

2021 Annual Report
Closed Leichner Landfill
Vancouver, Washington
Consent Decree 96-2-03081-7
Facility ID No. 1017

Clark County Public Health
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A complete copy of this report is provided on compact disc attached to back cover of report.

1.0 INTRODUCTION

This report presents and evaluates the results of groundwater and landfill gas (LFG) compliance monitoring performed during 2021 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 2021. 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 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 State Department of Ecology (Ecology) and Clark County Public Health (CCPH) in July 2013 (SCS, 2013).

Although not directly related to environmental monitoring, it should be mentioned that the County formally notified Ecology and CCPH in November 2019 of the purchase-and-sale agreement (PSA) with the City of Vancouver (City) for the Koski property. The sale was finalized in December 2020. The Koski property is part of the overall closed Leichner Landfill property (see Figure 1-1). The City intends to develop the Koski property as the operations center for its Public Works Department. The City submitted to Ecology and CCPH a letter of intent dated January 15, 2020 (City, 2020) to join as a responsible party to the Consent Decree.

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; closure activities included constructing 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 consists of 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. 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 Troutdale Formation aquifer. The monitoring well locations are shown in Figure 2-1. The following describes the nomenclature used for the site monitoring wells:

- Wells used for monitoring 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 used for monitoring 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 used for monitoring groundwater elevation and quality in the deeper Troutdale Formation aquifer are denoted with a “D” in the well number (e.g., well LB-1D).

The compliance groundwater quality monitoring well network consists of 18 monitoring wells¹ that were sampled during the annual monitoring event performed in February 2021: 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 monitoring these during the semiannual monitoring event performed in August 2021: LB-1S, LB-5S, LB-6S, LB-10SR, LB-13I, LB-26I, and LB-27I. Wells LB-1S, LB-10SR and LB-27I were sampled for VOCs, only, on May 13, 2021, as part of verification sampling, since VOCs were detected in these three wells in July 2020.

Groundwater samples collected from the site monitoring wells were submitted for laboratory analyses to ALS Environmental in Kelso, Washington. The samples were analyzed for nitrate as nitrogen (nitrate), total dissolved solids (TDS), chloride (Cl), dissolved iron (Fe), dissolved manganese (Mn), and volatile organic compounds (VOCs), consistent with testing methods specified in the CMP (SCS, 2013). Laboratory analytical data reports are provided in Appendix C (included on the attached compact disc [CD] only).

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. The 2021 field parameter monitoring results are provided in Appendix B (see Table B-1).

2.1.1 Additional Groundwater Quality Monitoring

Additional (non-routine) groundwater quality monitoring was performed in 2021 to collect background (baseline) data for monitoring wells along Leichner Landfill’s eastern property boundary (wells LB-22S, LB23S, LB24S and MW-NE; see Figure 2-1) in advance of planned road construction across the northern portion of the landfill. NE 99th Street is being extended across the site, with construction scheduled to begin in 2022. Wells LB-22S, LB23S, LB24S and MW-NE were sampled on March 16, 2021. Since these wells are not a part of the routine groundwater quality monitoring

¹ The compliance monitoring network described in the 2013 CMP (SCS, 2013) includes monitoring wells LB-4SR and LB-4D formerly located east of the Leichner Landfill property. These two wells, along with well LB-4I, were decommissioned in August 2014 as approved by Ecology (Ecology, 2014).

program (they are used as piezometers for interpreting groundwater flow conditions) they had not been sampled for numerous years. Consequently, each well was redeveloped prior to being sampled. These wells are located along the eastern boundary, in an upgradient location on the site.

Additionally, LB-22S, along with LB-9SR near NE 94th Avenue (see Figure 2-1), were decommissioning in late August 2021² since they were in the direct alignment of the road extension and related road improvements. As such, well LB-9SR was also redeveloped and then sampled on August 21, 2021 to collect background (baseline) groundwater quality data before it was decommissioned. Laboratory reports for the non-routine samples are provided in Appendix C and the analytical results are discussed below and included with the data tables included in this report.

2.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Static depth-to-groundwater levels were measured on February 17 and August 7, 2021, and converted to groundwater elevations for interpreting groundwater potentiometric surface contours and groundwater flow in the alluvial WBZ and Troutdale Formation aquifer (see Figures 2-2 through 2-5). The 2021 and historical groundwater elevation data are presented in Appendix D.

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, with minor southeast to southwest variations (see Figures 2-3 and 2-5). The 2021 groundwater flow directions were consistent with historical interpretations of groundwater flow at Lechner Landfill.

Groundwater elevation hydrographs are provided in Appendix D. The 2021 groundwater elevation data are 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 silty (sandy silt and clayey silt) aquitard. 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 18 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) and west of the landfill (LB-3S/LB-3D), 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 assurance/quality control (QA/QC) procedures included collecting field groundwater 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

² Monitoring wells LB-9RS and LB-22S were decommissioned consistent with a work plan dated May 19, 2021 (SCS, 2021c) that was submitted to and approved by Ecology. A report documenting the well decommissioning activities dated September 22, 2021 (SCS, 2021d) was submitted to Ecology and CPH. As noted in the May 2021 work plan (SCS, 2021c), replacement wells for LB-9RS and LB-22s will be installed once road construction activities are completed in 2023.

the laboratory reports. ALS Environmental incorporated its laboratory data quality review comments in the Case 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. The QA/QC reviews (Appendix E) indicated that no laboratory QA/QC issues were identified that required corrective action, and the data were acceptable for their intended use.

2.4 GROUNDWATER ANALYTICAL RESULTS

Laboratory analytical results of groundwater samples collected from site monitoring wells in 2021 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 below.

2.4.1 Volatile Organic Compounds

VOCs for which compliance levels were established in the 1996 Consent Decree, and that are still part of the analytical testing program (including 1,4-dichlorobenzene, tetrachloroethene, and trichloroethene)³. During the July 2020 semiannual monitoring event, chloromethane, chloroform, and bromodichloromethane (BDCM) were detected in monitoring wells MW01S, MW10SR and MW27I, and verified through resampling in October 2020. The detected VOCs were considered anomalous because (1) they have not been historically detected in groundwater at Leichner Landfill, and (2) VOCs have not been detected in these three monitoring wells since 1999, except for isolated detections of trichloroethene in well LB-10SR and vinyl chloride in well LB-27I, both in 2011.

These wells were sampled during the following three quarters (February, May and August 2021) and VOCs were not detected above the laboratory method reporting limits (MRLs) in the groundwater samples. The only VOC detected in any of the groundwater samples was chloroform, in the August 2021 sample from LB-27I, at a concentration below the WAC Groundwater Quality Criteria of 7.0 microgram per liter (µg/L). This is a common laboratory contaminant and is not likely representative of the groundwater conditions. These results were reported in a memo to Ecology dated October 6, 2021 (SCS, 2021e). Because VOCs were not detected during the 2021 monitoring events, semiannual monitoring of VOCs concentrations in groundwater collected from MW01S, MW10SR and MW27I was resumed in 2022.

2.4.2 Inorganic Parameters and Dissolved Metals

The 2021 analytical data for inorganic parameters (nitrate, Cl, TDS) and dissolved metals (Mn and Fe) are summarized in Appendix B (see Table B-3), and time-concentration graphs of historical data for these parameters are provided in Appendix F.

Overall, 2021 groundwater analytical results for inorganic parameters and dissolved metals were generally consistent with historical data. Table 2-1 summarizes 2021 groundwater concentrations above compliance levels. Concentrations of Mn and/or Fe above the compliance levels were detected in a few wells located downgradient and near the landfill areas (i.e., LB-17I, LB-17D, and LB-20S), and at well LB-27I along the southwest corner of the site (see Figure 2-1).⁴ However, Fe

³ Laboratory analysis of two additional VOCs with established compliance levels (i.e., vinyl chloride and 1,1-dichloroethene) was discontinued in 2013 as approved by Ecology (Ecology, 2013) because these compounds were not detected after two years of testing using a low-level EPA Method 8260B.

⁴ It should be noted that Fe concentrations in samples collected from well LB-27I have been historically above the compliance level but stable since monitoring began at this well in 1996, ranging from approximately 0.1 to 0.5 mg/L.

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 and are significantly below compliance levels (see time-concentration graphs in Appendix F).
- Fe and Mn have occasionally been detected at concentrations above the compliance levels in groundwater samples collected from cross-gradient well LB-10SR (see Figures 2-2 and 2-4) screened in the shallow alluvium WBZ (see time-concentration diagrams in Appendix F).
- Mn concentrations in groundwater samples collected from well LB-20S since 2006 have been variable but were typically below the compliance level (see time-concentration diagrams in Appendix F).
- Fe and/or Mn concentrations in samples collected from 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) have remained stable (or non-detect) throughout most of their extensive monitoring history (see time-concentration diagrams in Appendix F).
- Elevated concentrations of Fe and Mn have occasionally been detected in groundwater collected from the upgradient monitoring well MW-NE (see section 2.5 below).

Nitrate was detected in well LB-10SR groundwater at a concentration of 15.2 milligrams per liter (mg/L) in August 2021. This concentration is above the compliance level of 10 mg/L, although below the compliance level during the February 2021 monitoring event. Historical nitrate concentrations in groundwater at this replacement well (and former well LB-10S) have fluctuated and previously ranged from 0.35 to 28.14 mg/L, and notably, the concentrations have not exhibited an increasing concentration trend over the historical dataset (see time-concentration graph in Appendix F). Additionally, while the August 2021 concentration was elevated, none of the other leachate indicator parameters were elevated in the August 2021 sample. As previously reported in past annual reports, nitrate concentrations in groundwater collected from well LB-10SR are likely reflective of natural background concentrations, and not affected by the landfill.

2.4.2.1 Statistical Analysis of Groundwater Analytical Data

Lechner Landfill groundwater quality data from 2017 to 2021 for inorganic parameters (nitrate, Cl, and TDS) and dissolved metals (Mn and Fe) were statistically evaluated using the MTCA Stat97 program.⁵ 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. Table 2-2 provides a summary of calculated UCL-95 of the mean values, along with groundwater compliance levels established in the Consent Decree and CAP.

⁵ MTCA Stat97 was obtained from Ecology's website: <http://www.ecy.wa.gov/programs/tcp/tools/Mtca.exe>.

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 (EPA, 2002), the method may commonly yield estimated UCL-95 values that are greater than predicted for data distributions that 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 a UCL-95 value for nitrate in LB-10SR groundwater that exceeded the range of concentrations. In these cases, the highest reported value from the last 5 monitoring years (2017 to 2021) was selected (see Table 2-2).

The calculated UCL-95 values, or default highest reported values, for nitrate, Cl, TDS, Fe and Mn were below their respective compliance levels except for the following:

- **Nitrate:** The calculated UCL-95 value for nitrate was above the compliance level of 10 mg/L in well LB-10SR groundwater. Nitrate concentrations in well LB-10SR groundwater exhibited variability by two orders of magnitude (0.75 to 23.4 mg/L) between 2017 and 2021. As noted above, historical nitrate concentrations in well LB-10SR (and former well LB-10S) have shown notable fluctuations that are reflective of natural background concentrations.
- **Iron:** The calculated UCL-95 values, or default highest reported values, for dissolved Fe were below the compliance of 0.3 mg/L, except for well LB-17I (UCL-95 of 14.5 mg/L).
- **Manganese:** The calculated UCL-95 values, or default highest reported values, for dissolved Mn were below the compliance level of 0.05 mg/L, except for wells LB-17I (UCL-95 of 2.86 mg/L), LB-17D (UCL-95 of 4.25 mg/L), LB-20S (UCL-95 of 1.56 mg/L), and LB-27I (UCL-95 of 0.28 mg/L).

The above results are similar to those reported in previous annual reports.

2.4.2.2 Trend Analysis of Groundwater Analytical Data

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 exhibit increasing, decreasing or stable trends.

Inorganic parameter concentrations in groundwater samples collected from alluvial WBZ wells and Troutdale Formation wells show either generally stable or decreasing trends (particularly since about 2001), except for nitrate concentrations in samples collected from wells LB-10SR, LB-10DR, LB-26I, and LB-27D. As previously discussed, changes in nitrate concentrations detected in these wells are believed to be reflective of background (i.e., non-landfill-impacted) groundwater conditions. It should be noted that the maximum detected nitrate concentrations in groundwater collected from these wells are below the regulatory compliance level of 10 mg/L. While recent nitrate fluctuations in LB-10SR included detections above the compliance level of 10 mg/L, the concentrations are within the range detected historically in this well and former well LB-10S and do not show an increasing trend. As noted above, these appear to be reflected of natural background concentrations.

Some parameters show notable fluctuations but do not exhibit increasing trends. For example, LB-03S and LB-03D samples collected in August 2021 both showed concentrations of chloride and nitrate at or above the historical range, although the concentrations were below their respective compliance levels.

It is also noteworthy that Cl, TDS, Fe, and Mn concentrations in groundwater collected from wells LB-17I, LB-17D, and LB-20S, located downgradient and in close proximity to the former landfilling areas, exhibited pronounced decreasing concentration trends generally from about 1991-1993 to 2001 (see time-concentration plots in Appendix F). These decreasing concentration trends were likely in response to the implementation of Leichner Landfill's post-closure systems, including the landfill cover system and the stormwater control and collection system. Concentrations of these inorganic parameters in groundwater samples collected from these wells have remained relatively stable since about 2001 (except for Cl in well LB-20S as noted above). As 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).

2.5 ADDITIONAL GROUNDWATER SAMPLING

As previous mentioned, additional (non-routine) groundwater quality monitoring was performed in 2021 to collect background (baseline) data for monitoring wells LB-22S, LB23S, LB24S and MW-NE located along Leichner Landfill's eastern property boundary and from well LB-9RS located in the northwest portion of the site adjacent to 94th Avenue. Since monitoring wells LB-9SR, LB-22S, LB-23S, LB-24S and MW-NE have been primarily used as piezometers since they were installed, there was no historical analytical data, except from an initial sampling of LB-22S, LB-23S and LB24S performed in 1990, shortly after the wells were installed. In general, parameter concentrations in the baseline samples collected in 2021 from these wells are consistent with those from 1990 and are within the ranged of concentrations detected in groundwater from other shallow monitoring wells. VOCs were not detected in the groundwater samples from these wells during the 2021 sampling event, consistent with historical results. In general, parameter concentrations were similar in samples collected in 2021 from all four wells.

3.0 STORMWATER MONITORING

The County received formal approval from Ecology to terminate Leichner Landfill's General Stormwater Permit (No. WAR005572B) as memorialized in a letter dated March 30, 2018 (Ecology, 2018). As a result, monthly stormwater inspection, quarterly monitoring, and annual reporting are no longer required, and these activities were suspended in the first quarter of 2018.

Consistent with Ecology's requirements noted in its March 30, 2018 letter (Ecology, 2018), the County will retain and make available upon request to Ecology or any other local government agency the facility's Stormwater Pollution Prevention Plan (SWPPP), along with all notices of intent, reports on inspections, and all other reports required by the General Stormwater Permit for at least three years from the date of termination.

The County is coordinating with Clark County Public Works (CCPW) in support of the engineering design and proposed stormwater control system for the planned extension of 99th Street through the northern portion of the Leichner Landfill. The road project will require decommissioning and filling of the North Detention Pond, redesign of the stormwater control system, and repair of landfill liner system along the southern edge of the North Detention Pond potentially impacted by the road construction. The County will keep Ecology apprised of these developments if impacts to the landfill require modification to the landfill liner system.

4.0 LANDFILL GAS MONITORING

This section describes the GCCS that was initially installed at the Leichner Landfill in 1978, and presents compliance and performance monitoring results associated with the GCCS. The GCCS 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, and installation of a new micro-flare in October 2020 (discussed in Section 4.3.1) to replace the former flare due to further decreases in methane production. The current GCCS includes an LFG extraction well field with 102 gas extraction wells, a condensate collection system, an LFG blower and flare station (BFS), and an integrated remote monitoring and control (RMC) system. The RMC system 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.

4.1 COMPLIANCE LANDFILL GAS MIGRATION MONITORING RESULTS

Compliance LFG migration monitoring at Leichner Landfill is performed to (1) fulfill compliance monitoring requirements for 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 BFS.

The LFG compliance monitoring network is comprised of 51 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.

To accommodate construction of the NE 99th Street road project, six LFG wells, located in the northern portion of the site (probes GP-14R, GP-18S, GP-18D, GP-19S, GP-19D, and GP-31; see Figure 4-1), were decommissioned in accordance with the May 2021 work plan (SCS, 2021c). A September 2021 report documenting the probe decommissioning (SCS, 2021d) was submitted to Ecology and CPH. As noted in the May 2021 work plan (SCS, 2021c), two replacement probes will be installed once road construction activities are completed in 2023.

Compliance LFG monitoring was performed quarterly in 2021 (March, June, September, and December). Quarterly monitoring data collected in 2021 are summarized in Table 4-1. Monitoring results indicate methane was predominantly not detected in the LFG monitoring probes. The methane detected in GP-39 in September 2021 was immediately addressed with adjustments to the GCCS. Monitoring of the probe the following day after the adjustments indicated no methane detected.

4.2 LANDFILL GAS EXTRACTION WELLS

The LFG extraction wells (see Figure 4-1) were monitored and adjusted (balanced) semi-monthly (twice a month) during 2021 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 in 2021.

4.3 LANDFILL GAS FLARE

4.3.1 Installation of New Micro-Flare

The LLOC approved in 2019 the installation of a new, smaller, more efficient LFG micro-flare. The old flare was turned off and disassembled on September 28, 2020, and the new flare was started on October 2, 2020.

A new Air Discharge Permit (ADP 20-3433) was issued by the Southwest Clean Air Agency (SWCAA) in 2020. As required, an emissions source test of the newly installed micro-flare was conducted by Montrose Air Quality Services, LLC (Montrose) on December 9, 2020. A report presenting the source test results performed to meet the requirements under Permit No 20-3433 was submitted to SWCAA in January 2021 (Montrose, 2021). A report documenting the installation of the new flare was submitted to SWCAA under separate cover in March 2021 (SCS, 2021b).

4.3.2 Landfill Gas Flare Monitoring

The LFG flare system was monitored regularly (typically on a weekly or biweekly basis) in 2021 and continuously by 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.

To meet the annual reporting requirements of the ADP, the 2020 Annual Flare Emissions Estimate report, dated March 15, 2021 (SCS, 2021a), was submitted to the SWCAA. The report presents and evaluates flare monitoring data and performance objectives. The 2021 annual report will be submitted to the SWCAA on or before March 15, 2022.

4.4 GREENHOUSE GAS MONITORING

SCS completed an evaluation in November 2013 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 weekly monitoring. Consequently, weekly GHG monitoring was suspended beginning January 2014.

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 2021 included the following:

- Performing checks and adjusting 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 wellfields.
- 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 management system.
- Coordinating periodic pumping and disposal of condensate collected from the condensate sumps and temporarily stored in the onsite condensate holding tank.
- Performing vegetation control.
- Reviewing and uploading the LFG monitoring data into SCS's site-specific DataServices™ database for the Leichner Landfill project.

5.2 NON-ROUTINE ACTIVITIES

Notable non-routine maintenance, repair, and replacement activities related to the Leichner Landfill's post-closure systems and equipment performed in 2021 are described in this section unless already previously discussed in this report.

5.2.1 First Quarter 2021

- Installed hardware for the pressure transducer which controls operation of the new flare.
- Installed and calibrated new oxygen sensor and connected it to the landfill's RMC system.
- Removed the old flare and associated equipment from the site where it was disposed/recycled.
- Conducted a virtual Teams meeting on February 9, 2021 with Clark County Public Works regarding the contingency plan for 99th St. road extension construction project.

- Reviewed and commented on design notes prepared by Mike Davis related to the 99th St. road extension construction project and participated in a virtual Teams meeting on February 19, 2021 to discuss SCS's comments.
- Prepared for/participated in a virtual Teams meeting on March 18, 2021 with the Clark County Public Works group regarding the contingency plan for 99th St. road extension construction project.

5.2.2 Second Quarter 2021

- Began work on the South Pond stormwater conveyance system modifications, including preparing a technical memorandum presenting design drawings and costs for constructing a new discharge line. Begin design work for the discharge line.
- Install a silt fence along the south side of Module 2.
- Coordinated obtaining disposal certificate for old flare and documented final disposition of the old flare.
- Reviewed past three years of well field monitoring results to assess performance of existing GCCS. The assessment provided information to determine if additional upgrades to the GCCS are necessary, such as replacement, or addition, of gas wells and/or condensate pump stations.
- Prepared tables and figures summarizing results of this assessment for inclusion in the report presenting results of an evaluation of upgrade options for the GCCS.
- Conducted a site walk with the Clark County Public Works 99th Street extension project team on April 21, 2021.

5.2.3 Third Quarter 2021

- Prepared and submitted to the County a technical memorandum describing the proposed configuration of the South Pond discharge line and force main including costs for constructing the new discharge line.
- Prepared the area near where the NE 99th Street extension construction work are planned by putting up fences and "private property" signs.
- Installed the new stormwater discharge line for the South Pond and realigned the force main line.
- Repaired a hole in the fence on the south side of the property noted by security patrol.
- Obtained three drilling quotes for the decommissioning and installation work related to the 99th Street road construction project and provided them to the County as support for selecting the drilling subcontractor to perform the monitoring well and gas probe decommissioning and installation work.

5.2.4 Fourth Quarter 2021

- Responded to high water alarm at North Pond and manually pumped down the pond water level until the necessary repairs were made to the North Pond pumps.
- Ordered and installed a new level transducer in the North Pond pump vault box.
- Repaired RMC security camera.
- Regraded area around a vault and discharge trench for South Pond and built a new pipe manifold and support assembly.
- Reviewed emission calculations presented in the 2020 air discharge report with the SWCAA and revised calculations in response to SWCAA's comments.

6.0 REFERENCES

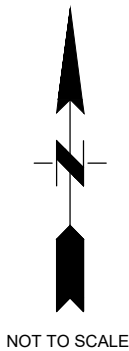
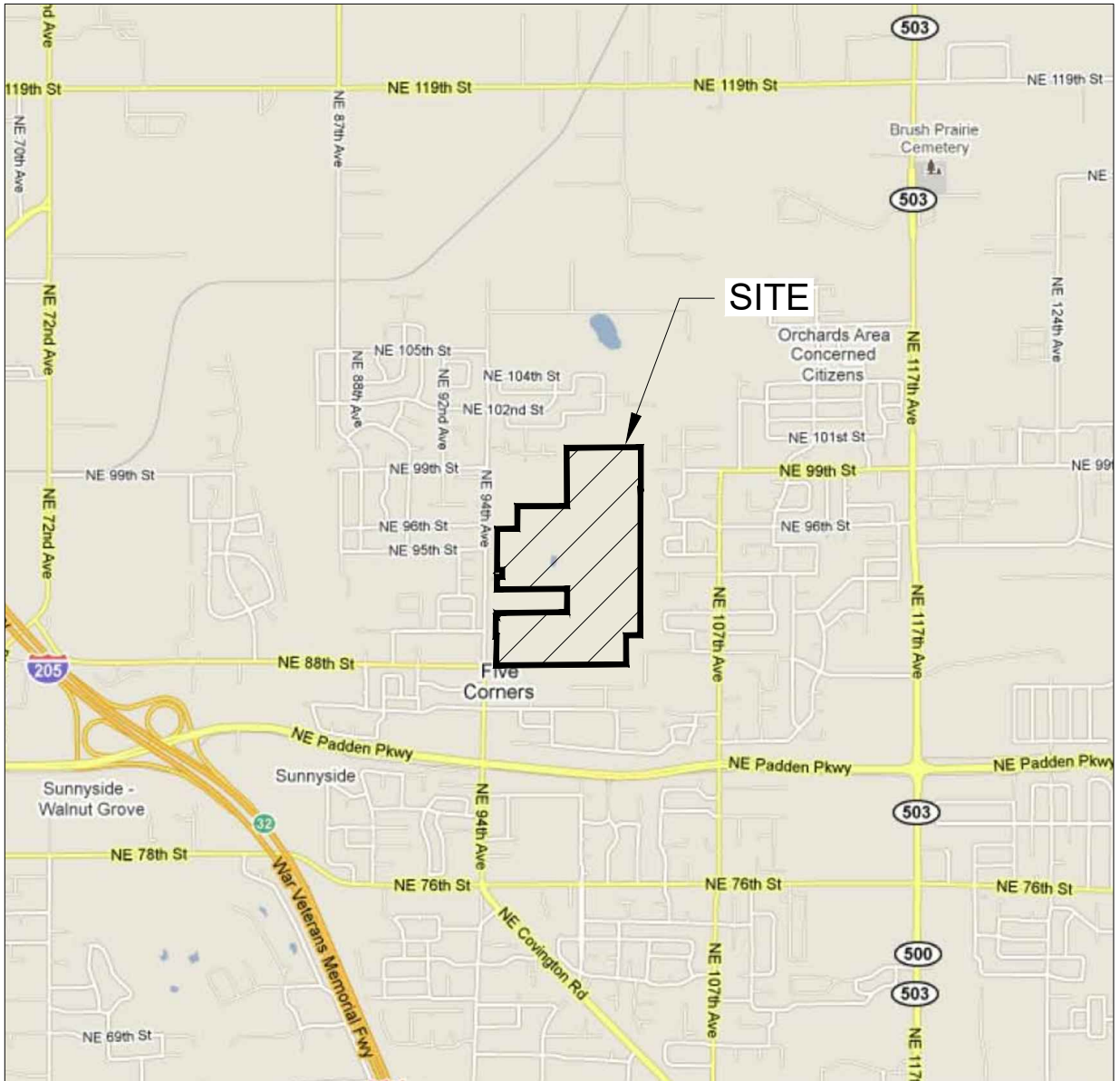
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FIGURES



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. 04221030.14	DES BY K.K.	SITE LOCATION MAP LEICHER LANDFILL CLARK COUNTY, WASHINGTON	DATE AUGUST 2021
	SCALE AS SHOWN	CHK BY B.L.		FIGURE
	CAD FILE FIGURE 1-1	APP BY L.C.		1-1

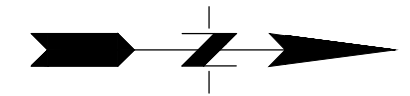


LEGEND:

- 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
- LB-22S ~~⊕~~ Decommissioned Monitoring Well Location, 2021
- — — — — 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.



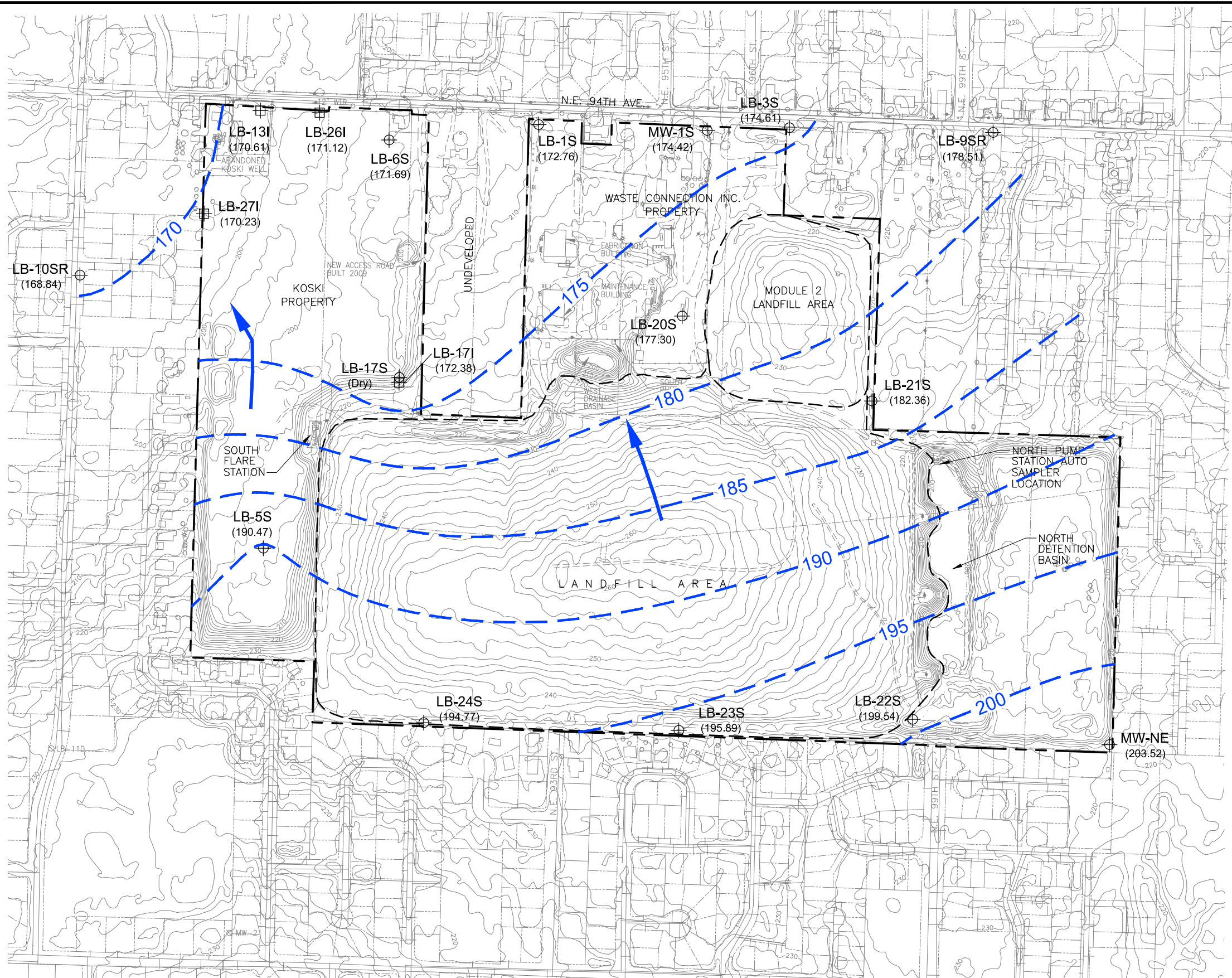
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 Environmental Consultants and Contractors
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 Portland, Oregon 97224
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PROJECT NO.	04221030.14	DES BY	K.K.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-1	APP BY	L.C.

GROUNDWATER MONITORING WELL LOCATIONS
 LEICHER LANDFILL
 VANCOUVER, WASHINGTON

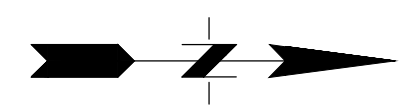
DATE AUGUST 2021
 FIGURE 2-1



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
- (177.26) Groundwater Elevation Measured on February 17, 2021
- ➔ Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008



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Portland, Oregon 97224
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PROJECT NO.	04221030.14	DES BY	K.K.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-2	APP BY	L.C.

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
ALLUVIAL WATER BEARING ZONE
FEBRUARY 17, 2021
LEICHER LANDFILL
VANCOUVER, WASHINGTON

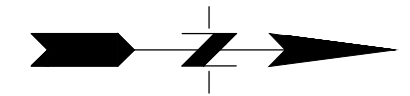
DATE
AUGUST 2021
FIGURE
2-2



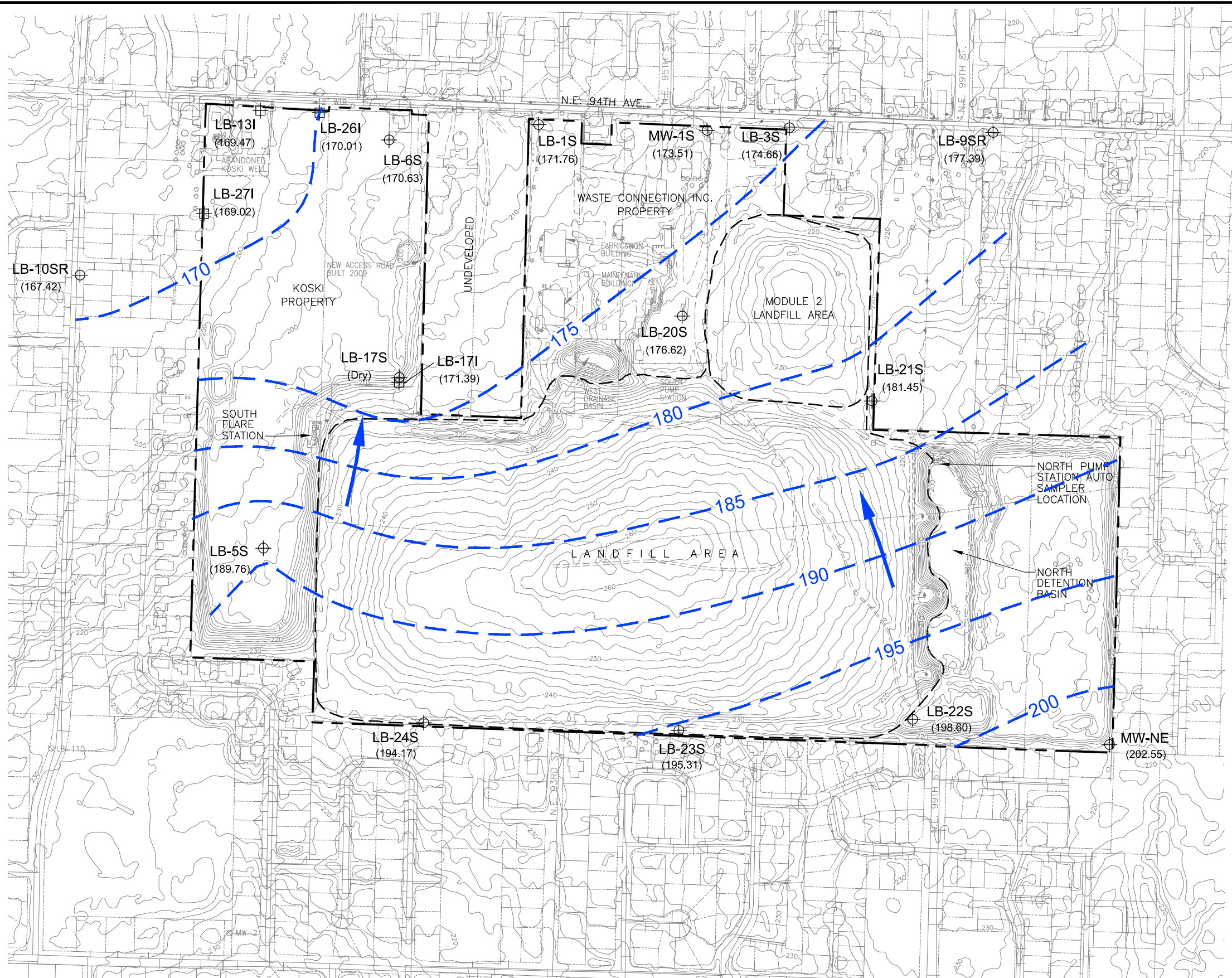
LEGEND:

- 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
- (178.09) Groundwater Elevation Measured on February 17, 2021
- ➔ Inferred Groundwater Flow Direction

NOTE:
 Topography Taken From Clark County GIS, December 2008



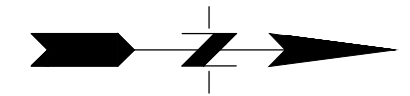
PROJECT NO.	04221030.14	DES BY	K.K.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-3	APP BY	L.C.



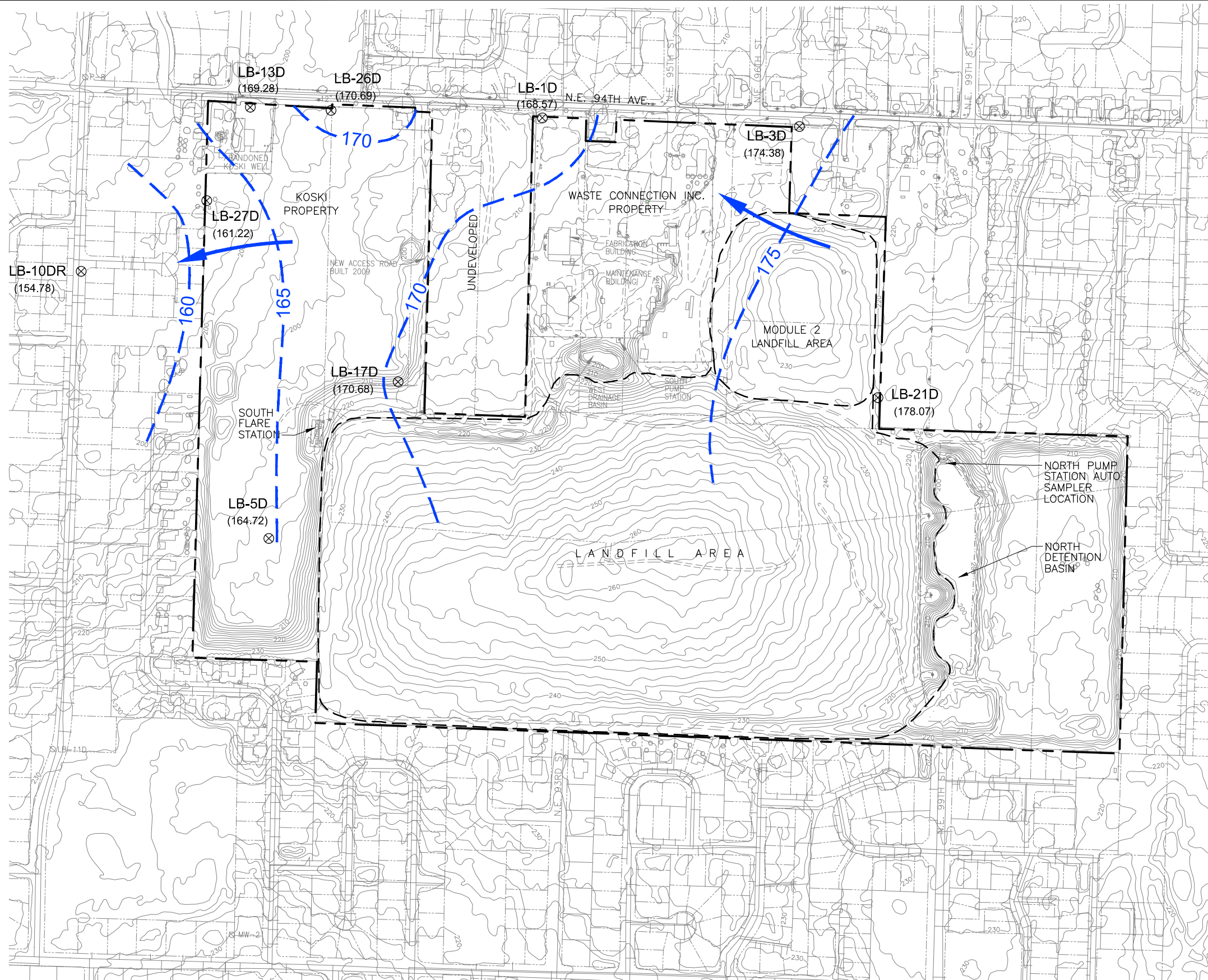
LEGEND:

- 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
- (176.62) Groundwater Elevation Measured on August 7, 2021
- ➔ Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008



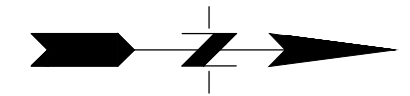
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CAD FILE	FIGURE 2-4	APP BY	L.C.



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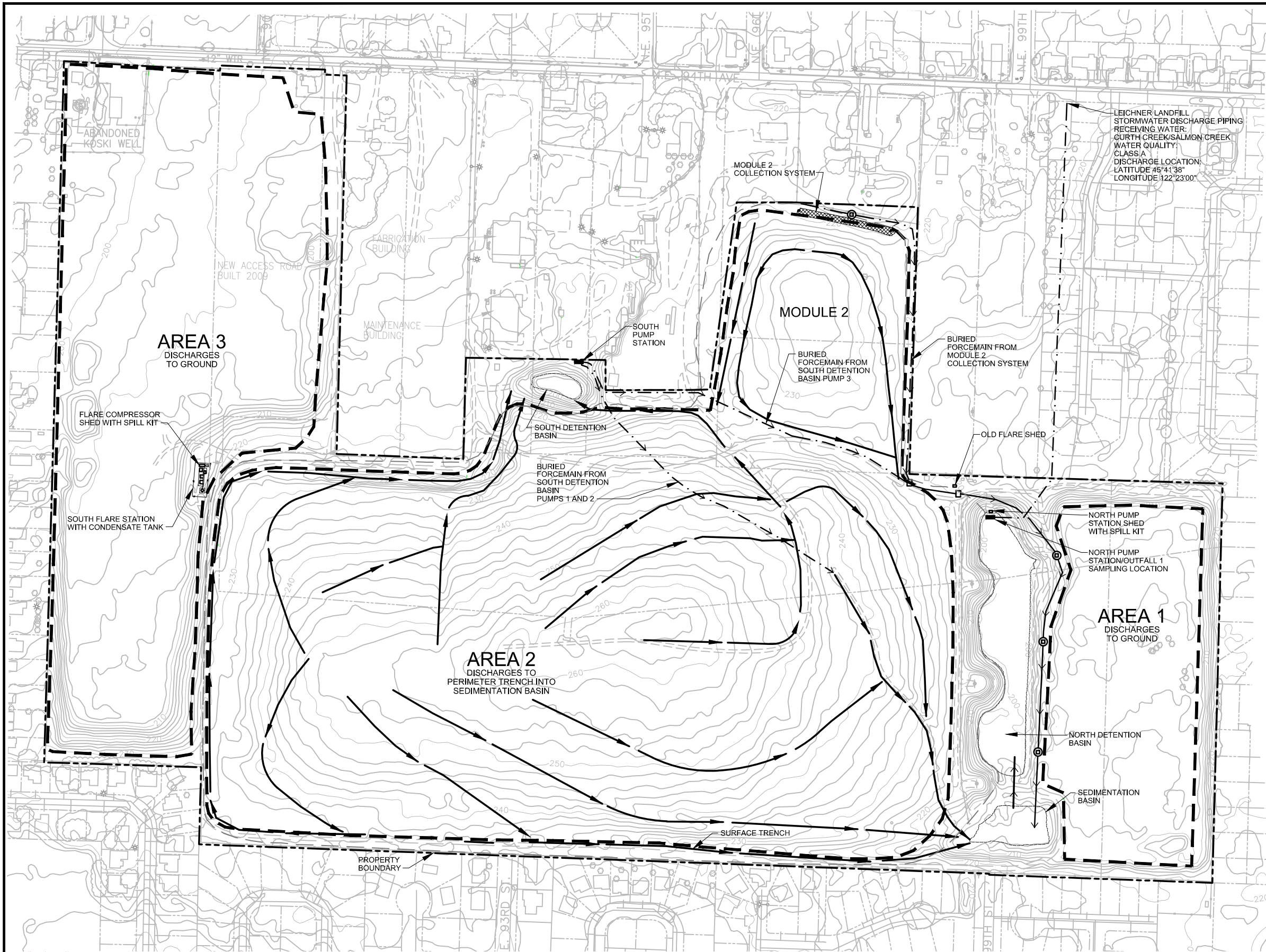
- LB-5D ⊗ Monitoring Well Location, Troutdale Aquifer
- Property Boundary
- - - - - Limit of Landfill Cover and Approximate Edge of Waste
- -175- - - Groundwater Potentiometric Surface Contour, queried where uncertain
- (164.72) Groundwater Elevation Measured on August 7, 2021
- ➔ Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008



PROJECT NO.	04221030.14	DES BY	K.K.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-5	APP BY	L.C.

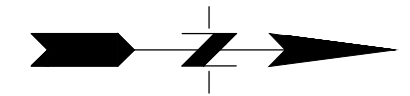
GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
TROUTDALE FORMATION AQUIFER
AUGUST 7, 2021
LEICHTNER LANDFILL
VANCOUVER, WASHINGTON



LEGEND:

- Property Boundary
- Drainage Path
- Underground Stormwater Collection Piping
- Stormwater Forcemain
- Drainage Area Boundary
- Stormwater Forcemain Access Vault
- Stormwater Manhole
- Pump Station

NOTE:
Topography Taken From Clark County GIS, December 2008



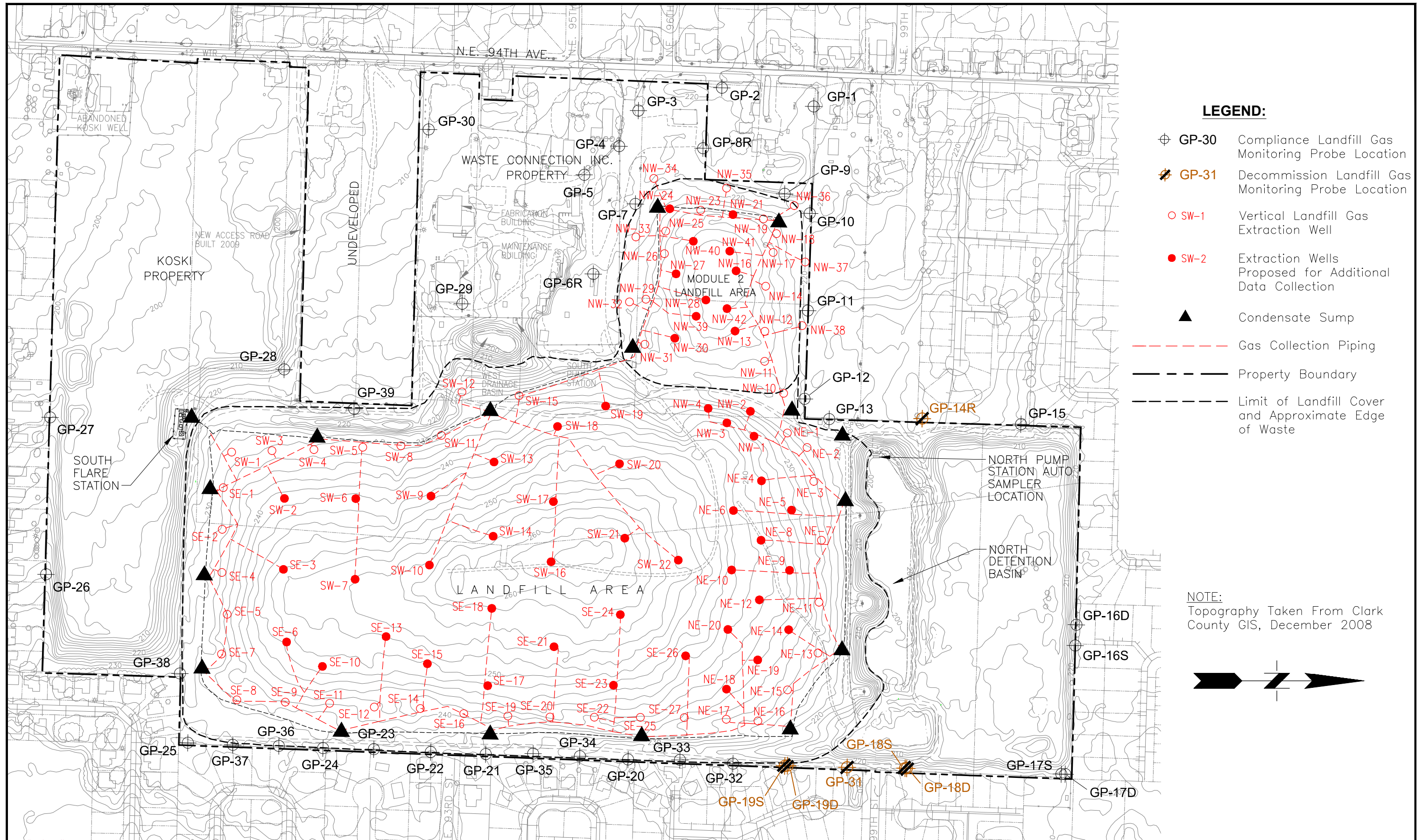
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PROJECT NO.	04221030.14	DES BY	K.K.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 3-1	APP BY	L.C.

SITE MAP AND STORMWATER SYSTEM
LEICHNER LANDFILL
VANCOUVER, WASHINGTON

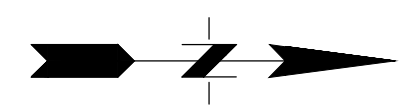
DATE	AUGUST 2021
FIGURE	3-1



LEGEND:

- ⊕ GP-30 Compliance Landfill Gas Monitoring Probe Location
- ⊕ GP-31 Decommission Landfill Gas Monitoring Probe Location
- SW-1 Vertical Landfill Gas Extraction Well
- SW-2 Extraction Wells Proposed for Additional Data Collection
- ▲ Condensate Sump
- Gas Collection Piping
- Property Boundary
- Limit of Landfill Cover and Approximate Edge of Waste

NOTE:
Topography Taken From Clark County GIS, December 2008



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PROJECT NO.	04221030.14	DES BY	K.K.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 4-1	APP BY	L.C.

LANDFILL GAS PROBE AND EXTRACTION WELL LOCATIONS
LEICHER LANDFILL
VANCOUVER, WASHINGTON

DATE	AUGUST 2021
FIGURE	4-1

TABLES

**Table 2-1
2021 Groundwater Concentrations Above Compliance Levels
Leichner Landfill**

Location	Sample Number	Date	Nitrate as Nitrogen (CL = 10 mg/L)	Dissolved Iron (CL = 0.3 mg/L)	Dissolved Manganese (CL = 0.05 mg/L)
LB-10SR	LB-012819-02-10SR	1/28/19	---	---	---
LB-10SR	LB-072319-03-10SR	7/23/19	10.4	---	---
LB-10SR	LB-020620-01-10SR	2/6/20	23.40	---	---
LB-10SR	LB-101420-05-10SR	10/14/20	---	---	---
LB-10SR	LB-021821-03-10SR	2/18/21	---	---	---
LB-10SR	LB-081021-02-10SR	8/10/21	15.20	---	---
LB-17D	LB-012919-01-17D	1/29/19	---	---	4.10
LB-17D	LB-020520-03-17D	2/5/20	---	---	4.17
LB-17D	LB-020520-03-17D	2/5/20	---	---	4.17
LB-17D	LB-021821-09-17D	2/18/21	---	---	4.06
LB-17I	LB-012919-07-17I	1/29/19	---	7.94	1.34
LB-17I	LB-020520-05-17I	2/5/20	---	9.42	1.58
LB-17I	LB-021921-03-17I	2/19/21	---	14.50	2.86
LB-20S	LB-012919-05-20S	1/29/19	---	---	1.06
LB-20S	LB-020620-02-20S	2/6/20	---	---	0.12
LB-20S	LB-021921-01-20S	2/19/21	---	---	0.25
LB-27I	LB-013019-03-27I	1/30/19	---	---	0.23
LB-27I	LB-072219-4-27I	7/22/19	---	---	0.35
LB-27I	LB-020520-06-27I	2/5/20	---	---	0.13
LB-27I	LB-072820-02-27I	7/28/20	---	---	0.32
LB-27I	LB-021921-04-27I	2/19/21	---	---	0.079
LB-27I (DUP)	LB-021921-04-27I	2/19/21	---	---	0.082
MW-NE	LB-031621-06-NE	3/16/21		---	0.235
<p>Notes: CL = compliance level for inorganic parameters and metals in groundwater at Leichner Landfill. mg/L = milligrams per liter WGQC =Ground water quality criteria µg/L = micrograms per liter --- = concentration was below the compliance level</p>					

Table 2-2
Statistical Summary of Groundwater Quality Data From 2017 to 2021
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	M(12.2)	6.65	M(7.00)	M(10.1)	5.03	M(8.00)	6.18	26.07	11.65	10.54	M(10.8)	17.48	15.68	17.04	8.93	M(6.21)	25.05	7.87	
Nitrate	10	mg/L	M(8.49)	5.97	M(6.82)	M(9.14)	5.71	M(0.96)	3.27	M(23.4)	M(3.79)	M(5.13)	M(4.94)	All ND	All ND	NC	4.05	M(5.55)	2.90	M(4.25)	
Total Dissolved Solids	500	mg/L	200.32	171.00	161.51	177.12	173.38	217.00	165.83	281.15	221.78	202.11	M(179.00)	278.61	M(207.0)	266.80	197.68	190.5	321.00	213.34	
Metals																					
Iron (dissolved)	0.3	mg/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	M(14.5)	0.142	0.26	All ND	All ND	NC	NC
Manganese (dissolved)	0.05	mg/L	All ND	All ND	All ND	All ND	All ND	0.0024	All ND	M(0.0041)	All ND	0.0055	All ND	M(2.86)	4.25	M(1.56)	M(0.0041)	All ND	0.283	NC	

NOTES:
mg/L = milligrams per liter
ND = indicates not detected at any sampling event
M = maximum value detected in last five years shown in parenthesis.
NC = not calculated.
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 (Ecology, 1992).

**Table 4-1
2021 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-1A	3/30/2021	0	2.6	18.7	78.7
GP-1A	6/25/2021	0	2.3	19.2	78.5
GP-1A	9/21/2021	0	1.5	18.9	79.6
GP-1A	12/14/2021	0	2.9	18	79.1
GP-1B	3/30/2021	0	2.5	18.8	78.7
GP-1B	6/25/2021	0	1.8	19.6	78.6
GP-1B	9/21/2021	0	2	18.3	79.7
GP-1B	12/14/2021	0	2.1	18.4	79.5
GP-02	3/30/2021	0	2.7	18.6	78.7
GP-02	6/25/2021	0	2.5	18.6	78.9
GP-02	9/21/2021	0	2.3	18.5	79.2
GP-02	12/14/2021	0	2.2	17.6	80.2
GP-03	3/30/2021	0	2.3	17.6	80.1
GP-03	6/25/2021	0	2.9	17.8	79.3
GP-03	9/21/2021	0	2.4	17.7	79.9
GP-03	12/10/2021	0	7.2	17.5	75.3
GP-4A	3/30/2021	0	3.5	15.6	80.9
GP-4A	6/25/2021	0	3	16.9	80.1
GP-4A	9/21/2021	0	2.3	17.8	79.9
GP-4A	12/14/2021	0	3.6	14.1	82.3
GP-4B	3/30/2021	0	3.9	14	82.1
GP-4B	6/25/2021	0	2.6	16	81.4
GP-4B	9/21/2021	0	2.8	15.8	81.4
GP-4B	12/14/2021	0	3.9	12.4	83.7
GP-05	3/30/2021	0	3.7	17	79.3
GP-05	6/25/2021	0	3.8	16.7	79.5
GP-05	9/21/2021	0	3.6	16.9	79.5
GP-05	12/14/2021	0	4.5	13.5	82
GP-06	3/30/2021	0	4.1	15.1	80.8
GP-06	6/25/2021	0	4.8	15.3	79.9
GP-06	9/21/2021	0	5.2	14.6	80.2
GP-06	12/14/2021	0	4.2	13.4	82.4
GP-07	3/30/2021	0	2.6	18.5	78.9
GP-07	6/25/2021	0	3.7	18	78.3
GP-07	9/21/2021	0	9.2	7.6	83.2
GP-07	12/14/2021	1	1.5	14.3	83.2
GP-8R	3/30/2021	0	1	19.8	79.2
GP-8R	6/25/2021	0	1.6	19.7	78.7
GP-8R	9/21/2021	0	1.7	18.2	80.1
GP-8R	12/10/2021	0	7.2	19.1	73.7
GP-8R	12/14/2021	0	0.6	19.5	79.9

**Table 4-1
2021 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-9A	3/30/2021	0	4.4	14.5	81.1
GP-9A	6/25/2021	0.1	5.2	15.3	79.4
GP-9A	9/21/2021	0	4.6	14.6	80.8
GP-9A	12/14/2021	0.5	8.9	1.8	88.8
GP-9B	3/30/2021	0.2	14.8	1.9	83.1
GP-9B	6/25/2021	0	14.1	2.6	83.3
GP-9B	9/21/2021	0	12.7	5.3	82
GP-9B	12/14/2021	0.2	15.2	1.1	83.5
GP-10A	3/30/2021	0	6.2	13.6	80.2
GP-10A	6/25/2021	0	5.1	15.5	79.4
GP-10A	9/21/2021	0	4.4	16.1	79.5
GP-10A	12/14/2021	0	6.3	14.2	79.5
GP-10B	3/30/2021	0	2.6	18.2	79.2
GP-10B	6/25/2021	0	2.4	18.8	78.8
GP-10B	9/21/2021	0	1.3	19.1	79.6
GP-10B	12/14/2021	0	3.3	16.5	80.2
GP-11	3/30/2021	0	1.3	19.8	78.9
GP-11	6/25/2021	0	1.6	19.4	79
GP-11	9/21/2021	0	1	19.5	79.5
GP-11	12/14/2021	0	1.1	17.5	81.4
GP-12	3/30/2021	0	1.6	19.6	78.8
GP-12	6/25/2021	0	1	20	79
GP-12	9/21/2021	0	0.3	20.4	79.3
GP-12	12/14/2021	0	1.3	19.1	79.6
GP-13	3/30/2021	0	1.5	19.7	78.8
GP-13	6/25/2021	0	2.4	18.1	79.5
GP-13	9/21/2021	0	1.8	19	79.2
GP-13	12/13/2021	0	1.3	14.7	84
GP-14	3/30/2021	0	0.9	20.2	78.9
GP-14	6/25/2021	0	1.2	20	78.8
GP-15	3/30/2021	0	1.8	19.5	78.7
GP-15	6/25/2021	0	1.7	19.1	79.2
GP-15	9/21/2021	0	2	19.1	78.9
GP-15	12/14/2021	0	1.6	19	79.4
GP-16D	3/30/2021	0	2.2	18.9	78.9
GP-16D	6/25/2021	0	2.1	18.5	79.4
GP-16D	9/21/2021	0	2.8	18.5	78.7
GP-16D	12/14/2021	0	1.5	18.5	80
GP-16S	3/30/2021	0	1.4	19.5	79.1
GP-16S	6/25/2021	0	1.8	19.4	78.8
GP-16S	9/21/2021	0	1.4	19.2	79.4
GP-16S	12/14/2021	0	1.9	19.3	78.8

**Table 4-1
2021 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-17D	3/30/2021	0	5.9	15.5	78.6
GP-17D	6/25/2021	0	4	17.4	78.6
GP-17D	9/21/2021	0	4.4	17.4	78.2
GP-17D	12/14/2021	0	3	16.5	80.5
GP-17S	3/30/2021	0	4.6	16.9	78.5
GP-17S	6/25/2021	0	3.5	18.2	78.3
GP-17S	9/21/2021	0	3.3	17.9	78.8
GP-17S	12/14/2021	0	4	16.6	79.4
GP-18D	3/30/2021	0	2.3	18.8	78.9
GP-18D	6/25/2021	0	1.5	19.6	78.9
GP-18S	3/30/2021	0	1.5	19.6	78.9
GP-18S	6/25/2021	0	1.3	19.9	78.8
GP-19D	3/30/2021	0	2	18.9	79.1
GP-19D	6/25/2021	0	1.6	19.2	79.2
GP-19S	3/30/2021	0	1.4	19.4	79.2
GP-19S	6/25/2021	0	1	20.2	78.8
GP-20	3/30/2021	0	7.2	9.9	82.9
GP-20	6/25/2021	0	6	12.7	81.3
GP-20	9/21/2021	0	5.7	14	80.3
GP-20	12/13/2021	0	6	9.5	84.5
GP-21A	3/30/2021	0	1.3	19.8	78.9
GP-21A	6/25/2021	0	1.3	19.3	79.4
GP-21A	9/21/2021	0	0.9	19.7	79.4
GP-21A	12/13/2021	0	2.2	18.7	79.1
GP-21B	3/30/2021	0	1.7	18.7	79.6
GP-21B	6/25/2021	0	1.4	18.9	79.7
GP-21B	9/21/2021	0	1.6	18.4	80
GP-21B	12/13/2021	0	1.6	18.1	80.3
GP-22	3/30/2021	0	1.3	19.7	79
GP-22	6/25/2021	0	1.1	19.8	79.1
GP-22	9/21/2021	0	0.7	19.6	79.7
GP-22	12/13/2021	0	1.6	19.1	79.3
GP-23	3/30/2021	0	1.3	19.6	79.1
GP-23	6/25/2021	0	1.2	19.7	79.1
GP-23	9/21/2021	0	1	19.4	79.6
GP-23	12/13/2021	0	1.6	18.7	79.7
GP-24A	3/30/2021	0	0.6	20.2	79.2
GP-24A	6/25/2021	0	0.7	20.3	79
GP-24A	9/21/2021	0	0.3	19.9	79.8
GP-24A	12/13/2021	0	1.7	18.2	80.1


**Table 4-1
2021 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-24B	3/30/2021	0	0.5	20.3	79.2
GP-24B	6/25/2021	0	0.5	20.5	79
GP-24B	9/21/2021	0	0.4	19.9	79.7
GP-24B	12/13/2021	0	1.7	17.6	80.7
GP-25A	3/30/2021	0	2	18.8	79.2
GP-25A	6/25/2021	0	1.6	19	79.4
GP-25A	9/21/2021	0	0.8	19.5	79.7
GP-25A	12/13/2021	0	2.1	18.7	79.2
GP-25B	3/30/2021	0	2.5	18.1	79.4
GP-25B	6/25/2021	0	1.9	18.5	79.6
GP-25B	9/21/2021	0	2.6	17.8	79.6
GP-25B	12/13/2021	0	2.3	17.7	80
GP-26	3/30/2021	0	0.8	20	79.2
GP-26	6/25/2021	0	0.7	20.2	79.1
GP-26	9/21/2021	0	0.2	20.3	79.5
GP-26	12/13/2021	0	1.3	20.3	78.4
GP-27	3/30/2021	0	0.7	20	79.3
GP-27	6/25/2021	0	0.9	19.9	79.2
GP-27	9/21/2021	0	0.5	19.7	79.8
GP-27	12/13/2021	0	0.8	20.2	79
GP-28	3/30/2021	0.1	4.3	11.7	83.9
GP-28	6/25/2021	0	4.6	12.1	83.3
GP-28	9/21/2021	0	5.9	12.4	81.7
GP-28	12/10/2021	0	6.9	12.1	81
GP-29	3/30/2021	0	6	9.7	84.3
GP-29	6/25/2021	0	5.4	10.2	84.4
GP-29	9/21/2021	0	6.1	9.5	84.4
GP-29	12/14/2021	0	6.2	7.5	86.3
GP-30A	3/30/2021	0	4	16.6	79.4
GP-30A	6/25/2021	0	4.8	16.3	78.9
GP-30A	9/21/2021	0	4.6	15.1	80.3
GP-30A	12/16/2021	0	4.3	15.8	79.9
GP-30B	3/30/2021	0	2.8	17.4	79.8
GP-30B	6/25/2021	0	4.2	16.7	79.1
GP-30B	9/21/2021	0	3.7	16.6	79.7
GP-30B	12/16/2021	0	3.5	16.1	80.4
GP-31	3/30/2021	0	1.2	19.8	79
GP-31	6/25/2021	0	1.3	20.2	78.5
GP-32	3/30/2021	0	2.1	18.9	79
GP-32	6/25/2021	0	1.6	19.3	79.1
GP-32	9/21/2021	0	1.7	19.4	78.9
GP-32	12/13/2021	0	1.7	17.4	80.9

**Table 4-1
2021 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-33	3/30/2021	0	1.6	19	79.4
GP-33	6/25/2021	0	1.6	19.1	79.3
GP-33	9/21/2021	0	1.8	18.5	79.7
GP-33	12/13/2021	0	2.1	17.2	80.7
GP-34	3/30/2021	0	4.2	14.4	81.4
GP-34	6/25/2021	0	4.1	15.4	80.5
GP-34	9/21/2021	0	3.7	16.2	80.1
GP-34	12/13/2021	0	4.9	13.2	81.9
GP-35	3/30/2021	0	2.1	17.9	80
GP-35	6/25/2021	0	1.9	18.3	79.8
GP-35	9/21/2021	0	1.6	18.6	79.8
GP-35	12/13/2021	0	3.3	16.4	80.3
GP-36	3/30/2021	0	1.1	19	79.9
GP-36	6/25/2021	0	1	19.1	79.9
GP-36	9/21/2021	0	1.5	18.8	79.7
GP-36	12/13/2021	0	1.8	17.3	80.9
GP-37	3/30/2021	0	2.1	18.1	79.8
GP-37	6/25/2021	0	1.6	18.7	79.7
GP-37	9/21/2021	0	1.4	18.8	79.8
GP-37	12/13/2021	0	2	17.9	80.1
GP-38	3/30/2021	0	1.7	18.2	80.1
GP-38	6/25/2021	0	1.4	19.2	79.4
GP-38	9/21/2021	0	0.2	20.4	79.4
GP-38	12/13/2021	0	2.3	19.2	78.5
GP-39	3/30/2021	1.2	16.3	6.3	76.2
GP-39	6/25/2021	9.3	19.5	4.7	66.5
GP-39	9/21/2021	12.8	22.8	2.3	62.1
GP-39	9/22/2021	0	0.1	20.7	79.2
GP-39	12/10/2021	3.8	18.3	0	77.9

Note: LFG probes GP14, GP18D, GP18S, GP19S, GP19D and GP31 were abandoned in July 2021 in preparation for a street extension across the northern portion of the landfill.



APPENDIX A
2021 Field Sampling Data Sheets (FSDSs)

First Quarter (February) 2021 FSDSs

Groundwater Elevation Survey

Project #: 04221030.13

Sampler: Chris Perron

Quarter: 1 2 3 4

Date: 2/17/2021

Monitoring Point Designation	Reference Elevation (ft. msl)	DTB (ft. btoc)	DTW (ft. btoc)	Time	Comments
Monitoring Wells					
MW-1 N	216.58	15.00	N/A	0930	Dry @ 14.26
MW-1 S	216.13	44.50	41.71	0931	
MW-1 E	216.45	29.05	N/A	0931	Dry @ 29.24
MW-NE	219.83	50.34	16.54	1217	
LB-R2	222.27	77.36	49.69	1128	
LB-1S	210.12	45.00	37.36	0949	
LB-1D	209.74	137.45	46.43	0950	Well ID label peeling
LB-3S	218.25	52.50	43.64	0958	
LB-3D	219.29	117.28	43.61	0958	
LB-5S	206.89	30.32	16.42	1417	
LB-5C	206.70	74.71	37.38	1352	
LB-5D	207.56	122.40	41.41	1356	
LB-6S	202.80	39.07	31.11	1351	
LB-9SR	217.94	49.60	39.43	1007	
LB-10SR	204.04	42.35	35.20	1534	
LB-10CR	203.05	71.95	34.92	1531	DTW 34.09
LB-10DR	203.36	121.10	46.70	1530	
LB-13I	202.36	55.03	31.75	1235	
LB-13C	202.68	66.00	32.13	1237	
LB-13D	202.96	88.88	32.54	1153	
LB-17S	208.18	34.38	N/A	1435	Dry @ 34.54
LB-17I	213.14	51.95	40.58	1430	
LB-17C	206.55	72.35	34.25	1443	
LB-17D	213.17	100.91	41.51	1439	
LB-20S	221.22	61.50	43.92	0940	Lock missing
LB-21S	223.35	54.24	40.99	1110	
LB-21C	223.32	79.10	41.42	1115	Missing Label
LB-21D	223.63	110.73	44.31	1113	
LB-22S	208.42	36.97	8.88	1126	
LB-23S	229.19	45.40	33.30	1314	
LB-24S	235.13	54.16	40.36	1321	
LB-26I	200.22	58.30	29.10	1332	
LB-26D	200.75	101.78	28.94	1257	
LB-27I	205.35	57.15	35.12	1135	
LB-27D	204.65	115.10	42.06	1055	

Notes: Probe disconnected between readings

Field Calibration Log SCS Engineers

Equipment:			Serial Number:		Field Staff:			
YSE Pro Plus			17J102717		J. Holtz			
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)
04221030.13 / Leichner	2-17-21	0915	6.0	12.64	4.00	7.00	1413	220.0
" ↓ "	2-18-21	0740	14.8	10.12	4.00	7.00	1413	220.0
" ↓ "	2-19-21	0715	14.2	11.24	4.00	7.00	1413	220.0
" ↓ "	2/23/21	925	16.8	9.78 <small>mg/L</small>	4.0	7.0	1413 µS/cm	220.0 mV
Notes:								

Landfill Visual Inspection Program

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

Landfill Lechner Landfill
 Inspector Chris Perra
 Date 2/17/2021
 Reason for inspection Semiannual Groundwater Monitoring
 1st, 2nd, 3rd, or 4th groundwater monitoring event
 Other

Notes:

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-18

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021821-05-15

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	<u>W</u>	NW	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY			CLOUDY			RAIN			?	
										TEMPERATURE: 40.0 °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/21	11:14	45.00	.	37.31	.	7.69	X 1 1.25
/ /	:	.	.	.	.	.	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	2/18/21	11:40	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/21	11:40	A	1 (250, 500, 1L)	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/21	11:40	A	1 (125, 250, 500)	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 ₂ /NO ₃) (Tannin/Lignin)				
GREEN - Poly	(Cyanide)				
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)				
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)				

WATER QUALITY DATA

Purge Start Time: 11:15

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(1120)	0.00	6.74	92.3	248.1	7.5	37.37	7.00	Clear/colorless
1	A(1123)	0.15	6.70	84.6	261.5	9.0	37.37	6.18	Clear/colorless
2	A(1126)	0.30	6.69	83.8	261.1	9.2	37.37	6.22	Clear/colorless
3	A(1129)	0.45	6.65	86.5	262.3	9.5	37.37	6.25	Clear/colorless
4	A(1132)	0.60	6.65	86.6	265.5	9.7	37.37	6.00	Clear/colorless
5	A(1135)	0.75	6.64	86.7	267.9	9.3	37.37	5.60	Clear/colorless
6	A(1138)	0.90	6.63	86.8	268.0	9.1	37.37	5.65	Clear/colorless

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 8/7/30 ~ 200 ml/min

SAMPLER:

I. Hultquist
(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: Lechner Landfill

WELL ID: LB-021821-06-DUP1

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID:

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	<u>W</u>	NW	<u>LIGHT</u>	MEDIUM	HEAVY
	WEATHER: SUNNY			CLOUDY			<u>RAIN</u>			TEMPERATURE: <u>51.0</u> °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 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 =

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	<u>2/18/21</u>	<u>7:45</u>	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	<u>2/18/21</u>	<u>11:45</u>	A	1 250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	<u>✓</u>
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	<u>2/18/21</u>	<u>11:45</u>	A	1 <u>250</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		<u>✓</u>
	/ /	:		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	<u>(8260)</u> (8011) OR [] WA [<u>X</u>]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>
	YELLOW - Poly	(COD) (TOC) (NH ₄) (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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (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	<u>A (115)</u>	<u>0.00</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
1									
2									
3									
4									
5									
6									

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Collected at: LB-15

SAMPLER: I. Holtz
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-1D

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021821-04-1D

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY			CLOUDY			RAIN			TEMPERATURE: 70 °F / 21 °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/21	10:25	137.95	39.1	39.19	.	98.76	X 1 16.09
/ /	:	.	.	.	.	.	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)

Bottle Type	Date	Time	Method	Amount & Volume mL	Preservative	Ice	Filter	pH	✓
VOA Glass	2/18/21	10:45	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	2/18/21	10:45		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/21	10:45	A	1 (250, 500) 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/21	10:45	A	1 (125, 250, 500)	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
	VOA - Glass	(8260) (8011)	OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []
WHITE - Poly	(pH) (Conductivity) (DS) (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) (Ti) (V) (Zn) (Hardness)	
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA

Purge Start Time: 10:26

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, 10:28	0.00	6.75	11.9	223.9	7.8	39.20	9.47	Clear, colorless
1	A, 10:31	0.10	6.81	10.52	227.4	8.4	39.20	8.08	Clear, colorless
2	A, 10:34	0.20	6.84	10.25	229.3	8.3	39.20	7.66	Clear, colorless
3	A, 10:37	0.30	6.81	10.27	227.9	8.2	39.20	7.52	Clear, colorless
4	A, 10:40	0.40	6.83	10.43	227.3	8.2	39.20	7.56	Clear, colorless
5	A, 10:43	0.50	6.83	10.45	227.8	8.2	39.20	7.52	Clear, colorless
6									

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 10/10/70 psi 150 ml/min

SAMPLER:

I. Hultqvist
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-35

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021821-08-35

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	<input checked="" type="checkbox"/> W	NW	<input checked="" type="checkbox"/> LIGHT	<input type="checkbox"/> MEDIUM	<input type="checkbox"/> HEAVY	
WEATHER:	SUNNY		CLOUDY		<input checked="" type="checkbox"/> RAIN			?	TEMPERATURE: 71.0 °C			

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/21	:	52.55	.	42.91	.	10.04	X 1 1.63
1/1	:	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	2/18/21	13:55	A	3	40 ml	HCl	<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input checked="" type="checkbox"/>
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/21	13:55	A	1	250, 500, 1L	None	<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO	NA	<input checked="" type="checkbox"/>
Yellow Poly	1/1	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	1/1	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	1/1	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/21	13:55	A	1	125, 250, 500	HNO ₃	<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> YES		<input checked="" type="checkbox"/>
	1/1	:		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) (TI) (V) (Zn) (Hardness)	
	RED DISSOLVED - Poly	(Ca) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA

Purge Start Time: 13:35

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(1338)	0.00	6.78	85.9	201.2	8.2	42.51	10.59	Clear/Colorless
1	A(1341)	0.15	6.79	81.1	199.9	9.0	42.51	8.65	Clear/Colorless
2	A(1344)	0.30	6.31	80.5	200.1	10.1	42.51	5.43	Clear/Colorless
3	A(1347)	0.45	6.24	82.6	200.1	10.2	42.51	5.16	Clear/Colorless
4	A(1350)	0.60	6.29	82.3	200.2	10.2	42.51	5.03	Clear/Colorless
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 9/6/30 psi ~ 200 ml/min

SAMPLER:

(PRINTED NAME)

I. Holtzner

(SIGNATURE)

[Signature]

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-3D

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-021821-07-3D

DUP ID: 11 **NA**

WIND FROM:	N	NE	E	SE	S	SW	<input checked="" type="radio"/> W	NW	<input checked="" type="radio"/> LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY			CLOUDY			<input checked="" type="radio"/> RAIN			TEMPERATURE: <input checked="" type="text" value="40.0"/> °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Circle appropriate units]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/21	12:34	117.28	.	47.57	.	73.75	X 1 12.02
/ /	:						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) [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	2/18/21	12:00	A	3 (40 ml)	HCl	<input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO		<input checked="" type="checkbox"/>
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/21	13:00	A	1 (250, 500, 1L)	None	<input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO	NA	<input checked="" type="checkbox"/>
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/21	13:00	A	1 (25, 250, 500)	HNO ₃	<input checked="" type="radio"/> YES	<input checked="" type="radio"/> YES		<input checked="" type="checkbox"/>
	/ /	:		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
		VOA - Glass	(8280) (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) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₄) (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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 12:36

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O ₂ (mg/l)	Water Quality
0	A (12:38)	0.00	6.76	95.3	206.5	8.5	43.57	4.40	Clear, colorless
1	A (12:41)	0.17	6.68	81.0	213.0	9.0	43.57	2.66	Clear, colorless
2	A (12:44)	0.34	6.64	79.6	215.6	9.1	43.57	3.65	Clear, colorless
3	A (12:47)	0.51	6.60	80.2	228.0	9.3	43.57	4.26	Clear, colorless
4	A (12:50)	0.68	6.57	81.1	235.9	9.0	43.57	4.87	Clear, colorless
5	A (12:53)	0.85	6.57	81.5	237.2	8.9	43.57	5.00	Clear, colorless
6	A (1:56)	1.02	6.57	82.1	239.3	9.3	43.57	5.20	Clear, colorless

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

Low Flow Purge Method: 8/7/70 psi · 225 mL/min

SAMPLER: I. Hultquist [Signature]
(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: Lechner Landfill

WELL ID: LB-55

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021921-02-55

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	<u>SW</u>	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
	WEATHER:		SUNNY	CLOUDY	<u>RAIN</u>			?	TEMPERATURE: <u>54.0</u> °F <u>.0</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/21	08:35	30.32	.	16.29	.	14.03	X 1 2.28
/ /	:	.	.	.	.	.	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	2/19/21	09:00	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/21	09:00	A	1 250, 500 , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/21	09:00	A	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		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	<u>(8260)</u> (8011)	OR [ ] WA X [ ]
AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []
WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T) <u>(NO₃)</u>	
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) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)	

WATER QUALITY DATA

Purge Start Time: 08:37

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	<u>A(0843)</u>	<u>0.00</u>	<u>7.17</u>	<u>95.9</u>	<u>103.3</u>	<u>9.4</u>	<u>16.29</u>	<u>8.72</u>	<u>clear/colorless</u>
1	<u>A(0846)</u>	<u>0.21</u>	<u>6.52</u>	<u>91.1</u>	<u>141.2</u>	<u>11.2</u>	<u>16.29</u>	<u>8.02</u>	<u>clear/colorless</u>
2	<u>A(0849)</u>	<u>0.42</u>	<u>6.47</u>	<u>91.8</u>	<u>151.6</u>	<u>11.3</u>	<u>16.29</u>	<u>8.02</u>	<u>clear/colorless</u>
3	<u>A(0852)</u>	<u>0.63</u>	<u>6.42</u>	<u>94.2</u>	<u>158.3</u>	<u>11.4</u>	<u>16.29</u>	<u>7.75</u>	<u>clear/colorless</u>
4	<u>A(0855)</u>	<u>0.84</u>	<u>6.40</u>	<u>96.1</u>	<u>161.0</u>	<u>11.2</u>	<u>16.29</u>	<u>7.76</u>	<u>clear/colorless</u>
5	<u>A(0858)</u>	<u>1.05</u>	<u>6.38</u>	<u>98.2</u>	<u>161.4</u>	<u>11.3</u>	<u>16.29</u>	<u>7.70</u>	<u>clear/colorless</u>
6		.	.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 8/7/20 psi ~250ml/min

SAMPLER:

(PRINTED NAME)

I. Hultquist

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-5D

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-021721-04-5D

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	<u>SW</u>	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
	<u>SUNNY</u>		CLOUDY		RAIN		?		TEMPERATURE: <u>65.0</u> °C		

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)
2/17/21	14:13	122.40	.	41.37	.	81.03			X 1 13.2
/ /	:	.	.	.	.	.			X 3 .
Gal/ft = (dia./2) ² x 0.163		1" = 0.041	<u>2" =</u> 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	2/17/21	14:35	A	3 <u>40 ml</u>	<u>HCl</u>	YES	<u>NO</u>			
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO			
White Poly	2/17/21	14:35	A	1 250, <u>500</u> , 1L	<u>None</u>	YES	<u>NO</u>	NA		
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO			
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO			
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO			
Red Diss. Poly	2/17/21	14:35	A	1 <u>125</u> , 250, 500	<u>HNO₃</u>	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) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>
	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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA			Purge Start Time: 14:14				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(1410)	0.00	7.20	70.8	310.7	11.0	41.42	6.39	clear/colorless
1	A(1419)	0.10	6.85	71.0	312.7	11.2	41.44	2.27	clear/colorless
2	A(1422)	0.20	6.73	70.5	315.1	11.6	41.44	1.02	clear/colorless
3	A(1425)	0.30	6.79	65.9	318.3	11.9	41.44	0.80	clear/colorless
4	A(1428)	0.40	6.78	63.5	320.1	11.8	41.44	0.56	clear/colorless
5	A(1431)	0.50	6.77	63.3	319.9	11.8	41.44	0.54	clear/colorless
6	A(1434)	0.60	6.76	62.4	319.6	11.8	41.44	0.53	clear/colorless

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

Low Flow Purge Method: 1/9/65 ~ 150 ml/min

SAMPLER: J. Hultquist
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-68

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LR-022321-03-68

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	<u>SW</u>	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
	WEATHER: SUNNY			CLOUDY			<u>RAIN</u>			TEMPERATURE: <u>46</u> °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/23/21	14:15	39.07	—	30.80	—	8.27	X 1 1.35
1/1	:	:	:	:	:	:	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)

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√ if used
VOA Glass	2/23/21	14:40	A	3 (40 mL)	HCl	YES	NO		✓
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/23/21	14:40	A	1 (250, 500, 1L)	None	YES	NO	NA	✓
Yellow Poly	1/1	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	1/1	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	1/1	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/23/21	14:40	A	1 (25, 250, 500)	HNO ₃	YES	YES		✓
	1/1	:		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 <input checked="" type="checkbox"/>
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (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	<u>(Ca)</u> <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA

Purge Start Time: 14:20

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(1421)	0.00	6.71	1933	242.6	11.4	30.81	9.33	clear/colorless
1	A(1424)	0.20	6.71	194.1	244.4	11.8	30.80	9.34	clear/colorless
2	A(1427)	0.40	6.71	194.5	246.3	11.8	30.80	9.37	clear/colorless
3	A(1430)	0.55	6.71	194.9	247.0	11.8	30.80	9.31	clear/colorless
4	A(1433)	0.75	6.71	195.4	247.5	11.8	30.80	9.36	clear/colorless
5		.	.	.	.	.	.	.	.
6		.	.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method:

8/7/25 → 225 mL/min

SAMPLER:

(PRINTED NAME)

T Andrews

(SIGNATURE)



Need to switch tubing - pulled tubing

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-10SR

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021821-03-10SR

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: F 39.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/21	09:06	42.35	.	35.18	.	7.17	X 1 1.16
/ /	:	.	.	.	.	.	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)

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	2/18/21	09:30	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/21	09:30	A	1 (250, 500, 1L)	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/21	09:30	A	1 (25, 250, 500)	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 ₄) (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) (TI) (V) (Zn) (Hardness)	
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA

Purge Start Time: 09:07

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(0911)	0.00	6.60	118.3	207.8	8.9	35.17	7.92	clear/colorless
1	A(0914)	0.15	6.49	108.5	213.5	9.8	35.17	7.20	clear/colorless
2	A(0917)	0.30	6.52	104.4	216.6	10.2	35.18	6.71	clear/colorless
3	A(0920)	0.45	6.49	101.1	211.3	10.5	35.18	6.32	clear/colorless
4	A(0923)	0.60	6.48	104.2	212.0	10.4	35.18	6.28	clear/colorless
5	A(0926)	0.75	6.46	101.1	210.9	10.4	35.18	6.22	clear/colorless
6		.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 9/6/30 psi ~ 200 ml/min

SAMPLER:

(PRINTED NAME)

Jean Helgqvist

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-021821-02-FB

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID:

DUP ID:

NA

WIND FROM:	N	NE	<u>E</u>	SE	S	SW	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
WEATHER:	SUNNY		<u>CLOUDY</u>		RAIN		?		TEMPERATURE: <u>63.0</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 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)

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	<u>2/18/21</u>	<u>09:00</u>	G	3 40 ml	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	<u>2/18/21</u>	<u>09:00</u>	G	1 250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	<u>2/18/21</u>	<u>09:00</u>	G	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		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	<u>(8260)</u> (8011) OR [] WA <u>X</u>
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO3)</u>
	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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	<u>(Ca)</u> <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (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	<u>G(0900)</u>	<u>0.00</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
1		.	.	.	.	.	.	.
2		.	.	.	.	.	.	.
3		.	.	.	.	.	.	.
4		.	.	.	.	.	.	.
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Collected Near: LB-10SR using laboratory supplied DI water

SAMPLER:

(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: Lechner Landfill

WELL ID: LB-10DR

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021821-01-10DR

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY	
WEATHER:	SUNNY			CLOUDY			RAIN			?		
										TEMPERATURE: 73.9 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/21	08:11	121.10	.	46.41	.	74.69	X 1 12.17
/ /	:	.	.	.	.	.	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	2/18/21	08:35	A	3 40 ml	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/21	08:35	A	1 250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/21	08:35	A	1 250, 500, 500	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)						
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 ₂ /NO ₃) (Tannin/Lignin)							
GREEN - Poly	(Cyanide)							
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)							
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)							

WATER QUALITY DATA

Purge Start Time: 08:12

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(0816)	0.00	6.28	149.9	325.6	8.5	46.40	3.16	clear/colorless
1	A(0819)	0.15	6.22	143.1	293.6	9.4	46.41	2.72	clear/colorless
2	A(0822)	0.30	6.33	134.1	281.4	9.6	46.41	2.44	clear/colorless
3	A(0825)	0.45	6.45	127.0	277.0	9.5	46.41	2.27	clear/colorless
4	A(0828)	0.60	6.53	124.4	275.7	9.9	46.41	2.05	clear/colorless
5	A(0831)	0.75	6.56	124.5	275.9	9.9	46.41	2.01	clear/colorless
6	A(0834)	0.90	6.60	121.1	276.6	9.8	46.41	1.94	clear/colorless

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 8/7/60 psc ~ 175 ml/min

SAMPLER:

I. Hultquist

(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: Lechner Landfill

WELL ID: LB-13I

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-022221-01-13I

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 46 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/23/21	11:40	55.03	—	31.46	—	23.57	X 1 3.84
/ /	:	:	:	:	:	:	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)

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/23/21	12:00	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/23/21	12:00	A	1 (250, 500, 1L)	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/23/21	12:00	A	1 (125, 250, 500)	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	(8200) (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) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 11:43

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 (1145)	0.00	6.53	199.4	411.1	11.6	31.46	4.29	clear/colorless
1	A (1146)	0.25	6.50	176.4	275.5	11.8	31.46	2.30	clear/colorless
2	A (1147)	0.45	6.49	175.0	275.1	11.8	31.46	2.28	clear/colorless
3	A (1154)	0.70	6.52	177.3	274.9	11.8	31.46	2.26	clear/colorless
4	A (1157)	0.90	6.52	171.8	274.9	11.8	31.46	2.23	clear/colorless
5	A (1200)	1.15	6.52	172.0	274.9	11.8	31.46	2.22	clear/colorless
6									

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

Low Flow Purge Method: 8/7/30 → 225 mL/min

SAMPLER: T Andrews
(PRINTED NAME)


(SIGNATURE)

Need to switch tubing - pulled tubing

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-13D

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021721-02-13D

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	<u>W</u>	NW	<u>LIGHT</u>	MEDIUM	HEAVY
	WEATHER: SUNNY		<u>CLOUDY</u>		RAIN		?		TEMPERATURE: <u>64.5</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/17/21	12:04	88.88	.	32.52	.	56.36	X 1 9.18
/ /	:	.	.	.	.	.	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	2/17/21	12:25	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/21	12:25	A	1 250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	2/17/21	12:25	IIH	125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/21	12:25	A	1 <u>125</u> 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		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	<u>8260</u> (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA			Purge Start Time: <u>12:05</u>				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(1206)	0.00	7.03	70.8	210.6	9.9	32.52	2.89	clear/colorless
1	A(1209)	0.15	6.74	60.9	217.6	10.4	32.52	3.28	clear/colorless
2	A(1212)	0.30	6.67	58.0	220.6	10.4	32.52	3.37	clear/colorless
3	A(1215)	0.45	6.64	57.9	221.9	10.4	32.52	3.60	clear/colorless
4	A(1218)	0.60	6.62	58.2	222.5	10.5	32.52	4.00	clear/colorless
5	A(1221)	0.75	6.60	58.7	224.6	10.6	32.52	4.36	clear/colorless
6	A(1224)	0.90	6.60	58.6	225.6	10.6	32.52	4.39	clear/colorless

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 8/7/60 psi ~ 200ml/min

SAMPLER:

J. H. H. H. H.
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

pg 1/2

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-17I

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021921-03-17I

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 40.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/21	09:35	51.95	.	40.44	.	11.51	X 1 1.88
/ /	:	.	.	.	.	.	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	2/19/21	10:15	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/21	10:15	A	1 250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/21	10:15	A	1 25, 250, 500	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 ₄) (NO ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 09:30

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(0937)	0.00	6.52	79.3	306.6	9.6	40.43	3.00	Clear/colorless
1	A(0940)	0.10	6.51	20.2	334.5	10.7	40.43	1.00	Clear/colorless
2	A(0943)	0.20	6.59	-4.8	350.0	10.9	40.43	0.71	Clear/colorless
3	A(0946)	0.30	6.63	-20.0	366.6	11.0	40.43	0.66	Clear/colorless
4	A(0949)	0.40	6.65	-30.5	405.7	11.3	40.43	0.59	Clear/colorless
5	A(0952)	0.50	6.67	-41.7	474.0	11.3	40.43	0.62	Clear/colorless
6	A(0955)	0.60	6.69	-49.9	503.0	11.4	40.43	0.58	Clear/colorless

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 8.5/6.5/30psi ~ 125ml/min

SAMPLER:

Z. Hultquist

(SIGNATURE)

FIELD SAMPLING DATA SHEET

Pg 2/2

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-172

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021921-03-172

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	<u>SW</u>	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
	WEATHER: SUNNY		<u>CLOUDY</u>			RAIN			?		
										TEMPERATURE: <u>40.0</u> °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/21	09:35	51.95	.	40.44	.	11.51	X 1 1.88
/ /	:	.	.	.	.	.	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	2/19/21	10:15	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/21	10:15	A	1 250, 500, 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/21	10:15	A	1 <u>125</u> 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		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	<u>(8260)</u> (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>
	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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA

Purge Start Time: 09:36

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp	DTW	Diss O ₂ (mg/l)	Water Quality
0	<u>A(1098)</u>	<u>0.00</u>	6.77	-56.9	512.9	11.5	40.43	0.58	clear/colorless
1	<u>A(1001)</u>	0.80	6.73	-63.3	519.6	11.9	40.43	0.53	clear/colorless
2	<u>A(1004)</u>	0.90	6.75	-68.4	522.9	12.4	40.43	0.48	clear/colorless
3	<u>A(1007)</u>	1.00	6.76	-72.3	525.0	12.5	40.43	0.48	clear/colorless
4	<u>A(1010)</u>	1.10	6.77	-75.0	528.7	12.0	40.43	0.48	clear/colorless
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 8.5/6.5/30psi ~ 125ml/min

SAMPLER:

I. Hultquist
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201 Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-17D
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-021821-09-17D

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	<u>W</u>	NW	<u>LIGHT</u>	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	<u>RAIN</u>				?	TEMPERATURE: <u>64.0</u> °C			

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

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/21	14:47	100.91	.	41.33	.	59.58	X 1 9.71
/ /	:	.	.	.	.	.	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	2/18/21	15:10	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/21	15:10	A	1 250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/21	15:10	A	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		250, 500, 1L		YES			

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

Analysis Allowed per Bottle Type	BOTTLE TYPE	ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	
	VOA - Glass	<u>(8260)</u> (8011)	OR [] WA <u>X</u>
	AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>	
	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) (Ti) (V) (Zn) (Hardness)	
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)	

WATER QUALITY DATA Purge Start Time: 14:47 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(1450)	0.00	6.45	62.2	270.1	9.2	41.33	3.20	clear colorless
1	A(1453)	0.15	6.70	67.5	290.6	10.5	41.33	1.21	clear colorless
2	A(1456)	0.30	6.75	58.0	293.8	10.7	41.33	0.93	clear colorless
3	A(1459)	0.45	6.76	55.8	295.3	10.8	41.33	0.68	clear colorless
4	A(1502)	0.60	6.77	55.1	295.1	10.7	41.33	0.64	clear colorless
5	A(1505)	0.75	6.77	53.1	295.6	10.7	41.33	0.63	clear colorless
6									

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

Low Flow Purge Method: 9/6/60 psi ~ 225 ^{psi} ml/min
AMPLER: E. Hultquist [Signature]
 (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: Lechner Landfill

WELL ID: LB-205

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021921-01-205

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	<u>W</u>	NW				
	SUNNY		<u>CLOUDY</u>		RAIN		?	<u>LIGHT</u>		MEDIUM	HEAVY	
WEATHER:	TEMPERATURE: °F <u>39.0</u> °C											

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
2/19/21	07:44	61.50	.	43.72	.	17.78	X 1	2.89
/ /	:	.	.	.	.	.	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)

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	2/19/21	08:10	A	3 40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/21	08:10	A	1 250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/21	08:10	A	1 125, 250, 500	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) (Ti) (V) (Zn) (Hardness)	
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA

Purge Start Time: 07:45

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(0749)	0.00	6.32	152.8	523.6	7.2	43.77	2.95	light tan/cloudy
1	A(0752)	0.15	6.17	143.1	439.2	10.2	43.77	1.15	light tan/cloudy
2	A(0755)	0.30	6.35	131.6	431.2	10.7	43.79	0.61	light tan/cloudy
3	A(0758)	0.45	6.46	107.1	426.4	10.7	43.79	0.57	light tan/cloudy
4	A(0801)	0.60	6.50	98.9	422.6	10.6	43.79	0.53	light tan/cloudy
5	A(0804)	0.75	6.49	97.6	415.3	10.9	43.79	0.53	light tan/cloudy
6	A(0807)	0.90	6.50	96.8	414.2	10.8	43.79	0.55	light tan/cloudy

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 9/6/30³⁵ psi ~ 200ml/min

SAMPLER:

(PRINTED NAME)

I. Holtquist

(SIGNATURE)

[Signature]

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-26I

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-002321-02-26I

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY CLOUDY RAIN ?										
											TEMPERATURE: 46 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/23/21	13:30	58.30	---	28.81	---	29.49	X 1 4.81
/ /	:	.	.	.	.	.	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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (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	2/23/21	13:50	A	3 (40 ml)	HCl	YES	NO		✓	
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO			
White Poly	2/23/21	13:50	A	1 250, 500, 1L	None	YES	NO	NA	✓	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO			
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO			
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO			
Red Diss. Poly	2/23/21	13:50	A	1 (25) 250, 500	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) (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) (Ti) (V) (Zn) (Hardness)	
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA			Purge Start Time: 13:30				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(1332)	0.00	6.41	329.6	251.0	11.2	28.81	4.68	clear/colorless
1	A(1335)	0.35	6.42	192.4	250.0	11.6	28.81	4.08	clear/colorless
2	A(1338)	0.80	6.50	192.2	255.0	11.6	28.81	4.12	clear/colorless
3	A(1341)	1.20	6.52	192.8	260.1	11.6	28.81	4.04	clear/colorless
4	A(1344)	1.55	6.52	193.1	261.4	11.6	28.81	4.06	clear/colorless
5	A(1347)	1.90	6.53	193.4	263.2	11.6	28.81	4.08	clear/colorless
6									

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

Low Flow Purge Method: 7/8/40 → 350mL/min

SAMPLER: J Andrews
(PRINTED NAME)


(SIGNATURE)

Need to switch tubing - pulled tubing

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-260

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021721-03-260

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	<u>SW</u>	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
	WEATHER: <u>SUNNY</u> CLOUDY RAIN ?									TEMPERATURE: <u>F 45.0</u> °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/17/21	13:05	101.28	.	228.94	.	73.34	X 1 11.9
/ /	:	.	.	.	.	.	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	2/17/21	13:20	A	3 40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/21	13:20	A	1 250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/21	13:20	A	1 125, 250, 500	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) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T) <u>(NO₃)</u>
	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) (TI) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA

Purge Start Time: 13:06

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(1307)	0.00	7.18	60.3	223.5	10.2	28.24	3.06	clear/colorless
1	A(1309)	0.25	6.59	63.6	242.5	11.4	28.24	3.09	clear/colorless
2	A(1313)	0.50	6.59	62.3	246.7	11.7	28.24	2.98	clear/colorless
3	A(1316)	0.75	6.58	59.2	249.9	11.7	28.24	2.95	clear/colorless
4	A(1319)	1.00	6.57	59.3	250.7	11.6	28.24	2.94	clear/colorless
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 8/7/60psi ~ 300ml/min

SAMPLER:

I. Holtquist
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

Pg 1/2

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-27E

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021921-04-27E

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	<u>W</u>	NW	<u>LIGHT</u>	MEDIUM	HEAVY
	WEATHER: SUNNY <u>CLOUDY</u> RAIN ?										
											TEMPERATURE: <u>52.0</u> °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
02/19/21	10:48	57.13	.	35.03	.	22.12	X 1 3.51
/ /	:	.	.	.	.	.	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	2/19/21	11:25	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/21	11:25	A	1 250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/21	11:25	A	1 <u>25</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		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)		OR []	WA []	
	VOA - Glass	<u>8260</u> (8011)				<input checked="" type="checkbox"/>
	AMBER - Glass	(8080) (8150) (TOX)				
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>				
	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) (Ti) (V) (Zn) (Hardness)				
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)				

WATER QUALITY DATA

Purge Start Time: 10:51

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp <u>(C)</u>	DTW	Diss O ₂ (mg/l)	Water Quality
0	<u>A(1053)</u>	<u>0.00</u>	<u>7.23</u>	<u>7.6</u>	<u>234.8</u>	<u>11.0</u>	<u>35.03</u>	<u>5.10</u>	Clear/colorless
1	<u>A(1056)</u>	<u>0.24</u>	<u>6.84</u>	<u>11.1</u>	<u>235.0</u>	<u>11.3</u>	<u>35.03</u>	<u>3.12</u>	Clear/colorless
2	<u>A(1059)</u>	<u>0.48</u>	<u>6.77</u>	<u>9.4</u>	<u>233.7</u>	<u>11.4</u>	<u>35.03</u>	<u>1.45</u>	Clear/colorless
3	<u>A(1102)</u>	<u>0.72</u>	<u>6.75</u>	<u>8.7</u>	<u>234.1</u>	<u>11.3</u>	<u>35.03</u>	<u>1.08</u>	Clear/colorless
4	<u>A(1105)</u>	<u>0.96</u>	<u>6.74</u>	<u>8.1</u>	<u>235.3</u>	<u>11.4</u>	<u>35.03</u>	<u>0.83</u>	Clear/colorless
5	<u>A(1108)</u>	<u>1.20</u>	<u>6.75</u>	<u>7.3</u>	<u>237.6</u>	<u>11.4</u>	<u>35.03</u>	<u>0.75</u>	Clear/colorless
6	<u>A(1101)</u>	<u>1.44</u>	<u>6.76</u>	<u>7.3</u>	<u>239.9</u>	<u>11.5</u>	<u>35.03</u>	<u>0.62</u>	Clear/colorless

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

Low Flow Purge Method: 8/7/35psi ~300ml/min

SAMPLER:

(PRINTED NAME)

F. Hultquist

(SIGNATURE)



FIELD SAMPLING DATA SHEET

pg 2/2

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-27J
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-021921-04-27J

DUP ID: NA

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 64.2 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/21	10:48	57.13	.	35.03	.	22.12	X 1 3.51
/ /	:	.	.	.	.	.	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	2/19/21	11:25	A	3 40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/21	11:25	A	1 250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/21	11:25	A	1 125, 250, 500	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	<u>(8260)</u> (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T) <u>(NO₃)</u>
	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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (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	A(1114)	0.00 1.68	6.78	6.8	242.9	11.4	35.03	0.57	Clear/colorless
1	A(1117)	1.92	6.80	6.9	247.5	11.3	35.03	0.45	Clear/colorless
2	A(1120)	2.16	6.81	6.3	248.6	11.4	35.03	0.45	Clear/colorless
3	A(1123)	2.40	6.83	6.1	250.1	11.5	35.03	0.43	Clear/colorless
4		.	.	.	.	.	.	.
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

Low Flow Purge Method: 8/7/35 psi ~ 300ml/min

SAMPLER: I. Hultquist [Signature]
 (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-021921-05-DUP2

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID:

WIND FROM:

N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER: SUNNY								CLOUDY		RAIN

DUP ID:

NA

TEMPERATURE: °F 42. °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 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 =

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[if used]
VOA Glass	2/19/21	11:30	A	3	40 ml	HCl	YES	NO	✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/21	11:30	A	1	250, 500, 1L	None	YES	NO	NA ✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/21	11:30	A	1	125, 250, 500	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)
	AMBER - Glass	(8080) (8150) (TOX)
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₄) (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) (Ti) (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	A(1130)	0.00	-	-	-	-	-	-	-
1		.	.	.	.	.	.	.	.
2		.	.	.	.	.	.	.	.
3		.	.	.	.	.	.	.	.
4		.	.	.	.	.	.	.	.
5		.	.	.	.	.	.	.	.
6		.	.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Collected at: LB-27I

SAMPLER:

I. Hultquist
(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-27D

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-021721-01-27D

DUP ID:

NA

WIND FROM:	N	NE	E	SE	<u>S</u>	SW	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		<u>RAIN</u>		?		TEMPERATURE: <u>F 43.0</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/17/21	10:50	115.10	.	42.06	.	73.04	X 1 11.90
/ /	:	.	.	.	.	.	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	2/17/21	11:20	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/21	11:20	A	1 250, <u>500</u> 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/21	11:20	A	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		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
	VOA - Glass	<u>8260</u> (8011)	OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []
WHITE - Poly	(pH) (Conductivity) <u>(DS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(S)</u> (SO ₄) (Silica, T.) <u>(NO3)</u>	
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) (Ti) (V) (Zn) (Hardness)	
RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)	

WATER QUALITY DATA

Purge Start Time: 10:58

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(1101)	0.00	6.12	117.1	286.9	6.6	41.14	4.13	Clear/colorless
1	A(1104)	0.18	6.66	75.3	283.4	9.0	42.29	3.19	Clear/colorless
2	A(1107)	0.36	6.75	69.4	283.4	9.0	42.29	3.13	Clear/colorless
3	A(1110)	0.54	6.83	62.8	285.2	8.9	42.83	3.04	Clear/colorless
4	A(1113)	0.72	6.84	62.1	286.9	8.8	43.03	3.02	Clear/colorless
5	A(1116)	0.90	6.85	58.9	287.1	8.9	43.03	3.01	Clear/colorless
6	A(1119)	1.08	6.85	57.2	286.5	8.9	43.03	2.94	Clear/colorless

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 20/10/60 psi ~ 225 ml/min

SAMPLER:

(PRINTED NAME)

I. Hultquist

(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 _____ OF _____ COC# _____

PROJECT NAME Leyhner landfill					NUMBER OF CONTAINERS	<input type="checkbox"/> Semi-volatile Organics by GC/MS 825 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/> <input type="checkbox"/> Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/> <input type="checkbox"/> Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/> <input type="checkbox"/> Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/> <input type="checkbox"/> PCBs <input type="checkbox"/> Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/> 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 8141 <input type="checkbox"/> <input type="checkbox"/> Chlorophenolics - 8151 <input type="checkbox"/> 8151 <input type="checkbox"/> <input type="checkbox"/> Metals, Total or Dissolved (See List below) <input type="checkbox"/> PCP <input type="checkbox"/> <input type="checkbox"/> Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/> (circle) pH, Cond. (Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb. (circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, I-Phos TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/> Alkalinity <input type="checkbox"/> CO3 <input type="checkbox"/> HCO3 <input type="checkbox"/> Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/> Dissolved Gases CO2 <input type="checkbox"/> RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/>	REMARKS														
PROJECT NUMBER 04221030.13																					
PROJECT MANAGER Rach Cary / T Andlows																					
COMPANY NAME SCS Engineers																					
ADDRESS 15940 SW 72nd Ave Portland, OR 97224																					
CITY/STATE/ZIP																					
E-MAIL ADDRESS Tandlows@scsengineers.com																					
PHONE # 503 724-0112 FAX # _____																					
SAMPLER'S SIGNATURE 																					
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX																	
Trip Blanks	2-17-21	0700		W	2				X												
LB-021721-01-270	2-17-21	1120		W	5				X												
LB-021721-02-130	2-17-21	1225		W	5				X												
LB-021721-03-260	2-17-21	1320		W	5				X												
LB-021721-04-50	2-17-21	1435		W	5				X												
LB-021821-01-100R	2-18-21	0835		W	5				X												
LB-021821-02-FB	2-18-21	0900		W	5				X												
LB-021821-03-185R	2-18-21	0930		W	5				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: _____ _____ _____		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 Ti Sn <u>V</u> Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)
	TURNAROUND REQUIREMENTS _____ 24 hr. _____ 48 hr. _____ 5 day <input checked="" type="checkbox"/> Standard (15 working days) _____ Provide FAX Results _____ Requested Report Date _____		SPECIAL INSTRUCTIONS/COMMENTS: Metals are field filtered <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)
	RELINQUISHED BY: Signature: Rach Cary Date/Time: 2/18/21 0950 Printed Name: Rach Cary Firm: SCS		

RECEIVED BY: Signature: Rach Cary Date/Time: 2/18/21 Printed Name: Rach Cary Firm: SCS	RECEIVED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____	RECEIVED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____
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CHAIN OF CUSTODY

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

PAGE 2 OF 2 SR# _____ COC# _____

PROJECT NAME	Lechner Landfill
PROJECT NUMBER	04221030.13
PROJECT MANAGER	Garb Lacy / T Andrews
COMPANY NAME	SCS Engineers
ADDRESS	15940 SW 72nd Ave
CITY/STATE/ZIP	Portland, OR 97224
E-MAIL ADDRESS	Tandrews@scsengineers.com
PHONE	503 724-0112
FAX #	
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	ANALYSIS CHECKBOXES																		REMARKS								
						Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/>	Hydrocarbons ("see below") Gas <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> Oil <input type="checkbox"/>	PCBs 1664 SGT <input type="checkbox"/>	Aroclors <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) 8151 <input type="checkbox"/>	Cyanide <input type="checkbox"/>	Hex-Chrom <input type="checkbox"/>	(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 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/>	CO ₂ <input type="checkbox"/>									
LB-021921-04-771	2-19-21	1125		W	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
LB-021921-05-082	2-19-21	1130		W	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____ _____	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 Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: Metals are field filtered

RELINQUISHED BY: Signature: <u>[Signature]</u> Date/Time: <u>2-19-21 1211</u> Printed Name: <u>Tandrews</u> Firm: <u>SCS</u>	RECEIVED BY: Signature: <u>[Signature]</u> Date/Time: <u>2/19/21</u> Printed Name: <u>Monique</u> Firm: <u>ALS</u>	RELINQUISHED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____	RECEIVED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____
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PROJECT NAME <i>Lechner Landfill</i>	NUMBER OF CONTAINERS	<input type="checkbox"/> Semivolatile Organics by GC/MS 825 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	<input type="checkbox"/> BTEX <input type="checkbox"/>	<input type="checkbox"/> Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	<input type="checkbox"/> Aroclors <input type="checkbox"/>	<input type="checkbox"/> Pesticides/Herbicides 608 <input type="checkbox"/> 808 <input type="checkbox"/> 814 <input type="checkbox"/> 8151 <input type="checkbox"/>	<input type="checkbox"/> Chlorophenolics - 8151M Tri <input type="checkbox"/> Tetra <input type="checkbox"/> PCP <input type="checkbox"/>	<input type="checkbox"/> Metals, Total or Dissolved (See List below)	<input type="checkbox"/> Cyanide <input type="checkbox"/>	<input type="checkbox"/> (circle) pH, Cond, Oil SO ₄ , PO ₄ , F, NO ₂ , NO ₃ , BOD, TSS, TDS, Turb.	<input type="checkbox"/> (circle) NH ₃ -N, COD, TKN, TOC, DOC, NO ₂ +NO ₃ , T-Phos	<input type="checkbox"/> TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	<input type="checkbox"/> Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input type="checkbox"/>	<input type="checkbox"/> Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	<input type="checkbox"/> Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/>	<input type="checkbox"/> CO ₂ <input type="checkbox"/>		
PROJECT NUMBER <i>04220030-13</i>																		
PROJECT MANAGER <i>Tiffany Andrews</i>																		
COMPANY NAME <i>SCS Engineers.com</i>																		
ADDRESS <i>15940 SW 72nd Avenue</i>																		
CITY/STATE/ZIP <i>Portland, OR 97224</i>																		
E-MAIL ADDRESS <i>Tandrews@scsengineers.com</i>																		
PHONE # <i>503-724-0112</i>																		
SAMPLER'S SIGNATURE																		

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	CONTAINERS	Semivolatile Organics by GC/MS	Volatile Organics	Hydrocarbons	Oil & Grease/TRPH	PCBs	Aroclors	Pesticides/Herbicides	Chlorophenolics	Metals, Total or Dissolved	Cyanide	(circle) pH, Cond, Oil 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	CO ₂	REMARKS	
<i>LB-022321-03-68</i>	<i>2/23/01</i>	<i>1440</i>			<i>4</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<i>LB-022321-01-15</i>	<i>2/23/01</i>	<i>1200</i>			<i>4</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<i>LB-022321-02-26</i>	<i>2/23/01</i>	<i>1350</i>			<i>4</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<i>Top Reads</i>	<i>-</i>	<i>-</i>		<i>W</i>	<i>2</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																										

<p>REPORT REQUIREMENTS</p> <p><input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required</p> <p><input type="checkbox"/> II. Report Dup., MS, MSD as required</p> <p><input type="checkbox"/> III. CLP Like Summary (no raw data)</p> <p><input type="checkbox"/> IV. Data Validation Report</p> <p><input type="checkbox"/> V. EDD</p>	<p>INVOICE INFORMATION</p> <p>P.O. # _____</p> <p>Bill To: _____</p>	<p>Circle which metals are to be analyzed:</p> <p>Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg</p> <p>Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg</p> <p>*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)</p> <p>SPECIAL INSTRUCTIONS/COMMENTS:</p> <p><i>Metals are Field Filtered</i></p> <p><input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)</p>
<p>TURNAROUND REQUIREMENTS</p> <p>_____ 24 hr. _____ 48 hr.</p> <p>_____ 5 day</p> <p><input checked="" type="checkbox"/> Standard (15 working days)</p> <p>_____ Provide FAX Results</p> <p>Requested Report Date _____</p>		

<p>RELINQUISHED BY:</p> <p><i>T. Andrews</i> Signature Date/Time: <i>2/24/01</i> Firm: <i>SCS</i></p>	<p>RECEIVED BY:</p> <p><i>[Signature]</i> Signature Date/Time: <i>2/24/01</i> Firm: <i>[Firm]</i></p>	<p>RELINQUISHED BY:</p> <p>_____ Signature Date/Time: _____ Firm: _____</p>	<p>RECEIVED BY:</p> <p>_____ Signature Date/Time: _____ Firm: _____</p>
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Second Quarter (May) 2021 FSDSs

SCS ENGINEERS

Field Report Form

Client: Lechner Landfill		Weather: Sunny ~ 60°F
Project: 04221030.13		Date: 5/13/2021
Event: 2Q2021		Arrival: 0930
Prepared By: K. Kingen	Address: Vancouver, WA	Departure: 1430
- Arrived @ SCS Portland to load gear into trucks, then departed for site.		
- Arrived onsite, met with client (Mike), as well as several SCS personnel.		
- Began site tour and sampling.		
- Completed site tour and sampling, departed site.		

Signed: 

Landfill Visual Inspection Program

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

Landfill *Leichner*
Inspector *K. Kinger*
Date *5/13/2021*
Reason for inspection
1st, 2nd, 3rd, or 4th groundwater monitoring event
Other

Notes:

Field Calibration Log

SCS Engineers

Equipment: YSI			Serial Number: 175102917		Field Staff: K. Kingen			
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)
Leichner	5/13/21 1007 KK	1007	18.0	8.12	4.0	7.01	1412	219.9
Notes:								



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 _____ OF _____ COC# _____

PROJECT NAME <i>Leitchner Landfill</i>	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>
PROJECT NUMBER <i>01221030-13</i>		Volatile Organics 624 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/>
PROJECT MANAGER <i>Tiffany Andrews</i>		Hydrocarbons (*see below) 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>
COMPANY NAME <i>SCS Engineers</i>		Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>
ADDRESS <i>15940 SW 22nd Ave</i>		Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>
CITY/STATE/ZIP <i>Portland, OR 97224</i>		PCBs Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/>
E-MAIL ADDRESS <i>T.Andrews@scsengineers.com</i>		Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>
PHONE # <i>503.421.0112</i>	Chlorophenolics - 8151M Tri <input type="checkbox"/> Tetra <input type="checkbox"/> PCP <input type="checkbox"/>	REMARKS
FAX # <i>0</i>	Metals, Total or Dissolved (See List below)	
SAMPLER'S SIGNATURE <i>[Signature]</i>	Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>	
	(circle) pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , DOC, NH ₃ -N, COD, TKN, TOC, TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	
	(circle) NH ₃ -N, COD, TKN, TOC, TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	
	Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input type="checkbox"/>	
	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	
	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS	Volatile Organics	Hydrocarbons	Gas	Oil & Grease/TRPH	PCBs	Aroclors	Pesticides/Herbicides	Chlorophenolics	Metals, Total or Dissolved	Cyanide	(circle) pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , DOC, NH ₃ -N, COD, TKN, TOC, TOX 9020	Alkalinity	Dioxins/Furans	Dissolved Gases	Methane	Ethane	Ethene	REMARKS	
LB-051321-01-27I	5/13/21	1120		W		X	X																		
LB-051321-03-1S	5/13/21	1225		W		X	X																		
LB-051321-02-FB	5/13/21	1150		W		X	X																		
LB-051321-04-1SR	5/13/21	1320		W		X	X																		
LB-051321-05-DUP	5/13/21	1325		W		X	X																		

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____ _____ _____	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
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: Signature: <i>[Signature]</i> Date/Time: <i>5/14/21 08:45</i> Printed Name: _____ Firm: _____	RECEIVED BY: Signature: <i>[Signature]</i> Date/Time: <i>5/14/21 08:45</i> Printed Name: _____ Firm: _____	RELINQUISHED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____	RECEIVED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____
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FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-27E

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-051321-01-27E

DUP ID: NA

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 64 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
5/13/21	10:48	59.13	---	34.59	---	22.54	X1 3.67
/ /	:	.	.	.	.	.	X3 11.02

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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (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	5/13/21	11:20	<u>A</u>	3 40 ml	<u>HCl</u>	<u>YES</u>	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	/ /	:		250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	/ /	:		125, 250, 500	HNO ₃	YES	YES		
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 3 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 [X] 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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 10:54 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(1054)	0.00	6.70	154.8	240.7	12.5	34.59	10.5	Clear, colorless
1	A(1059)	0.1	6.60	156.1	242.4	12.4	34.60	0.99	" "
2	A(1102)	0.21	6.56	151.9	244.1	12.3	34.60	0.45	" "
3	A(1105)	0.31	6.62	145.0	246.2	12.3	34.60	0.40	" "
4	A(1109)	0.42	6.62	139.1	248.8	12.3	34.60	0.36	" "
5	A(1111)	0.52	6.69	137.4	251.7	12.3	34.60	0.34	" "
6	A(1114)	0.63	6.60	131.4	253.8	12.3	34.59	0.31	" "

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

Collected Near: Lowflow purge: 8/7/35psi ~ 300-400 mL/min

SAMPLER: Kora Kruger
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-18

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-051321-03-18

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY CLOUDY RAIN ?										
										TEMPERATURE: 64 °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

[Circle appropriate units]

[Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
5/13/21	12:00	45.00	/	36.04	/	8.36	X 1 1.36
1/1	:	.	/	.	/	.	X 3 4.09

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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (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	5/13/21	12:25	A	3 40 ml	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	/ /	:		250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	/ /	:		125, 250, 500	HNO ₃	YES	YES		
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

3

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) (Ti) (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	A(1202)	0.00	6.91	143.8	260.8	13.8	36.65	4.94	Light tan, slightly cloudy
1	A(1216)	0.1	6.94	149.2	263.9	13.2	36.66	3.83	Clear, colorless
2	A(1213)	0.21	6.90	150.0	269.0	13.0	36.65	3.75	"
3	A(1216)	0.31	6.68	150.3	265.2	12.8	36.65	3.67	"
4	A(1219)	0.42	6.67	149.8	265.6	12.9	36.66	3.54	"
5	A(1222)	0.52	6.67	149.6	265.9	12.9	36.66	3.49	"
6									

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

Low Flow Purge Method: 8/7/30 psi ~ 400 mL/min

SAMPLER:

Karen Kingen
(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: Lechner Landfill **WELL ID:** LR-051321-03-FB

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:**

DUP ID: **NA**

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 67.0 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (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	<u>5/13/01</u>	<u>11:50</u>	<u>GA</u>	3 40 ml	<u>HCL</u>	<u>YES</u>	NO		<input checked="" type="checkbox"/>
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	/ /	:		250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	/ /	:		125, 250, 500	HNO ₃	YES	YES		
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 3 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	<u>(8260)</u> (8011) OR [] WA <input checked="" type="checkbox"/>
	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) (TI) (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]

Collected at near: LR-18

SAMPLER: T Andrews
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-103R

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-051321-04-103R

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: (°F) 92. °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

[Circle appropriate units]

[Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
5/13/21	12:59	42.35	.	34.78	.	7.57	X 1 1.23
/ /	:	X 3 3.70

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
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§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (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	5/13/21	13:20	A	3 40 ml	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	/ /	:		250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	/ /	:		125, 250, 500	HNO ₃	YES	YES		
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

3

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)	(TI)	(V)	(Zn)	(Hardness)
	RED DISSOLVED - Poly	(Ca)	(Fe)	(Mg)	(Mn)	(K)	(Na)												

WATER QUALITY DATA

Purge Start Time: 13:01

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(1302)	0.00	6.47	152.7	207.1	16.5	34.79	5.11	Clear, colorless
1	A(1305)	0.1	6.33	156.6	208.0	16.2	34.79	3.13	" "
2	A(1308)	0.21	6.31	156.9	209.4	15.7	34.79	2.33	" "
3	A(1311)	0.31	6.32	155.6	211.0	15.7	34.79	1.75	" "
4	A(1314)	0.42	6.32	154.5	211.3	15.7	34.79	1.64	" "
5	A(1317)	0.52	6.34	153.0	212.2	15.5	34.79	1.59	" "
6									

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: 9/6 | 30 psi ~ 400 mL/min

SAMPLER: Kara Kinyon
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-051321-05-DUP
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:**

DUP ID: NA

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

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

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

(Circle appropriate units) [Water Column x Gal/ft]

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: [N if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	5/13/21	13:25	A	3 40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	/ /	:		250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	/ /	:		125, 250, 500	HNO ₃	YES	YES		
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 3 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 ₁) (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) (TI) (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]

Collected at: LB-10SR

SAMPLER: T Andrews
(PRINTED NAME)

(SIGNATURE)

Third Quarter (July) 2021 FSDSs

SCS ENGINEERS

Field Report Form

Page 1 of 1

Client: Lechner Bros Landfill		Weather: Sunny 80F	
Project: 04221030.13		Date: 8/10/2021	
Event: 3Q2021 Monitoring		Arrival: 0700	
Prepared By: J. Hultquist	Address: Vancouver, WA		Departure: 1400
<ul style="list-style-type: none">- Loaded up truck, departed for site,- Stopped at Safeway for Ice- Arrived onsite, Calibrated YSI probes- Resumed GW Sampling- Sampled LB-10SR, FB(LB-10SR), LB-1S, LB-2GS, LB-6J- Loaded up equipment, departed for office- Left samples on ice for courier pickup on 8/11/2021			

Signed: _____

Landfill Visual Inspection Program

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

Landfill Lechner Bros Landfill
Inspector I. Hultquist
Date 8/09/2021
Reason for inspection
1st, 2nd, 3rd, or 4th groundwater monitoring event
Other

Notes: Sunny 80°F

Field Calibration Log SCS Engineers

Equipment: YSI Pro Plus			Serial Number: 17J 102717		Field Staff: I. Holtquist			
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)
LBLE / 04221030.13	8/9/2021	1130	24.5	8.20	4.00	7.00	1413	220.0
LBLE / 04221030.13	8/10/2021	0720	21.2	8.83	4.00	7.00	1413	220.0
Notes:								

Leichner Landfill Groundwater Elevation Survey

Project #: 04221030.13

Sampler: J. Hultquist

Quarter: 1 2 3 4

Date: 8/9/2021

Monitoring Point Designation	Reference Elevation (ft. msl)	DTB (ft. btoc)	DTW (ft. btoc)	Time	Comments
Monitoring Wells					
MW-1 N	216.58	15.00	NA	0953	Dry @ 14.99
MW-1 S	216.13	44.50	42.62	0952	
MW-1 E	216.45	29.05	NA	0954	Dry @ 29.01
MW-NE	219.83	50.34	17.51	0819	
LB-R2	222.27	77.36	50.68	0838	
LB-1S	210.12	45.00	38.36	1006	
LB-1D	209.74	137.45	41.17	1008	
LB-3S	218.25	52.50	43.59	1015	
LB-3D	219.29	117.28	44.91	1022	
LB-5S	206.89	30.32	17.13	0744	
LB-5C	206.70	74.71	38.42	0747	
LB-5D	207.56	122.40	42.84	0740	
LB-6S	202.80	39.07	32.17	0931	
LB-9SR	217.94	49.60	40.55	1028	
LB-10SR	204.04	42.35	36.62	0944	
LB-10CR	203.05	71.95	35.50	0939	
LB-10DR	203.36	121.10	48.58	0941	
LB-13I	202.36	55.03	32.89	0919	
LB-13C	202.68	66.00	33.30	0917	
LB-13D	202.96	88.88	33.68	0915	
LB-17S	208.18	34.38	NA	0845	TD - 34.42 Dry
LB-17I	213.14	51.95	41.57	0856	
LB-17C	206.55	72.35	35.26	0843	
LB-17D	213.17	100.91	42.49	0849	
LB-20S	221.22	61.50	44.60	0959	
LB-21S	223.35	54.24	41.90	0829	
LB-21C	223.32	79.10	42.31	0831	
LB-21D	223.63	110.73	45.56	0829	0828
LB-22S	208.42	36.97	9.82	0814	
LB-23S	229.19	45.40	33.88	0810	
LB-24S	235.13	54.16	40.96	0805	
LB-26I	200.22	58.30	30.21	0926	
LB-26D	200.75	101.78	36.06	0928	
LB-27I	205.35	57.15	36.33	0906	
LB-27D	204.65	115.10	43.41	0910	

Notes:

Sunny 83°F
Probe disconnected between locations/wells

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-1S

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-081021-03-1S

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
	SUNNY			CLOUDY			RAIN			?	
WEATHER:	TEMPERATURE: F 80.0 °C										

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/10/21	11:15	45.00	.	38.36	.	.	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	8/10/21	11:40	A	3	40 ml	HCl	YES	NO	
Amber Glass	/ /	:			(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/10/21	11:40	A	1	250, 500, 1L	None	YES	NO	NA
Yellow Poly	/ /	:			250, 500, 1L	H ₂ SO ₄	YES	NO	
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO	
Red Total Poly	/ /	:			125, 250, 500	HNO ₃	YES	NO	
Red Diss. Poly	8/10/21	11:40	A	1	125, 250, 500	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	(8250) (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (DB) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₄) (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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 11:16

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(1118)	0.00	6.74	117.5	267.8	18.7	38.37	6.98	Clear/colorless
1	A(1121)	0.25	6.78	115.3	272.0	15.0	38.37	6.16	" "
2	A(1124)	0.50	6.61	114.9	272.1	14.3	38.37	5.75	" "
3	A(1127)	0.75	6.31	118.2	272.8	14.3	38.37	5.60	" "
4	A(1130)	1.00	6.10	123.8	273.8	14.1	38.37	5.41	" "
5	A(1133)	1.25	6.06	122.9	273.6	14.1	38.37	5.33	" "
6	A(1136)	1.50	6.04	121.8	273.5	14.0	38.37	5.31	" "

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

Low Flow Purge Method: (9/6/35psi) ~ 300ml/min

SAMPLER:

(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS	15940 SW 72nd Avenue, Portland, OR 97224 Office: 503.639.9201 Fax: 503.684.6984
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PROJECT NAME: Lechner Landfill **WELL ID:** LB-5S
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-080921-01-5S

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	<u>LIGHT</u>	MEDIUM	HEAVY
WEATHER:	<u>SUNNY</u>		CLOUDY		RAIN		?		TEMPERATURE: <u>67.3.0</u> °C		

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)
8/9/21	12:24	30.32	-	17.13	.	.	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	8/9/21	12:45	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/9/21	12:45	A	1 250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/9/21	12:45	A	1 <u>25</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		
	/ /	:		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)	OR []	WA []	
	VOA - Glass	<u>8280</u> (8011)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
	AMBER - Glass	(8080) (8150) (TOX)		<input type="checkbox"/>	<input type="checkbox"/>
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>			
	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) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)			

WATER QUALITY DATA Purge Start Time: 12:26 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp <u>°C</u>	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1227)	0.00	6.79	76.1	324.1	18.4	17.16	11.50	clear/colorless
1	A(1230)	0.25	6.84	52.3	251.2	15.2	17.16	9.86	" "
2	A(1233)	0.50	7.08	48.9	230.1	15.0	17.16	9.54	" "
3	A(1236)	0.75	7.15	44.4	223.3	15.1	17.16	9.47	" "
4	A(1239)	1.00	7.18	41.0	223.0	15.0	17.16	9.49	" "
5	A(1242)	1.25	7.20	39.9	229.9	15.0	17.16	9.45	" "
6									

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

Low Flow Purge Method: (8/7/20psi) ~ 300ml/min

SAMPLER: I. Hultquist 
 (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: Lechner Landfill

WELL ID: LB-6S

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-081021-056S

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 83.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
8/10/21	12:47	39.07	.	32.20	.	.	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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (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	8/10/21	13:10	A	3 40 ml	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/10/21	13:10	A	1 250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/10/21	13:10	A	1 125, 250, 500	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)				OR []	WA []
	VOA - Glass	(8260)	(8011)				WA []
	AMBER - Glass	(8080)	(8150)	(TOX)			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 ₂ /NO ₃) (Tannin/Lignin)					
	GREEN - Poly	(Cyanide)					
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hardness)					
	RED DISSOLVED - Poly	(Ca) (Mg) (Mn) (K) (Na)					

WATER QUALITY DATA

Purge Start Time: 12:48

Pump/Bailor Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1253)	0.00	7.02	54.9	201.7	18.3	32.21	9.27	clear/colorless
1	A(1256)	0.30	7.01	38.6	231.3	17.4	32.21	7.12	clear/colorless
2	A(1259)	0.60	6.99	36.1	230.0	16.6	32.21	7.23	clear/colorless
3	A(1302)	0.90	6.99	34.7	230.8	16.9	32.21	7.20	clear/colorless
4	A(1305)	1.20	6.99	32.1	232.7	16.8	32.21	7.22	clear/colorless
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: (8/7/25 psi) ~ 350ml/min

SAMPLER:

(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: Lechner Landfill **WELL ID:** LB-105R
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-081021-02-105R

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	<u>LIGHT</u>	MEDIUM	HEAVY
	<u>SUNNY</u>			CLOUDY			RAIN			?	
WEATHER:	TEMPERATURE: <u>60.0</u> °C										

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/10/21	08:04	42.35	.	36.67	.	.	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)

Bottle Type	Date	Time	Method ^s	Amount & Volume mL	Preservative (circle)	Ice	Filter	pH	√ (if used)
VOA Glass	8/10/21	08:30	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/10/21	08:30	A	1 <u>250, 500, 1L</u>	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/10/21	08:30	A	1 <u>125, 250, 500</u>	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		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	<u>2260</u> (8011)	OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []
WHITE - Poly	(pH) (Conductivity) <u>TDS</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>Cl</u> (SO ₄) (Silica, T.) <u>NO3</u>	
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) <u>Fe</u> (Mg) <u>Mn</u> (K) (Na)	

WATER QUALITY DATA Purge Start Time: 08:06

Meas.	Method ^s	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O ₂ (mg/l)	Water Quality
0	<u>A(0808)</u>	<u>0.00</u>	<u>6.36</u>	<u>166.2</u>	<u>428.5</u>	<u>18.2</u>	<u>36.67</u>	<u>3.44</u>	<u>clear/colorless</u>
1	<u>A(0811)</u>	<u>0.20</u>	<u>5.97</u>	<u>137.9</u>	<u>303.8</u>	<u>15.9</u>	<u>36.67</u>	<u>2.55</u>	<u>clear/light tan</u>
2	<u>A(0814)</u>	<u>0.40</u>	<u>5.97</u>	<u>133.6</u>	<u>286.0</u>	<u>15.4</u>	<u>36.67</u>	<u>2.40</u>	<u>clear/colorless</u>
3	<u>A(0817)</u>	<u>0.60</u>	<u>6.02</u>	<u>125.3</u>	<u>280.1</u>	<u>15.1</u>	<u>36.67</u>	<u>2.04</u>	<u>clear/colorless</u>
4	<u>A(0820)</u>	<u>0.80</u>	<u>6.06</u>	<u>119.0</u>	<u>271.7</u>	<u>15.0</u>	<u>36.67</u>	<u>1.86</u>	<u>clear/colorless</u>
5	<u>A(0823)</u>	<u>1.00</u>	<u>6.09</u>	<u>110.5</u>	<u>266.5</u>	<u>15.1</u>	<u>36.67</u>	<u>1.80</u>	<u>clear/colorless</u>
6	<u>A(0826)</u>	<u>1.20</u>	<u>6.10</u>	<u>108.7</u>	<u>266.0</u>	<u>15.1</u>	<u>36.67</u>	<u>1.82</u>	<u>clear/colorless</u>

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

Low Flow Purge Method: (8/7 / 25psi) ~ 250 ml/min

SAMPLER: T. Hultquist (PRINTED NAME) [Signature] (SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: FB

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-081021-01-FB

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	<u>LIGHT</u>	MEDIUM	HEAVY
	WEATHER: <u>SUNNY</u>								CLOUDY	RAIN	?	TEMPERATURE: 60.0 °F

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 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 =

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	8/10/21	07:45	G	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/10/21	07:45	G	1 250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/10/21	07:45	G	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		
	/ /	:		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	<u>(8260)</u> (8011)	OR [ ] WA [ X ]
AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []
WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T) <u>(NO3)</u>	
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) (Ti) (V) (Zn) (Hardness)	
RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (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		<u>0.00</u>	.	.	.	.	.	.	.
1	
2	
3	
4	
5	
6	

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Collected Near: LB-10SR

SAMPLER: I. Holtquist
(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: Lechner Landfill

WELL ID: LB-13I

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-080921-03-13I

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: °F 80.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
8/9/21	14:17	55.03	.	32.86	.	.	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	8/9/21	14:40	A	3 40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/9/21	14:40	A	1 250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/9/21	14:40	A	1 25, 250, 500	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)	OR []	WA []
	VOA - Glass	(8260) (8011)		WA [X]
	AMBER - Glass	(8080) (8150) (TOX)		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 ₂ /NO ₃) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hardness)		
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)		

WATER QUALITY DATA

Purge Start Time: 14:19

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	7.11	6.2	267.7	18.5	32.87	5.33	clear/colorless
1	A(1426)	0.25	7.15	6.1	283.3	16.0	32.87	4.27	clear/colorless
2	A(1429)	0.50	7.48	5.4	283.4	15.9	32.87	4.00	clear/colorless
3	A(1432)	0.75	7.46	-3.5	285.1	16.1	32.87	3.57	clear/colorless
4	A(1435)	1.00	7.49	-8.9	285.8	16.1	32.87	3.38	clear/colorless
5	A(1438)	1.25	7.53	-13.7	286.4	15.8	32.87	3.32	clear/colorless
6									

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: (8/7/30psc) ~ 400 ml/min

SAMPLER:

(PRINTED NAME)

I. Hultquist

(SIGNATURE)

[Signature]

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: DUP

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-080921-04 - DUP

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	LIGHT	MEDIUM	HEAVY
	WEATHER: <u>SUNNY</u> CLOUDY RAIN ?								TEMPERATURE: °F <u>80.0</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
<u>/ /</u>	<u>:</u>	<u>.</u>	<u>.</u>	<u>.</u>	<u>.</u>	<u>.</u>	X 1
<u>/ /</u>	<u>:</u>	<u>.</u>	<u>.</u>	<u>.</u>	<u>.</u>	<u>.</u>	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	<u>8/9/21</u>	<u>14:45</u>	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		<input checked="" type="checkbox"/>
Amber Glass	<u>/ /</u>	<u>:</u>		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	<u>8/9/21</u>	<u>14:40</u>	A	1 250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	<input checked="" type="checkbox"/>
Yellow Poly	<u>/ /</u>	<u>14:49</u>		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	<u>/ /</u>	<u>:</u>		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	<u>/ /</u>	<u>:</u>		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	<u>8/9/21</u>	<u>14:40</u>	A	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		<input checked="" type="checkbox"/>
	<u>/ /</u>	<u>14:45</u>		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	<u>8260</u> (8011) OR [] WA <input checked="" type="checkbox"/>
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>TDS</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>Cl</u> (SO ₄) (Silica, T) <u>NO₃</u>
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>Fe</u> (Mg) <u>Mn</u> (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		<u>0.00</u>	.				.	.	
1		
2		
3		
4		
5		
6		

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

Collected at: LB-13I

SAMPLER: I. Hultquist
(PRINTED NAME)

(SIGNATURE) [Signature]

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-26I

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-081021-04-26I

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	<u>LIGHT</u>	MEDIUM	HEAVY
	<u>SUNNY</u>		CLOUDY		RAIN		?		TEMPERATURE: <u>F 80</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/10/21	12:07	58.30	.	30.22	.	.	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	8/10/21	12:25	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/10/21	12:25	A	1 250, 500 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/10/21	12:25	A	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		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	<u>8260</u> (8011)
	AMBER - Glass	(8080) (8150) (TOX)
	WHITE - Poly	(pH) (Conductivity) <u>TDS</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>Cl</u> (SO ₄) (Silica, T) <u>NO₃</u>
	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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>Fe</u> (Mg) <u>Mn</u> (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	A(1209)	0.00	6.80	95.7	254.9	19.0	30.22	5.29	Clear/colorless
1	A(1212)	0.40	6.68	92.5	253.0	14.4	30.22	4.50	Clear/colorless
2	A(1215)	0.80	6.56	86.9	258.3	13.9	30.22	4.73	Clear/colorless
3	A(1218)	1.20	6.56	74.6	258.7	13.7	30.22	4.87	Clear/colorless
4	A(1221)	1.60	6.52	76.9	262.4	13.8	30.22	4.70	Clear/colorless
5									
6									

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

Low Flow Purge Method: (8/17/40psi) ~ 500ml/min

SAMPLER:

I. Helton
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-27I

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-080921-02-27I

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	<u>LIGHT</u>	MEDIUM	HEAVY	
WEATHER:	<u>SUNNY</u>			CLOUDY	RAIN			?	TEMPERATURE: <u>76.0</u> °C			

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
8/9/21	13:19	57.15	.	36.33	.	.	X 1	.
/ /	:	.	.	.	.	.	X 3	.
Gal/ft = (dia./2) ² x 0.163		1" = 0.041	<u>2</u> " = 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)

Bottle Type	Date	Time	Method [§]	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	8/9/21	13:45	A	3	<u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>	
Amber Glass	/ /	:			(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/9/21	13:45	A	1	250, <u>500</u> , 1L	<u>None</u>	<u>YES</u>	<u>NO</u>	NA
Yellow Poly	/ /	:			250, 500, 1L	H ₂ SO ₄	YES	NO	
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO	
Red Total Poly	/ /	:			125, 250, 500	HNO ₃	YES	NO	
Red Diss. Poly	8/9/21	13:45	A	1	<u>25</u> 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>	
	/ /	13:45			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	<u>(8280)</u> (8011) OR [] WA <u>[X]</u>
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA Purge Start Time: 13 : 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(1324)	0.00	7.12	69.1	236.0	17.4	36.35	8.98	clear/colorless
1	A(1327)	0.20	7.25	44.0	235.1	16.9	36.35	4.17	clear/colorless
2	A(1330)	0.40	7.38	42.4	234.3	16.6	36.35	3.31	clear/colorless
3	A(1333)	0.60	7.39	36.2	234.7	16.5	36.35	3.10	clear/colorless
4	A(1336)	0.80	7.33	28.3	236.4	16.5	36.35	2.94	clear/colorless
5	A(1339)	1.00	7.34	25.1	239.3	16.3	36.35	2.91	clear/colorless
6	A(1342)	1.20	7.36	22.9	240.6	16.3	36.35	2.90	clear/colorless

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

Low Flow Purge Method: (0.7/35 psi) ~ 250 ml/min
JH

SAMPLER: J. Holtquist
(PRINTED NAME)

(SIGNATURE)



CHAIN OF CUSTODY

SR# _____

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

PAGE 1OF 1

COC# _____

PROJECT NAME	berhaer landfill
PROJECT NUMBER	042210.30.13
PROJECT MANAGER	Barb Cary / T Andrews
COMPANY NAME	SCS Engineers
ADDRESS	15940 SW 72nd Ave
CITY/STATE/ZIP	Portland, OR 97224
E-MAIL ADDRESS	TAndrews@scsengineers.com
PHONE #	503 784-0112 FAX #
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	ANALYSIS CHECKS															REMARKS						
						Semivolatile Organics by GC/MS 825 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/>	Hydrocarbons Gas <input type="checkbox"/> Diesel <input type="checkbox"/> 8021 <input type="checkbox"/>	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	PCBs Aroclors <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> Tetra <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) <input type="checkbox"/>	Cyanide <input type="checkbox"/>	(circle) pH, Cond, Cl, SO4, PO4, F, NO2, NO3 <input type="checkbox"/>	(circle) BOD, TSS, TDS, Turb. <input type="checkbox"/>	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos <input type="checkbox"/>	TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases FSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/>		CO2 <input type="checkbox"/>					
TB1	8/9/21	1130		W	2		X																				
LB-080921-01-55	8/9/21	1245		W	5		X							X	X												
LB-080921-02-27I	8/9/21	1345		W	5		X							X	X												
LB-080921-03-13I	8/9/21	1340		W	5		X							X	X												
LB-080921-04-Dup	8/9/21	1445		W	5		X							X	X												

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____ _____	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 Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input checked="" type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS: Metals are field filtered <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: Signature: _____ Date/Time: 8/10/21 Printed Name: T Andrews Firm: SCS	RECEIVED BY: Signature: _____ Date/Time: 8/10/21 Printed Name: T Andrews Firm: SCS	RELINQUISHED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____	RECEIVED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____
---	---	---	---



Courier/After-Hours Sample Receipt Record

Company: SOS

Date/Time: 8/10 1150 A.M. P.M.

