100
LB-031517-17	K1702609-005	103	97	99
LB-031517-19	K1702609-006	105	98	100
LB-031517-16	K1702609-007	104	97	98
LB-031517-15	K1702609-008	104	98	97
Trip Blank	K1702609-009	105	98	99
Method Blank	KWG1702174-3	105	99	100
Lab Control Sample	KWG1702174-1	105	102	104
Duplicate Lab Control Sample	KWG1702174-2	103	101	104

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: SCS Engineers
Project: Leichner Landfill/04217030.13
Sample Matrix: Water

Service Request: K1702609
Date Extracted: 03/17/2017
Date Analyzed: 03/17/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702174

	Lab Control Sample KWG1702174-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702174-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	13.3	10.0	133 *	12.4	10.0	124	32-124	7	30
Chloromethane	9.50	10.0	95	9.06	10.0	91	34-130	5	30
Bromomethane	10.4	10.0	104	10.7	10.0	107	35-113	3	30
Chloroethane	12.2	10.0	122	11.5	10.0	115	58-134	6	30
Trichlorofluoromethane	10.3	10.0	103	9.89	10.0	99	52-141	4	30
Acetone	51.4	50.0	103	49.8	50.0	100	68-135	3	30
Carbon Disulfide	20.2	20.0	101	19.0	20.0	95	46-144	6	30
Methylene Chloride	10.1	10.0	101	9.80	10.0	98	71-122	3	30
Methyl tert-Butyl Ether	9.84	10.0	98	9.56	10.0	96	54-126	3	30
trans-1,2-Dichloroethene	10.7	10.0	107	10.0	10.0	100	67-125	6	30
1,1-Dichloroethane	9.93	10.0	99	9.83	10.0	98	68-132	1	30
2,2-Dichloropropane	10.7	10.0	107	10.1	10.0	101	37-145	6	30
cis-1,2-Dichloroethene	9.81	10.0	98	9.24	10.0	92	71-118	6	30
2-Butanone (MEK)	50.2	50.0	100	47.8	50.0	96	71-149	5	30
Bromochloromethane	10.0	10.0	100	9.74	10.0	97	75-131	3	30
Chloroform	10.3	10.0	103	9.91	10.0	99	70-129	4	30
1,1,1-Trichloroethane (TCA)	10.4	10.0	104	9.94	10.0	99	59-136	5	30
Carbon Tetrachloride	11.3	10.0	113	10.5	10.0	105	55-140	7	30
1,1-Dichloropropene	9.84	10.0	98	9.20	10.0	92	59-134	7	30
Benzene	9.32	10.0	93	8.94	10.0	89	69-124	4	30
1,2-Dichloroethane (EDC)	9.61	10.0	96	9.20	10.0	92	56-142	4	30
Trichloroethene (TCE)	10.5	10.0	105	9.80	10.0	98	67-128	7	30
1,2-Dichloropropane	9.12	10.0	91	8.88	10.0	89	67-126	3	30
Dibromomethane	9.75	10.0	98	9.52	10.0	95	69-128	2	30
Bromodichloromethane	9.77	10.0	98	9.47	10.0	95	63-129	3	30
cis-1,3-Dichloropropene	9.22	10.0	92	9.07	10.0	91	62-132	2	30
4-Methyl-2-pentanone (MIBK)	47.3	50.0	95	45.4	50.0	91	64-134	4	30
Toluene	9.49	10.0	95	8.99	10.0	90	69-124	5	30
trans-1,3-Dichloropropene	9.92	10.0	99	9.63	10.0	96	59-125	3	30
1,1,2-Trichloroethane	9.78	10.0	98	9.86	10.0	99	74-118	1	30
Tetrachloroethene (PCE)	11.4	10.0	114	11.0	10.0	110	62-126	3	30
2-Hexanone	49.7	50.0	99	47.3	50.0	95	59-131	5	30
1,3-Dichloropropane	9.59	10.0	96	9.52	10.0	95	75-116	1	30
Dibromochloromethane	10.2	10.0	102	10.1	10.0	101	67-126	1	30
1,2-Dibromoethane (EDB)	10.3	10.0	103	10.1	10.0	101	74-118	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: SCS Engineers
Project: Leichner Landfill/04217030.13
Sample Matrix: Water

Service Request: K1702609
Date Extracted: 03/17/2017
Date Analyzed: 03/17/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702174

	Lab Control Sample KWG1702174-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702174-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	10.5	10.0	105	10.3	10.0	103	72-116	2	30
Ethylbenzene	10.2	10.0	102	9.98	10.0	100	67-121	2	30
1,1,1,2-Tetrachloroethane	10.4	10.0	104	10.3	10.0	103	66-124	1	30
m,p-Xylenes	21.1	20.0	105	20.4	20.0	102	69-121	3	30
o-Xylene	10.1	10.0	101	9.87	10.0	99	71-119	2	30
Styrene	9.88	10.0	99	9.60	10.0	96	74-121	3	30
Bromoform	11.1	10.0	111	10.8	10.0	108	52-144	3	30
Isopropylbenzene	10.6	10.0	106	10.0	10.0	100	67-129	5	30
1,1,2,2-Tetrachloroethane	9.12	10.0	91	8.86	10.0	89	70-127	3	30
Bromobenzene	9.66	10.0	97	9.22	10.0	92	72-116	5	30
n-Propylbenzene	9.49	10.0	95	8.99	10.0	90	61-124	5	30
1,2,3-Trichloropropane	9.10	10.0	91	8.83	10.0	88	69-123	3	30
2-Chlorotoluene	9.09	10.0	91	8.59	10.0	86	55-131	6	30
1,3,5-Trimethylbenzene	9.56	10.0	96	8.99	10.0	90	62-126	6	30
4-Chlorotoluene	9.24	10.0	92	8.94	10.0	89	66-121	3	30
tert-Butylbenzene	9.83	10.0	98	9.29	10.0	93	61-127	6	30
1,2,4-Trimethylbenzene	9.62	10.0	96	9.19	10.0	92	63-122	5	30
sec-Butylbenzene	9.75	10.0	98	9.09	10.0	91	59-128	7	30
4-Isopropyltoluene	10.2	10.0	102	9.40	10.0	94	61-128	8	30
1,3-Dichlorobenzene	10.0	10.0	100	9.42	10.0	94	70-116	6	30
1,4-Dichlorobenzene	9.87	10.0	99	9.46	10.0	95	73-115	4	30
n-Butylbenzene	9.24	10.0	92	8.55	10.0	86	55-130	8	30
1,2-Dichlorobenzene	9.82	10.0	98	9.42	10.0	94	72-115	4	30
1,2-Dibromo-3-chloropropane	8.53	10.0	85	8.89	10.0	89	55-132	4	30
1,2,4-Trichlorobenzene	8.99	10.0	90	8.36	10.0	84	58-126	7	30
Hexachlorobutadiene	9.94	10.0	99	8.91	10.0	89	57-119	11	30
Naphthalene	8.71	10.0	87	7.97	10.0	80	64-126	9	30
1,2,3-Trichlorobenzene	8.92	10.0	89	8.33	10.0	83	68-120	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Third Quarter (August) 2017 Laboratory Data Reports

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September 21, 2017

Analytical Report for Service Request No: K1708630

Jason Davendonis
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

RE: Leichner Landfill, WA / 04217030.17

Dear Jason,

Enclosed are the results of the sample(s) submitted to our laboratory August 16, 2017
For your reference, these analyses have been assigned our service request number **K1708630.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

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Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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ALS ENVIRONMENTAL

Client:	SCS Engineers	**Service Request No.:**	K1708630
Project:	Leichner Landfill, WA/ 04217030.17	**Date Received:**	08/16/17
Sample Matrix:	Ground Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Three ground water samples were received for analysis at ALS Environmental on 08/16/17. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

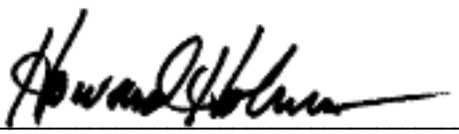
Dissolved Metals

No anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS27\0824F004.D: 1,2-Dibromo-3chloropropane. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

No other anomalies associated with the analysis of these samples were observed.

Approved by 

Chain of Custody

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CHAIN OF CUSTODY

SR# K1708630

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PAGE 1 OF 1 COC#

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 04217030.17
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE #: 503 639 9736 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐	Hex-Chrom☐	(circle) pH, Cond, Cl, SO4, PO4, F, NO2, (NO3, BOD, TSS, TDS, Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO2☐ Methane☐ Ethane☐ Ethene☐			REMARKS
LB-081517-01-SS	8/15/17	1040		W	5		X						X		X										
LB-081517-02-Dup1	8/15/17	1045		W	5		X						X		X										

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
X Standard (15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

CC Tiffany Andrews
tandrews@scsengineers.com

Samples for Metals are field filtered

Container Supply Number
81805

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Date/Time: 8/16/17 0920	Date/Time: 8/16/17 0921	Date/Time:	Date/Time:
Printed Name: David Lamadrid	Printed Name: B Peterman	Printed Name:	Printed Name:
Firm: SCS	Firm: ALS	Firm:	Firm:

PC 42

Cooler Receipt and Preservation Form

Client SCS Engineers Service Request *K17* 08630

Received: 8/16/17 Opened: 8/16/17 By: BR Unloaded: 8/16/17 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y (N) If present, were they signed and dated? Y (N)

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
0.3	0.5	—	—	+0.2	378			

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

SHORT HOLD TIME

General Chemistry

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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/17
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	08/16/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Chloride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-081517-01-5s	K1708630-001	**5.51**	0.20	2	08/16/17 15:54	8/16/17	
LB-081517-02-DUP1	K1708630-002	**5.54**	0.20	2	08/16/17 16:04	8/16/17	
Method Blank	K1708630-MB1	ND U	0.10	1	08/16/17 09:46	8/16/17	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project	Leichner Landfill,	**Date Collected:**	NA
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	NA
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Replicate Sample Summary
Chloride

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1708613-002DUP	0.10	ND U	0.50	NC	NC	20	08/16/17
Batch QC	KQ1711735-03DUP	0.10	0.98	1.0	0.989	2	20	08/16/17

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	N/A
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	N/A
		Date Analyzed:	08/16/17
		Date Extracted:	08/16/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1711735-03	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike KQ1711735-03MS			**Duplicate Matrix Spike** KQ1711735-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	0.98	4.68	4.00	92	4.70	4.00	93	90-110	<1	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	N/A
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	N/A
		Date Analyzed:	08/16/17
		Date Extracted:	08/16/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1708613-002	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1708613-002MS			K1708613-002DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	ND U	4.14	4.00	104	4.17	4.00	104	90-110	<1	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Analyzed:**	08/16/17
Sample Matrix:	WA/04217030.17 Ground Water	**Date Extracted:**	08/16/17

Lab Control Sample Summary
Chloride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	558099

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1708630-LCS	4.89	5.00	98	90-110

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/17
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	08/16/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-081517-01-5s	K1708630-001	**5.96**	0.10	2	08/16/17 15:54	8/16/17	
LB-081517-02-DUP1	K1708630-002	**6.01**	0.10	2	08/16/17 16:04	8/16/17	
Method Blank	K1708630-MB1	ND U	0.050	1	08/16/17 09:46	8/16/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project	Leichner Landfill,	**Date Collected:**	NA
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	NA
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Replicate Sample Summary
Nitrate as Nitrogen

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1708612-002DUP	0.050	ND U	ND U	NC	NC	20	08/16/17
Batch QC	K1708613-002DUP	0.050	0.229	0.230	0.230	<1	20	08/16/17

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	N/A
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	N/A
		Date Analyzed:	08/16/17
		Date Extracted:	08/16/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1708612-002	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1708612-002MS			K1708612-002DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	ND U	3.83	4.00	96	3.87	4.00	97	90-110	1	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	N/A
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	N/A
		Date Analyzed:	08/16/17
		Date Extracted:	08/16/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1708613-002	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike K1708613-002MS			**Duplicate Matrix Spike** K1708613-002DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	0.229	4.09	4.00	96	4.13	4.00	98	90-110	1	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Analyzed:**	08/16/17
Sample Matrix:	WA/04217030.17 Ground Water	**Date Extracted:**	08/16/17

Lab Control Sample Summary
Nitrate as Nitrogen

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	558099

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1708630-LCS	2.38	2.50	95	90-110

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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/17
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	08/16/17
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Solids, Total Dissolved

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
LB-081517-01-5s	K1708630-001	**172**	5.0	1	08/22/17 16:29	
LB-081517-02-DUP1	K1708630-002	**170**	5.0	1	08/22/17 16:29	
Method Blank	K1708630-MB1	ND U	5.0	1	08/22/17 16:29	
Method Blank	K1708630-MB2	ND U	5.0	1	08/22/17 16:29	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project	Leichner Landfill,	**Date Collected:**	08/15/17
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	08/16/17
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Replicate Sample Summary
Solids, Total Dissolved

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
LB-081517-01-5s	K1708630-001DUP	5.0	172	171	171	1	10	08/22/17

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Analyzed:**	08/22/17
Sample Matrix:	WA/04217030.17 Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	558671

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1708630-LCS	1600	1640	97	85-115

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/17 10:40
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	08/16/17 09:25
Sample Name:	LB-081517-01-5s	**Basis:**	NA
Lab Code:	K1708630-001		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:23	08/21/17	
Manganese	6010C	ND U	ug/L	1.1	1	08/24/17 11:23	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/17 10:45
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	08/16/17 09:25
Sample Name:	LB-081517-02-DUP1	**Basis:**	NA
Lab Code:	K1708630-002		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:26	08/21/17	
Manganese	6010C	ND U	ug/L	1.1	1	08/24/17 11:26	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	NA
Sample Matrix:	WA/04217030.17 Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1711814-02		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 10:20	08/21/17	
Manganese	6010C	ND U	ug/L	1.1	1	08/24/17 10:20	08/21/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project	Leichner Landfill,	**Date Collected:**	NA
Sample Matrix:	WA/04217030.17 Water	**Date Received:**	NA
		Date Analyzed:	08/24/17

Replicate Sample Summary

Total Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1708457-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1711814-03 Result	Average	RPD	RPD Limit
Iron	6010C	21	3280	3330	3310	2	20
Manganese	6010C	1.1	2430	2440	2440	<1	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	N/A
Sample Matrix:	WA/04217030.17 Water	**Date Received:**	N/A
		Date Analyzed:	08/24/17
		Date Extracted:	08/21/17

Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1708457-001	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA CLP-METALS ILM04.0		

Matrix Spike
KQ1711814-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	3280	4300	1000	102	75-125
Manganese	2430	2870	500	90 #	75-125

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill,
Sample Matrix: WA/04217030.17 Ground Water

Service Request: K1708630
Date Analyzed: 08/24/17

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1711814-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2450	2500	98	80-120
Manganese	6010C	1210	1250	97	80-120

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/2017
Sample Matrix:	WA/04217030.17 Ground water	**Date Received:**	08/16/2017

Volatile Organic Compounds

Sample Name:	LB-081517-01-5s	**Units:**	ug/L
Lab Code:	K1708630-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromomethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Trichlorofluoromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Acetone	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Carbon Disulfide	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Methylene Chloride	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1-Dichloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2,2-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Butanone (MEK)	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Bromochloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloroform	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Carbon Tetrachloride	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Benzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Trichloroethene (TCE)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Dibromomethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromodichloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Toluene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,2-Trichloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Hexanone	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
1,3-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Dibromochloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill,
Sample Matrix: WA/04217030.17 Ground water

Service Request: K1708630
Date Collected: 08/15/2017
Date Received: 08/16/2017

Volatile Organic Compounds

Sample Name: LB-081517-01-5s
Lab Code: K1708630-001

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Ethylbenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
m,p-Xylenes	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
o-Xylene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Styrene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromoform	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Isopropylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
n-Propylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,3-Trichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Chlorotoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
4-Chlorotoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
tert-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
sec-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
4-Isopropyltoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,3-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,4-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
n-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	*
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Hexachlorobutadiene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Naphthalene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/2017
Sample Matrix:	WA/04217030.17 Ground water	**Date Received:**	08/16/2017

Volatile Organic Compounds

Sample Name:	LB-081517-01-5s	**Units:**	ug/L
Lab Code:	K1708630-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	73-122	08/24/17	Acceptable
Toluene-d8	90	65-144	08/24/17	Acceptable
4-Bromofluorobenzene	95	68-117	08/24/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/2017
Sample Matrix:	WA/04217030.17 Ground water	**Date Received:**	08/16/2017

Volatile Organic Compounds

Sample Name:	LB-081517-02-DUP1	**Units:**	ug/L
Lab Code:	K1708630-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromomethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Trichlorofluoromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Acetone	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Carbon Disulfide	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Methylene Chloride	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1-Dichloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2,2-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Butanone (MEK)	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Bromochloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloroform	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Carbon Tetrachloride	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Benzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Trichloroethene (TCE)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Dibromomethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromodichloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Toluene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,2-Trichloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Hexanone	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
1,3-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Dibromochloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/2017
Sample Matrix:	WA/04217030.17 Ground water	**Date Received:**	08/16/2017

Volatile Organic Compounds

Sample Name:	LB-081517-02-DUP1	**Units:**	ug/L
Lab Code:	K1708630-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Ethylbenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
m,p-Xylenes	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
o-Xylene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Styrene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromoform	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Isopropylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
n-Propylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,3-Trichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Chlorotoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
4-Chlorotoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
tert-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
sec-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
4-Isopropyltoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,3-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,4-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
n-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	*
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Hexachlorobutadiene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Naphthalene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	08/15/2017
Sample Matrix:	WA/04217030.17 Ground water	**Date Received:**	08/16/2017

Volatile Organic Compounds

Sample Name:	LB-081517-02-DUP1	**Units:**	ug/L
Lab Code:	K1708630-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	73-122	08/24/17	Acceptable
Toluene-d8	90	65-144	08/24/17	Acceptable
4-Bromofluorobenzene	94	68-117	08/24/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill,
Sample Matrix: WA/04217030.17 Ground water

Service Request: K1708630
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1707444-3

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromomethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Trichlorofluoromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Acetone	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Carbon Disulfide	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Methylene Chloride	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1-Dichloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2,2-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Butanone (MEK)	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Bromochloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Chloroform	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Carbon Tetrachloride	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Benzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Trichloroethene (TCE)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Dibromomethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromodichloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
Toluene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,2-Trichloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Hexanone	ND	U	20	1	08/24/17	08/24/17	KWG1707444	
1,3-Dichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Dibromochloromethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill,
Sample Matrix: WA/04217030.17 Ground water

Service Request: K1708630
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1707444-3

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Ethylbenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
m,p-Xylenes	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
o-Xylene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Styrene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromoform	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Isopropylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
Bromobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
n-Propylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,3-Trichloropropane	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
2-Chlorotoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
4-Chlorotoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
tert-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
sec-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
4-Isopropyltoluene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,3-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,4-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
n-Butylbenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2-Dichlorobenzene	ND	U	0.50	1	08/24/17	08/24/17	KWG1707444	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	*
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Hexachlorobutadiene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
Naphthalene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/24/17	08/24/17	KWG1707444	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708630
Project:	Leichner Landfill,	**Date Collected:**	NA
Sample Matrix:	WA/04217030.17 Ground water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1707444-3	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	73-122	08/24/17	Acceptable
Toluene-d8	91	65-144	08/24/17	Acceptable
4-Bromofluorobenzene	95	68-117	08/24/17	Acceptable

Comments:

QA/QC Report

Client: SCS Engineers **Service Request:** K1708630
Project: Leichner Landfill,
Sample Matrix: WA/04217030.17 Ground water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
LB-081517-01-5s	K1708630-001	95	90	95
LB-081517-02-DUP1	K1708630-002	95	90	94
Method Blank	KWG1707444-3	94	91	95
Lab Control Sample	KWG1707444-1	99	93	98
Duplicate Lab Control Sample	KWG1707444-2	97	94	101

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: SCS Engineers
Project: Leichner Landfill,
Sample Matrix: WA/04217030.17 Ground water

Service Request: K1708630
Date Extracted: 08/24/2017
Date Analyzed: 08/24/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1707444

	Lab Control Sample KWG1707444-1 Lab Control Spike			Duplicate Lab Control Sample KWG1707444-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	5.90	10.0	59	5.95	10.0	60	32-124	1	30
Chloromethane	6.08	10.0	61	6.17	10.0	62	34-130	1	30
Bromomethane	7.22	10.0	72	7.47	10.0	75	35-113	3	30
Chloroethane	8.33	10.0	83	8.30	10.0	83	58-134	0	30
Trichlorofluoromethane	9.10	10.0	91	9.36	10.0	94	52-141	3	30
Acetone	47.0	50.0	94	51.1	50.0	102	68-135	8	30
Carbon Disulfide	17.2	20.0	86	17.5	20.0	87	46-144	1	30
Methylene Chloride	8.39	10.0	84	8.67	10.0	87	71-122	3	30
Methyl tert-Butyl Ether	9.37	10.0	94	10.2	10.0	102	54-126	8	30
trans-1,2-Dichloroethene	9.06	10.0	91	9.25	10.0	93	67-125	2	30
1,1-Dichloroethane	9.12	10.0	91	9.34	10.0	93	68-132	2	30
2,2-Dichloropropane	8.76	10.0	88	8.82	10.0	88	37-145	1	30
cis-1,2-Dichloroethene	8.99	10.0	90	9.45	10.0	95	71-118	5	30
2-Butanone (MEK)	43.3	50.0	87	49.6	50.0	99	71-149	14	30
Bromochloromethane	9.29	10.0	93	9.99	10.0	100	75-131	7	30
Chloroform	9.62	10.0	96	9.89	10.0	99	70-129	3	30
1,1,1-Trichloroethane (TCA)	9.42	10.0	94	9.69	10.0	97	59-136	3	30
Carbon Tetrachloride	9.62	10.0	96	9.86	10.0	99	55-140	2	30
1,1-Dichloropropene	9.49	10.0	95	9.66	10.0	97	59-134	2	30
Benzene	8.96	10.0	90	9.24	10.0	92	69-124	3	30
1,2-Dichloroethane (EDC)	10.3	10.0	103	11.0	10.0	110	56-142	7	30
Trichloroethene (TCE)	9.64	10.0	96	9.95	10.0	100	67-128	3	30
1,2-Dichloropropane	8.86	10.0	89	9.20	10.0	92	67-126	4	30
Dibromomethane	9.08	10.0	91	9.62	10.0	96	69-128	6	30
Bromodichloromethane	9.12	10.0	91	9.50	10.0	95	63-129	4	30
cis-1,3-Dichloropropene	8.43	10.0	84	8.73	10.0	87	62-132	3	30
4-Methyl-2-pentanone (MIBK)	44.4	50.0	89	49.2	50.0	98	64-134	10	30
Toluene	9.03	10.0	90	9.28	10.0	93	69-124	3	30
trans-1,3-Dichloropropene	7.67	10.0	77	8.11	10.0	81	59-125	6	30
1,1,2-Trichloroethane	8.68	10.0	87	9.45	10.0	95	74-118	8	30
Tetrachloroethene (PCE)	9.46	10.0	95	9.70	10.0	97	62-126	3	30
2-Hexanone	45.1	50.0	90	49.7	50.0	99	59-131	10	30
1,3-Dichloropropane	8.34	10.0	83	8.89	10.0	89	75-116	6	30
Dibromochloromethane	8.36	10.0	84	8.81	10.0	88	67-126	5	30
1,2-Dibromoethane (EDB)	8.38	10.0	84	9.00	10.0	90	74-118	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: SCS Engineers
Project: Leichner Landfill,
Sample Matrix: WA/04217030.17 Ground water

Service Request: K1708630
Date Extracted: 08/24/2017
Date Analyzed: 08/24/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1707444

	Lab Control Sample KWG1707444-1 Lab Control Spike			Duplicate Lab Control Sample KWG1707444-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	9.51	10.0	95	9.85	10.0	99	72-116	4	30
Ethylbenzene	9.26	10.0	93	9.46	10.0	95	67-121	2	30
1,1,1,2-Tetrachloroethane	8.38	10.0	84	8.98	10.0	90	66-124	7	30
m,p-Xylenes	18.7	20.0	94	19.5	20.0	98	69-121	4	30
o-Xylene	9.22	10.0	92	9.49	10.0	95	71-119	3	30
Styrene	9.00	10.0	90	9.24	10.0	92	74-121	3	30
Bromoform	7.65	10.0	77	8.47	10.0	85	52-144	10	30
Isopropylbenzene	9.56	10.0	96	9.81	10.0	98	67-129	3	30
1,1,2,2-Tetrachloroethane	7.65	10.0	77	8.23	10.0	82	70-127	7	30
Bromobenzene	8.78	10.0	88	9.07	10.0	91	72-116	3	30
n-Propylbenzene	9.00	10.0	90	9.08	10.0	91	61-124	1	30
1,2,3-Trichloropropane	8.14	10.0	81	9.11	10.0	91	69-123	11	30
2-Chlorotoluene	8.83	10.0	88	8.93	10.0	89	55-131	1	30
1,3,5-Trimethylbenzene	9.30	10.0	93	9.25	10.0	93	62-126	1	30
4-Chlorotoluene	9.10	10.0	91	9.25	10.0	93	66-121	2	30
tert-Butylbenzene	9.42	10.0	94	9.54	10.0	95	61-127	1	30
1,2,4-Trimethylbenzene	9.58	10.0	96	9.77	10.0	98	63-122	2	30
sec-Butylbenzene	9.51	10.0	95	9.51	10.0	95	59-128	0	30
4-Isopropyltoluene	9.91	10.0	99	9.81	10.0	98	61-128	1	30
1,3-Dichlorobenzene	9.36	10.0	94	9.49	10.0	95	70-116	1	30
1,4-Dichlorobenzene	9.27	10.0	93	9.48	10.0	95	73-115	2	30
n-Butylbenzene	9.54	10.0	95	9.38	10.0	94	55-130	2	30
1,2-Dichlorobenzene	9.34	10.0	93	9.43	10.0	94	72-115	1	30
1,2-Dibromo-3-chloropropane	7.47	10.0	75	7.66	10.0	77	55-132	3	30
1,2,4-Trichlorobenzene	9.84	10.0	98	10.2	10.0	102	58-126	4	30
Hexachlorobutadiene	9.40	10.0	94	9.23	10.0	92	57-119	2	30
Naphthalene	8.97	10.0	90	9.67	10.0	97	64-126	8	30
1,2,3-Trichlorobenzene	9.62	10.0	96	9.92	10.0	99	68-120	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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September 21, 2017

Analytical Report for Service Request No: K1708663

Jason Davendonis
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

RE: Leichner Landfill / 0421703013

Dear Jason,

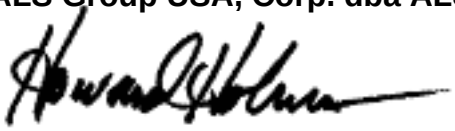
Enclosed are the results of the sample(s) submitted to our laboratory August 17, 2017
For your reference, these analyses have been assigned our service request number **K1708663.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Howard Holmes
Project Manager

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Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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ALS ENVIRONMENTAL

Client:	SCS Engineers	**Service Request No.:**	K1708663
Project:	Leichner Landfill/ 04217030133	**Date Received:**	08/17/17
Sample Matrix:	Ground Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Eight ground water samples were received for analysis at ALS Environmental on 08/17/17. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

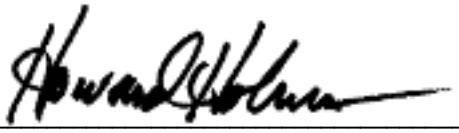
Dissolved Metals

No anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS27\0821F026.D: Chloromethane, Methylene Chloride, 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane and 1,2-Dibromo-3-chloropropane. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

No other anomalies associated with the analysis of these samples were observed.

Approved by 

Chain of Custody

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CHAIN OF CUSTODY

SR# K1708663

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PAGE 1 OF 1 COC#

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 042170361.3
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE # / FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☒ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond, (NO3) BOD, TSS, (TDS) Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases CO2☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐				REMARKS
LB-081617-07-19	8/16/17	1440		W	5		X						X		X										
LB-081617-08-FB1	8/16/17	1500		W	5		X						X		X										
LB-081617-09-GS	8/16/17	1530		W	5		X						X		X										
LB-081617-06-10SA	8/16/17	1340		W	5		X						X		X										
LB-081617-04-13I	8/16/17	1105		W	5		X						X		X										
LB-081617-05-26I	8/16/17	1205		W	5		X						X		X										
LB-081617-03-27I	8/16/17	1005		W	5		X						X		X										

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
✓ Standard (15 working days)
___ Provide FAX Results
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu (Fe) Pb Mg (Mn) Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

CC tandrews@scsengineers.com

Samples are field filtered for Metals

Supplied trip blanks contained bubbles

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

Container Supply Number: 81805

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature: [signature]	Signature:
Date/Time: 8/17/17 0	Date/Time: 8/17/17 1000	Date/Time: 8/17/17 1130	Date/Time:
Printed Name: JASON DAVENDORF	Printed Name: [signature]	Printed Name: GEOFF GRAVES	Printed Name:
Firm: SCS	Firm: [illegible]	Firm: ALS	Firm:

Rec'd @ LAB

PC HH

Cooler Receipt and Preservation Form

Client SCS Service Request K17 08663

Received: 8/17/17 Opened: 8/17/17 By: CG Unloaded: 8/17/17 By: CG

Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*

Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*

Were custody seals on coolers? NA Y (N) If yes, how many and where? _____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number NA (NA)	Filed
5.7	5.7	3.5	3.5	0.0	380	81805		

Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____

Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N

Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N

Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N

Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N

Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N

Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N

Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

s, *Discrepancies, & Resolutions:* Rec'd 1 trip blank vials.

SHORT HOLD TIME

25/16 *Page* ____ *of* ____

General Chemistry

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www.alsglobal.com

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17
Sample Matrix:	Ground Water	**Date Received:**	08/17/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Chloride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-081617-07-1S	K1708663-001	**5.71**	0.20	2	08/17/17 15:10	8/17/17	
LB-081617-08-FB1	K1708663-002	ND U	0.20	2	08/17/17 15:20	8/17/17	
LB-081617-09-6S	K1708663-003	**6.47**	0.20	2	08/17/17 16:01	8/17/17	
LB-081617-06-10SR	K1708663-004	**26.0**	2.0	20	08/17/17 16:52	8/17/17	
LB-081617-04-13I	K1708663-005	**8.27**	0.20	2	08/17/17 16:21	8/17/17	
LB-081617-05-26I	K1708663-006	**7.38**	0.20	2	08/17/17 16:32	8/17/17	
LB-081617-03-27I	K1708663-007	**22.1**	2.0	20	08/17/17 18:04	8/17/17	
Method Blank	K1708663-MB1	ND U	0.10	1	08/17/17 13:59	8/17/17	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project	Leichner Landfill/0421703013	**Date Collected:**	08/16/17
Sample Matrix:	Ground Water	**Date Received:**	08/17/17
		Date Analyzed:	08/17/17

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	LB-081617-07-1S	**Units:**	mg/L
Lab Code:	K1708663-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1708663-001DUP Result	Average	RPD	RPD Limit
Chloride	300.0	0.20	5.71	5.69	5.70	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17
Sample Matrix:	Ground Water	**Date Received:**	08/17/17
		Date Analyzed:	08/17/17
		Date Extracted:	08/17/17

Duplicate Matrix Spike Summary
Chloride

Sample Name:	LB-081617-07-1S	**Units:**	mg/L
Lab Code:	K1708663-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1708663-001MS			K1708663-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	5.71	15.3	10.0	96	15.3	10.0	96	90-110	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Analyzed:**	08/17/17
Sample Matrix:	Ground Water	**Date Extracted:**	08/17/17

Lab Control Sample Summary
Chloride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	558233

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1708663-LCS1	4.89	5.00	98	90-110

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17
Sample Matrix:	Ground Water	**Date Received:**	08/17/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
LB-081617-07-1S	K1708663-001	**4.13**	0.10	2	08/17/17 15:10	8/17/17	
LB-081617-08-FB1	K1708663-002	ND U	0.10	2	08/17/17 15:20	8/17/17	
LB-081617-09-6S	K1708663-003	**0.66**	0.10	2	08/17/17 16:01	8/17/17	
LB-081617-06-10SR	K1708663-004	**0.96**	0.10	2	08/17/17 16:11	8/17/17	
LB-081617-04-13I	K1708663-005	**0.97**	0.10	2	08/17/17 16:21	8/17/17	
LB-081617-05-26I	K1708663-006	**2.92**	0.10	2	08/17/17 16:32	8/17/17	
LB-081617-03-27I	K1708663-007	ND U	0.10	2	08/17/17 16:42	8/17/17	
Method Blank	K1708663-MB1	ND U	0.050	1	08/17/17 13:59	8/17/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project	Leichner Landfill/0421703013	**Date Collected:**	08/16/17
Sample Matrix:	Ground Water	**Date Received:**	08/17/17
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Replicate Sample Summary

Nitrate as Nitrogen

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
LB-081617-07-1S	K1708663-001DUP	0.10	4.13	4.14	4.14	<1	20	08/17/17
Batch QC	K1708664-005DUP	0.10	0.17	0.17	0.170	<1	20	08/17/17

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	N/A
Sample Matrix:	Ground Water	**Date Received:**	N/A
		Date Analyzed:	08/17/17
		Date Extracted:	08/17/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1708664-005	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1708664-005MS			K1708664-005DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	0.17	10.1	10.0	99	10.1	10.0	99	90-110	<1	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17
Sample Matrix:	Ground Water	**Date Received:**	08/17/17
		Date Analyzed:	08/17/17
		Date Extracted:	08/17/17

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	LB-081617-07-1S	**Units:**	mg/L
Lab Code:	K1708663-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1708663-001MS			K1708663-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	4.13	14.4	10.0	102	14.4	10.0	103	90-110	<1	20

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Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Analyzed:**	08/17/17
Sample Matrix:	Ground Water	**Date Extracted:**	08/17/17

Lab Control Sample Summary
Nitrate as Nitrogen

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	558233

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1708663-LCS1	2.42	2.50	97	90-110

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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17
Sample Matrix:	Ground Water	**Date Received:**	08/17/17
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Solids, Total Dissolved

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
LB-081617-07-1S	K1708663-001	**172**	5.0	1	08/22/17 16:29	
LB-081617-08-FB1	K1708663-002	**1.0**	1.0	1	08/22/17 21:45	
LB-081617-09-6S	K1708663-003	**109**	5.0	1	08/22/17 21:45	
LB-081617-06-10SR	K1708663-004	**288**	5.0	1	08/22/17 21:45	
LB-081617-04-13I	K1708663-005	**167**	5.0	1	08/22/17 21:45	
LB-081617-05-26I	K1708663-006	**161**	5.0	1	08/22/17 21:45	
LB-081617-03-27I	K1708663-007	**296**	5.0	1	08/22/17 21:45	
Method Blank	K1708663-MB1	ND U	1.0	1	08/22/17 21:45	
Method Blank	K1708663-MB2	ND U	5.0	1	08/22/17 16:29	
Method Blank	K1708663-MB3	ND U	5.0	1	08/22/17 16:29	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project	Leichner Landfill/0421703013	**Date Collected:**	08/16/17
Sample Matrix:	Ground Water	**Date Received:**	08/17/17
Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Replicate Sample Summary
Solids, Total Dissolved

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1708630-001DUP	5.0	172	171	171	1	10	08/22/17
LB-081617-03-27I	K1708663-007DUP	5.0	296	294	295	<1	10	08/22/17

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Analyzed:**	08/22/17
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	558679

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1708663-LCS1	1570	1640	96	85-115

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Analyzed:**	08/22/17
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method:	SM 2540 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	558671

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1708663-LCS2	1600	1640	97	85-115

Metals

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Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17 14:40
Sample Matrix:	Ground Water	**Date Received:**	08/17/17 11:30
Sample Name:	LB-081617-07-1S	**Basis:**	NA
Lab Code:	K1708663-001		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:28	08/21/17	
Manganese	6010C	ND U	ug/L	1.1	1	08/24/17 11:28	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17 15:00
Sample Matrix:	Ground Water	**Date Received:**	08/17/17 11:30
Sample Name:	LB-081617-08-FB1	**Basis:**	NA
Lab Code:	K1708663-002		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:31	08/21/17	
Manganese	6010C	ND U	ug/L	1.1	1	08/24/17 11:31	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17 15:30
Sample Matrix:	Ground Water	**Date Received:**	08/17/17 11:30
Sample Name:	LB-081617-09-6S	**Basis:**	NA
Lab Code:	K1708663-003		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:34	08/21/17	
Manganese	6010C	ND U	ug/L	1.1	1	08/24/17 11:34	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17 13:40
Sample Matrix:	Ground Water	**Date Received:**	08/17/17 11:30
Sample Name:	LB-081617-06-10SR	**Basis:**	NA
Lab Code:	K1708663-004		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:36	08/21/17	
Manganese	6010C	**4.1**	ug/L	1.1	1	08/24/17 11:36	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17 11:05
Sample Matrix:	Ground Water	**Date Received:**	08/17/17 11:30
Sample Name:	LB-081617-04-13I	**Basis:**	NA
Lab Code:	K1708663-005		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:50	08/21/17	
Manganese	6010C	**3.0**	ug/L	1.1	1	08/24/17 11:50	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17 12:05
Sample Matrix:	Ground Water	**Date Received:**	08/17/17 11:30
Sample Name:	LB-081617-05-26I	**Basis:**	NA
Lab Code:	K1708663-006		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:52	08/21/17	
Manganese	6010C	ND U	ug/L	1.1	1	08/24/17 11:52	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/17 10:05
Sample Matrix:	Ground Water	**Date Received:**	08/17/17 11:30
Sample Name:	LB-081617-03-27I	**Basis:**	NA
Lab Code:	K1708663-007		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 11:55	08/21/17	
Manganese	6010C	**252**	ug/L	1.1	1	08/24/17 11:55	08/21/17	

Analytical Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1711814-02		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	08/24/17 10:20	08/21/17	
Manganese	6010C	ND U	ug/L	1.1	1	08/24/17 10:20	08/21/17	

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project	Leichner Landfill/0421703013	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	08/24/17

Replicate Sample Summary
Total Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1708457-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1711814-03 Result	Average	RPD	RPD Limit
Iron	6010C	21	3280	3330	3300	2	20
Manganese	6010C	1.1	2430	2440	2430	<1	20

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	08/24/17
		Date Extracted:	08/21/17

Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1708457-001	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA CLP-METALS ILM04.0		

Matrix Spike
KQ1711814-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	3280	4300	1000	102	75-125
Manganese	2430	2870	500	90 #	75-125

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QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Analyzed:**	08/24/17
Sample Matrix:	Ground Water		

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1711814-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2450	2500	98	80-120
Manganese	6010C	1210	1250	97	80-120

Volatile Organic Compounds

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Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-07-1S	**Units:**	ug/L
Lab Code:	K1708663-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
Bromomethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Trichlorofluoromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Acetone	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Carbon Disulfide	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Methylene Chloride	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	*
Methyl tert-Butyl Ether	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1-Dichloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2,2-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2-Butanone (MEK)	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Bromochloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloroform	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Carbon Tetrachloride	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Benzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Trichloroethene (TCE)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Dibromomethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Bromodichloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Toluene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,2-Trichloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2-Hexanone	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
1,3-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Dibromochloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-07-1S	**Units:**	ug/L
Lab Code:	K1708663-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Ethylbenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
m,p-Xylenes	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
o-Xylene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Styrene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Bromoform	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Isopropylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
Bromobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
n-Propylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,3-Trichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
2-Chlorotoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
4-Chlorotoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
tert-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
sec-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
4-Isopropyltoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,3-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,4-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
n-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	*
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
Hexachlorobutadiene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
Naphthalene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-07-1S	**Units:**	ug/L
Lab Code:	K1708663-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	73-122	08/21/17	Acceptable
Toluene-d8	89	65-144	08/21/17	Acceptable
4-Bromofluorobenzene	94	68-117	08/21/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-08-FB1	**Units:**	ug/L
Lab Code:	K1708663-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
Bromomethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Trichlorofluoromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Acetone	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Carbon Disulfide	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Methylene Chloride	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	*
Methyl tert-Butyl Ether	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1-Dichloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2,2-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2-Butanone (MEK)	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Bromochloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloroform	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Carbon Tetrachloride	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Benzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Trichloroethene (TCE)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Dibromomethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Bromodichloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Toluene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,2-Trichloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2-Hexanone	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
1,3-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Dibromochloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-08-FB1	**Units:**	ug/L
Lab Code:	K1708663-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Ethylbenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
m,p-Xylenes	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
o-Xylene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Styrene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Bromoform	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Isopropylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
Bromobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
n-Propylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,3-Trichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
2-Chlorotoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
4-Chlorotoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
tert-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
sec-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
4-Isopropyltoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,3-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,4-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
n-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	*
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
Hexachlorobutadiene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
Naphthalene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-08-FB1	**Units:**	ug/L
Lab Code:	K1708663-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	73-122	08/21/17	Acceptable
Toluene-d8	90	65-144	08/21/17	Acceptable
4-Bromofluorobenzene	95	68-117	08/21/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-09-6S	**Units:**	ug/L
Lab Code:	K1708663-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichlorofluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Acetone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Carbon Disulfide	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Methylene Chloride	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Butanone (MEK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Bromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Carbon Tetrachloride	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Benzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichloroethene (TCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromodichloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Toluene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,2-Trichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Hexanone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-09-6S	**Units:**	ug/L
Lab Code:	K1708663-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Ethylbenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
m,p-Xylenes	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
o-Xylene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Styrene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromoform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Isopropylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
n-Propylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
tert-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
sec-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Isopropyltoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,4-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
n-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Hexachlorobutadiene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Naphthalene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-09-6S	**Units:**	ug/L
Lab Code:	K1708663-003	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	73-122	08/22/17	Acceptable
Toluene-d8	93	65-144	08/22/17	Acceptable
4-Bromofluorobenzene	98	68-117	08/22/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-06-10SR	**Units:**	ug/L
Lab Code:	K1708663-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichlorofluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Acetone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Carbon Disulfide	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Methylene Chloride	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Butanone (MEK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Bromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Carbon Tetrachloride	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Benzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichloroethene (TCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromodichloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Toluene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,2-Trichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Hexanone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-06-10SR	**Units:**	ug/L
Lab Code:	K1708663-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Ethylbenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
m,p-Xylenes	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
o-Xylene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Styrene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromoform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Isopropylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
n-Propylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
tert-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
sec-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Isopropyltoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,4-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
n-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Hexachlorobutadiene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Naphthalene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-06-10SR	**Units:**	ug/L
Lab Code:	K1708663-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	73-122	08/22/17	Acceptable
Toluene-d8	92	65-144	08/22/17	Acceptable
4-Bromofluorobenzene	97	68-117	08/22/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-04-13I	**Units:**	ug/L
Lab Code:	K1708663-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichlorofluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Acetone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Carbon Disulfide	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Methylene Chloride	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Butanone (MEK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Bromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Carbon Tetrachloride	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Benzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichloroethene (TCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromodichloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Toluene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,2-Trichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Hexanone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-04-13I	**Units:**	ug/L
Lab Code:	K1708663-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Ethylbenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
m,p-Xylenes	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
o-Xylene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Styrene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromoform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Isopropylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
n-Propylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
tert-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
sec-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Isopropyltoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,4-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
n-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Hexachlorobutadiene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Naphthalene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-04-13I	**Units:**	ug/L
Lab Code:	K1708663-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	73-122	08/22/17	Acceptable
Toluene-d8	94	65-144	08/22/17	Acceptable
4-Bromofluorobenzene	99	68-117	08/22/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-05-26I	**Units:**	ug/L
Lab Code:	K1708663-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichlorofluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Acetone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Carbon Disulfide	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Methylene Chloride	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Butanone (MEK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Bromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Carbon Tetrachloride	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Benzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichloroethene (TCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromodichloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Toluene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,2-Trichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Hexanone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-05-26I	**Units:**	ug/L
Lab Code:	K1708663-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Ethylbenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
m,p-Xylenes	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
o-Xylene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Styrene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromoform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Isopropylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
n-Propylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
tert-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
sec-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Isopropyltoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,4-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
n-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Hexachlorobutadiene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Naphthalene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-05-26I	**Units:**	ug/L
Lab Code:	K1708663-006	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	73-122	08/22/17	Acceptable
Toluene-d8	95	65-144	08/22/17	Acceptable
4-Bromofluorobenzene	98	68-117	08/22/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-03-27I	**Units:**	ug/L
Lab Code:	K1708663-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichlorofluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Acetone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Carbon Disulfide	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Methylene Chloride	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Butanone (MEK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Bromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Carbon Tetrachloride	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Benzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichloroethene (TCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromodichloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Toluene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,2-Trichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Hexanone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-03-27I	**Units:**	ug/L
Lab Code:	K1708663-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Ethylbenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
m,p-Xylenes	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
o-Xylene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Styrene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromoform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Isopropylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
n-Propylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
tert-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
sec-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Isopropyltoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,4-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
n-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Hexachlorobutadiene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Naphthalene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	LB-081617-03-27I	**Units:**	ug/L
Lab Code:	K1708663-007	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	73-122	08/22/17	Acceptable
Toluene-d8	94	65-144	08/22/17	Acceptable
4-Bromofluorobenzene	96	68-117	08/22/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1708663-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichlorofluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Acetone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Carbon Disulfide	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Methylene Chloride	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Butanone (MEK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Bromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Carbon Tetrachloride	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Benzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichloroethene (TCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromodichloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Toluene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,2-Trichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Hexanone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1708663-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Ethylbenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
m,p-Xylenes	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
o-Xylene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Styrene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromoform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Isopropylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
n-Propylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
tert-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
sec-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Isopropyltoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,4-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
n-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Hexachlorobutadiene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Naphthalene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	08/16/2017
Sample Matrix:	Ground water	**Date Received:**	08/17/2017

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1708663-008	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	73-122	08/22/17	Acceptable
Toluene-d8	94	65-144	08/22/17	Acceptable
4-Bromofluorobenzene	98	68-117	08/22/17	Acceptable

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill/0421703013
Sample Matrix: Water

Service Request: K1708663
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1707311-3

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
Bromomethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Trichlorofluoromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Acetone	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Carbon Disulfide	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Methylene Chloride	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	*
Methyl tert-Butyl Ether	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1-Dichloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2,2-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2-Butanone (MEK)	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Bromochloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Chloroform	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Carbon Tetrachloride	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Benzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Trichloroethene (TCE)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Dibromomethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Bromodichloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
Toluene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,2-Trichloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
2-Hexanone	ND	U	20	1	08/21/17	08/21/17	KWG1707311	
1,3-Dichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Dibromochloromethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	

Comments:

Analytical Results

Client: SCS Engineers
Project: Leichner Landfill/0421703013
Sample Matrix: Water

Service Request: K1708663
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1707311-3

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Ethylbenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
m,p-Xylenes	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
o-Xylene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Styrene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Bromoform	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
Isopropylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
Bromobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
n-Propylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,3-Trichloropropane	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	*
2-Chlorotoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
4-Chlorotoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
tert-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
sec-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
4-Isopropyltoluene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,3-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,4-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
n-Butylbenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2-Dichlorobenzene	ND	U	0.50	1	08/21/17	08/21/17	KWG1707311	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	*
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
Hexachlorobutadiene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
Naphthalene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/21/17	08/21/17	KWG1707311	

* See Case Narrative

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1707311-3	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	73-122	08/21/17	Acceptable
Toluene-d8	91	65-144	08/21/17	Acceptable
4-Bromofluorobenzene	94	68-117	08/21/17	Acceptable

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1707486-5	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichlorofluoromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Acetone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Carbon Disulfide	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Methylene Chloride	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Methyl tert-Butyl Ether	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,2-Dichloroethene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Butanone (MEK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Bromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Chloroform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Carbon Tetrachloride	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Benzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Trichloroethene (TCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromomethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromodichloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
cis-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
Toluene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
trans-1,3-Dichloropropene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,2-Trichloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Tetrachloroethene (PCE)	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Hexanone	ND	U	20	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Dibromochloromethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1707486-5	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Ethylbenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
m,p-Xylenes	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
o-Xylene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Styrene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromoform	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Isopropylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
Bromobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
n-Propylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichloropropane	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
2-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3,5-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Chlorotoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
tert-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trimethylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
sec-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
4-Isopropyltoluene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,3-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,4-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
n-Butylbenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2-Dichlorobenzene	ND	U	0.50	1	08/22/17	08/22/17	KWG1707486	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,4-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Hexachlorobutadiene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
Naphthalene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	
1,2,3-Trichlorobenzene	ND	U	2.0	1	08/22/17	08/22/17	KWG1707486	

Comments:

Analytical Results

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1707486-5	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	73-122	08/22/17	Acceptable
Toluene-d8	94	65-144	08/22/17	Acceptable
4-Bromofluorobenzene	98	68-117	08/22/17	Acceptable

Comments:

Client: SCS Engineers **Service Request:** K1708663
Project: Leichner Landfill/0421703013
Sample Matrix: Ground water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
LB-081617-07-1S	K1708663-001	99	89	94
LB-081617-08-FB1	K1708663-002	100	90	95
LB-081617-09-6S	K1708663-003	102	93	98
LB-081617-06-10SR	K1708663-004	101	92	97
LB-081617-04-13I	K1708663-005	99	94	99
LB-081617-05-26I	K1708663-006	101	95	98
LB-081617-03-27I	K1708663-007	101	94	96
Trip Blank	K1708663-008	101	94	98
Batch QC	K1708734-001	101	95	96
Method Blank	KWG1707311-3	100	91	94
Method Blank	KWG1707486-5	102	94	98
Batch QCMS	KWG1707486-1	96	96	101
Batch QCDMS	KWG1707486-2	100	99	100
Lab Control Sample	KWG1707311-1	97	93	99
Duplicate Lab Control Sample	KWG1707311-2	98	92	98
Lab Control Sample	KWG1707486-3	97	97	100
Duplicate Lab Control Sample	KWG1707486-4	98	96	103

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Extracted:**	08/22/2017
Sample Matrix:	Water	**Date Analyzed:**	08/22/2017 - 08/23/2017

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1708734-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1707486

		Batch QCMS KWG1707486-1 Matrix Spike			Batch QCDMS KWG1707486-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chloroform	ND	10.3	10.0	103	10.2	10.0	102	64-133	1	30
Carbon Tetrachloride	ND	10.3	10.0	103	10.2	10.0	102	53-161	1	30
Benzene	ND	9.90	10.0	99	9.78	10.0	98	63-144	1	30
Trichloroethene (TCE)	ND	9.92	10.0	99	9.52	10.0	95	53-139	4	30
Bromodichloromethane	ND	10.4	10.0	104	10.5	10.0	105	61-134	1	30
Toluene	ND	9.92	10.0	99	9.87	10.0	99	71-136	1	30
1,1,2-Trichloroethane	ND	10.8	10.0	108	11.0	10.0	110	74-124	2	30
2-Hexanone	ND	60.2	50.0	120	64.7	50.0	129	53-132	7	30
Chlorobenzene	ND	10.3	10.0	103	10.1	10.0	101	69-126	3	30
Ethylbenzene	ND	10.1	10.0	101	9.93	10.0	99	66-136	2	30
1,2,3-Trichloropropane	ND	12.1	10.0	121	12.4	10.0	124	71-127	3	30
2-Chlorotoluene	ND	11.1	10.0	111	11.1	10.0	111	55-139	0	30
1,2-Dichlorobenzene	ND	11.3	10.0	113	11.4	10.0	114	72-119	1	30
Naphthalene	ND	11.9	10.0	119	13.1	10.0	131	52-147	10	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Extracted:**	08/21/2017
Sample Matrix:	Water	**Date Analyzed:**	08/21/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1707311

	Lab Control Sample KWG1707311-1 Lab Control Spike			Duplicate Lab Control Sample KWG1707311-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	5.79	10.0	58	5.37	10.0	54	32-124	8	30
Chloromethane	6.07	10.0	61	5.94	10.0	59	34-130	2	30
Bromomethane	7.72	10.0	77	7.43	10.0	74	35-113	4	30
Chloroethane	7.42	10.0	74	7.38	10.0	74	58-134	1	30
Trichlorofluoromethane	8.60	10.0	86	8.17	10.0	82	52-141	5	30
Acetone	45.2	50.0	90	49.4	50.0	99	68-135	9	30
Carbon Disulfide	17.8	20.0	89	17.1	20.0	85	46-144	4	30
Methylene Chloride	8.26	10.0	83	8.12	10.0	81	71-122	2	30
Methyl tert-Butyl Ether	9.02	10.0	90	9.56	10.0	96	54-126	6	30
trans-1,2-Dichloroethene	8.87	10.0	89	8.32	10.0	83	67-125	6	30
1,1-Dichloroethane	9.03	10.0	90	8.68	10.0	87	68-132	4	30
2,2-Dichloropropane	10.0	10.0	100	9.54	10.0	95	37-145	5	30
cis-1,2-Dichloroethene	8.99	10.0	90	8.87	10.0	89	71-118	1	30
2-Butanone (MEK)	41.3	50.0	83	44.6	50.0	89	71-149	8	30
Bromochloromethane	9.21	10.0	92	9.39	10.0	94	75-131	2	30
Chloroform	9.60	10.0	96	9.31	10.0	93	70-129	3	30
1,1,1-Trichloroethane (TCA)	9.65	10.0	97	9.07	10.0	91	59-136	6	30
Carbon Tetrachloride	10.0	10.0	100	9.66	10.0	97	55-140	4	30
1,1-Dichloropropene	9.07	10.0	91	8.51	10.0	85	59-134	6	30
Benzene	8.64	10.0	86	8.49	10.0	85	69-124	2	30
1,2-Dichloroethane (EDC)	10.1	10.0	101	10.2	10.0	102	56-142	1	30
Trichloroethene (TCE)	9.18	10.0	92	8.64	10.0	86	67-128	6	30
1,2-Dichloropropane	8.77	10.0	88	8.48	10.0	85	67-126	3	30
Dibromomethane	8.80	10.0	88	9.12	10.0	91	69-128	4	30
Bromodichloromethane	9.65	10.0	97	9.64	10.0	96	63-129	0	30
cis-1,3-Dichloropropene	9.01	10.0	90	8.89	10.0	89	62-132	1	30
4-Methyl-2-pentanone (MIBK)	40.5	50.0	81	44.6	50.0	89	64-134	10	30
Toluene	8.52	10.0	85	8.31	10.0	83	69-124	2	30
trans-1,3-Dichloropropene	9.08	10.0	91	8.96	10.0	90	59-125	1	30
1,1,2-Trichloroethane	8.88	10.0	89	9.13	10.0	91	74-118	3	30
Tetrachloroethene (PCE)	9.41	10.0	94	8.86	10.0	89	62-126	6	30
2-Hexanone	43.4	50.0	87	43.4	50.0	87	59-131	0	30
1,3-Dichloropropane	8.57	10.0	86	8.52	10.0	85	75-116	1	30
Dibromochloromethane	9.41	10.0	94	9.46	10.0	95	67-126	1	30
1,2-Dibromoethane (EDB)	8.43	10.0	84	8.61	10.0	86	74-118	2	30

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Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Extracted:**	08/21/2017
Sample Matrix:	Water	**Date Analyzed:**	08/21/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1707311

	Lab Control Sample KWG1707311-1 Lab Control Spike			Duplicate Lab Control Sample KWG1707311-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	9.53	10.0	95	9.27	10.0	93	72-116	3	30
Ethylbenzene	9.22	10.0	92	8.71	10.0	87	67-121	6	30
1,1,1,2-Tetrachloroethane	8.93	10.0	89	8.88	10.0	89	66-124	1	30
m,p-Xylenes	18.6	20.0	93	17.9	20.0	90	69-121	4	30
o-Xylene	9.15	10.0	92	8.73	10.0	87	71-119	5	30
Styrene	8.95	10.0	90	8.44	10.0	84	74-121	6	30
Bromoform	9.23	10.0	92	9.53	10.0	95	52-144	3	30
Isopropylbenzene	9.28	10.0	93	8.82	10.0	88	67-129	5	30
1,1,2,2-Tetrachloroethane	8.07	10.0	81	8.45	10.0	85	70-127	5	30
Bromobenzene	8.45	10.0	85	8.26	10.0	83	72-116	2	30
n-Propylbenzene	8.82	10.0	88	8.31	10.0	83	61-124	6	30
1,2,3-Trichloropropane	8.03	10.0	80	8.60	10.0	86	69-123	7	30
2-Chlorotoluene	8.53	10.0	85	8.21	10.0	82	55-131	4	30
1,3,5-Trimethylbenzene	9.15	10.0	92	8.66	10.0	87	62-126	6	30
4-Chlorotoluene	9.00	10.0	90	8.60	10.0	86	66-121	5	30
tert-Butylbenzene	8.96	10.0	90	8.58	10.0	86	61-127	4	30
1,2,4-Trimethylbenzene	9.49	10.0	95	9.03	10.0	90	63-122	5	30
sec-Butylbenzene	9.14	10.0	91	8.69	10.0	87	59-128	5	30
4-Isopropyltoluene	9.66	10.0	97	9.12	10.0	91	61-128	6	30
1,3-Dichlorobenzene	9.30	10.0	93	8.89	10.0	89	70-116	5	30
1,4-Dichlorobenzene	9.21	10.0	92	8.88	10.0	89	73-115	4	30
n-Butylbenzene	9.40	10.0	94	8.80	10.0	88	55-130	7	30
1,2-Dichlorobenzene	9.13	10.0	91	9.05	10.0	91	72-115	1	30
1,2-Dibromo-3-chloropropane	7.78	10.0	78	8.77	10.0	88	55-132	12	30
1,2,4-Trichlorobenzene	9.51	10.0	95	9.44	10.0	94	58-126	1	30
Hexachlorobutadiene	9.48	10.0	95	8.75	10.0	88	57-119	8	30
Naphthalene	8.63	10.0	86	9.26	10.0	93	64-126	7	30
1,2,3-Trichlorobenzene	9.37	10.0	94	9.48	10.0	95	68-120	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Extracted:**	08/22/2017
Sample Matrix:	Water	**Date Analyzed:**	08/22/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1707486