Number of Containers: 1 Cooler Box Other

Containers Received From: [Signature]

Containers Received By: [Signature]

Client Not Available Samples Stored: _____

Relinquished to ALS by: _____ Date/Time: _____ A.M. P.M.

ALS Environmental's Sample Receiving office is open Monday through Friday from 8:00 a.m. to 5:00 p.m. Closed Weekends. Samples delivered outside office hours are placed under the refrigeration and officially received and processed the following business day. Samples received via ALS Environmental courier will be officially received and processed according to the actual time of arrival at the laboratory.

1317 S. 13th Avenue | Kelso, WA 98626 | +1 360 577 7222 | Fax +1 360 636 1068

WHITE - Retained by Originator YELLOW - Courier/Lab



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 <i>Leichner Landfill</i>	NUMBER OF CONTAINERS	<input type="checkbox"/> Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>
PROJECT NUMBER <i>04221030.13</i>		<input type="checkbox"/> Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/>
PROJECT MANAGER <i>Rach Cary / T Andrews</i>		<input type="checkbox"/> Gas <input type="checkbox"/> Hydrocarbons (*see below) 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>
COMPANY NAME <i>SCS Engineers</i>		<input type="checkbox"/> Oil & Grease/TRPH 1664 <input type="checkbox"/> HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>
ADDRESS <i>15940 SW 72nd Ave</i>		<input type="checkbox"/> PCBs
CITY/STATE/ZIP <i>Portland, OR 97224</i>		<input type="checkbox"/> Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/>
E-MAIL ADDRESS <i>TAndrews@SCSEngineers.com</i>		<input type="checkbox"/> Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>
PHONE # <i>503 724 0112</i>	<input type="checkbox"/> Chlorophenolics 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>	
FAX #	<input type="checkbox"/> Metals Total - 8151M (See List below) PCP <input type="checkbox"/>	
SAMPLER'S SIGNATURE <i>[Signature]</i>	<input type="checkbox"/> Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	CONTAINERS	Semivolatile Organics by GC/MS	Volatile Organics	Gas Hydrocarbons	Oil & Grease/TRPH	PCBs	Aroclors	Pesticides/Herbicides	Chlorophenolics	Metals Total	Cyanide	Hex-Chrom	NO ₃ , BOD, TSS, Turb.	NH ₃ -N, COD, TKN, TOC	AOX	CO ₃	HCO ₃	Dissolved Gases	CO ₂	Ethane	ETHANE	REMARKS
TB2	8/10/21	0700		W	2	X																				
LB-081021-01-FB	8/10/21	0745		W	5	X								X		X										
LB-081021-02-1058	8/10/21	0830		W	5	X								X		X										
LB-081021-03-15	8/10/21	1140		W	5	X								X		X										
LB-081021-04-26I	8/10/21	1225		W	5	X								X		X										
LB-081021-05-6S	8/10/21	1310		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: _____ _____ _____	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 TI Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr TI Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)
	TURNAROUND REQUIREMENTS _____ 24 hr. _____ 48 hr. _____ 5 day <input checked="" type="checkbox"/> Standard (15 working days) _____ Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS: <i>Metals are field filtered</i> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: Signature: <i>[Signature]</i> Date/Time: <i>8/10/21 15:11</i> Printed Name: _____ Firm: _____	RECEIVED BY: Signature: <i>[Signature]</i> Date/Time: <i>8/11/21 15:15</i> Printed Name: _____ Firm: _____	RELINQUISHED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____	RECEIVED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____
---	---	---	---

Client: Lechner Bros Landfill	Weather: Sunny 80°	
Project: 04221030.12 / 04221030.05	Date: 8/10/2021	
Event: 99 th Street extension + well development	Arrival: 0900	
Prepared By: I. Hultquist	Address: Vancouver WA	Departure: 1100
<ul style="list-style-type: none">- Arrived at LB-9SR- YSI Pro Plus already calibrated from 3Q GW monitoring. ^{Calibrated} turbidity meter- Surged LB-9SR for ~ 10min with stainless steel bailer- Removed 2 case volumes (~1.5gal) with stainless steel bailer- Deployed Blue Whale / DC pump- Surged well with pump for ~ 2 case volumes.- Purged well until turbidity was ~ 50 NTUs- Departed from LB-9SR to resume 3Q GW monitoring, will return to sample after 24 hours.		

Signed: 

SCS ENGINEERS

Field Report Form

Client: Lechner Bros Landfill Project: 04221030.12 Event: 99th Street Expansion Well Sampling Prepared By: J. Hultqvist	Weather: Sunny 85°F Date: 8/11/21 Arrival: 1140 Departure: 1320
Address: Vancouver WA	
<ul style="list-style-type: none"> - Loaded up car, departed to site, picked up ice in route. - Arrived onsite, & began sampling LB-9SR - Purged for longer / purged more volume due to cloudiness of groundwater. Proceeded to sample once water was clearer and parameters stable. - Put samples on ice, drove back to office for courier pickup. 	

Signed: _____

Field Calibration Log SCS Engineers

Equipment:			Serial Number:		Field Staff:			
YSI Pro Plus			17J102717		I. Hultquist			
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)
LBLF/04221030.12	8/10/21	0720	21.2	8.83	4.00	7.00	1413	220.0
LBLF/04221030.12	8/11/21	1030	23.7	8.39	4.00	7.00	1413	220.0
Notes:								
Calibration on 9/11/2021 was in office								

WELL DEVELOPMENT FORM

SCS ENGINEERS

15940 SW 72nd Ave, Portland, OR 97224
 Ph: (503) 639-9201, Fax: (503) 684-6948

Client: <u>LELF</u>	Date: <u>8/10/2021</u>
Project #: <u>04221030.12</u>	Well ID: <u>LB-982</u>
Site Name: <u>Leichner Bros Landfill</u>	Initial DTW: <u>40.36</u> Final DTW: <u>40.60</u>
Site Location: <u>Vancouver, WA</u>	Initial DTB: <u>49.61</u> Final DTB: <u>49.96</u>
Development Method: <u>Surge + purge</u>	Casing Diameter: <u>2"</u>
Total Water Removed: <u>48 gal</u>	Casing Volume: <u>1.50 gal</u>
Water Contained? <u>Purge to ground</u>	WL Meter #:
Estimate of specific capacity or recharge to well:	Field Personnel: <u>I. Hultquist / K. Kreger</u>

Time	Cumulative Gallons Removed	pH S.U.	Temperature °C	Specific Conductance uS	Dissolved Oxygen mg/L	DTW (TOC) ft-bgs	Silt/Sand mL/1000mL	Comments
Surge well for 10 mins								
0914	0.00	6.79	13.4	199.2	11.04	—	>1000	Brown, muddy
0921	1.50	6.96	12.5	171.4	10.65	40.75	>1000	Dark brown, muddy
0928	3.00	6.93	12.4	179.1	10.99	40.69	>1000	
0951	4.25	7.07	14.6	194.5	11.78	41.56	>1000	
0953	7.50	6.95	12.7	193.5	8.63	41.64	>1000	
0955	9.00	6.87	12.8	200.5	8.08	41.71	>1000	Light brown, turbid
0957	10.50	6.76	12.5	201.8	8.17	41.65	>1000	
0959	12.00	6.81	12.4	203.9	7.49	41.71	>1000	
1002	13.50	6.86	12.6	205.1	7.36	41.71	>1000	
1006	15.00	6.86	12.5	205.8	7.28	41.71	>1000	Tan, turbid
1008	16.50	6.95	12.7	204.9	7.64	41.79	930	
1011	18.00	6.82	12.5	206.6	7.60	41.86	826	
1014	19.50	7.10	12.6	207.1	8.06	41.80	682	
1016	21.00	7.08	12.5	208.3	7.95	41.81	549	
1017	22.50	7.08	12.5	206.4	7.86	41.81	503	
1019	24.00	7.02	12.5	208.3	7.68	41.81	375	
1021	25.50	6.90	12.6	207.7	7.39	41.82	277	Light tan, slightly turbid
1024	27.00	6.91	12.5	208.0	7.46	41.80	235	
1025	28.50	6.90	12.5	208.6	7.51	41.80	211	
1028	30.00	6.84	12.4	208.4	7.50	41.80	182	
1029	31.50	6.84	12.4	207.9	7.48	41.80	172	
1031	33.00	6.85	12.4	208.2	7.45	41.80	145	
1033	34.50	6.85	12.4	208.5	7.42	41.80	155	
1034	36.00	6.84	12.4	208.4	7.38	41.80	148	

Signed: _____

WELL DEVELOPMENT FORM

SCS ENGINEERS

15940 SW 72nd Ave, Portland, OR 97224
 Ph: (503) 639-9201, Fax: (503) 684-6948

Client: <u>LBLF</u>	Date: <u>8/10/2021</u>
Project #: <u>04221030.12</u>	Well ID: <u>LB-982</u>
Site Name: <u>Leichner Bros Landfill</u>	Initial DTW: <u>40.34</u> Final DTW: <u>40.60</u>
Site Location: <u>Vancouver, WA</u>	Initial DTB: <u>49.61</u> Final DTB: <u>49.94</u>
Development Method: <u>Surge + purge</u>	Casing Diameter: <u>2"</u>
Total Water Removed: <u>48 gal</u>	Casing Volume: <u>1.50 gal</u>
Water Contained? <u>Purge to ground</u>	WL Meter #:
Estimate of specific capacity or recharge to well:	Field Personnel: <u>I. Hultquist / K. Krzyzan</u>

Time	Cumulative Gallons Removed	pH S.U.	Temperature °C	Specific Conductance uS	Dissolved Oxygen mg/L	DTW (TOC) ft-bgs	Silt/Sand mL/1000mL	Comments
1035	37.50	6.82	12.4	208.2	7.32	41.80	124	
1038	39.00	6.77	12.4	208.6	7.46	41.80	116	
1039	40.50	6.78	12.4	208.4	7.50	41.80	111	
1041	42.00	6.78	12.4	207.9	7.49	41.80	90.1	
1043	43.50	6.84	12.4	208.5	7.46	41.80	73.8	
1044	45.00	6.81	12.4	208.4	7.56	41.80	54.2	
1046	46.50	6.78	12.4	207.1	7.65	41.80	59.7	
1048	48.00	6.77	12.4	207.7	7.74	41.80	54.0	

Signed: _____

FIELD SAMPLING DATA SHEET

pg 1/2

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-9SR

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-081121-01-9SR

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	LIGHT	MEDIUM	HEAVY
	WEATHER: <u>SUNNY</u>								CLOUDY	RAIN	?	TEMPERATURE: 86.0 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/11/21	11:50	49.96	.	40.60	.	.	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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (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	8/11/21	12:45	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		<u>✓</u>
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/11/21	12:45	A	1 250, 500, <u>1L</u>	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	<u>✓</u>
Yellow Poly	8/11/21	12:45	A	1 <u>250, 500, 1L</u> #	<u>H₂SO₄</u>	<u>YES</u>	<u>NO</u>		<u>✓</u>
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	8/11/21	12:45	A	1 <u>250, 500</u>	<u>HNO₃</u>	<u>YES</u>	<u>NO</u>		<u>✓</u>
Red Diss. Poly	8/11/21	12:45	A	1 <u>250, 500</u>	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		<u>✓</u>
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

04/5/7 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) <u>(TDS)</u> <u>(SS)</u> (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> <u>(SO₄)</u> (Silica, T.) <u>(NO₃)</u>	
YELLOW - Poly	<u>(CO₂)</u> <u>(Fe)</u> <u>(NH₃)</u> (NO ₂ /NO ₃) (Tannin/Lignin)	
GREEN - Poly	(Cyanide)	
RED TOTAL - Poly	<u>(As)</u> <u>(Sb)</u> <u>(Ba)</u> <u>(Be)</u> <u>(Bi)</u> <u>(Br)</u> <u>(Ca)</u> <u>(Cd)</u> <u>(Co)</u> <u>(Cr)</u> <u>(Cu)</u> <u>(Fe)</u> <u>(Pb)</u> <u>(Mn)</u> <u>(Ni)</u> <u>(Ag)</u> <u>(S)</u> <u>(Li)</u> <u>(V)</u> <u>(Zn)</u> (Hardness) <u>(Ca)</u> <u>(K)</u> <u>(Mg)</u> <u>(Na)</u>	
RED DISSOLVED - Poly	<u>(Ba)</u> <u>(Be)</u> <u>(Bi)</u> <u>(Br)</u> <u>(Ca)</u> <u>(Cd)</u> <u>(Co)</u> <u>(Cr)</u> <u>(Cu)</u> <u>(Fe)</u> <u>(Pb)</u> <u>(Mn)</u> <u>(Ni)</u> <u>(Ag)</u> <u>(S)</u> <u>(Li)</u> <u>(V)</u> <u>(Zn)</u> (Hardness) <u>(Ca)</u> <u>(K)</u> <u>(Mg)</u> <u>(Na)</u>	

WATER QUALITY DATA

Purge Start Time: 11:58

Pump/Bailor Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1202)	0.00	6.66	104.6	179.1	16.6	40.62	6.47	Cloudy/light tan
1	A(1205)	0.25	6.21	130.5	177.7	14.2	40.63	6.63	" "
2	A(1208)	0.50	6.28	128.2	183.4	14.1	40.63	6.25	" "
3	A(1211)	0.75	6.35	124.6	188.0	13.6	40.63	5.91	" "
4	A(1214)	1.00	6.47	119.5	192.0	13.6	40.63	5.73	" "
5	A(1217)	1.25	6.52	117.0	194.7	13.5	40.63	5.82	" "
6	A(1220)	1.50	6.50	114.5	198.9	13.7	40.63	5.40	Clearing/light tan

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: (8/7/3 Spsi) ~ 400ml/min

SAMPLER:

(PRINTED NAME)

I. H. H. H. H.

(SIGNATURE)

[Signature]

FIELD SAMPLING DATA SHEET

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SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-9SR
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-081121-01-9SR

DUP ID: NA
WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 86 °F °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/11/21	11:50	49.96	.	40.60	.	.	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	8/11/21	12:45	A	3	<u>40 ml</u>	<u>HCl</u>	<u>YES</u> <u>NO</u>		<input checked="" type="checkbox"/>
Amber Glass	/ /	:			(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/11/21	12:45	A	1	250, 500, 1L	<u>None</u>	<u>YES</u> <u>NO</u>	NA	<input checked="" type="checkbox"/>
Yellow Poly	8/11/21	12:45	A	1	250, 500, 1L	<u>H₂SO₄</u>	<u>YES</u> <u>NO</u>		<input checked="" type="checkbox"/>
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO	
Red Total Poly	8/11/21	12:45	A	1	<u>250</u> 250, 500	<u>HNO₃</u>	<u>YES</u> <u>NO</u>		<input checked="" type="checkbox"/>
Red Diss. Poly	8/11/21	12:45	A	1	<u>250</u> 250, 500	<u>HNO₃</u>	<u>YES</u> <u>YES</u>		<input checked="" type="checkbox"/>

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	<u>8280</u> (8011)	OR [ ]	WA ☒
AMBER - Glass	(8080) (8150) (TOX)	OR []	WA []
WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> <u>(FSS)</u> (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> <u>(Br)</u> (Silica, T) <u>(NO₃)</u>		
YELLOW - Poly	<u>(COD)</u> <u>(POB)</u> <u>(NH₃)</u> (NO ₃ /NO ₂) (Tannin/Lignin)		
GREEN - Poly	(Cyanide)		
RED TOTAL - Poly	<u>(As)</u> <u>(Sb)</u> <u>(Ba)</u> <u>(Be)</u> <u>(Bi)</u> <u>(Br)</u> <u>(Ca)</u> <u>(Cd)</u> <u>(Co)</u> <u>(Cr)</u> <u>(Cu)</u> <u>(Fe)</u> <u>(Pb)</u> <u>(Mn)</u> <u>(Ni)</u> <u>(Ag)</u> <u>(Se)</u> <u>(Th)</u> <u>(V)</u> <u>(Zn)</u> (Hardness) <u>(Ca)</u> <u>(Mg)</u> <u>(Na)</u>		
RED DISSOLVED - Poly	<u>(Ca)</u> <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> <u>(K)</u> <u>(Na)</u>		

WATER QUALITY DATA Purge Start Time: 11:58 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp <u>(C)</u>	DTW	Diss O ₂ (mg/l)	Water Quality
0	<u>A(1223)</u>	<u>0.00-1.75</u>	<u>6.65</u>	<u>111.2</u>	<u>201.4</u>	<u>13.4</u>	<u>40.63</u>	<u>5.50</u>	<u>Clearing/light tan</u>
1	<u>A(1226)</u>	<u>2.00</u>	<u>6.53</u>	<u>110.9</u>	<u>202.0</u>	<u>13.4</u>	<u>40.63</u>	<u>5.30</u>	<u>" "</u>
2	<u>A(1229)</u>	<u>2.25</u>	<u>6.55</u>	<u>109.8</u>	<u>203.6</u>	<u>13.6</u>	<u>40.63</u>	<u>5.32</u>	<u>" "</u>
3	<u>A(1232)</u>	<u>2.50</u>	<u>6.59</u>	<u>107.7</u>	<u>207.2</u>	<u>13.7</u>	<u>40.63</u>	<u>5.12</u>	<u>" "</u>
4	<u>A(1235)</u>	<u>2.75</u>	<u>6.65</u>	<u>104.6</u>	<u>205.2</u>	<u>13.7</u>	<u>40.63</u>	<u>5.23</u>	<u>Slightly cloudy / very tan</u>
5	<u>A(1238)</u>	<u>3.00-3.50</u>	<u>6.65</u>	<u>103.7</u>	<u>204.7</u>	<u>13.7</u>	<u>40.63</u>	<u>5.24</u>	<u>" "</u>
6	<u>A(1241)</u>	<u>3.25</u>	<u>6.63</u>	<u>102.8</u>	<u>204.0</u>	<u>13.6</u>	<u>40.63</u>	<u>5.33</u>	<u>" "</u>

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

Low Flow Purge Method: (8/7/35psi) ~ 400ml/min

SAMPLER: J. Hultquist (PRINTED NAME) [Signature] (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: Lechner Landfill
 PROJECT NUMBER: 04221030.12
 PROJECT MANAGER: Barb Lory / T Andrews
 COMPANY NAME: SCS Engineers
 ADDRESS: 15940 SW 72nd Ave
 CITY/STATE/ZIP: Portland OR 97224
 E-MAIL ADDRESS: Tandrews@scsengineers.com
 PHONE #: (503) 724-0112
 SAMPLER'S SIGNATURE: [Signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	ANALYSIS CHECKS																		REMARKS
						Semivolatiles	Volatiles	Gas	Oil & Grease	PCBs	Aroclors	Pesticides	Chlorophenols	Metals	Cyanide	(circle) pH	(circle) NH ₃ -N	DOC	TOX	Alkalinity	Dioxins	Dissolved Gases	Hardness		Silica
LB-081121-01-9SR	8/11/21	1245		W	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Trip Blank	8/11/21	1100		W	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

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 Ti Sn 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 Ti Sn V Zn Hg

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

SPECIAL INSTRUCTIONS/COMMENTS:

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

RELINQUISHED BY:

Signature: [Signature] Date/Time: 8/11/21 1511
 Printed Name: [Name] Firm: [Firm]

RECEIVED BY:

Signature: [Signature] Date/Time: 8/11/21 1515
 Printed Name: [Name] Firm: [Firm]

RELINQUISHED BY:

Signature: _____ Date/Time: _____
 Printed Name: _____ Firm: _____

RECEIVED BY:

Signature: _____ Date/Time: _____
 Printed Name: _____ Firm: _____

Special Groundwater Sampling Event (March) 2021 FSDSs

SCS ENGINEERS

Field Report Form

Client: Lechner brothers Landfill / Clarke County		Weather: Overcast
Project: 04221030.12		
Event: Special Event - Develop + Sample ^{and NW-NE} LB-225, LB-235, LB-245		Date: 3-15-21
Prepared By: I. Hultquist	Address: Vancouver, WA	Arrival: 1235
Departure: 1645		
- Loaded up truck, departed for site		
- Arrived onsite		
- Calibrated GST		
- Developed LB-225, LB-235, LB-245, LB-NE		
Casing on wells LB-245 and LB-225 bent,		
unable to use SS bailer, able to get submersible pump		
down well.		
Departed for SCS Portland		

Signed: 

SCS ENGINEERS

Field Report Form

Client: <u>Clark County</u>		Weather: <u>Sunny 42°F</u>	
Project: <u>LBLF/041221030.12</u>		Date: <u>3-15-21</u>	
Event: <u>Lechner Special Event</u>		Arrival: <u>1040</u>	
Prepared By: <u>J. Hultquist</u>	Address: <u>Vancouver WA</u>	Departure:	

- Loaded up truck. Departed for Site.
- Stopped at safety for decon supplies.
- Arrived onsite
- Deconned Sample Pro Bladder pump
- Calibrated VSI
- Sampled LB-24S, LB-23S, LB-22S, ~~LB-1~~^{TR} MW-NE
FB + DUP (~~LB~~^{LB}-031621-01-FB @ 24S and DUP1 (LB-031621-05-DUP1 @
2522S)
Departed for SCS Portland
Samples picked up by courier on 3/17/2021

Signed: 

Field Calibration Log SCS Engineers

Equipment:			Serial Number:		Field Staff:			
YSI ProPlus			19K102542		J. Hultquist			
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)
LBLF/04221030.12	3-15-21	1250	13.7	10.36	4.00	7.00	1413	220.0
" 11	3-16-21	1050	11.6	10.92	4.00	7.00	1413	220.0
Notes:								

WELL DEVELOPMENT FORM

SCS ENGINEERS

15940 SW 72nd Ave, Portland, OR 97224
 Ph: (503) 639-9201, Fax: (503) 684-6948

Client: <u>Clark County</u>	Date: <u>3-15-21</u>
Project #: <u>04221030.12</u>	Well ID: <u>LB-225</u>
Site Name: <u>Lechner bss LF</u>	Initial DTW: <u>8.25</u> Final DTW: <u>8.21</u>
Site Location: <u>Vancouver WA</u>	Initial DTB: <u>37.16</u> Final DTB: <u>37.20</u>
Development Method:	Casing Diameter: <u>2</u>
Total Water Removed:	Casing Volume: <u>4.71</u>
Water Contained? <u>Surge to ground</u>	WL Meter #:
Estimate of specific capacity or recharge to well:	Field Personnel: <u>J. Hultquist</u>

Time	Cumulative Gallons Removed	pH S.U.	Temperature °F	Specific Conductance		Dissolved Oxygen mg/L	DTW (TOC) ft-bgs	Silt/Sand mL/1000mL	Comments
				uS	mS				
									Unable to Surge with SS bailer, casing bent Surged with Submersible pump
1503	0.1	6.48	12.2	166.4		7.41	9.17		Dark brown
1505	5.00	6.18	12.2	315.9		5.78	9.23		" "
1507	9.75	6.15	12.1	411.7		5.40	9.27		light brown
1509	14.5	6.18	12.2	428.0		4.65	9.27		Clearing/light tan
1511	19.25	6.25	12.2	375.8		5.11	9.27		" "
1513	24	6.24	12.3	376.1		5.02	9.27		" "
1515	28.75	6.29	12.3	377.5		5.05	9.27		clear/colorless
1517	33.5	6.31	12.3	379.4		4.92	9.27		" "
1519	38.25	6.31	12.3	379.8		4.97	9.27		" "
1521	43	6.32	12.3	380.1		4.93	9.27		" "
1523	47.75	6.33	12.3	378.4		4.90	9.27		clear/colorless

Signed: _____



WELL DEVELOPMENT FORM

SCS ENGINEERS

15940 SW 72nd Ave, Portland, OR 97224
 Ph: (503) 639-9201, Fax: (503) 684-6948

Client: <u>Clack County</u>	Date: <u>3-15-21</u>
Project #: <u>04721030.12</u>	Well ID: <u>LB-235</u>
Site Name: <u>Leichner Basin LF</u>	Initial DTW: <u>32.61</u> Final DTW: <u>32.60</u>
Site Location: <u>Vancouver WA</u>	Initial DTB: <u>45.61</u> Final DTB: <u>46.13</u>
Development Method:	Casing Diameter: <u>2</u>
Total Water Removed:	Casing Volume: <u>2.11 gal</u>
Water Contained? <u>Purge to ground</u>	WL Meter #:
Estimate of specific capacity or recharge to well:	Field Personnel: <u>T. H. August</u>

Time	Cumulative Gallons Removed	pH S.U.	Temperature		Specific Conductance		Dissolved Oxygen mg/L	DTW (TOC) ft-bgs	Silt/Sand mL/1000mL	Comments
			°F	°C	uS	mS				
1407										
1407	0.1	6.15	12.4		142.8		2.33	32.61		Surged well with SS boiler - 10 min
1412	2.0	6.13	12.3		141.2		7.22	32.63		Dark brown, No. 10 SS boiler
1419	4.25	6.17	12.6		141.6		7.14	33.14		Light tan/cloudy
1421	6.50	6.07	12.6		141.2		6.81	33.14		" "
1423	8.75	6.03	12.6		141.1		6.42	33.15		clearing/cloudy
1425	11.0	6.01	12.5		140.7		6.40	33.16		" "
1427	13.25	6.01	12.6		140.5		6.44	33.16		" "
1429	15.50	6.03	12.6		141.5		6.50	33.16		" "
1431	17.75	6.02	12.7		144.5		6.67	33.16		" "
1433	20.0	6.05	12.8		145.2		6.70	33.16		" "
1435	22.25	6.09	12.7		148.6		6.65	33.16		clear / light tan

Signed:

WELL DEVELOPMENT FORM

SCS ENGINEERS

15940 SW 72nd Ave, Portland, OR 97224

Ph: (503) 639-9201, Fax: (503) 684-6948

Client: Clark County

Date: 3-15-2021

Project #: 04221030.12

Well ID: LB-245

Site Name: Leichner Bros LF

Initial DTW: 39.78

Final DTW:

Site Location: Vancouver WA

Initial DTB: 54.39

Final DTB: 54

Development Method: Surge, bail w ss bails, submersible pump

Casing Diameter: 2

Total Water Removed: 28 gal

Casing Volume: 2.38 gal

Water Contained? Purge to ground

WL Meter #:

Estimate of specific capacity or recharge to well:

Field Personnel: J. Hultgren

Time	Cumulative Gallons Removed	pH S.U.	Temperature		Specific Conductance		Dissolved Oxygen mg/L	DTW (TOC) ft-bgs	Silt/Sand mL/1000mL	Comments
			°F	°C	uS	mS				
1253										Initial WL reading + TD reading / Surge with ss bails - 10min Attempted to put ss bails down well, casing bail, bails gets stuck ~ 10-15' down well Able to get submersible pump past bend - surge with the DC pump
1320	0.1	6.55	11.5		338.1	7.77	39.89			Dark brown / no odor
1322	2.5	6.08	12.3		179.6	7.01	39.89			light brown / no odor
1324	5.0	5.93	12.4		173.3	6.43	39.89			light tan / no odor
1326	7.5	6.02	12.4		175.9	6.41	39.89			" "
1328	10	6.07	12.4		170.4	6.14	39.89			clearing / no odor
1330	12.5	6.05	12.3		178.1	5.82	39.89			" "
1332	15.0	6.10	12.4		176.6	6.29	39.89			light tan / cloudy
1334	17.5	6.10	12.3		179.0	6.33	39.89			" "
1336	20.0	6.12	12.3		179.1	6.36	39.89			clear / cloudy
1338	22.5	6.14	12.3		180.3	6.40	39.89			" "
1340	25.0	6.18	12.3		180.8	6.32	39.89			" "
1342	27.5	6.18	12.3		180.3	6.30	39.89			" "

Signed: _____



WELL DEVELOPMENT FORM

SCS ENGINEERS

15940 SW 72nd Ave, Portland, OR 97224
 Ph: (503) 639-9201, Fax: (503) 684-6948

Client: <u>Clark County</u>	Date: <u>3-15-21</u>
Project #: <u>04221030.121</u>	Well ID: <u>MW-NE</u>
Site Name: <u>Leichner</u>	Initial DTW: <u>15.84</u> Final DTW: <u>19.31</u>
Site Location: <u>Vancouver W4</u>	Initial DTB: <u>52.21</u> Final DTB: <u>52.22</u>
Development Method: <u>Surge + purge</u>	Casing Diameter: <u>5"</u>
Total Water Removed: <u>78 gal</u>	Casing Volume: <u>37.13</u>
Water Contained? <u>Purge to ground</u>	WL Meter #:
Estimate of specific capacity or recharge to well:	Field Personnel: <u>J. Hultquist</u>

Time	Cumulative Gallons Removed	pH S.U.	Temperature		Specific Conductance		Dissolved Oxygen mg/L	DTW (TOC) ft-bgs	Silt/Sand mL/100mL	Comments
			°F	°C	uS	mS				
										<u>Surged well with bailer/submersible pump</u>
<u>1544</u>	<u>0.1</u>	<u>8.18</u>	<u>11.5</u>		<u>222.6</u>		<u>0.06</u>	<u>15.84</u>		<u>SS barker / Dark brown</u>
<u>1555</u>	<u>2.5</u>	<u>7.21</u>	<u>11.5</u>		<u>220.4</u>		<u>0.10</u>	<u>15.85</u>		<u>" "</u>
<u>1606</u>	<u>37.13</u>	<u>6.50</u>	<u>11.5</u>		<u>210.3</u>		<u>4.43</u>	<u>19.31</u>		<u>Dark brown / Submersible pump</u>
<u>1628</u>	<u>74.5</u>	<u>6.67</u>	<u>11.4</u>		<u>214.7</u>		<u>4.91</u>	<u>19.31</u>		<u>Light Brown</u>
<u>1632</u>	<u>78.0</u>	<u>6.65</u>	<u>11.4</u>		<u>214.0</u>		<u>4.96</u>	<u>19.31</u>		<u>" "</u>

Signed: _____

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-225
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-031621-04-225
DUP ID: LB-031621-05-DUP1 NA

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 50.0 °F °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/16/21	13:20	37.20	.	8.19	-	.	X 1
1/1	:	.	.	.	.	.	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	3/16/21	13:45	A	3	40 ml	HCl	YES	NO	✓
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/16/21	13:45	A	1	250, 500, 1L	None	YES	NO	NA ✓
Yellow Poly	3/16/21	13:45	A	1	250, 500, 1L	H ₂ SO ₄	YES	NO	✓
Green Poly	1/1	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	3/16/21	13:45	A	1	250, 500	HNO ₃	YES	NO	✓
Red Diss. Poly	3/16/21	13:45	A	1	250, 500	HNO ₃	YES	YES	✓

White no acid, Yellow H₂SO₄, Red HNO₃ Total Bottles (include duplicate count): 14

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) (FS) (TS) (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) (Ti) (V) (Zn) (Hardness) Ca Na K Mg Vc
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA Purge Start Time: 13:21 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(1320)	0.00	6.14	169.3	57.3	12.1	8.20	8.57	clear/colorless
1	A(1326)	0.50	5.90	190.1	81.4	12.1	8.21	7.44	cloudy/colorless
2	A(1329)	1.00	6.01	187.2	99.0	12.1	8.21	7.21	cloudy/colorless
3	A(1332)	1.30	6.16	184.6	120.6	12.1	8.21	7.12	cloudy/colorless
4	A(1335)	1.60	6.19	182.6	144.1	12.1	8.21	6.95	cloudy/colorless
5	A(1338)	1.90	6.26	182.1	146.2	12.1	8.21	6.81	cloudy/colorless
6	A(1341)	2.20	6.27	180.8	147.7	12.1	8.21	6.80	cloudy/colorless

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

Low Flow Purge Method: (10/15/35psi) ~ 400 ml/min

LB-031621-05-DUP1 @ 1350

SAMPLER: I. Hultquist
(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-235

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-031621-03-235

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 45.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/16/21	:	46.13	.	32.56	.	.	X 1
1/1	:	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	3/16/21	12:45	A	3	40 ml	HCl	YES	NO	✓
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/16/21	12:45	A	1	250, 500, 1L	None	YES	NO	NA ✓
Yellow Poly	3/16/21	12:45	A	1	250, 500, 1L	H ₂ SO ₄	YES	NO	✓
Green Poly	1/1	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	3/16/21	12:45	A	1	25, 250, 500	HNO ₃	YES	NO	✓
Red Diss. Poly	3/16/21	12:45	A	1	25, 250, 500	HNO ₃	YES	YES	✓
	1/1	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

75

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	(826) (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.) (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) (Pb) (Mn) (Ni) (Ag) (Se) (Li) (V) (Zn) (Hardness) ✓ Ca Mg K Na
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA

Purge Start Time: 12:28

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(1231)	0.00	6.49	145.9	163.8	12.2	32.56	9.13	clear/colorless
1	A(1238)	0.50	5.91	155.2	172.8	12.3	32.56	6.88	cloudy/colorless
2	A(1241)	0.80	5.94	154.9	172.9	12.3	32.56	6.93	cloudy/colorless
3	A(1244)	1.10	5.97	154.8	173.5	12.3	32.56	6.95	cloudy/colorless
4		.	.	.	.	.	.	.
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: (8/6/35psi) ~ 400 ml/min

SAMPLER:

J. Hultquist
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

 15940 SW 72nd Avenue,
 Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-245

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-031621-02-245

DUP ID:
NA

WIND FROM:	N	NE	E	SE	S	<u>SW</u>	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
WEATHER:	<u>SUNNY</u>		CLOUDY		RAIN		?		TEMPERATURE: <u>45.0</u> °C		

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)
3/16/21	11:38	54.39	-	39.77	-	.	X 1
1/1	:	.	.	.	.	.	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	3/16/21	12:05	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/16/21	12:05	A	1 250, 500, <u>15</u>	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	3/16/21	12:05	A	1 <u>250</u> , 500, 1L	<u>H₂SO₄</u>	<u>YES</u>	<u>NO</u>		✓
Green Poly	1/1	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	3/16/21	12:05	A	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>NO</u>		✓
Red Diss. Poly	3/16/21	12:05	A	1 <u>125</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	1/1	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

75

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	<u>15280</u> (8011) OR [] WA []
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>TDS</u> <u>TSS</u> <u>Alkalinity</u> (HCO ₃ /CO ₃) <u>Cl</u> <u>SO₄</u> (Silica, T.) <u>NO₃</u>
	YELLOW - Poly	<u>COD</u> <u>TOC</u> <u>NH₄</u> (NO ₃ /NO ₂) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	<u>As</u> <u>Sb</u> <u>Ba</u> <u>Be</u> <u>Cd</u> <u>Co</u> <u>Cr</u> <u>Cu</u> <u>Pb</u> <u>Mn</u> <u>Ni</u> <u>Cs</u> <u>Se</u> <u>Pd</u> <u>Cl</u> <u>Zn</u> (Hardness) <u>Vc</u> <u>Ca</u> <u>Fe</u> <u>K</u> <u>Na</u> <u>Si</u>
RED DISSOLVED - Poly	<u>Ca</u> <u>Fe</u> <u>Mg</u> <u>Mn</u> <u>K</u> <u>Na</u>	

WATER QUALITY DATA

 Purge Start Time: 11:39

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(1142)	0.00	6.26	146.4	309.4	11.5	39.78	7.53	clear/colorless
1	A(1151)	0.50	5.94	146.0	182.2	12.0	39.78	6.82	cloudy/colorless
2	A(1154)	0.80	6.08	145.8	183.0	12.1	39.78	6.80	cloudy/colorless
3	A(1157)	1.10	6.10	145.3	182.4	12.1	39.78	6.78	cloudy/colorless
4	A(1200)	1.40	6.17	146.6	180.9	12.1	39.78	6.81	cloudy/colorless
5									
6									

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

 Low Flow Purge Method: (7/8/35 psi) ~ 400ml/min
SAMPLER:
I. Hv. Hqvist
 (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: Lechner Landfill **WELL ID:** FB LB-031621-01-FB

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:**

DUP ID: NA

WIND FROM: N NE E SE S SW W NW **WEATHER:** SUNNY CLOUDY RAIN ? **TEMPERATURE:** 64.5 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 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 =

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[v if used]
VOA Glass	3/16/21	11:10	G	3 40ml	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/16/21	11:10	G	1 250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	3/16/21	11:10	G	1 250, 500, 1L	H ₂ SO ₄	YES	NO		✓
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	3/16/21	11:10	G	25, 250, 500	HNO ₃	YES	NO		✓
Red Diss. Poly	3/16/21	11:10	G	1 25, 250, 500	HNO ₃	YES	YES		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

7.5

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 ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness) (V) Ca K Na S
	RED DISSOLVED - Poly	(Ga) (Fe) (Mg) (Mn) (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	G	0.00	—	—	—	—	—	—	—
1									
2									
3									
4									
5									
6									

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

Collected Near: LB-245 using laboratory Supplied DI water

SAMPLER: I. Hultqvist

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: MW-NE

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662

BLIND ID: LB-031621-06-NE

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	<u>SW</u>	W	NW	<u>LIGHT</u>	MEDIUM	HEAVY
WEATHER:	<u>SUNNY</u>		CLOUDY		RAIN		?		TEMPERATURE: <u>65.0</u> °C		

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)
3/16/21	14:15	52.22	.	15.76	.	.	X 1
1/1	:	.	.	.	.	.	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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (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	3/16/21	14:40	A	3 (40 ml)	<u>HCl</u>	<u>YES</u>	<u>NO</u>		✓
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/16/21	14:40	A	1 250, 500 (1L)	<u>None</u>	<u>YES</u>	<u>NO</u>	NA	✓
Yellow Poly	3/16/21	14:40	A	1 <u>250</u> , 500, 1L	<u>H₂SO₄</u>	<u>YES</u>	<u>NO</u>		✓
Green Poly	1/1	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	3/16/21	14:40	A	1 <u>25</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>NO</u>		✓
Red Diss. Poly	3/16/21	14:40	A	1 <u>25</u> , 250, 500	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	1/1	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

75

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)	OR []	WA []
	VOA - Glass	<u>(8260)</u> (8011)		
	AMBER - Glass	(8080) (8150) (TOX)		
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> <u>(TSS)</u> (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> <u>(SO₄)</u> (Silica, T) <u>(NO₃)</u>		
	YELLOW - Poly	<u>(CO₂)</u> <u>(NH₄)</u> (NO ₂ /NO ₃) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	<u>(As)</u> <u>(Sb)</u> <u>(Ba)</u> <u>(Be)</u> <u>(Cd)</u> <u>(Co)</u> <u>(Cr)</u> <u>(Cu)</u> <u>(Fe)</u> <u>(Pb)</u> (Mn) <u>(Ni)</u> <u>(Ag)</u> (Se) <u>(Ti)</u> <u>(V)</u> <u>(Zn)</u> (Hardness) Ca Na K U Mg		
RED DISSOLVED - Poly	<u>(Ca)</u> <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> <u>(K)</u> <u>(Na)</u>			

WATER QUALITY DATA

Purge Start Time: 14:15

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(1417)	0.00	7.52	107.4	226.5	13.1	15.64	3.44	clear/colorless
1	A(1424)	0.50	6.73	53.3	224.4	11.8	15.70	2.42	cloudy/light red
2	A(1427)	0.80	6.84	39.4	243.6	12.1	15.70	2.69	cloudy/light red
3	A(1430)	1.10	6.95	27.4	245.3	12.0	15.70	2.66	cloudy/light red
4	A(1433)	1.40	6.94	27.0	244.7	11.9	15.70	2.60	cloudy/light red
5	A(1436)	1.70	6.89	30.0	246.1	11.9	15.70	2.54	cloudy/light red
6									

[Casing]

[Select A-G]

[Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method: (9/6/39 psi) ~ 400 ml/min

SAMPLER:

(PRINTED NAME)

I. H. H. H. H. H.

(SIGNATURE)

[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 <i>Leichter Landfill</i>		NUMBER OF CONTAINERS	Semi-volatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	
PROJECT NUMBER <i>04231030.12</i>			Volatile Organics 6241 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/>	
PROJECT MANAGER <i>Andrews / L. Caruso</i>			Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	
COMPANY NAME <i>SCS Engineers</i>			Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	
ADDRESS <i>15940 SW 72nd Ave</i>			Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>	
CITY/STATE/ZIP <i>Portland, OR 97224</i>			Chlorophenolics Tri <input type="checkbox"/> Tetra <input type="checkbox"/> PCP <input type="checkbox"/>	
E-MAIL ADDRESS <i>Andrews@scsengineers.com</i>			Metals Total or Dissolved (See List below) Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>	
PHONE # <i>503 724-0112</i>		Alkalinity <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>		
SAMPLER'S SIGNATURE <i>[Signature]</i>		Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>		
		Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>		

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	625	8270	8270LL	8260	Gas	Diesel	Oil	1664 HEM	1664 SGT	608	8081	8141	8151	Tri	Tetra	PCP	(See List below)	Cyanide	Hex-Chrom	(circle) pH, Cond. (Cl, SO4)	(circle) NH3-N, COD, TKN, TOC	AOX	1650	506	1613	8290	RSK 175	Methane	Ethane	Ethene	REMARKS			
Trip Blank	3-16-21	1000		W																																		
LB-031621-01-FB	3-16-21	1110		W				X																														
LB-031621-02-24S	3-16-21	1205		W				X																														
LB-031621-03-23S	3-16-21	1245		W				X																														
LB-031621-04-22S	3-16-21	1345		W				X																														
LB-031621-05-Dup1	3-16-21	1350		W				X																														
LB-031621-06-NE	3-16-21	1440		W				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: _____	Circle which metals are to be analyzed: Total Metals: Al <input type="checkbox"/> As <input checked="" type="checkbox"/> Sb <input checked="" type="checkbox"/> Ba <input checked="" type="checkbox"/> Be <input checked="" type="checkbox"/> B <input type="checkbox"/> Ca <input checked="" type="checkbox"/> Cd <input checked="" type="checkbox"/> Co <input checked="" type="checkbox"/> Cr <input checked="" type="checkbox"/> Cu <input checked="" type="checkbox"/> Fe <input checked="" type="checkbox"/> Pb <input checked="" type="checkbox"/> Mg <input checked="" type="checkbox"/> Mn <input checked="" type="checkbox"/> Mo <input checked="" type="checkbox"/> Ni <input checked="" type="checkbox"/> K <input checked="" type="checkbox"/> Ag <input checked="" type="checkbox"/> Na <input checked="" type="checkbox"/> Se <input checked="" type="checkbox"/> Sr <input checked="" type="checkbox"/> Ti <input checked="" type="checkbox"/> Sn <input checked="" type="checkbox"/> V <input checked="" type="checkbox"/> Zn <input checked="" type="checkbox"/> Hg Dissolved Metals: Al <input type="checkbox"/> As <input type="checkbox"/> Sb <input type="checkbox"/> Ba <input type="checkbox"/> Be <input type="checkbox"/> B <input type="checkbox"/> Ca <input checked="" type="checkbox"/> Cd <input checked="" type="checkbox"/> Co <input checked="" type="checkbox"/> Cr <input checked="" type="checkbox"/> Cu <input checked="" type="checkbox"/> Fe <input checked="" type="checkbox"/> Pb <input checked="" type="checkbox"/> Mg <input checked="" type="checkbox"/> Mn <input checked="" type="checkbox"/> Mo <input checked="" type="checkbox"/> Ni <input checked="" type="checkbox"/> K <input checked="" type="checkbox"/> Ag <input checked="" type="checkbox"/> Na <input checked="" type="checkbox"/> Se <input checked="" type="checkbox"/> Sr <input checked="" type="checkbox"/> Ti <input checked="" type="checkbox"/> Sn <input checked="" type="checkbox"/> V <input checked="" type="checkbox"/> Zn <input checked="" type="checkbox"/> Hg
	TURNAROUND REQUIREMENTS _____ 24 hr. _____ 48 hr. _____ 5 day <input checked="" type="checkbox"/> Standard (15 working days) _____ Provide FAX Results _____ Requested Report Date	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <i>Metals are field filtered</i> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: <i>[Signature]</i> <i>3/17/21</i> Signature _____ Date/Time _____ Printed Name _____ Firm _____	RECEIVED BY: <i>[Signature]</i> <i>3/17/21</i> Signature _____ Date/Time _____ Printed Name _____ Firm _____	RELINQUISHED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____	RECEIVED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____
--	--	---	---



Courier/After-Hours Sample Receipt Record

Company: SOS

Date/Time: 3/17/21 1035 A.M. P.M.

Number of Containers: 1 Cooler Box Other _____

Containers Received From: X _____

Containers Received By: [Signature]

Client Not Available Samples Stored: _____

Relinquished to ALS by: [Signature] Date/Time: 3/17/21 A.M. P.M.

ALS Environmental's Sample Receiving office is open Monday through Friday from 8:00 a.m. to 5:00 p.m. Closed Weekends. Samples delivered outside office hours are placed under the refrigeration and officially received and processed the following business day. Samples received via ALS Environmental courier will be officially received and processed according to the actual time of arrival at the laboratory.

1317 S. 13th Avenue | Kelso, WA 98626 | +1 360 577 7222 | Fax +1 360 636 1068

WHITE - Retained by Originator YELLOW - Courier/Lab



APPENDIX B

Summary Tables of 2021 Groundwater Field Parameter Measurements and Analytical Data

Field Parameters

Table B-1
2021 Groundwater Chemistry
Field Parameters
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-1D	LB-021821-04-1D	2/18/21	6.83	228	8.2	7.52
LB-1S	LB-021821-05-1S	2/18/21	6.63	268	9.1	5.65
LB-1S	LB-021821-06-DUP1	2/18/21	6.63	268	9.1	5.65
LB-1S	LB-081021-03-1S	8/10/21	6.04	274	14.0	5.31
LB-3D	LB-021821-07-3D	2/18/21	6.57	238	9.3	5.20
LB-3S	LB-021821-08-3S	2/18/21	6.29	200	10.2	5.03
LB-5D	LB-021721-04-5D	2/17/21	6.76	320	11.8	0.53
LB-5S	LB-021921-02-5S	2/19/21	6.38	161	11.3	7.70
LB-5S	LB-080921-01-5S	8/9/21	7.20	230	15.0	9.45
LB-6S	LB-022321-03-6S	2/23/21	6.71	248	11.8	9.36
LB-6S	LB-081021-05-6S	8/10/21	6.99	233	16.8	7.22
LB-9SR	L081121-01-9SR	8/11/21	6.63	204	13.6	5.33
LB-10DR	LB-021821-01-10DR	2/18/21	6.60	277	9.8	1.94
LB-10SR	LB-021821-03-10SR	2/18/21	6.46	211	10.4	6.22
LB-10SR	LB-081021-02-10SR	8/10/21	6.10	266	15.1	1.82
LB-13D	LB-021721-02-13D	2/17/21	6.60	226	10.6	4.39
LB-13I	LB-022321-01-13I	2/23/21	6.52	275	11.8	2.22
LB-13I	LB-080921-03-13I	8/9/21	7.53	286	15.8	3.32
LB-13I	LB-080921-04-DUP	8/9/21	7.53	286	15.8	3.32
LB-17D	LB-021821-09-17D	2/18/21	6.77	296	10.7	0.63
LB-17I	LB-021921-03-17I	2/19/21	6.77	529	12.0	0.48
LB-20S	LB-021921-01-20S	2/19/21	6.50	414	10.8	0.55
LB-22S	LB-031621-04-22S	3/16/21	6.27	148	12.1	6.80
LB-23S	LB-031621-03-23S	3/16/21	5.97	174	12.3	6.95
LB-24S	LB-031621-02-24S	3/16/21	6.17	181	12.1	6.81
LB-26D	LB-021721-03-26D	2/17/21	6.57	251	11.6	2.94
LB-26I	LB-022321-02-26I	2/23/21	6.53	263	11.6	4.08
LB-26I	LB-081021-04-26I	8/10/21	6.52	262	13.8	4.70
LB-27D	LB-021721-01-27D	2/17/21	6.85	287	8.9	2.94
LB-27I	LB-021921-04-27I	2/19/21	6.83	250	11.5	0.43
LB-27I	LB-021921-05-DUP2	2/19/21	6.83	250	11.5	0.43
LB-27I	LB-080921-02-27I	8/9/21	7.36	241	16.3	2.90
MW-NE	LB-031621-06-NE	3/16/21	6.89	246.1	11.9	2.57
FIELDQC	LB-021821-02-FB	2/18/21	N/A	N/A	N/A	N/A
FIELDQC	LB-081021-01-FB	8/10/21	N/A	N/A	N/A	N/A

Notes:
N/A = Not Applicable

Volatile Organic Compounds

Table B-2
2021 Groundwater Chemistry
Volatile Organic Compounds^a (µg/L)
Leichner Landfill

Location	Sample Number	Date	Bromo-dichloro-methane	Chloro-benzene	Chloro-ethane	Chloroform	Chloro-methane	1,4-DCB	1,1-DCA	1,1,1-TCA	cis-1,2-DCE	PCE	TCE
LB-1D	LB-021821-04-1D	2/18/21	0.50 L	0.50 L	0.50 L	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-021821-05-1S	2/18/21	0.50 L	0.50 L	0.50 L	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-021821-06-DUP1	2/18/21	0.50 L	0.50 L	0.50 L	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-051321-03-1S	5/13/21	0.50 L	0.50 L	0.50 L	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-081021-03-1S	8/10/21	0.50 L	0.50 L	0.50 L	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-021821-07-3D	2/18/21	0.50 L	0.50 L	0.50 L	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-021821-08-3S	2/18/21	0.50 L	0.50 L	0.50 L	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-021721-04-5D	2/17/21	0.50 L	0.50 L	0.50 L	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-021921-02-5S	2/19/21	0.50 L	0.50 L	0.50 L	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-080921-01-5S	8/9/21	0.50 L	0.50 L	0.50 L	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	LB022321-03-6S	2/23/21	0.50 L	0.50 L	0.50 L	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-081021-05-6S	8/10/21	0.50 L	0.50 L	0.50 L	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-9SR	LB-081121-01-9SR	8/11/21	0.50 L	0.50 L	0.50 L	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-021821-01-10DR	2/18/21	0.50 L	0.50 L	0.50 L	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-021821-03-10SR	2/18/21	0.5 L	0.50 L	0.50 L	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-051321-04-10SR	5/13/21	0.5 L	0.50 L	0.50 L	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-051321-05-DUP	5/13/21	0.5 L	0.50 L	0.50 L	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-081021-02-10SR	8/10/21	0.5 L	0.50 L	0.50 L	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-021721-02-13D	2/17/21	0.50 L	0.50 L	0.50 L	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-022321-01-13I	2/23/21	0.50 L	0.50 L	0.50 L	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-080921-03-13I	8/9/21	0.50 L	0.50 L	0.50 L	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-080921-04-DUP	8/9/21	0.50 L	0.50 L	0.50 L	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-021821-09-17D	2/18/21	0.50 L	0.50 L	0.50 L	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-021921-03-17I	2/19/21	0.50 L	0.50 L	0.50 L	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-021921-01-20S	2/19/21	0.50 L	0.50 L	0.50 L	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-22S	LB-031621-04-22S	3/16/21	0.50 L	0.50 L	0.50 L	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-23S	LB-031621-03-23S	3/16/21	0.50 L	0.50 L	0.50 L	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-24S	LB-031621-02-24S	3/16/21	0.50 L	0.50 L	0.50 L	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-021721-03-26D	2/17/21	0.50 L	0.50 L	0.50 L	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-022321-02-26I	2/23/21	0.50 L	0.50 L	0.50 L	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-081021-04-26I	8/10/21	0.50 L	0.50 L	0.50 L	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-021721-01-27D	2/17/21	0.50 L	0.50 L	0.50 L	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-021921-04-27I	2/19/21	0.50 L	0.50 L	0.50 L	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-021921-05-DUP2	2/19/21	0.50 L	0.50 L	0.50 L	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-051321-01-27I	5/13/21	0.50 L	0.50 L	0.50 L	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-080921-02-27I	8/9/21	0.50 L	0.50 L	0.50 L	0.61	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L

Table B-2
2021 Groundwater Chemistry
Volatile Organic Compounds^a (µg/L)
Leichner Landfill

Location	Sample Number	Date	Bromo-dichloro-methane	Chloro-benzene	Chloro-ethane	Chloroform	Chloro-methane	1,4-DCB	1,1-DCA	1,1,1-TCA	cis-1,2-DCE	PCE	TCE
MW-NE	LB-031621-06-NE	3/16/21	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELD QC	LB021821-02-FB	2/18/21	0.50 L	0.50 L	0.50 L	1.40	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELD QC	LB-051321-02-FB	5/13/21	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELD QC	LB-081021-01-FB	8/10/21	0.50 L	0.50 L	0.50 L	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	2/17/21	0.50 L	0.50 L	0.50 L	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	2/18/21	0.50 L	0.50 L	0.50 L	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	2/23/21	0.50 L	0.50 L	0.50 L	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	8/9/21	0.50 L	0.50 L	0.50 L	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	8/10/21	0.50 L	0.50 L	0.50 L	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	8/11/21	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 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 = above the laboratory method detection limit
(MDL) but below the method reporting limit (MRL)
Dup = field duplicate sample;
L = not detected at or above MRL;
* = Trip blank had toluene detected in it on 8/9/2021 at 0.63 mg/L, on 8/10/2021 at 0.50 mg/L, and on 8/11/2021 at 0.58 mg/L.
Toluene was not detected in any samples.

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


**Table B-3
2021 Groundwater Chemistry
Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
Leichner Landfill**

Location	Sample Number	Date	Conductivity (µmhos/cm)	Chloride (CL = 250 mg/L)	Nitrate as Nitrogen (CL = 10 mg/L)	Total Dissolved Solids (CL = 500 mg/L)	Dissolved Iron (CL = 0.3 mg/L)	Dissolved Manganese (CL = 0.05 mg/L)
LB-1D	LB-021821-04-1D	2/18/21	NT	6.10	5.65	170	0.021 L	0.0011 L
LB-1S	LB-021821-05-1S	2/18/21	NT	5.67	3.91	190	0.021 L	0.0011 L
LB-1S (Dup)	LB-021821-06-DUP1	2/18/21	NT	5.69	3.92	198	0.021 L	0.0011 L
LB-1S	LB-081021-03-1S	8/10/21	NT	6.11	5.01	191	0.021 L	0.0011 L
LB-3D	LB-021821-07-3D	2/18/21	NT	10.1	9.14	171	0.021 L	0.0011 L
LB-3S	LB-021821-08-3S	2/18/21	NT	7.00	6.82	148	0.021 L	0.0011 L
LB-5D	LB-021721-04-5D	2/1/21	NT	7.98	0.96	215	0.021 L	0.0025
LB-5S	LB-021921-02-5S	2/19/21	NT	6.75	7.09	140	0.021 L	0.0011 L
LB-5S	LB-080921-01-5S	8/9/21	NT	4.25	4.48	161	0.021 L	0.0011 L
LB-6S	LB-022321-03-6S	2/23/21	NT	7.78	4.37	169	0.021 L	0.0011 L
LB-6S	LB-081021-05-6S	8/10/21	NT	4.62	1.72	163	0.021 L	0.0011 L
LB-9SR	LB-081121-01-9SR	8/11/21	NT	3.56	3.65	175	0.021 L	0.0011 L
LB-10DR	LB-021821-01-10DR	2/18/21	NT	7.25	3.79	200	0.021 L	0.0011 L
LB-10SR	LB-021821-03-10SR	2/18/21	NT	6.55	6.34	206	0.021 L	0.0011 L
LB-10SR	LB-081021-02-10SR	8/10/21	NT	5.65	15.2	235	0.021 L	0.0030
LB-13D	LB-021721-02-13D	2/17/21	NT	5.05	4.78	179	0.021 L	0.0011 L
LB-13I	LB-022321-01-13I	2/23/21	NT	12.9	4.87	199	0.021 L	0.0029
LB-13I	LB-080921-03-13I	8/9/21	NT	6.85	5.13	199	0.021 L	0.0019
LB-13I (Dup)	LB-080921-04-Dup	8/9/21	NT	6.82	5.15	191	0.021 L	0.0014
LB-17D	LB-021821-09-17D	2/18/21	NT	11.6	0.20 L	200	0.106	4.06
LB-17I	LB-021921-03-17I	2/19/21	NT	18.0	0.20 L	299	14.50	2.86
LB-20S	LB-021921-01-20S	2/19/21	NT	4.61	0.20 L	275	0.021 L	0.251
LB-22S	LB-031621-04-22S	3/16/21	NT	4.01	4.89	184	0.021 L	0.0011 L
LB-22S (Dup)	LB-031621-05-DUP1	3/16/21	NT	4.07	4.97	167	0.021 L	0.0011 L
LB-23S	LB-031621-03-23S	3/16/21	NT	3.18	3.79	151	0.021 L	0.0011 L
LB-24S	LB-031621-02-24S	3/16/21	NT	3.82	4.79	144	0.021 L	0.0011 L
LB-26D	LB-021721-03-26D	2/17/21	NT	6.21	5.55	197	0.021 L	0.0011 L
LB-26I	LB-022321-02-26I	2/23/21	NT	8.15	4.74	182	0.021 L	0.0041
LB-26I	LB-081021-04-26I	8/10/21	NT	6.81	4.49	191	0.021 L	0.0035
LB-27D	LB-021721-01-27D	2/17/21	NT	7.21	3.89	207	0.021 L	0.0011 L
LB-27I	LB-021921-04-27I	2/19/21	NT	4.98	1.35	176	0.021 L	0.0791
LB-27I (Dup)	LB-021921-05-DUP2	2/19/21	NT	5.06	1.36	181	0.021 L	0.0821
LB-27I	LB-080921-02-27I	8/9/21	NT	6.38	3.06	177	0.021 L	0.0112
MW-NE	LB-031621-06-NE	3/16/21	NT	2.85	2.79	190	0.225	0.235

Table B-3
2021 Groundwater Chemistry
Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
Leichner Landfill

Location	Sample Number	Date	Conductivity (µmhos/cm)	Chloride (CL = 250 mg/L)	Nitrate as Nitrogen (CL = 10 mg/L)	Total Dissolved Solids (CL = 500 mg/L)	Dissolved Iron (CL = 0.3 mg/L)	Dissolved Manganese (CL = 0.05 mg/L)
FIELDQC	LB-021821-02-FB	2/18/21	NT	0.20 L	0.10 L	5.0 L	0.021 L	0.0011 L
FIELDQC	LB-031621-01-FB	3/16/21	NT	0.20 L	0.10 L	5.0 L	0.021 L	0.0011 L
FIELDQC	LB-081021-01-FB	8/10/21	NT	0.20 L	0.10 L	5.0 L	0.021 L	0.0011 L

Notes:
CL = compliance level for inorganic parameters and metals in groundwater at Leichner Landfill.
µmhos/cm = microohms per centimeter; mg/L = milligrams per liter
B = estimated concentration; detected above the method detection limit (MDL) but below the method reporting limit (MRL); L = not detected at or above MRL;
J = estimated concentration; H = due to laboratory error, sample was extracted and analyzed past the recommended 7-day hold time; NT = not tested.
 = concentration is above the compliance level



APPENDIX C
2021 Laboratory Analytical Data Reports

First Quarter (February) 2021 Laboratory Reports



February 26, 2021

Service Request No:K2101511

David Lamadrid
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

Laboratory Results for: Leichner Landfill

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory February 18, 2021
For your reference, these analyses have been assigned our service request number **K2101511**.

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

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: SCS Engineers
Project: Leichner Landfill
Sample Matrix: Ground Water

Service Request: K2101511
Date Received: 02/18/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Eight ground water samples were received for analysis at ALS Environmental on 02/18/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0222F009.D. 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.

Approved by 

Date 02/26/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: LB-021721-01-27D **Lab ID: K2101511-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	207			5.0	mg/L	SM 2540 C
Chloride	7.21			0.20	mg/L	300.0
Nitrate as Nitrogen	3.89			0.10	mg/L	300.0

CLIENT ID: LB-021721-02-13D **Lab ID: K2101511-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	179			5.0	mg/L	SM 2540 C
Chloride	5.05			0.20	mg/L	300.0
Nitrate as Nitrogen	4.78			0.10	mg/L	300.0

CLIENT ID: LB-021721-03-26D **Lab ID: K2101511-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	197			5.0	mg/L	SM 2540 C
Chloride	6.21			0.20	mg/L	300.0
Nitrate as Nitrogen	5.55			0.10	mg/L	300.0

CLIENT ID: LB-021721-04-5D **Lab ID: K2101511-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	215			5.0	mg/L	SM 2540 C
Chloride	7.98			0.20	mg/L	300.0
Nitrate as Nitrogen	0.96			0.10	mg/L	300.0
Manganese, Dissolved	2.5			1.1	ug/L	6010C

CLIENT ID: LB-021821-01-10DR **Lab ID: K2101511-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	200			5.0	mg/L	SM 2540 C
Chloride	7.25			0.20	mg/L	300.0
Nitrate as Nitrogen	3.79			0.10	mg/L	300.0

CLIENT ID: LB-021821-02-FB **Lab ID: K2101511-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloroform	1.4			0.50	ug/L	8260C

CLIENT ID: LB-021821-03-10SR **Lab ID: K2101511-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	206			5.0	mg/L	SM 2540 C
Chloride	6.55			0.20	mg/L	300.0
Nitrate as Nitrogen	6.34			0.10	mg/L	300.0



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request:K2101511

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2101511-001	Trip Blanks	2/17/2021	0700
K2101511-002	LB-021721-01-27D	2/17/2021	1120
K2101511-003	LB-021721-02-13D	2/17/2021	1225
K2101511-004	LB-021721-03-26D	2/17/2021	1320
K2101511-005	LB-021721-04-5D	2/17/2021	1435
K2101511-006	LB-021821-01-10DR	2/18/2021	0835
K2101511-007	LB-021821-02-FB	2/18/2021	0900
K2101511-008	LB-021821-03-10SR	2/18/2021	0930



CHAIN OF CUSTODY

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PAGE

OF

SR#

COC#

K2101511

PROJECT NAME Leitchner Landfill	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>
PROJECT NUMBER 0422103013		Volatile Organics 624 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/>
PROJECT MANAGER Barb Lacy / T Andrews		Gas <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>
COMPANY NAME SCS Engineers		Oil & Grease/TRPH <input type="checkbox"/> Oil <input type="checkbox"/>
ADDRESS 15940 SW 72nd Ave		1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>
CITY/STATE/ZIP Portland, OR 97224		Pesticides/Herbicides <input type="checkbox"/>
E-MAIL ADDRESS TAndrews@scsengineers.com		Chlorophenolics <input type="checkbox"/>
PHONE # 503 724-0112		Tri <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>
SAMPLER'S SIGNATURE 	Metals, Total or (Dissolved) (See List below)	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/>	Gas <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>	Oil & Grease/TRPH <input type="checkbox"/> Oil <input type="checkbox"/>	1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	Pesticides/Herbicides <input type="checkbox"/>	Chlorophenolics <input type="checkbox"/>	Tri <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>	Metals, Total or (Dissolved) (See List below)	Cyanide <input type="checkbox"/>	(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 , F-Phos	TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input type="checkbox"/>	Dioxins/Furans 1813 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/>	REMARKS
Trip Blanks	2-17-21	0700		W	2		X															
LB-021721-01-270	2-17-21	1120		W	5		X						X		X							
LB-021721-02-130	2-17-21	1225		W	5		X						X		X							
LB-021721-03-260	2-17-21	1320		W	5		X						X		X							
LB-021721-04-50	2-17-21	1435		W	5		X						X		X							
LB-021821-01-100R	2-18-21	0835		W	5		X						X		X							
LB-021821-02-FB	2-18-21	0900		W	5		X						X		X							
LB-021821-03-115R	2-18-21	0930		W	5		X						X		X							

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____ _____ _____	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 Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)	
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS: Metals are field filtered <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)	
	Container Supply Number 115140		

RELINQUISHED BY: Signature: <u>Tan Hultgren</u> Date/Time: <u>2/18/21 @ 0950</u> Printed Name: _____ Firm: <u>SCS</u>	RECEIVED BY: Signature: <u>[Signature]</u> Date/Time: <u>2/18/21 @ 0950</u> Printed Name: _____ Firm: _____	RELINQUISHED BY: Signature: <u>[Signature]</u> Date/Time: <u>2/18/21 @ 1145</u> Printed Name: _____ Firm: _____	RECEIVED BY: Signature: <u>[Signature]</u> Date/Time: <u>2/18/21 @ 1145</u> Printed Name: _____ Firm: _____
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PM HH

Cooler Receipt and Preservation Form

Client SCS-Leichner L.F Service Request K21 01511
Received: 2/18/21 Opened: 2/18/21 By: [Signature] Unloaded: 2/18/21 By: [Signature]

- 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? 1 Front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: **Frozen Partially Thawed Thawed**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number <input checked="" type="checkbox"/> NA	Filed
<u>2.9</u>		<u>IR01</u>	<u>115140</u>	<u>—</u>	<u>—</u>		

- 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 (unbroken)? NA Y N
- Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? 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	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____
SHORT HOLD TIME



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.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/analyte is offered by that state.

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.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2101511

Sample Name: Trip Blanks
Lab Code: K2101511-001
Sample Matrix: Ground Water

Date Collected: 02/17/21
Date Received: 02/18/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

Sample Name: LB-021721-01-27D
Lab Code: K2101511-002
Sample Matrix: Ground Water

Date Collected: 02/17/21
Date Received: 02/18/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021721-02-13D
Lab Code: K2101511-003
Sample Matrix: Ground Water

Date Collected: 02/17/21
Date Received: 02/18/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021721-03-26D
Lab Code: K2101511-004
Sample Matrix: Ground Water

Date Collected: 02/17/21
Date Received: 02/18/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2101511

Sample Name: LB-021721-04-5D
Lab Code: K2101511-005
Sample Matrix: Ground Water

Date Collected: 02/17/21
Date Received: 02/18/21

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021821-01-10DR
Lab Code: K2101511-006
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/18/21

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021821-02-FB
Lab Code: K2101511-007
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/18/21

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021821-03-10SR
Lab Code: K2101511-008
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/18/21

Analysis Method

300.0

Extracted/Digested By

Analyzed By

KABROWN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2101511

Sample Name: LB-021821-03-10SR
Lab Code: K2101511-008
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/18/21

Analysis Method

6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

AMCKORNEY
MKANALY
JMADISON



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 07:00
Date Received: 02/18/21 11:45

Sample Name: Trip Blanks
Lab Code: K2101511-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 20:29	*
Benzene	ND U	0.50	1	02/22/21 20:29	
Bromobenzene	ND U	2.0	1	02/22/21 20:29	
Bromochloromethane	ND U	0.50	1	02/22/21 20:29	
Bromodichloromethane	ND U	0.50	1	02/22/21 20:29	
Bromoform	ND U	0.50	1	02/22/21 20:29	
Bromomethane	ND U	0.50	1	02/22/21 20:29	
2-Butanone (MEK)	ND U	20	1	02/22/21 20:29	
n-Butylbenzene	ND U	4.0	1	02/22/21 20:29	
sec-Butylbenzene	ND U	2.0	1	02/22/21 20:29	
tert-Butylbenzene	ND U	2.0	1	02/22/21 20:29	
Carbon Disulfide	ND U	0.50	1	02/22/21 20:29	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 20:29	
Chlorobenzene	ND U	0.50	1	02/22/21 20:29	
Chloroethane	ND U	0.50	1	02/22/21 20:29	
Chloroform	ND U	0.50	1	02/22/21 20:29	
Chloromethane	ND U	0.50	1	02/22/21 20:29	
2-Chlorotoluene	ND U	2.0	1	02/22/21 20:29	
4-Chlorotoluene	ND U	2.0	1	02/22/21 20:29	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 20:29	
Dibromochloromethane	ND U	0.50	1	02/22/21 20:29	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 20:29	
Dibromomethane	ND U	0.50	1	02/22/21 20:29	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 20:29	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 20:29	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 20:29	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 20:29	*
1,1-Dichloroethane	ND U	0.50	1	02/22/21 20:29	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 20:29	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 20:29	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 20:29	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 20:29	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 20:29	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 20:29	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 20:29	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 20:29	
Ethylbenzene	ND U	0.50	1	02/22/21 20:29	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 20:29	
2-Hexanone	ND U	20	1	02/22/21 20:29	
Isopropylbenzene	ND U	2.0	1	02/22/21 20:29	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 20:29	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 07:00
Date Received: 02/18/21 11:45

Sample Name: Trip Blanks
Lab Code: K2101511-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 20:29	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 20:29	
Methylene Chloride	ND U	2.0	1	02/22/21 20:29	
Naphthalene	ND U	2.0	1	02/22/21 20:29	
n-Propylbenzene	ND U	2.0	1	02/22/21 20:29	
Styrene	ND U	0.50	1	02/22/21 20:29	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 20:29	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 20:29	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 20:29	
Toluene	ND U	0.50	1	02/22/21 20:29	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 20:29	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 20:29	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 20:29	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 20:29	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 20:29	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 20:29	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 20:29	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 20:29	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 20:29	
Vinyl Chloride	ND U	0.50	1	02/22/21 20:29	
o-Xylene	ND U	0.50	1	02/22/21 20:29	
m,p-Xylenes	ND U	0.50	1	02/22/21 20:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	68 - 117	02/22/21 20:29	
Dibromofluoromethane	97	73 - 122	02/22/21 20:29	
Toluene-d8	101	65 - 144	02/22/21 20:29	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 11:20
Date Received: 02/18/21 11:45

Sample Name: LB-021721-01-27D
Lab Code: K2101511-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 20:56	*
Benzene	ND U	0.50	1	02/22/21 20:56	
Bromobenzene	ND U	2.0	1	02/22/21 20:56	
Bromochloromethane	ND U	0.50	1	02/22/21 20:56	
Bromodichloromethane	ND U	0.50	1	02/22/21 20:56	
Bromoform	ND U	0.50	1	02/22/21 20:56	
Bromomethane	ND U	0.50	1	02/22/21 20:56	
2-Butanone (MEK)	ND U	20	1	02/22/21 20:56	
n-Butylbenzene	ND U	4.0	1	02/22/21 20:56	
sec-Butylbenzene	ND U	2.0	1	02/22/21 20:56	
tert-Butylbenzene	ND U	2.0	1	02/22/21 20:56	
Carbon Disulfide	ND U	0.50	1	02/22/21 20:56	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 20:56	
Chlorobenzene	ND U	0.50	1	02/22/21 20:56	
Chloroethane	ND U	0.50	1	02/22/21 20:56	
Chloroform	ND U	0.50	1	02/22/21 20:56	
Chloromethane	ND U	0.50	1	02/22/21 20:56	
2-Chlorotoluene	ND U	2.0	1	02/22/21 20:56	
4-Chlorotoluene	ND U	2.0	1	02/22/21 20:56	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 20:56	
Dibromochloromethane	ND U	0.50	1	02/22/21 20:56	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 20:56	
Dibromomethane	ND U	0.50	1	02/22/21 20:56	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 20:56	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 20:56	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 20:56	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 20:56	*
1,1-Dichloroethane	ND U	0.50	1	02/22/21 20:56	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 20:56	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 20:56	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 20:56	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 20:56	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 20:56	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 20:56	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 20:56	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 20:56	
Ethylbenzene	ND U	0.50	1	02/22/21 20:56	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 20:56	
2-Hexanone	ND U	20	1	02/22/21 20:56	
Isopropylbenzene	ND U	2.0	1	02/22/21 20:56	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 20:56	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 11:20
Date Received: 02/18/21 11:45

Sample Name: LB-021721-01-27D
Lab Code: K2101511-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 20:56	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 20:56	
Methylene Chloride	ND U	2.0	1	02/22/21 20:56	
Naphthalene	ND U	2.0	1	02/22/21 20:56	
n-Propylbenzene	ND U	2.0	1	02/22/21 20:56	
Styrene	ND U	0.50	1	02/22/21 20:56	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 20:56	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 20:56	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 20:56	
Toluene	ND U	0.50	1	02/22/21 20:56	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 20:56	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 20:56	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 20:56	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 20:56	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 20:56	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 20:56	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 20:56	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 20:56	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 20:56	
Vinyl Chloride	ND U	0.50	1	02/22/21 20:56	
o-Xylene	ND U	0.50	1	02/22/21 20:56	
m,p-Xylenes	ND U	0.50	1	02/22/21 20:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	02/22/21 20:56	
Dibromofluoromethane	96	73 - 122	02/22/21 20:56	
Toluene-d8	99	65 - 144	02/22/21 20:56	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 12:25
Date Received: 02/18/21 11:45

Sample Name: LB-021721-02-13D
Lab Code: K2101511-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 21:22	*
Benzene	ND U	0.50	1	02/22/21 21:22	
Bromobenzene	ND U	2.0	1	02/22/21 21:22	
Bromochloromethane	ND U	0.50	1	02/22/21 21:22	
Bromodichloromethane	ND U	0.50	1	02/22/21 21:22	
Bromoform	ND U	0.50	1	02/22/21 21:22	
Bromomethane	ND U	0.50	1	02/22/21 21:22	
2-Butanone (MEK)	ND U	20	1	02/22/21 21:22	
n-Butylbenzene	ND U	4.0	1	02/22/21 21:22	
sec-Butylbenzene	ND U	2.0	1	02/22/21 21:22	
tert-Butylbenzene	ND U	2.0	1	02/22/21 21:22	
Carbon Disulfide	ND U	0.50	1	02/22/21 21:22	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 21:22	
Chlorobenzene	ND U	0.50	1	02/22/21 21:22	
Chloroethane	ND U	0.50	1	02/22/21 21:22	
Chloroform	ND U	0.50	1	02/22/21 21:22	
Chloromethane	ND U	0.50	1	02/22/21 21:22	
2-Chlorotoluene	ND U	2.0	1	02/22/21 21:22	
4-Chlorotoluene	ND U	2.0	1	02/22/21 21:22	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 21:22	
Dibromochloromethane	ND U	0.50	1	02/22/21 21:22	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 21:22	
Dibromomethane	ND U	0.50	1	02/22/21 21:22	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 21:22	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 21:22	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 21:22	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 21:22	*
1,1-Dichloroethane	ND U	0.50	1	02/22/21 21:22	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 21:22	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 21:22	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 21:22	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 21:22	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 21:22	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 21:22	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 21:22	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 21:22	
Ethylbenzene	ND U	0.50	1	02/22/21 21:22	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 21:22	
2-Hexanone	ND U	20	1	02/22/21 21:22	
Isopropylbenzene	ND U	2.0	1	02/22/21 21:22	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 21:22	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 12:25
Date Received: 02/18/21 11:45

Sample Name: LB-021721-02-13D
Lab Code: K2101511-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 21:22	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 21:22	
Methylene Chloride	ND U	2.0	1	02/22/21 21:22	
Naphthalene	ND U	2.0	1	02/22/21 21:22	
n-Propylbenzene	ND U	2.0	1	02/22/21 21:22	
Styrene	ND U	0.50	1	02/22/21 21:22	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 21:22	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 21:22	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 21:22	
Toluene	ND U	0.50	1	02/22/21 21:22	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 21:22	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 21:22	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 21:22	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 21:22	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 21:22	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 21:22	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 21:22	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 21:22	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 21:22	
Vinyl Chloride	ND U	0.50	1	02/22/21 21:22	
o-Xylene	ND U	0.50	1	02/22/21 21:22	
m,p-Xylenes	ND U	0.50	1	02/22/21 21:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	68 - 117	02/22/21 21:22	
Dibromofluoromethane	96	73 - 122	02/22/21 21:22	
Toluene-d8	99	65 - 144	02/22/21 21:22	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 13:20
Date Received: 02/18/21 11:45

Sample Name: LB-021721-03-26D
Lab Code: K2101511-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 21:49	*
Benzene	ND U	0.50	1	02/22/21 21:49	
Bromobenzene	ND U	2.0	1	02/22/21 21:49	
Bromochloromethane	ND U	0.50	1	02/22/21 21:49	
Bromodichloromethane	ND U	0.50	1	02/22/21 21:49	
Bromoform	ND U	0.50	1	02/22/21 21:49	
Bromomethane	ND U	0.50	1	02/22/21 21:49	
2-Butanone (MEK)	ND U	20	1	02/22/21 21:49	
n-Butylbenzene	ND U	4.0	1	02/22/21 21:49	
sec-Butylbenzene	ND U	2.0	1	02/22/21 21:49	
tert-Butylbenzene	ND U	2.0	1	02/22/21 21:49	
Carbon Disulfide	ND U	0.50	1	02/22/21 21:49	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 21:49	
Chlorobenzene	ND U	0.50	1	02/22/21 21:49	
Chloroethane	ND U	0.50	1	02/22/21 21:49	
Chloroform	ND U	0.50	1	02/22/21 21:49	
Chloromethane	ND U	0.50	1	02/22/21 21:49	
2-Chlorotoluene	ND U	2.0	1	02/22/21 21:49	
4-Chlorotoluene	ND U	2.0	1	02/22/21 21:49	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 21:49	
Dibromochloromethane	ND U	0.50	1	02/22/21 21:49	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 21:49	
Dibromomethane	ND U	0.50	1	02/22/21 21:49	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 21:49	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 21:49	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 21:49	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 21:49	*
1,1-Dichloroethane	ND U	0.50	1	02/22/21 21:49	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 21:49	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 21:49	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 21:49	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 21:49	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 21:49	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 21:49	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 21:49	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 21:49	
Ethylbenzene	ND U	0.50	1	02/22/21 21:49	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 21:49	
2-Hexanone	ND U	20	1	02/22/21 21:49	
Isopropylbenzene	ND U	2.0	1	02/22/21 21:49	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 21:49	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 13:20
Date Received: 02/18/21 11:45

Sample Name: LB-021721-03-26D
Lab Code: K2101511-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 21:49	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 21:49	
Methylene Chloride	ND U	2.0	1	02/22/21 21:49	
Naphthalene	ND U	2.0	1	02/22/21 21:49	
n-Propylbenzene	ND U	2.0	1	02/22/21 21:49	
Styrene	ND U	0.50	1	02/22/21 21:49	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 21:49	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 21:49	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 21:49	
Toluene	ND U	0.50	1	02/22/21 21:49	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 21:49	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 21:49	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 21:49	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 21:49	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 21:49	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 21:49	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 21:49	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 21:49	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 21:49	
Vinyl Chloride	ND U	0.50	1	02/22/21 21:49	
o-Xylene	ND U	0.50	1	02/22/21 21:49	
m,p-Xylenes	ND U	0.50	1	02/22/21 21:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	02/22/21 21:49	
Dibromofluoromethane	94	73 - 122	02/22/21 21:49	
Toluene-d8	96	65 - 144	02/22/21 21:49	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 14:35
Date Received: 02/18/21 11:45

Sample Name: LB-021721-04-5D
Lab Code: K2101511-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 22:15	*
Benzene	ND U	0.50	1	02/22/21 22:15	
Bromobenzene	ND U	2.0	1	02/22/21 22:15	
Bromochloromethane	ND U	0.50	1	02/22/21 22:15	
Bromodichloromethane	ND U	0.50	1	02/22/21 22:15	
Bromoform	ND U	0.50	1	02/22/21 22:15	
Bromomethane	ND U	0.50	1	02/22/21 22:15	
2-Butanone (MEK)	ND U	20	1	02/22/21 22:15	
n-Butylbenzene	ND U	4.0	1	02/22/21 22:15	
sec-Butylbenzene	ND U	2.0	1	02/22/21 22:15	
tert-Butylbenzene	ND U	2.0	1	02/22/21 22:15	
Carbon Disulfide	ND U	0.50	1	02/22/21 22:15	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 22:15	
Chlorobenzene	ND U	0.50	1	02/22/21 22:15	
Chloroethane	ND U	0.50	1	02/22/21 22:15	
Chloroform	ND U	0.50	1	02/22/21 22:15	
Chloromethane	ND U	0.50	1	02/22/21 22:15	
2-Chlorotoluene	ND U	2.0	1	02/22/21 22:15	
4-Chlorotoluene	ND U	2.0	1	02/22/21 22:15	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 22:15	
Dibromochloromethane	ND U	0.50	1	02/22/21 22:15	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 22:15	
Dibromomethane	ND U	0.50	1	02/22/21 22:15	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 22:15	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 22:15	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 22:15	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 22:15	*
1,1-Dichloroethane	ND U	0.50	1	02/22/21 22:15	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 22:15	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 22:15	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 22:15	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 22:15	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 22:15	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 22:15	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 22:15	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 22:15	
Ethylbenzene	ND U	0.50	1	02/22/21 22:15	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 22:15	
2-Hexanone	ND U	20	1	02/22/21 22:15	
Isopropylbenzene	ND U	2.0	1	02/22/21 22:15	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 22:15	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21 14:35
Date Received: 02/18/21 11:45

Sample Name: LB-021721-04-5D
Lab Code: K2101511-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 22:15	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 22:15	
Methylene Chloride	ND U	2.0	1	02/22/21 22:15	
Naphthalene	ND U	2.0	1	02/22/21 22:15	
n-Propylbenzene	ND U	2.0	1	02/22/21 22:15	
Styrene	ND U	0.50	1	02/22/21 22:15	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 22:15	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 22:15	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 22:15	
Toluene	ND U	0.50	1	02/22/21 22:15	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 22:15	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 22:15	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 22:15	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 22:15	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 22:15	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 22:15	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 22:15	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 22:15	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 22:15	
Vinyl Chloride	ND U	0.50	1	02/22/21 22:15	
o-Xylene	ND U	0.50	1	02/22/21 22:15	
m,p-Xylenes	ND U	0.50	1	02/22/21 22:15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	85	68 - 117	02/22/21 22:15	
Dibromofluoromethane	95	73 - 122	02/22/21 22:15	
Toluene-d8	101	65 - 144	02/22/21 22:15	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/18/21 08:35
Date Received: 02/18/21 11:45

Sample Name: LB-021821-01-10DR
Lab Code: K2101511-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 22:42	*
Benzene	ND U	0.50	1	02/22/21 22:42	
Bromobenzene	ND U	2.0	1	02/22/21 22:42	
Bromochloromethane	ND U	0.50	1	02/22/21 22:42	
Bromodichloromethane	ND U	0.50	1	02/22/21 22:42	
Bromoform	ND U	0.50	1	02/22/21 22:42	
Bromomethane	ND U	0.50	1	02/22/21 22:42	
2-Butanone (MEK)	ND U	20	1	02/22/21 22:42	
n-Butylbenzene	ND U	4.0	1	02/22/21 22:42	
sec-Butylbenzene	ND U	2.0	1	02/22/21 22:42	
tert-Butylbenzene	ND U	2.0	1	02/22/21 22:42	
Carbon Disulfide	ND U	0.50	1	02/22/21 22:42	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 22:42	
Chlorobenzene	ND U	0.50	1	02/22/21 22:42	
Chloroethane	ND U	0.50	1	02/22/21 22:42	
Chloroform	ND U	0.50	1	02/22/21 22:42	
Chloromethane	ND U	0.50	1	02/22/21 22:42	
2-Chlorotoluene	ND U	2.0	1	02/22/21 22:42	
4-Chlorotoluene	ND U	2.0	1	02/22/21 22:42	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 22:42	
Dibromochloromethane	ND U	0.50	1	02/22/21 22:42	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 22:42	
Dibromomethane	ND U	0.50	1	02/22/21 22:42	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 22:42	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 22:42	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 22:42	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 22:42	*
1,1-Dichloroethane	ND U	0.50	1	02/22/21 22:42	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 22:42	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 22:42	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 22:42	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 22:42	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 22:42	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 22:42	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 22:42	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 22:42	
Ethylbenzene	ND U	0.50	1	02/22/21 22:42	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 22:42	
2-Hexanone	ND U	20	1	02/22/21 22:42	
Isopropylbenzene	ND U	2.0	1	02/22/21 22:42	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 22:42	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/18/21 08:35
Date Received: 02/18/21 11:45

Sample Name: LB-021821-01-10DR
Lab Code: K2101511-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 22:42	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 22:42	
Methylene Chloride	ND U	2.0	1	02/22/21 22:42	
Naphthalene	ND U	2.0	1	02/22/21 22:42	
n-Propylbenzene	ND U	2.0	1	02/22/21 22:42	
Styrene	ND U	0.50	1	02/22/21 22:42	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 22:42	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 22:42	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 22:42	
Toluene	ND U	0.50	1	02/22/21 22:42	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 22:42	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 22:42	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 22:42	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 22:42	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 22:42	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 22:42	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 22:42	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 22:42	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 22:42	
Vinyl Chloride	ND U	0.50	1	02/22/21 22:42	
o-Xylene	ND U	0.50	1	02/22/21 22:42	
m,p-Xylenes	ND U	0.50	1	02/22/21 22:42	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	02/22/21 22:42	
Dibromofluoromethane	94	73 - 122	02/22/21 22:42	
Toluene-d8	99	65 - 144	02/22/21 22:42	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/18/21 09:00
Date Received: 02/18/21 11:45

Sample Name: LB-021821-02-FB
Lab Code: K2101511-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 23:08	*
Benzene	ND U	0.50	1	02/22/21 23:08	
Bromobenzene	ND U	2.0	1	02/22/21 23:08	
Bromochloromethane	ND U	0.50	1	02/22/21 23:08	
Bromodichloromethane	ND U	0.50	1	02/22/21 23:08	
Bromoform	ND U	0.50	1	02/22/21 23:08	
Bromomethane	ND U	0.50	1	02/22/21 23:08	
2-Butanone (MEK)	ND U	20	1	02/22/21 23:08	
n-Butylbenzene	ND U	4.0	1	02/22/21 23:08	
sec-Butylbenzene	ND U	2.0	1	02/22/21 23:08	
tert-Butylbenzene	ND U	2.0	1	02/22/21 23:08	
Carbon Disulfide	ND U	0.50	1	02/22/21 23:08	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 23:08	
Chlorobenzene	ND U	0.50	1	02/22/21 23:08	
Chloroethane	ND U	0.50	1	02/22/21 23:08	
Chloroform	1.4	0.50	1	02/22/21 23:08	
Chloromethane	ND U	0.50	1	02/22/21 23:08	
2-Chlorotoluene	ND U	2.0	1	02/22/21 23:08	
4-Chlorotoluene	ND U	2.0	1	02/22/21 23:08	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 23:08	
Dibromochloromethane	ND U	0.50	1	02/22/21 23:08	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 23:08	
Dibromomethane	ND U	0.50	1	02/22/21 23:08	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 23:08	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 23:08	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 23:08	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 23:08	*
1,1-Dichloroethane	ND U	0.50	1	02/22/21 23:08	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 23:08	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 23:08	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 23:08	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 23:08	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 23:08	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 23:08	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 23:08	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 23:08	
Ethylbenzene	ND U	0.50	1	02/22/21 23:08	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 23:08	
2-Hexanone	ND U	20	1	02/22/21 23:08	
Isopropylbenzene	ND U	2.0	1	02/22/21 23:08	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 23:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/18/21 09:00
Date Received: 02/18/21 11:45

Sample Name: LB-021821-02-FB
Lab Code: K2101511-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 23:08	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 23:08	
Methylene Chloride	ND U	2.0	1	02/22/21 23:08	
Naphthalene	ND U	2.0	1	02/22/21 23:08	
n-Propylbenzene	ND U	2.0	1	02/22/21 23:08	
Styrene	ND U	0.50	1	02/22/21 23:08	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 23:08	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 23:08	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 23:08	
Toluene	ND U	0.50	1	02/22/21 23:08	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 23:08	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 23:08	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 23:08	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 23:08	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 23:08	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 23:08	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 23:08	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 23:08	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 23:08	
Vinyl Chloride	ND U	0.50	1	02/22/21 23:08	
o-Xylene	ND U	0.50	1	02/22/21 23:08	
m,p-Xylenes	ND U	0.50	1	02/22/21 23:08	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	02/22/21 23:08	
Dibromofluoromethane	97	73 - 122	02/22/21 23:08	
Toluene-d8	99	65 - 144	02/22/21 23:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/18/21 09:30
Date Received: 02/18/21 11:45

Sample Name: LB-021821-03-10SR
Lab Code: K2101511-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 23:35	*
Benzene	ND U	0.50	1	02/22/21 23:35	
Bromobenzene	ND U	2.0	1	02/22/21 23:35	
Bromochloromethane	ND U	0.50	1	02/22/21 23:35	
Bromodichloromethane	ND U	0.50	1	02/22/21 23:35	
Bromoform	ND U	0.50	1	02/22/21 23:35	
Bromomethane	ND U	0.50	1	02/22/21 23:35	
2-Butanone (MEK)	ND U	20	1	02/22/21 23:35	
n-Butylbenzene	ND U	4.0	1	02/22/21 23:35	
sec-Butylbenzene	ND U	2.0	1	02/22/21 23:35	
tert-Butylbenzene	ND U	2.0	1	02/22/21 23:35	
Carbon Disulfide	ND U	0.50	1	02/22/21 23:35	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 23:35	
Chlorobenzene	ND U	0.50	1	02/22/21 23:35	
Chloroethane	ND U	0.50	1	02/22/21 23:35	
Chloroform	ND U	0.50	1	02/22/21 23:35	
Chloromethane	ND U	0.50	1	02/22/21 23:35	
2-Chlorotoluene	ND U	2.0	1	02/22/21 23:35	
4-Chlorotoluene	ND U	2.0	1	02/22/21 23:35	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 23:35	
Dibromochloromethane	ND U	0.50	1	02/22/21 23:35	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 23:35	
Dibromomethane	ND U	0.50	1	02/22/21 23:35	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 23:35	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 23:35	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 23:35	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 23:35	*
1,1-Dichloroethane	ND U	0.50	1	02/22/21 23:35	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 23:35	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 23:35	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 23:35	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 23:35	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 23:35	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 23:35	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 23:35	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 23:35	
Ethylbenzene	ND U	0.50	1	02/22/21 23:35	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 23:35	
2-Hexanone	ND U	20	1	02/22/21 23:35	
Isopropylbenzene	ND U	2.0	1	02/22/21 23:35	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 23:35	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/18/21 09:30
Date Received: 02/18/21 11:45

Sample Name: LB-021821-03-10SR
Lab Code: K2101511-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 23:35	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 23:35	
Methylene Chloride	ND U	2.0	1	02/22/21 23:35	
Naphthalene	ND U	2.0	1	02/22/21 23:35	
n-Propylbenzene	ND U	2.0	1	02/22/21 23:35	
Styrene	ND U	0.50	1	02/22/21 23:35	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 23:35	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 23:35	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 23:35	
Toluene	ND U	0.50	1	02/22/21 23:35	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 23:35	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 23:35	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 23:35	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 23:35	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 23:35	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 23:35	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 23:35	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 23:35	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 23:35	
Vinyl Chloride	ND U	0.50	1	02/22/21 23:35	
o-Xylene	ND U	0.50	1	02/22/21 23:35	
m,p-Xylenes	ND U	0.50	1	02/22/21 23:35	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	02/22/21 23:35	
Dibromofluoromethane	96	73 - 122	02/22/21 23:35	
Toluene-d8	97	65 - 144	02/22/21 23:35	



Metals

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-01-27D
Lab Code: K2101511-002

Service Request: K2101511
Date Collected: 02/17/21 11:20
Date Received: 02/18/21 11:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/25/21 13:34	02/24/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/25/21 13:34	02/24/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-02-13D
Lab Code: K2101511-003

Service Request: K2101511
Date Collected: 02/17/21 12:25
Date Received: 02/18/21 11:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/25/21 13:45	02/24/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/25/21 13:45	02/24/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-03-26D
Lab Code: K2101511-004

Service Request: K2101511
Date Collected: 02/17/21 13:20
Date Received: 02/18/21 11:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/25/21 13:48	02/24/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/25/21 13:48	02/24/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-04-5D
Lab Code: K2101511-005

Service Request: K2101511
Date Collected: 02/17/21 14:35
Date Received: 02/18/21 11:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/25/21 13:51	02/24/21	
Manganese	6010C	2.5	ug/L	1.1	1	02/25/21 13:51	02/24/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-01-10DR
Lab Code: K2101511-006

Service Request: K2101511
Date Collected: 02/18/21 08:35
Date Received: 02/18/21 11:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/25/21 13:53	02/24/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/25/21 13:53	02/24/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-02-FB
Lab Code: K2101511-007

Service Request: K2101511
Date Collected: 02/18/21 09:00
Date Received: 02/18/21 11:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/25/21 14:07	02/24/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/25/21 14:07	02/24/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-03-10SR
Lab Code: K2101511-008

Service Request: K2101511
Date Collected: 02/18/21 09:30
Date Received: 02/18/21 11:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/25/21 14:09	02/24/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/25/21 14:09	02/24/21	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-01-27D
Lab Code: K2101511-002

Service Request: K2101511
Date Collected: 02/17/21 11:20
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	7.21	mg/L	0.20	2	02/18/21 19:17	
Nitrate as Nitrogen	300.0	3.89	mg/L	0.10	2	02/18/21 19:17	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-01-27D
Lab Code: K2101511-002

Service Request: K2101511
Date Collected: 02/17/21 11:20
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	207	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-02-13D
Lab Code: K2101511-003

Service Request: K2101511
Date Collected: 02/17/21 12:25
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.05	mg/L	0.20	2	02/18/21 19:29	
Nitrate as Nitrogen	300.0	4.78	mg/L	0.10	2	02/18/21 19:29	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-02-13D
Lab Code: K2101511-003

Service Request: K2101511
Date Collected: 02/17/21 12:25
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	179	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-03-26D
Lab Code: K2101511-004

Service Request: K2101511
Date Collected: 02/17/21 13:20
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	6.21	mg/L	0.20	2	02/18/21 20:04	
Nitrate as Nitrogen	300.0	5.55	mg/L	0.10	2	02/18/21 20:04	

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dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-03-26D
Lab Code: K2101511-004

Service Request: K2101511
Date Collected: 02/17/21 13:20
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	197	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-04-5D
Lab Code: K2101511-005

Service Request: K2101511
Date Collected: 02/17/21 14:35
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	7.98	mg/L	0.20	2	02/18/21 21:14	
Nitrate as Nitrogen	300.0	0.96	mg/L	0.10	2	02/18/21 21:14	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021721-04-5D
Lab Code: K2101511-005

Service Request: K2101511
Date Collected: 02/17/21 14:35
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	215	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-01-10DR
Lab Code: K2101511-006

Service Request: K2101511
Date Collected: 02/18/21 08:35
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	7.25	mg/L	0.20	2	02/18/21 21:26	
Nitrate as Nitrogen	300.0	3.79	mg/L	0.10	2	02/18/21 21:26	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-01-10DR
Lab Code: K2101511-006

Service Request: K2101511
Date Collected: 02/18/21 08:35
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	200	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-02-FB
Lab Code: K2101511-007

Service Request: K2101511
Date Collected: 02/18/21 09:00
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.20	2	02/18/21 21:37	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.10	2	02/18/21 21:37	

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dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-02-FB
Lab Code: K2101511-007

Service Request: K2101511
Date Collected: 02/18/21 09:00
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-03-10SR
Lab Code: K2101511-008

Service Request: K2101511
Date Collected: 02/18/21 09:30
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	6.55	mg/L	0.20	2	02/18/21 21:49	
Nitrate as Nitrogen	300.0	6.34	mg/L	0.10	2	02/18/21 21:49	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-03-10SR
Lab Code: K2101511-008

Service Request: K2101511
Date Collected: 02/18/21 09:30
Date Received: 02/18/21 11:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	206	mg/L	5.0	1	02/20/21 09:20	



QC Summary Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
Trip Blanks	K2101511-001	83	97	101
LB-021721-01-27D	K2101511-002	82	96	99
LB-021721-02-13D	K2101511-003	83	96	99
LB-021721-03-26D	K2101511-004	84	94	96
LB-021721-04-5D	K2101511-005	85	95	101
LB-021821-01-10DR	K2101511-006	87	94	99
LB-021821-02-FB	K2101511-007	82	97	99
LB-021821-03-10SR	K2101511-008	82	96	97
Method Blank	KQ2102604-05	90	92	96
Lab Control Sample	KQ2102604-03	93	96	100
Duplicate Lab Control Sample	KQ2102604-04	91	94	99
LB-021721-01-27D	KQ2102604-06	92	94	100
LB-021721-01-27D	KQ2102604-07	91	99	101

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21
Date Received: 02/18/21
Date Analyzed: 02/23/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: LB-021721-01-27D
Lab Code: K2101511-002
Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike KQ2102604-06			Duplicate Matrix Spike KQ2102604-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Acetone	ND U	55.3	50.0	111	74.3	50.0	149 *	68-134	29	30
Benzene	ND U	8.86	10.0	89	11.0	10.0	110	63-144	21	30
Bromobenzene	ND U	8.31	10.0	83	11.2	10.0	112	72-122	30	30
Bromochloromethane	ND U	8.76	10.0	88	11.2	10.0	112	73-135	25	30
Bromodichloromethane	ND U	8.86	10.0	89	11.5	10.0	115	61-134	26	30
Bromoform	ND U	7.97	10.0	80	10.5	10.0	105	54-140	27	30
Bromomethane	ND U	8.13	10.0	81	10.7	10.0	107	36-127	27	30
2-Butanone (MEK)	ND U	46.6	50.0	93	63.9	50.0	128	65-147	31*	30
n-Butylbenzene	ND U	8.46	10.0	85	10.9	10.0	109	52-144	25	30
sec-Butylbenzene	ND U	8.79	10.0	88	11.4	10.0	114	56-142	26	30
tert-Butylbenzene	ND U	8.56	10.0	86	11.1	10.0	111	59-139	26	30
Carbon Disulfide	ND U	18.9	20.0	94	23.4	20.0	117	52-156	22	30
Carbon Tetrachloride	ND U	9.02	10.0	90	11.7	10.0	117	53-161	26	30
Chlorobenzene	ND U	8.47	10.0	85	10.3	10.0	103	69-126	19	30
Chloroethane	ND U	11.3	10.0	113	13.5	10.0	135	56-147	18	30
Chloroform	ND U	8.66	10.0	87	11.1	10.0	111	64-133	24	30
Chloromethane	ND U	9.96	10.0	100	11.8	10.0	118	49-127	17	30
2-Chlorotoluene	ND U	8.75	10.0	88	11.1	10.0	111	55-139	23	30
4-Chlorotoluene	ND U	8.77	10.0	88	11.2	10.0	112	57-138	24	30
1,2-Dibromo-3-chloropropane	ND U	7.38	10.0	74	9.21	10.0	92	59-133	22	30
Dibromochloromethane	ND U	8.94	10.0	89	11.3	10.0	113	68-125	23	30
1,2-Dibromoethane (EDB)	ND U	7.66	10.0	77	9.74	10.0	97	73-122	24	30
Dibromomethane	ND U	8.53	10.0	85	11.5	10.0	115	68-132	30	30
1,2-Dichlorobenzene	ND U	8.33	10.0	83	11.2	10.0	112	72-119	29	30
1,3-Dichlorobenzene	ND U	8.44	10.0	84	11.0	10.0	110	70-121	26	30
1,4-Dichlorobenzene	ND U	8.15	10.0	82	10.7	10.0	107	72-121	27	30
Dichlorodifluoromethane	ND U	11.0	10.0	110	13.1	10.0	131	29-133	17	30
1,1-Dichloroethane	ND U	8.60	10.0	86	11.2	10.0	112	69-141	26	30
cis-1,2-Dichloroethene	ND U	8.01	10.0	80	10.6	10.0	106	61-139	28	30
trans-1,2-Dichloroethene	ND U	8.43	10.0	84	11.1	10.0	111	65-143	27	30
1,2-Dichloropropane	ND U	8.40	10.0	84	10.7	10.0	107	63-131	24	30
1,3-Dichloropropane	ND U	8.37	10.0	84	10.6	10.0	106	74-121	24	30
2,2-Dichloropropane	ND U	5.92	10.0	59	7.92	10.0	79	39-161	29	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21
Date Received: 02/18/21
Date Analyzed: 02/23/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: LB-021721-01-27D
Lab Code: K2101511-002
Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike KQ2102604-06			Duplicate Matrix Spike KQ2102604-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1-Dichloropropene	ND U	8.84	10.0	88	11.4	10.0	114	61-148	25	30
cis-1,3-Dichloropropene	ND U	8.09	10.0	81	10.8	10.0	108	66-134	28	30
trans-1,3-Dichloropropene	ND U	6.52	10.0	65	8.67	10.0	87	56-127	28	30
Ethylbenzene	ND U	7.93	10.0	79	9.95	10.0	100	66-136	23	30
Hexachlorobutadiene	ND U	7.94	10.0	79	11.1	10.0	111	60-132	33*	30
2-Hexanone	ND U	39.8	50.0	80	59.7	50.0	119	53-132	40*	30
Isopropylbenzene	ND U	8.35	10.0	84	10.4	10.0	104	58-144	22	30
4-Isopropyltoluene	ND U	8.67	10.0	87	11.4	10.0	114	57-141	27	30
Methyl tert-Butyl Ether	ND U	7.82	10.0	78	11.2	10.0	112	54-126	35*	30
4-Methyl-2-pentanone (MIBK)	ND U	45.4	50.0	91	62.0	50.0	124	64-139	31*	30
Methylene Chloride	ND U	8.96	10.0	90	10.7	10.0	107	70-133	17	30
Naphthalene	ND U	6.19	10.0	62	9.71	10.0	97	52-147	44*	30
n-Propylbenzene	ND U	8.81	10.0	88	11.5	10.0	115	55-144	26	30
Styrene	ND U	8.00	10.0	80	10.2	10.0	102	66-131	24	30
1,1,1,2-Tetrachloroethane	ND U	8.35	10.0	84	10.7	10.0	107	67-127	25	30
1,1,2,2-Tetrachloroethane	ND U	8.52	10.0	85	12.2	10.0	122	72-129	36*	30
Tetrachloroethene (PCE)	ND U	8.23	10.0	82	9.93	10.0	99	61-131	19	30
Toluene	ND U	8.86	10.0	89	11.5	10.0	115	71-136	26	30
1,2,3-Trichlorobenzene	ND U	6.98	10.0	70	10.3	10.0	103	57-137	38*	30
1,2,4-Trichlorobenzene	ND U	7.32	10.0	73	10.0	10.0	100	57-133	31*	30
1,1,2-Trichloroethane	ND U	8.22	10.0	82	10.1	10.0	101	74-124	21	30
1,1,1-Trichloroethane (TCA)	ND U	8.49	10.0	85	10.9	10.0	109	57-151	25	30
Trichloroethene (TCE)	ND U	8.53	10.0	85	10.9	10.0	109	53-139	24	30
Trichlorofluoromethane (CFC 11)	ND U	8.97	10.0	90	11.2	10.0	112	45-124	22	30
1,2,3-Trichloropropane	ND U	8.75	10.0	88	12.3	10.0	123	71-127	33*	30
1,2,4-Trimethylbenzene	ND U	8.51	10.0	85	11.2	10.0	112	61-132	27	30
1,3,5-Trimethylbenzene	ND U	8.44	10.0	84	11.0	10.0	110	60-136	27	30
Vinyl Chloride	ND U	10.6	10.0	106	12.9	10.0	129	49-136	19	30
o-Xylene	ND U	8.06	10.0	81	10.2	10.0	102	67-127	23	30
m,p-Xylenes	ND U	16.2	20.0	81	20.1	20.0	100	67-135	21	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102604-05

Service Request: K2101511
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/22/21 16:30	
Benzene	ND U	0.50	1	02/22/21 16:30	
Bromobenzene	ND U	2.0	1	02/22/21 16:30	
Bromochloromethane	ND U	0.50	1	02/22/21 16:30	
Bromodichloromethane	ND U	0.50	1	02/22/21 16:30	
Bromoform	ND U	0.50	1	02/22/21 16:30	
Bromomethane	ND U	0.50	1	02/22/21 16:30	
2-Butanone (MEK)	ND U	20	1	02/22/21 16:30	
n-Butylbenzene	ND U	4.0	1	02/22/21 16:30	
sec-Butylbenzene	ND U	2.0	1	02/22/21 16:30	
tert-Butylbenzene	ND U	2.0	1	02/22/21 16:30	
Carbon Disulfide	ND U	0.50	1	02/22/21 16:30	
Carbon Tetrachloride	ND U	0.50	1	02/22/21 16:30	
Chlorobenzene	ND U	0.50	1	02/22/21 16:30	
Chloroethane	ND U	0.50	1	02/22/21 16:30	
Chloroform	ND U	0.50	1	02/22/21 16:30	
Chloromethane	ND U	0.50	1	02/22/21 16:30	
2-Chlorotoluene	ND U	2.0	1	02/22/21 16:30	
4-Chlorotoluene	ND U	2.0	1	02/22/21 16:30	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/22/21 16:30	
Dibromochloromethane	ND U	0.50	1	02/22/21 16:30	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/22/21 16:30	
Dibromomethane	ND U	0.50	1	02/22/21 16:30	
1,2-Dichlorobenzene	ND U	0.50	1	02/22/21 16:30	
1,3-Dichlorobenzene	ND U	0.50	1	02/22/21 16:30	
1,4-Dichlorobenzene	ND U	0.50	1	02/22/21 16:30	
Dichlorodifluoromethane	ND U	0.50	1	02/22/21 16:30	
1,1-Dichloroethane	ND U	0.50	1	02/22/21 16:30	
cis-1,2-Dichloroethene	ND U	0.50	1	02/22/21 16:30	
trans-1,2-Dichloroethene	ND U	0.50	1	02/22/21 16:30	
1,2-Dichloropropane	ND U	0.50	1	02/22/21 16:30	
1,3-Dichloropropane	ND U	0.50	1	02/22/21 16:30	
2,2-Dichloropropane	ND U	0.50	1	02/22/21 16:30	
1,1-Dichloropropene	ND U	0.50	1	02/22/21 16:30	
cis-1,3-Dichloropropene	ND U	0.50	1	02/22/21 16:30	
trans-1,3-Dichloropropene	ND U	0.50	1	02/22/21 16:30	
Ethylbenzene	ND U	0.50	1	02/22/21 16:30	
Hexachlorobutadiene	ND U	2.0	1	02/22/21 16:30	
2-Hexanone	ND U	20	1	02/22/21 16:30	
Isopropylbenzene	ND U	2.0	1	02/22/21 16:30	
4-Isopropyltoluene	ND U	2.0	1	02/22/21 16:30	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102604-05

Service Request: K2101511
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/22/21 16:30	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/22/21 16:30	
Methylene Chloride	ND U	2.0	1	02/22/21 16:30	
Naphthalene	ND U	2.0	1	02/22/21 16:30	
n-Propylbenzene	ND U	2.0	1	02/22/21 16:30	
Styrene	ND U	0.50	1	02/22/21 16:30	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/22/21 16:30	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/22/21 16:30	
Tetrachloroethene (PCE)	ND U	0.50	1	02/22/21 16:30	
Toluene	ND U	0.50	1	02/22/21 16:30	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/22/21 16:30	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/22/21 16:30	
1,1,2-Trichloroethane	ND U	0.50	1	02/22/21 16:30	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/22/21 16:30	
Trichloroethene (TCE)	ND U	0.50	1	02/22/21 16:30	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/22/21 16:30	
1,2,3-Trichloropropane	ND U	0.50	1	02/22/21 16:30	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/22/21 16:30	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/22/21 16:30	
Vinyl Chloride	ND U	0.50	1	02/22/21 16:30	
o-Xylene	ND U	0.50	1	02/22/21 16:30	
m,p-Xylenes	ND U	0.50	1	02/22/21 16:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	02/22/21 16:30	
Dibromofluoromethane	92	73 - 122	02/22/21 16:30	
Toluene-d8	96	65 - 144	02/22/21 16:30	

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Analyzed: 02/22/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 713756

Analyte Name	Lab Control Sample KQ2102604-03			Duplicate Lab Control Sample KQ2102604-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.32	10.0	93	9.75	10.0	98	66-124	5	30
1,1,1-Trichloroethane (TCA)	8.51	10.0	85	7.91	10.0	79	59-136	7	30
1,1,2,2-Tetrachloroethane	10.2	10.0	102	10.7	10.0	107	70-127	5	30
1,1,2-Trichloroethane	9.67	10.0	97	10.0	10.0	100	74-118	4	30
1,1-Dichloroethane	9.53	10.0	95	8.93	10.0	89	68-132	7	30
1,1-Dichloropropene	8.56	10.0	86	8.03	10.0	80	59-134	6	30
1,2,3-Trichlorobenzene	9.52	10.0	95	9.95	10.0	100	68-120	4	30
1,2,3-Trichloropropane	10.5	10.0	105	11.6	10.0	116	69-123	10	30
1,2,4-Trichlorobenzene	9.23	10.0	92	9.37	10.0	94	58-126	2	30
1,2,4-Trimethylbenzene	9.61	10.0	96	9.27	10.0	93	63-122	4	30
1,2-Dibromo-3-chloropropane	10.5	10.0	105	8.87	10.0	89	55-132	17	30
1,2-Dibromoethane (EDB)	9.17	10.0	92	10.1	10.0	101	74-118	9	30
1,2-Dichlorobenzene	9.94	10.0	99	10.1	10.0	101	72-115	2	30
1,2-Dichloropropane	9.09	10.0	91	9.31	10.0	93	67-126	2	30
1,3,5-Trimethylbenzene	9.14	10.0	91	9.05	10.0	91	62-126	<1	30
1,3-Dichlorobenzene	9.43	10.0	94	9.61	10.0	96	70-116	2	30
1,3-Dichloropropane	9.69	10.0	97	10.1	10.0	101	75-116	4	30
1,4-Dichlorobenzene	9.54	10.0	95	9.68	10.0	97	73-115	1	30
2,2-Dichloropropane	6.91	10.0	69	6.10	10.0	61	37-145	12	30
2-Butanone (MEK)	59.9	50.0	120	58.9	50.0	118	71-149	2	30
2-Chlorotoluene	9.66	10.0	97	9.21	10.0	92	55-131	5	30
2-Hexanone	51.6	50.0	103	57.2	50.0	114	59-131	10	30
4-Chlorotoluene	9.89	10.0	99	9.78	10.0	98	66-121	1	30
4-Isopropyltoluene	9.30	10.0	93	8.89	10.0	89	61-128	5	30
4-Methyl-2-pentanone (MIBK)	52.4	50.0	105	55.8	50.0	112	64-134	6	30
Acetone	66.1	50.0	132	64.6	50.0	129	68-135	2	30
Benzene	8.98	10.0	90	8.79	10.0	88	69-124	2	30
Bromobenzene	9.69	10.0	97	10.0	10.0	100	72-116	3	30
Bromochloromethane	9.76	10.0	98	9.53	10.0	95	75-131	2	30
Bromodichloromethane	9.97	10.0	100	10.0	10.0	100	63-129	<1	30
Bromoform	10.0	10.0	100	10.5	10.0	105	52-144	4	30
Bromomethane	8.84	10.0	88	8.06	10.0	81	35-113	9	30
Carbon Disulfide	17.9	20.0	90	16.6	20.0	83	46-144	7	30
Carbon Tetrachloride	9.08	10.0	91	8.15	10.0	82	55-140	11	30
Chlorobenzene	9.50	10.0	95	9.43	10.0	94	72-116	<1	30
Chloroethane	10.8	10.0	108	10.1	10.0	101	58-134	7	30
Chloroform	9.33	10.0	93	9.33	10.0	93	70-129	<1	30
Chloromethane	9.74	10.0	97	9.27	10.0	93	34-130	5	30
cis-1,2-Dichloroethene	9.00	10.0	90	8.85	10.0	89	71-118	2	30
cis-1,3-Dichloropropene	9.47	10.0	95	9.55	10.0	96	62-132	<1	30
Dibromochloromethane	10.5	10.0	105	10.8	10.0	108	67-126	3	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Analyzed: 02/22/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 713756

Analyte Name	Lab Control Sample KQ2102604-03			Duplicate Lab Control Sample KQ2102604-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	9.38	10.0	94	9.63	10.0	96	69-128	3	30
Dichlorodifluoromethane	10.2	10.0	102	8.59	10.0	86	32-124	17	30
Ethylbenzene	8.39	10.0	84	8.47	10.0	85	67-121	<1	30
Hexachlorobutadiene	9.35	10.0	94	8.71	10.0	87	57-119	7	30
Isopropylbenzene	8.78	10.0	88	8.26	10.0	83	67-129	6	30
m,p-Xylenes	17.2	20.0	86	16.8	20.0	84	69-121	2	30
Methyl tert-Butyl Ether	9.39	10.0	94	9.50	10.0	95	54-126	1	30
Methylene Chloride	9.24	10.0	92	9.58	10.0	96	71-122	4	30
Naphthalene	9.34	10.0	93	9.20	10.0	92	64-126	2	30
n-Butylbenzene	9.05	10.0	91	8.56	10.0	86	55-130	6	30
n-Propylbenzene	9.34	10.0	93	8.88	10.0	89	61-124	5	30
o-Xylene	8.75	10.0	88	8.97	10.0	90	71-119	2	30
sec-Butylbenzene	8.86	10.0	89	8.58	10.0	86	59-128	3	30
Styrene	9.35	10.0	94	9.40	10.0	94	74-121	<1	30
tert-Butylbenzene	8.99	10.0	90	8.50	10.0	85	61-127	6	30
Tetrachloroethene (PCE)	8.70	10.0	87	8.07	10.0	81	62-126	8	30
Toluene	9.16	10.0	92	8.97	10.0	90	69-124	2	30
trans-1,2-Dichloroethene	8.69	10.0	87	8.36	10.0	84	67-125	4	30
trans-1,3-Dichloropropene	8.54	10.0	85	8.55	10.0	86	59-125	<1	30
Trichloroethene (TCE)	8.65	10.0	87	8.50	10.0	85	67-128	2	30
Trichlorofluoromethane (CFC 11)	8.08	10.0	81	6.85	10.0	69	52-141	16	30
Vinyl Chloride	9.71	10.0	97	8.85	10.0	89	55-123	9	30



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102371-02

Service Request: K2101511
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/25/21 13:29	02/24/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/25/21 13:29	02/24/21	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21
Date Received: 02/18/21
Date Analyzed: 02/25/21
Date Extracted: 02/24/21

Matrix Spike Summary
Dissolved Metals

Sample Name: LB-021721-01-27D
Lab Code: K2101511-002
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2102371-04

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Iron	ND U	1010	1000	101	75-125
Manganese	ND U	527	500	105	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21
Date Received: 02/18/21
Date Analyzed: 02/25/21

Replicate Sample Summary

Dissolved Metals

Sample Name: LB-021721-01-27D
Lab Code: K2101511-002

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				KQ2102371-03 Result			
Iron	6010C	21	ND U	ND U	ND	-	20
Manganese	6010C	1.1	ND U	ND U	ND	-	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
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Analyzed: 02/25/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2102371-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2540	2500	102	80-120
Manganese	6010C	1350	1250	108	80-120



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101511-MB1

Service Request: K2101511
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.10	1	02/18/21 10:08	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	02/18/21 10:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101511-MB1

Service Request: K2101511
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101511-MB2

Service Request: K2101511
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.10	1	02/18/21 21:02	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	02/18/21 21:02	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101511-MB2

Service Request: K2101511
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request:K2101511
Date Collected:02/17/21
Date Received:02/18/21
Date Analyzed:2/18/21

**Duplicate Matrix Spike Summary
General Chemistry Parameters**

Sample Name: LB-021721-03-26D
Lab Code: K2101511-004

Units:mg/L
Basis:NA

Analyte Name	Method	Sample		Matrix Spike K2101511-004MS			Duplicate Matrix Spike K2101511-004DMS			RPD	RPD Limit
		Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
Chloride	300.0	6.21	14.2	8.00	99	14.3	8.00	101	90-110	<1	20
Nitrate as Nitrogen	300.0	5.55	13.4	8.00	98	13.5	8.00	99	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.

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QA/QC Report

Client: SCS Engineers
Project Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Collected: 02/17/21
Date Received: 02/18/21
Date Analyzed: 02/18/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-021721-03-26D
Lab Code: K2101511-004

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				K2101511-004DUP Result			
Chloride	300.0	0.20	6.21	6.17	6.19	<1	20
Nitrate as Nitrogen	300.0	0.10	5.55	5.51	5.53	<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
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Analyzed: 02/18/21 - 02/20/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2101511-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.93	5.00	99	90-110
Nitrate as Nitrogen	300.0	2.36	2.50	95	90-110
Solids, Total Dissolved	SM 2540 C	928	922	101	85-115

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101511
Date Analyzed: 02/18/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2101511-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.95	5.00	99	90-110
Nitrate as Nitrogen	300.0	2.37	2.50	95	90-110



February 26, 2021

Service Request No:K2101575

David Lamadrid
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

Laboratory Results for: Leichner Landfill

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory February 19, 2021
For your reference, these analyses have been assigned our service request number **K2101575**.

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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Narrative Documents

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Client: SCS Engineers
Project: Lechner Landfill
Sample Matrix: Ground Water

Service Request: K2101575
Date Received: 02/19/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Twelve ground water samples were received for analysis at ALS Environmental on 02/19/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS27\0223F003.D. 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.

The advisory criterion was exceeded for Bromomethane in Laboratory Control Sample (LCS) KQ2102778-03. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, this compound is not included in the subset of analytes used to control the analysis. The recovery information reported for this analyte is for advisory purposes only. No further corrective action was required.

Approved by

A handwritten signature in black ink, appearing to read 'Howard J. Blum', is written over a horizontal line.

Date

02/26/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: LB-021821-04-1D **Lab ID: K2101575-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	170			5.0	mg/L	SM 2540 C
Chloride	6.10			0.20	mg/L	300.0
Nitrate as Nitrogen	5.65			0.10	mg/L	300.0

CLIENT ID: LB-021821-05-1S **Lab ID: K2101575-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	190			5.0	mg/L	SM 2540 C
Chloride	5.67			0.20	mg/L	300.0
Nitrate as Nitrogen	3.91			0.10	mg/L	300.0

CLIENT ID: LB-021821-06-DUP1 **Lab ID: K2101575-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	198			5.0	mg/L	SM 2540 C
Chloride	5.69			0.20	mg/L	300.0
Nitrate as Nitrogen	3.92			0.10	mg/L	300.0

CLIENT ID: LB-021821-07-3D **Lab ID: K2101575-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	171			5.0	mg/L	SM 2540 C
Chloride	10.1			0.40	mg/L	300.0
Nitrate as Nitrogen	9.14			0.20	mg/L	300.0

CLIENT ID: LB-021821-08-3S **Lab ID: K2101575-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	148			5.0	mg/L	SM 2540 C
Chloride	7.00			0.40	mg/L	300.0
Nitrate as Nitrogen	6.82			0.20	mg/L	300.0

CLIENT ID: LB-021821-09-17D **Lab ID: K2101575-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	200			5.0	mg/L	SM 2540 C
Chloride	11.6			0.40	mg/L	300.0
Iron, Dissolved	106			21	ug/L	6010C
Manganese, Dissolved	4060			1.1	ug/L	6010C

CLIENT ID: LB-021921-01-20S **Lab ID: K2101575-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	275			5.0	mg/L	SM 2540 C
Chloride	4.61			0.40	mg/L	300.0
Manganese, Dissolved	251			1.1	ug/L	6010C

CLIENT ID: LB-021921-02-5S **Lab ID: K2101575-009**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	140			5.0	mg/L	SM 2540 C
Chloride	6.75			0.40	mg/L	300.0



SAMPLE DETECTION SUMMARY

CLIENT ID: LB-021921-02-5S **Lab ID: K2101575-009**

Analyte	Results	Flag	MDL	MRL	Units	Method
Nitrate as Nitrogen	7.09			0.20	mg/L	300.0

CLIENT ID: LB-021921-03-17I **Lab ID: K2101575-010**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	299			5.0	mg/L	SM 2540 C
Chloride	18.0			0.40	mg/L	300.0
Iron, Dissolved	14500			21	ug/L	6010C
Manganese, Dissolved	2860			1.1	ug/L	6010C

CLIENT ID: LB-021921-04-27I **Lab ID: K2101575-011**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	176			5.0	mg/L	SM 2540 C
Chloride	4.98			0.20	mg/L	300.0
Nitrate as Nitrogen	1.35			0.10	mg/L	300.0
Manganese, Dissolved	79.1			1.1	ug/L	6010C

CLIENT ID: LB-021921-05-DUP2 **Lab ID: K2101575-012**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	181			5.0	mg/L	SM 2540 C
Chloride	5.06			0.20	mg/L	300.0
Nitrate as Nitrogen	1.36			0.10	mg/L	300.0
Manganese, Dissolved	82.1			1.1	ug/L	6010C



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Lechner Landfill/04221030.13

Service Request:K2101575

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2101575-001	Trip Blank	2/18/2021	0950
K2101575-002	LB-021821-04-1D	2/18/2021	1045
K2101575-003	LB-021821-05-1S	2/18/2021	1140
K2101575-004	LB-021821-06-DUP1	2/18/2021	1145
K2101575-005	LB-021821-07-3D	2/18/2021	1300
K2101575-006	LB-021821-08-3S	2/18/2021	1355
K2101575-007	LB-021821-09-17D	2/18/2021	1510
K2101575-008	LB-021921-01-20S	2/19/2021	0810
K2101575-009	LB-021921-02-5S	2/19/2021	0900
K2101575-010	LB-021921-03-17I	2/19/2021	1015
K2101575-011	LB-021921-04-27I	2/19/2021	1125
K2101575-012	LB-021921-05-DUP2	2/19/2021	1130



CHAIN OF CUSTODY

SR# **K2101575**

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

PAGE **1** OF **2** COC# _____

PROJECT NAME	Lechner landfill	
PROJECT NUMBER	04221030.13	
PROJECT MANAGER	Dach Lucy / T Andrews	
COMPANY NAME	SCS Engineers	
ADDRESS	15940 SW 72nd Ave	
CITY/STATE/ZIP	Portland, OR 97224	
E-MAIL ADDRESS	tandrews@scsengineers.com	
PHONE #	503 724-0112	FAX #
SAMPLER'S SIGNATURE		

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/>	Hydrocarbons (see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 808 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) PCP <input type="checkbox"/>	Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>	(circle) pH, Cond (Cl, SO4, PO4, F, NO2, NO3) BOD, TSS, TDS, Turb. (circle) NH3-N, COD, TKN, TOC, TOX-9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	Alkalinity <input type="checkbox"/> CO3 <input type="checkbox"/> HCO3 <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>	REMARKS
Trip Blank	2-18-21	0950		W	2		X												
LB-021821-04-10	2-18-21	1045		W	5		X					X	X						
LB-021821-05-15	2-18-21	1146		W	5		X					X	X						
LB-021821-06-Dup1	2-18-21	1145		W	5		X					X	X						
LB-021821-07-3D	2-18-21	1300		W	5		X					X	X						
LB-021821-08-3S	2-18-21	1355		W	5		X					X	X						
LB-021821-09-17D	2-18-21	1510		W	5		X					X	X						
LB-021921-01-20S	2-19-21	0810		W	5		X					X	X						
LB-021921-02-5S	2-19-21	0900		W	5		X					X	X						
LB-021921-03-17J	2-19-21	1015		W	5		X					X	X						

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____ _____ _____	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 Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input checked="" type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS: Metals are field filtered <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

Container Supply Number



115140

RELINQUISHED BY: Signature: Ian Hulbert Date/Time: 2-19-21 12:11 Firm: SCS	RECEIVED BY: Signature: M. Brown Date/Time: 2/19/21 Firm: SCS	RELINQUISHED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____	RECEIVED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____
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CHAIN OF CUSTODY

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

PAGE 2 OF 2 COC#

SR# K2101575

PROJECT NAME: Leichter Landfill

PROJECT NUMBER: 04221030.13

PROJECT MANAGER: Barb Lacy / T Andrews

COMPANY NAME: SCS Engineers

ADDRESS: 15940 SW 72nd Ave

CITY/STATE/ZIP: Portland, OR 97224

E-MAIL ADDRESS: T.Andrews@Scsengineers.com

PHONE: 503 724-0112 FAX # _____

SAMPLER'S SIGNATURE: _____

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	ANALYZED PARAMETERS																		REMARKS																				
						Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/> 624 <input type="checkbox"/> 8260 <input type="checkbox"/>	Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	Oil & Grease/TPH <input type="checkbox"/>	1664 HEM <input type="checkbox"/>	1664 SGT <input type="checkbox"/>	Aroclors <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Congeners <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/>	8151 <input type="checkbox"/>	Tetra <input type="checkbox"/>	8151M <input type="checkbox"/>	Metals, Total or Dissolved (See List below) <input type="checkbox"/>	PCP <input type="checkbox"/>	Cyanide <input type="checkbox"/>	(circle) pH, Cond (NO3) BOD, TSS, Turb. <input type="checkbox"/>	Hex-Chrom <input type="checkbox"/>	(circle) SO4, PO4, F, NO2, DOC, NH3-N, COD, TKN, TOC, <input type="checkbox"/>		TOX 9020 <input type="checkbox"/>	AOX 1650 <input type="checkbox"/>	506 <input type="checkbox"/>	Alkalinity <input type="checkbox"/>	CO3 <input type="checkbox"/>	HCO3 <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/>	Methane <input type="checkbox"/>	Ethane <input type="checkbox"/>	Ethene <input type="checkbox"/>									
LB-021921-04-272	2-19-21	1125		W	5		X											X																										
LB-021921-05-Dup2	2-19-21	1130		W	5		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 Ti 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 Ti Sn V Zn Hg

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

SPECIAL INSTRUCTIONS/COMMENTS: Metals are field filtered

Container Supply Number  115140

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

RELINQUISHED BY:

[Signature] 2-19-21 1211
Signature Date/Time
Tom H. Hays SCS
Printed Name Firm

RECEIVED BY:

[Signature] 2/19/21
Signature Date/Time
Ellenow ACS 1211
Printed Name Firm

RELINQUISHED BY:

Signature _____ Date/Time _____
Printed Name _____ Firm _____

RECEIVED BY:

Signature _____ Date/Time _____
Printed Name _____ Firm _____

Cooler Receipt and Preservation Form

Client SLS Service Request K2101875
 Received: 2/19/21 Opened: 2/19/21 By: [Signature] Unloaded: 2/19/21 By: [Signature]

- 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? 1 Front
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: **Frozen Partially Thawed Thawed**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number	Filed
<u>N/A</u>	<u>2.6</u>	<u>IR</u>	<u>115140</u>			<u>NA</u>	

- 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 (unbroken) NA Y N
- Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? 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	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

SHORT HOLD TIME



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.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/analyte is offered by that state.