	Lab Control Sample KWG1707486-3 Lab Control Spike			Duplicate Lab Control Sample KWG1707486-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	5.60	10.0	56	5.28	10.0	53	32-124	6	30
Chloromethane	7.31	10.0	73	6.94	10.0	69	34-130	5	30
Bromomethane	8.34	10.0	83	8.12	10.0	81	35-113	3	30
Chloroethane	10.5	10.0	105	9.94	10.0	99	58-134	5	30
Trichlorofluoromethane	8.02	10.0	80	7.73	10.0	77	52-141	4	30
Acetone	53.8	50.0	108	55.0	50.0	110	68-135	2	30
Carbon Disulfide	20.6	20.0	103	18.6	20.0	93	46-144	10	30
Methylene Chloride	9.63	10.0	96	9.27	10.0	93	71-122	4	30
Methyl tert-Butyl Ether	9.97	10.0	100	10.1	10.0	101	54-126	1	30
trans-1,2-Dichloroethene	9.41	10.0	94	8.92	10.0	89	67-125	5	30
1,1-Dichloroethane	10.0	10.0	100	9.53	10.0	95	68-132	5	30
2,2-Dichloropropane	10.0	10.0	100	9.41	10.0	94	37-145	6	30
cis-1,2-Dichloroethene	9.16	10.0	92	8.92	10.0	89	71-118	3	30
2-Butanone (MEK)	52.7	50.0	105	55.6	50.0	111	71-149	5	30
Bromochloromethane	9.11	10.0	91	8.70	10.0	87	75-131	5	30
Chloroform	10.1	10.0	101	9.49	10.0	95	70-129	6	30
1,1,1-Trichloroethane (TCA)	9.33	10.0	93	8.64	10.0	86	59-136	8	30
Carbon Tetrachloride	9.53	10.0	95	9.12	10.0	91	55-140	4	30
1,1-Dichloropropene	9.37	10.0	94	8.91	10.0	89	59-134	5	30
Benzene	9.58	10.0	96	9.16	10.0	92	69-124	4	30
1,2-Dichloroethane (EDC)	9.97	10.0	100	9.68	10.0	97	56-142	3	30
Trichloroethene (TCE)	9.37	10.0	94	8.68	10.0	87	67-128	8	30
1,2-Dichloropropane	10.1	10.0	101	9.98	10.0	100	67-126	1	30
Dibromomethane	9.65	10.0	97	9.59	10.0	96	69-128	1	30
Bromodichloromethane	10.4	10.0	104	9.92	10.0	99	63-129	4	30
cis-1,3-Dichloropropene	10.1	10.0	101	9.91	10.0	99	62-132	2	30
4-Methyl-2-pentanone (MIBK)	51.9	50.0	104	53.0	50.0	106	64-134	2	30
Toluene	9.40	10.0	94	9.08	10.0	91	69-124	3	30
trans-1,3-Dichloropropene	10.5	10.0	105	10.1	10.0	101	59-125	4	30
1,1,2-Trichloroethane	9.98	10.0	100	9.90	10.0	99	74-118	1	30
Tetrachloroethene (PCE)	9.28	10.0	93	8.88	10.0	89	62-126	4	30
2-Hexanone	52.5	50.0	105	52.3	50.0	105	59-131	0	30
1,3-Dichloropropane	10.1	10.0	101	10.0	10.0	100	75-116	0	30
Dibromochloromethane	9.65	10.0	97	9.45	10.0	95	67-126	2	30
1,2-Dibromoethane (EDB)	9.82	10.0	98	9.84	10.0	98	74-118	0	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	SCS Engineers	**Service Request:**	K1708663
Project:	Leichner Landfill/0421703013	**Date Extracted:**	08/22/2017
Sample Matrix:	Water	**Date Analyzed:**	08/22/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1707486

	Lab Control Sample KWG1707486-3 Lab Control Spike			Duplicate Lab Control Sample KWG1707486-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	9.71	10.0	97	9.65	10.0	97	72-116	1	30
Ethylbenzene	9.78	10.0	98	9.34	10.0	93	67-121	5	30
1,1,1,2-Tetrachloroethane	9.27	10.0	93	9.30	10.0	93	66-124	0	30
m,p-Xylenes	19.5	20.0	97	18.8	20.0	94	69-121	4	30
o-Xylene	9.21	10.0	92	9.09	10.0	91	71-119	1	30
Styrene	9.40	10.0	94	9.23	10.0	92	74-121	2	30
Bromoform	10.0	10.0	100	9.93	10.0	99	52-144	1	30
Isopropylbenzene	9.53	10.0	95	9.31	10.0	93	67-129	2	30
1,1,2,2-Tetrachloroethane	12.0	10.0	120	12.4	10.0	124	70-127	3	30
Bromobenzene	10.2	10.0	102	9.58	10.0	96	72-116	6	30
n-Propylbenzene	11.1	10.0	111	10.5	10.0	105	61-124	5	30
1,2,3-Trichloropropane	11.4	10.0	114	10.9	10.0	109	69-123	4	30
2-Chlorotoluene	10.9	10.0	109	10.3	10.0	103	55-131	5	30
1,3,5-Trimethylbenzene	11.1	10.0	111	10.6	10.0	106	62-126	5	30
4-Chlorotoluene	11.1	10.0	111	10.5	10.0	105	66-121	5	30
tert-Butylbenzene	10.3	10.0	103	9.90	10.0	99	61-127	4	30
1,2,4-Trimethylbenzene	11.4	10.0	114	10.8	10.0	108	63-122	5	30
sec-Butylbenzene	11.1	10.0	111	10.7	10.0	107	59-128	3	30
4-Isopropyltoluene	11.1	10.0	111	10.7	10.0	107	61-128	4	30
1,3-Dichlorobenzene	10.5	10.0	105	10.3	10.0	103	70-116	3	30
1,4-Dichlorobenzene	10.4	10.0	104	9.91	10.0	99	73-115	5	30
n-Butylbenzene	11.1	10.0	111	10.7	10.0	107	55-130	4	30
1,2-Dichlorobenzene	11.1	10.0	111	10.7	10.0	107	72-115	4	30
1,2-Dibromo-3-chloropropane	11.5	10.0	115	11.0	10.0	110	55-132	4	30
1,2,4-Trichlorobenzene	10.6	10.0	106	10.2	10.0	102	58-126	3	30
Hexachlorobutadiene	10.0	10.0	100	9.08	10.0	91	57-119	10	30
Naphthalene	11.4	10.0	114	11.1	10.0	111	64-126	2	30
1,2,3-Trichlorobenzene	11.0	10.0	110	10.9	10.0	109	68-120	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

APPENDIX D

2017 Groundwater Elevation Data And Groundwater Elevation Hydrographs

Table D-1
2017 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-R2	3/16/2017	222.27	41.16	181.11
LB-R2	8/15/2017	222.27	41.42	180.85
LB-1S	3/16/2017	210.12	29.65	180.47
LB-1S	8/15/2017	210.12	29.75	180.37
LB-1D	3/16/2017	209.74	32.65	177.09
LB-1D	8/15/2017	209.74	33.41	176.33
LB-3S	3/16/2017	218.25	35.05	183.20
LB-3S	8/15/2017	218.25	35.17	183.08
LB-3D	3/16/2017	219.29	36.11	183.18
LB-3D	8/15/2017	219.29	36.22	183.07
LB-5S	3/16/2017	206.89	14.28	192.61
LB-5S	8/15/2017	206.89	14.74	192.15
LB-5C	3/16/2017	206.70	29.07	177.63
LB-5C	8/15/2017	206.70	29.05	177.65
LB-5D	3/16/2017	207.56	34.15	173.41
LB-5D	8/15/2017	207.56	34.26	173.30
LB-6S	3/16/2017	202.80	23.04	179.76
LB-6S	8/15/2017	202.80	23.55	179.25
LB-9S(R)	3/16/2017	217.94	30.95	186.99
LB-9S(R)	8/15/2017	217.94	31.90	186.04
LB-10SR	3/16/2017	204.04	26.59	177.45
LB-10SR	8/15/2017	204.04	27.10	176.94
LB-10CR	3/16/2017	203.05	25.54	177.51
LB-10CR	8/15/2017	203.05	26.03	177.02
LB-10DR	3/16/2017	203.36	39.24	164.12
LB-10DR	8/15/2017	203.36	39.50	163.86
LB-13I	3/16/2017	202.36	23.66	178.70
LB-13I	8/15/2017	202.36	24.30	178.06
LB-13C	3/16/2017	202.68	24.07	178.61
LB-13C	8/15/2017	202.68	24.71	177.97
LB-13D	3/16/2017	202.96	24.76	178.20
LB-13D	8/15/2017	202.96	24.98	177.98

Table D-1
2017 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-17S	3/16/2017	208.18	27.28	180.90
LB-17S	8/15/2017	208.18	27.19	180.99
LB-17I	3/16/2017	212.96	32.46	180.50
LB-17I	8/15/2017	212.96	32.42	180.54
LB-17C	3/16/2017	207.97	26.11	181.86
LB-17C	8/15/2017	207.97	26.09	181.88
LB-17D	3/16/2017	213.17	33.35	179.82
LB-17D	8/15/2017	213.17	33.41	179.76
LB-20S	3/16/2017	221.22	36.28	184.94
LB-20S	8/15/2017	221.22	36.55	184.67
LB-21S	3/16/2017	223.35	33.71	189.64
LB-21S	8/15/2017	223.35	34.43	188.92
LB-21C	3/16/2017	223.32	34.06	189.26
LB-21C	8/15/2017	223.32	34.81	188.51
LB-21D	3/16/2017	223.63	36.95	186.68
LB-21D	8/15/2017	223.63	37.86	185.77
LB-22S	3/16/2017	208.42	3.19	205.23
LB-22S	8/15/2017	208.42	4.08	204.34
LB-23S	3/16/2017	229.19	28.09	201.10
LB-23S	8/15/2017	229.19	28.57	200.62
LB-24S	3/16/2017	235.13	36.29	198.84
LB-24S	8/15/2017	235.13	36.77	198.36
LB-26I	3/16/2017	200.22	21.03	179.19
LB-26I	8/15/2017	200.22	21.60	178.62
LB-26D	3/16/2017	200.75	21.20	179.55
LB-26D	8/15/2017	200.75	21.31	179.44
LB-27I	3/16/2017	205.35	26.88	178.47
LB-27I	8/15/2017	205.35	27.55	177.80
LB-27D	3/16/2017	204.63	33.25	171.38
LB-27D	8/15/2017	204.63	34.73	169.90
MW-1 N	3/16/2017	216.58	Dry	NA
MW-1 N	8/15/2017	216.58	Dry	NA

Table D-1
2017 Groundwater Elevation Data
Leichner Landfill

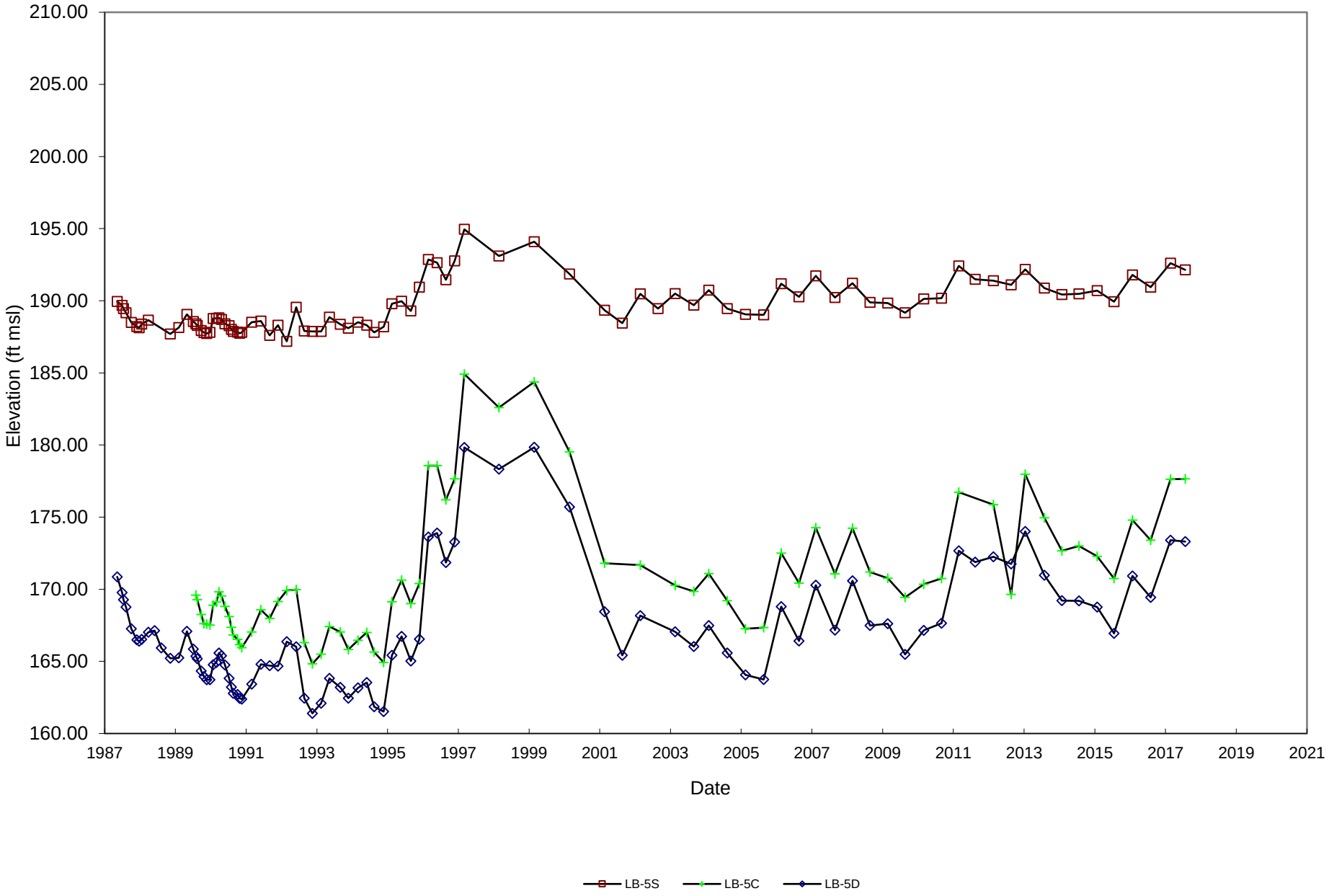
Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
MW-1 S	3/16/2017	216.13	33.73	182.40
MW-1 S	8/15/2017	216.13	34.13	182.00
MW-1 E	3/16/2017	216.45	Dry	NA
MW-1 E	8/15/2017	216.45	Dry	NA
MW-NE	3/16/2017	220.06	10.43	209.63
MW-NE	8/15/2017	220.06	11.44	208.62

Notes:
AMSL = above mean sea level; BTOC = below top of casing; NA = not applicable.

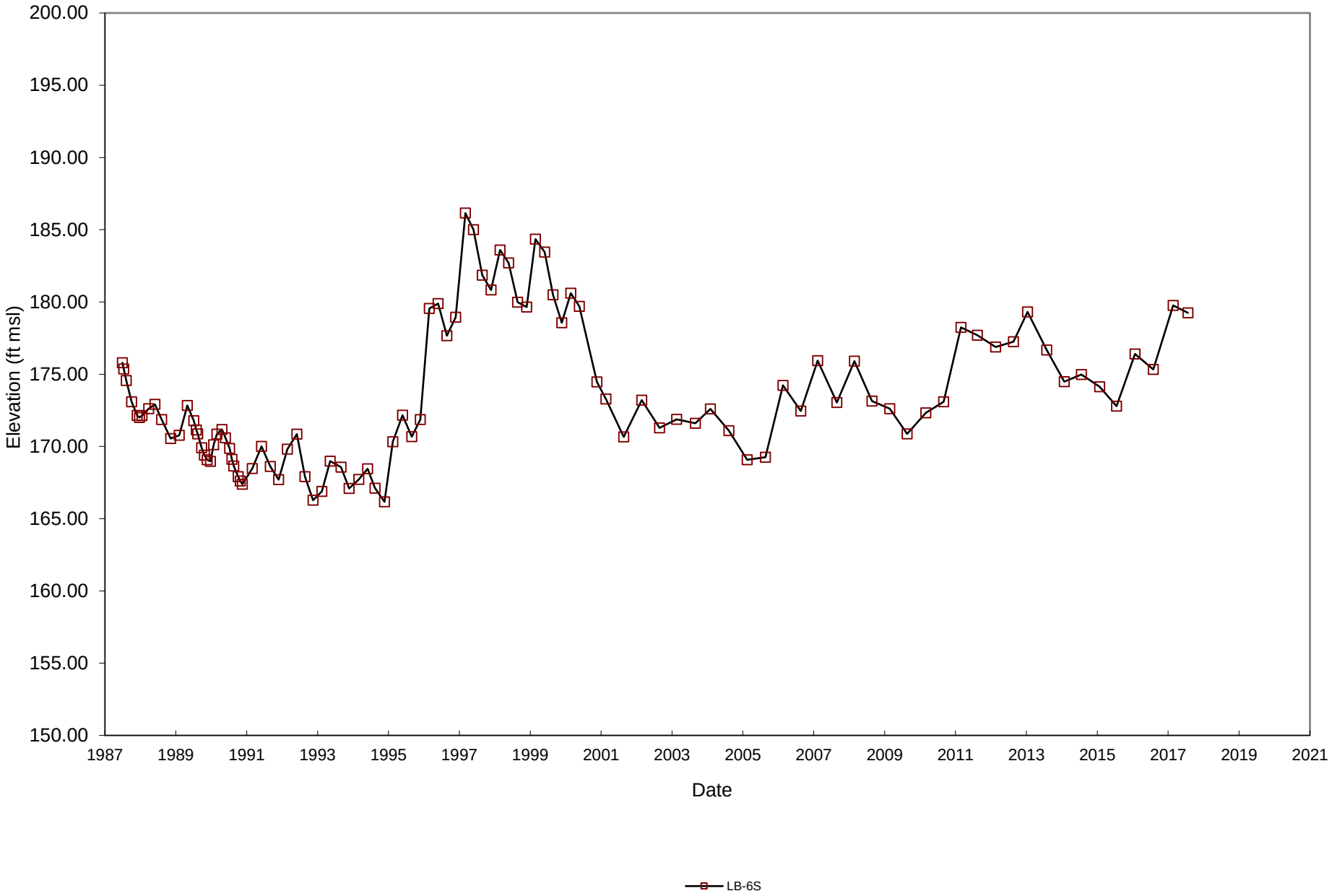
LB-1S and LB-1D Hydrographs
Leichner Landfill

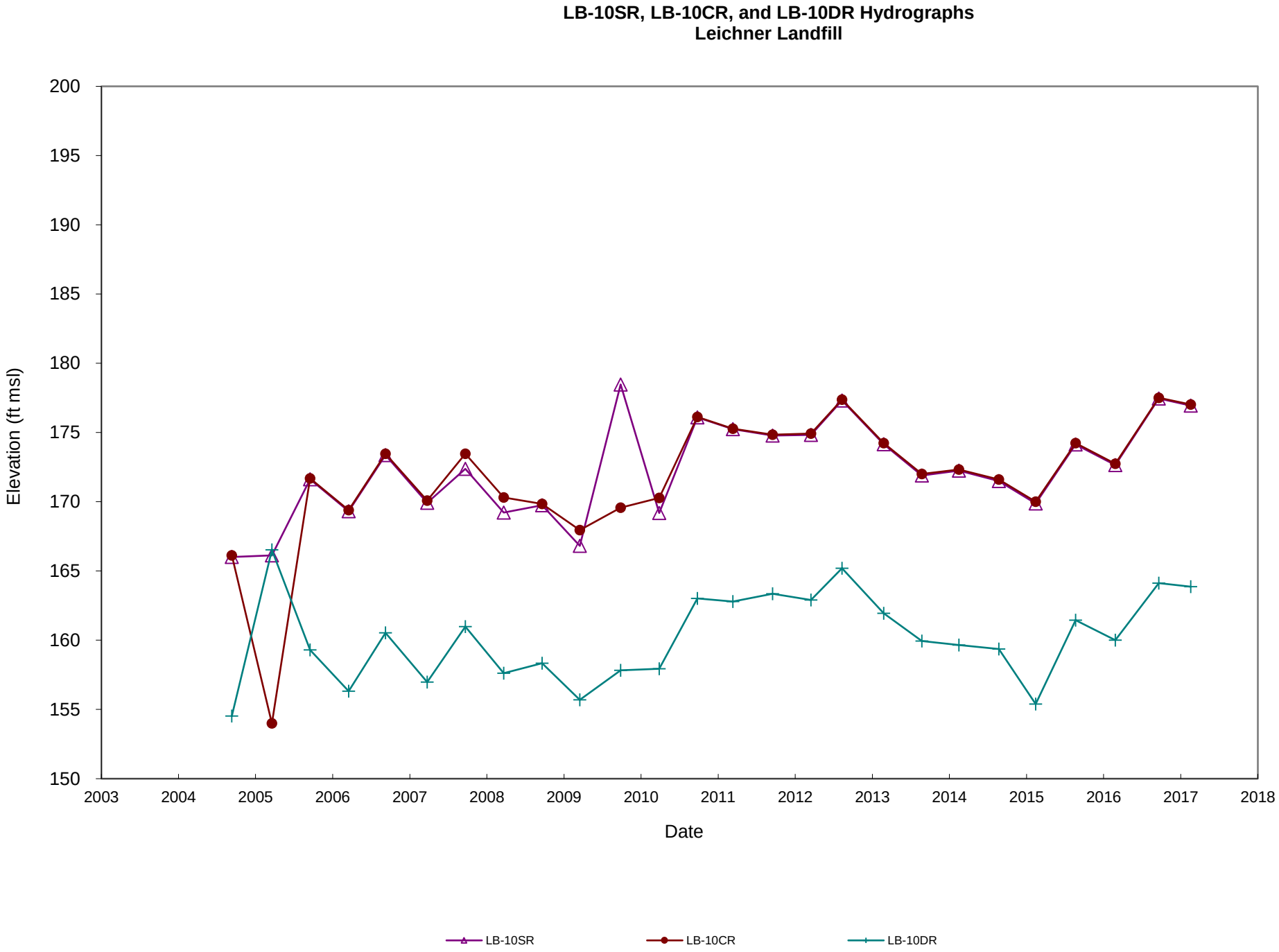
LB-3S and LB-3D Hydrographs
Leichner Landfill

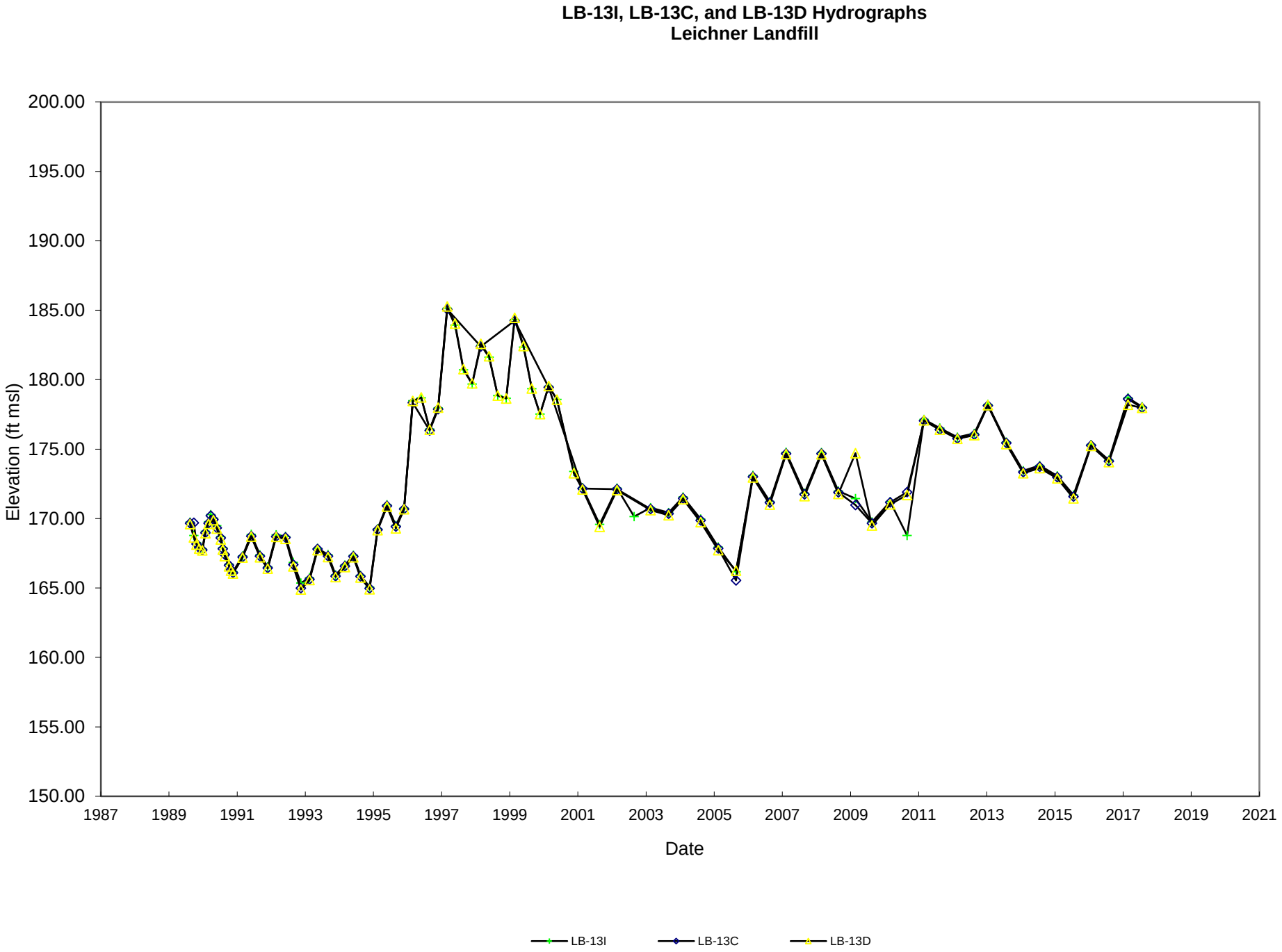
LB 5S, LB-5C, and LB-5D Hydrographs
Leichner Landfill



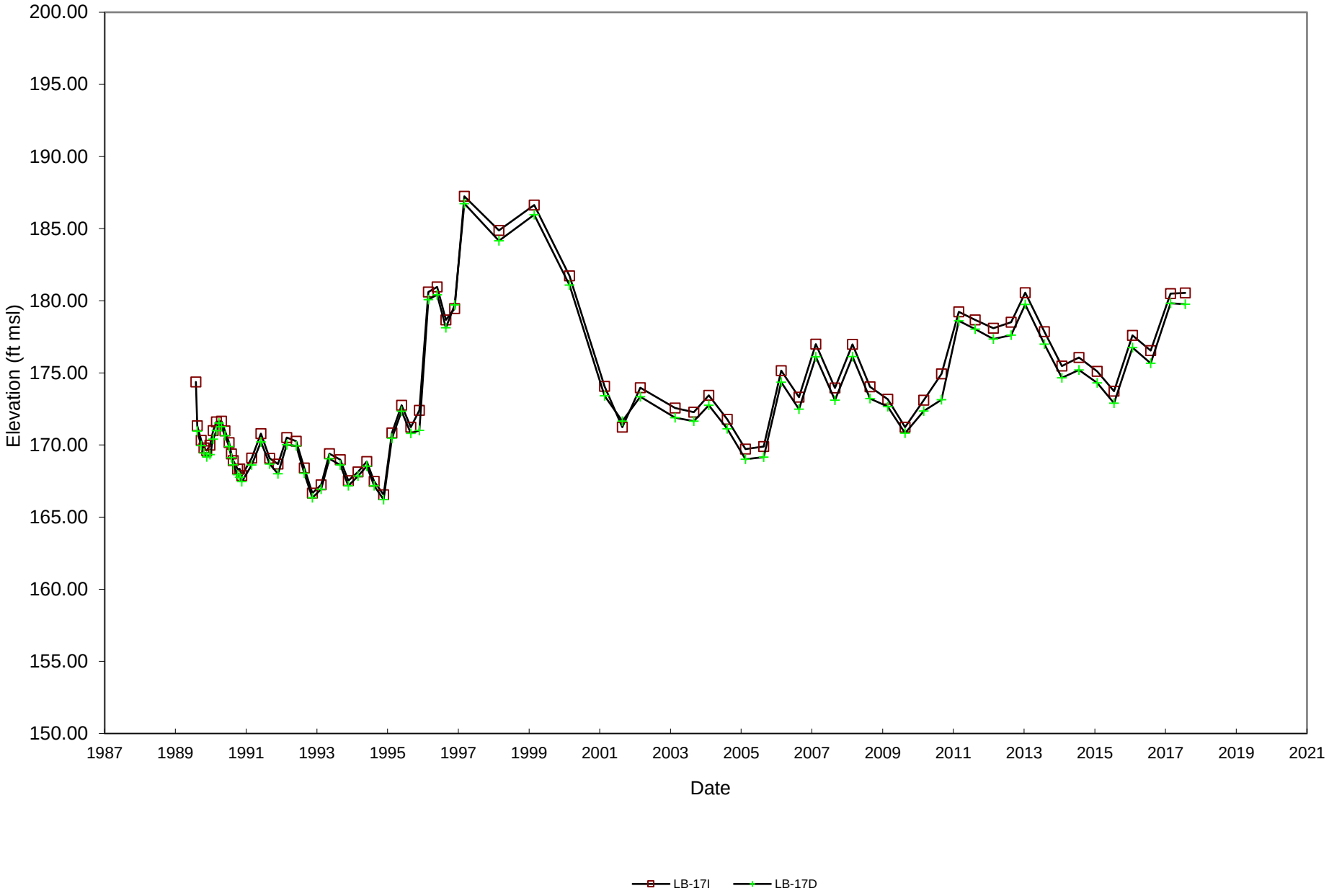
LB-6S Hydrograph
Leichner Landfill



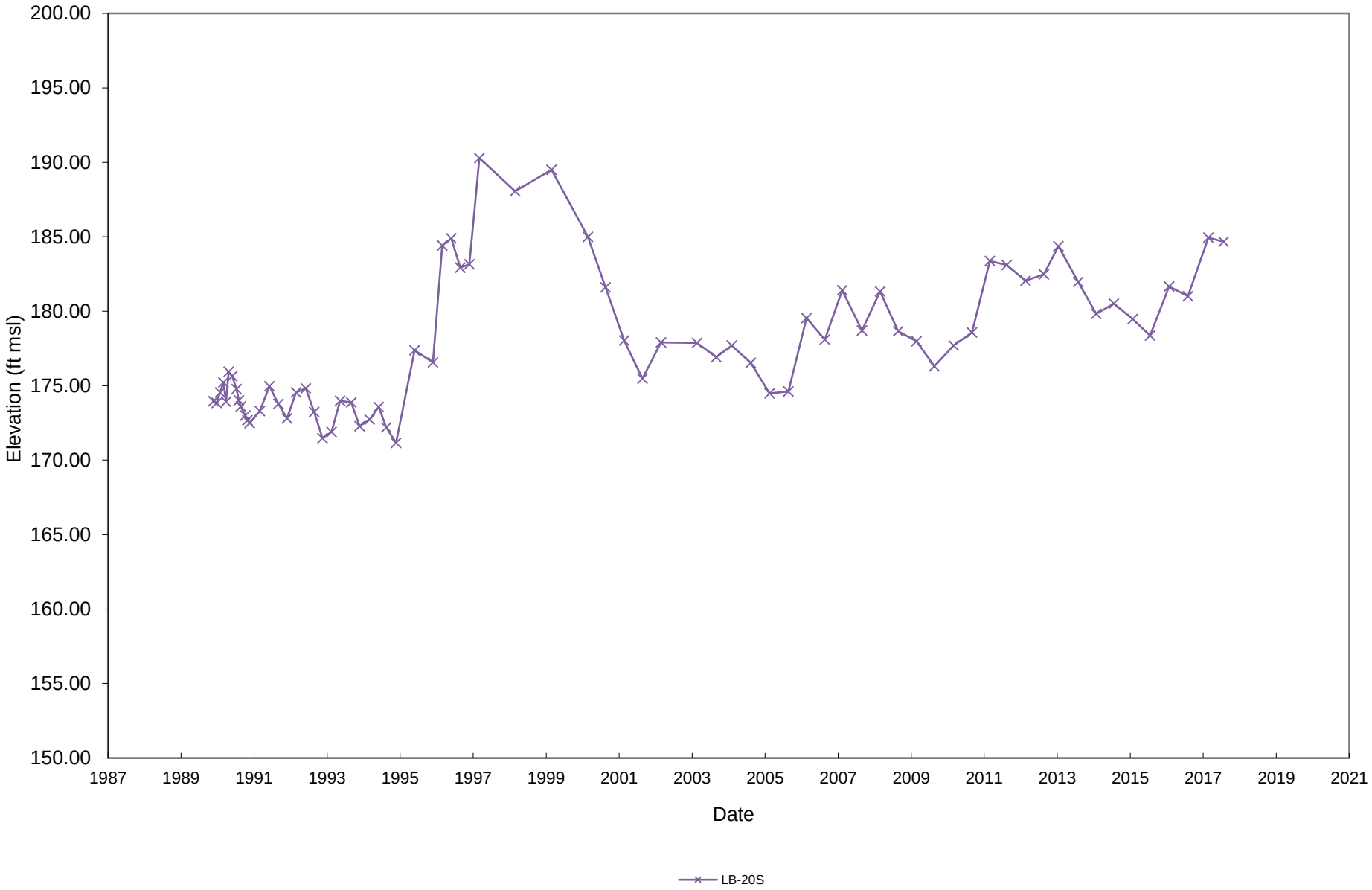

LB-10SR, LB-10CR, and LB-10DR Hydrographs
Leichner Landfill
Elevation (ft msl)
200
195
190
185
180
175
170
165
160
155
150
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
Date
LB-10SR
LB-10CR
LB-10DR


LB-13I, LB-13C, and LB-13D Hydrographs
Leichner Landfill
200.00
195.00
190.00
185.00
180.00
175.00
170.00
165.00
160.00
155.00
150.00
Elevation (ft msl)
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
Date
LB-13I
LB-13C
LB-13D

LB-17I and LB-17D Hydrographs
Leichner Landfill

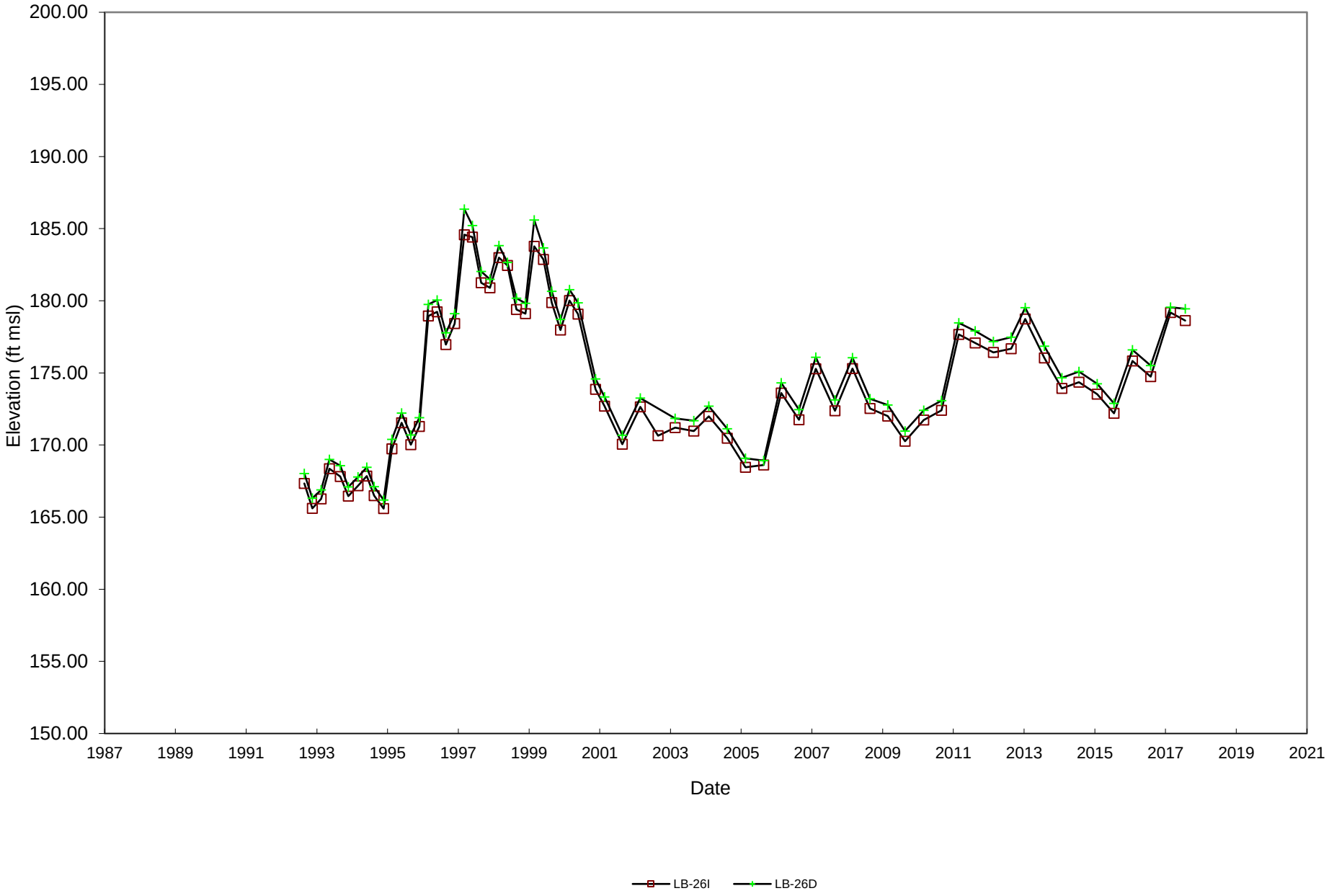


LB-20S Hydrograph
Leichner Landfill

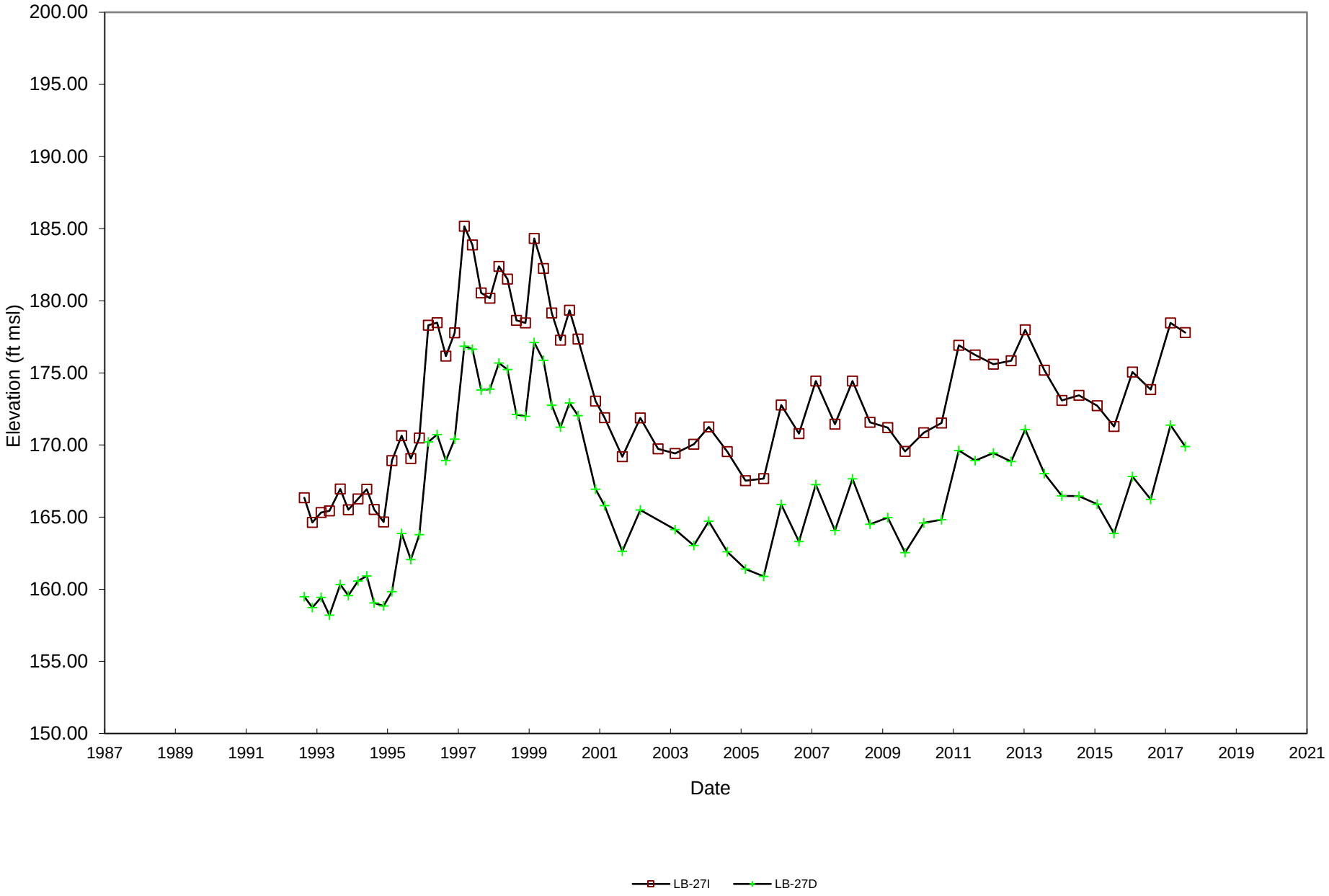


LB-21S, LB-21C, and LB-21D Hydrographs
Leichner Landfill

LB-26I and LB-26D Hydrographs
Leichner Landfill



LB-27I and LB-27D Hydrographs
Leichner Landfill



APPENDIX E

Quality Assurance/Quality Control Reviews of 2017 Laboratory Analytical Data

First Quarter (March) 2017 QA/QC Reviews

SCS Engineers QA/QC Review
Groundwater - 1Q 2017 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K1702344

Samples: LB-030817-01 (LB-5D), LB-030817-02 (DUP1/LB-5D), LB-030817-03 (LB-27D), LB-030817-04 (LB-13D), LB-030817-05 (LB-26D), LB-030817-06 (LB-17D), and LB-030817-07 (LB-17I).

Sample Date: 03/08/2017
Laboratory Sample Received Date: 03/09/2017
Sample Receipt Temperature: 1.7ºC
Laboratory Data Received Date: 03/31/2017
QA/QC Review Date: 04/26/2017 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries were within QC limits except for isopropylbenzene, n-propylbenzene, sec-butylbenzene, and 1,3-dichlorobenzene in Laboratory Control Sample (LCS) KWG1701976-1 (* Flag). These are noted and qualified in the case narrative. All surrogate recoveries were within control limits.
LCSD	All relative percent differences (RPDs) were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits except for dissolved manganese in Batch QC (# Flags). It should be noted that dissolved iron and dissolved manganese for the Batch QC sample were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery (# Flags). These are noted and qualified in the case narrative.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times
All analytical hold times were met.

Reporting Limit Exceedances
All project-specific reporting limits were met.

Field QA/QC
Field Duplicate
A field duplicate sample LB-030817-02 (DUP1) was collected at monitoring well LB-5D (LB-030817-01) on 03/08/2017. All calculated RPDs were within 20%.

Trip Blank

A laboratory supplied trip blank was carried into the field on 03/08/2017 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect except for toluene. No toluene was detected in any of the samples. All surrogate recoveries were within control limits.

Notes

2,2-Dichloropropane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon final review of lab report K1702344 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/26/2017; TMA).

SCS Engineers QA/QC Review
Groundwater - 1Q 2017 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K1702428

Samples: LB-030917-08 (LB-3D), LB-030917-09 (LB-3S), LB-030917-10 (LB-1D), LB-030917-11 (LB-1S), LB-030917-12 (LB-10DR), and LB-030917-13 (LB-SR).

Sample Date: 03/09/2017
Laboratory Sample Received Date: 03/09/2017
Sample Receipt Temperature: 1.6ºC
Laboratory Data Received Date: 03/31/2017
QA/QC Review Date: 04/21/2017 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries and surrogates were within QC limits.
LCSD	All relative percent differences (RPDs) were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times
All analytical hold times were met.

Reporting Limit Exceedances
All project-specific reporting limits were met.

Field QA/QC
Trip Blank
A laboratory supplied trip blank was carried into the field on 03/09/2017 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect except for toluene. No toluene was detected in any of the samples. All surrogate recoveries were within control limits.

Notes
Dichlorodifluoromethane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation
Upon final review of lab report K1702428 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/26/2017; TMA).

SCS Engineers QA/QC Review
Groundwater - 1Q 2017 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K1702609

Samples: LB-031517-14 (LB-5S), LB-031517-15(FB1/LB-27I), LB-031517-16 (LB-27I), LB-031517-17 (LB-20S), LB-031517-18 (LB-13I), LB-031517-19 (LB-26I), LB-031517-20 (LB-6S, and LB-031517-21 (DUP2/LB-6S).

Sample Date: 03/15/2017
Laboratory Sample Received Date: 03/16/2017
Sample Receipt Temperature: 5.7ºC
Laboratory Data Received Date: 04/05/2017
QA/QC Review Date: 04/26/2017 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries and surrogates were within QC limits except for dichlorodifluoromethane in batch KWG1702174-1 (* Flags). This is noted and qualified in the case narrative.
LCSD	All relative percent differences (RPDs) were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits. It should be noted that dissolved iron for the Batch QC sample were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery (# Flag). This is noted and qualified in the case narrative.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times
All analytical hold times were met.

Reporting Limit Exceedances
All project-specific reporting limits were met except for chloride which was diluted to bring concentrations within calibration range.

Field QA/QC
Field/Equipment Blank
An equipment blank sample (LB-031517-15) was collected near monitoring well LB-27I on 03/15/2017 using lab supplied deionized water. All analytes were reported as non-detect.

Field Duplicate
A field duplicate sample LB-031517-21 (DUP2) was collected at monitoring well LB-6S (LB-031517-20) on 03/15/2017. All calculated RPDs were within 20%.

Trip Blank

A laboratory supplied trip blank was carried into the field on 03/15/2017 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect except for toluene. No toluene was detected in any of the samples. All surrogate recoveries were within control limits.

Notes

Napthalene was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon final review of lab report K1702609 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/26/2017; TMA).

Third Quarter (August) 2017 QA/QC Reviews

SCS Engineers QA/QC Review
Groundwater - 3Q 2017 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K1708630

Samples: LB-081517-01-5S (LB-5S), and LB-081517-02-DUP1 (DUP1).

Sample Date: 08/15/2017
Laboratory Sample Received Date: 08/16/2017
Sample Receipt Temperature: 4.0°C
Laboratory Data Received Date: 09/21/2017
QA/QC Review Date: 01/18/2018 (SEN)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries were within QC limits. All surrogate recoveries were within control limits.
LCSD	All relative percent differences (RPDs) were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits except for dissolved manganese in Batch QC (# Flags). It should be noted that dissolved iron and dissolved manganese for the Batch QC sample were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery (# Flags). These are noted and qualified in the case narrative.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times
All analytical hold times were met.

Reporting Limit Exceedances
All project-specific reporting limits were met.

Field QA/QC
Field Duplicate
A field duplicate sample LB-081517-02-DUP1 (DUP1) was collected at monitoring well LB-5S (LB-030817-01) on 08/15/2017. All calculated RPDs were within 20%.

Notes
1,2-Dibromo-3-chloropropane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon final review of lab report K1708630 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (01/18/2018; SEN).

SCS Engineers QA/QC Review
Groundwater - 3Q 2017 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K1708663

Samples: LB-081617-07-1S (LB-1S), LB-081617-08-FB1 (FB1/LB-1S), LB-081617-09-6S (LB-6S), LB-081617-06-10SR (LB-10SR), LB-081617-04-13I (LB-13I), LB-081617-05-26I (LB-26I), and LB-081617-03-27I (LB-27I).

Sample Date: 08/16/2017
Laboratory Sample Received Date: 08/17/2017
Sample Receipt Temperature: 4.0ºC
Laboratory Data Received Date: 09/21/2017
QA/QC Review Date: 01/18/2018 (SEN)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries were within QC limits, and all surrogate recoveries were within control limits.
LCSD	All relative percent differences (RPDs) were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits except for dissolved manganese in Batch QC (# Flags). It should be noted that dissolved iron and dissolved manganese for the Batch QC sample were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery (# Flags). These are noted and qualified in the case narrative.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times
All analytical hold times were met.

Reporting Limit Exceedances
All project-specific reporting limits were met.

Field QA/QC

Field Blank
A field blank sample LB-081617-08-FB1 (FB1) was collected near monitoring well LB-1S (LB-030817-07-1S) on 08/16/2017. All analytes were non-detect, except TDS, which was detected at the reporting limit.

Trip Blank
A laboratory supplied trip blank was carried into the field on 08/16/2017 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect.

Notes

Chloromethane, methylene chloride, 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, and 1,2-dibromo-3-chloropropane were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

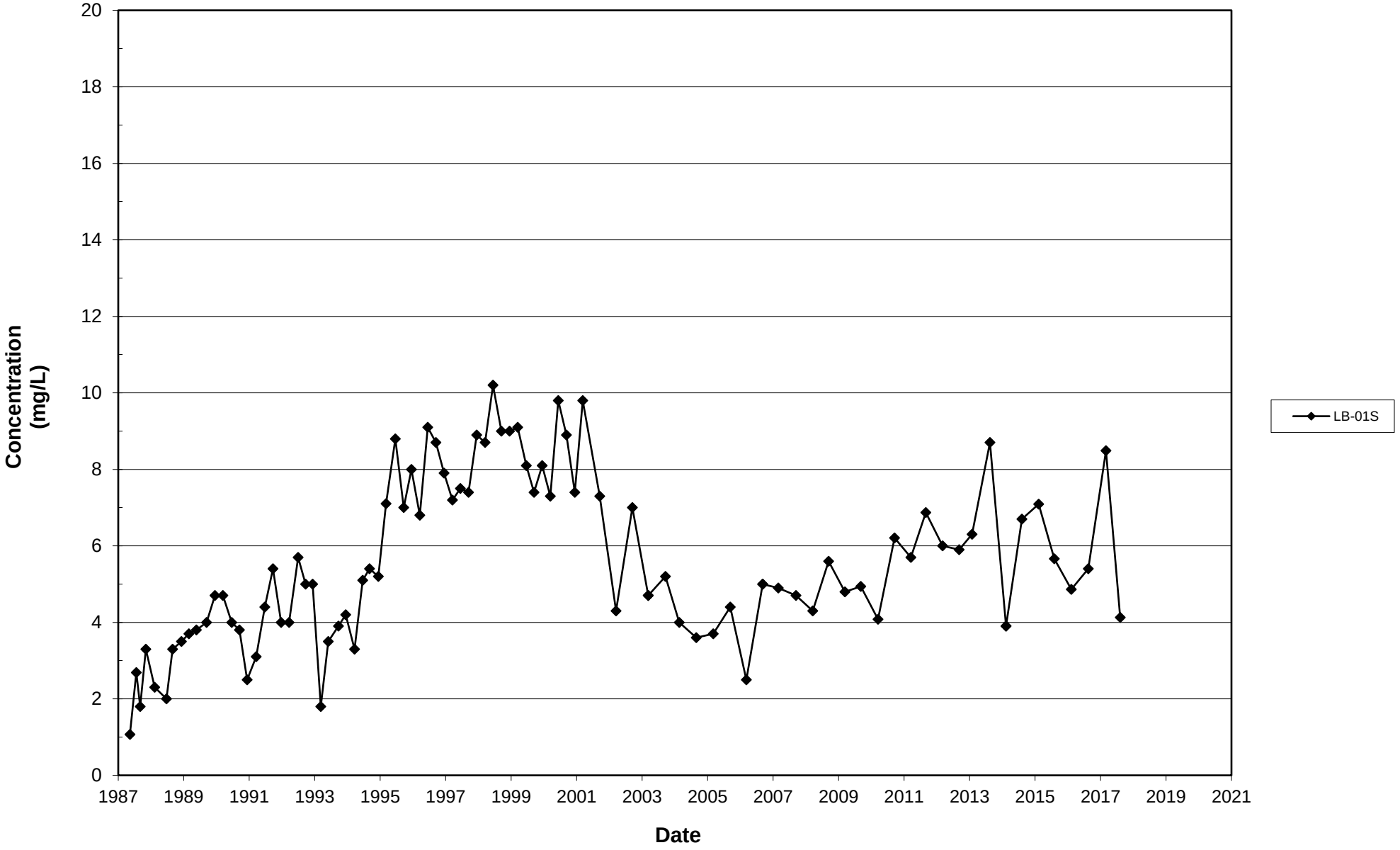
Upon final review of lab report K1708663 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (01/18/2018; SEN).