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.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2101575

Sample Name: Trip Blank
Lab Code: K2101575-001
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/19/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

Sample Name: LB-021821-04-1D
Lab Code: K2101575-002
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021821-05-1S
Lab Code: K2101575-003
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021821-06-DUP1
Lab Code: K2101575-004
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2101575

Sample Name: LB-021821-07-3D
Lab Code: K2101575-005
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021821-08-3S
Lab Code: K2101575-006
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021821-09-17D
Lab Code: K2101575-007
Sample Matrix: Ground Water

Date Collected: 02/18/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021921-01-20S
Lab Code: K2101575-008
Sample Matrix: Ground Water

Date Collected: 02/19/21
Date Received: 02/19/21

Analysis Method
300.0

Extracted/Digested By

Analyzed By
KABROWN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2101575

Sample Name: LB-021921-01-20S
Lab Code: K2101575-008
Sample Matrix: Ground Water

Date Collected: 02/19/21
Date Received: 02/19/21

Analysis Method
6010C
8260C
SM 2540 C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021921-02-5S
Lab Code: K2101575-009
Sample Matrix: Ground Water

Date Collected: 02/19/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By
ABOYER

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021921-03-17I
Lab Code: K2101575-010
Sample Matrix: Ground Water

Date Collected: 02/19/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By
ABOYER

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON

Sample Name: LB-021921-04-27I
Lab Code: K2101575-011
Sample Matrix: Ground Water

Date Collected: 02/19/21
Date Received: 02/19/21

Analysis Method
300.0
6010C

Extracted/Digested By
ABOYER

Analyzed By
KABROWN
AMCKORNEY

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2101575

Sample Name: LB-021921-04-27I
Lab Code: K2101575-011
Sample Matrix: Ground Water

Date Collected: 02/19/21
Date Received: 02/19/21

Analysis Method
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
MKANALY
JMADISON

Sample Name: LB-021921-05-DUP2
Lab Code: K2101575-012
Sample Matrix: Ground Water

Date Collected: 02/19/21
Date Received: 02/19/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JMADISON



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 09:50
Date Received: 02/19/21 12:11

Sample Name: Trip Blank
Lab Code: K2101575-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 12:37	
Benzene	ND U	0.50	1	02/23/21 12:37	
Bromobenzene	ND U	2.0	1	02/23/21 12:37	
Bromochloromethane	ND U	0.50	1	02/23/21 12:37	
Bromodichloromethane	ND U	0.50	1	02/23/21 12:37	
Bromoform	ND U	0.50	1	02/23/21 12:37	
Bromomethane	ND U	0.50	1	02/23/21 12:37	*
2-Butanone (MEK)	ND U	20	1	02/23/21 12:37	
n-Butylbenzene	ND U	4.0	1	02/23/21 12:37	
sec-Butylbenzene	ND U	2.0	1	02/23/21 12:37	
tert-Butylbenzene	ND U	2.0	1	02/23/21 12:37	
Carbon Disulfide	ND U	0.50	1	02/23/21 12:37	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 12:37	
Chlorobenzene	ND U	0.50	1	02/23/21 12:37	
Chloroethane	ND U	0.50	1	02/23/21 12:37	
Chloroform	ND U	0.50	1	02/23/21 12:37	
Chloromethane	ND U	0.50	1	02/23/21 12:37	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 12:37	
4-Chlorotoluene	ND U	2.0	1	02/23/21 12:37	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 12:37	
Dibromochloromethane	ND U	0.50	1	02/23/21 12:37	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 12:37	
Dibromomethane	ND U	0.50	1	02/23/21 12:37	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 12:37	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 12:37	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 12:37	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 12:37	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 12:37	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 12:37	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 12:37	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 12:37	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 12:37	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 12:37	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 12:37	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 12:37	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 12:37	
Ethylbenzene	ND U	0.50	1	02/23/21 12:37	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 12:37	
2-Hexanone	ND U	20	1	02/23/21 12:37	*
Isopropylbenzene	ND U	2.0	1	02/23/21 12:37	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 12:37	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 09:50
Date Received: 02/19/21 12:11

Sample Name: Trip Blank
Lab Code: K2101575-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 12:37	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 12:37	
Methylene Chloride	ND U	2.0	1	02/23/21 12:37	
Naphthalene	ND U	2.0	1	02/23/21 12:37	
n-Propylbenzene	ND U	2.0	1	02/23/21 12:37	
Styrene	ND U	0.50	1	02/23/21 12:37	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 12:37	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 12:37	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 12:37	
Toluene	ND U	0.50	1	02/23/21 12:37	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 12:37	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 12:37	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 12:37	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 12:37	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 12:37	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 12:37	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 12:37	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 12:37	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 12:37	
Vinyl Chloride	ND U	0.50	1	02/23/21 12:37	
o-Xylene	ND U	0.50	1	02/23/21 12:37	
m,p-Xylenes	ND U	0.50	1	02/23/21 12:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	68 - 117	02/23/21 12:37	
Dibromofluoromethane	100	73 - 122	02/23/21 12:37	
Toluene-d8	92	65 - 144	02/23/21 12:37	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 10:45
Date Received: 02/19/21 12:11

Sample Name: LB-021821-04-1D
Lab Code: K2101575-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 13:00	
Benzene	ND U	0.50	1	02/23/21 13:00	
Bromobenzene	ND U	2.0	1	02/23/21 13:00	
Bromochloromethane	ND U	0.50	1	02/23/21 13:00	
Bromodichloromethane	ND U	0.50	1	02/23/21 13:00	
Bromoform	ND U	0.50	1	02/23/21 13:00	
Bromomethane	ND U	0.50	1	02/23/21 13:00	*
2-Butanone (MEK)	ND U	20	1	02/23/21 13:00	
n-Butylbenzene	ND U	4.0	1	02/23/21 13:00	
sec-Butylbenzene	ND U	2.0	1	02/23/21 13:00	
tert-Butylbenzene	ND U	2.0	1	02/23/21 13:00	
Carbon Disulfide	ND U	0.50	1	02/23/21 13:00	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 13:00	
Chlorobenzene	ND U	0.50	1	02/23/21 13:00	
Chloroethane	ND U	0.50	1	02/23/21 13:00	
Chloroform	ND U	0.50	1	02/23/21 13:00	
Chloromethane	ND U	0.50	1	02/23/21 13:00	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 13:00	
4-Chlorotoluene	ND U	2.0	1	02/23/21 13:00	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 13:00	
Dibromochloromethane	ND U	0.50	1	02/23/21 13:00	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 13:00	
Dibromomethane	ND U	0.50	1	02/23/21 13:00	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 13:00	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 13:00	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 13:00	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 13:00	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 13:00	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 13:00	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 13:00	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 13:00	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 13:00	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 13:00	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 13:00	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 13:00	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 13:00	
Ethylbenzene	ND U	0.50	1	02/23/21 13:00	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 13:00	
2-Hexanone	ND U	20	1	02/23/21 13:00	*
Isopropylbenzene	ND U	2.0	1	02/23/21 13:00	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 13:00	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 10:45
Date Received: 02/19/21 12:11

Sample Name: LB-021821-04-1D
Lab Code: K2101575-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 13:00	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 13:00	
Methylene Chloride	ND U	2.0	1	02/23/21 13:00	
Naphthalene	ND U	2.0	1	02/23/21 13:00	
n-Propylbenzene	ND U	2.0	1	02/23/21 13:00	
Styrene	ND U	0.50	1	02/23/21 13:00	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 13:00	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 13:00	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 13:00	
Toluene	ND U	0.50	1	02/23/21 13:00	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 13:00	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 13:00	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 13:00	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 13:00	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 13:00	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 13:00	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 13:00	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 13:00	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 13:00	
Vinyl Chloride	ND U	0.50	1	02/23/21 13:00	
o-Xylene	ND U	0.50	1	02/23/21 13:00	
m,p-Xylenes	ND U	0.50	1	02/23/21 13:00	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	86	68 - 117	02/23/21 13:00	
Dibromofluoromethane	99	73 - 122	02/23/21 13:00	
Toluene-d8	91	65 - 144	02/23/21 13:00	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 11:40
Date Received: 02/19/21 12:11

Sample Name: LB-021821-05-1S
Lab Code: K2101575-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 13:22	
Benzene	ND U	0.50	1	02/23/21 13:22	
Bromobenzene	ND U	2.0	1	02/23/21 13:22	
Bromochloromethane	ND U	0.50	1	02/23/21 13:22	
Bromodichloromethane	ND U	0.50	1	02/23/21 13:22	
Bromoform	ND U	0.50	1	02/23/21 13:22	
Bromomethane	ND U	0.50	1	02/23/21 13:22	*
2-Butanone (MEK)	ND U	20	1	02/23/21 13:22	
n-Butylbenzene	ND U	4.0	1	02/23/21 13:22	
sec-Butylbenzene	ND U	2.0	1	02/23/21 13:22	
tert-Butylbenzene	ND U	2.0	1	02/23/21 13:22	
Carbon Disulfide	ND U	0.50	1	02/23/21 13:22	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 13:22	
Chlorobenzene	ND U	0.50	1	02/23/21 13:22	
Chloroethane	ND U	0.50	1	02/23/21 13:22	
Chloroform	ND U	0.50	1	02/23/21 13:22	
Chloromethane	ND U	0.50	1	02/23/21 13:22	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 13:22	
4-Chlorotoluene	ND U	2.0	1	02/23/21 13:22	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 13:22	
Dibromochloromethane	ND U	0.50	1	02/23/21 13:22	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 13:22	
Dibromomethane	ND U	0.50	1	02/23/21 13:22	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 13:22	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 13:22	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 13:22	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 13:22	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 13:22	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 13:22	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 13:22	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 13:22	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 13:22	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 13:22	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 13:22	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 13:22	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 13:22	
Ethylbenzene	ND U	0.50	1	02/23/21 13:22	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 13:22	
2-Hexanone	ND U	20	1	02/23/21 13:22	*
Isopropylbenzene	ND U	2.0	1	02/23/21 13:22	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 13:22	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 11:40
Date Received: 02/19/21 12:11

Sample Name: LB-021821-05-1S
Lab Code: K2101575-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 13:22	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 13:22	
Methylene Chloride	ND U	2.0	1	02/23/21 13:22	
Naphthalene	ND U	2.0	1	02/23/21 13:22	
n-Propylbenzene	ND U	2.0	1	02/23/21 13:22	
Styrene	ND U	0.50	1	02/23/21 13:22	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 13:22	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 13:22	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 13:22	
Toluene	ND U	0.50	1	02/23/21 13:22	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 13:22	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 13:22	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 13:22	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 13:22	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 13:22	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 13:22	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 13:22	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 13:22	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 13:22	
Vinyl Chloride	ND U	0.50	1	02/23/21 13:22	
o-Xylene	ND U	0.50	1	02/23/21 13:22	
m,p-Xylenes	ND U	0.50	1	02/23/21 13:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	02/23/21 13:22	
Dibromofluoromethane	96	73 - 122	02/23/21 13:22	
Toluene-d8	91	65 - 144	02/23/21 13:22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 11:45
Date Received: 02/19/21 12:11

Sample Name: LB-021821-06-DUP1
Lab Code: K2101575-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 13:45	
Benzene	ND U	0.50	1	02/23/21 13:45	
Bromobenzene	ND U	2.0	1	02/23/21 13:45	
Bromochloromethane	ND U	0.50	1	02/23/21 13:45	
Bromodichloromethane	ND U	0.50	1	02/23/21 13:45	
Bromoform	ND U	0.50	1	02/23/21 13:45	
Bromomethane	ND U	0.50	1	02/23/21 13:45	*
2-Butanone (MEK)	ND U	20	1	02/23/21 13:45	
n-Butylbenzene	ND U	4.0	1	02/23/21 13:45	
sec-Butylbenzene	ND U	2.0	1	02/23/21 13:45	
tert-Butylbenzene	ND U	2.0	1	02/23/21 13:45	
Carbon Disulfide	ND U	0.50	1	02/23/21 13:45	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 13:45	
Chlorobenzene	ND U	0.50	1	02/23/21 13:45	
Chloroethane	ND U	0.50	1	02/23/21 13:45	
Chloroform	ND U	0.50	1	02/23/21 13:45	
Chloromethane	ND U	0.50	1	02/23/21 13:45	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 13:45	
4-Chlorotoluene	ND U	2.0	1	02/23/21 13:45	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 13:45	
Dibromochloromethane	ND U	0.50	1	02/23/21 13:45	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 13:45	
Dibromomethane	ND U	0.50	1	02/23/21 13:45	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 13:45	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 13:45	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 13:45	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 13:45	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 13:45	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 13:45	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 13:45	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 13:45	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 13:45	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 13:45	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 13:45	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 13:45	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 13:45	
Ethylbenzene	ND U	0.50	1	02/23/21 13:45	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 13:45	
2-Hexanone	ND U	20	1	02/23/21 13:45	*
Isopropylbenzene	ND U	2.0	1	02/23/21 13:45	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 13:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 11:45
Date Received: 02/19/21 12:11

Sample Name: LB-021821-06-DUP1
Lab Code: K2101575-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 13:45	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 13:45	
Methylene Chloride	ND U	2.0	1	02/23/21 13:45	
Naphthalene	ND U	2.0	1	02/23/21 13:45	
n-Propylbenzene	ND U	2.0	1	02/23/21 13:45	
Styrene	ND U	0.50	1	02/23/21 13:45	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 13:45	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 13:45	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 13:45	
Toluene	ND U	0.50	1	02/23/21 13:45	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 13:45	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 13:45	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 13:45	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 13:45	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 13:45	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 13:45	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 13:45	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 13:45	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 13:45	
Vinyl Chloride	ND U	0.50	1	02/23/21 13:45	
o-Xylene	ND U	0.50	1	02/23/21 13:45	
m,p-Xylenes	ND U	0.50	1	02/23/21 13:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	68 - 117	02/23/21 13:45	
Dibromofluoromethane	94	73 - 122	02/23/21 13:45	
Toluene-d8	90	65 - 144	02/23/21 13:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 13:00
Date Received: 02/19/21 12:11

Sample Name: LB-021821-07-3D
Lab Code: K2101575-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 14:08	
Benzene	ND U	0.50	1	02/23/21 14:08	
Bromobenzene	ND U	2.0	1	02/23/21 14:08	
Bromochloromethane	ND U	0.50	1	02/23/21 14:08	
Bromodichloromethane	ND U	0.50	1	02/23/21 14:08	
Bromoform	ND U	0.50	1	02/23/21 14:08	
Bromomethane	ND U	0.50	1	02/23/21 14:08	*
2-Butanone (MEK)	ND U	20	1	02/23/21 14:08	
n-Butylbenzene	ND U	4.0	1	02/23/21 14:08	
sec-Butylbenzene	ND U	2.0	1	02/23/21 14:08	
tert-Butylbenzene	ND U	2.0	1	02/23/21 14:08	
Carbon Disulfide	ND U	0.50	1	02/23/21 14:08	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 14:08	
Chlorobenzene	ND U	0.50	1	02/23/21 14:08	
Chloroethane	ND U	0.50	1	02/23/21 14:08	
Chloroform	ND U	0.50	1	02/23/21 14:08	
Chloromethane	ND U	0.50	1	02/23/21 14:08	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 14:08	
4-Chlorotoluene	ND U	2.0	1	02/23/21 14:08	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 14:08	
Dibromochloromethane	ND U	0.50	1	02/23/21 14:08	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 14:08	
Dibromomethane	ND U	0.50	1	02/23/21 14:08	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 14:08	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 14:08	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 14:08	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 14:08	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 14:08	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 14:08	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 14:08	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 14:08	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 14:08	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 14:08	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 14:08	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 14:08	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 14:08	
Ethylbenzene	ND U	0.50	1	02/23/21 14:08	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 14:08	
2-Hexanone	ND U	20	1	02/23/21 14:08	*
Isopropylbenzene	ND U	2.0	1	02/23/21 14:08	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 14:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 13:00
Date Received: 02/19/21 12:11

Sample Name: LB-021821-07-3D
Lab Code: K2101575-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 14:08	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 14:08	
Methylene Chloride	ND U	2.0	1	02/23/21 14:08	
Naphthalene	ND U	2.0	1	02/23/21 14:08	
n-Propylbenzene	ND U	2.0	1	02/23/21 14:08	
Styrene	ND U	0.50	1	02/23/21 14:08	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 14:08	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 14:08	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 14:08	
Toluene	ND U	0.50	1	02/23/21 14:08	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 14:08	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 14:08	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 14:08	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 14:08	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 14:08	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 14:08	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 14:08	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 14:08	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 14:08	
Vinyl Chloride	ND U	0.50	1	02/23/21 14:08	
o-Xylene	ND U	0.50	1	02/23/21 14:08	
m,p-Xylenes	ND U	0.50	1	02/23/21 14:08	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	02/23/21 14:08	
Dibromofluoromethane	101	73 - 122	02/23/21 14:08	
Toluene-d8	92	65 - 144	02/23/21 14:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 13:55
Date Received: 02/19/21 12:11

Sample Name: LB-021821-08-3S
Lab Code: K2101575-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 14:31	
Benzene	ND U	0.50	1	02/23/21 14:31	
Bromobenzene	ND U	2.0	1	02/23/21 14:31	
Bromochloromethane	ND U	0.50	1	02/23/21 14:31	
Bromodichloromethane	ND U	0.50	1	02/23/21 14:31	
Bromoform	ND U	0.50	1	02/23/21 14:31	
Bromomethane	ND U	0.50	1	02/23/21 14:31	*
2-Butanone (MEK)	ND U	20	1	02/23/21 14:31	
n-Butylbenzene	ND U	4.0	1	02/23/21 14:31	
sec-Butylbenzene	ND U	2.0	1	02/23/21 14:31	
tert-Butylbenzene	ND U	2.0	1	02/23/21 14:31	
Carbon Disulfide	ND U	0.50	1	02/23/21 14:31	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 14:31	
Chlorobenzene	ND U	0.50	1	02/23/21 14:31	
Chloroethane	ND U	0.50	1	02/23/21 14:31	
Chloroform	ND U	0.50	1	02/23/21 14:31	
Chloromethane	ND U	0.50	1	02/23/21 14:31	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 14:31	
4-Chlorotoluene	ND U	2.0	1	02/23/21 14:31	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 14:31	
Dibromochloromethane	ND U	0.50	1	02/23/21 14:31	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 14:31	
Dibromomethane	ND U	0.50	1	02/23/21 14:31	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 14:31	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 14:31	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 14:31	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 14:31	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 14:31	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 14:31	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 14:31	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 14:31	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 14:31	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 14:31	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 14:31	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 14:31	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 14:31	
Ethylbenzene	ND U	0.50	1	02/23/21 14:31	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 14:31	
2-Hexanone	ND U	20	1	02/23/21 14:31	*
Isopropylbenzene	ND U	2.0	1	02/23/21 14:31	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 14:31	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 13:55
Date Received: 02/19/21 12:11

Sample Name: LB-021821-08-3S
Lab Code: K2101575-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 14:31	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 14:31	
Methylene Chloride	ND U	2.0	1	02/23/21 14:31	
Naphthalene	ND U	2.0	1	02/23/21 14:31	
n-Propylbenzene	ND U	2.0	1	02/23/21 14:31	
Styrene	ND U	0.50	1	02/23/21 14:31	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 14:31	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 14:31	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 14:31	
Toluene	ND U	0.50	1	02/23/21 14:31	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 14:31	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 14:31	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 14:31	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 14:31	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 14:31	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 14:31	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 14:31	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 14:31	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 14:31	
Vinyl Chloride	ND U	0.50	1	02/23/21 14:31	
o-Xylene	ND U	0.50	1	02/23/21 14:31	
m,p-Xylenes	ND U	0.50	1	02/23/21 14:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	68 - 117	02/23/21 14:31	
Dibromofluoromethane	98	73 - 122	02/23/21 14:31	
Toluene-d8	91	65 - 144	02/23/21 14:31	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 15:10
Date Received: 02/19/21 12:11

Sample Name: LB-021821-09-17D
Lab Code: K2101575-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 14:54	
Benzene	ND U	0.50	1	02/23/21 14:54	
Bromobenzene	ND U	2.0	1	02/23/21 14:54	
Bromochloromethane	ND U	0.50	1	02/23/21 14:54	
Bromodichloromethane	ND U	0.50	1	02/23/21 14:54	
Bromoform	ND U	0.50	1	02/23/21 14:54	
Bromomethane	ND U	0.50	1	02/23/21 14:54	*
2-Butanone (MEK)	ND U	20	1	02/23/21 14:54	
n-Butylbenzene	ND U	4.0	1	02/23/21 14:54	
sec-Butylbenzene	ND U	2.0	1	02/23/21 14:54	
tert-Butylbenzene	ND U	2.0	1	02/23/21 14:54	
Carbon Disulfide	ND U	0.50	1	02/23/21 14:54	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 14:54	
Chlorobenzene	ND U	0.50	1	02/23/21 14:54	
Chloroethane	ND U	0.50	1	02/23/21 14:54	
Chloroform	ND U	0.50	1	02/23/21 14:54	
Chloromethane	ND U	0.50	1	02/23/21 14:54	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 14:54	
4-Chlorotoluene	ND U	2.0	1	02/23/21 14:54	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 14:54	
Dibromochloromethane	ND U	0.50	1	02/23/21 14:54	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 14:54	
Dibromomethane	ND U	0.50	1	02/23/21 14:54	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 14:54	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 14:54	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 14:54	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 14:54	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 14:54	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 14:54	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 14:54	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 14:54	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 14:54	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 14:54	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 14:54	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 14:54	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 14:54	
Ethylbenzene	ND U	0.50	1	02/23/21 14:54	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 14:54	
2-Hexanone	ND U	20	1	02/23/21 14:54	*
Isopropylbenzene	ND U	2.0	1	02/23/21 14:54	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 14:54	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21 15:10
Date Received: 02/19/21 12:11

Sample Name: LB-021821-09-17D
Lab Code: K2101575-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 14:54	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 14:54	
Methylene Chloride	ND U	2.0	1	02/23/21 14:54	
Naphthalene	ND U	2.0	1	02/23/21 14:54	
n-Propylbenzene	ND U	2.0	1	02/23/21 14:54	
Styrene	ND U	0.50	1	02/23/21 14:54	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 14:54	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 14:54	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 14:54	
Toluene	ND U	0.50	1	02/23/21 14:54	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 14:54	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 14:54	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 14:54	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 14:54	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 14:54	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 14:54	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 14:54	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 14:54	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 14:54	
Vinyl Chloride	ND U	0.50	1	02/23/21 14:54	
o-Xylene	ND U	0.50	1	02/23/21 14:54	
m,p-Xylenes	ND U	0.50	1	02/23/21 14:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	02/23/21 14:54	
Dibromofluoromethane	100	73 - 122	02/23/21 14:54	
Toluene-d8	92	65 - 144	02/23/21 14:54	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 08:10
Date Received: 02/19/21 12:11

Sample Name: LB-021921-01-20S
Lab Code: K2101575-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 15:16	
Benzene	ND U	0.50	1	02/23/21 15:16	
Bromobenzene	ND U	2.0	1	02/23/21 15:16	
Bromochloromethane	ND U	0.50	1	02/23/21 15:16	
Bromodichloromethane	ND U	0.50	1	02/23/21 15:16	
Bromoform	ND U	0.50	1	02/23/21 15:16	
Bromomethane	ND U	0.50	1	02/23/21 15:16	*
2-Butanone (MEK)	ND U	20	1	02/23/21 15:16	
n-Butylbenzene	ND U	4.0	1	02/23/21 15:16	
sec-Butylbenzene	ND U	2.0	1	02/23/21 15:16	
tert-Butylbenzene	ND U	2.0	1	02/23/21 15:16	
Carbon Disulfide	ND U	0.50	1	02/23/21 15:16	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 15:16	
Chlorobenzene	ND U	0.50	1	02/23/21 15:16	
Chloroethane	ND U	0.50	1	02/23/21 15:16	
Chloroform	ND U	0.50	1	02/23/21 15:16	
Chloromethane	ND U	0.50	1	02/23/21 15:16	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 15:16	
4-Chlorotoluene	ND U	2.0	1	02/23/21 15:16	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 15:16	
Dibromochloromethane	ND U	0.50	1	02/23/21 15:16	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 15:16	
Dibromomethane	ND U	0.50	1	02/23/21 15:16	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 15:16	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 15:16	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 15:16	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 15:16	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 15:16	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 15:16	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 15:16	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 15:16	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 15:16	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 15:16	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 15:16	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 15:16	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 15:16	
Ethylbenzene	ND U	0.50	1	02/23/21 15:16	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 15:16	
2-Hexanone	ND U	20	1	02/23/21 15:16	*
Isopropylbenzene	ND U	2.0	1	02/23/21 15:16	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 15:16	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 08:10
Date Received: 02/19/21 12:11

Sample Name: LB-021921-01-20S
Lab Code: K2101575-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 15:16	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 15:16	
Methylene Chloride	ND U	2.0	1	02/23/21 15:16	
Naphthalene	ND U	2.0	1	02/23/21 15:16	
n-Propylbenzene	ND U	2.0	1	02/23/21 15:16	
Styrene	ND U	0.50	1	02/23/21 15:16	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 15:16	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 15:16	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 15:16	
Toluene	ND U	0.50	1	02/23/21 15:16	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 15:16	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 15:16	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 15:16	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 15:16	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 15:16	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 15:16	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 15:16	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 15:16	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 15:16	
Vinyl Chloride	ND U	0.50	1	02/23/21 15:16	
o-Xylene	ND U	0.50	1	02/23/21 15:16	
m,p-Xylenes	ND U	0.50	1	02/23/21 15:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	85	68 - 117	02/23/21 15:16	
Dibromofluoromethane	101	73 - 122	02/23/21 15:16	
Toluene-d8	92	65 - 144	02/23/21 15:16	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 09:00
Date Received: 02/19/21 12:11

Sample Name: LB-021921-02-5S
Lab Code: K2101575-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 15:39	
Benzene	ND U	0.50	1	02/23/21 15:39	
Bromobenzene	ND U	2.0	1	02/23/21 15:39	
Bromochloromethane	ND U	0.50	1	02/23/21 15:39	
Bromodichloromethane	ND U	0.50	1	02/23/21 15:39	
Bromoform	ND U	0.50	1	02/23/21 15:39	
Bromomethane	ND U	0.50	1	02/23/21 15:39	*
2-Butanone (MEK)	ND U	20	1	02/23/21 15:39	
n-Butylbenzene	ND U	4.0	1	02/23/21 15:39	
sec-Butylbenzene	ND U	2.0	1	02/23/21 15:39	
tert-Butylbenzene	ND U	2.0	1	02/23/21 15:39	
Carbon Disulfide	ND U	0.50	1	02/23/21 15:39	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 15:39	
Chlorobenzene	ND U	0.50	1	02/23/21 15:39	
Chloroethane	ND U	0.50	1	02/23/21 15:39	
Chloroform	ND U	0.50	1	02/23/21 15:39	
Chloromethane	ND U	0.50	1	02/23/21 15:39	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 15:39	
4-Chlorotoluene	ND U	2.0	1	02/23/21 15:39	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 15:39	
Dibromochloromethane	ND U	0.50	1	02/23/21 15:39	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 15:39	
Dibromomethane	ND U	0.50	1	02/23/21 15:39	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 15:39	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 15:39	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 15:39	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 15:39	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 15:39	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 15:39	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 15:39	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 15:39	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 15:39	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 15:39	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 15:39	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 15:39	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 15:39	
Ethylbenzene	ND U	0.50	1	02/23/21 15:39	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 15:39	
2-Hexanone	ND U	20	1	02/23/21 15:39	*
Isopropylbenzene	ND U	2.0	1	02/23/21 15:39	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 15:39	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 09:00
Date Received: 02/19/21 12:11

Sample Name: LB-021921-02-5S
Lab Code: K2101575-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 15:39	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 15:39	
Methylene Chloride	ND U	2.0	1	02/23/21 15:39	
Naphthalene	ND U	2.0	1	02/23/21 15:39	
n-Propylbenzene	ND U	2.0	1	02/23/21 15:39	
Styrene	ND U	0.50	1	02/23/21 15:39	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 15:39	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 15:39	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 15:39	
Toluene	ND U	0.50	1	02/23/21 15:39	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 15:39	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 15:39	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 15:39	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 15:39	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 15:39	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 15:39	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 15:39	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 15:39	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 15:39	
Vinyl Chloride	ND U	0.50	1	02/23/21 15:39	
o-Xylene	ND U	0.50	1	02/23/21 15:39	
m,p-Xylenes	ND U	0.50	1	02/23/21 15:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	68 - 117	02/23/21 15:39	
Dibromofluoromethane	99	73 - 122	02/23/21 15:39	
Toluene-d8	92	65 - 144	02/23/21 15:39	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 10:15
Date Received: 02/19/21 12:11

Sample Name: LB-021921-03-17I
Lab Code: K2101575-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 16:02	
Benzene	ND U	0.50	1	02/23/21 16:02	
Bromobenzene	ND U	2.0	1	02/23/21 16:02	
Bromochloromethane	ND U	0.50	1	02/23/21 16:02	
Bromodichloromethane	ND U	0.50	1	02/23/21 16:02	
Bromoform	ND U	0.50	1	02/23/21 16:02	
Bromomethane	ND U	0.50	1	02/23/21 16:02	*
2-Butanone (MEK)	ND U	20	1	02/23/21 16:02	
n-Butylbenzene	ND U	4.0	1	02/23/21 16:02	
sec-Butylbenzene	ND U	2.0	1	02/23/21 16:02	
tert-Butylbenzene	ND U	2.0	1	02/23/21 16:02	
Carbon Disulfide	ND U	0.50	1	02/23/21 16:02	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 16:02	
Chlorobenzene	ND U	0.50	1	02/23/21 16:02	
Chloroethane	ND U	0.50	1	02/23/21 16:02	
Chloroform	ND U	0.50	1	02/23/21 16:02	
Chloromethane	ND U	0.50	1	02/23/21 16:02	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 16:02	
4-Chlorotoluene	ND U	2.0	1	02/23/21 16:02	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 16:02	
Dibromochloromethane	ND U	0.50	1	02/23/21 16:02	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 16:02	
Dibromomethane	ND U	0.50	1	02/23/21 16:02	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 16:02	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 16:02	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 16:02	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 16:02	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 16:02	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 16:02	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 16:02	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 16:02	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 16:02	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 16:02	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 16:02	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 16:02	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 16:02	
Ethylbenzene	ND U	0.50	1	02/23/21 16:02	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 16:02	
2-Hexanone	ND U	20	1	02/23/21 16:02	*
Isopropylbenzene	ND U	2.0	1	02/23/21 16:02	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 16:02	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 10:15
Date Received: 02/19/21 12:11

Sample Name: LB-021921-03-17I
Lab Code: K2101575-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 16:02	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 16:02	
Methylene Chloride	ND U	2.0	1	02/23/21 16:02	
Naphthalene	ND U	2.0	1	02/23/21 16:02	
n-Propylbenzene	ND U	2.0	1	02/23/21 16:02	
Styrene	ND U	0.50	1	02/23/21 16:02	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 16:02	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 16:02	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 16:02	
Toluene	ND U	0.50	1	02/23/21 16:02	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 16:02	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 16:02	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 16:02	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 16:02	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 16:02	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 16:02	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 16:02	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 16:02	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 16:02	
Vinyl Chloride	ND U	0.50	1	02/23/21 16:02	
o-Xylene	ND U	0.50	1	02/23/21 16:02	
m,p-Xylenes	ND U	0.50	1	02/23/21 16:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	02/23/21 16:02	
Dibromofluoromethane	99	73 - 122	02/23/21 16:02	
Toluene-d8	93	65 - 144	02/23/21 16:02	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 11:25
Date Received: 02/19/21 12:11

Sample Name: LB-021921-04-27I
Lab Code: K2101575-011

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 16:25	
Benzene	ND U	0.50	1	02/23/21 16:25	
Bromobenzene	ND U	2.0	1	02/23/21 16:25	
Bromochloromethane	ND U	0.50	1	02/23/21 16:25	
Bromodichloromethane	ND U	0.50	1	02/23/21 16:25	
Bromoform	ND U	0.50	1	02/23/21 16:25	
Bromomethane	ND U	0.50	1	02/23/21 16:25	*
2-Butanone (MEK)	ND U	20	1	02/23/21 16:25	
n-Butylbenzene	ND U	4.0	1	02/23/21 16:25	
sec-Butylbenzene	ND U	2.0	1	02/23/21 16:25	
tert-Butylbenzene	ND U	2.0	1	02/23/21 16:25	
Carbon Disulfide	ND U	0.50	1	02/23/21 16:25	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 16:25	
Chlorobenzene	ND U	0.50	1	02/23/21 16:25	
Chloroethane	ND U	0.50	1	02/23/21 16:25	
Chloroform	ND U	0.50	1	02/23/21 16:25	
Chloromethane	ND U	0.50	1	02/23/21 16:25	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 16:25	
4-Chlorotoluene	ND U	2.0	1	02/23/21 16:25	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 16:25	
Dibromochloromethane	ND U	0.50	1	02/23/21 16:25	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 16:25	
Dibromomethane	ND U	0.50	1	02/23/21 16:25	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 16:25	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 16:25	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 16:25	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 16:25	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 16:25	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 16:25	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 16:25	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 16:25	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 16:25	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 16:25	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 16:25	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 16:25	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 16:25	
Ethylbenzene	ND U	0.50	1	02/23/21 16:25	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 16:25	
2-Hexanone	ND U	20	1	02/23/21 16:25	*
Isopropylbenzene	ND U	2.0	1	02/23/21 16:25	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 16:25	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 11:25
Date Received: 02/19/21 12:11

Sample Name: LB-021921-04-27I
Lab Code: K2101575-011

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 16:25	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 16:25	
Methylene Chloride	ND U	2.0	1	02/23/21 16:25	
Naphthalene	ND U	2.0	1	02/23/21 16:25	
n-Propylbenzene	ND U	2.0	1	02/23/21 16:25	
Styrene	ND U	0.50	1	02/23/21 16:25	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 16:25	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 16:25	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 16:25	
Toluene	ND U	0.50	1	02/23/21 16:25	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 16:25	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 16:25	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 16:25	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 16:25	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 16:25	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 16:25	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 16:25	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 16:25	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 16:25	
Vinyl Chloride	ND U	0.50	1	02/23/21 16:25	
o-Xylene	ND U	0.50	1	02/23/21 16:25	
m,p-Xylenes	ND U	0.50	1	02/23/21 16:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	68 - 117	02/23/21 16:25	
Dibromofluoromethane	99	73 - 122	02/23/21 16:25	
Toluene-d8	92	65 - 144	02/23/21 16:25	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 11:30
Date Received: 02/19/21 12:11

Sample Name: LB-021921-05-DUP2
Lab Code: K2101575-012

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 16:47	
Benzene	ND U	0.50	1	02/23/21 16:47	
Bromobenzene	ND U	2.0	1	02/23/21 16:47	
Bromochloromethane	ND U	0.50	1	02/23/21 16:47	
Bromodichloromethane	ND U	0.50	1	02/23/21 16:47	
Bromoform	ND U	0.50	1	02/23/21 16:47	
Bromomethane	ND U	0.50	1	02/23/21 16:47	*
2-Butanone (MEK)	ND U	20	1	02/23/21 16:47	
n-Butylbenzene	ND U	4.0	1	02/23/21 16:47	
sec-Butylbenzene	ND U	2.0	1	02/23/21 16:47	
tert-Butylbenzene	ND U	2.0	1	02/23/21 16:47	
Carbon Disulfide	ND U	0.50	1	02/23/21 16:47	*
Carbon Tetrachloride	ND U	0.50	1	02/23/21 16:47	
Chlorobenzene	ND U	0.50	1	02/23/21 16:47	
Chloroethane	ND U	0.50	1	02/23/21 16:47	
Chloroform	ND U	0.50	1	02/23/21 16:47	
Chloromethane	ND U	0.50	1	02/23/21 16:47	*
2-Chlorotoluene	ND U	2.0	1	02/23/21 16:47	
4-Chlorotoluene	ND U	2.0	1	02/23/21 16:47	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 16:47	
Dibromochloromethane	ND U	0.50	1	02/23/21 16:47	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 16:47	
Dibromomethane	ND U	0.50	1	02/23/21 16:47	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 16:47	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 16:47	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 16:47	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 16:47	*
1,1-Dichloroethane	ND U	0.50	1	02/23/21 16:47	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 16:47	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 16:47	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 16:47	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 16:47	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 16:47	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 16:47	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 16:47	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 16:47	
Ethylbenzene	ND U	0.50	1	02/23/21 16:47	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 16:47	
2-Hexanone	ND U	20	1	02/23/21 16:47	*
Isopropylbenzene	ND U	2.0	1	02/23/21 16:47	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 16:47	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/19/21 11:30
Date Received: 02/19/21 12:11

Sample Name: LB-021921-05-DUP2
Lab Code: K2101575-012

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 16:47	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 16:47	
Methylene Chloride	ND U	2.0	1	02/23/21 16:47	
Naphthalene	ND U	2.0	1	02/23/21 16:47	
n-Propylbenzene	ND U	2.0	1	02/23/21 16:47	
Styrene	ND U	0.50	1	02/23/21 16:47	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 16:47	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 16:47	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 16:47	
Toluene	ND U	0.50	1	02/23/21 16:47	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 16:47	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 16:47	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 16:47	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 16:47	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 16:47	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 16:47	*
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 16:47	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 16:47	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 16:47	
Vinyl Chloride	ND U	0.50	1	02/23/21 16:47	
o-Xylene	ND U	0.50	1	02/23/21 16:47	
m,p-Xylenes	ND U	0.50	1	02/23/21 16:47	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	02/23/21 16:47	
Dibromofluoromethane	101	73 - 122	02/23/21 16:47	
Toluene-d8	92	65 - 144	02/23/21 16:47	



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-04-1D
Lab Code: K2101575-002

Service Request: K2101575
Date Collected: 02/18/21 10:45
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 09:54	02/20/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/24/21 09:54	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-05-1S
Lab Code: K2101575-003

Service Request: K2101575
Date Collected: 02/18/21 11:40
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 10:05	02/20/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/24/21 10:05	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-06-DUP1
Lab Code: K2101575-004

Service Request: K2101575
Date Collected: 02/18/21 11:45
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 10:07	02/20/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/24/21 10:07	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-07-3D
Lab Code: K2101575-005

Service Request: K2101575
Date Collected: 02/18/21 13:00
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 10:10	02/20/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/24/21 10:10	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-08-3S
Lab Code: K2101575-006

Service Request: K2101575
Date Collected: 02/18/21 13:55
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 10:13	02/20/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/24/21 10:13	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-09-17D
Lab Code: K2101575-007

Service Request: K2101575
Date Collected: 02/18/21 15:10
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	106	ug/L	21	1	02/24/21 10:23	02/20/21	
Manganese	6010C	4060	ug/L	1.1	1	02/24/21 10:23	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-01-20S
Lab Code: K2101575-008

Service Request: K2101575
Date Collected: 02/19/21 08:10
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 10:26	02/20/21	
Manganese	6010C	251	ug/L	1.1	1	02/24/21 10:26	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-02-5S
Lab Code: K2101575-009

Service Request: K2101575
Date Collected: 02/19/21 09:00
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 10:29	02/20/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/24/21 10:29	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-03-17I
Lab Code: K2101575-010

Service Request: K2101575
Date Collected: 02/19/21 10:15
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	14500	ug/L	21	1	02/24/21 10:32	02/20/21	
Manganese	6010C	2860	ug/L	1.1	1	02/24/21 10:32	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-04-27I
Lab Code: K2101575-011

Service Request: K2101575
Date Collected: 02/19/21 11:25
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 10:34	02/20/21	
Manganese	6010C	79.1	ug/L	1.1	1	02/24/21 10:34	02/20/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-05-DUP2
Lab Code: K2101575-012

Service Request: K2101575
Date Collected: 02/19/21 11:30
Date Received: 02/19/21 12:11
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 10:37	02/20/21	
Manganese	6010C	82.1	ug/L	1.1	1	02/24/21 10:37	02/20/21	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-04-1D
Lab Code: K2101575-002

Service Request: K2101575
Date Collected: 02/18/21 10:45
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	6.10	mg/L	0.20	2	02/19/21 17:28	
Nitrate as Nitrogen	300.0	5.65	mg/L	0.10	2	02/19/21 17:28	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-04-1D
Lab Code: K2101575-002

Service Request: K2101575
Date Collected: 02/18/21 10:45
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	170	mg/L	5.0	1	02/20/21 09:20	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-05-1S
Lab Code: K2101575-003

Service Request: K2101575
Date Collected: 02/18/21 11:40
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.67	mg/L	0.20	2	02/19/21 17:40	
Nitrate as Nitrogen	300.0	3.91	mg/L	0.10	2	02/19/21 17:40	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-05-1S
Lab Code: K2101575-003

Service Request: K2101575
Date Collected: 02/18/21 11:40
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	190	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-06-DUP1
Lab Code: K2101575-004

Service Request: K2101575
Date Collected: 02/18/21 11:45
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.69	mg/L	0.20	2	02/19/21 18:16	
Nitrate as Nitrogen	300.0	3.92	mg/L	0.10	2	02/19/21 18:16	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-06-DUP1
Lab Code: K2101575-004

Service Request: K2101575
Date Collected: 02/18/21 11:45
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	198	mg/L	5.0	1	02/20/21 09:20	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-07-3D
Lab Code: K2101575-005

Service Request: K2101575
Date Collected: 02/18/21 13:00
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	10.1	mg/L	0.40	4	02/19/21 19:02	
Nitrate as Nitrogen	300.0	9.14	mg/L	0.20	4	02/19/21 19:02	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-07-3D
Lab Code: K2101575-005

Service Request: K2101575
Date Collected: 02/18/21 13:00
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	171	mg/L	5.0	1	02/20/21 10:45	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-08-3S
Lab Code: K2101575-006

Service Request: K2101575
Date Collected: 02/18/21 13:55
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	7.00	mg/L	0.40	4	02/19/21 19:14	
Nitrate as Nitrogen	300.0	6.82	mg/L	0.20	4	02/19/21 19:14	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-08-3S
Lab Code: K2101575-006

Service Request: K2101575
Date Collected: 02/18/21 13:55
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	148	mg/L	5.0	1	02/20/21 10:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-09-17D
Lab Code: K2101575-007

Service Request: K2101575
Date Collected: 02/18/21 15:10
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	11.6	mg/L	0.40	4	02/19/21 19:25	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.20	4	02/19/21 19:25	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021821-09-17D
Lab Code: K2101575-007

Service Request: K2101575
Date Collected: 02/18/21 15:10
Date Received: 02/19/21 12:11

Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	200	mg/L	5.0	1	02/20/21 10:45	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-01-20S
Lab Code: K2101575-008

Service Request: K2101575
Date Collected: 02/19/21 08:10
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Chloride	300.0	4.61	mg/L	0.40	4	02/19/21 19:37	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.20	4	02/19/21 19:37	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-01-20S
Lab Code: K2101575-008

Service Request: K2101575
Date Collected: 02/19/21 08:10
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	275	mg/L	5.0	1	02/20/21 10:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-02-5S
Lab Code: K2101575-009

Service Request: K2101575
Date Collected: 02/19/21 09:00
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	6.75	mg/L	0.40	4	02/19/21 19:49	
Nitrate as Nitrogen	300.0	7.09	mg/L	0.20	4	02/19/21 19:49	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-02-5S
Lab Code: K2101575-009

Service Request: K2101575
Date Collected: 02/19/21 09:00
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	140	mg/L	5.0	1	02/20/21 10:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-03-17I
Lab Code: K2101575-010

Service Request: K2101575
Date Collected: 02/19/21 10:15
Date Received: 02/19/21 12:11

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	18.0	mg/L	0.40	4	02/19/21 20:00	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.20	4	02/19/21 20:00	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-03-17I
Lab Code: K2101575-010

Service Request: K2101575
Date Collected: 02/19/21 10:15
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	299	mg/L	5.0	1	02/20/21 10:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-04-27I
Lab Code: K2101575-011

Service Request: K2101575
Date Collected: 02/19/21 11:25
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	4.98	mg/L	0.20	2	02/19/21 20:35	
Nitrate as Nitrogen	300.0	1.35	mg/L	0.10	2	02/19/21 20:35	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-04-27I
Lab Code: K2101575-011

Service Request: K2101575
Date Collected: 02/19/21 11:25
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	176	mg/L	5.0	1	02/20/21 10:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-05-DUP2
Lab Code: K2101575-012

Service Request: K2101575
Date Collected: 02/19/21 11:30
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.06	mg/L	0.20	2	02/19/21 20:47	
Nitrate as Nitrogen	300.0	1.36	mg/L	0.10	2	02/19/21 20:47	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-021921-05-DUP2
Lab Code: K2101575-012

Service Request: K2101575
Date Collected: 02/19/21 11:30
Date Received: 02/19/21 12:11
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	181	mg/L	5.0	1	02/20/21 10:45	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
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Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
Trip Blank	K2101575-001	88	100	92
LB-021821-04-1D	K2101575-002	86	99	91
LB-021821-05-1S	K2101575-003	87	96	91
LB-021821-06-DUP1	K2101575-004	88	94	90
LB-021821-07-3D	K2101575-005	87	101	92
LB-021821-08-3S	K2101575-006	88	98	91
LB-021821-09-17D	K2101575-007	87	100	92
LB-021921-01-20S	K2101575-008	85	101	92
LB-021921-02-5S	K2101575-009	88	99	92
LB-021921-03-17I	K2101575-010	87	99	93
LB-021921-04-27I	K2101575-011	88	99	92
LB-021921-05-DUP2	K2101575-012	87	101	92
Method Blank	KQ2102778-05	87	100	92
Lab Control Sample	KQ2102778-03	98	101	97
Duplicate Lab Control Sample	KQ2102778-04	100	99	99

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102778-05

Service Request: K2101575
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/23/21 12:12	
Benzene	ND U	0.50	1	02/23/21 12:12	
Bromobenzene	ND U	2.0	1	02/23/21 12:12	
Bromochloromethane	ND U	0.50	1	02/23/21 12:12	
Bromodichloromethane	ND U	0.50	1	02/23/21 12:12	
Bromoform	ND U	0.50	1	02/23/21 12:12	
Bromomethane	ND U	0.50	1	02/23/21 12:12	
2-Butanone (MEK)	ND U	20	1	02/23/21 12:12	
n-Butylbenzene	ND U	4.0	1	02/23/21 12:12	
sec-Butylbenzene	ND U	2.0	1	02/23/21 12:12	
tert-Butylbenzene	ND U	2.0	1	02/23/21 12:12	
Carbon Disulfide	ND U	0.50	1	02/23/21 12:12	
Carbon Tetrachloride	ND U	0.50	1	02/23/21 12:12	
Chlorobenzene	ND U	0.50	1	02/23/21 12:12	
Chloroethane	ND U	0.50	1	02/23/21 12:12	
Chloroform	ND U	0.50	1	02/23/21 12:12	
Chloromethane	ND U	0.50	1	02/23/21 12:12	
2-Chlorotoluene	ND U	2.0	1	02/23/21 12:12	
4-Chlorotoluene	ND U	2.0	1	02/23/21 12:12	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/23/21 12:12	
Dibromochloromethane	ND U	0.50	1	02/23/21 12:12	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/23/21 12:12	
Dibromomethane	ND U	0.50	1	02/23/21 12:12	
1,2-Dichlorobenzene	ND U	0.50	1	02/23/21 12:12	
1,3-Dichlorobenzene	ND U	0.50	1	02/23/21 12:12	
1,4-Dichlorobenzene	ND U	0.50	1	02/23/21 12:12	
Dichlorodifluoromethane	ND U	0.50	1	02/23/21 12:12	
1,1-Dichloroethane	ND U	0.50	1	02/23/21 12:12	
cis-1,2-Dichloroethene	ND U	0.50	1	02/23/21 12:12	
trans-1,2-Dichloroethene	ND U	0.50	1	02/23/21 12:12	
1,2-Dichloropropane	ND U	0.50	1	02/23/21 12:12	
1,3-Dichloropropane	ND U	0.50	1	02/23/21 12:12	
2,2-Dichloropropane	ND U	0.50	1	02/23/21 12:12	
1,1-Dichloropropene	ND U	0.50	1	02/23/21 12:12	
cis-1,3-Dichloropropene	ND U	0.50	1	02/23/21 12:12	
trans-1,3-Dichloropropene	ND U	0.50	1	02/23/21 12:12	
Ethylbenzene	ND U	0.50	1	02/23/21 12:12	
Hexachlorobutadiene	ND U	2.0	1	02/23/21 12:12	
2-Hexanone	ND U	20	1	02/23/21 12:12	
Isopropylbenzene	ND U	2.0	1	02/23/21 12:12	
4-Isopropyltoluene	ND U	2.0	1	02/23/21 12:12	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102778-05

Service Request: K2101575
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/23/21 12:12	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/23/21 12:12	
Methylene Chloride	ND U	2.0	1	02/23/21 12:12	
Naphthalene	ND U	2.0	1	02/23/21 12:12	
n-Propylbenzene	ND U	2.0	1	02/23/21 12:12	
Styrene	ND U	0.50	1	02/23/21 12:12	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/23/21 12:12	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/23/21 12:12	
Tetrachloroethene (PCE)	ND U	0.50	1	02/23/21 12:12	
Toluene	ND U	0.50	1	02/23/21 12:12	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/23/21 12:12	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/23/21 12:12	
1,1,2-Trichloroethane	ND U	0.50	1	02/23/21 12:12	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/23/21 12:12	
Trichloroethene (TCE)	ND U	0.50	1	02/23/21 12:12	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/23/21 12:12	
1,2,3-Trichloropropane	ND U	0.50	1	02/23/21 12:12	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/23/21 12:12	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/23/21 12:12	
Vinyl Chloride	ND U	0.50	1	02/23/21 12:12	
o-Xylene	ND U	0.50	1	02/23/21 12:12	
m,p-Xylenes	ND U	0.50	1	02/23/21 12:12	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	02/23/21 12:12	
Dibromofluoromethane	100	73 - 122	02/23/21 12:12	
Toluene-d8	92	65 - 144	02/23/21 12:12	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Analyzed: 02/23/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 713900

Analyte Name	Lab Control Sample KQ2102778-03			Duplicate Lab Control Sample KQ2102778-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.03	10.0	90	8.78	10.0	88	66-124	3	30
1,1,1-Trichloroethane (TCA)	8.28	10.0	83	7.75	10.0	78	59-136	7	30
1,1,2,2-Tetrachloroethane	9.94	10.0	99	10.3	10.0	103	70-127	3	30
1,1,2-Trichloroethane	9.55	10.0	96	9.73	10.0	97	74-118	2	30
1,1-Dichloroethane	8.89	10.0	89	8.24	10.0	82	68-132	8	30
1,1-Dichloropropene	8.26	10.0	83	7.61	10.0	76	59-134	8	30
1,2,3-Trichlorobenzene	9.32	10.0	93	9.03	10.0	90	68-120	3	30
1,2,3-Trichloropropane	9.71	10.0	97	9.85	10.0	99	69-123	1	30
1,2,4-Trichlorobenzene	9.49	10.0	95	9.36	10.0	94	58-126	1	30
1,2,4-Trimethylbenzene	8.92	10.0	89	8.45	10.0	85	63-122	5	30
1,2-Dibromo-3-chloropropane	9.86	10.0	99	9.72	10.0	97	55-132	1	30
1,2-Dibromoethane (EDB)	9.64	10.0	96	9.62	10.0	96	74-118	<1	30
1,2-Dichlorobenzene	9.32	10.0	93	9.05	10.0	91	72-115	3	30
1,2-Dichloropropane	9.40	10.0	94	8.76	10.0	88	67-126	7	30
1,3,5-Trimethylbenzene	8.50	10.0	85	8.02	10.0	80	62-126	6	30
1,3-Dichlorobenzene	9.12	10.0	91	8.56	10.0	86	70-116	6	30
1,3-Dichloropropane	9.82	10.0	98	9.87	10.0	99	75-116	<1	30
1,4-Dichlorobenzene	9.18	10.0	92	8.67	10.0	87	73-115	6	30
2,2-Dichloropropane	8.64	10.0	86	7.81	10.0	78	37-145	10	30
2-Butanone (MEK)	58.9	50.0	118	60.0	50.0	120	71-149	2	30
2-Chlorotoluene	8.52	10.0	85	8.02	10.0	80	55-131	6	30
2-Hexanone	47.4	50.0	95	50.7	50.0	101	59-131	7	30
4-Chlorotoluene	8.58	10.0	86	8.11	10.0	81	66-121	6	30
4-Isopropyltoluene	8.86	10.0	89	8.32	10.0	83	61-128	6	30
4-Methyl-2-pentanone (MIBK)	63.0	50.0	126	63.4	50.0	127	64-134	<1	30
Acetone	58.7	50.0	117	59.2	50.0	118	68-135	<1	30
Benzene	8.93	10.0	89	8.33	10.0	83	69-124	7	30
Bromobenzene	8.70	10.0	87	8.50	10.0	85	72-116	2	30
Bromochloromethane	10.4	10.0	104	10.1	10.0	101	75-131	3	30
Bromodichloromethane	9.49	10.0	95	9.07	10.0	91	63-129	5	30
Bromoform	9.78	10.0	98	10.1	10.0	101	52-144	3	30
Bromomethane	11.9	10.0	119 *	10.8	10.0	108	35-113	10	30
Carbon Disulfide	16.6	20.0	83	15.4	20.0	77	46-144	8	30
Carbon Tetrachloride	8.14	10.0	81	7.34	10.0	73	55-140	10	30
Chlorobenzene	9.21	10.0	92	8.93	10.0	89	72-116	3	30
Chloroethane	10.9	10.0	109	9.84	10.0	98	58-134	10	30
Chloroform	9.10	10.0	91	8.51	10.0	85	70-129	7	30
Chloromethane	8.21	10.0	82	7.33	10.0	73	34-130	11	30
cis-1,2-Dichloroethene	8.83	10.0	88	8.20	10.0	82	71-118	7	30
cis-1,3-Dichloropropene	9.95	10.0	100	9.72	10.0	97	62-132	2	30
Dibromochloromethane	9.37	10.0	94	9.40	10.0	94	67-126	<1	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Analyzed: 02/23/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 713900

Analyte Name	Lab Control Sample KQ2102778-03			Duplicate Lab Control Sample KQ2102778-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	10.5	10.0	105	10.1	10.0	101	69-128	3	30
Dichlorodifluoromethane	6.38	10.0	64	5.85	10.0	59	32-124	9	30
Ethylbenzene	8.82	10.0	88	8.43	10.0	84	67-121	5	30
Hexachlorobutadiene	8.32	10.0	83	7.81	10.0	78	57-119	6	30
Isopropylbenzene	8.65	10.0	87	8.18	10.0	82	67-129	6	30
m,p-Xylenes	18.3	20.0	91	17.3	20.0	86	69-121	6	30
Methyl tert-Butyl Ether	10.6	10.0	106	10.4	10.0	104	54-126	2	30
Methylene Chloride	9.01	10.0	90	8.47	10.0	85	71-122	6	30
Naphthalene	8.80	10.0	88	9.17	10.0	92	64-126	4	30
n-Butylbenzene	7.87	10.0	79	7.40	10.0	74	55-130	6	30
n-Propylbenzene	8.13	10.0	81	7.59	10.0	76	61-124	7	30
o-Xylene	9.41	10.0	94	8.98	10.0	90	71-119	5	30
sec-Butylbenzene	8.25	10.0	83	7.72	10.0	77	59-128	7	30
Styrene	9.69	10.0	97	9.05	10.0	91	74-121	7	30
tert-Butylbenzene	7.93	10.0	79	7.42	10.0	74	61-127	7	30
Tetrachloroethene (PCE)	8.02	10.0	80	7.61	10.0	76	62-126	5	30
Toluene	9.35	10.0	94	8.92	10.0	89	69-124	5	30
trans-1,2-Dichloroethene	8.65	10.0	87	7.74	10.0	77	67-125	11	30
trans-1,3-Dichloropropene	9.50	10.0	95	9.30	10.0	93	59-125	2	30
Trichloroethene (TCE)	7.96	10.0	80	7.39	10.0	74	67-128	7	30
Trichlorofluoromethane (CFC 11)	6.87	10.0	69	6.37	10.0	64	52-141	8	30
Vinyl Chloride	10.2	10.0	102	9.33	10.0	93	55-123	9	30



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102423-02

Service Request: K2101575
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	02/24/21 09:49	02/20/21	
Manganese	6010C	ND U	ug/L	1.1	1	02/24/21 09:49	02/20/21	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21
Date Received: 02/19/21
Date Analyzed: 02/24/21
Date Extracted: 02/20/21

Matrix Spike Summary
Dissolved Metals

Sample Name: LB-021821-04-1D
Lab Code: K2101575-002
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2102423-04

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Iron	ND U	990	1000	99	75-125
Manganese	ND U	503	500	101	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21
Date Received: 02/19/21
Date Analyzed: 02/24/21

Replicate Sample Summary

Dissolved Metals

Sample Name: LB-021821-04-1D
Lab Code: K2101575-002

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				KQ2102423-03 Result			
Iron	6010C	21	ND U	ND U	ND	-	20
Manganese	6010C	1.1	ND U	ND U	ND	-	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
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Analyzed: 02/24/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2102423-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2640	2500	106	80-120
Manganese	6010C	1320	1250	105	80-120



General Chemistry

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101575-MB1

Service Request: K2101575
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.10	1	02/19/21 10:06	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	02/19/21 10:06	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101575-MB1

Service Request: K2101575
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/20/21 10:45	

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dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101575-MB2

Service Request: K2101575
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/20/21 10:45	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101575-MB3

Service Request: K2101575
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101575-MB4

Service Request: K2101575
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/20/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request:K2101575
Date Collected:02/18/21
Date Received:02/19/21
Date Analyzed:2/19/21

**Duplicate Matrix Spike Summary
General Chemistry Parameters**

Sample Name: LB-021821-06-DUP1
Lab Code: K2101575-004

Units:mg/L
Basis:NA

Analyte Name	Method	Sample Result	Result	Matrix Spike K2101575-004MS			Duplicate Matrix Spike K2101575-004DMS			RPD	RPD Limit
				Spike Amount	% Rec	Result	Spike Amount	% Rec	Limits		
Chloride	300.0	5.69	13.6	8.00	99	13.6	8.00	99	90-110	<1	20
Nitrate as Nitrogen	300.0	3.92	11.8	8.00	99	11.8	8.00	98	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
Project Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21
Date Received: 02/19/21
Date Analyzed: 02/20/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-021821-05-1S
Lab Code: K2101575-003

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2101575-003DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total Dissolved	SM 2540 C	5.0	190	188	189	<1	5

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
Project Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21
Date Received: 02/19/21
Date Analyzed: 02/19/21 - 02/20/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-021821-06-DUP1
Lab Code: K2101575-004

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K2101575-004DUP Result	Average	RPD	RPD Limit
Chloride	300.0	0.20	5.69	5.65	5.67	<1	20
Nitrate as Nitrogen	300.0	0.10	3.92	3.90	3.91	<1	20
Solids, Total Dissolved	SM 2540 C	5.0	198	189	194	4	5

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
Project Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21
Date Received: 02/19/21
Date Analyzed: 02/20/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-021821-07-3D
Lab Code: K2101575-005

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2101575-005DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total Dissolved	SM 2540 C	5.0	171	175	173	3	5

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/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Collected: 02/18/21
Date Received: 02/19/21
Date Analyzed: 02/20/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-021821-08-3S
Lab Code: K2101575-006

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2101575-006DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total Dissolved	SM 2540 C	5.0	148	155	151	4	5

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/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Analyzed: 02/19/21 - 02/20/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2101575-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	5.03	5.00	101	90-110
Nitrate as Nitrogen	300.0	2.40	2.50	96	90-110
Solids, Total Dissolved	SM 2540 C	920	922	100	85-115

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101575
Date Analyzed: 02/20/21
Date Extracted: NA

Lab Control Sample Summary
Solids, Total Dissolved

Analysis Method: SM 2540 C
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 713639

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2101575-LCS2	928	922	101	85-115



March 08, 2021

Service Request No:K2101683

David Lamadrid
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

Laboratory Results for: Leichner Landfill

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory February 24, 2021
For your reference, these analyses have been assigned our service request number **K2101683**.

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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PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Landfill
Sample Matrix: Ground Water

Service Request: K2101683
Date Received: 02/24/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Four ground water samples were received for analysis at ALS Environmental on 02/24/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13 \0225F003.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.

Approved by



Date

03/08/2021

SAMPLE DETECTION SUMMARY

CLIENT ID: LB-022321-03-6S	Lab ID: K2101683-001
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	169			5.0	mg/L	SM 2540 C
Chloride	7.78			0.20	mg/L	300.0
Nitrate as Nitrogen	4.37			0.10	mg/L	300.0

CLIENT ID: LB-022321-01-13I	Lab ID: K2101683-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	199			5.0	mg/L	SM 2540 C
Chloride	12.9			0.20	mg/L	300.0
Nitrate as Nitrogen	4.87			0.10	mg/L	300.0
Manganese, Dissolved	2.9			1.1	ug/L	6010C

CLIENT ID: LB-022321-02-26I	Lab ID: K2101683-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	182			5.0	mg/L	SM 2540 C
Chloride	8.15			0.20	mg/L	300.0
Nitrate as Nitrogen	4.74			0.10	mg/L	300.0
Manganese, Dissolved	4.1			1.1	ug/L	6010C



Sample Receipt Information

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

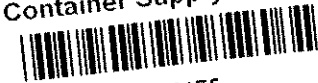
Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request:K2101683

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2101683-001	LB-022321-03-6S	2/23/2021	1440
K2101683-002	LB-022321-01-13I	2/23/2021	1200
K2101683-003	LB-022321-02-26I	2/23/2021	1350
K2101683-004	Trip Blanks	2/23/2021	

PROJECT INFORMATION					NUMBER OF CONTAINERS	ANALYSIS PARAMETERS															REMARKS								
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX		Semi-volatile Organics by GC/MS 825 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/>	Hydrocarbons Gas 8021 <input type="checkbox"/>	Oil & Grease/TRPH 1664 <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	PCBs 1664 <input type="checkbox"/> HEM <input type="checkbox"/>	Aroclors 1664 <input type="checkbox"/> SGT <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 808 <input type="checkbox"/>	Congeners 814 <input type="checkbox"/>	Chlorophenolics - 815T Tri <input type="checkbox"/> Tetra <input type="checkbox"/> Penta <input type="checkbox"/>	Metals, Total or Dissolved (See List below) <input type="checkbox"/>	Cyanide <input type="checkbox"/>	(circle) pH, Cond NO ₂ , BOD, TSS, TOC, Turb.	(circle) NH ₃ -N, COD, TKN, TOC, DOC, NO ₂ +NO ₃ , T-Phos	Alkalinity <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>		HCO ₃ <input type="checkbox"/>	Dissolved Gases CO ₂ <input type="checkbox"/> Methane <input type="checkbox"/>	Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>					
PROJECT NAME: <u>Lechner Landfill</u> PROJECT NUMBER: <u>0422003013</u> PROJECT MANAGER: <u>Tiffany Andrews</u> COMPANY NAME: <u>SCS Engineers.com</u> ADDRESS: <u>15940 SW 72nd Avenue</u> CITY/STATE/ZIP: <u>Portland, OR 97224</u> E-MAIL ADDRESS: <u>Tandrews@scsengineers.com</u> PHONE # <u>503-724-0112</u> FAX # <u> </u> SAMPLER'S SIGNATURE: <u> </u>					4		X										X		X										
LB-022321-03-68	2/23/21	1440			4									X		X													
LB-022321-01-15	2/23/21	1200			4									X		X													
LB-022321-02-26	2/23/21	1350			4									X		X													
Trip Blanks	-	-		W	2									X															

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____ _____ _____	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 Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <u>Metals are Field Filtered</u>  Container Supply Number <u>108175</u> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: <u>JM</u> Signature: <u>T Andrews</u> Date/Time: <u>2/24/21</u> Firm: <u>SCS</u>	RECEIVED BY: <u>JM</u> Signature: <u>JM</u> Date/Time: <u>2/24/21</u> Firm: <u>ALS</u>	RELINQUISHED BY: <u>JM</u> Signature: <u>JM</u> Date/Time: <u>2/24/21</u> Firm: <u>ALS</u>	RECEIVED BY: <u>JM</u> Signature: <u>JM</u> Date/Time: <u>2/24/21</u> Firm: <u>ALS</u>
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Cooler Receipt and Preservation Form

PM HH

Client SAS Service Request K21
 Received: 2/24/21 Opened: 2/24/21 By: [Signature] Unloaded: 2/24/21 By: [Signature]

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? FRONT
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 5. Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with 'X'	PM Notified If out of temp	Tracking Number NA	Filed
N/A	0.6	IR02	108175				

6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Received 5 containers per sample, not 4 as on COC.

SHORT HOLD TIME



Miscellaneous Forms

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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.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/analyte is offered by that state.

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.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2101683

Sample Name: LB-022321-03-6S
Lab Code: K2101683-001
Sample Matrix: Ground Water

Date Collected: 02/23/21
Date Received: 02/24/21

Analysis Method	Extracted/Digested By	Analyzed By
300.0		KABROWN
6010C	ABOYER	RMOORE
8260C		MKANALY
SM 2540 C		JMADISON

Sample Name: LB-022321-01-13I
Lab Code: K2101683-002
Sample Matrix: Ground Water

Date Collected: 02/23/21
Date Received: 02/24/21

Analysis Method	Extracted/Digested By	Analyzed By
300.0		KABROWN
6010C	ABOYER	RMOORE
8260C		MKANALY
SM 2540 C		JMADISON

Sample Name: LB-022321-02-26I
Lab Code: K2101683-003
Sample Matrix: Ground Water

Date Collected: 02/23/21
Date Received: 02/24/21

Analysis Method	Extracted/Digested By	Analyzed By
300.0		KABROWN
6010C	ABOYER	RMOORE
8260C		MKANALY
SM 2540 C		JMADISON

Sample Name: Trip Blanks
Lab Code: K2101683-004
Sample Matrix: Ground Water

Date Collected: 02/23/21
Date Received: 02/24/21

Analysis Method	Extracted/Digested By	Analyzed By
8260C		MKANALY



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Collected: 02/23/21 14:40
Date Received: 02/24/21 11:50

Sample Name: LB-022321-03-6S
Lab Code: K2101683-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/25/21 17:10	
Benzene	ND U	0.50	1	02/25/21 17:10	
Bromobenzene	ND U	2.0	1	02/25/21 17:10	
Bromochloromethane	ND U	0.50	1	02/25/21 17:10	
Bromodichloromethane	ND U	0.50	1	02/25/21 17:10	
Bromoform	ND U	0.50	1	02/25/21 17:10	
Bromomethane	ND U	0.50	1	02/25/21 17:10	
2-Butanone (MEK)	ND U	20	1	02/25/21 17:10	
n-Butylbenzene	ND U	4.0	1	02/25/21 17:10	
sec-Butylbenzene	ND U	2.0	1	02/25/21 17:10	
tert-Butylbenzene	ND U	2.0	1	02/25/21 17:10	
Carbon Disulfide	ND U	0.50	1	02/25/21 17:10	
Carbon Tetrachloride	ND U	0.50	1	02/25/21 17:10	
Chlorobenzene	ND U	0.50	1	02/25/21 17:10	
Chloroethane	ND U	0.50	1	02/25/21 17:10	
Chloroform	ND U	0.50	1	02/25/21 17:10	
Chloromethane	ND U	0.50	1	02/25/21 17:10	
2-Chlorotoluene	ND U	2.0	1	02/25/21 17:10	
4-Chlorotoluene	ND U	2.0	1	02/25/21 17:10	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/25/21 17:10	
Dibromochloromethane	ND U	0.50	1	02/25/21 17:10	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/25/21 17:10	
Dibromomethane	ND U	0.50	1	02/25/21 17:10	
1,2-Dichlorobenzene	ND U	0.50	1	02/25/21 17:10	
1,3-Dichlorobenzene	ND U	0.50	1	02/25/21 17:10	
1,4-Dichlorobenzene	ND U	0.50	1	02/25/21 17:10	
Dichlorodifluoromethane	ND U	0.50	1	02/25/21 17:10	
1,1-Dichloroethane	ND U	0.50	1	02/25/21 17:10	
cis-1,2-Dichloroethene	ND U	0.50	1	02/25/21 17:10	
trans-1,2-Dichloroethene	ND U	0.50	1	02/25/21 17:10	
1,2-Dichloropropane	ND U	0.50	1	02/25/21 17:10	
1,3-Dichloropropane	ND U	0.50	1	02/25/21 17:10	
2,2-Dichloropropane	ND U	0.50	1	02/25/21 17:10	*
1,1-Dichloropropene	ND U	0.50	1	02/25/21 17:10	
cis-1,3-Dichloropropene	ND U	0.50	1	02/25/21 17:10	
trans-1,3-Dichloropropene	ND U	0.50	1	02/25/21 17:10	
Ethylbenzene	ND U	0.50	1	02/25/21 17:10	
Hexachlorobutadiene	ND U	2.0	1	02/25/21 17:10	
2-Hexanone	ND U	20	1	02/25/21 17:10	
Isopropylbenzene	ND U	2.0	1	02/25/21 17:10	
4-Isopropyltoluene	ND U	2.0	1	02/25/21 17:10	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Collected: 02/23/21 14:40
Date Received: 02/24/21 11:50

Sample Name: LB-022321-03-6S
Lab Code: K2101683-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/25/21 17:10	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/25/21 17:10	
Methylene Chloride	ND U	2.0	1	02/25/21 17:10	
Naphthalene	ND U	2.0	1	02/25/21 17:10	
n-Propylbenzene	ND U	2.0	1	02/25/21 17:10	
Styrene	ND U	0.50	1	02/25/21 17:10	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/25/21 17:10	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/25/21 17:10	
Tetrachloroethene (PCE)	ND U	0.50	1	02/25/21 17:10	
Toluene	ND U	0.50	1	02/25/21 17:10	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/25/21 17:10	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/25/21 17:10	
1,1,2-Trichloroethane	ND U	0.50	1	02/25/21 17:10	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/25/21 17:10	
Trichloroethene (TCE)	ND U	0.50	1	02/25/21 17:10	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/25/21 17:10	
1,2,3-Trichloropropane	ND U	0.50	1	02/25/21 17:10	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/25/21 17:10	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/25/21 17:10	
Vinyl Chloride	ND U	0.50	1	02/25/21 17:10	
o-Xylene	ND U	0.50	1	02/25/21 17:10	
m,p-Xylenes	ND U	0.50	1	02/25/21 17:10	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	02/25/21 17:10	
Dibromofluoromethane	95	73 - 122	02/25/21 17:10	
Toluene-d8	96	65 - 144	02/25/21 17:10	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Collected: 02/23/21 12:00
Date Received: 02/24/21 11:50

Sample Name: LB-022321-01-13I
Lab Code: K2101683-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/25/21 17:37	
Benzene	ND U	0.50	1	02/25/21 17:37	
Bromobenzene	ND U	2.0	1	02/25/21 17:37	
Bromochloromethane	ND U	0.50	1	02/25/21 17:37	
Bromodichloromethane	ND U	0.50	1	02/25/21 17:37	
Bromoform	ND U	0.50	1	02/25/21 17:37	
Bromomethane	ND U	0.50	1	02/25/21 17:37	
2-Butanone (MEK)	ND U	20	1	02/25/21 17:37	
n-Butylbenzene	ND U	4.0	1	02/25/21 17:37	
sec-Butylbenzene	ND U	2.0	1	02/25/21 17:37	
tert-Butylbenzene	ND U	2.0	1	02/25/21 17:37	
Carbon Disulfide	ND U	0.50	1	02/25/21 17:37	
Carbon Tetrachloride	ND U	0.50	1	02/25/21 17:37	
Chlorobenzene	ND U	0.50	1	02/25/21 17:37	
Chloroethane	ND U	0.50	1	02/25/21 17:37	
Chloroform	ND U	0.50	1	02/25/21 17:37	
Chloromethane	ND U	0.50	1	02/25/21 17:37	
2-Chlorotoluene	ND U	2.0	1	02/25/21 17:37	
4-Chlorotoluene	ND U	2.0	1	02/25/21 17:37	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/25/21 17:37	
Dibromochloromethane	ND U	0.50	1	02/25/21 17:37	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/25/21 17:37	
Dibromomethane	ND U	0.50	1	02/25/21 17:37	
1,2-Dichlorobenzene	ND U	0.50	1	02/25/21 17:37	
1,3-Dichlorobenzene	ND U	0.50	1	02/25/21 17:37	
1,4-Dichlorobenzene	ND U	0.50	1	02/25/21 17:37	
Dichlorodifluoromethane	ND U	0.50	1	02/25/21 17:37	
1,1-Dichloroethane	ND U	0.50	1	02/25/21 17:37	
cis-1,2-Dichloroethene	ND U	0.50	1	02/25/21 17:37	
trans-1,2-Dichloroethene	ND U	0.50	1	02/25/21 17:37	
1,2-Dichloropropane	ND U	0.50	1	02/25/21 17:37	
1,3-Dichloropropane	ND U	0.50	1	02/25/21 17:37	
2,2-Dichloropropane	ND U	0.50	1	02/25/21 17:37	*
1,1-Dichloropropene	ND U	0.50	1	02/25/21 17:37	
cis-1,3-Dichloropropene	ND U	0.50	1	02/25/21 17:37	
trans-1,3-Dichloropropene	ND U	0.50	1	02/25/21 17:37	
Ethylbenzene	ND U	0.50	1	02/25/21 17:37	
Hexachlorobutadiene	ND U	2.0	1	02/25/21 17:37	
2-Hexanone	ND U	20	1	02/25/21 17:37	
Isopropylbenzene	ND U	2.0	1	02/25/21 17:37	
4-Isopropyltoluene	ND U	2.0	1	02/25/21 17:37	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Collected: 02/23/21 12:00
Date Received: 02/24/21 11:50

Sample Name: LB-022321-01-13I
Lab Code: K2101683-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/25/21 17:37	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/25/21 17:37	
Methylene Chloride	ND U	2.0	1	02/25/21 17:37	
Naphthalene	ND U	2.0	1	02/25/21 17:37	
n-Propylbenzene	ND U	2.0	1	02/25/21 17:37	
Styrene	ND U	0.50	1	02/25/21 17:37	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/25/21 17:37	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/25/21 17:37	
Tetrachloroethene (PCE)	ND U	0.50	1	02/25/21 17:37	
Toluene	ND U	0.50	1	02/25/21 17:37	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/25/21 17:37	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/25/21 17:37	
1,1,2-Trichloroethane	ND U	0.50	1	02/25/21 17:37	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/25/21 17:37	
Trichloroethene (TCE)	ND U	0.50	1	02/25/21 17:37	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/25/21 17:37	
1,2,3-Trichloropropane	ND U	0.50	1	02/25/21 17:37	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/25/21 17:37	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/25/21 17:37	
Vinyl Chloride	ND U	0.50	1	02/25/21 17:37	
o-Xylene	ND U	0.50	1	02/25/21 17:37	
m,p-Xylenes	ND U	0.50	1	02/25/21 17:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	85	68 - 117	02/25/21 17:37	
Dibromofluoromethane	93	73 - 122	02/25/21 17:37	
Toluene-d8	99	65 - 144	02/25/21 17:37	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Collected: 02/23/21 13:50
Date Received: 02/24/21 11:50

Sample Name: LB-022321-02-26I
Lab Code: K2101683-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/25/21 18:03	
Benzene	ND U	0.50	1	02/25/21 18:03	
Bromobenzene	ND U	2.0	1	02/25/21 18:03	
Bromochloromethane	ND U	0.50	1	02/25/21 18:03	
Bromodichloromethane	ND U	0.50	1	02/25/21 18:03	
Bromoform	ND U	0.50	1	02/25/21 18:03	
Bromomethane	ND U	0.50	1	02/25/21 18:03	
2-Butanone (MEK)	ND U	20	1	02/25/21 18:03	
n-Butylbenzene	ND U	4.0	1	02/25/21 18:03	
sec-Butylbenzene	ND U	2.0	1	02/25/21 18:03	
tert-Butylbenzene	ND U	2.0	1	02/25/21 18:03	
Carbon Disulfide	ND U	0.50	1	02/25/21 18:03	
Carbon Tetrachloride	ND U	0.50	1	02/25/21 18:03	
Chlorobenzene	ND U	0.50	1	02/25/21 18:03	
Chloroethane	ND U	0.50	1	02/25/21 18:03	
Chloroform	ND U	0.50	1	02/25/21 18:03	
Chloromethane	ND U	0.50	1	02/25/21 18:03	
2-Chlorotoluene	ND U	2.0	1	02/25/21 18:03	
4-Chlorotoluene	ND U	2.0	1	02/25/21 18:03	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/25/21 18:03	
Dibromochloromethane	ND U	0.50	1	02/25/21 18:03	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/25/21 18:03	
Dibromomethane	ND U	0.50	1	02/25/21 18:03	
1,2-Dichlorobenzene	ND U	0.50	1	02/25/21 18:03	
1,3-Dichlorobenzene	ND U	0.50	1	02/25/21 18:03	
1,4-Dichlorobenzene	ND U	0.50	1	02/25/21 18:03	
Dichlorodifluoromethane	ND U	0.50	1	02/25/21 18:03	
1,1-Dichloroethane	ND U	0.50	1	02/25/21 18:03	
cis-1,2-Dichloroethene	ND U	0.50	1	02/25/21 18:03	
trans-1,2-Dichloroethene	ND U	0.50	1	02/25/21 18:03	
1,2-Dichloropropane	ND U	0.50	1	02/25/21 18:03	
1,3-Dichloropropane	ND U	0.50	1	02/25/21 18:03	
2,2-Dichloropropane	ND U	0.50	1	02/25/21 18:03	*
1,1-Dichloropropene	ND U	0.50	1	02/25/21 18:03	
cis-1,3-Dichloropropene	ND U	0.50	1	02/25/21 18:03	
trans-1,3-Dichloropropene	ND U	0.50	1	02/25/21 18:03	
Ethylbenzene	ND U	0.50	1	02/25/21 18:03	
Hexachlorobutadiene	ND U	2.0	1	02/25/21 18:03	
2-Hexanone	ND U	20	1	02/25/21 18:03	
Isopropylbenzene	ND U	2.0	1	02/25/21 18:03	
4-Isopropyltoluene	ND U	2.0	1	02/25/21 18:03	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Collected: 02/23/21 13:50
Date Received: 02/24/21 11:50

Sample Name: LB-022321-02-26I
Lab Code: K2101683-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/25/21 18:03	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/25/21 18:03	
Methylene Chloride	ND U	2.0	1	02/25/21 18:03	
Naphthalene	ND U	2.0	1	02/25/21 18:03	
n-Propylbenzene	ND U	2.0	1	02/25/21 18:03	
Styrene	ND U	0.50	1	02/25/21 18:03	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/25/21 18:03	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/25/21 18:03	
Tetrachloroethene (PCE)	ND U	0.50	1	02/25/21 18:03	
Toluene	ND U	0.50	1	02/25/21 18:03	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/25/21 18:03	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/25/21 18:03	
1,1,2-Trichloroethane	ND U	0.50	1	02/25/21 18:03	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/25/21 18:03	
Trichloroethene (TCE)	ND U	0.50	1	02/25/21 18:03	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/25/21 18:03	
1,2,3-Trichloropropane	ND U	0.50	1	02/25/21 18:03	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/25/21 18:03	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/25/21 18:03	
Vinyl Chloride	ND U	0.50	1	02/25/21 18:03	
o-Xylene	ND U	0.50	1	02/25/21 18:03	
m,p-Xylenes	ND U	0.50	1	02/25/21 18:03	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	85	68 - 117	02/25/21 18:03	
Dibromofluoromethane	95	73 - 122	02/25/21 18:03	
Toluene-d8	95	65 - 144	02/25/21 18:03	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Collected: 02/23/21
Date Received: 02/24/21 11:50

Sample Name: Trip Blanks
Lab Code: K2101683-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/25/21 18:30	
Benzene	ND U	0.50	1	02/25/21 18:30	
Bromobenzene	ND U	2.0	1	02/25/21 18:30	
Bromochloromethane	ND U	0.50	1	02/25/21 18:30	
Bromodichloromethane	ND U	0.50	1	02/25/21 18:30	
Bromoform	ND U	0.50	1	02/25/21 18:30	
Bromomethane	ND U	0.50	1	02/25/21 18:30	
2-Butanone (MEK)	ND U	20	1	02/25/21 18:30	
n-Butylbenzene	ND U	4.0	1	02/25/21 18:30	
sec-Butylbenzene	ND U	2.0	1	02/25/21 18:30	
tert-Butylbenzene	ND U	2.0	1	02/25/21 18:30	
Carbon Disulfide	ND U	0.50	1	02/25/21 18:30	
Carbon Tetrachloride	ND U	0.50	1	02/25/21 18:30	
Chlorobenzene	ND U	0.50	1	02/25/21 18:30	
Chloroethane	ND U	0.50	1	02/25/21 18:30	
Chloroform	ND U	0.50	1	02/25/21 18:30	
Chloromethane	ND U	0.50	1	02/25/21 18:30	
2-Chlorotoluene	ND U	2.0	1	02/25/21 18:30	
4-Chlorotoluene	ND U	2.0	1	02/25/21 18:30	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/25/21 18:30	
Dibromochloromethane	ND U	0.50	1	02/25/21 18:30	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/25/21 18:30	
Dibromomethane	ND U	0.50	1	02/25/21 18:30	
1,2-Dichlorobenzene	ND U	0.50	1	02/25/21 18:30	
1,3-Dichlorobenzene	ND U	0.50	1	02/25/21 18:30	
1,4-Dichlorobenzene	ND U	0.50	1	02/25/21 18:30	
Dichlorodifluoromethane	ND U	0.50	1	02/25/21 18:30	
1,1-Dichloroethane	ND U	0.50	1	02/25/21 18:30	
cis-1,2-Dichloroethene	ND U	0.50	1	02/25/21 18:30	
trans-1,2-Dichloroethene	ND U	0.50	1	02/25/21 18:30	
1,2-Dichloropropane	ND U	0.50	1	02/25/21 18:30	
1,3-Dichloropropane	ND U	0.50	1	02/25/21 18:30	
2,2-Dichloropropane	ND U	0.50	1	02/25/21 18:30	*
1,1-Dichloropropene	ND U	0.50	1	02/25/21 18:30	
cis-1,3-Dichloropropene	ND U	0.50	1	02/25/21 18:30	
trans-1,3-Dichloropropene	ND U	0.50	1	02/25/21 18:30	
Ethylbenzene	ND U	0.50	1	02/25/21 18:30	
Hexachlorobutadiene	ND U	2.0	1	02/25/21 18:30	
2-Hexanone	ND U	20	1	02/25/21 18:30	
Isopropylbenzene	ND U	2.0	1	02/25/21 18:30	
4-Isopropyltoluene	ND U	2.0	1	02/25/21 18:30	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Collected: 02/23/21
Date Received: 02/24/21 11:50

Sample Name: Trip Blanks
Lab Code: K2101683-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/25/21 18:30	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/25/21 18:30	
Methylene Chloride	ND U	2.0	1	02/25/21 18:30	
Naphthalene	ND U	2.0	1	02/25/21 18:30	
n-Propylbenzene	ND U	2.0	1	02/25/21 18:30	
Styrene	ND U	0.50	1	02/25/21 18:30	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/25/21 18:30	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/25/21 18:30	
Tetrachloroethene (PCE)	ND U	0.50	1	02/25/21 18:30	
Toluene	ND U	0.50	1	02/25/21 18:30	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/25/21 18:30	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/25/21 18:30	
1,1,2-Trichloroethane	ND U	0.50	1	02/25/21 18:30	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/25/21 18:30	
Trichloroethene (TCE)	ND U	0.50	1	02/25/21 18:30	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/25/21 18:30	
1,2,3-Trichloropropane	ND U	0.50	1	02/25/21 18:30	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/25/21 18:30	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/25/21 18:30	
Vinyl Chloride	ND U	0.50	1	02/25/21 18:30	
o-Xylene	ND U	0.50	1	02/25/21 18:30	
m,p-Xylenes	ND U	0.50	1	02/25/21 18:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	02/25/21 18:30	
Dibromofluoromethane	93	73 - 122	02/25/21 18:30	
Toluene-d8	100	65 - 144	02/25/21 18:30	



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-03-6S
Lab Code: K2101683-001

Service Request: K2101683
Date Collected: 02/23/21 14:40
Date Received: 02/24/21 11:50
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/05/21 13:56	03/02/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/05/21 13:56	03/02/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-01-13I
Lab Code: K2101683-002

Service Request: K2101683
Date Collected: 02/23/21 12:00
Date Received: 02/24/21 11:50
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/05/21 13:59	03/02/21	
Manganese	6010C	2.9	ug/L	1.1	1	03/05/21 13:59	03/02/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-02-26I
Lab Code: K2101683-003

Service Request: K2101683
Date Collected: 02/23/21 13:50
Date Received: 02/24/21 11:50
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/05/21 14:01	03/02/21	
Manganese	6010C	4.1	ug/L	1.1	1	03/05/21 14:01	03/02/21	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-03-6S
Lab Code: K2101683-001

Service Request: K2101683
Date Collected: 02/23/21 14:40
Date Received: 02/24/21 11:50
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	7.78	mg/L	0.20	2	02/24/21 14:03	
Nitrate as Nitrogen	300.0	4.37	mg/L	0.10	2	02/24/21 14:03	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-03-6S
Lab Code: K2101683-001

Service Request: K2101683
Date Collected: 02/23/21 14:40
Date Received: 02/24/21 11:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	169	mg/L	5.0	1	02/24/21 13:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-01-13I
Lab Code: K2101683-002

Service Request: K2101683
Date Collected: 02/23/21 12:00
Date Received: 02/24/21 11:50
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	12.9	mg/L	0.20	2	02/24/21 14:15	
Nitrate as Nitrogen	300.0	4.87	mg/L	0.10	2	02/24/21 14:15	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-01-13I
Lab Code: K2101683-002

Service Request: K2101683
Date Collected: 02/23/21 12:00
Date Received: 02/24/21 11:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	199	mg/L	5.0	1	02/24/21 13:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-02-26I
Lab Code: K2101683-003

Service Request: K2101683
Date Collected: 02/23/21 13:50
Date Received: 02/24/21 11:50
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	8.15	mg/L	0.20	2	02/24/21 14:27	
Nitrate as Nitrogen	300.0	4.74	mg/L	0.10	2	02/24/21 14:27	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-022321-02-26I
Lab Code: K2101683-003

Service Request: K2101683
Date Collected: 02/23/21 13:50
Date Received: 02/24/21 11:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	182	mg/L	5.0	1	02/24/21 13:45	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
LB-022321-03-6S	K2101683-001	84	95	96
LB-022321-01-13I	K2101683-002	85	93	99
LB-022321-02-26I	K2101683-003	85	95	95
Trip Blanks	K2101683-004	82	93	100
Method Blank	KQ2102841-05	87	93	100
Lab Control Sample	KQ2102841-03	99	98	102
Duplicate Lab Control Sample	KQ2102841-04	92	100	100

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102841-05

Service Request: K2101683
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	02/25/21 13:11	
Benzene	ND U	0.50	1	02/25/21 13:11	
Bromobenzene	ND U	2.0	1	02/25/21 13:11	
Bromochloromethane	ND U	0.50	1	02/25/21 13:11	
Bromodichloromethane	ND U	0.50	1	02/25/21 13:11	
Bromoform	ND U	0.50	1	02/25/21 13:11	
Bromomethane	ND U	0.50	1	02/25/21 13:11	
2-Butanone (MEK)	ND U	20	1	02/25/21 13:11	
n-Butylbenzene	ND U	4.0	1	02/25/21 13:11	
sec-Butylbenzene	ND U	2.0	1	02/25/21 13:11	
tert-Butylbenzene	ND U	2.0	1	02/25/21 13:11	
Carbon Disulfide	ND U	0.50	1	02/25/21 13:11	
Carbon Tetrachloride	ND U	0.50	1	02/25/21 13:11	
Chlorobenzene	ND U	0.50	1	02/25/21 13:11	
Chloroethane	ND U	0.50	1	02/25/21 13:11	
Chloroform	ND U	0.50	1	02/25/21 13:11	
Chloromethane	ND U	0.50	1	02/25/21 13:11	
2-Chlorotoluene	ND U	2.0	1	02/25/21 13:11	
4-Chlorotoluene	ND U	2.0	1	02/25/21 13:11	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	02/25/21 13:11	
Dibromochloromethane	ND U	0.50	1	02/25/21 13:11	
1,2-Dibromoethane (EDB)	ND U	2.0	1	02/25/21 13:11	
Dibromomethane	ND U	0.50	1	02/25/21 13:11	
1,2-Dichlorobenzene	ND U	0.50	1	02/25/21 13:11	
1,3-Dichlorobenzene	ND U	0.50	1	02/25/21 13:11	
1,4-Dichlorobenzene	ND U	0.50	1	02/25/21 13:11	
Dichlorodifluoromethane	ND U	0.50	1	02/25/21 13:11	
1,1-Dichloroethane	ND U	0.50	1	02/25/21 13:11	
cis-1,2-Dichloroethene	ND U	0.50	1	02/25/21 13:11	
trans-1,2-Dichloroethene	ND U	0.50	1	02/25/21 13:11	
1,2-Dichloropropane	ND U	0.50	1	02/25/21 13:11	
1,3-Dichloropropane	ND U	0.50	1	02/25/21 13:11	
2,2-Dichloropropane	ND U	0.50	1	02/25/21 13:11	
1,1-Dichloropropene	ND U	0.50	1	02/25/21 13:11	
cis-1,3-Dichloropropene	ND U	0.50	1	02/25/21 13:11	
trans-1,3-Dichloropropene	ND U	0.50	1	02/25/21 13:11	
Ethylbenzene	ND U	0.50	1	02/25/21 13:11	
Hexachlorobutadiene	ND U	2.0	1	02/25/21 13:11	
2-Hexanone	ND U	20	1	02/25/21 13:11	
Isopropylbenzene	ND U	2.0	1	02/25/21 13:11	
4-Isopropyltoluene	ND U	2.0	1	02/25/21 13:11	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102841-05

Service Request: K2101683
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	02/25/21 13:11	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	02/25/21 13:11	
Methylene Chloride	ND U	2.0	1	02/25/21 13:11	
Naphthalene	ND U	2.0	1	02/25/21 13:11	
n-Propylbenzene	ND U	2.0	1	02/25/21 13:11	
Styrene	ND U	0.50	1	02/25/21 13:11	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	02/25/21 13:11	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	02/25/21 13:11	
Tetrachloroethene (PCE)	ND U	0.50	1	02/25/21 13:11	
Toluene	ND U	0.50	1	02/25/21 13:11	
1,2,3-Trichlorobenzene	ND U	2.0	1	02/25/21 13:11	
1,2,4-Trichlorobenzene	ND U	2.0	1	02/25/21 13:11	
1,1,2-Trichloroethane	ND U	0.50	1	02/25/21 13:11	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	02/25/21 13:11	
Trichloroethene (TCE)	ND U	0.50	1	02/25/21 13:11	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	02/25/21 13:11	
1,2,3-Trichloropropane	ND U	0.50	1	02/25/21 13:11	
1,2,4-Trimethylbenzene	ND U	2.0	1	02/25/21 13:11	
1,3,5-Trimethylbenzene	ND U	2.0	1	02/25/21 13:11	
Vinyl Chloride	ND U	0.50	1	02/25/21 13:11	
o-Xylene	ND U	0.50	1	02/25/21 13:11	
m,p-Xylenes	ND U	0.50	1	02/25/21 13:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	02/25/21 13:11	
Dibromofluoromethane	93	73 - 122	02/25/21 13:11	
Toluene-d8	100	65 - 144	02/25/21 13:11	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Analyzed: 02/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 714203

Analyte Name	Lab Control Sample KQ2102841-03			Duplicate Lab Control Sample KQ2102841-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.76	10.0	98	9.63	10.0	96	66-124	1	30
1,1,1-Trichloroethane (TCA)	8.06	10.0	81	8.20	10.0	82	59-136	2	30
1,1,2,2-Tetrachloroethane	10.5	10.0	105	10.2	10.0	102	70-127	3	30
1,1,2-Trichloroethane	10.1	10.0	101	9.82	10.0	98	74-118	3	30
1,1-Dichloroethane	9.45	10.0	95	9.10	10.0	91	68-132	4	30
1,1-Dichloropropene	8.13	10.0	81	8.10	10.0	81	59-134	<1	30
1,2,3-Trichlorobenzene	9.63	10.0	96	9.52	10.0	95	68-120	1	30
1,2,3-Trichloropropane	11.0	10.0	110	9.82	10.0	98	69-123	11	30
1,2,4-Trichlorobenzene	9.22	10.0	92	9.03	10.0	90	58-126	2	30
1,2,4-Trimethylbenzene	9.52	10.0	95	9.07	10.0	91	63-122	5	30
1,2-Dibromo-3-chloropropane	9.35	10.0	94	8.76	10.0	88	55-132	7	30
1,2-Dibromoethane (EDB)	9.53	10.0	95	9.03	10.0	90	74-118	5	30
1,2-Dichlorobenzene	9.71	10.0	97	9.58	10.0	96	72-115	1	30
1,2-Dichloropropane	9.60	10.0	96	9.19	10.0	92	67-126	4	30
1,3,5-Trimethylbenzene	9.09	10.0	91	8.86	10.0	89	62-126	3	30
1,3-Dichlorobenzene	9.27	10.0	93	9.24	10.0	92	70-116	<1	30
1,3-Dichloropropane	9.86	10.0	99	9.78	10.0	98	75-116	<1	30
1,4-Dichlorobenzene	9.76	10.0	98	9.18	10.0	92	73-115	6	30
2,2-Dichloropropane	6.64	10.0	66	6.43	10.0	64	37-145	3	30
2-Butanone (MEK)	59.9	50.0	120	60.0	50.0	120	71-149	<1	30
2-Chlorotoluene	9.41	10.0	94	8.93	10.0	89	55-131	5	30
2-Hexanone	51.5	50.0	103	50.8	50.0	102	59-131	1	30
4-Chlorotoluene	9.84	10.0	98	9.51	10.0	95	66-121	3	30
4-Isopropyltoluene	8.98	10.0	90	8.81	10.0	88	61-128	2	30
4-Methyl-2-pentanone (MIBK)	56.7	50.0	113	55.1	50.0	110	64-134	3	30
Acetone	63.6	50.0	127	60.7	50.0	121	68-135	5	30
Benzene	9.23	10.0	92	8.74	10.0	87	69-124	5	30
Bromobenzene	9.50	10.0	95	9.39	10.0	94	72-116	1	30
Bromochloromethane	10.1	10.0	101	9.85	10.0	99	75-131	2	30
Bromodichloromethane	10.9	10.0	109	9.91	10.0	99	63-129	10	30
Bromoform	10.6	10.0	106	10.4	10.0	104	52-144	1	30
Bromomethane	8.48	10.0	85	7.97	10.0	80	35-113	6	30
Carbon Disulfide	17.6	20.0	88	16.7	20.0	83	46-144	6	30
Carbon Tetrachloride	8.48	10.0	85	8.03	10.0	80	55-140	5	30
Chlorobenzene	9.53	10.0	95	9.14	10.0	91	72-116	4	30
Chloroethane	10.0	10.0	100	9.70	10.0	97	58-134	3	30
Chloroform	9.86	10.0	99	9.25	10.0	93	70-129	6	30
Chloromethane	9.52	10.0	95	9.05	10.0	91	34-130	5	30
cis-1,2-Dichloroethene	9.43	10.0	94	8.58	10.0	86	71-118	9	30
cis-1,3-Dichloropropene	9.72	10.0	97	9.79	10.0	98	62-132	<1	30
Dibromochloromethane	11.0	10.0	110	10.7	10.0	107	67-126	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Analyzed: 02/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 714203

Analyte Name	Lab Control Sample KQ2102841-03			Duplicate Lab Control Sample KQ2102841-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	9.98	10.0	100	9.48	10.0	95	69-128	5	30
Dichlorodifluoromethane	8.51	10.0	85	8.43	10.0	84	32-124	<1	30
Ethylbenzene	8.66	10.0	87	8.14	10.0	81	67-121	6	30
Hexachlorobutadiene	9.02	10.0	90	8.83	10.0	88	57-119	2	30
Isopropylbenzene	8.56	10.0	86	8.28	10.0	83	67-129	3	30
m,p-Xylenes	17.3	20.0	86	16.6	20.0	83	69-121	4	30
Methyl tert-Butyl Ether	9.84	10.0	98	9.45	10.0	95	54-126	4	30
Methylene Chloride	9.87	10.0	99	9.13	10.0	91	71-122	8	30
Naphthalene	9.12	10.0	91	8.84	10.0	88	64-126	3	30
n-Butylbenzene	8.61	10.0	86	8.45	10.0	85	55-130	2	30
n-Propylbenzene	9.06	10.0	91	8.69	10.0	87	61-124	4	30
o-Xylene	9.11	10.0	91	8.68	10.0	87	71-119	5	30
sec-Butylbenzene	8.55	10.0	86	8.18	10.0	82	59-128	4	30
Styrene	9.57	10.0	96	9.11	10.0	91	74-121	5	30
tert-Butylbenzene	8.43	10.0	84	8.27	10.0	83	61-127	2	30
Tetrachloroethene (PCE)	8.24	10.0	82	8.16	10.0	82	62-126	<1	30
Toluene	9.32	10.0	93	8.88	10.0	89	69-124	5	30
trans-1,2-Dichloroethene	9.17	10.0	92	8.12	10.0	81	67-125	12	30
trans-1,3-Dichloropropene	8.75	10.0	88	8.58	10.0	86	59-125	2	30
Trichloroethene (TCE)	8.82	10.0	88	8.47	10.0	85	67-128	4	30
Trichlorofluoromethane (CFC 11)	7.35	10.0	74	7.06	10.0	71	52-141	4	30
Vinyl Chloride	9.24	10.0	92	8.97	10.0	90	55-123	3	30



Metals

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2102807-02

Service Request: K2101683
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	03/05/21 13:49	03/02/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/05/21 13:49	03/02/21	

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683
Date Analyzed: 03/05/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2102807-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2440	2500	98	80-120
Manganese	6010C	1200	1250	96	80-120



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101683-MB1

Service Request: K2101683
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.10	1	02/24/21 12:10	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	02/24/21 12:10	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101683-MB1

Service Request: K2101683
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/24/21 13:45	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2101683-MB2

Service Request: K2101683
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	02/24/21 13:45	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2101683

Date Analyzed: 02/24/21

**Lab Control Sample Summary
General Chemistry Parameters**

Units:mg/L

Basis:NA

Lab Control Sample

K2101683-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	5.06	5.00	101	90-110
Nitrate as Nitrogen	300.0	2.40	2.50	96	90-110
Solids, Total Dissolved	SM 2540 C	890	922	97	85-115

Second Quarter (May) 2021 Laboratory Reports (VOCs)



May 28, 2021

Service Request No:K2105413

Tiffany Andrews
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

Laboratory Results for: Leichner Lanfill

Dear Tiffany,

Enclosed are the results of the sample(s) submitted to our laboratory May 14, 2021
For your reference, these analyses have been assigned our service request number **K2105413**.

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

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Client: SCS Engineers
Project: Leichner Lanfill
Sample Matrix: Ground Water

Service Request: K2105413
Date Received: 05/14/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Six ground water samples were received for analysis at ALS Environmental on 05/14/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Volatiles by GC/MS:

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0520F007.D. 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.

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0524F002.D. 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.

Approved by 

Date 05/28/2021



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13

Service Request:K2105413

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2105413-001	LB-051321-01-27I	5/13/2021	1120
K2105413-002	LB-051321-03-1S	5/13/2021	1225
K2105413-003	LB-051321-02-FB	5/13/2021	1150
K2105413-004	LB-051321-04-10SR	5/13/2021	1320
K2105413-005	LB-051321-05-DUP	5/13/2021	1325
K2105413-006	Trip Blank	5/13/2021	



ADDRESS 1317 South 13th Ave., Kelso, WA 98626
 PHONE 1 360 577 7222 FAX 1 360 636 1068

Chain of Custody

Work Order No.:

K2105413 REV

Part of the ALS Group A Campbell Brothers Limited Company

Project Manager: Tiffany Andrews				Bill to: Same	
Client Name: Leichner Landfill				Company:	
Address: 15940 SW 72nd Avenue				Address:	
City, State ZIP: Portland, OR 97224				City, State ZIP:	
Email: tandrews@scsengineers.com		Phone: 503-724-0112		Email:	
Project Name: Leichner Special Event				REQUESTED ANALYSIS	
Project Number: 04221030.12				TAT	
P.O. Number:				<input type="checkbox"/> Routine 21day <input type="checkbox"/> Same Day 100% <input type="checkbox"/> Next Day *** <input type="checkbox"/> 3 Day <input type="checkbox"/> 5 Day 50%	
Sampler's Name: Kara Kingen				po#	
SAMPLE RECEIPT					
Temperature (°C):		Temp Blank Present		No. of Containers 8260 (VCCs)	
Received Intact: Yes No N/A		Wet Ice / Blue Ice			
Cooler Custody Seals: Yes No N/A		Total Containers:			
Sample Custody Seals: Yes No N/A					
Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	
LB-051321-01-27I	W	5/13/2021	11:20		3 X
LB-051321-03-1S	W	5/13/2021	12:25		3 X
LB-051321-02-BB	W	5/13/2021	11:50		3 X
LB-051321-04-10SR	W	5/13/2021	13:20		3 X
LB-051321-05-DUP	W	5/13/2021	13:25		3 X
Additional Methods Available Upon Request					
Dissolved		Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, V, Zn, Zr			
Total		Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, V, Zn, Zr			
RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Kara Kingen	Kara Kingen	5/14/2021 @0845			
Comments					
CI and TDS are Field Filtered					

PM HH

Cooler Receipt and Preservation Form

Client SGJ Service Request K21 OS413
Received: 5114121 Opened: 5114121 By: BR Unloaded: 5114121 By: BR

- 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? Front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>4.1</u>	<u>-</u>	<u>1202</u>					

- 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 (unbroken) NA Y N
- Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? 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	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

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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	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.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/bsdwlabservice.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/analyte is offered by that state.

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.

ALS Group USA, Corp.
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Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13

Service Request: K2105413

Sample Name: LB-051321-01-27I
Lab Code: K2105413-001
Sample Matrix: Ground Water

Date Collected: 05/13/21
Date Received: 05/14/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

Sample Name: LB-051321-03-1S
Lab Code: K2105413-002
Sample Matrix: Ground Water

Date Collected: 05/13/21
Date Received: 05/14/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

Sample Name: LB-051321-02-FB
Lab Code: K2105413-003
Sample Matrix: Ground Water

Date Collected: 05/13/21
Date Received: 05/14/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

Sample Name: LB-051321-04-10SR
Lab Code: K2105413-004
Sample Matrix: Ground Water

Date Collected: 05/13/21
Date Received: 05/14/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

Sample Name: LB-051321-05-DUP
Lab Code: K2105413-005
Sample Matrix: Ground Water

Date Collected: 05/13/21
Date Received: 05/14/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13

Service Request: K2105413

Sample Name: Trip Blank
Lab Code: K2105413-006
Sample Matrix: Ground Water

Date Collected: 05/13/21
Date Received: 05/14/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 11:20
Date Received: 05/14/21 12:15

Sample Name: LB-051321-01-27I
Lab Code: K2105413-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	05/20/21 16:16	
Benzene	ND U	0.50	1	05/20/21 16:16	
Bromobenzene	ND U	2.0	1	05/20/21 16:16	
Bromochloromethane	ND U	0.50	1	05/20/21 16:16	
Bromodichloromethane	ND U	0.50	1	05/20/21 16:16	
Bromoform	ND U	0.50	1	05/20/21 16:16	
Bromomethane	ND U	0.50	1	05/20/21 16:16	*
2-Butanone (MEK)	ND U	20	1	05/20/21 16:16	
n-Butylbenzene	ND U	4.0	1	05/20/21 16:16	
sec-Butylbenzene	ND U	2.0	1	05/20/21 16:16	
tert-Butylbenzene	ND U	2.0	1	05/20/21 16:16	
Carbon Disulfide	ND U	0.50	1	05/20/21 16:16	
Carbon Tetrachloride	ND U	0.50	1	05/20/21 16:16	
Chlorobenzene	ND U	0.50	1	05/20/21 16:16	
Chloroethane	ND U	0.50	1	05/20/21 16:16	
Chloroform	ND U	0.50	1	05/20/21 16:16	
Chloromethane	ND U	0.50	1	05/20/21 16:16	
2-Chlorotoluene	ND U	2.0	1	05/20/21 16:16	
4-Chlorotoluene	ND U	2.0	1	05/20/21 16:16	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	05/20/21 16:16	
Dibromochloromethane	ND U	0.50	1	05/20/21 16:16	
1,2-Dibromoethane (EDB)	ND U	2.0	1	05/20/21 16:16	
Dibromomethane	ND U	0.50	1	05/20/21 16:16	
1,2-Dichlorobenzene	ND U	0.50	1	05/20/21 16:16	
1,3-Dichlorobenzene	ND U	0.50	1	05/20/21 16:16	
1,4-Dichlorobenzene	ND U	0.50	1	05/20/21 16:16	
Dichlorodifluoromethane	ND U	0.50	1	05/20/21 16:16	
1,1-Dichloroethane	ND U	0.50	1	05/20/21 16:16	
cis-1,2-Dichloroethene	ND U	0.50	1	05/20/21 16:16	
trans-1,2-Dichloroethene	ND U	0.50	1	05/20/21 16:16	
1,2-Dichloropropane	ND U	0.50	1	05/20/21 16:16	
1,3-Dichloropropane	ND U	0.50	1	05/20/21 16:16	
2,2-Dichloropropane	ND U	0.50	1	05/20/21 16:16	*
1,1-Dichloropropene	ND U	0.50	1	05/20/21 16:16	
cis-1,3-Dichloropropene	ND U	0.50	1	05/20/21 16:16	
trans-1,3-Dichloropropene	ND U	0.50	1	05/20/21 16:16	
Ethylbenzene	ND U	0.50	1	05/20/21 16:16	
Hexachlorobutadiene	ND U	2.0	1	05/20/21 16:16	
2-Hexanone	ND U	20	1	05/20/21 16:16	
Isopropylbenzene	ND U	2.0	1	05/20/21 16:16	
4-Isopropyltoluene	ND U	2.0	1	05/20/21 16:16	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 11:20
Date Received: 05/14/21 12:15

Sample Name: LB-051321-01-27I
Lab Code: K2105413-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	05/20/21 16:16	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	05/20/21 16:16	
Methylene Chloride	ND U	2.0	1	05/20/21 16:16	
Naphthalene	ND U	2.0	1	05/20/21 16:16	*
n-Propylbenzene	ND U	2.0	1	05/20/21 16:16	
Styrene	ND U	0.50	1	05/20/21 16:16	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	05/20/21 16:16	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	05/20/21 16:16	
Tetrachloroethene (PCE)	ND U	0.50	1	05/20/21 16:16	
Toluene	ND U	0.50	1	05/20/21 16:16	
1,2,3-Trichlorobenzene	ND U	2.0	1	05/20/21 16:16	
1,2,4-Trichlorobenzene	ND U	2.0	1	05/20/21 16:16	
1,1,2-Trichloroethane	ND U	0.50	1	05/20/21 16:16	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	05/20/21 16:16	
Trichloroethene (TCE)	ND U	0.50	1	05/20/21 16:16	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	05/20/21 16:16	
1,2,3-Trichloropropane	ND U	0.50	1	05/20/21 16:16	
1,2,4-Trimethylbenzene	ND U	2.0	1	05/20/21 16:16	
1,3,5-Trimethylbenzene	ND U	2.0	1	05/20/21 16:16	
Vinyl Chloride	ND U	0.50	1	05/20/21 16:16	
o-Xylene	ND U	0.50	1	05/20/21 16:16	
m,p-Xylenes	ND U	0.50	1	05/20/21 16:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	68 - 117	05/20/21 16:16	
Dibromofluoromethane	93	73 - 122	05/20/21 16:16	
Toluene-d8	96	65 - 144	05/20/21 16:16	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 12:25
Date Received: 05/14/21 12:15

Sample Name: LB-051321-03-1S
Lab Code: K2105413-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	05/20/21 16:42	
Benzene	ND U	0.50	1	05/20/21 16:42	
Bromobenzene	ND U	2.0	1	05/20/21 16:42	
Bromochloromethane	ND U	0.50	1	05/20/21 16:42	
Bromodichloromethane	ND U	0.50	1	05/20/21 16:42	
Bromoform	ND U	0.50	1	05/20/21 16:42	
Bromomethane	ND U	0.50	1	05/20/21 16:42	*
2-Butanone (MEK)	ND U	20	1	05/20/21 16:42	
n-Butylbenzene	ND U	4.0	1	05/20/21 16:42	
sec-Butylbenzene	ND U	2.0	1	05/20/21 16:42	
tert-Butylbenzene	ND U	2.0	1	05/20/21 16:42	
Carbon Disulfide	ND U	0.50	1	05/20/21 16:42	
Carbon Tetrachloride	ND U	0.50	1	05/20/21 16:42	
Chlorobenzene	ND U	0.50	1	05/20/21 16:42	
Chloroethane	ND U	0.50	1	05/20/21 16:42	
Chloroform	ND U	0.50	1	05/20/21 16:42	
Chloromethane	ND U	0.50	1	05/20/21 16:42	
2-Chlorotoluene	ND U	2.0	1	05/20/21 16:42	
4-Chlorotoluene	ND U	2.0	1	05/20/21 16:42	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	05/20/21 16:42	
Dibromochloromethane	ND U	0.50	1	05/20/21 16:42	
1,2-Dibromoethane (EDB)	ND U	2.0	1	05/20/21 16:42	
Dibromomethane	ND U	0.50	1	05/20/21 16:42	
1,2-Dichlorobenzene	ND U	0.50	1	05/20/21 16:42	
1,3-Dichlorobenzene	ND U	0.50	1	05/20/21 16:42	
1,4-Dichlorobenzene	ND U	0.50	1	05/20/21 16:42	
Dichlorodifluoromethane	ND U	0.50	1	05/20/21 16:42	
1,1-Dichloroethane	ND U	0.50	1	05/20/21 16:42	
cis-1,2-Dichloroethene	ND U	0.50	1	05/20/21 16:42	
trans-1,2-Dichloroethene	ND U	0.50	1	05/20/21 16:42	
1,2-Dichloropropane	ND U	0.50	1	05/20/21 16:42	
1,3-Dichloropropane	ND U	0.50	1	05/20/21 16:42	
2,2-Dichloropropane	ND U	0.50	1	05/20/21 16:42	*
1,1-Dichloropropene	ND U	0.50	1	05/20/21 16:42	
cis-1,3-Dichloropropene	ND U	0.50	1	05/20/21 16:42	
trans-1,3-Dichloropropene	ND U	0.50	1	05/20/21 16:42	
Ethylbenzene	ND U	0.50	1	05/20/21 16:42	
Hexachlorobutadiene	ND U	2.0	1	05/20/21 16:42	
2-Hexanone	ND U	20	1	05/20/21 16:42	
Isopropylbenzene	ND U	2.0	1	05/20/21 16:42	
4-Isopropyltoluene	ND U	2.0	1	05/20/21 16:42	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 12:25
Date Received: 05/14/21 12:15

Sample Name: LB-051321-03-1S
Lab Code: K2105413-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	05/20/21 16:42	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	05/20/21 16:42	
Methylene Chloride	ND U	2.0	1	05/20/21 16:42	
Naphthalene	ND U	2.0	1	05/20/21 16:42	*
n-Propylbenzene	ND U	2.0	1	05/20/21 16:42	
Styrene	ND U	0.50	1	05/20/21 16:42	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	05/20/21 16:42	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	05/20/21 16:42	
Tetrachloroethene (PCE)	ND U	0.50	1	05/20/21 16:42	
Toluene	ND U	0.50	1	05/20/21 16:42	
1,2,3-Trichlorobenzene	ND U	2.0	1	05/20/21 16:42	
1,2,4-Trichlorobenzene	ND U	2.0	1	05/20/21 16:42	
1,1,2-Trichloroethane	ND U	0.50	1	05/20/21 16:42	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	05/20/21 16:42	
Trichloroethene (TCE)	ND U	0.50	1	05/20/21 16:42	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	05/20/21 16:42	
1,2,3-Trichloropropane	ND U	0.50	1	05/20/21 16:42	
1,2,4-Trimethylbenzene	ND U	2.0	1	05/20/21 16:42	
1,3,5-Trimethylbenzene	ND U	2.0	1	05/20/21 16:42	
Vinyl Chloride	ND U	0.50	1	05/20/21 16:42	
o-Xylene	ND U	0.50	1	05/20/21 16:42	
m,p-Xylenes	ND U	0.50	1	05/20/21 16:42	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	86	68 - 117	05/20/21 16:42	
Dibromofluoromethane	93	73 - 122	05/20/21 16:42	
Toluene-d8	96	65 - 144	05/20/21 16:42	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 11:50
Date Received: 05/14/21 12:15

Sample Name: LB-051321-02-FB
Lab Code: K2105413-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	05/20/21 17:09	
Benzene	ND U	0.50	1	05/20/21 17:09	
Bromobenzene	ND U	2.0	1	05/20/21 17:09	
Bromochloromethane	ND U	0.50	1	05/20/21 17:09	
Bromodichloromethane	ND U	0.50	1	05/20/21 17:09	
Bromoform	ND U	0.50	1	05/20/21 17:09	
Bromomethane	ND U	0.50	1	05/20/21 17:09	*
2-Butanone (MEK)	ND U	20	1	05/20/21 17:09	
n-Butylbenzene	ND U	4.0	1	05/20/21 17:09	
sec-Butylbenzene	ND U	2.0	1	05/20/21 17:09	
tert-Butylbenzene	ND U	2.0	1	05/20/21 17:09	
Carbon Disulfide	ND U	0.50	1	05/20/21 17:09	
Carbon Tetrachloride	ND U	0.50	1	05/20/21 17:09	
Chlorobenzene	ND U	0.50	1	05/20/21 17:09	
Chloroethane	ND U	0.50	1	05/20/21 17:09	
Chloroform	ND U	0.50	1	05/20/21 17:09	
Chloromethane	ND U	0.50	1	05/20/21 17:09	
2-Chlorotoluene	ND U	2.0	1	05/20/21 17:09	
4-Chlorotoluene	ND U	2.0	1	05/20/21 17:09	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	05/20/21 17:09	
Dibromochloromethane	ND U	0.50	1	05/20/21 17:09	
1,2-Dibromoethane (EDB)	ND U	2.0	1	05/20/21 17:09	
Dibromomethane	ND U	0.50	1	05/20/21 17:09	
1,2-Dichlorobenzene	ND U	0.50	1	05/20/21 17:09	
1,3-Dichlorobenzene	ND U	0.50	1	05/20/21 17:09	
1,4-Dichlorobenzene	ND U	0.50	1	05/20/21 17:09	
Dichlorodifluoromethane	ND U	0.50	1	05/20/21 17:09	
1,1-Dichloroethane	ND U	0.50	1	05/20/21 17:09	
cis-1,2-Dichloroethene	ND U	0.50	1	05/20/21 17:09	
trans-1,2-Dichloroethene	ND U	0.50	1	05/20/21 17:09	
1,2-Dichloropropane	ND U	0.50	1	05/20/21 17:09	
1,3-Dichloropropane	ND U	0.50	1	05/20/21 17:09	
2,2-Dichloropropane	ND U	0.50	1	05/20/21 17:09	*
1,1-Dichloropropene	ND U	0.50	1	05/20/21 17:09	
cis-1,3-Dichloropropene	ND U	0.50	1	05/20/21 17:09	
trans-1,3-Dichloropropene	ND U	0.50	1	05/20/21 17:09	
Ethylbenzene	ND U	0.50	1	05/20/21 17:09	
Hexachlorobutadiene	ND U	2.0	1	05/20/21 17:09	
2-Hexanone	ND U	20	1	05/20/21 17:09	
Isopropylbenzene	ND U	2.0	1	05/20/21 17:09	
4-Isopropyltoluene	ND U	2.0	1	05/20/21 17:09	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 11:50
Date Received: 05/14/21 12:15

Sample Name: LB-051321-02-FB
Lab Code: K2105413-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	05/20/21 17:09	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	05/20/21 17:09	
Methylene Chloride	ND U	2.0	1	05/20/21 17:09	
Naphthalene	ND U	2.0	1	05/20/21 17:09	*
n-Propylbenzene	ND U	2.0	1	05/20/21 17:09	
Styrene	ND U	0.50	1	05/20/21 17:09	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	05/20/21 17:09	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	05/20/21 17:09	
Tetrachloroethene (PCE)	ND U	0.50	1	05/20/21 17:09	
Toluene	ND U	0.50	1	05/20/21 17:09	
1,2,3-Trichlorobenzene	ND U	2.0	1	05/20/21 17:09	
1,2,4-Trichlorobenzene	ND U	2.0	1	05/20/21 17:09	
1,1,2-Trichloroethane	ND U	0.50	1	05/20/21 17:09	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	05/20/21 17:09	
Trichloroethene (TCE)	ND U	0.50	1	05/20/21 17:09	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	05/20/21 17:09	
1,2,3-Trichloropropane	ND U	0.50	1	05/20/21 17:09	
1,2,4-Trimethylbenzene	ND U	2.0	1	05/20/21 17:09	
1,3,5-Trimethylbenzene	ND U	2.0	1	05/20/21 17:09	
Vinyl Chloride	ND U	0.50	1	05/20/21 17:09	
o-Xylene	ND U	0.50	1	05/20/21 17:09	
m,p-Xylenes	ND U	0.50	1	05/20/21 17:09	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	05/20/21 17:09	
Dibromofluoromethane	92	73 - 122	05/20/21 17:09	
Toluene-d8	93	65 - 144	05/20/21 17:09	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 13:20
Date Received: 05/14/21 12:15

Sample Name: LB-051321-04-10SR
Lab Code: K2105413-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	05/20/21 17:35	
Benzene	ND U	0.50	1	05/20/21 17:35	
Bromobenzene	ND U	2.0	1	05/20/21 17:35	
Bromochloromethane	ND U	0.50	1	05/20/21 17:35	
Bromodichloromethane	ND U	0.50	1	05/20/21 17:35	
Bromoform	ND U	0.50	1	05/20/21 17:35	
Bromomethane	ND U	0.50	1	05/20/21 17:35	*
2-Butanone (MEK)	ND U	20	1	05/20/21 17:35	
n-Butylbenzene	ND U	4.0	1	05/20/21 17:35	
sec-Butylbenzene	ND U	2.0	1	05/20/21 17:35	
tert-Butylbenzene	ND U	2.0	1	05/20/21 17:35	
Carbon Disulfide	ND U	0.50	1	05/20/21 17:35	
Carbon Tetrachloride	ND U	0.50	1	05/20/21 17:35	
Chlorobenzene	ND U	0.50	1	05/20/21 17:35	
Chloroethane	ND U	0.50	1	05/20/21 17:35	
Chloroform	ND U	0.50	1	05/20/21 17:35	
Chloromethane	ND U	0.50	1	05/20/21 17:35	
2-Chlorotoluene	ND U	2.0	1	05/20/21 17:35	
4-Chlorotoluene	ND U	2.0	1	05/20/21 17:35	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	05/20/21 17:35	
Dibromochloromethane	ND U	0.50	1	05/20/21 17:35	
1,2-Dibromoethane (EDB)	ND U	2.0	1	05/20/21 17:35	
Dibromomethane	ND U	0.50	1	05/20/21 17:35	
1,2-Dichlorobenzene	ND U	0.50	1	05/20/21 17:35	
1,3-Dichlorobenzene	ND U	0.50	1	05/20/21 17:35	
1,4-Dichlorobenzene	ND U	0.50	1	05/20/21 17:35	
Dichlorodifluoromethane	ND U	0.50	1	05/20/21 17:35	
1,1-Dichloroethane	ND U	0.50	1	05/20/21 17:35	
cis-1,2-Dichloroethene	ND U	0.50	1	05/20/21 17:35	
trans-1,2-Dichloroethene	ND U	0.50	1	05/20/21 17:35	
1,2-Dichloropropane	ND U	0.50	1	05/20/21 17:35	
1,3-Dichloropropane	ND U	0.50	1	05/20/21 17:35	
2,2-Dichloropropane	ND U	0.50	1	05/20/21 17:35	*
1,1-Dichloropropene	ND U	0.50	1	05/20/21 17:35	
cis-1,3-Dichloropropene	ND U	0.50	1	05/20/21 17:35	
trans-1,3-Dichloropropene	ND U	0.50	1	05/20/21 17:35	
Ethylbenzene	ND U	0.50	1	05/20/21 17:35	
Hexachlorobutadiene	ND U	2.0	1	05/20/21 17:35	
2-Hexanone	ND U	20	1	05/20/21 17:35	
Isopropylbenzene	ND U	2.0	1	05/20/21 17:35	
4-Isopropyltoluene	ND U	2.0	1	05/20/21 17:35	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 13:20
Date Received: 05/14/21 12:15

Sample Name: LB-051321-04-10SR
Lab Code: K2105413-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	05/20/21 17:35	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	05/20/21 17:35	
Methylene Chloride	ND U	2.0	1	05/20/21 17:35	
Naphthalene	ND U	2.0	1	05/20/21 17:35	*
n-Propylbenzene	ND U	2.0	1	05/20/21 17:35	
Styrene	ND U	0.50	1	05/20/21 17:35	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	05/20/21 17:35	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	05/20/21 17:35	
Tetrachloroethene (PCE)	ND U	0.50	1	05/20/21 17:35	
Toluene	ND U	0.50	1	05/20/21 17:35	
1,2,3-Trichlorobenzene	ND U	2.0	1	05/20/21 17:35	
1,2,4-Trichlorobenzene	ND U	2.0	1	05/20/21 17:35	
1,1,2-Trichloroethane	ND U	0.50	1	05/20/21 17:35	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	05/20/21 17:35	
Trichloroethene (TCE)	ND U	0.50	1	05/20/21 17:35	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	05/20/21 17:35	
1,2,3-Trichloropropane	ND U	0.50	1	05/20/21 17:35	
1,2,4-Trimethylbenzene	ND U	2.0	1	05/20/21 17:35	
1,3,5-Trimethylbenzene	ND U	2.0	1	05/20/21 17:35	
Vinyl Chloride	ND U	0.50	1	05/20/21 17:35	
o-Xylene	ND U	0.50	1	05/20/21 17:35	
m,p-Xylenes	ND U	0.50	1	05/20/21 17:35	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	86	68 - 117	05/20/21 17:35	
Dibromofluoromethane	91	73 - 122	05/20/21 17:35	
Toluene-d8	97	65 - 144	05/20/21 17:35	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 13:25
Date Received: 05/14/21 12:15

Sample Name: LB-051321-05-DUP
Lab Code: K2105413-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	05/24/21 13:27	
Benzene	ND U	0.50	1	05/24/21 13:27	
Bromobenzene	ND U	2.0	1	05/24/21 13:27	
Bromochloromethane	ND U	0.50	1	05/24/21 13:27	
Bromodichloromethane	ND U	0.50	1	05/24/21 13:27	
Bromoform	ND U	0.50	1	05/24/21 13:27	
Bromomethane	ND U	0.50	1	05/24/21 13:27	*
2-Butanone (MEK)	ND U	20	1	05/24/21 13:27	
n-Butylbenzene	ND U	4.0	1	05/24/21 13:27	
sec-Butylbenzene	ND U	2.0	1	05/24/21 13:27	
tert-Butylbenzene	ND U	2.0	1	05/24/21 13:27	
Carbon Disulfide	ND U	0.50	1	05/24/21 13:27	
Carbon Tetrachloride	ND U	0.50	1	05/24/21 13:27	
Chlorobenzene	ND U	0.50	1	05/24/21 13:27	
Chloroethane	ND U	0.50	1	05/24/21 13:27	
Chloroform	ND U	0.50	1	05/24/21 13:27	
Chloromethane	ND U	0.50	1	05/24/21 13:27	
2-Chlorotoluene	ND U	2.0	1	05/24/21 13:27	
4-Chlorotoluene	ND U	2.0	1	05/24/21 13:27	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	05/24/21 13:27	
Dibromochloromethane	ND U	0.50	1	05/24/21 13:27	
1,2-Dibromoethane (EDB)	ND U	2.0	1	05/24/21 13:27	
Dibromomethane	ND U	0.50	1	05/24/21 13:27	
1,2-Dichlorobenzene	ND U	0.50	1	05/24/21 13:27	
1,3-Dichlorobenzene	ND U	0.50	1	05/24/21 13:27	
1,4-Dichlorobenzene	ND U	0.50	1	05/24/21 13:27	
Dichlorodifluoromethane	ND U	0.50	1	05/24/21 13:27	
1,1-Dichloroethane	ND U	0.50	1	05/24/21 13:27	
cis-1,2-Dichloroethene	ND U	0.50	1	05/24/21 13:27	
trans-1,2-Dichloroethene	ND U	0.50	1	05/24/21 13:27	
1,2-Dichloropropane	ND U	0.50	1	05/24/21 13:27	
1,3-Dichloropropane	ND U	0.50	1	05/24/21 13:27	
2,2-Dichloropropane	ND U	0.50	1	05/24/21 13:27	*
1,1-Dichloropropene	ND U	0.50	1	05/24/21 13:27	
cis-1,3-Dichloropropene	ND U	0.50	1	05/24/21 13:27	
trans-1,3-Dichloropropene	ND U	0.50	1	05/24/21 13:27	
Ethylbenzene	ND U	0.50	1	05/24/21 13:27	
Hexachlorobutadiene	ND U	2.0	1	05/24/21 13:27	
2-Hexanone	ND U	20	1	05/24/21 13:27	*
Isopropylbenzene	ND U	2.0	1	05/24/21 13:27	
4-Isopropyltoluene	ND U	2.0	1	05/24/21 13:27	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21 13:25
Date Received: 05/14/21 12:15

Sample Name: LB-051321-05-DUP
Lab Code: K2105413-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	05/24/21 13:27	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	05/24/21 13:27	
Methylene Chloride	ND U	2.0	1	05/24/21 13:27	
Naphthalene	ND U	2.0	1	05/24/21 13:27	
n-Propylbenzene	ND U	2.0	1	05/24/21 13:27	
Styrene	ND U	0.50	1	05/24/21 13:27	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	05/24/21 13:27	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	05/24/21 13:27	
Tetrachloroethene (PCE)	ND U	0.50	1	05/24/21 13:27	
Toluene	ND U	0.50	1	05/24/21 13:27	
1,2,3-Trichlorobenzene	ND U	2.0	1	05/24/21 13:27	
1,2,4-Trichlorobenzene	ND U	2.0	1	05/24/21 13:27	
1,1,2-Trichloroethane	ND U	0.50	1	05/24/21 13:27	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	05/24/21 13:27	
Trichloroethene (TCE)	ND U	0.50	1	05/24/21 13:27	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	05/24/21 13:27	
1,2,3-Trichloropropane	ND U	0.50	1	05/24/21 13:27	
1,2,4-Trimethylbenzene	ND U	2.0	1	05/24/21 13:27	
1,3,5-Trimethylbenzene	ND U	2.0	1	05/24/21 13:27	
Vinyl Chloride	ND U	0.50	1	05/24/21 13:27	
o-Xylene	ND U	0.50	1	05/24/21 13:27	
m,p-Xylenes	ND U	0.50	1	05/24/21 13:27	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	05/24/21 13:27	
Dibromofluoromethane	93	73 - 122	05/24/21 13:27	
Toluene-d8	97	65 - 144	05/24/21 13:27	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21
Date Received: 05/14/21 12:15

Sample Name: Trip Blank
Lab Code: K2105413-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	05/20/21 18:02	
Benzene	ND U	0.50	1	05/20/21 18:02	
Bromobenzene	ND U	2.0	1	05/20/21 18:02	
Bromochloromethane	ND U	0.50	1	05/20/21 18:02	
Bromodichloromethane	ND U	0.50	1	05/20/21 18:02	
Bromoform	ND U	0.50	1	05/20/21 18:02	
Bromomethane	ND U	0.50	1	05/20/21 18:02	*
2-Butanone (MEK)	ND U	20	1	05/20/21 18:02	
n-Butylbenzene	ND U	4.0	1	05/20/21 18:02	
sec-Butylbenzene	ND U	2.0	1	05/20/21 18:02	
tert-Butylbenzene	ND U	2.0	1	05/20/21 18:02	
Carbon Disulfide	ND U	0.50	1	05/20/21 18:02	
Carbon Tetrachloride	ND U	0.50	1	05/20/21 18:02	
Chlorobenzene	ND U	0.50	1	05/20/21 18:02	
Chloroethane	ND U	0.50	1	05/20/21 18:02	
Chloroform	ND U	0.50	1	05/20/21 18:02	
Chloromethane	ND U	0.50	1	05/20/21 18:02	
2-Chlorotoluene	ND U	2.0	1	05/20/21 18:02	
4-Chlorotoluene	ND U	2.0	1	05/20/21 18:02	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	05/20/21 18:02	
Dibromochloromethane	ND U	0.50	1	05/20/21 18:02	
1,2-Dibromoethane (EDB)	ND U	2.0	1	05/20/21 18:02	
Dibromomethane	ND U	0.50	1	05/20/21 18:02	
1,2-Dichlorobenzene	ND U	0.50	1	05/20/21 18:02	
1,3-Dichlorobenzene	ND U	0.50	1	05/20/21 18:02	
1,4-Dichlorobenzene	ND U	0.50	1	05/20/21 18:02	
Dichlorodifluoromethane	ND U	0.50	1	05/20/21 18:02	
1,1-Dichloroethane	ND U	0.50	1	05/20/21 18:02	
cis-1,2-Dichloroethene	ND U	0.50	1	05/20/21 18:02	
trans-1,2-Dichloroethene	ND U	0.50	1	05/20/21 18:02	
1,2-Dichloropropane	ND U	0.50	1	05/20/21 18:02	
1,3-Dichloropropane	ND U	0.50	1	05/20/21 18:02	
2,2-Dichloropropane	ND U	0.50	1	05/20/21 18:02	*
1,1-Dichloropropene	ND U	0.50	1	05/20/21 18:02	
cis-1,3-Dichloropropene	ND U	0.50	1	05/20/21 18:02	
trans-1,3-Dichloropropene	ND U	0.50	1	05/20/21 18:02	
Ethylbenzene	ND U	0.50	1	05/20/21 18:02	
Hexachlorobutadiene	ND U	2.0	1	05/20/21 18:02	
2-Hexanone	ND U	20	1	05/20/21 18:02	
Isopropylbenzene	ND U	2.0	1	05/20/21 18:02	
4-Isopropyltoluene	ND U	2.0	1	05/20/21 18:02	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Collected: 05/13/21
Date Received: 05/14/21 12:15

Sample Name: Trip Blank
Lab Code: K2105413-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	05/20/21 18:02	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	05/20/21 18:02	
Methylene Chloride	ND U	2.0	1	05/20/21 18:02	
Naphthalene	ND U	2.0	1	05/20/21 18:02	*
n-Propylbenzene	ND U	2.0	1	05/20/21 18:02	
Styrene	ND U	0.50	1	05/20/21 18:02	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	05/20/21 18:02	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	05/20/21 18:02	
Tetrachloroethene (PCE)	ND U	0.50	1	05/20/21 18:02	
Toluene	ND U	0.50	1	05/20/21 18:02	
1,2,3-Trichlorobenzene	ND U	2.0	1	05/20/21 18:02	
1,2,4-Trichlorobenzene	ND U	2.0	1	05/20/21 18:02	
1,1,2-Trichloroethane	ND U	0.50	1	05/20/21 18:02	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	05/20/21 18:02	
Trichloroethene (TCE)	ND U	0.50	1	05/20/21 18:02	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	05/20/21 18:02	
1,2,3-Trichloropropane	ND U	0.50	1	05/20/21 18:02	
1,2,4-Trimethylbenzene	ND U	2.0	1	05/20/21 18:02	
1,3,5-Trimethylbenzene	ND U	2.0	1	05/20/21 18:02	
Vinyl Chloride	ND U	0.50	1	05/20/21 18:02	
o-Xylene	ND U	0.50	1	05/20/21 18:02	
m,p-Xylenes	ND U	0.50	1	05/20/21 18:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	05/20/21 18:02	
Dibromofluoromethane	93	73 - 122	05/20/21 18:02	
Toluene-d8	97	65 - 144	05/20/21 18:02	