APPENDIX F

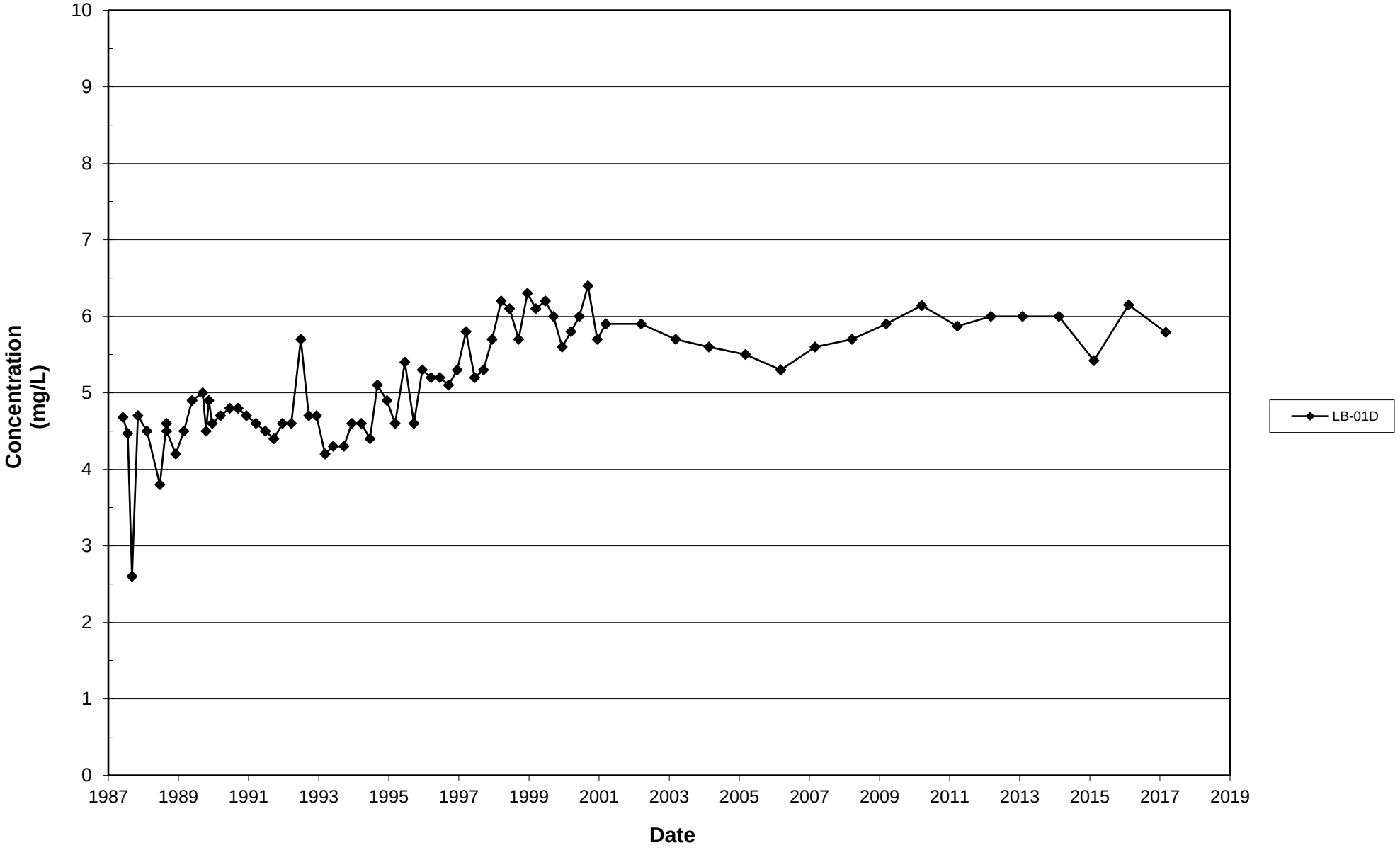
Groundwater Time-Concentration Graphs

Nitrate

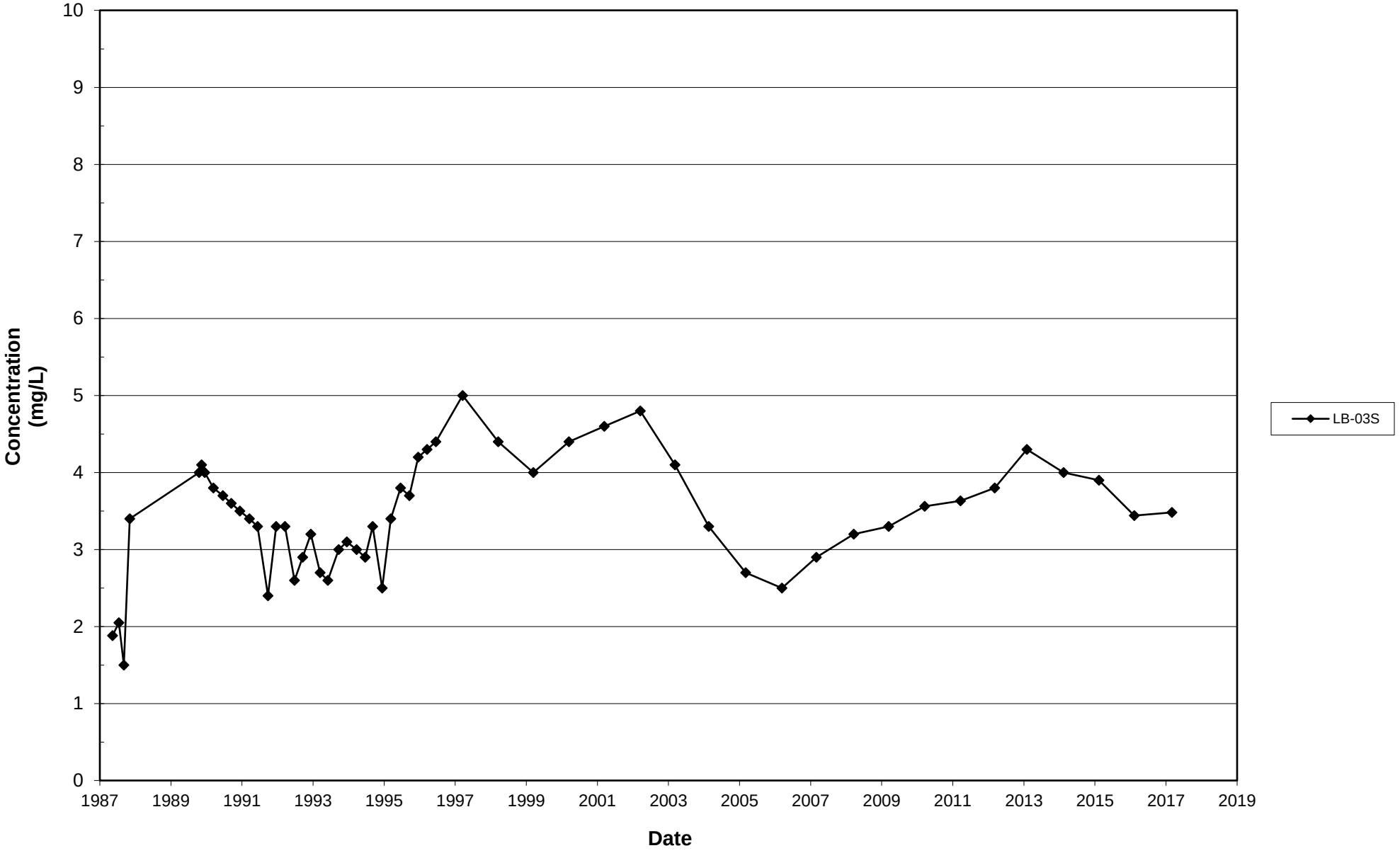
Leichner Landfill
Nitrate, LB-01S
1987 - 2017



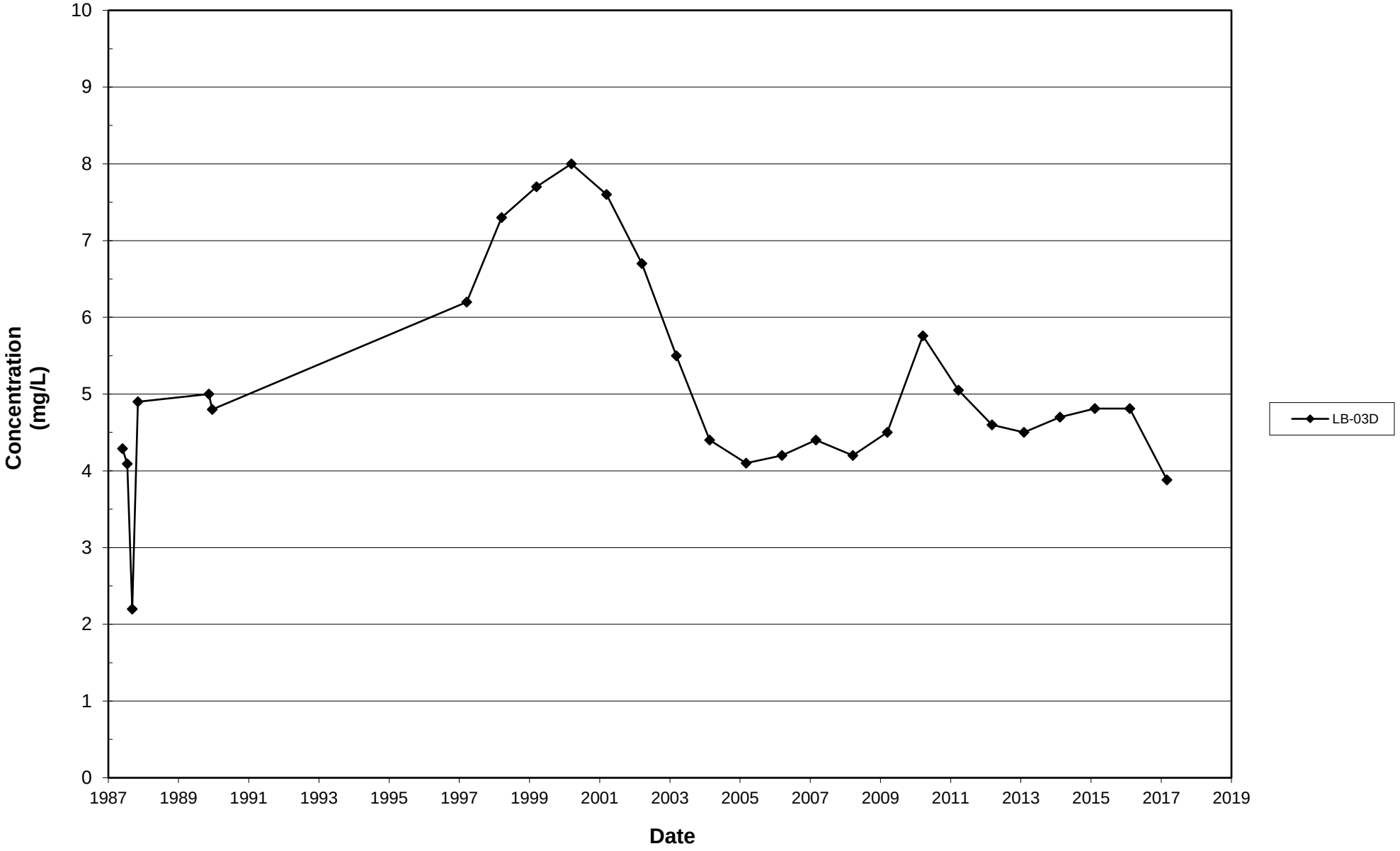
Leichner Landfill
Nitrate, LB-01D
1987 - 2017



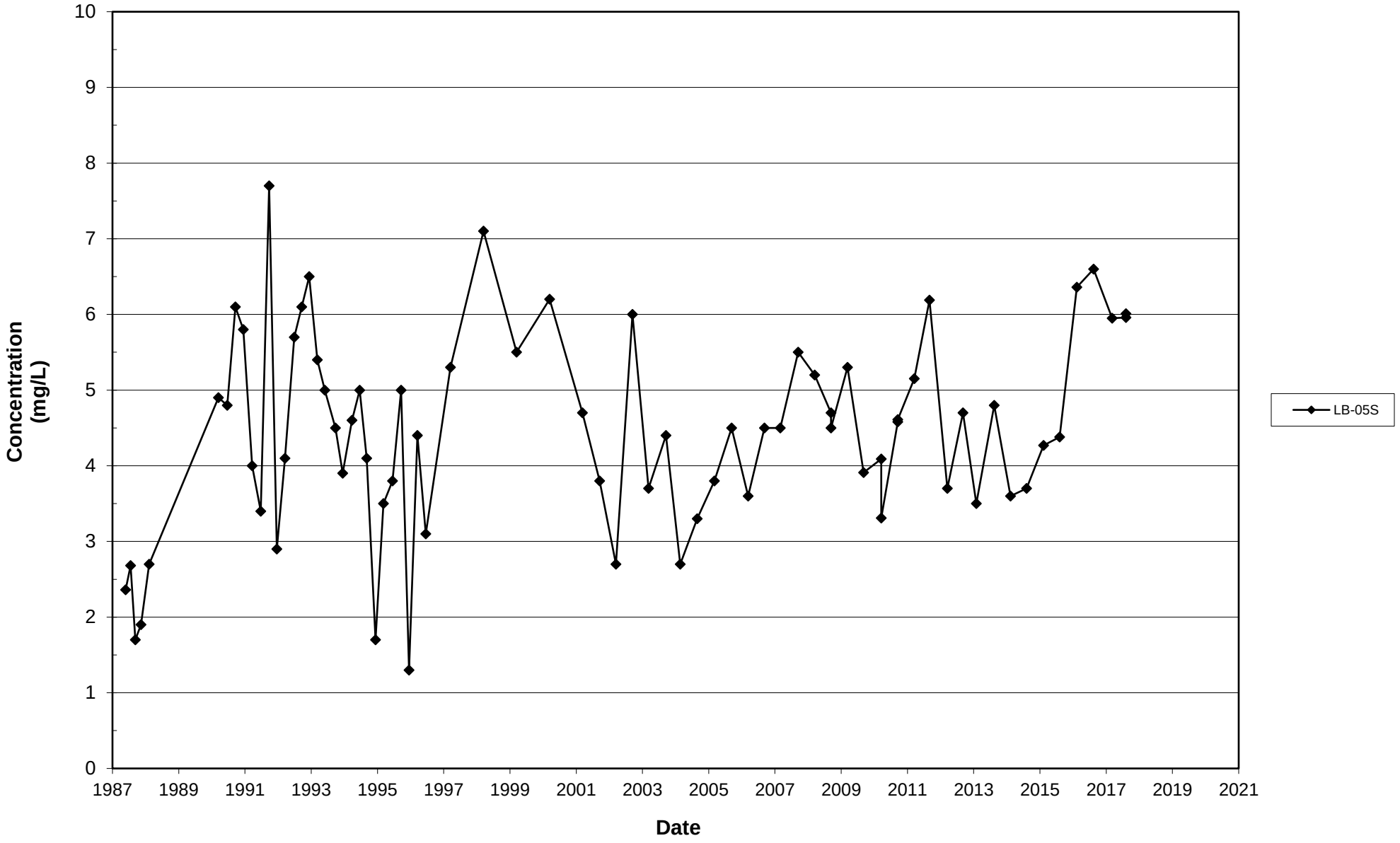
Leichner Landfill
Nitrate, LB-03S
1987 - 2017



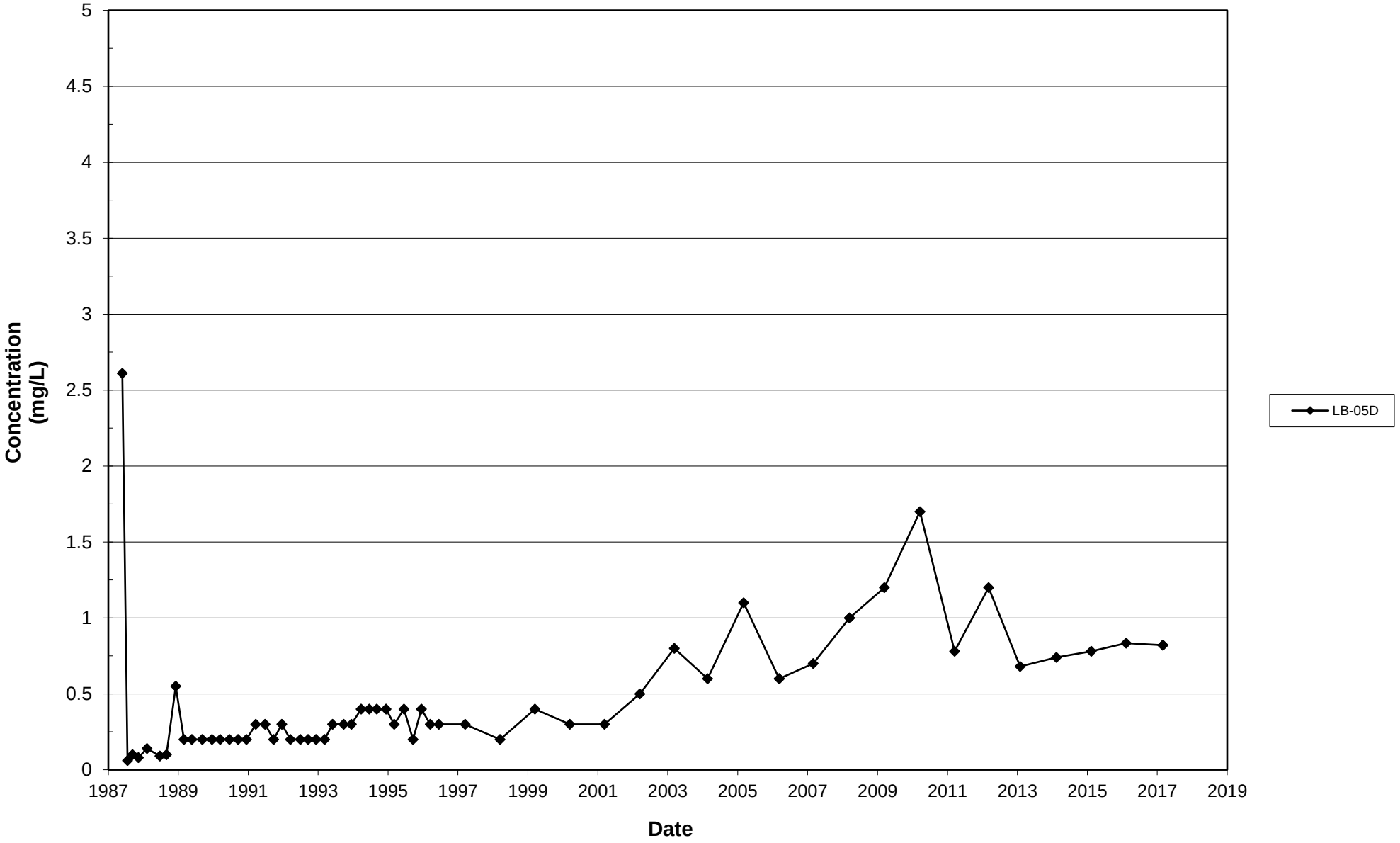
Leichner Landfill
Nitrate, LB-03D
1987 - 2017



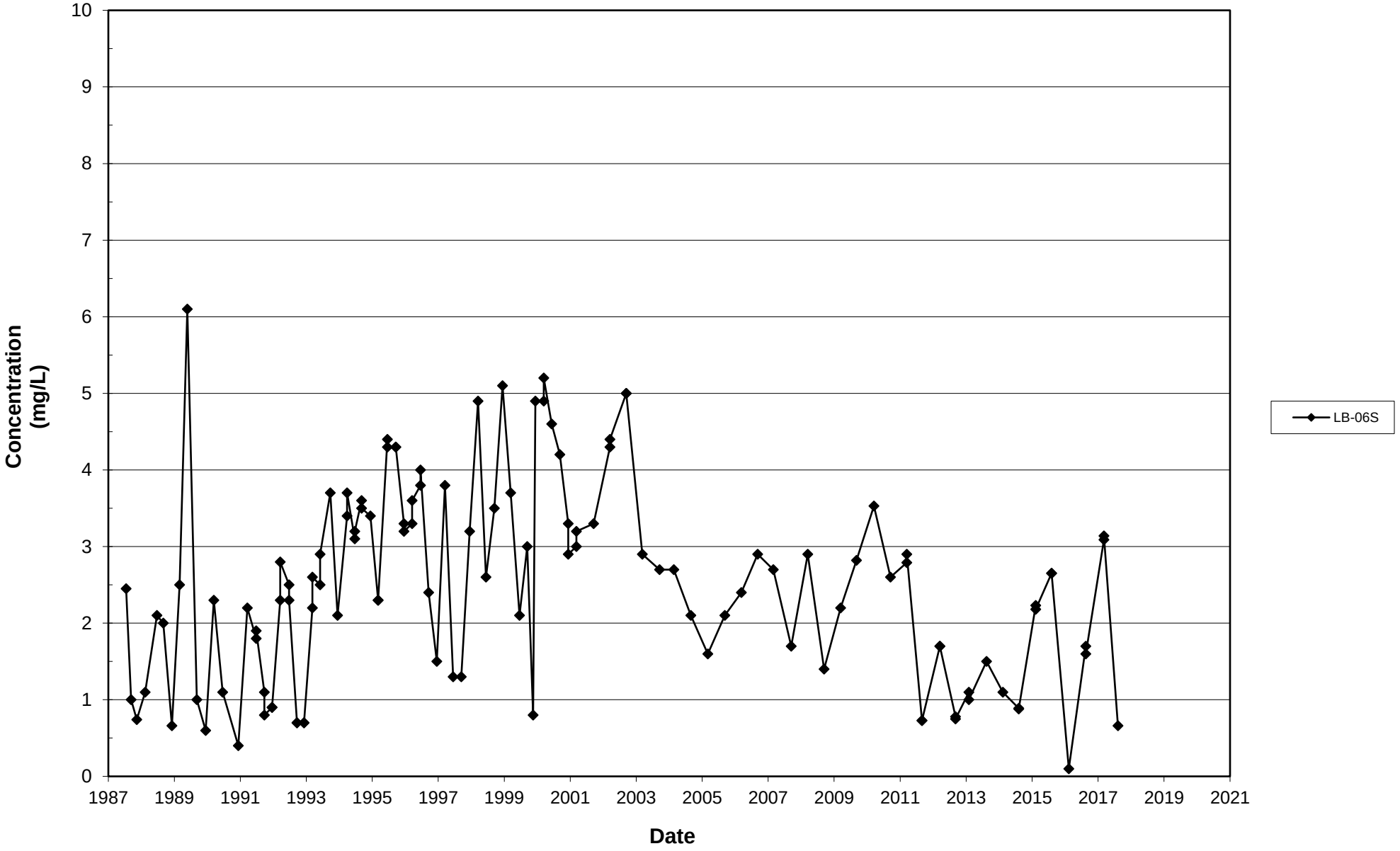
Leichner Landfill
Nitrate, LB-05S
1987 - 2017



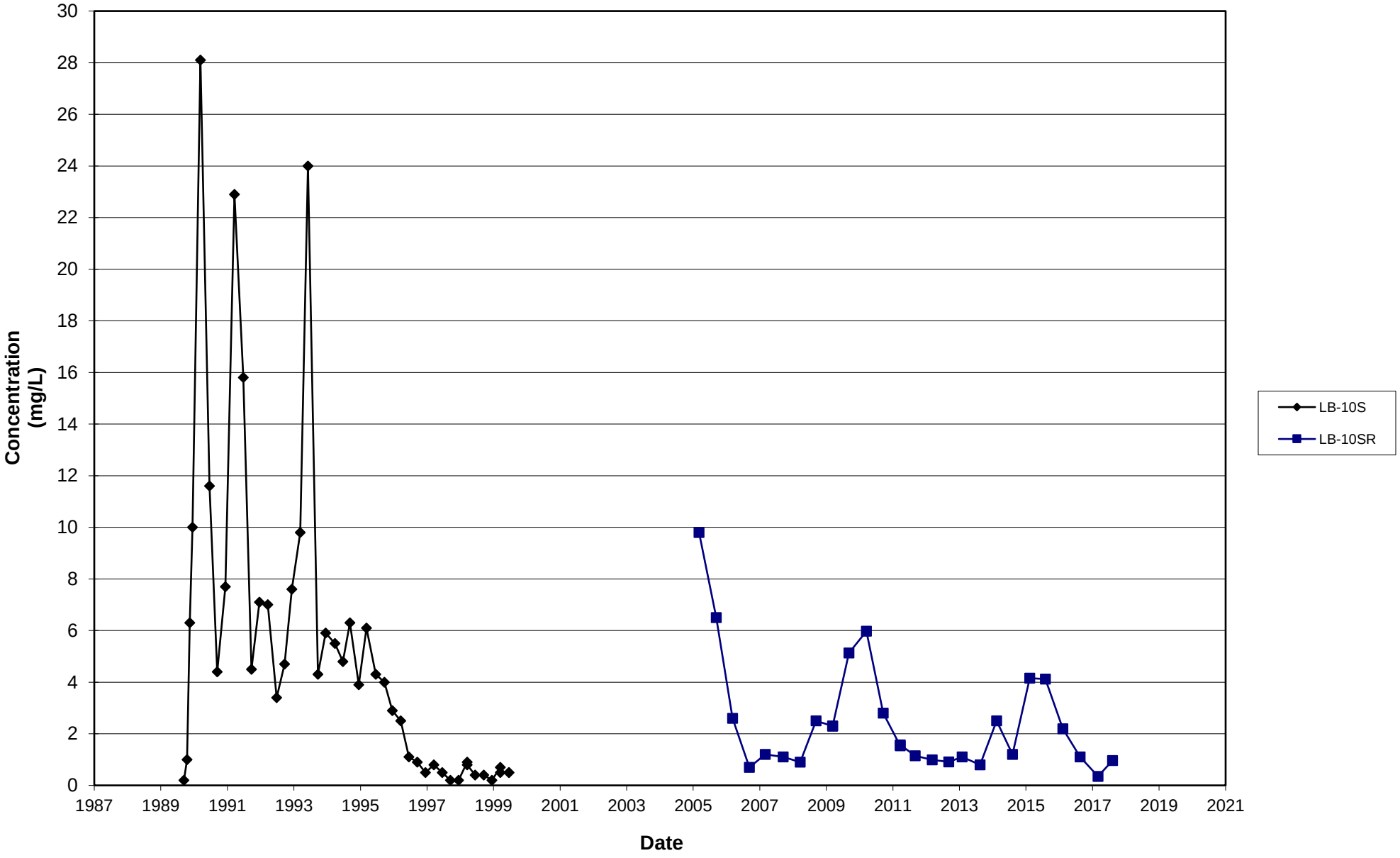
Leichner Landfill
Nitrate, LB-05D
1987 - 2017



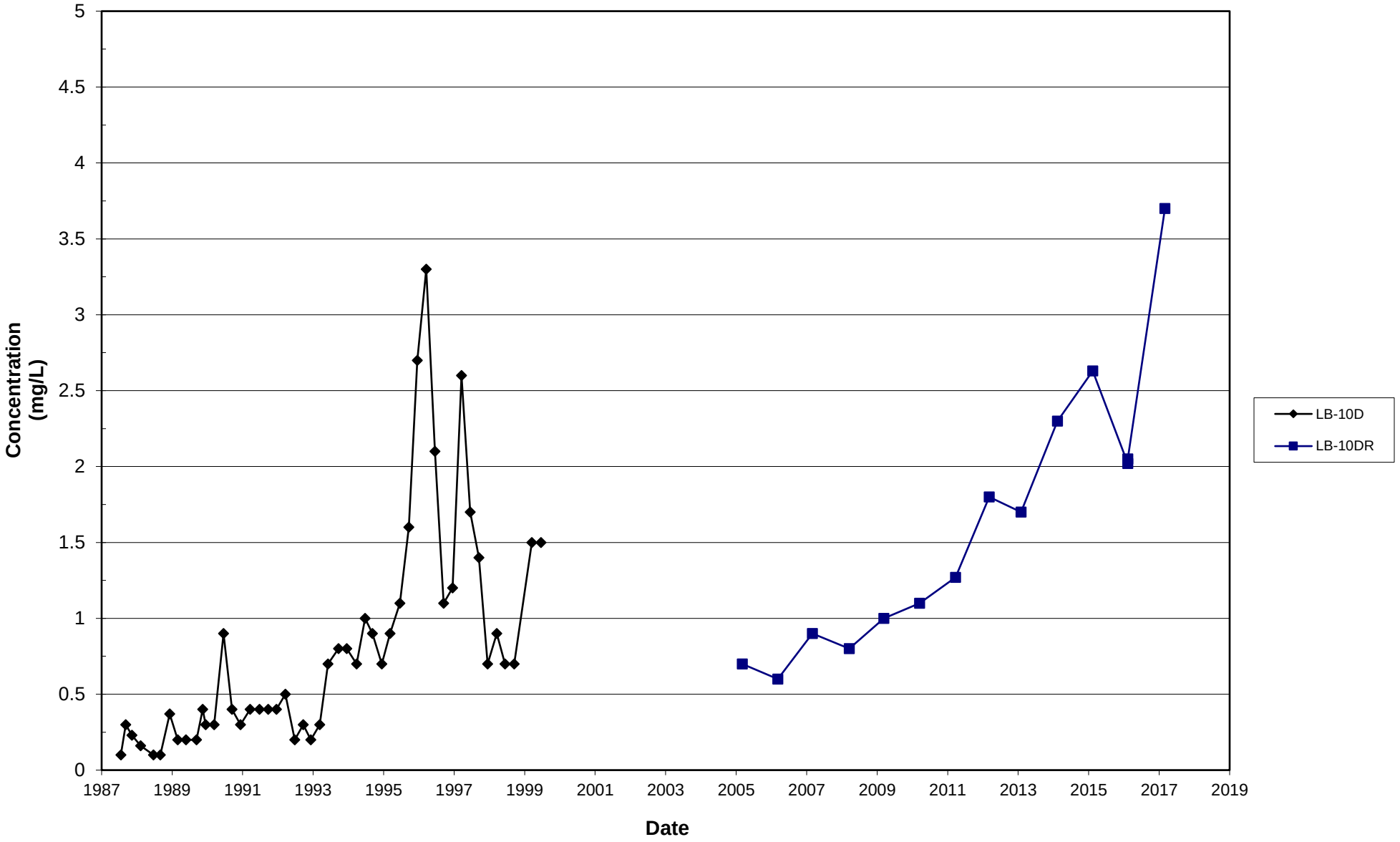
Leichner Landfill
Nitrate, LB-06S
1987 - 2017



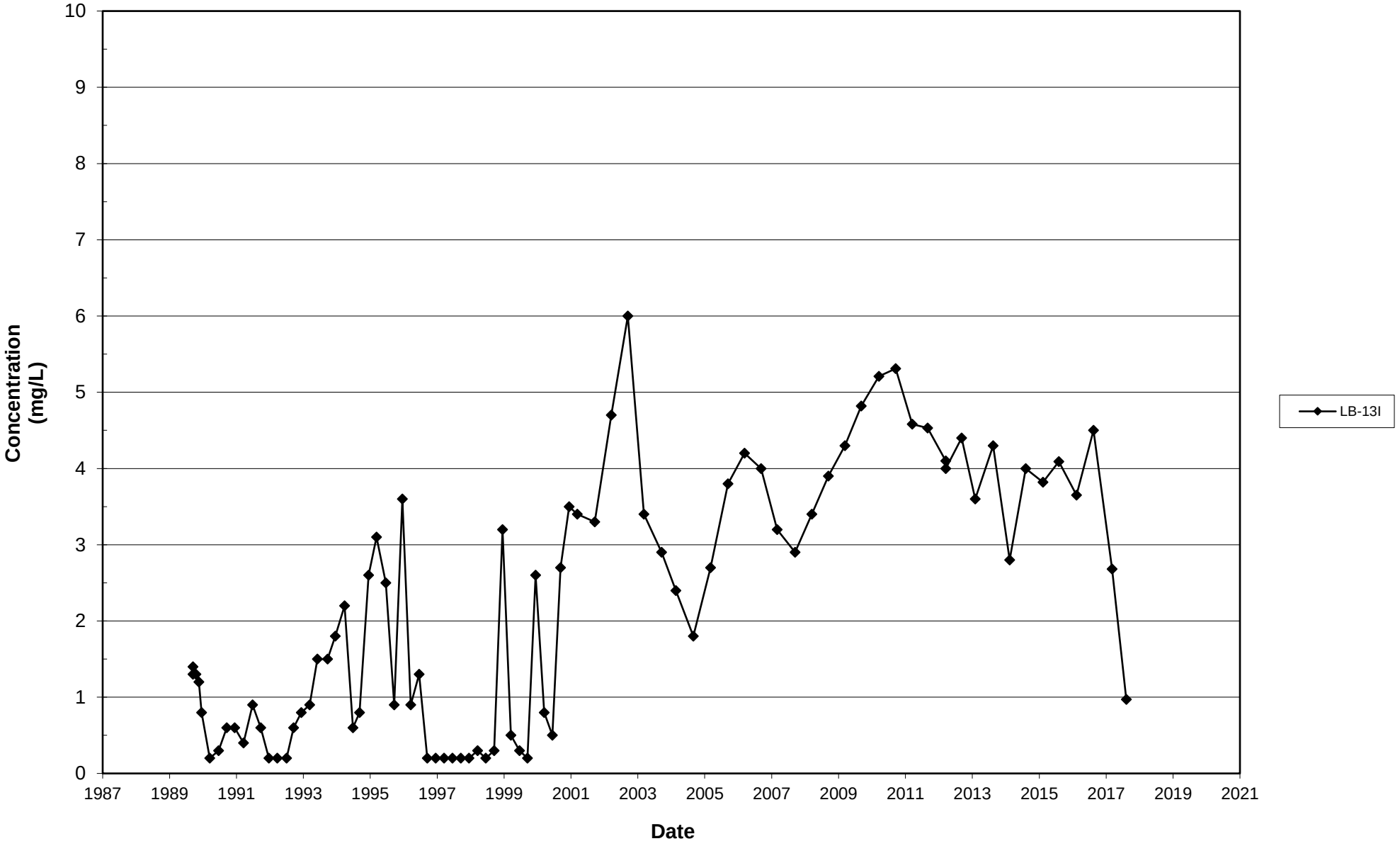
Leichner Landfill
Nitrate, LB-10S and LB-10SR
1987 - 2017



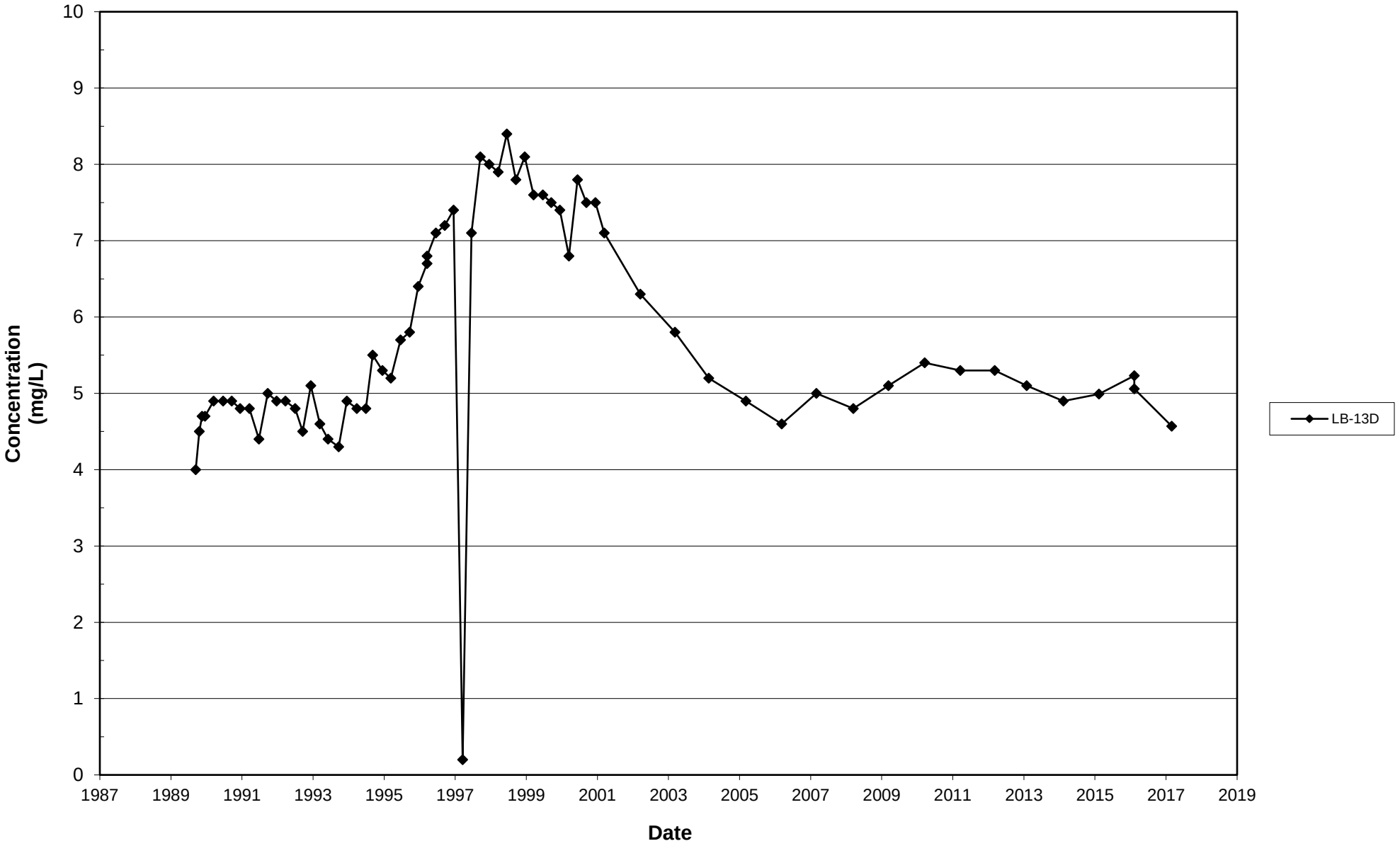
Leichner Landfill
Nitrate, LB-10D and LB-10DR
1987 - 2017



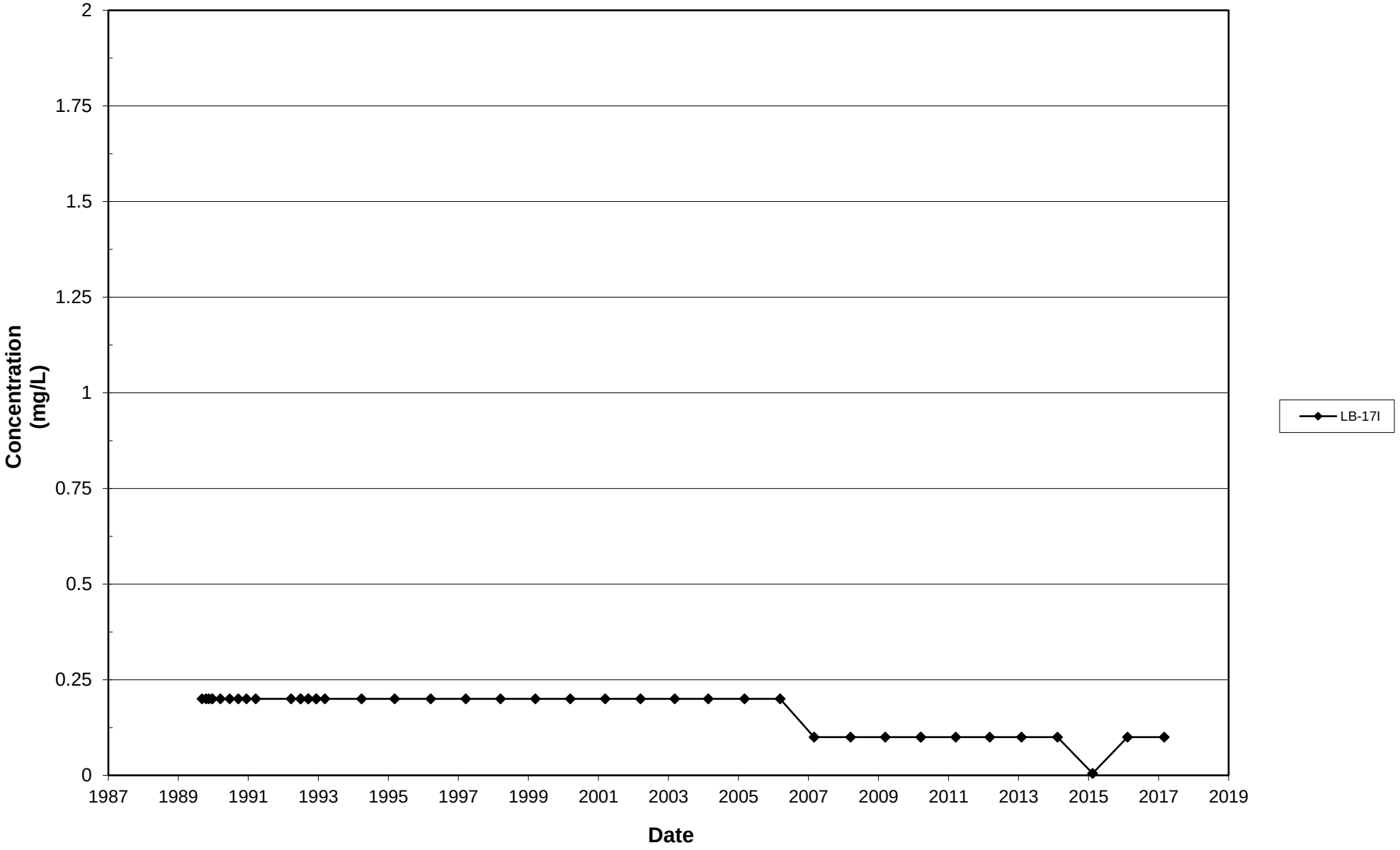
Leichner Landfill
Nitrate, LB-13I
1987 - 2017



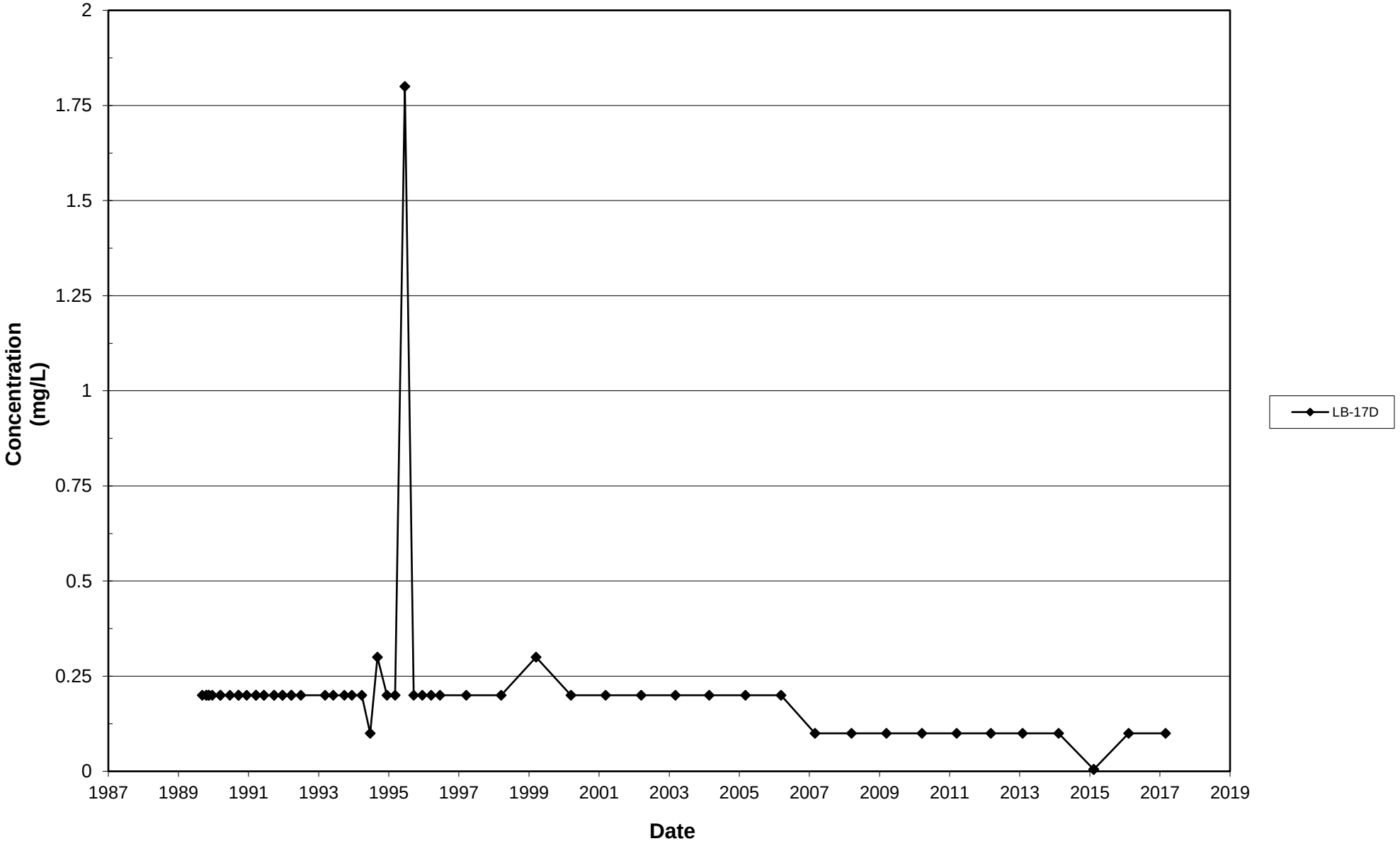
Leichner Landfill
Nitrate, LB-13D
1987 - 2017



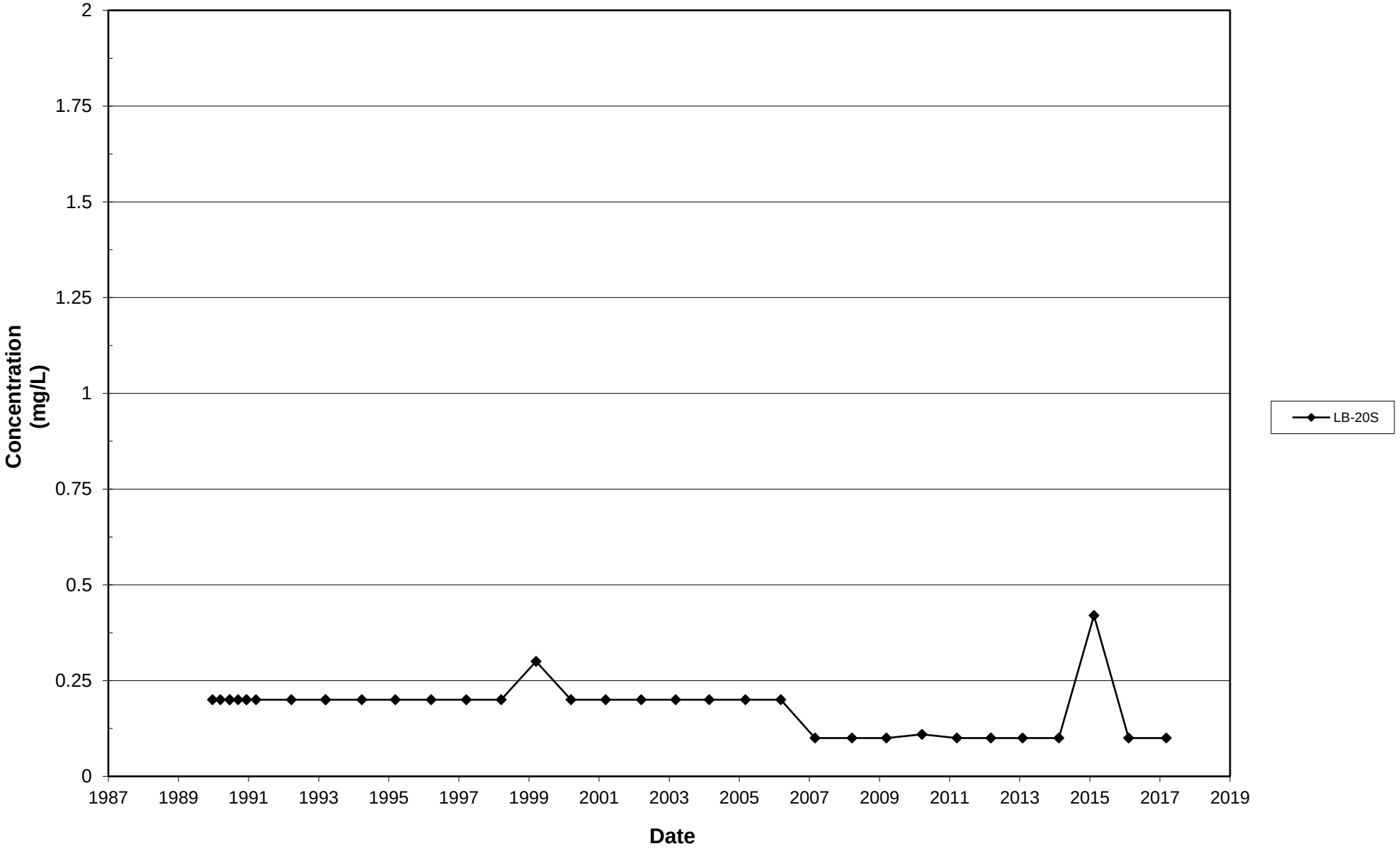
Leichner Landfill
Nitrate, LB-17I
1987 - 2017



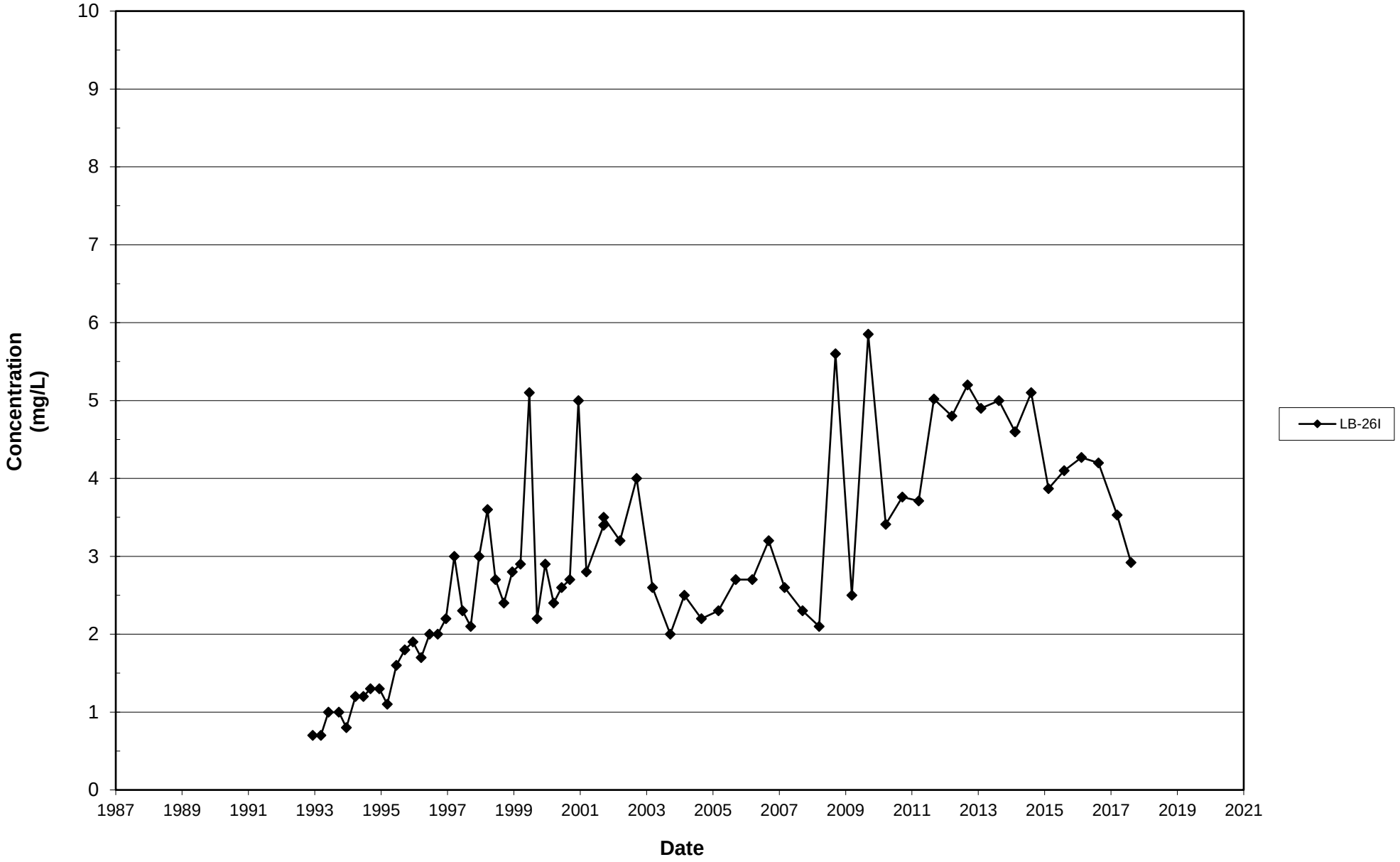
Leichner Landfill
Nitrate, LB-17D
1987 - 2017



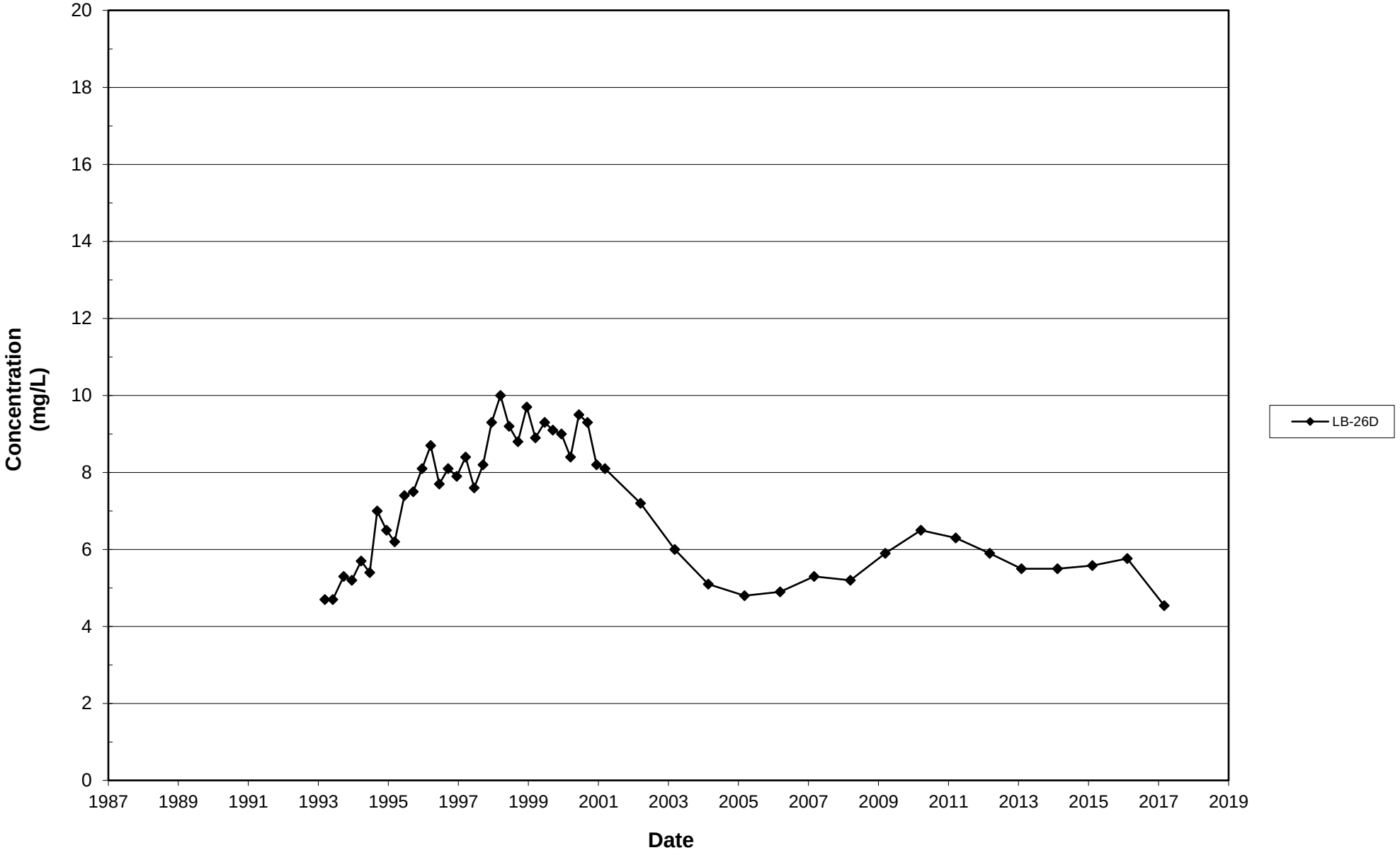
Leichner Landfill
Nitrate, LB-20S
1987 - 2017



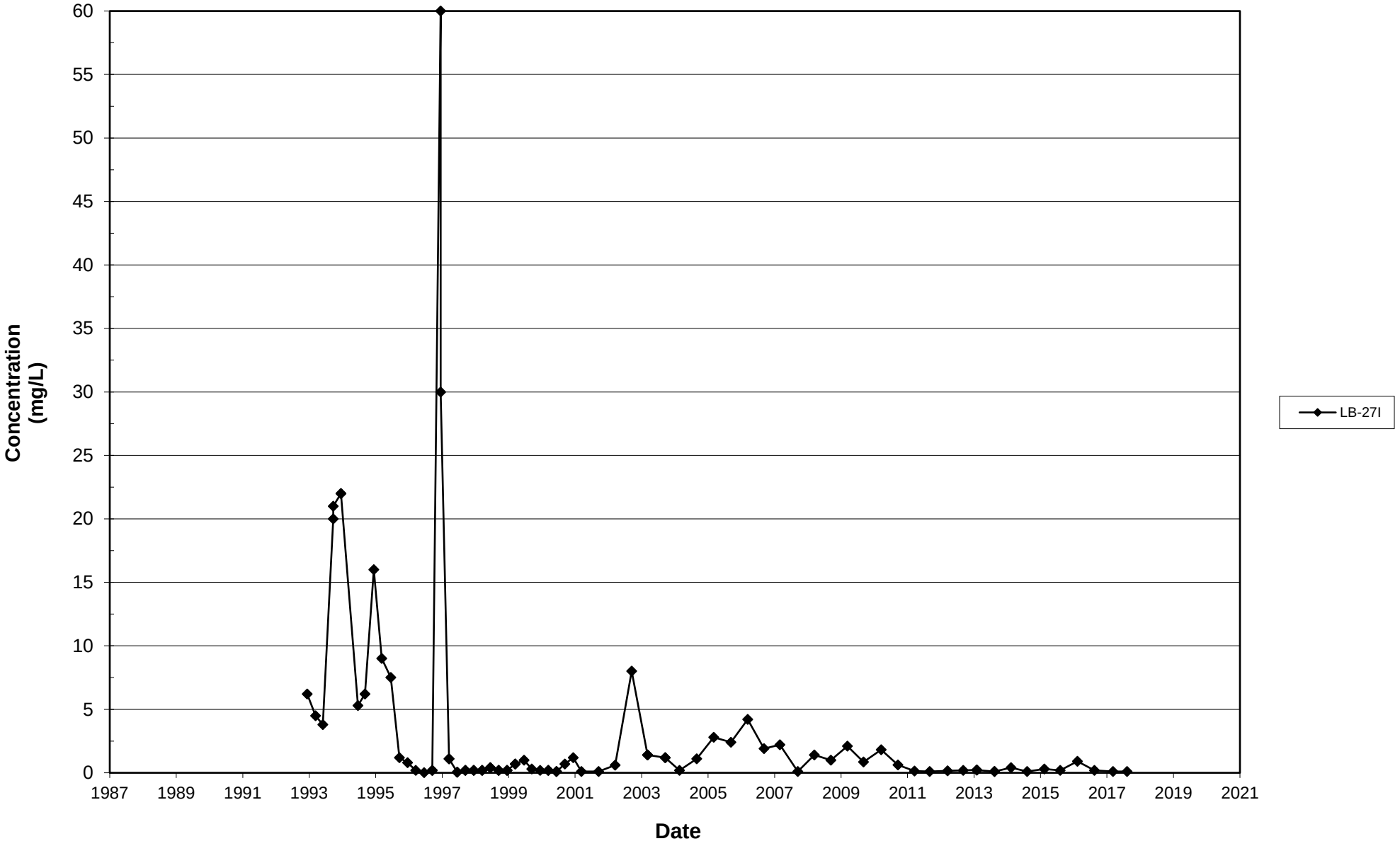
Leichner Landfill
Nitrate, LB-26I
1987 - 2017



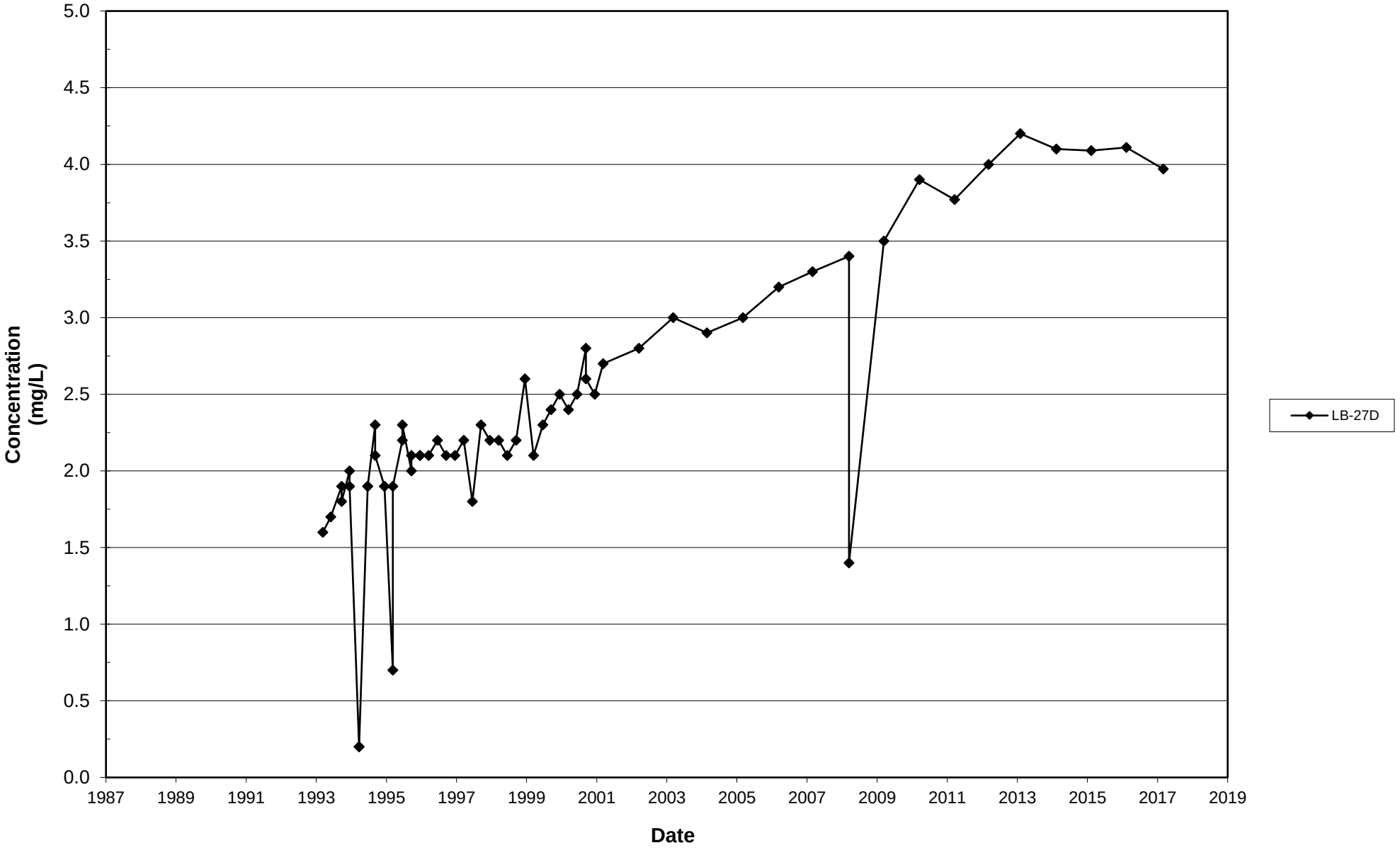
Leichner Landfill
Nitrate, LB-26D
1987 - 2017



Leichner Landfill
Nitrate, LB-27I
1987 - 2017

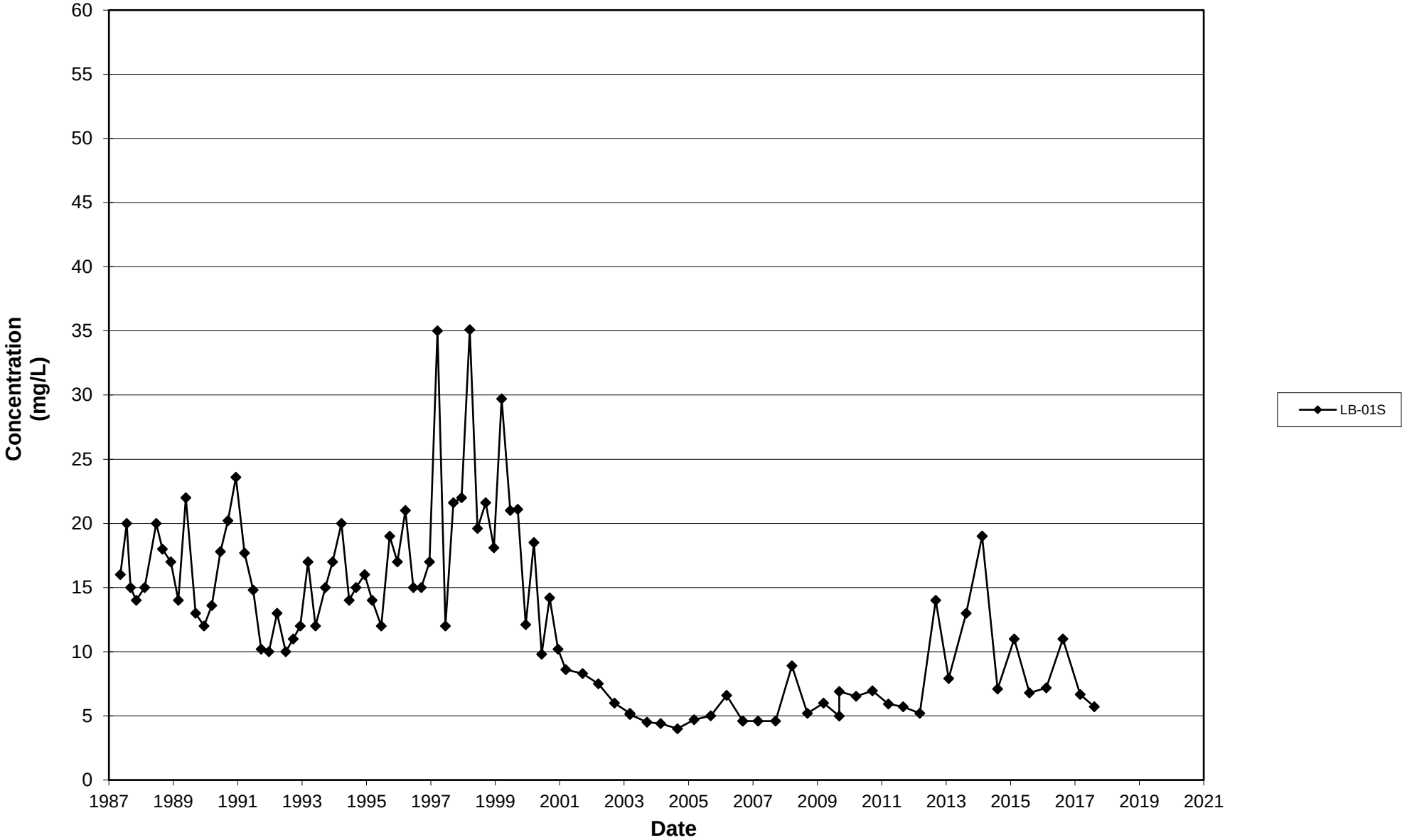


Leichner Landfill
Nitrate, LB-27D
1987 - 2017

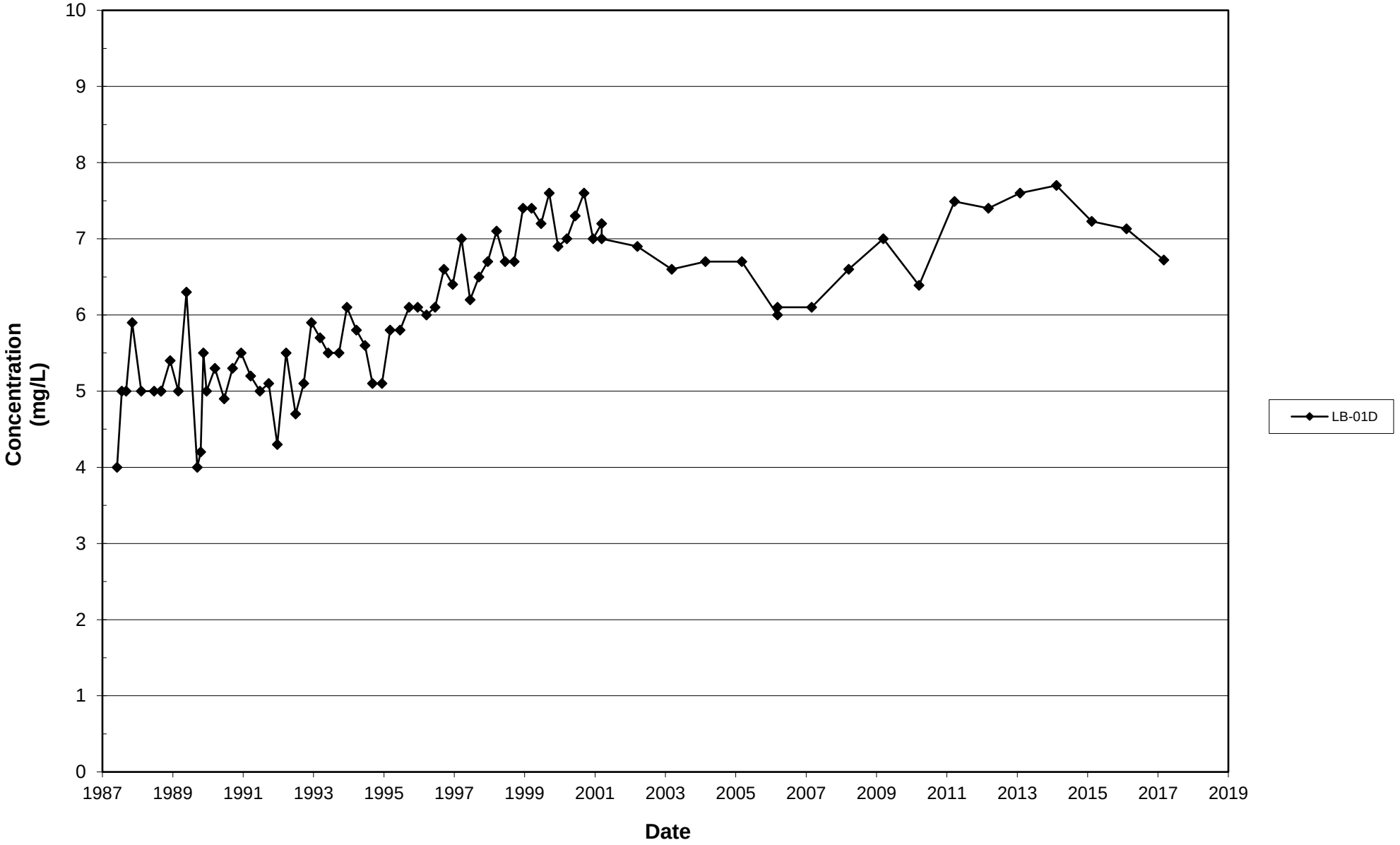


Chloride

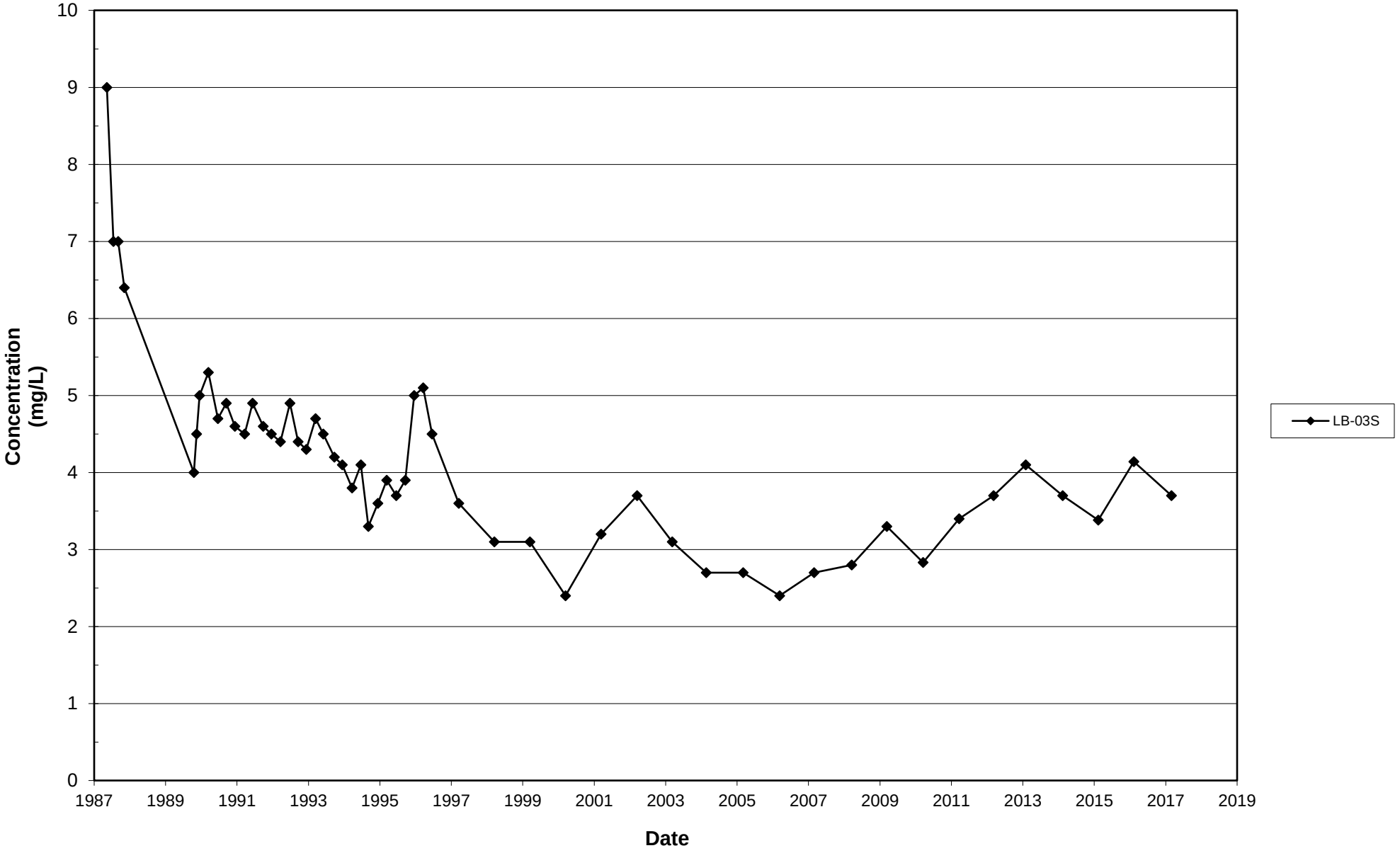
Leichner Landfill
Chloride, LB-01S
1987 - 2017



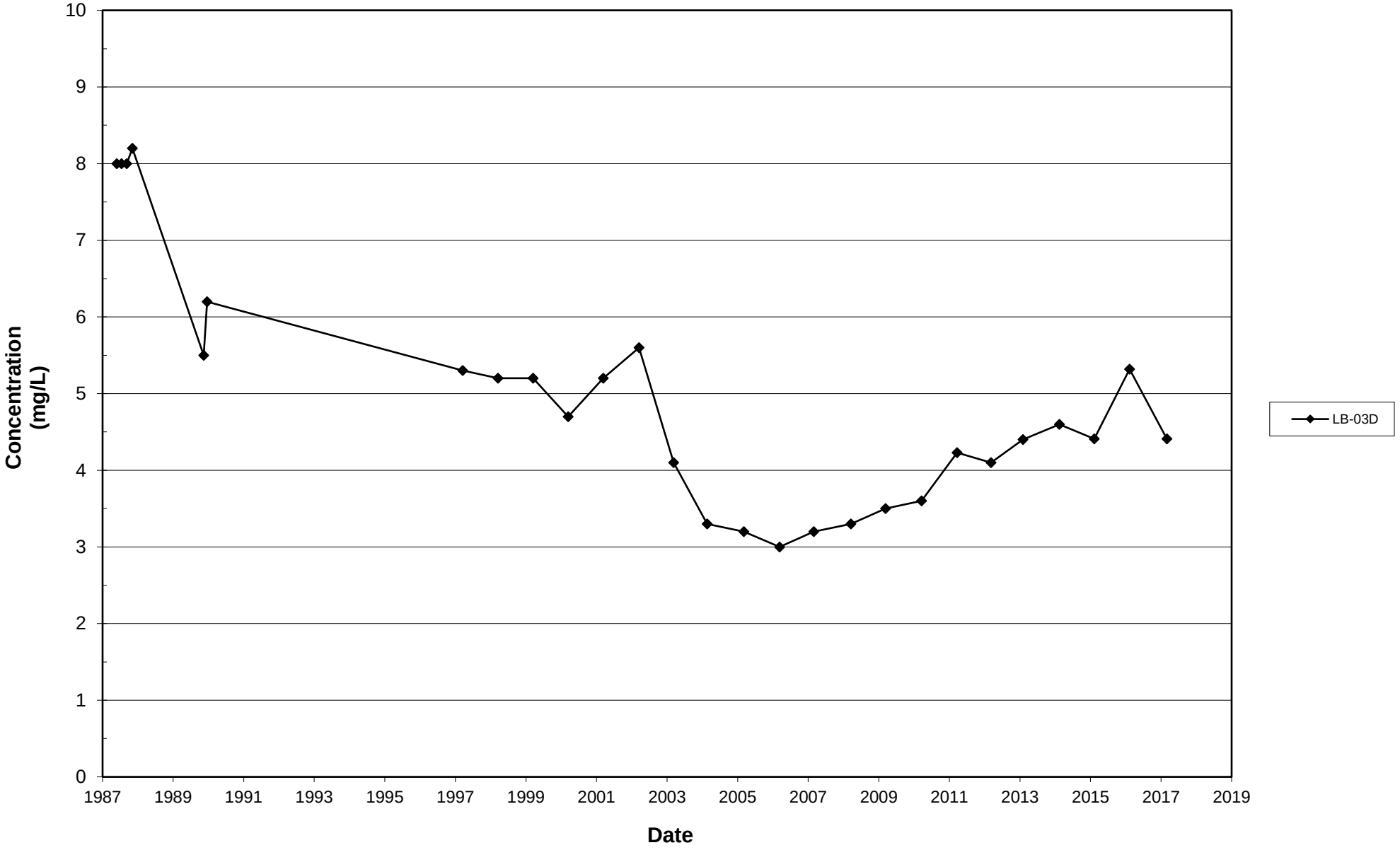
Leichner Landfill
Chloride, LB-01D
1987 - 2017



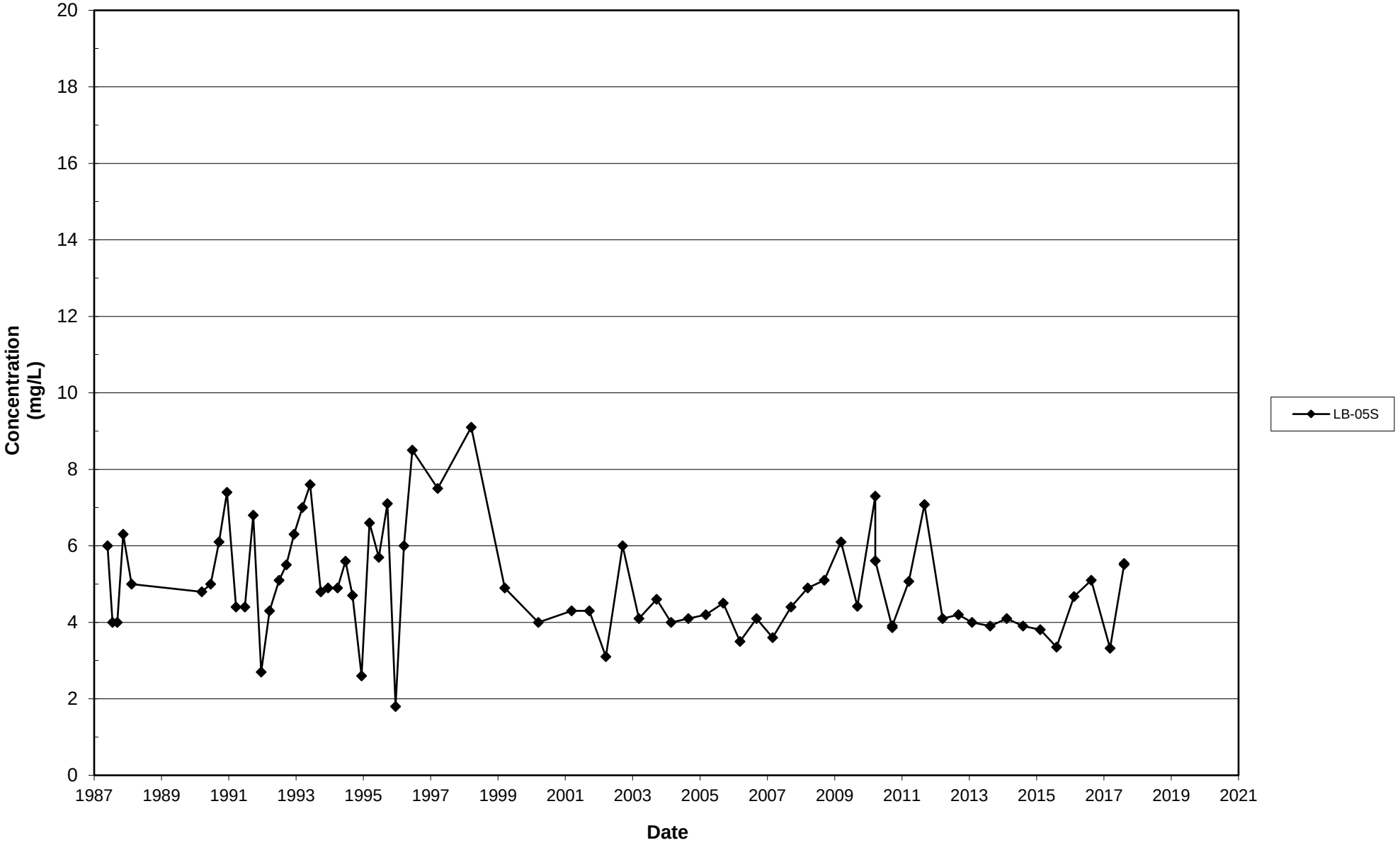
Leichner Landfill
Chloride, LB-03S
1987 - 2017



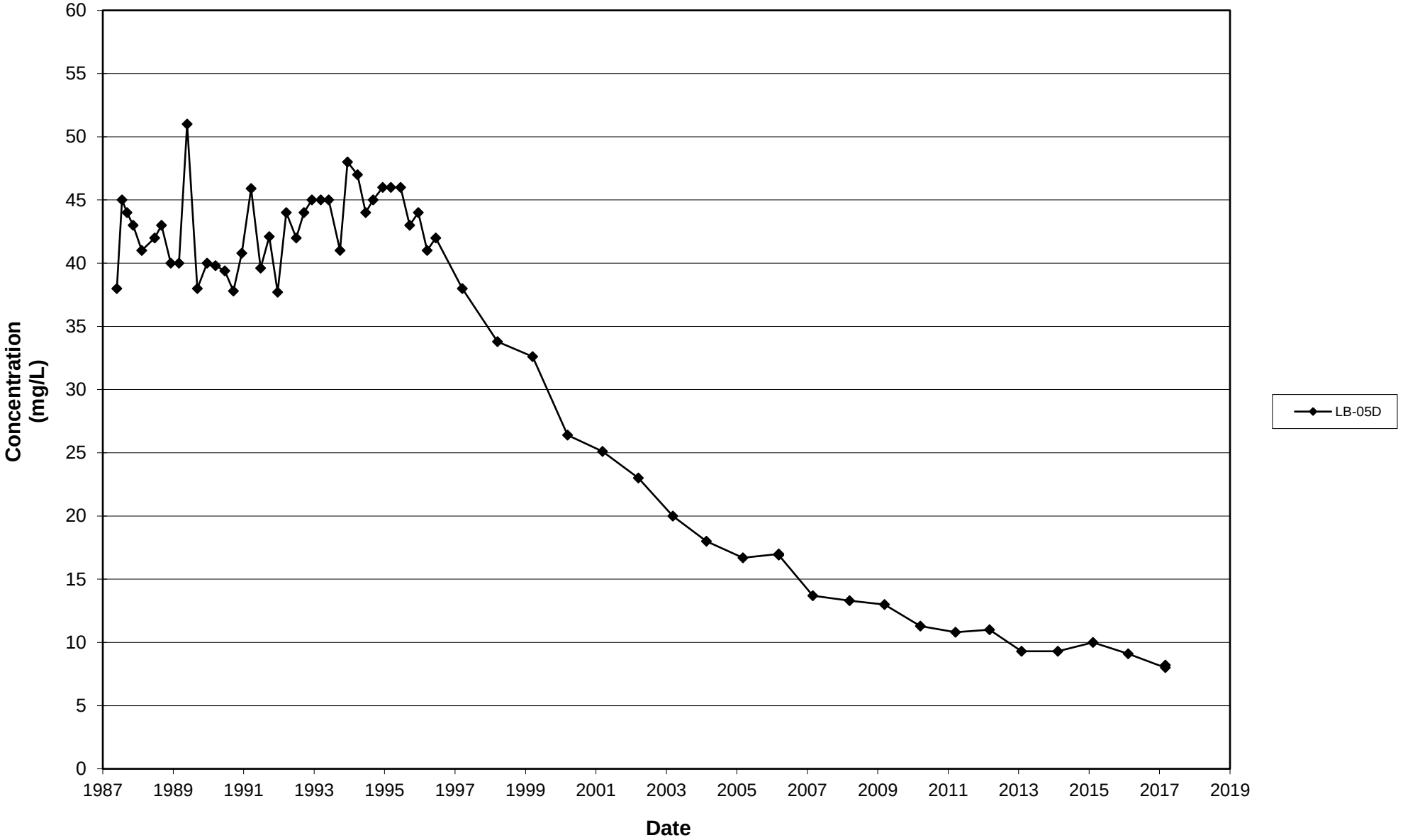
Leichner Landfill
Chloride, LB-03D
1987 - 2017



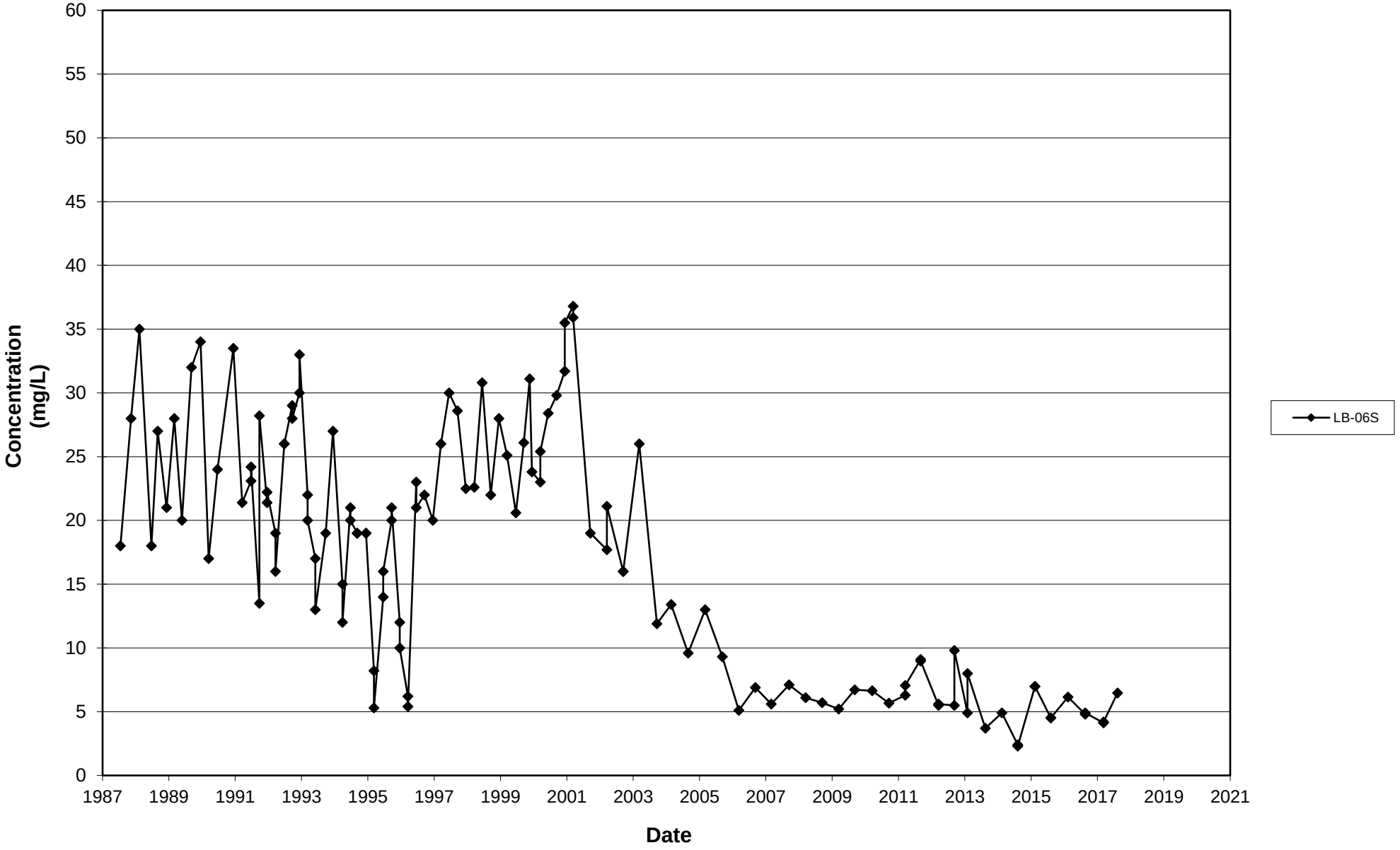
Leichner Landfill
Chloride, LB-05S
1987 - 2017



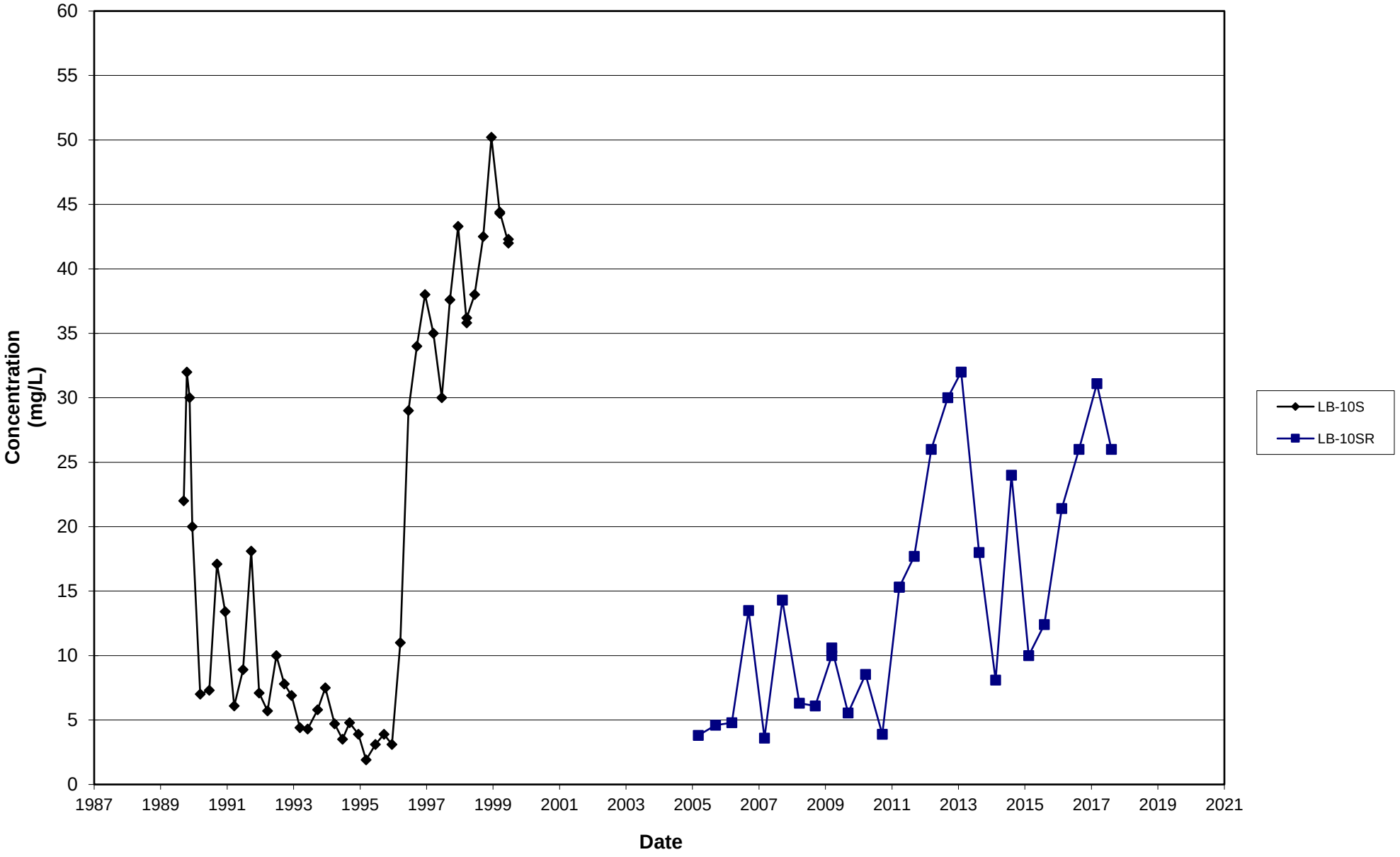
Leichner Landfill
Chloride, LB-05D
1987 - 2017



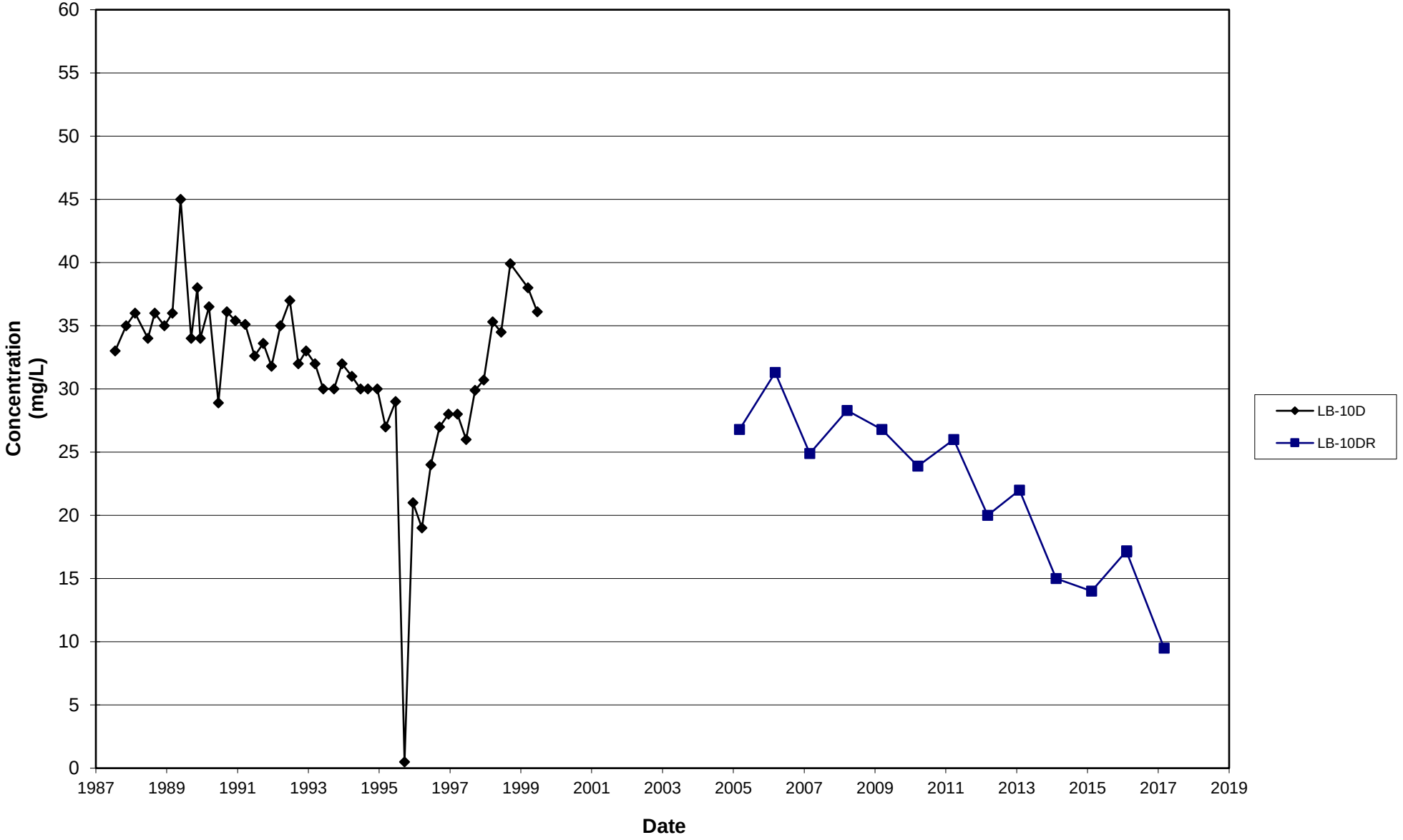
Leichner Landfill
Chloride, LB-06S
1987 - 2017



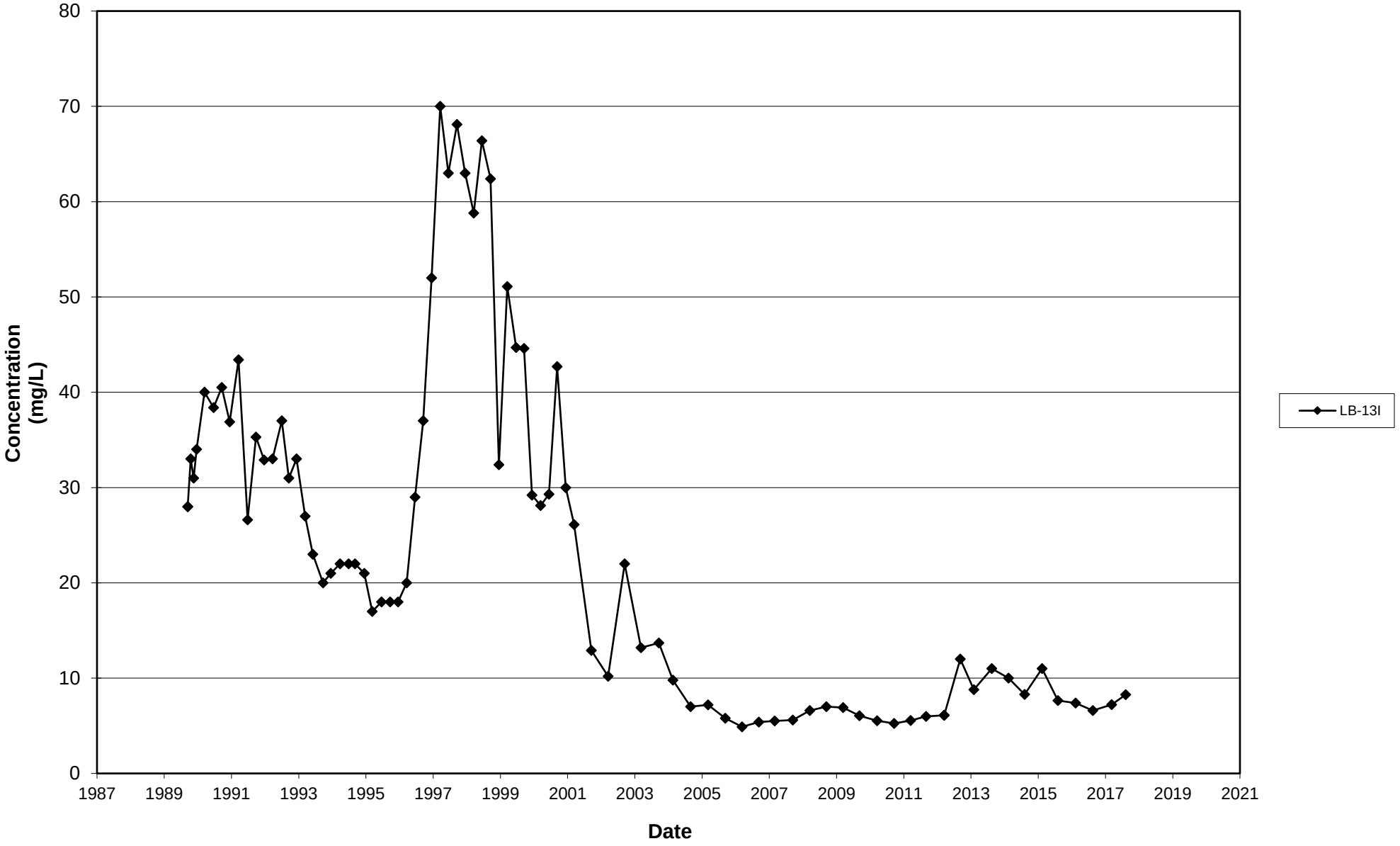
Leichner Landfill
Chloride, LB-10S and LB-10SR
1987 - 2017



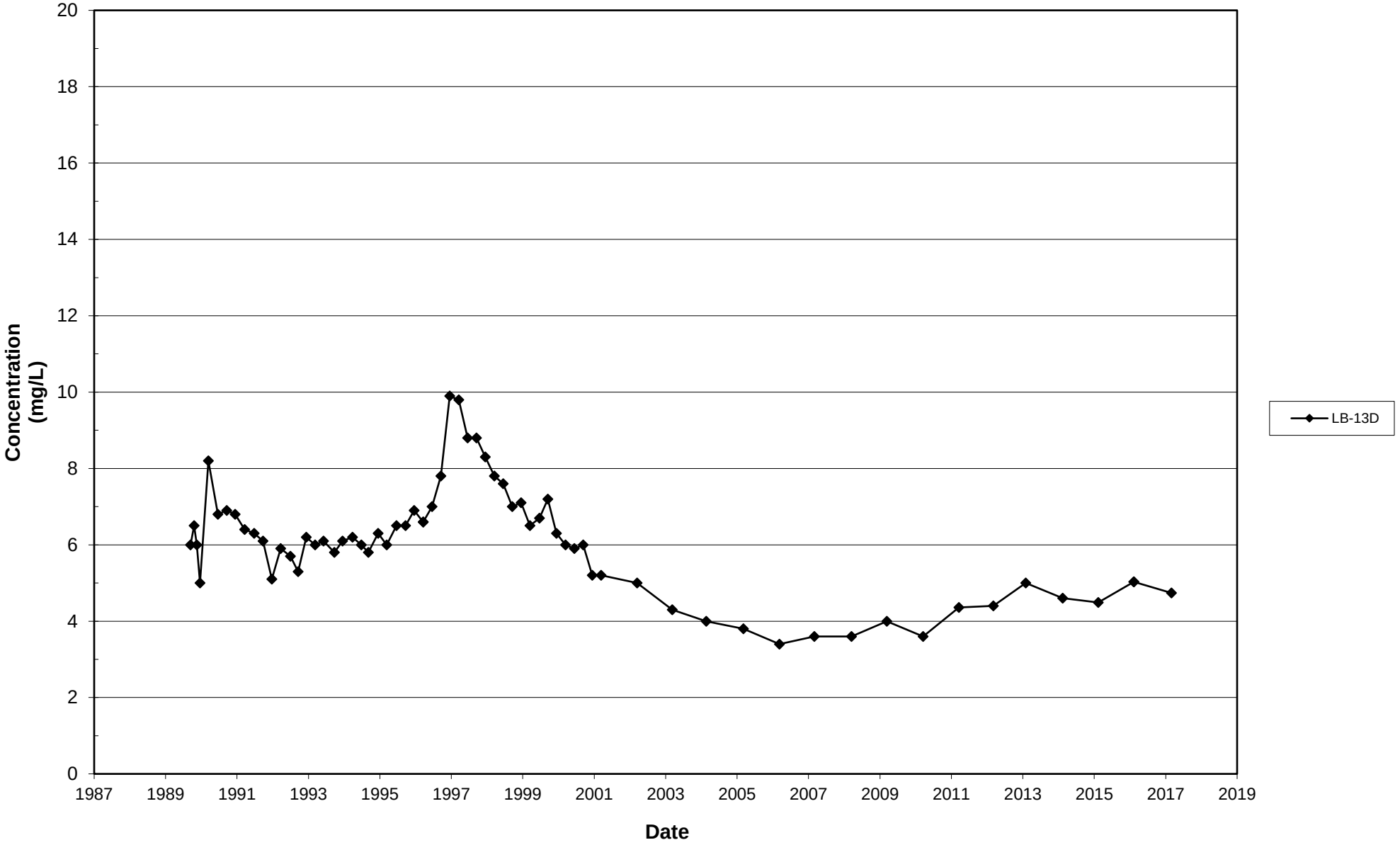
Leichner Landfill
Chloride, LB-10D and LB-10DR
1987 - 2017



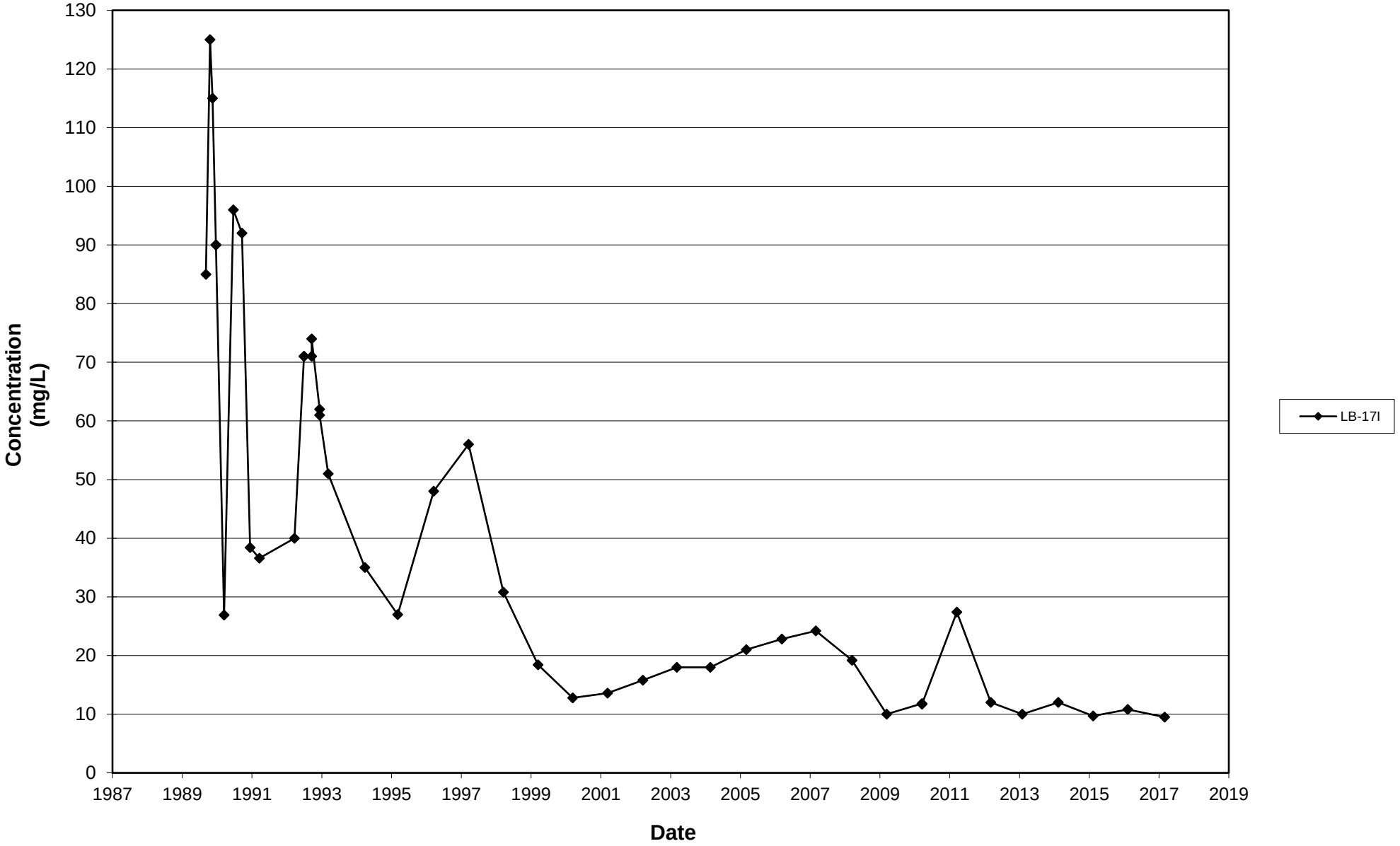
Leichner Landfill
Chloride, LB-13I
1987 - 2017



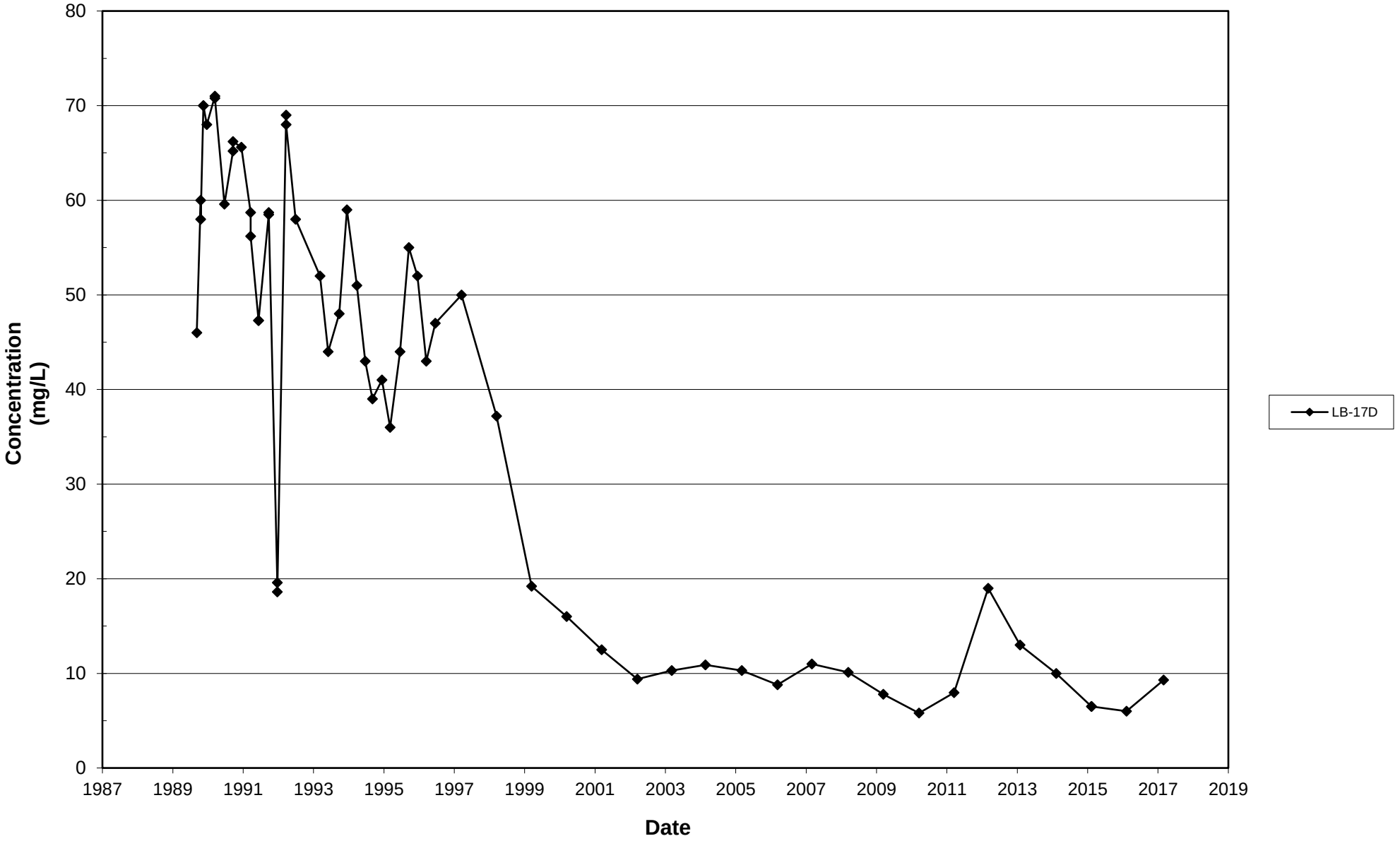
Leichner Landfill
Chloride, LB-13D
1987 - 2017



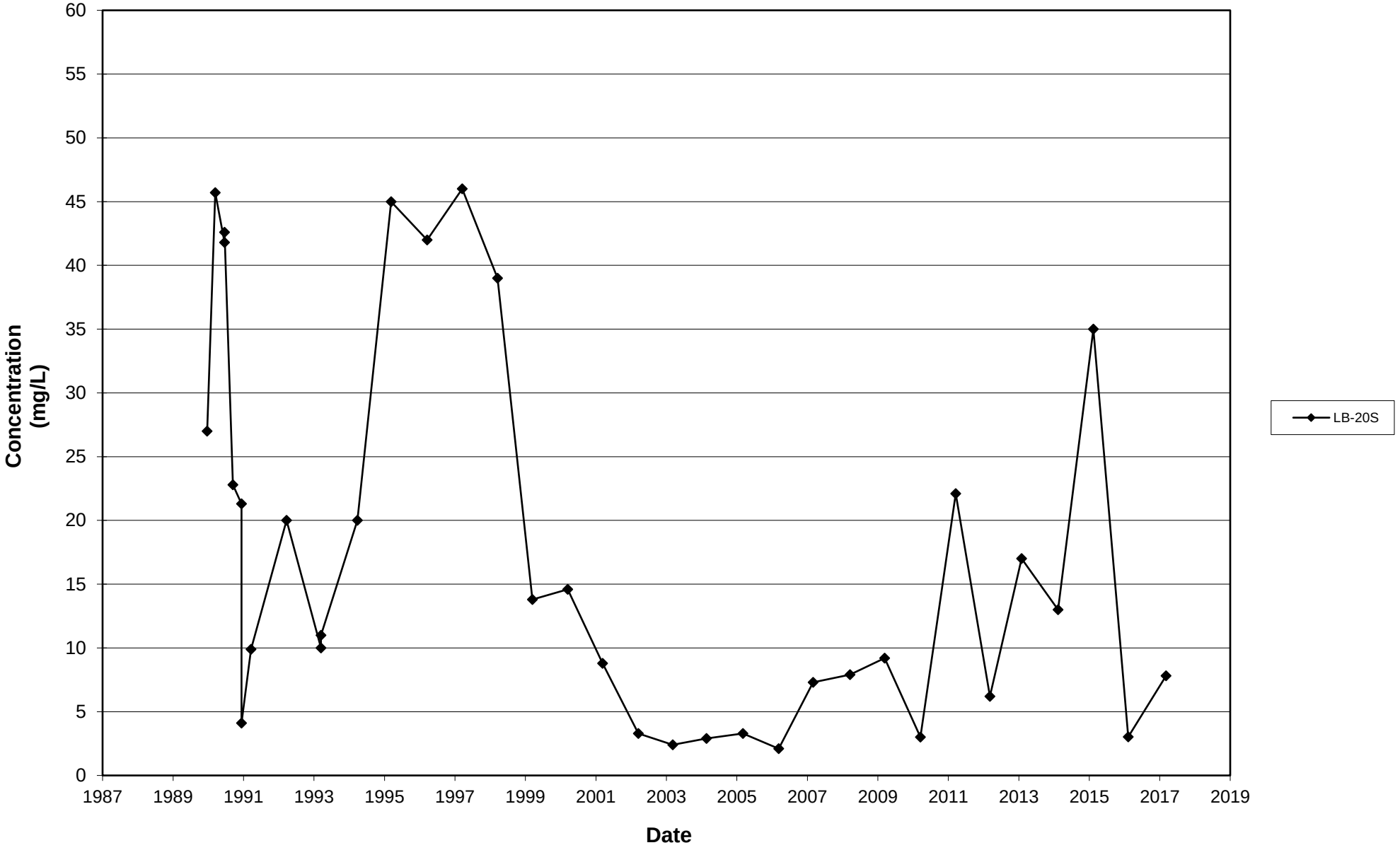
Leichner Landfill
Chloride, LB-17I
1987 - 2017



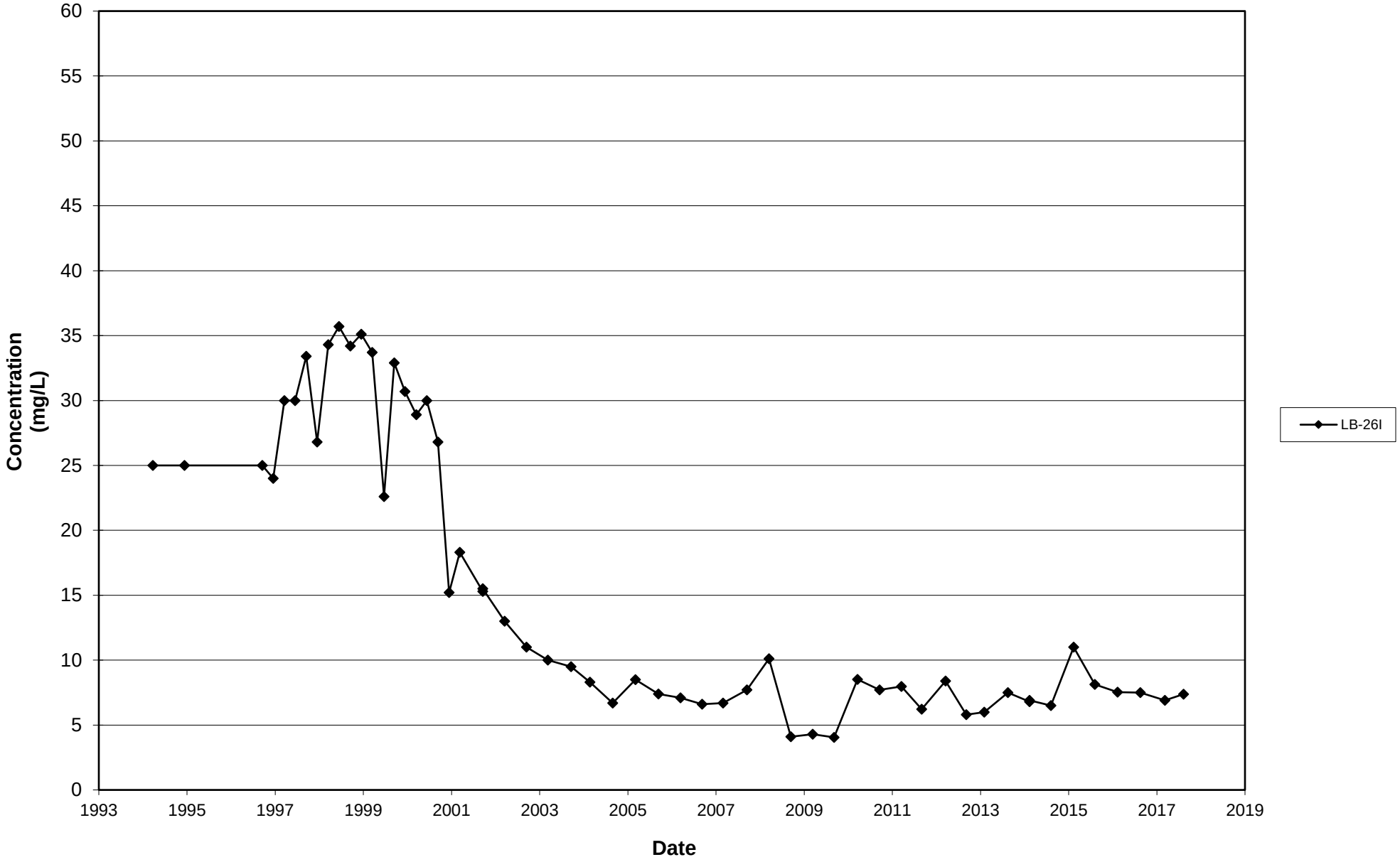
Leichner Landfill
Chloride, LB-17D
1987 - 2017



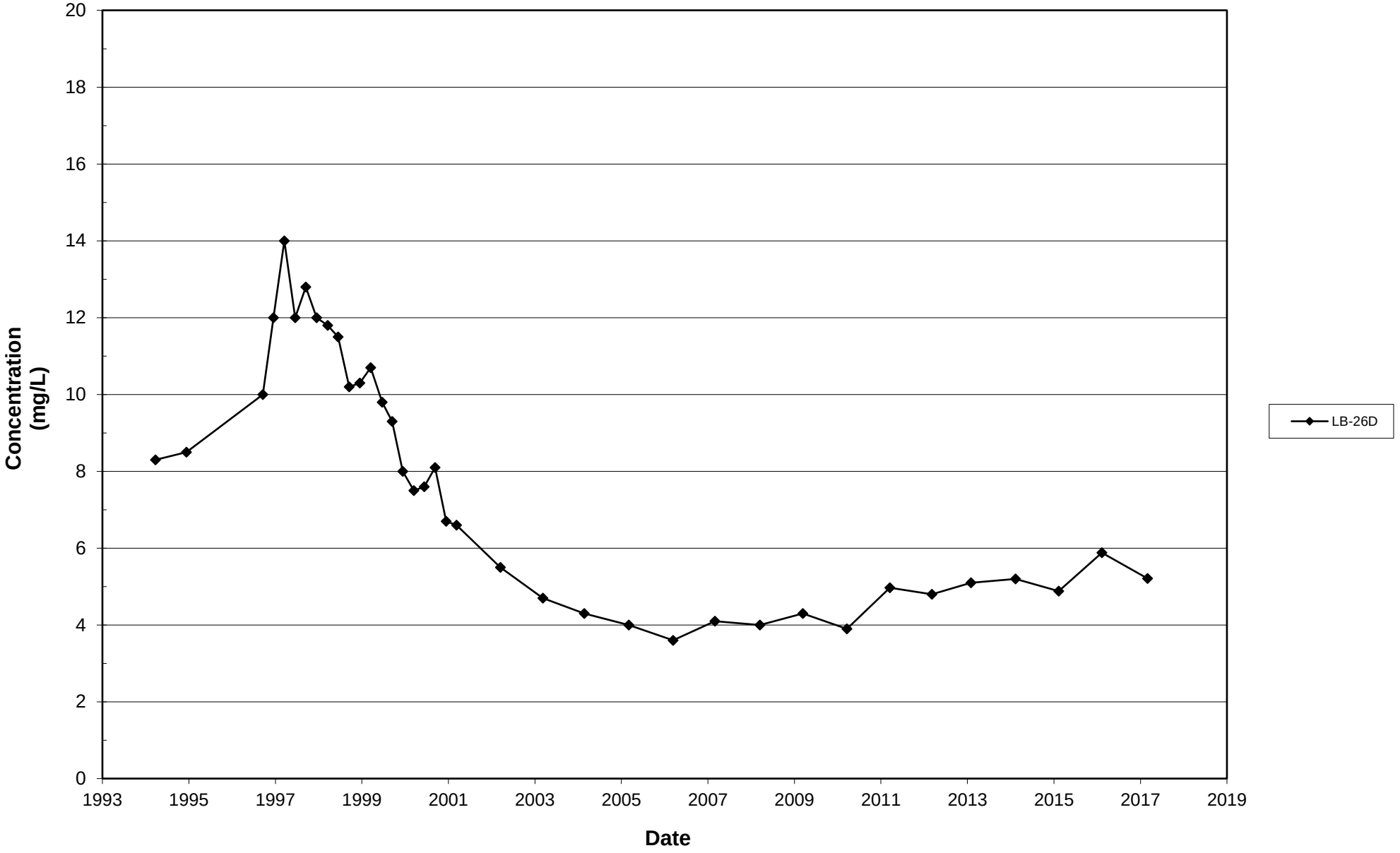
Leichner Landfill
Chloride, LB-20S
1987 - 2017