QC Summary Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
LB-051321-01-27I	K2105413-001	89	93	96
LB-051321-03-1S	K2105413-002	86	93	96
LB-051321-02-FB	K2105413-003	87	92	93
LB-051321-04-10SR	K2105413-004	86	91	97
LB-051321-05-DUP	K2105413-005	87	93	97
Trip Blank	K2105413-006	84	93	97
Method Blank	KQ2109518-05	88	91	96
Method Blank	KQ2109560-05	91	92	95
Lab Control Sample	KQ2109518-03	95	91	100
Duplicate Lab Control Sample	KQ2109518-04	94	90	101
Lab Control Sample	KQ2109560-03	96	93	97
Duplicate Lab Control Sample	KQ2109560-04	95	93	97

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2109518-05

Service Request: K2105413
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	05/20/21 14:57	
Benzene	ND U	0.50	1	05/20/21 14:57	
Bromobenzene	ND U	2.0	1	05/20/21 14:57	
Bromochloromethane	ND U	0.50	1	05/20/21 14:57	
Bromodichloromethane	ND U	0.50	1	05/20/21 14:57	
Bromoform	ND U	0.50	1	05/20/21 14:57	
Bromomethane	ND U	0.50	1	05/20/21 14:57	
2-Butanone (MEK)	ND U	20	1	05/20/21 14:57	
n-Butylbenzene	ND U	4.0	1	05/20/21 14:57	
sec-Butylbenzene	ND U	2.0	1	05/20/21 14:57	
tert-Butylbenzene	ND U	2.0	1	05/20/21 14:57	
Carbon Disulfide	ND U	0.50	1	05/20/21 14:57	
Carbon Tetrachloride	ND U	0.50	1	05/20/21 14:57	
Chlorobenzene	ND U	0.50	1	05/20/21 14:57	
Chloroethane	ND U	0.50	1	05/20/21 14:57	
Chloroform	ND U	0.50	1	05/20/21 14:57	
Chloromethane	ND U	0.50	1	05/20/21 14:57	
2-Chlorotoluene	ND U	2.0	1	05/20/21 14:57	
4-Chlorotoluene	ND U	2.0	1	05/20/21 14:57	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	05/20/21 14:57	
Dibromochloromethane	ND U	0.50	1	05/20/21 14:57	
1,2-Dibromoethane (EDB)	ND U	2.0	1	05/20/21 14:57	
Dibromomethane	ND U	0.50	1	05/20/21 14:57	
1,2-Dichlorobenzene	ND U	0.50	1	05/20/21 14:57	
1,3-Dichlorobenzene	ND U	0.50	1	05/20/21 14:57	
1,4-Dichlorobenzene	ND U	0.50	1	05/20/21 14:57	
Dichlorodifluoromethane	ND U	0.50	1	05/20/21 14:57	
1,1-Dichloroethane	ND U	0.50	1	05/20/21 14:57	
cis-1,2-Dichloroethene	ND U	0.50	1	05/20/21 14:57	
trans-1,2-Dichloroethene	ND U	0.50	1	05/20/21 14:57	
1,2-Dichloropropane	ND U	0.50	1	05/20/21 14:57	
1,3-Dichloropropane	ND U	0.50	1	05/20/21 14:57	
2,2-Dichloropropane	ND U	0.50	1	05/20/21 14:57	
1,1-Dichloropropene	ND U	0.50	1	05/20/21 14:57	
cis-1,3-Dichloropropene	ND U	0.50	1	05/20/21 14:57	
trans-1,3-Dichloropropene	ND U	0.50	1	05/20/21 14:57	
Ethylbenzene	ND U	0.50	1	05/20/21 14:57	
Hexachlorobutadiene	ND U	2.0	1	05/20/21 14:57	
2-Hexanone	ND U	20	1	05/20/21 14:57	
Isopropylbenzene	ND U	2.0	1	05/20/21 14:57	
4-Isopropyltoluene	ND U	2.0	1	05/20/21 14:57	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2109518-05

Service Request: K2105413
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	05/20/21 14:57	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	05/20/21 14:57	
Methylene Chloride	ND U	2.0	1	05/20/21 14:57	
Naphthalene	ND U	2.0	1	05/20/21 14:57	
n-Propylbenzene	ND U	2.0	1	05/20/21 14:57	
Styrene	ND U	0.50	1	05/20/21 14:57	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	05/20/21 14:57	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	05/20/21 14:57	
Tetrachloroethene (PCE)	ND U	0.50	1	05/20/21 14:57	
Toluene	ND U	0.50	1	05/20/21 14:57	
1,2,3-Trichlorobenzene	ND U	2.0	1	05/20/21 14:57	
1,2,4-Trichlorobenzene	ND U	2.0	1	05/20/21 14:57	
1,1,2-Trichloroethane	ND U	0.50	1	05/20/21 14:57	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	05/20/21 14:57	
Trichloroethene (TCE)	ND U	0.50	1	05/20/21 14:57	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	05/20/21 14:57	
1,2,3-Trichloropropane	ND U	0.50	1	05/20/21 14:57	
1,2,4-Trimethylbenzene	ND U	2.0	1	05/20/21 14:57	
1,3,5-Trimethylbenzene	ND U	2.0	1	05/20/21 14:57	
Vinyl Chloride	ND U	0.50	1	05/20/21 14:57	
o-Xylene	ND U	0.50	1	05/20/21 14:57	
m,p-Xylenes	ND U	0.50	1	05/20/21 14:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	68 - 117	05/20/21 14:57	
Dibromofluoromethane	91	73 - 122	05/20/21 14:57	
Toluene-d8	96	65 - 144	05/20/21 14:57	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2109560-05

Service Request: K2105413
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	05/24/21 12:32	
Benzene	ND U	0.50	1	05/24/21 12:32	
Bromobenzene	ND U	2.0	1	05/24/21 12:32	
Bromochloromethane	ND U	0.50	1	05/24/21 12:32	
Bromodichloromethane	ND U	0.50	1	05/24/21 12:32	
Bromoform	ND U	0.50	1	05/24/21 12:32	
Bromomethane	ND U	0.50	1	05/24/21 12:32	
2-Butanone (MEK)	ND U	20	1	05/24/21 12:32	
n-Butylbenzene	ND U	4.0	1	05/24/21 12:32	
sec-Butylbenzene	ND U	2.0	1	05/24/21 12:32	
tert-Butylbenzene	ND U	2.0	1	05/24/21 12:32	
Carbon Disulfide	ND U	0.50	1	05/24/21 12:32	
Carbon Tetrachloride	ND U	0.50	1	05/24/21 12:32	
Chlorobenzene	ND U	0.50	1	05/24/21 12:32	
Chloroethane	ND U	0.50	1	05/24/21 12:32	
Chloroform	ND U	0.50	1	05/24/21 12:32	
Chloromethane	ND U	0.50	1	05/24/21 12:32	
2-Chlorotoluene	ND U	2.0	1	05/24/21 12:32	
4-Chlorotoluene	ND U	2.0	1	05/24/21 12:32	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	05/24/21 12:32	
Dibromochloromethane	ND U	0.50	1	05/24/21 12:32	
1,2-Dibromoethane (EDB)	ND U	2.0	1	05/24/21 12:32	
Dibromomethane	ND U	0.50	1	05/24/21 12:32	
1,2-Dichlorobenzene	ND U	0.50	1	05/24/21 12:32	
1,3-Dichlorobenzene	ND U	0.50	1	05/24/21 12:32	
1,4-Dichlorobenzene	ND U	0.50	1	05/24/21 12:32	
Dichlorodifluoromethane	ND U	0.50	1	05/24/21 12:32	
1,1-Dichloroethane	ND U	0.50	1	05/24/21 12:32	
cis-1,2-Dichloroethene	ND U	0.50	1	05/24/21 12:32	
trans-1,2-Dichloroethene	ND U	0.50	1	05/24/21 12:32	
1,2-Dichloropropane	ND U	0.50	1	05/24/21 12:32	
1,3-Dichloropropane	ND U	0.50	1	05/24/21 12:32	
2,2-Dichloropropane	ND U	0.50	1	05/24/21 12:32	
1,1-Dichloropropene	ND U	0.50	1	05/24/21 12:32	
cis-1,3-Dichloropropene	ND U	0.50	1	05/24/21 12:32	
trans-1,3-Dichloropropene	ND U	0.50	1	05/24/21 12:32	
Ethylbenzene	ND U	0.50	1	05/24/21 12:32	
Hexachlorobutadiene	ND U	2.0	1	05/24/21 12:32	
2-Hexanone	ND U	20	1	05/24/21 12:32	
Isopropylbenzene	ND U	2.0	1	05/24/21 12:32	
4-Isopropyltoluene	ND U	2.0	1	05/24/21 12:32	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2109560-05

Service Request: K2105413
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	05/24/21 12:32	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	05/24/21 12:32	
Methylene Chloride	ND U	2.0	1	05/24/21 12:32	
Naphthalene	ND U	2.0	1	05/24/21 12:32	
n-Propylbenzene	ND U	2.0	1	05/24/21 12:32	
Styrene	ND U	0.50	1	05/24/21 12:32	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	05/24/21 12:32	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	05/24/21 12:32	
Tetrachloroethene (PCE)	ND U	0.50	1	05/24/21 12:32	
Toluene	ND U	0.50	1	05/24/21 12:32	
1,2,3-Trichlorobenzene	ND U	2.0	1	05/24/21 12:32	
1,2,4-Trichlorobenzene	ND U	2.0	1	05/24/21 12:32	
1,1,2-Trichloroethane	ND U	0.50	1	05/24/21 12:32	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	05/24/21 12:32	
Trichloroethene (TCE)	ND U	0.50	1	05/24/21 12:32	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	05/24/21 12:32	
1,2,3-Trichloropropane	ND U	0.50	1	05/24/21 12:32	
1,2,4-Trimethylbenzene	ND U	2.0	1	05/24/21 12:32	
1,3,5-Trimethylbenzene	ND U	2.0	1	05/24/21 12:32	
Vinyl Chloride	ND U	0.50	1	05/24/21 12:32	
o-Xylene	ND U	0.50	1	05/24/21 12:32	
m,p-Xylenes	ND U	0.50	1	05/24/21 12:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	68 - 117	05/24/21 12:32	
Dibromofluoromethane	92	73 - 122	05/24/21 12:32	
Toluene-d8	95	65 - 144	05/24/21 12:32	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Analyzed: 05/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 724325

Analyte Name	Lab Control Sample KQ2109518-03			Duplicate Lab Control Sample KQ2109518-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.44	10.0	94	8.90	10.0	89	66-124	6	30
1,1,1-Trichloroethane (TCA)	7.71	10.0	77	7.57	10.0	76	59-136	2	30
1,1,2,2-Tetrachloroethane	9.74	10.0	97	9.12	10.0	91	70-127	7	30
1,1,2-Trichloroethane	9.05	10.0	91	9.00	10.0	90	74-118	<1	30
1,1-Dichloroethane	8.50	10.0	85	8.15	10.0	82	68-132	4	30
1,1-Dichloropropene	8.54	10.0	85	7.99	10.0	80	59-134	7	30
1,2,3-Trichlorobenzene	8.68	10.0	87	8.51	10.0	85	68-120	2	30
1,2,3-Trichloropropane	9.71	10.0	97	9.50	10.0	95	69-123	2	30
1,2,4-Trichlorobenzene	8.58	10.0	86	8.36	10.0	84	58-126	3	30
1,2,4-Trimethylbenzene	8.97	10.0	90	8.50	10.0	85	63-122	5	30
1,2-Dibromo-3-chloropropane	8.60	10.0	86	8.51	10.0	85	55-132	1	30
1,2-Dibromoethane (EDB)	8.73	10.0	87	8.72	10.0	87	74-118	<1	30
1,2-Dichlorobenzene	9.20	10.0	92	8.81	10.0	88	72-115	4	30
1,2-Dichloropropane	8.73	10.0	87	8.39	10.0	84	67-126	4	30
1,3,5-Trimethylbenzene	9.11	10.0	91	8.54	10.0	85	62-126	6	30
1,3-Dichlorobenzene	9.02	10.0	90	8.45	10.0	85	70-116	7	30
1,3-Dichloropropane	9.28	10.0	93	8.79	10.0	88	75-116	5	30
1,4-Dichlorobenzene	8.96	10.0	90	8.54	10.0	85	73-115	5	30
2,2-Dichloropropane	6.22	10.0	62	5.91	10.0	59	37-145	5	30
2-Butanone (MEK)	97.0	100	97	93.0	100	93	71-149	4	30
2-Chlorotoluene	8.80	10.0	88	8.44	10.0	84	55-131	4	30
2-Hexanone	87.5	100	88	89.6	100	90	59-131	2	30
4-Chlorotoluene	9.07	10.0	91	8.61	10.0	86	66-121	5	30
4-Isopropyltoluene	8.80	10.0	88	8.44	10.0	84	61-128	4	30
4-Methyl-2-pentanone (MIBK)	92.7	100	93	91.6	100	92	64-134	1	30
Acetone	97.5	100	98	93.9	100	94	68-135	4	30
Benzene	8.63	10.0	86	8.38	10.0	84	69-124	3	30
Bromobenzene	9.07	10.0	91	8.79	10.0	88	72-116	3	30
Bromochloromethane	9.13	10.0	91	8.71	10.0	87	75-131	5	30
Bromodichloromethane	8.87	10.0	89	8.60	10.0	86	63-129	3	30
Bromoform	9.73	10.0	97	9.25	10.0	93	52-144	5	30
Bromomethane	7.55	10.0	76	7.30	10.0	73	35-113	3	30
Carbon Disulfide	8.14	10.0	81	7.25	10.0	73	46-144	12	30
Carbon Tetrachloride	8.64	10.0	86	8.24	10.0	82	55-140	5	30
Chlorobenzene	9.21	10.0	92	8.71	10.0	87	72-116	6	30
Chloroethane	9.02	10.0	90	8.68	10.0	87	58-134	4	30
Chloroform	8.42	10.0	84	8.15	10.0	82	70-129	3	30
Chloromethane	9.21	10.0	92	8.78	10.0	88	34-130	5	30
cis-1,2-Dichloroethene	8.52	10.0	85	8.41	10.0	84	71-118	1	30
cis-1,3-Dichloropropene	8.57	10.0	86	8.23	10.0	82	62-132	4	30
Dibromochloromethane	10.9	10.0	109	10.0	10.0	100	67-126	9	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Analyzed: 05/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 724325

Analyte Name	Lab Control Sample KQ2109518-03			Duplicate Lab Control Sample KQ2109518-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	8.42	10.0	84	8.23	10.0	82	69-128	2	30
Dichlorodifluoromethane	9.56	10.0	96	8.85	10.0	89	32-124	8	30
Ethylbenzene	8.88	10.0	89	8.10	10.0	81	67-121	9	30
Hexachlorobutadiene	9.02	10.0	90	8.56	10.0	86	57-119	5	30
Isopropylbenzene	8.91	10.0	89	8.34	10.0	83	67-129	7	30
m,p-Xylenes	17.7	20.0	89	16.6	20.0	83	69-121	7	30
Methyl tert-Butyl Ether	15.3	20.0	77	15.2	20.0	76	54-126	<1	30
Methylene Chloride	9.09	10.0	91	8.53	10.0	85	71-122	6	30
Naphthalene	8.38	10.0	84	7.88	10.0	79	64-126	6	30
n-Butylbenzene	8.63	10.0	86	8.25	10.0	83	55-130	5	30
n-Propylbenzene	9.14	10.0	91	8.63	10.0	86	61-124	6	30
o-Xylene	8.93	10.0	89	8.29	10.0	83	71-119	7	30
sec-Butylbenzene	8.89	10.0	89	8.29	10.0	83	59-128	7	30
Styrene	9.14	10.0	91	8.64	10.0	86	74-121	6	30
tert-Butylbenzene	8.62	10.0	86	8.13	10.0	81	61-127	6	30
Tetrachloroethene (PCE)	9.11	10.0	91	8.43	10.0	84	62-126	8	30
Toluene	8.95	10.0	90	8.66	10.0	87	69-124	3	30
trans-1,2-Dichloroethene	8.67	10.0	87	8.11	10.0	81	67-125	7	30
trans-1,3-Dichloropropene	7.75	10.0	78	7.50	10.0	75	59-125	3	30
Trichloroethene (TCE)	8.57	10.0	86	8.11	10.0	81	67-128	6	30
Trichlorofluoromethane (CFC 11)	7.69	10.0	77	7.37	10.0	74	52-141	4	30
Vinyl Chloride	8.87	10.0	89	8.29	10.0	83	55-123	7	30

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QA/QC Report

Client: SCS Engineers
Project: Lechner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Analyzed: 05/24/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 724687

Analyte Name	Lab Control Sample KQ2109560-03			Duplicate Lab Control Sample KQ2109560-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	10.3	10.0	103	10.1	10.0	101	66-124	2	30
1,1,1-Trichloroethane (TCA)	9.03	10.0	90	8.90	10.0	89	59-136	1	30
1,1,2,2-Tetrachloroethane	10.6	10.0	106	10.6	10.0	106	70-127	<1	30
1,1,2-Trichloroethane	10.4	10.0	104	10.2	10.0	102	74-118	2	30
1,1-Dichloroethane	9.33	10.0	93	9.44	10.0	94	68-132	1	30
1,1-Dichloropropene	9.44	10.0	94	9.24	10.0	92	59-134	2	30
1,2,3-Trichlorobenzene	9.72	10.0	97	10.3	10.0	103	68-120	6	30
1,2,3-Trichloropropane	10.4	10.0	104	10.6	10.0	106	69-123	2	30
1,2,4-Trichlorobenzene	9.90	10.0	99	10.3	10.0	103	58-126	4	30
1,2,4-Trimethylbenzene	9.90	10.0	99	10.1	10.0	101	63-122	2	30
1,2-Dibromo-3-chloropropane	9.87	10.0	99	9.93	10.0	99	55-132	<1	30
1,2-Dibromoethane (EDB)	9.78	10.0	98	9.54	10.0	95	74-118	2	30
1,2-Dichlorobenzene	10.4	10.0	104	10.1	10.0	101	72-115	3	30
1,2-Dichloropropane	9.44	10.0	94	9.51	10.0	95	67-126	<1	30
1,3,5-Trimethylbenzene	9.73	10.0	97	9.81	10.0	98	62-126	<1	30
1,3-Dichlorobenzene	10.1	10.0	101	9.89	10.0	99	70-116	2	30
1,3-Dichloropropane	10.0	10.0	100	9.96	10.0	100	75-116	<1	30
1,4-Dichlorobenzene	9.97	10.0	100	9.98	10.0	100	73-115	<1	30
2,2-Dichloropropane	7.29	10.0	73	7.11	10.0	71	37-145	3	30
2-Butanone (MEK)	94.3	100	94	96.7	100	97	71-149	2	30
2-Chlorotoluene	9.68	10.0	97	9.72	10.0	97	55-131	<1	30
2-Hexanone	86.0	100	86	86.1	100	86	59-131	<1	30
4-Chlorotoluene	9.97	10.0	100	10.0	10.0	100	66-121	<1	30
4-Isopropyltoluene	9.83	10.0	98	9.76	10.0	98	61-128	<1	30
4-Methyl-2-pentanone (MIBK)	89.4	100	89	88.2	100	88	64-134	1	30
Acetone	93.9	100	94	91.7	100	92	68-135	2	30
Benzene	9.47	10.0	95	9.35	10.0	94	69-124	1	30
Bromobenzene	9.96	10.0	100	10.3	10.0	103	72-116	4	30
Bromochloromethane	9.71	10.0	97	9.66	10.0	97	75-131	<1	30
Bromodichloromethane	10.0	10.0	100	9.85	10.0	99	63-129	2	30
Bromoform	10.7	10.0	107	10.4	10.0	104	52-144	2	30
Bromomethane	7.76	10.0	78	7.73	10.0	77	35-113	<1	30
Carbon Disulfide	8.28	10.0	83	8.26	10.0	83	46-144	<1	30
Carbon Tetrachloride	9.70	10.0	97	9.51	10.0	95	55-140	2	30
Chlorobenzene	9.77	10.0	98	9.72	10.0	97	72-116	<1	30
Chloroethane	9.27	10.0	93	9.36	10.0	94	58-134	<1	30
Chloroform	9.23	10.0	92	9.20	10.0	92	70-129	<1	30
Chloromethane	9.32	10.0	93	9.17	10.0	92	34-130	2	30
cis-1,2-Dichloroethene	9.49	10.0	95	9.39	10.0	94	71-118	1	30
cis-1,3-Dichloropropene	9.33	10.0	93	9.38	10.0	94	62-132	<1	30
Dibromochloromethane	11.9	10.0	119	11.1	10.0	111	67-126	7	30

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2105413
Date Analyzed: 05/24/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 724687

Analyte Name	Lab Control Sample KQ2109560-03			Duplicate Lab Control Sample KQ2109560-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	8.76	10.0	88	9.70	10.0	97	69-128	10	30
Dichlorodifluoromethane	9.05	10.0	91	9.20	10.0	92	32-124	2	30
Ethylbenzene	9.16	10.0	92	9.43	10.0	94	67-121	3	30
Hexachlorobutadiene	10.9	10.0	109	10.7	10.0	107	57-119	2	30
Isopropylbenzene	9.52	10.0	95	9.57	10.0	96	67-129	<1	30
m,p-Xylenes	19.1	20.0	95	18.8	20.0	94	69-121	1	30
Methyl tert-Butyl Ether	17.7	20.0	89	17.1	20.0	85	54-126	4	30
Methylene Chloride	9.75	10.0	98	9.45	10.0	95	71-122	3	30
Naphthalene	9.12	10.0	91	9.78	10.0	98	64-126	7	30
n-Butylbenzene	9.69	10.0	97	9.62	10.0	96	55-130	<1	30
n-Propylbenzene	10.0	10.0	100	10.1	10.0	101	61-124	<1	30
o-Xylene	9.57	10.0	96	9.38	10.0	94	71-119	2	30
sec-Butylbenzene	9.62	10.0	96	9.61	10.0	96	59-128	<1	30
Styrene	9.83	10.0	98	9.57	10.0	96	74-121	3	30
tert-Butylbenzene	9.56	10.0	96	9.64	10.0	96	61-127	<1	30
Tetrachloroethene (PCE)	9.90	10.0	99	9.50	10.0	95	62-126	4	30
Toluene	9.73	10.0	97	9.63	10.0	96	69-124	1	30
trans-1,2-Dichloroethene	9.56	10.0	96	9.50	10.0	95	67-125	<1	30
trans-1,3-Dichloropropene	8.48	10.0	85	8.55	10.0	86	59-125	<1	30
Trichloroethene (TCE)	9.28	10.0	93	9.20	10.0	92	67-128	<1	30
Trichlorofluoromethane (CFC 11)	8.64	10.0	86	8.38	10.0	84	52-141	3	30
Vinyl Chloride	9.28	10.0	93	8.96	10.0	90	55-123	4	30

Special Sampling Event – (March 2021)



March 26, 2021

Service Request No:K2102664

Tiffany Andrews
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

Laboratory Results for: Leichner Landfill

Dear Tiffany,

Enclosed are the results of the sample(s) submitted to our laboratory March 17, 2021
For your reference, these analyses have been assigned our service request number **K2102664**.

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

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Lanfill
Sample Matrix: Ground Water

Service Request: K2102664
Date Received: 03/17/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Seven ground water samples were received for analysis at ALS Environmental on 03/17/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS27\0318F002.D: Tetrachloroethene (PCE) and Trichlorofluoromethane (CFC11). 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.

The ALS control criterion for the following analyte was not met in Continuing Calibration Verification (CCV) MS27\0318F002.D: Dichlorodifluoromethane. In accordance with ALS standard operating procedures, an MRL check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verifies instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Because the sensitivity was shown to be adequate to detect the compound in question, and the field samples analyzed in this sequence did not contain the analyte in question, the data quality has not been significantly affected. No further corrective action was taken.

The advisory criterion was exceeded for Acetone and 4-Methyl-2-pentanone (MIBK) in the replicate Laboratory Control Samples (LCS/DLCS) KQ2104290-03 and KQ2104290-03. 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. No further corrective action was required.

Approved by



Date

03/26/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: LB-031621-01-FB **Lab ID: K2102664-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Thallium	0.028			0.020	ug/L	6020A

CLIENT ID: LB-031621-02-24S **Lab ID: K2102664-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	144			5.0	mg/L	SM 2540 C
Alkalinity as CaCO3, Total	57			15	mg/L	SM 2320 B
Bicarbonate as CaCO3	57			15	mg/L	SM 2320 B
Chloride	3.82			0.20	mg/L	300.0
Nitrate as Nitrogen	4.79			0.10	mg/L	300.0
Solids, Total Suspended (TSS)	11.5			5.0	mg/L	SM 2540 D
Sulfate	7.72			0.40	mg/L	300.0
Calcium, Dissolved	15500			21	ug/L	6010C
Magnesium, Dissolved	6070			5.3	ug/L	6010C
Potassium, Dissolved	2680			210	ug/L	6010C
Sodium, Dissolved	8850			210	ug/L	6010C
Arsenic	0.55			0.50	ug/L	6020A
Barium	9.38			0.050	ug/L	6020A
Calcium	15700			21	ug/L	6010C
Chromium	0.85			0.20	ug/L	6020A
Cobalt	0.379			0.020	ug/L	6020A
Copper	0.72			0.10	ug/L	6020A
Hardness, Total as CaCO3	64.8			0.07	mg/L	SM 2340 B
Iron	585			21	ug/L	6010C
Lead	0.177			0.020	ug/L	6020A
Magnesium	6210			5.3	ug/L	6010C
Manganese	16.3			1.1	ug/L	6010C
Nickel	0.59			0.20	ug/L	6020A
Potassium	2740			210	ug/L	6010C
Silicon	26100			210	ug/L	6010C
Sodium	8960			210	ug/L	6010C
Vanadium	6.31			0.20	ug/L	6020A
Zinc	32.2			2.0	ug/L	6020A

CLIENT ID: LB-031621-03-23S **Lab ID: K2102664-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	151			5.0	mg/L	SM 2540 C
Alkalinity as CaCO3, Total	49			15	mg/L	SM 2320 B
Bicarbonate as CaCO3	49			15	mg/L	SM 2320 B
Chloride	3.18			0.20	mg/L	300.0
Nitrate as Nitrogen	3.79			0.10	mg/L	300.0
Solids, Total Suspended (TSS)	9.0			5.0	mg/L	SM 2540 D
Sulfate	6.77			0.40	mg/L	300.0



SAMPLE DETECTION SUMMARY

CLIENT ID: LB-031621-03-23S **Lab ID: K2102664-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Calcium, Dissolved	14100			21	ug/L	6010C
Magnesium, Dissolved	5570			5.3	ug/L	6010C
Potassium, Dissolved	1980			210	ug/L	6010C
Sodium, Dissolved	5760			210	ug/L	6010C
Antimony	0.050			0.050	ug/L	6020A
Arsenic	0.53			0.50	ug/L	6020A
Barium	5.72			0.050	ug/L	6020A
Calcium	14100			21	ug/L	6010C
Chromium	1.08			0.20	ug/L	6020A
Cobalt	0.311			0.020	ug/L	6020A
Copper	0.63			0.10	ug/L	6020A
Hardness, Total as CaCO3	58.3			0.07	mg/L	SM 2340 B
Iron	555			21	ug/L	6010C
Lead	0.308			0.020	ug/L	6020A
Magnesium	5610			5.3	ug/L	6010C
Manganese	31.5			1.1	ug/L	6010C
Nickel	0.51			0.20	ug/L	6020A
Potassium	2030			210	ug/L	6010C
Silicon	27200			210	ug/L	6010C
Sodium	5800			210	ug/L	6010C
Thallium	0.044			0.020	ug/L	6020A
Vanadium	7.18			0.20	ug/L	6020A
Zinc	35.0			2.0	ug/L	6020A

CLIENT ID: LB-031621-04-22S **Lab ID: K2102664-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	184			5.0	mg/L	SM 2540 C
Alkalinity as CaCO3, Total	65			15	mg/L	SM 2320 B
Bicarbonate as CaCO3	65			15	mg/L	SM 2320 B
Chloride	4.01			0.20	mg/L	300.0
Nitrate as Nitrogen	4.89			0.10	mg/L	300.0
Solids, Total Suspended (TSS)	10.0			5.0	mg/L	SM 2540 D
Sulfate	4.18			0.40	mg/L	300.0
Calcium, Dissolved	20700			21	ug/L	6010C
Magnesium, Dissolved	9170			5.3	ug/L	6010C
Potassium, Dissolved	2840			210	ug/L	6010C
Sodium, Dissolved	5660			210	ug/L	6010C
Antimony	0.119			0.050	ug/L	6020A
Arsenic	0.65			0.50	ug/L	6020A
Barium	13.0			0.050	ug/L	6020A
Beryllium	0.022			0.020	ug/L	6020A
Cadmium	0.037			0.020	ug/L	6020A



SAMPLE DETECTION SUMMARY

CLIENT ID: LB-031621-04-22S **Lab ID: K2102664-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Calcium	20600			21	ug/L	6010C
Chromium	1.36			0.20	ug/L	6020A
Cobalt	0.359			0.020	ug/L	6020A
Copper	1.09			0.10	ug/L	6020A
Hardness, Total as CaCO3	89.4			0.07	mg/L	SM 2340 B
Iron	831			21	ug/L	6010C
Lead	0.296			0.020	ug/L	6020A
Magnesium	9220			5.3	ug/L	6010C
Manganese	104			1.1	ug/L	6010C
Nickel	1.13			0.20	ug/L	6020A
Potassium	2900			210	ug/L	6010C
Silicon	24700			210	ug/L	6010C
Sodium	5640			210	ug/L	6010C
Thallium	0.028			0.020	ug/L	6020A
Vanadium	6.85			0.20	ug/L	6020A
Zinc	24.7			2.0	ug/L	6020A

CLIENT ID: LB-031621-05-DUP1 **Lab ID: K2102664-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	167			5.0	mg/L	SM 2540 C
Alkalinity as CaCO3, Total	65			15	mg/L	SM 2320 B
Bicarbonate as CaCO3	65			15	mg/L	SM 2320 B
Chloride	4.07			0.20	mg/L	300.0
Nitrate as Nitrogen	4.94			0.10	mg/L	300.0
Solids, Total Suspended (TSS)	11.5			5.0	mg/L	SM 2540 D
Sulfate	4.26			0.40	mg/L	300.0
Calcium, Dissolved	20800			21	ug/L	6010C
Magnesium, Dissolved	9220			5.3	ug/L	6010C
Potassium, Dissolved	2830			210	ug/L	6010C
Sodium, Dissolved	5660			210	ug/L	6010C
Antimony	0.133			0.050	ug/L	6020A
Arsenic	0.69			0.50	ug/L	6020A
Barium	12.6			0.050	ug/L	6020A
Beryllium	0.024			0.020	ug/L	6020A
Cadmium	0.034			0.020	ug/L	6020A
Calcium	20500			21	ug/L	6010C
Chromium	1.32			0.20	ug/L	6020A
Cobalt	0.351			0.020	ug/L	6020A
Copper	1.14			0.10	ug/L	6020A
Hardness, Total as CaCO3	88.8			0.07	mg/L	SM 2340 B
Iron	835			21	ug/L	6010C
Lead	0.304			0.020	ug/L	6020A



SAMPLE DETECTION SUMMARY

CLIENT ID: LB-031621-05-DUP1 **Lab ID: K2102664-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Magnesium	9140			5.3	ug/L	6010C
Manganese	103			1.1	ug/L	6010C
Nickel	1.17			0.20	ug/L	6020A
Potassium	2870			210	ug/L	6010C
Silicon	24700			210	ug/L	6010C
Sodium	5620			210	ug/L	6010C
Vanadium	6.89			0.20	ug/L	6020A
Zinc	25.8			2.0	ug/L	6020A

CLIENT ID: LB-031621-06-NE **Lab ID: K2102664-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	190			5.0	mg/L	SM 2540 C
Alkalinity as CaCO3, Total	105			15	mg/L	SM 2320 B
Ammonia as Nitrogen	0.116			0.050	mg/L	350.1
Bicarbonate as CaCO3	105			15	mg/L	SM 2320 B
Chloride	2.85			0.20	mg/L	300.0
Nitrate as Nitrogen	2.79			0.10	mg/L	300.0
Solids, Total Suspended (TSS)	45.5			5.0	mg/L	SM 2540 D
Sulfate	4.09			0.40	mg/L	300.0
Calcium, Dissolved	24600			21	ug/L	6010C
Iron, Dissolved	225			21	ug/L	6010C
Magnesium, Dissolved	10600			5.3	ug/L	6010C
Manganese, Dissolved	235			1.1	ug/L	6010C
Potassium, Dissolved	3630			210	ug/L	6010C
Sodium, Dissolved	6180			210	ug/L	6010C
Antimony	0.068			0.050	ug/L	6020A
Arsenic	0.66			0.50	ug/L	6020A
Barium	6.95			0.050	ug/L	6020A
Calcium	24600			21	ug/L	6010C
Chromium	1.04			0.20	ug/L	6020A
Cobalt	0.534			0.020	ug/L	6020A
Copper	0.54			0.10	ug/L	6020A
Hardness, Total as CaCO3	105			0.07	mg/L	SM 2340 B
Iron	18200			21	ug/L	6010C
Lead	0.108			0.020	ug/L	6020A
Magnesium	10700			5.3	ug/L	6010C
Manganese	331			1.1	ug/L	6010C
Nickel	1.63			0.20	ug/L	6020A
Potassium	3620			210	ug/L	6010C
Silicon	22700			210	ug/L	6010C
Sodium	6190			210	ug/L	6010C
Vanadium	6.09			0.20	ug/L	6020A

SAMPLE DETECTION SUMMARY

CLIENT ID: LB-031621-06-NE

Lab ID: K2102664-007

Analyte	Results	Flag	MDL	MRL	Units	Method
Zinc	7.0			2.0	ug/L	6020A



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12

Service Request:K2102664

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2102664-001	Trip Blank	3/16/2021	1000
K2102664-002	LB-031621-01-FB	3/16/2021	1110
K2102664-003	LB-031621-02-24S	3/16/2021	1205
K2102664-004	LB-031621-03-23S	3/16/2021	1245
K2102664-005	LB-031621-04-22S	3/16/2021	1345
K2102664-006	LB-031621-05-DUP1	3/16/2021	1350
K2102664-007	LB-031621-06-NE	3/16/2021	1440




CHAIN OF CUSTODY

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

SR# 12102964PAGE 1 OF 1 COC#

PROJECT NAME <u>Leichter hand-1</u>	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>
PROJECT NUMBER <u>04221030.12</u>		Volatile Organics 624 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/>
PROJECT MANAGER <u>Andrews / L. Caruso</u>		Hydrocarbons (*see below) 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>
COMPANY NAME <u>SCS Engineers</u>		Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>
ADDRESS <u>15940 SW 72nd Ave</u>		Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>
CITY/STATE/ZIP <u>Portland, OR 97224</u>		PCBs Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/>
E-MAIL ADDRESS <u>Andrews@scsengineers.com</u>		Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 8141 <input type="checkbox"/>
PHONE # <u>503 724-0112</u>	Chlorophenolics - 8151M Tri <input type="checkbox"/> Tetra <input type="checkbox"/> 8151 <input type="checkbox"/>	
SAMPLER'S SIGNATURE <u>[Signature]</u>	Metals Total or Dissolved (See List below) <input type="checkbox"/> PCP <input type="checkbox"/>	
	Cyanide <input type="checkbox"/>	(c/c) pH Cond <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>
		NO ₃ BOD, TSS, TDS, Turb. <input type="checkbox"/> SO ₄ , PO ₄ , F, NO ₂ , DOC, NH ₄ -N, COD, TKN, TOC <input type="checkbox"/>
		TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>
		Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input checked="" type="checkbox"/>
		Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>
		Dissolved Gases FSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> CO ₂ <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>
		<u>H₂O₂</u>
		<u>Silica</u>

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS	Volatile Organics	Hydrocarbons	Gas	Oil & Grease/TRPH	PCBs	Aroclors	Pesticides/Herbicides	Chlorophenolics	Tri	Tetra	Metals Total or Dissolved	Cyanide	(c/c) pH Cond	NO ₃ BOD, TSS, TDS, Turb.	DOC, NH ₄ -N, COD, TKN, TOC	TOX 9020	AOX 1650	506	Alkalinity	CO ₃	HCO ₃	Dioxins/Furans	1613	8290	Dissolved Gases	FSK 175	Methane	CO ₂	Ethane	Ethene	REMARKS			
Trip Blank	3-16-21	1000		W	2	X																																		
LB-031621-01-FB	3-16-21	1110		W	7	X									X																									
LB-031621-02-245	3-16-21	1205		W	7	X									X																									
LB-031621-03-235	3-16-21	1245		W	7	X									X																									
LB-031621-04-225	3-16-21	1345		W	7	X									X																									
LB-031621-05-DUP1	3-16-21	1350		W	7	X									X																									
LB-031621-06-NE	3-16-21	1440		W	7	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: _____ _____ _____	Circle which metals are to be analyzed: Total Metals: Al <input type="checkbox"/> As <input checked="" type="checkbox"/> Sb <input checked="" type="checkbox"/> Ba <input checked="" type="checkbox"/> Be <input type="checkbox"/> B <input type="checkbox"/> Ca <input checked="" type="checkbox"/> Cd <input checked="" type="checkbox"/> Co <input checked="" type="checkbox"/> Cr <input checked="" type="checkbox"/> Cu <input checked="" type="checkbox"/> Fe <input checked="" type="checkbox"/> Pb <input checked="" type="checkbox"/> Mg <input checked="" type="checkbox"/> Mn <input checked="" type="checkbox"/> Mo <input type="checkbox"/> Ni <input type="checkbox"/> K <input type="checkbox"/> Ag <input type="checkbox"/> Na <input type="checkbox"/> Se <input type="checkbox"/> Sr <input type="checkbox"/> Ti <input type="checkbox"/> Sn <input type="checkbox"/> V <input checked="" type="checkbox"/> Zn <input type="checkbox"/> Hg <input type="checkbox"/> Dissolved Metals: Al <input type="checkbox"/> As <input type="checkbox"/> Sb <input type="checkbox"/> Ba <input type="checkbox"/> Be <input type="checkbox"/> B <input type="checkbox"/> Ca <input checked="" type="checkbox"/> Cd <input type="checkbox"/> Co <input type="checkbox"/> Cr <input type="checkbox"/> Cu <input checked="" type="checkbox"/> Fe <input checked="" type="checkbox"/> Pb <input checked="" type="checkbox"/> Mg <input checked="" type="checkbox"/> Mn <input checked="" type="checkbox"/> Mo <input type="checkbox"/> Ni <input type="checkbox"/> K <input type="checkbox"/> Ag <input type="checkbox"/> Na <input type="checkbox"/> Se <input type="checkbox"/> Sr <input type="checkbox"/> Ti <input type="checkbox"/> Sn <input type="checkbox"/> V <input type="checkbox"/> Zn <input type="checkbox"/> Hg <input type="checkbox"/>
	TURNAROUND REQUIREMENTS _____ 24 hr. _____ 48 hr. _____ 5 day <input checked="" type="checkbox"/> Standard (15 working days) _____ Provide FAX Results Requested Report Date _____	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <u>Metals are field filtered</u> Container Supply Number  115453

RELINQUISHED BY: <u>[Signature]</u> 3/17/21 Signature Date/Time <u>CHRIS PERRA</u> SCS Printed Name Firm	RECEIVED BY: <u>[Signature]</u> 3/17/21 Signature Date/Time <u>ALS 103</u> Printed Name Firm	RELINQUISHED BY: <u>[Signature]</u> 3/17/21 Signature Date/Time <u>ALS 124</u> Printed Name Firm	RECEIVED BY: <u>[Signature]</u> 3/17/21 Signature Date/Time <u>ALS 045</u> Printed Name Firm
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PM HH

Cooler Receipt and Preservation Form

Client S&S Service Request K21 026044

Received: 3/17/21 Opened: 3/17/21 By: [Signature] Unloaded: 3/17/21 By: [Signature]

- 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? 1 Front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: **Frozen Partially Thawed Thawed**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>1.7</u>		<u>1602</u>	<u>115453</u>				

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

SHORT HOLD TIME



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.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/analyte is offered by that state.

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.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12

Service Request: K2102664

Sample Name: Trip Blank
Lab Code: K2102664-001
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

Sample Name: LB-031621-01-FB
Lab Code: K2102664-002
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method
300.0
350.1
6010C
6020A
8260C

Extracted/Digested By

ESCHLOSS
ABOYER
ABOYER

Analyzed By
KABROWN
ESCHLOSS
RMOORE
EMCALLISTER
MKANALY

SM 2320 B
SM 2540 C
SM 2540 D
SM 5220 C
SM 5310 C

GOLSON
JMADISON
JMADISON
JMADISON
MSPECHT

Sample Name: LB-031621-01-FB
Lab Code: K2102664-002.R01
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method
6020A

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method
300.0

Extracted/Digested By

Analyzed By
KABROWN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12

Service Request: K2102664

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
350.1	ESCHLOSS	ESCHLOSS
6010C	ABOYER	RMOORE
6020A	ABOYER	EMCALLISTER
8260C		MKANALY
SM 2320 B		GOLSON
SM 2540 C		JMADISON
SM 2540 D		JMADISON
SM 5220 C		JMADISON
SM 5310 C		MSPECHT

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003.R01
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
6020A	ABOYER	EMCALLISTER

Sample Name: LB-031621-03-23S
Lab Code: K2102664-004
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
300.0		KABROWN
350.1	ESCHLOSS	ESCHLOSS
6010C	ABOYER	RMOORE
6020A	ABOYER	EMCALLISTER
8260C		MKANALY
SM 2320 B		GOLSON
SM 2540 C		JMADISON
SM 2540 D		JMADISON
SM 5220 C		JMADISON
SM 5310 C		MSPECHT

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12

Service Request: K2102664

Sample Name: LB-031621-03-23S
Lab Code: K2102664-004.R01
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
6020A	ABOYER	EMCALLISTER

Sample Name: LB-031621-04-22S
Lab Code: K2102664-005
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
300.0		KABROWN
350.1	ESCHLOSS	ESCHLOSS
6010C	ABOYER	RMOORE
6020A	ABOYER	EMCALLISTER
8260C		MKANALY
SM 2320 B		GOLSON
SM 2540 C		JMADISON
SM 2540 D		JMADISON
SM 5220 C		JMADISON
SM 5310 C		MSPECHT

Sample Name: LB-031621-04-22S
Lab Code: K2102664-005.R01
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
6020A	ABOYER	EMCALLISTER

Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
300.0		KABROWN

ALS Group USA, Corp.
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Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12

Service Request: K2102664

Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
350.1	ESCHLOSS	ESCHLOSS
6010C	ABOYER	RMOORE
6020A	ABOYER	EMCALLISTER
8260C		MKANALY
SM 2320 B		GOLSON
SM 2540 C		JMADISON
SM 2540 D		JMADISON
SM 5220 C		JMADISON
SM 5310 C		MSPECHT

Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006.R01
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
6020A	ABOYER	EMCALLISTER

Sample Name: LB-031621-06-NE
Lab Code: K2102664-007
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method	Extracted/Digested By	Analyzed By
300.0		KABROWN
350.1	ESCHLOSS	ESCHLOSS
6010C	ABOYER	RMOORE
6020A	ABOYER	EMCALLISTER
8260C		MKANALY
SM 2320 B		GOLSON
SM 2540 C		JMADISON
SM 2540 D		JMADISON
SM 5220 C		JMADISON
SM 5310 C		MSPECHT

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12

Service Request: K2102664

Sample Name: LB-031621-06-NE
Lab Code: K2102664-007.R01
Sample Matrix: Ground Water

Date Collected: 03/16/21
Date Received: 03/17/21

Analysis Method
6020A

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 10:00
Date Received: 03/17/21 12:45

Sample Name: Trip Blank
Lab Code: K2102664-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	03/18/21 14:54	*
Benzene	ND U	0.50	1	03/18/21 14:54	
Bromobenzene	ND U	2.0	1	03/18/21 14:54	
Bromochloromethane	ND U	0.50	1	03/18/21 14:54	
Bromodichloromethane	ND U	0.50	1	03/18/21 14:54	
Bromoform	ND U	0.50	1	03/18/21 14:54	
Bromomethane	ND U	0.50	1	03/18/21 14:54	
2-Butanone (MEK)	ND U	20	1	03/18/21 14:54	
n-Butylbenzene	ND U	4.0	1	03/18/21 14:54	
sec-Butylbenzene	ND U	2.0	1	03/18/21 14:54	
tert-Butylbenzene	ND U	2.0	1	03/18/21 14:54	
Carbon Disulfide	ND U	0.50	1	03/18/21 14:54	
Carbon Tetrachloride	ND U	0.50	1	03/18/21 14:54	
Chlorobenzene	ND U	0.50	1	03/18/21 14:54	
Chloroethane	ND U	0.50	1	03/18/21 14:54	
Chloroform	ND U	0.50	1	03/18/21 14:54	
Chloromethane	ND U	0.50	1	03/18/21 14:54	
2-Chlorotoluene	ND U	2.0	1	03/18/21 14:54	
4-Chlorotoluene	ND U	2.0	1	03/18/21 14:54	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/18/21 14:54	
Dibromochloromethane	ND U	0.50	1	03/18/21 14:54	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/18/21 14:54	
Dibromomethane	ND U	0.50	1	03/18/21 14:54	
1,2-Dichlorobenzene	ND U	0.50	1	03/18/21 14:54	
1,3-Dichlorobenzene	ND U	0.50	1	03/18/21 14:54	
1,4-Dichlorobenzene	ND U	0.50	1	03/18/21 14:54	
Dichlorodifluoromethane	ND U	0.50	1	03/18/21 14:54	*
1,1-Dichloroethane	ND U	0.50	1	03/18/21 14:54	
cis-1,2-Dichloroethene	ND U	0.50	1	03/18/21 14:54	
trans-1,2-Dichloroethene	ND U	0.50	1	03/18/21 14:54	
1,2-Dichloropropane	ND U	0.50	1	03/18/21 14:54	
1,3-Dichloropropane	ND U	0.50	1	03/18/21 14:54	
2,2-Dichloropropane	ND U	0.50	1	03/18/21 14:54	
1,1-Dichloropropene	ND U	0.50	1	03/18/21 14:54	
cis-1,3-Dichloropropene	ND U	0.50	1	03/18/21 14:54	
trans-1,3-Dichloropropene	ND U	0.50	1	03/18/21 14:54	
Ethylbenzene	ND U	0.50	1	03/18/21 14:54	
Hexachlorobutadiene	ND U	2.0	1	03/18/21 14:54	
2-Hexanone	ND U	20	1	03/18/21 14:54	
Isopropylbenzene	ND U	2.0	1	03/18/21 14:54	
4-Isopropyltoluene	ND U	2.0	1	03/18/21 14:54	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Trip Blank
Lab Code: K2102664-001

Service Request: K2102664
Date Collected: 03/16/21 10:00
Date Received: 03/17/21 12:45

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	03/18/21 14:54	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/18/21 14:54	*
Methylene Chloride	ND U	2.0	1	03/18/21 14:54	
Naphthalene	ND U	2.0	1	03/18/21 14:54	
n-Propylbenzene	ND U	2.0	1	03/18/21 14:54	
Styrene	ND U	0.50	1	03/18/21 14:54	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/18/21 14:54	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/18/21 14:54	
Tetrachloroethene (PCE)	ND U	0.50	1	03/18/21 14:54	*
Toluene	ND U	0.50	1	03/18/21 14:54	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/18/21 14:54	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/18/21 14:54	
1,1,2-Trichloroethane	ND U	0.50	1	03/18/21 14:54	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/18/21 14:54	
Trichloroethene (TCE)	ND U	0.50	1	03/18/21 14:54	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/18/21 14:54	*
1,2,3-Trichloropropane	ND U	0.50	1	03/18/21 14:54	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/18/21 14:54	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/18/21 14:54	
Vinyl Chloride	ND U	0.50	1	03/18/21 14:54	
o-Xylene	ND U	0.50	1	03/18/21 14:54	
m,p-Xylenes	ND U	0.50	1	03/18/21 14:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	68 - 117	03/18/21 14:54	
Dibromofluoromethane	96	73 - 122	03/18/21 14:54	
Toluene-d8	95	65 - 144	03/18/21 14:54	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 11:10
Date Received: 03/17/21 12:45

Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	03/18/21 15:16	*
Benzene	ND U	0.50	1	03/18/21 15:16	
Bromobenzene	ND U	2.0	1	03/18/21 15:16	
Bromochloromethane	ND U	0.50	1	03/18/21 15:16	
Bromodichloromethane	ND U	0.50	1	03/18/21 15:16	
Bromoform	ND U	0.50	1	03/18/21 15:16	
Bromomethane	ND U	0.50	1	03/18/21 15:16	
2-Butanone (MEK)	ND U	20	1	03/18/21 15:16	
n-Butylbenzene	ND U	4.0	1	03/18/21 15:16	
sec-Butylbenzene	ND U	2.0	1	03/18/21 15:16	
tert-Butylbenzene	ND U	2.0	1	03/18/21 15:16	
Carbon Disulfide	ND U	0.50	1	03/18/21 15:16	
Carbon Tetrachloride	ND U	0.50	1	03/18/21 15:16	
Chlorobenzene	ND U	0.50	1	03/18/21 15:16	
Chloroethane	ND U	0.50	1	03/18/21 15:16	
Chloroform	ND U	0.50	1	03/18/21 15:16	
Chloromethane	ND U	0.50	1	03/18/21 15:16	
2-Chlorotoluene	ND U	2.0	1	03/18/21 15:16	
4-Chlorotoluene	ND U	2.0	1	03/18/21 15:16	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/18/21 15:16	
Dibromochloromethane	ND U	0.50	1	03/18/21 15:16	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/18/21 15:16	
Dibromomethane	ND U	0.50	1	03/18/21 15:16	
1,2-Dichlorobenzene	ND U	0.50	1	03/18/21 15:16	
1,3-Dichlorobenzene	ND U	0.50	1	03/18/21 15:16	
1,4-Dichlorobenzene	ND U	0.50	1	03/18/21 15:16	
Dichlorodifluoromethane	ND U	0.50	1	03/18/21 15:16	*
1,1-Dichloroethane	ND U	0.50	1	03/18/21 15:16	
cis-1,2-Dichloroethene	ND U	0.50	1	03/18/21 15:16	
trans-1,2-Dichloroethene	ND U	0.50	1	03/18/21 15:16	
1,2-Dichloropropane	ND U	0.50	1	03/18/21 15:16	
1,3-Dichloropropane	ND U	0.50	1	03/18/21 15:16	
2,2-Dichloropropane	ND U	0.50	1	03/18/21 15:16	
1,1-Dichloropropene	ND U	0.50	1	03/18/21 15:16	
cis-1,3-Dichloropropene	ND U	0.50	1	03/18/21 15:16	
trans-1,3-Dichloropropene	ND U	0.50	1	03/18/21 15:16	
Ethylbenzene	ND U	0.50	1	03/18/21 15:16	
Hexachlorobutadiene	ND U	2.0	1	03/18/21 15:16	
2-Hexanone	ND U	20	1	03/18/21 15:16	
Isopropylbenzene	ND U	2.0	1	03/18/21 15:16	
4-Isopropyltoluene	ND U	2.0	1	03/18/21 15:16	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 11:10
Date Received: 03/17/21 12:45

Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	03/18/21 15:16	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/18/21 15:16	*
Methylene Chloride	ND U	2.0	1	03/18/21 15:16	
Naphthalene	ND U	2.0	1	03/18/21 15:16	
n-Propylbenzene	ND U	2.0	1	03/18/21 15:16	
Styrene	ND U	0.50	1	03/18/21 15:16	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/18/21 15:16	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/18/21 15:16	
Tetrachloroethene (PCE)	ND U	0.50	1	03/18/21 15:16	*
Toluene	ND U	0.50	1	03/18/21 15:16	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/18/21 15:16	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/18/21 15:16	
1,1,2-Trichloroethane	ND U	0.50	1	03/18/21 15:16	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/18/21 15:16	
Trichloroethene (TCE)	ND U	0.50	1	03/18/21 15:16	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/18/21 15:16	*
1,2,3-Trichloropropane	ND U	0.50	1	03/18/21 15:16	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/18/21 15:16	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/18/21 15:16	
Vinyl Chloride	ND U	0.50	1	03/18/21 15:16	
o-Xylene	ND U	0.50	1	03/18/21 15:16	
m,p-Xylenes	ND U	0.50	1	03/18/21 15:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	68 - 117	03/18/21 15:16	
Dibromofluoromethane	98	73 - 122	03/18/21 15:16	
Toluene-d8	95	65 - 144	03/18/21 15:16	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 12:05
Date Received: 03/17/21 12:45

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	03/18/21 15:39	*
Benzene	ND U	0.50	1	03/18/21 15:39	
Bromobenzene	ND U	2.0	1	03/18/21 15:39	
Bromochloromethane	ND U	0.50	1	03/18/21 15:39	
Bromodichloromethane	ND U	0.50	1	03/18/21 15:39	
Bromoform	ND U	0.50	1	03/18/21 15:39	
Bromomethane	ND U	0.50	1	03/18/21 15:39	
2-Butanone (MEK)	ND U	20	1	03/18/21 15:39	
n-Butylbenzene	ND U	4.0	1	03/18/21 15:39	
sec-Butylbenzene	ND U	2.0	1	03/18/21 15:39	
tert-Butylbenzene	ND U	2.0	1	03/18/21 15:39	
Carbon Disulfide	ND U	0.50	1	03/18/21 15:39	
Carbon Tetrachloride	ND U	0.50	1	03/18/21 15:39	
Chlorobenzene	ND U	0.50	1	03/18/21 15:39	
Chloroethane	ND U	0.50	1	03/18/21 15:39	
Chloroform	ND U	0.50	1	03/18/21 15:39	
Chloromethane	ND U	0.50	1	03/18/21 15:39	
2-Chlorotoluene	ND U	2.0	1	03/18/21 15:39	
4-Chlorotoluene	ND U	2.0	1	03/18/21 15:39	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/18/21 15:39	
Dibromochloromethane	ND U	0.50	1	03/18/21 15:39	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/18/21 15:39	
Dibromomethane	ND U	0.50	1	03/18/21 15:39	
1,2-Dichlorobenzene	ND U	0.50	1	03/18/21 15:39	
1,3-Dichlorobenzene	ND U	0.50	1	03/18/21 15:39	
1,4-Dichlorobenzene	ND U	0.50	1	03/18/21 15:39	
Dichlorodifluoromethane	ND U	0.50	1	03/18/21 15:39	*
1,1-Dichloroethane	ND U	0.50	1	03/18/21 15:39	
cis-1,2-Dichloroethene	ND U	0.50	1	03/18/21 15:39	
trans-1,2-Dichloroethene	ND U	0.50	1	03/18/21 15:39	
1,2-Dichloropropane	ND U	0.50	1	03/18/21 15:39	
1,3-Dichloropropane	ND U	0.50	1	03/18/21 15:39	
2,2-Dichloropropane	ND U	0.50	1	03/18/21 15:39	
1,1-Dichloropropene	ND U	0.50	1	03/18/21 15:39	
cis-1,3-Dichloropropene	ND U	0.50	1	03/18/21 15:39	
trans-1,3-Dichloropropene	ND U	0.50	1	03/18/21 15:39	
Ethylbenzene	ND U	0.50	1	03/18/21 15:39	
Hexachlorobutadiene	ND U	2.0	1	03/18/21 15:39	
2-Hexanone	ND U	20	1	03/18/21 15:39	
Isopropylbenzene	ND U	2.0	1	03/18/21 15:39	
4-Isopropyltoluene	ND U	2.0	1	03/18/21 15:39	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 12:05
Date Received: 03/17/21 12:45

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	03/18/21 15:39	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/18/21 15:39	*
Methylene Chloride	ND U	2.0	1	03/18/21 15:39	
Naphthalene	ND U	2.0	1	03/18/21 15:39	
n-Propylbenzene	ND U	2.0	1	03/18/21 15:39	
Styrene	ND U	0.50	1	03/18/21 15:39	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/18/21 15:39	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/18/21 15:39	
Tetrachloroethene (PCE)	ND U	0.50	1	03/18/21 15:39	*
Toluene	ND U	0.50	1	03/18/21 15:39	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/18/21 15:39	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/18/21 15:39	
1,1,2-Trichloroethane	ND U	0.50	1	03/18/21 15:39	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/18/21 15:39	
Trichloroethene (TCE)	ND U	0.50	1	03/18/21 15:39	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/18/21 15:39	*
1,2,3-Trichloropropane	ND U	0.50	1	03/18/21 15:39	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/18/21 15:39	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/18/21 15:39	
Vinyl Chloride	ND U	0.50	1	03/18/21 15:39	
o-Xylene	ND U	0.50	1	03/18/21 15:39	
m,p-Xylenes	ND U	0.50	1	03/18/21 15:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	03/18/21 15:39	
Dibromofluoromethane	98	73 - 122	03/18/21 15:39	
Toluene-d8	93	65 - 144	03/18/21 15:39	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 12:45
Date Received: 03/17/21 12:45

Sample Name: LB-031621-03-23S
Lab Code: K2102664-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	03/18/21 16:02	*
Benzene	ND U	0.50	1	03/18/21 16:02	
Bromobenzene	ND U	2.0	1	03/18/21 16:02	
Bromochloromethane	ND U	0.50	1	03/18/21 16:02	
Bromodichloromethane	ND U	0.50	1	03/18/21 16:02	
Bromoform	ND U	0.50	1	03/18/21 16:02	
Bromomethane	ND U	0.50	1	03/18/21 16:02	
2-Butanone (MEK)	ND U	20	1	03/18/21 16:02	
n-Butylbenzene	ND U	4.0	1	03/18/21 16:02	
sec-Butylbenzene	ND U	2.0	1	03/18/21 16:02	
tert-Butylbenzene	ND U	2.0	1	03/18/21 16:02	
Carbon Disulfide	ND U	0.50	1	03/18/21 16:02	
Carbon Tetrachloride	ND U	0.50	1	03/18/21 16:02	
Chlorobenzene	ND U	0.50	1	03/18/21 16:02	
Chloroethane	ND U	0.50	1	03/18/21 16:02	
Chloroform	ND U	0.50	1	03/18/21 16:02	
Chloromethane	ND U	0.50	1	03/18/21 16:02	
2-Chlorotoluene	ND U	2.0	1	03/18/21 16:02	
4-Chlorotoluene	ND U	2.0	1	03/18/21 16:02	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/18/21 16:02	
Dibromochloromethane	ND U	0.50	1	03/18/21 16:02	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/18/21 16:02	
Dibromomethane	ND U	0.50	1	03/18/21 16:02	
1,2-Dichlorobenzene	ND U	0.50	1	03/18/21 16:02	
1,3-Dichlorobenzene	ND U	0.50	1	03/18/21 16:02	
1,4-Dichlorobenzene	ND U	0.50	1	03/18/21 16:02	
Dichlorodifluoromethane	ND U	0.50	1	03/18/21 16:02	*
1,1-Dichloroethane	ND U	0.50	1	03/18/21 16:02	
cis-1,2-Dichloroethene	ND U	0.50	1	03/18/21 16:02	
trans-1,2-Dichloroethene	ND U	0.50	1	03/18/21 16:02	
1,2-Dichloropropane	ND U	0.50	1	03/18/21 16:02	
1,3-Dichloropropane	ND U	0.50	1	03/18/21 16:02	
2,2-Dichloropropane	ND U	0.50	1	03/18/21 16:02	
1,1-Dichloropropene	ND U	0.50	1	03/18/21 16:02	
cis-1,3-Dichloropropene	ND U	0.50	1	03/18/21 16:02	
trans-1,3-Dichloropropene	ND U	0.50	1	03/18/21 16:02	
Ethylbenzene	ND U	0.50	1	03/18/21 16:02	
Hexachlorobutadiene	ND U	2.0	1	03/18/21 16:02	
2-Hexanone	ND U	20	1	03/18/21 16:02	
Isopropylbenzene	ND U	2.0	1	03/18/21 16:02	
4-Isopropyltoluene	ND U	2.0	1	03/18/21 16:02	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 12:45
Date Received: 03/17/21 12:45

Sample Name: LB-031621-03-23S
Lab Code: K2102664-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	03/18/21 16:02	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/18/21 16:02	*
Methylene Chloride	ND U	2.0	1	03/18/21 16:02	
Naphthalene	ND U	2.0	1	03/18/21 16:02	
n-Propylbenzene	ND U	2.0	1	03/18/21 16:02	
Styrene	ND U	0.50	1	03/18/21 16:02	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/18/21 16:02	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/18/21 16:02	
Tetrachloroethene (PCE)	ND U	0.50	1	03/18/21 16:02	*
Toluene	ND U	0.50	1	03/18/21 16:02	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/18/21 16:02	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/18/21 16:02	
1,1,2-Trichloroethane	ND U	0.50	1	03/18/21 16:02	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/18/21 16:02	
Trichloroethene (TCE)	ND U	0.50	1	03/18/21 16:02	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/18/21 16:02	*
1,2,3-Trichloropropane	ND U	0.50	1	03/18/21 16:02	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/18/21 16:02	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/18/21 16:02	
Vinyl Chloride	ND U	0.50	1	03/18/21 16:02	
o-Xylene	ND U	0.50	1	03/18/21 16:02	
m,p-Xylenes	ND U	0.50	1	03/18/21 16:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	03/18/21 16:02	
Dibromofluoromethane	98	73 - 122	03/18/21 16:02	
Toluene-d8	94	65 - 144	03/18/21 16:02	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 13:45
Date Received: 03/17/21 12:45

Sample Name: LB-031621-04-22S
Lab Code: K2102664-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	03/18/21 16:25	*
Benzene	ND U	0.50	1	03/18/21 16:25	
Bromobenzene	ND U	2.0	1	03/18/21 16:25	
Bromochloromethane	ND U	0.50	1	03/18/21 16:25	
Bromodichloromethane	ND U	0.50	1	03/18/21 16:25	
Bromoform	ND U	0.50	1	03/18/21 16:25	
Bromomethane	ND U	0.50	1	03/18/21 16:25	
2-Butanone (MEK)	ND U	20	1	03/18/21 16:25	
n-Butylbenzene	ND U	4.0	1	03/18/21 16:25	
sec-Butylbenzene	ND U	2.0	1	03/18/21 16:25	
tert-Butylbenzene	ND U	2.0	1	03/18/21 16:25	
Carbon Disulfide	ND U	0.50	1	03/18/21 16:25	
Carbon Tetrachloride	ND U	0.50	1	03/18/21 16:25	
Chlorobenzene	ND U	0.50	1	03/18/21 16:25	
Chloroethane	ND U	0.50	1	03/18/21 16:25	
Chloroform	ND U	0.50	1	03/18/21 16:25	
Chloromethane	ND U	0.50	1	03/18/21 16:25	
2-Chlorotoluene	ND U	2.0	1	03/18/21 16:25	
4-Chlorotoluene	ND U	2.0	1	03/18/21 16:25	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/18/21 16:25	
Dibromochloromethane	ND U	0.50	1	03/18/21 16:25	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/18/21 16:25	
Dibromomethane	ND U	0.50	1	03/18/21 16:25	
1,2-Dichlorobenzene	ND U	0.50	1	03/18/21 16:25	
1,3-Dichlorobenzene	ND U	0.50	1	03/18/21 16:25	
1,4-Dichlorobenzene	ND U	0.50	1	03/18/21 16:25	
Dichlorodifluoromethane	ND U	0.50	1	03/18/21 16:25	*
1,1-Dichloroethane	ND U	0.50	1	03/18/21 16:25	
cis-1,2-Dichloroethene	ND U	0.50	1	03/18/21 16:25	
trans-1,2-Dichloroethene	ND U	0.50	1	03/18/21 16:25	
1,2-Dichloropropane	ND U	0.50	1	03/18/21 16:25	
1,3-Dichloropropane	ND U	0.50	1	03/18/21 16:25	
2,2-Dichloropropane	ND U	0.50	1	03/18/21 16:25	
1,1-Dichloropropene	ND U	0.50	1	03/18/21 16:25	
cis-1,3-Dichloropropene	ND U	0.50	1	03/18/21 16:25	
trans-1,3-Dichloropropene	ND U	0.50	1	03/18/21 16:25	
Ethylbenzene	ND U	0.50	1	03/18/21 16:25	
Hexachlorobutadiene	ND U	2.0	1	03/18/21 16:25	
2-Hexanone	ND U	20	1	03/18/21 16:25	
Isopropylbenzene	ND U	2.0	1	03/18/21 16:25	
4-Isopropyltoluene	ND U	2.0	1	03/18/21 16:25	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 13:45
Date Received: 03/17/21 12:45

Sample Name: LB-031621-04-22S
Lab Code: K2102664-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	03/18/21 16:25	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/18/21 16:25	*
Methylene Chloride	ND U	2.0	1	03/18/21 16:25	
Naphthalene	ND U	2.0	1	03/18/21 16:25	
n-Propylbenzene	ND U	2.0	1	03/18/21 16:25	
Styrene	ND U	0.50	1	03/18/21 16:25	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/18/21 16:25	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/18/21 16:25	
Tetrachloroethene (PCE)	ND U	0.50	1	03/18/21 16:25	*
Toluene	ND U	0.50	1	03/18/21 16:25	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/18/21 16:25	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/18/21 16:25	
1,1,2-Trichloroethane	ND U	0.50	1	03/18/21 16:25	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/18/21 16:25	
Trichloroethene (TCE)	ND U	0.50	1	03/18/21 16:25	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/18/21 16:25	*
1,2,3-Trichloropropane	ND U	0.50	1	03/18/21 16:25	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/18/21 16:25	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/18/21 16:25	
Vinyl Chloride	ND U	0.50	1	03/18/21 16:25	
o-Xylene	ND U	0.50	1	03/18/21 16:25	
m,p-Xylenes	ND U	0.50	1	03/18/21 16:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	03/18/21 16:25	
Dibromofluoromethane	98	73 - 122	03/18/21 16:25	
Toluene-d8	93	65 - 144	03/18/21 16:25	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 13:50
Date Received: 03/17/21 12:45

Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	03/18/21 16:48	*
Benzene	ND U	0.50	1	03/18/21 16:48	
Bromobenzene	ND U	2.0	1	03/18/21 16:48	
Bromochloromethane	ND U	0.50	1	03/18/21 16:48	
Bromodichloromethane	ND U	0.50	1	03/18/21 16:48	
Bromoform	ND U	0.50	1	03/18/21 16:48	
Bromomethane	ND U	0.50	1	03/18/21 16:48	
2-Butanone (MEK)	ND U	20	1	03/18/21 16:48	
n-Butylbenzene	ND U	4.0	1	03/18/21 16:48	
sec-Butylbenzene	ND U	2.0	1	03/18/21 16:48	
tert-Butylbenzene	ND U	2.0	1	03/18/21 16:48	
Carbon Disulfide	ND U	0.50	1	03/18/21 16:48	
Carbon Tetrachloride	ND U	0.50	1	03/18/21 16:48	
Chlorobenzene	ND U	0.50	1	03/18/21 16:48	
Chloroethane	ND U	0.50	1	03/18/21 16:48	
Chloroform	ND U	0.50	1	03/18/21 16:48	
Chloromethane	ND U	0.50	1	03/18/21 16:48	
2-Chlorotoluene	ND U	2.0	1	03/18/21 16:48	
4-Chlorotoluene	ND U	2.0	1	03/18/21 16:48	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/18/21 16:48	
Dibromochloromethane	ND U	0.50	1	03/18/21 16:48	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/18/21 16:48	
Dibromomethane	ND U	0.50	1	03/18/21 16:48	
1,2-Dichlorobenzene	ND U	0.50	1	03/18/21 16:48	
1,3-Dichlorobenzene	ND U	0.50	1	03/18/21 16:48	
1,4-Dichlorobenzene	ND U	0.50	1	03/18/21 16:48	
Dichlorodifluoromethane	ND U	0.50	1	03/18/21 16:48	*
1,1-Dichloroethane	ND U	0.50	1	03/18/21 16:48	
cis-1,2-Dichloroethene	ND U	0.50	1	03/18/21 16:48	
trans-1,2-Dichloroethene	ND U	0.50	1	03/18/21 16:48	
1,2-Dichloropropane	ND U	0.50	1	03/18/21 16:48	
1,3-Dichloropropane	ND U	0.50	1	03/18/21 16:48	
2,2-Dichloropropane	ND U	0.50	1	03/18/21 16:48	
1,1-Dichloropropene	ND U	0.50	1	03/18/21 16:48	
cis-1,3-Dichloropropene	ND U	0.50	1	03/18/21 16:48	
trans-1,3-Dichloropropene	ND U	0.50	1	03/18/21 16:48	
Ethylbenzene	ND U	0.50	1	03/18/21 16:48	
Hexachlorobutadiene	ND U	2.0	1	03/18/21 16:48	
2-Hexanone	ND U	20	1	03/18/21 16:48	
Isopropylbenzene	ND U	2.0	1	03/18/21 16:48	
4-Isopropyltoluene	ND U	2.0	1	03/18/21 16:48	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 13:50
Date Received: 03/17/21 12:45

Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	03/18/21 16:48	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/18/21 16:48	*
Methylene Chloride	ND U	2.0	1	03/18/21 16:48	
Naphthalene	ND U	2.0	1	03/18/21 16:48	
n-Propylbenzene	ND U	2.0	1	03/18/21 16:48	
Styrene	ND U	0.50	1	03/18/21 16:48	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/18/21 16:48	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/18/21 16:48	
Tetrachloroethene (PCE)	ND U	0.50	1	03/18/21 16:48	*
Toluene	ND U	0.50	1	03/18/21 16:48	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/18/21 16:48	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/18/21 16:48	
1,1,2-Trichloroethane	ND U	0.50	1	03/18/21 16:48	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/18/21 16:48	
Trichloroethene (TCE)	ND U	0.50	1	03/18/21 16:48	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/18/21 16:48	*
1,2,3-Trichloropropane	ND U	0.50	1	03/18/21 16:48	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/18/21 16:48	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/18/21 16:48	
Vinyl Chloride	ND U	0.50	1	03/18/21 16:48	
o-Xylene	ND U	0.50	1	03/18/21 16:48	
m,p-Xylenes	ND U	0.50	1	03/18/21 16:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	68 - 117	03/18/21 16:48	
Dibromofluoromethane	95	73 - 122	03/18/21 16:48	
Toluene-d8	93	65 - 144	03/18/21 16:48	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 14:40
Date Received: 03/17/21 12:45

Sample Name: LB-031621-06-NE
Lab Code: K2102664-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	03/18/21 17:10	*
Benzene	ND U	0.50	1	03/18/21 17:10	
Bromobenzene	ND U	2.0	1	03/18/21 17:10	
Bromochloromethane	ND U	0.50	1	03/18/21 17:10	
Bromodichloromethane	ND U	0.50	1	03/18/21 17:10	
Bromoform	ND U	0.50	1	03/18/21 17:10	
Bromomethane	ND U	0.50	1	03/18/21 17:10	
2-Butanone (MEK)	ND U	20	1	03/18/21 17:10	
n-Butylbenzene	ND U	4.0	1	03/18/21 17:10	
sec-Butylbenzene	ND U	2.0	1	03/18/21 17:10	
tert-Butylbenzene	ND U	2.0	1	03/18/21 17:10	
Carbon Disulfide	ND U	0.50	1	03/18/21 17:10	
Carbon Tetrachloride	ND U	0.50	1	03/18/21 17:10	
Chlorobenzene	ND U	0.50	1	03/18/21 17:10	
Chloroethane	ND U	0.50	1	03/18/21 17:10	
Chloroform	ND U	0.50	1	03/18/21 17:10	
Chloromethane	ND U	0.50	1	03/18/21 17:10	
2-Chlorotoluene	ND U	2.0	1	03/18/21 17:10	
4-Chlorotoluene	ND U	2.0	1	03/18/21 17:10	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/18/21 17:10	
Dibromochloromethane	ND U	0.50	1	03/18/21 17:10	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/18/21 17:10	
Dibromomethane	ND U	0.50	1	03/18/21 17:10	
1,2-Dichlorobenzene	ND U	0.50	1	03/18/21 17:10	
1,3-Dichlorobenzene	ND U	0.50	1	03/18/21 17:10	
1,4-Dichlorobenzene	ND U	0.50	1	03/18/21 17:10	
Dichlorodifluoromethane	ND U	0.50	1	03/18/21 17:10	*
1,1-Dichloroethane	ND U	0.50	1	03/18/21 17:10	
cis-1,2-Dichloroethene	ND U	0.50	1	03/18/21 17:10	
trans-1,2-Dichloroethene	ND U	0.50	1	03/18/21 17:10	
1,2-Dichloropropane	ND U	0.50	1	03/18/21 17:10	
1,3-Dichloropropane	ND U	0.50	1	03/18/21 17:10	
2,2-Dichloropropane	ND U	0.50	1	03/18/21 17:10	
1,1-Dichloropropene	ND U	0.50	1	03/18/21 17:10	
cis-1,3-Dichloropropene	ND U	0.50	1	03/18/21 17:10	
trans-1,3-Dichloropropene	ND U	0.50	1	03/18/21 17:10	
Ethylbenzene	ND U	0.50	1	03/18/21 17:10	
Hexachlorobutadiene	ND U	2.0	1	03/18/21 17:10	
2-Hexanone	ND U	20	1	03/18/21 17:10	
Isopropylbenzene	ND U	2.0	1	03/18/21 17:10	
4-Isopropyltoluene	ND U	2.0	1	03/18/21 17:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 14:40
Date Received: 03/17/21 12:45

Sample Name: LB-031621-06-NE
Lab Code: K2102664-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	03/18/21 17:10	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/18/21 17:10	*
Methylene Chloride	ND U	2.0	1	03/18/21 17:10	
Naphthalene	ND U	2.0	1	03/18/21 17:10	
n-Propylbenzene	ND U	2.0	1	03/18/21 17:10	
Styrene	ND U	0.50	1	03/18/21 17:10	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/18/21 17:10	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/18/21 17:10	
Tetrachloroethene (PCE)	ND U	0.50	1	03/18/21 17:10	*
Toluene	ND U	0.50	1	03/18/21 17:10	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/18/21 17:10	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/18/21 17:10	
1,1,2-Trichloroethane	ND U	0.50	1	03/18/21 17:10	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/18/21 17:10	
Trichloroethene (TCE)	ND U	0.50	1	03/18/21 17:10	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/18/21 17:10	*
1,2,3-Trichloropropane	ND U	0.50	1	03/18/21 17:10	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/18/21 17:10	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/18/21 17:10	
Vinyl Chloride	ND U	0.50	1	03/18/21 17:10	
o-Xylene	ND U	0.50	1	03/18/21 17:10	
m,p-Xylenes	ND U	0.50	1	03/18/21 17:10	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	68 - 117	03/18/21 17:10	
Dibromofluoromethane	95	73 - 122	03/18/21 17:10	
Toluene-d8	93	65 - 144	03/18/21 17:10	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Service Request: K2102664
Date Collected: 03/16/21 11:10
Date Received: 03/17/21 12:45
Basis: NA

Hardness by ICP-AES Calculation 20th Ed.

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Hardness, Total as CaCO3	SM 2340 B	ND U	mg/L	0.07	1	03/22/21 16:16	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Service Request: K2102664
Date Collected: 03/16/21 11:10
Date Received: 03/17/21 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	ND U	ug/L	21	1	03/22/21 16:50	03/19/21	
Iron	6010C	ND U	ug/L	21	1	03/22/21 16:50	03/19/21	
Magnesium	6010C	ND U	ug/L	5.3	1	03/22/21 16:50	03/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/22/21 16:50	03/19/21	
Potassium	6010C	ND U	ug/L	210	1	03/22/21 16:50	03/19/21	
Sodium	6010C	ND U	ug/L	210	1	03/22/21 16:50	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Service Request: K2102664
Date Collected: 03/16/21 11:10
Date Received: 03/17/21 12:45
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	ND U	ug/L	0.050	1	03/24/21 12:44	03/19/21	
Arsenic	6020A	ND U	ug/L	0.50	1	03/24/21 12:44	03/19/21	
Barium	6020A	ND U	ug/L	0.050	1	03/24/21 12:44	03/19/21	
Beryllium	6020A	ND U	ug/L	0.020	1	03/24/21 12:44	03/19/21	
Cadmium	6020A	ND U	ug/L	0.020	1	03/24/21 12:44	03/19/21	
Calcium	6010C	ND U	ug/L	21	1	03/22/21 16:16	03/19/21	
Chromium	6020A	ND U	ug/L	0.20	1	03/24/21 12:44	03/19/21	
Cobalt	6020A	ND U	ug/L	0.020	1	03/24/21 12:44	03/19/21	
Copper	6020A	ND U	ug/L	0.10	1	03/25/21 17:31	03/24/21	
Iron	6010C	ND U	ug/L	21	1	03/22/21 16:16	03/19/21	
Lead	6020A	ND U	ug/L	0.020	1	03/25/21 17:31	03/24/21	
Magnesium	6010C	ND U	ug/L	5.3	1	03/22/21 16:16	03/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/22/21 16:16	03/19/21	
Nickel	6020A	ND U	ug/L	0.20	1	03/24/21 12:44	03/19/21	
Potassium	6010C	ND U	ug/L	210	1	03/22/21 16:16	03/19/21	
Selenium	6020A	ND U	ug/L	1.0	1	03/24/21 12:44	03/19/21	
Silicon	6010C	ND U	ug/L	210	1	03/22/21 16:16	03/19/21	
Silver	6020A	ND U	ug/L	0.020	1	03/24/21 12:44	03/19/21	
Sodium	6010C	ND U	ug/L	210	1	03/22/21 16:16	03/19/21	
Thallium	6020A	0.028	ug/L	0.020	1	03/24/21 12:44	03/19/21	
Vanadium	6020A	ND U	ug/L	0.20	1	03/24/21 12:44	03/19/21	
Zinc	6020A	ND U	ug/L	2.0	1	03/24/21 12:44	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Service Request: K2102664
Date Collected: 03/16/21 12:05
Date Received: 03/17/21 12:45
Basis: NA

Hardness by ICP-AES Calculation 20th Ed.

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Hardness, Total as CaCO3	SM 2340 B	64.8	mg/L	0.07	1	03/22/21 16:19	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Service Request: K2102664
Date Collected: 03/16/21 12:05
Date Received: 03/17/21 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	15500	ug/L	21	1	03/22/21 16:53	03/19/21	
Iron	6010C	ND U	ug/L	21	1	03/22/21 16:53	03/19/21	
Magnesium	6010C	6070	ug/L	5.3	1	03/22/21 16:53	03/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/22/21 16:53	03/19/21	
Potassium	6010C	2680	ug/L	210	1	03/22/21 16:53	03/19/21	
Sodium	6010C	8850	ug/L	210	1	03/22/21 16:53	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21 12:05
Date Received: 03/17/21 12:45

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	ND U	ug/L	0.050	1	03/24/21 12:46	03/19/21	
Arsenic	6020A	0.55	ug/L	0.50	1	03/24/21 12:46	03/19/21	
Barium	6020A	9.38	ug/L	0.050	1	03/24/21 12:46	03/19/21	
Beryllium	6020A	ND U	ug/L	0.020	1	03/24/21 12:46	03/19/21	
Cadmium	6020A	ND U	ug/L	0.020	1	03/24/21 12:46	03/19/21	
Calcium	6010C	15700	ug/L	21	1	03/22/21 16:19	03/19/21	
Chromium	6020A	0.85	ug/L	0.20	1	03/24/21 12:46	03/19/21	
Cobalt	6020A	0.379	ug/L	0.020	1	03/24/21 12:46	03/19/21	
Copper	6020A	0.72	ug/L	0.10	1	03/25/21 17:33	03/24/21	
Iron	6010C	585	ug/L	21	1	03/22/21 16:19	03/19/21	
Lead	6020A	0.177	ug/L	0.020	1	03/25/21 17:33	03/24/21	
Magnesium	6010C	6210	ug/L	5.3	1	03/22/21 16:19	03/19/21	
Manganese	6010C	16.3	ug/L	1.1	1	03/22/21 16:19	03/19/21	
Nickel	6020A	0.59	ug/L	0.20	1	03/24/21 12:46	03/19/21	
Potassium	6010C	2740	ug/L	210	1	03/22/21 16:19	03/19/21	
Selenium	6020A	ND U	ug/L	1.0	1	03/24/21 12:46	03/19/21	
Silicon	6010C	26100	ug/L	210	1	03/22/21 16:19	03/19/21	
Silver	6020A	ND U	ug/L	0.020	1	03/24/21 12:46	03/19/21	
Sodium	6010C	8960	ug/L	210	1	03/22/21 16:19	03/19/21	
Thallium	6020A	ND U	ug/L	0.020	1	03/24/21 12:46	03/19/21	
Vanadium	6020A	6.31	ug/L	0.20	1	03/24/21 12:46	03/19/21	
Zinc	6020A	32.2	ug/L	2.0	1	03/24/21 12:46	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-03-23S
Lab Code: K2102664-004

Service Request: K2102664
Date Collected: 03/16/21 12:45
Date Received: 03/17/21 12:45
Basis: NA

Hardness by ICP-AES Calculation 20th Ed.

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Hardness, Total as CaCO3	SM 2340 B	58.3	mg/L	0.07	1	03/22/21 16:21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-03-23S
Lab Code: K2102664-004

Service Request: K2102664
Date Collected: 03/16/21 12:45
Date Received: 03/17/21 12:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	14100	ug/L	21	1	03/22/21 16:55	03/19/21	
Iron	6010C	ND U	ug/L	21	1	03/22/21 16:55	03/19/21	
Magnesium	6010C	5570	ug/L	5.3	1	03/22/21 16:55	03/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/22/21 16:55	03/19/21	
Potassium	6010C	1980	ug/L	210	1	03/22/21 16:55	03/19/21	
Sodium	6010C	5760	ug/L	210	1	03/22/21 16:55	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-03-23S
Lab Code: K2102664-004

Service Request: K2102664
Date Collected: 03/16/21 12:45
Date Received: 03/17/21 12:45

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	0.050	ug/L	0.050	1	03/24/21 12:58	03/19/21	
Arsenic	6020A	0.53	ug/L	0.50	1	03/24/21 12:58	03/19/21	
Barium	6020A	5.72	ug/L	0.050	1	03/24/21 12:58	03/19/21	
Beryllium	6020A	ND U	ug/L	0.020	1	03/24/21 12:58	03/19/21	
Cadmium	6020A	ND U	ug/L	0.020	1	03/24/21 12:58	03/19/21	
Calcium	6010C	14100	ug/L	21	1	03/22/21 16:21	03/19/21	
Chromium	6020A	1.08	ug/L	0.20	1	03/24/21 12:58	03/19/21	
Cobalt	6020A	0.311	ug/L	0.020	1	03/24/21 12:58	03/19/21	
Copper	6020A	0.63	ug/L	0.10	1	03/25/21 17:40	03/24/21	
Iron	6010C	555	ug/L	21	1	03/22/21 16:21	03/19/21	
Lead	6020A	0.308	ug/L	0.020	1	03/25/21 17:40	03/24/21	
Magnesium	6010C	5610	ug/L	5.3	1	03/22/21 16:21	03/19/21	
Manganese	6010C	31.5	ug/L	1.1	1	03/22/21 16:21	03/19/21	
Nickel	6020A	0.51	ug/L	0.20	1	03/24/21 12:58	03/19/21	
Potassium	6010C	2030	ug/L	210	1	03/22/21 16:21	03/19/21	
Selenium	6020A	ND U	ug/L	1.0	1	03/24/21 12:58	03/19/21	
Silicon	6010C	27200	ug/L	210	1	03/22/21 16:21	03/19/21	
Silver	6020A	ND U	ug/L	0.020	1	03/24/21 12:58	03/19/21	
Sodium	6010C	5800	ug/L	210	1	03/22/21 16:21	03/19/21	
Thallium	6020A	0.044	ug/L	0.020	1	03/24/21 12:58	03/19/21	
Vanadium	6020A	7.18	ug/L	0.20	1	03/24/21 12:58	03/19/21	
Zinc	6020A	35.0	ug/L	2.0	1	03/24/21 12:58	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-04-22S
Lab Code: K2102664-005

Service Request: K2102664
Date Collected: 03/16/21 13:45
Date Received: 03/17/21 12:45
Basis: NA

Hardness by ICP-AES Calculation 20th Ed.

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Hardness, Total as CaCO3	SM 2340 B	89.4	mg/L	0.07	1	03/22/21 16:42	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-04-22S
Lab Code: K2102664-005

Service Request: K2102664
Date Collected: 03/16/21 13:45
Date Received: 03/17/21 12:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	20700	ug/L	21	1	03/22/21 16:58	03/19/21	
Iron	6010C	ND U	ug/L	21	1	03/22/21 16:58	03/19/21	
Magnesium	6010C	9170	ug/L	5.3	1	03/22/21 16:58	03/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/22/21 16:58	03/19/21	
Potassium	6010C	2840	ug/L	210	1	03/22/21 16:58	03/19/21	
Sodium	6010C	5660	ug/L	210	1	03/22/21 16:58	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-04-22S
Lab Code: K2102664-005

Service Request: K2102664
Date Collected: 03/16/21 13:45
Date Received: 03/17/21 12:45
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	0.119	ug/L	0.050	1	03/24/21 13:00	03/19/21	
Arsenic	6020A	0.65	ug/L	0.50	1	03/24/21 13:00	03/19/21	
Barium	6020A	13.0	ug/L	0.050	1	03/24/21 13:00	03/19/21	
Beryllium	6020A	0.022	ug/L	0.020	1	03/24/21 13:00	03/19/21	
Cadmium	6020A	0.037	ug/L	0.020	1	03/24/21 13:00	03/19/21	
Calcium	6010C	20600	ug/L	21	1	03/22/21 16:42	03/19/21	
Chromium	6020A	1.36	ug/L	0.20	1	03/24/21 13:00	03/19/21	
Cobalt	6020A	0.359	ug/L	0.020	1	03/24/21 13:00	03/19/21	
Copper	6020A	1.09	ug/L	0.10	1	03/25/21 17:42	03/24/21	
Iron	6010C	831	ug/L	21	1	03/22/21 16:42	03/19/21	
Lead	6020A	0.296	ug/L	0.020	1	03/25/21 17:42	03/24/21	
Magnesium	6010C	9220	ug/L	5.3	1	03/22/21 16:42	03/19/21	
Manganese	6010C	104	ug/L	1.1	1	03/22/21 16:42	03/19/21	
Nickel	6020A	1.13	ug/L	0.20	1	03/24/21 13:00	03/19/21	
Potassium	6010C	2900	ug/L	210	1	03/22/21 16:42	03/19/21	
Selenium	6020A	ND U	ug/L	1.0	1	03/24/21 13:00	03/19/21	
Silicon	6010C	24700	ug/L	210	1	03/22/21 16:42	03/19/21	
Silver	6020A	ND U	ug/L	0.020	1	03/24/21 13:00	03/19/21	
Sodium	6010C	5640	ug/L	210	1	03/22/21 16:42	03/19/21	
Thallium	6020A	0.028	ug/L	0.020	1	03/24/21 13:00	03/19/21	
Vanadium	6020A	6.85	ug/L	0.20	1	03/24/21 13:00	03/19/21	
Zinc	6020A	24.7	ug/L	2.0	1	03/24/21 13:00	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006

Service Request: K2102664
Date Collected: 03/16/21 13:50
Date Received: 03/17/21 12:45
Basis: NA

Hardness by ICP-AES Calculation 20th Ed.

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Hardness, Total as CaCO3	SM 2340 B	88.8	mg/L	0.07	1	03/22/21 16:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006

Service Request: K2102664
Date Collected: 03/16/21 13:50
Date Received: 03/17/21 12:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	20800	ug/L	21	1	03/22/21 17:01	03/19/21	
Iron	6010C	ND U	ug/L	21	1	03/22/21 17:01	03/19/21	
Magnesium	6010C	9220	ug/L	5.3	1	03/22/21 17:01	03/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/22/21 17:01	03/19/21	
Potassium	6010C	2830	ug/L	210	1	03/22/21 17:01	03/19/21	
Sodium	6010C	5660	ug/L	210	1	03/22/21 17:01	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006

Service Request: K2102664
Date Collected: 03/16/21 13:50
Date Received: 03/17/21 12:45
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	0.133	ug/L	0.050	1	03/24/21 13:07	03/19/21	
Arsenic	6020A	0.69	ug/L	0.50	1	03/24/21 13:07	03/19/21	
Barium	6020A	12.6	ug/L	0.050	1	03/24/21 13:07	03/19/21	
Beryllium	6020A	0.024	ug/L	0.020	1	03/24/21 13:07	03/19/21	
Cadmium	6020A	0.034	ug/L	0.020	1	03/24/21 13:07	03/19/21	
Calcium	6010C	20500	ug/L	21	1	03/22/21 16:45	03/19/21	
Chromium	6020A	1.32	ug/L	0.20	1	03/24/21 13:07	03/19/21	
Cobalt	6020A	0.351	ug/L	0.020	1	03/24/21 13:07	03/19/21	
Copper	6020A	1.14	ug/L	0.10	1	03/25/21 17:47	03/24/21	
Iron	6010C	835	ug/L	21	1	03/22/21 16:45	03/19/21	
Lead	6020A	0.304	ug/L	0.020	1	03/25/21 17:47	03/24/21	
Magnesium	6010C	9140	ug/L	5.3	1	03/22/21 16:45	03/19/21	
Manganese	6010C	103	ug/L	1.1	1	03/22/21 16:45	03/19/21	
Nickel	6020A	1.17	ug/L	0.20	1	03/24/21 13:07	03/19/21	
Potassium	6010C	2870	ug/L	210	1	03/22/21 16:45	03/19/21	
Selenium	6020A	ND U	ug/L	1.0	1	03/24/21 13:07	03/19/21	
Silicon	6010C	24700	ug/L	210	1	03/22/21 16:45	03/19/21	
Silver	6020A	ND U	ug/L	0.020	1	03/24/21 13:07	03/19/21	
Sodium	6010C	5620	ug/L	210	1	03/22/21 16:45	03/19/21	
Thallium	6020A	ND U	ug/L	0.020	1	03/24/21 13:07	03/19/21	
Vanadium	6020A	6.89	ug/L	0.20	1	03/24/21 13:07	03/19/21	
Zinc	6020A	25.8	ug/L	2.0	1	03/24/21 13:07	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-06-NE
Lab Code: K2102664-007

Service Request: K2102664
Date Collected: 03/16/21 14:40
Date Received: 03/17/21 12:45
Basis: NA

Hardness by ICP-AES Calculation 20th Ed.

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Hardness, Total as CaCO3	SM 2340 B	105	mg/L	0.07	1	03/22/21 16:47	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-06-NE
Lab Code: K2102664-007

Service Request: K2102664
Date Collected: 03/16/21 14:40
Date Received: 03/17/21 12:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	24600	ug/L	21	1	03/22/21 17:03	03/19/21	
Iron	6010C	225	ug/L	21	1	03/22/21 17:03	03/19/21	
Magnesium	6010C	10600	ug/L	5.3	1	03/22/21 17:03	03/19/21	
Manganese	6010C	235	ug/L	1.1	1	03/22/21 17:03	03/19/21	
Potassium	6010C	3630	ug/L	210	1	03/22/21 17:03	03/19/21	
Sodium	6010C	6180	ug/L	210	1	03/22/21 17:03	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-06-NE
Lab Code: K2102664-007

Service Request: K2102664
Date Collected: 03/16/21 14:40
Date Received: 03/17/21 12:45
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	0.068	ug/L	0.050	1	03/24/21 13:09	03/19/21	
Arsenic	6020A	0.66	ug/L	0.50	1	03/24/21 13:09	03/19/21	
Barium	6020A	6.95	ug/L	0.050	1	03/24/21 13:09	03/19/21	
Beryllium	6020A	ND U	ug/L	0.020	1	03/24/21 13:09	03/19/21	
Cadmium	6020A	ND U	ug/L	0.020	1	03/24/21 13:09	03/19/21	
Calcium	6010C	24600	ug/L	21	1	03/22/21 16:47	03/19/21	
Chromium	6020A	1.04	ug/L	0.20	1	03/24/21 13:09	03/19/21	
Cobalt	6020A	0.534	ug/L	0.020	1	03/24/21 13:09	03/19/21	
Copper	6020A	0.54	ug/L	0.10	1	03/25/21 17:48	03/24/21	
Iron	6010C	18200	ug/L	21	1	03/22/21 16:47	03/19/21	
Lead	6020A	0.108	ug/L	0.020	1	03/25/21 17:48	03/24/21	
Magnesium	6010C	10700	ug/L	5.3	1	03/22/21 16:47	03/19/21	
Manganese	6010C	331	ug/L	1.1	1	03/22/21 16:47	03/19/21	
Nickel	6020A	1.63	ug/L	0.20	1	03/24/21 13:09	03/19/21	
Potassium	6010C	3620	ug/L	210	1	03/22/21 16:47	03/19/21	
Selenium	6020A	ND U	ug/L	1.0	1	03/24/21 13:09	03/19/21	
Silicon	6010C	22700	ug/L	210	1	03/22/21 16:47	03/19/21	
Silver	6020A	ND U	ug/L	0.020	1	03/24/21 13:09	03/19/21	
Sodium	6010C	6190	ug/L	210	1	03/22/21 16:47	03/19/21	
Thallium	6020A	ND U	ug/L	0.020	1	03/24/21 13:09	03/19/21	
Vanadium	6020A	6.09	ug/L	0.20	1	03/24/21 13:09	03/19/21	
Zinc	6020A	7.0	ug/L	2.0	1	03/24/21 13:09	03/19/21	



General Chemistry

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Service Request: K2102664
Date Collected: 03/16/21 11:10
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	ND U	mg/L	15	1	03/19/21 20:07	NA	
Ammonia as Nitrogen	350.1	ND U	mg/L	0.050	1	03/24/21 15:05	03/23/21	
Bicarbonate as CaCO3	SM 2320 B	ND U	mg/L	15	1	03/19/21 20:07	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	03/23/21 18:25	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	NA	
Chloride	300.0	ND U	mg/L	0.20	2	03/17/21 17:29	NA	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.10	2	03/17/21 17:29	NA	
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	03/18/21 09:20	NA	
Sulfate	300.0	ND U	mg/L	0.40	2	03/17/21 17:29	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Service Request: K2102664
Date Collected: 03/16/21 11:10
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	03/18/21 08:00	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Service Request: K2102664
Date Collected: 03/16/21 12:05
Date Received: 03/17/21 12:45

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	57	mg/L	15	1	03/19/21 20:07	NA	
Ammonia as Nitrogen	350.1	ND U	mg/L	0.050	1	03/24/21 15:05	03/23/21	
Bicarbonate as CaCO3	SM 2320 B	57	mg/L	15	1	03/19/21 20:07	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	03/23/21 18:25	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	NA	
Chloride	300.0	3.82	mg/L	0.20	2	03/17/21 18:16	NA	
Nitrate as Nitrogen	300.0	4.79	mg/L	0.10	2	03/17/21 18:16	NA	
Solids, Total Suspended (TSS)	SM 2540 D	11.5	mg/L	5.0	1	03/19/21 07:30	NA	
Sulfate	300.0	7.72	mg/L	0.40	2	03/17/21 18:16	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Service Request: K2102664
Date Collected: 03/16/21 12:05
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	144	mg/L	5.0	1	03/18/21 08:00	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-03-23S
Lab Code: K2102664-004

Service Request: K2102664
Date Collected: 03/16/21 12:45
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	49	mg/L	15	1	03/19/21 20:07	NA	
Ammonia as Nitrogen	350.1	ND U	mg/L	0.050	1	03/24/21 15:05	03/23/21	
Bicarbonate as CaCO3	SM 2320 B	49	mg/L	15	1	03/19/21 20:07	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	03/23/21 18:25	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	NA	
Chloride	300.0	3.18	mg/L	0.20	2	03/17/21 18:27	NA	
Nitrate as Nitrogen	300.0	3.79	mg/L	0.10	2	03/17/21 18:27	NA	
Solids, Total Suspended (TSS)	SM 2540 D	9.0	mg/L	5.0	1	03/19/21 07:30	NA	
Sulfate	300.0	6.77	mg/L	0.40	2	03/17/21 18:27	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-03-23S
Lab Code: K2102664-004

Service Request: K2102664
Date Collected: 03/16/21 12:45
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	151	mg/L	5.0	1	03/18/21 08:00	NA	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-04-22S
Lab Code: K2102664-005

Service Request: K2102664
Date Collected: 03/16/21 13:45
Date Received: 03/17/21 12:45

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	65	mg/L	15	1	03/19/21 20:07	NA	
Ammonia as Nitrogen	350.1	ND U	mg/L	0.050	1	03/24/21 15:05	03/23/21	
Bicarbonate as CaCO3	SM 2320 B	65	mg/L	15	1	03/19/21 20:07	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	03/23/21 18:25	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	NA	
Chloride	300.0	4.01	mg/L	0.20	2	03/17/21 18:39	NA	
Nitrate as Nitrogen	300.0	4.89	mg/L	0.10	2	03/17/21 18:39	NA	
Solids, Total Suspended (TSS)	SM 2540 D	10.0	mg/L	5.0	1	03/19/21 08:05	NA	
Sulfate	300.0	4.18	mg/L	0.40	2	03/17/21 18:39	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-04-22S
Lab Code: K2102664-005

Service Request: K2102664
Date Collected: 03/16/21 13:45
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	184	mg/L	5.0	1	03/18/21 08:00	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006

Service Request: K2102664
Date Collected: 03/16/21 13:50
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	65	mg/L	15	1	03/19/21 20:07	NA	
Ammonia as Nitrogen	350.1	ND U	mg/L	0.050	1	03/24/21 15:05	03/23/21	
Bicarbonate as CaCO3	SM 2320 B	65	mg/L	15	1	03/19/21 20:07	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	03/23/21 18:25	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	NA	
Chloride	300.0	4.07	mg/L	0.20	2	03/17/21 18:50	NA	
Nitrate as Nitrogen	300.0	4.94	mg/L	0.10	2	03/17/21 18:50	NA	
Solids, Total Suspended (TSS)	SM 2540 D	11.5	mg/L	5.0	1	03/19/21 08:05	NA	
Sulfate	300.0	4.26	mg/L	0.40	2	03/17/21 18:50	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-05-DUP1
Lab Code: K2102664-006

Service Request: K2102664
Date Collected: 03/16/21 13:50
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	167	mg/L	5.0	1	03/18/21 08:00	NA	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-06-NE
Lab Code: K2102664-007

Service Request: K2102664
Date Collected: 03/16/21 14:40
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	105	mg/L	15	1	03/19/21 20:07	NA	
Ammonia as Nitrogen	350.1	0.116	mg/L	0.050	1	03/24/21 15:05	03/23/21	
Bicarbonate as CaCO3	SM 2320 B	105	mg/L	15	1	03/19/21 20:07	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	03/23/21 18:25	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	NA	
Chloride	300.0	2.85	mg/L	0.20	2	03/17/21 19:02	NA	
Nitrate as Nitrogen	300.0	2.79	mg/L	0.10	2	03/17/21 19:02	NA	
Solids, Total Suspended (TSS)	SM 2540 D	45.5	mg/L	5.0	1	03/19/21 08:05	NA	
Sulfate	300.0	4.09	mg/L	0.40	2	03/17/21 19:02	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-031621-06-NE
Lab Code: K2102664-007

Service Request: K2102664
Date Collected: 03/16/21 14:40
Date Received: 03/17/21 12:45
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	190	mg/L	5.0	1	03/18/21 08:00	NA	



QC Summary Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
Trip Blank	K2102664-001	91	96	95
LB-031621-01-FB	K2102664-002	94	98	95
LB-031621-02-24S	K2102664-003	90	98	93
LB-031621-03-23S	K2102664-004	90	98	94
LB-031621-04-22S	K2102664-005	87	98	93
LB-031621-05-DUP1	K2102664-006	88	95	93
LB-031621-06-NE	K2102664-007	89	95	93
Method Blank	KQ2104290-05	90	97	96
Lab Control Sample	KQ2104290-03	100	99	99
Duplicate Lab Control Sample	KQ2104290-04	98	96	97
LB-031621-01-FB	KQ2104290-06	101	97	96
LB-031621-01-FB	KQ2104290-07	97	98	97

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/18/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: LB-031621-01-FB
Lab Code: K2102664-002
Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike KQ2104290-06			Duplicate Matrix Spike KQ2104290-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Acetone	ND U	91.1	50.0	182 *	95.5	50.0	191 *	68-134	5	30
Benzene	ND U	10.5	10.0	105	10.5	10.0	105	63-144	<1	30
Bromobenzene	ND U	9.35	10.0	94	9.19	10.0	92	72-122	2	30
Bromochloromethane	ND U	9.66	10.0	97	9.64	10.0	96	73-135	<1	30
Bromodichloromethane	ND U	10.1	10.0	101	10.0	10.0	100	61-134	<1	30
Bromoform	ND U	9.40	10.0	94	9.32	10.0	93	54-140	<1	30
Bromomethane	ND U	10.5	10.0	105	10.0	10.0	100	36-127	5	30
2-Butanone (MEK)	ND U	65.0	50.0	130	68.7	50.0	137	65-147	6	30
n-Butylbenzene	ND U	10.9	10.0	109	10.9	10.0	109	52-144	<1	30
sec-Butylbenzene	ND U	11.1	10.0	111	11.0	10.0	110	56-142	<1	30
tert-Butylbenzene	ND U	10.3	10.0	103	10.1	10.0	101	59-139	2	30
Carbon Disulfide	ND U	21.0	20.0	105	20.5	20.0	102	52-156	3	30
Carbon Tetrachloride	ND U	10.1	10.0	101	9.97	10.0	100	53-161	1	30
Chlorobenzene	ND U	9.58	10.0	96	9.37	10.0	94	69-126	2	30
Chloroethane	ND U	10.8	10.0	108	10.3	10.0	103	56-147	5	30
Chloroform	ND U	10.2	10.0	102	10.0	10.0	100	64-133	1	30
Chloromethane	ND U	13.8	10.0	138 *	12.8	10.0	128 *	49-127	7	30
2-Chlorotoluene	ND U	10.8	10.0	108	10.5	10.0	105	55-139	2	30
4-Chlorotoluene	ND U	10.7	10.0	107	10.6	10.0	106	57-138	2	30
1,2-Dibromo-3-chloropropane	ND U	11.0	10.0	110	11.4	10.0	114	59-133	4	30
Dibromochloromethane	ND U	9.26	10.0	93	9.05	10.0	91	68-125	2	30
1,2-Dibromoethane (EDB)	ND U	9.43	10.0	94	9.42	10.0	94	73-122	<1	30
Dibromomethane	ND U	10.6	10.0	106	10.4	10.0	104	68-132	2	30
1,2-Dichlorobenzene	ND U	9.97	10.0	100	9.93	10.0	99	72-119	<1	30
1,3-Dichlorobenzene	ND U	9.78	10.0	98	9.86	10.0	99	70-121	<1	30
1,4-Dichlorobenzene	ND U	9.41	10.0	94	9.58	10.0	96	72-121	2	30
Dichlorodifluoromethane	ND U	9.27	10.0	93	9.00	10.0	90	29-133	3	30
1,1-Dichloroethane	ND U	11.6	10.0	116	11.7	10.0	117	69-141	<1	30
cis-1,2-Dichloroethene	ND U	9.50	10.0	95	9.54	10.0	95	61-139	<1	30
trans-1,2-Dichloroethene	ND U	10.3	10.0	103	10.1	10.0	101	65-143	2	30
1,2-Dichloropropane	ND U	11.9	10.0	119	11.7	10.0	117	63-131	2	30
1,3-Dichloropropane	ND U	10.8	10.0	108	10.8	10.0	108	74-121	<1	30
2,2-Dichloropropane	ND U	11.4	10.0	114	11.2	10.0	112	39-161	2	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/18/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: LB-031621-01-FB
Lab Code: K2102664-002
Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike KQ2104290-06			Duplicate Matrix Spike KQ2104290-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1-Dichloropropene	ND U	11.4	10.0	114	11.2	10.0	112	61-148	1	30
cis-1,3-Dichloropropene	ND U	10.7	10.0	107	10.6	10.0	106	66-134	<1	30
trans-1,3-Dichloropropene	ND U	9.91	10.0	99	9.89	10.0	99	56-127	<1	30
Ethylbenzene	ND U	9.82	10.0	98	9.60	10.0	96	66-136	2	30
Hexachlorobutadiene	ND U	9.52	10.0	95	9.83	10.0	98	60-132	3	30
2-Hexanone	ND U	55.0	50.0	110	59.3	50.0	119	53-132	8	30
Isopropylbenzene	ND U	10.2	10.0	102	9.88	10.0	99	58-144	3	30
4-Isopropyltoluene	ND U	11.6	10.0	116	11.5	10.0	115	57-141	<1	30
Methyl tert-Butyl Ether	ND U	10.7	10.0	107	11.1	10.0	111	54-126	4	30
4-Methyl-2-pentanone (MIBK)	ND U	71.0	50.0	142 *	74.4	50.0	149 *	64-139	5	30
Methylene Chloride	ND U	9.96	10.0	100	9.87	10.0	99	70-133	<1	30
Naphthalene	ND U	9.65	10.0	97	10.6	10.0	106	52-147	9	30
n-Propylbenzene	ND U	11.1	10.0	111	10.9	10.0	109	55-144	2	30
Styrene	ND U	10.3	10.0	103	10.2	10.0	102	66-131	2	30
1,1,1,2-Tetrachloroethane	ND U	9.19	10.0	92	8.81	10.0	88	67-127	4	30
1,1,2,2-Tetrachloroethane	ND U	11.6	10.0	116	12.3	10.0	123	72-129	7	30
Tetrachloroethene (PCE)	ND U	8.79	10.0	88	8.46	10.0	85	61-131	4	30
Toluene	ND U	10.4	10.0	104	10.2	10.0	102	71-136	2	30
1,2,3-Trichlorobenzene	ND U	9.43	10.0	94	9.83	10.0	98	57-137	4	30
1,2,4-Trichlorobenzene	ND U	9.86	10.0	99	10.2	10.0	102	57-133	3	30
1,1,2-Trichloroethane	ND U	10.0	10.0	100	10.3	10.0	103	74-124	2	30
1,1,1-Trichloroethane (TCA)	ND U	10.2	10.0	102	10.1	10.0	101	57-151	1	30
Trichloroethene (TCE)	ND U	9.58	10.0	96	9.18	10.0	92	53-139	4	30
Trichlorofluoromethane (CFC 11)	ND U	8.65	10.0	87	8.40	10.0	84	45-124	3	30
1,2,3-Trichloropropane	ND U	10.5	10.0	105	11.4	10.0	114	71-127	8	30
1,2,4-Trimethylbenzene	ND U	10.9	10.0	109	10.9	10.0	109	61-132	<1	30
1,3,5-Trimethylbenzene	ND U	10.7	10.0	107	10.7	10.0	107	60-136	<1	30
Vinyl Chloride	ND U	11.5	10.0	115	11.1	10.0	111	49-136	3	30
o-Xylene	ND U	10.2	10.0	102	9.86	10.0	99	67-127	3	30
m,p-Xylenes	ND U	20.0	20.0	100	19.6	20.0	98	67-135	2	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2104290-05

Service Request: K2102664
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	03/18/21 14:31	
Benzene	ND U	0.50	1	03/18/21 14:31	
Bromobenzene	ND U	2.0	1	03/18/21 14:31	
Bromochloromethane	ND U	0.50	1	03/18/21 14:31	
Bromodichloromethane	ND U	0.50	1	03/18/21 14:31	
Bromoform	ND U	0.50	1	03/18/21 14:31	
Bromomethane	ND U	0.50	1	03/18/21 14:31	
2-Butanone (MEK)	ND U	20	1	03/18/21 14:31	
n-Butylbenzene	ND U	4.0	1	03/18/21 14:31	
sec-Butylbenzene	ND U	2.0	1	03/18/21 14:31	
tert-Butylbenzene	ND U	2.0	1	03/18/21 14:31	
Carbon Disulfide	ND U	0.50	1	03/18/21 14:31	
Carbon Tetrachloride	ND U	0.50	1	03/18/21 14:31	
Chlorobenzene	ND U	0.50	1	03/18/21 14:31	
Chloroethane	ND U	0.50	1	03/18/21 14:31	
Chloroform	ND U	0.50	1	03/18/21 14:31	
Chloromethane	ND U	0.50	1	03/18/21 14:31	
2-Chlorotoluene	ND U	2.0	1	03/18/21 14:31	
4-Chlorotoluene	ND U	2.0	1	03/18/21 14:31	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/18/21 14:31	
Dibromochloromethane	ND U	0.50	1	03/18/21 14:31	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/18/21 14:31	
Dibromomethane	ND U	0.50	1	03/18/21 14:31	
1,2-Dichlorobenzene	ND U	0.50	1	03/18/21 14:31	
1,3-Dichlorobenzene	ND U	0.50	1	03/18/21 14:31	
1,4-Dichlorobenzene	ND U	0.50	1	03/18/21 14:31	
Dichlorodifluoromethane	ND U	0.50	1	03/18/21 14:31	
1,1-Dichloroethane	ND U	0.50	1	03/18/21 14:31	
cis-1,2-Dichloroethene	ND U	0.50	1	03/18/21 14:31	
trans-1,2-Dichloroethene	ND U	0.50	1	03/18/21 14:31	
1,2-Dichloropropane	ND U	0.50	1	03/18/21 14:31	
1,3-Dichloropropane	ND U	0.50	1	03/18/21 14:31	
2,2-Dichloropropane	ND U	0.50	1	03/18/21 14:31	
1,1-Dichloropropene	ND U	0.50	1	03/18/21 14:31	
cis-1,3-Dichloropropene	ND U	0.50	1	03/18/21 14:31	
trans-1,3-Dichloropropene	ND U	0.50	1	03/18/21 14:31	
Ethylbenzene	ND U	0.50	1	03/18/21 14:31	
Hexachlorobutadiene	ND U	2.0	1	03/18/21 14:31	
2-Hexanone	ND U	20	1	03/18/21 14:31	
Isopropylbenzene	ND U	2.0	1	03/18/21 14:31	
4-Isopropyltoluene	ND U	2.0	1	03/18/21 14:31	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2104290-05

Service Request: K2102664
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	03/18/21 14:31	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/18/21 14:31	
Methylene Chloride	ND U	2.0	1	03/18/21 14:31	
Naphthalene	ND U	2.0	1	03/18/21 14:31	
n-Propylbenzene	ND U	2.0	1	03/18/21 14:31	
Styrene	ND U	0.50	1	03/18/21 14:31	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/18/21 14:31	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/18/21 14:31	
Tetrachloroethene (PCE)	ND U	0.50	1	03/18/21 14:31	
Toluene	ND U	0.50	1	03/18/21 14:31	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/18/21 14:31	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/18/21 14:31	
1,1,2-Trichloroethane	ND U	0.50	1	03/18/21 14:31	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/18/21 14:31	
Trichloroethene (TCE)	ND U	0.50	1	03/18/21 14:31	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/18/21 14:31	
1,2,3-Trichloropropane	ND U	0.50	1	03/18/21 14:31	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/18/21 14:31	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/18/21 14:31	
Vinyl Chloride	ND U	0.50	1	03/18/21 14:31	
o-Xylene	ND U	0.50	1	03/18/21 14:31	
m,p-Xylenes	ND U	0.50	1	03/18/21 14:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	03/18/21 14:31	
Dibromofluoromethane	97	73 - 122	03/18/21 14:31	
Toluene-d8	96	65 - 144	03/18/21 14:31	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Lechner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/18/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 716662

Analyte Name	Lab Control Sample KQ2104290-03			Duplicate Lab Control Sample KQ2104290-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	8.83	10.0	88	8.87	10.0	89	66-124	<1	30
1,1,1-Trichloroethane (TCA)	8.82	10.0	88	8.66	10.0	87	59-136	2	30
1,1,2,2-Tetrachloroethane	11.7	10.0	117	11.8	10.0	118	70-127	<1	30
1,1,2-Trichloroethane	10.0	10.0	100	10.2	10.0	102	74-118	2	30
1,1-Dichloroethane	11.1	10.0	111	10.7	10.0	107	68-132	3	30
1,1-Dichloropropene	9.47	10.0	95	9.50	10.0	95	59-134	<1	30
1,2,3-Trichlorobenzene	9.74	10.0	97	9.73	10.0	97	68-120	<1	30
1,2,3-Trichloropropane	10.5	10.0	105	11.1	10.0	111	69-123	5	30
1,2,4-Trichlorobenzene	10.1	10.0	101	10.2	10.0	102	58-126	<1	30
1,2,4-Trimethylbenzene	10.3	10.0	103	10.1	10.0	101	63-122	1	30
1,2-Dibromo-3-chloropropane	11.1	10.0	111	11.1	10.0	111	55-132	<1	30
1,2-Dibromoethane (EDB)	9.73	10.0	97	9.81	10.0	98	74-118	<1	30
1,2-Dichlorobenzene	9.80	10.0	98	9.81	10.0	98	72-115	<1	30
1,2-Dichloropropane	11.5	10.0	115	11.3	10.0	113	67-126	1	30
1,3,5-Trimethylbenzene	9.54	10.0	95	9.74	10.0	97	62-126	2	30
1,3-Dichlorobenzene	9.60	10.0	96	9.51	10.0	95	70-116	<1	30
1,3-Dichloropropane	11.0	10.0	110	11.0	10.0	110	75-116	<1	30
1,4-Dichlorobenzene	9.45	10.0	95	9.33	10.0	93	73-115	1	30
2,2-Dichloropropane	10.0	10.0	100	9.84	10.0	98	37-145	2	30
2-Butanone (MEK)	66.4	50.0	133	65.5	50.0	131	71-149	1	30
2-Chlorotoluene	9.86	10.0	99	9.88	10.0	99	55-131	<1	30
2-Hexanone	56.7	50.0	113	58.9	50.0	118	59-131	4	30
4-Chlorotoluene	9.91	10.0	99	9.94	10.0	99	66-121	<1	30
4-Isopropyltoluene	10.1	10.0	101	10.3	10.0	103	61-128	2	30
4-Methyl-2-pentanone (MIBK)	73.4	50.0	147 *	72.8	50.0	146 *	64-134	<1	30
Acetone	76.1	50.0	152 *	75.7	50.0	151 *	68-135	<1	30
Benzene	9.83	10.0	98	9.71	10.0	97	69-124	1	30
Bromobenzene	8.97	10.0	90	9.14	10.0	91	72-116	2	30
Bromochloromethane	10.2	10.0	102	9.59	10.0	96	75-131	6	30
Bromodichloromethane	10.0	10.0	100	9.92	10.0	99	63-129	1	30
Bromoform	9.42	10.0	94	9.54	10.0	95	52-144	1	30
Bromomethane	8.78	10.0	88	8.64	10.0	86	35-113	2	30
Carbon Disulfide	17.9	20.0	90	17.6	20.0	88	46-144	2	30
Carbon Tetrachloride	8.48	10.0	85	8.35	10.0	84	55-140	2	30
Chlorobenzene	9.15	10.0	92	9.16	10.0	92	72-116	<1	30
Chloroethane	9.10	10.0	91	9.23	10.0	92	58-134	1	30
Chloroform	9.61	10.0	96	9.54	10.0	95	70-129	<1	30
Chloromethane	11.4	10.0	114	11.2	10.0	112	34-130	3	30
cis-1,2-Dichloroethene	9.26	10.0	93	9.29	10.0	93	71-118	<1	30
cis-1,3-Dichloropropene	11.1	10.0	111	10.9	10.0	109	62-132	2	30
Dibromochloromethane	9.26	10.0	93	9.05	10.0	91	67-126	2	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/18/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 716662

Analyte Name	Lab Control Sample KQ2104290-03			Duplicate Lab Control Sample KQ2104290-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	10.8	10.0	108	10.4	10.0	104	69-128	3	30
Dichlorodifluoromethane	7.41	10.0	74	7.47	10.0	75	32-124	<1	30
Ethylbenzene	9.05	10.0	91	8.77	10.0	88	67-121	3	30
Hexachlorobutadiene	8.63	10.0	86	8.76	10.0	88	57-119	1	30
Isopropylbenzene	8.97	10.0	90	9.00	10.0	90	67-129	<1	30
m,p-Xylenes	18.3	20.0	92	18.1	20.0	91	69-121	1	30
Methyl tert-Butyl Ether	11.4	10.0	114	11.3	10.0	113	54-126	1	30
Methylene Chloride	10.1	10.0	101	9.79	10.0	98	71-122	3	30
Naphthalene	10.3	10.0	103	10.7	10.0	107	64-126	4	30
n-Butylbenzene	9.63	10.0	96	9.63	10.0	96	55-130	<1	30
n-Propylbenzene	9.65	10.0	97	9.79	10.0	98	61-124	1	30
o-Xylene	9.41	10.0	94	9.63	10.0	96	71-119	2	30
sec-Butylbenzene	9.38	10.0	94	9.49	10.0	95	59-128	1	30
Styrene	9.96	10.0	100	10.0	10.0	100	74-121	<1	30
tert-Butylbenzene	8.77	10.0	88	8.99	10.0	90	61-127	2	30
Tetrachloroethene (PCE)	7.45	10.0	75	7.62	10.0	76	62-126	2	30
Toluene	9.65	10.0	97	9.49	10.0	95	69-124	2	30
trans-1,2-Dichloroethene	9.35	10.0	94	9.07	10.0	91	67-125	3	30
trans-1,3-Dichloropropene	10.5	10.0	105	10.5	10.0	105	59-125	<1	30
Trichloroethene (TCE)	8.43	10.0	84	8.48	10.0	85	67-128	<1	30
Trichlorofluoromethane (CFC 11)	6.94	10.0	69	6.71	10.0	67	52-141	3	30
Vinyl Chloride	9.43	10.0	94	9.21	10.0	92	55-123	2	30



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2104120-02

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	ND U	ug/L	21	1	03/22/21 16:08	03/19/21	
Iron	6010C	ND U	ug/L	21	1	03/22/21 16:08	03/19/21	
Magnesium	6010C	ND U	ug/L	5.3	1	03/22/21 16:08	03/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	03/22/21 16:08	03/19/21	
Potassium	6010C	ND U	ug/L	210	1	03/22/21 16:08	03/19/21	
Silicon	6010C	ND U	ug/L	210	1	03/22/21 16:08	03/19/21	
Sodium	6010C	ND U	ug/L	210	1	03/22/21 16:08	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2104132-01

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	ND U	ug/L	0.050	1	03/24/21 12:39	03/19/21	
Arsenic	6020A	ND U	ug/L	0.50	1	03/24/21 12:39	03/19/21	
Barium	6020A	ND U	ug/L	0.050	1	03/24/21 12:39	03/19/21	
Beryllium	6020A	ND U	ug/L	0.020	1	03/24/21 12:39	03/19/21	
Cadmium	6020A	ND U	ug/L	0.020	1	03/24/21 12:39	03/19/21	
Chromium	6020A	ND U	ug/L	0.20	1	03/24/21 12:39	03/19/21	
Cobalt	6020A	ND U	ug/L	0.020	1	03/24/21 12:39	03/19/21	
Nickel	6020A	ND U	ug/L	0.20	1	03/24/21 12:39	03/19/21	
Selenium	6020A	ND U	ug/L	1.0	1	03/24/21 12:39	03/19/21	
Silver	6020A	ND U	ug/L	0.020	1	03/24/21 12:39	03/19/21	
Thallium	6020A	ND U	ug/L	0.020	1	03/24/21 12:39	03/19/21	
Vanadium	6020A	ND U	ug/L	0.20	1	03/24/21 12:39	03/19/21	
Zinc	6020A	ND U	ug/L	2.0	1	03/24/21 12:39	03/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2104566-01

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Copper	6020A	ND U	ug/L	0.10	1	03/25/21 17:28	03/24/21	
Lead	6020A	ND U	ug/L	0.020	1	03/25/21 17:28	03/24/21	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/22/21
Date Extracted: 03/19/21

Matrix Spike Summary
Total Metals

Sample Name: LB-031621-03-23S
Lab Code: K2102664-004
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2104120-08

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Calcium	14100	24200	10000	101	75-125
Iron	555	1550	1000	99	75-125
Magnesium	5610	16000	10000	104	75-125
Manganese	31.5	527	500	99	75-125
Potassium	2030	12500	10000	104	75-125
Sodium	5800	16000	10000	102	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/22/21
Date Extracted: 03/19/21

Matrix Spike Summary
Total Metals

Sample Name: LB-031621-03-23S
Lab Code: K2102664-004
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2104120-09

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Silicon	27200	36800	10000	97	75-125

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/24/21
Date Extracted: 03/19/21

Matrix Spike Summary
Total Metals

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003
Analysis Method: 6020A
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2104132-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Antimony	ND U	9.90	10.0	99	75-125
Arsenic	0.55	48.0	50.0	95	75-125
Barium	9.38	106	100	97	75-125
Beryllium	ND U	2.49	2.50	99	75-125
Cadmium	ND U	24.4	25.0	97	75-125
Chromium	0.85	10.6	10.0	97	75-125
Cobalt	0.379	24.0	25.0	94	75-125
Nickel	0.59	24.7	25.0	96	75-125
Selenium	ND U	48.3	50.0	97	75-125
Silver	ND U	12.3	12.5	98	75-125
Thallium	ND U	49.3	50.0	99	75-125
Vanadium	6.31	30.5	25.0	97	75-125
Zinc	32.2	56.9	25.0	99	75-125

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/25/21
Date Extracted: 03/24/21

Matrix Spike Summary
Total Metals

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003
Analysis Method: 6020A
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2104566-04

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Copper	0.72	12.3	12.5	93	75-125
Lead	0.177	50.1	50.0	100	75-125

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/22/21

Replicate Sample Summary

Total Metals

Sample Name: LB-031621-03-23S
Lab Code: K2102664-004

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2104120-07				
Calcium	6010C	21	14100	14200	14200	14200	<1	20
Iron	6010C	21	555	561	561	558	1	20
Magnesium	6010C	5.3	5610	5650	5650	5630	<1	20
Manganese	6010C	1.1	31.5	31.5	31.5	31.5	<1	20
Potassium	6010C	210	2030	2040	2040	2040	<1	20
Silicon	6010C	210	27200	27200	27200	27200	<1	20
Sodium	6010C	210	5800	5800	5800	5800	<1	20

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/24/21

Replicate Sample Summary

Total Metals

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2104132-03				
Antimony	6020A	0.050	ND U	ND U	ND	-	20	
Arsenic	6020A	0.50	0.55	0.54	0.55	2	20	
Barium	6020A	0.050	9.38	9.43	9.41	<1	20	
Beryllium	6020A	0.020	ND U	ND U	ND	-	20	
Cadmium	6020A	0.020	ND U	ND U	ND	-	20	
Chromium	6020A	0.20	0.85	0.88	0.87	3	20	
Cobalt	6020A	0.020	0.379	0.309	0.344	20	20	
Nickel	6020A	0.20	0.59	0.59	0.59	<1	20	
Selenium	6020A	1.0	ND U	ND U	ND	-	20	
Silver	6020A	0.020	ND U	ND U	ND	-	20	
Thallium	6020A	0.020	ND U	ND U	ND	-	20	
Vanadium	6020A	0.20	6.31	6.40	6.36	1	20	
Zinc	6020A	2.0	32.2	33.4	32.8	4	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.

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/25/21

Replicate Sample Summary

Total Metals

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2104566-03				
Copper	6020A	0.10	0.72	0.66	0.69	9	20	
Lead	6020A	0.020	0.177	0.176	0.177	<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
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/22/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2104120-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Calcium	6010C	12100	12500	96	80-120
Iron	6010C	2460	2500	99	80-120
Magnesium	6010C	12400	12500	99	80-120
Manganese	6010C	1220	1250	98	80-120
Potassium	6010C	12400	12500	99	80-120
Sodium	6010C	12200	12500	98	80-120

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/22/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2104120-06

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Silicon	6010C	9670	10000	97	80-120

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/24/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2104132-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony	6020A	9.94	10.0	99	80-120
Arsenic	6020A	49.6	50.0	99	80-120
Barium	6020A	96.2	100	96	80-120
Beryllium	6020A	2.39	2.50	96	80-120
Cadmium	6020A	24.6	25.0	98	80-120
Chromium	6020A	9.84	10.0	98	80-120
Cobalt	6020A	24.3	25.0	97	80-120
Nickel	6020A	24.9	25.0	100	80-120
Selenium	6020A	50.2	50.0	100	80-120
Silver	6020A	12.3	12.5	98	80-120
Thallium	6020A	50.3	50.0	101	80-120
Vanadium	6020A	24.6	25.0	98	80-120
Zinc	6020A	25.7	25.0	103	80-120

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/25/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2104566-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Copper	6020A	11.9	12.5	95	80-120
Lead	6020A	51.0	50.0	102	80-120



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2102664-MB1

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	ND U	mg/L	15	1	03/19/21 20:07	NA	
Ammonia as Nitrogen	350.1	ND U	mg/L	0.050	1	03/24/21 15:05	03/23/21	
Bicarbonate as CaCO3	SM 2320 B	ND U	mg/L	15	1	03/19/21 20:07	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	03/23/21 18:25	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	NA	
Chloride	300.0	ND U	mg/L	0.10	1	03/17/21 10:27	NA	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/17/21 10:27	NA	
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	03/18/21 09:20	NA	
Sulfate	300.0	ND U	mg/L	0.20	1	03/17/21 10:27	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2102664-MB1

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	03/18/21 08:00	NA	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2102664-MB2

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	03/18/21 09:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2102664-MB2

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	03/18/21 08:00	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2102664-MB3

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	03/19/21 10:35	
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	03/19/21 08:05	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2102664-MB4

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	03/19/21 08:05	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2102664-MB5

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	03/19/21 07:30	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2102664-MB6

Service Request: K2102664
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	03/19/21 07:30	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/17/21 - 03/19/21

Duplicate Matrix Spike Summary
General Chemistry Parameters

Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Units: mg/L
Basis: NA

Matrix Spike
K2102664-002MS

Duplicate Matrix Spike
K2102664-002DMS

Analyte Name	Method	Sample Result	Matrix Spike			Duplicate Matrix Spike			% Rec Limits	RPD	Limit
			Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	106	100	106	103	100	103	80-128	2	20
Chloride	300.0	ND U	7.73	8.00	97	7.80	8.00	97	90-110	<1	20
Nitrate as Nitrogen	300.0	ND U	7.64	8.00	95	7.72	8.00	97	90-110	1	20
Sulfate	300.0	ND U	7.87	8.00	98	7.89	8.00	99	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.

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/24/21
Date Extracted: 03/23/21

Duplicate Matrix Spike Summary
Ammonia as Nitrogen

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003
Analysis Method: 350.1
Prep Method: Method

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike K2102664-003MS		Duplicate Matrix Spike K2102664-003DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Ammonia as Nitrogen	ND U	2.01	2.00	100	2.03	2.00	101	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/17/21 - 03/19/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-031621-01-FB
Lab Code: K2102664-002

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K2102664-002DUP Result	Average	RPD	RPD Limit
Bicarbonate as CaCO3	SM 2320 B	15	ND U	ND U	NC	NC	20
Chemical Oxygen Demand (COD)	SM 5220 C	10	ND U	ND U	NC	NC	20
Chloride	300.0	0.20	ND U	ND U	NC	NC	20
Nitrate as Nitrogen	300.0	0.10	ND U	ND U	NC	NC	20
Sulfate	300.0	0.40	ND U	ND U	NC	NC	20
Alkalinity as CaCO3, Total	SM 2320 B	15	ND U	ND U	NC	NC	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
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Collected: 03/16/21
Date Received: 03/17/21
Date Analyzed: 03/24/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-031621-02-24S
Lab Code: K2102664-003

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2102664-003DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Ammonia as Nitrogen	350.1	0.050	ND U	ND U	NC	NC	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
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/17/21 - 03/24/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2102664-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity as CaCO ₃ , Total	SM 2320 B	38.4	37	103	90-110
Ammonia as Nitrogen	350.1	5.65	5.36	105	86-114
Bicarbonate as CaCO ₃	SM 2320 B	38	37	103	85-115
Carbon, Total Organic	SM 5310 C	23.8	25.0	95	83-117
Chemical Oxygen Demand (COD)	SM 5220 C	111	111	100	83-117
Chloride	300.0	5.06	5.00	101	90-110
Nitrate as Nitrogen	300.0	2.41	2.50	96	90-110
Solids, Total Dissolved	SM 2540 C	923	922	100	85-115
Solids, Total Suspended (TSS)	SM 2540 D	408	402	101	85-115
Sulfate	300.0	5.01	5.00	100	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/19/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2102664-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity as CaCO ₃ , Total	SM 2320 B	38.8	37	104	90-110
Bicarbonate as CaCO ₃	SM 2320 B	39	37	104	85-115
Solids, Total Suspended (TSS)	SM 2540 D	408	402	101	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2102664
Date Analyzed: 03/19/21
Date Extracted: NA

Lab Control Sample Summary
Solids, Total Suspended (TSS)

Analysis Method: SM 2540 D
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 716725

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2102664-LCS3	402	402	100	85-115

Third Quarter (July) 2021 Laboratory Reports



September 03, 2021

Service Request No:K2109260

Tiffany Andrews
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

Laboratory Results for: Leichner Lanfill

Dear Tiffany,

Enclosed are the results of the sample(s) submitted to our laboratory August 10, 2021
For your reference, these analyses have been assigned our service request number **K2109260**.

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

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Lanfill
Sample Matrix: Ground Water

Service Request: K2109260
Date Received: 08/10/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Five ground water samples were received for analysis at ALS Environmental on 08/10/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0816F0003.D. 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.

Method 8260C, 08/16/2021: The Trip Blank analyzed with this sample contained a low level of Toluene above the Method Reporting Limit (MRL). The associated field samples did not contain the analyte in question. The issue was narrated. No further corrective action was required.