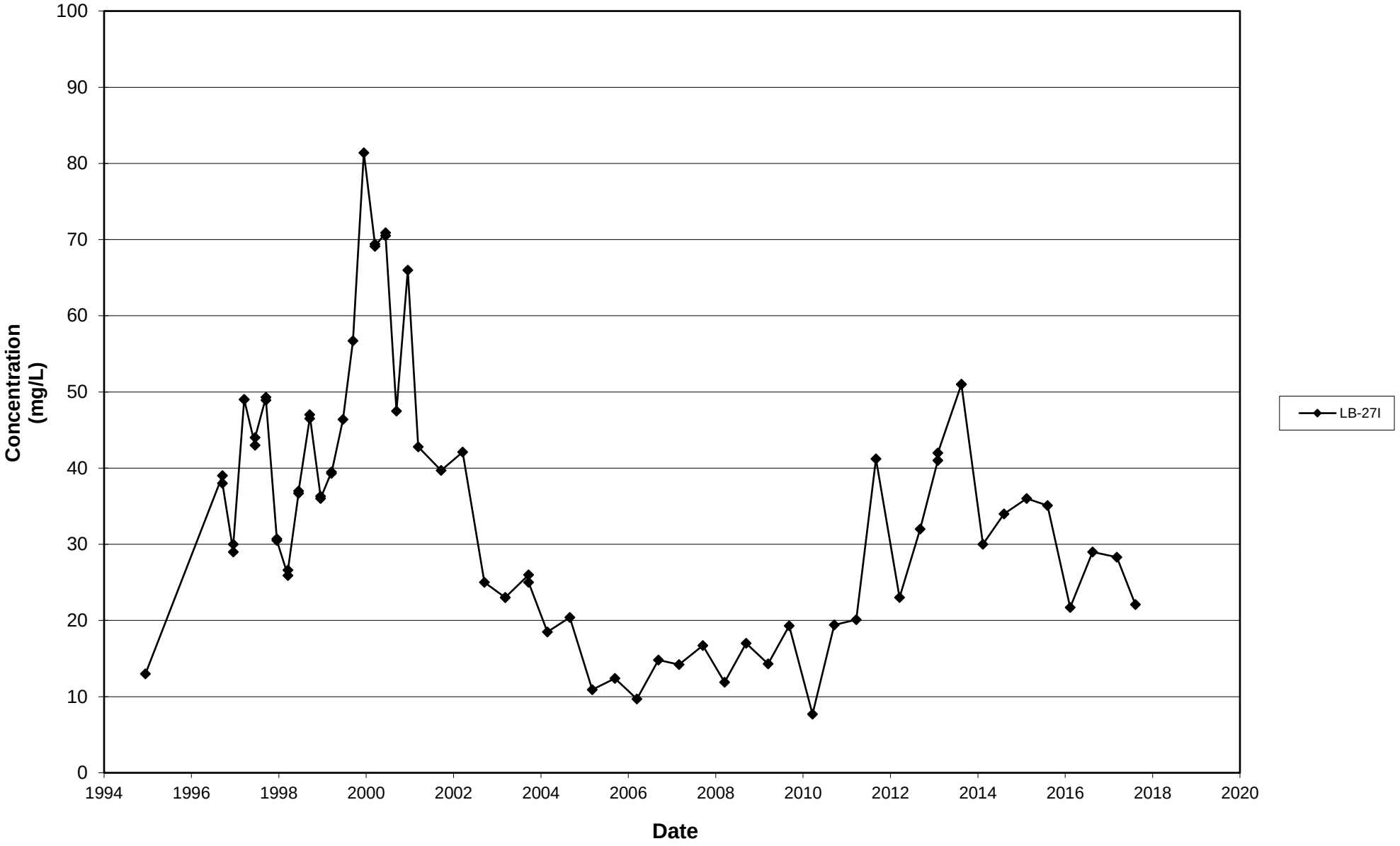
Leichner Landfill
Chloride, LB-26I
1987 - 2017



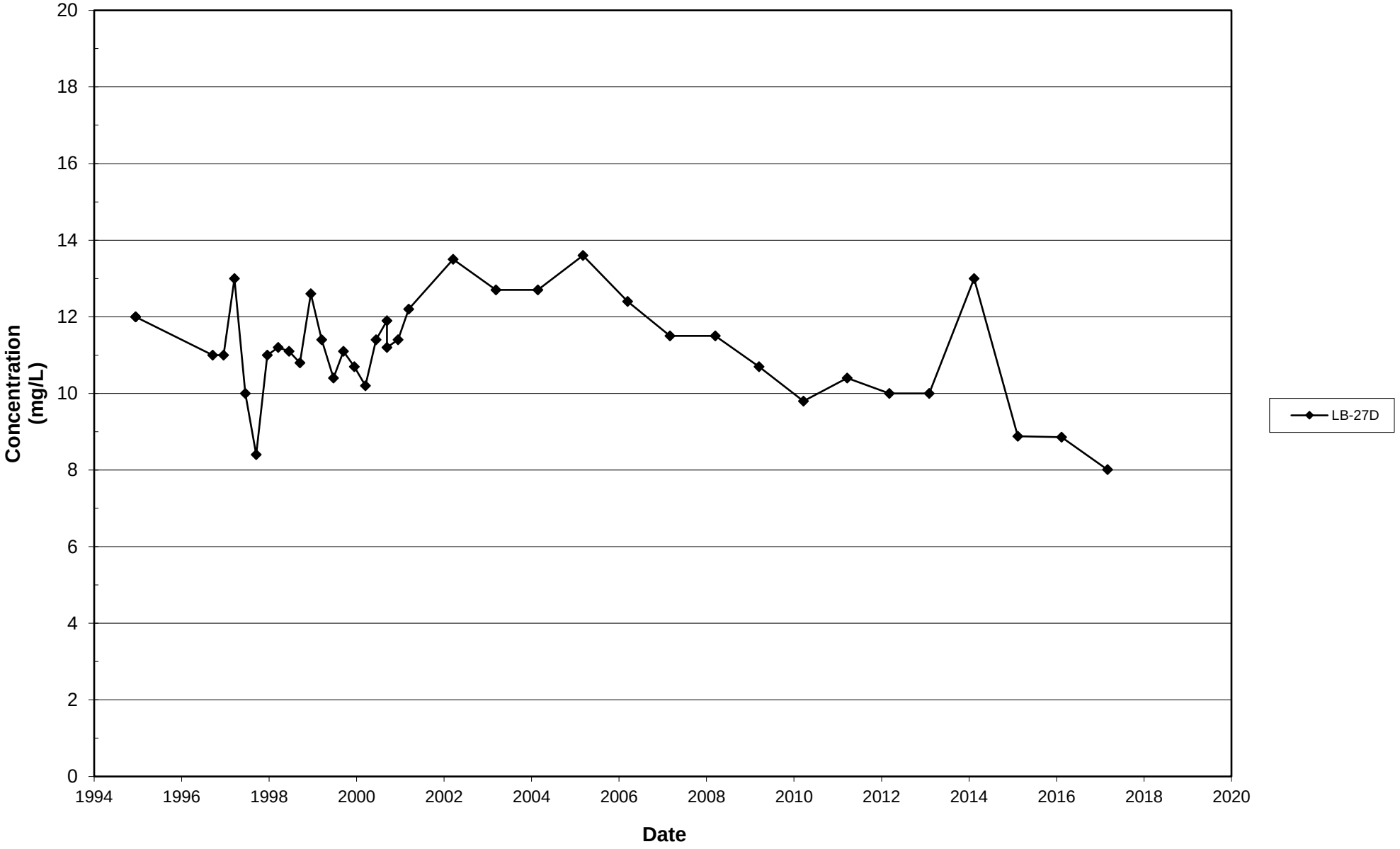
Leichner Landfill
Chloride, LB-26D
1987 - 2017



Leichner Landfill
Chloride, LB-27I
1994 - 2017

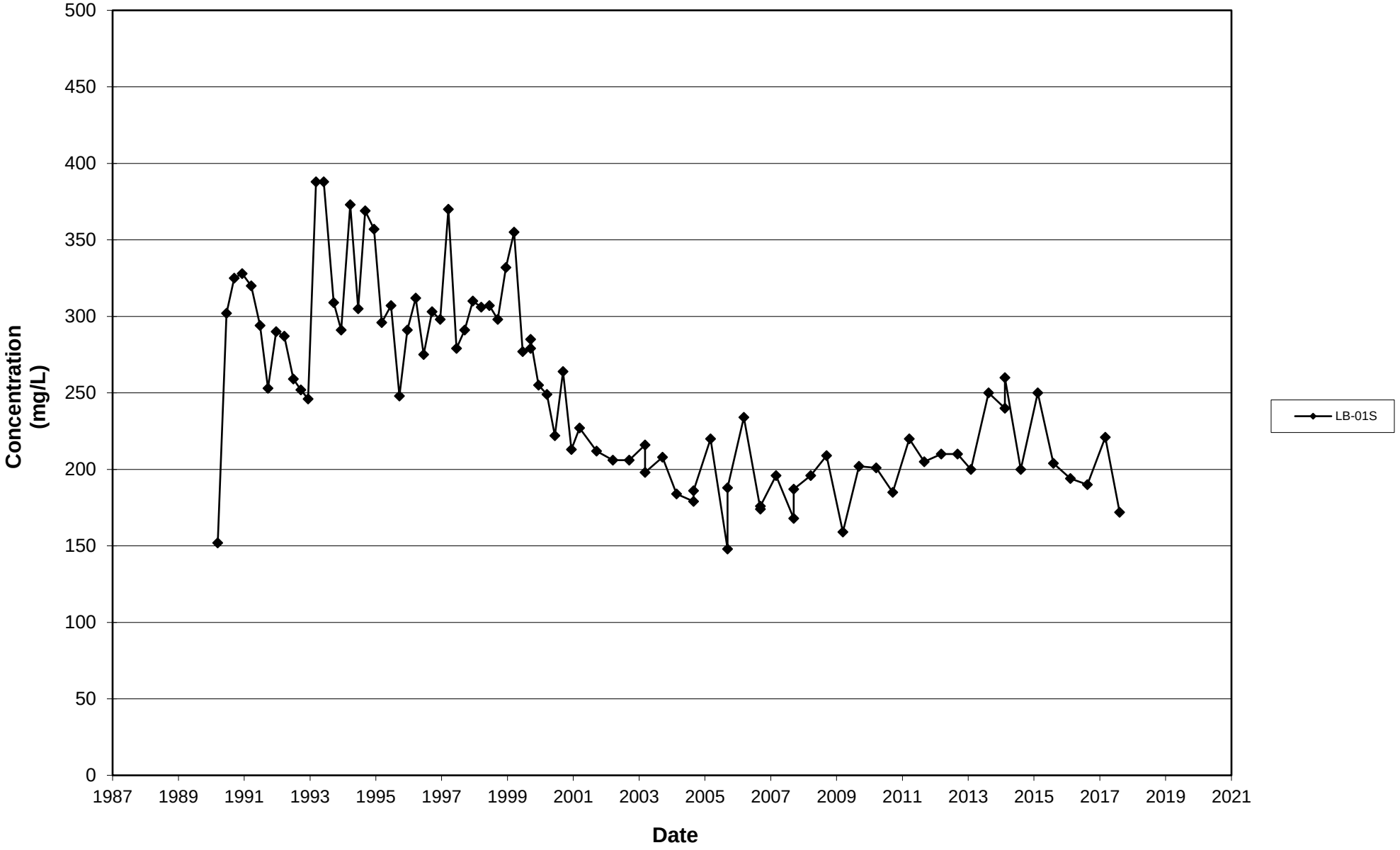


Leichner Landfill
Chloride, LB-27D
1994 - 2017

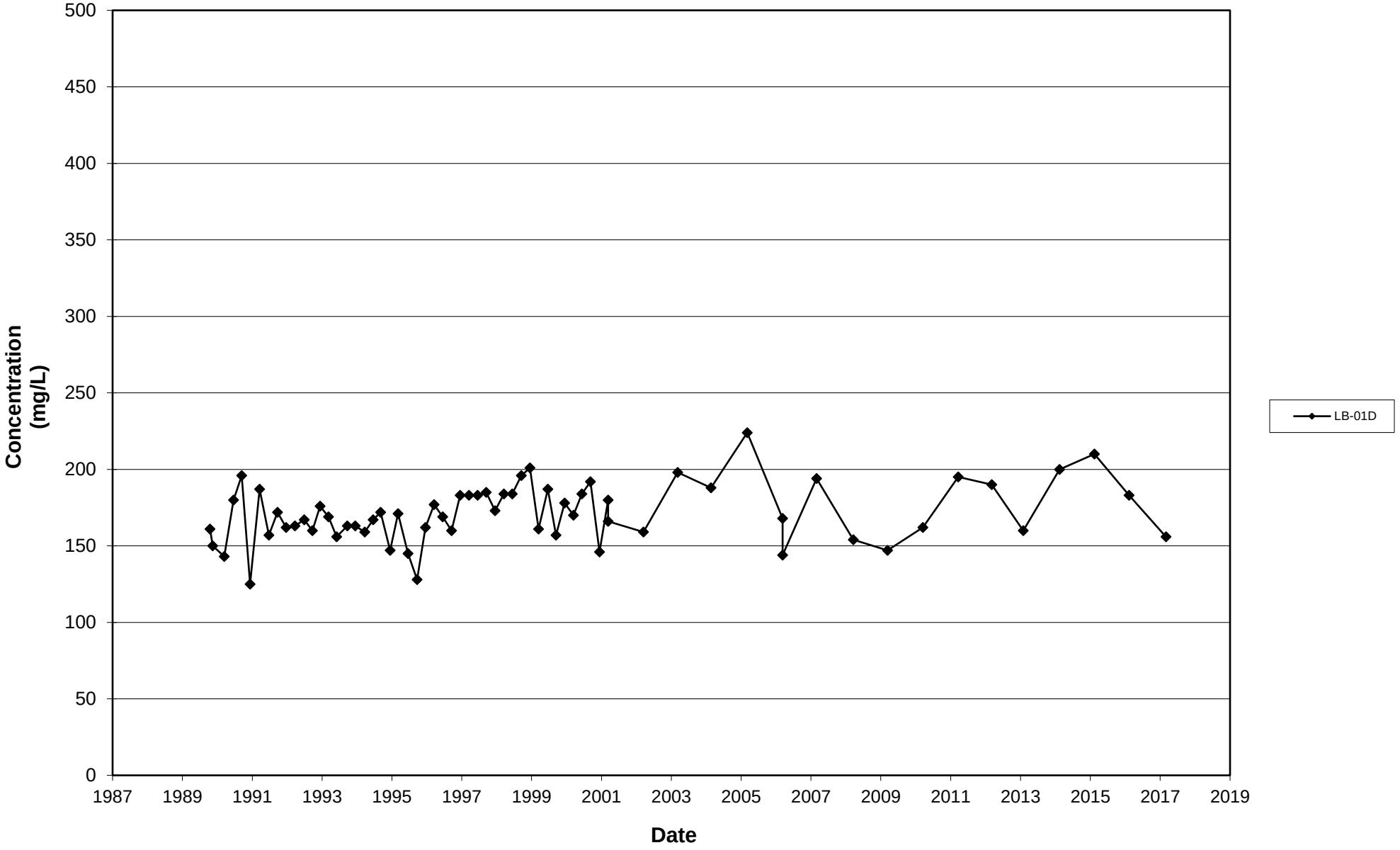


Total Dissolved Solids

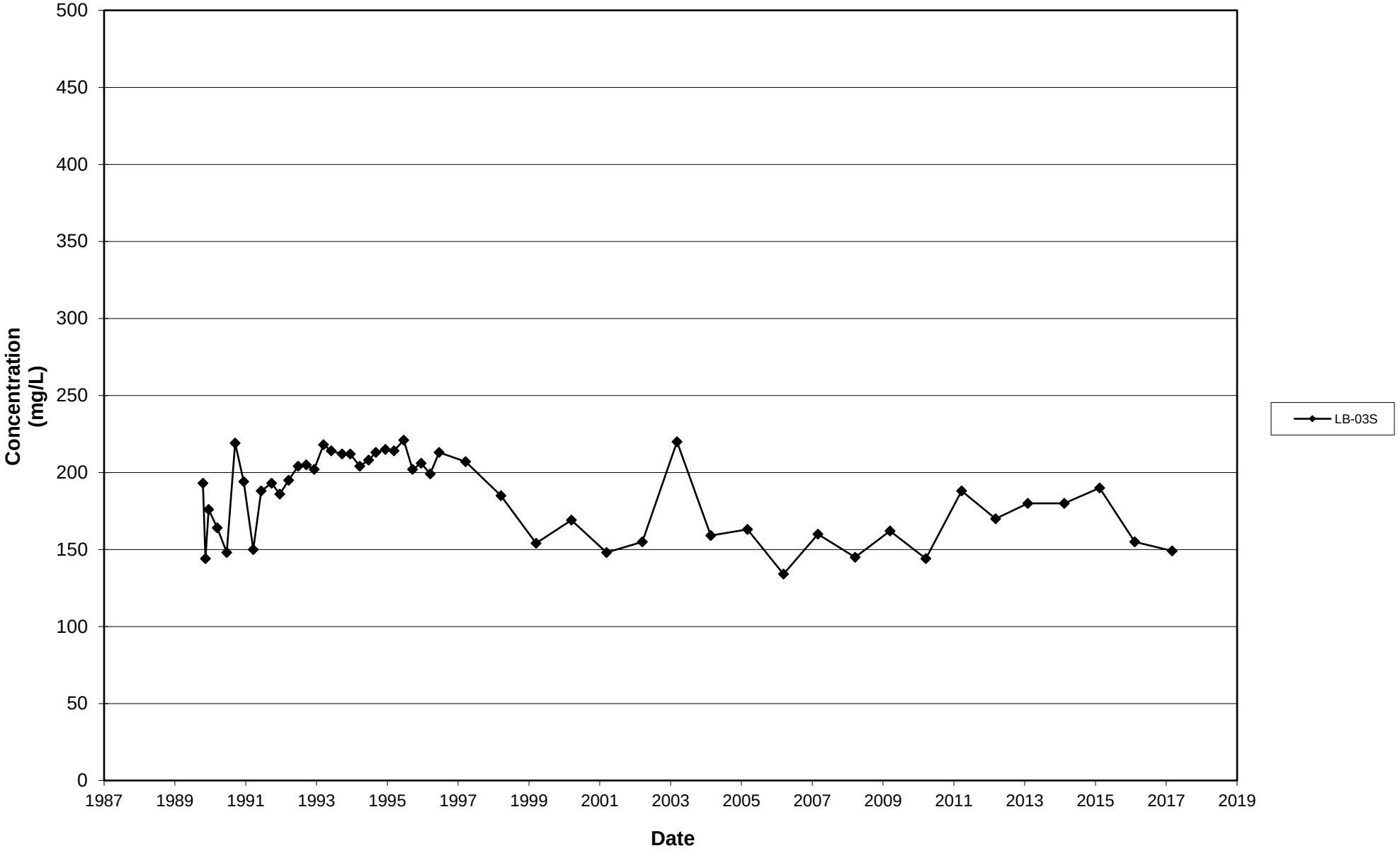
Leichner Landfill
Total Dissolved Solids, LB-01S
1987 - 2017



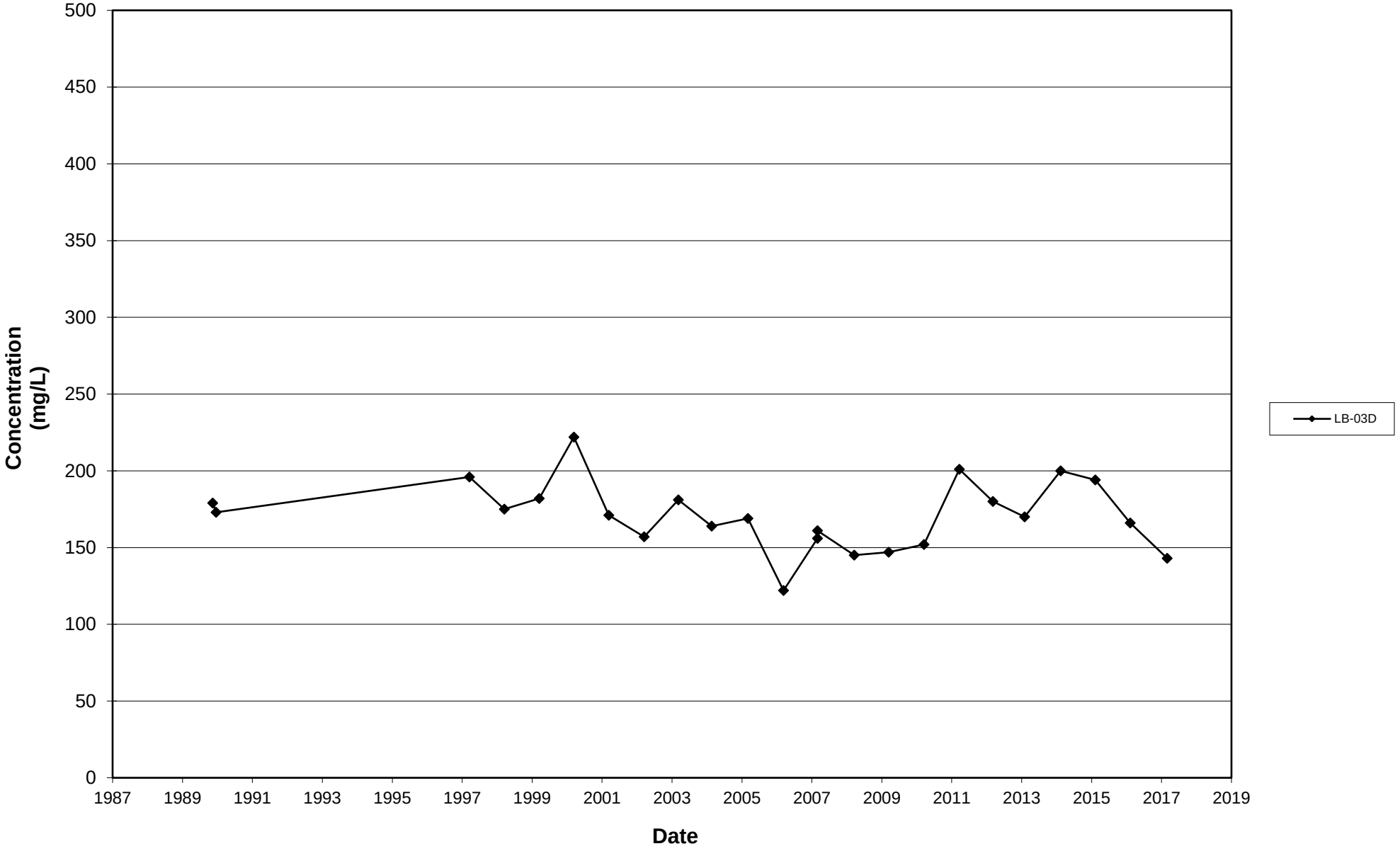
Leichner Landfill
Total Dissolved Solids, LB-01D
1987 - 2017



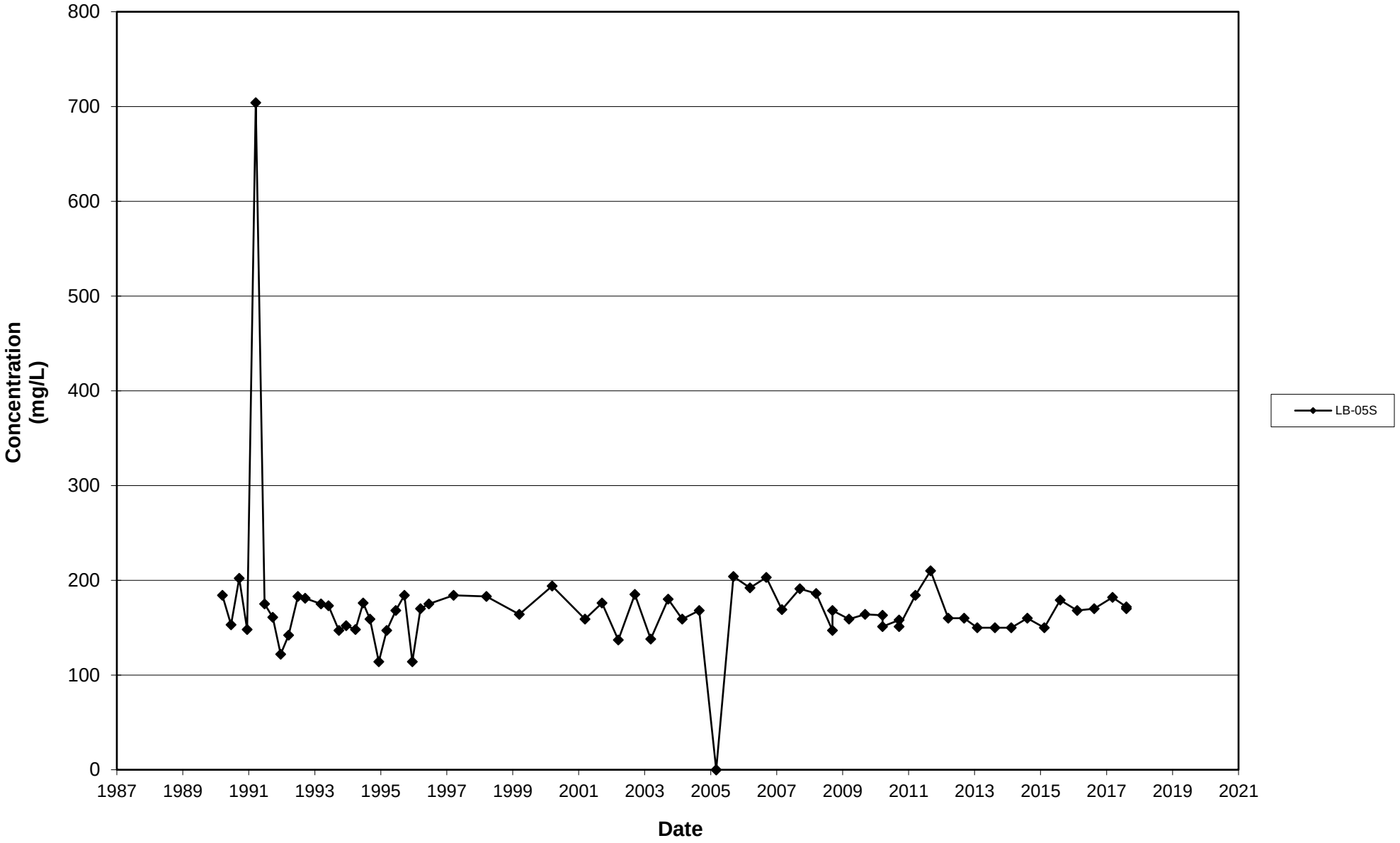
Leichner Landfill
Total Dissolved Solids, LB-03S
1987 - 2017



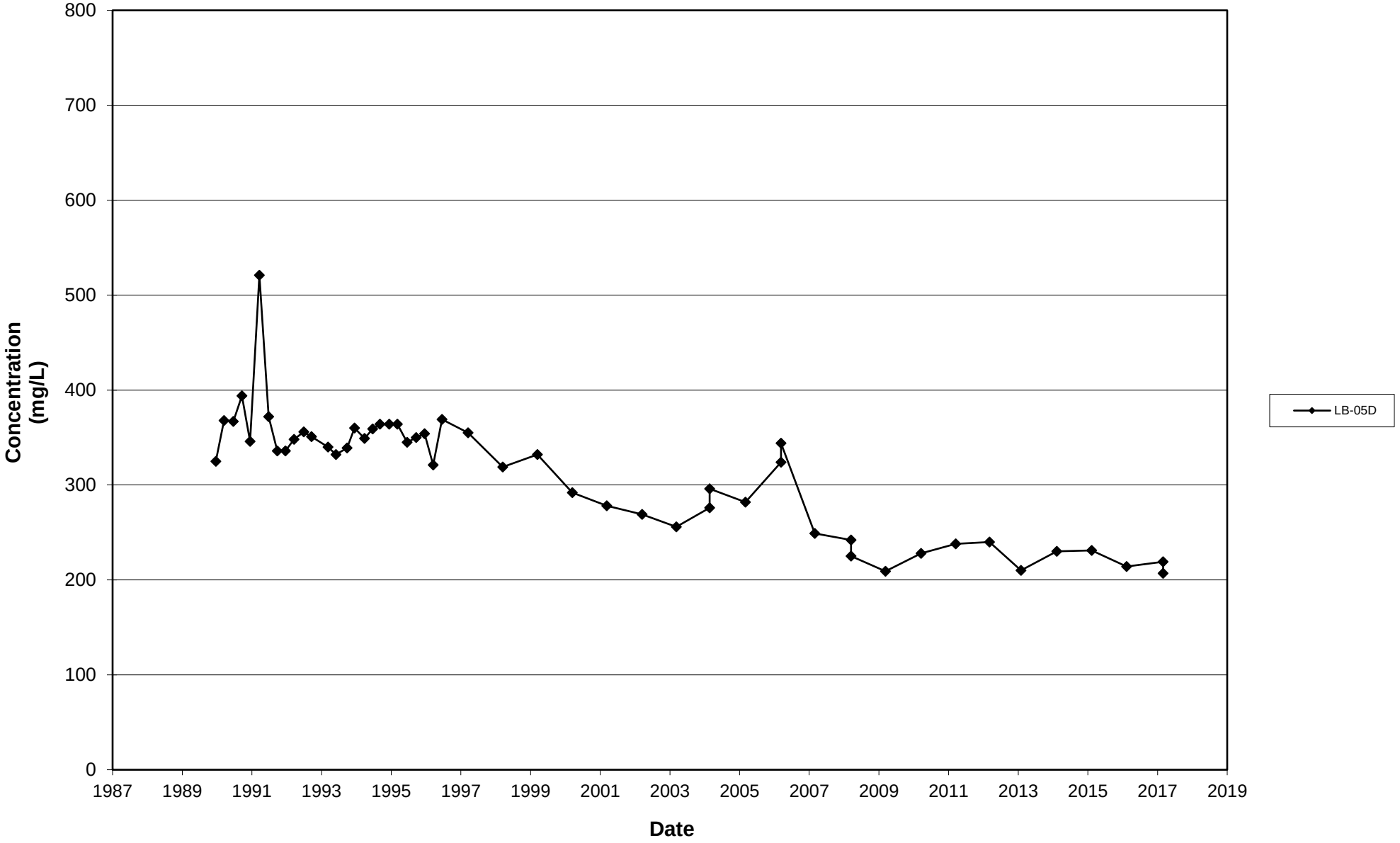
Leichner Landfill
Total Dissolved Solids, LB-03D
1987 - 2017



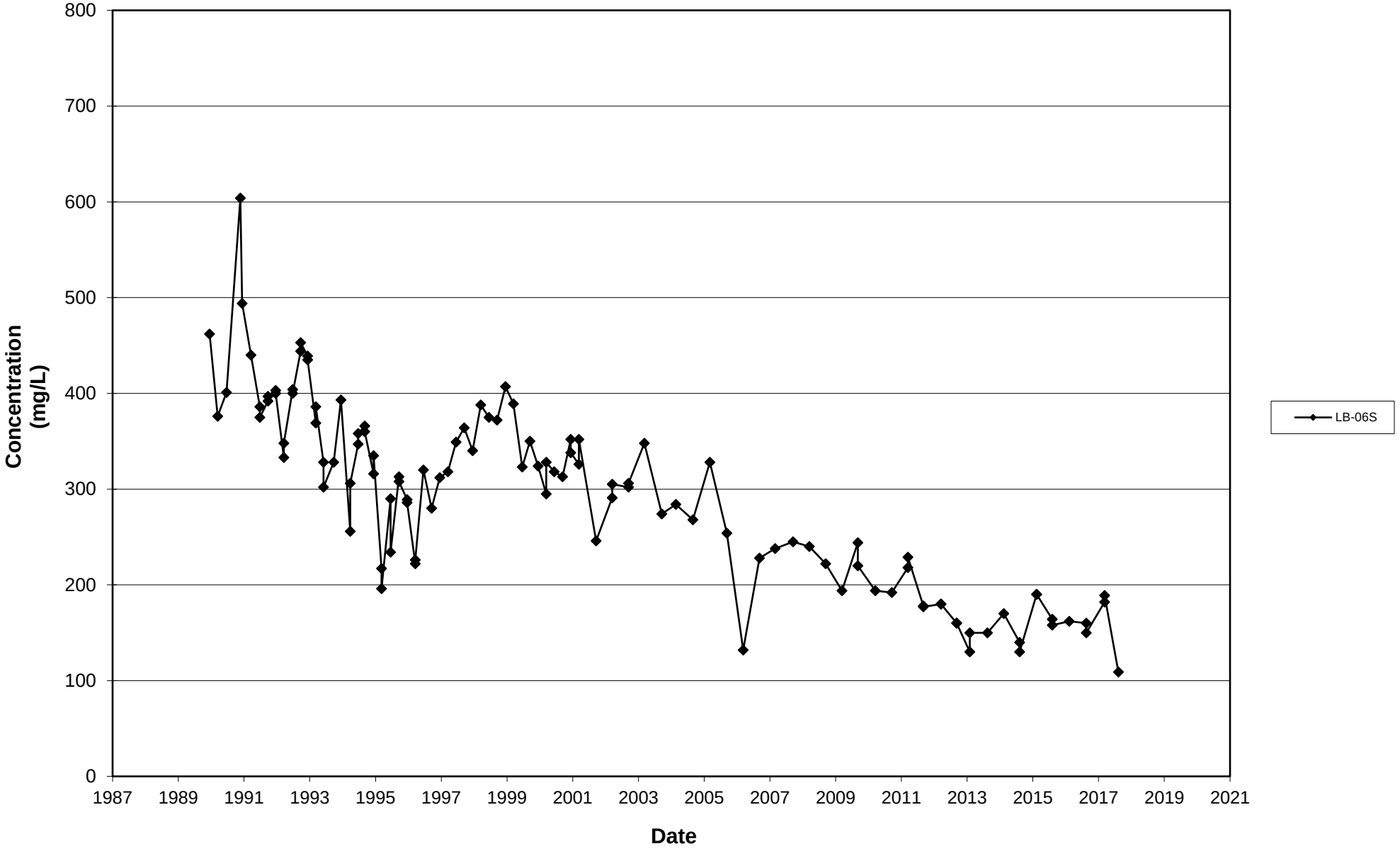
Leichner Landfill
Total Dissolved Solids, LB-05S
1987 - 2017



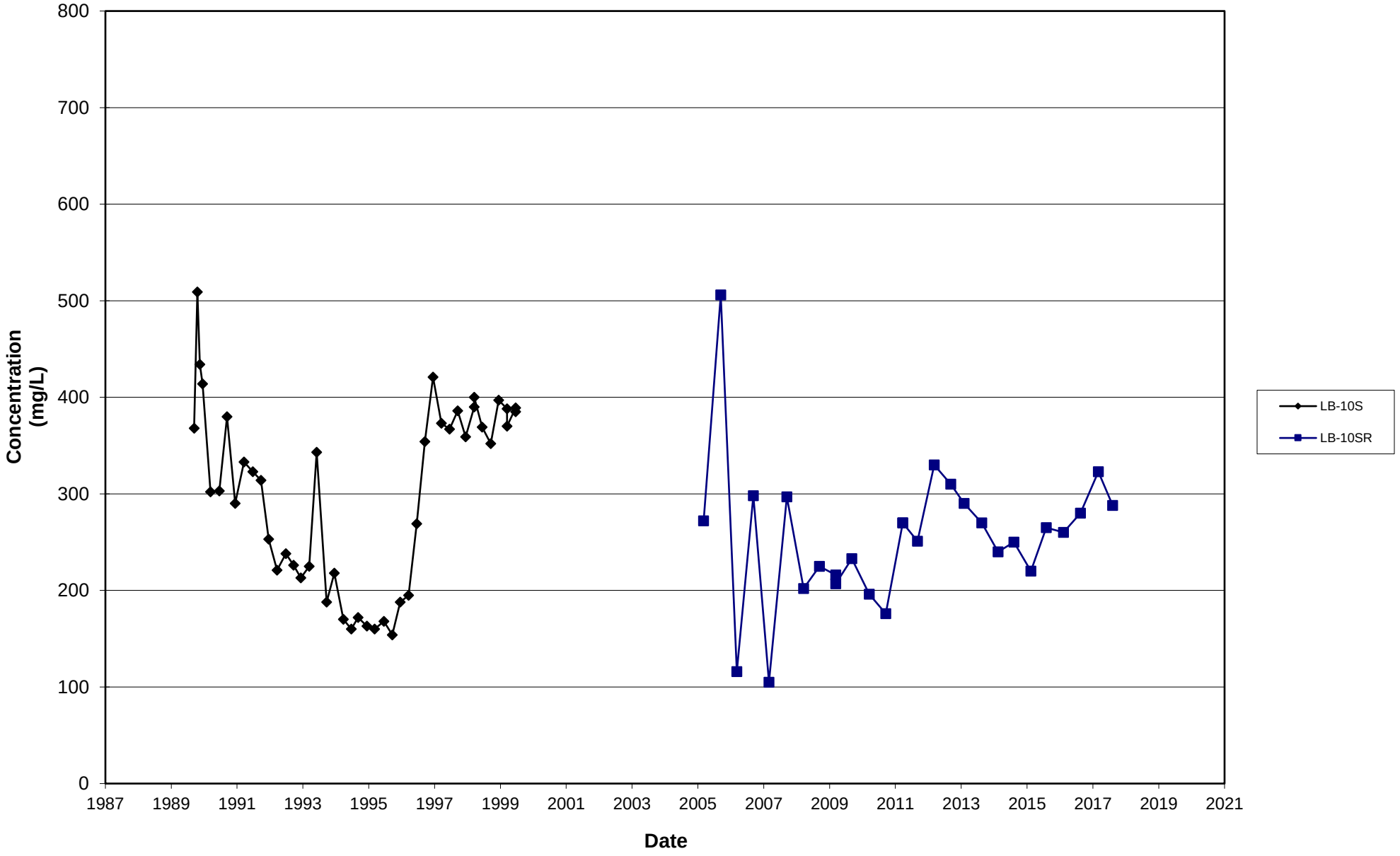
Leichner Landfill
Total Dissolved Solids, LB-05D
1987 - 2017



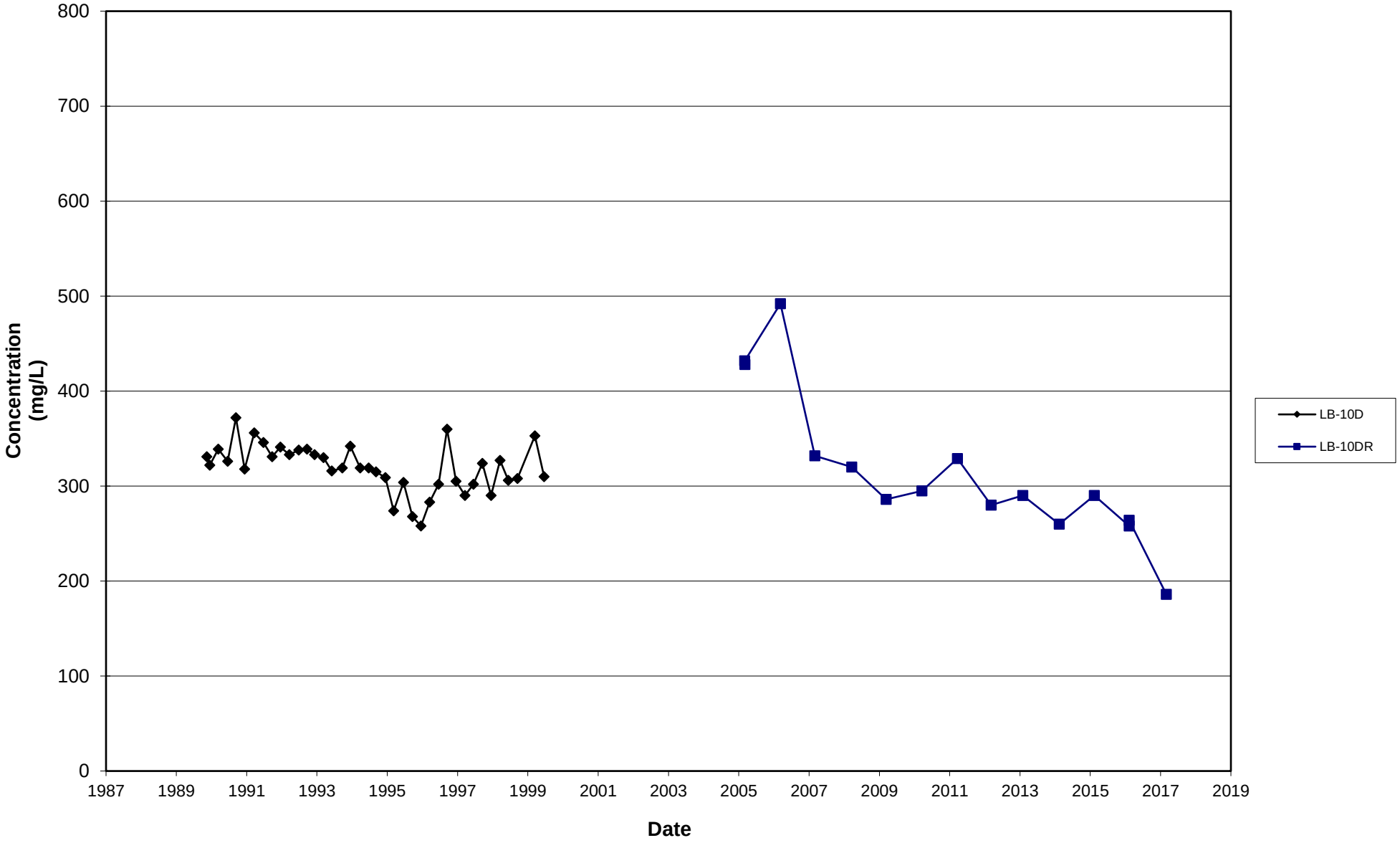
Leichner Landfill
Total Dissolved Solids, LB-06S
1987 - 2017



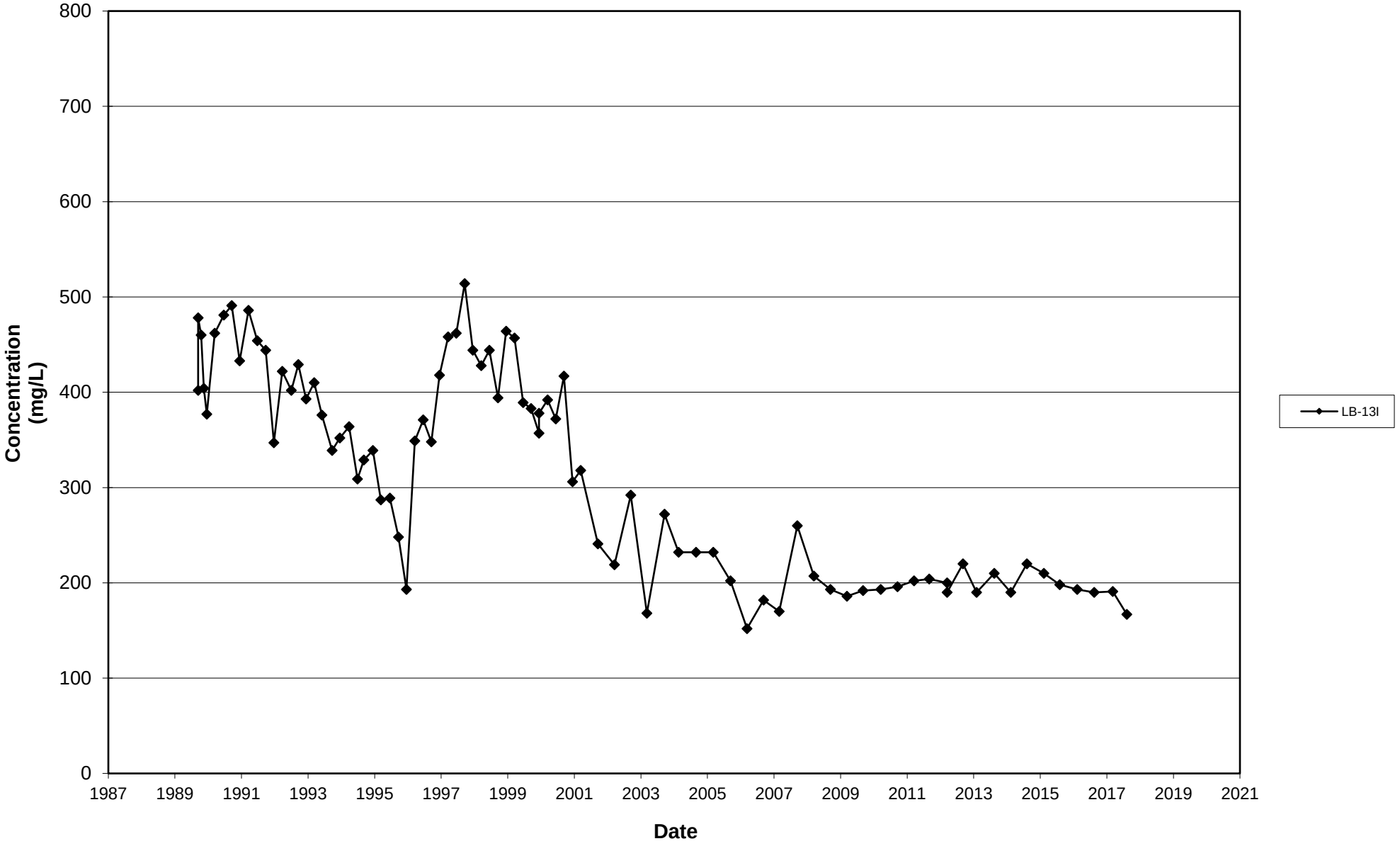
Leichner Landfill
Total Dissolved Solids, LB-10S and LB-10SR
1987 - 2017



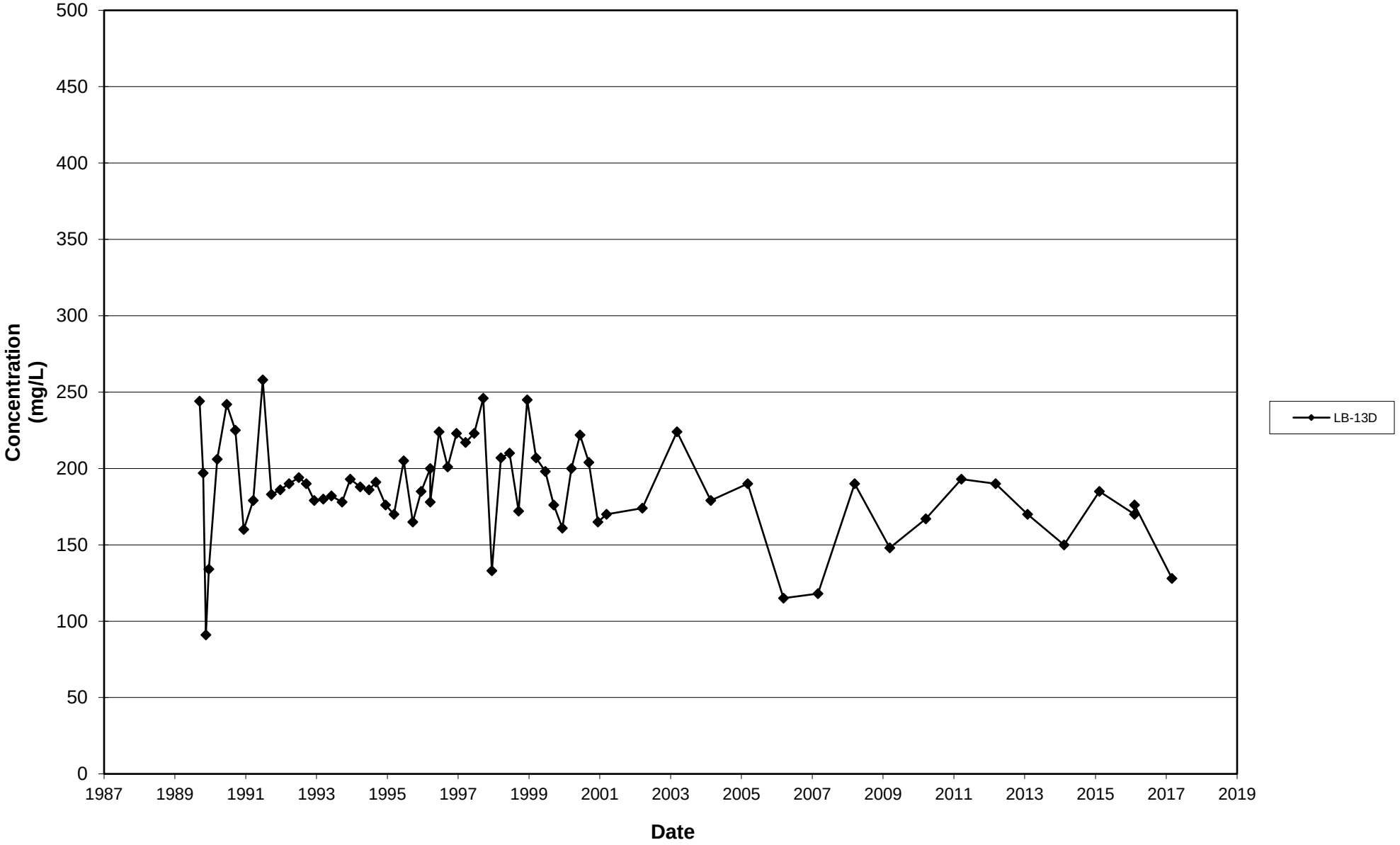
Leichner Landfill
Total Dissolved Solids, LB-10D and LB-10DR
1987 - 2017



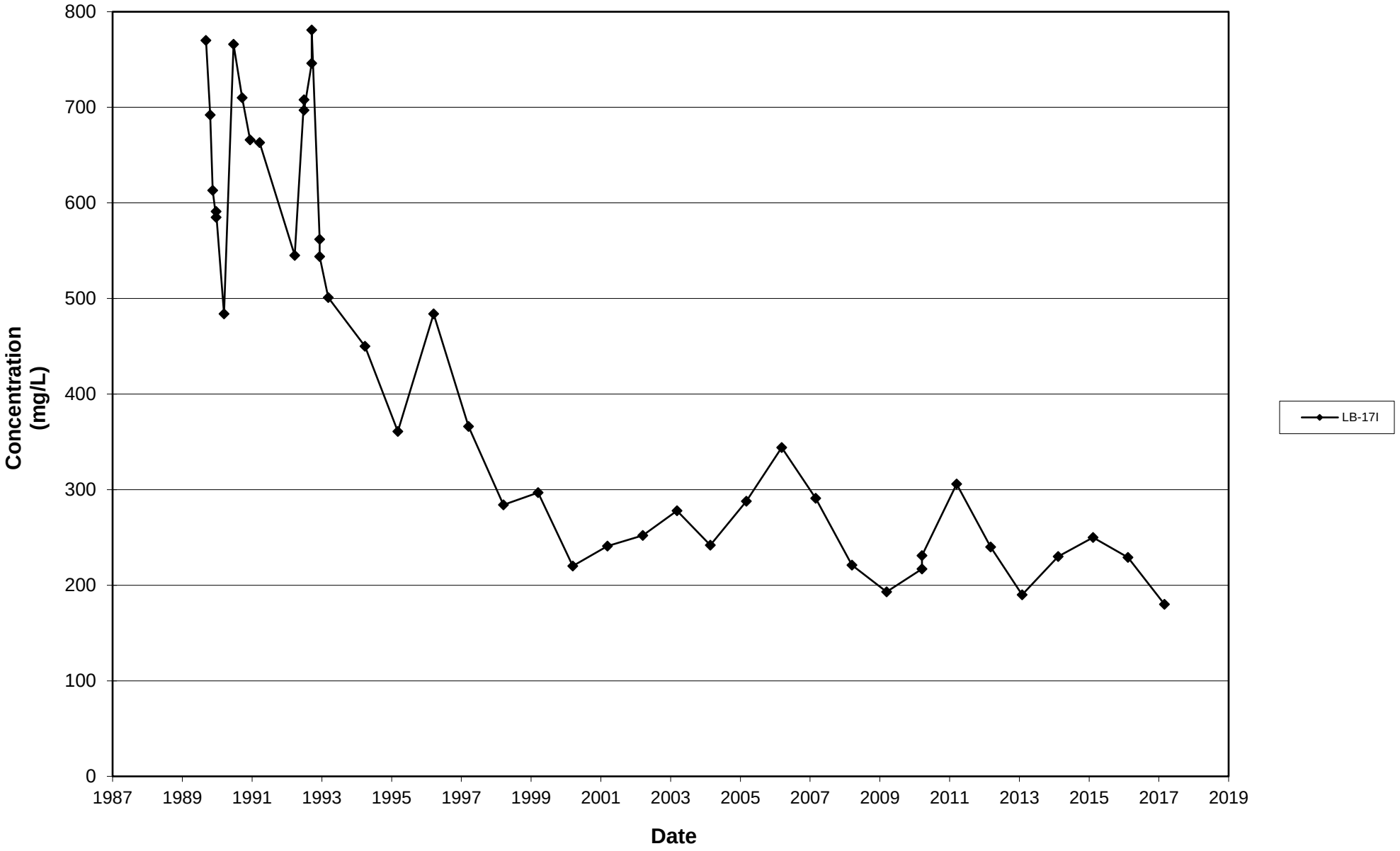
Leichner Landfill
Total Dissolved Solids, LB-13I
1987 - 2017



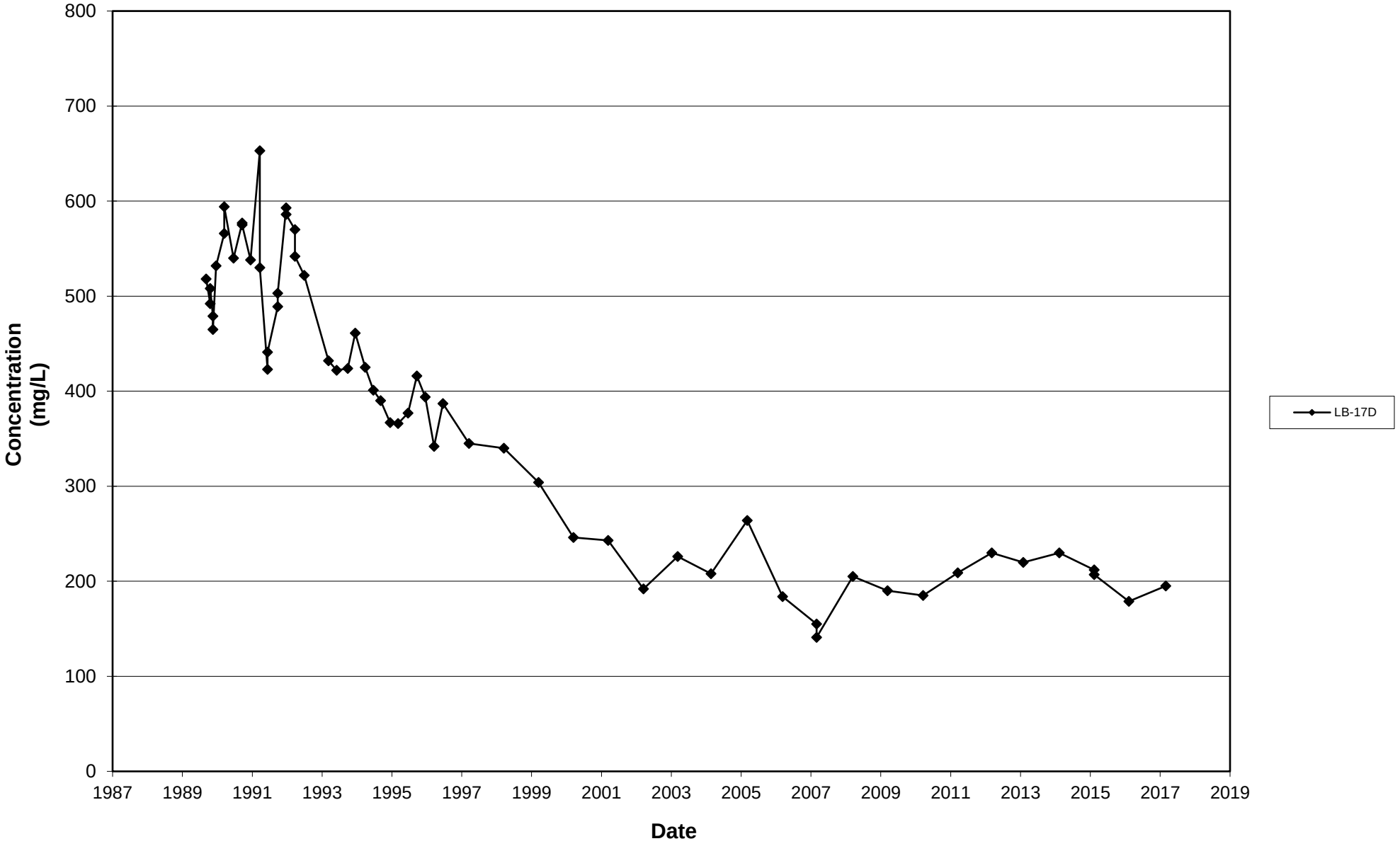
Leichner Landfill
Total Dissolved Solids, LB-13D
1987 - 2017



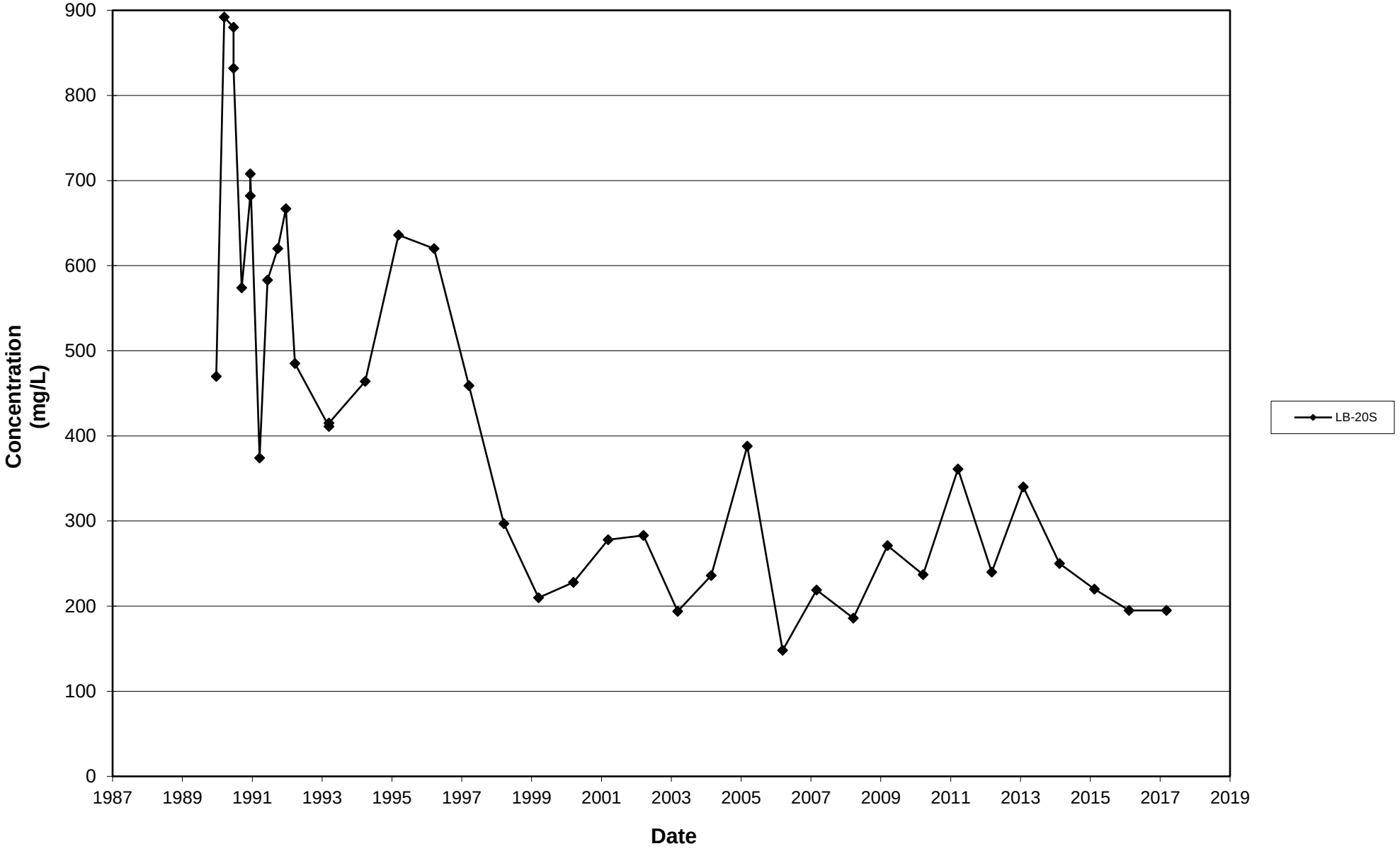
Leichner Landfill
Total Dissolved Solids, LB-17I
1987 - 2017