The advisory criterion was exceeded for Dibromochloromethane in the replicate Laboratory Control Samples (LCS/DLCS) KQ2115824-03 and KQ2115824-04. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, this compound is not included in the subset of analytes used to control the analysis. The recovery information reported for this analyte 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



Date

09/03/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: TB1	Lab ID: K2109260-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Toluene	0.63			0.50	ug/L	8260C

CLIENT ID: LB-080921-01-5S	Lab ID: K2109260-002
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	161			5.0	mg/L	SM 2540 C
Chloride	4.25			0.20	mg/L	300.0
Nitrate as Nitrogen	4.48			0.10	mg/L	300.0

CLIENT ID: LB-080921-02-27I	Lab ID: K2109260-003
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	177			5.0	mg/L	SM 2540 C
Chloride	6.38			0.20	mg/L	300.0
Nitrate as Nitrogen	3.06			0.10	mg/L	300.0
Manganese, Dissolved	11.2			1.1	ug/L	6010C
Chloroform	0.61			0.50	ug/L	8260C

CLIENT ID: LB-080921-03-13I	Lab ID: K2109260-004
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	199			5.0	mg/L	SM 2540 C
Chloride	6.85			0.20	mg/L	300.0
Nitrate as Nitrogen	5.13			0.10	mg/L	300.0
Manganese, Dissolved	1.9			1.1	ug/L	6010C

CLIENT ID: LB-080921-04-Dup	Lab ID: K2109260-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	191			5.0	mg/L	SM 2540 C
Chloride	6.82			0.20	mg/L	300.0
Nitrate as Nitrogen	5.15			0.10	mg/L	300.0
Manganese, Dissolved	1.4			1.1	ug/L	6010C



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13

Service Request:K2109260

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2109260-001	TB1	8/9/2021	1130
K2109260-002	LB-080921-01-5S	8/9/2021	1245
K2109260-003	LB-080921-02-27I	8/9/2021	1345
K2109260-004	LB-080921-03-13I	8/9/2021	1440
K2109260-005	LB-080921-04-Dup	8/9/2021	1445




CHAIN OF CUSTODY

SR# K2109260

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

PAGE 1 OF 1 COC# _____

PROJECT NAME <u>Leichter Landfill</u>					NUMBER OF CONTAINERS	Semi-volatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/>	Hydrocarbons (see below) Gas <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	PCBs Aroclors <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Congeners <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/>	Metals Total or Dissolved (See List below) 8151 <input type="checkbox"/>	Cyanide <input type="checkbox"/>	Hex-Chrom (circle) pH, Cond, SA, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb, (circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	Alkalinity <input type="checkbox"/> CO3 <input type="checkbox"/> HCO3 <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>	REMARKS
PROJECT NUMBER <u>042210.30.13</u>																					
PROJECT MANAGER <u>Barb hary / T Andrews</u>																					
COMPANY NAME <u>SCS Engineers</u>																					
ADDRESS <u>15440 SW 72nd Ave</u>																					
CITY/STATE/ZIP <u>Portland, OR 97204</u>																					
E-MAIL ADDRESS <u>Tandrews@scsengineers.com</u>																					
PHONE # <u>503 724-0112</u> FAX # _____																					
SAMPLER'S SIGNATURE <u>[Signature]</u>																					
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX																	
TB1	8/9/21	1130		W	2		X														
LB-080921-01-5S	8/9/21	1245		W	5		X							X							
LB-080921-02-2FI	8/9/21	1345		W	5		X							X							
LB-080921-03-13I	8/9/21	1340		W	5		X							X							
LB-080921-04-DV	8/9/21	1445		W	5		X							X							

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____ _____ _____	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 Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) Container Supply Number  115140
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS: <u>Metals are field filtered</u> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: <u>[Signature]</u> Signature <u>T Andrews</u> Printed Name <u>8/10/21</u> Date/Time <u>SCS</u> Firm	RECEIVED BY: <u>[Signature]</u> Signature <u>ALC 1150</u> Printed Name <u>8/10/21</u> Date/Time <u>ALS 1150</u> Firm	RELINQUISHED BY: <u>[Signature]</u> Signature <u>ALS 1410</u> Printed Name <u>8/10/21</u> Date/Time <u>ALS 1410</u> Firm	RECEIVED BY: <u>[Signature]</u> Signature <u>ALS</u> Printed Name <u>8/10/21 1410</u> Date/Time <u>ALS</u> Firm
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PM H2

Cooler Receipt and Preservation Form

Client SES Engineers Service Request K21 09260
Received: 8-10-21 Opened: 8-10-21 By: SW Unloaded: 8-10-21 By: SW

- 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? 1 front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID <input checked="" type="checkbox"/> NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number <input checked="" type="checkbox"/> NA	Filed
<u>-</u>	<u>3.3</u>	<u>1207</u>					

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

SHORT HOLD TIME



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.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/analyte is offered by that state.

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.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13

Service Request: K2109260

Sample Name: TB1
Lab Code: K2109260-001
Sample Matrix: Ground Water

Date Collected: 08/9/21
Date Received: 08/10/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
MKANALY

Sample Name: LB-080921-01-5S
Lab Code: K2109260-002
Sample Matrix: Ground Water

Date Collected: 08/9/21
Date Received: 08/10/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JSANCHEZ

ABOYER

Sample Name: LB-080921-02-27I
Lab Code: K2109260-003
Sample Matrix: Ground Water

Date Collected: 08/9/21
Date Received: 08/10/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JSANCHEZ

ABOYER

Sample Name: LB-080921-03-13I
Lab Code: K2109260-004
Sample Matrix: Ground Water

Date Collected: 08/9/21
Date Received: 08/10/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
KABROWN
AMCKORNEY
MKANALY
JSANCHEZ

ABOYER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13

Service Request: K2109260

Sample Name: LB-080921-04-Dup
Lab Code: K2109260-005
Sample Matrix: Ground Water

Date Collected: 08/9/21
Date Received: 08/10/21

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

KABROWN
AMCKORNEY
MKANALY
JSANCHEZ



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 11:30
Date Received: 08/10/21 14:10

Sample Name: TB1
Lab Code: K2109260-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/16/21 16:48	
Benzene	ND U	0.50	1	08/16/21 16:48	
Bromobenzene	ND U	2.0	1	08/16/21 16:48	
Bromochloromethane	ND U	0.50	1	08/16/21 16:48	
Bromodichloromethane	ND U	0.50	1	08/16/21 16:48	
Bromoform	ND U	0.50	1	08/16/21 16:48	
Bromomethane	ND U	0.50	1	08/16/21 16:48	*
2-Butanone (MEK)	ND U	20	1	08/16/21 16:48	
n-Butylbenzene	ND U	4.0	1	08/16/21 16:48	
sec-Butylbenzene	ND U	2.0	1	08/16/21 16:48	
tert-Butylbenzene	ND U	2.0	1	08/16/21 16:48	
Carbon Disulfide	ND U	0.50	1	08/16/21 16:48	
Carbon Tetrachloride	ND U	0.50	1	08/16/21 16:48	
Chlorobenzene	ND U	0.50	1	08/16/21 16:48	
Chloroethane	ND U	0.50	1	08/16/21 16:48	
Chloroform	ND U	0.50	1	08/16/21 16:48	
Chloromethane	ND U	0.50	1	08/16/21 16:48	*
2-Chlorotoluene	ND U	2.0	1	08/16/21 16:48	
4-Chlorotoluene	ND U	2.0	1	08/16/21 16:48	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/16/21 16:48	
Dibromochloromethane	ND U	0.50	1	08/16/21 16:48	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/16/21 16:48	
Dibromomethane	ND U	0.50	1	08/16/21 16:48	
1,2-Dichlorobenzene	ND U	0.50	1	08/16/21 16:48	
1,3-Dichlorobenzene	ND U	0.50	1	08/16/21 16:48	
1,4-Dichlorobenzene	ND U	0.50	1	08/16/21 16:48	
Dichlorodifluoromethane	ND U	0.50	1	08/16/21 16:48	
1,1-Dichloroethane	ND U	0.50	1	08/16/21 16:48	
cis-1,2-Dichloroethene	ND U	0.50	1	08/16/21 16:48	
trans-1,2-Dichloroethene	ND U	0.50	1	08/16/21 16:48	
1,2-Dichloropropane	ND U	0.50	1	08/16/21 16:48	
1,3-Dichloropropane	ND U	0.50	1	08/16/21 16:48	
2,2-Dichloropropane	ND U	0.50	1	08/16/21 16:48	
1,1-Dichloropropene	ND U	0.50	1	08/16/21 16:48	
cis-1,3-Dichloropropene	ND U	0.50	1	08/16/21 16:48	
trans-1,3-Dichloropropene	ND U	0.50	1	08/16/21 16:48	
Ethylbenzene	ND U	0.50	1	08/16/21 16:48	
Hexachlorobutadiene	ND U	2.0	1	08/16/21 16:48	
2-Hexanone	ND U	20	1	08/16/21 16:48	
Isopropylbenzene	ND U	2.0	1	08/16/21 16:48	
4-Isopropyltoluene	ND U	2.0	1	08/16/21 16:48	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 11:30
Date Received: 08/10/21 14:10

Sample Name: TB1
Lab Code: K2109260-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/16/21 16:48	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/16/21 16:48	
Methylene Chloride	ND U	2.0	1	08/16/21 16:48	
Naphthalene	ND U	2.0	1	08/16/21 16:48	*
n-Propylbenzene	ND U	2.0	1	08/16/21 16:48	
Styrene	ND U	0.50	1	08/16/21 16:48	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/16/21 16:48	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/16/21 16:48	
Tetrachloroethene (PCE)	ND U	0.50	1	08/16/21 16:48	
Toluene	0.63	0.50	1	08/16/21 16:48	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/16/21 16:48	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/16/21 16:48	
1,1,2-Trichloroethane	ND U	0.50	1	08/16/21 16:48	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/16/21 16:48	
Trichloroethene (TCE)	ND U	0.50	1	08/16/21 16:48	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/16/21 16:48	
1,2,3-Trichloropropane	ND U	0.50	1	08/16/21 16:48	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/16/21 16:48	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/16/21 16:48	
Vinyl Chloride	ND U	0.50	1	08/16/21 16:48	
o-Xylene	ND U	0.50	1	08/16/21 16:48	
m,p-Xylenes	ND U	0.50	1	08/16/21 16:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	08/16/21 16:48	
Dibromofluoromethane	108	73 - 122	08/16/21 16:48	
Toluene-d8	100	65 - 144	08/16/21 16:48	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 12:45
Date Received: 08/10/21 14:10

Sample Name: LB-080921-01-5S
Lab Code: K2109260-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/16/21 17:14	
Benzene	ND U	0.50	1	08/16/21 17:14	
Bromobenzene	ND U	2.0	1	08/16/21 17:14	
Bromochloromethane	ND U	0.50	1	08/16/21 17:14	
Bromodichloromethane	ND U	0.50	1	08/16/21 17:14	
Bromoform	ND U	0.50	1	08/16/21 17:14	
Bromomethane	ND U	0.50	1	08/16/21 17:14	*
2-Butanone (MEK)	ND U	20	1	08/16/21 17:14	
n-Butylbenzene	ND U	4.0	1	08/16/21 17:14	
sec-Butylbenzene	ND U	2.0	1	08/16/21 17:14	
tert-Butylbenzene	ND U	2.0	1	08/16/21 17:14	
Carbon Disulfide	ND U	0.50	1	08/16/21 17:14	
Carbon Tetrachloride	ND U	0.50	1	08/16/21 17:14	
Chlorobenzene	ND U	0.50	1	08/16/21 17:14	
Chloroethane	ND U	0.50	1	08/16/21 17:14	
Chloroform	ND U	0.50	1	08/16/21 17:14	
Chloromethane	ND U	0.50	1	08/16/21 17:14	*
2-Chlorotoluene	ND U	2.0	1	08/16/21 17:14	
4-Chlorotoluene	ND U	2.0	1	08/16/21 17:14	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/16/21 17:14	
Dibromochloromethane	ND U	0.50	1	08/16/21 17:14	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/16/21 17:14	
Dibromomethane	ND U	0.50	1	08/16/21 17:14	
1,2-Dichlorobenzene	ND U	0.50	1	08/16/21 17:14	
1,3-Dichlorobenzene	ND U	0.50	1	08/16/21 17:14	
1,4-Dichlorobenzene	ND U	0.50	1	08/16/21 17:14	
Dichlorodifluoromethane	ND U	0.50	1	08/16/21 17:14	
1,1-Dichloroethane	ND U	0.50	1	08/16/21 17:14	
cis-1,2-Dichloroethene	ND U	0.50	1	08/16/21 17:14	
trans-1,2-Dichloroethene	ND U	0.50	1	08/16/21 17:14	
1,2-Dichloropropane	ND U	0.50	1	08/16/21 17:14	
1,3-Dichloropropane	ND U	0.50	1	08/16/21 17:14	
2,2-Dichloropropane	ND U	0.50	1	08/16/21 17:14	
1,1-Dichloropropene	ND U	0.50	1	08/16/21 17:14	
cis-1,3-Dichloropropene	ND U	0.50	1	08/16/21 17:14	
trans-1,3-Dichloropropene	ND U	0.50	1	08/16/21 17:14	
Ethylbenzene	ND U	0.50	1	08/16/21 17:14	
Hexachlorobutadiene	ND U	2.0	1	08/16/21 17:14	
2-Hexanone	ND U	20	1	08/16/21 17:14	
Isopropylbenzene	ND U	2.0	1	08/16/21 17:14	
4-Isopropyltoluene	ND U	2.0	1	08/16/21 17:14	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 12:45
Date Received: 08/10/21 14:10

Sample Name: LB-080921-01-5S
Lab Code: K2109260-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/16/21 17:14	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/16/21 17:14	
Methylene Chloride	ND U	2.0	1	08/16/21 17:14	
Naphthalene	ND U	2.0	1	08/16/21 17:14	*
n-Propylbenzene	ND U	2.0	1	08/16/21 17:14	
Styrene	ND U	0.50	1	08/16/21 17:14	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/16/21 17:14	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/16/21 17:14	
Tetrachloroethene (PCE)	ND U	0.50	1	08/16/21 17:14	
Toluene	ND U	0.50	1	08/16/21 17:14	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/16/21 17:14	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/16/21 17:14	
1,1,2-Trichloroethane	ND U	0.50	1	08/16/21 17:14	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/16/21 17:14	
Trichloroethene (TCE)	ND U	0.50	1	08/16/21 17:14	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/16/21 17:14	
1,2,3-Trichloropropane	ND U	0.50	1	08/16/21 17:14	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/16/21 17:14	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/16/21 17:14	
Vinyl Chloride	ND U	0.50	1	08/16/21 17:14	
o-Xylene	ND U	0.50	1	08/16/21 17:14	
m,p-Xylenes	ND U	0.50	1	08/16/21 17:14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	08/16/21 17:14	
Dibromofluoromethane	110	73 - 122	08/16/21 17:14	
Toluene-d8	104	65 - 144	08/16/21 17:14	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 13:45
Date Received: 08/10/21 14:10

Sample Name: LB-080921-02-271
Lab Code: K2109260-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/16/21 17:41	
Benzene	ND U	0.50	1	08/16/21 17:41	
Bromobenzene	ND U	2.0	1	08/16/21 17:41	
Bromochloromethane	ND U	0.50	1	08/16/21 17:41	
Bromodichloromethane	ND U	0.50	1	08/16/21 17:41	
Bromoform	ND U	0.50	1	08/16/21 17:41	
Bromomethane	ND U	0.50	1	08/16/21 17:41	*
2-Butanone (MEK)	ND U	20	1	08/16/21 17:41	
n-Butylbenzene	ND U	4.0	1	08/16/21 17:41	
sec-Butylbenzene	ND U	2.0	1	08/16/21 17:41	
tert-Butylbenzene	ND U	2.0	1	08/16/21 17:41	
Carbon Disulfide	ND U	0.50	1	08/16/21 17:41	
Carbon Tetrachloride	ND U	0.50	1	08/16/21 17:41	
Chlorobenzene	ND U	0.50	1	08/16/21 17:41	
Chloroethane	ND U	0.50	1	08/16/21 17:41	
Chloroform	0.61	0.50	1	08/16/21 17:41	
Chloromethane	ND U	0.50	1	08/16/21 17:41	*
2-Chlorotoluene	ND U	2.0	1	08/16/21 17:41	
4-Chlorotoluene	ND U	2.0	1	08/16/21 17:41	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/16/21 17:41	
Dibromochloromethane	ND U	0.50	1	08/16/21 17:41	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/16/21 17:41	
Dibromomethane	ND U	0.50	1	08/16/21 17:41	
1,2-Dichlorobenzene	ND U	0.50	1	08/16/21 17:41	
1,3-Dichlorobenzene	ND U	0.50	1	08/16/21 17:41	
1,4-Dichlorobenzene	ND U	0.50	1	08/16/21 17:41	
Dichlorodifluoromethane	ND U	0.50	1	08/16/21 17:41	
1,1-Dichloroethane	ND U	0.50	1	08/16/21 17:41	
cis-1,2-Dichloroethene	ND U	0.50	1	08/16/21 17:41	
trans-1,2-Dichloroethene	ND U	0.50	1	08/16/21 17:41	
1,2-Dichloropropane	ND U	0.50	1	08/16/21 17:41	
1,3-Dichloropropane	ND U	0.50	1	08/16/21 17:41	
2,2-Dichloropropane	ND U	0.50	1	08/16/21 17:41	
1,1-Dichloropropene	ND U	0.50	1	08/16/21 17:41	
cis-1,3-Dichloropropene	ND U	0.50	1	08/16/21 17:41	
trans-1,3-Dichloropropene	ND U	0.50	1	08/16/21 17:41	
Ethylbenzene	ND U	0.50	1	08/16/21 17:41	
Hexachlorobutadiene	ND U	2.0	1	08/16/21 17:41	
2-Hexanone	ND U	20	1	08/16/21 17:41	
Isopropylbenzene	ND U	2.0	1	08/16/21 17:41	
4-Isopropyltoluene	ND U	2.0	1	08/16/21 17:41	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 13:45
Date Received: 08/10/21 14:10

Sample Name: LB-080921-02-27I
Lab Code: K2109260-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/16/21 17:41	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/16/21 17:41	
Methylene Chloride	ND U	2.0	1	08/16/21 17:41	
Naphthalene	ND U	2.0	1	08/16/21 17:41	*
n-Propylbenzene	ND U	2.0	1	08/16/21 17:41	
Styrene	ND U	0.50	1	08/16/21 17:41	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/16/21 17:41	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/16/21 17:41	
Tetrachloroethene (PCE)	ND U	0.50	1	08/16/21 17:41	
Toluene	ND U	0.50	1	08/16/21 17:41	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/16/21 17:41	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/16/21 17:41	
1,1,2-Trichloroethane	ND U	0.50	1	08/16/21 17:41	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/16/21 17:41	
Trichloroethene (TCE)	ND U	0.50	1	08/16/21 17:41	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/16/21 17:41	
1,2,3-Trichloropropane	ND U	0.50	1	08/16/21 17:41	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/16/21 17:41	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/16/21 17:41	
Vinyl Chloride	ND U	0.50	1	08/16/21 17:41	
o-Xylene	ND U	0.50	1	08/16/21 17:41	
m,p-Xylenes	ND U	0.50	1	08/16/21 17:41	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	78	68 - 117	08/16/21 17:41	
Dibromofluoromethane	106	73 - 122	08/16/21 17:41	
Toluene-d8	102	65 - 144	08/16/21 17:41	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 14:40
Date Received: 08/10/21 14:10

Sample Name: LB-080921-03-13I
Lab Code: K2109260-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/16/21 18:08	
Benzene	ND U	0.50	1	08/16/21 18:08	
Bromobenzene	ND U	2.0	1	08/16/21 18:08	
Bromochloromethane	ND U	0.50	1	08/16/21 18:08	
Bromodichloromethane	ND U	0.50	1	08/16/21 18:08	
Bromoform	ND U	0.50	1	08/16/21 18:08	
Bromomethane	ND U	0.50	1	08/16/21 18:08	*
2-Butanone (MEK)	ND U	20	1	08/16/21 18:08	
n-Butylbenzene	ND U	4.0	1	08/16/21 18:08	
sec-Butylbenzene	ND U	2.0	1	08/16/21 18:08	
tert-Butylbenzene	ND U	2.0	1	08/16/21 18:08	
Carbon Disulfide	ND U	0.50	1	08/16/21 18:08	
Carbon Tetrachloride	ND U	0.50	1	08/16/21 18:08	
Chlorobenzene	ND U	0.50	1	08/16/21 18:08	
Chloroethane	ND U	0.50	1	08/16/21 18:08	
Chloroform	ND U	0.50	1	08/16/21 18:08	
Chloromethane	ND U	0.50	1	08/16/21 18:08	*
2-Chlorotoluene	ND U	2.0	1	08/16/21 18:08	
4-Chlorotoluene	ND U	2.0	1	08/16/21 18:08	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/16/21 18:08	
Dibromochloromethane	ND U	0.50	1	08/16/21 18:08	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/16/21 18:08	
Dibromomethane	ND U	0.50	1	08/16/21 18:08	
1,2-Dichlorobenzene	ND U	0.50	1	08/16/21 18:08	
1,3-Dichlorobenzene	ND U	0.50	1	08/16/21 18:08	
1,4-Dichlorobenzene	ND U	0.50	1	08/16/21 18:08	
Dichlorodifluoromethane	ND U	0.50	1	08/16/21 18:08	
1,1-Dichloroethane	ND U	0.50	1	08/16/21 18:08	
cis-1,2-Dichloroethene	ND U	0.50	1	08/16/21 18:08	
trans-1,2-Dichloroethene	ND U	0.50	1	08/16/21 18:08	
1,2-Dichloropropane	ND U	0.50	1	08/16/21 18:08	
1,3-Dichloropropane	ND U	0.50	1	08/16/21 18:08	
2,2-Dichloropropane	ND U	0.50	1	08/16/21 18:08	
1,1-Dichloropropene	ND U	0.50	1	08/16/21 18:08	
cis-1,3-Dichloropropene	ND U	0.50	1	08/16/21 18:08	
trans-1,3-Dichloropropene	ND U	0.50	1	08/16/21 18:08	
Ethylbenzene	ND U	0.50	1	08/16/21 18:08	
Hexachlorobutadiene	ND U	2.0	1	08/16/21 18:08	
2-Hexanone	ND U	20	1	08/16/21 18:08	
Isopropylbenzene	ND U	2.0	1	08/16/21 18:08	
4-Isopropyltoluene	ND U	2.0	1	08/16/21 18:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 14:40
Date Received: 08/10/21 14:10

Sample Name: LB-080921-03-13I
Lab Code: K2109260-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/16/21 18:08	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/16/21 18:08	
Methylene Chloride	ND U	2.0	1	08/16/21 18:08	
Naphthalene	ND U	2.0	1	08/16/21 18:08	*
n-Propylbenzene	ND U	2.0	1	08/16/21 18:08	
Styrene	ND U	0.50	1	08/16/21 18:08	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/16/21 18:08	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/16/21 18:08	
Tetrachloroethene (PCE)	ND U	0.50	1	08/16/21 18:08	
Toluene	ND U	0.50	1	08/16/21 18:08	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/16/21 18:08	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/16/21 18:08	
1,1,2-Trichloroethane	ND U	0.50	1	08/16/21 18:08	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/16/21 18:08	
Trichloroethene (TCE)	ND U	0.50	1	08/16/21 18:08	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/16/21 18:08	
1,2,3-Trichloropropane	ND U	0.50	1	08/16/21 18:08	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/16/21 18:08	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/16/21 18:08	
Vinyl Chloride	ND U	0.50	1	08/16/21 18:08	
o-Xylene	ND U	0.50	1	08/16/21 18:08	
m,p-Xylenes	ND U	0.50	1	08/16/21 18:08	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	68 - 117	08/16/21 18:08	
Dibromofluoromethane	107	73 - 122	08/16/21 18:08	
Toluene-d8	101	65 - 144	08/16/21 18:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 14:45
Date Received: 08/10/21 14:10

Sample Name: LB-080921-04-Dup
Lab Code: K2109260-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/16/21 18:34	
Benzene	ND U	0.50	1	08/16/21 18:34	
Bromobenzene	ND U	2.0	1	08/16/21 18:34	
Bromochloromethane	ND U	0.50	1	08/16/21 18:34	
Bromodichloromethane	ND U	0.50	1	08/16/21 18:34	
Bromoform	ND U	0.50	1	08/16/21 18:34	
Bromomethane	ND U	0.50	1	08/16/21 18:34	*
2-Butanone (MEK)	ND U	20	1	08/16/21 18:34	
n-Butylbenzene	ND U	4.0	1	08/16/21 18:34	
sec-Butylbenzene	ND U	2.0	1	08/16/21 18:34	
tert-Butylbenzene	ND U	2.0	1	08/16/21 18:34	
Carbon Disulfide	ND U	0.50	1	08/16/21 18:34	
Carbon Tetrachloride	ND U	0.50	1	08/16/21 18:34	
Chlorobenzene	ND U	0.50	1	08/16/21 18:34	
Chloroethane	ND U	0.50	1	08/16/21 18:34	
Chloroform	ND U	0.50	1	08/16/21 18:34	
Chloromethane	ND U	0.50	1	08/16/21 18:34	*
2-Chlorotoluene	ND U	2.0	1	08/16/21 18:34	
4-Chlorotoluene	ND U	2.0	1	08/16/21 18:34	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/16/21 18:34	
Dibromochloromethane	ND U	0.50	1	08/16/21 18:34	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/16/21 18:34	
Dibromomethane	ND U	0.50	1	08/16/21 18:34	
1,2-Dichlorobenzene	ND U	0.50	1	08/16/21 18:34	
1,3-Dichlorobenzene	ND U	0.50	1	08/16/21 18:34	
1,4-Dichlorobenzene	ND U	0.50	1	08/16/21 18:34	
Dichlorodifluoromethane	ND U	0.50	1	08/16/21 18:34	
1,1-Dichloroethane	ND U	0.50	1	08/16/21 18:34	
cis-1,2-Dichloroethene	ND U	0.50	1	08/16/21 18:34	
trans-1,2-Dichloroethene	ND U	0.50	1	08/16/21 18:34	
1,2-Dichloropropane	ND U	0.50	1	08/16/21 18:34	
1,3-Dichloropropane	ND U	0.50	1	08/16/21 18:34	
2,2-Dichloropropane	ND U	0.50	1	08/16/21 18:34	
1,1-Dichloropropene	ND U	0.50	1	08/16/21 18:34	
cis-1,3-Dichloropropene	ND U	0.50	1	08/16/21 18:34	
trans-1,3-Dichloropropene	ND U	0.50	1	08/16/21 18:34	
Ethylbenzene	ND U	0.50	1	08/16/21 18:34	
Hexachlorobutadiene	ND U	2.0	1	08/16/21 18:34	
2-Hexanone	ND U	20	1	08/16/21 18:34	
Isopropylbenzene	ND U	2.0	1	08/16/21 18:34	
4-Isopropyltoluene	ND U	2.0	1	08/16/21 18:34	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21 14:45
Date Received: 08/10/21 14:10

Sample Name: LB-080921-04-Dup
Lab Code: K2109260-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/16/21 18:34	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/16/21 18:34	
Methylene Chloride	ND U	2.0	1	08/16/21 18:34	
Naphthalene	ND U	2.0	1	08/16/21 18:34	*
n-Propylbenzene	ND U	2.0	1	08/16/21 18:34	
Styrene	ND U	0.50	1	08/16/21 18:34	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/16/21 18:34	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/16/21 18:34	
Tetrachloroethene (PCE)	ND U	0.50	1	08/16/21 18:34	
Toluene	ND U	0.50	1	08/16/21 18:34	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/16/21 18:34	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/16/21 18:34	
1,1,2-Trichloroethane	ND U	0.50	1	08/16/21 18:34	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/16/21 18:34	
Trichloroethene (TCE)	ND U	0.50	1	08/16/21 18:34	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/16/21 18:34	
1,2,3-Trichloropropane	ND U	0.50	1	08/16/21 18:34	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/16/21 18:34	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/16/21 18:34	
Vinyl Chloride	ND U	0.50	1	08/16/21 18:34	
o-Xylene	ND U	0.50	1	08/16/21 18:34	
m,p-Xylenes	ND U	0.50	1	08/16/21 18:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	68 - 117	08/16/21 18:34	
Dibromofluoromethane	113	73 - 122	08/16/21 18:34	
Toluene-d8	104	65 - 144	08/16/21 18:34	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-01-5S
Lab Code: K2109260-002

Service Request: K2109260
Date Collected: 08/09/21 12:45
Date Received: 08/10/21 14:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 09:57	08/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	09/02/21 09:57	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-02-27I
Lab Code: K2109260-003

Service Request: K2109260
Date Collected: 08/09/21 13:45
Date Received: 08/10/21 14:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 10:00	08/19/21	
Manganese	6010C	11.2	ug/L	1.1	1	09/02/21 10:00	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-03-13I
Lab Code: K2109260-004

Service Request: K2109260
Date Collected: 08/09/21 14:40
Date Received: 08/10/21 14:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 10:34	08/19/21	
Manganese	6010C	1.9	ug/L	1.1	1	09/02/21 10:34	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-04-Dup
Lab Code: K2109260-005

Service Request: K2109260
Date Collected: 08/09/21 14:45
Date Received: 08/10/21 14:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 10:36	08/19/21	
Manganese	6010C	1.4	ug/L	1.1	1	09/02/21 10:36	08/19/21	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-01-5S
Lab Code: K2109260-002

Service Request: K2109260
Date Collected: 08/09/21 12:45
Date Received: 08/10/21 14:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	4.25	mg/L	0.20	2	08/10/21 21:20	
Nitrate as Nitrogen	300.0	4.48	mg/L	0.10	2	08/10/21 21:20	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-01-5S
Lab Code: K2109260-002

Service Request: K2109260
Date Collected: 08/09/21 12:45
Date Received: 08/10/21 14:10
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	161	mg/L	5.0	1	08/11/21 09:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-02-27I
Lab Code: K2109260-003

Service Request: K2109260
Date Collected: 08/09/21 13:45
Date Received: 08/10/21 14:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	6.38	mg/L	0.20	2	08/10/21 21:29	
Nitrate as Nitrogen	300.0	3.06	mg/L	0.10	2	08/10/21 21:29	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-02-27I
Lab Code: K2109260-003

Service Request: K2109260
Date Collected: 08/09/21 13:45
Date Received: 08/10/21 14:10
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	177	mg/L	5.0	1	08/11/21 09:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-03-13I
Lab Code: K2109260-004

Service Request: K2109260
Date Collected: 08/09/21 14:40
Date Received: 08/10/21 14:10
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Chloride	300.0	6.85	mg/L	0.20	2	08/10/21 21:39	
Nitrate as Nitrogen	300.0	5.13	mg/L	0.10	2	08/10/21 21:39	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-03-13I
Lab Code: K2109260-004

Service Request: K2109260
Date Collected: 08/09/21 14:40
Date Received: 08/10/21 14:10
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	199	mg/L	5.0	1	08/11/21 09:10	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-04-Dup
Lab Code: K2109260-005

Service Request: K2109260
Date Collected: 08/09/21 14:45
Date Received: 08/10/21 14:10
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Chloride	300.0	6.82	mg/L	0.20	2	08/10/21 21:49	
Nitrate as Nitrogen	300.0	5.15	mg/L	0.10	2	08/10/21 21:49	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-080921-04-Dup
Lab Code: K2109260-005

Service Request: K2109260
Date Collected: 08/09/21 14:45
Date Received: 08/10/21 14:10
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	191	mg/L	5.0	1	08/11/21 09:10	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
TB1	K2109260-001	81	108	100
LB-080921-01-5S	K2109260-002	81	110	104
LB-080921-02-27I	K2109260-003	78	106	102
LB-080921-03-13I	K2109260-004	79	107	101
LB-080921-04-Dup	K2109260-005	83	113	104
Method Blank	KQ2115824-05	82	105	102
Lab Control Sample	KQ2115824-03	93	100	102
Duplicate Lab Control Sample	KQ2115824-04	95	102	104

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2115824-05

Service Request: K2109260
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/16/21 12:23	
Benzene	ND U	0.50	1	08/16/21 12:23	
Bromobenzene	ND U	2.0	1	08/16/21 12:23	
Bromochloromethane	ND U	0.50	1	08/16/21 12:23	
Bromodichloromethane	ND U	0.50	1	08/16/21 12:23	
Bromoform	ND U	0.50	1	08/16/21 12:23	
Bromomethane	ND U	0.50	1	08/16/21 12:23	
2-Butanone (MEK)	ND U	20	1	08/16/21 12:23	
n-Butylbenzene	ND U	4.0	1	08/16/21 12:23	
sec-Butylbenzene	ND U	2.0	1	08/16/21 12:23	
tert-Butylbenzene	ND U	2.0	1	08/16/21 12:23	
Carbon Disulfide	ND U	0.50	1	08/16/21 12:23	
Carbon Tetrachloride	ND U	0.50	1	08/16/21 12:23	
Chlorobenzene	ND U	0.50	1	08/16/21 12:23	
Chloroethane	ND U	0.50	1	08/16/21 12:23	
Chloroform	ND U	0.50	1	08/16/21 12:23	
Chloromethane	ND U	0.50	1	08/16/21 12:23	
2-Chlorotoluene	ND U	2.0	1	08/16/21 12:23	
4-Chlorotoluene	ND U	2.0	1	08/16/21 12:23	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/16/21 12:23	
Dibromochloromethane	ND U	0.50	1	08/16/21 12:23	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/16/21 12:23	
Dibromomethane	ND U	0.50	1	08/16/21 12:23	
1,2-Dichlorobenzene	ND U	0.50	1	08/16/21 12:23	
1,3-Dichlorobenzene	ND U	0.50	1	08/16/21 12:23	
1,4-Dichlorobenzene	ND U	0.50	1	08/16/21 12:23	
Dichlorodifluoromethane	ND U	0.50	1	08/16/21 12:23	
1,1-Dichloroethane	ND U	0.50	1	08/16/21 12:23	
cis-1,2-Dichloroethene	ND U	0.50	1	08/16/21 12:23	
trans-1,2-Dichloroethene	ND U	0.50	1	08/16/21 12:23	
1,2-Dichloropropane	ND U	0.50	1	08/16/21 12:23	
1,3-Dichloropropane	ND U	0.50	1	08/16/21 12:23	
2,2-Dichloropropane	ND U	0.50	1	08/16/21 12:23	
1,1-Dichloropropene	ND U	0.50	1	08/16/21 12:23	
cis-1,3-Dichloropropene	ND U	0.50	1	08/16/21 12:23	
trans-1,3-Dichloropropene	ND U	0.50	1	08/16/21 12:23	
Ethylbenzene	ND U	0.50	1	08/16/21 12:23	
Hexachlorobutadiene	ND U	2.0	1	08/16/21 12:23	
2-Hexanone	ND U	20	1	08/16/21 12:23	
Isopropylbenzene	ND U	2.0	1	08/16/21 12:23	
4-Isopropyltoluene	ND U	2.0	1	08/16/21 12:23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2115824-05

Service Request: K2109260
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/16/21 12:23	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/16/21 12:23	
Methylene Chloride	ND U	2.0	1	08/16/21 12:23	
Naphthalene	ND U	2.0	1	08/16/21 12:23	
n-Propylbenzene	ND U	2.0	1	08/16/21 12:23	
Styrene	ND U	0.50	1	08/16/21 12:23	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/16/21 12:23	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/16/21 12:23	
Tetrachloroethene (PCE)	ND U	0.50	1	08/16/21 12:23	
Toluene	ND U	0.50	1	08/16/21 12:23	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/16/21 12:23	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/16/21 12:23	
1,1,2-Trichloroethane	ND U	0.50	1	08/16/21 12:23	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/16/21 12:23	
Trichloroethene (TCE)	ND U	0.50	1	08/16/21 12:23	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/16/21 12:23	
1,2,3-Trichloropropane	ND U	0.50	1	08/16/21 12:23	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/16/21 12:23	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/16/21 12:23	
Vinyl Chloride	ND U	0.50	1	08/16/21 12:23	
o-Xylene	ND U	0.50	1	08/16/21 12:23	
m,p-Xylenes	ND U	0.50	1	08/16/21 12:23	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	08/16/21 12:23	
Dibromofluoromethane	105	73 - 122	08/16/21 12:23	
Toluene-d8	102	65 - 144	08/16/21 12:23	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Analyzed: 08/16/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 735147

Analyte Name	Lab Control Sample KQ2115824-03			Duplicate Lab Control Sample KQ2115824-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	10.9	10.0	109	10.4	10.0	104	66-124	5	30
1,1,1-Trichloroethane (TCA)	10.4	10.0	104	10.9	10.0	109	59-136	4	30
1,1,2,2-Tetrachloroethane	9.42	10.0	94	9.22	10.0	92	70-127	2	30
1,1,2-Trichloroethane	9.55	10.0	96	9.83	10.0	98	74-118	3	30
1,1-Dichloroethane	10.0	10.0	100	10.0	10.0	100	68-132	<1	30
1,1-Dichloropropene	9.75	10.0	98	9.25	10.0	93	59-134	5	30
1,2,3-Trichlorobenzene	8.62	10.0	86	8.72	10.0	87	68-120	1	30
1,2,3-Trichloropropane	11.0	10.0	110	11.1	10.0	111	69-123	<1	30
1,2,4-Trichlorobenzene	9.00	10.0	90	8.79	10.0	88	58-126	2	30
1,2,4-Trimethylbenzene	9.10	10.0	91	8.95	10.0	90	63-122	2	30
1,2-Dibromo-3-chloropropane	10.4	10.0	104	9.90	10.0	99	55-132	5	30
1,2-Dibromoethane (EDB)	9.76	10.0	98	9.66	10.0	97	74-118	1	30
1,2-Dichlorobenzene	9.60	10.0	96	8.89	10.0	89	72-115	8	30
1,2-Dichloropropane	9.93	10.0	99	9.64	10.0	96	67-126	3	30
1,3,5-Trimethylbenzene	9.12	10.0	91	8.64	10.0	86	62-126	5	30
1,3-Dichlorobenzene	9.30	10.0	93	8.88	10.0	89	70-116	5	30
1,3-Dichloropropane	9.40	10.0	94	9.43	10.0	94	75-116	<1	30
1,4-Dichlorobenzene	9.54	10.0	95	9.10	10.0	91	73-115	5	30
2,2-Dichloropropane	9.85	10.0	99	9.64	10.0	96	37-145	2	30
2-Butanone (MEK)	104	100	104	101	100	101	71-149	3	30
2-Chlorotoluene	8.78	10.0	88	8.74	10.0	87	55-131	<1	30
2-Hexanone	89.4	100	89	87.6	100	88	59-131	2	30
4-Chlorotoluene	9.20	10.0	92	8.89	10.0	89	66-121	3	30
4-Isopropyltoluene	8.88	10.0	89	8.55	10.0	86	61-128	4	30
4-Methyl-2-pentanone (MIBK)	98.2	100	98	96.5	100	96	64-134	2	30
Acetone	100	100	100	97.9	100	98	68-135	3	30
Benzene	10.1	10.0	101	9.89	10.0	99	69-124	2	30
Bromobenzene	9.85	10.0	99	9.44	10.0	94	72-116	4	30
Bromochloromethane	10.4	10.0	104	10.1	10.0	101	75-131	4	30
Bromodichloromethane	11.4	10.0	114	11.5	10.0	115	63-129	<1	30
Bromoform	11.7	10.0	117	11.8	10.0	118	52-144	<1	30
Bromomethane	7.16	10.0	72	7.12	10.0	71	35-113	<1	30
Carbon Disulfide	9.39	10.0	94	9.37	10.0	94	46-144	<1	30
Carbon Tetrachloride	11.5	10.0	115	11.5	10.0	115	55-140	<1	30
Chlorobenzene	9.73	10.0	97	9.27	10.0	93	72-116	5	30
Chloroethane	10.2	10.0	102	10.8	10.0	108	58-134	5	30
Chloroform	10.1	10.0	101	10.7	10.0	107	70-129	5	30
Chloromethane	7.30	10.0	73	7.52	10.0	75	34-130	3	30
cis-1,2-Dichloroethene	10.0	10.0	100	9.75	10.0	98	71-118	3	30
cis-1,3-Dichloropropene	10.5	10.0	105	10.5	10.0	105	62-132	<1	30
Dibromochloromethane	12.9	10.0	129 *	12.7	10.0	127 *	67-126	1	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Analyzed: 08/16/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 735147

Analyte Name	Lab Control Sample KQ2115824-03			Duplicate Lab Control Sample KQ2115824-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	10.4	10.0	104	10.7	10.0	107	69-128	4	30
Dichlorodifluoromethane	8.98	10.0	90	8.73	10.0	87	32-124	3	30
Ethylbenzene	9.29	10.0	93	9.14	10.0	91	67-121	2	30
Hexachlorobutadiene	10.3	10.0	103	9.93	10.0	99	57-119	3	30
Isopropylbenzene	9.12	10.0	91	9.07	10.0	91	67-129	<1	30
m,p-Xylenes	18.3	20.0	92	18.2	20.0	91	69-121	<1	30
Methyl tert-Butyl Ether	18.7	20.0	93	18.6	20.0	93	54-126	<1	30
Methylene Chloride	9.29	10.0	93	9.05	10.0	91	71-122	3	30
Naphthalene	7.42	10.0	74	7.34	10.0	73	64-126	1	30
n-Butylbenzene	8.37	10.0	84	8.11	10.0	81	55-130	3	30
n-Propylbenzene	9.17	10.0	92	8.93	10.0	89	61-124	3	30
o-Xylene	8.98	10.0	90	8.78	10.0	88	71-119	2	30
sec-Butylbenzene	8.88	10.0	89	8.32	10.0	83	59-128	7	30
Styrene	9.68	10.0	97	8.90	10.0	89	74-121	8	30
tert-Butylbenzene	8.82	10.0	88	8.39	10.0	84	61-127	5	30
Tetrachloroethene (PCE)	10.0	10.0	100	9.74	10.0	97	62-126	3	30
Toluene	10.3	10.0	103	10.5	10.0	105	69-124	2	30
trans-1,2-Dichloroethene	10.1	10.0	101	9.70	10.0	97	67-125	4	30
trans-1,3-Dichloropropene	9.66	10.0	97	9.42	10.0	94	59-125	3	30
Trichloroethene (TCE)	9.79	10.0	98	9.86	10.0	99	67-128	<1	30
Trichlorofluoromethane (CFC 11)	9.80	10.0	98	9.93	10.0	99	52-141	1	30
Vinyl Chloride	9.13	10.0	91	9.42	10.0	94	55-123	3	30



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2115398-02

Service Request: K2109260
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 09:50	08/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	09/02/21 09:50	08/19/21	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Analyzed: 09/02/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2115398-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2600	2500	104	80-120
Manganese	6010C	1300	1250	104	80-120



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109260-MB1

Service Request: K2109260
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.10	1	08/10/21 12:07	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	08/10/21 12:07	

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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109260-MB1

Service Request: K2109260
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/11/21 09:10	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109260-MB2

Service Request: K2109260
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.10	1	08/10/21 20:02	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	08/10/21 20:02	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109260-MB2

Service Request: K2109260
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/11/21 09:10	

ALS Group USA, Corp.

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QA/QC Report

Client: SCS Engineers
Project Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Collected: 08/09/21
Date Received: 08/10/21
Date Analyzed: 08/11/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-080921-04-Dup
Lab Code: K2109260-005

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2109260- 005DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total Dissolved	SM 2540 C	5.0	191	193	192	<1	5

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 Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Analyzed: 08/10/21 - 08/11/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2109260-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.68	5.00	94	90-110
Nitrate as Nitrogen	300.0	2.38	2.50	95	90-110
Solids, Total Dissolved	SM 2540 C	917	922	99	85-115

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QA/QC Report

Client: SCS Engineers
Project: Leichner Lanfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109260
Date Analyzed: 08/10/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2109260-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.74	5.00	95	90-110
Nitrate as Nitrogen	300.0	2.39	2.50	96	90-110



September 03, 2021

Service Request No:K2109352

Tiffany Andrews
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

Laboratory Results for: Leichner Landfill

Dear Tiffany,

Enclosed are the results of the sample(s) submitted to our laboratory August 11, 2021
For your reference, these analyses have been assigned our service request number **K2109352**.

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

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Landfill
Sample Matrix: Ground Water

Service Request: K2109352
Date Received: 08/11/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Six ground water samples were received for analysis at ALS Environmental on 08/11/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

Method 300.0, 08/12/2021: Samples LB-081021-01-FB and LB-081021-01-10SR were received with insufficient holding time remaining. Additionally, sample LB-081021-01-10SR was initially over range and required subsequent dilution. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violation.

Volatiles by GC/MS:

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0819F005.D. 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.

Method 8260C, 08/19/2021: The Trip Blank (TB2) analyzed with these samples contained low levels of Toluene above the Method Reporting Limit (MRL). The associated field samples did not contain the analyte in question. No further corrective action was taken.

Approved by



Date

09/03/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: TB2	Lab ID: K2109352-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Toluene	0.50			0.50	ug/L	8260C

CLIENT ID: LB-081021-02-10SR	Lab ID: K2109352-003
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	235			5.0	mg/L	SM 2540 C
Chloride	5.65			0.20	mg/L	300.0
Nitrate as Nitrogen	15.2			0.50	mg/L	300.0
Manganese, Dissolved	3.0			1.1	ug/L	6010C

CLIENT ID: LB-081021-03-1S	Lab ID: K2109352-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	191			5.0	mg/L	SM 2540 C
Chloride	6.11			0.20	mg/L	300.0
Nitrate as Nitrogen	5.01			0.10	mg/L	300.0

CLIENT ID: LB-081021-04-26I	Lab ID: K2109352-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	191			5.0	mg/L	SM 2540 C
Chloride	6.81			0.20	mg/L	300.0
Nitrate as Nitrogen	4.49			0.10	mg/L	300.0
Manganese, Dissolved	3.5			1.1	ug/L	6010C

CLIENT ID: LB-081021-05-6S	Lab ID: K2109352-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	163			5.0	mg/L	SM 2540 C
Chloride	4.62			0.20	mg/L	300.0
Nitrate as Nitrogen	1.72			0.10	mg/L	300.0



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Lechner Landfill/04221030.13

Service Request:K2109352

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2109352-001	TB2	8/10/2021	0700
K2109352-002	LB-081021-01-FB	8/10/2021	0745
K2109352-003	LB-081021-02-10SR	8/10/2021	0830
K2109352-004	LB-081021-03-1S	8/10/2021	1140
K2109352-005	LB-081021-04-26I	8/10/2021	1225
K2109352-006	LB-081021-05-6S	8/10/2021	1310



CHAIN OF CUSTODY

SR# K2109352

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

PAGE OF COC#

PROJECT NAME: <u>Reichner Landfill</u>					NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/> Volatile Organics 624 <input type="checkbox"/> 8267 <input type="checkbox"/> 8021 <input type="checkbox"/> Hydrocarbons Gas <input type="checkbox"/> Diesel <input type="checkbox"/> BTEX <input type="checkbox"/> Oil & Grease/TRPH <input type="checkbox"/> Oil <input type="checkbox"/> 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/> Aroclors <input type="checkbox"/> Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 814 <input type="checkbox"/> Chlorophenolics Tri <input type="checkbox"/> Tetra <input type="checkbox"/> 8151 <input type="checkbox"/> Metals, Total or Dissolved (See List below) <input type="checkbox"/> RCP <input type="checkbox"/> Cyanide <input type="checkbox"/> (circle) pH, Cond. (A) SO4, PO4, F, NO2, NO3, BOD, TSS, <input checked="" type="checkbox"/> NH3-N, turb. DOC, NO2+NO3, COD, TKN, TOC, TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/> Alkalinity <input type="checkbox"/> CO3 <input type="checkbox"/> HCO3 <input type="checkbox"/> Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/> Dissolved Gases FSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/>	PROJECT NUMBER: <u>0422103013</u>	PROJECT MANAGER: <u>Barb Lucy / T Andrews</u>	COMPANY NAME: <u>SCS Engineers</u>	ADDRESS: <u>15940 SW 72nd Ave</u>	CITY/STATE/ZIP: <u>Portland, OR 97224</u>	E-MAIL ADDRESS: <u>Tandrews@scsengineers.com</u>	PHONE # <u>503 724-0112</u> FAX # <u> </u>	SAMPLER'S SIGNATURE:	REMARKS
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
TB2	8/10/21	0700		W			2								
LB-081021-01-FB	8/10/21	0745		W			5								
LB-081021-02-10CR	8/10/21	0830		W			5								
LB-081021-03-15	8/10/21	1140		W			5								
LB-081021-04-26E	8/10/21	1225		W			5								
LB-081021-05-6S	8/10/21	1310		W	5										

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # <u> </u> Bill To: <u> </u> _____ _____	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 Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu <u>Fe</u> Pb Mg <u>Mn</u> Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date <u> </u>	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <u>Metals are field filtered</u> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

Container Supply Number

 115140

RELINQUISHED BY: Signature: <u> </u> Date/Time: <u>8/11/21</u> Printed Name: <u> </u> Firm: <u> </u>	RECEIVED BY: Signature: <u> </u> Date/Time: <u>8/11/21</u> Printed Name: <u> </u> Firm: <u>ALS</u>	RELINQUISHED BY: Signature: <u> </u> Date/Time: <u>8/11/21</u> Printed Name: <u> </u> Firm: <u> </u>	RECEIVED BY: Signature: <u> </u> Date/Time: <u>8/11/21 1750</u> Printed Name: <u> </u> Firm: <u>ALS</u>
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PM

Cooler Receipt and Preservation Form

Client SCS Service Request K21 09352
Received: 8/11/12 Opened: 8/11/12 By: AP Unloaded: 8/11/12 By: AP

- 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? 1 front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID/NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number	NA	Filed
—	0.9	1 (2)		—	—		NA	

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken)? NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.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/analyte is offered by that state.

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.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2109352

Sample Name: TB2
Lab Code: K2109352-001
Sample Matrix: Ground Water

Date Collected: 08/10/21
Date Received: 08/11/21

Analysis Method
8260C

Extracted/Digested By

Analyzed By
GROETTGER

Sample Name: LB-081021-01-FB
Lab Code: K2109352-002
Sample Matrix: Ground Water

Date Collected: 08/10/21
Date Received: 08/11/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By
ESCHLOSS
AMCKORNEY
GROETTGER
JSANCHEZ

Sample Name: LB-081021-02-10SR
Lab Code: K2109352-003
Sample Matrix: Ground Water

Date Collected: 08/10/21
Date Received: 08/11/21

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By
ESCHLOSS
AMCKORNEY
GROETTGER
JSANCHEZ

Sample Name: LB-081021-02-10SR
Lab Code: K2109352-003.R01
Sample Matrix: Ground Water

Date Collected: 08/10/21
Date Received: 08/11/21

Analysis Method
300.0

Extracted/Digested By

Analyzed By
ESCHLOSS

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13

Service Request: K2109352

Sample Name: LB-081021-03-1S
Lab Code: K2109352-004
Sample Matrix: Ground Water

Date Collected: 08/10/21
Date Received: 08/11/21

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

ESCHLOSS
AMCKORNEY
GROETTGER
JSANCHEZ

Sample Name: LB-081021-04-26I
Lab Code: K2109352-005
Sample Matrix: Ground Water

Date Collected: 08/10/21
Date Received: 08/11/21

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

ESCHLOSS
AMCKORNEY
GROETTGER
JSANCHEZ

Sample Name: LB-081021-05-6S
Lab Code: K2109352-006
Sample Matrix: Ground Water

Date Collected: 08/10/21
Date Received: 08/11/21

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

ESCHLOSS
AMCKORNEY
GROETTGER
JSANCHEZ



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 07:00
Date Received: 08/11/21 17:50

Sample Name: TB2
Lab Code: K2109352-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 16:45	
Benzene	ND U	0.50	1	08/19/21 16:45	
Bromobenzene	ND U	2.0	1	08/19/21 16:45	
Bromochloromethane	ND U	0.50	1	08/19/21 16:45	
Bromodichloromethane	ND U	0.50	1	08/19/21 16:45	*
Bromoform	ND U	0.50	1	08/19/21 16:45	
Bromomethane	ND U	0.50	1	08/19/21 16:45	
2-Butanone (MEK)	ND U	20	1	08/19/21 16:45	
n-Butylbenzene	ND U	4.0	1	08/19/21 16:45	*
sec-Butylbenzene	ND U	2.0	1	08/19/21 16:45	
tert-Butylbenzene	ND U	2.0	1	08/19/21 16:45	*
Carbon Disulfide	ND U	0.50	1	08/19/21 16:45	*
Carbon Tetrachloride	ND U	0.50	1	08/19/21 16:45	
Chlorobenzene	ND U	0.50	1	08/19/21 16:45	
Chloroethane	ND U	0.50	1	08/19/21 16:45	
Chloroform	ND U	0.50	1	08/19/21 16:45	
Chloromethane	ND U	0.50	1	08/19/21 16:45	*
2-Chlorotoluene	ND U	2.0	1	08/19/21 16:45	
4-Chlorotoluene	ND U	2.0	1	08/19/21 16:45	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 16:45	
Dibromochloromethane	ND U	0.50	1	08/19/21 16:45	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 16:45	
Dibromomethane	ND U	0.50	1	08/19/21 16:45	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 16:45	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 16:45	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 16:45	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 16:45	*
1,1-Dichloroethane	ND U	0.50	1	08/19/21 16:45	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 16:45	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 16:45	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 16:45	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 16:45	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 16:45	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 16:45	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 16:45	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 16:45	
Ethylbenzene	ND U	0.50	1	08/19/21 16:45	*
Hexachlorobutadiene	ND U	2.0	1	08/19/21 16:45	
2-Hexanone	ND U	20	1	08/19/21 16:45	
Isopropylbenzene	ND U	2.0	1	08/19/21 16:45	*
4-Isopropyltoluene	ND U	2.0	1	08/19/21 16:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 07:00
Date Received: 08/11/21 17:50

Sample Name: TB2
Lab Code: K2109352-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 16:45	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 16:45	
Methylene Chloride	ND U	2.0	1	08/19/21 16:45	
Naphthalene	ND U	2.0	1	08/19/21 16:45	*
n-Propylbenzene	ND U	2.0	1	08/19/21 16:45	
Styrene	ND U	0.50	1	08/19/21 16:45	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 16:45	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 16:45	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 16:45	
Toluene	0.50	0.50	1	08/19/21 16:45	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 16:45	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 16:45	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 16:45	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 16:45	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 16:45	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 16:45	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 16:45	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 16:45	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 16:45	
Vinyl Chloride	ND U	0.50	1	08/19/21 16:45	*
o-Xylene	ND U	0.50	1	08/19/21 16:45	
m,p-Xylenes	ND U	0.50	1	08/19/21 16:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	08/19/21 16:45	
Dibromofluoromethane	110	73 - 122	08/19/21 16:45	
Toluene-d8	105	65 - 144	08/19/21 16:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 07:45
Date Received: 08/11/21 17:50

Sample Name: LB-081021-01-FB
Lab Code: K2109352-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 17:12	
Benzene	ND U	0.50	1	08/19/21 17:12	
Bromobenzene	ND U	2.0	1	08/19/21 17:12	
Bromochloromethane	ND U	0.50	1	08/19/21 17:12	
Bromodichloromethane	ND U	0.50	1	08/19/21 17:12	*
Bromoform	ND U	0.50	1	08/19/21 17:12	
Bromomethane	ND U	0.50	1	08/19/21 17:12	
2-Butanone (MEK)	ND U	20	1	08/19/21 17:12	
n-Butylbenzene	ND U	4.0	1	08/19/21 17:12	*
sec-Butylbenzene	ND U	2.0	1	08/19/21 17:12	
tert-Butylbenzene	ND U	2.0	1	08/19/21 17:12	*
Carbon Disulfide	ND U	0.50	1	08/19/21 17:12	*
Carbon Tetrachloride	ND U	0.50	1	08/19/21 17:12	
Chlorobenzene	ND U	0.50	1	08/19/21 17:12	
Chloroethane	ND U	0.50	1	08/19/21 17:12	
Chloroform	ND U	0.50	1	08/19/21 17:12	
Chloromethane	ND U	0.50	1	08/19/21 17:12	*
2-Chlorotoluene	ND U	2.0	1	08/19/21 17:12	
4-Chlorotoluene	ND U	2.0	1	08/19/21 17:12	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 17:12	
Dibromochloromethane	ND U	0.50	1	08/19/21 17:12	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 17:12	
Dibromomethane	ND U	0.50	1	08/19/21 17:12	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 17:12	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 17:12	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 17:12	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 17:12	*
1,1-Dichloroethane	ND U	0.50	1	08/19/21 17:12	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 17:12	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 17:12	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 17:12	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 17:12	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 17:12	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 17:12	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 17:12	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 17:12	
Ethylbenzene	ND U	0.50	1	08/19/21 17:12	*
Hexachlorobutadiene	ND U	2.0	1	08/19/21 17:12	
2-Hexanone	ND U	20	1	08/19/21 17:12	
Isopropylbenzene	ND U	2.0	1	08/19/21 17:12	*
4-Isopropyltoluene	ND U	2.0	1	08/19/21 17:12	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 07:45
Date Received: 08/11/21 17:50

Sample Name: LB-081021-01-FB
Lab Code: K2109352-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 17:12	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 17:12	
Methylene Chloride	ND U	2.0	1	08/19/21 17:12	
Naphthalene	ND U	2.0	1	08/19/21 17:12	*
n-Propylbenzene	ND U	2.0	1	08/19/21 17:12	
Styrene	ND U	0.50	1	08/19/21 17:12	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 17:12	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 17:12	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 17:12	
Toluene	ND U	0.50	1	08/19/21 17:12	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 17:12	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 17:12	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 17:12	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 17:12	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 17:12	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 17:12	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 17:12	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 17:12	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 17:12	
Vinyl Chloride	ND U	0.50	1	08/19/21 17:12	*
o-Xylene	ND U	0.50	1	08/19/21 17:12	
m,p-Xylenes	ND U	0.50	1	08/19/21 17:12	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	08/19/21 17:12	
Dibromofluoromethane	100	73 - 122	08/19/21 17:12	
Toluene-d8	102	65 - 144	08/19/21 17:12	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 08:30
Date Received: 08/11/21 17:50

Sample Name: LB-081021-02-10SR
Lab Code: K2109352-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 17:39	
Benzene	ND U	0.50	1	08/19/21 17:39	
Bromobenzene	ND U	2.0	1	08/19/21 17:39	
Bromochloromethane	ND U	0.50	1	08/19/21 17:39	
Bromodichloromethane	ND U	0.50	1	08/19/21 17:39	*
Bromoform	ND U	0.50	1	08/19/21 17:39	
Bromomethane	ND U	0.50	1	08/19/21 17:39	
2-Butanone (MEK)	ND U	20	1	08/19/21 17:39	
n-Butylbenzene	ND U	4.0	1	08/19/21 17:39	*
sec-Butylbenzene	ND U	2.0	1	08/19/21 17:39	
tert-Butylbenzene	ND U	2.0	1	08/19/21 17:39	*
Carbon Disulfide	ND U	0.50	1	08/19/21 17:39	*
Carbon Tetrachloride	ND U	0.50	1	08/19/21 17:39	
Chlorobenzene	ND U	0.50	1	08/19/21 17:39	
Chloroethane	ND U	0.50	1	08/19/21 17:39	
Chloroform	ND U	0.50	1	08/19/21 17:39	
Chloromethane	ND U	0.50	1	08/19/21 17:39	*
2-Chlorotoluene	ND U	2.0	1	08/19/21 17:39	
4-Chlorotoluene	ND U	2.0	1	08/19/21 17:39	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 17:39	
Dibromochloromethane	ND U	0.50	1	08/19/21 17:39	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 17:39	
Dibromomethane	ND U	0.50	1	08/19/21 17:39	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 17:39	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 17:39	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 17:39	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 17:39	*
1,1-Dichloroethane	ND U	0.50	1	08/19/21 17:39	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 17:39	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 17:39	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 17:39	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 17:39	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 17:39	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 17:39	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 17:39	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 17:39	
Ethylbenzene	ND U	0.50	1	08/19/21 17:39	*
Hexachlorobutadiene	ND U	2.0	1	08/19/21 17:39	
2-Hexanone	ND U	20	1	08/19/21 17:39	
Isopropylbenzene	ND U	2.0	1	08/19/21 17:39	*
4-Isopropyltoluene	ND U	2.0	1	08/19/21 17:39	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 08:30
Date Received: 08/11/21 17:50

Sample Name: LB-081021-02-10SR
Lab Code: K2109352-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 17:39	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 17:39	
Methylene Chloride	ND U	2.0	1	08/19/21 17:39	
Naphthalene	ND U	2.0	1	08/19/21 17:39	*
n-Propylbenzene	ND U	2.0	1	08/19/21 17:39	
Styrene	ND U	0.50	1	08/19/21 17:39	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 17:39	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 17:39	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 17:39	
Toluene	ND U	0.50	1	08/19/21 17:39	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 17:39	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 17:39	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 17:39	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 17:39	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 17:39	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 17:39	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 17:39	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 17:39	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 17:39	
Vinyl Chloride	ND U	0.50	1	08/19/21 17:39	*
o-Xylene	ND U	0.50	1	08/19/21 17:39	
m,p-Xylenes	ND U	0.50	1	08/19/21 17:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	75	68 - 117	08/19/21 17:39	
Dibromofluoromethane	108	73 - 122	08/19/21 17:39	
Toluene-d8	106	65 - 144	08/19/21 17:39	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 11:40
Date Received: 08/11/21 17:50

Sample Name: LB-081021-03-1S
Lab Code: K2109352-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 18:05	
Benzene	ND U	0.50	1	08/19/21 18:05	
Bromobenzene	ND U	2.0	1	08/19/21 18:05	
Bromochloromethane	ND U	0.50	1	08/19/21 18:05	
Bromodichloromethane	ND U	0.50	1	08/19/21 18:05	*
Bromoform	ND U	0.50	1	08/19/21 18:05	
Bromomethane	ND U	0.50	1	08/19/21 18:05	
2-Butanone (MEK)	ND U	20	1	08/19/21 18:05	
n-Butylbenzene	ND U	4.0	1	08/19/21 18:05	*
sec-Butylbenzene	ND U	2.0	1	08/19/21 18:05	
tert-Butylbenzene	ND U	2.0	1	08/19/21 18:05	*
Carbon Disulfide	ND U	0.50	1	08/19/21 18:05	*
Carbon Tetrachloride	ND U	0.50	1	08/19/21 18:05	
Chlorobenzene	ND U	0.50	1	08/19/21 18:05	
Chloroethane	ND U	0.50	1	08/19/21 18:05	
Chloroform	ND U	0.50	1	08/19/21 18:05	
Chloromethane	ND U	0.50	1	08/19/21 18:05	*
2-Chlorotoluene	ND U	2.0	1	08/19/21 18:05	
4-Chlorotoluene	ND U	2.0	1	08/19/21 18:05	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 18:05	
Dibromochloromethane	ND U	0.50	1	08/19/21 18:05	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 18:05	
Dibromomethane	ND U	0.50	1	08/19/21 18:05	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 18:05	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 18:05	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 18:05	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 18:05	*
1,1-Dichloroethane	ND U	0.50	1	08/19/21 18:05	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 18:05	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 18:05	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 18:05	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 18:05	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 18:05	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 18:05	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 18:05	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 18:05	
Ethylbenzene	ND U	0.50	1	08/19/21 18:05	*
Hexachlorobutadiene	ND U	2.0	1	08/19/21 18:05	
2-Hexanone	ND U	20	1	08/19/21 18:05	
Isopropylbenzene	ND U	2.0	1	08/19/21 18:05	*
4-Isopropyltoluene	ND U	2.0	1	08/19/21 18:05	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 11:40
Date Received: 08/11/21 17:50

Sample Name: LB-081021-03-1S
Lab Code: K2109352-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 18:05	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 18:05	
Methylene Chloride	ND U	2.0	1	08/19/21 18:05	
Naphthalene	ND U	2.0	1	08/19/21 18:05	*
n-Propylbenzene	ND U	2.0	1	08/19/21 18:05	
Styrene	ND U	0.50	1	08/19/21 18:05	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 18:05	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 18:05	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 18:05	
Toluene	ND U	0.50	1	08/19/21 18:05	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 18:05	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 18:05	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 18:05	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 18:05	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 18:05	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 18:05	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 18:05	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 18:05	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 18:05	
Vinyl Chloride	ND U	0.50	1	08/19/21 18:05	*
o-Xylene	ND U	0.50	1	08/19/21 18:05	
m,p-Xylenes	ND U	0.50	1	08/19/21 18:05	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	08/19/21 18:05	
Dibromofluoromethane	109	73 - 122	08/19/21 18:05	
Toluene-d8	104	65 - 144	08/19/21 18:05	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 12:25
Date Received: 08/11/21 17:50

Sample Name: LB-081021-04-26I
Lab Code: K2109352-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 18:32	
Benzene	ND U	0.50	1	08/19/21 18:32	
Bromobenzene	ND U	2.0	1	08/19/21 18:32	
Bromochloromethane	ND U	0.50	1	08/19/21 18:32	
Bromodichloromethane	ND U	0.50	1	08/19/21 18:32	*
Bromoform	ND U	0.50	1	08/19/21 18:32	
Bromomethane	ND U	0.50	1	08/19/21 18:32	
2-Butanone (MEK)	ND U	20	1	08/19/21 18:32	
n-Butylbenzene	ND U	4.0	1	08/19/21 18:32	*
sec-Butylbenzene	ND U	2.0	1	08/19/21 18:32	
tert-Butylbenzene	ND U	2.0	1	08/19/21 18:32	*
Carbon Disulfide	ND U	0.50	1	08/19/21 18:32	*
Carbon Tetrachloride	ND U	0.50	1	08/19/21 18:32	
Chlorobenzene	ND U	0.50	1	08/19/21 18:32	
Chloroethane	ND U	0.50	1	08/19/21 18:32	
Chloroform	ND U	0.50	1	08/19/21 18:32	
Chloromethane	ND U	0.50	1	08/19/21 18:32	*
2-Chlorotoluene	ND U	2.0	1	08/19/21 18:32	
4-Chlorotoluene	ND U	2.0	1	08/19/21 18:32	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 18:32	
Dibromochloromethane	ND U	0.50	1	08/19/21 18:32	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 18:32	
Dibromomethane	ND U	0.50	1	08/19/21 18:32	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 18:32	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 18:32	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 18:32	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 18:32	*
1,1-Dichloroethane	ND U	0.50	1	08/19/21 18:32	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 18:32	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 18:32	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 18:32	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 18:32	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 18:32	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 18:32	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 18:32	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 18:32	
Ethylbenzene	ND U	0.50	1	08/19/21 18:32	*
Hexachlorobutadiene	ND U	2.0	1	08/19/21 18:32	
2-Hexanone	ND U	20	1	08/19/21 18:32	
Isopropylbenzene	ND U	2.0	1	08/19/21 18:32	*
4-Isopropyltoluene	ND U	2.0	1	08/19/21 18:32	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 12:25
Date Received: 08/11/21 17:50

Sample Name: LB-081021-04-26I
Lab Code: K2109352-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 18:32	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 18:32	
Methylene Chloride	ND U	2.0	1	08/19/21 18:32	
Naphthalene	ND U	2.0	1	08/19/21 18:32	*
n-Propylbenzene	ND U	2.0	1	08/19/21 18:32	
Styrene	ND U	0.50	1	08/19/21 18:32	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 18:32	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 18:32	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 18:32	
Toluene	ND U	0.50	1	08/19/21 18:32	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 18:32	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 18:32	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 18:32	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 18:32	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 18:32	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 18:32	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 18:32	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 18:32	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 18:32	
Vinyl Chloride	ND U	0.50	1	08/19/21 18:32	*
o-Xylene	ND U	0.50	1	08/19/21 18:32	
m,p-Xylenes	ND U	0.50	1	08/19/21 18:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	08/19/21 18:32	
Dibromofluoromethane	103	73 - 122	08/19/21 18:32	
Toluene-d8	102	65 - 144	08/19/21 18:32	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 13:10
Date Received: 08/11/21 17:50

Sample Name: LB-081021-05-6S
Lab Code: K2109352-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 18:58	
Benzene	ND U	0.50	1	08/19/21 18:58	
Bromobenzene	ND U	2.0	1	08/19/21 18:58	
Bromochloromethane	ND U	0.50	1	08/19/21 18:58	
Bromodichloromethane	ND U	0.50	1	08/19/21 18:58	*
Bromoform	ND U	0.50	1	08/19/21 18:58	
Bromomethane	ND U	0.50	1	08/19/21 18:58	
2-Butanone (MEK)	ND U	20	1	08/19/21 18:58	
n-Butylbenzene	ND U	4.0	1	08/19/21 18:58	*
sec-Butylbenzene	ND U	2.0	1	08/19/21 18:58	
tert-Butylbenzene	ND U	2.0	1	08/19/21 18:58	*
Carbon Disulfide	ND U	0.50	1	08/19/21 18:58	*
Carbon Tetrachloride	ND U	0.50	1	08/19/21 18:58	
Chlorobenzene	ND U	0.50	1	08/19/21 18:58	
Chloroethane	ND U	0.50	1	08/19/21 18:58	
Chloroform	ND U	0.50	1	08/19/21 18:58	
Chloromethane	ND U	0.50	1	08/19/21 18:58	*
2-Chlorotoluene	ND U	2.0	1	08/19/21 18:58	
4-Chlorotoluene	ND U	2.0	1	08/19/21 18:58	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 18:58	
Dibromochloromethane	ND U	0.50	1	08/19/21 18:58	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 18:58	
Dibromomethane	ND U	0.50	1	08/19/21 18:58	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 18:58	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 18:58	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 18:58	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 18:58	*
1,1-Dichloroethane	ND U	0.50	1	08/19/21 18:58	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 18:58	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 18:58	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 18:58	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 18:58	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 18:58	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 18:58	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 18:58	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 18:58	
Ethylbenzene	ND U	0.50	1	08/19/21 18:58	*
Hexachlorobutadiene	ND U	2.0	1	08/19/21 18:58	
2-Hexanone	ND U	20	1	08/19/21 18:58	
Isopropylbenzene	ND U	2.0	1	08/19/21 18:58	*
4-Isopropyltoluene	ND U	2.0	1	08/19/21 18:58	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Collected: 08/10/21 13:10
Date Received: 08/11/21 17:50

Sample Name: LB-081021-05-6S
Lab Code: K2109352-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 18:58	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 18:58	
Methylene Chloride	ND U	2.0	1	08/19/21 18:58	
Naphthalene	ND U	2.0	1	08/19/21 18:58	*
n-Propylbenzene	ND U	2.0	1	08/19/21 18:58	
Styrene	ND U	0.50	1	08/19/21 18:58	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 18:58	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 18:58	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 18:58	
Toluene	ND U	0.50	1	08/19/21 18:58	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 18:58	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 18:58	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 18:58	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 18:58	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 18:58	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 18:58	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 18:58	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 18:58	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 18:58	
Vinyl Chloride	ND U	0.50	1	08/19/21 18:58	*
o-Xylene	ND U	0.50	1	08/19/21 18:58	
m,p-Xylenes	ND U	0.50	1	08/19/21 18:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	08/19/21 18:58	
Dibromofluoromethane	107	73 - 122	08/19/21 18:58	
Toluene-d8	100	65 - 144	08/19/21 18:58	



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-01-FB
Lab Code: K2109352-002

Service Request: K2109352
Date Collected: 08/10/21 07:45
Date Received: 08/11/21 17:50
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 10:39	08/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	09/02/21 10:39	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-02-10SR
Lab Code: K2109352-003

Service Request: K2109352
Date Collected: 08/10/21 08:30
Date Received: 08/11/21 17:50
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 10:54	08/19/21	
Manganese	6010C	3.0	ug/L	1.1	1	09/02/21 10:54	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-03-1S
Lab Code: K2109352-004

Service Request: K2109352
Date Collected: 08/10/21 11:40
Date Received: 08/11/21 17:50
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 10:56	08/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	09/02/21 10:56	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-04-26I
Lab Code: K2109352-005

Service Request: K2109352
Date Collected: 08/10/21 12:25
Date Received: 08/11/21 17:50
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 11:06	08/19/21	
Manganese	6010C	3.5	ug/L	1.1	1	09/02/21 11:06	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-05-6S
Lab Code: K2109352-006

Service Request: K2109352
Date Collected: 08/10/21 13:10
Date Received: 08/11/21 17:50
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 11:09	08/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	09/02/21 11:09	08/19/21	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-01-FB
Lab Code: K2109352-002

Service Request: K2109352
Date Collected: 08/10/21 07:45
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.20	2	08/12/21 11:59	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.10	2	08/12/21 11:59	*

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-01-FB
Lab Code: K2109352-002

Service Request: K2109352
Date Collected: 08/10/21 07:45
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/16/21 10:03	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-02-10SR
Lab Code: K2109352-003

Service Request: K2109352
Date Collected: 08/10/21 08:30
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.65	mg/L	0.20	2	08/12/21 12:09	
Nitrate as Nitrogen	300.0	15.2	mg/L	0.50	10	08/17/21 14:39	*

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-02-10SR
Lab Code: K2109352-003

Service Request: K2109352
Date Collected: 08/10/21 08:30
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	235	mg/L	5.0	1	08/11/21 09:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-03-1S
Lab Code: K2109352-004

Service Request: K2109352
Date Collected: 08/10/21 11:40
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	6.11	mg/L	0.20	2	08/12/21 11:31	
Nitrate as Nitrogen	300.0	5.01	mg/L	0.10	2	08/12/21 11:31	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-03-1S
Lab Code: K2109352-004

Service Request: K2109352
Date Collected: 08/10/21 11:40
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	191	mg/L	5.0	1	08/11/21 09:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-04-26I
Lab Code: K2109352-005

Service Request: K2109352
Date Collected: 08/10/21 12:25
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Chloride	300.0	6.81	mg/L	0.20	2	08/12/21 11:40	
Nitrate as Nitrogen	300.0	4.49	mg/L	0.10	2	08/12/21 11:40	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-04-26I
Lab Code: K2109352-005

Service Request: K2109352
Date Collected: 08/10/21 12:25
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	191	mg/L	5.0	1	08/11/21 09:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-05-6S
Lab Code: K2109352-006

Service Request: K2109352
Date Collected: 08/10/21 13:10
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	4.62	mg/L	0.20	2	08/12/21 11:50	
Nitrate as Nitrogen	300.0	1.72	mg/L	0.10	2	08/12/21 11:50	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: LB-081021-05-6S
Lab Code: K2109352-006

Service Request: K2109352
Date Collected: 08/10/21 13:10
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	163	mg/L	5.0	1	08/11/21 09:10	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
TB2	K2109352-001	84	110	105
LB-081021-01-FB	K2109352-002	80	100	102
LB-081021-02-10SR	K2109352-003	75	108	106
LB-081021-03-1S	K2109352-004	81	109	104
LB-081021-04-26I	K2109352-005	80	103	102
LB-081021-05-6S	K2109352-006	81	107	100
Method Blank	KQ2116037-05	82	107	103
Lab Control Sample	KQ2116037-03	88	99	103
Duplicate Lab Control Sample	KQ2116037-04	86	103	105

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2116037-05

Service Request: K2109352
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 13:14	
Benzene	ND U	0.50	1	08/19/21 13:14	
Bromobenzene	ND U	2.0	1	08/19/21 13:14	
Bromochloromethane	ND U	0.50	1	08/19/21 13:14	
Bromodichloromethane	ND U	0.50	1	08/19/21 13:14	
Bromoform	ND U	0.50	1	08/19/21 13:14	
Bromomethane	ND U	0.50	1	08/19/21 13:14	
2-Butanone (MEK)	ND U	20	1	08/19/21 13:14	
n-Butylbenzene	ND U	4.0	1	08/19/21 13:14	
sec-Butylbenzene	ND U	2.0	1	08/19/21 13:14	
tert-Butylbenzene	ND U	2.0	1	08/19/21 13:14	
Carbon Disulfide	ND U	0.50	1	08/19/21 13:14	
Carbon Tetrachloride	ND U	0.50	1	08/19/21 13:14	
Chlorobenzene	ND U	0.50	1	08/19/21 13:14	
Chloroethane	ND U	0.50	1	08/19/21 13:14	
Chloroform	ND U	0.50	1	08/19/21 13:14	
Chloromethane	ND U	0.50	1	08/19/21 13:14	
2-Chlorotoluene	ND U	2.0	1	08/19/21 13:14	
4-Chlorotoluene	ND U	2.0	1	08/19/21 13:14	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 13:14	
Dibromochloromethane	ND U	0.50	1	08/19/21 13:14	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 13:14	
Dibromomethane	ND U	0.50	1	08/19/21 13:14	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 13:14	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 13:14	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 13:14	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 13:14	
1,1-Dichloroethane	ND U	0.50	1	08/19/21 13:14	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 13:14	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 13:14	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 13:14	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 13:14	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 13:14	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 13:14	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 13:14	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 13:14	
Ethylbenzene	ND U	0.50	1	08/19/21 13:14	
Hexachlorobutadiene	ND U	2.0	1	08/19/21 13:14	
2-Hexanone	ND U	20	1	08/19/21 13:14	
Isopropylbenzene	ND U	2.0	1	08/19/21 13:14	
4-Isopropyltoluene	ND U	2.0	1	08/19/21 13:14	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2116037-05

Service Request: K2109352
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 13:14	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 13:14	
Methylene Chloride	ND U	2.0	1	08/19/21 13:14	
Naphthalene	ND U	2.0	1	08/19/21 13:14	
n-Propylbenzene	ND U	2.0	1	08/19/21 13:14	
Styrene	ND U	0.50	1	08/19/21 13:14	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 13:14	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 13:14	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 13:14	
Toluene	ND U	0.50	1	08/19/21 13:14	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 13:14	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 13:14	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 13:14	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 13:14	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 13:14	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 13:14	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 13:14	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 13:14	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 13:14	
Vinyl Chloride	ND U	0.50	1	08/19/21 13:14	
o-Xylene	ND U	0.50	1	08/19/21 13:14	
m,p-Xylenes	ND U	0.50	1	08/19/21 13:14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	08/19/21 13:14	
Dibromofluoromethane	107	73 - 122	08/19/21 13:14	
Toluene-d8	103	65 - 144	08/19/21 13:14	

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Analyzed: 08/19/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 735652

Analyte Name	Lab Control Sample KQ2116037-03			Duplicate Lab Control Sample KQ2116037-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.78	10.0	98	9.58	10.0	96	66-124	2	30
1,1,1-Trichloroethane (TCA)	10.5	10.0	105	10.7	10.0	107	59-136	2	30
1,1,2,2-Tetrachloroethane	9.31	10.0	93	8.91	10.0	89	70-127	4	30
1,1,2-Trichloroethane	9.10	10.0	91	8.72	10.0	87	74-118	4	30
1,1-Dichloroethane	9.61	10.0	96	9.37	10.0	94	68-132	3	30
1,1-Dichloropropene	9.79	10.0	98	9.21	10.0	92	59-134	6	30
1,2,3-Trichlorobenzene	8.12	10.0	81	7.87	10.0	79	68-120	3	30
1,2,3-Trichloropropane	9.48	10.0	95	9.48	10.0	95	69-123	<1	30
1,2,4-Trichlorobenzene	8.30	10.0	83	8.03	10.0	80	58-126	3	30
1,2,4-Trimethylbenzene	8.89	10.0	89	8.50	10.0	85	63-122	4	30
1,2-Dibromo-3-chloropropane	9.14	10.0	91	9.52	10.0	95	55-132	4	30
1,2-Dibromoethane (EDB)	9.12	10.0	91	8.85	10.0	89	74-118	3	30
1,2-Dichlorobenzene	9.09	10.0	91	8.94	10.0	89	72-115	2	30
1,2-Dichloropropane	9.49	10.0	95	9.37	10.0	94	67-126	1	30
1,3,5-Trimethylbenzene	8.64	10.0	86	8.23	10.0	82	62-126	5	30
1,3-Dichlorobenzene	9.07	10.0	91	8.52	10.0	85	70-116	6	30
1,3-Dichloropropane	9.04	10.0	90	8.70	10.0	87	75-116	4	30
1,4-Dichlorobenzene	9.24	10.0	92	8.70	10.0	87	73-115	6	30
2,2-Dichloropropane	9.35	10.0	94	8.89	10.0	89	37-145	5	30
2-Butanone (MEK)	55.0	50.0	110	53.0	50.0	106	71-149	4	30
2-Chlorotoluene	8.80	10.0	88	8.54	10.0	85	55-131	3	30
2-Hexanone	45.9	50.0	92	44.1	50.0	88	59-131	4	30
4-Chlorotoluene	9.15	10.0	92	8.74	10.0	87	66-121	5	30
4-Isopropyltoluene	8.82	10.0	88	8.35	10.0	84	61-128	5	30
4-Methyl-2-pentanone (MIBK)	48.5	50.0	97	50.7	50.0	101	64-134	4	30
Acetone	45.9	50.0	92	49.2	50.0	98	68-135	7	30
Benzene	9.84	10.0	98	9.69	10.0	97	69-124	2	30
Bromobenzene	9.46	10.0	95	9.03	10.0	90	72-116	5	30
Bromochloromethane	10.2	10.0	102	10.1	10.0	101	75-131	1	30
Bromodichloromethane	11.1	10.0	111	10.6	10.0	106	63-129	4	30
Bromoform	10.1	10.0	101	10.5	10.0	105	52-144	4	30
Bromomethane	7.15	10.0	72	7.01	10.0	70	35-113	2	30
Carbon Disulfide	18.9	20.0	94	18.6	20.0	93	46-144	1	30
Carbon Tetrachloride	11.5	10.0	115	10.8	10.0	108	55-140	6	30
Chlorobenzene	9.13	10.0	91	8.63	10.0	86	72-116	6	30
Chloroethane	9.71	10.0	97	9.45	10.0	95	58-134	3	30
Chloroform	10.2	10.0	102	10.1	10.0	101	70-129	1	30
Chloromethane	8.19	10.0	82	7.59	10.0	76	34-130	8	30
cis-1,2-Dichloroethene	9.50	10.0	95	9.50	10.0	95	71-118	<1	30
cis-1,3-Dichloropropene	10.4	10.0	104	10.2	10.0	102	62-132	2	30
Dibromochloromethane	10.9	10.0	109	10.9	10.0	109	67-126	<1	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Analyzed: 08/19/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 735652

Analyte Name	Lab Control Sample KQ2116037-03			Duplicate Lab Control Sample KQ2116037-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	10.4	10.0	104	9.93	10.0	99	69-128	4	30
Dichlorodifluoromethane	9.19	10.0	92	8.99	10.0	90	32-124	2	30
Ethylbenzene	8.64	10.0	86	8.43	10.0	84	67-121	2	30
Hexachlorobutadiene	10.4	10.0	104	9.78	10.0	98	57-119	6	30
Isopropylbenzene	8.68	10.0	87	8.20	10.0	82	67-129	6	30
m,p-Xylenes	17.9	20.0	89	16.2	20.0	81	69-121	9	30
Methyl tert-Butyl Ether	8.96	10.0	90	8.84	10.0	88	54-126	1	30
Methylene Chloride	9.84	10.0	98	9.10	10.0	91	71-122	8	30
Naphthalene	7.01	10.0	70	6.84	10.0	68	64-126	2	30
n-Butylbenzene	8.20	10.0	82	8.10	10.0	81	55-130	1	30
n-Propylbenzene	8.80	10.0	88	8.50	10.0	85	61-124	3	30
o-Xylene	8.65	10.0	87	8.04	10.0	80	71-119	7	30
sec-Butylbenzene	8.63	10.0	86	8.32	10.0	83	59-128	4	30
Styrene	8.60	10.0	86	8.65	10.0	87	74-121	<1	30
tert-Butylbenzene	8.35	10.0	84	8.08	10.0	81	61-127	3	30
Tetrachloroethene (PCE)	9.84	10.0	98	9.53	10.0	95	62-126	3	30
Toluene	10.2	10.0	102	10.2	10.0	102	69-124	<1	30
trans-1,2-Dichloroethene	9.72	10.0	97	9.63	10.0	96	67-125	<1	30
trans-1,3-Dichloropropene	8.81	10.0	88	8.58	10.0	86	59-125	3	30
Trichloroethene (TCE)	10.2	10.0	102	9.43	10.0	94	67-128	8	30
Trichlorofluoromethane (CFC 11)	8.91	10.0	89	8.73	10.0	87	52-141	2	30
Vinyl Chloride	8.45	10.0	85	8.08	10.0	81	55-123	4	30



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2115398-02

Service Request: K2109352
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	ND U	ug/L	21	1	09/02/21 09:50	08/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	09/02/21 09:50	08/19/21	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Analyzed: 09/02/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2115398-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2600	2500	104	80-120
Manganese	6010C	1300	1250	104	80-120



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109352-MB1

Service Request: K2109352
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	ND U	mg/L	0.10	1	08/12/21 11:06	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	08/12/21 11:06	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109352-MB1

Service Request: K2109352
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/11/21 09:10	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109352-MB2

Service Request: K2109352
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	08/17/21 13:53	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109352-MB2

Service Request: K2109352
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/11/21 09:10	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109352-MB3

Service Request: K2109352
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/16/21 10:03	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109352-MB4

Service Request: K2109352
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/16/21 10:03	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Analyzed: 08/11/21 - 08/12/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2109352-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.71	5.00	94	90-110
Nitrate as Nitrogen	300.0	2.42	2.50	97	90-110
Solids, Total Dissolved	SM 2540 C	917	922	99	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.13
Sample Matrix: Ground Water

Service Request: K2109352
Date Analyzed: 08/16/21 - 08/17/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2109352-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Nitrate as Nitrogen	300.0	2.39	2.50	95	90-110
Solids, Total Dissolved	SM 2540 C	918	922	100	85-115



September 03, 2021

Service Request No:K2109353

Barbara Lary
SCS Engineers
15940 SW 72nd Ave
Portland, OR 97224

Laboratory Results for: Leichner Landfill

Dear Barbara,

Enclosed are the results of the sample(s) submitted to our laboratory August 11, 2021
For your reference, these analyses have been assigned our service request number **K2109353**.

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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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Landfill
Sample Matrix: Ground Water

Service Request: K2109353
Date Received: 08/11/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Two ground water samples were received for analysis at ALS Environmental on 08/11/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

Method 6010C, 09/02/2021: The matrix spike recovery of Iron for sample LB-081121-01-9SR was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential high bias in this matrix. No further corrective action was appropriate.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0819F005.D. 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.

Method 8260C, 08/19/2021: The Trip Blank analyzed with this sample contained low levels of Toluene above the Method Reporting Limit (MRL). The associated field sample did not contain the analyte in question. No further corrective action was taken.

Approved by



Date

09/03/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: LB-081121-01-9SR **Lab ID: K2109353-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	175			5.0	mg/L	SM 2540 C
Alkalinity as CaCO3, Total	76.8			6.0	mg/L	SM 2320 B
Bicarbonate as CaCO3	76.8			6.0	mg/L	SM 2320 B
Chloride	3.56			0.20	mg/L	300.0
Nitrate as Nitrogen	3.65			0.10	mg/L	300.0
Solids, Total Suspended (TSS)	9.0			5.0	mg/L	SM 2540 D
Sulfate	6.45			0.40	mg/L	300.0
Calcium, Dissolved	19200			21	ug/L	6010C
Magnesium, Dissolved	8780			5.3	ug/L	6010C
Potassium, Dissolved	2960			210	ug/L	6010C
Sodium, Dissolved	5960			210	ug/L	6010C
Arsenic	0.66			0.50	ug/L	6020A
Barium	7.89			0.050	ug/L	6020A
Calcium	19400			21	ug/L	6010C
Chromium	1.18			0.20	ug/L	6020A
Copper	1.02			0.10	ug/L	6020A
Hardness, Total as CaCO3	86.1			0.07	mg/L	SM 2340 B
Iron	1480			21	ug/L	6010C
Lead	0.023			0.020	ug/L	6020A
Magnesium	9140			5.3	ug/L	6010C
Manganese	45.6			1.1	ug/L	6010C
Nickel	0.22			0.20	ug/L	6020A
Potassium	3100			210	ug/L	6010C
Silicon	30100			210	ug/L	6010C
Sodium	6080			210	ug/L	6010C
Vanadium	6.91			0.20	ug/L	6020A
Zinc	9.4			2.0	ug/L	6020A

CLIENT ID: Trip Blank **Lab ID: K2109353-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Toluene	0.58			0.50	ug/L	8260C



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Landfill/04221030.12

Service Request:K2109353

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2109353-001	LB-081121-01-9SR	8/11/2021	1245
K2109353-002	Trip Blank	8/11/2021	1100



CHAIN OF CUSTODY


SR# K2109353

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

PAGE 1 OF 1 COC#

PROJECT NAME	<u>Lechner Landfill</u>
PROJECT NUMBER	<u>04221030.12</u>
PROJECT MANAGER	<u>Barb Lory / T Andrews</u>
COMPANY NAME	<u>SCS Engineers</u>
ADDRESS	<u>15940 SW 72nd Ave</u>
CITY/STATE/ZIP	<u>Portland OR 97224</u>
E-MAIL ADDRESS	<u>Tandrews@scsengineers.com</u>
PHONE #	<u>(503) 724-0112</u>
SAMPLER'S SIGNATURE	<u>[Signature]</u>

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	ANALYSIS CHECKBOXES																				REMARKS
						Semivolatile Organics by GC/MS 825 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/>	Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	Aroclors <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 8141 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> Tetra <input type="checkbox"/> 8151M <input type="checkbox"/>	Metals, Total or Dissolved (See List below) Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>	(circle) pH, Cond, Cl, SO ₄ , PO ₄ , F, NO ₂ (NO ₃), BOD, TSS, (DS), Turb.	(circle) NH ₃ -N, COD, TKN, TOC, DOC, NO ₂ +NO ₃ , T-Phos	Alkalinity <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/>	Hardness	Silica						
LB-081121-01-9SR	8/11/21	1245		W	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Trip Blank	8/11/21	1100		W	2	<input checked="" type="checkbox"/>																				

REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____	Circle which metals are to be analyzed: Total Metals: Al <input checked="" type="checkbox"/> As <input checked="" type="checkbox"/> Sb <input checked="" type="checkbox"/> Ba <input checked="" type="checkbox"/> Be <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> Ca <input checked="" type="checkbox"/> Cd <input checked="" type="checkbox"/> Co <input checked="" type="checkbox"/> Cr <input checked="" type="checkbox"/> Cu <input checked="" type="checkbox"/> Fe <input checked="" type="checkbox"/> Pb <input checked="" type="checkbox"/> Mn <input checked="" type="checkbox"/> Mo <input checked="" type="checkbox"/> Ni <input checked="" type="checkbox"/> K <input checked="" type="checkbox"/> Ag <input checked="" type="checkbox"/> Na <input checked="" type="checkbox"/> Se <input checked="" type="checkbox"/> Sr <input checked="" type="checkbox"/> Ti <input checked="" type="checkbox"/> Sn <input checked="" type="checkbox"/> V <input checked="" type="checkbox"/> Zn <input checked="" type="checkbox"/> Hg Dissolved Metals: Al As Sb Ba Be B <input checked="" type="checkbox"/> Ca Cd Co Cr Cu <input checked="" type="checkbox"/> Fe Pb <input checked="" type="checkbox"/> Mg <input checked="" type="checkbox"/> Mn Mo Ni <input checked="" type="checkbox"/> K <input checked="" type="checkbox"/> Ag <input checked="" type="checkbox"/> Na <input checked="" type="checkbox"/> Se Sr Ti Sn V Zn Hg
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input checked="" type="checkbox"/> 5 day <input type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <div style="text-align: right;"> Container Supply Number  118388 </div> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: <u>[Signature]</u> 8/11/21 1511 Signature Date/Time <u>K. King</u> SCS Printed Name Firm	RECEIVED BY: <u>[Signature]</u> 8/11/21 1515 Signature Date/Time <u>ALS</u> ALS Printed Name Firm	RELINQUISHED BY: <u>[Signature]</u> 8/11/21 1750 Signature Date/Time <u>[Signature]</u> ALS Printed Name Firm	RECEIVED BY: <u>[Signature]</u> 8/11/21 1750 Signature Date/Time <u>[Signature]</u> ALS Printed Name Firm
--	--	--	--

PM MM

Cooler Receipt and Preservation Form

Client SCS Service Request K21 09353
Received: 8/11/12 Opened: 8/11/12 By: NP Unloaded: 8/11/12 By: NP

- 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? 1 Front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID/NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
—	0.9	1/21		—	—		

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.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/analyte is offered by that state.

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.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12

Service Request: K2109353

Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001
Sample Matrix: Ground Water

Date Collected: 08/11/21
Date Received: 08/11/21

Analysis Method	Extracted/Digested By	Analyzed By
300.0		ESCHLOSS
350.1	ESCHLOSS	ESCHLOSS
6010C	ABOYER	AMCKORNEY
6020A	ABOYER	EMCALLISTER
8260C		GROETTGER
SM 2320 B		GOLSON
SM 2540 C		JSANCHEZ
SM 2540 D		JSANCHEZ
SM 5220 C		GOLSON
SM 5310 C		MSPECHT

Sample Name: Trip Blank
Lab Code: K2109353-002
Sample Matrix: Ground Water

Date Collected: 08/11/21
Date Received: 08/11/21

Analysis Method	Extracted/Digested By	Analyzed By
8260C		GROETTGER



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21 12:45
Date Received: 08/11/21 17:50

Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 19:25	
Benzene	ND U	0.50	1	08/19/21 19:25	
Bromobenzene	ND U	2.0	1	08/19/21 19:25	
Bromochloromethane	ND U	0.50	1	08/19/21 19:25	
Bromodichloromethane	ND U	0.50	1	08/19/21 19:25	*
Bromoform	ND U	0.50	1	08/19/21 19:25	
Bromomethane	ND U	0.50	1	08/19/21 19:25	
2-Butanone (MEK)	ND U	20	1	08/19/21 19:25	
n-Butylbenzene	ND U	4.0	1	08/19/21 19:25	*
sec-Butylbenzene	ND U	2.0	1	08/19/21 19:25	
tert-Butylbenzene	ND U	2.0	1	08/19/21 19:25	*
Carbon Disulfide	ND U	0.50	1	08/19/21 19:25	*
Carbon Tetrachloride	ND U	0.50	1	08/19/21 19:25	
Chlorobenzene	ND U	0.50	1	08/19/21 19:25	
Chloroethane	ND U	0.50	1	08/19/21 19:25	
Chloroform	ND U	0.50	1	08/19/21 19:25	
Chloromethane	ND U	0.50	1	08/19/21 19:25	*
2-Chlorotoluene	ND U	2.0	1	08/19/21 19:25	
4-Chlorotoluene	ND U	2.0	1	08/19/21 19:25	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 19:25	
Dibromochloromethane	ND U	0.50	1	08/19/21 19:25	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 19:25	
Dibromomethane	ND U	0.50	1	08/19/21 19:25	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 19:25	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 19:25	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 19:25	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 19:25	*
1,1-Dichloroethane	ND U	0.50	1	08/19/21 19:25	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 19:25	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 19:25	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 19:25	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 19:25	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 19:25	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 19:25	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 19:25	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 19:25	
Ethylbenzene	ND U	0.50	1	08/19/21 19:25	*
Hexachlorobutadiene	ND U	2.0	1	08/19/21 19:25	
2-Hexanone	ND U	20	1	08/19/21 19:25	
Isopropylbenzene	ND U	2.0	1	08/19/21 19:25	*
4-Isopropyltoluene	ND U	2.0	1	08/19/21 19:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21 12:45
Date Received: 08/11/21 17:50

Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 19:25	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 19:25	
Methylene Chloride	ND U	2.0	1	08/19/21 19:25	
Naphthalene	ND U	2.0	1	08/19/21 19:25	*
n-Propylbenzene	ND U	2.0	1	08/19/21 19:25	
Styrene	ND U	0.50	1	08/19/21 19:25	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 19:25	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 19:25	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 19:25	
Toluene	ND U	0.50	1	08/19/21 19:25	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 19:25	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 19:25	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 19:25	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 19:25	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 19:25	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 19:25	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 19:25	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 19:25	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 19:25	
Vinyl Chloride	ND U	0.50	1	08/19/21 19:25	*
o-Xylene	ND U	0.50	1	08/19/21 19:25	
m,p-Xylenes	ND U	0.50	1	08/19/21 19:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	08/19/21 19:25	
Dibromofluoromethane	102	73 - 122	08/19/21 19:25	
Toluene-d8	101	65 - 144	08/19/21 19:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21 11:00
Date Received: 08/11/21 17:50

Sample Name: Trip Blank
Lab Code: K2109353-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 19:51	
Benzene	ND U	0.50	1	08/19/21 19:51	
Bromobenzene	ND U	2.0	1	08/19/21 19:51	
Bromochloromethane	ND U	0.50	1	08/19/21 19:51	
Bromodichloromethane	ND U	0.50	1	08/19/21 19:51	*
Bromoform	ND U	0.50	1	08/19/21 19:51	
Bromomethane	ND U	0.50	1	08/19/21 19:51	
2-Butanone (MEK)	ND U	20	1	08/19/21 19:51	
n-Butylbenzene	ND U	4.0	1	08/19/21 19:51	*
sec-Butylbenzene	ND U	2.0	1	08/19/21 19:51	
tert-Butylbenzene	ND U	2.0	1	08/19/21 19:51	*
Carbon Disulfide	ND U	0.50	1	08/19/21 19:51	*
Carbon Tetrachloride	ND U	0.50	1	08/19/21 19:51	
Chlorobenzene	ND U	0.50	1	08/19/21 19:51	
Chloroethane	ND U	0.50	1	08/19/21 19:51	
Chloroform	ND U	0.50	1	08/19/21 19:51	
Chloromethane	ND U	0.50	1	08/19/21 19:51	*
2-Chlorotoluene	ND U	2.0	1	08/19/21 19:51	
4-Chlorotoluene	ND U	2.0	1	08/19/21 19:51	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 19:51	
Dibromochloromethane	ND U	0.50	1	08/19/21 19:51	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 19:51	
Dibromomethane	ND U	0.50	1	08/19/21 19:51	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 19:51	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 19:51	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 19:51	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 19:51	*
1,1-Dichloroethane	ND U	0.50	1	08/19/21 19:51	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 19:51	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 19:51	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 19:51	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 19:51	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 19:51	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 19:51	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 19:51	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 19:51	
Ethylbenzene	ND U	0.50	1	08/19/21 19:51	*
Hexachlorobutadiene	ND U	2.0	1	08/19/21 19:51	
2-Hexanone	ND U	20	1	08/19/21 19:51	
Isopropylbenzene	ND U	2.0	1	08/19/21 19:51	*
4-Isopropyltoluene	ND U	2.0	1	08/19/21 19:51	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21 11:00
Date Received: 08/11/21 17:50

Sample Name: Trip Blank
Lab Code: K2109353-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 19:51	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 19:51	
Methylene Chloride	ND U	2.0	1	08/19/21 19:51	
Naphthalene	ND U	2.0	1	08/19/21 19:51	*
n-Propylbenzene	ND U	2.0	1	08/19/21 19:51	
Styrene	ND U	0.50	1	08/19/21 19:51	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 19:51	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 19:51	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 19:51	
Toluene	0.58	0.50	1	08/19/21 19:51	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 19:51	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 19:51	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 19:51	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 19:51	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 19:51	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 19:51	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 19:51	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 19:51	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 19:51	
Vinyl Chloride	ND U	0.50	1	08/19/21 19:51	*
o-Xylene	ND U	0.50	1	08/19/21 19:51	
m,p-Xylenes	ND U	0.50	1	08/19/21 19:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	68 - 117	08/19/21 19:51	
Dibromofluoromethane	109	73 - 122	08/19/21 19:51	
Toluene-d8	102	65 - 144	08/19/21 19:51	



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Service Request: K2109353
Date Collected: 08/11/21 12:45
Date Received: 08/11/21 17:50
Basis: NA

Hardness by ICP-AES Calculation 20th Ed.

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Hardness, Total as CaCO3	SM 2340 B	86.1	mg/L	0.07	1	09/02/21 10:41	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Service Request: K2109353
Date Collected: 08/11/21 12:45
Date Received: 08/11/21 17:50

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	19200	ug/L	21	1	09/02/21 11:11	08/19/21	
Iron	6010C	ND U	ug/L	21	1	09/02/21 11:11	08/19/21	
Magnesium	6010C	8780	ug/L	5.3	1	09/02/21 11:11	08/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	09/02/21 11:11	08/19/21	
Potassium	6010C	2960	ug/L	210	1	09/02/21 11:11	08/19/21	
Sodium	6010C	5960	ug/L	210	1	09/02/21 11:11	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Service Request: K2109353
Date Collected: 08/11/21 12:45
Date Received: 08/11/21 17:50
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	ND U	ug/L	0.050	1	08/23/21 13:30	08/17/21	
Arsenic	6020A	0.66	ug/L	0.50	1	08/23/21 13:30	08/17/21	
Barium	6020A	7.89	ug/L	0.050	1	08/23/21 13:30	08/17/21	
Beryllium	6020A	ND U	ug/L	0.020	1	08/23/21 13:30	08/17/21	
Cadmium	6020A	ND U	ug/L	0.020	1	08/23/21 13:30	08/17/21	
Calcium	6010C	19400	ug/L	21	1	09/02/21 10:41	08/19/21	
Chromium	6020A	1.18	ug/L	0.20	1	08/23/21 13:30	08/17/21	
Cobalt	6020A	ND U	ug/L	0.020	1	08/23/21 13:30	08/17/21	
Copper	6020A	1.02	ug/L	0.10	1	08/23/21 13:30	08/17/21	
Iron	6010C	1480	ug/L	21	1	09/02/21 10:41	08/19/21	
Lead	6020A	0.023	ug/L	0.020	1	08/23/21 13:30	08/17/21	
Magnesium	6010C	9140	ug/L	5.3	1	09/02/21 10:41	08/19/21	
Manganese	6010C	45.6	ug/L	1.1	1	09/02/21 10:41	08/19/21	
Nickel	6020A	0.22	ug/L	0.20	1	08/23/21 13:30	08/17/21	
Potassium	6010C	3100	ug/L	210	1	09/02/21 10:41	08/19/21	
Selenium	6020A	ND U	ug/L	1.0	1	08/23/21 13:30	08/17/21	
Silicon	6010C	30100	ug/L	210	1	09/02/21 10:41	08/19/21	
Silver	6020A	ND U	ug/L	0.020	1	08/23/21 13:30	08/17/21	
Sodium	6010C	6080	ug/L	210	1	09/02/21 10:41	08/19/21	
Thallium	6020A	ND U	ug/L	0.020	1	08/23/21 13:30	08/17/21	
Vanadium	6020A	6.91	ug/L	0.20	1	08/23/21 13:30	08/17/21	
Zinc	6020A	9.4	ug/L	2.0	1	08/23/21 13:30	08/17/21	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Service Request: K2109353
Date Collected: 08/11/21 12:45
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO ₃ , Total	SM 2320 B	76.8	mg/L	6.0	1	08/20/21 15:01	NA	
Ammonia as Nitrogen	350.1	ND U	mg/L	0.050	1	08/12/21 13:45	08/12/21	
Bicarbonate as CaCO ₃	SM 2320 B	76.8	mg/L	6.0	1	08/20/21 15:01	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	08/18/21 13:45	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	08/12/21 11:30	NA	
Chloride	300.0	3.56	mg/L	0.20	2	08/12/21 12:28	NA	
Nitrate as Nitrogen	300.0	3.65	mg/L	0.10	2	08/12/21 12:28	NA	
Solids, Total Suspended (TSS)	SM 2540 D	9.0	mg/L	5.0	1	08/17/21 09:20	NA	
Sulfate	300.0	6.45	mg/L	0.40	2	08/12/21 12:28	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Service Request: K2109353
Date Collected: 08/11/21 12:45
Date Received: 08/11/21 17:50
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	175	mg/L	5.0	1	08/16/21 10:03	NA	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Phone (360) 577-7222 Fax (360) 425-9096
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Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
LB-081121-01-9SR	K2109353-001	80	102	101
Trip Blank	K2109353-002	79	109	102
Method Blank	KQ2116037-05	82	107	103
Lab Control Sample	KQ2116037-03	88	99	103
Duplicate Lab Control Sample	KQ2116037-04	86	103	105

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2116037-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	ND U	20	1	08/19/21 13:14	
Benzene	ND U	0.50	1	08/19/21 13:14	
Bromobenzene	ND U	2.0	1	08/19/21 13:14	
Bromochloromethane	ND U	0.50	1	08/19/21 13:14	
Bromodichloromethane	ND U	0.50	1	08/19/21 13:14	
Bromoform	ND U	0.50	1	08/19/21 13:14	
Bromomethane	ND U	0.50	1	08/19/21 13:14	
2-Butanone (MEK)	ND U	20	1	08/19/21 13:14	
n-Butylbenzene	ND U	4.0	1	08/19/21 13:14	
sec-Butylbenzene	ND U	2.0	1	08/19/21 13:14	
tert-Butylbenzene	ND U	2.0	1	08/19/21 13:14	
Carbon Disulfide	ND U	0.50	1	08/19/21 13:14	
Carbon Tetrachloride	ND U	0.50	1	08/19/21 13:14	
Chlorobenzene	ND U	0.50	1	08/19/21 13:14	
Chloroethane	ND U	0.50	1	08/19/21 13:14	
Chloroform	ND U	0.50	1	08/19/21 13:14	
Chloromethane	ND U	0.50	1	08/19/21 13:14	
2-Chlorotoluene	ND U	2.0	1	08/19/21 13:14	
4-Chlorotoluene	ND U	2.0	1	08/19/21 13:14	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/19/21 13:14	
Dibromochloromethane	ND U	0.50	1	08/19/21 13:14	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/19/21 13:14	
Dibromomethane	ND U	0.50	1	08/19/21 13:14	
1,2-Dichlorobenzene	ND U	0.50	1	08/19/21 13:14	
1,3-Dichlorobenzene	ND U	0.50	1	08/19/21 13:14	
1,4-Dichlorobenzene	ND U	0.50	1	08/19/21 13:14	
Dichlorodifluoromethane	ND U	0.50	1	08/19/21 13:14	
1,1-Dichloroethane	ND U	0.50	1	08/19/21 13:14	
cis-1,2-Dichloroethene	ND U	0.50	1	08/19/21 13:14	
trans-1,2-Dichloroethene	ND U	0.50	1	08/19/21 13:14	
1,2-Dichloropropane	ND U	0.50	1	08/19/21 13:14	
1,3-Dichloropropane	ND U	0.50	1	08/19/21 13:14	
2,2-Dichloropropane	ND U	0.50	1	08/19/21 13:14	
1,1-Dichloropropene	ND U	0.50	1	08/19/21 13:14	
cis-1,3-Dichloropropene	ND U	0.50	1	08/19/21 13:14	
trans-1,3-Dichloropropene	ND U	0.50	1	08/19/21 13:14	
Ethylbenzene	ND U	0.50	1	08/19/21 13:14	
Hexachlorobutadiene	ND U	2.0	1	08/19/21 13:14	
2-Hexanone	ND U	20	1	08/19/21 13:14	
Isopropylbenzene	ND U	2.0	1	08/19/21 13:14	
4-Isopropyltoluene	ND U	2.0	1	08/19/21 13:14	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2116037-05

Service Request: K2109353
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Methyl tert-Butyl Ether	ND U	0.50	1	08/19/21 13:14	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/19/21 13:14	
Methylene Chloride	ND U	2.0	1	08/19/21 13:14	
Naphthalene	ND U	2.0	1	08/19/21 13:14	
n-Propylbenzene	ND U	2.0	1	08/19/21 13:14	
Styrene	ND U	0.50	1	08/19/21 13:14	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/19/21 13:14	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/19/21 13:14	
Tetrachloroethene (PCE)	ND U	0.50	1	08/19/21 13:14	
Toluene	ND U	0.50	1	08/19/21 13:14	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/19/21 13:14	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/19/21 13:14	
1,1,2-Trichloroethane	ND U	0.50	1	08/19/21 13:14	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/19/21 13:14	
Trichloroethene (TCE)	ND U	0.50	1	08/19/21 13:14	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/19/21 13:14	
1,2,3-Trichloropropane	ND U	0.50	1	08/19/21 13:14	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/19/21 13:14	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/19/21 13:14	
Vinyl Chloride	ND U	0.50	1	08/19/21 13:14	
o-Xylene	ND U	0.50	1	08/19/21 13:14	
m,p-Xylenes	ND U	0.50	1	08/19/21 13:14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	08/19/21 13:14	
Dibromofluoromethane	107	73 - 122	08/19/21 13:14	
Toluene-d8	103	65 - 144	08/19/21 13:14	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Analyzed: 08/19/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 735652

Analyte Name	Lab Control Sample KQ2116037-03			Duplicate Lab Control Sample KQ2116037-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.78	10.0	98	9.58	10.0	96	66-124	2	30
1,1,1-Trichloroethane (TCA)	10.5	10.0	105	10.7	10.0	107	59-136	2	30
1,1,2,2-Tetrachloroethane	9.31	10.0	93	8.91	10.0	89	70-127	4	30
1,1,2-Trichloroethane	9.10	10.0	91	8.72	10.0	87	74-118	4	30
1,1-Dichloroethane	9.61	10.0	96	9.37	10.0	94	68-132	3	30
1,1-Dichloropropene	9.79	10.0	98	9.21	10.0	92	59-134	6	30
1,2,3-Trichlorobenzene	8.12	10.0	81	7.87	10.0	79	68-120	3	30
1,2,3-Trichloropropane	9.48	10.0	95	9.48	10.0	95	69-123	<1	30
1,2,4-Trichlorobenzene	8.30	10.0	83	8.03	10.0	80	58-126	3	30
1,2,4-Trimethylbenzene	8.89	10.0	89	8.50	10.0	85	63-122	4	30
1,2-Dibromo-3-chloropropane	9.14	10.0	91	9.52	10.0	95	55-132	4	30
1,2-Dibromoethane (EDB)	9.12	10.0	91	8.85	10.0	89	74-118	3	30
1,2-Dichlorobenzene	9.09	10.0	91	8.94	10.0	89	72-115	2	30
1,2-Dichloropropane	9.49	10.0	95	9.37	10.0	94	67-126	1	30
1,3,5-Trimethylbenzene	8.64	10.0	86	8.23	10.0	82	62-126	5	30
1,3-Dichlorobenzene	9.07	10.0	91	8.52	10.0	85	70-116	6	30
1,3-Dichloropropane	9.04	10.0	90	8.70	10.0	87	75-116	4	30
1,4-Dichlorobenzene	9.24	10.0	92	8.70	10.0	87	73-115	6	30
2,2-Dichloropropane	9.35	10.0	94	8.89	10.0	89	37-145	5	30
2-Butanone (MEK)	55.0	50.0	110	53.0	50.0	106	71-149	4	30
2-Chlorotoluene	8.80	10.0	88	8.54	10.0	85	55-131	3	30
2-Hexanone	45.9	50.0	92	44.1	50.0	88	59-131	4	30
4-Chlorotoluene	9.15	10.0	92	8.74	10.0	87	66-121	5	30
4-Isopropyltoluene	8.82	10.0	88	8.35	10.0	84	61-128	5	30
4-Methyl-2-pentanone (MIBK)	48.5	50.0	97	50.7	50.0	101	64-134	4	30
Acetone	45.9	50.0	92	49.2	50.0	98	68-135	7	30
Benzene	9.84	10.0	98	9.69	10.0	97	69-124	2	30
Bromobenzene	9.46	10.0	95	9.03	10.0	90	72-116	5	30
Bromochloromethane	10.2	10.0	102	10.1	10.0	101	75-131	1	30
Bromodichloromethane	11.1	10.0	111	10.6	10.0	106	63-129	4	30
Bromoform	10.1	10.0	101	10.5	10.0	105	52-144	4	30
Bromomethane	7.15	10.0	72	7.01	10.0	70	35-113	2	30
Carbon Disulfide	18.9	20.0	94	18.6	20.0	93	46-144	1	30
Carbon Tetrachloride	11.5	10.0	115	10.8	10.0	108	55-140	6	30
Chlorobenzene	9.13	10.0	91	8.63	10.0	86	72-116	6	30
Chloroethane	9.71	10.0	97	9.45	10.0	95	58-134	3	30
Chloroform	10.2	10.0	102	10.1	10.0	101	70-129	1	30
Chloromethane	8.19	10.0	82	7.59	10.0	76	34-130	8	30
cis-1,2-Dichloroethene	9.50	10.0	95	9.50	10.0	95	71-118	<1	30
cis-1,3-Dichloropropene	10.4	10.0	104	10.2	10.0	102	62-132	2	30
Dibromochloromethane	10.9	10.0	109	10.9	10.0	109	67-126	<1	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Analyzed: 08/19/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 735652

Analyte Name	Lab Control Sample KQ2116037-03			Duplicate Lab Control Sample KQ2116037-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	10.4	10.0	104	9.93	10.0	99	69-128	4	30
Dichlorodifluoromethane	9.19	10.0	92	8.99	10.0	90	32-124	2	30
Ethylbenzene	8.64	10.0	86	8.43	10.0	84	67-121	2	30
Hexachlorobutadiene	10.4	10.0	104	9.78	10.0	98	57-119	6	30
Isopropylbenzene	8.68	10.0	87	8.20	10.0	82	67-129	6	30
m,p-Xylenes	17.9	20.0	89	16.2	20.0	81	69-121	9	30
Methyl tert-Butyl Ether	8.96	10.0	90	8.84	10.0	88	54-126	1	30
Methylene Chloride	9.84	10.0	98	9.10	10.0	91	71-122	8	30
Naphthalene	7.01	10.0	70	6.84	10.0	68	64-126	2	30
n-Butylbenzene	8.20	10.0	82	8.10	10.0	81	55-130	1	30
n-Propylbenzene	8.80	10.0	88	8.50	10.0	85	61-124	3	30
o-Xylene	8.65	10.0	87	8.04	10.0	80	71-119	7	30
sec-Butylbenzene	8.63	10.0	86	8.32	10.0	83	59-128	4	30
Styrene	8.60	10.0	86	8.65	10.0	87	74-121	<1	30
tert-Butylbenzene	8.35	10.0	84	8.08	10.0	81	61-127	3	30
Tetrachloroethene (PCE)	9.84	10.0	98	9.53	10.0	95	62-126	3	30
Toluene	10.2	10.0	102	10.2	10.0	102	69-124	<1	30
trans-1,2-Dichloroethene	9.72	10.0	97	9.63	10.0	96	67-125	<1	30
trans-1,3-Dichloropropene	8.81	10.0	88	8.58	10.0	86	59-125	3	30
Trichloroethene (TCE)	10.2	10.0	102	9.43	10.0	94	67-128	8	30
Trichlorofluoromethane (CFC 11)	8.91	10.0	89	8.73	10.0	87	52-141	2	30
Vinyl Chloride	8.45	10.0	85	8.08	10.0	81	55-123	4	30



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2115398-02

Service Request: K2109353
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Calcium	6010C	ND U	ug/L	21	1	09/02/21 09:50	08/19/21	
Iron	6010C	ND U	ug/L	21	1	09/02/21 09:50	08/19/21	
Magnesium	6010C	ND U	ug/L	5.3	1	09/02/21 09:50	08/19/21	
Manganese	6010C	ND U	ug/L	1.1	1	09/02/21 09:50	08/19/21	
Potassium	6010C	ND U	ug/L	210	1	09/02/21 09:50	08/19/21	
Silicon	6010C	ND U	ug/L	210	1	09/02/21 09:50	08/19/21	
Sodium	6010C	ND U	ug/L	210	1	09/02/21 09:50	08/19/21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2115616-02

Service Request: K2109353
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	ND U	ug/L	0.050	1	08/23/21 12:41	08/17/21	
Arsenic	6020A	ND U	ug/L	0.50	1	08/23/21 12:41	08/17/21	
Barium	6020A	ND U	ug/L	0.050	1	08/23/21 12:41	08/17/21	
Beryllium	6020A	ND U	ug/L	0.020	1	08/23/21 12:41	08/17/21	
Cadmium	6020A	ND U	ug/L	0.020	1	08/23/21 12:41	08/17/21	
Chromium	6020A	ND U	ug/L	0.20	1	08/23/21 12:41	08/17/21	
Cobalt	6020A	ND U	ug/L	0.020	1	08/23/21 12:41	08/17/21	
Copper	6020A	ND U	ug/L	0.10	1	08/23/21 12:41	08/17/21	
Lead	6020A	ND U	ug/L	0.020	1	08/23/21 12:41	08/17/21	
Nickel	6020A	ND U	ug/L	0.20	1	08/23/21 12:41	08/17/21	
Selenium	6020A	ND U	ug/L	1.0	1	08/23/21 12:41	08/17/21	
Silver	6020A	ND U	ug/L	0.020	1	08/23/21 12:41	08/17/21	
Thallium	6020A	ND U	ug/L	0.020	1	08/23/21 12:41	08/17/21	
Vanadium	6020A	ND U	ug/L	0.20	1	08/23/21 12:41	08/17/21	
Zinc	6020A	ND U	ug/L	2.0	1	08/23/21 12:41	08/17/21	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21
Date Received: 08/11/21
Date Analyzed: 09/2/21
Date Extracted: 08/19/21

Matrix Spike Summary
Total Metals

Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2115398-05

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Calcium	19400	30000	10000	106	75-125
Iron	1480	2830	1000	135 N	75-125
Magnesium	9140	19800	10000	107	75-125
Manganese	45.6	589	500	109	75-125
Potassium	3100	14000	10000	109	75-125
Sodium	6080	16600	10000	106	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21
Date Received: 08/11/21
Date Analyzed: 09/2/21
Date Extracted: 08/19/21

Matrix Spike Summary
Total Metals

Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2115398-06

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Silicon	30100	42000	10000	119	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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: SCS Engineers
Project Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21
Date Received: 08/11/21
Date Analyzed: 09/02/21

Replicate Sample Summary

Total Metals

Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2115398-04				
Calcium	6010C	21	19400	19700	19600	2	20	
Iron	6010C	21	1480	1700	1590	14	20	
Magnesium	6010C	5.3	9140	9180	9160	<1	20	
Manganese	6010C	1.1	45.6	49.1	47.4	7	20	
Potassium	6010C	210	3100	3140	3120	1	20	
Silicon	6010C	210	30100	30600	30400	2	20	
Sodium	6010C	210	6080	6120	6100	<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
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Analyzed: 09/02/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2115398-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Calcium	6010C	12700	12500	102	80-120
Iron	6010C	2600	2500	104	80-120
Magnesium	6010C	12900	12500	103	80-120
Manganese	6010C	1300	1250	104	80-120
Potassium	6010C	13200	12500	106	80-120
Sodium	6010C	12600	12500	101	80-120

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Analyzed: 09/02/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2115398-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Silicon	6010C	10600	10000	106	80-120

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Analyzed: 08/23/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2115616-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony	6020A	10.2	10.0	102	80-120
Arsenic	6020A	49.3	50.0	99	80-120
Barium	6020A	103	100	103	80-120
Beryllium	6020A	2.37	2.50	95	80-120
Cadmium	6020A	25.1	25.0	100	80-120
Chromium	6020A	9.75	10.0	98	80-120
Cobalt	6020A	25.0	25.0	100	80-120
Copper	6020A	12.7	12.5	102	80-120
Lead	6020A	52.2	50.0	104	80-120
Nickel	6020A	25.2	25.0	101	80-120
Selenium	6020A	50.9	50.0	102	80-120
Silver	6020A	12.5	12.5	100	80-120
Thallium	6020A	54.3	50.0	109	80-120
Vanadium	6020A	24.9	25.0	99	80-120
Zinc	6020A	26.0	25.0	104	80-120



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109353-MB1

Service Request: K2109353
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	ND U	mg/L	6.0	1	08/20/21 15:01	NA	
Ammonia as Nitrogen	350.1	ND U	mg/L	0.050	1	08/12/21 13:45	08/12/21	
Bicarbonate as CaCO3	SM 2320 B	ND U	mg/L	6.0	1	08/20/21 15:01	NA	
Carbon, Total Organic	SM 5310 C	ND U	mg/L	0.50	1	08/18/21 13:45	NA	
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	08/12/21 11:30	NA	
Chloride	300.0	ND U	mg/L	0.10	1	08/12/21 11:06	NA	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	08/12/21 11:06	NA	
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	08/17/21 09:20	NA	
Sulfate	300.0	ND U	mg/L	0.20	1	08/12/21 11:06	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109353-MB1

Service Request: K2109353
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/16/21 10:03	NA	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109353-MB2

Service Request: K2109353
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Chemical Oxygen Demand (COD)	SM 5220 C	ND U	mg/L	10	1	08/12/21 11:30	
Solids, Total Suspended (TSS)	SM 2540 D	ND U	mg/L	5.0	1	08/17/21 09:20	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2109353-MB2

Service Request: K2109353
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total Dissolved	SM 2540 C	ND U	mg/L	5.0	1	08/16/21 10:03	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21
Date Received: 08/11/21
Date Analyzed: 8/12/21

**Duplicate Matrix Spike Summary
General Chemistry Parameters**

Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Units: mg/L
Basis: NA

**Matrix Spike
K2109353-001MS**

**Duplicate Matrix Spike
K2109353-001DMS**

Analyte Name	Method	Sample		Spike		Duplicate Matrix Spike		% Rec	% Rec Limits	RPD	RPD Limit
		Result	Result	Amount	% Rec	Result	Amount				
Chloride	300.0	3.56	12.5	10.0	90	12.5	10.0	90	90-110	<1	20
Nitrate as Nitrogen	300.0	3.65	13.4	10.0	97	13.4	10.0	97	90-110	<1	20
Sulfate	300.0	6.45	15.9	10.0	94	15.8	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.

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Collected: 08/11/21
Date Received: 08/11/21
Date Analyzed: 08/12/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-081121-01-9SR
Lab Code: K2109353-001

Units: mg/L
Basis: NA

Table with 8 columns: Analyte Name, Analysis Method, MRL, Sample Result, Duplicate Sample K2109353-001DUP Result, Average, RPD, RPD Limit. Rows include Chloride, Nitrate as Nitrogen, and Sulfate.

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/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Analyzed: 08/12/21 - 08/20/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2109353-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity as CaCO ₃ , Total	SM 2320 B	109	109	100	90-110
Ammonia as Nitrogen	350.1	4.35	4.58	95	86-114
Bicarbonate as CaCO ₃	SM 2320 B	109	109	100	85-115
Carbon, Total Organic	SM 5310 C	24.6	25.0	98	83-117
Chemical Oxygen Demand (COD)	SM 5220 C	101	108	94	83-117
Chloride	300.0	4.71	5.00	94	90-110
Nitrate as Nitrogen	300.0	2.42	2.50	97	90-110
Solids, Total Dissolved	SM 2540 C	918	922	100	85-115
Solids, Total Suspended (TSS)	SM 2540 D	390	402	97	85-115
Sulfate	300.0	4.81	5.00	96	90-110

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04221030.12
Sample Matrix: Ground Water

Service Request: K2109353
Date Analyzed: 08/20/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2109353-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity as CaCO3, Total	SM 2320 B	110	109	101	90-110
Bicarbonate as CaCO3	SM 2320 B	110	109	101	85-115

APPENDIX D

2021 Groundwater Elevation Data and Groundwater Elevation Hydrographs

Table D-1
2021 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-R2	2/4/2020	222.27	50.86	171.41
LB-R2	7/28/2020	222.27	50.57	171.70
LB-R2	2/17/2021	222.27	49.69	172.58
LB-R2	8/9/2021	222.27	50.68	171.59
LB-1S	2/4/2020	210.12	38.31	171.81
LB-1S	7/28/2020	210.12	38.19	171.93
LB-1S	2/17/2021	210.12	37.36	172.76
LB-1S	8/9/2021	210.12	38.36	171.76
LB-1D	2/4/2020	209.74	40.45	169.29
LB-1D	7/28/2020	209.74	40.72	169.02
LB-1D	2/17/2021	209.74	40.43	169.31
LB-1D	8/9/2021	209.74	41.17	168.57
LB-3S	2/4/2020	218.25	43.77	174.48
LB-3S	7/28/2020	218.25	43.46	174.79
LB-3S	2/17/2021	218.25	43.64	174.61
LB-3S	8/9/2021	218.25	43.59	174.66
LB-3D	2/4/2020	219.29	44.74	174.55
LB-3D	7/28/2020	219.29	44.46	174.83
LB-3D	2/17/2021	219.29	43.61	175.68
LB-3D	8/9/2021	219.29	44.91	174.38
LB-5S	2/4/2020	206.89	16.76	190.13
LB-5S	7/28/2020	206.89	17.33	189.56
LB-5S	2/17/2021	206.89	16.42	190.47
LB-5S	8/9/2021	206.89	17.13	189.76
LB-5C	2/4/2020	206.70	38.38	168.32
LB-5C	7/28/2020	206.70	38.08	168.62
LB-5C	2/17/2021	206.70	37.38	169.32
LB-5C	8/9/2021	206.70	38.42	168.28
LB-5D	2/4/2020	207.56	42.47	165.09
LB-5D	7/28/2020	207.56	42.27	165.29
LB-5D	2/17/2021	207.56	41.41	166.15
LB-5D	8/9/2021	207.56	42.84	164.72

Table D-1
2021 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-6S	2/4/2020	202.80	32.03	170.77
LB-6S	7/28/2020	202.80	31.97	170.83
LB-6S	2/17/2021	202.80	31.11	171.69
LB-6S	8/9/2021	202.80	32.17	170.63
LB-9S(R)	2/4/2020	217.94	40.68	177.26
LB-9S(R)	7/28/2020	217.94	41.43	176.51
LB-9S(R)	2/17/2021	217.94	39.34	178.60
LB-9S(R)	8/9/2021	217.94	40.55	177.39
LB-10SR	2/4/2020	204.04	36.32	167.72
LB-10SR	7/28/2020	204.04	36.31	167.73
LB-10SR	2/17/2021	204.04	35.20	168.84
LB-10SR	8/9/2021	204.04	36.62	167.42
LB-10CR	2/4/2020	203.05	36.20	166.85
LB-10CR	7/28/2020	203.05	35.15	167.90
LB-10CR	2/17/2021	203.05	34.09	168.96
LB-10CR	8/9/2021	203.05	35.50	167.55
LB-10DR	2/4/2020	203.36	47.81	155.55
LB-10DR	7/28/2020	203.36	47.51	155.85
LB-10DR	2/17/2021	203.36	46.70	156.66
LB-10DR	8/9/2021	203.36	48.58	154.78
LB-13I	2/4/2020	202.36	32.62	169.74
LB-13I	7/28/2020	202.36	32.63	169.73
LB-13I	2/17/2021	202.36	31.75	170.61
LB-13I	8/9/2021	202.36	32.89	169.47
LB-13C	2/4/2020	202.68	33.02	169.66
LB-13C	7/28/2020	202.68	33.04	169.64
LB-13C	2/17/2021	202.68	32.13	170.55
LB-13C	8/9/2021	202.68	33.30	169.38
LB-13D	2/4/2020	202.96	33.48	169.48
LB-13D	7/28/2020	202.96	33.44	169.52
LB-13D	2/17/2021	202.96	32.54	170.42
LB-13D	8/9/2021	202.96	33.68	169.28

Table D-1
2021 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-17S	2/4/2020	208.18	Dry	NA
LB-17S	7/28/2020	208.18	Dry	NA
LB-17S	2/17/2021	208.18	Dry	NA
LB-17S	8/9/2021	208.18	Dry	NA
LB-17I	2/4/2020	212.96	41.67	171.29
LB-17I	7/28/2020	212.96	41.44	171.52
LB-17I	2/17/2021	212.96	40.58	172.38
LB-17I	8/9/2021	212.96	41.57	171.39
LB-17C	2/4/2020	207.97	35.35	172.62
LB-17C	7/28/2020	207.97	35.11	172.86
LB-17C	2/17/2021	207.97	34.25	173.72
LB-17C	8/9/2021	207.97	35.26	172.71
LB-17D	2/4/2020	213.17	42.47	170.70
LB-17D	7/28/2020	213.17	42.33	170.84
LB-17D	2/17/2021	213.17	41.51	171.66
LB-17D	8/9/2021	213.17	42.49	170.68
LB-20S	2/4/2020	221.22	45.03	176.19
LB-20S	7/28/2020	221.22	44.61	176.61
LB-20S	2/17/2021	221.22	43.92	177.30
LB-20S	8/9/2021	221.22	44.60	176.62
LB-21S	2/4/2020	223.35	42.29	181.06
LB-21S	7/28/2020	223.35	41.98	181.37
LB-21S	2/17/2021	223.35	40.99	182.36
LB-21S	8/9/2021	223.35	41.90	181.45
LB-21C	2/4/2020	223.32	42.70	180.62
LB-21C	7/28/2020	223.32	42.41	180.91
LB-21C	2/17/2021	223.32	41.42	181.90
LB-21C	8/9/2021	223.32	42.81	180.51
LB-21D	2/4/2020	223.63	45.54	178.09
LB-21D	7/28/2020	223.63	45.60	178.03
LB-21D	2/17/2021	223.63	44.31	179.32
LB-21D	8/9/2021	223.63	45.56	178.07
LB-22S	2/4/220	208.42	10.23	198.19
LB-22S	7/28/2020	208.42	10.37	198.05
LB-22S	2/17/2021	208.42	8.88	199.54
LB-22S	8/9/2021	208.42	9.82	198.60

Table D-1
2021 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-23S	2/4/2020	229.19	34.72	194.47
LB-23S	7/28/2020	229.19	34.41	194.78
LB-23S	2/17/2021	229.19	33.30	195.89
LB-23S	8/9/2021	229.19	33.88	195.31
LB-24S	2/4/2020	235.13	41.45	193.68
LB-24S	7/28/2020	235.13	41.39	193.74
LB-24S	2/17/2021	235.13	40.36	194.77
LB-24S	8/9/2021	235.13	40.96	194.17
LB-26I	2/4/2020	200.22	29.99	170.23
LB-26I	7/28/2020	200.22	30.02	170.20
LB-26I	2/17/2021	200.22	29.10	171.12
LB-26I	8/9/2021	200.22	30.21	170.01
LB-26D	2/4/2020	200.75	29.93	170.82
LB-26D	7/28/2020	200.75	29.84	170.91
LB-26D	2/17/2021	200.75	28.94	171.81
LB-26D	8/9/2021	200.75	30.06	170.69
LB-27I	2/4/2020	205.35	36.10	169.25
LB-27I	7/28/2020	205.35	36.02	169.33
LB-27I	2/17/2021	205.35	35.12	170.23
LB-27I	8/9/2021	205.35	36.33	169.02
LB-27D	2/4/2020	204.63	41.48	163.15
LB-27D	7/28/2020	204.63	42.21	162.42
LB-27D	2/17/2021	204.63	42.06	162.57
LB-27D	8/9/2021	204.63	43.41	161.22
MW-1 N	2/4/2020	216.58	Dry	NA
MW-1 N	7/28/2020	216.58	Dry	NA
MW-1 N	2/17/2021	216.58	Dry	NA
MW-1 N	8/9/2021	216.58	Dry	NA
MW-1 S	2/4/2020	216.13	42.75	173.38
MW-1 S	7/28/2020	216.13	42.49	173.64
MW-1 S	2/17/2021	216.13	41.71	174.42
MW-1 S	8/9/2021	216.13	42.62	173.51
MW-1 E	2/4/2020	216.45	Dry	NA
MW-1 E	7/28/2020	216.45	Dry	NA
MW-1 E	2/17/2021	216.45	Dry	NA
MW-1 E	8/9/2021	216.45	Dry	NA

Table D-1
2021 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
MW-NE	2/4/2020	220.06	18.03	202.03
MW-NE	7/28/2020	220.06	18.16	201.90
MW-NE	2/17/2021	220.06	16.54	203.52
MW-NE	8/9/2021	220.06	17.51	202.55

Notes:
 AMSL = above mean sea level
 BTOC = below top of casing
 NA = not applicable.