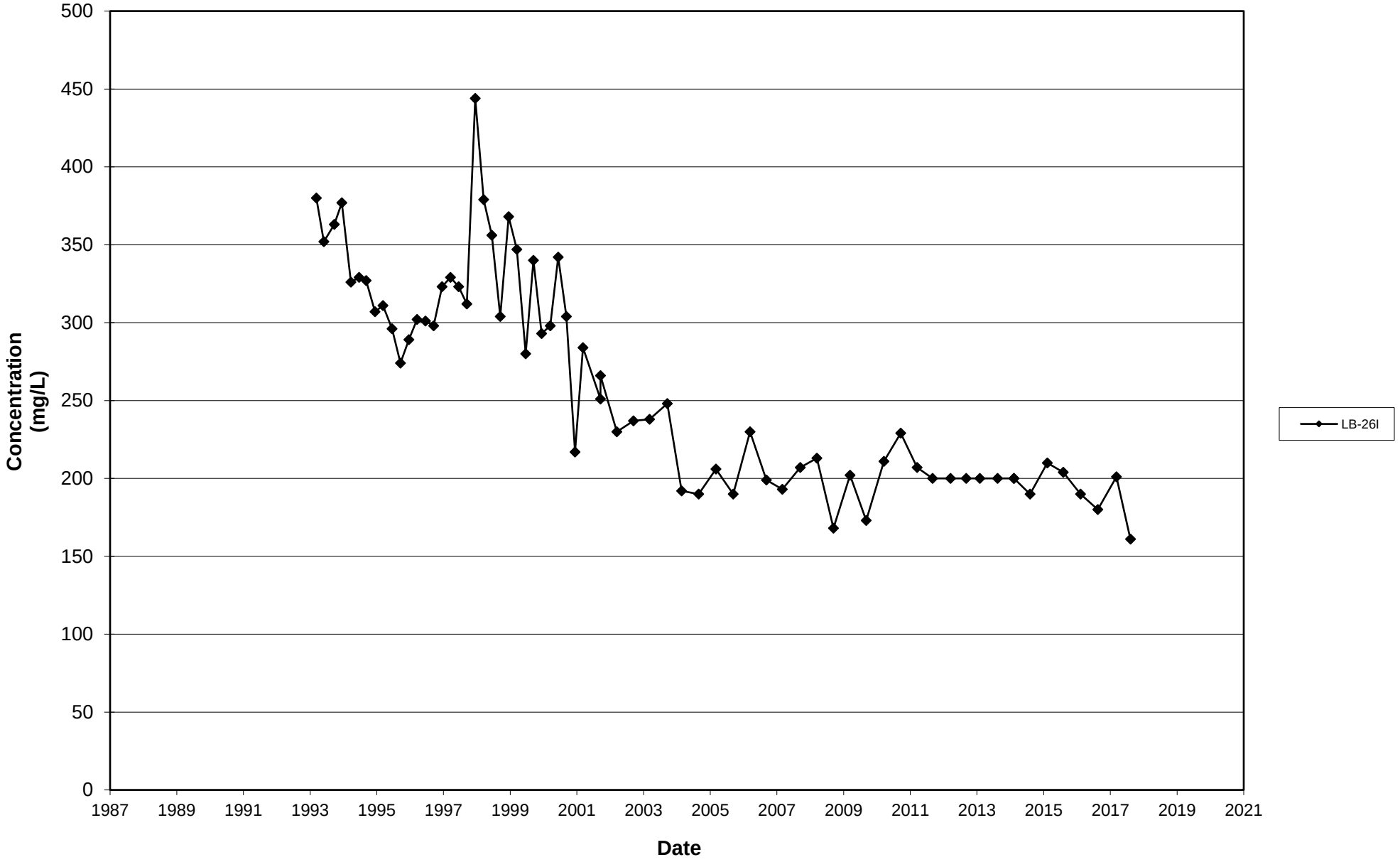
Leichner Landfill
Total Dissolved Solids, LB-17D
1987 - 2017



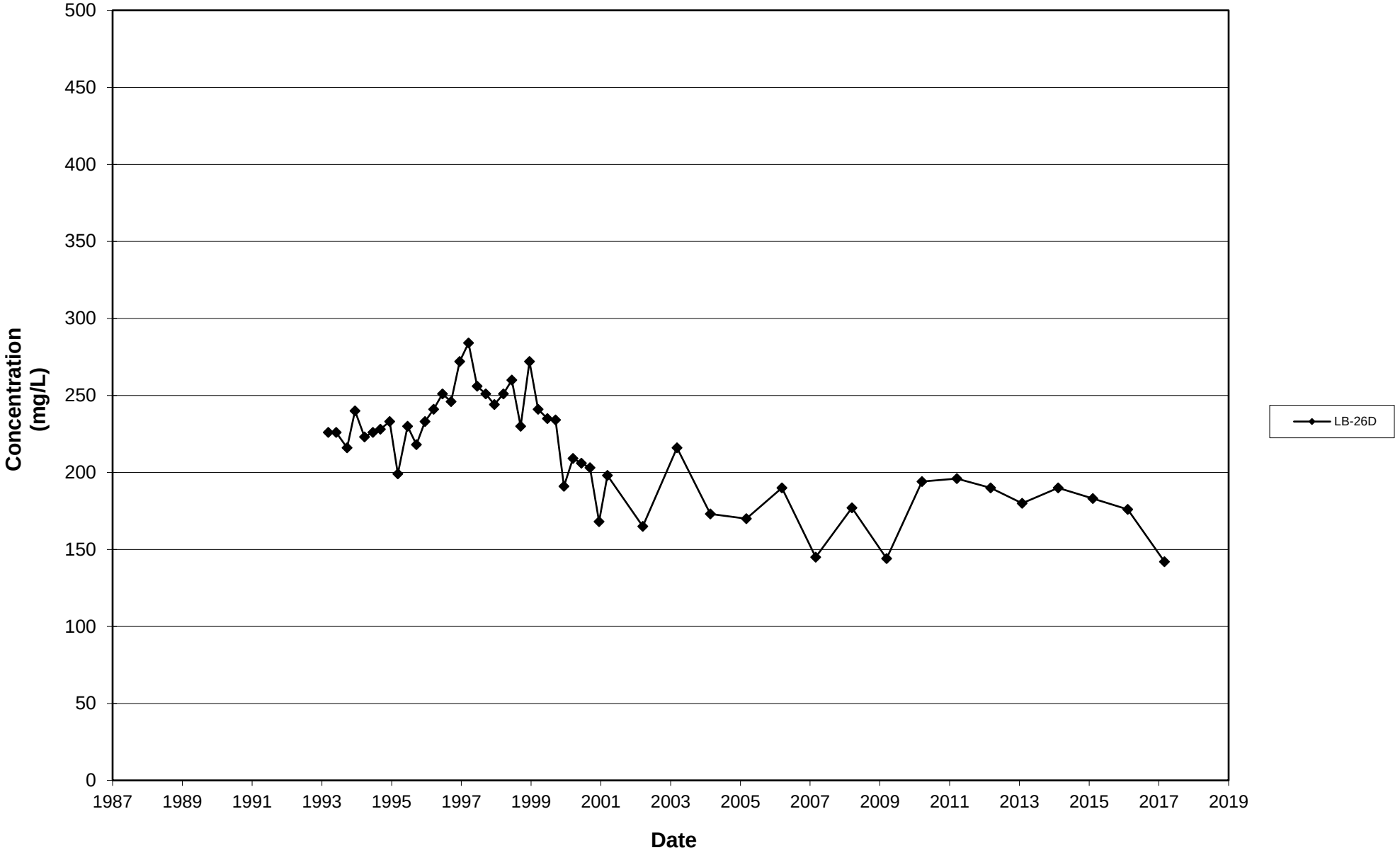
Leichner Landfill
Total Dissolved Solids, LB-20S
1987 - 2017



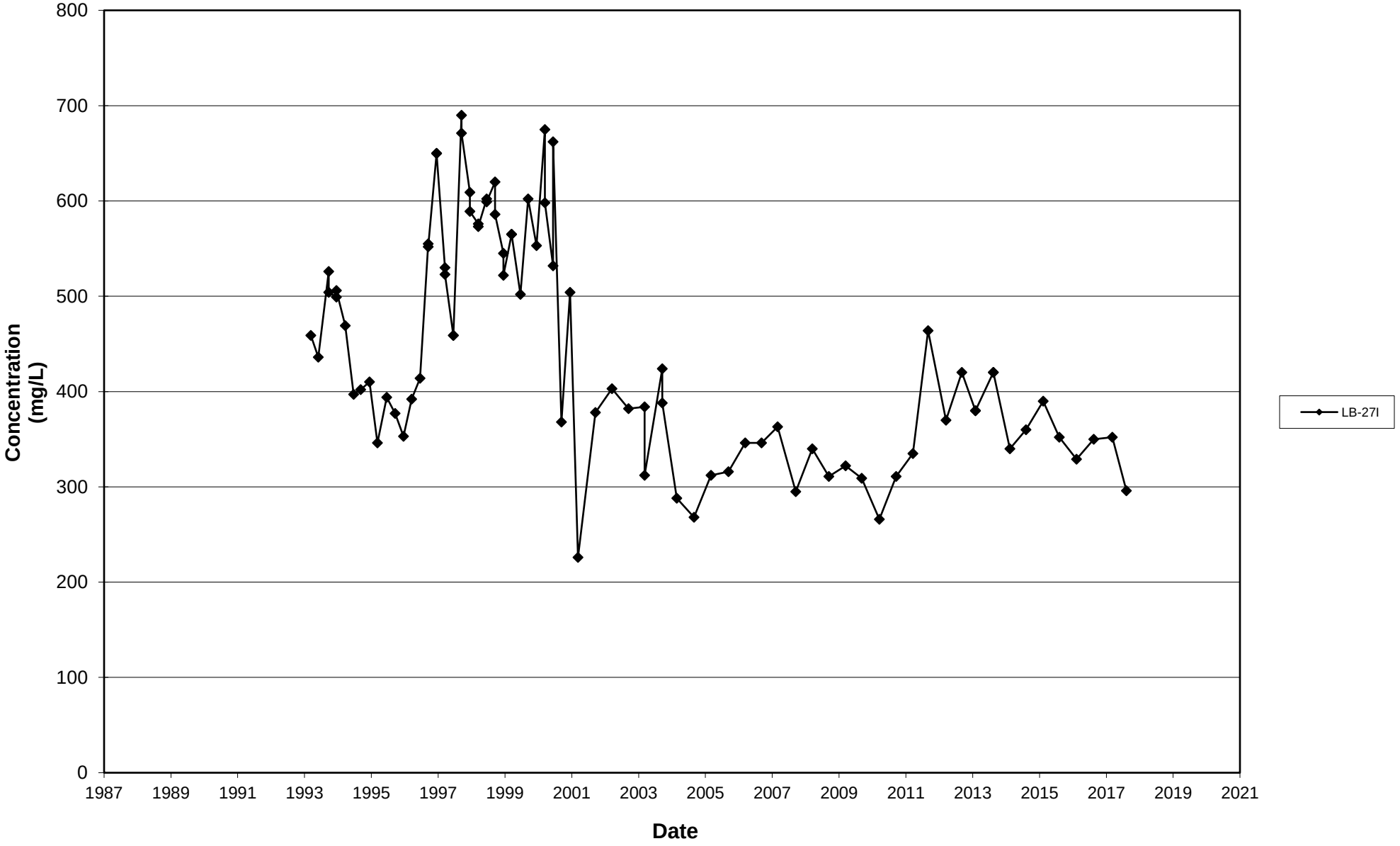
Leichner Landfill
Total Dissolved Solids, LB-26I
1987 - 2017



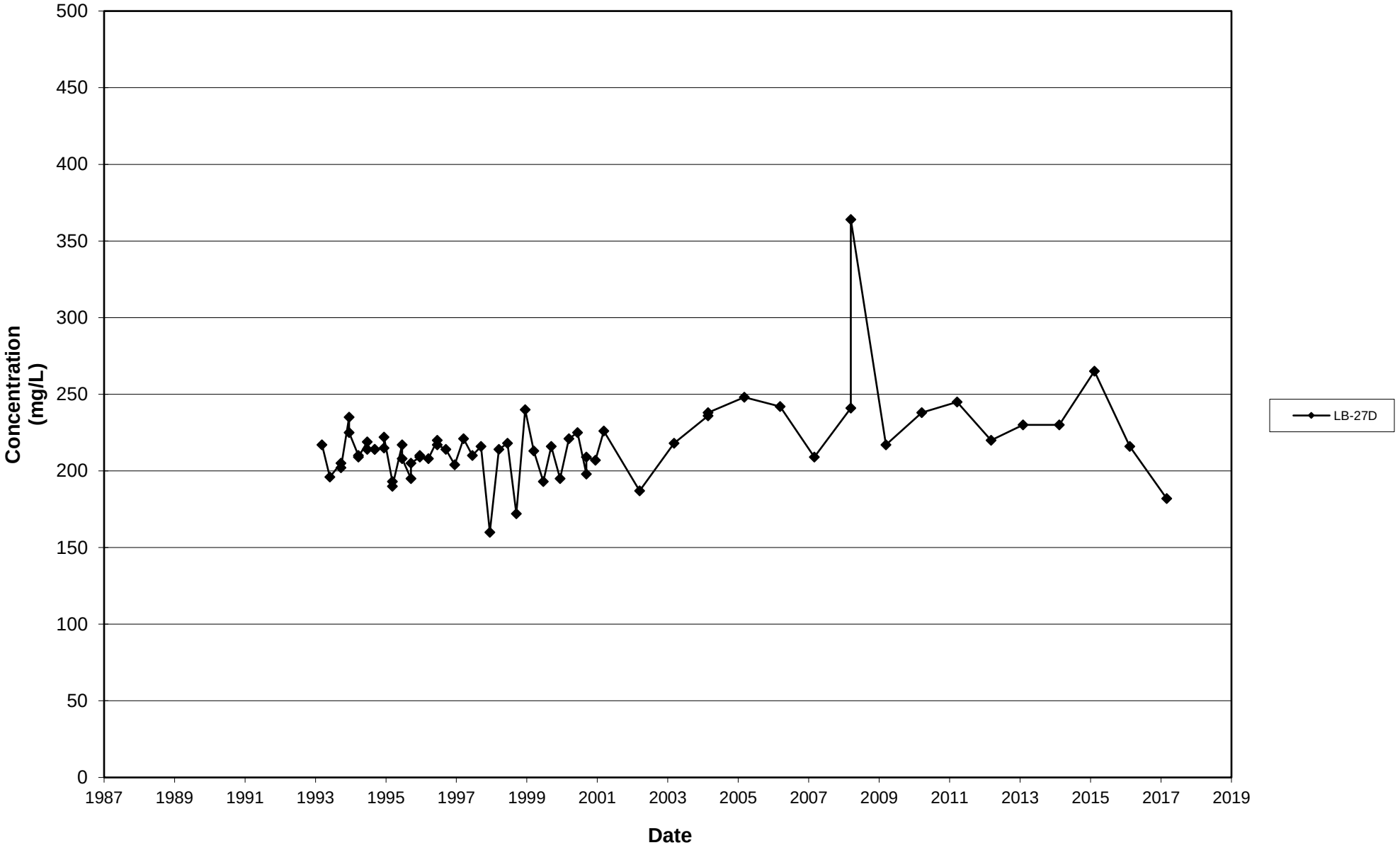
Leichner Landfill
Total Dissolved Solids, LB-26D
1987 - 2017



Leichner Landfill
Total Dissolved Solids, LB-27I
1987 - 2017

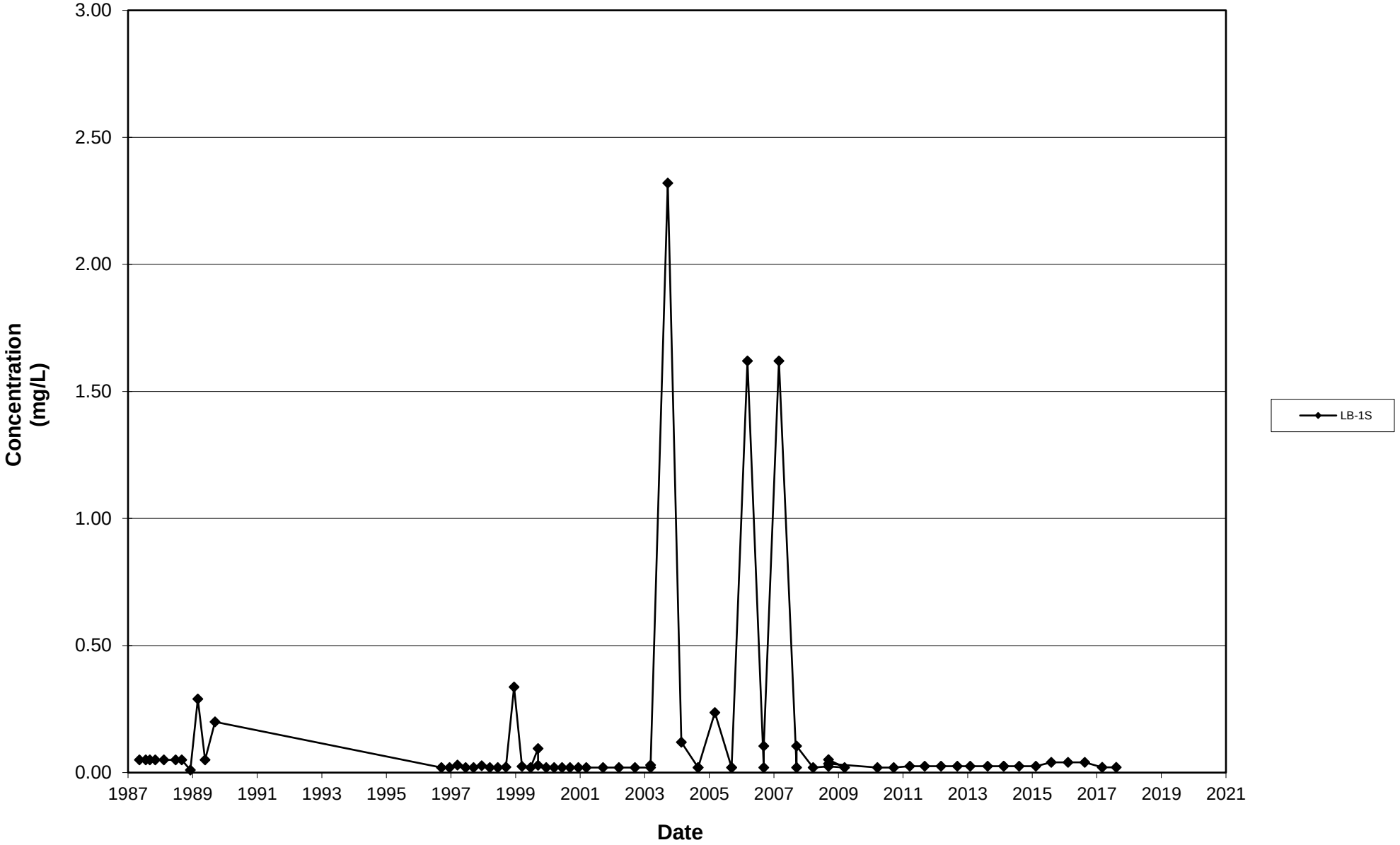


Leichner Landfill
Total Dissolved Solids, LB-27D
1987 - 2017

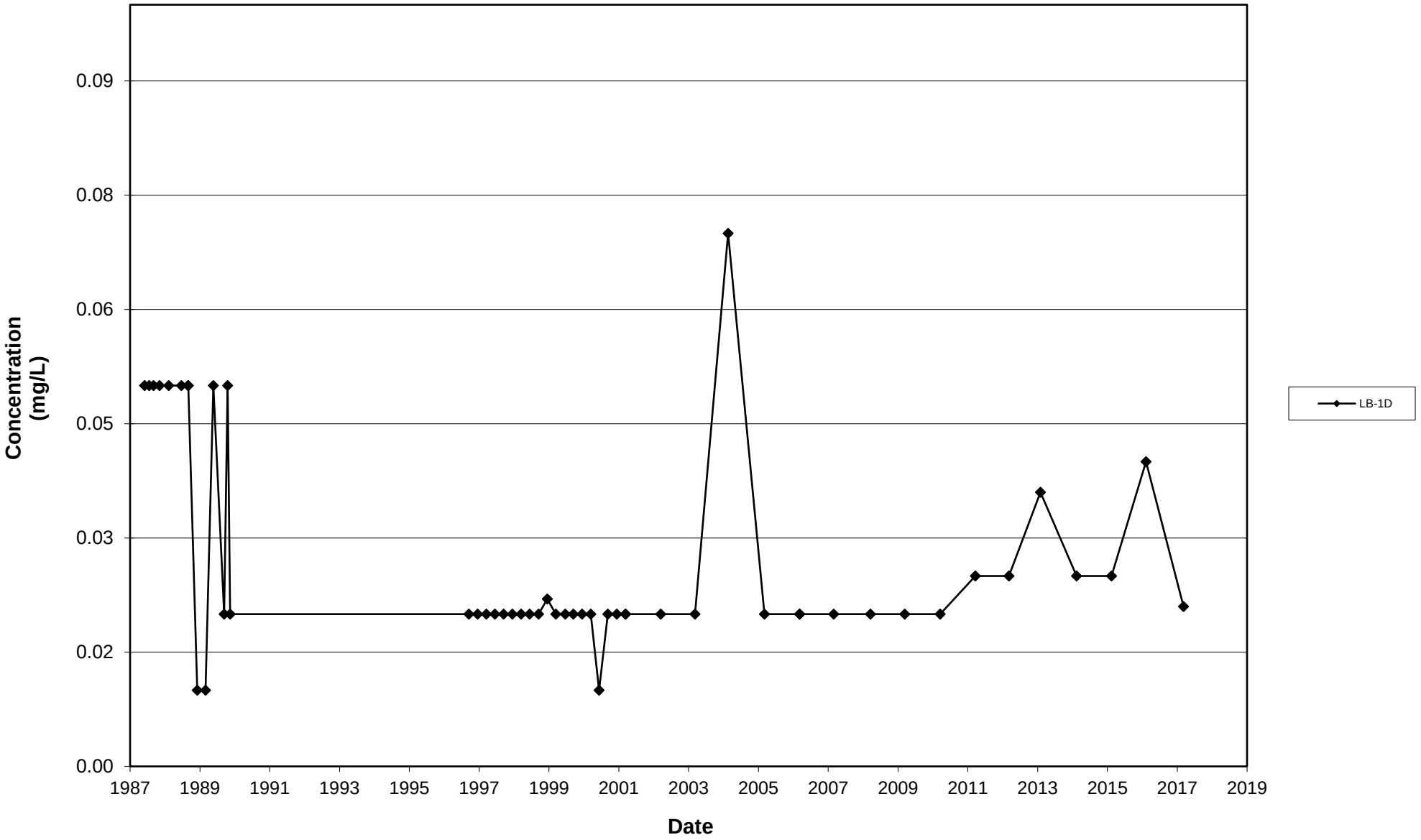


Dissolved Iron

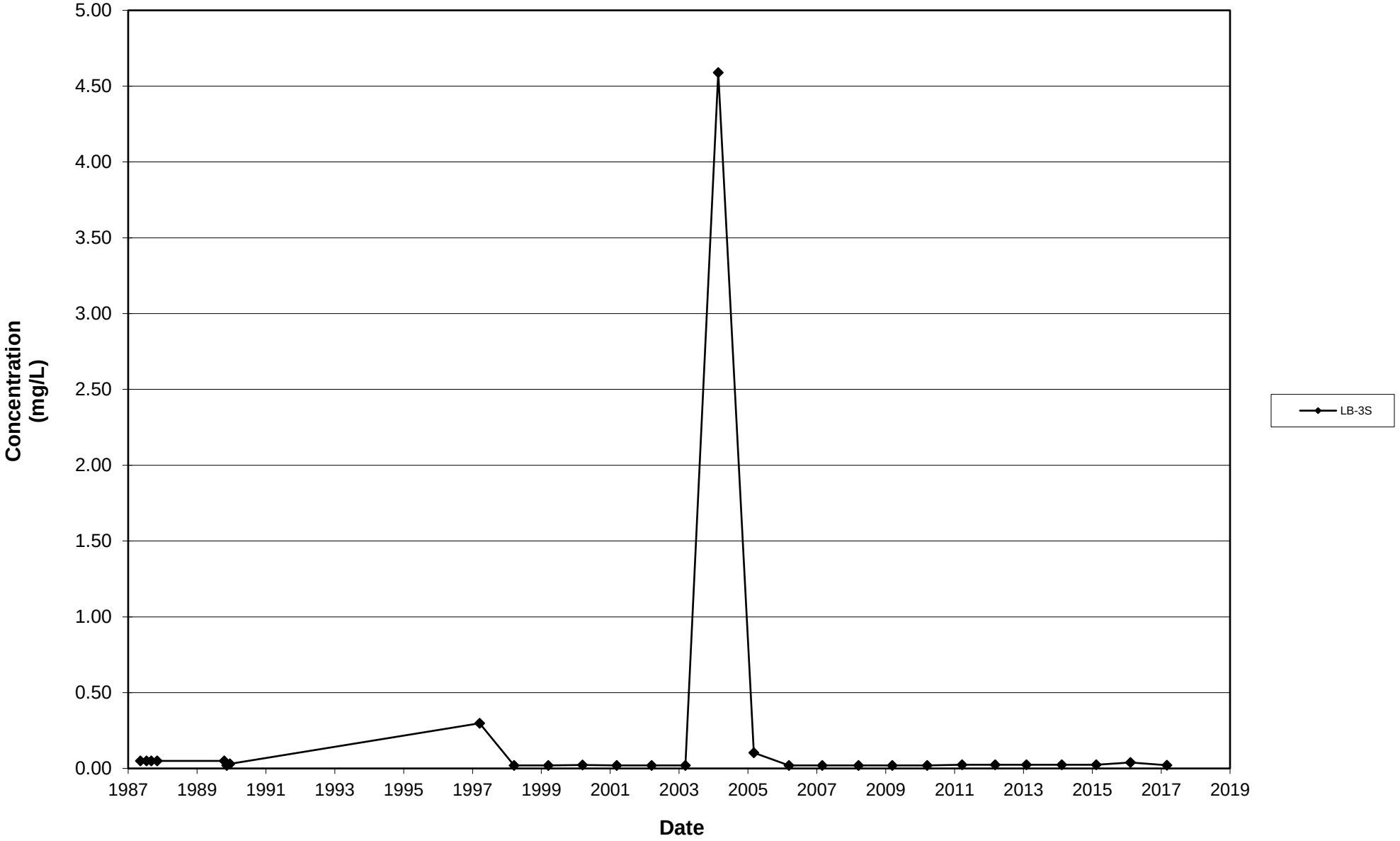
Leichner Landfill
Dissolved Iron, LB-01S
1987 - 2017



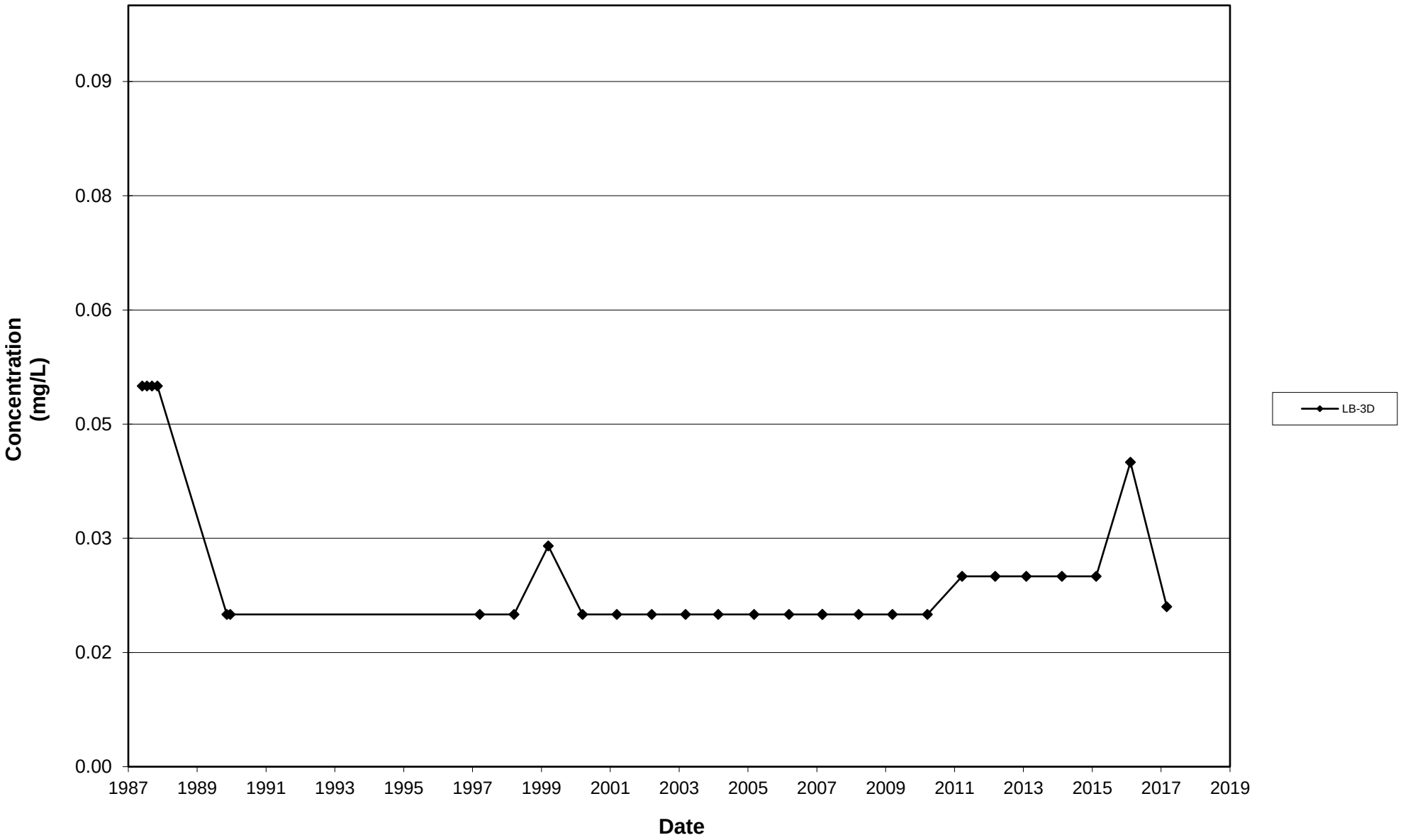
Leichner Landfill
Dissolved Iron, LB-01D
1987 - 2017



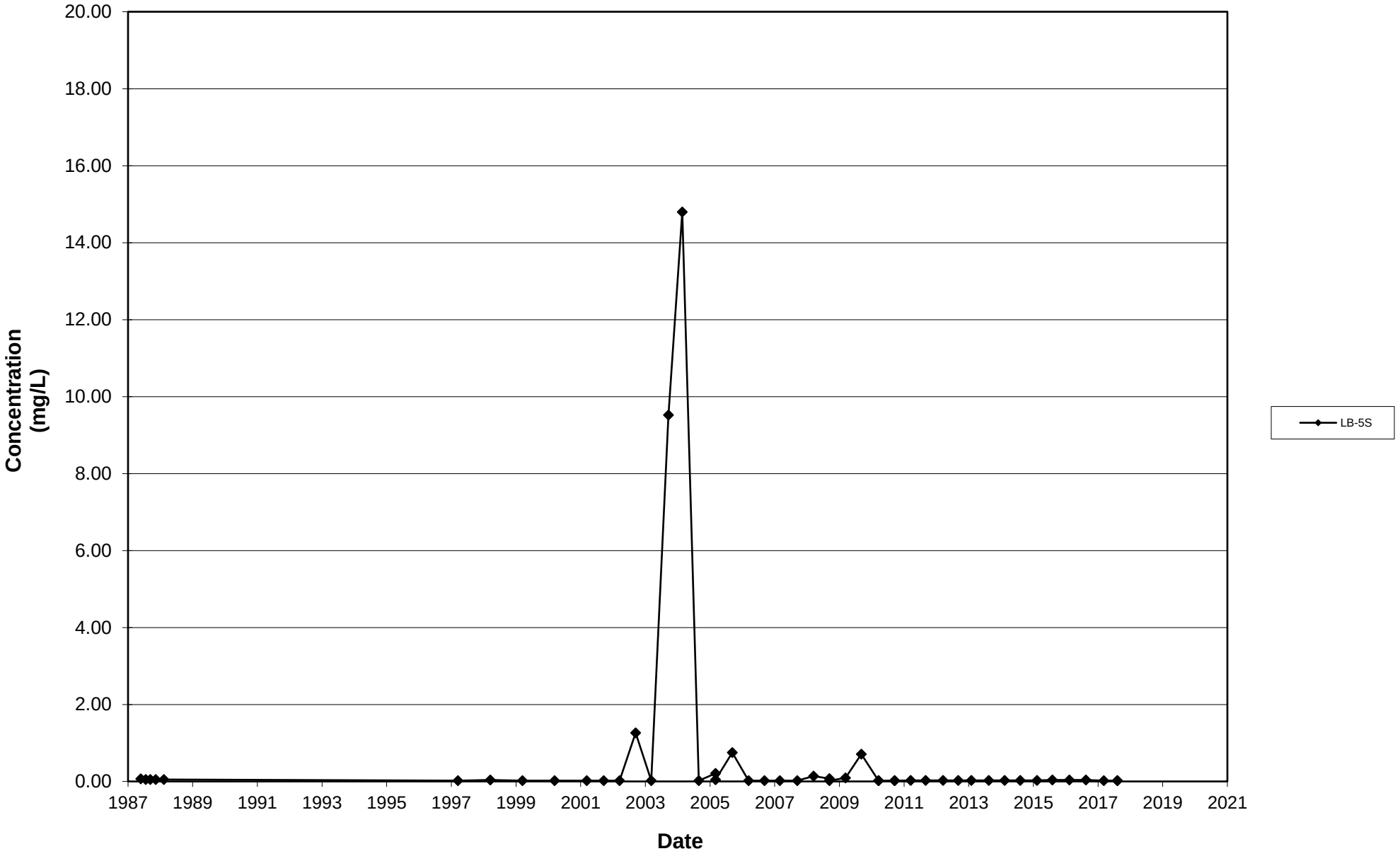
Leichner Landfill
Dissolved Iron, LB-03S
1987 - 2017



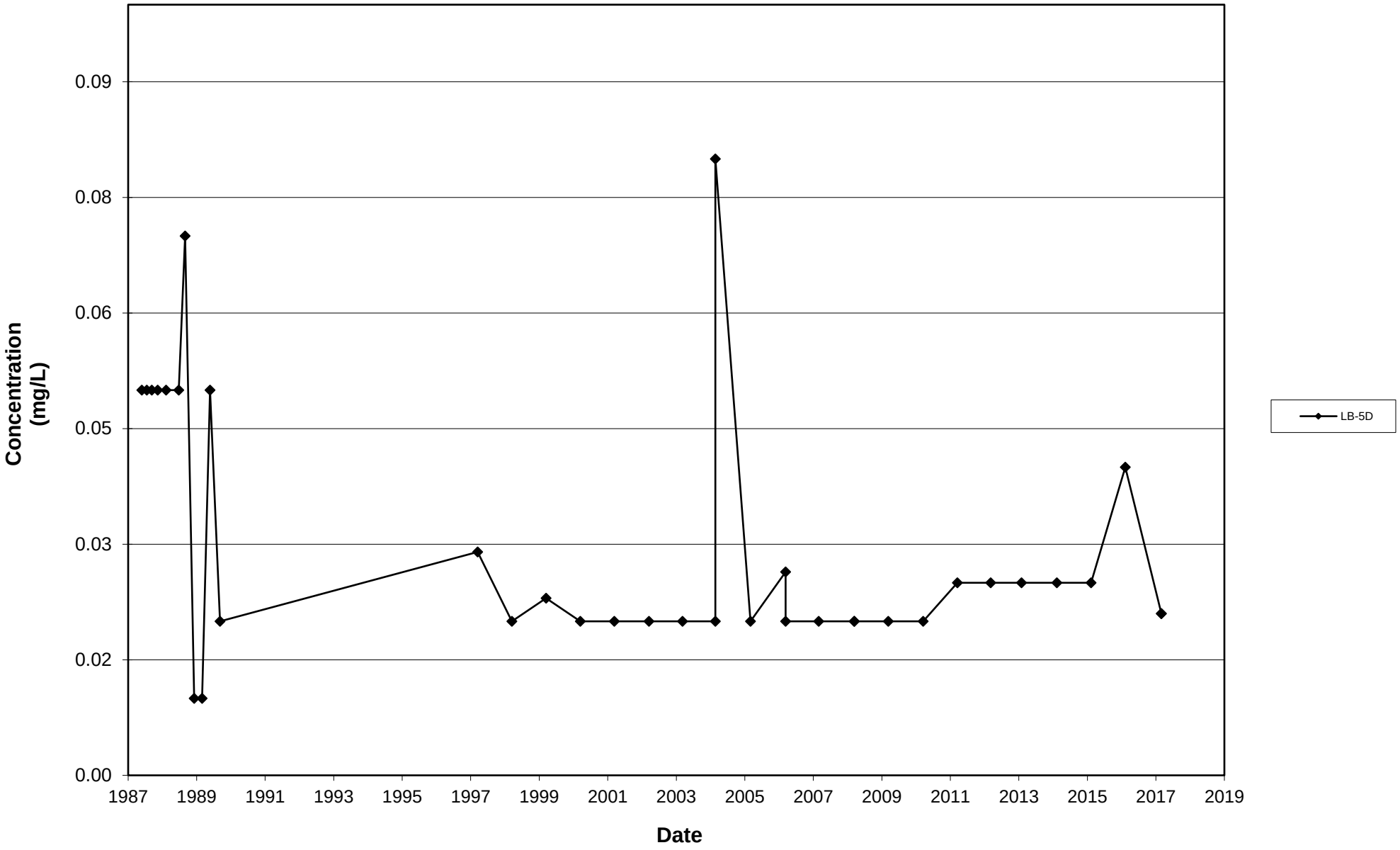
Leichner Landfill
Dissolved Iron, LB-03D
1987 - 2017



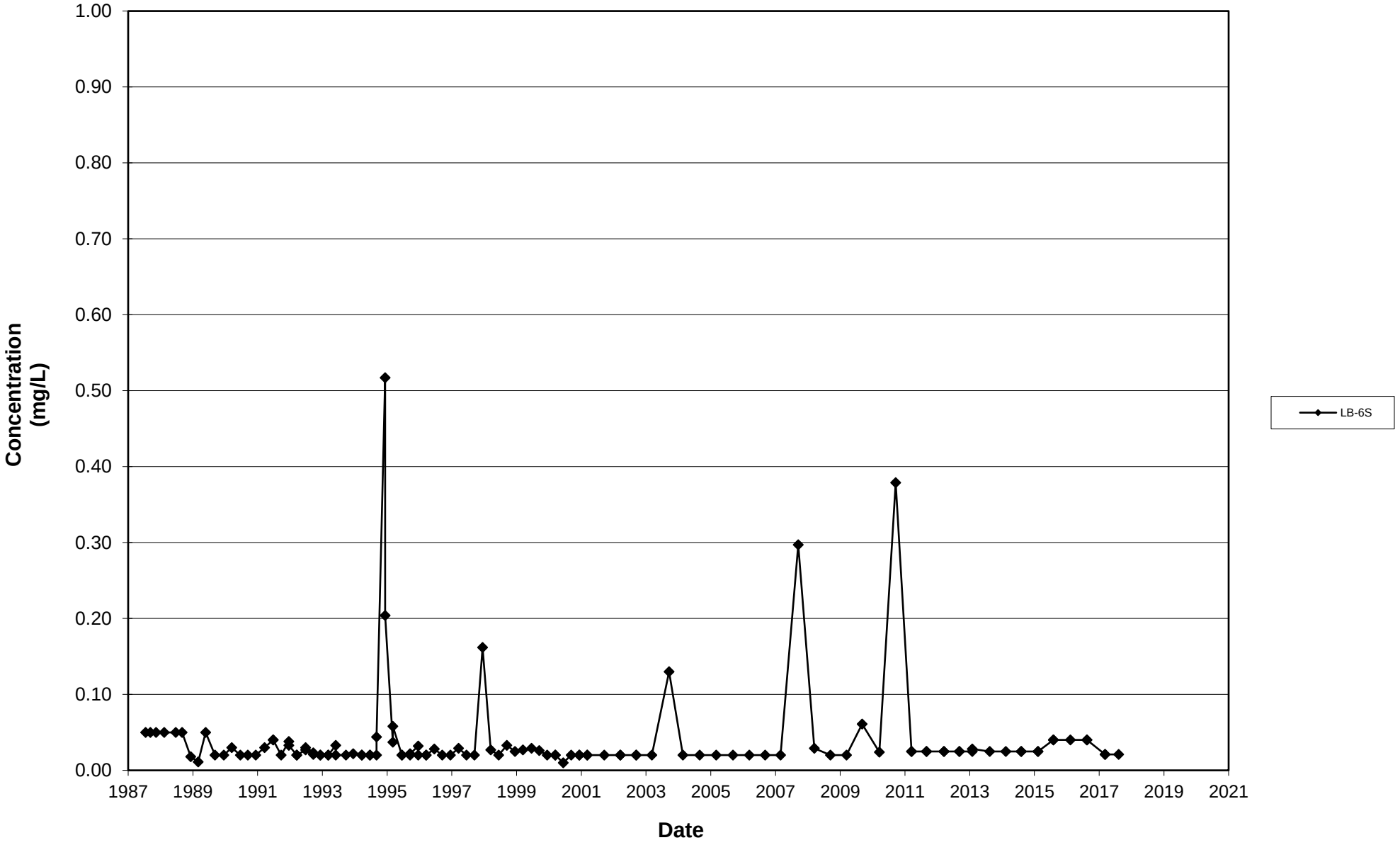
Leichner Landfill
Dissolved Iron, LB-05S
1987 - 2017



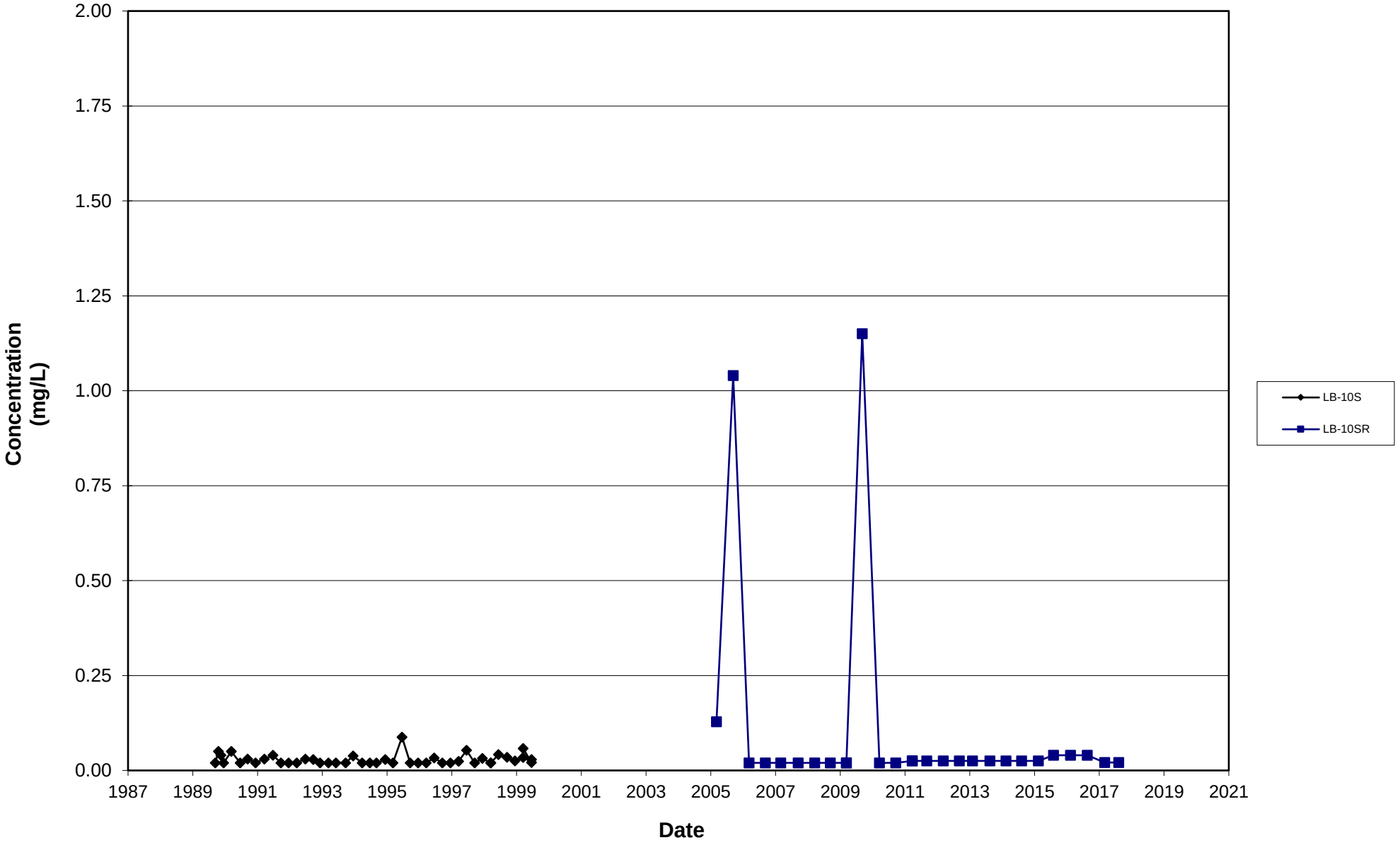
Leichner Landfill
Dissolved Iron, LB-05D
1987 - 2017



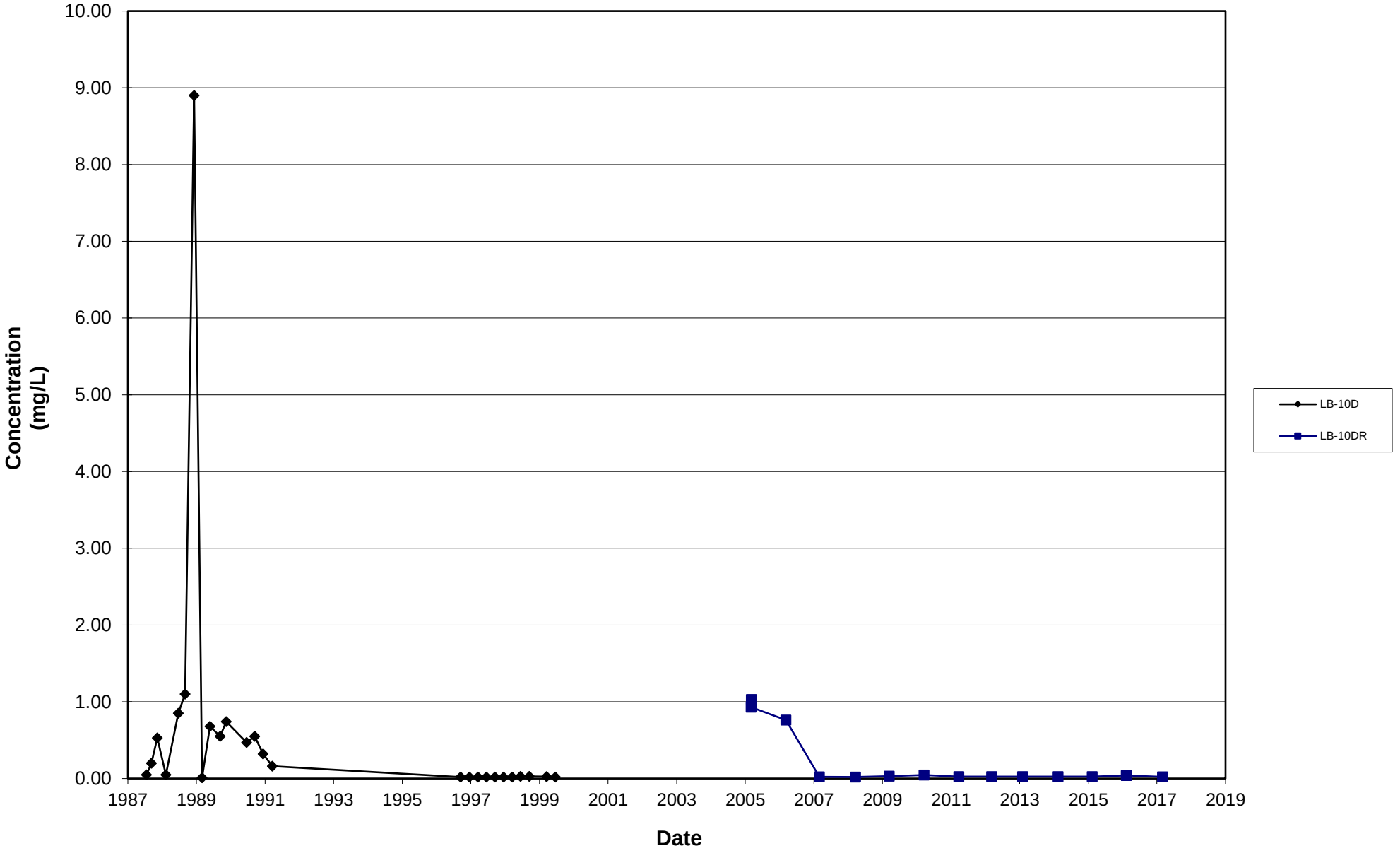
Leichner Landfill
Dissolved Iron, LB-06S
1987 - 2017



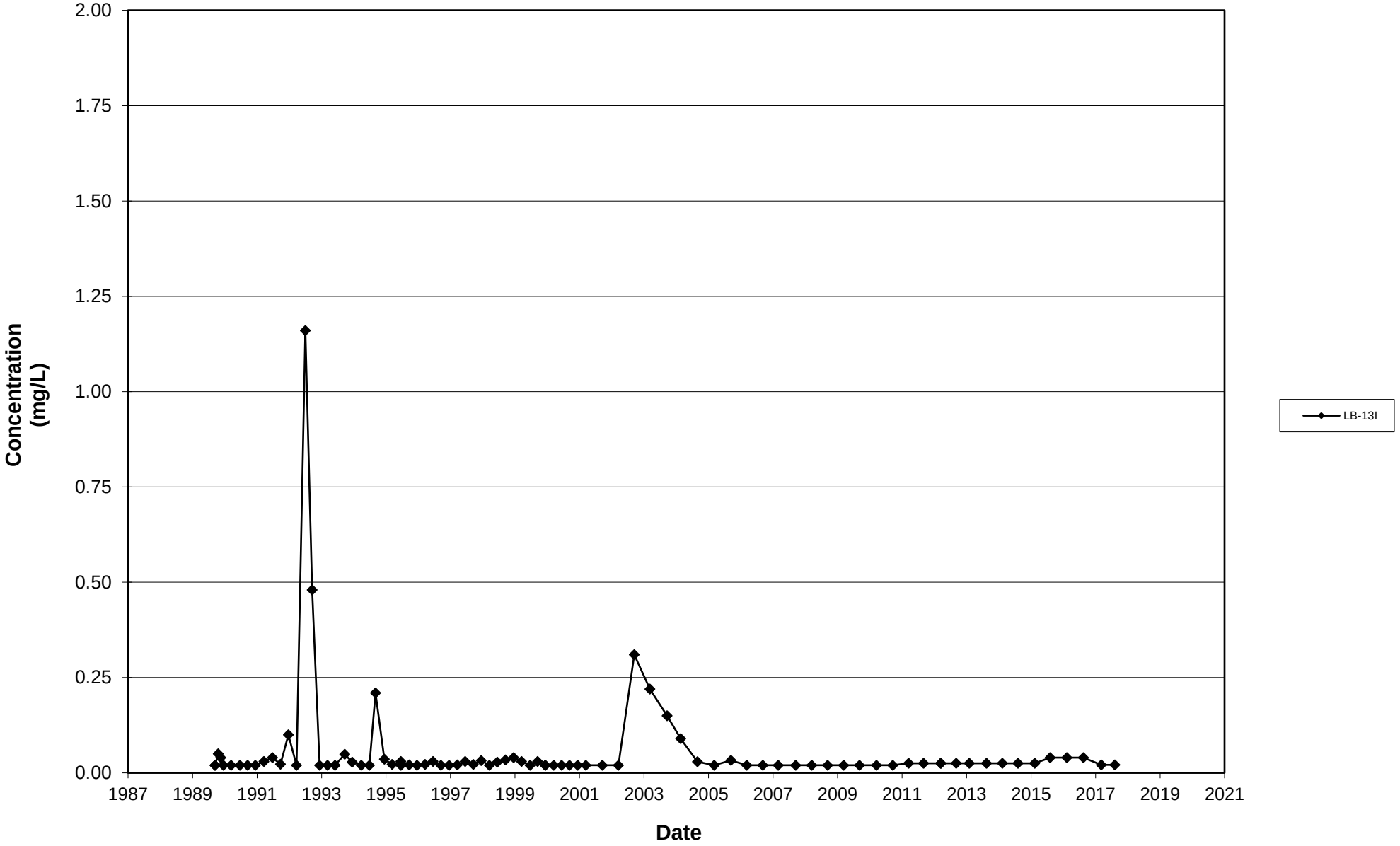
Leichner Landfill
Dissolved Iron, LB-10S and LB-10SR
1987 - 2017



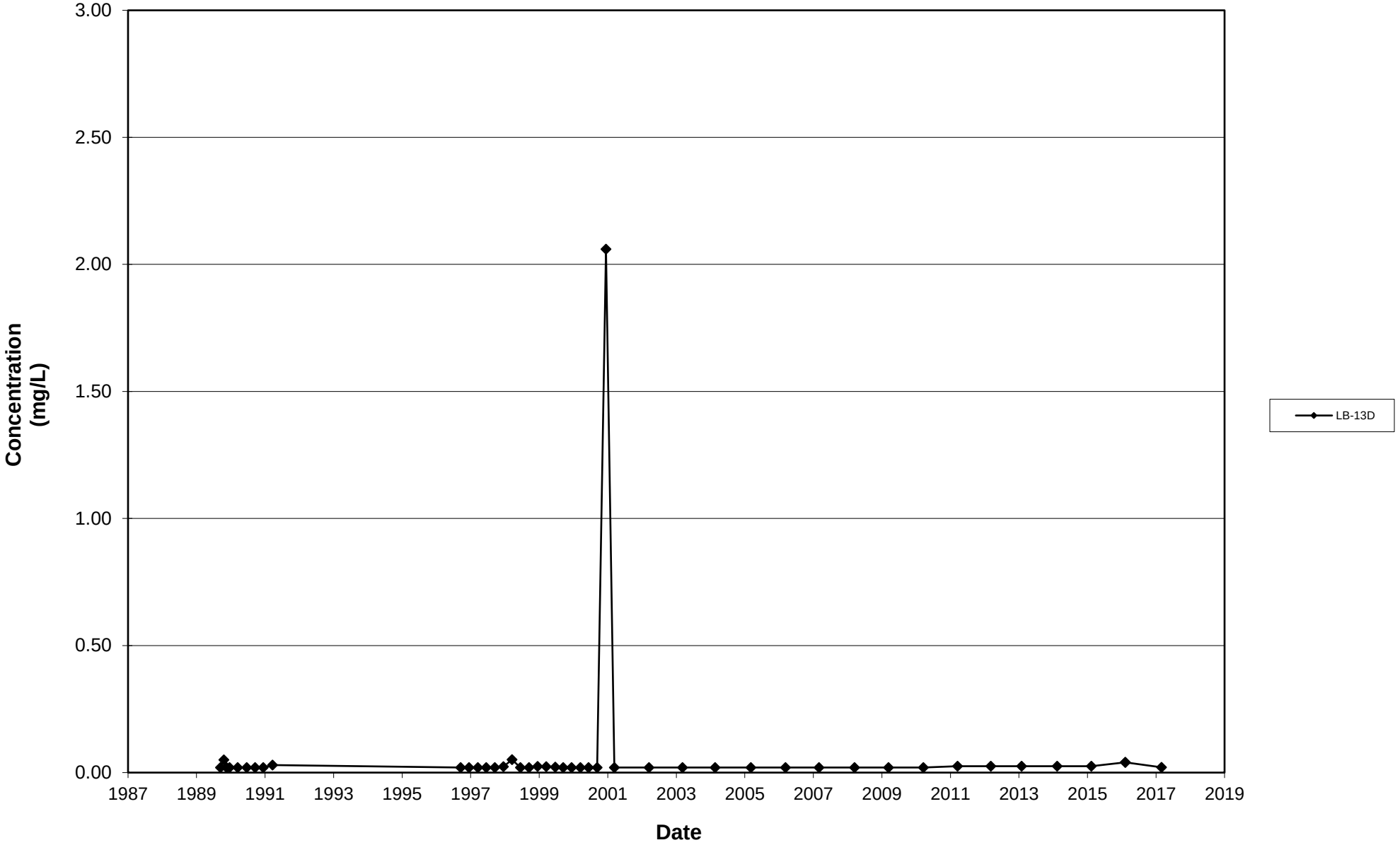
Leichner Landfill
Dissolved Iron, LB-10D and LB-10DR
1987 - 2017