LB-1S and LB-1D Hydrographs Leichner Landfill



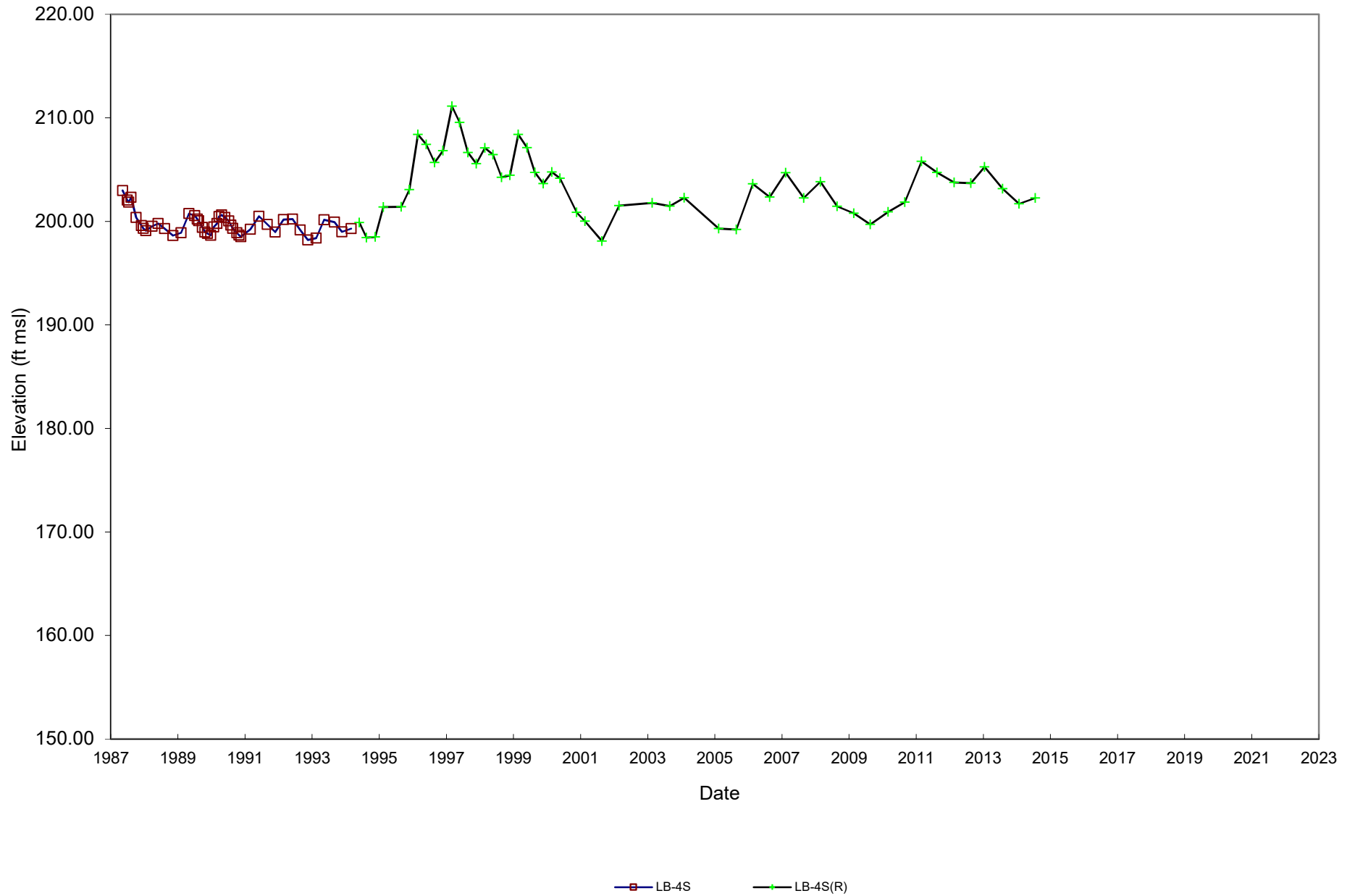
—■— LB-1S —+— LB-1D

LB-3S and LB-3D Hydrographs Leichner Landfill

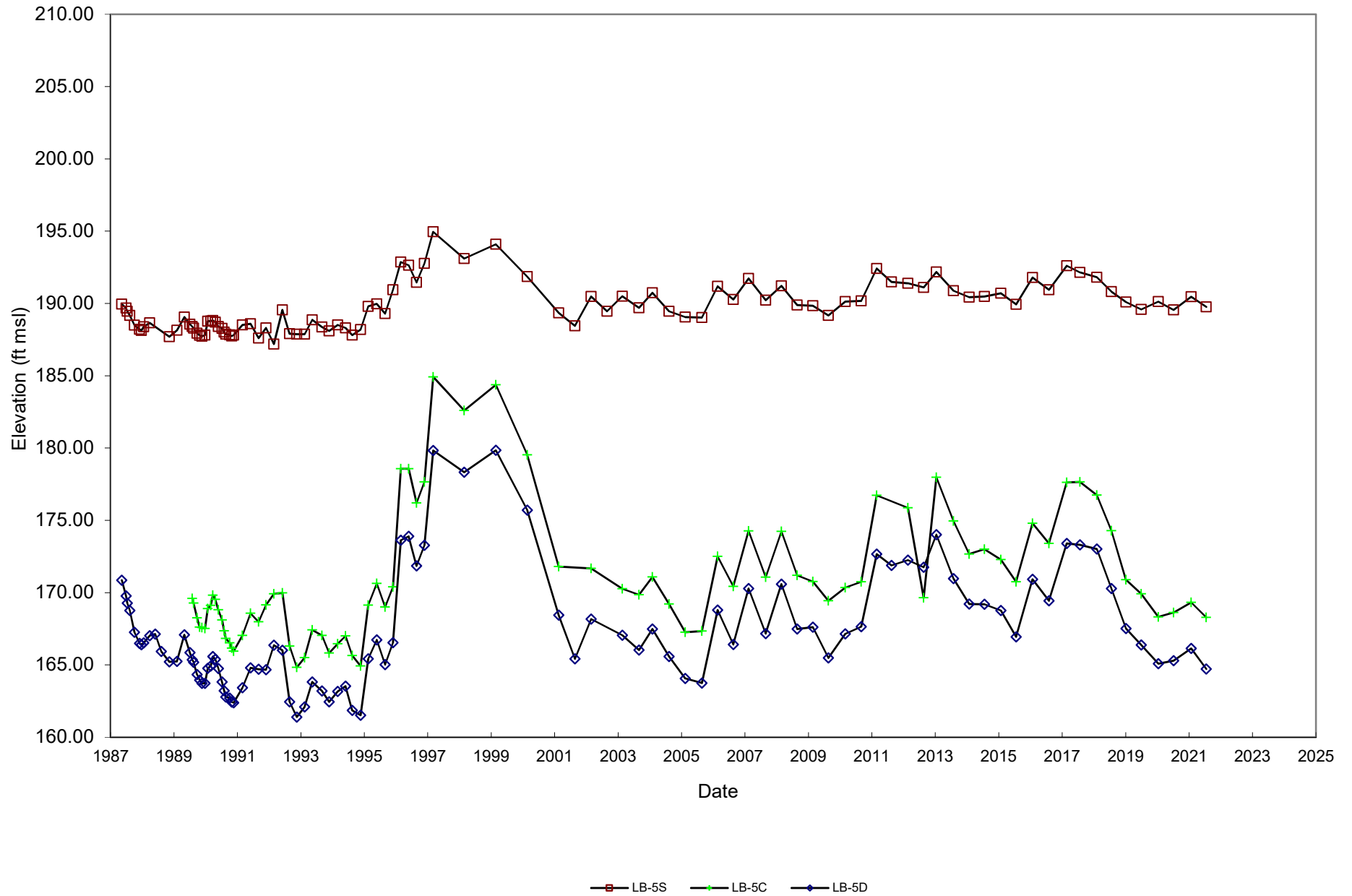


—■— LB-3S —+— LB-3D

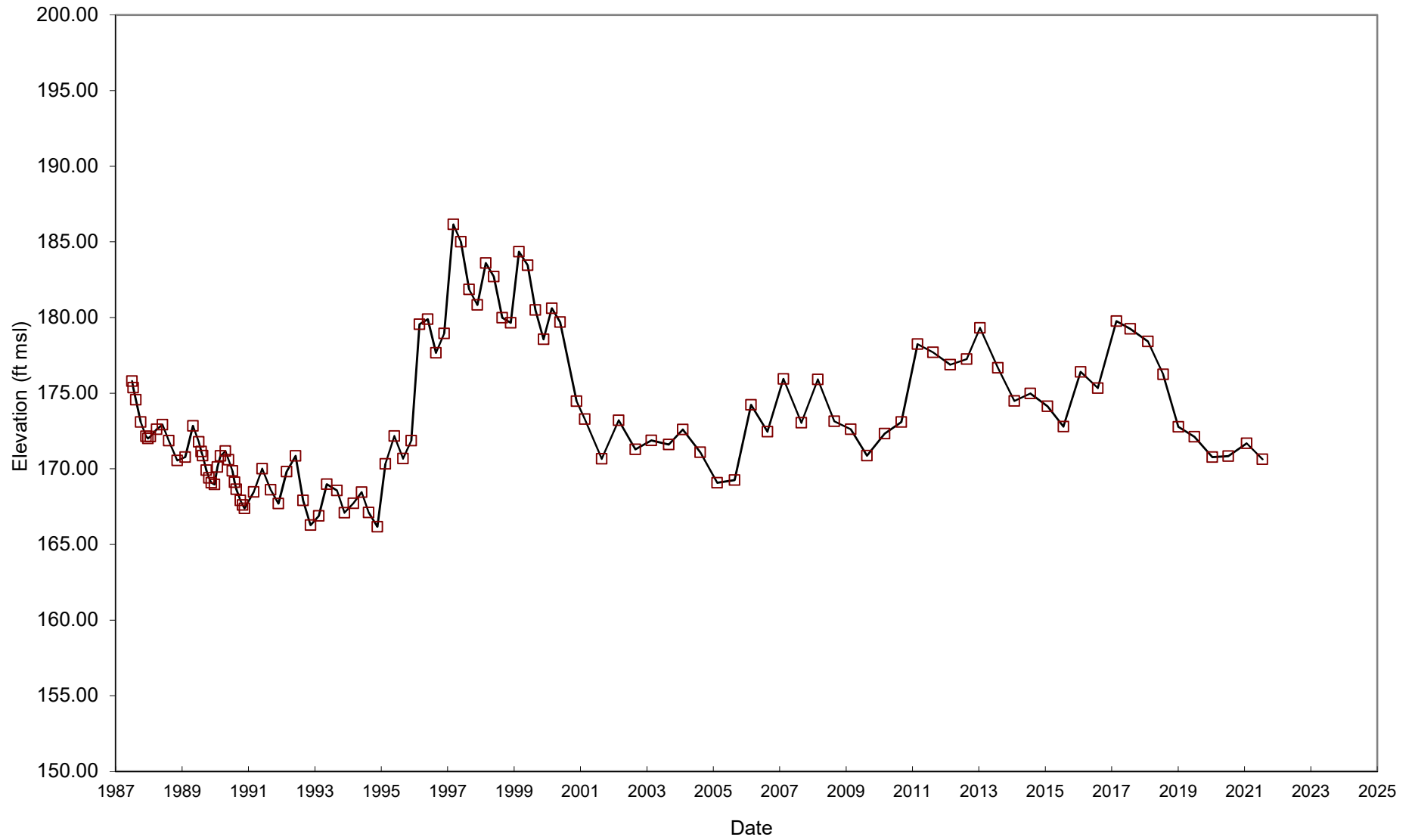
LB-4s, and LB-4S(R) Hydrographs Leichner Landfill



LB 5S, LB-5C, and LB-5D Hydrographs Leichner Landfill

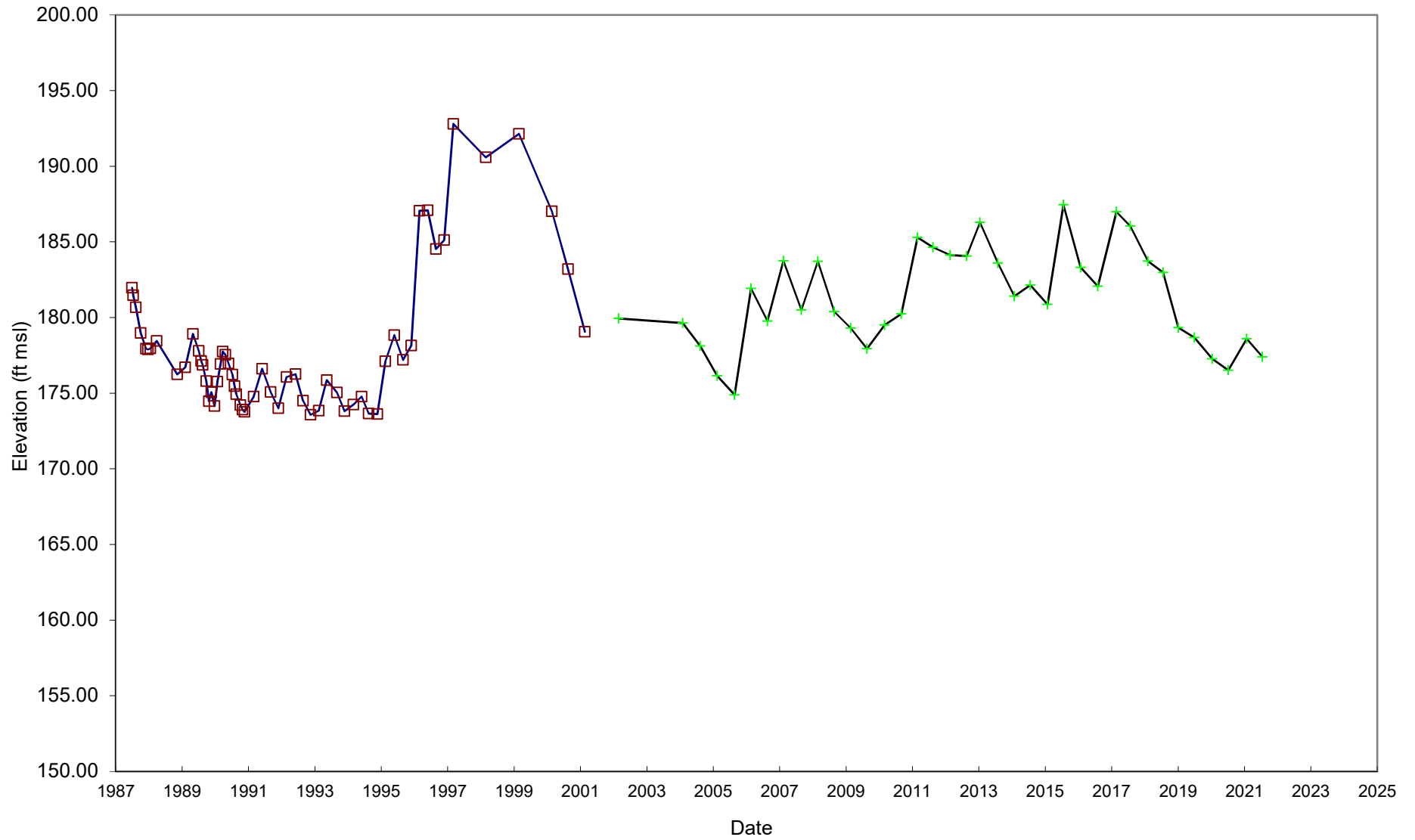


LB-6S Hydrograph Leichner Landfill



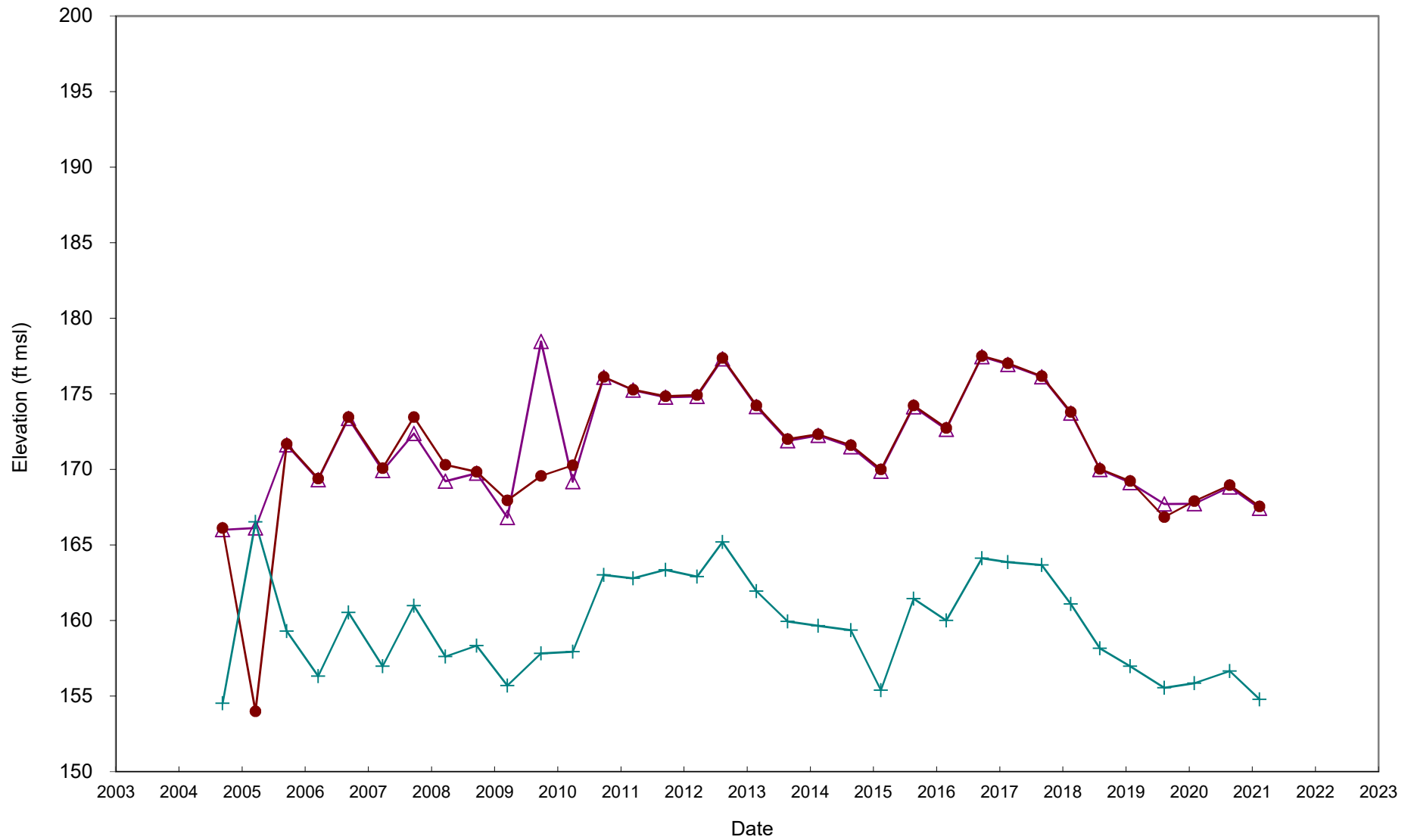
—■ LB-6S

LB-9s, and LB-9S(R) Hydrographs Leichner Landfill



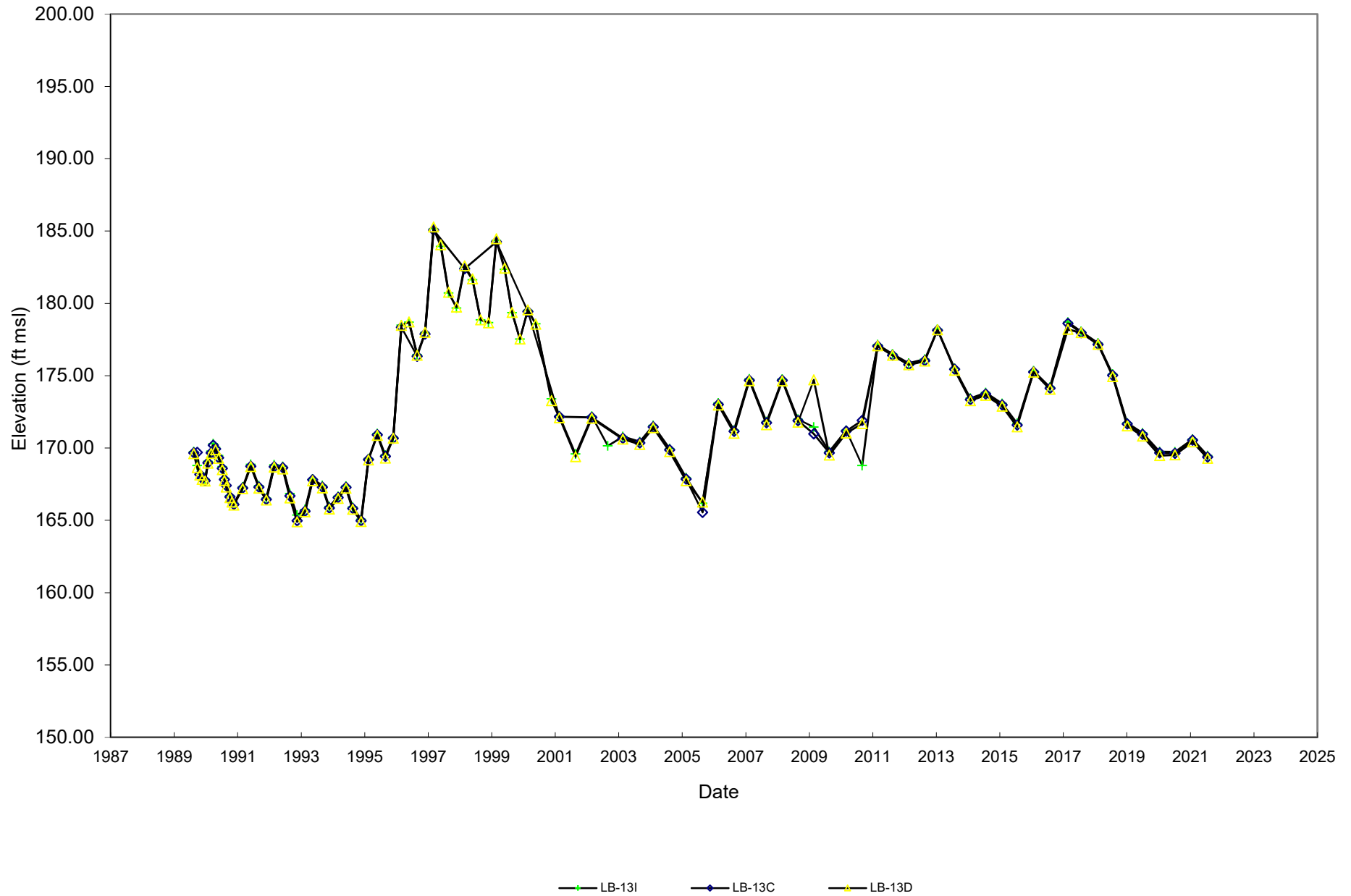
—■— LB-9S —+— LB-9S(R)

LB-10SR, LB-10CR, and LB-10DR Hydrographs Leichner Landfill



—▲— LB-10SR —●— LB-10CR —+— LB-10DR

LB-13I, LB-13C, and LB-13D Hydrographs Leichner Landfill

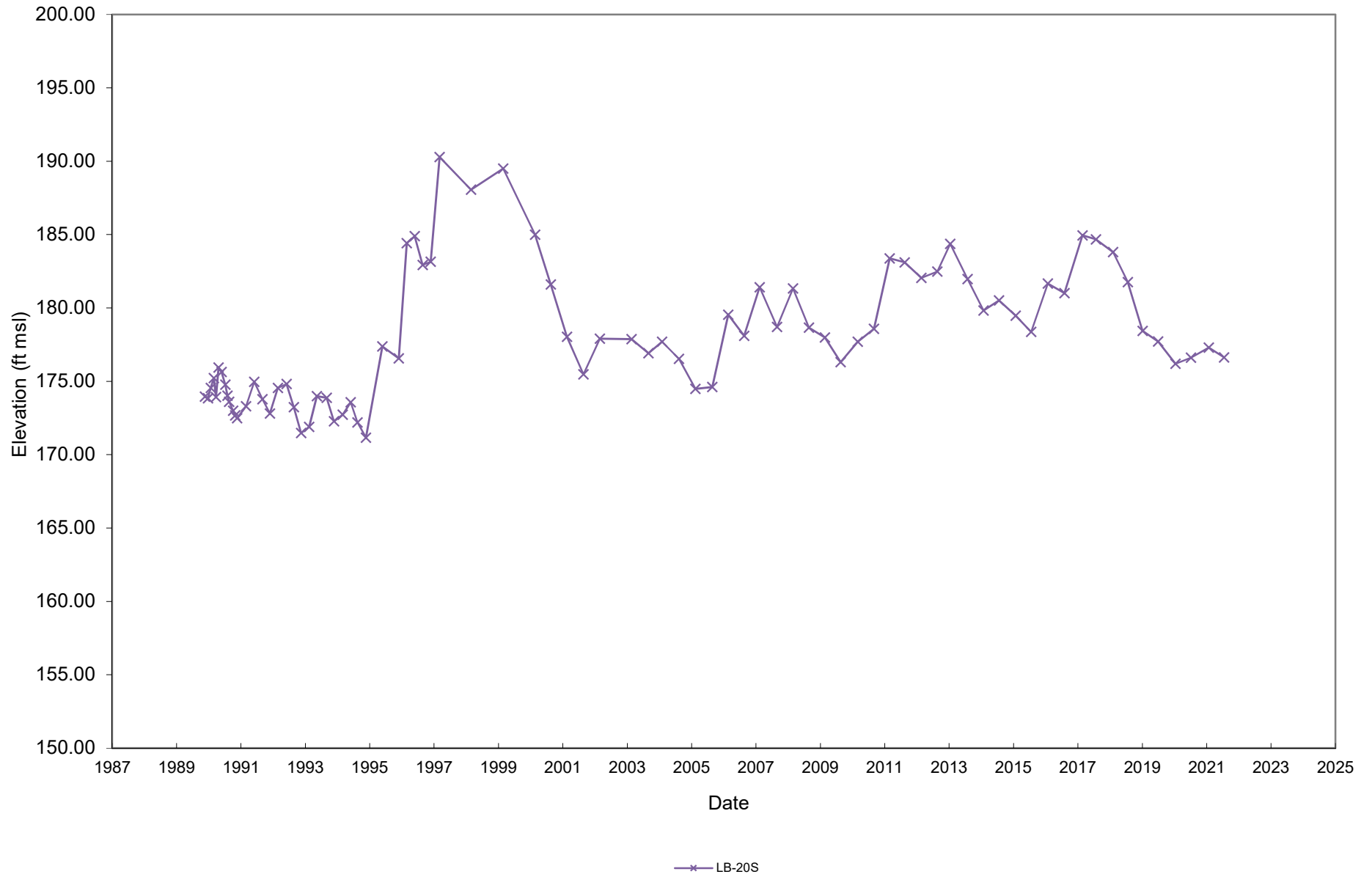


LB-17I and LB-17D Hydrographs Leichner Landfill



—■— LB-17I —+— LB-17D

LB-20S Hydrograph Leichner Landfill

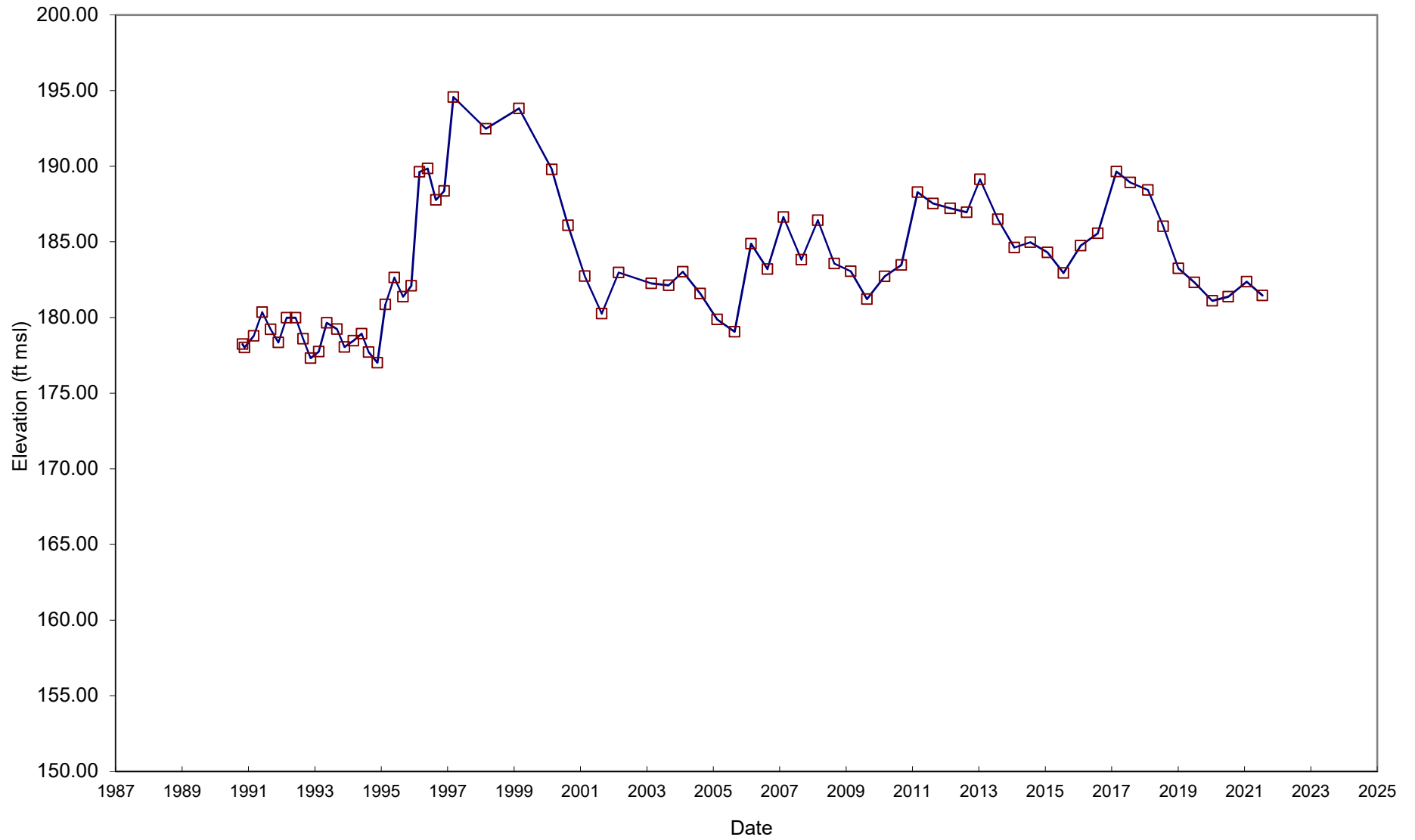


LB-21S, LB-21C, and LB-21D Hydrographs Leichner Landfill



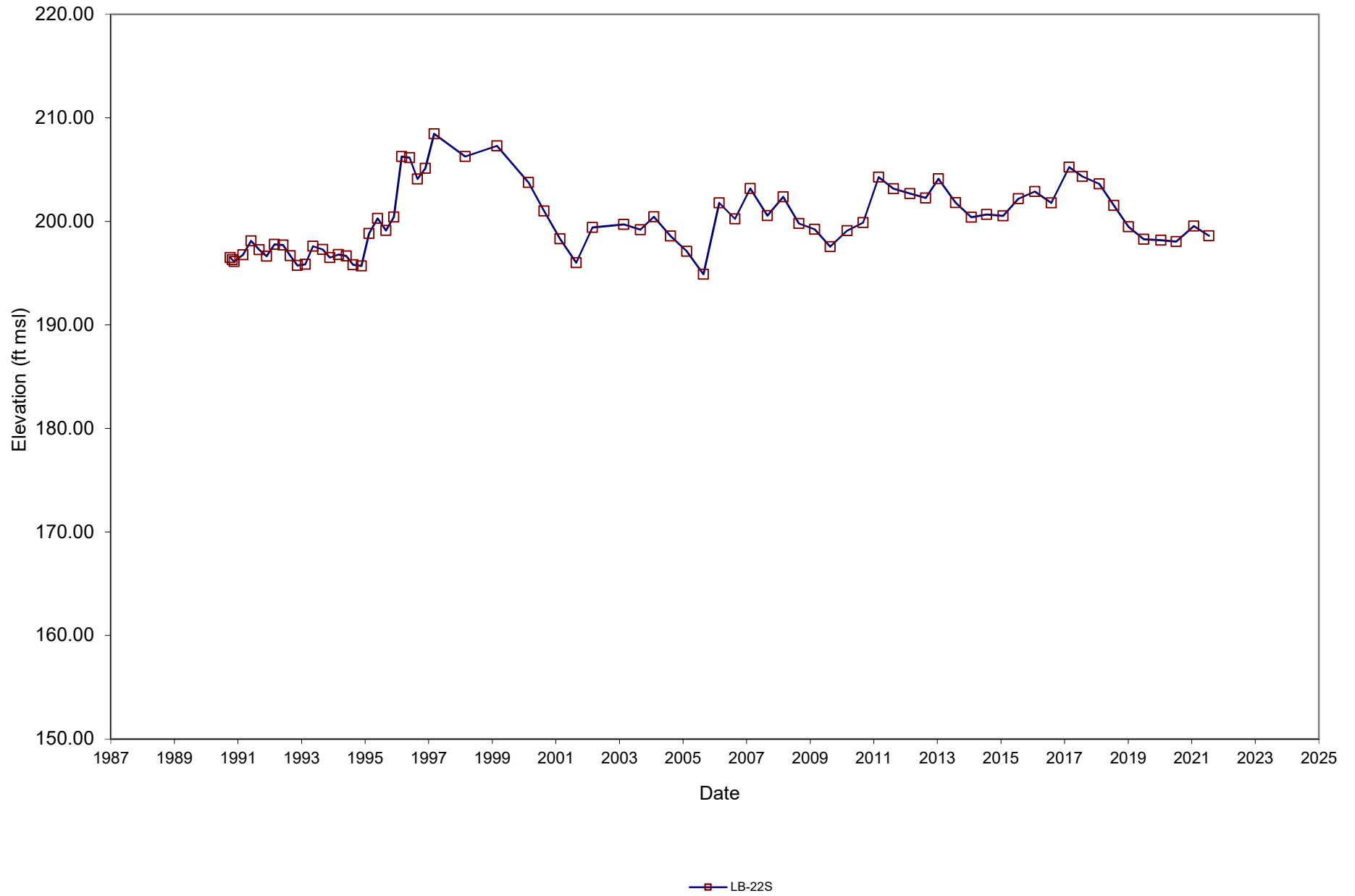
—■— LB-21S —▲— LB-21C —◆— LB-21D

LB-21S Hydrograph Leichner Landfill

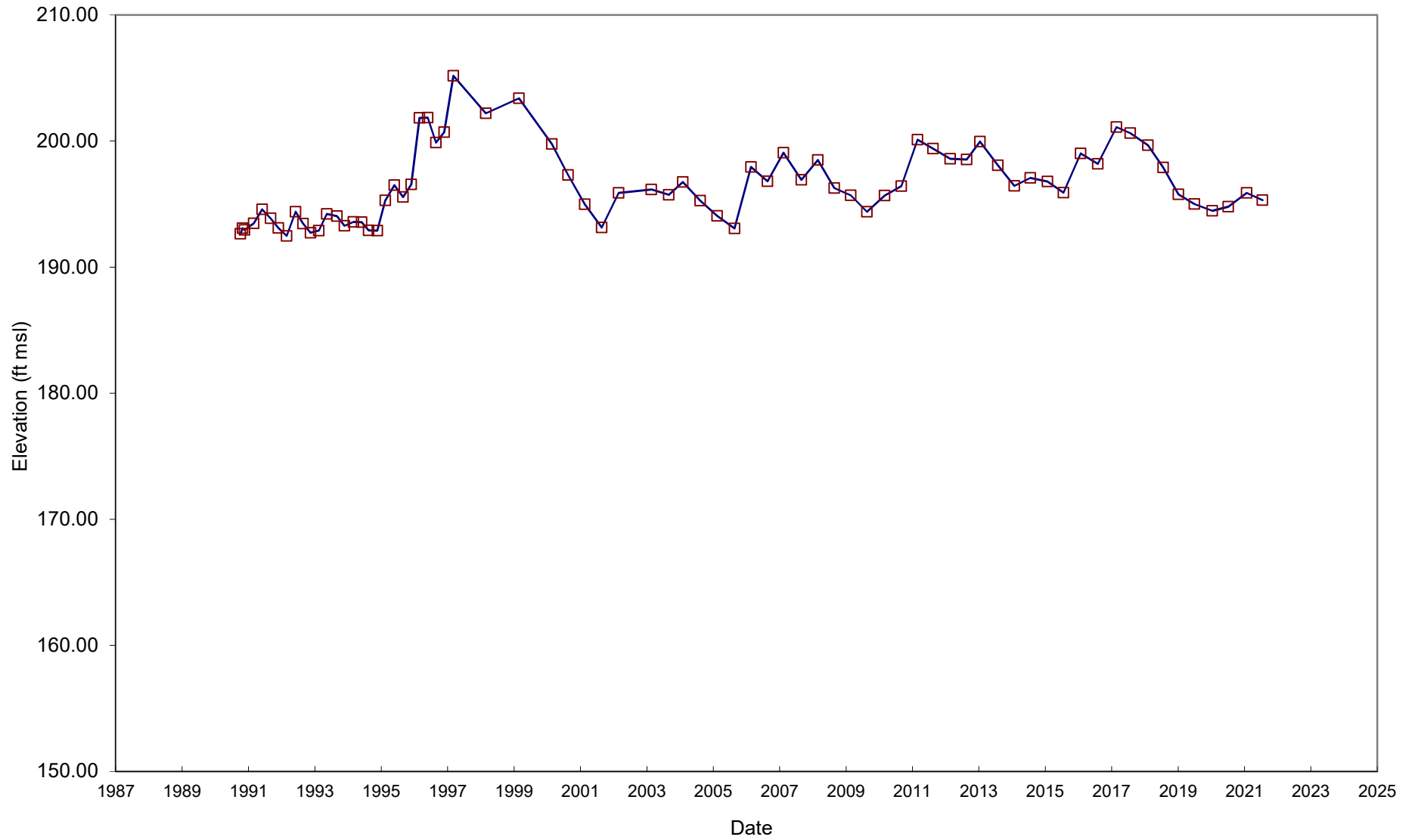


—■— LB-21S

LB-22S Hydrograph Leichner Landfill



LB-23S Hydrograph Leichner Landfill



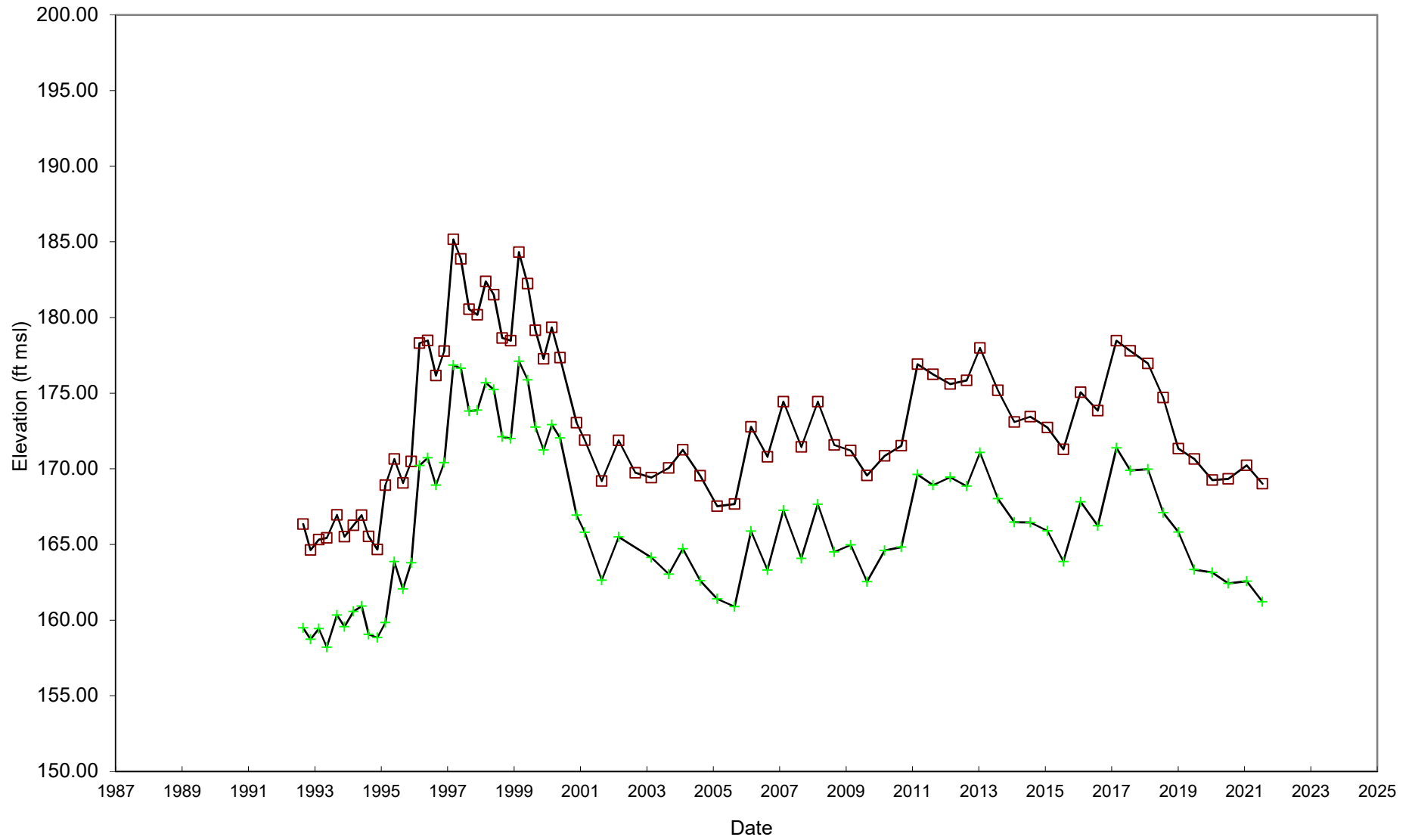
—■— LB-23S

LB-26I and LB-26D Hydrographs Leichner Landfill



—■— LB-26I —+— LB-26D

LB-27I and LB-27D Hydrographs Leichner Landfill



—■— LB-27I —+— LB-27D

APPENDIX E

Quality Assurance/Quality Control Reviews of 2021 Laboratory Analytical Data

First Quarter (February) 2021 QA/QC Reviews

SCS Engineers QA/QC Review
Groundwater - 1Q 2021 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2101511

Samples: LB-021721-01-27D (LB-27D), LB-021721-02-13D (LB-13D), LB-021721-03-26D (LB-26D), LB-021721-04-5D (LB-5D), LB-021821-01-10DR (10DR), LB-021821-02-FB (FB), LB-021821-03-10SR (LB-10SR), and Trip Blank.

Sample Date: 02/17/2021
Laboratory Sample Received Date: 02/18/2021
Sample Receipt Temperature: 2.9°C
Laboratory Data Received Date: 02/26/2021
QA/QC Review Date: 03/15/2021 (CAP)

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 RPDs were within QC limits, except for 2-Butanone (MEK), Hexachlorobutadiene, 2-Hexanone, Methyl tert-Butyl Ether, 4-Methyl-2-pentanone (MIBK), Naphthalene, 1,1,2,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, and 1,2,3-Trichloropropane in batch KQ2102604-06 and KQ2102604-07 (* flag). These are not noted and qualified for in the case narrative.
Matrix Spike	All % recoveries were within QC limits except for acetone in batch KQ2102604-07 (* flag). These are not noted and qualified for in the case narrative.

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

Field Blank

A field blank LB-021821-02-FB (FB) was collected near LB-10SR on 02/18/21 and submitted to the lab. All analytes were reported as non-detect except for chloroform at 1.4 mg/L (MRL 0.50 mg/L). No other sample had a chloroform detection.

Trip Blank

A laboratory supplied trip blank was carried into the field on 02/17/2021 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

Acetone, dibromochloromethane, and dichlorodifluoromethane flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0222F009.D. 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 K2101511 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (03/15/2021; CAP).

SCS Engineers QA/QC Review
Groundwater - 1Q 2021 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2101575

Samples: LB-021821-04-1D (LB-1D), LB-021821-05-1S (LB-1S), LB-021821-06-DUP1 (DUP1), LB-021821-07-3D (LB-3D), LB-021821-08-3S (3S), LB-021821-09-17D (17D), LB-021921-01-20S (LB-20S), LB-021921-02-5S (LB-5S), LB-021921-03-17I (LB-17I), LB-021921-04-27I (LB-27I), LB-021921-05-DUP2 (DUP2), and Trip Blank.

Sample Date: 02/18/2021 and 02/19/2021
Laboratory Sample Received Date: 02/19/2021
Sample Receipt Temperature: 2.6°C
Laboratory Data Received Date: 02/26/2021
QA/QC Review Date: 03/15/2021 (CAP)

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 RPDs were within QC limits.
Matrix Spike	All % recoveries 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

Field Duplicate

Two field duplicate samples, LB-021821-06-DUP1 (DUP1), and LB-021921-05-DUP2 (DUP2) were collected at monitoring wells LB-1S (LB-021821-05-1S), and LB-27I (LB-021921-04-27I) respectively on 02/18/2021 and 02/19/2021. All calculated RPDs were within 20%.

Trip Blank

A laboratory supplied trip blank was carried into the field on 02/18/2021 and 2/19/2021 with all samples collected over same dates and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect.

Notes

Bromomethane, Carbon Disulfide, Chloromethane, Dichlorodifluoromethane, 2-Hexanone, and Trichlorofluoromethane (CFC 11) were flagged as outside the control criterion for Continuing Calibration

Verification (CCV) MS27\0223F003.D. 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.

The advisory criterion was exceeded for Bromomethane in Laboratory Control Sample (LCS) KQ2102778-03. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, this compound is not included in the subset of analytes used to control the analysis. The recovery information reported for this analyte is for advisory purposes only. No further corrective action was required.

Data Validation

Upon final review of lab report K2101575 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (03/15/2021; CAP).

**SCS Engineers QA/QC Review
Groundwater - 1Q 2021 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2101683**

Samples: LB-022321-03-6S (LB-6S), LB-022321-01-13I (LB-13I), LB-022321-02-26I (LB-26I), and Trip Blank.

Sample Date: 02/23/2021
Laboratory Sample Received Date: 02/24/2021
Sample Receipt Temperature: 0.6°C
Laboratory Data Received Date: 03/08/2021
QA/QC Review Date: 03/15/2021 (CAP)

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 RPDs were within QC limits.
Matrix Spike	All % recoveries 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 02/23/2021 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

The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0225F003.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.

Data Validation

Upon final review of lab report K2101683 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (03/15/2021; CAP).

Second Quarter (May) 2021 QA/QC Reviews

**SCS Engineers QA/QC Review
Groundwater - 2Q 2021 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2105413**

Samples: LB-051321-01-27I (LB-27I), LB-051321-02-FB (Field Blank), LB-051321-03-1S (LB-1S), LB-051321-04-10SR (LB-10SR), LB-051321-05-10SR (LB-10SR), and Trip Blank.

Sample Date: 05/13/2021
Laboratory Sample Received Date: 05/14/2021
Sample Receipt Temperature: 4.1°C
Laboratory Data Received Date: 05/28/2021
QA/QC Review Date: 06/01/2021 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All percent recoveries were within QC limits, and all surrogate recoveries were within control limits.
Matrix Spikes	All percent recoveries were within QC limits.
MSD	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 LB-051321-02-FB (FB) was collected near LB-1S on 05/13/21 and submitted to the lab. All analytes were reported as non-detect.

Field Duplicate

A field duplicate sample LB-051321-05-DUP (DUP) was collected at monitoring wells LB-10SR (LB-051321-04-10SR on 05/13/2021. All calculated RPDs were within 20%.

Trip Blank

A laboratory supplied trip blank was carried into the field on 05/13/2021 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

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0520F007.D and MS13\0524F002.D. 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 CCVs 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 K2105413 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (06/01/2021; TMA).

Third Quarter (August) 2021 QA/QC Reviews

**SCS Engineers QA/QC Review
Groundwater - 3Q 2021 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2109260**

Samples: TB1 (Trip Blank), LB-080921-01-5S (LB-5S), LB-080921-02-27I (LB-27I), LB-080921-03-13I (LB-13I), LB-080921-04-DUP (LB-13I).

Sample Date: 08/09/2021
Laboratory Sample Received Date: 08/10/2021
Sample Receipt Temperature: 3.3°C
Laboratory Data Received Date: 09/03/2021
QA/QC Review Date: 11/10/2021 (IH)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All percent recoveries were within QC limits except for dibromochloromethane in batch KQ2115824 (* flag). This is noted and qualified for in the case narrative.
LCSD	All RPDs were within control limits.
Matrix Spikes	All percent recoveries were within QC limits.
MSD	All RPDs were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All percent recoveries were with control limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All percent recoveries were within control limits.
LCSD	All RPDs were within control 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-080921-04-DUP (DUP) was collected at monitoring wells LB-13I (LB-080921-03-13I) on 08/09/2021. All calculated RPDs were within 20% except for dissolved manganese (30.3%). It should be noted that the concentrations of dissolved manganese in the LB-080921-04-DUP and the LB-080921-03-13I were within five times the reporting limit and, therefore, not controlled by RPDs.

Trip Blank

A laboratory supplied trip blank was carried into the field on 08/09/2021 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 (0.63 ug/L). Toluene was not found in the associated samples. This was noted and qualified for in the case narrative.

Notes

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0816F0003.D. 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 CCVs met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon review the preliminary data presented in lab report K2109260 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (11/10/2021; IH).

**SCS Engineers QA/QC Review
Groundwater - 3Q 2021 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2109352**

Samples: TB2 (Trip Blank), LB-081021-01-FB (LB-10SR), LB-081021-02-10SR (LB-10SR), LB-081021-03-1S (LB-1S), LB-081021-04-26I (LB-26I), and LB-081021-05-6S (LB-6S).

Sample Date: 08/10/2021
Laboratory Sample Received Date: 08/11/2021
Sample Receipt Temperature: 0.7°C
Laboratory Data Received Date: 09/03/2021
QA/QC Review Date: 11/12/2021 (IH)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All percent recoveries were within QC limits except for dibromochloromethane in batch KQ2115824 (* flag). This is noted and qualified for in the case narrative.
LCSD	All RPDs were within control limits.
Matrix Spikes	All percent recoveries were within QC limits.
MSD	All RPDs were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All percent recoveries were with control limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All percent recoveries were within control limits.
LCSD	All RPDs were within control limits.

Hold Times

All analytical hold times were met except for nitrate as nitrogen for samples LB-081021-01-FB and LB-081121-02-10SR. This is noted and qualified for in the case narrative.

Reporting Limit Exceedances

All project-specific reporting limits were met.

Field QA/QC

Field Blank

A field blank (LB-081021-01-FB) was collected on 8/10/2021 at LB-10SR. All analytes were reported as non-detect.

Trip Blank

A laboratory supplied trip blank was carried into the field on 08/10/2021 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 (0.50 ug/L). Toluene was not found in the associated samples. This was noted and qualified for in the case narrative.

Notes

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0819F0003.D. 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 CCVs met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon review the preliminary data presented in lab report K2109352 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (11/12/2021; IH).

**SCS Engineers QA/QC Review
Groundwater - 3Q 2021 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2109352**

Samples: Trip Blank, and LB-081121-01-9SR (LB-09SR)

Sample Date: 08/11/2021
Laboratory Sample Received Date: 08/11/2021
Sample Receipt Temperature: 0.7°C
Laboratory Data Received Date: 09/03/2021
QA/QC Review Date: 11/12/2021 (IH)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All percent recoveries were within QC limits.
LCSD	All RPDs were within control limits.
Matrix Spikes	All percent recoveries were within QC limits.
MSD	All RPDs were within QC limits.

Total Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All percent recoveries were within control limits.
Matrix Spike	All spike recoveries were within control limits except for iron in batch KQ2115398-05 (N flag). This is noted and qualified for in the case narrative.
Duplicate	All RPDs were within control limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All percent recoveries were within control limits.
LCSD	All RPDs were within control limits.
MS	All spike recoveries were within control limits.
MSD	All RPDs were within control 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 08/11/2021 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 (0.58 ug/L). Toluene was not found in the associated samples. This was noted and qualified for in the case narrative.

Notes

Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0819F0005.D. 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 CCVs met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon review the preliminary data presented in lab report K2109353 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (11/12/2021; IH).

Special Groundwater Sampling Event
(March) 2021 QA/QC Reviews

**SCS Engineers QA/QC Review
Groundwater - 1Q 2021 Special Groundwater Sampling Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2102664**

Samples: LB-031621-01-FB, LB-031621-02-24S (LB-24S), LB-031621-03-23S (LB-23S), LB-031621-04-22S (LB-22S), LB-031621-05-DUP1 (LB-22S), LB-031621-06-NE (MW-NE) and Trip Blank.

Sample Date: 03/16/2021
Laboratory Sample Received Date: 03/17/2021
Sample Receipt Temperature: 1.7°C
Laboratory Data Received Date: 03/26/2021
QA/QC Review Date: 04/19/2021 (IH)

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 except for acetone and 4-methyl-2-pentanone (* flags). This is noted and qualified for in the case narrative.
LCSD	All RPDs were within QC limits.
MS	All % recoveries were within QC limits except for acetone, chloromethane, and 4-methyl-2-pentanone (* flags). This was not qualified for in the case narrative. It should be noted that MS and MSD data is presented for information purposes only. The laboratory evaluates system performance on LCS and LCSD control limits.
MSD	All 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.
Replicate	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.
Replicates	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-031621-05-DUP1 (DUP1) was collected at monitoring well LB-22S (LB-031621-04-22S) on 03/16/2021. All calculated RPDs were within 20% except for thallium (33.33%). It should be noted that the reported concentrations of thallium for LB-031621-05-DUP1 and LB-031621-04-22S, 0.02 ug/L and 0.028 ug/L respectively, were less than five times the reporting limit, 0.02 ug/L, and therefore not controlled by RPDs.

Field Blank

A field blank LB-031621-01-FB (FB) was collected near LB-24S on 03/16/21 and submitted to the lab. All analytes were reported as non-detect except for thallium. It should be noted that thallium was not detected in the LB-031621-02-24S (LB-24S) sample.

Trip Blank

A laboratory supplied trip blank (Trip Blank) was carried into the field on 03/17/2021 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

The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS27

\0318F002.D: tetrachloroethene (PCE) and trichlorofluoromethane (CFC11). 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.

The ALS control criterion for the following analyte was not met in Continuing Calibration Verification (CCV) MS27\0318F002.D: dichlorodifluoromethane. In accordance with ALS standard operating procedures, an MRL check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verifies instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Because the sensitivity was shown to be adequate to detect the compound in question, and the field samples analyzed in this sequence did not contain the analyte in question, the data quality has not been significantly affected. No further corrective action was taken.

Data Validation

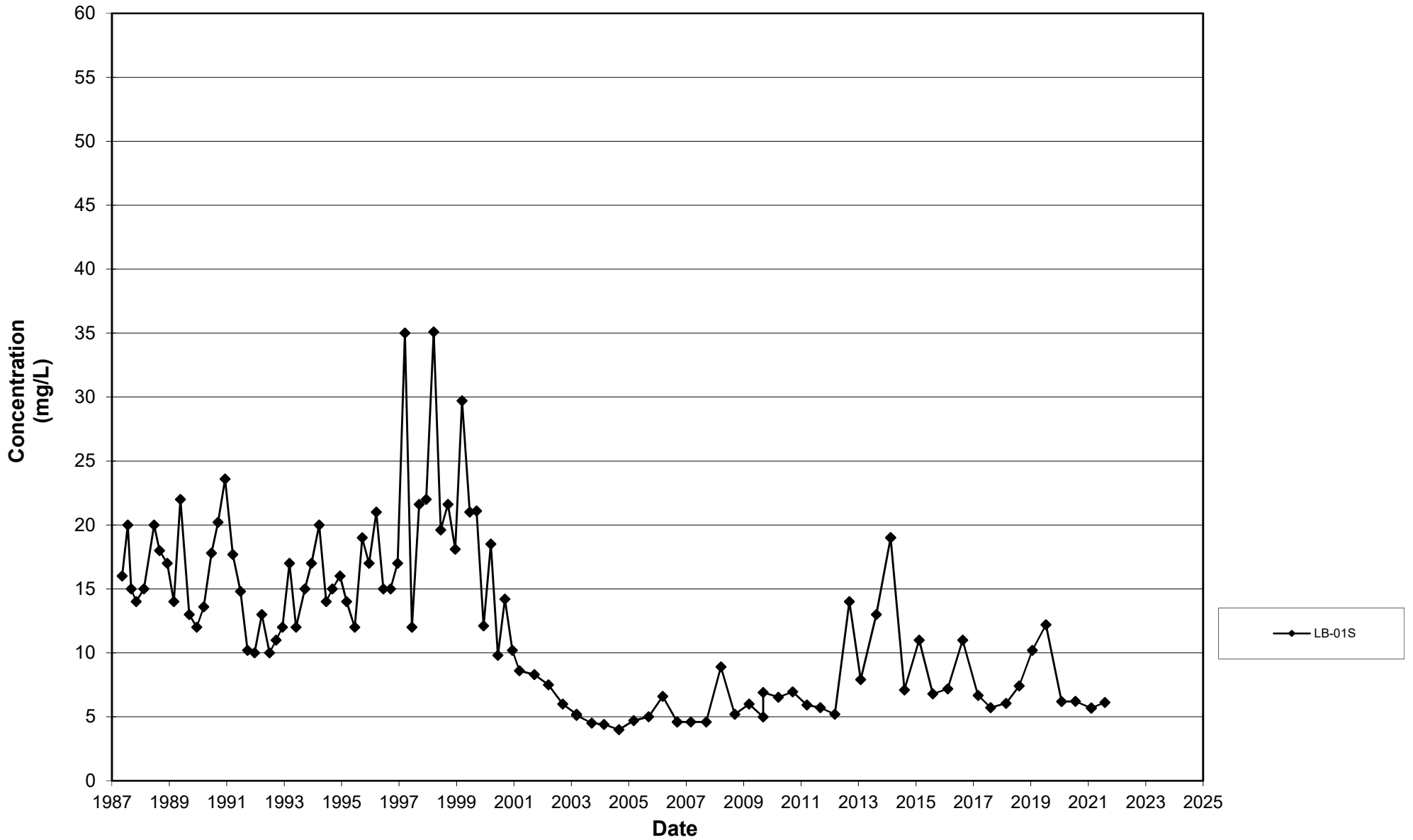
Upon final review of lab report K210664 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/19/2021; IH).

APPENDIX F

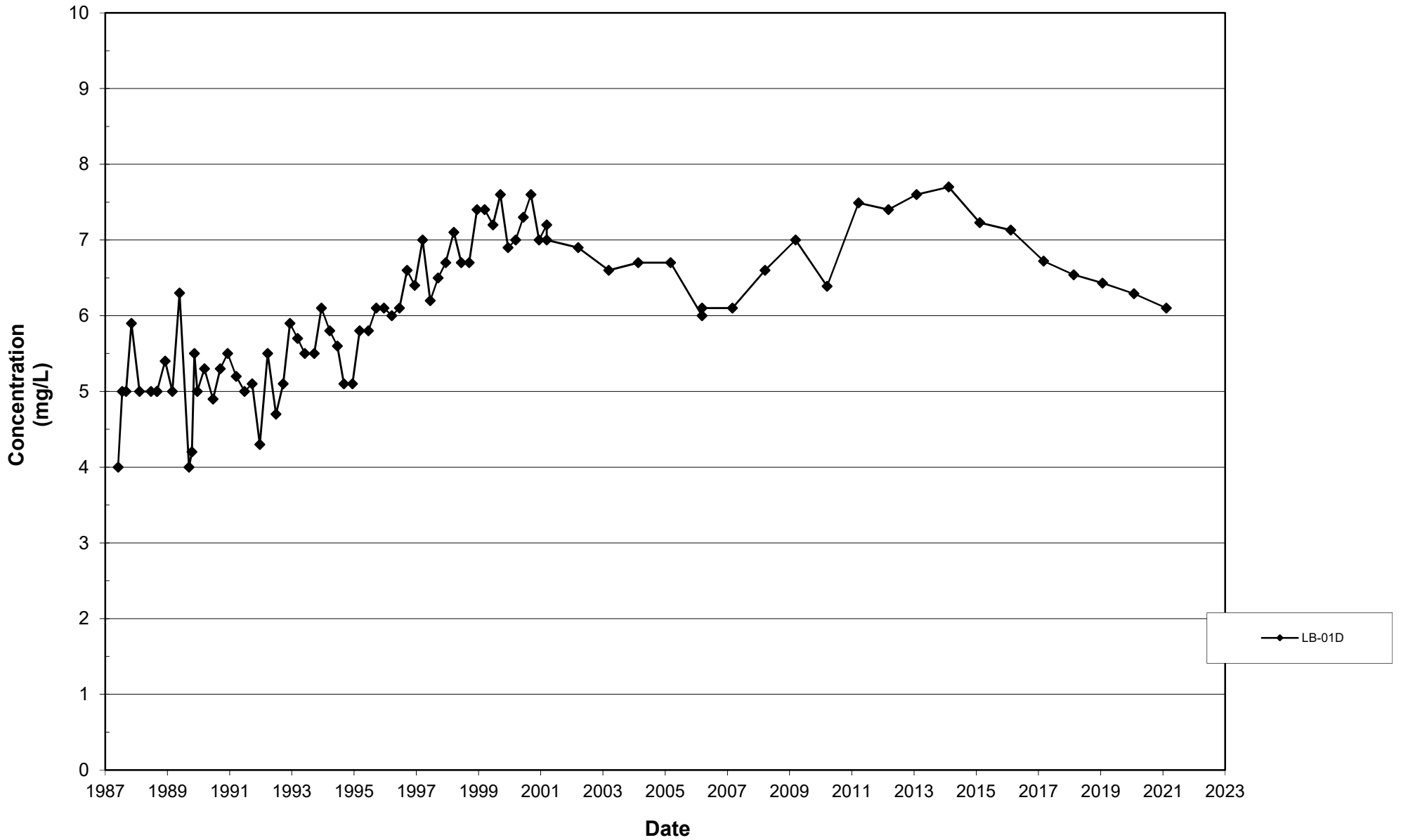
Groundwater Time-Concentration Graphs

Chloride

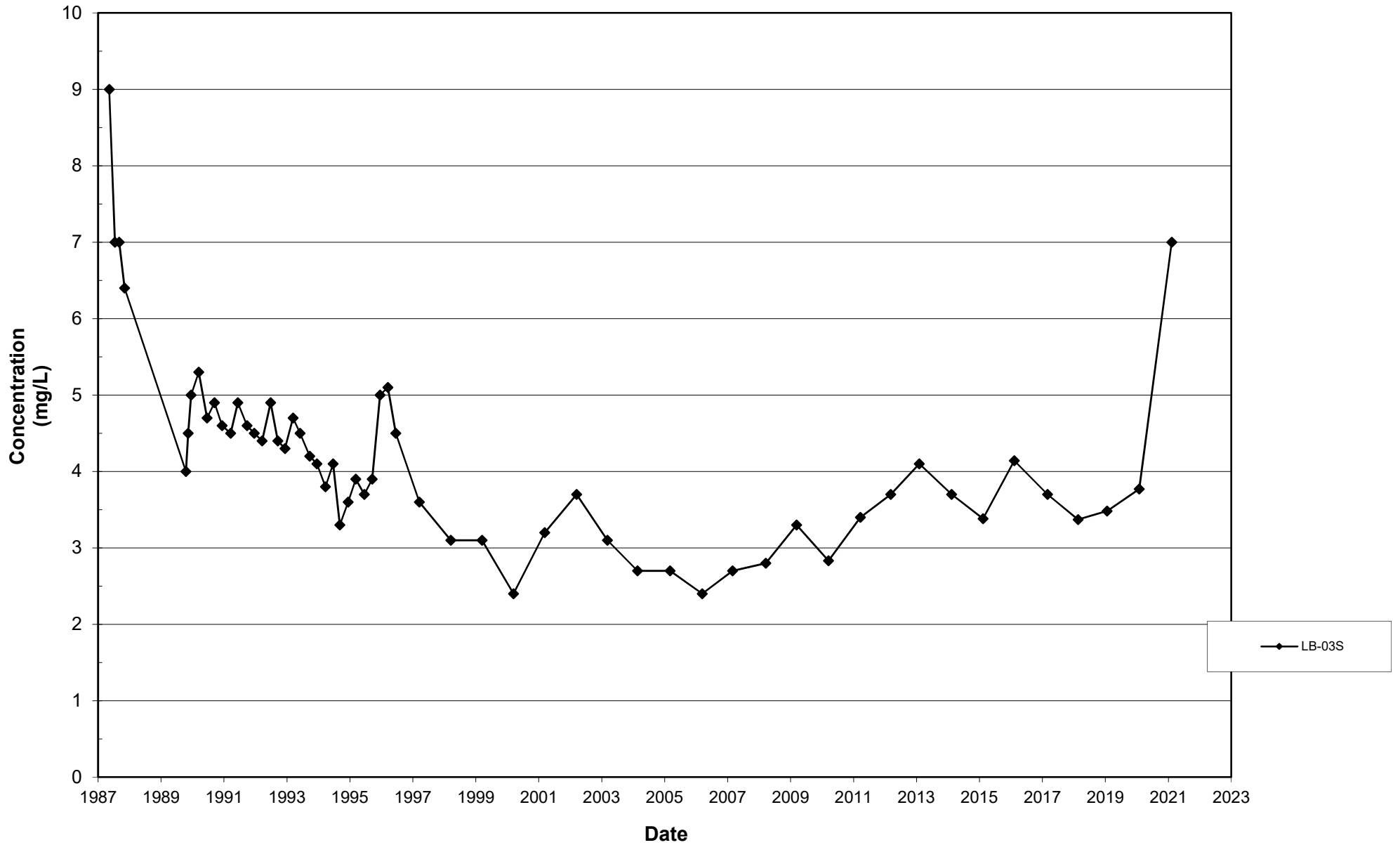
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1987 - 2021



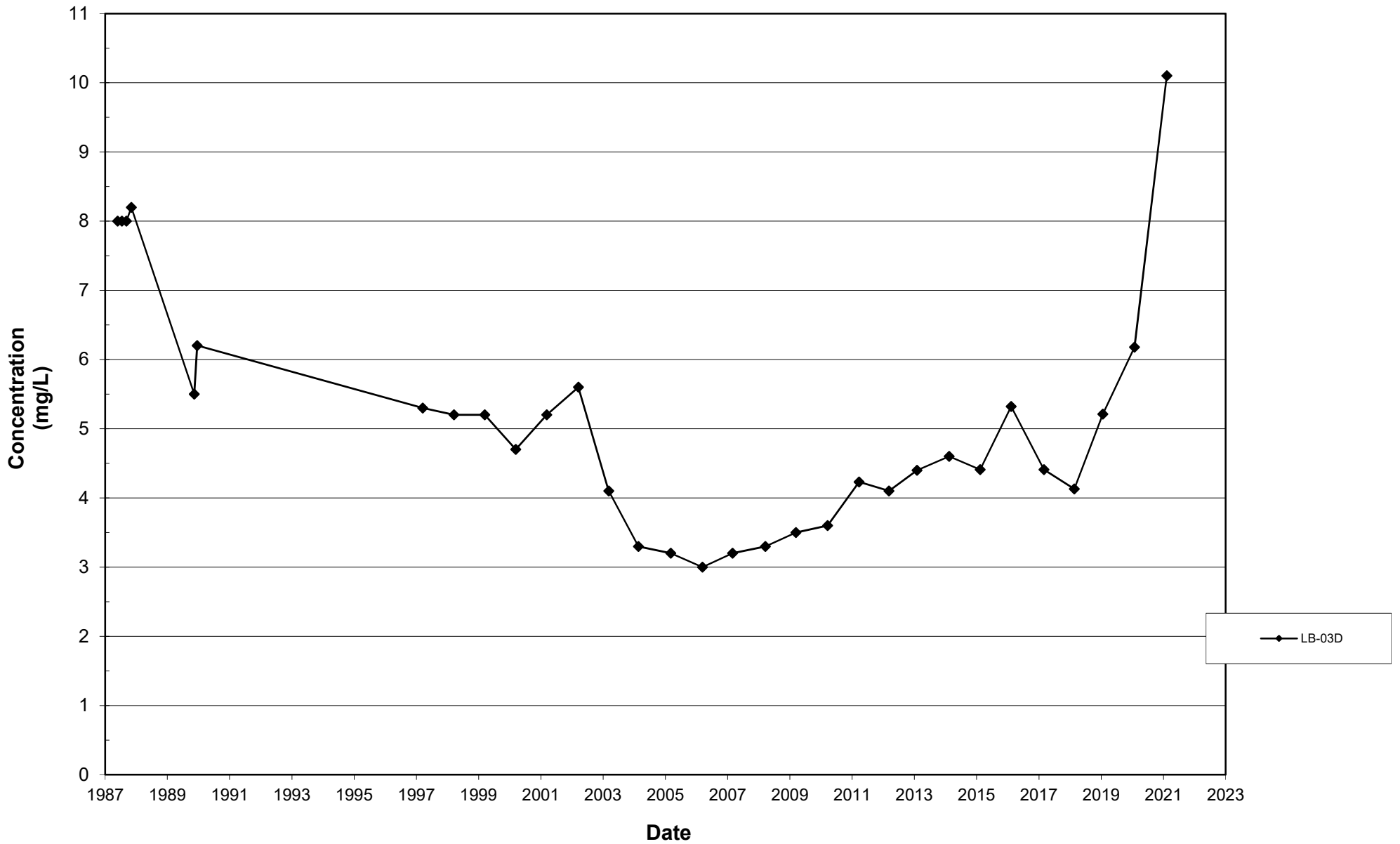
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1987 - 2021



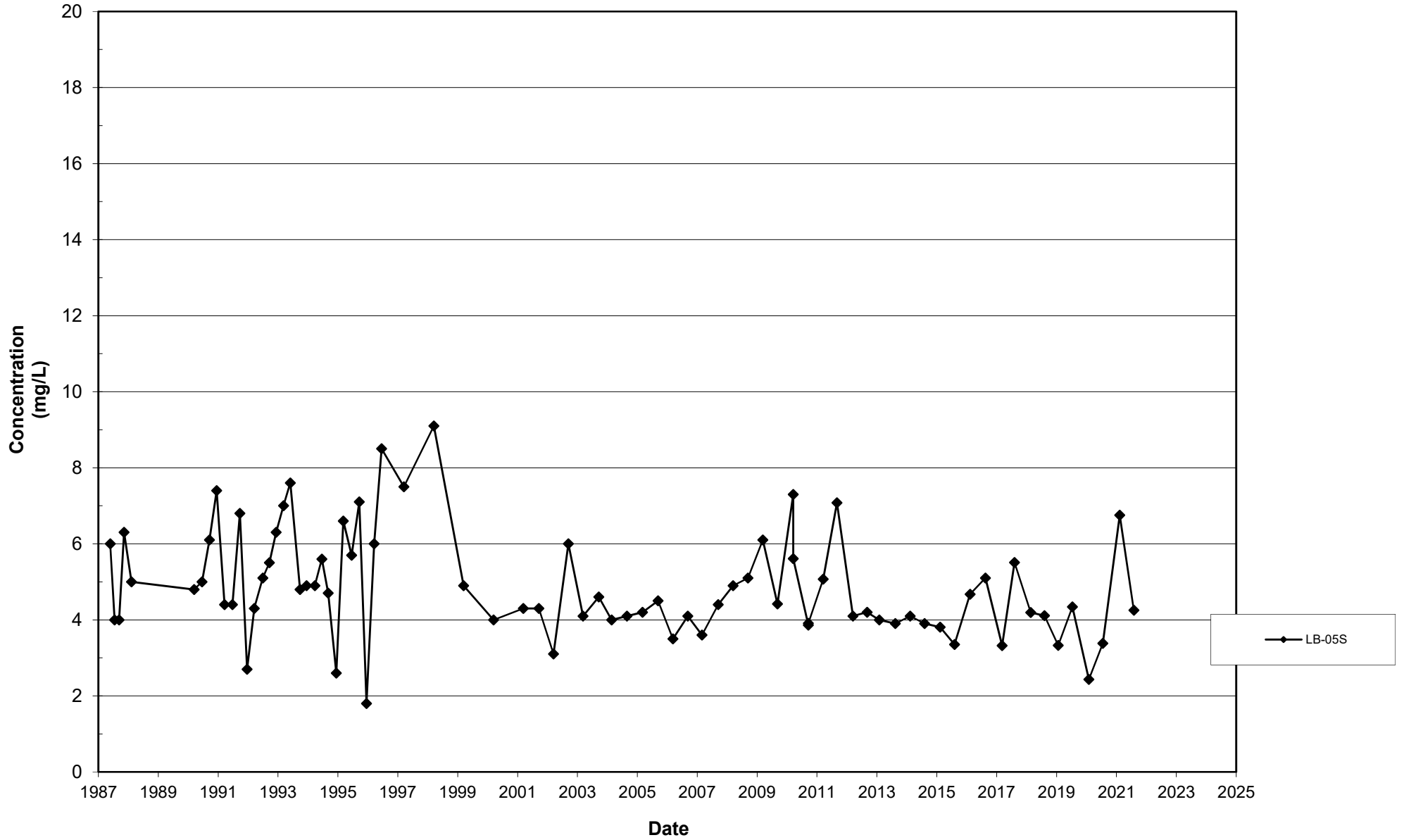
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1987 - 2021



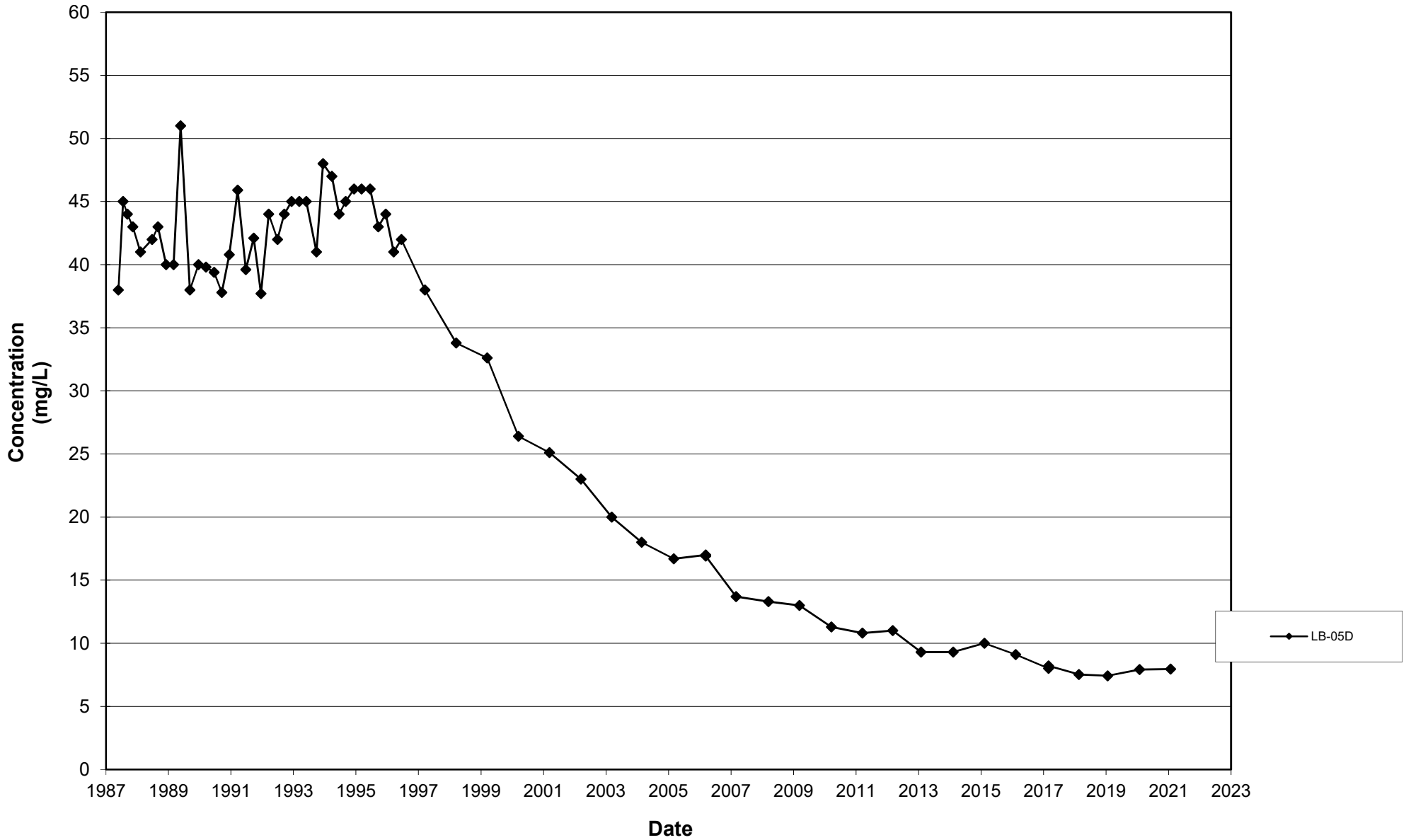
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1987 - 2021



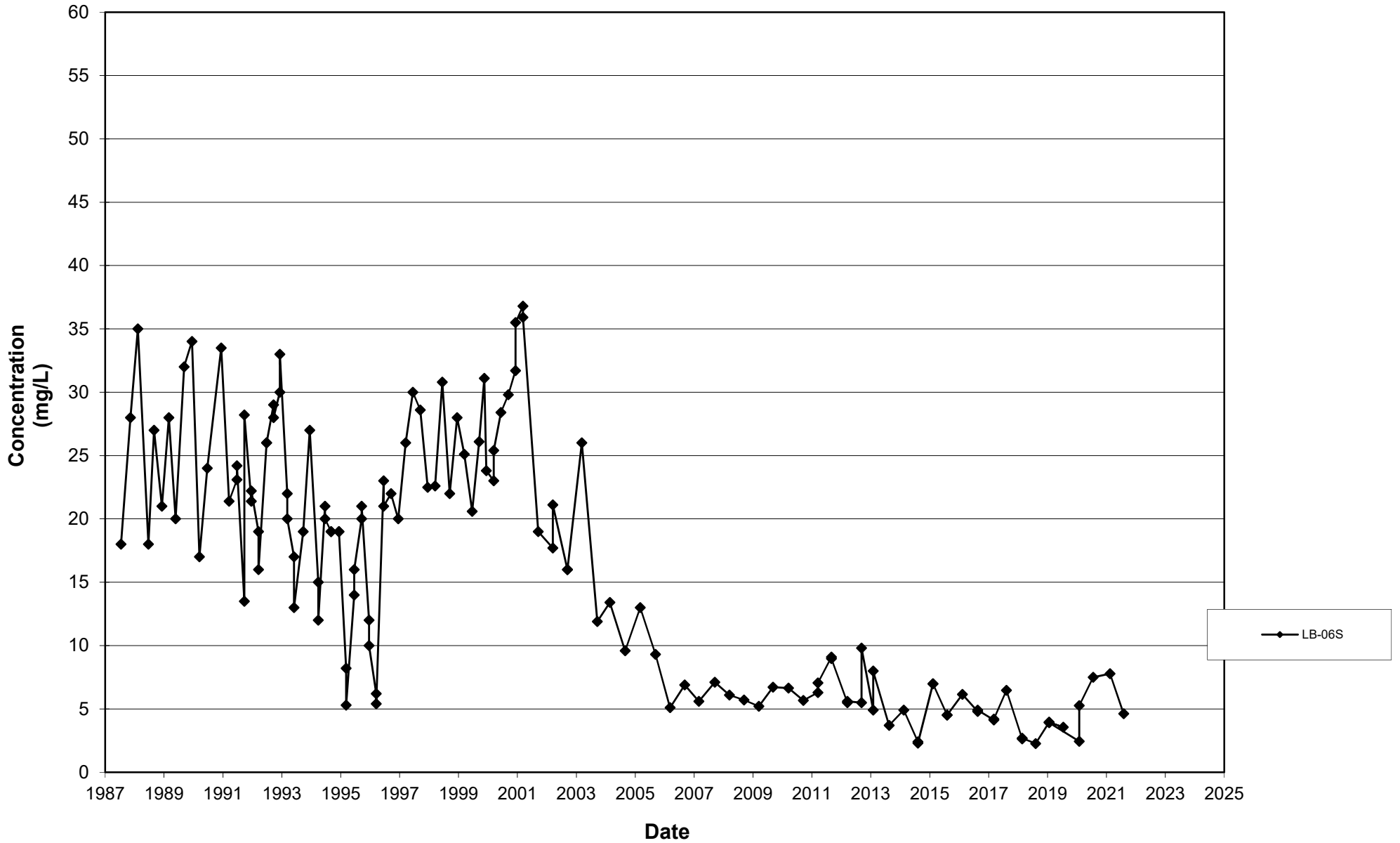
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1987 - 2021



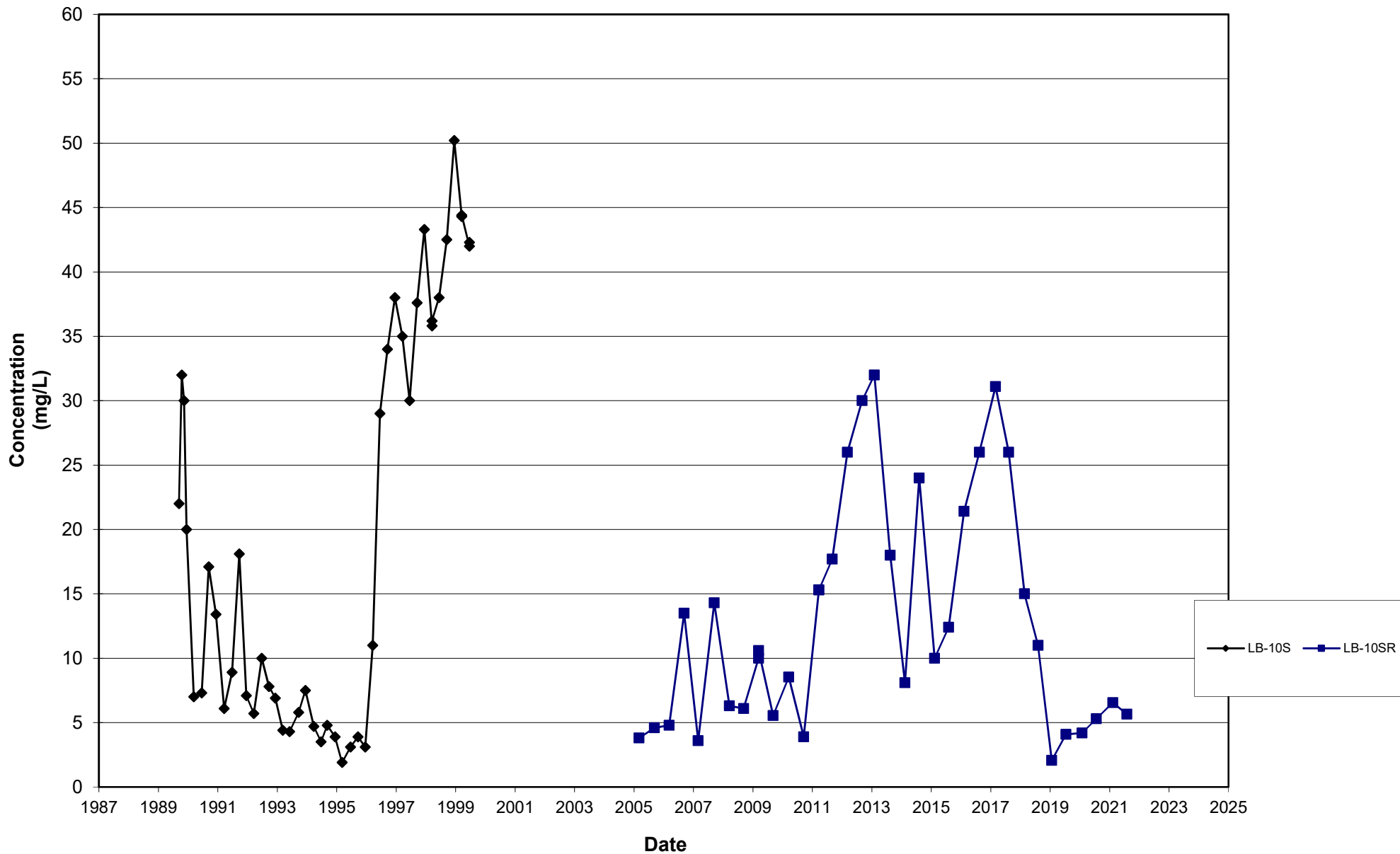
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1987 - 2021



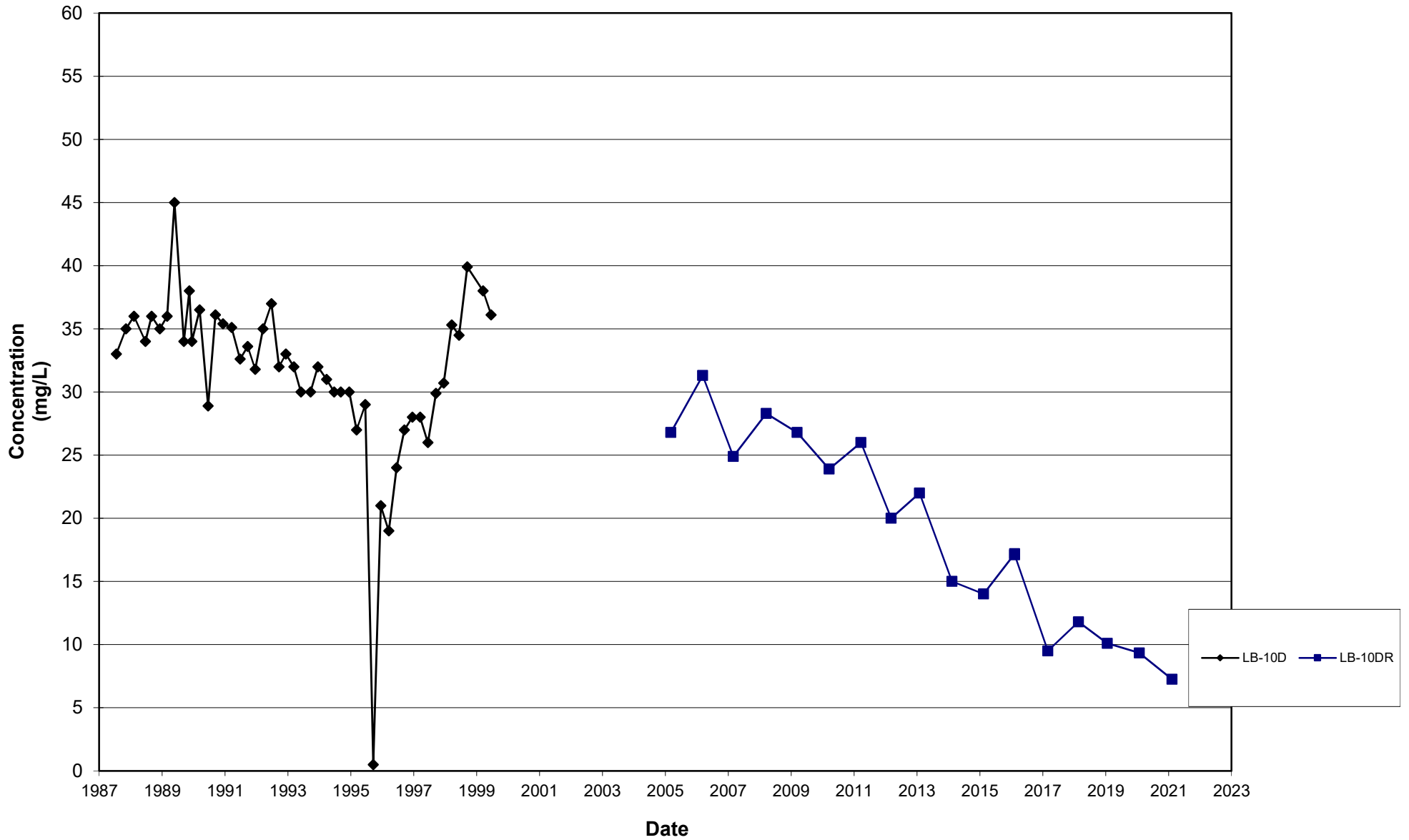
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1987 - 2021



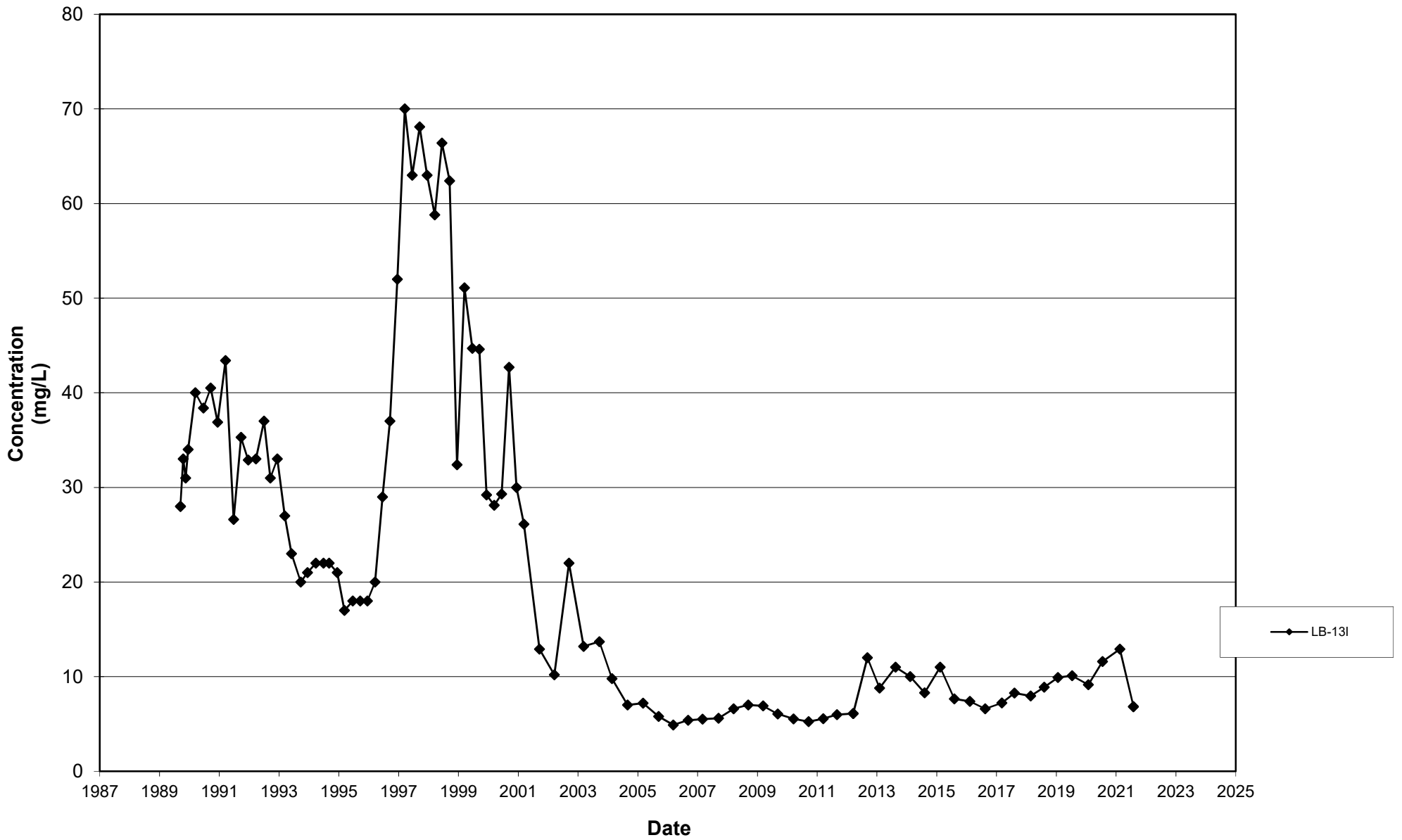
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1987 - 2021



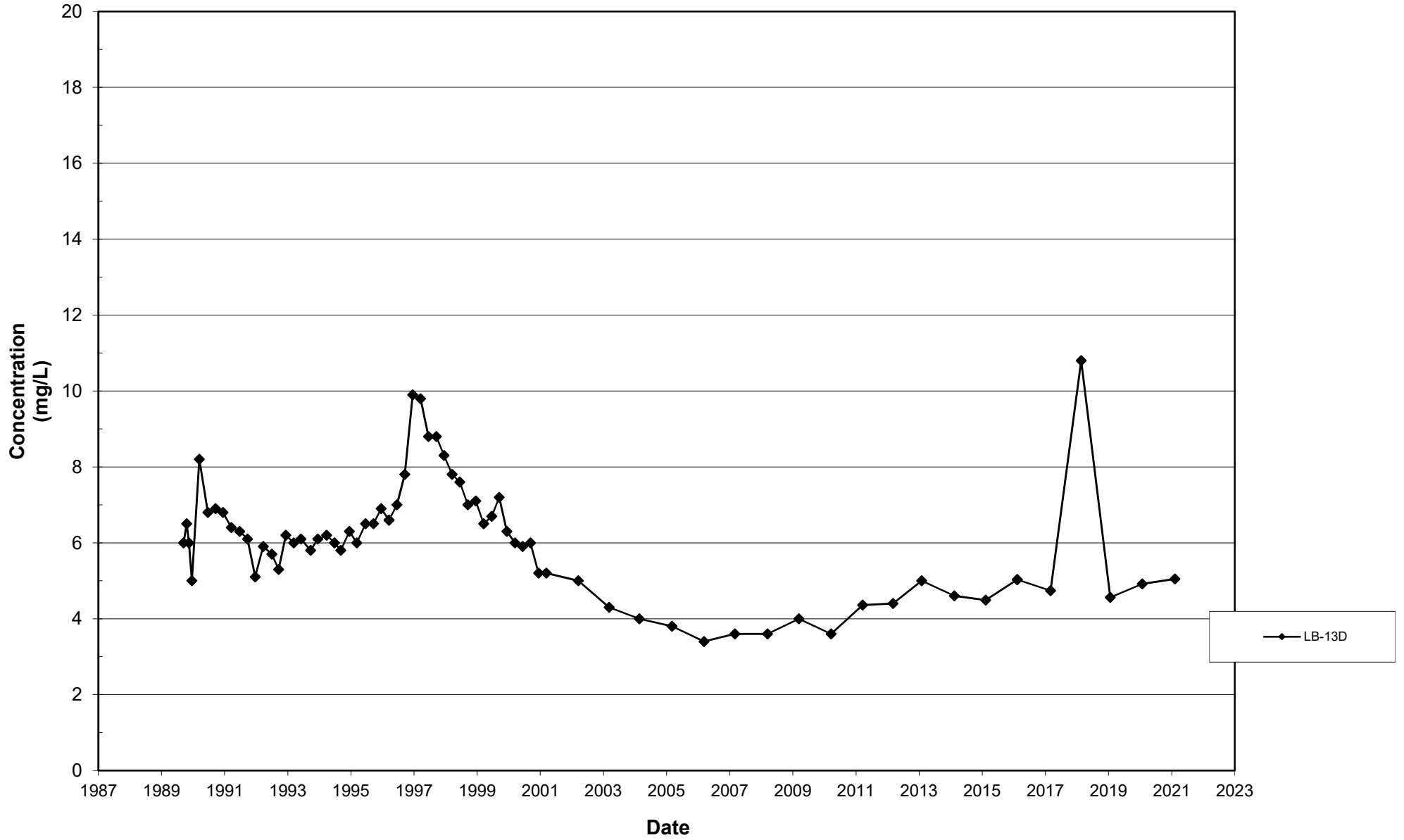
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1987 - 2021



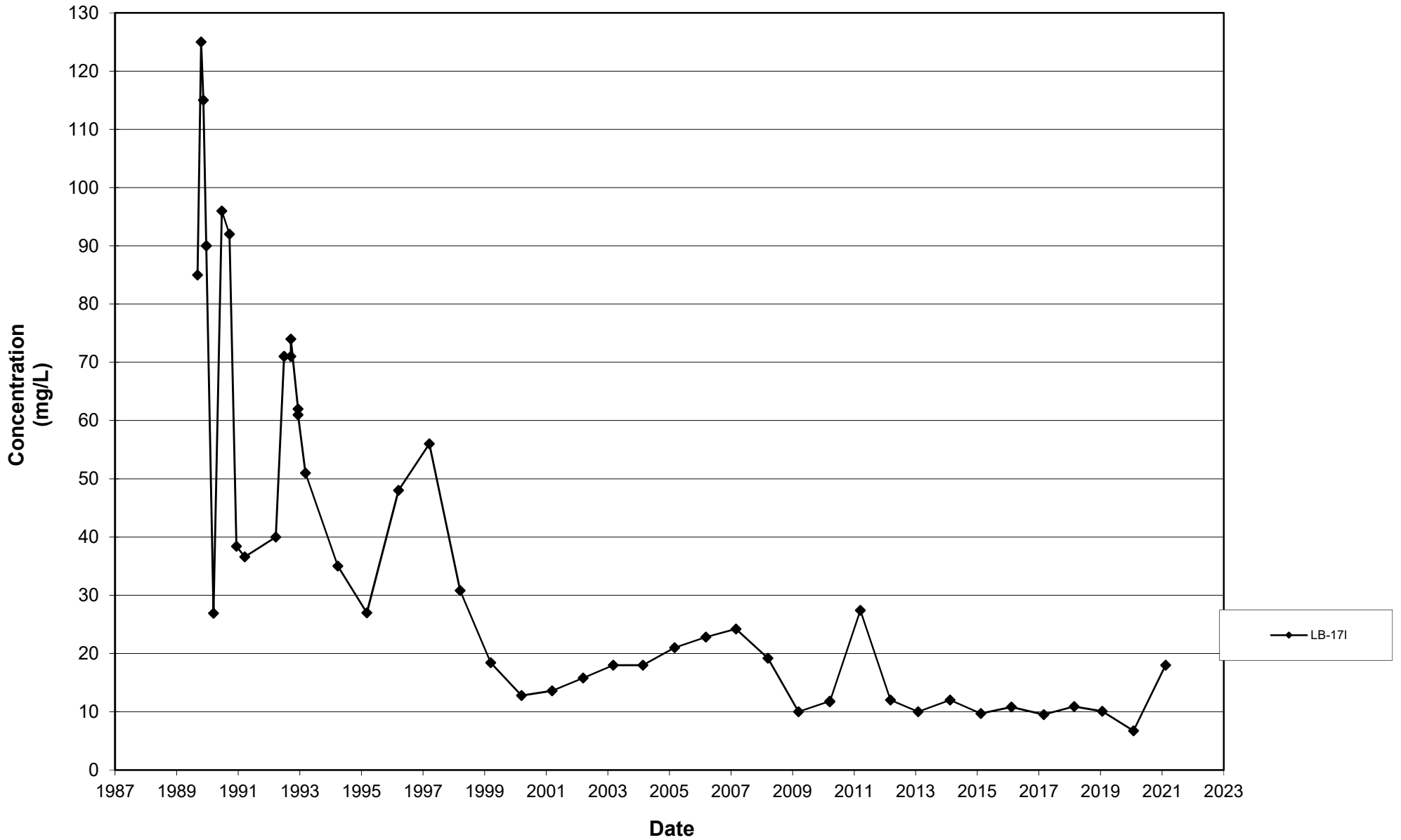
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1987 - 2021



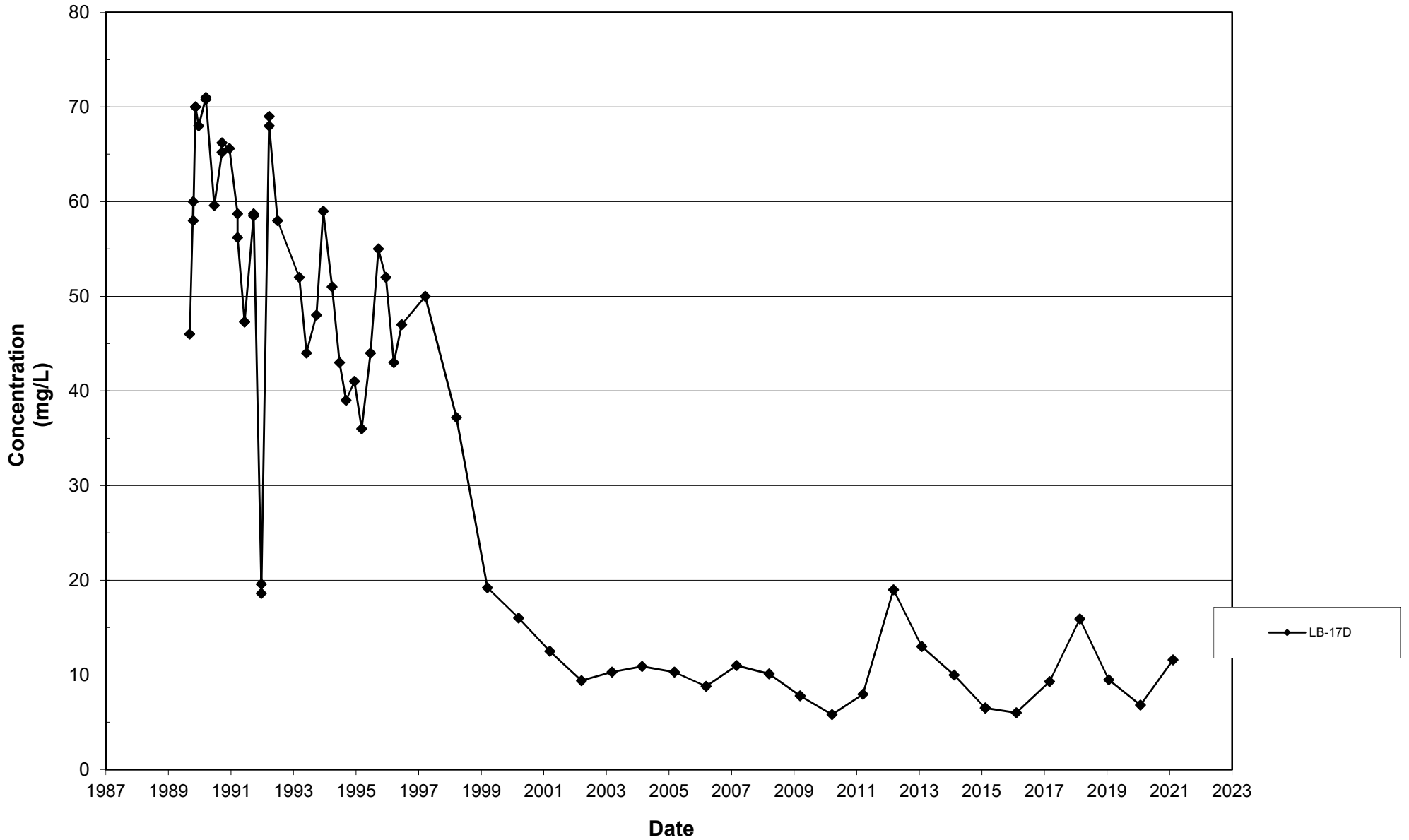
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1987 - 2021



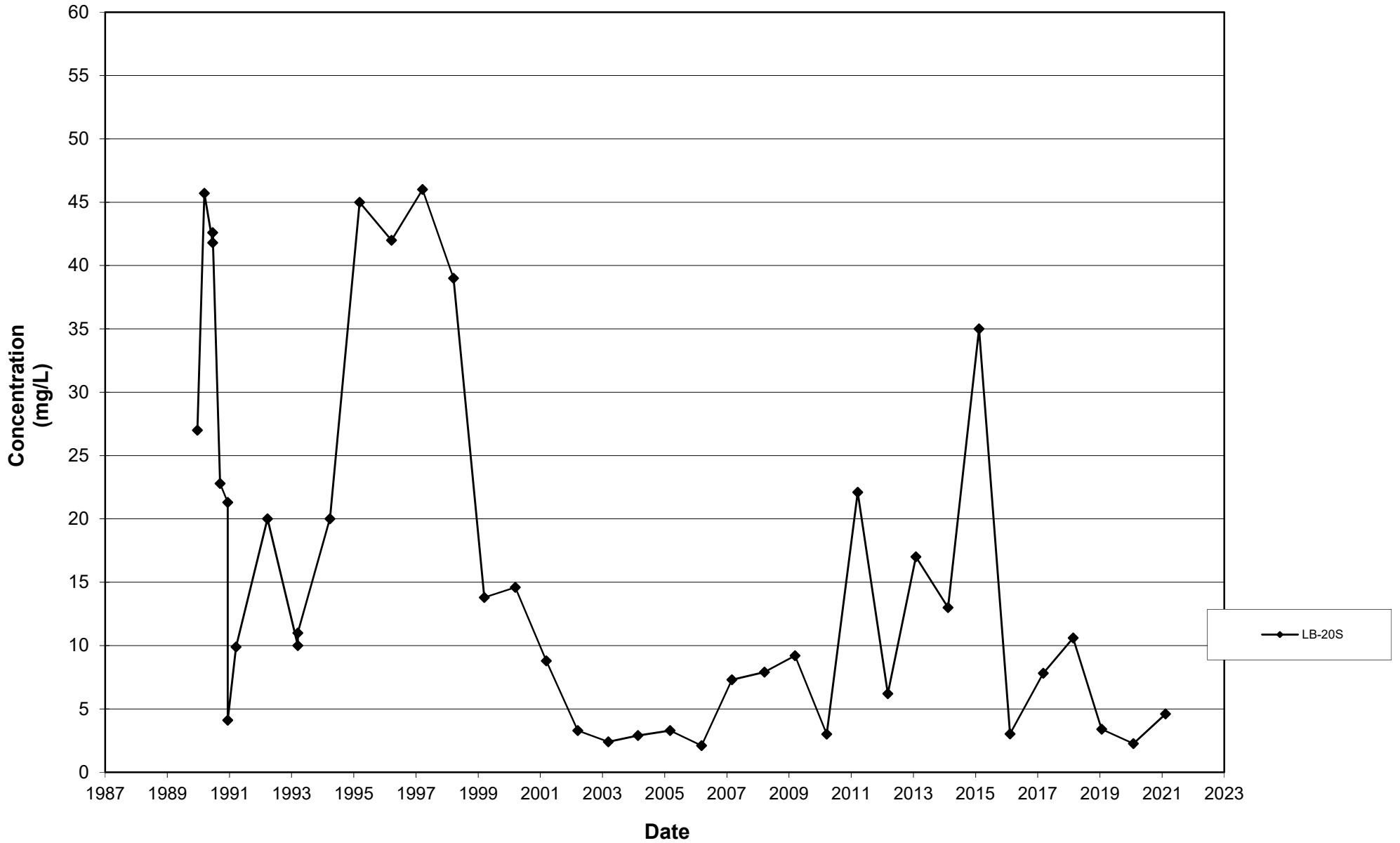
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1987 - 2021



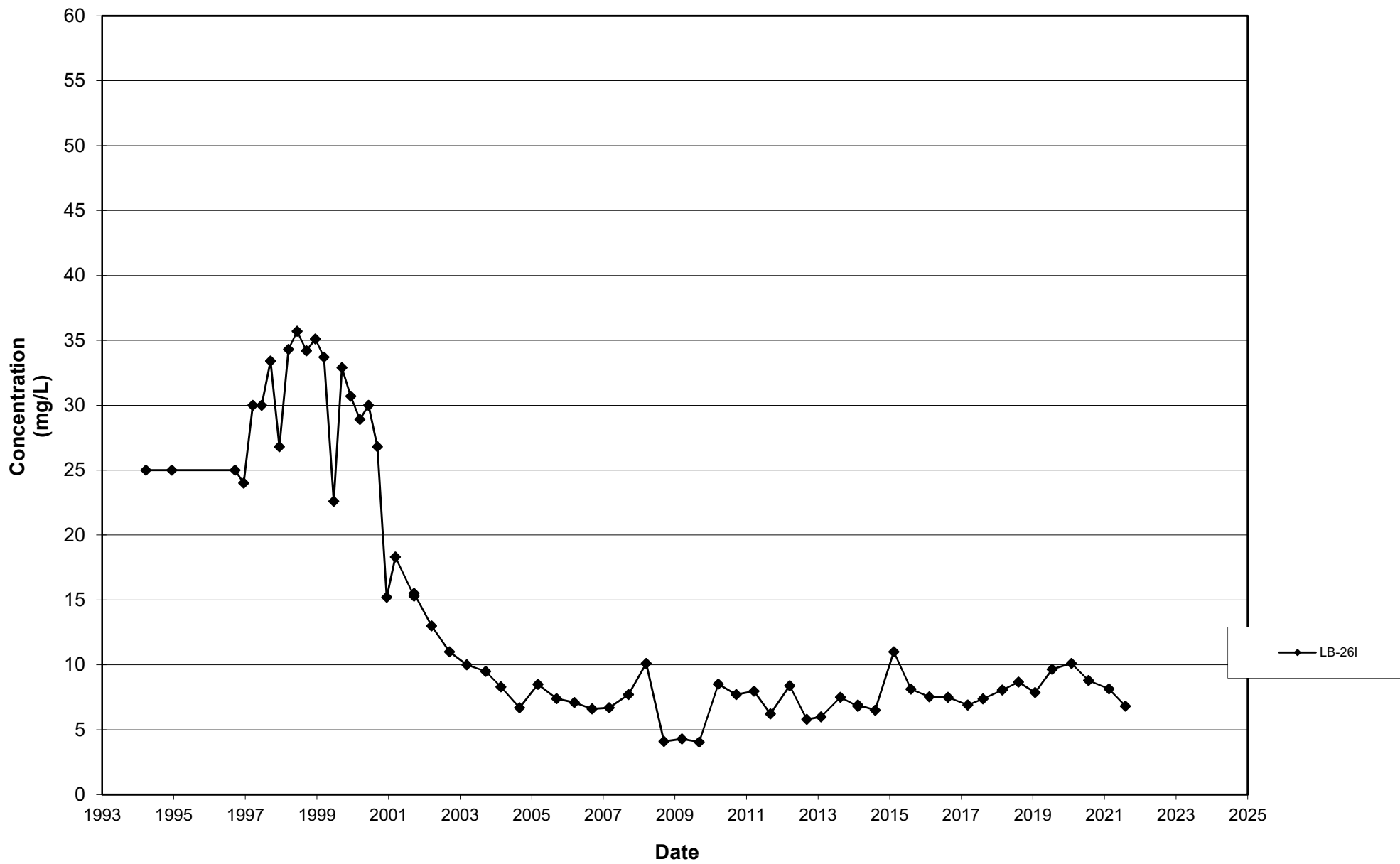
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Chloride, LB-17D
1987 - 2021



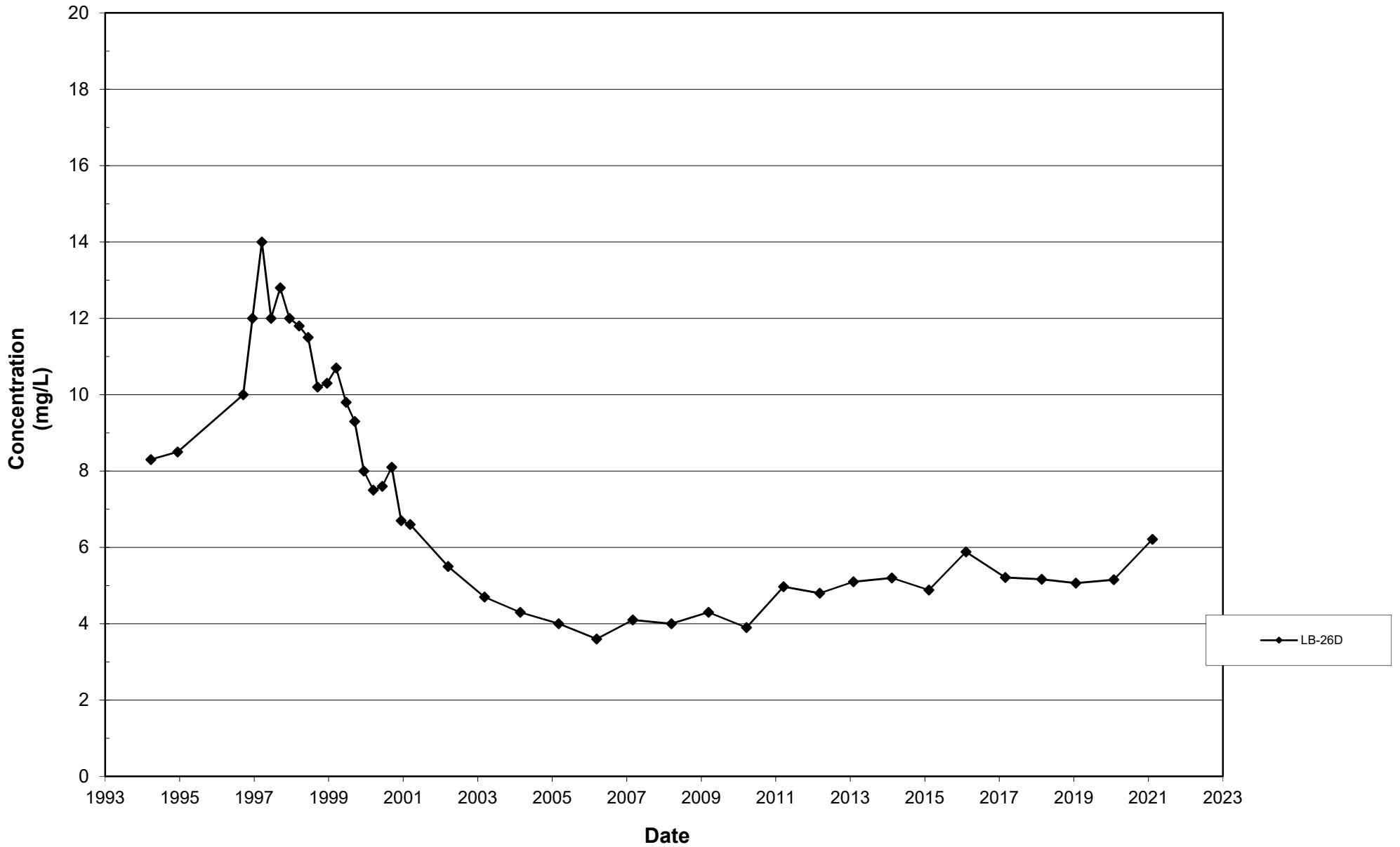
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Chloride, LB-20S
1987 - 2021



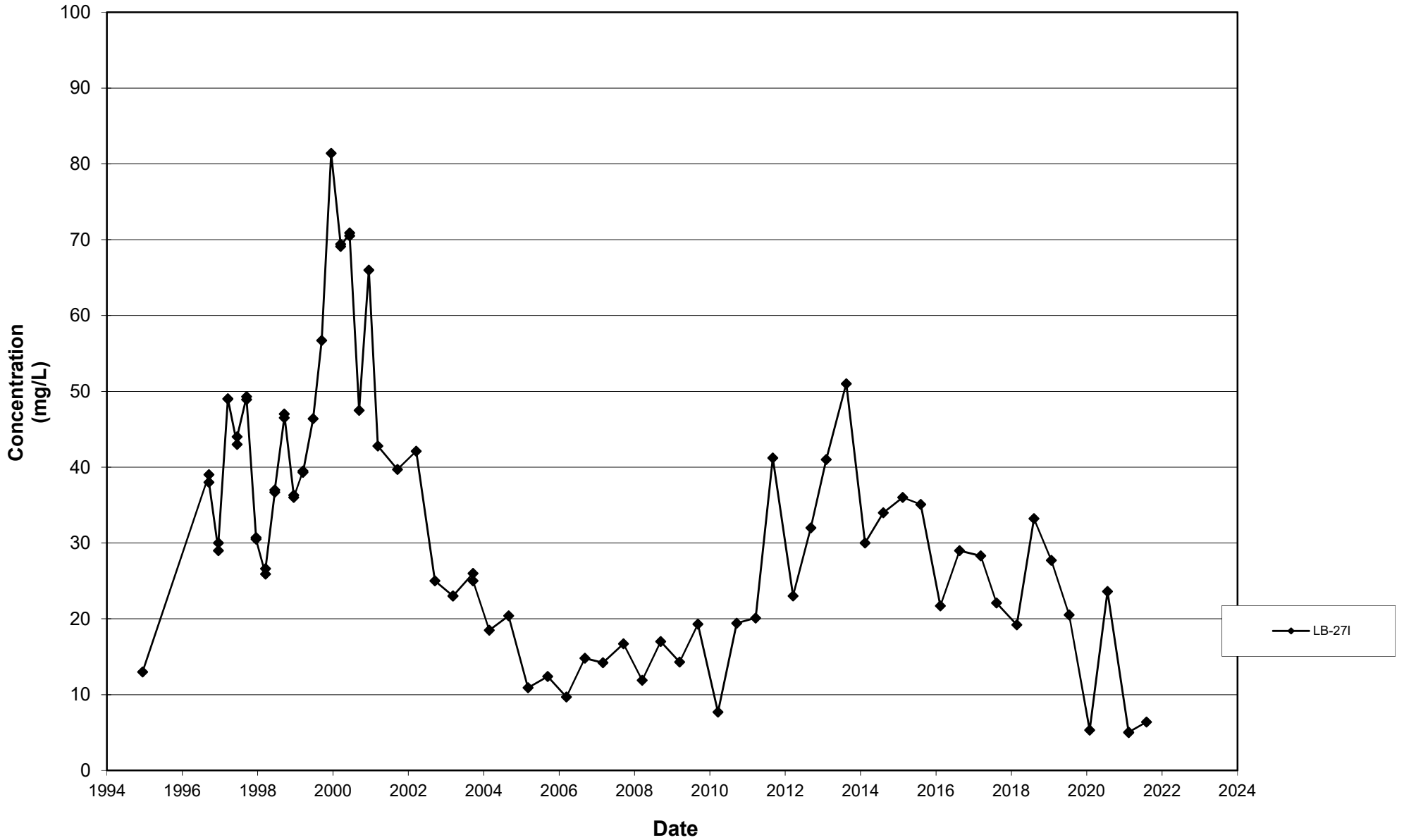
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Chloride, LB-26I
1987 - 2021



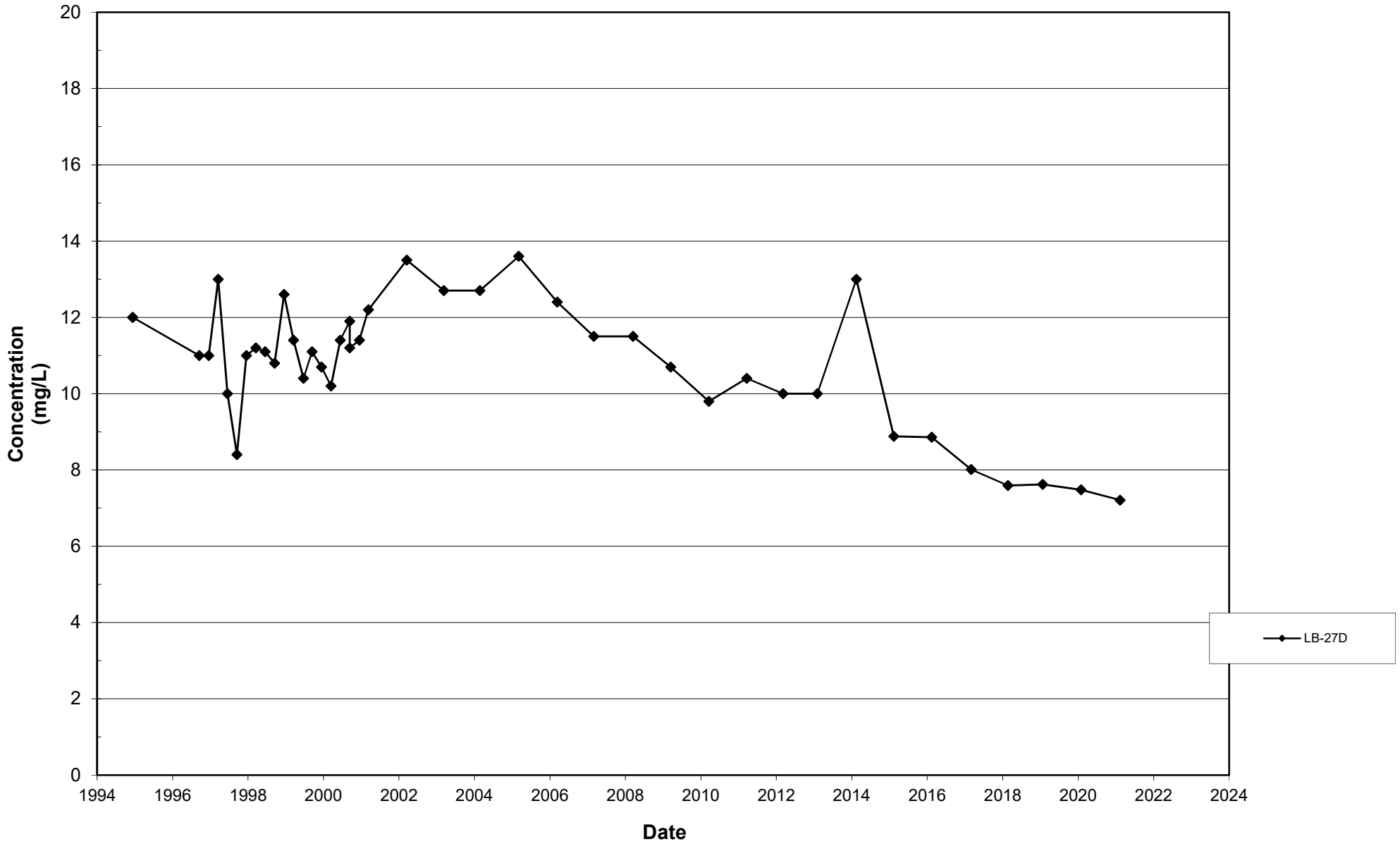
Leichner Landfill
Chloride, LB-26D
1987 - 2021



Leichner Landfill
Chloride, LB-27I
1987 - 2021

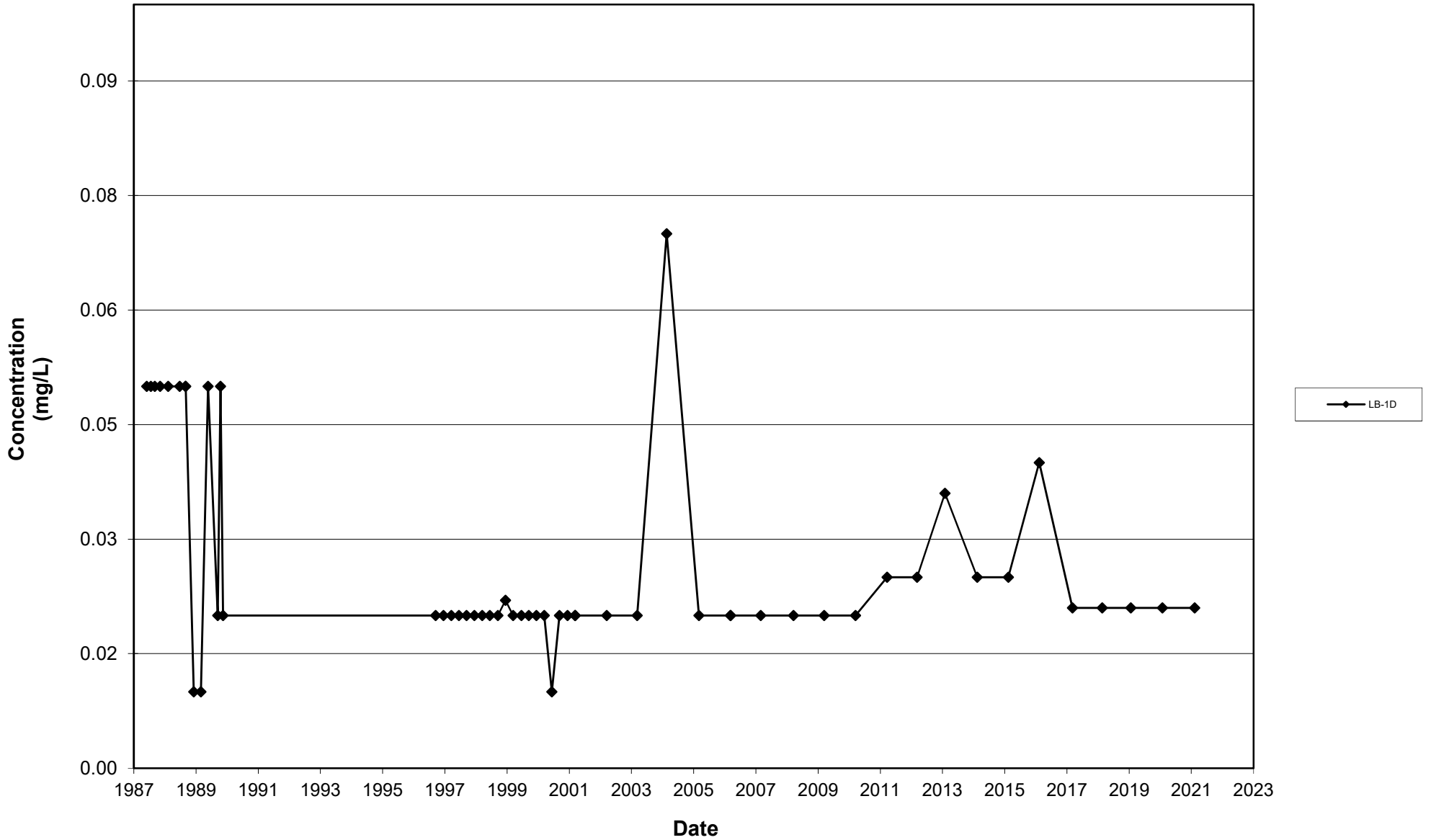


Leichner Landfill
Chloride, LB-27D
1987 - 2021

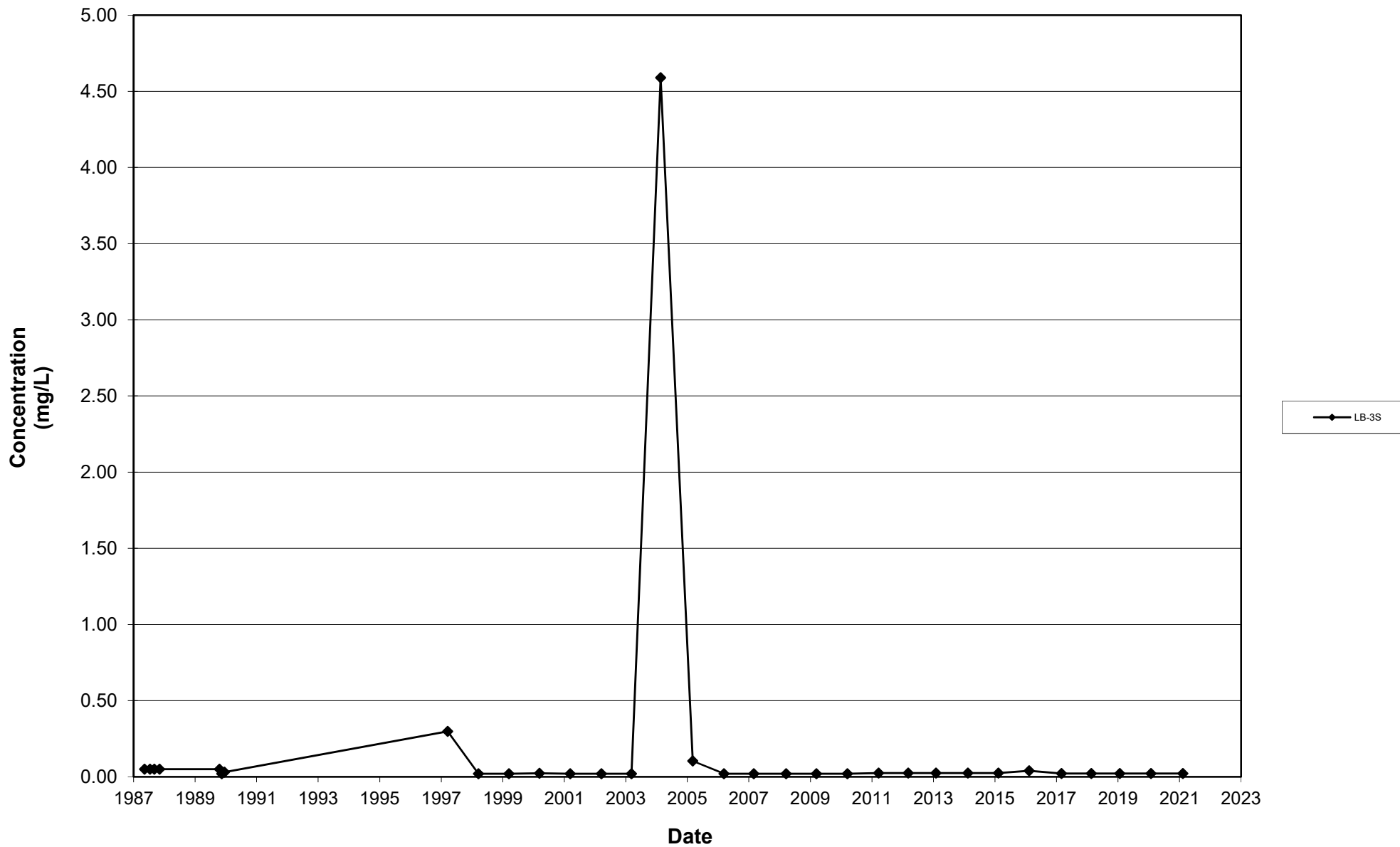


Dissolved Iron

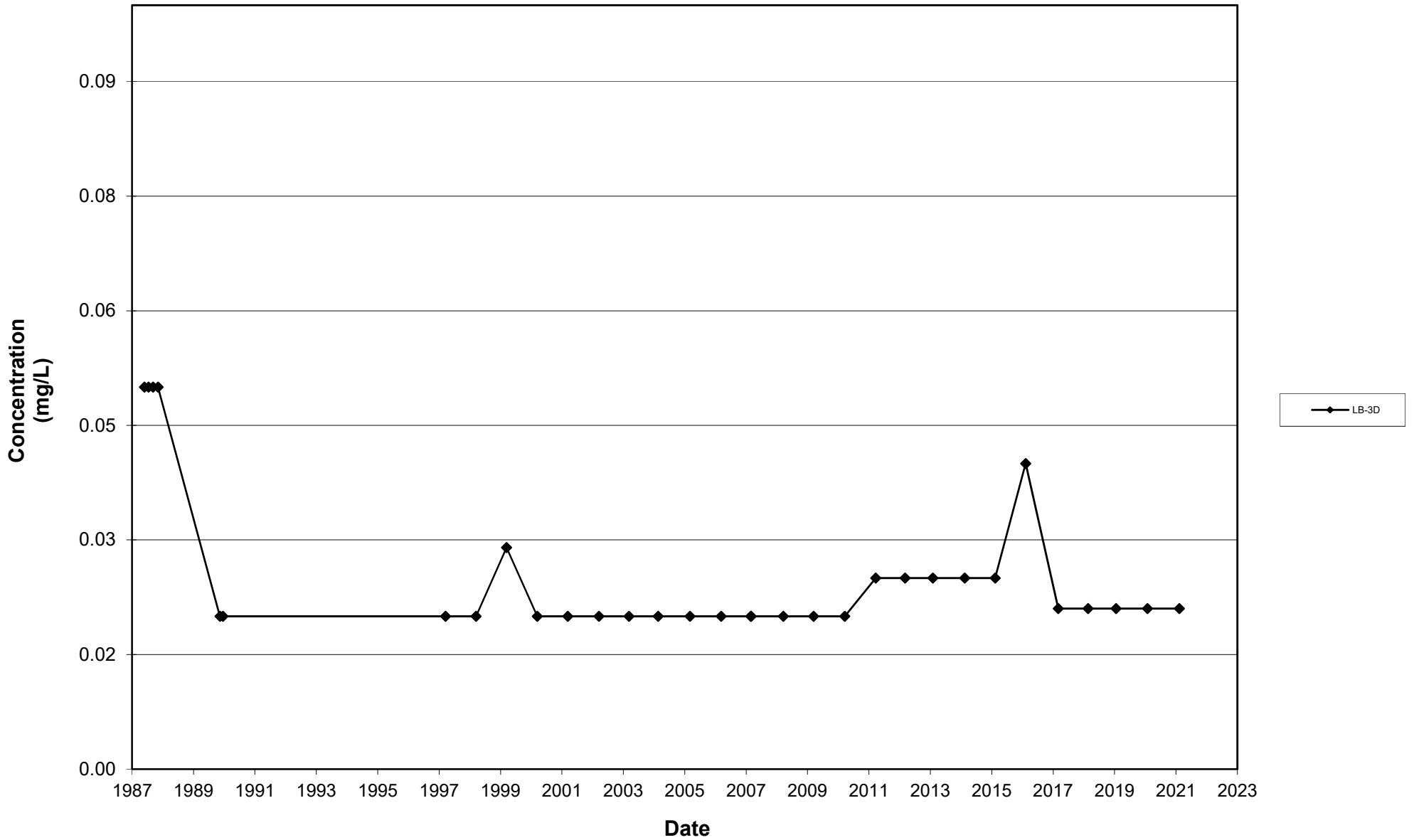
Leichner Landfill
Dissolved Iron, LB-01D
1987 - 2021



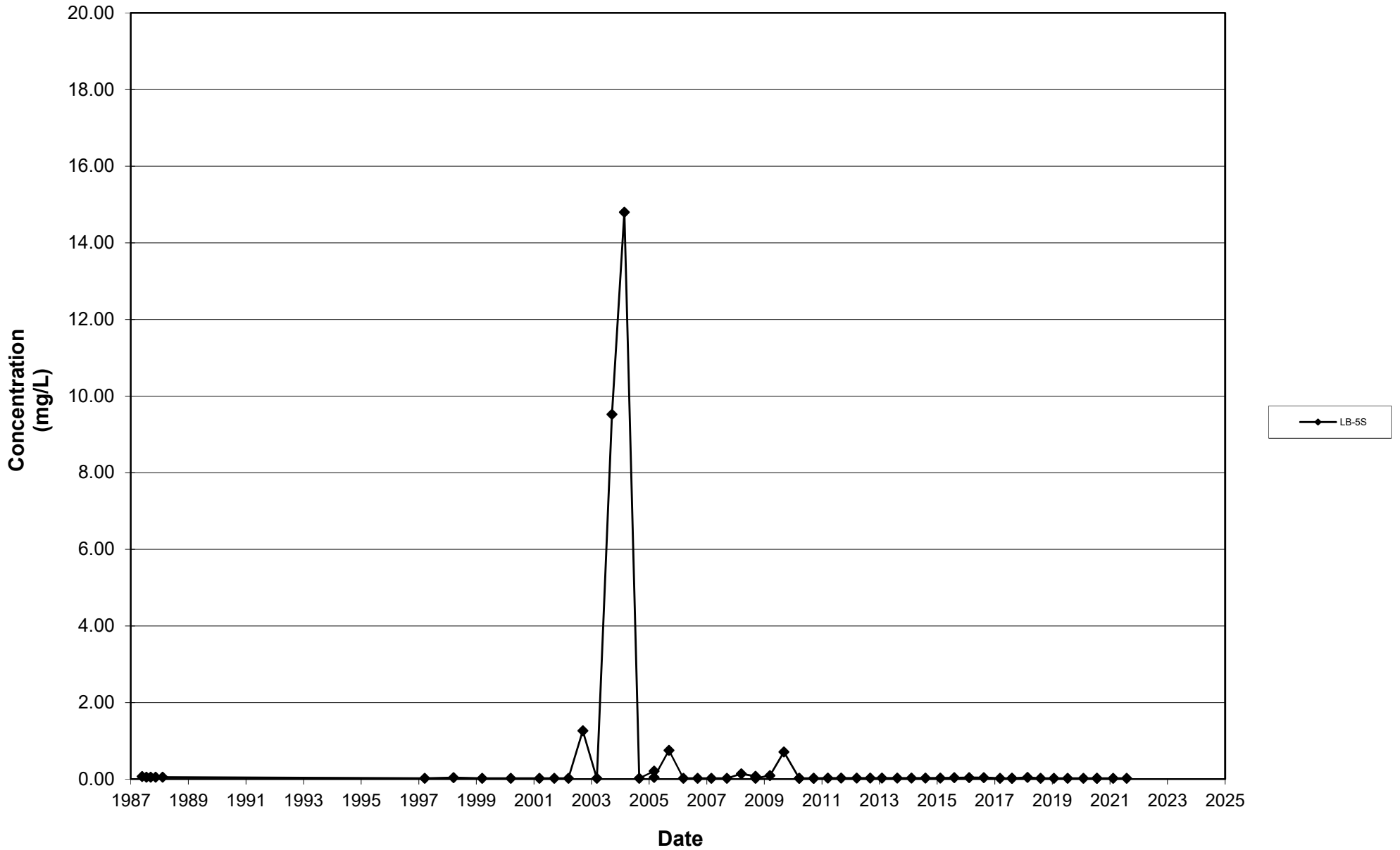
Leichner Landfill
Dissolved Iron, LB-03S
1987 - 2021



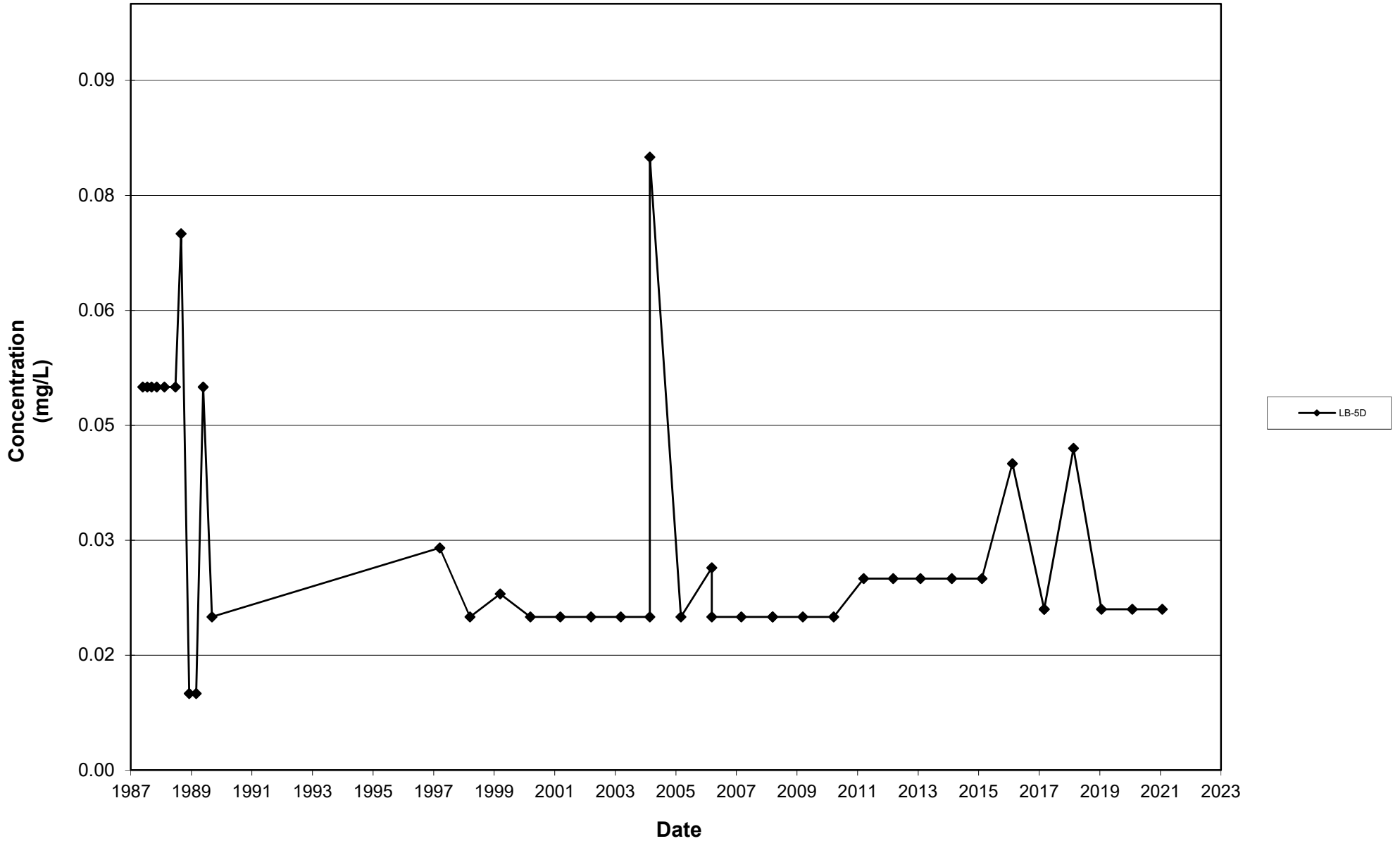
Leichner Landfill
Dissolved Iron, LB-03D
1987 - 2021



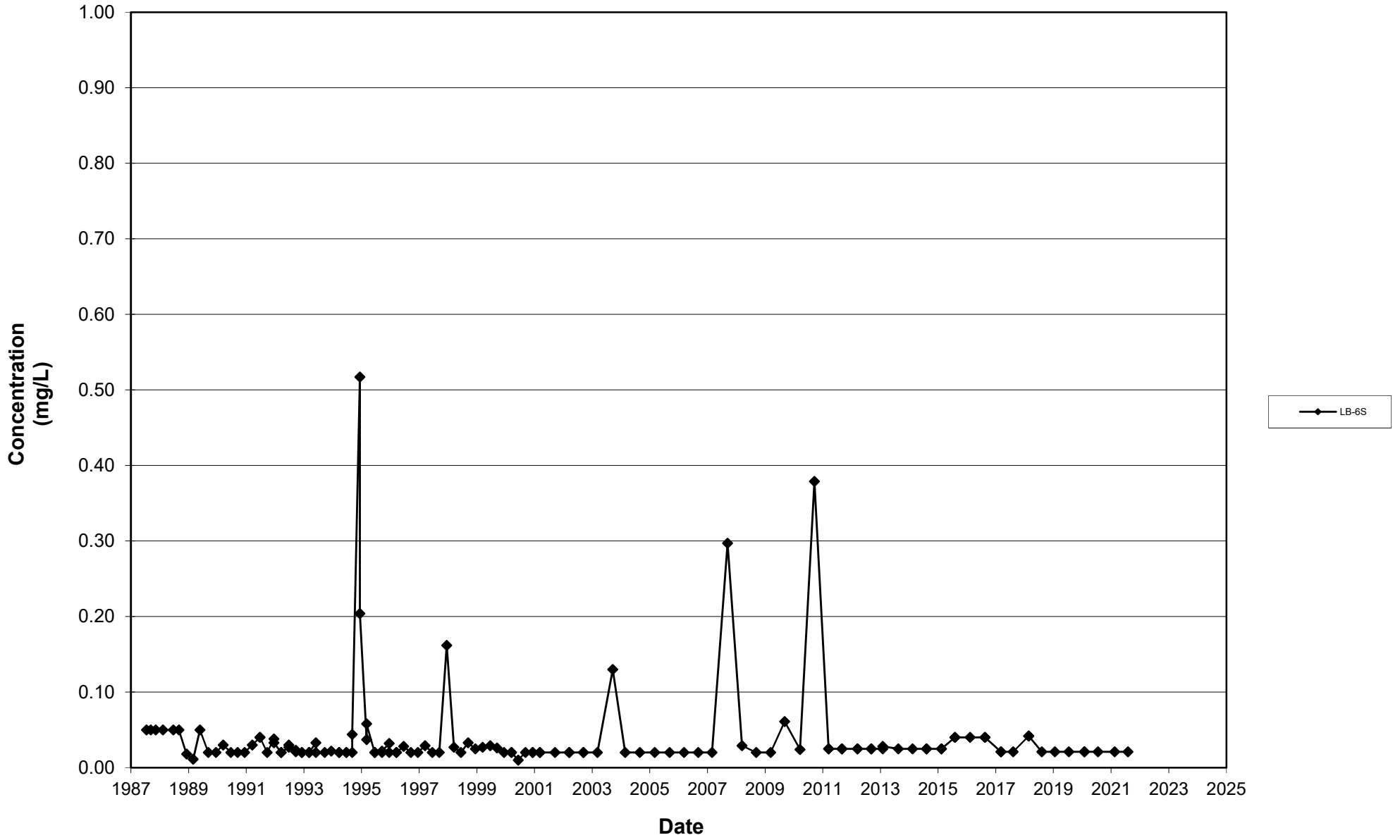
Leichner Landfill
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1987 - 2021



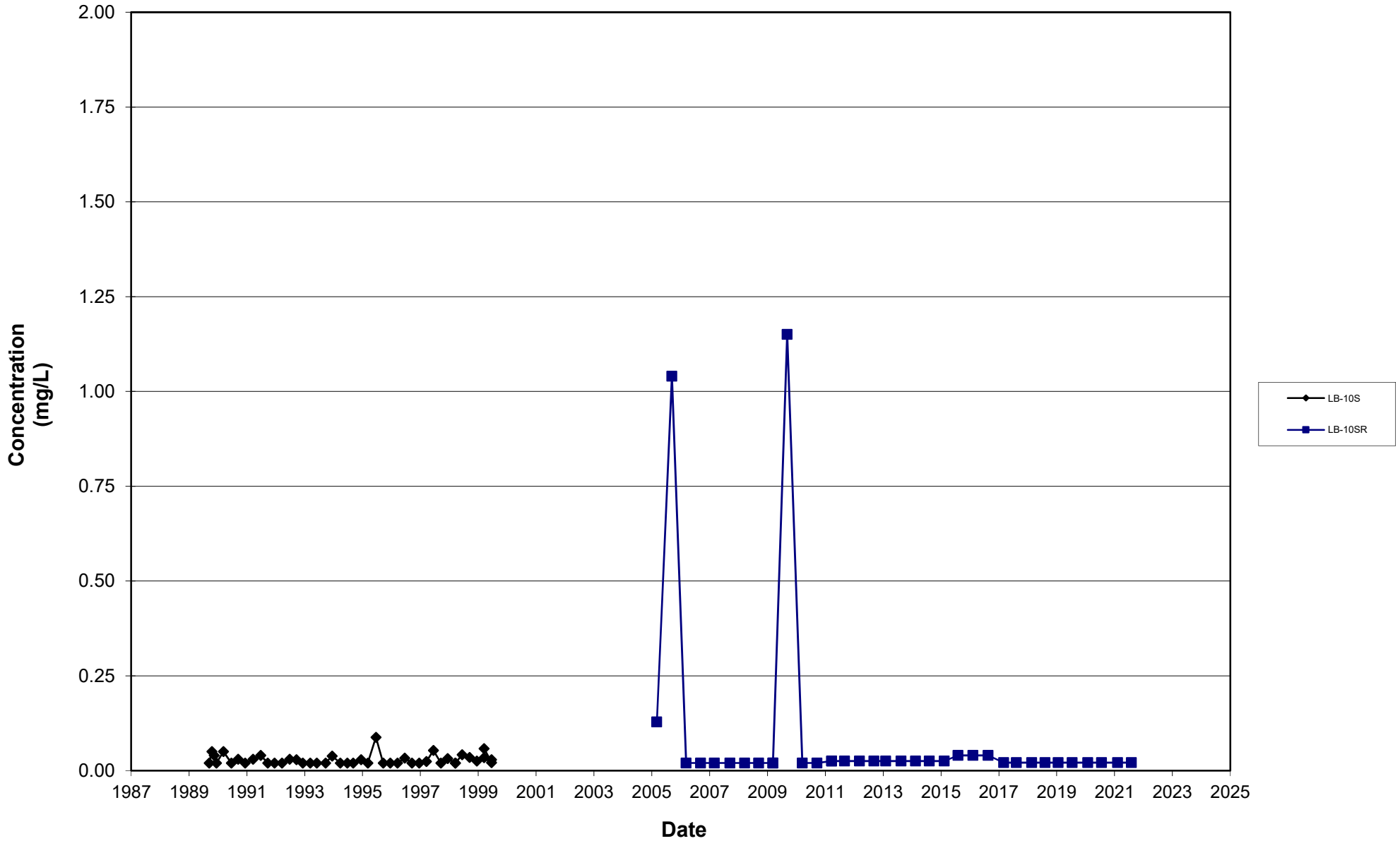
Leichner Landfill
Dissolved Iron, LB-05D
1987 - 2021



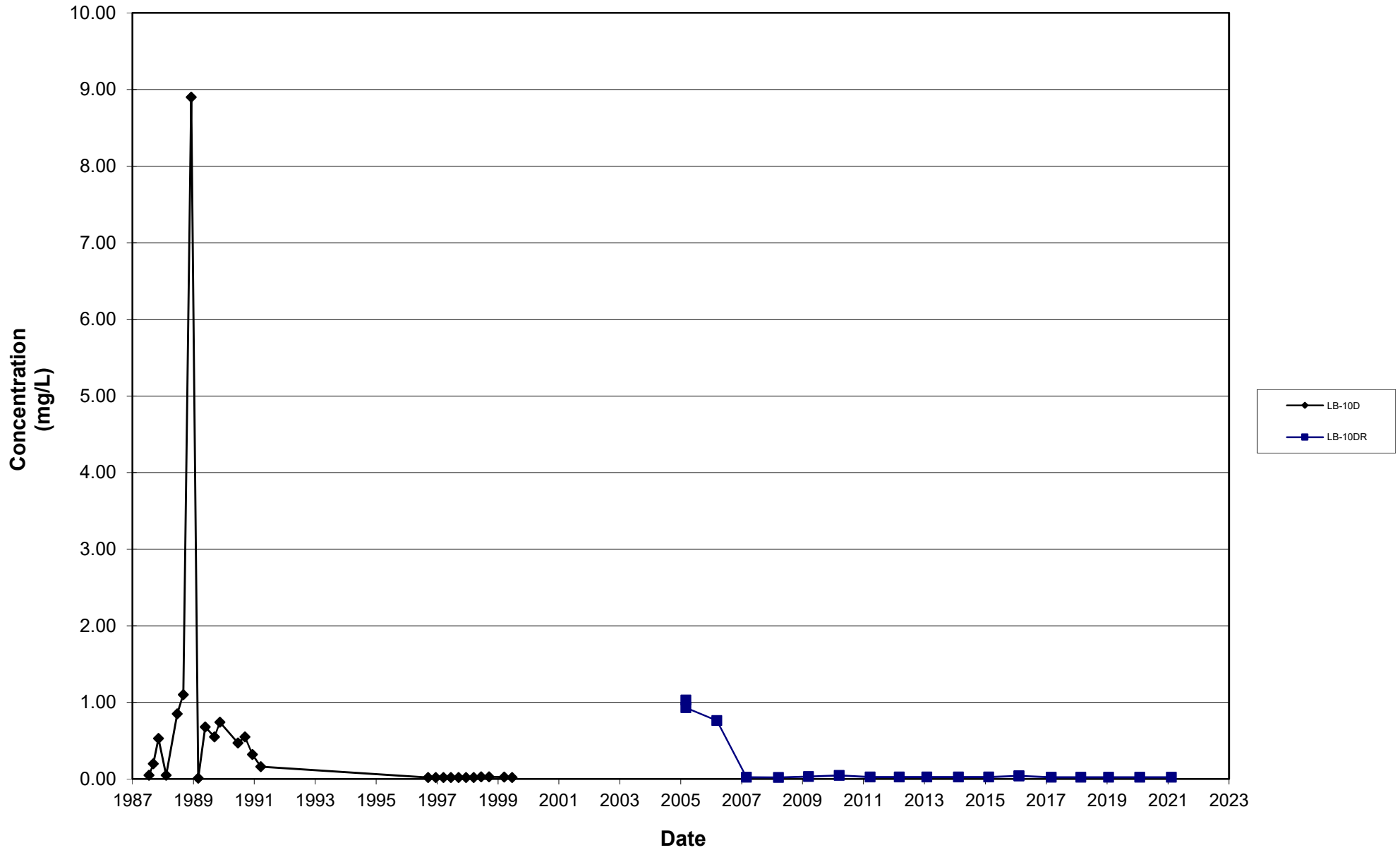
Leichner Landfill
Dissolved Iron, LB-06S
1987 - 2021



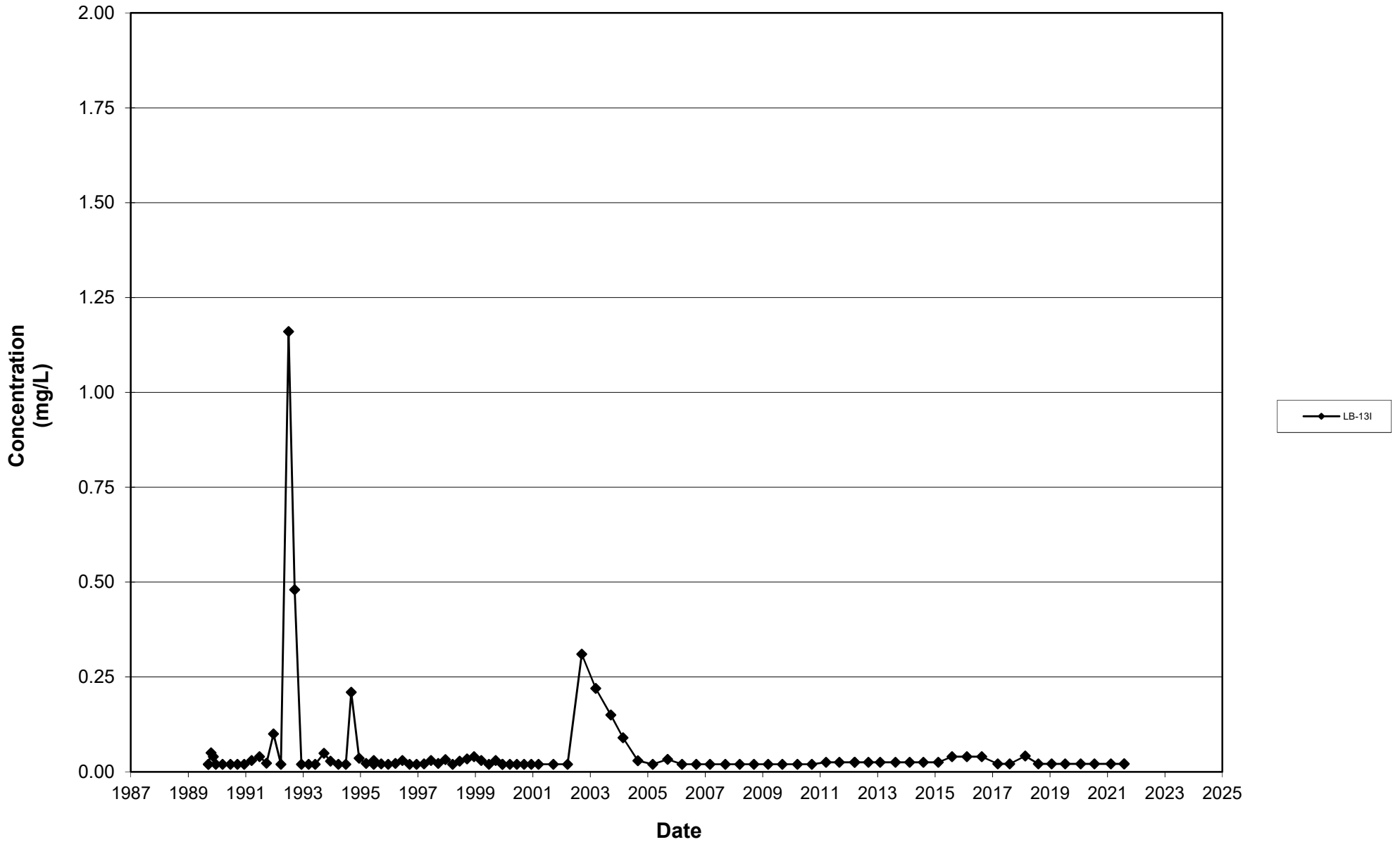
Leichner Landfill
Dissolved Iron, LB-10S and LB-10SR
1987 - 2021



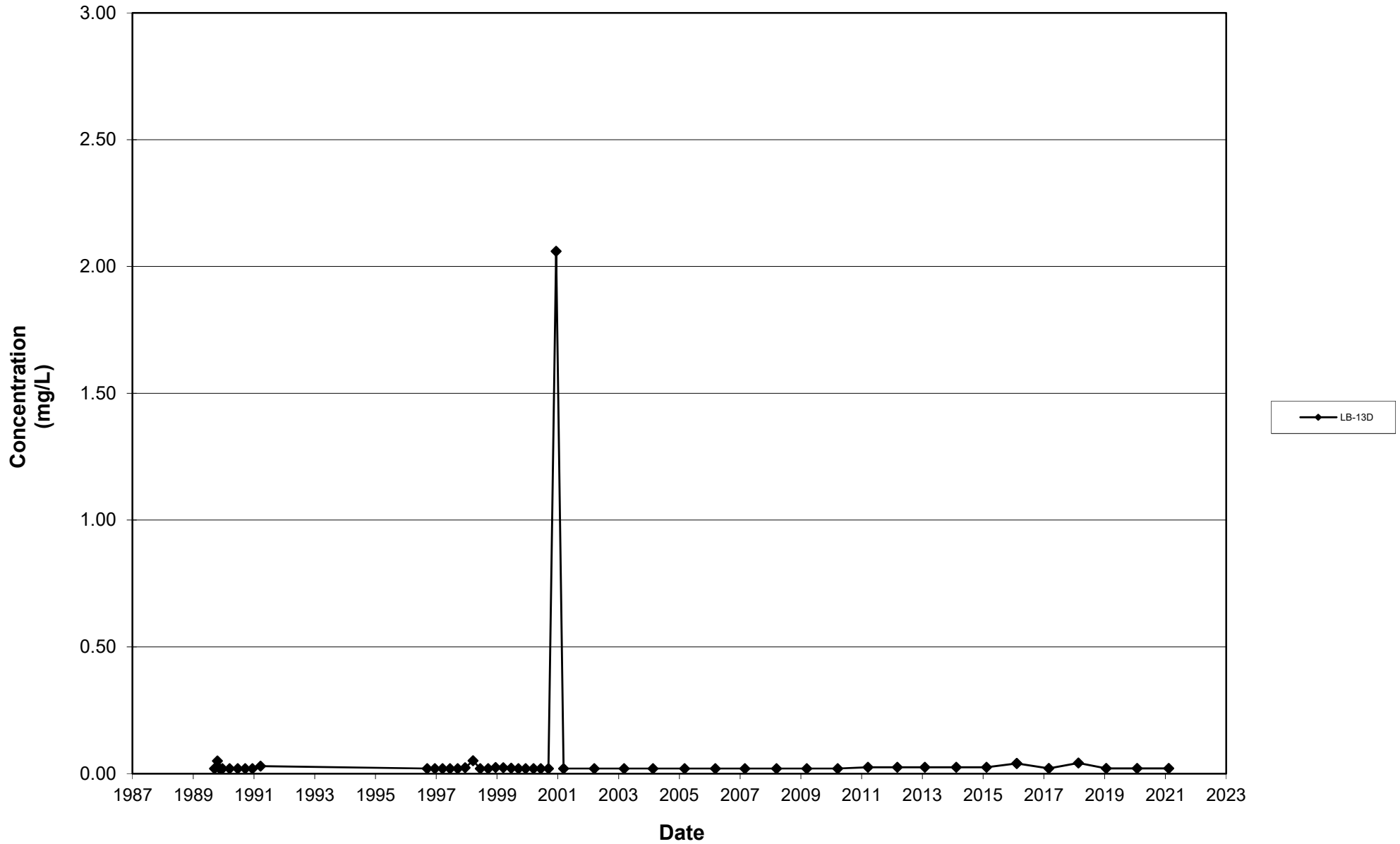
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1987 - 2021



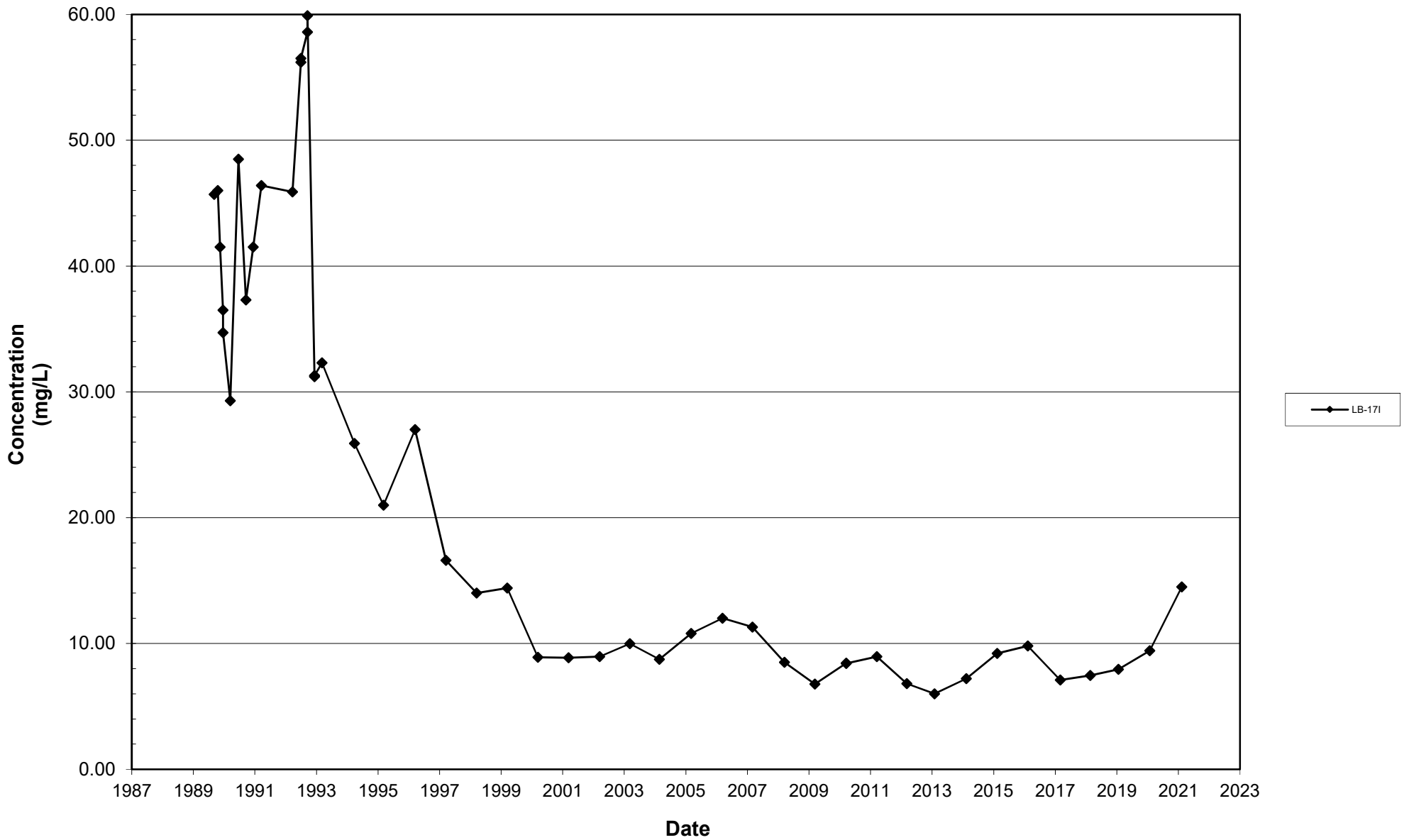
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1987 - 2021



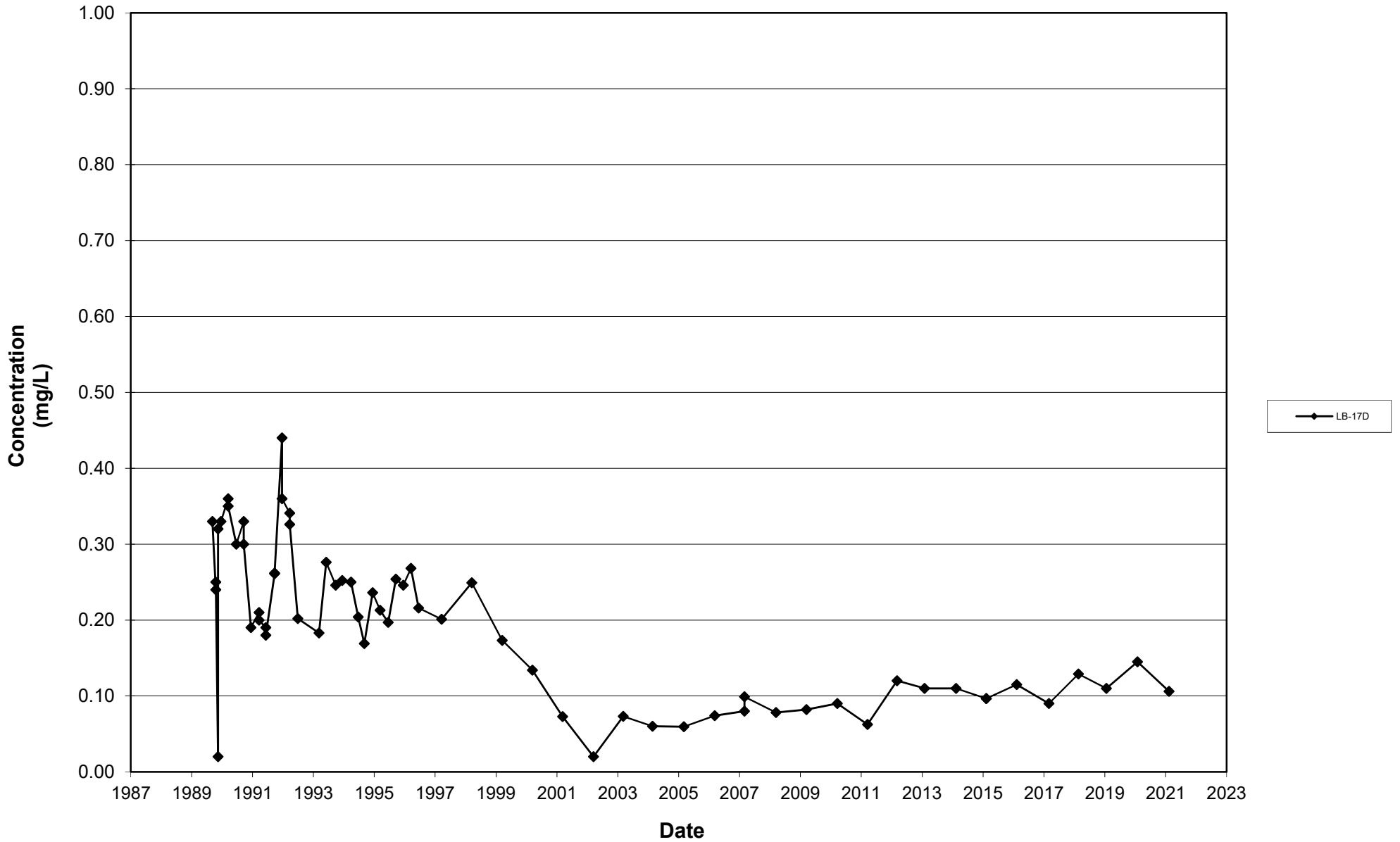
Leichner Landfill
Dissolved Iron, LB-13D
1987 - 2021



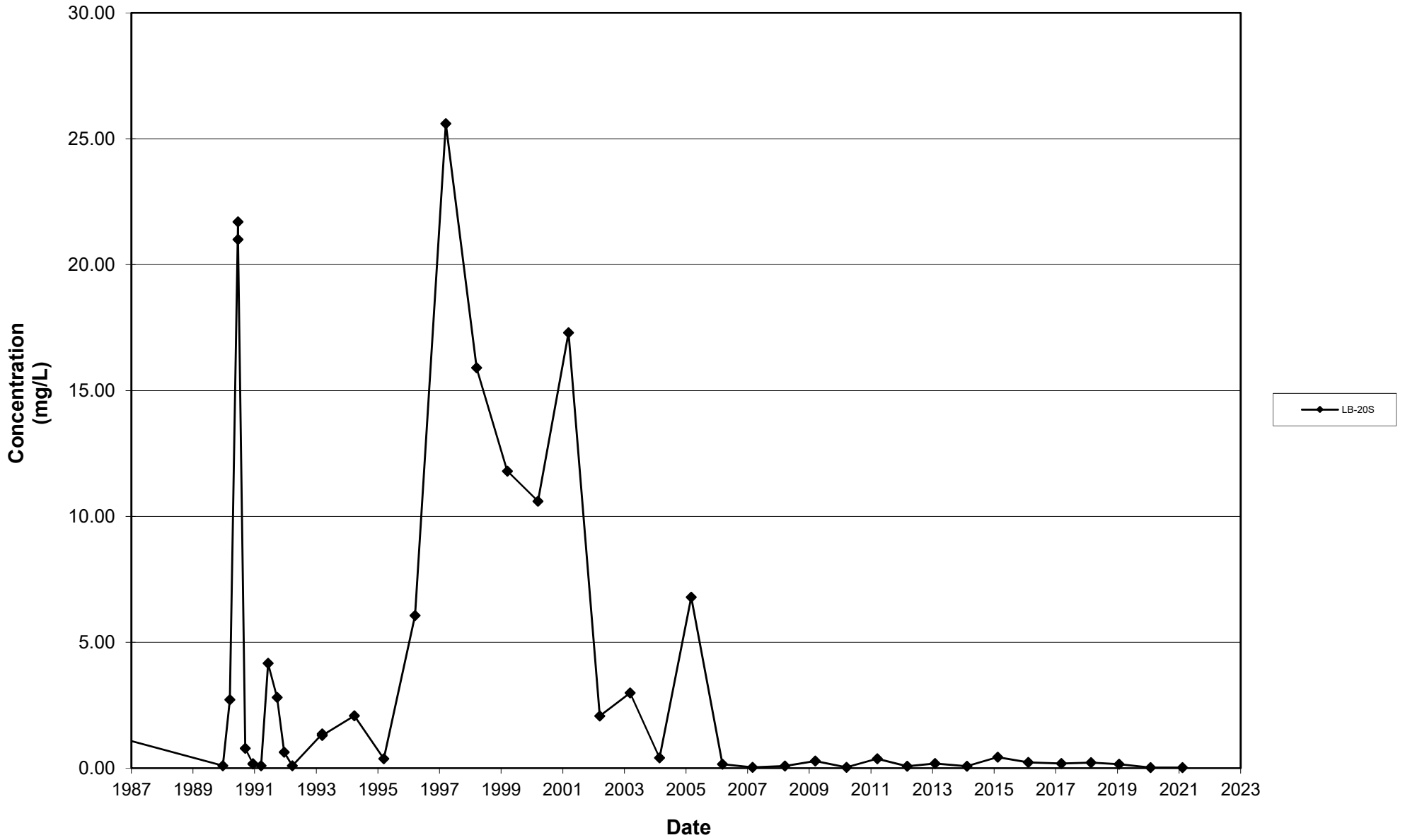
Leichner Landfill
Dissolved Iron, LB-17I
1987 - 2021



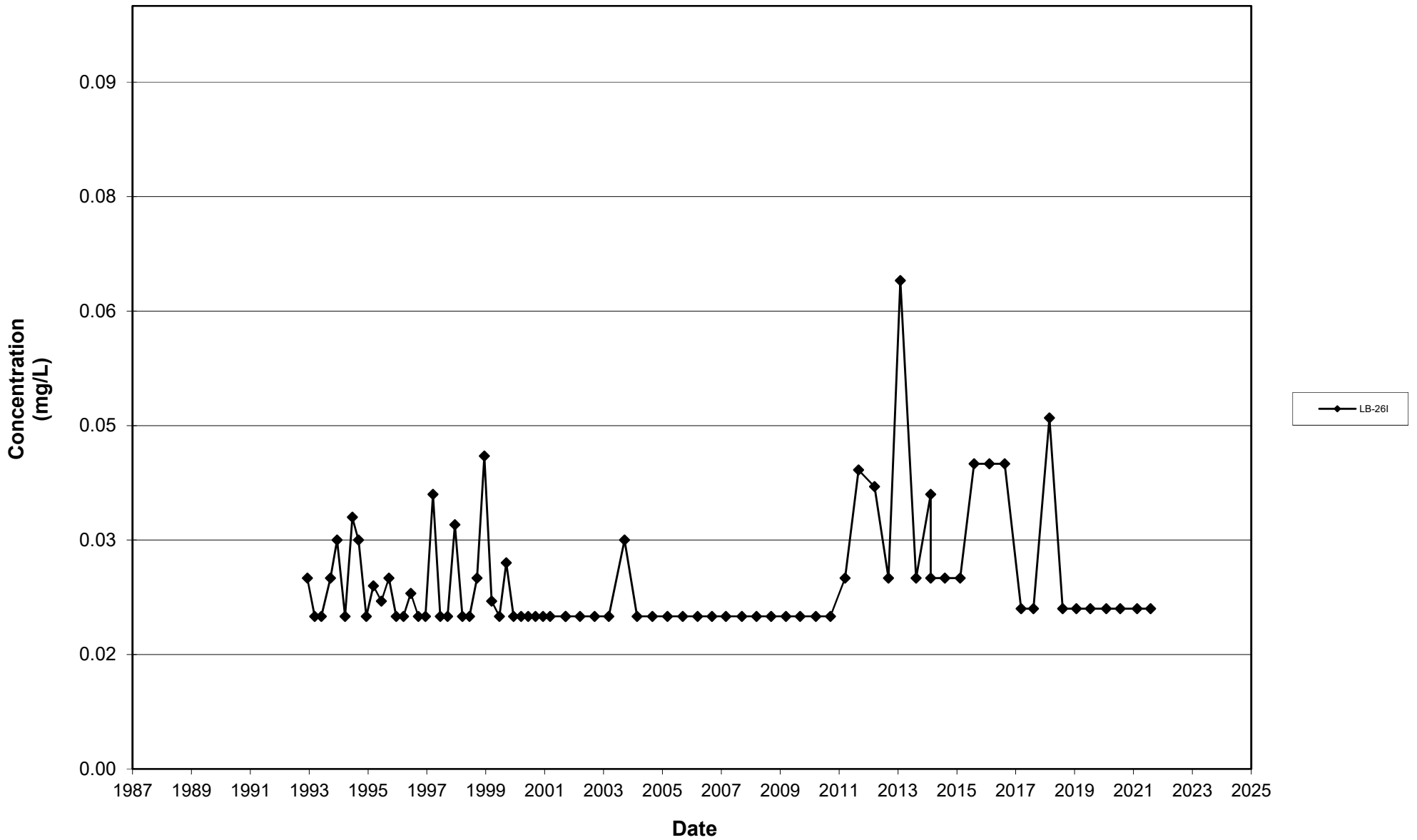
Leichner Landfill
Dissolved Iron, LB-17D
1987 - 2021



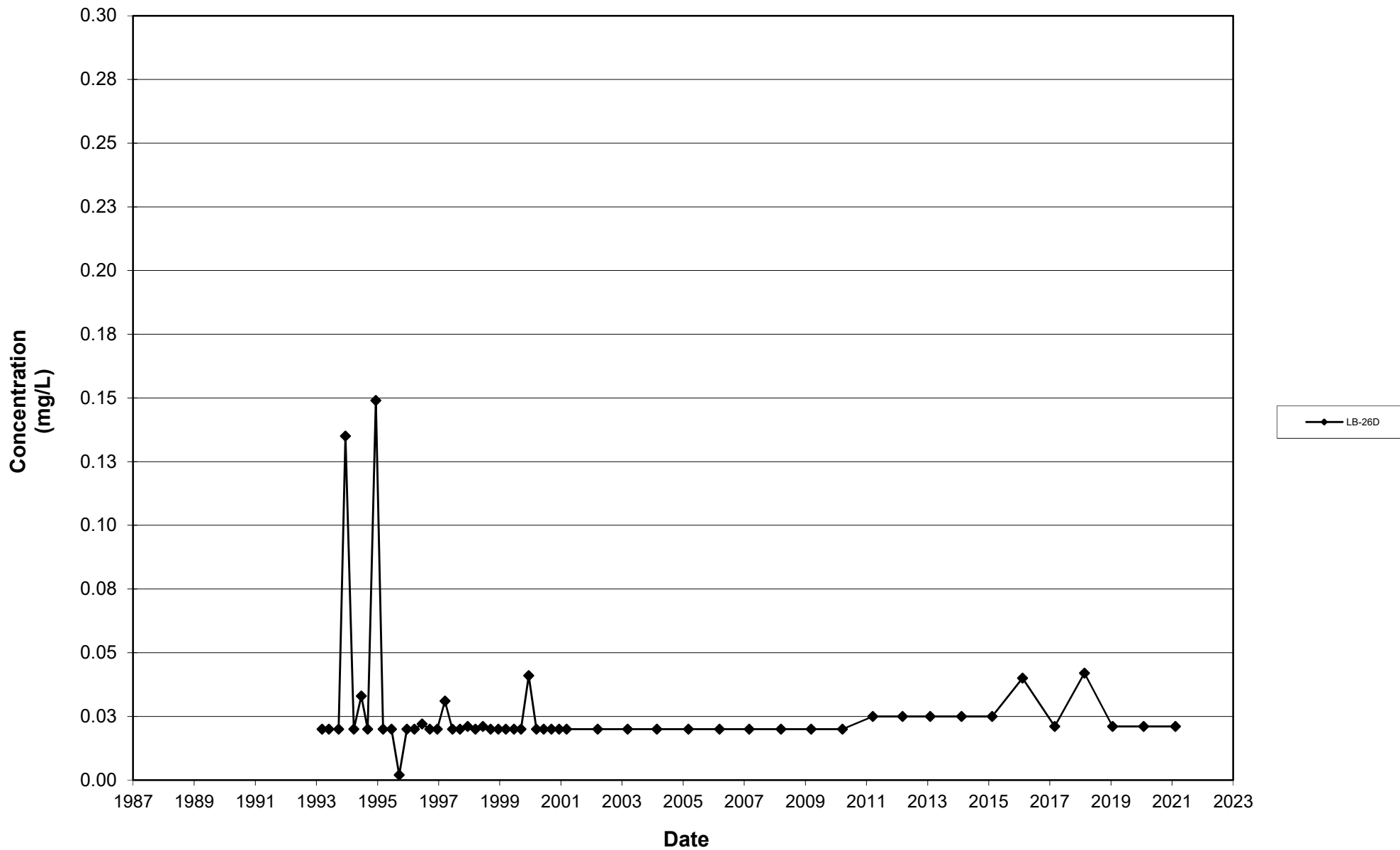
Leichner Landfill
Dissolved Iron, LB-20S
1987 - 2021



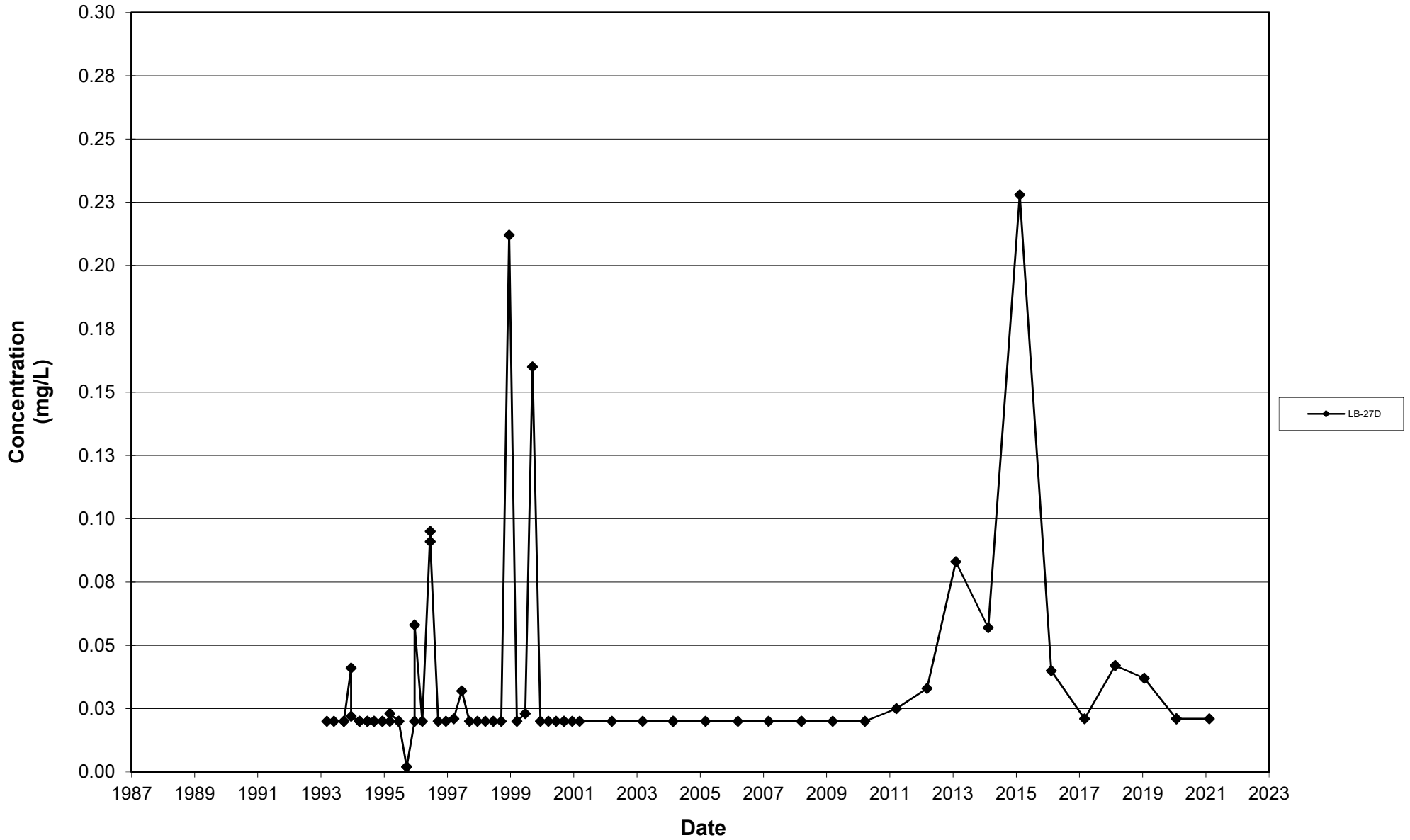
Leichner Landfill
Dissolved Iron, LB-26I
1987 - 2021



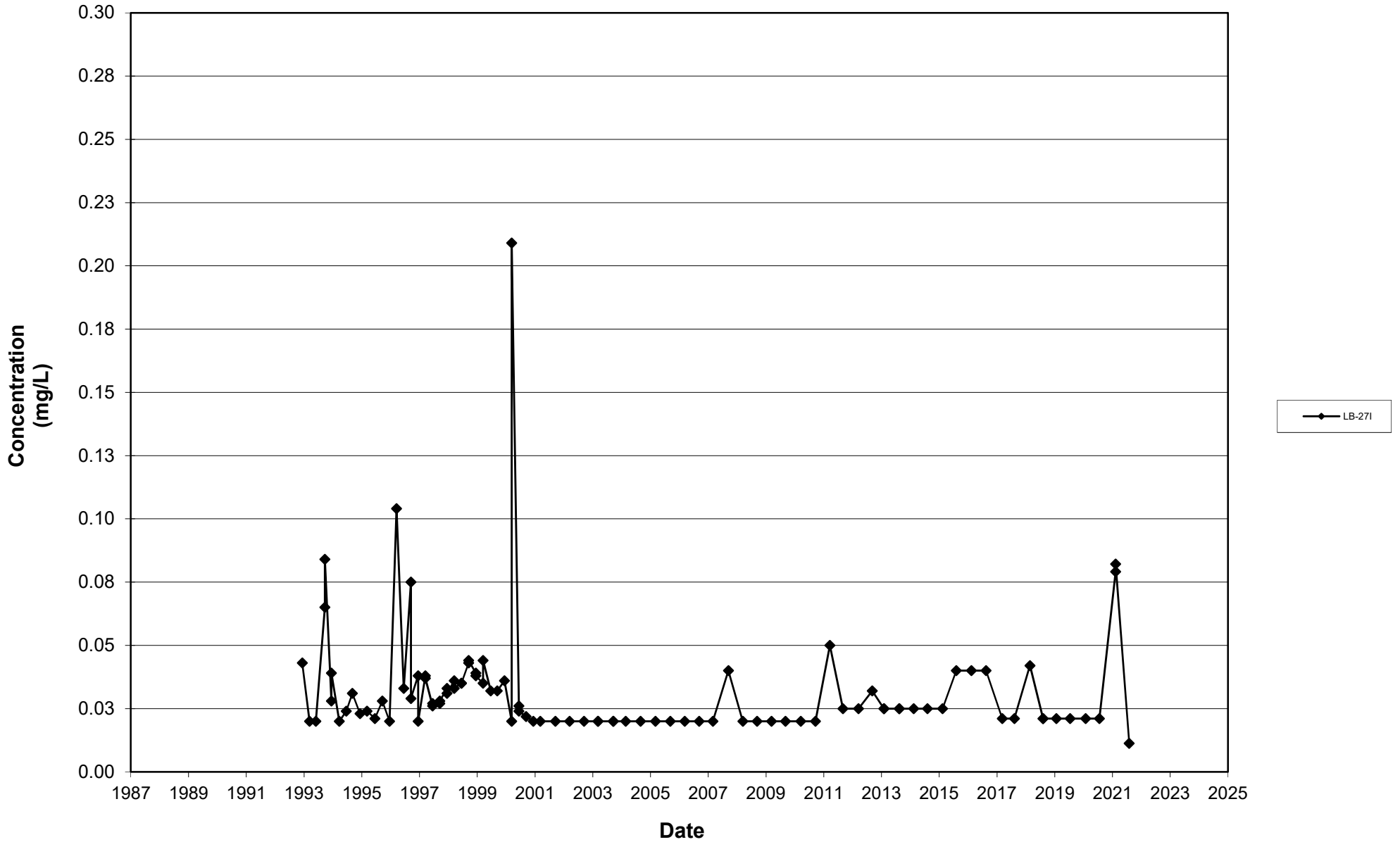
**Leichner Landfill
Dissolved Iron, LB-26D
1987 - 2021**



Leichner Landfill
Dissolved Iron, LB-27D
1987 - 2021

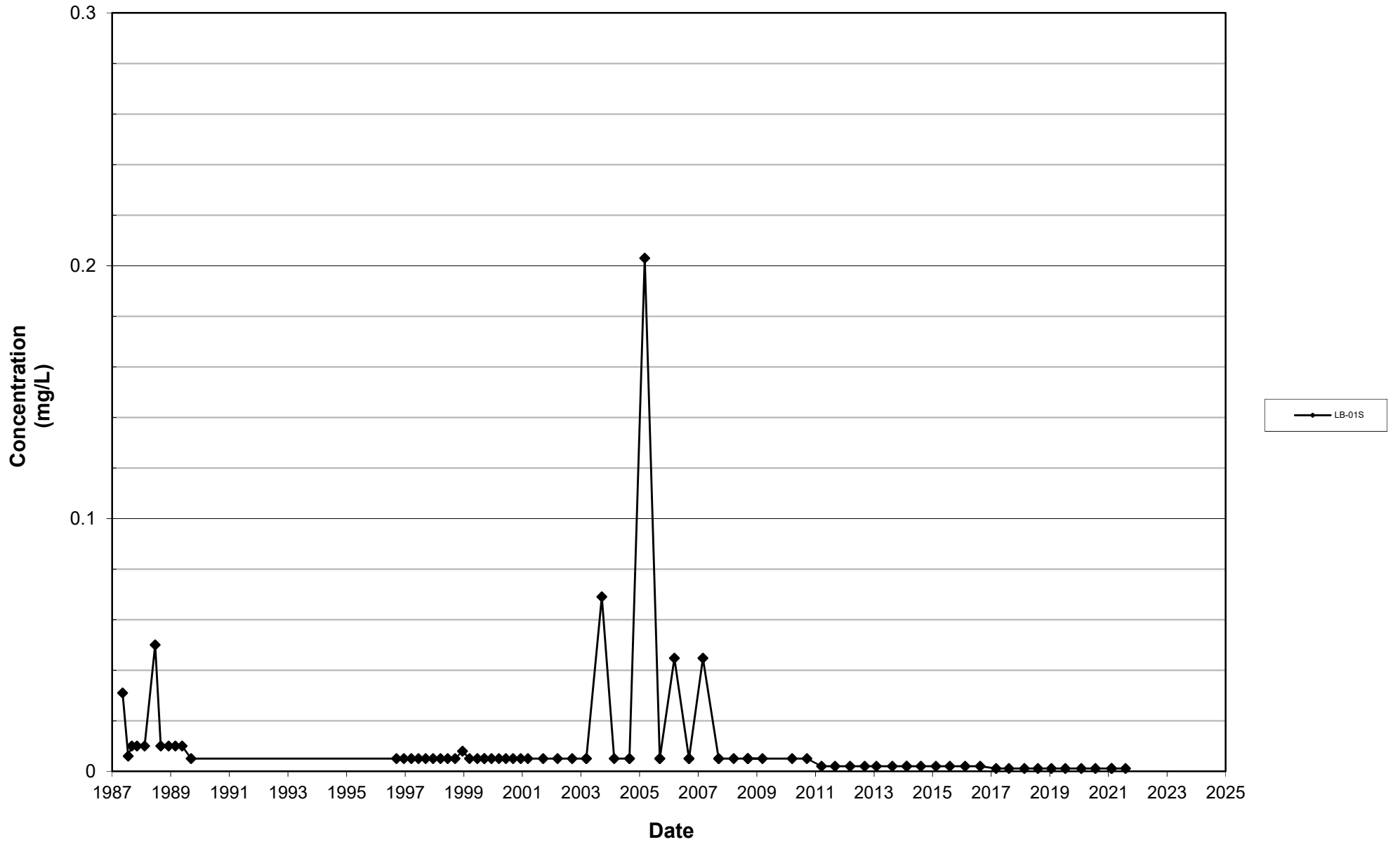


Leichner Landfill
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1987 - 2021

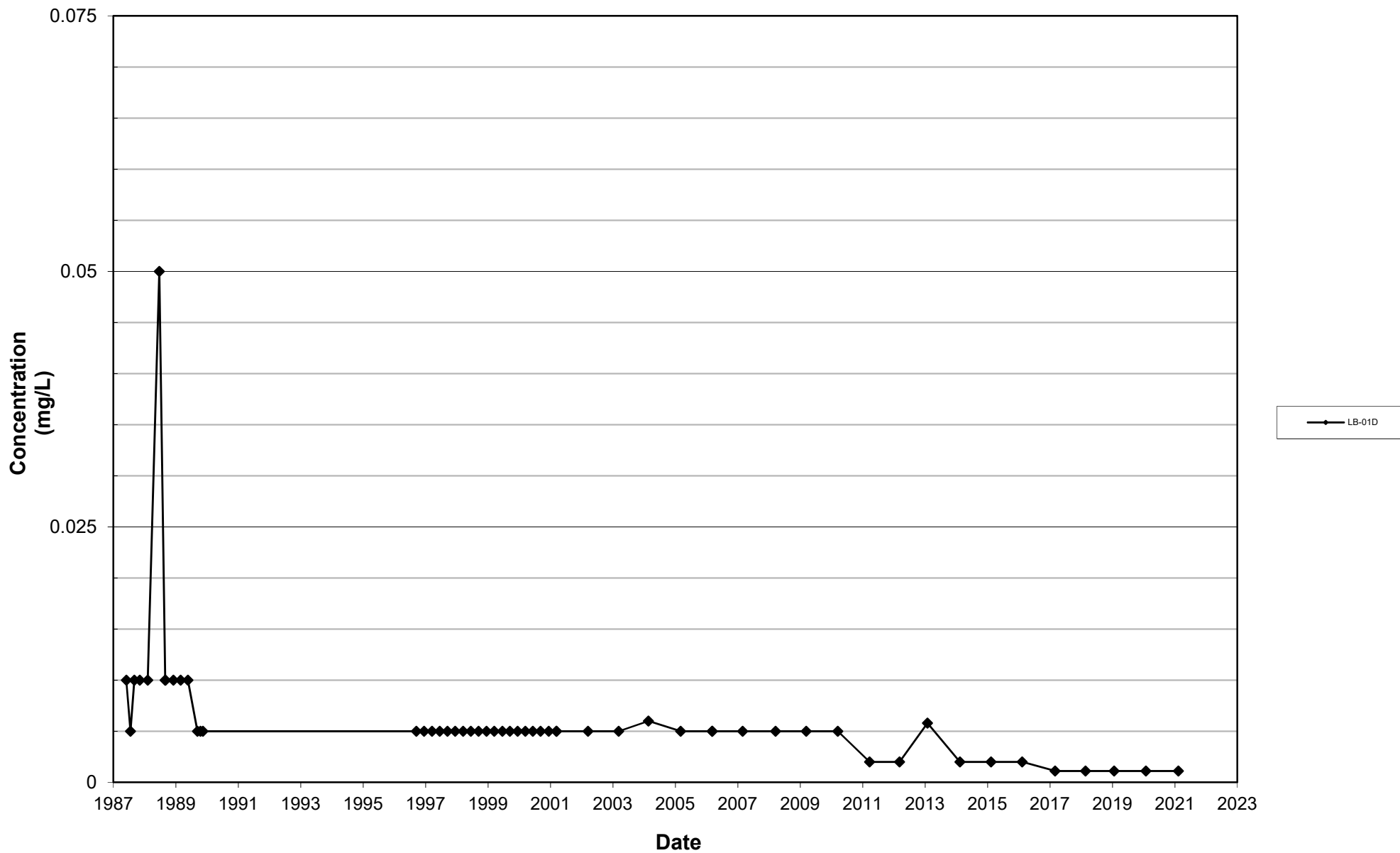


Dissolved Manganese

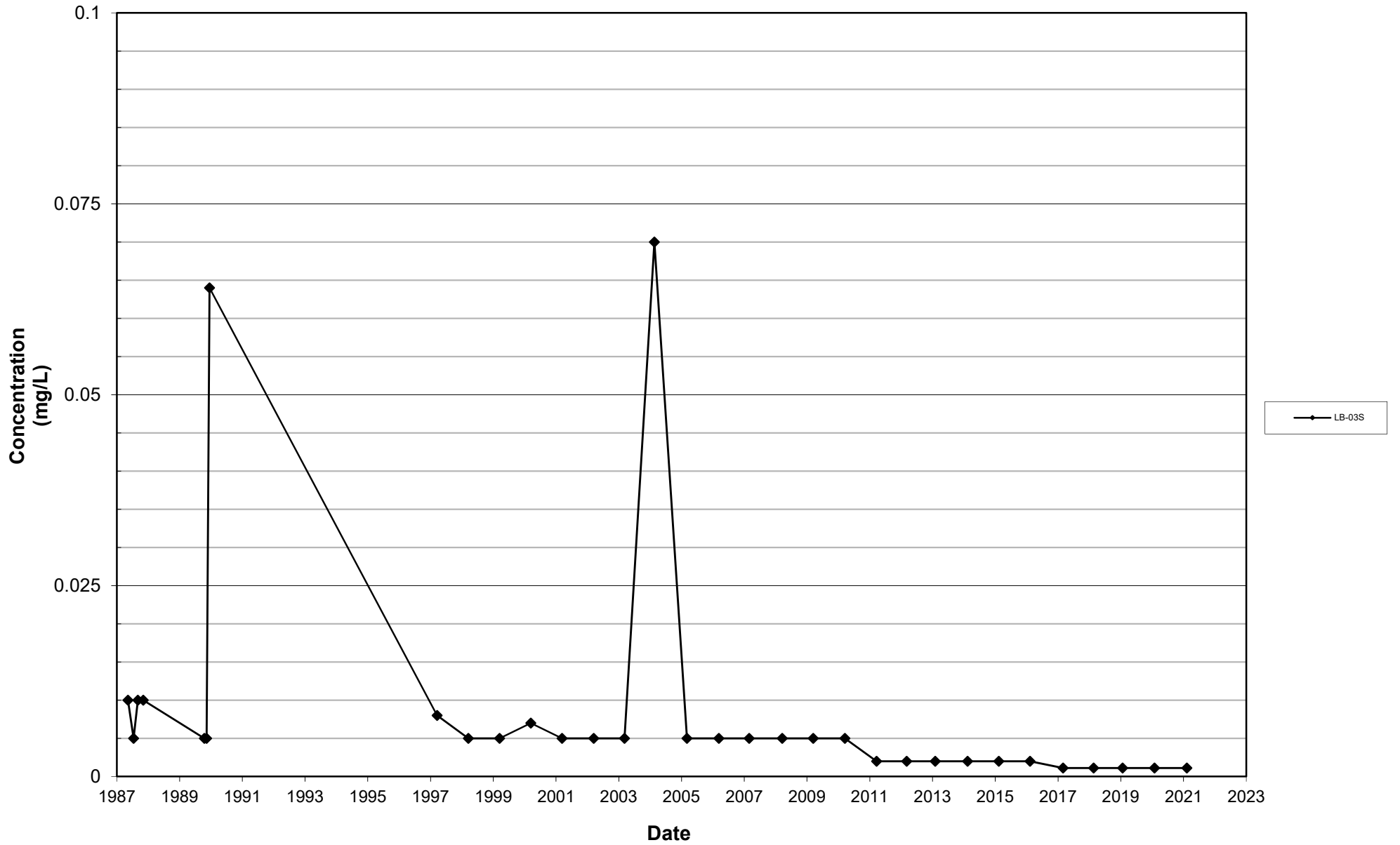
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1987 - 2021



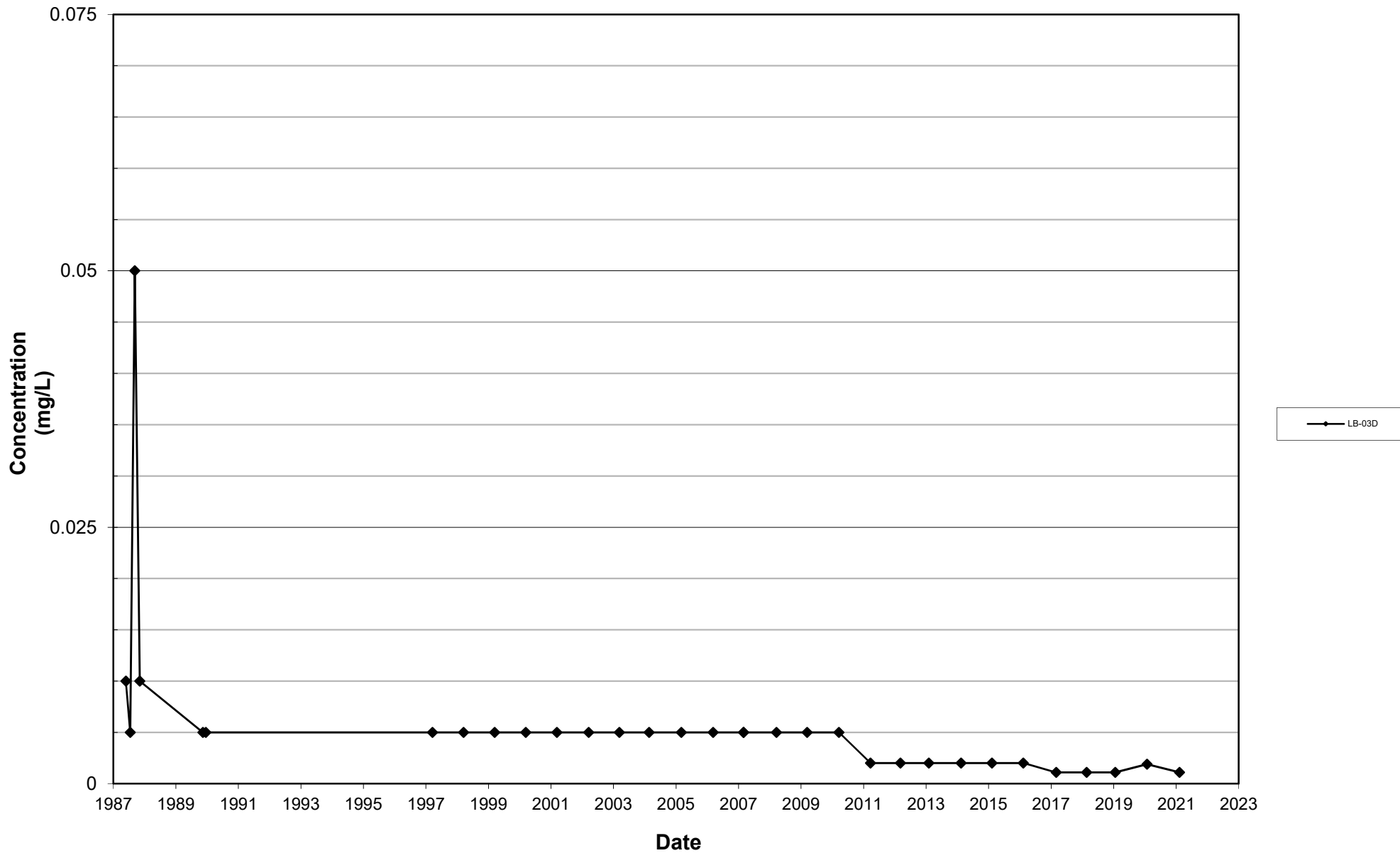
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Dissolved Manganese, LB-01D
1987 - 2021



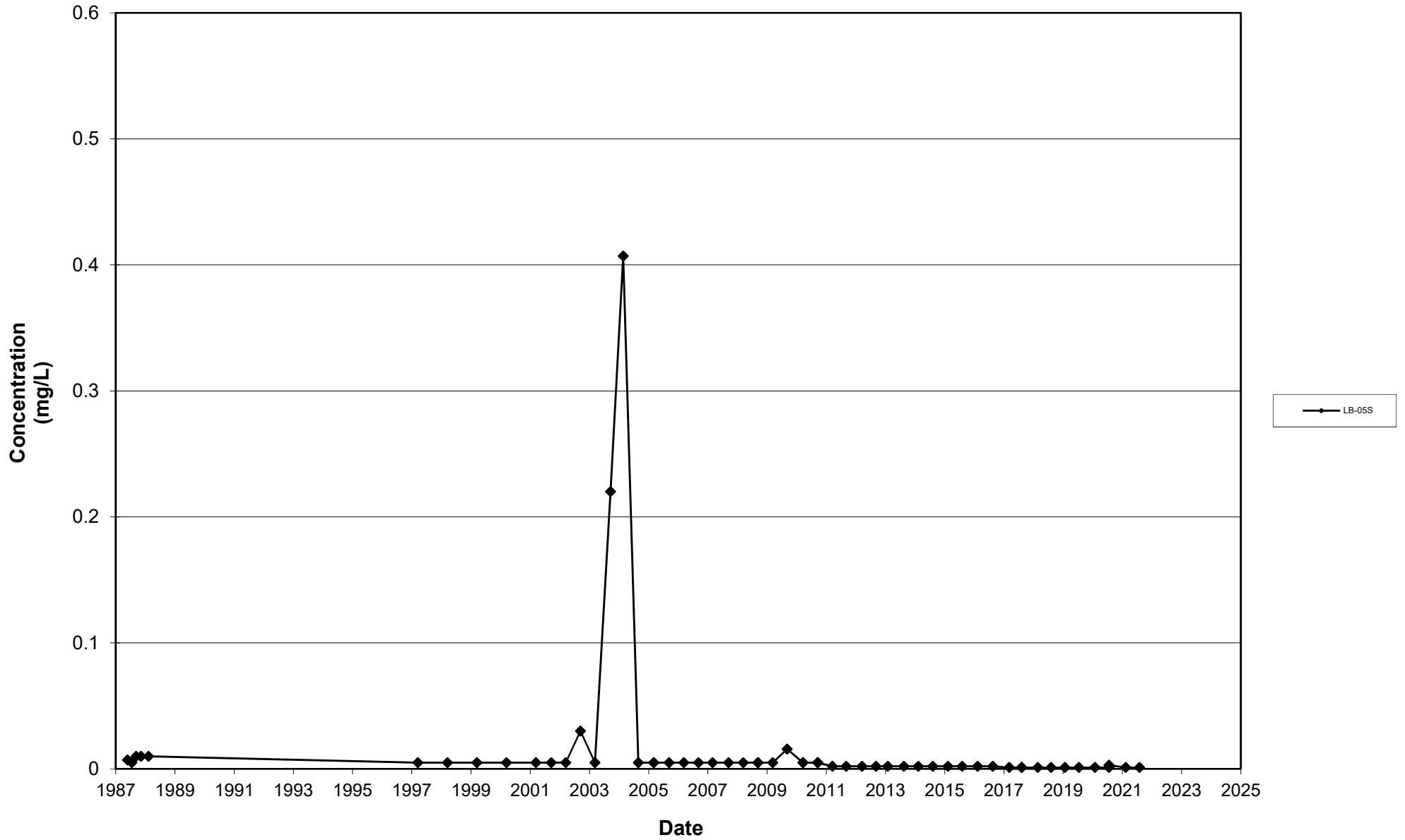
Leichner Landfill
Dissolved Manganese, LB-03S
1987 - 2021



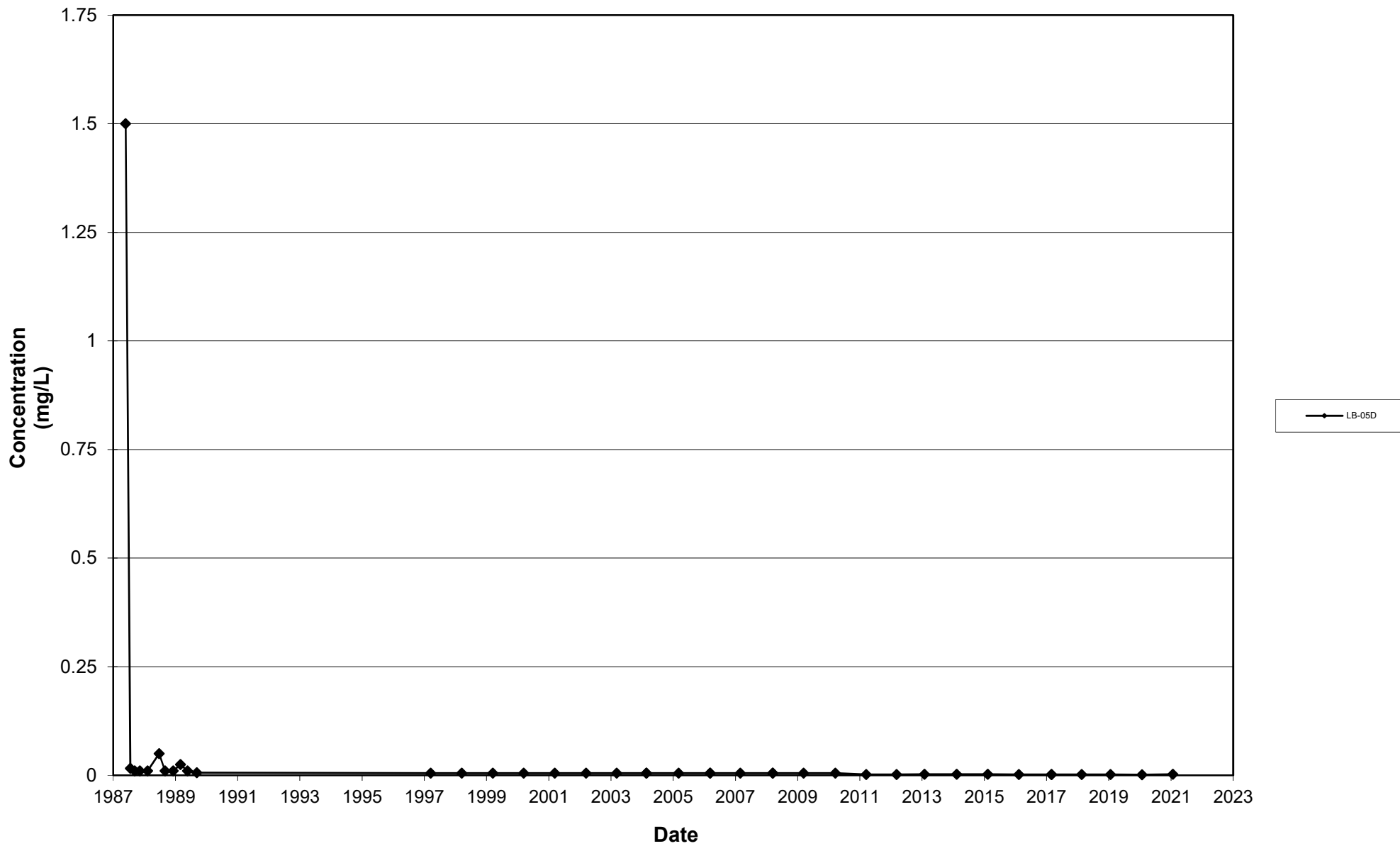
Leichner Landfill
Dissolved Manganese, LB-03D
1987 - 2021



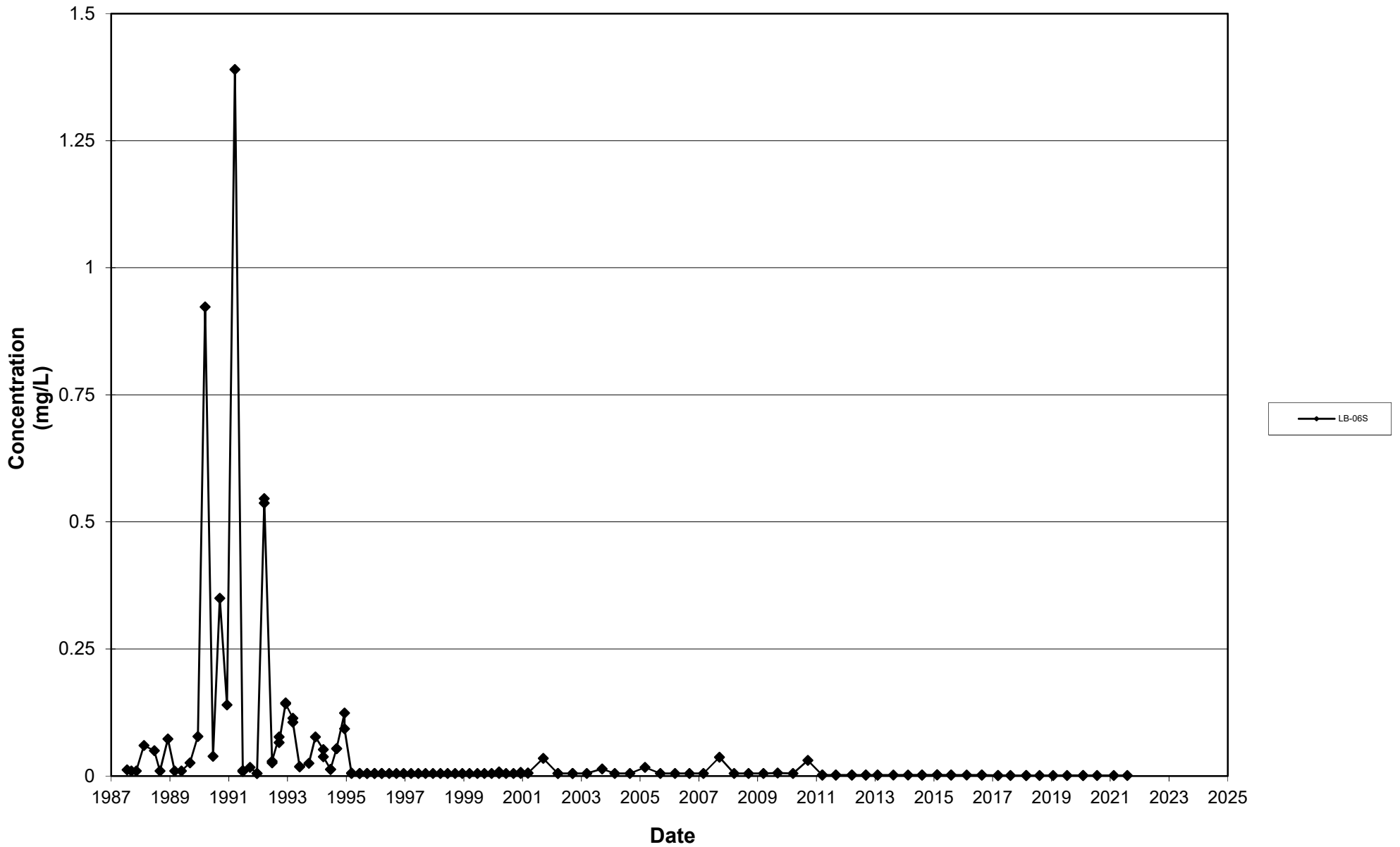
Leichner Landfill
Dissolved Manganese, LB-05S
1987 - 2021



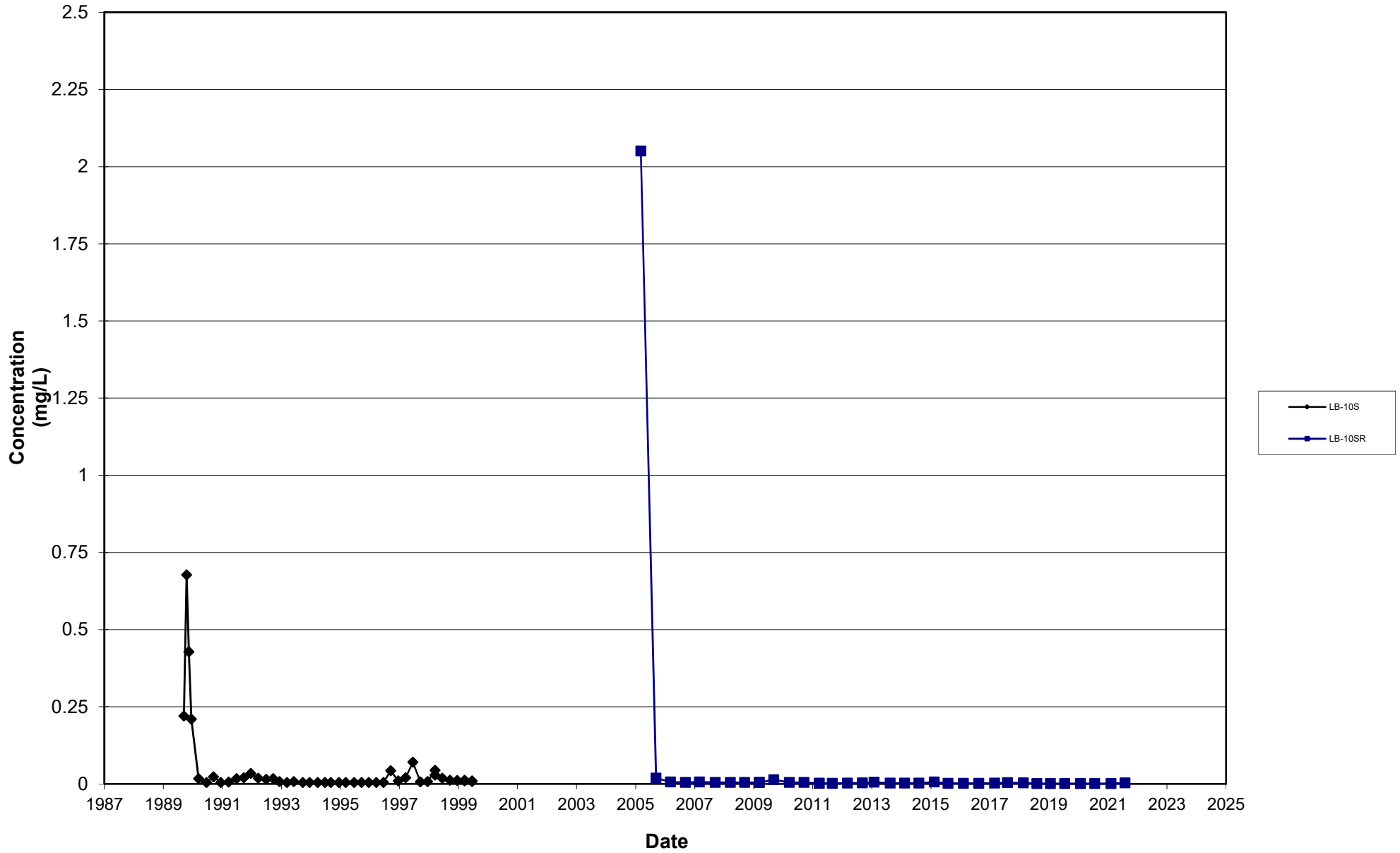
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Dissolved Manganese, LB-05D
1987 - 2021**



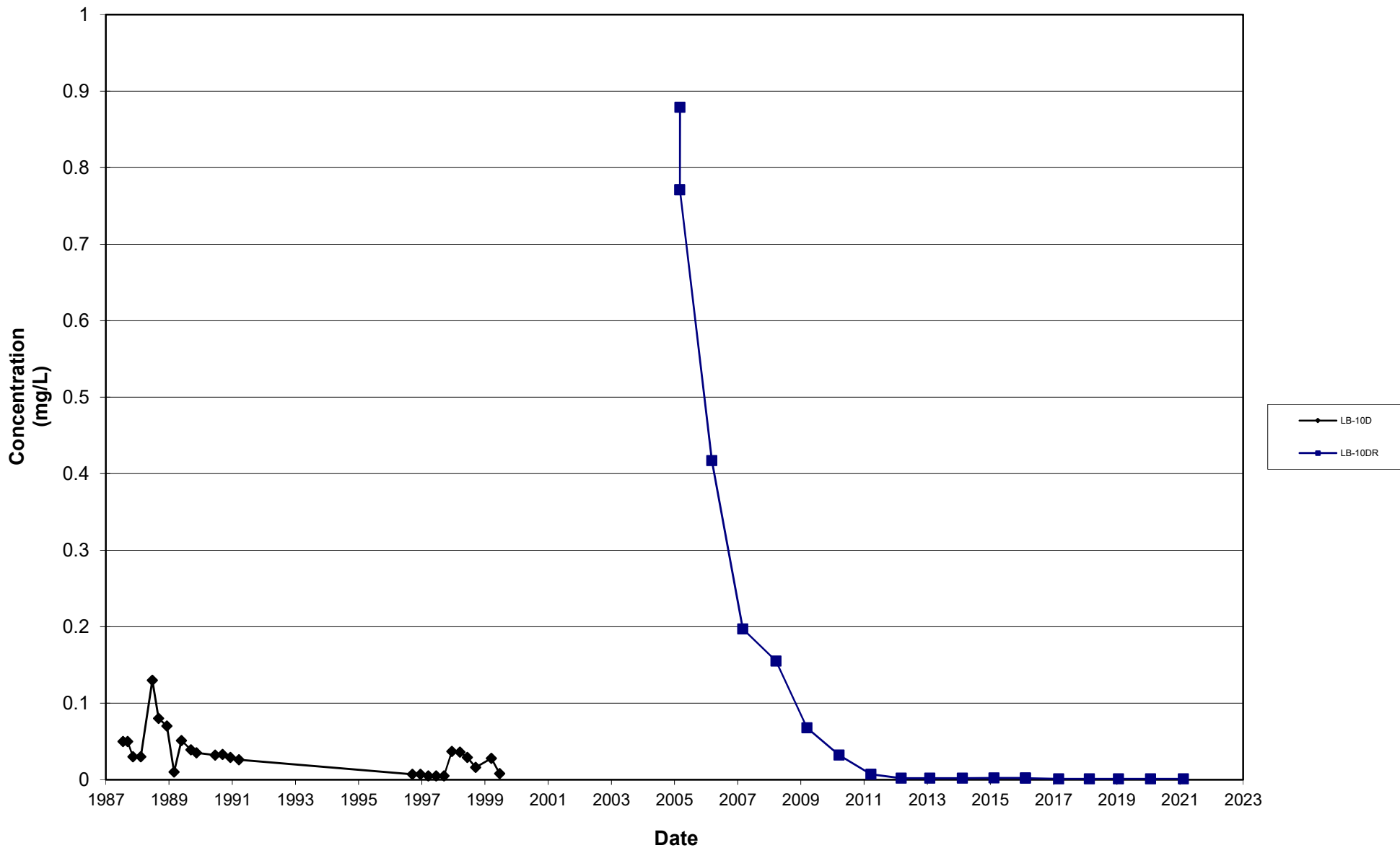
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Dissolved Manganese, LB-06S
1987 - 2021



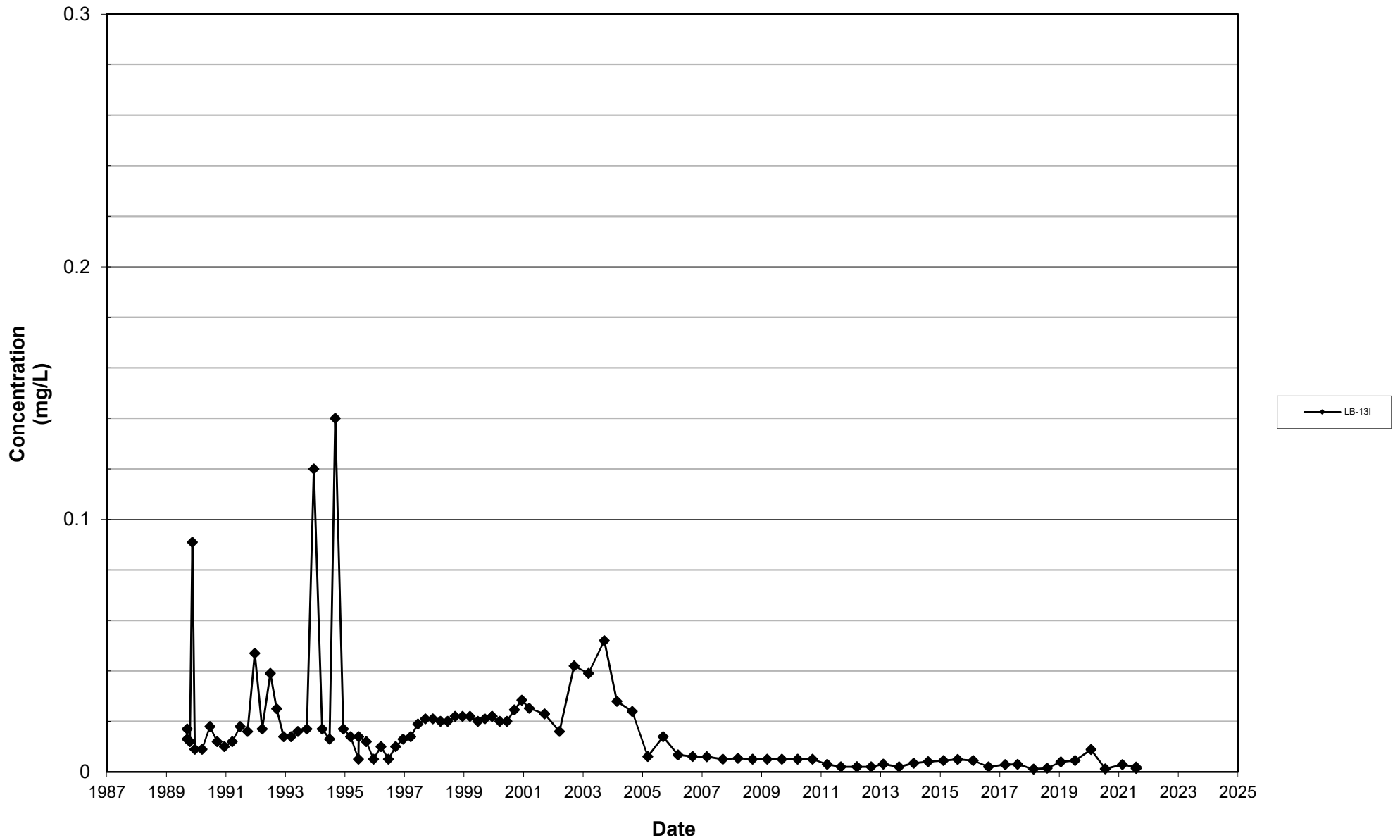
Leichner Landfill
Dissolved Manganese, LB-10S and LB-10SR
1987 - 2021



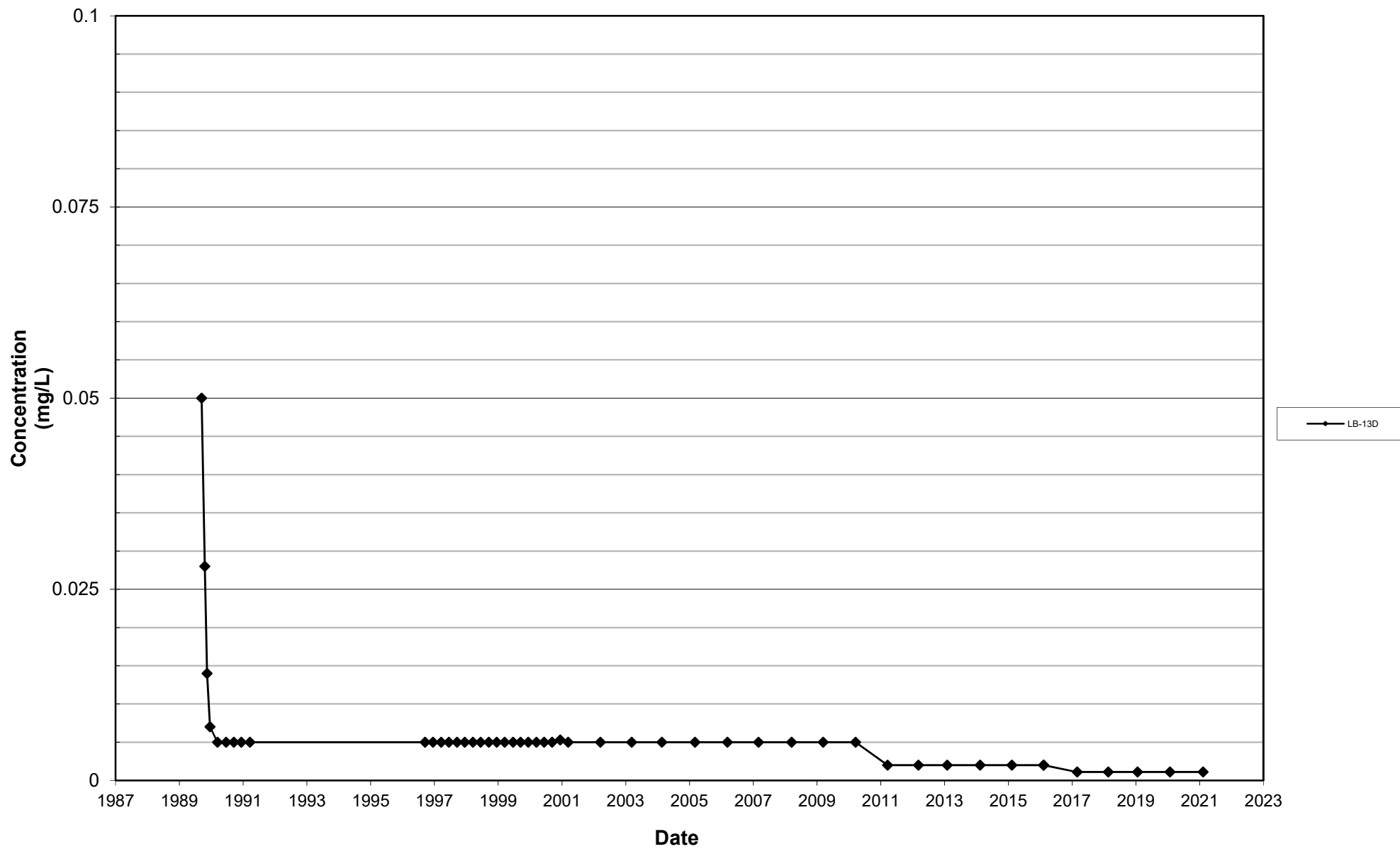
Leichner Landfill
Dissolved Manganese, LB-10D and LB-10DR
1987 - 2021



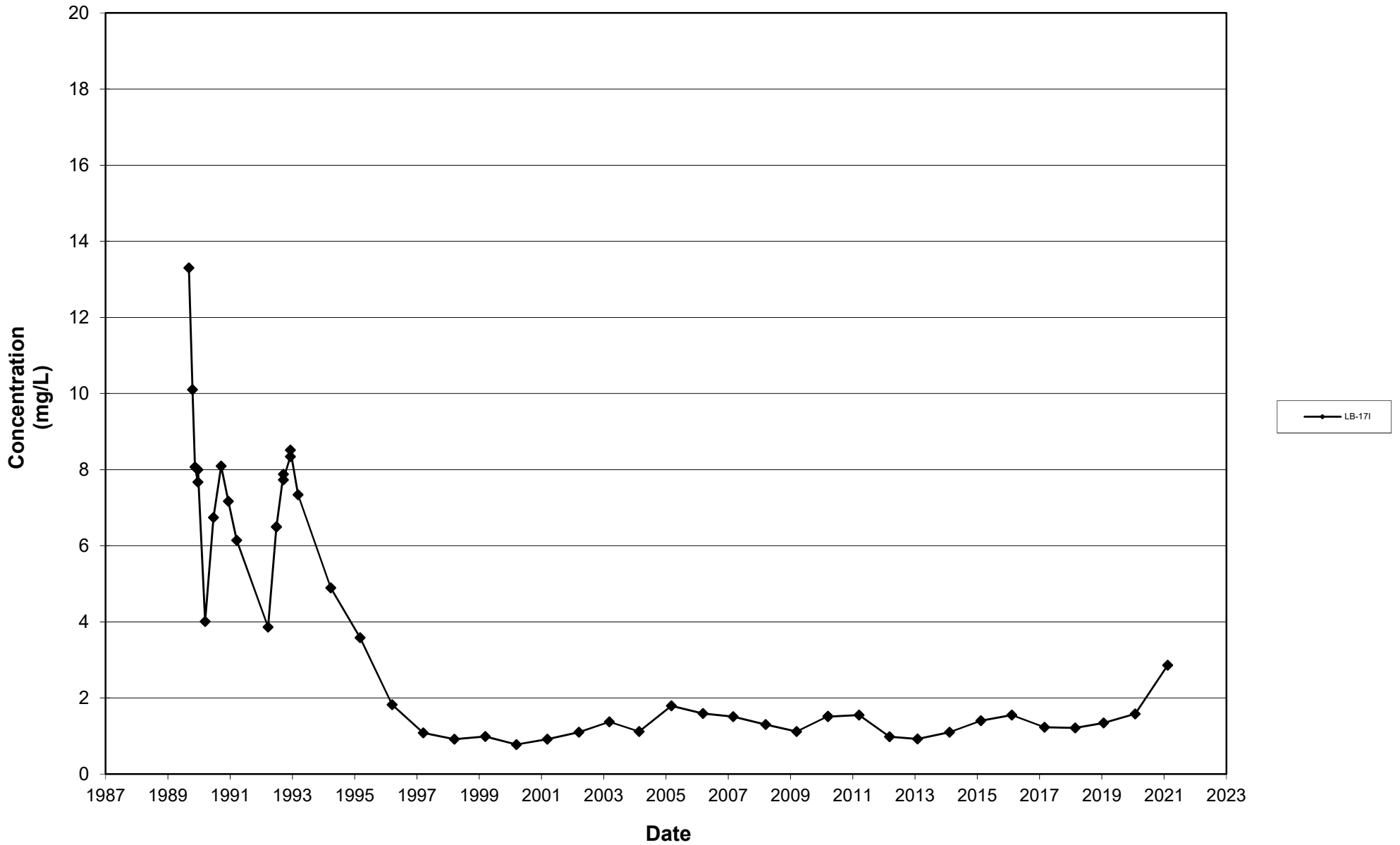
Leichner Landfill
Dissolved Manganese, LB-13I
1987 - 2021



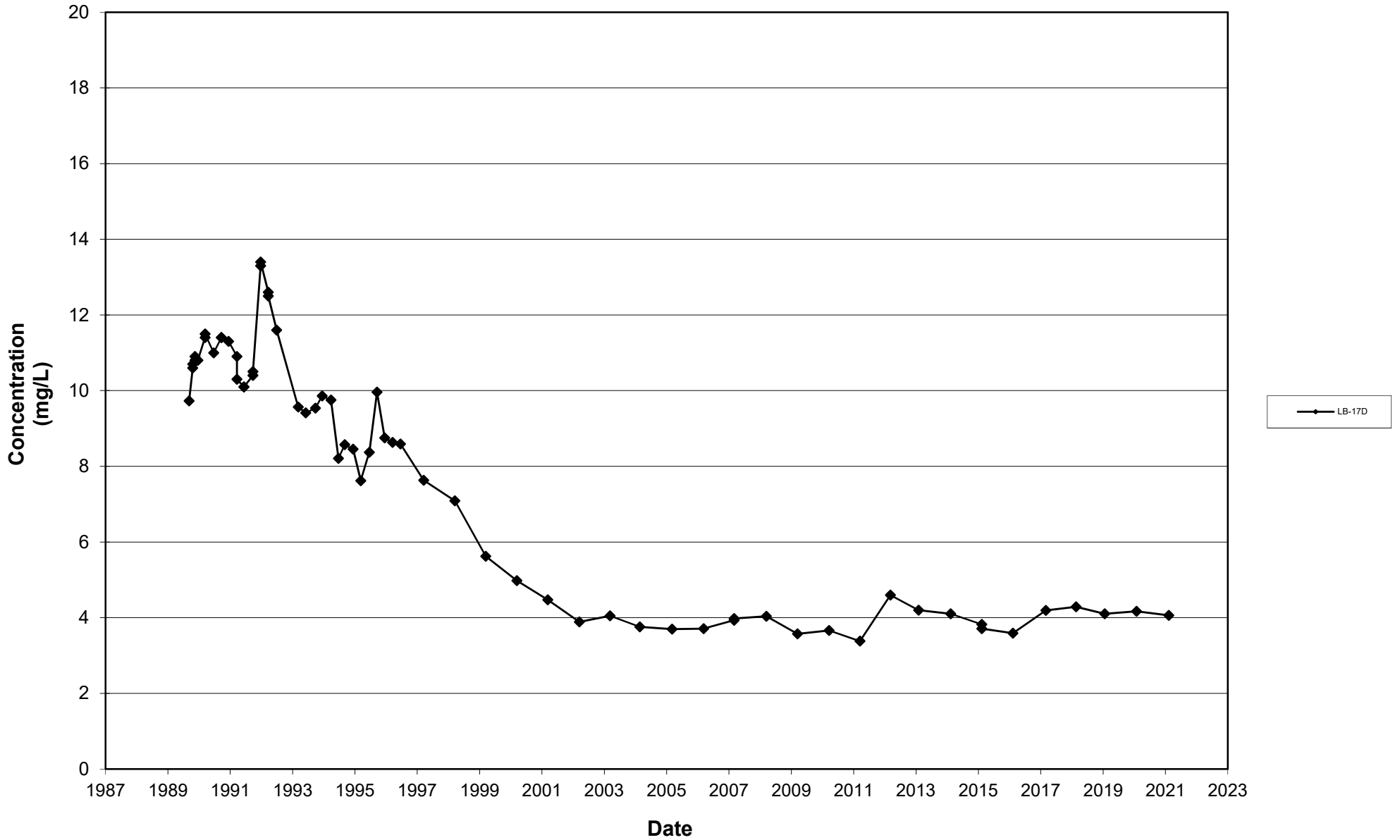
Leichner Landfill
Dissolved Manganese, LB-13D
1987 - 2021



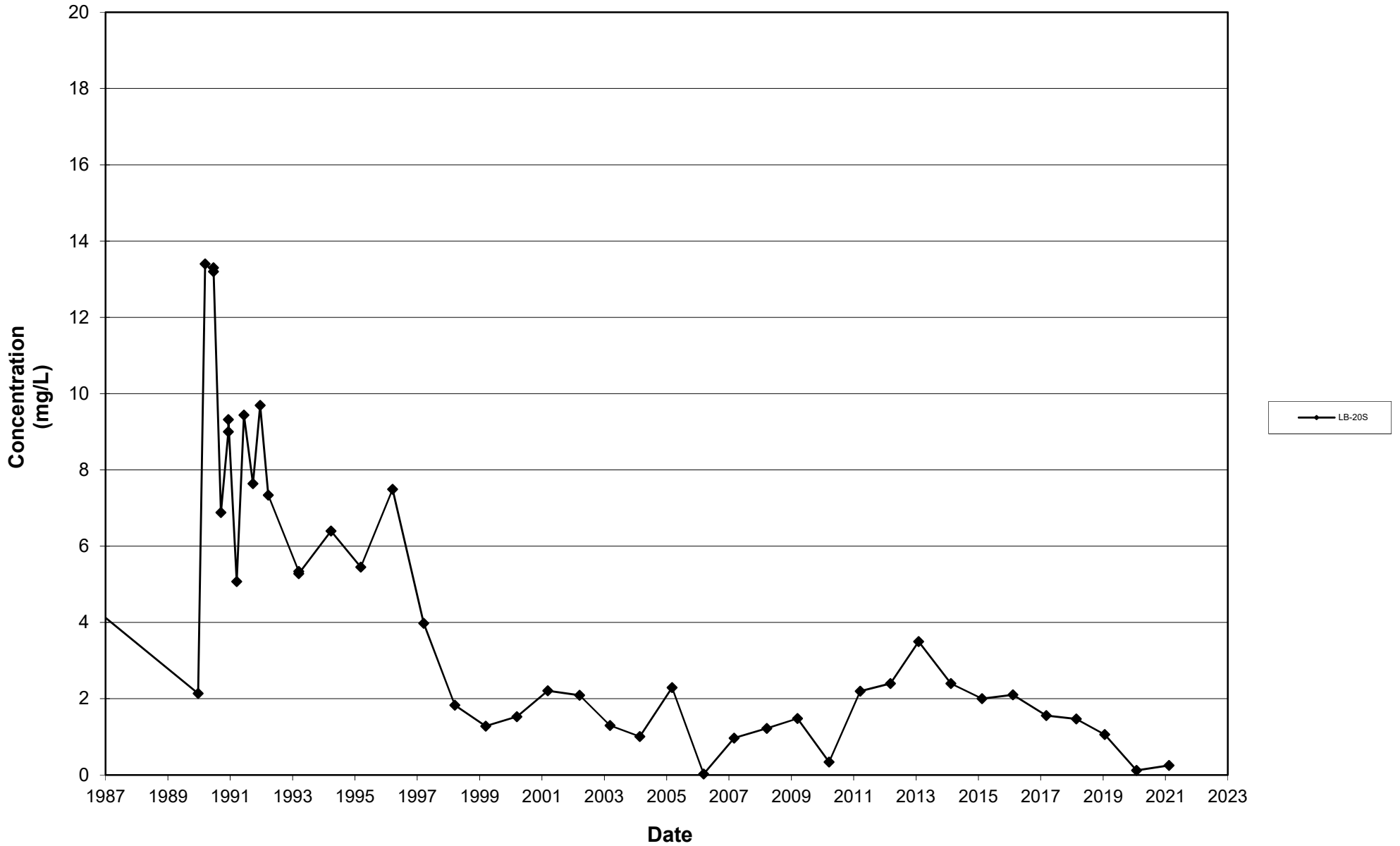
Leichner Landfill
Dissolved Manganese, LB-17I
1987 - 2021



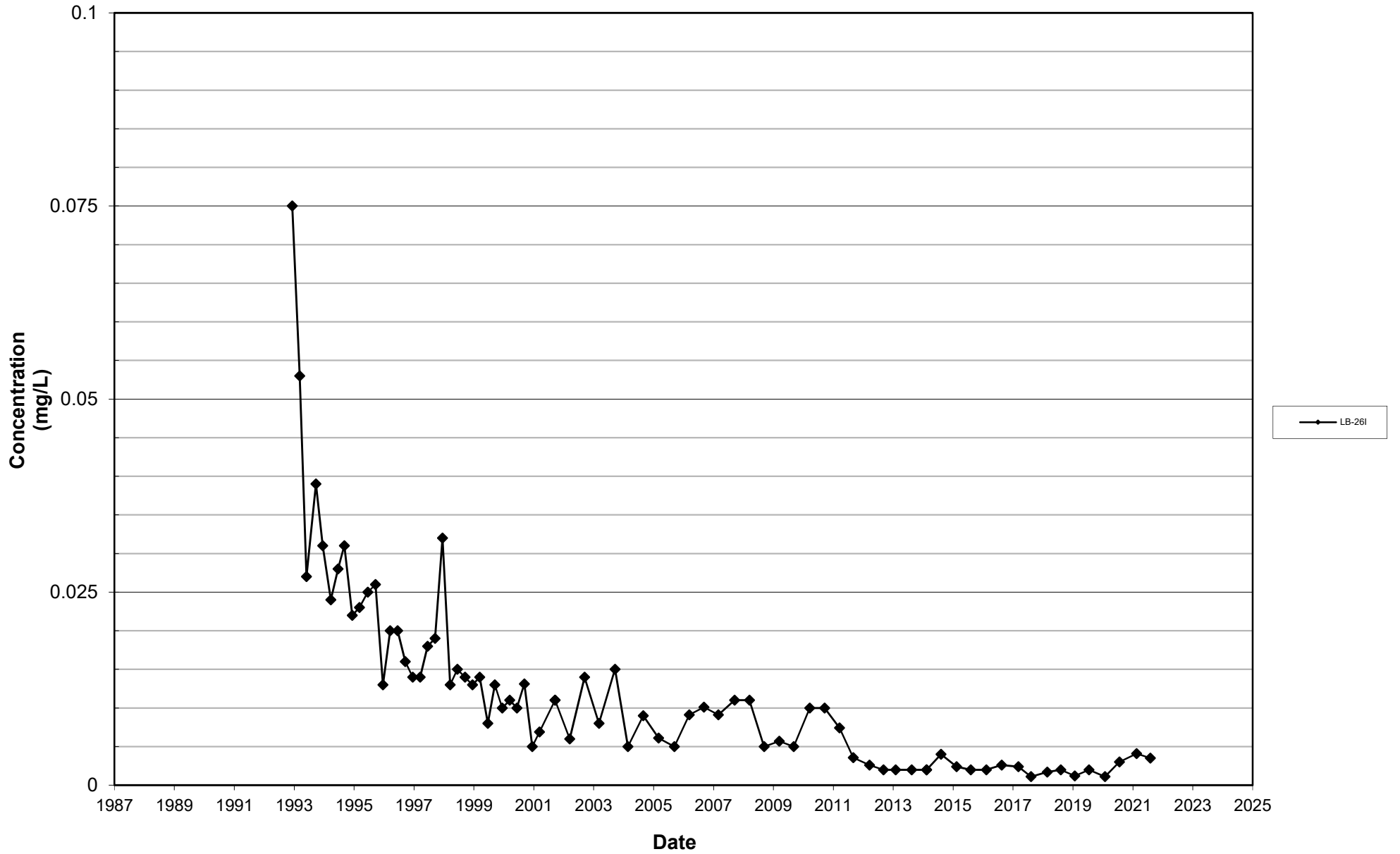
Leichner Landfill
Dissolved Manganese, LB-17D
1987 - 2021



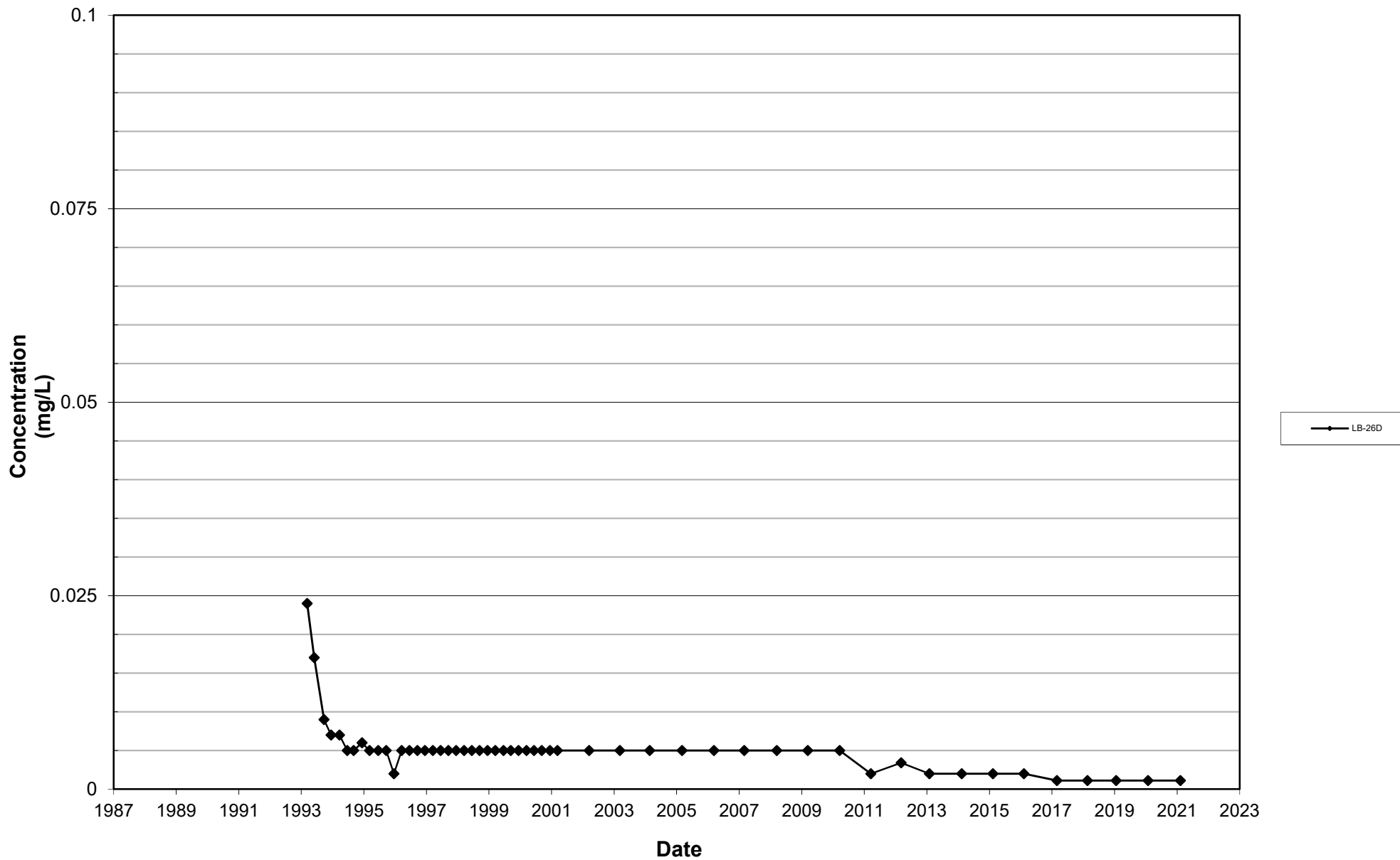
Leichner Landfill
Dissolved Manganese, LB-20S
1987 - 2021



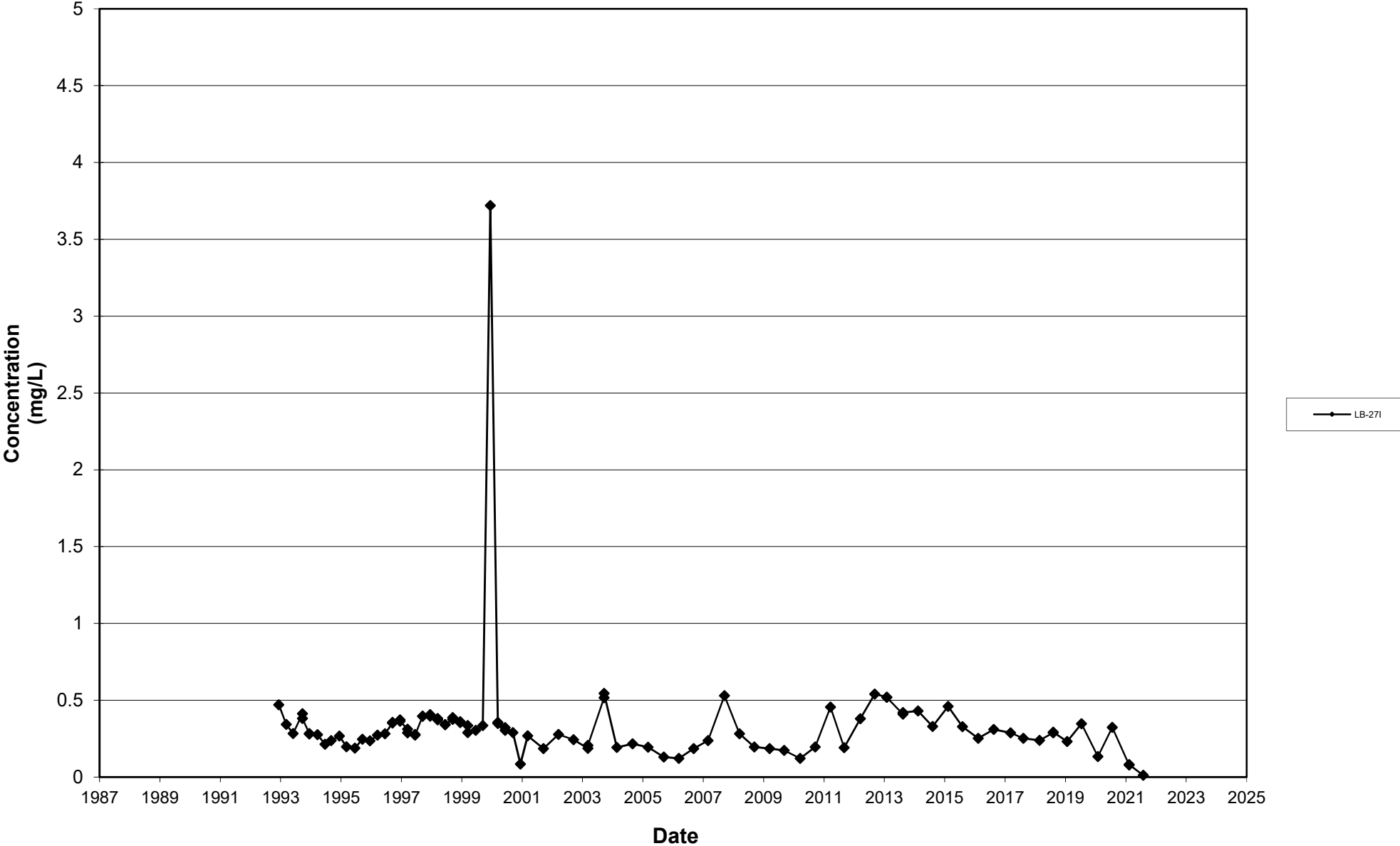
Leichner Landfill
Dissolved Manganese, LB-26I
1987 - 2021



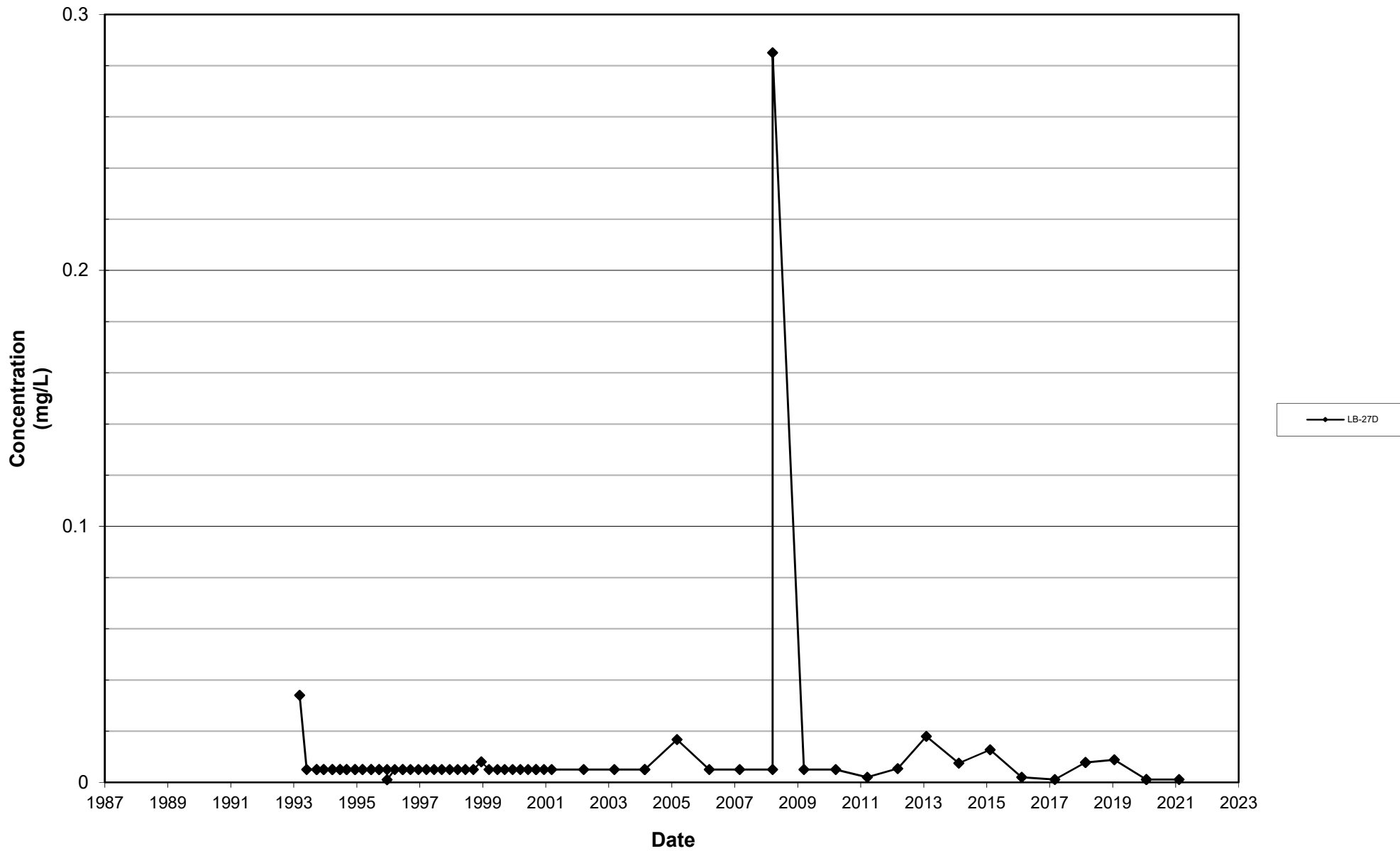
Leichner Landfill
Dissolved Manganese, LB-26D
1987 - 2021



**Leichner Landfill
Dissolved Manganese, LB-27I
1987 - 2021**

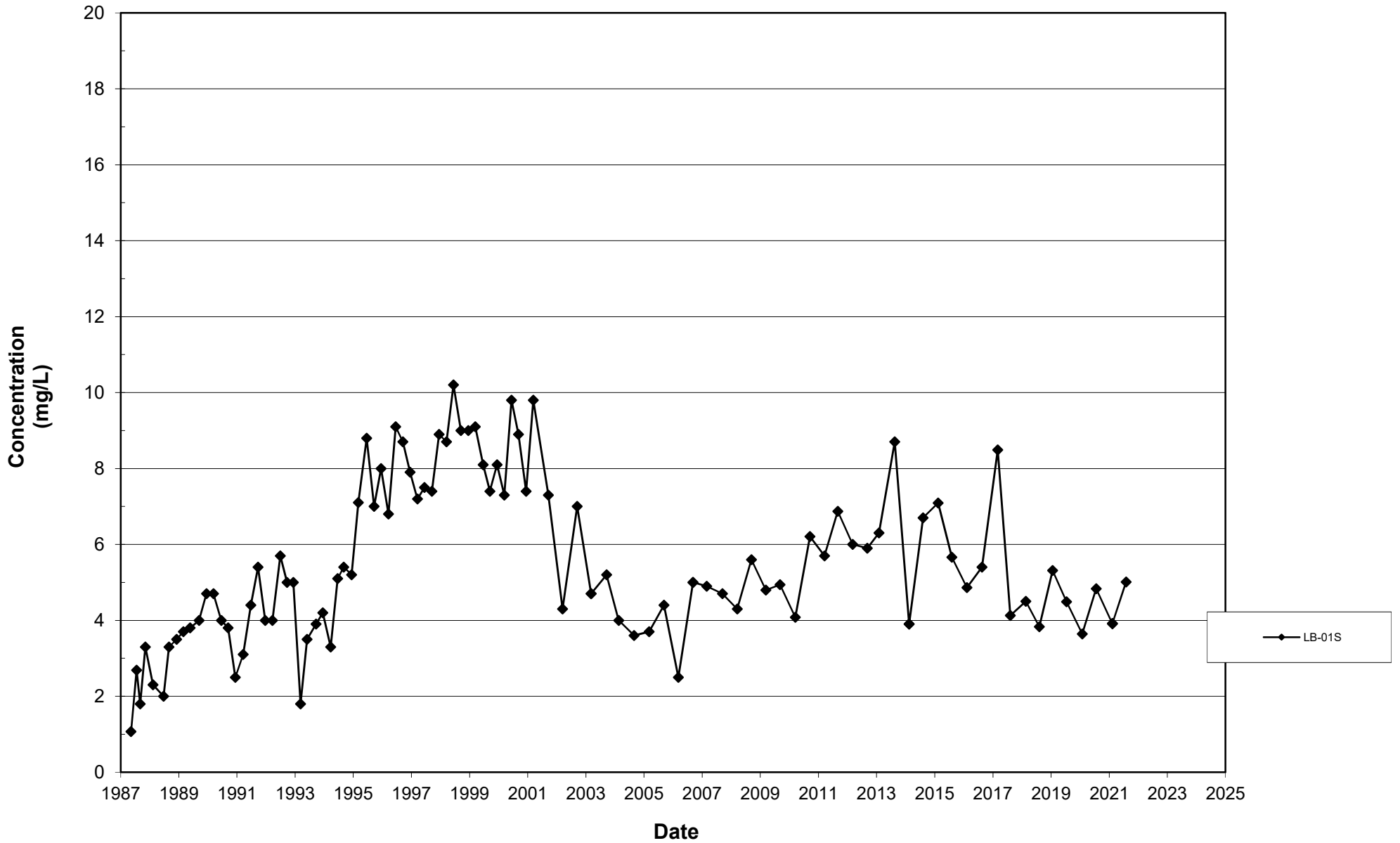


Leichner Landfill
Dissolved Manganese, LB-27D
1987 - 2021

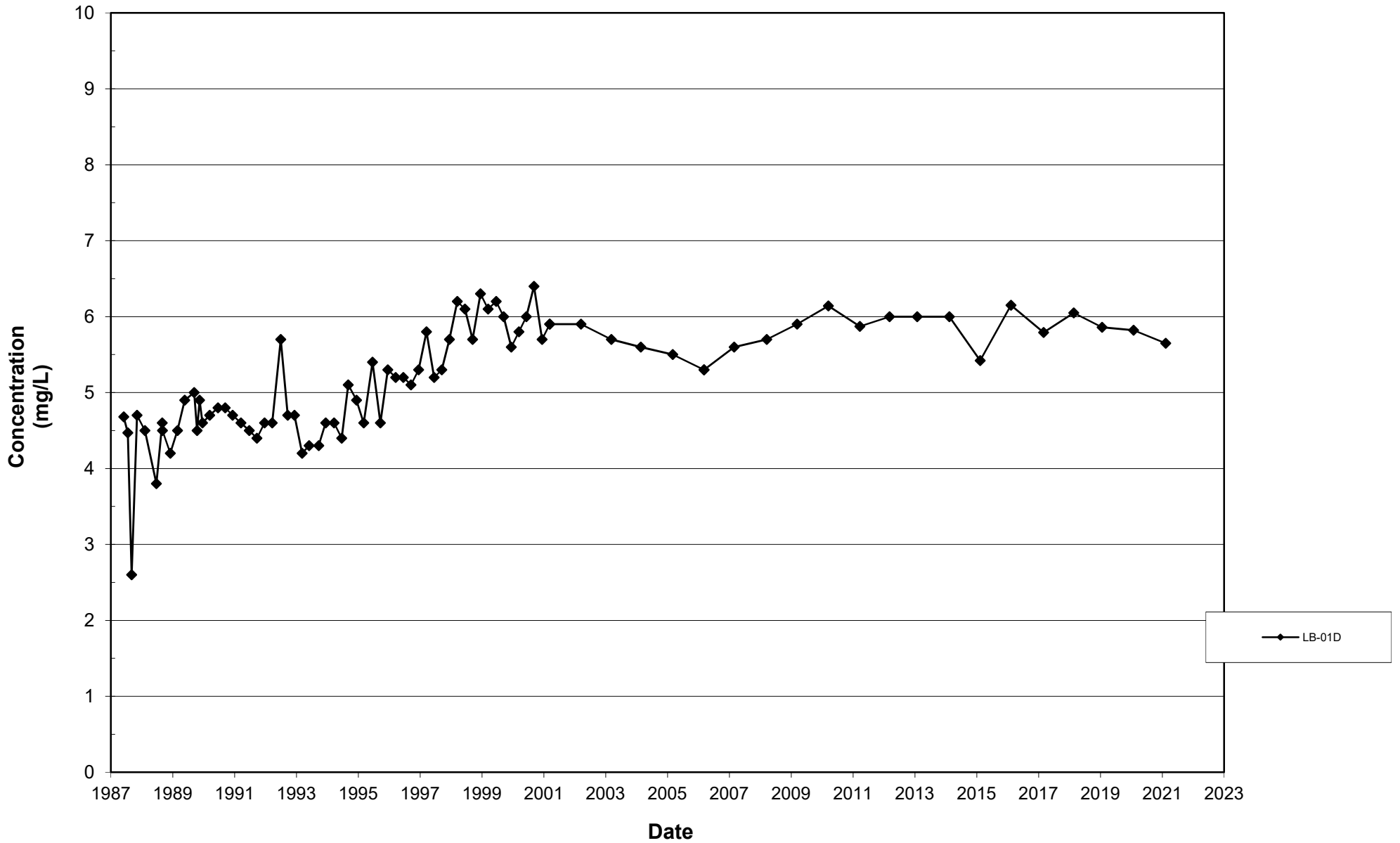


Nitrate

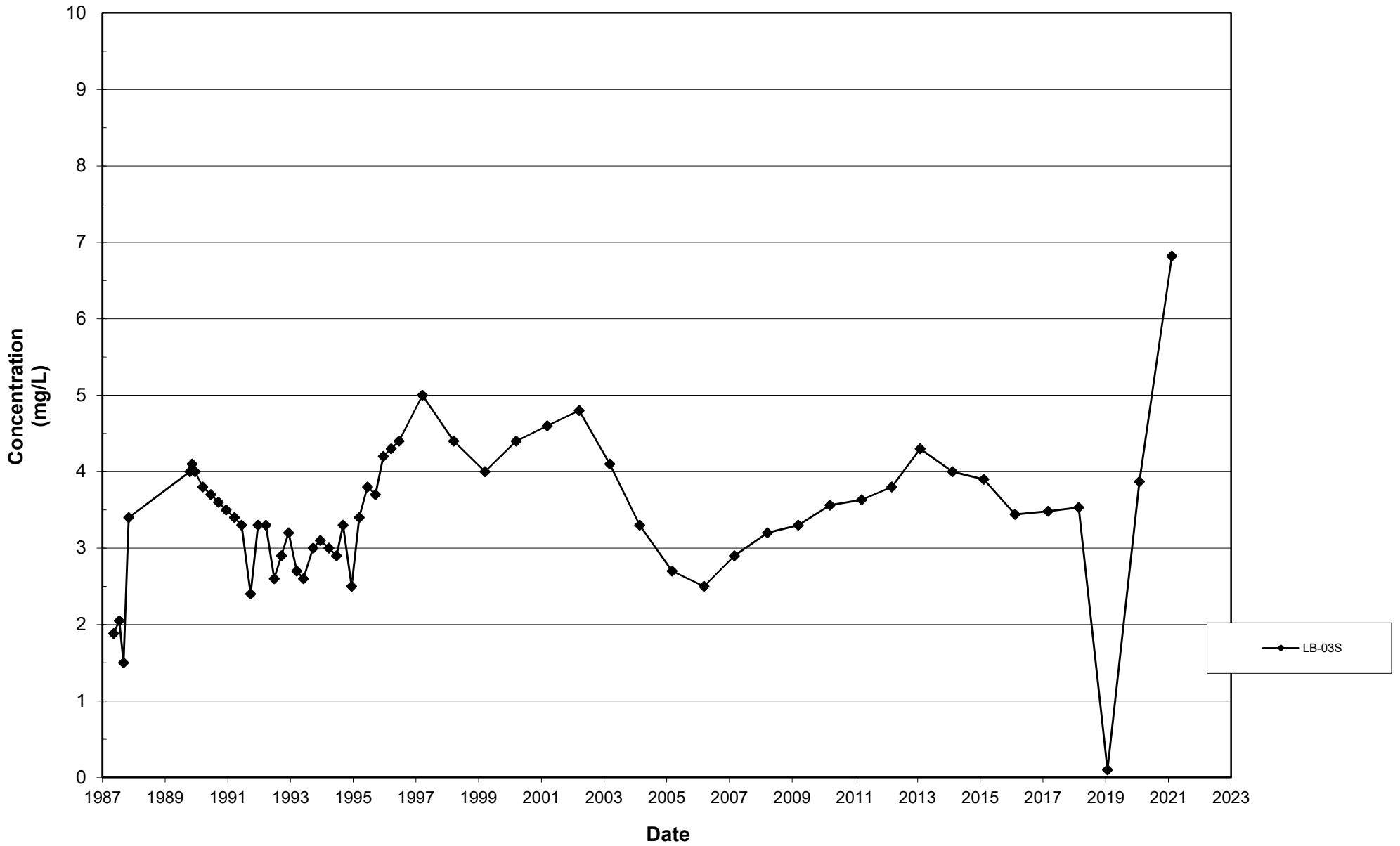
Leichner Landfill
Nitrate, LB-01S
1987 - 2021