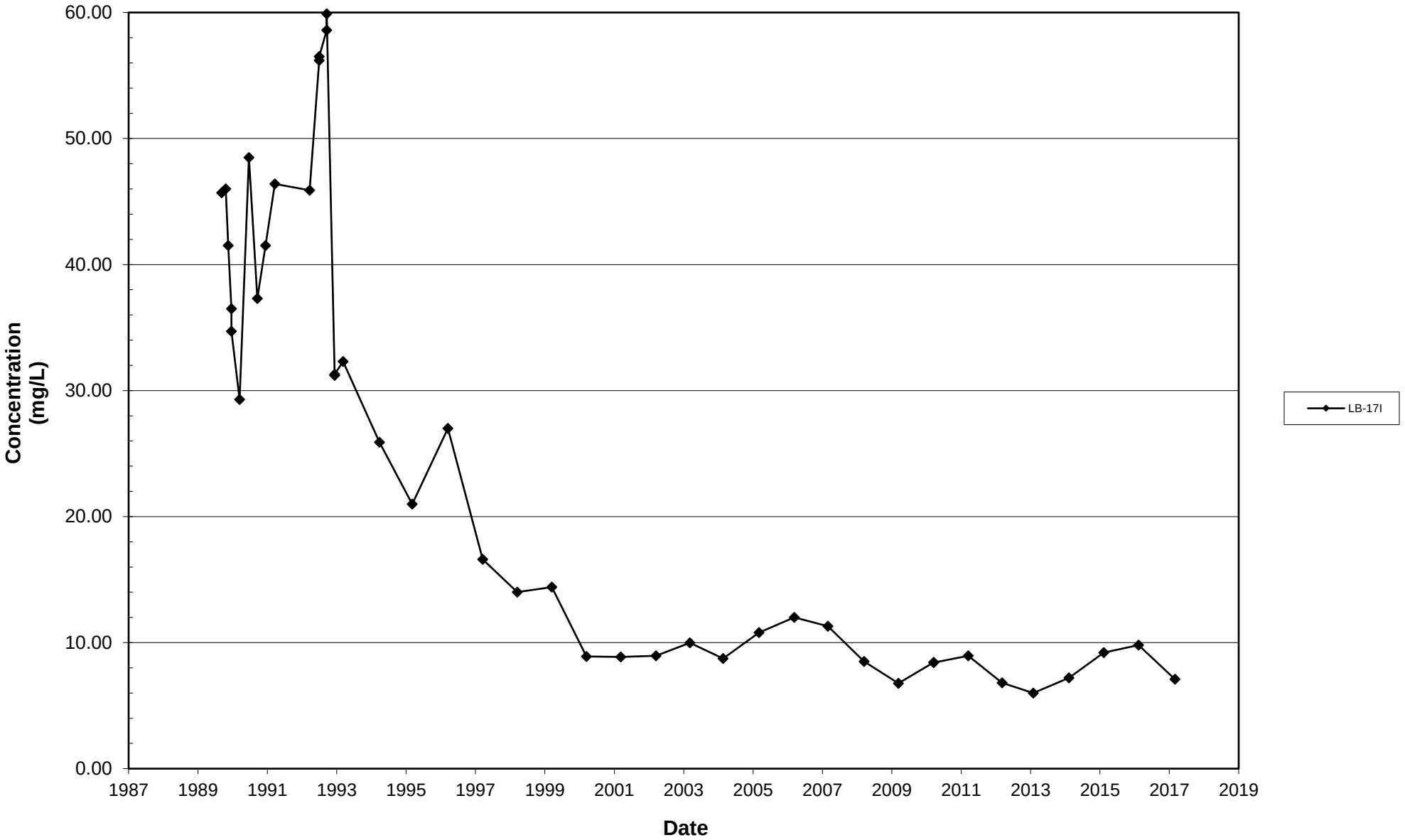
Leichner Landfill
Dissolved Iron, LB-13I
1987 - 2017



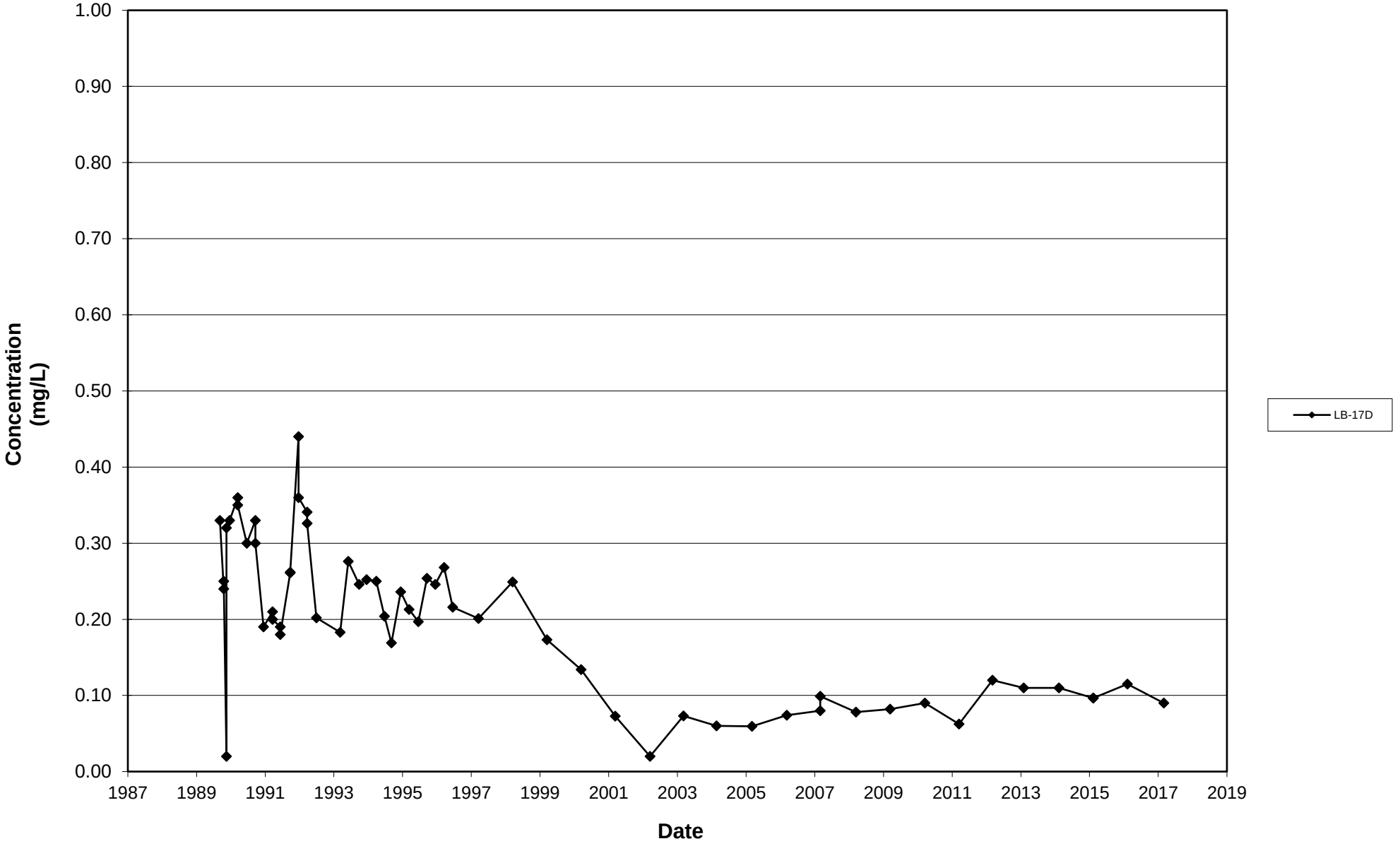
Leichner Landfill
Dissolved Iron, LB-13D
1987 - 2017



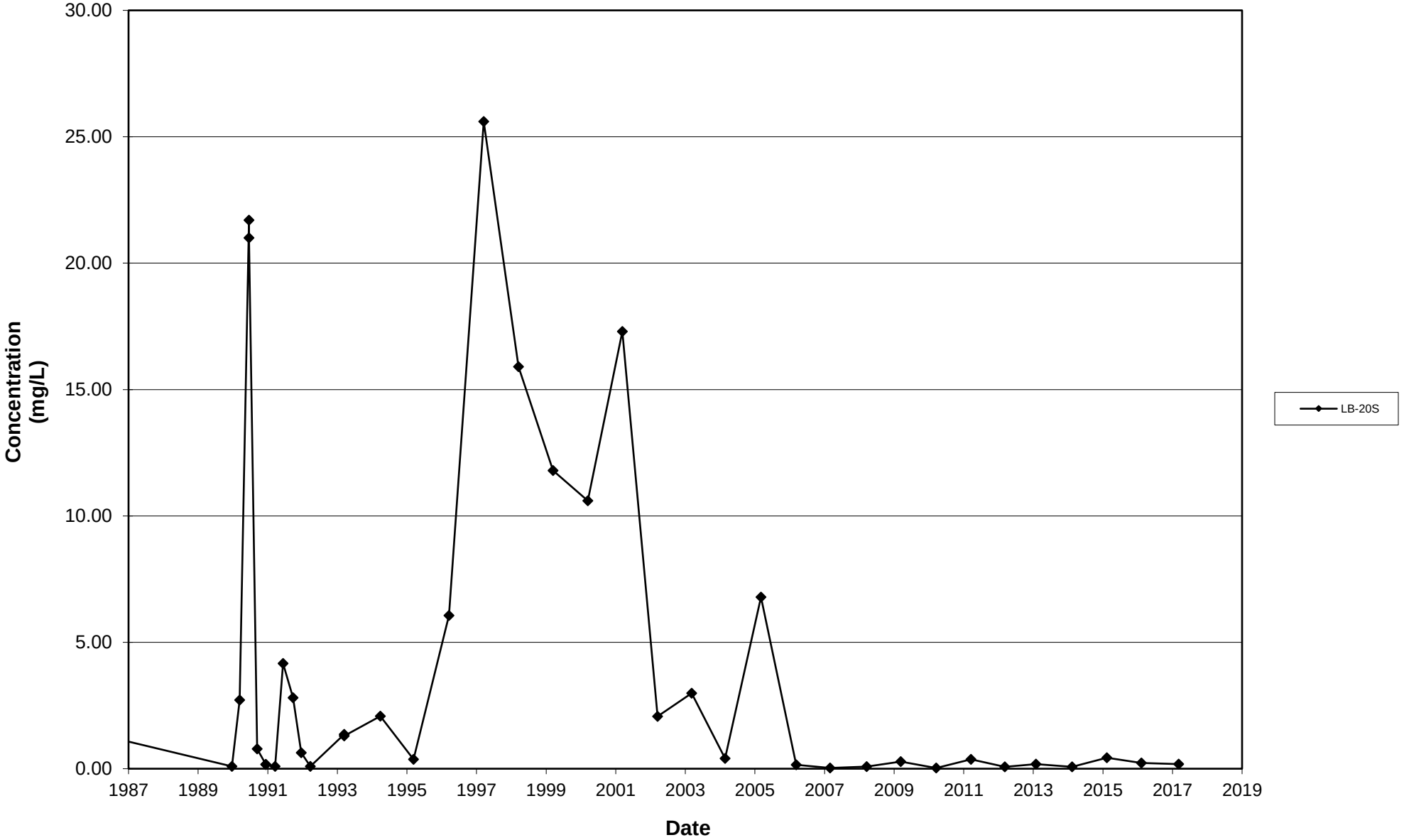
Leichner Landfill
Dissolved Iron, LB-17I
1987 - 2017



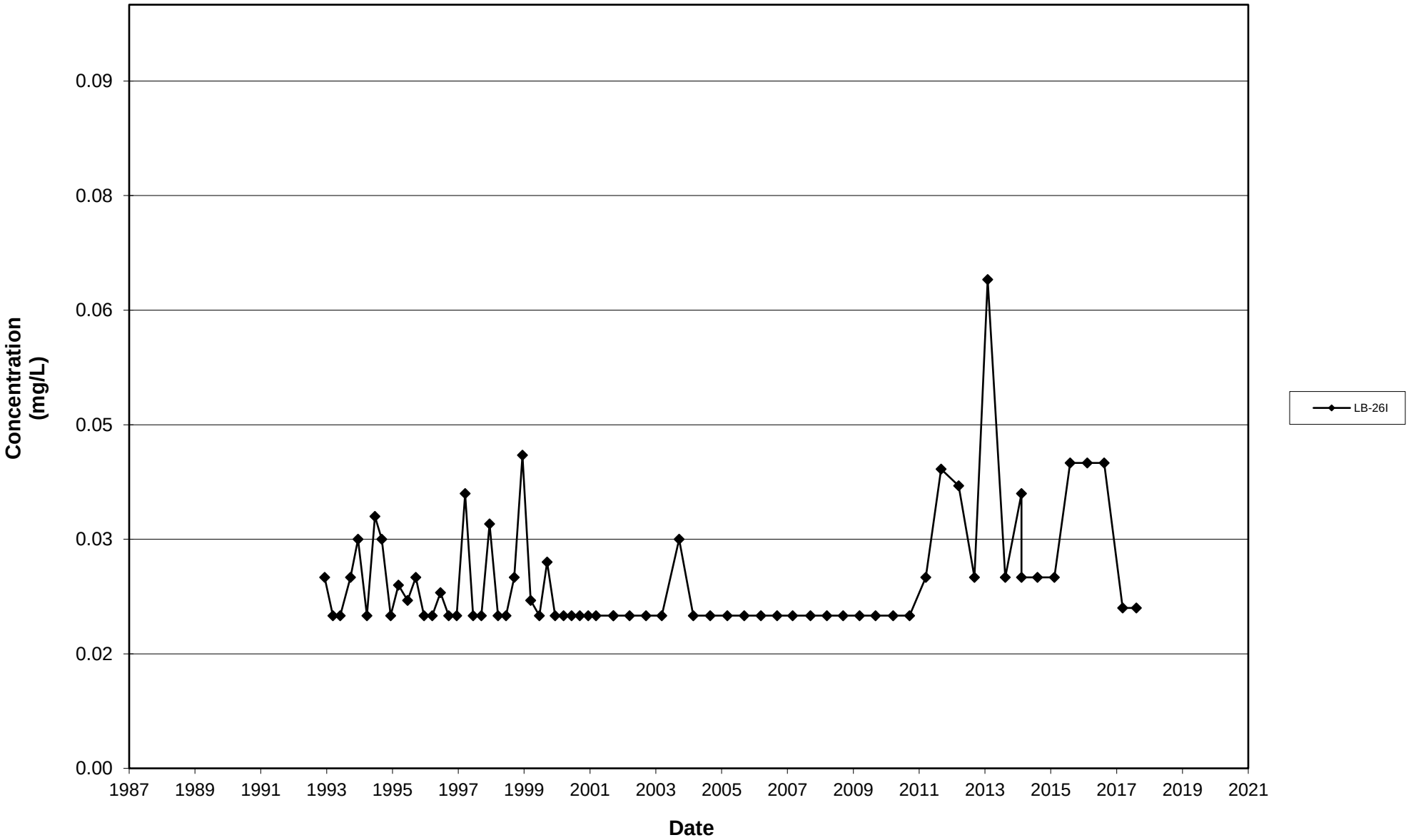
Leichner Landfill
Dissolved Iron, LB-17D
1987 - 2017



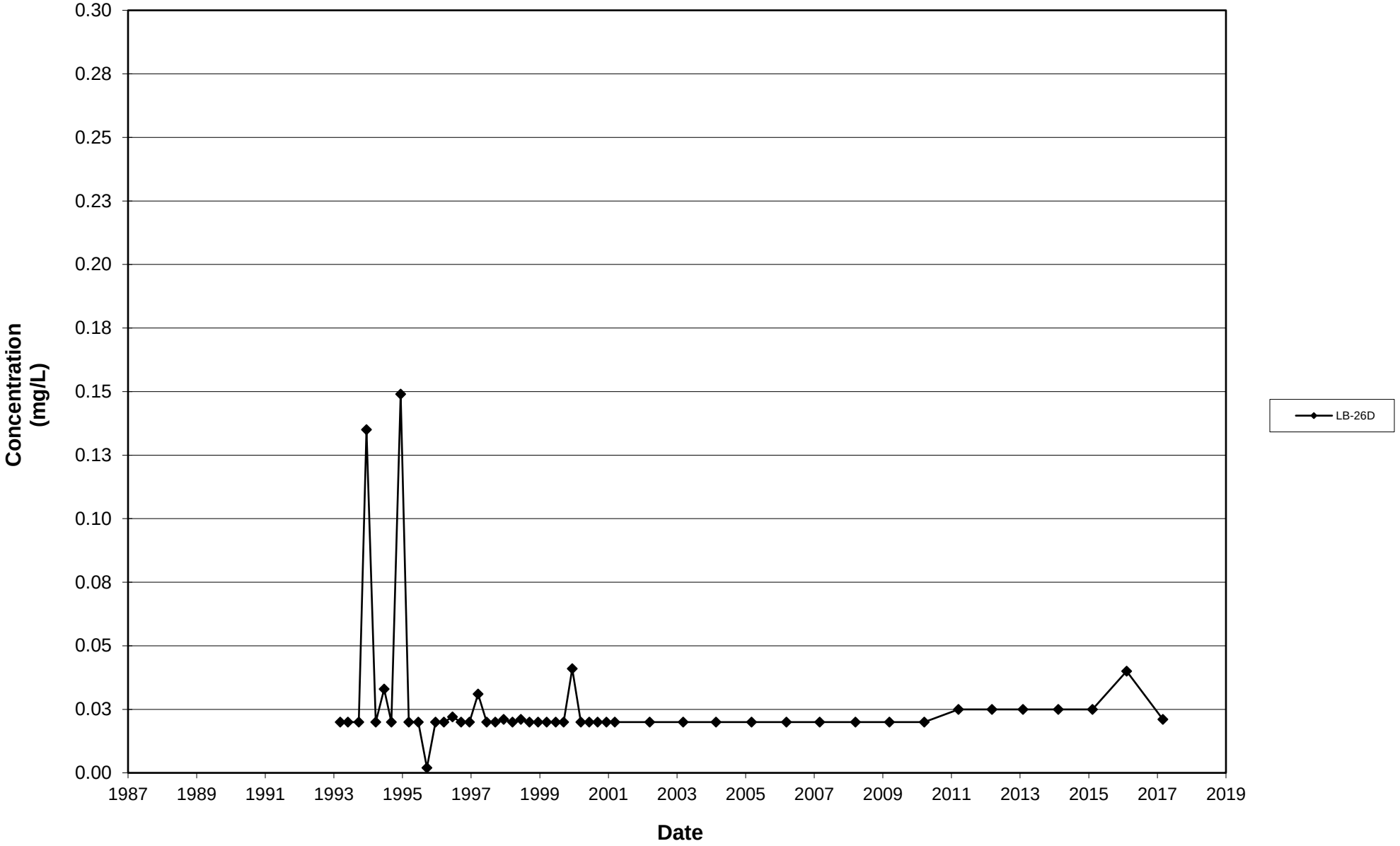
Leichner Landfill
Dissolved Iron, LB-20S
1987 - 2017



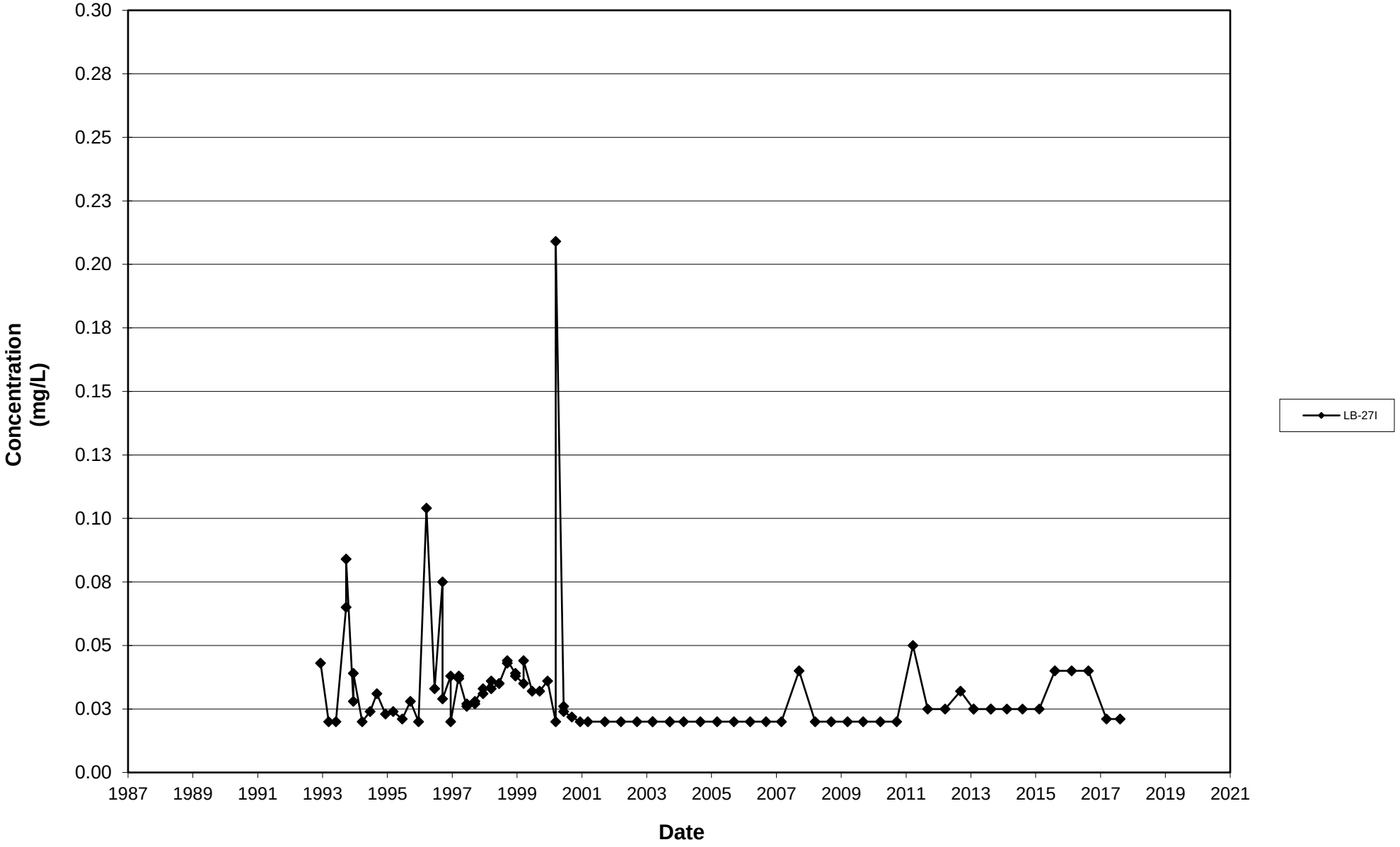
Leichner Landfill
Dissolved Iron, LB-26I
1987 - 2017



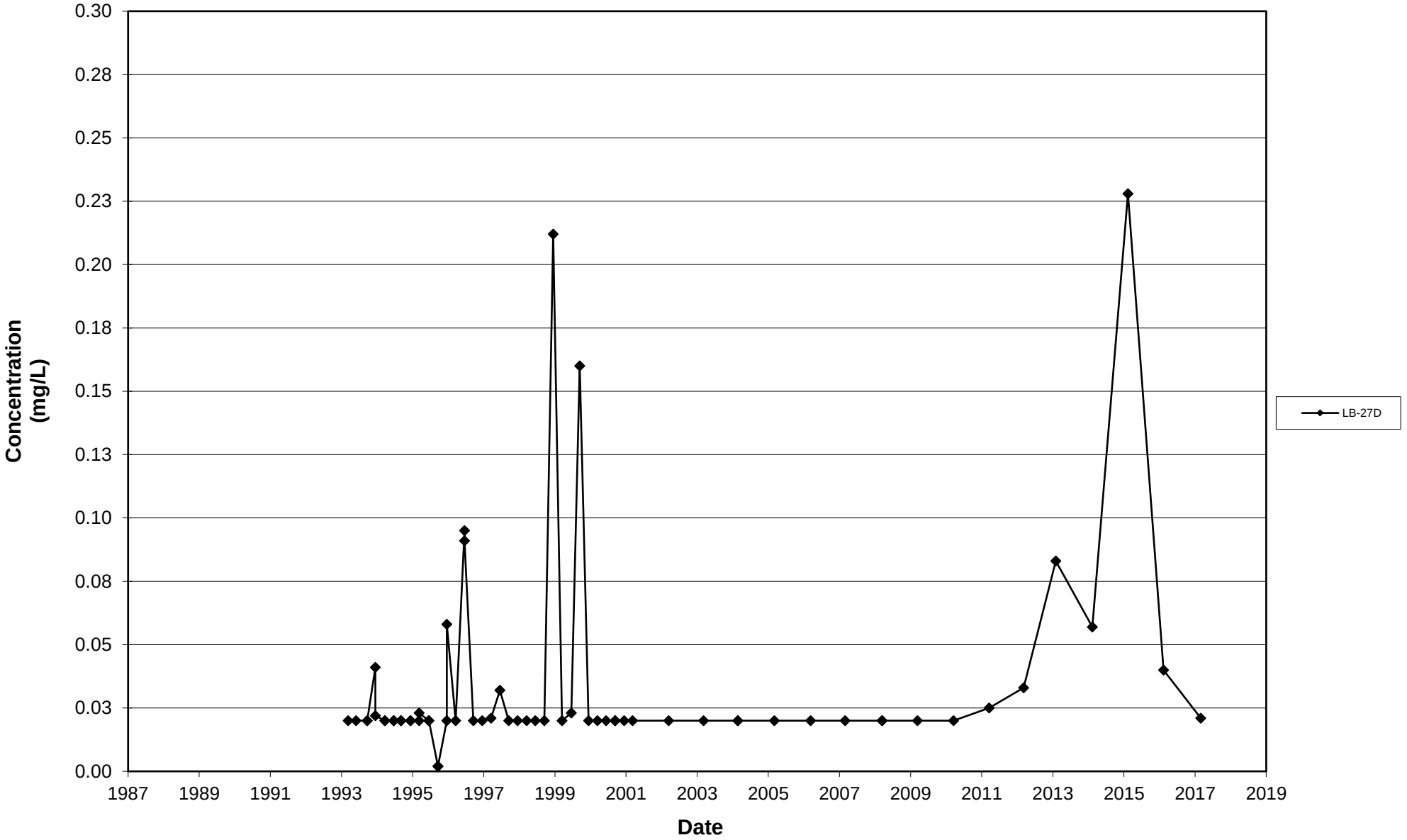
Leichner Landfill
Dissolved Iron, LB-26D
1987 - 2017



Leichner Landfill
Dissolved Iron, LB-27I
1987 - 2017

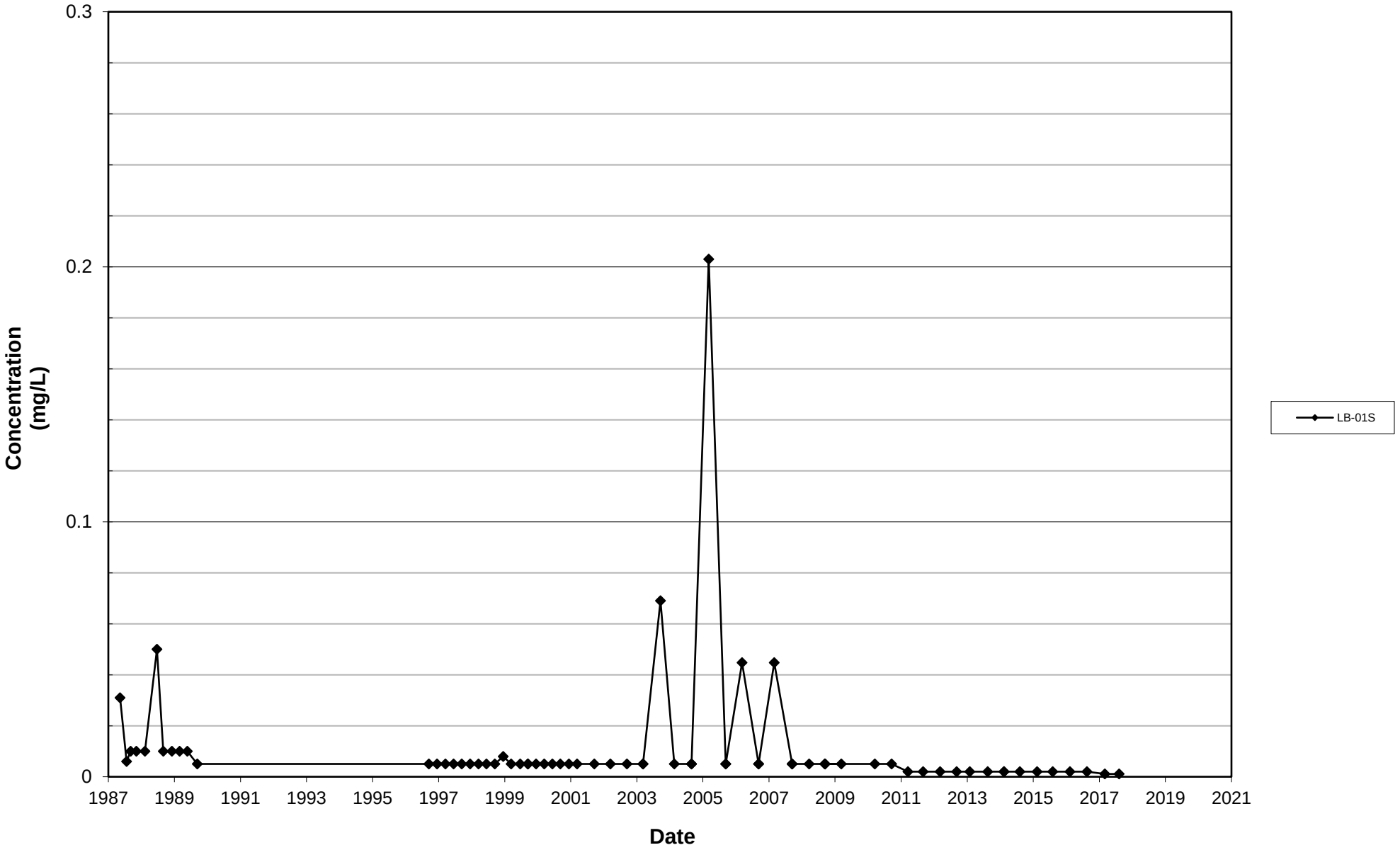


Leichner Landfill
Dissolved Iron, LB-27D
1987 - 2017

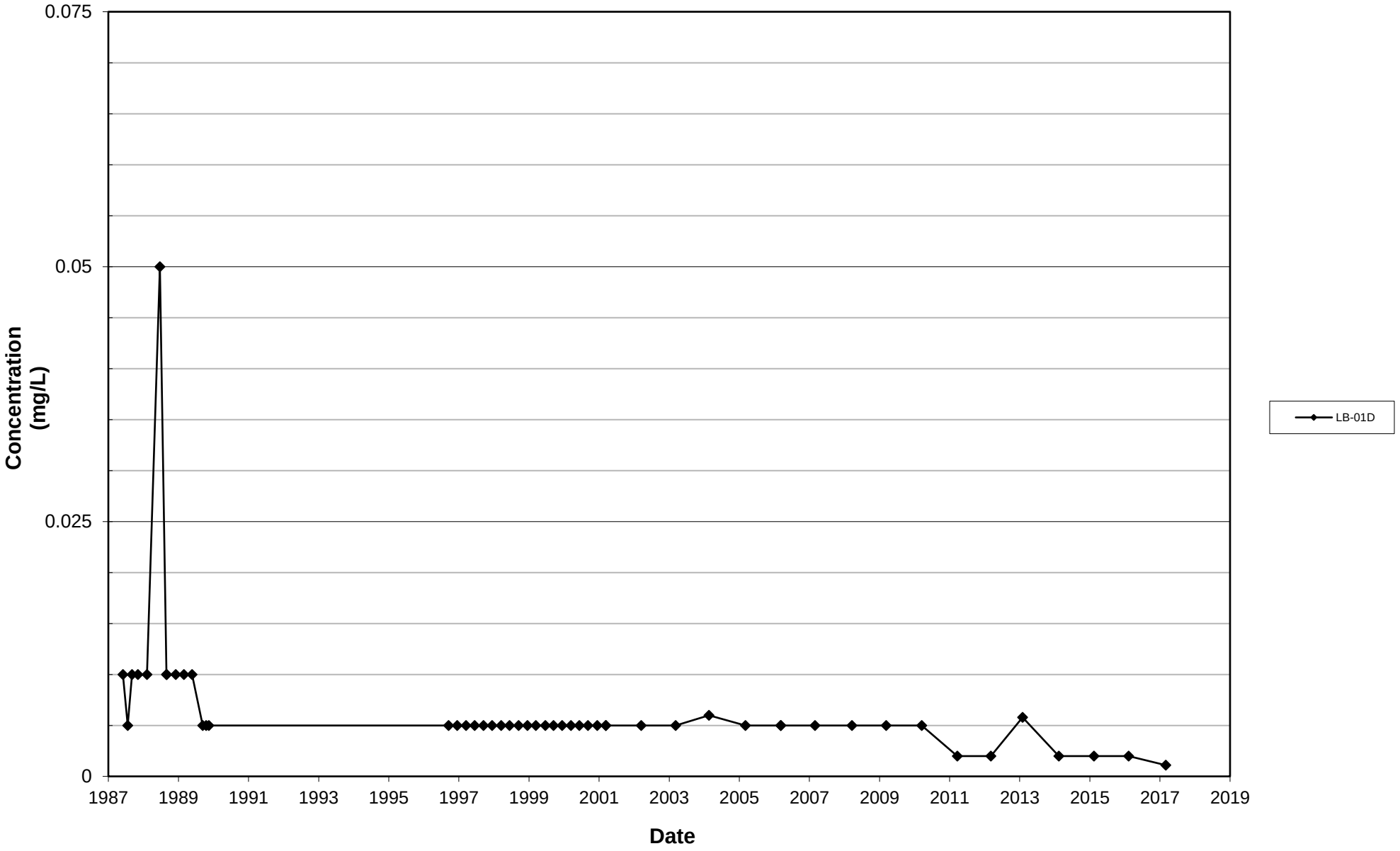


Dissolved Manganese

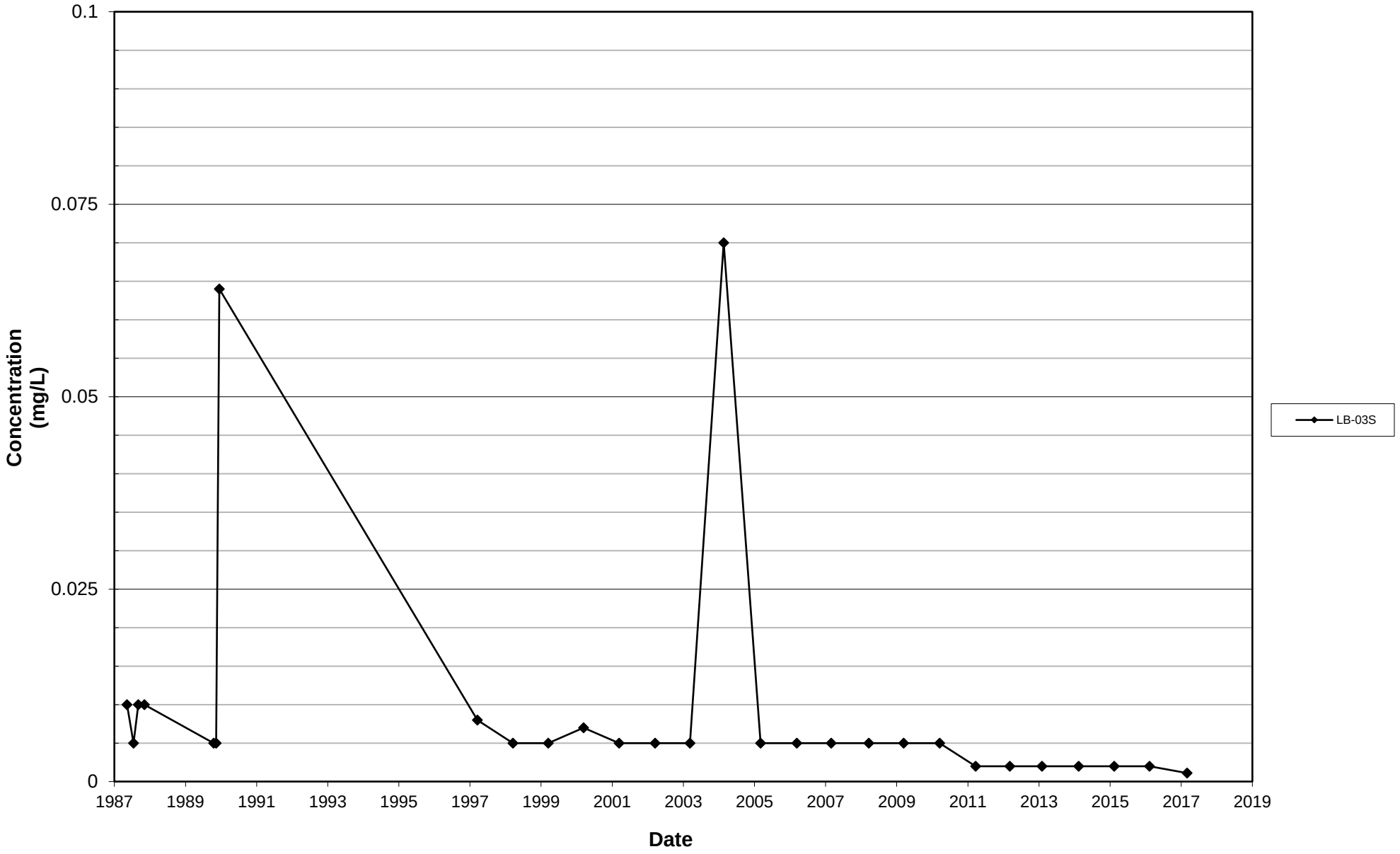
Leichner Landfill
Dissolved Manganese, LB-01S
1987 - 2017



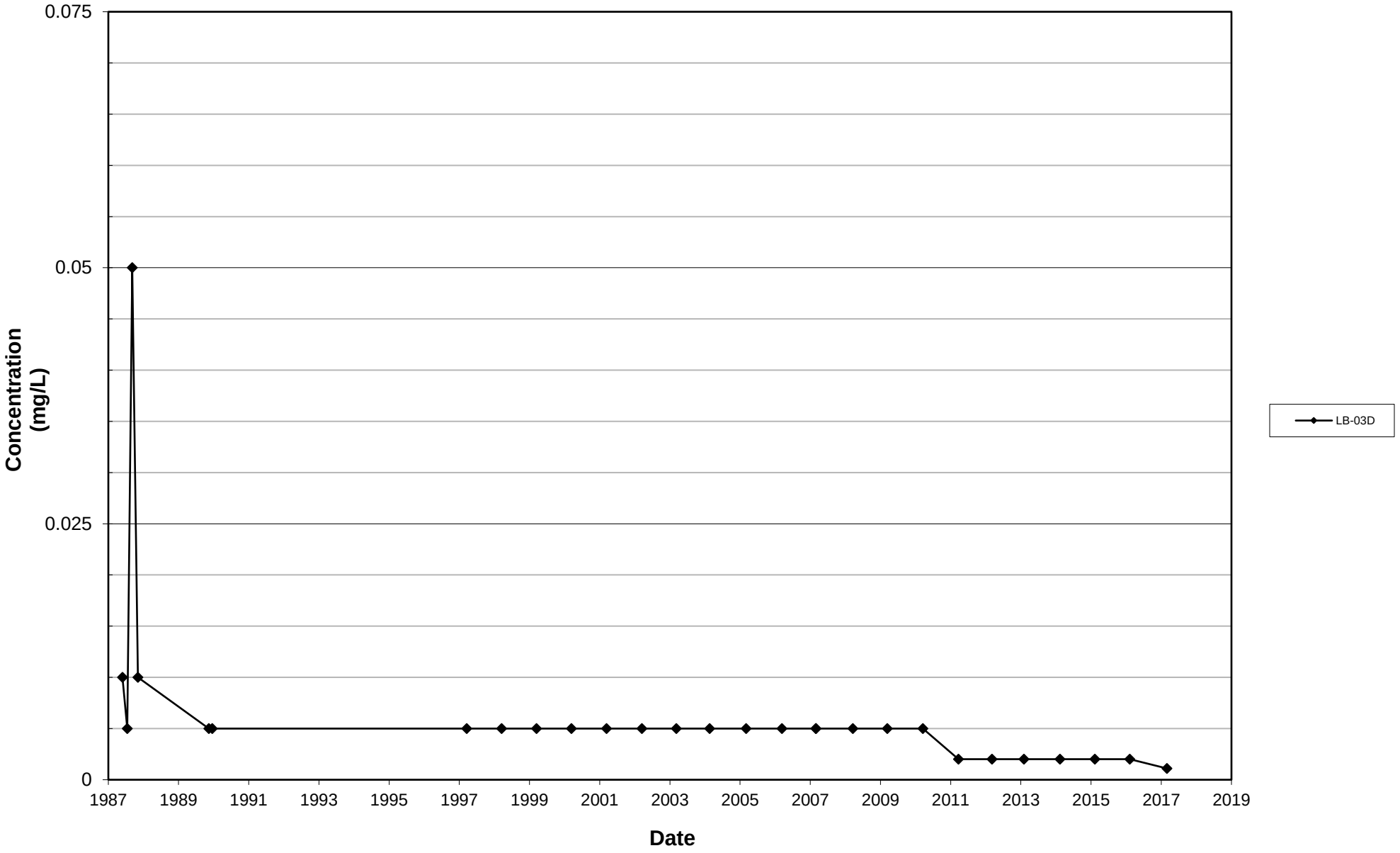
Leichner Landfill
Dissolved Manganese, LB-01D
1987 - 2017



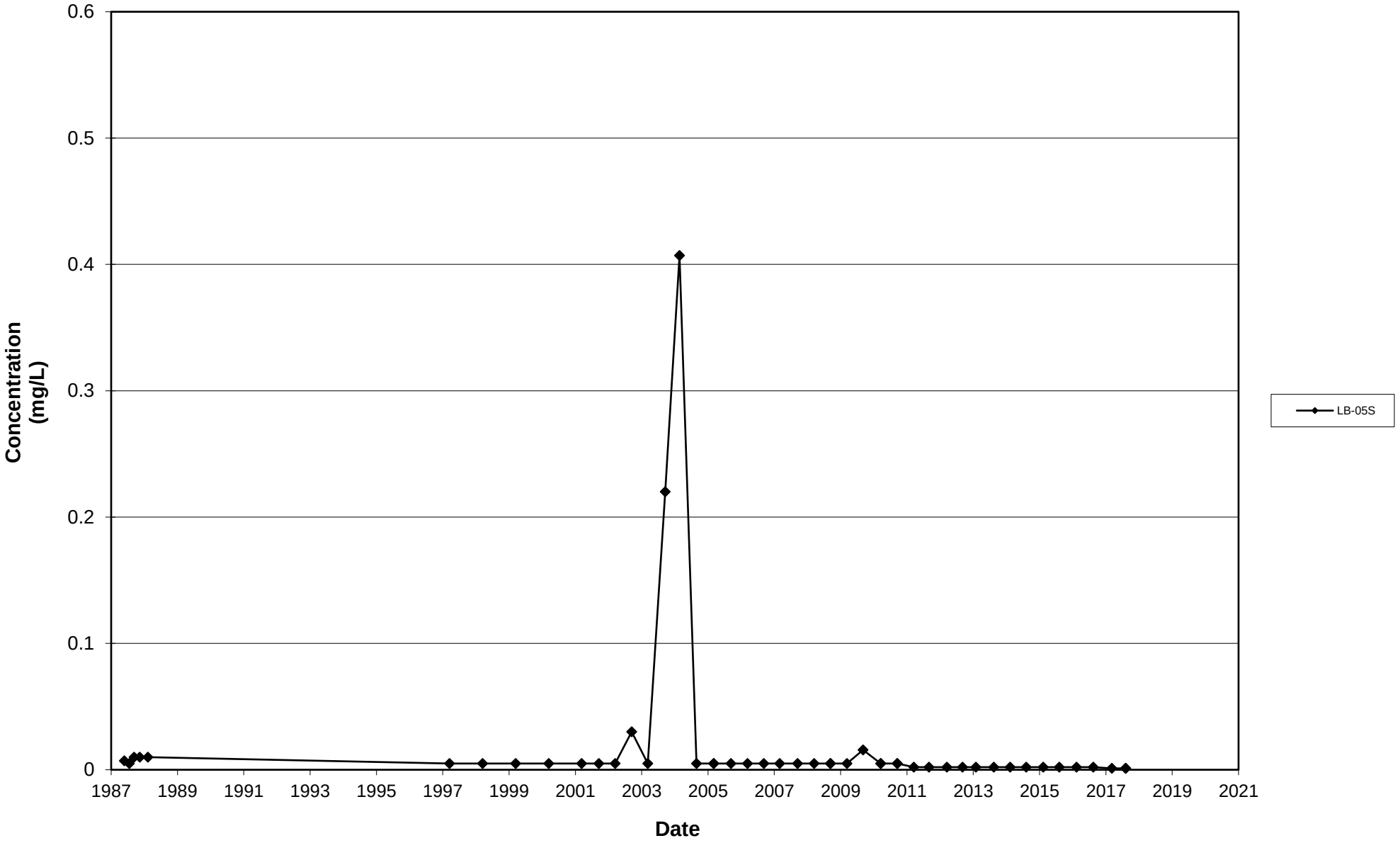
Leichner Landfill
Dissolved Manganese, LB-03S
1987 - 2017



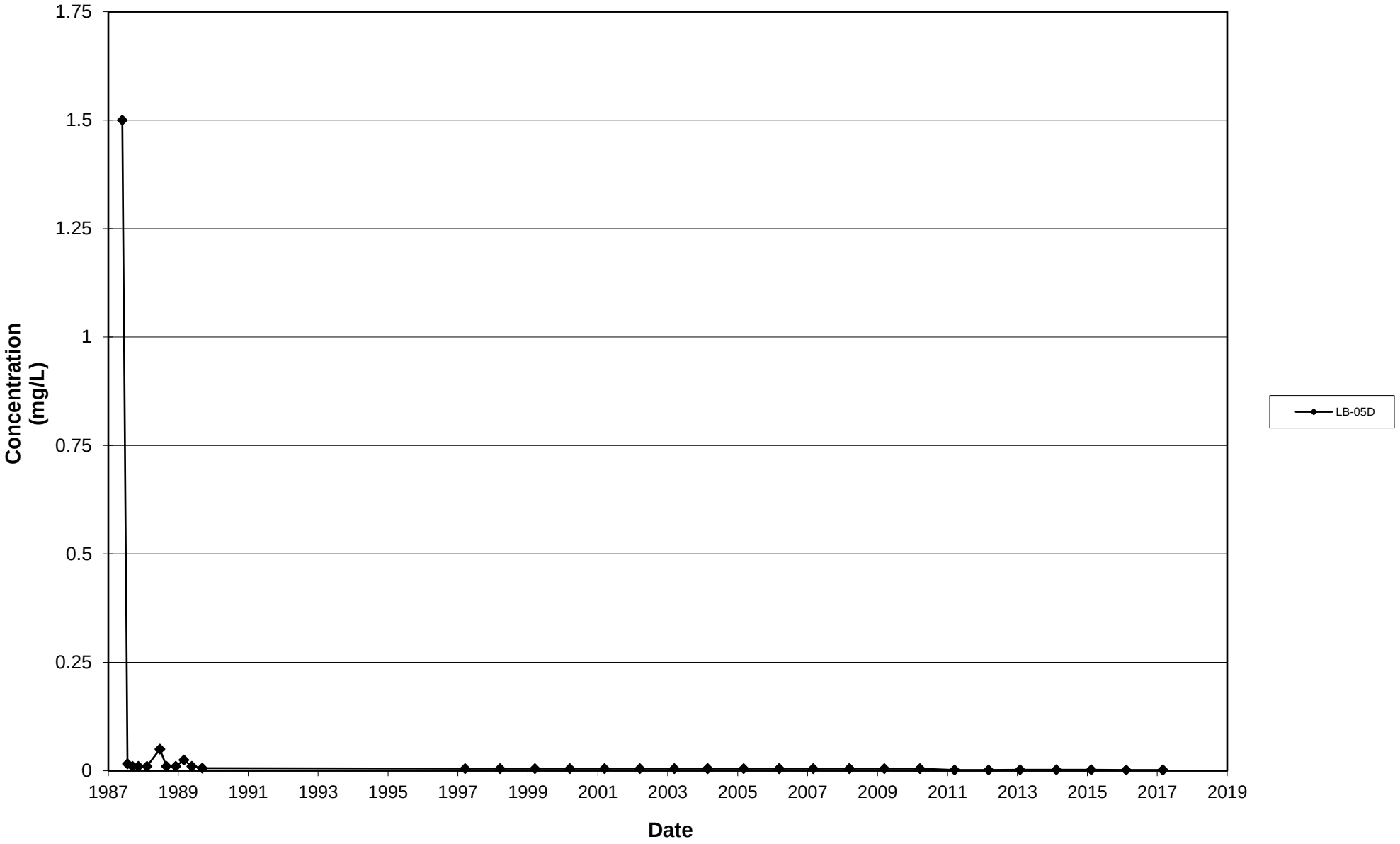
Leichner Landfill
Dissolved Manganese, LB-03D
1987 - 2017



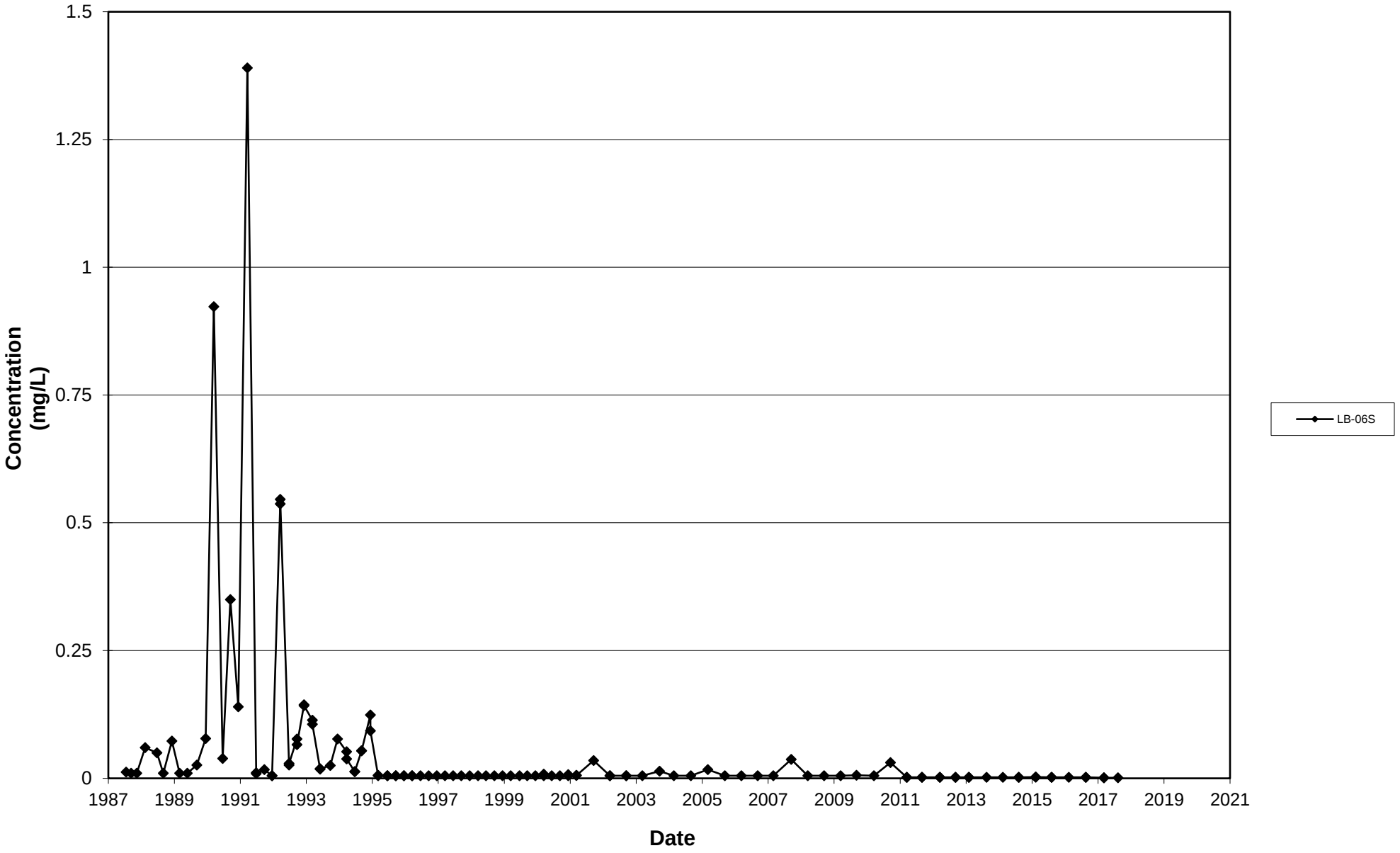
Leichner Landfill
Dissolved Manganese, LB-05S
1987 - 2017



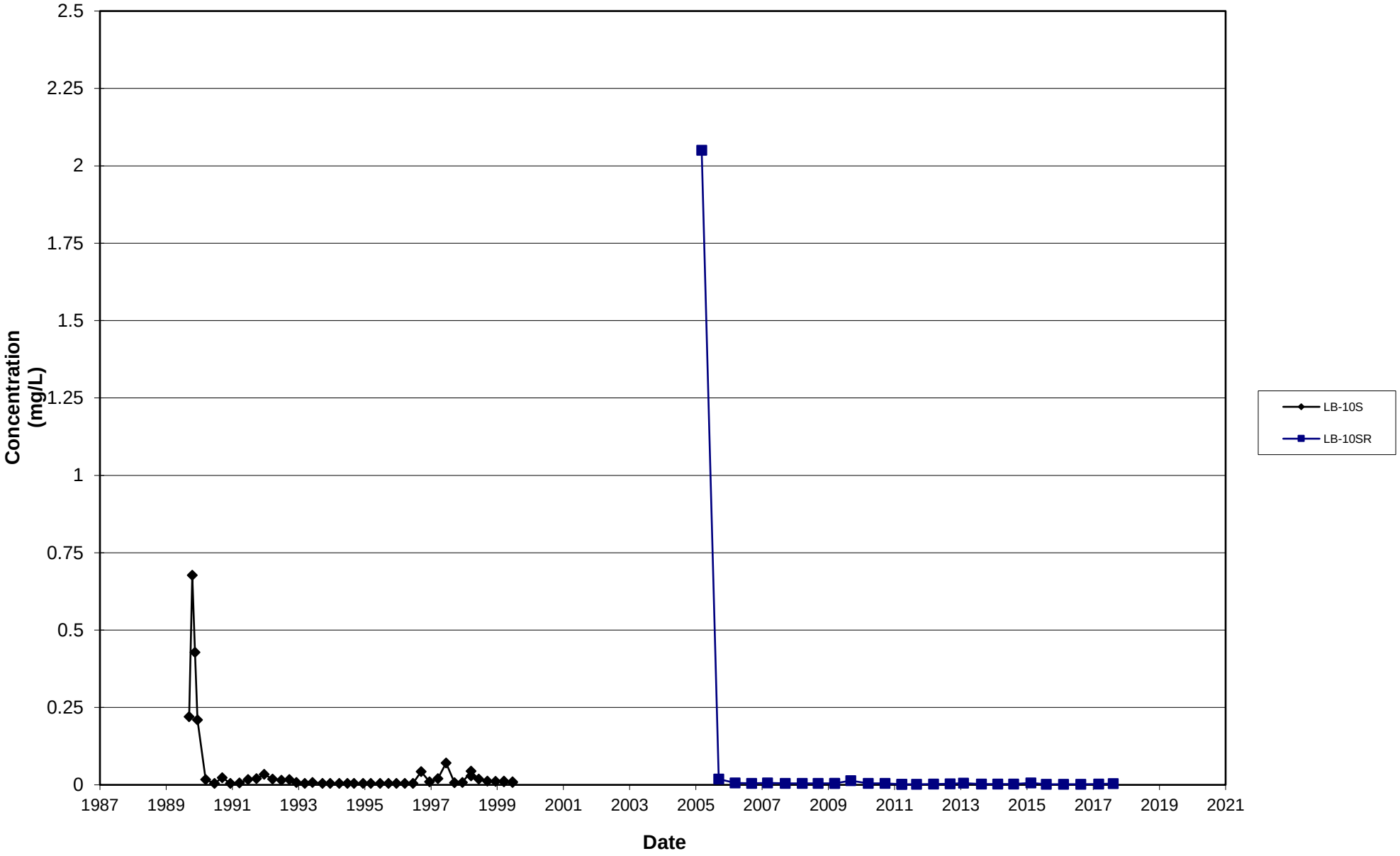
Leichner Landfill
Dissolved Manganese, LB-05D
1987 - 2017



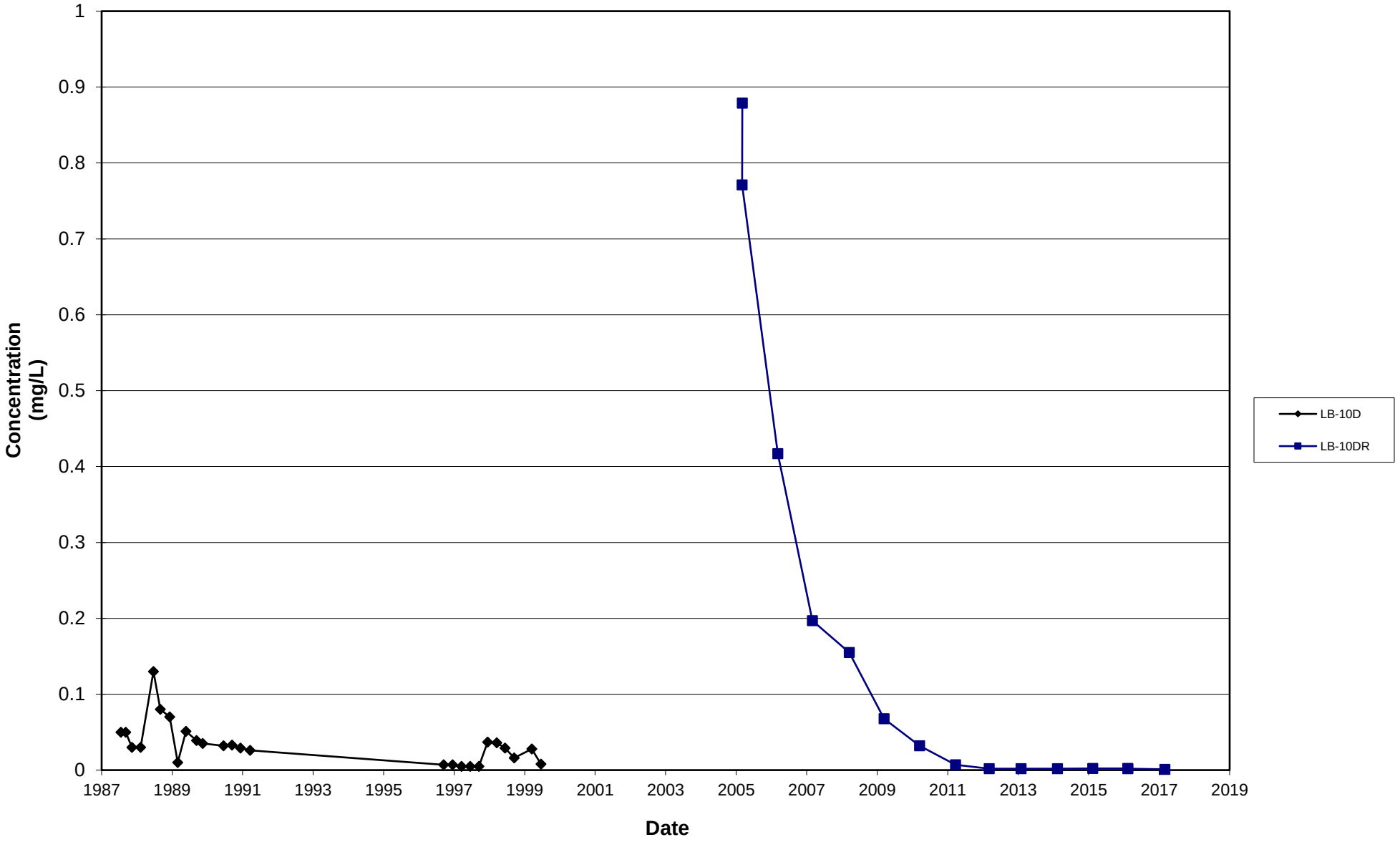
Leichner Landfill
Dissolved Manganese, LB-06S
1987 - 2017