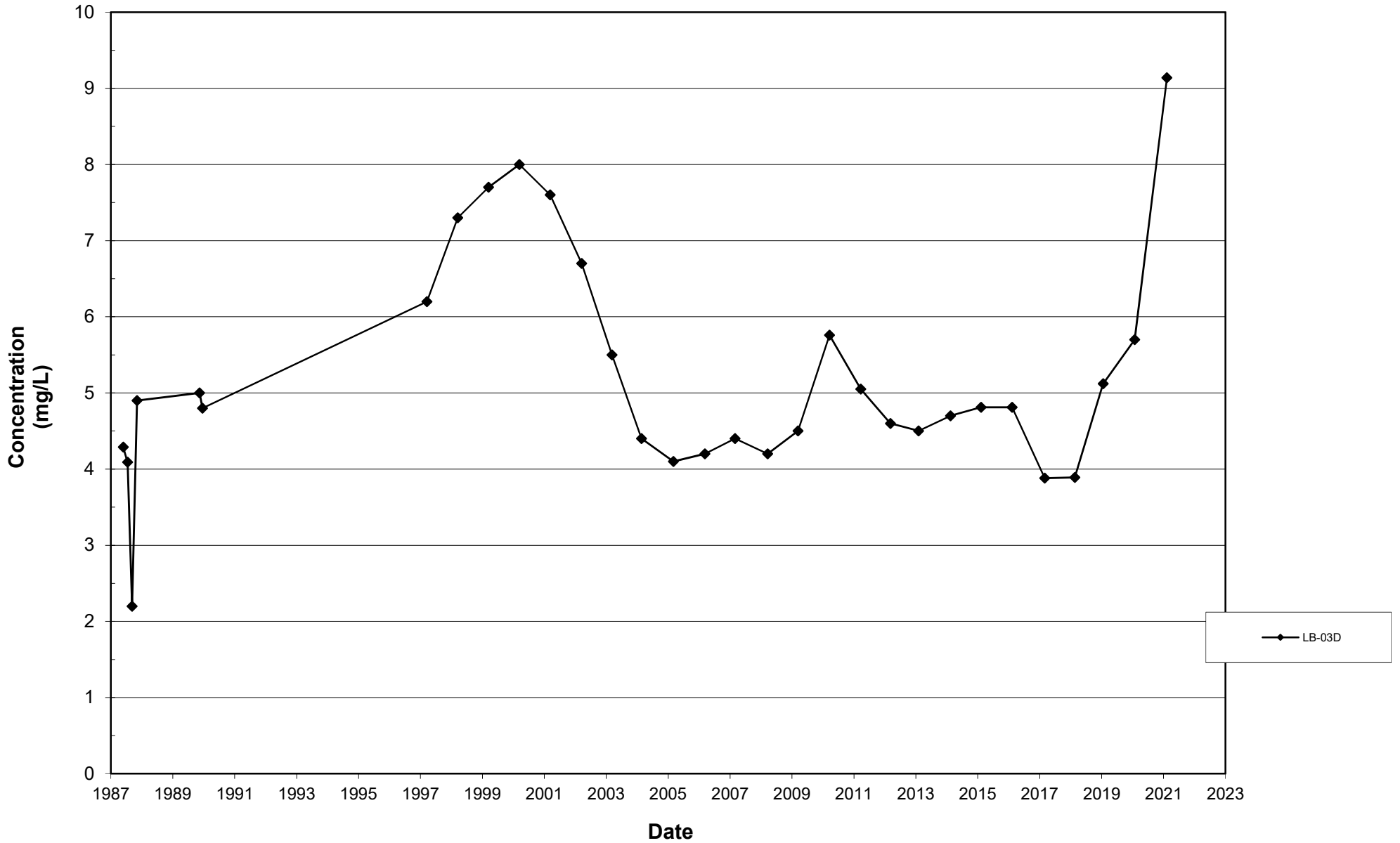
Leichner Landfill
Nitrate, LB-01D
1987 - 2021



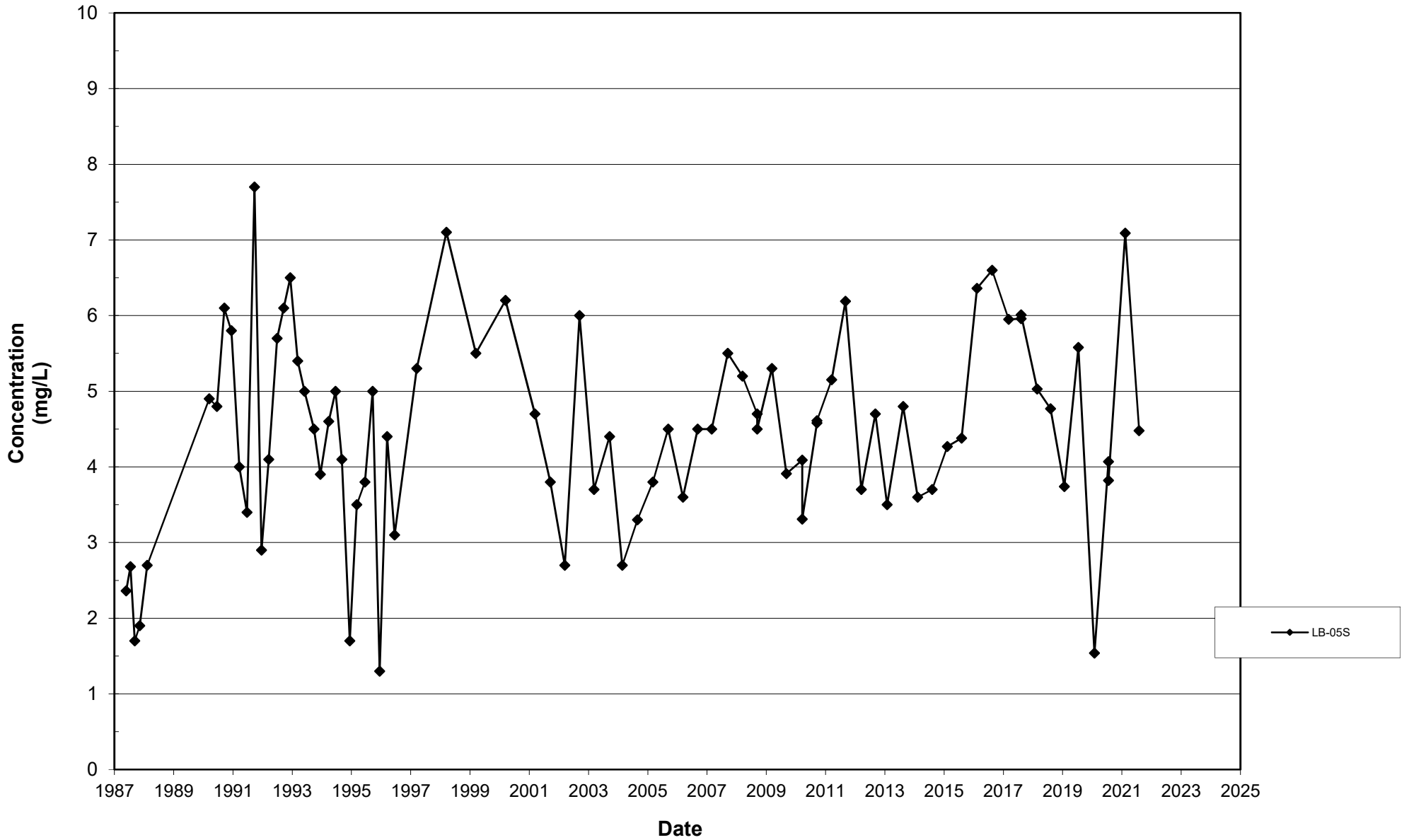
Leichner Landfill
Nitrate, LB-03S
1987 - 2021



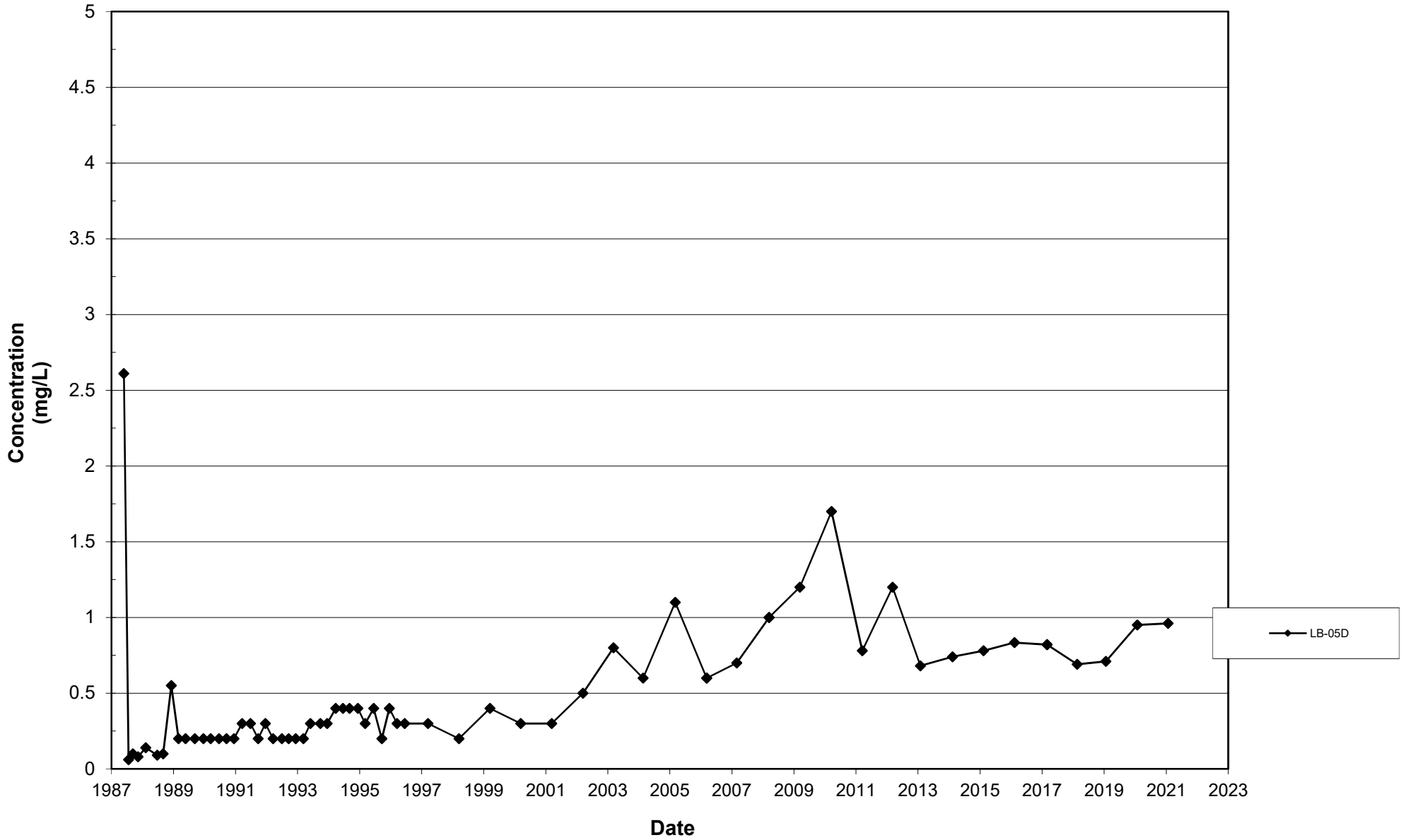
Leichner Landfill
Nitrate, LB-03D
1987 - 2021



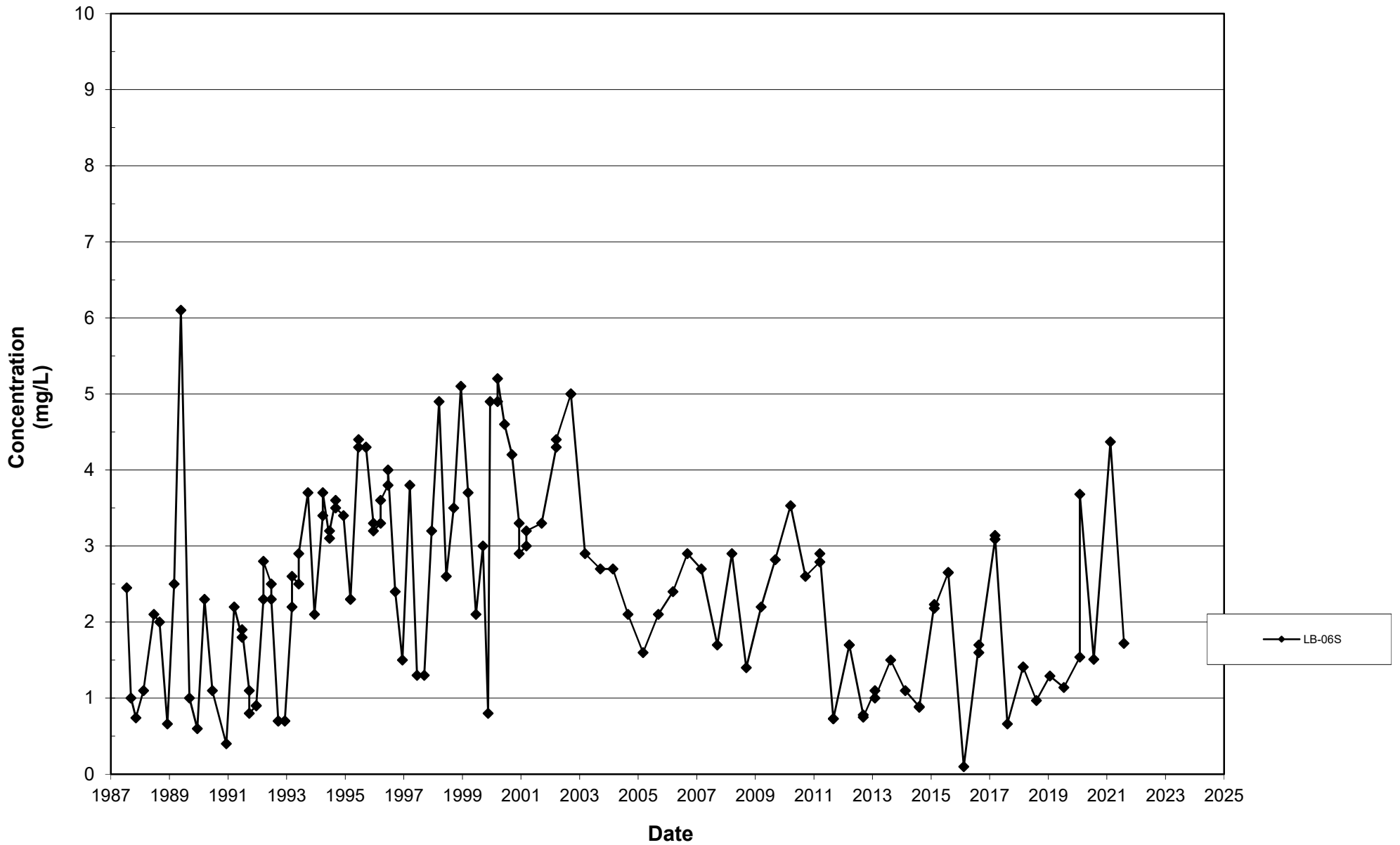
Leichner Landfill
Nitrate, LB-05S
1987 - 2021



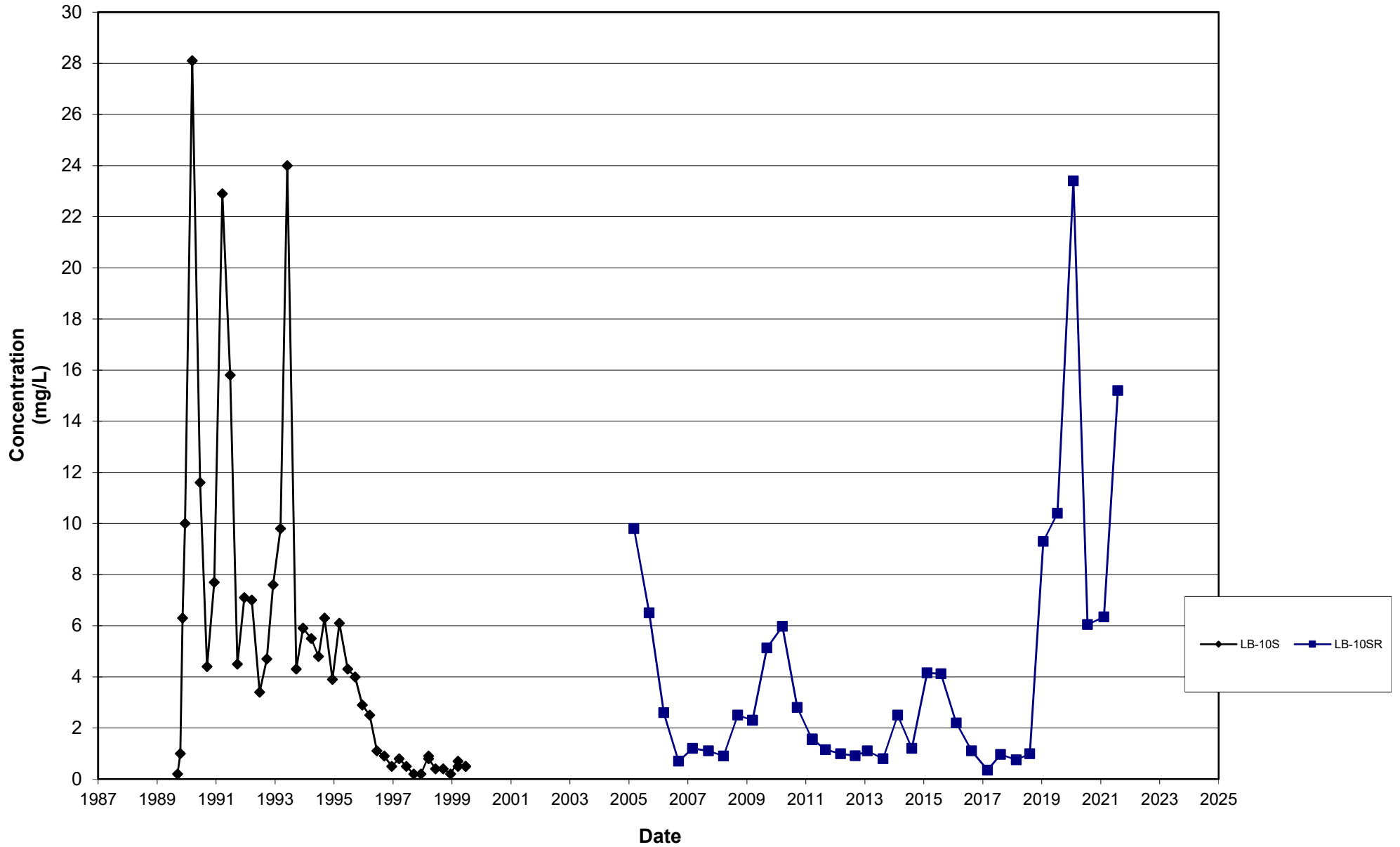
Leichner Landfill
Nitrate, LB-05D
1987 - 2021



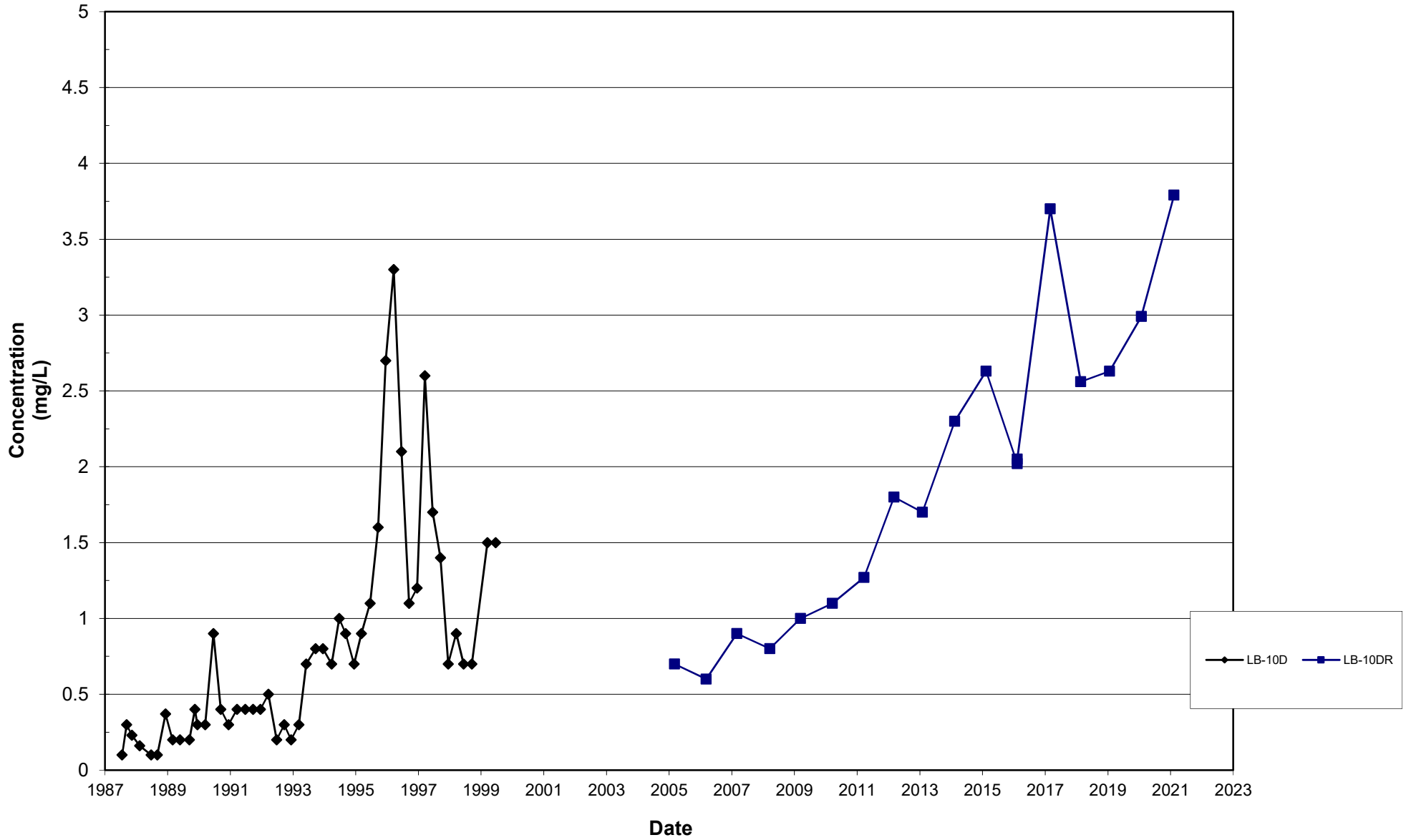
Leichner Landfill
Nitrate, LB-06S
1987 - 2021



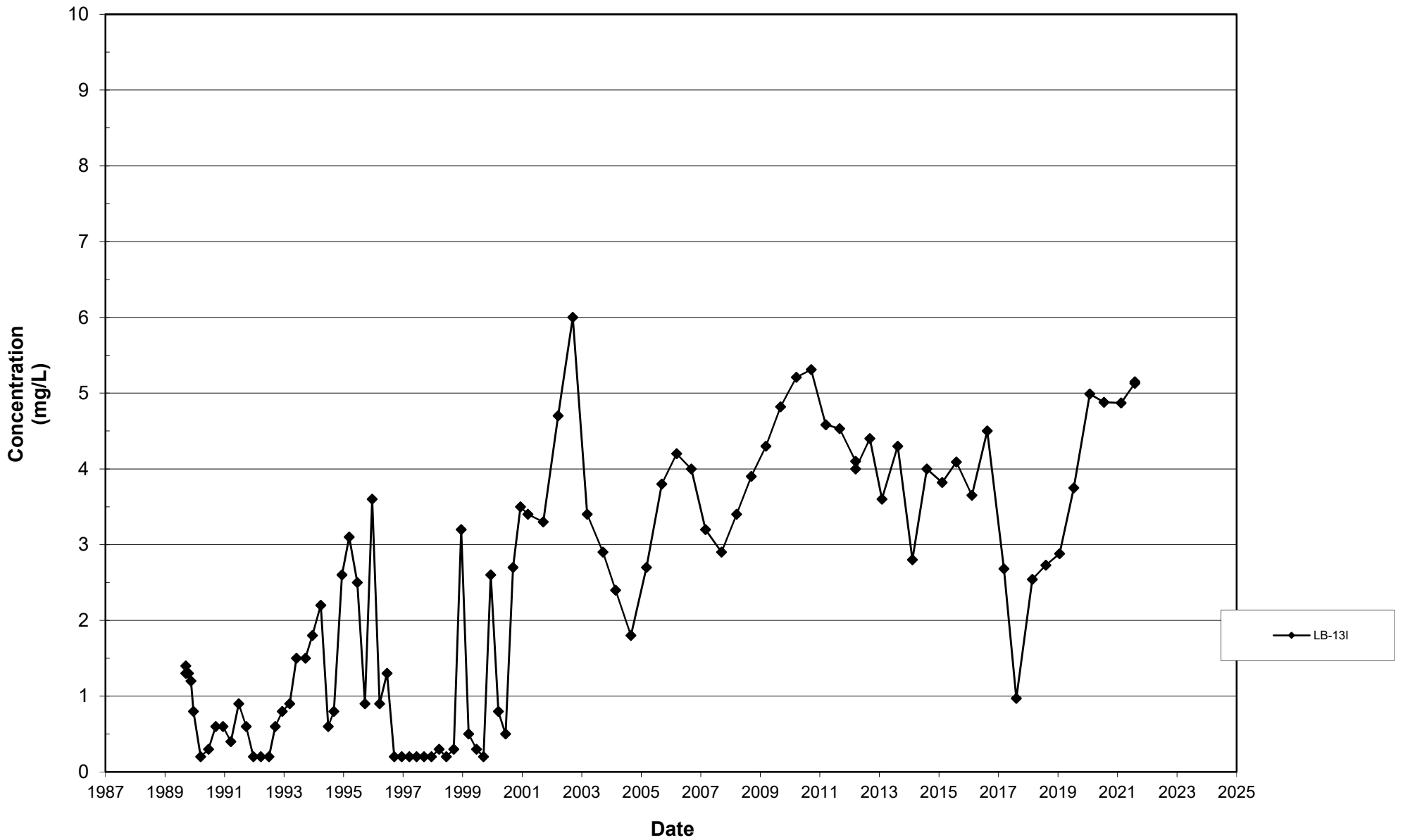
Leichner Landfill
Nitrate, LB-10S and LB-10SR
1987 - 2021



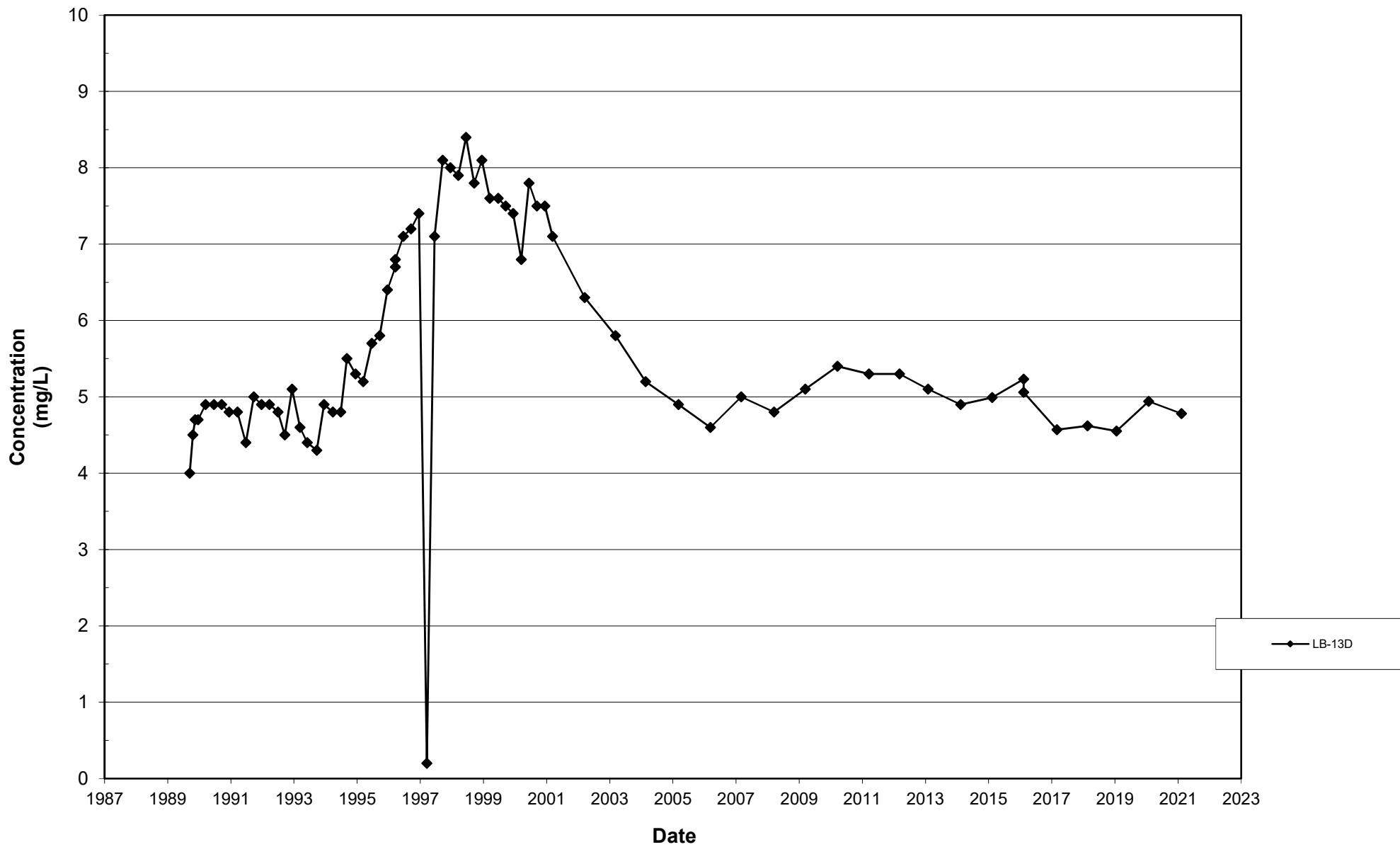
Leichner Landfill
Nitrate, LB-10D and LB-10DR
1987 - 2021



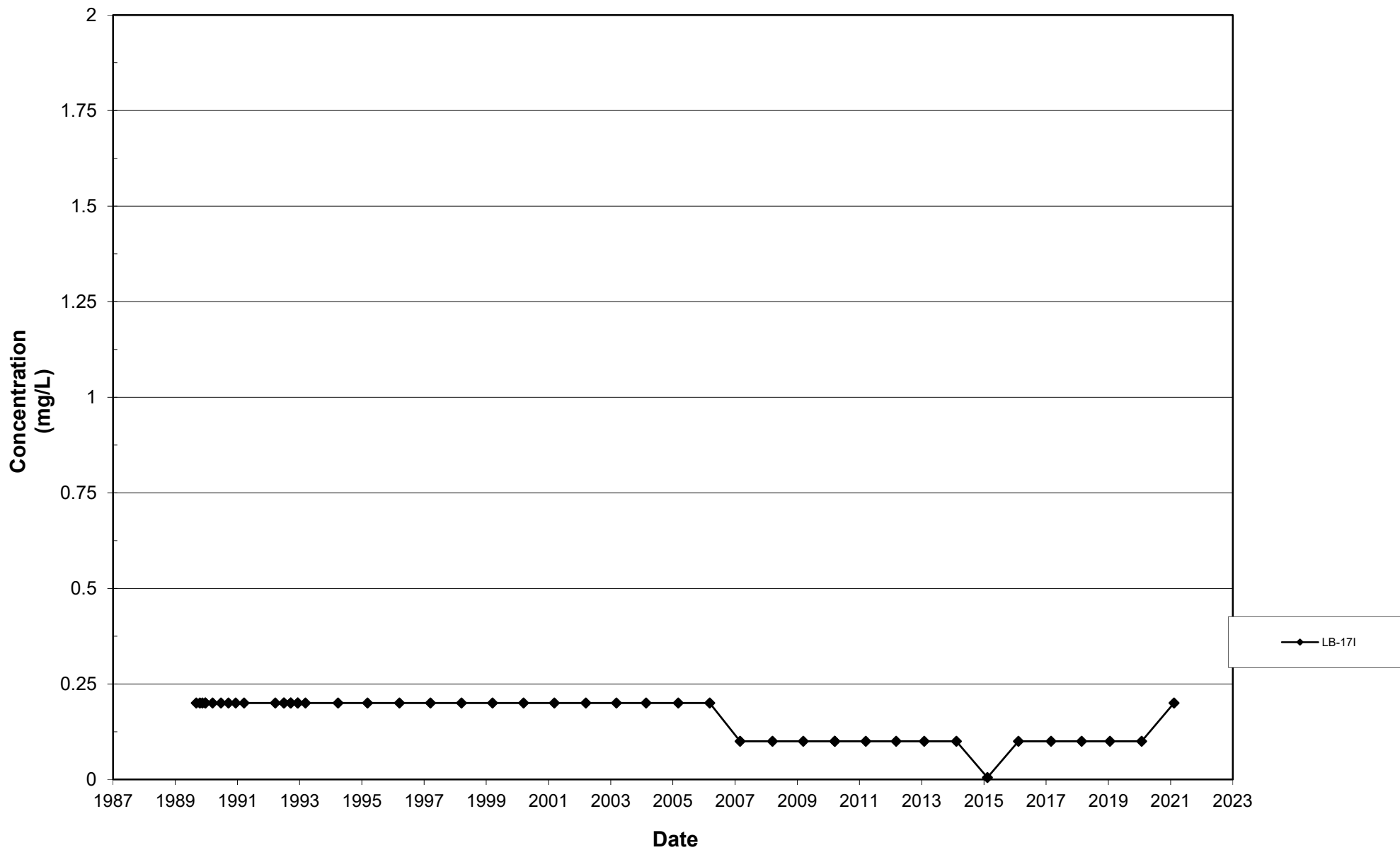
Leichner Landfill
Nitrate, LB-13I
1987 - 2021



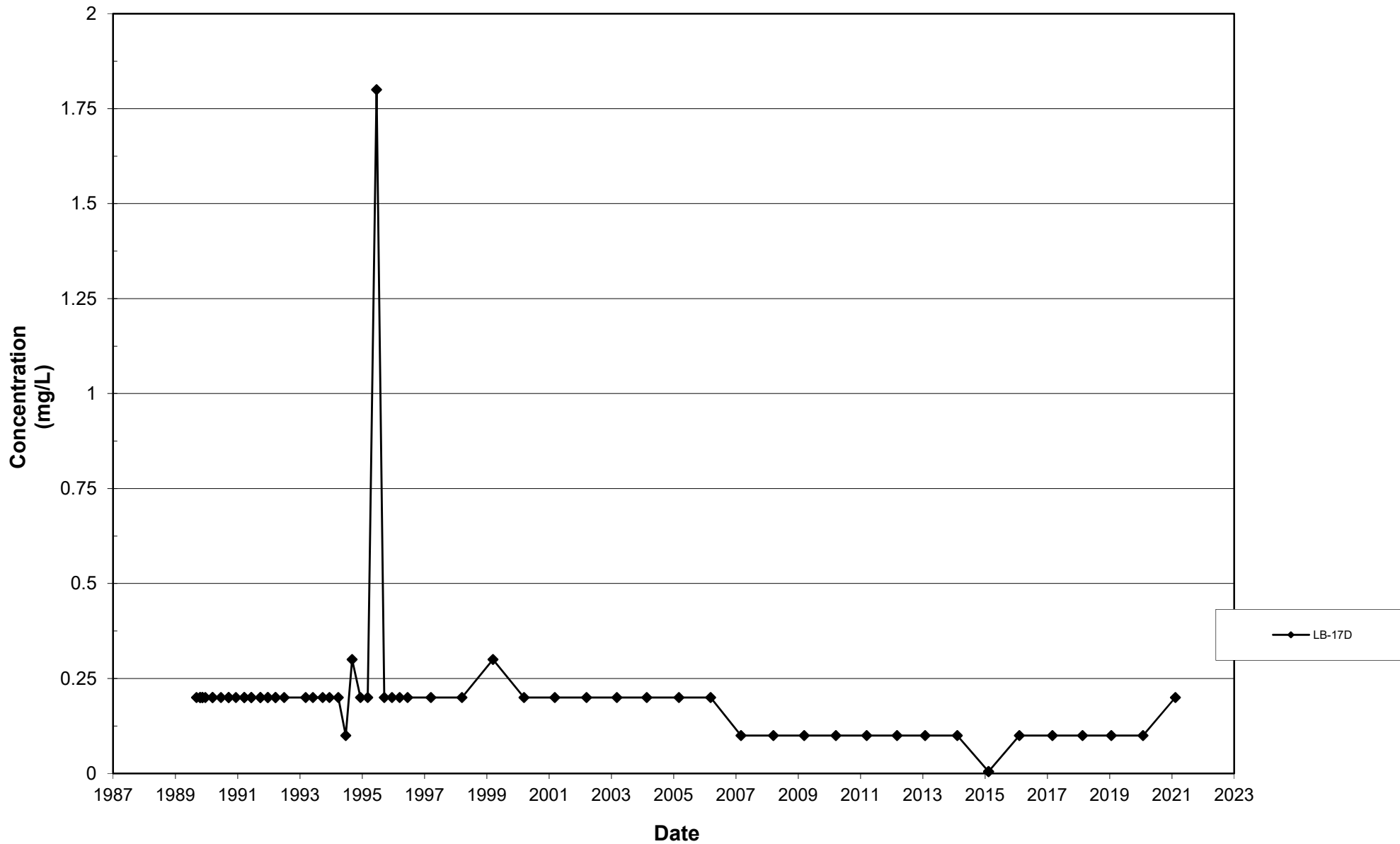
Leichner Landfill
Nitrate, LB-13D
1987 - 2021



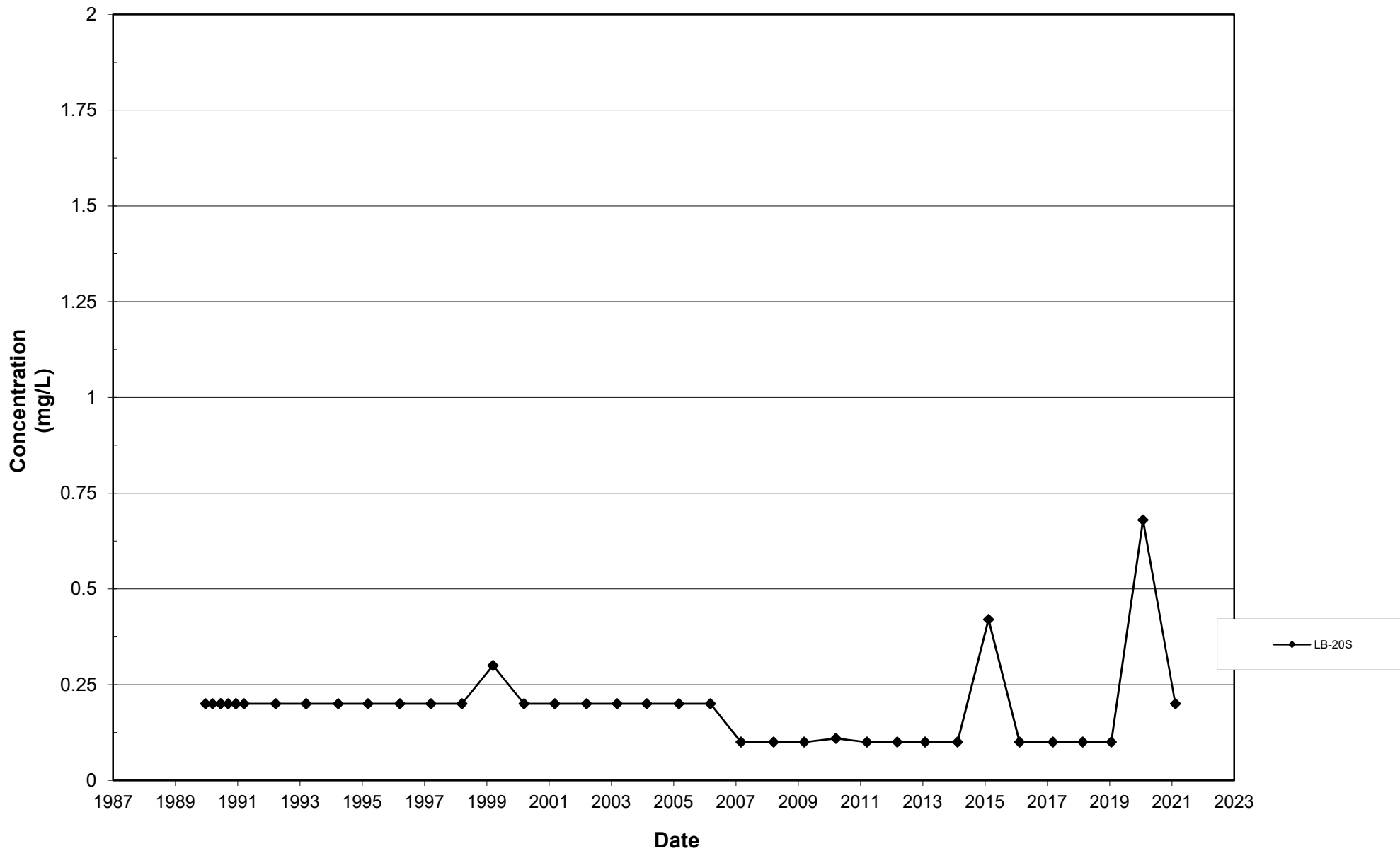
**Leichner Landfill
Nitrate, LB-17I
1987 - 2021**



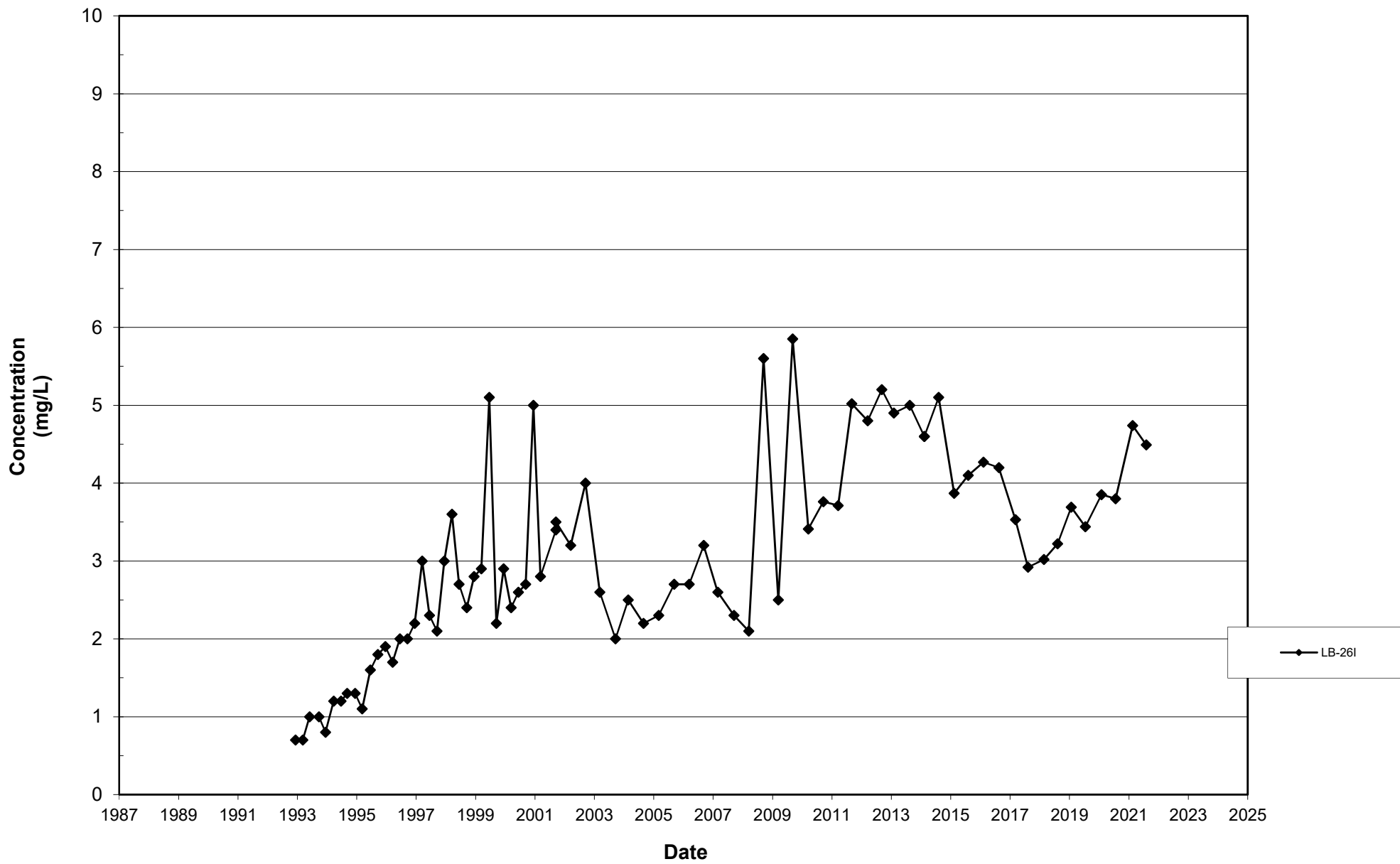
Leichner Landfill
Nitrate, LB-17D
1987 - 2021



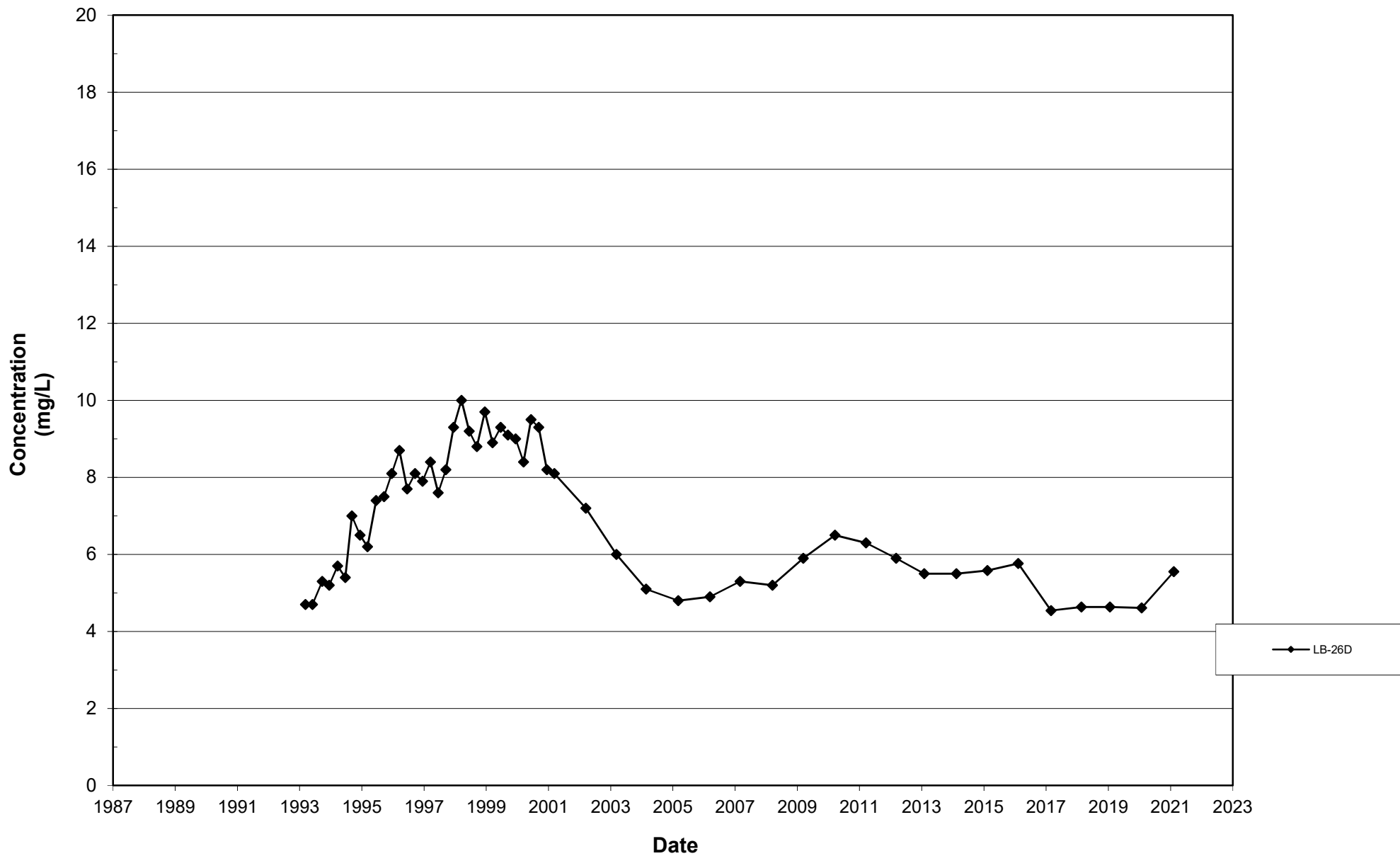
Leichner Landfill
Nitrate, LB-20S
1987 - 2021



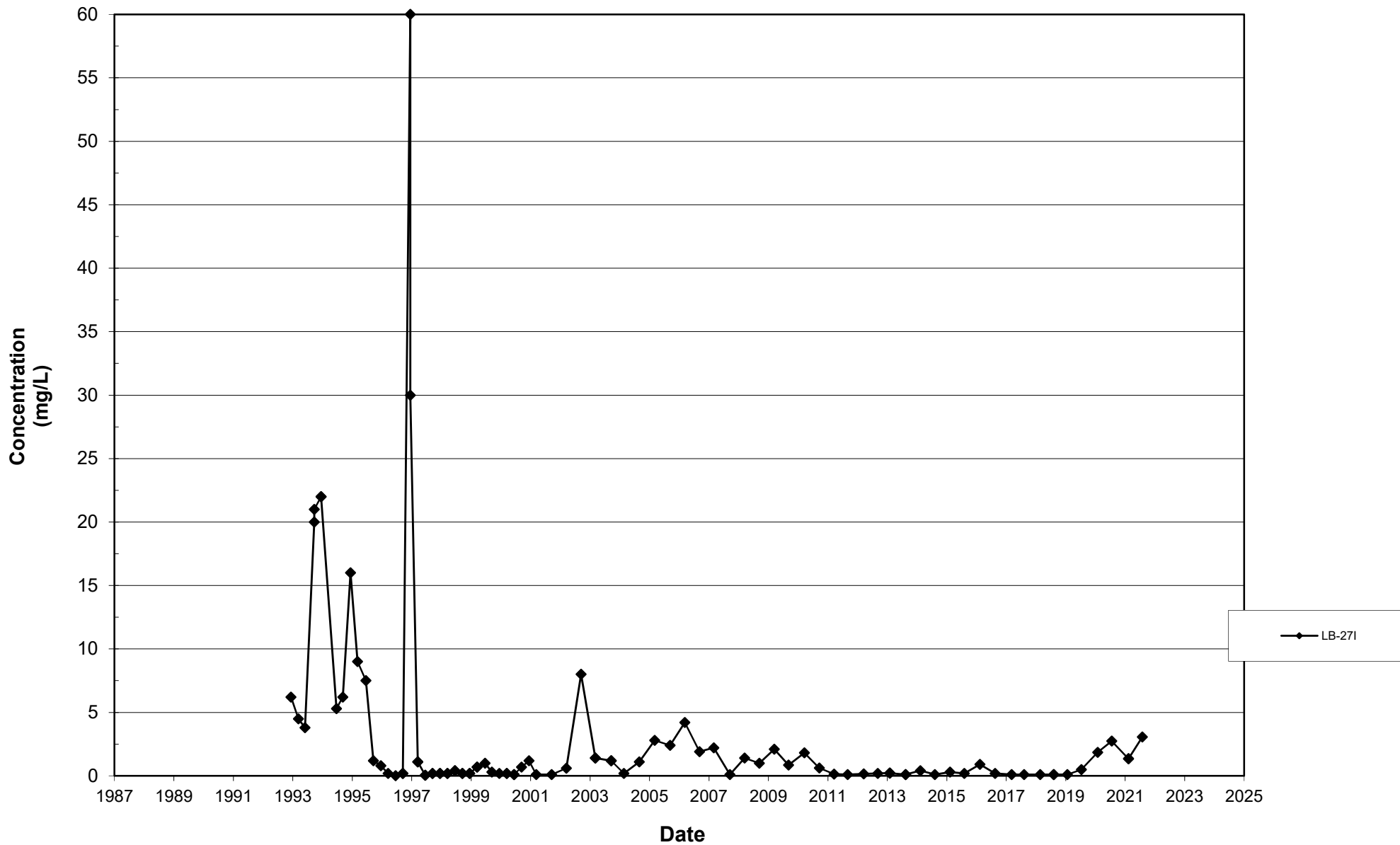
Leichner Landfill
Nitrate, LB-26I
1987 - 2021



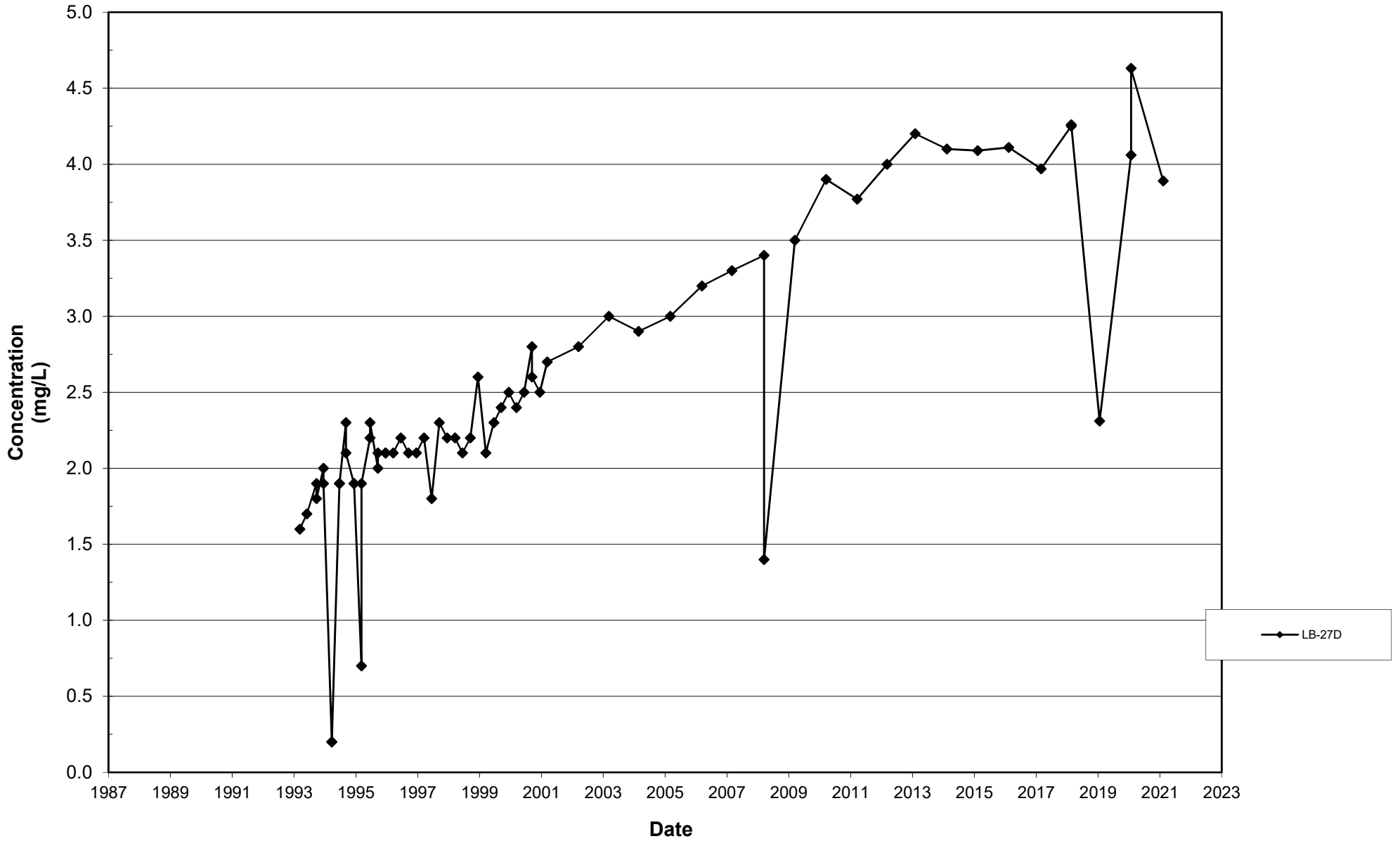
Leichner Landfill
Nitrate, LB-26D
1987 - 2021



Leichner Landfill
Nitrate, LB-27I
1987 - 2021

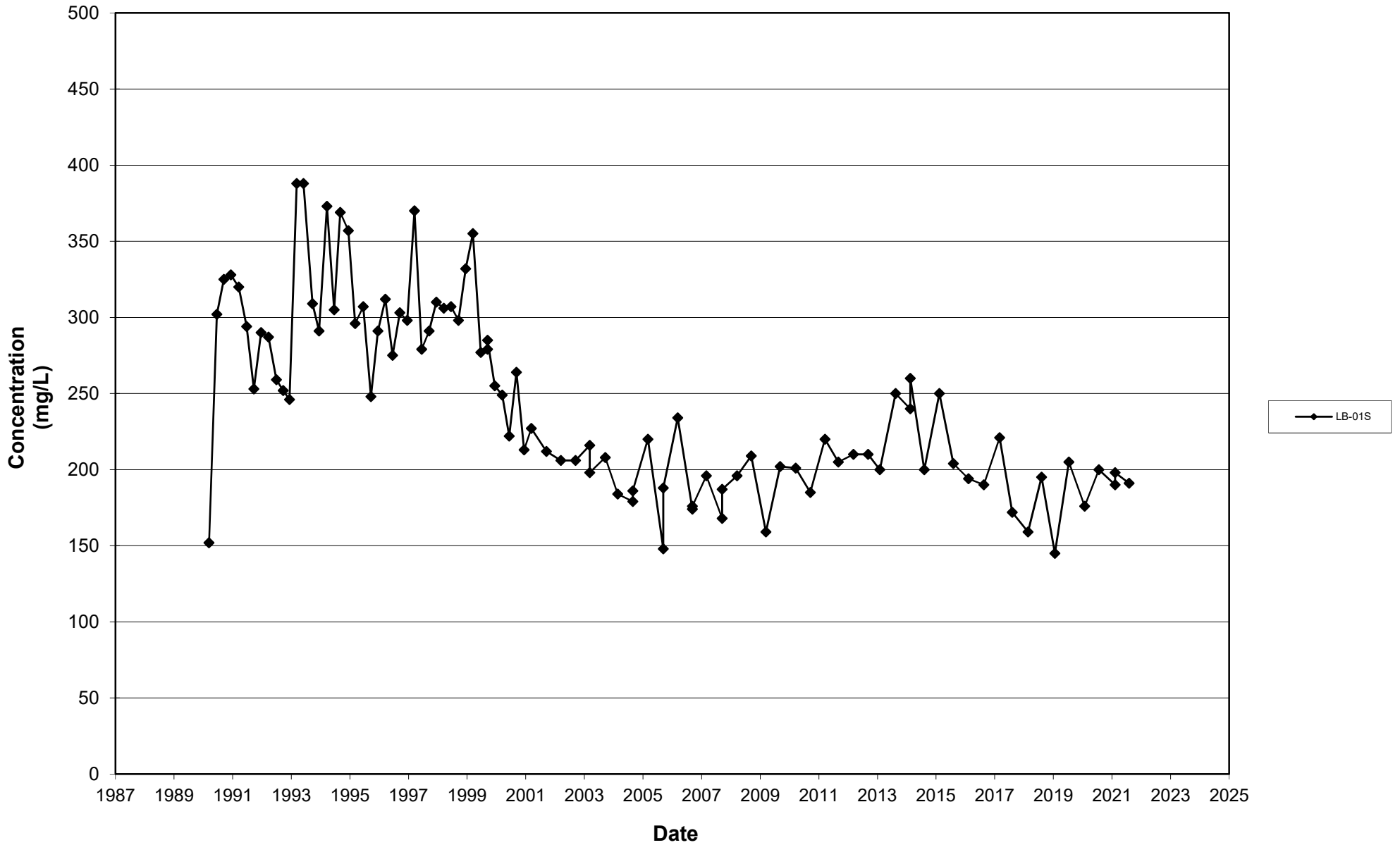


Leichner Landfill
Nitrate, LB-27D
1987 - 2021

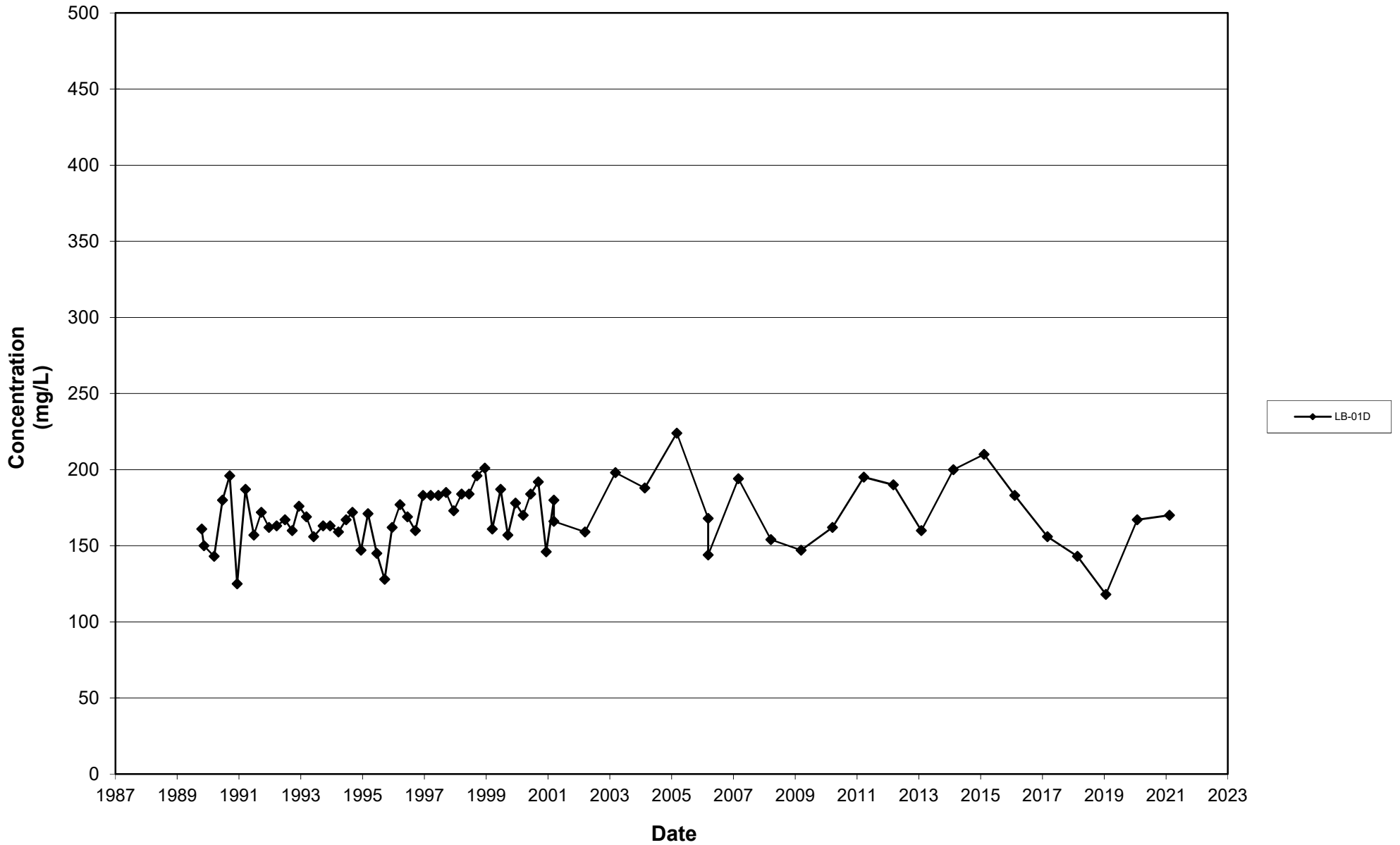


Total Dissolved Solids

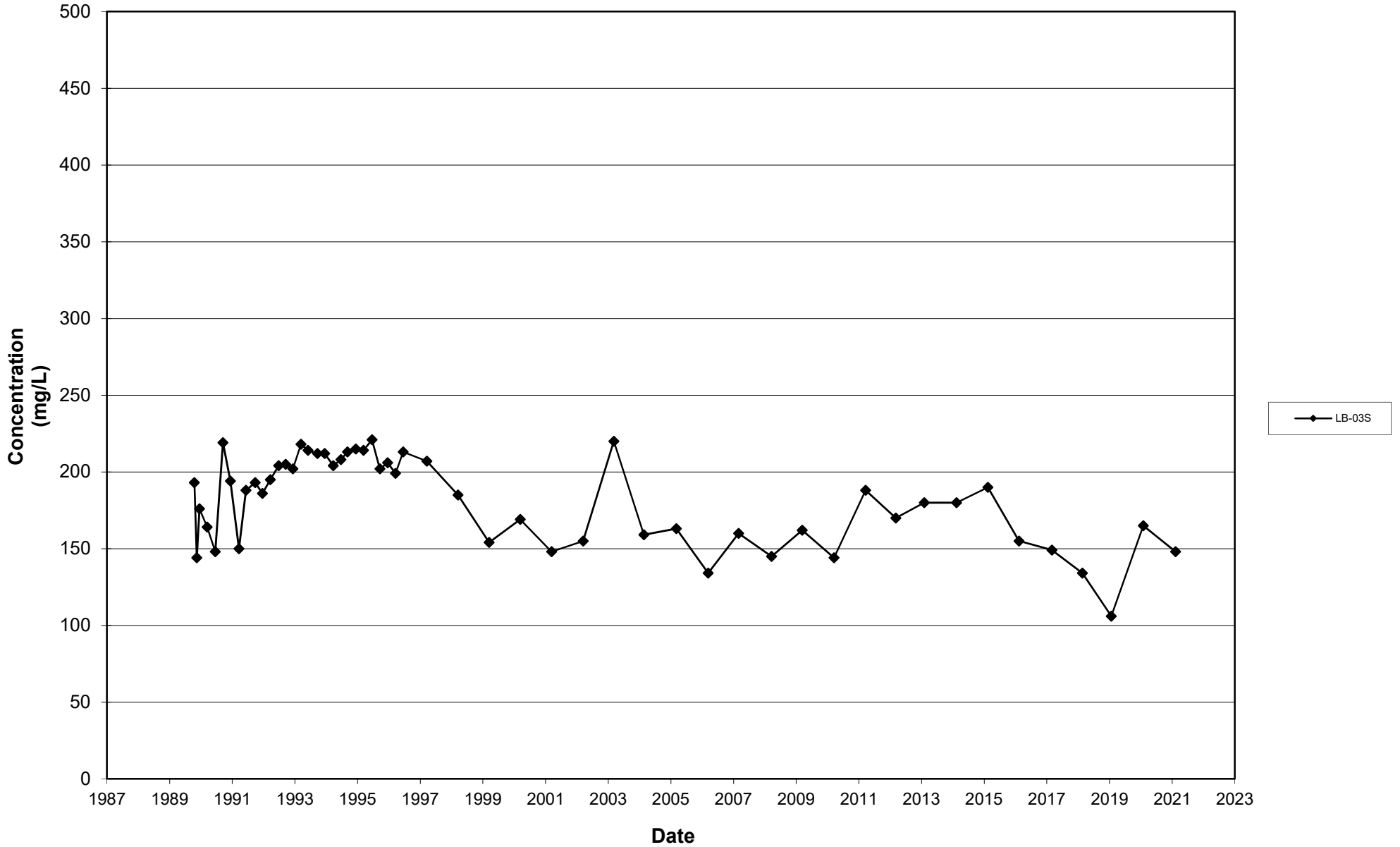
Leichner Landfill
Total Dissolved Solids, LB-01S
1987 - 2021



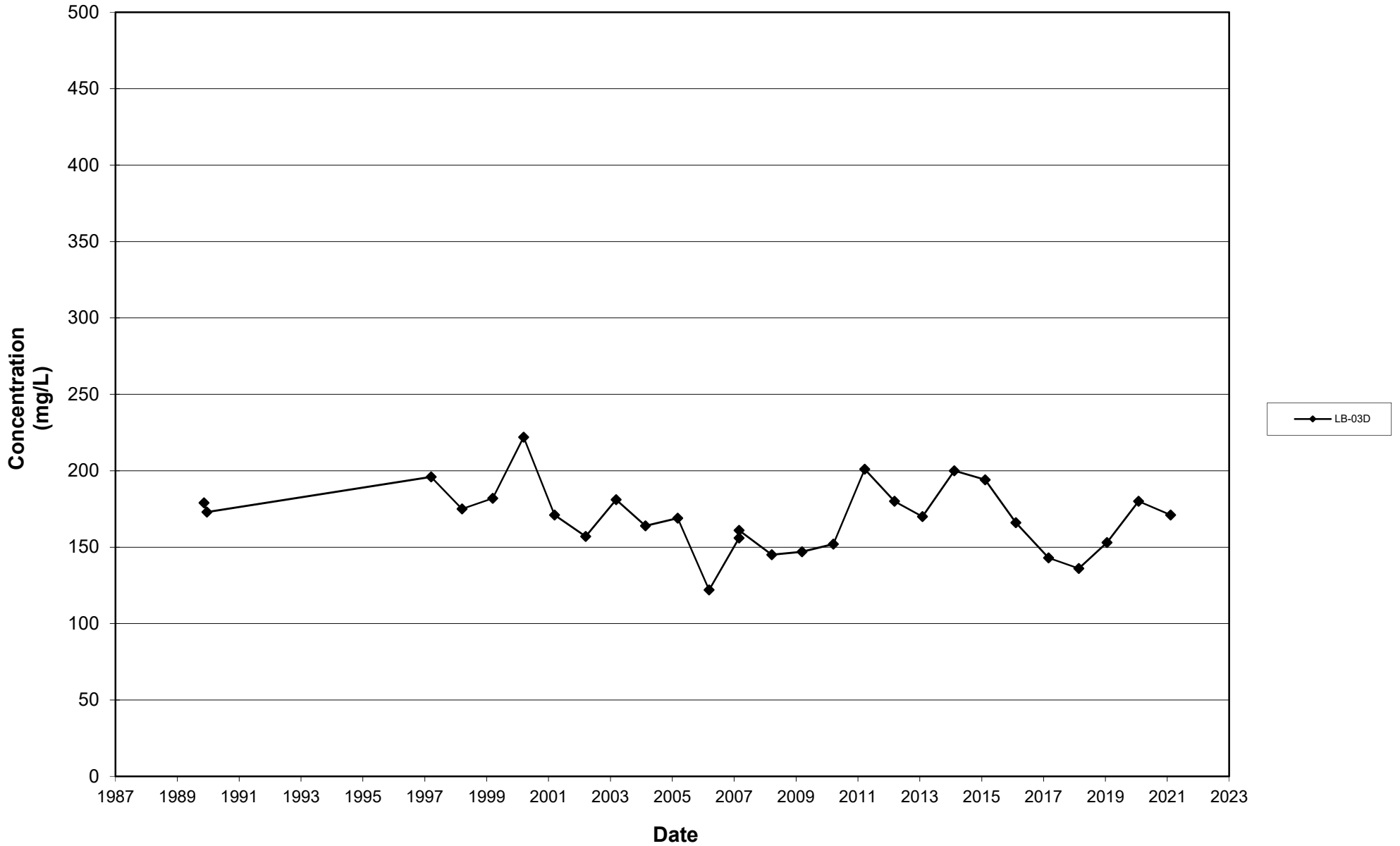
Leichner Landfill
Total Dissolved Solids, LB-01D
1987 - 2021



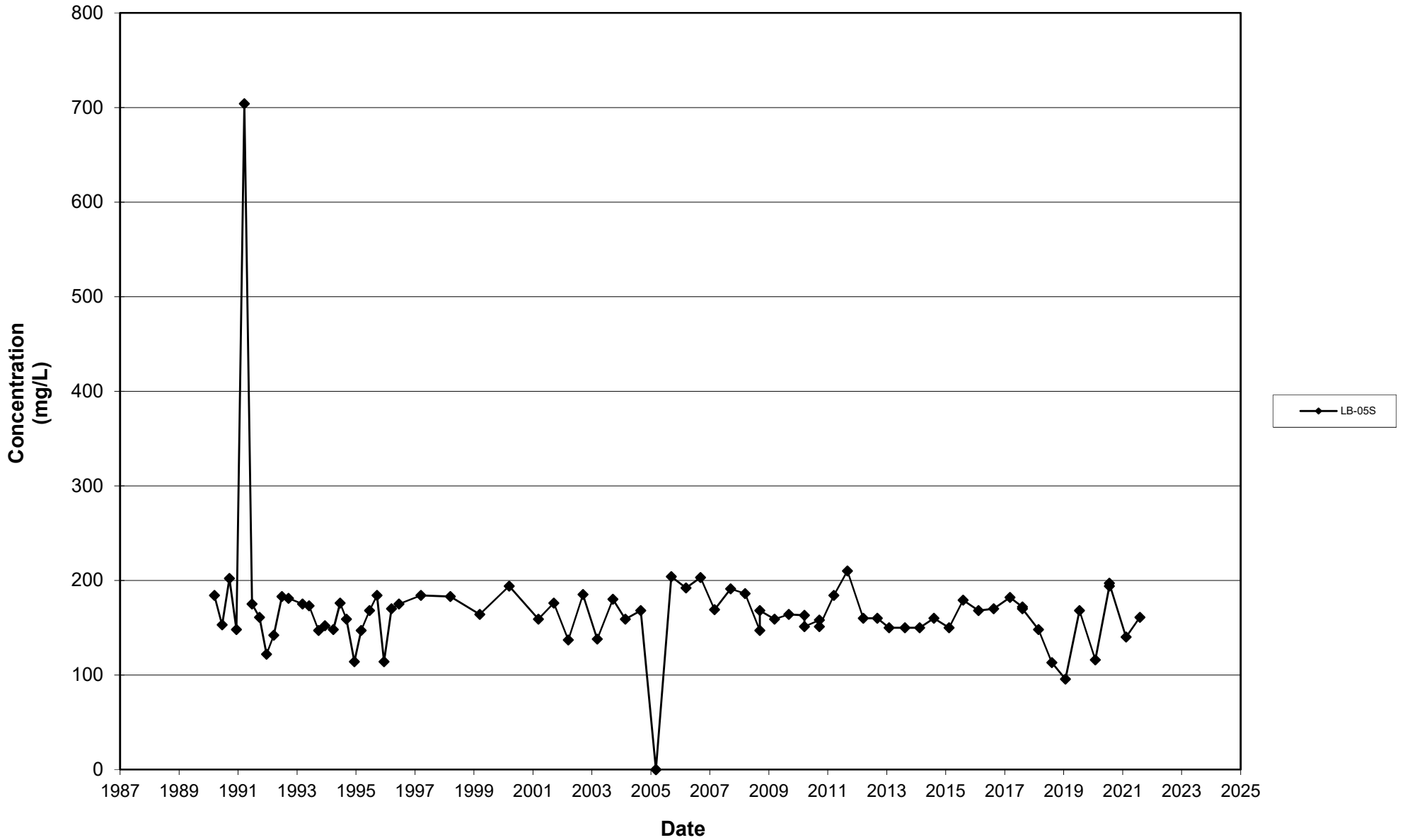
Leichner Landfill
Total Dissolved Solids, LB-03S
1987 - 2021



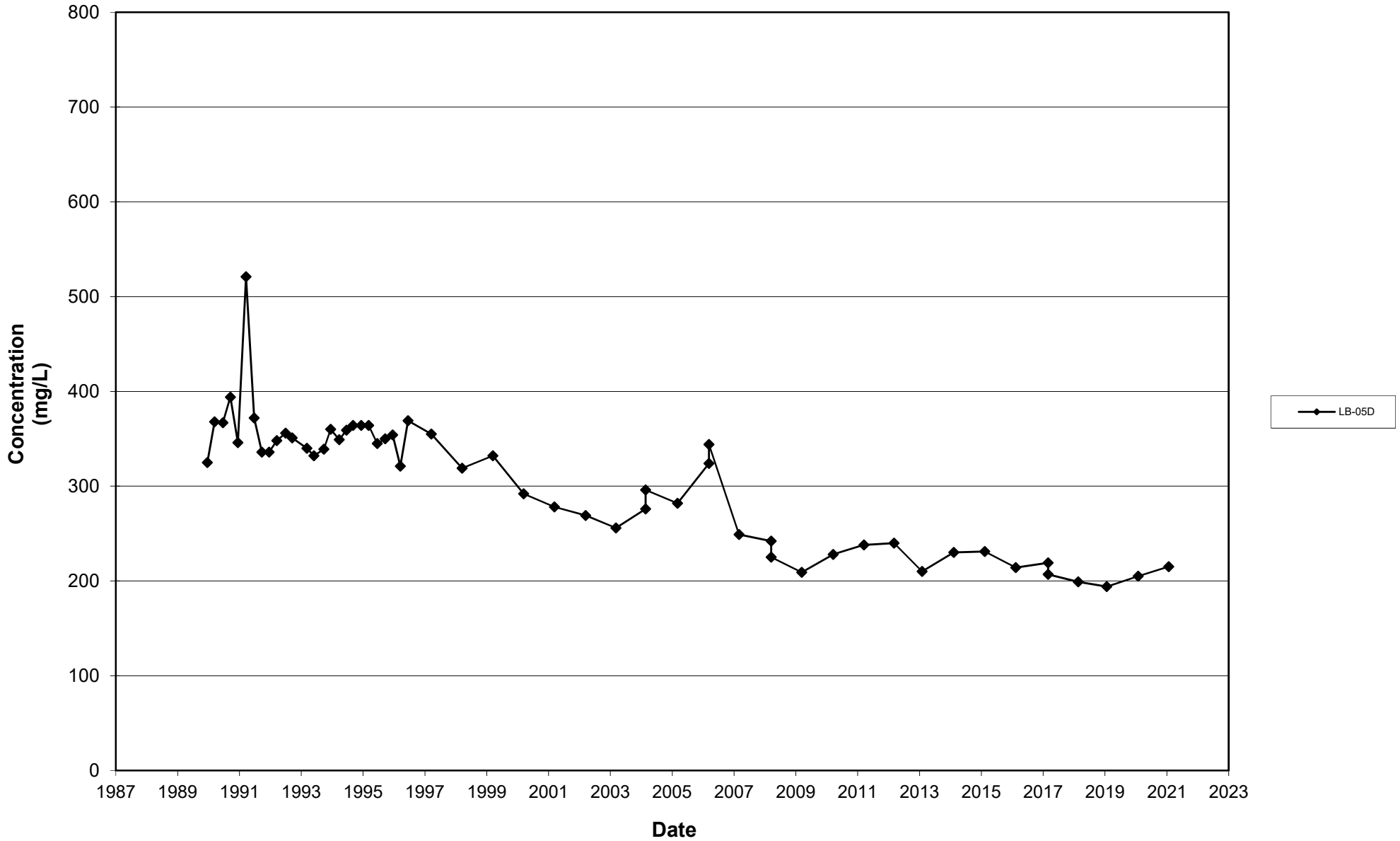
**Leichner Landfill
Total Dissolved Solids, LB-03D
1987 - 2021**



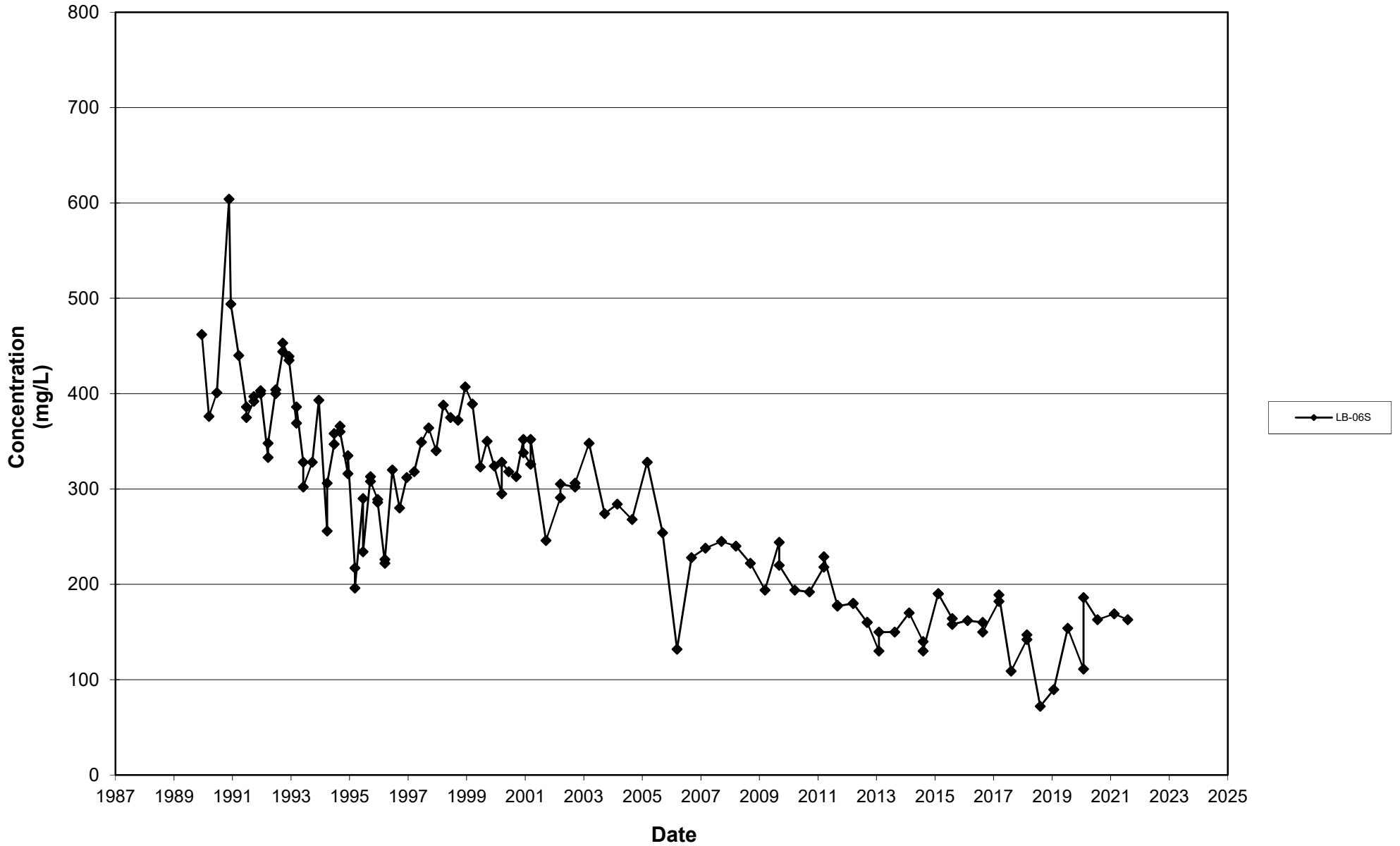
Leichner Landfill
Total Dissolved Solids, LB-05S
1987 - 2021



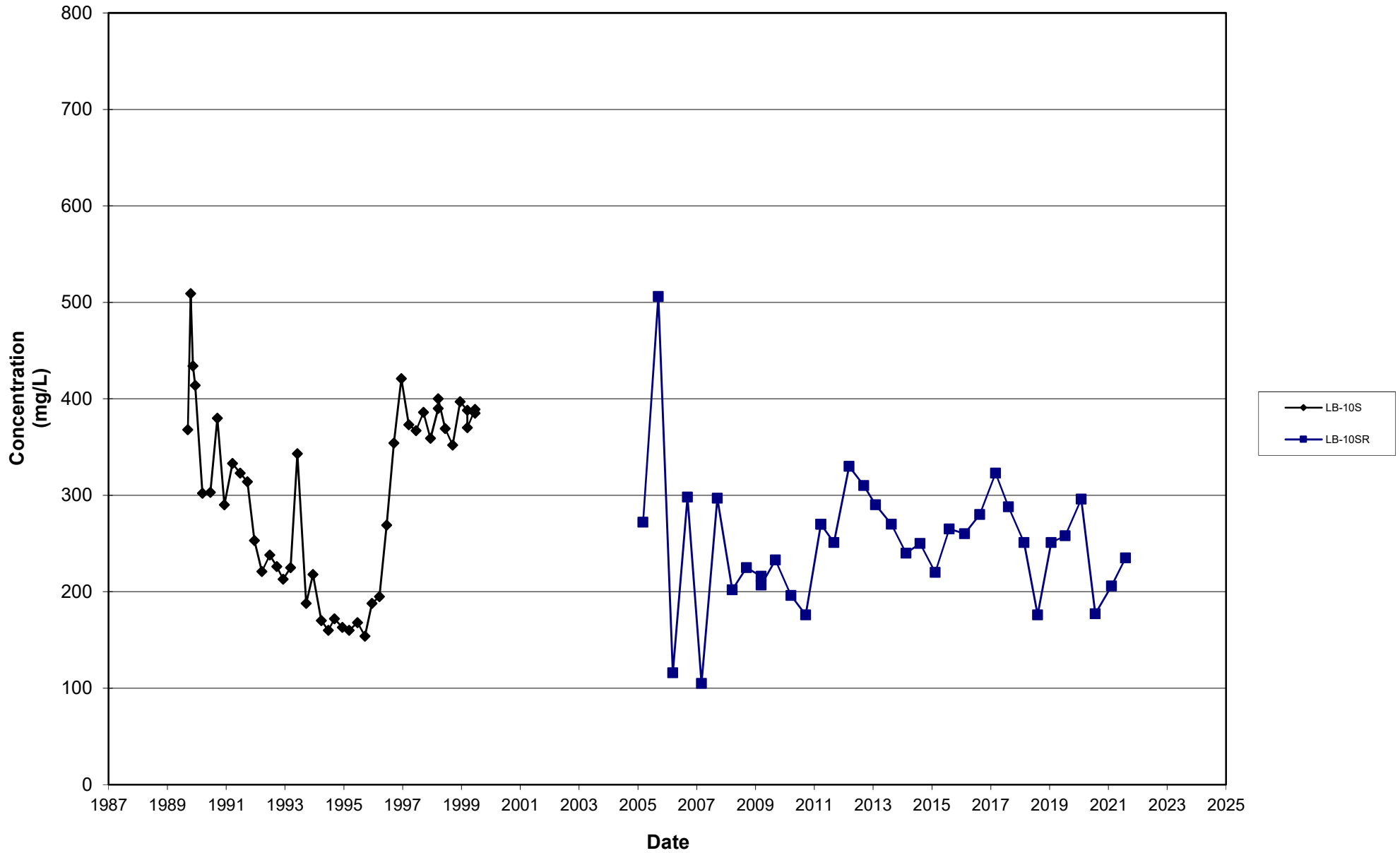
**Leichner Landfill
Total Dissolved Solids, LB-05D
1987 - 2021**



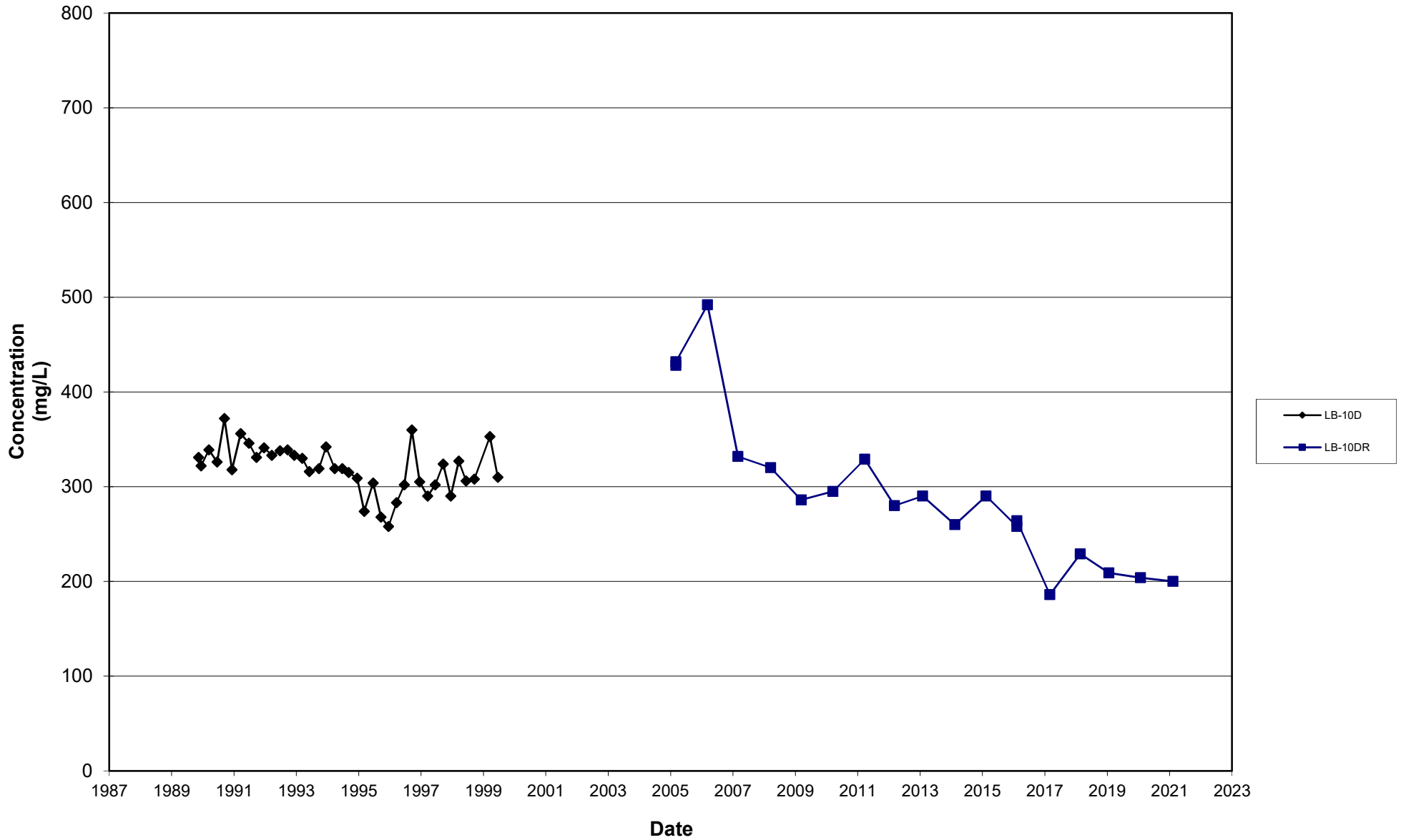
Leichner Landfill
Total Dissolved Solids, LB-06S
1987 - 2021



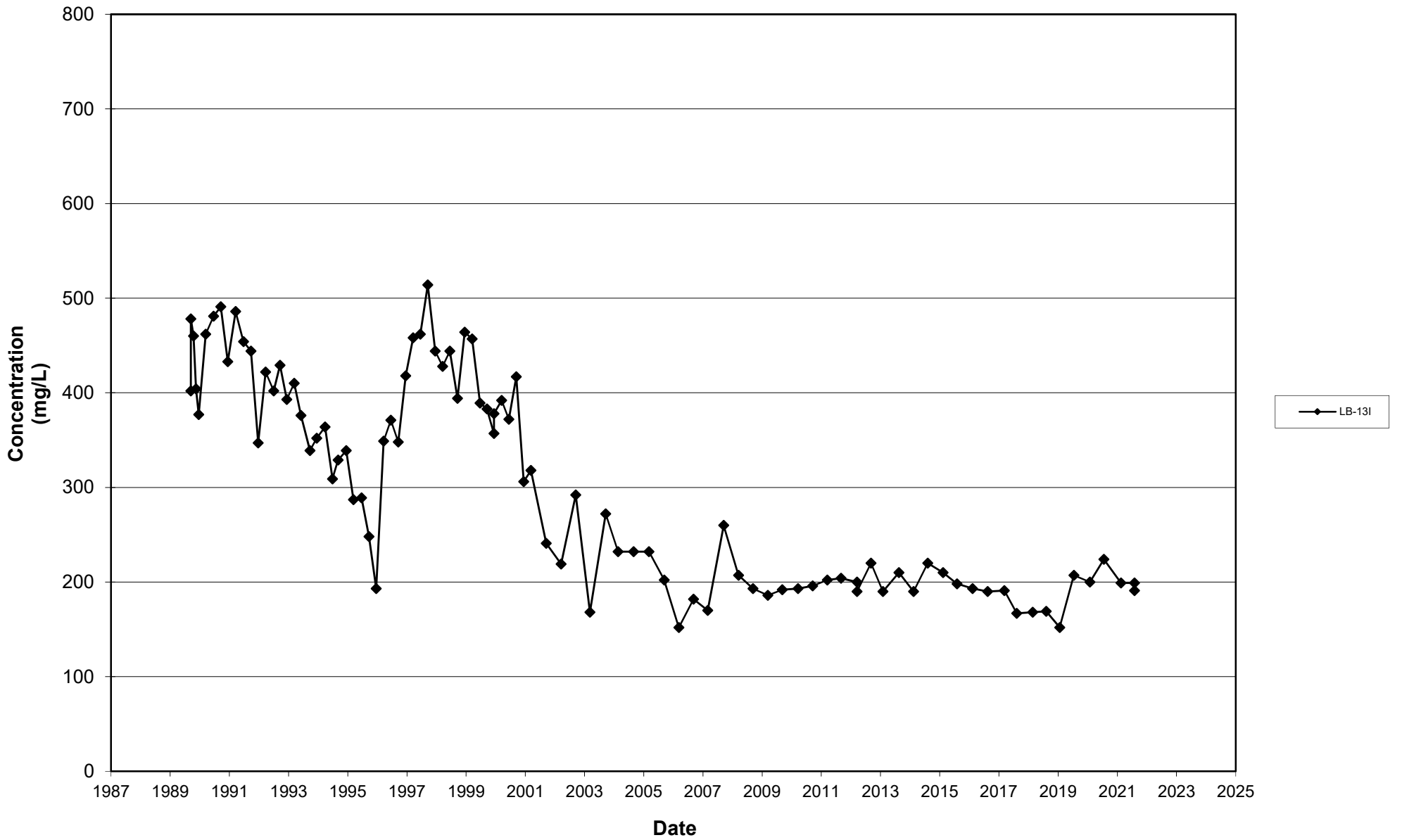
Leichner Landfill
Total Dissolved Solids, LB-10S and LB-10SR
1987 - 2021



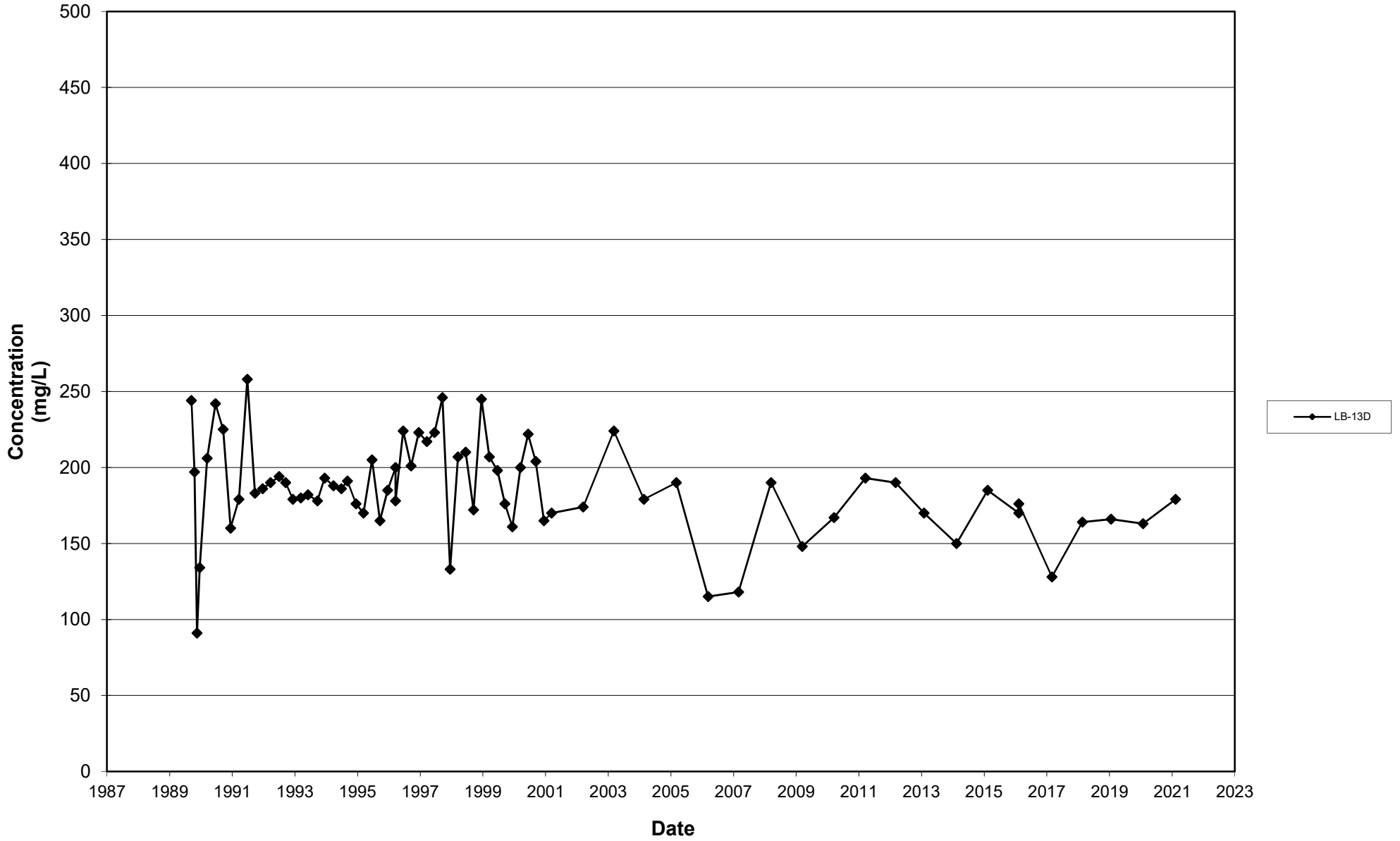
Leichner Landfill
Total Dissolved Solids, LB-10D and LB-10DR
1987 - 2021



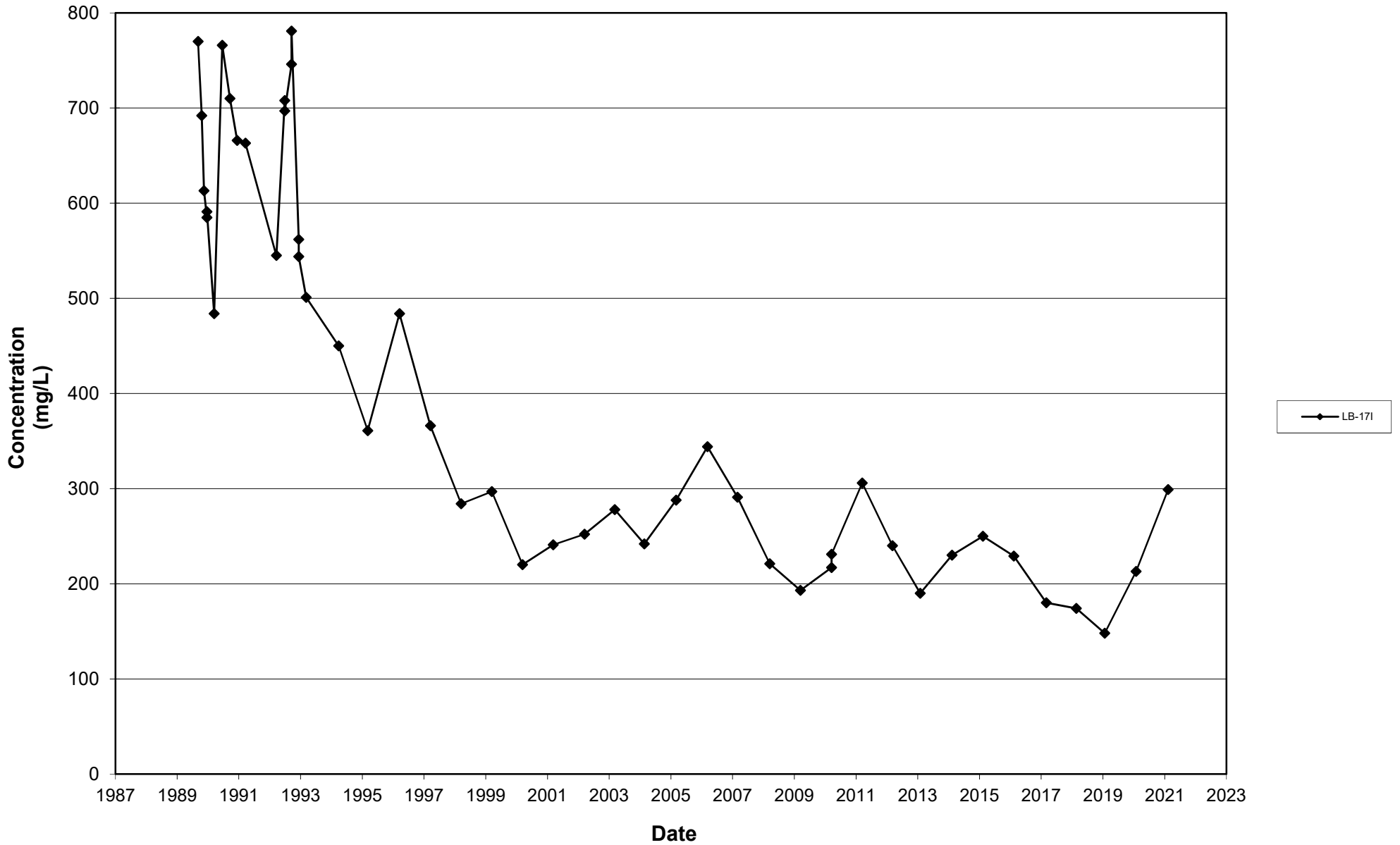
**Leichner Landfill
Total Dissolved Solids, LB-13I
1987 - 2021**



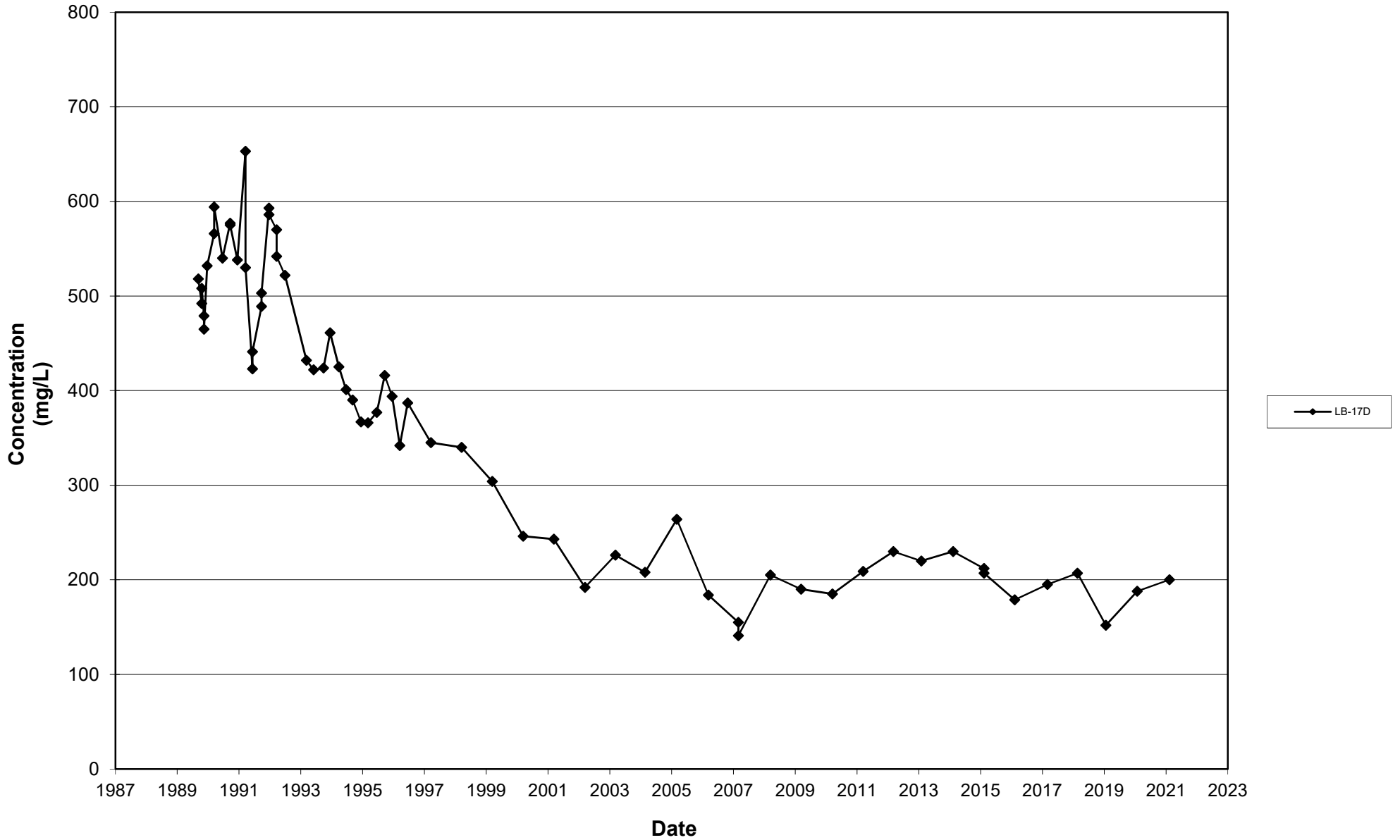
**Leichner Landfill
Total Dissolved Solids, LB-13D
1987 - 2021**



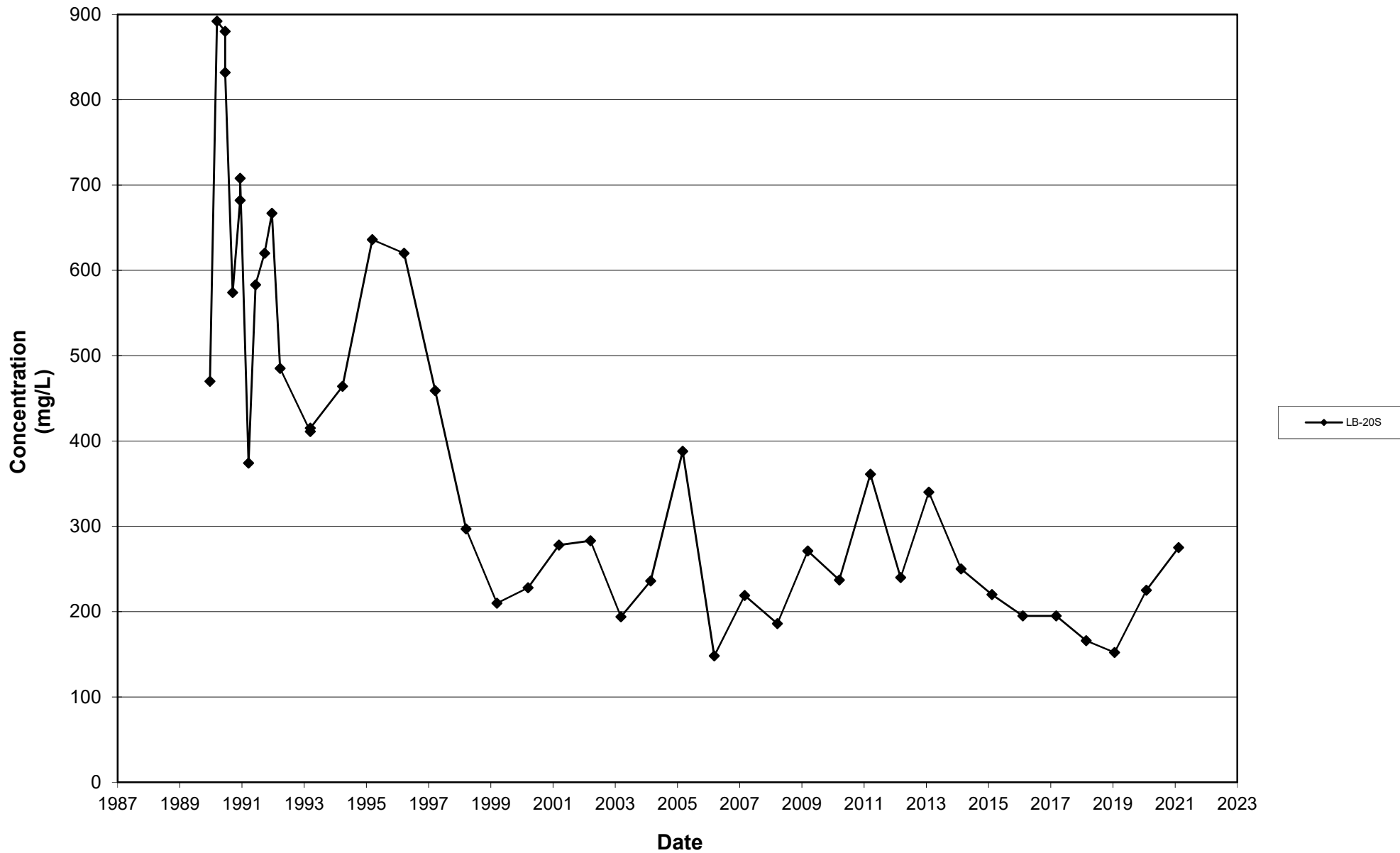
Leichner Landfill
Total Dissolved Solids, LB-17I
1987 - 2021



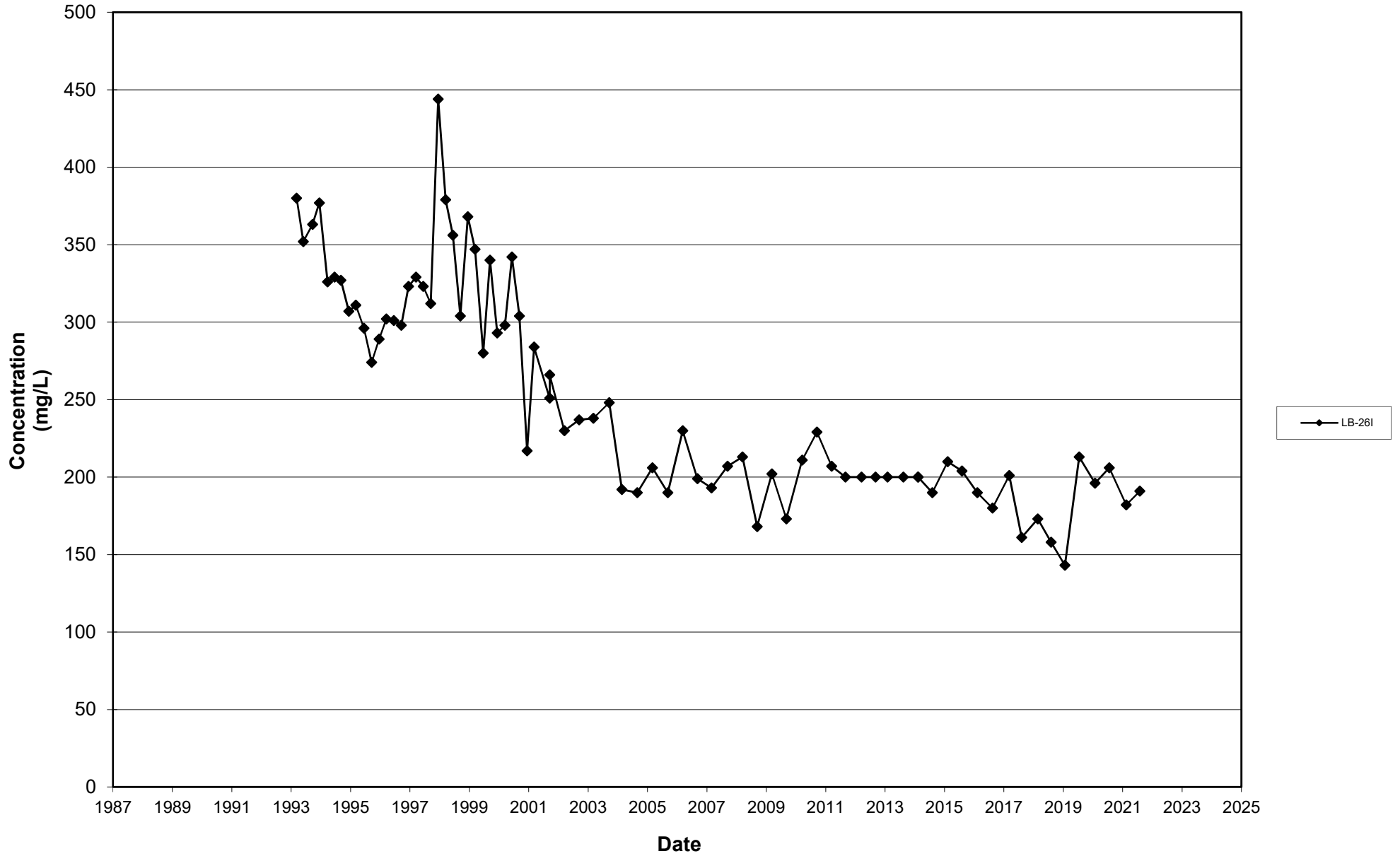
**Leichner Landfill
Total Dissolved Solids, LB-17D
1987 - 2021**



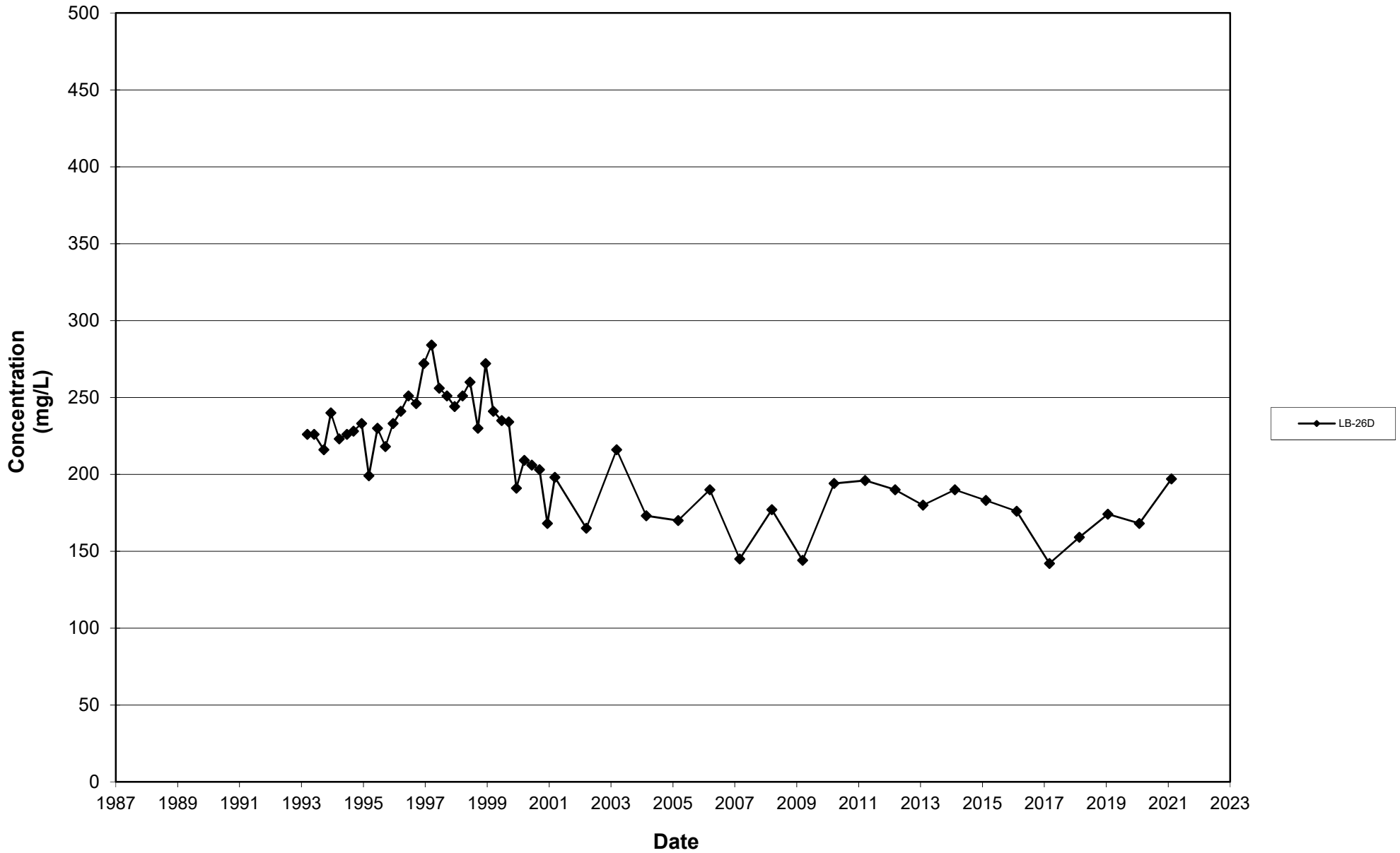
Leichner Landfill
Total Dissolved Solids, LB-20S
1987 - 2021



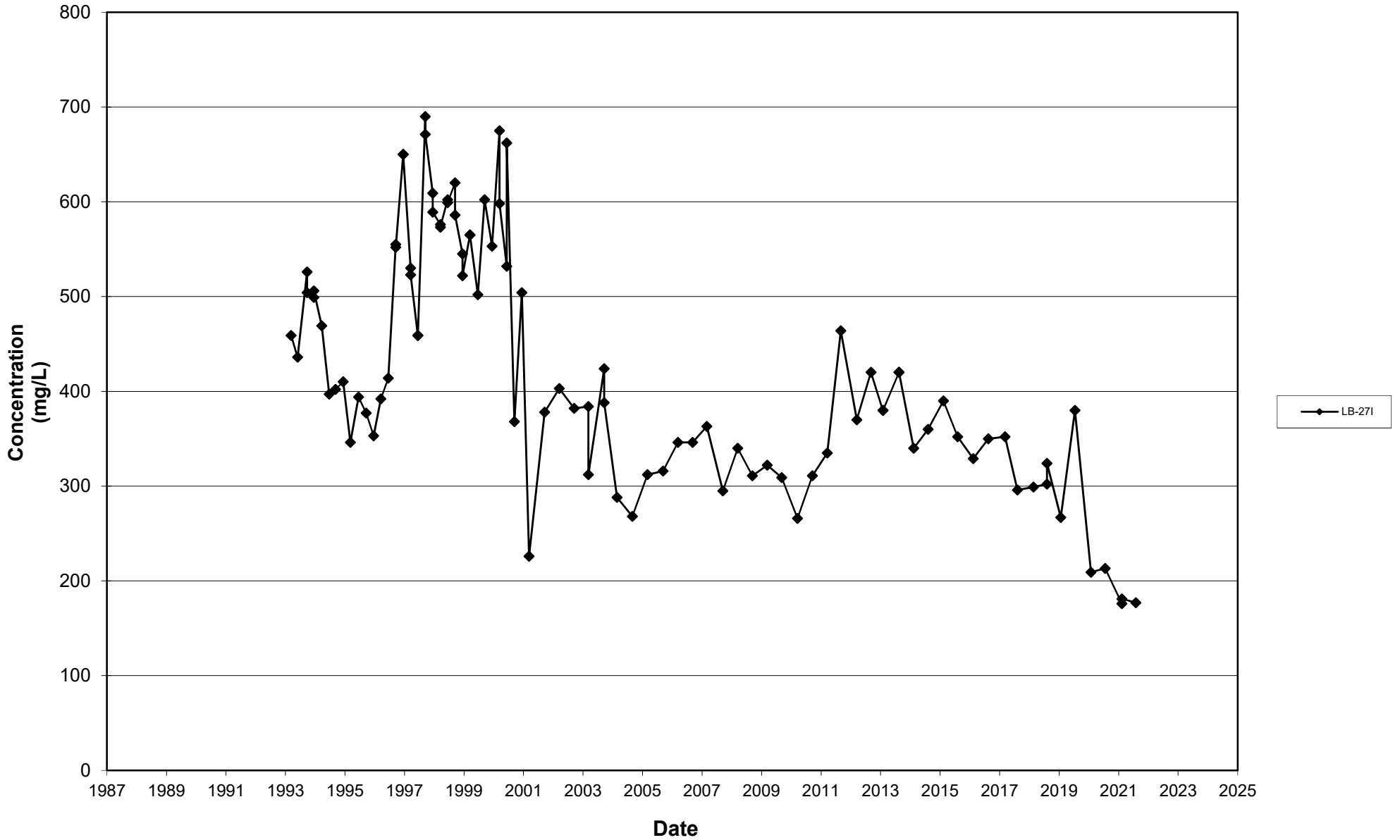
**Leichner Landfill
Total Dissolved Solids, LB-26I
1987 - 2021**



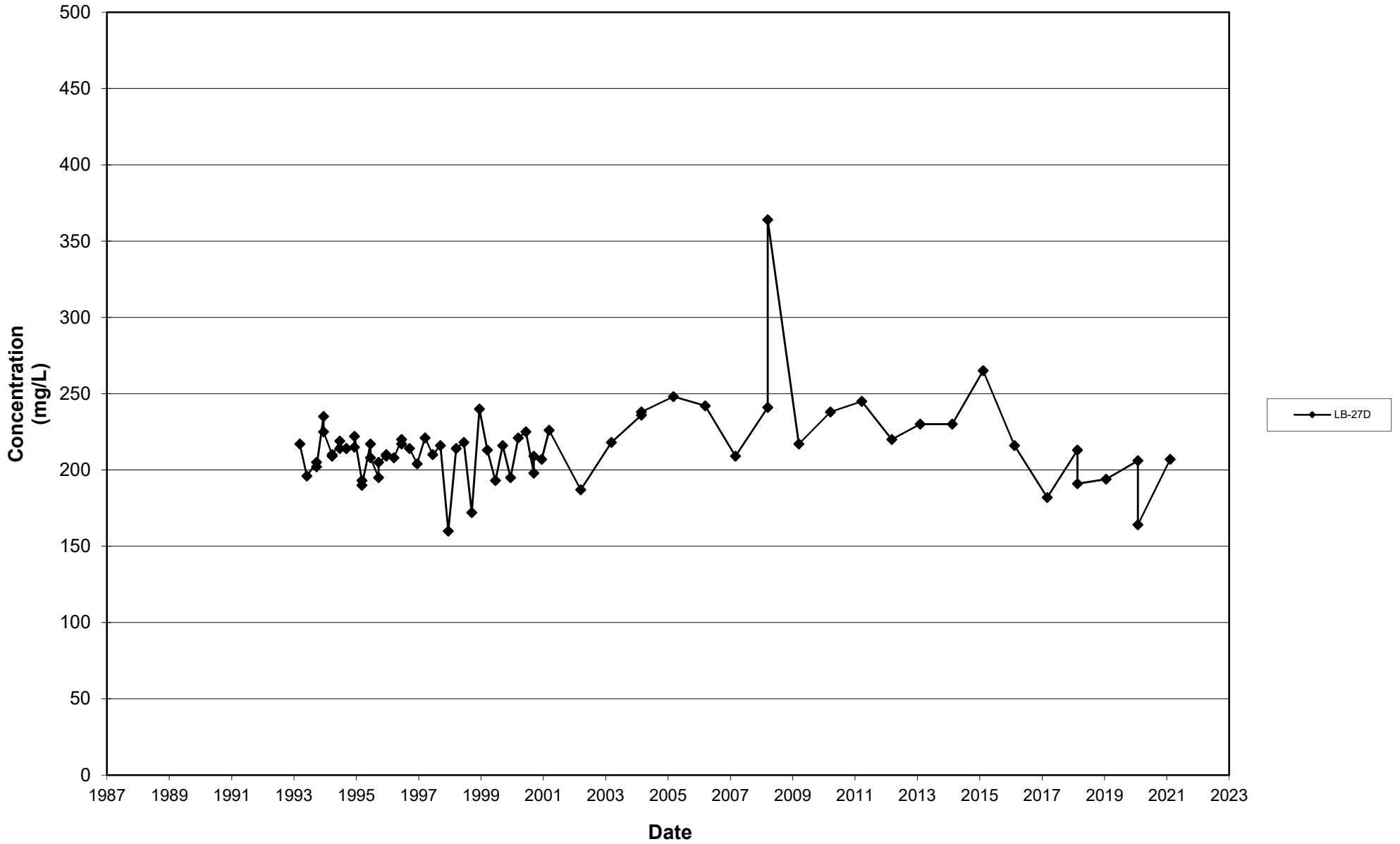
Leichner Landfill
Total Dissolved Solids, LB-26D
1987 - 2021



Leichner Landfill
Total Dissolved Solids, LB-27I
1987 - 2021



Leichner Landfill
Total Dissolved Solids, LB-27D
1987 - 2021



APPENDIX G

Summary of 2021 Groundwater Statistical Calculations

Table G-1
Groundwater Statistics - 2017 through 2021 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-1S					LB-1D				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Non	7.24	M(12.2)	5	5	Lognormal	6.42	6.65
Nitrate (mg/L)	10	10	Non	4.81	M(8.49)	5	5	Lognormal	5.83	5.97
TDS (mg/L)	10	10	Lognormal	185.40	200.32	5	5	Lognormal	150.80	171.00
Metals (mg/L)										
Iron (dissolved)	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	10	0	NC	NC	All ND	5	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND

Parameter	LB-3S					LB-3D				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	5	5	Non	4.26	M(7.00)	5	5	Non	6.01	M(10.1)
Nitrate (mg/L)	5	5	Non	3.56	M(6.82)	5	5	Non	5.55	M(9.14)
TDS (mg/L)	5	5	Normal	140.40	161.51	5	5	Lognormal	156.60	177.12
Metals (mg/L)										
Iron (dissolved)	5	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	5	0	NC	NC	All ND	5	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	5	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	5	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	5	0	NC	NC	All ND	5	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2017 through 2021 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-5S					LB-5D				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Lognormal	4.16	5.03	5	5	Non	7.76	M(8.00)
Nitrate (mg/L)	10	10	Normal	4.82	5.71	5	5	Non	0.83	M(0.96)
TDS (mg/L)	10	10	Lognormal	148.95	173.38	5	5	Lognormal	206.40	217.00
Metals (mg/L)										
Iron (dissolved)	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	10	0	NC	NC	All ND	5	5	Lognormal	0.002	0.0024
VOCs (µg/L)										
1,4-Dichlorobenzene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND

Parameter	LB-6S					LB-20S				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	11	11	Lognormal	4.74	6.18	5	5	Lognormal	5.74	17.04
Nitrate (mg/L)	10	10	Lognormal	1.98	3.27	5	1	NC	NC	NC
TDS (mg/L)	10	10	Normal	142.95	165.83	5	5	Lognormal	202.60	266.80
Metals (mg/L)										
Iron (dissolved)	10	0	NC	NC	All ND	5	3	Lognormal	0.18	0.26
Manganese (dissolved)	10	0	NC	NC	All ND	5	5	Non	0.89	M(1.56)
VOCs (µg/L)										
1,4-Dichlorobenzene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2017 through 2021 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-10SR					LB-10DR				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Lognormal	11.09	26.07	5	5	Lognormal	9.60	11.65
Nitrate (mg/L)	10	10	Lognormal	7.37	M(23.4)	5	5	Non	3.13	M(3.79)
TDS (mg/L)	10	10	Lognormal	246.1	281.15	5	5	Lognormal	205.60	221.78
Metals (mg/L)										
Iron (dissolved)	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	10	5	Lognormal	0.003	M(0.0041)	5	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND

Parameter	LB-13I					LB-13D				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Lognormal	9.28	10.54	5	5	Non	6.01	M(10.8)
Nitrate (mg/L)	10	10	Non	3.54	M(5.13)	5	5	Non	4.69	M(4.94)
TDS (mg/L)	10	10	Lognormal	187.60	202.11	5	5	Non	160.00	M(179.00)
Metals (mg/L)										
Iron (dissolved)	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	10	8	Lognormal	0.003	0.0055	5	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2017 through 2021 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-17I					LB-17D				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	5	5	Lognormal	11.05	17.48	5	5	Lognormal	10.62	15.68
Nitrate (mg/L)	5	0	NC	NC	All ND	5	0	NC	NC	All ND
TDS (mg/L)	5	5	Lognormal	202.80	278.61	5	5	Non	188.40	M(207.0)
Metals (mg/L)										
Iron (dissolved)	5	5	Non	9.28	M(14.5)	5	5	Lognormal	0.116	0.142
Manganese (dissolved)	5	5	Non	1.64	M(2.86)	5	5	Lognormal	4.16	4.25
VOCs (µg/L)										
1,4-Dichlorobenzene	5	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	5	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	5	0	NC	NC	All ND	5	0	NC	NC	All ND

Parameter	LB-26I					LB-26D				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Lognormal	8.24	8.93	5	5	Non	5.36	M(6.21)
Nitrate (mg/L)	10	10	Lognormal	3.67	4.05	5	5	Non	4.79	M(5.55)
TDS (mg/L)	10	10	Lognormal	182.40	197.68	5	5	Lognormal	168.00	190.5
Metals (mg/L)										
Iron (dissolved)	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	10	8	Non	0.002	M(0.0041)	5	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2017 through 2021 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-271					LB-27D				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detected	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Normal	19.13	25.05	5	5	Lognormal	7.58	7.87
Nitrate (mg/L)	10	5	Normal	1.90	2.90	5	5	Non	3.70	M(4.25)
TDS (mg/L)	10	10	Lognormal	267.10	321.00	5	5	Lognormal	200.40	213.34
Metals (mg/L)										
Iron (dissolved)	10	3	NC	NC	NC	5	1	NC	NC	NC
Manganese (dissolved)	10	10	Normal	0.219	0.283	5	2	NC	NC	NC
VOCs (µg/L)										
1,4-Dichlorobenzene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	10	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	10	0	NC	NC	All ND	5	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 MTCASat,
and (c) UCL calculated using MTCASat was higher than the maximum value of the data set.

^a Distribution was determined using MTCASat 97 program and Statistical Guidance for Ecology Site Managers.

^b UCL 95 was calculated using MTCASat 97 program and Statistical Guidance for Ecology Site Managers.