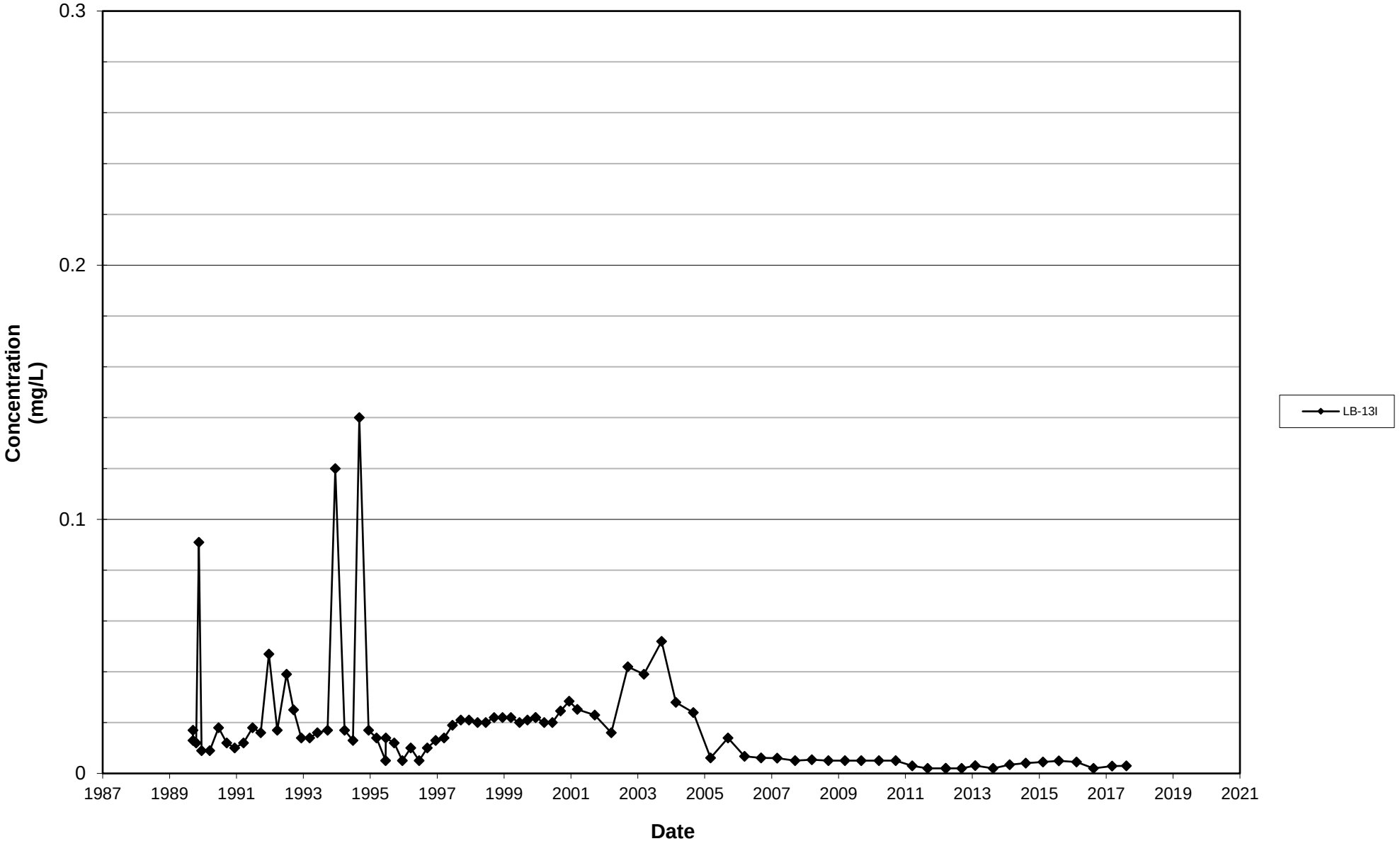
Leichner Landfill
Dissolved Manganese, LB-10S and LB-10SR
1987 - 2017



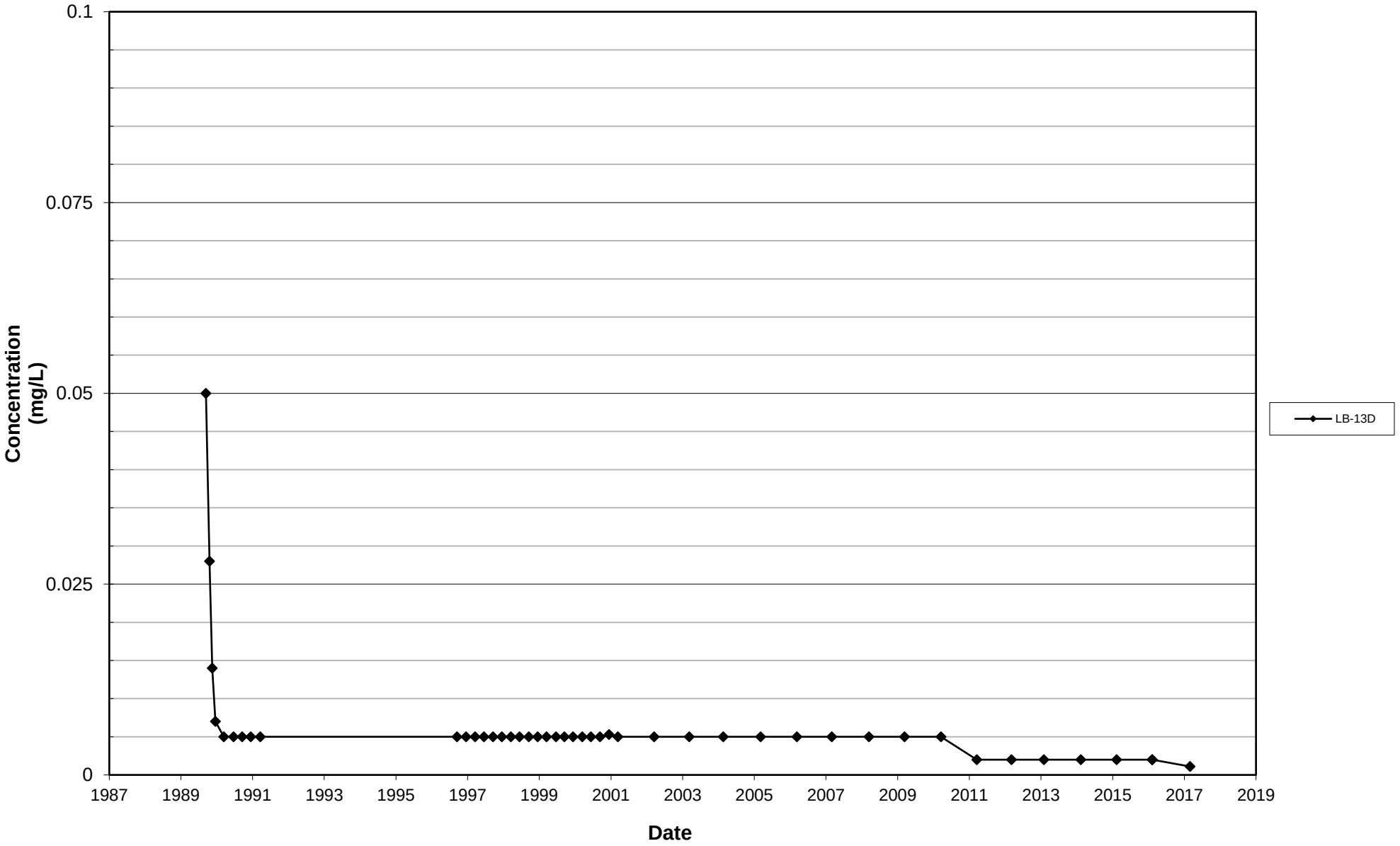
Leichner Landfill
Dissolved Manganese, LB-10D and LB-10DR
1987 - 2017



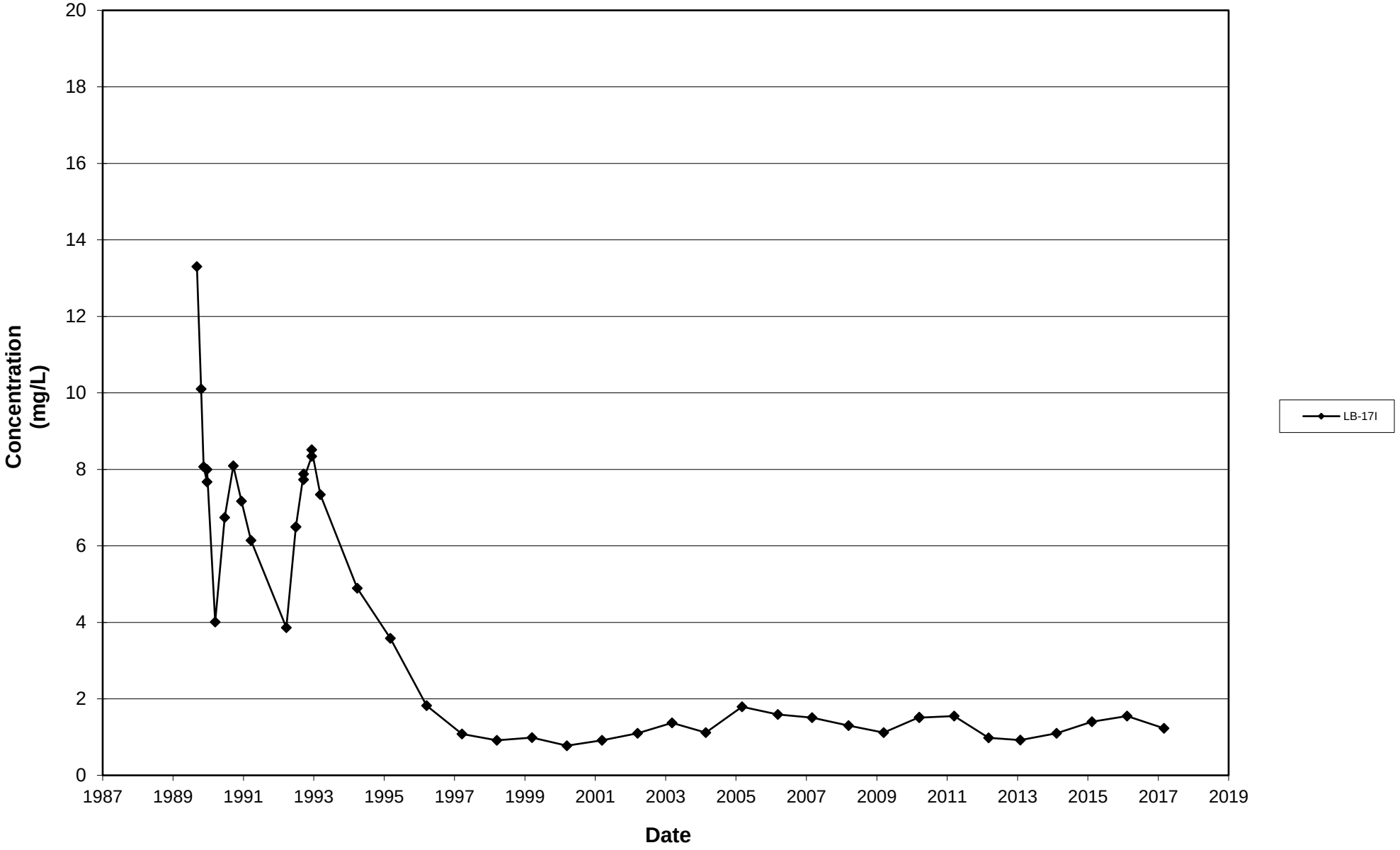
Leichner Landfill
Dissolved Manganese, LB-13I
1987 - 2017



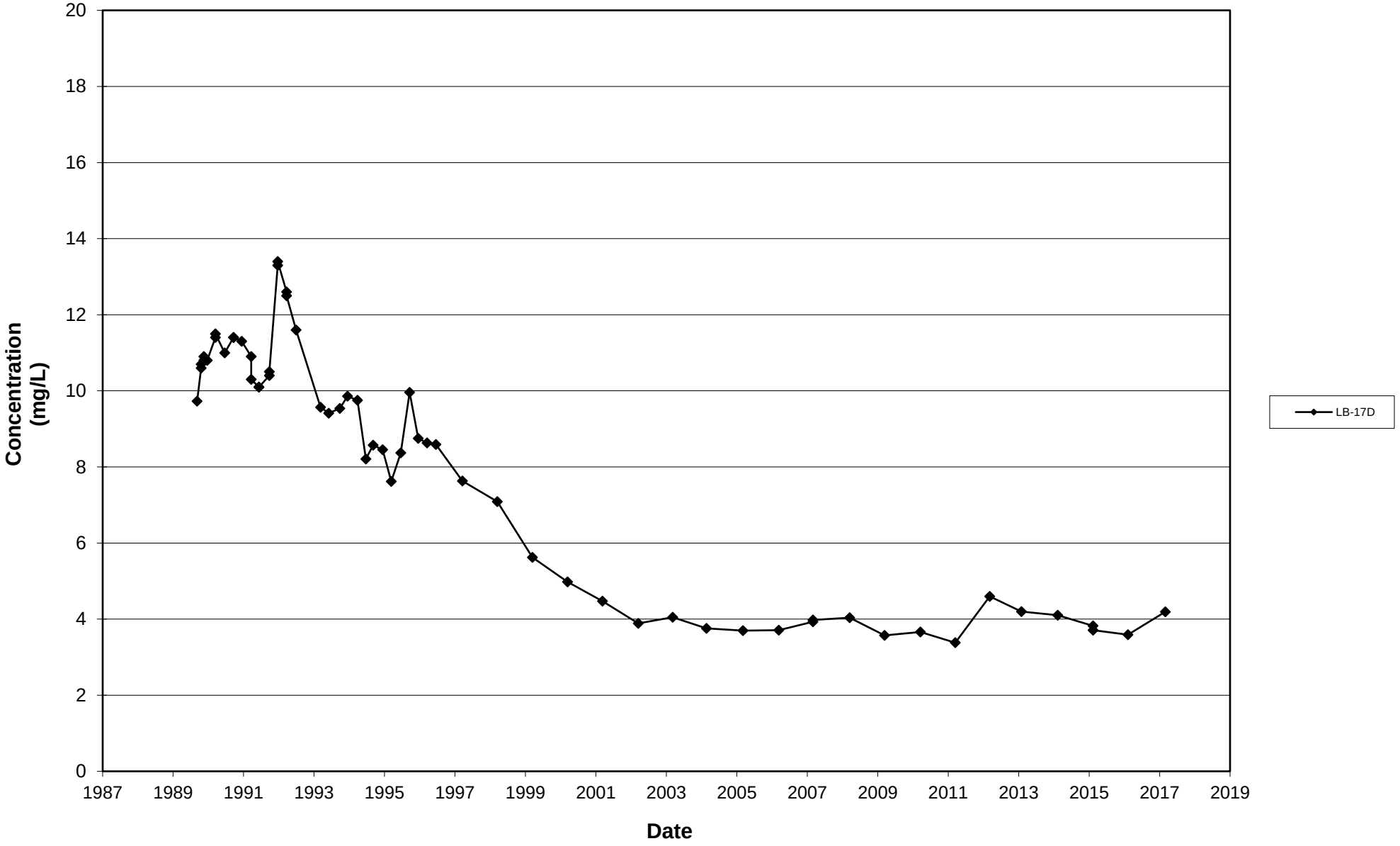
Leichner Landfill
Dissolved Manganese, LB-13D
1987 - 2017



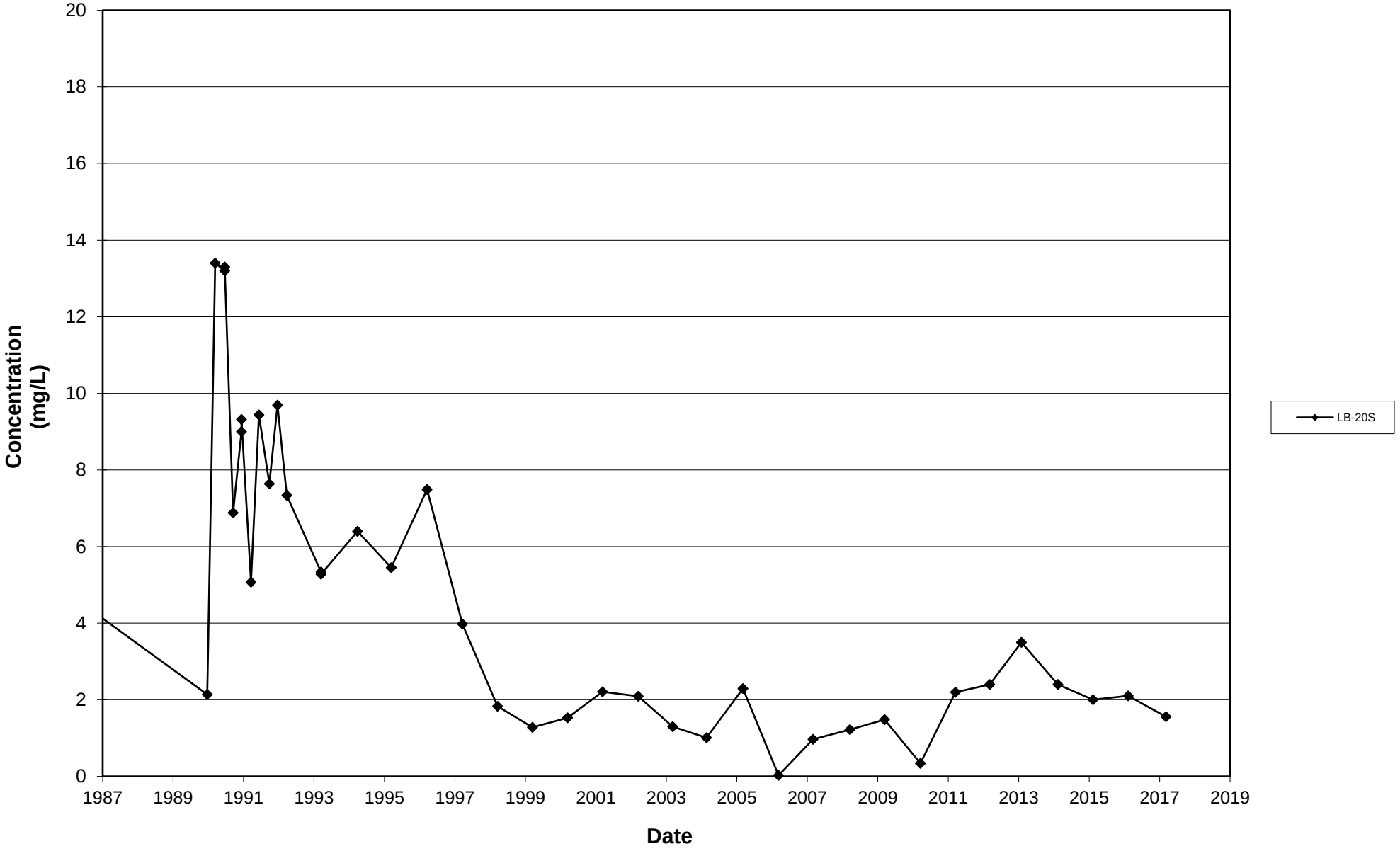
Leichner Landfill
Dissolved Manganese, LB-17I
1987 - 2017



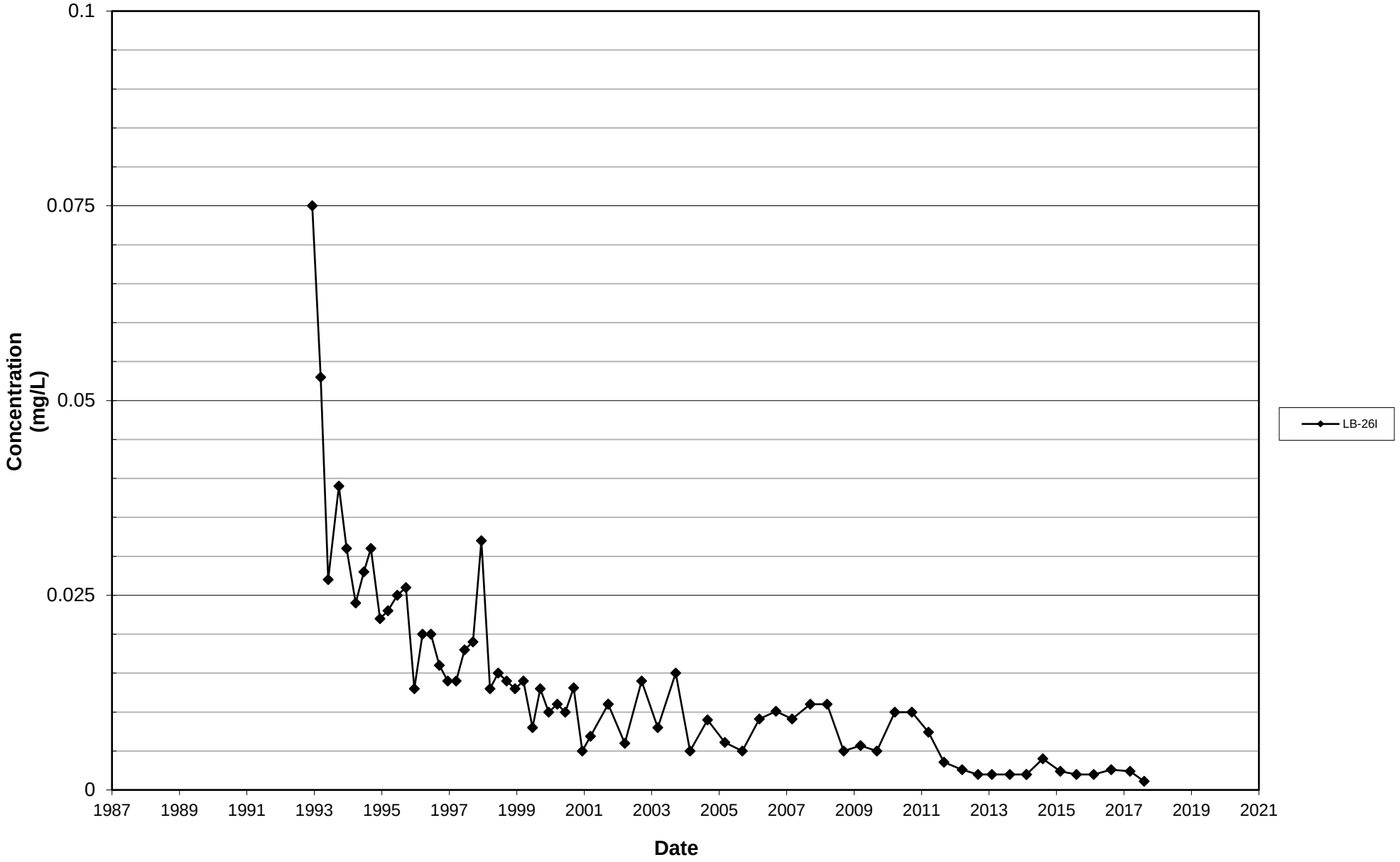
Leichner Landfill
Dissolved Manganese, LB-17D
1987 - 2017



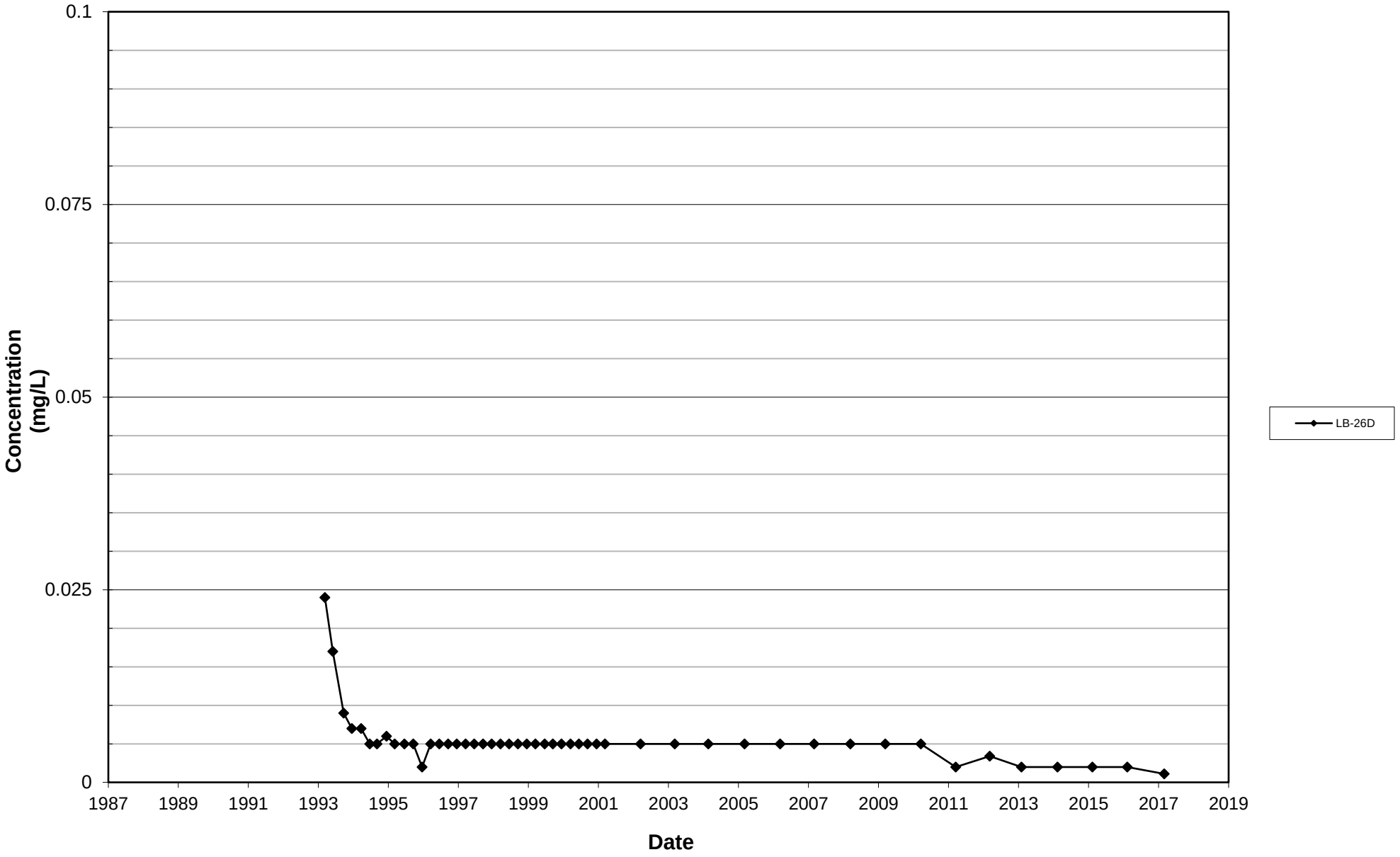
Leichner Landfill
Dissolved Manganese, LB-20S
1987 - 2017



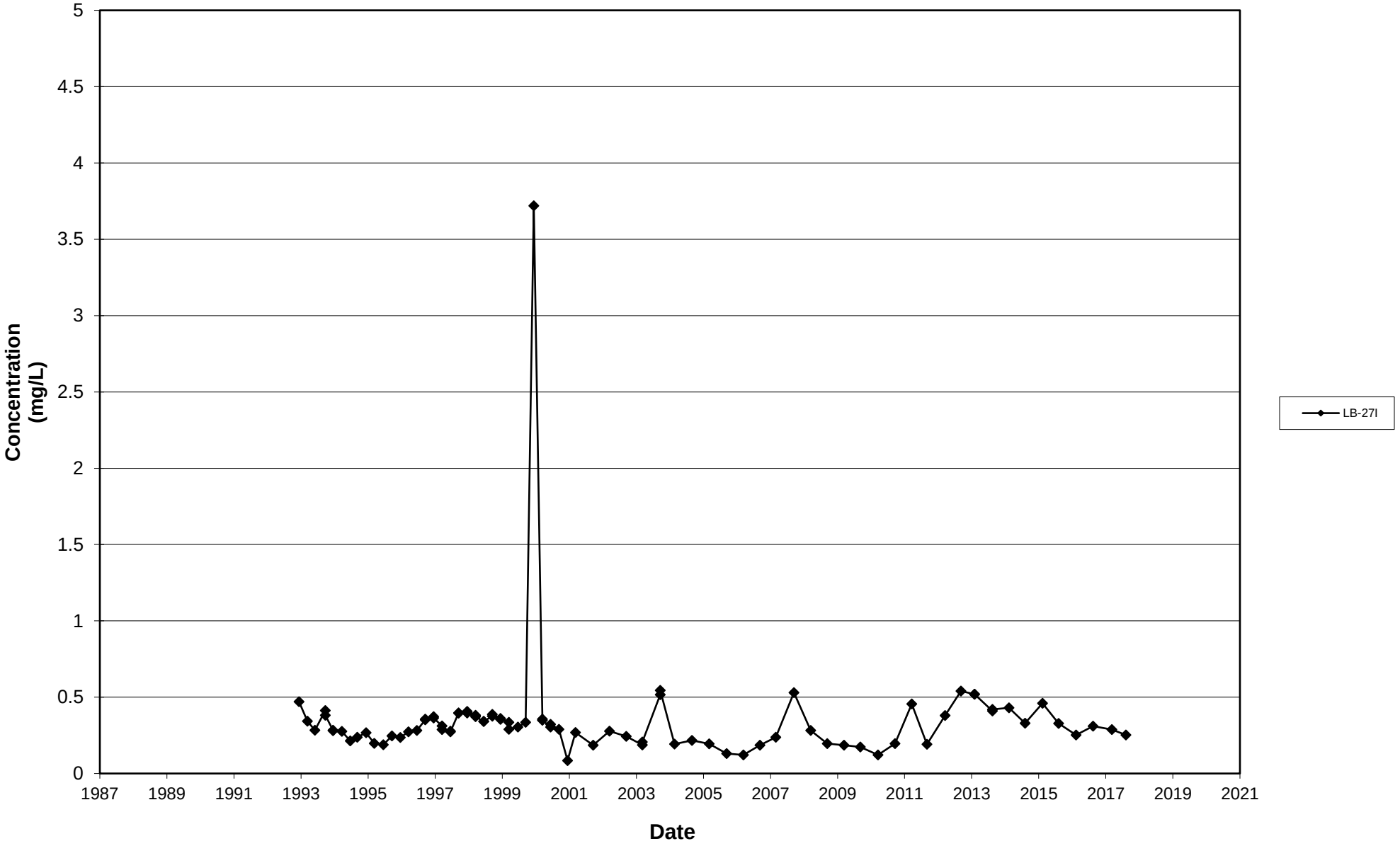
Leichner Landfill
Dissolved Manganese, LB-26I
1987 - 2017



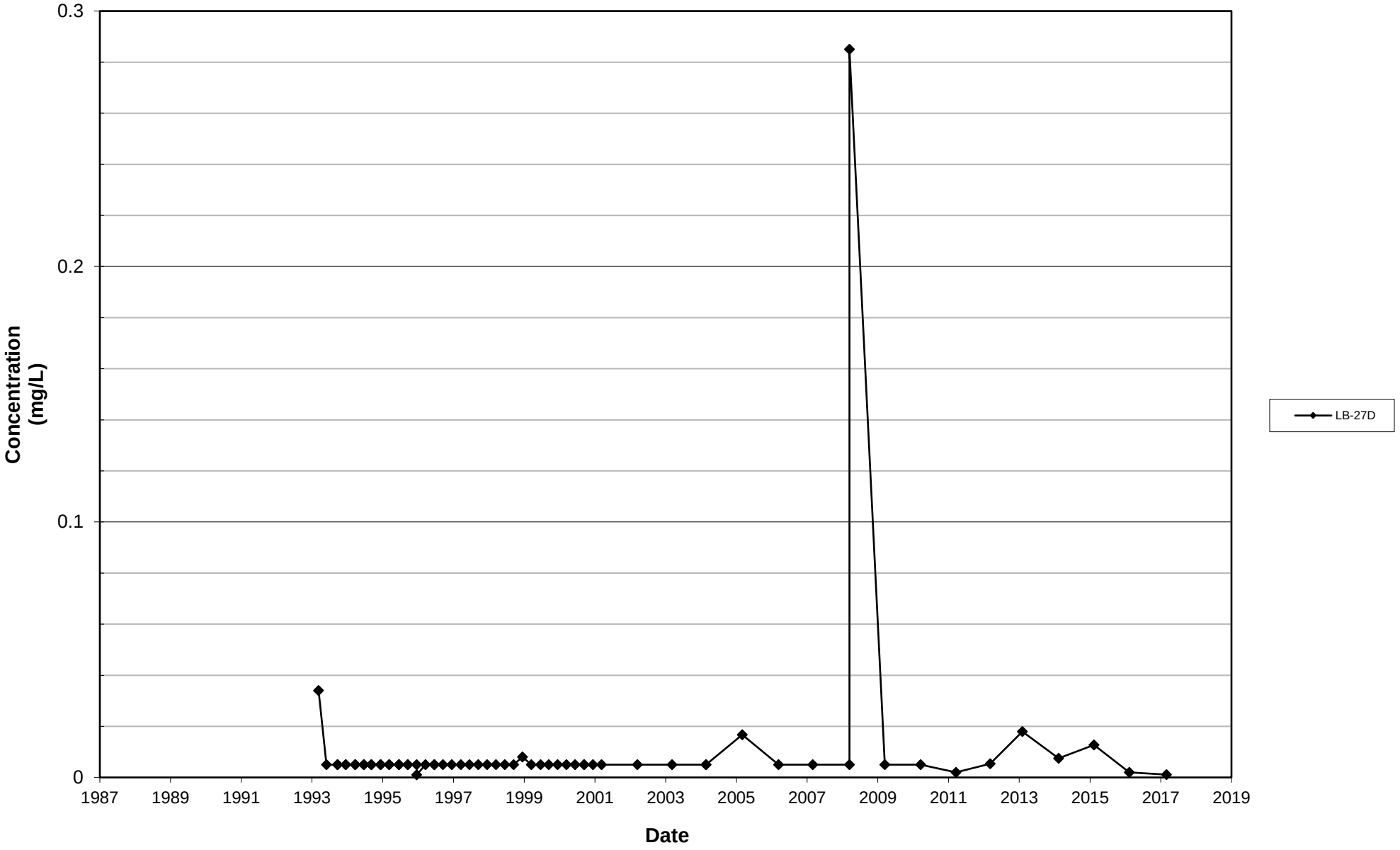
Leichner Landfill
Dissolved Manganese, LB-26D
1987 - 2017



Leichner Landfill
Dissolved Manganese, LB-27I
1987 - 2017



Leichner Landfill
Dissolved Manganese, LB-27D
1987 - 2017



APPENDIX G

Summary of 2017 Groundwater Statistical Calculations

Table G-1
Groundwater Statistics - 2012 through 2017 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-1S					LB-1D				
	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	13	13	Lognormal	9.98	12.98	6	6	Lognormal	7.30	7.61
Nitrate (mg/L)	13	13	Lognormal	5.93	6.86	6	6	Non	6.17	M(7.09)
TDS (mg/L)	13	13	Lognormal	212.39	225.32	6	6	Lognormal	183.17	203.76
Metals (mg/L)										
Iron (dissolved)	13	0	NC	NC	All ND	6	1	NC	0.036	M(0.036)
Manganese (dissolved)	13	1	NC	NC	M(0.002)	6	2	NC	0.003	M(0.0058)
VOCs (µg/L)										
1,4-Dichlorobenzene	11	0	NC	NC	All ND	6	0	NC	NC	All ND
Tetrachloroethene	11	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	11	0	NC	NC	All ND	6	0	NC	NC	All ND

Parameter	LB-3S					LB-3D				
	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	6	6	Non	3.79	M(4.14)	6	6	Non	4.54	M(5.32)
Nitrate (mg/L)	6	6	Lognormal	3.82	4.11	6	6	Non	4.55	M(4.81)
TDS (mg/L)	6	6	Lognormal	170.7	185.39	6	6	Lognormal	175.50	195.55
Metals (mg/L)										
Iron (dissolved)	6	0	NC	NC	All ND	6	0	NC	NC	All ND
Manganese (dissolved)	6	0	NC	NC	All ND	6	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	6	0	NC	NC	All ND	6	0	NC	NC	All ND
Tetrachloroethene	6	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	6	0	NC	NC	All ND	6	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2012 through 2017 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-5S					LB-5D				
	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	12	12	Lognormal	4.16	4.40	6	6	Lognormal	9.45	10.37
Nitrate (mg/L)	12	12	Non	4.79	M(6.6)	6	6	Non	0.72	M(1.2)
TDS (mg/L)	12	12	Non	162.6	M(182)	6	6	Lognormal	224.0	238.80
Metals (mg/L)										
Iron (dissolved)	12	0	NC	NC	All ND	6	0	NC	NC	All ND
Manganese (dissolved)	12	0	NC	NC	All ND	6	4	Lognormal	0.0020	M(0.0026)
VOCs (µg/L)										
1,4-Dichlorobenzene	12	0	NC	NC	All ND	6	0	NC	NC	All ND
Tetrachloroethene	12	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	12	0	NC	NC	All ND	6	0	NC	NC	All ND

Parameter	LB-6S					LB-20S				
	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	18	18	Lognormal	5.40	6.46	6	6	Lognormal	13.67	M(151)
Nitrate (mg/L)	18	17	Non	1.56	M(2.65)	6	1	NC	0.40	M(0.40)
TDS (mg/L)	18	18	Lognormal	159.17	169.70	6	6	Non	235.0	M(340.0)
Metals (mg/L)										
Iron (dissolved)	18	1	NC	0.028	M(0.028)	6	6	Lognormal	0.19	0.90
Manganese (dissolved)	18	2	NC	0.002	M(0.0022)	6	6	Non	2.33	M(3.5)
VOCs (µg/L)										
1,4-Dichlorobenzene	16	0	NC	NC	All ND	6	2	Non	0.215	M(0.23)
Tetrachloroethene	16	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	16	0	NC	NC	All ND	6	0	NC	NC	All ND

* MTCAStat 97 indicated lognormal distribution; however, the UCL 95 cannot be determined because more than 50 percent of the data are censored (i.e., non-detect).

Table G-1
Groundwater Statistics - 2012 through 2017 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-10SR					LB-10DR				
	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	12	12	Normal	22.08	30.2	6	6	Lognormal	16.28	21.8
Nitrate (mg/L)	12	12	Lognormal	1.77	3.2	6	6	Lognormal	2.39	2.5
TDS (mg/L)	12	12	Lognormal	277.2	292.2	6	6	Non	260.7	M(290.0)
Metals (mg/L)										
Iron (dissolved)	12	0	NC	NC	All ND	6	0	NC	NC	All ND
Manganese (dissolved)	12	10	Non	0.003	M(0.0059)	6	1	Non	0.002	M(0.002)
VOCs (µg/L)										
1,4-Dichlorobenzene	12	0	NC	NC	All ND	6	0	NC	NC	All ND
Tetrachloroethene	12	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	12	0	NC	NC	All ND	6	0	NC	NC	All ND

Parameter	LB-13I					LB-13D				
	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	13	13	Lognormal	8.49	10.0	6	6	Non	4.71	M(5.0)
Nitrate (mg/L)	13	13	Non	3.61	M(4.50)	6	6	Lognormal	5.02	5.3
TDS (mg/L)	13	13	Non	197.6	M(220)	6	6	Lognormal	165.5	190.2
Metals (mg/L)										
Iron (dissolved)	13	0	NC	NC	All ND	6	0	NC	NC	All ND
Manganese (dissolved)	13	8	Normal	0.004	M(0.0049)	6	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	13	0	NC	NC	All ND	6	0	NC	NC	All ND
Tetrachloroethene	13	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	13	0	NC	NC	All ND	6	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2012 through 2017 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-17I					LB-17D				
	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	6	6	Lognormal	10.67	12.1	7	7	Lognormal	10.04	M(151)
Nitrate (mg/L)	6	0	NC	NC	All ND	7	0	NC	NC	All ND
TDS (mg/L)	6	6	Non	219.83	M(250)	7	7	Lognormal	210.4	225.82
Metals (mg/L)										
Iron (dissolved)	6	6	Lognormal	7.68	9.9	7	7	Lognormal	0.105	0.115
Manganese (dissolved)	6	6	Lognormal	1.20	1.5	7	7	Lognormal	4.0	4.30
VOCs (µg/L)										
1,4-Dichlorobenzene	6	0	NC	NC	All ND	7	0	NC	NC	All ND
Tetrachloroethene	6	0	NC	NC	All ND	7	0	NC	NC	All ND
Trichloroethene	6	0	NC	NC	All ND	7	0	NC	NC	All ND

Parameter	LB-26I					LB-26D				
	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	13	13	Lognormal	7.41	8.3	6	6	Non	5.18	M(5.88)
Nitrate (mg/L)	13	13	Normal	4.39	4.9	6	6	Non	5.46	M(5.90)
TDS (mg/L)	13	13	Non	195.08	M(210.0)	6	6	Lognormal	176.83	189.9
Metals (mg/L)										
Iron (dissolved)	13	3	NC	0.046	M(0.064)	6	0	NC	NC	All ND
Manganese (dissolved)	13	6	Normal	0.003	M(0.004)	6	1	NC	0.003	M(0.0034)
VOCs (µg/L)										
1,4-Dichlorobenzene	13	0	NC	NC	All ND	6	0	NC	NC	All ND
Tetrachloroethene	13	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	13	0	NC	NC	All ND	6	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2012 through 2017 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

	LB-27I					LB-27D				
Parameter	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]	No. Analyses	No. Detected	Distribution[a]	Mean	UCL 95[b]
Inorganics										
Chloride (mg/L)	14	14	Lognormal	34.01	41.6	6	6	Non	9.79	M(13.0)
Nitrate (mg/L)	14	6	Normal	0.37	M(0.91)	6	6	Lognormal	4.08	4.2
TDS (mg/L)	14	14	Lognormal	368.50	393.2	6	6	Non	223.8	M(265)
Metals (mg/L)										
Iron (dissolved)	14	1	NC	0.032	M(0.032)	6	4	Lognormal	0.1	0.7
Manganese (dissolved)	14	14	Lognormal	0.389	0.5	6	4	Lognormal	0.011	0.1
VOCs (µg/L)										
1,4-Dichlorobenzene	14	0	NC	NC	All ND	6	0	NC	NC	All ND
Tetrachloroethene	14	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	14	0	NC	NC	All ND	6	0	NC	NC	All ND

Notes:

mg/L = milligrams per liter; µg/L = micrograms per liter; NC = not calculated, more than 50% samples were non-detect; Non = neither normal nor lognormal distribution;

M = default to maximum value per Statistical Guidance for Ecology Site Managers

for the following scenarios: (a) more than 50% non-detect values, (b) both normal and lognormal distributions were rejected by MTCAStat,

and (c) UCL calculated using MTCAStat was higher than the maximum value of the data set.

[a] Distribution was determined using MTCAStat 97 program and Statistical Guidance for Ecology Site Managers.

[b] UCL 95 was calculated using MTCAStat 97 program and Statistical Guidance for Ecology Site Managers.

APPENDIX H

2017 Landfill Gas Probe Monitoring Data

Table H-1
2017 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill

Probe	Date and Time	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-1A	3/10/2017 11:36	0.0	2.2	18.7	79.1
GP-1A	6/7/2017 11:30	0.0	2.5	18.3	79.2
GP-1A	9/18/2017 12:45	0.0	3.4	19.9	76.7
GP-1A	12/27/2017 12:21	0.0	3.0	18.9	78.1
GP-1B	3/10/2017 11:37	0.0	2.1	18.8	79.1
GP-1B	6/7/2017 11:32	0.0	2.4	18.6	79.0
GP-1B	9/18/2017 12:46	0.0	2.4	20.1	77.5
GP-1B	12/27/2017 12:23	0.0	2.1	19.1	78.8
GP-02	3/10/2017 11:40	0.0	3.1	17.9	79.0
GP-02	6/7/2017 11:36	0.0	3.2	16.9	79.9
GP-02	9/18/2017 12:49	0.0	2.0	19.2	78.8
GP-02	12/27/2017 12:28	0.0	2.3	17.9	79.8
GP-03	3/10/2017 10:12	0.0	2.3	17.4	80.3
GP-03	6/7/2017 10:32	0.0	3.1	16.1	80.8
GP-03	9/18/2017 12:10	0.0	3.2	18.2	78.6
GP-03	12/27/2017 9:48	0.1	2.6	17.7	79.6
GP-4A	3/10/2017 10:07	0.0	3.7	16.1	80.2
GP-4A	6/7/2017 10:25	0.0	3.8	15.0	81.2
GP-4A	9/18/2017 12:05	0.0	3.7	17.7	78.6
GP-4A	12/27/2017 12:13	0.0	3.4	17.5	79.1
GP-4B	3/10/2017 10:08	0.0	4.2	14.6	81.2
GP-4B	6/7/2017 10:28	0.0	4.3	14.3	81.4
GP-4B	9/18/2017 12:08	0.0	3.5	17.4	79.1
GP-4B	12/27/2017 12:14	0.0	3.2	17.4	79.4
GP-05	3/10/2017 10:03	0.0	3.9	16.9	79.2
GP-05	6/7/2017 10:22	0.0	4.1	15.0	80.9
GP-05	9/18/2017 12:01	0.0	6.6	15.4	78.0
GP-05	12/27/2017 12:09	0.0	3.6	15.8	80.6
GP-06	3/10/2017 11:17	0.0	4.6	14.5	80.9
GP-06	6/7/2017 11:15	0.0	5.1	15.2	79.7
GP-06	9/18/2017 12:40	0.0	6.5	15.9	77.6
GP-06	12/27/2017 10:38	0.0	4.1	15.8	80.1
GP-07	3/10/2017 11:10	0.0	0.3	20.8	78.9
GP-07	6/7/2017 11:01	7.7	10.8	0.0	81.5
GP-07	6/9/2017 10:25	6.5	11.9	0.0	81.6
GP-07	6/27/2017 13:42	0.0	9.7	4.8	85.5
GP-07	9/18/2017 12:32	2.5	17.5	0.1	79.9
GP-07	12/27/2017 10:35	1.5	3.7	0.0	94.8

Table H-1
2017 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill

Probe	Date and Time	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-8R	3/10/2017 10:19	0.0	0.5	20.8	78.7
GP-8R	6/7/2017 10:37	0.0	1.9	18.1	80.0
GP-8R	9/18/2017 12:13	0.0	2.3	20.4	77.3
GP-8R	12/27/2017 10:00	0.0	0.5	20.1	79.4
GP-9A	3/10/2017 11:23	0.0	11.5	6.0	82.5
GP-9A	6/7/2017 10:48	0.0	10.0	6.6	83.4
GP-9A	9/18/2017 12:19	0.0	2.5	13.5	84.0
GP-9A	12/27/2017 10:08	0.0	8.7	6.8	84.5
GP-9B	3/10/2017 11:24	2.0	15.2	0.3	82.5
GP-9B	6/7/2017 10:50	0.6	13.5	0.4	85.5
GP-9B	9/18/2017 12:20	0.0	10.6	2.3	87.1
GP-9B	12/27/2017 10:11	0.1	14.7	0.0	85.2
GP-10A	3/10/2017 11:27	0.0	8.4	8.7	82.9
GP-10A	6/7/2017 10:51	0.0	6.0	10.1	83.9
GP-10A	9/18/2017 12:23	0.0	6.7	13.8	79.5
GP-10A	12/27/2017 10:13	0.0	7.0	13.1	79.9
GP-10B	3/10/2017 11:28	0.0	2.3	17.0	80.7
GP-10B	6/7/2017 10:52	0.0	3.2	16.4	80.4
GP-10B	9/18/2017 12:24	0.0	5.7	18.6	75.7
GP-10B	12/27/2017 10:15	0.0	3.8	18.9	77.3
GP-11	3/10/2017 11:50	0.0	0.8	20.5	78.7
GP-11	6/7/2017 11:49	0.0	2.9	14.4	82.7
GP-11	9/18/2017 13:12	0.0	2.1	19.3	78.6
GP-11	12/27/2017 11:46	0.0	1.0	19.7	79.3
GP-12	3/10/2017 11:48	0.0	0.5	20.6	78.9
GP-12	6/7/2017 11:45	0.0	1.1	19.8	79.1
GP-12	9/18/2017 13:21	0.0	1.2	20.9	77.9
GP-12	12/27/2017 11:43	0.0	1.8	20.6	77.6
GP-13	3/10/2017 12:01	0.0	1.0	19.5	79.5
GP-13	6/7/2017 11:57	0.0	2.3	17.5	80.2
GP-13	9/18/2017 13:27	0.0	0.8	20.3	78.9
GP-13	12/27/2017 11:05	0.0	3.1	18.4	78.5
GP-14	3/10/2017 12:03	0.0	0.8	20.0	79.2
GP-14	6/7/2017 12:04	0.0	1.1	19.8	79.1
GP-14	9/18/2017 13:35	0.0	0.8	20.9	78.3
GP-14	12/27/2017 12:38	0.0	2.2	19.6	78.2

Table H-1
2017 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill

Probe	Date and Time	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-15	3/10/2017 12:06	0.0	1.4	19.4	79.2
GP-15	6/7/2017 12:09	0.0	1.3	18.7	80.0
GP-15	9/18/2017 13:41	0.0	1.5	19.8	78.7
GP-15	12/27/2017 12:42	0.0	1.2	19.3	79.5
GP-16D	3/10/2017 12:16	0.0	3.1	17.6	79.3
GP-16D	6/7/2017 12:29	0.0	3.2	16.1	80.7
GP-16D	9/18/2017 13:52	0.0	1.8	18.4	79.8
GP-16D	12/27/2017 14:59	0.0	1.5	18.6	79.9
GP-16S	3/10/2017 12:18	0.0	0.8	19.9	79.3
GP-16S	6/7/2017 12:36	0.0	1.1	18.8	80.1
GP-16S	9/18/2017 13:54	0.0	2.8	19.7	77.5
GP-16S	12/27/2017 15:01	0.0	2.0	19.4	78.6
GP-17D	3/10/2017 12:22	0.0	2.3	18.9	78.8
GP-17D	6/7/2017 12:47	0.0	1.3	0.0	98.7
GP-17D	9/18/2017 13:59	0.0	2.3	20.4	77.3
GP-17D	12/27/2017 15:10	0.0	1.6	19.2	79.2
GP-17S	3/10/2017 12:23	0.0	3.2	17.8	79.0
GP-17S	6/7/2017 12:48	0.0	3.4	17.1	79.5
GP-17S	9/18/2017 14:00	0.0	1.6	19.4	79.0
GP-17S	12/27/2017 15:11	0.0	1.6	18.4	80.0
GP-18D	3/10/2017 12:35	0.0	1.2	19.4	79.4
GP-18D	6/7/2017 12:59	0.0	1.9	0.0	98.1
GP-18D	9/18/2017 14:13	0.0	2.1	19.5	78.4
GP-18D	12/27/2017 13:26	0.0	1.6	18.4	80.0
GP-18S	3/10/2017 12:36	0.0	0.7	20.0	79.3
GP-18S	6/7/2017 13:00	0.0	1.5	18.7	79.8
GP-18S	9/18/2017 14:15	0.0	2.0	20.0	78.0
GP-18S	12/27/2017 13:28	0.0	1.1	19.0	79.9
GP-19D	3/10/2017 12:41	0.0	2.5	18.2	79.3
GP-19D	6/7/2017 13:07	0.1	2.5	0.0	97.4
GP-19D	9/18/2017 14:24	0.0	1.3	17.6	81.1
GP-19D	12/27/2017 13:37	0.0	1.9	17.6	80.5
GP-19S	3/10/2017 12:43	0.0	1.4	19.0	79.6
GP-19S	6/7/2017 13:10	0.0	1.8	0.0	98.2
GP-19S	9/18/2017 14:25	0.0	1.7	18.9	79.4
GP-19S	12/27/2017 13:38	0.0	2.4	18.4	79.2

Table H-1
2017 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill

Probe	Date and Time	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-20	3/10/2017 12:53	0.0	10.0	2.0	88.0
GP-20	6/7/2017 13:23	0.0	7.7	0.0	92.3
GP-20	9/18/2017 14:40	0.0	8.6	0.4	91.0
GP-20	12/27/2017 13:47	0.0	8.2	6.9	84.9
GP-21A	3/10/2017 12:59	0.0	0.7	20.4	78.9
GP-21A	6/7/2017 13:32	0.0	0.9	0.0	99.1
GP-21A	9/18/2017 14:52	0.0	2.7	19.8	77.5
GP-21A	12/27/2017 13:59	0.0	2.8	20.1	77.1
GP-21B	3/10/2017 13:00	0.0	1.2	19.8	79.0
GP-21B	6/7/2017 13:32	0.0	1.0	0.0	99.0
GP-21B	9/18/2017 14:52	0.0	1.8	19.9	78.3
GP-21B	12/27/2017 14:01	0.0	1.5	19.8	78.7
GP-22	3/10/2017 13:03	0.0	0.8	20.3	78.9
GP-22	6/7/2017 13:35	0.0	1.0	0.0	99.0
GP-22	9/18/2017 14:56	0.0	1.3	20.2	78.5
GP-22	12/27/2017 14:04	0.0	1.3	20.5	78.2
GP-23	3/10/2017 13:05	0.0	1.3	20.0	78.7
GP-23	6/7/2017 13:37	0.0	1.0	0.0	99.0
GP-23	9/18/2017 15:01	0.0	1.0	20.1	78.9
GP-23	12/27/2017 14:07	0.0	1.4	20.1	78.5
GP-24A	3/10/2017 13:07	0.0	0.4	20.9	78.7
GP-24A	6/7/2017 13:41	0.0	1.1	18.5	80.4
GP-24A	9/18/2017 15:08	0.0	0.8	0.0	99.2
GP-24A	12/27/2017 14:09	0.0	1.4	20.5	78.1
GP-24B	3/10/2017 13:07	0.0	0.5	20.8	78.7
GP-24B	6/7/2017 13:41	0.0	1.4	17.2	81.4
GP-24B	9/18/2017 15:09	0.0	0.5	0.1	99.4
GP-24B	12/27/2017 14:11	0.0	1.1	20.3	78.6
GP-25A	3/10/2017 13:16	0.0	2.5	18.7	78.8
GP-25A	6/7/2017 13:48	0.0	2.4	0.0	97.6
GP-25A	9/18/2017 15:15	0.0	1.0	20.1	78.9
GP-25A	12/27/2017 14:25	0.0	2.2	19.4	78.4
GP-25B	3/10/2017 13:16	0.0	3.1	17.7	79.2
GP-25B	6/7/2017 13:49	0.0	2.9	0.0	97.1
GP-25B	9/18/2017 15:16	0.0	2.3	17.4	80.3
GP-25B	12/27/2017 14:27	0.0	2.3	18.5	79.2

Table H-1
2017 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill

Probe	Date and Time	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-26	3/10/2017 13:25	0.0	0.5	20.0	79.5
GP-26	6/7/2017 13:56	0.0	1.8	0.0	98.2
GP-26	9/18/2017 15:21	0.0	2.1	0.0	97.9
GP-26	12/27/2017 14:36	0.0	1.3	20.9	77.8
GP-27	3/10/2017 13:27	0.0	0.5	20.4	79.1
GP-27	6/7/2017 13:59	0.0	0.0		
GP-27	9/18/2017 15:24	0.0	1.0	0.3	98.7
GP-27	12/27/2017 14:39	0.0	0.8	20.7	78.5
GP-28	3/10/2017 9:49	0.2	5.0	11.0	83.8
GP-28	6/7/2017 10:01	0.0	5.3	11.0	83.7
GP-28	9/18/2017 11:40	0.3	7.6	16.2	75.9
GP-28	12/27/2017 9:42	0.2	4.6	14.1	81.1
GP-29	3/10/2017 9:59	0.0	6.8	5.9	87.3
GP-29	6/7/2017 10:18	0.0	8.5	1.5	90.0
GP-29	9/18/2017 11:56	0.0	7.2	6.6	86.2
GP-29	12/27/2017 11:58	0.0	7.8	5.0	87.2
GP-30A	3/10/2017 9:54	0.0	4.6	15.0	80.4
GP-30A	6/7/2017 10:08	0.0	5.4	13.4	81.2
GP-30A	9/18/2017 11:49	0.0	6.0	15.4	78.6
GP-30A	12/27/2017 12:03	0.0	4.2	16.4	79.4
GP-30B	3/10/2017 9:55	0.0	4.4	15.2	80.4
GP-30B	6/7/2017 10:10	0.0	5.8	13.5	80.7
GP-30B	9/18/2017 11:50	0.0	6.0	15.6	78.4
GP-30B	12/27/2017 12:06	0.0	3.7	16.8	79.5
GP-31	3/10/2017 12:39	0.0	0.9	20.1	79.0
GP-31	6/7/2017 13:05	0.4	3.6	0.0	96.0
GP-31	9/18/2017 14:20	0.0	1.3	20.2	78.5
GP-31	12/27/2017 13:31	0.0	0.7	19.1	80.2
GP-32	3/10/2017 12:49	0.0	2.1	18.2	79.7
GP-32	6/7/2017 13:14	0.0	1.7	0.0	98.3
GP-32	9/18/2017 14:30	0.0	1.7	0.5	97.8
GP-32	12/27/2017 13:41	0.0	2.0	18.0	80.0
GP-33	3/10/2017 12:51	0.0	1.9	18.1	80.0
GP-33	6/7/2017 13:19	0.0	1.7	0.0	98.3
GP-33	9/18/2017 14:34	0.0	1.9	0.7	97.4
GP-33	12/27/2017 13:44	0.0	2.1	18.2	79.7

Table H-1
2017 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill

Probe	Date and Time	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-34	3/10/2017 12:55	0.0	4.9	10.3	84.8
GP-34	6/7/2017 13:25	0.0	5.3	0.0	94.7
GP-34	9/18/2017 14:44	0.0	7.3	13.8	78.9
GP-34	12/27/2017 13:50	0.0	6.3	13.5	80.2
GP-35	3/10/2017 12:57	0.0	2.5	15.1	82.4
GP-35	6/7/2017 13:27	0.0	3.3	0.0	96.7
GP-35	9/18/2017 14:47	0.0	5.0	17.6	77.4
GP-35	12/27/2017 13:56	0.0	3.3	16.4	80.3
GP-36	3/10/2017 13:11	0.0	1.7	17.4	80.9
GP-36	6/7/2017 13:43	0.0	1.5	18.5	80.0
GP-36	9/18/2017 15:11	0.0	0.4	20.7	78.9
GP-36	12/27/2017 14:16	0.0	1.2	18.3	80.5
GP-37	3/10/2017 13:13	0.0	3.2	16.7	80.1
GP-37	6/7/2017 13:45	0.0	2.2	0.0	97.8
GP-37	9/18/2017 15:13	0.0	0.5	20.4	79.1
GP-37	12/27/2017 14:19	0.0	2.0	18.0	80.0
GP-38	3/10/2017 13:20	0.6	5.3	5.0	89.1
GP-38	6/7/2017 13:52	0.9	5.1	0.0	94.0
GP-38	9/18/2017 15:19	0.0	2.8	19.6	77.6
GP-38	12/27/2017 14:31	0.0	2.6	19.1	78.3