

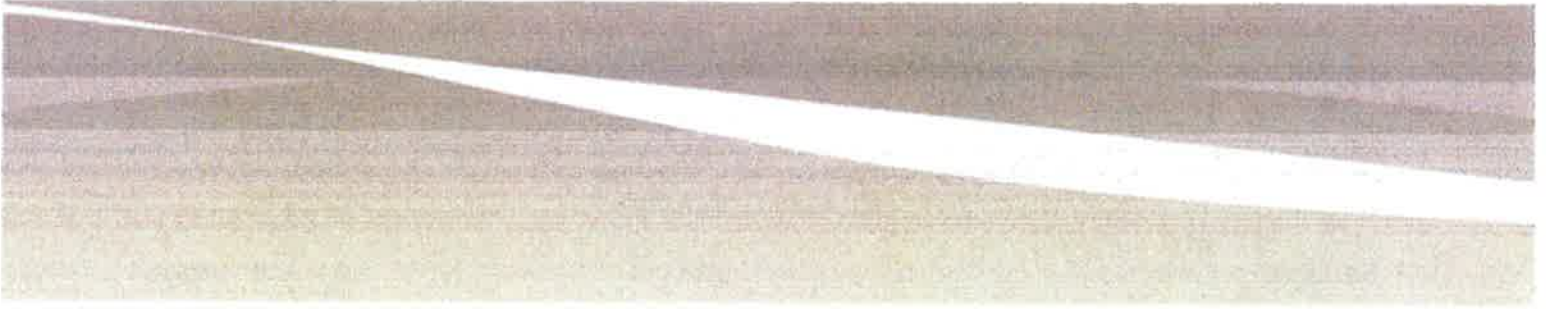
2023 Annual Report
Closed Leichner Landfill
Vancouver, Washington
Consent Decree 96-2-03081-7
Facility ID No. 1017

Clark County Public Health
1601 E. Fourth Plains Blvd., Bldg. 17
P.O. Box 9825
Vancouver, WA 98666-8825
(360) 397-2323

SCS ENGINEERS

04224030.14 | March 1, 2024

15940 SW 72nd Avenue
Portland, OR 97224



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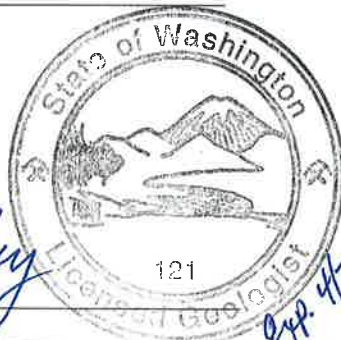
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1601 E. Fourth Plains Blvd., Bldg. 17
P.O. Box 9825
Vancouver, WA 98666-8825
(360) 397-2323

Brandon Rapozo, GIT
Staff Professional
SCS ENGINEERS

SCS ENGINEERS

04224030.14 | March 1, 2024

Barbara Lary, L.G., 121
Senior Project Geologist
SCS ENGINEERS



BARBARA E. LARY

Louis Caruso, L.G., L.H.G., 1329
Project Director
SCS ENGINEERS

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- Appendix E Quality Assurance/Quality Control Reviews of 2023 Laboratory Analytical Data (provided on attached compact disc only)
- Appendix F Groundwater Time-Concentration Graphs
- Appendix G Summary of 2023 Groundwater Statistical Calculations

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 2023 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 2023. SCS Engineers (SCS) performed the monitoring, maintenance, and repair activities and prepared this report on behalf of Clark County Public Health (CCPH) and the Leichner Landfill Oversight Committee (LLOC), whose members include the CCPH 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 CCPH in July 2013 (SCS, 2013).

Although not directly related to environmental monitoring, it should be mentioned that the Clark County formally notified Ecology and CCPH in November 2019 of the purchase-and-sale agreement (PSA) with the City of Vancouver (City) for the former Koski property. The sale was finalized in December 2020. The City's property is part of the overall closed Leichner Landfill property (Figure 1-1). The City intends to develop this 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 March 2023: 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 wells during the semiannual monitoring event performed in July 2023: LB-1S, LB-5S, LB-6S, LB-10SR, LB-13I, LB-26I, and LB-27I.

It should be noted that two monitoring wells (LB-9SR and LB-22S; see Figure 2-1) were decommissioned in late August 2021 to accommodate construction of the NE 99th Street road extension across the northern portion of the site, including the North Detention Basin. The fieldwork activities were performed in accordance with the May 2021 work plan (SCS, 2021b) approved by Ecology in an email dated May 26, 2021. A report documenting the decommissioning of these wells dated September 22, 2021 was submitted to Ecology and CCPH (SCS, 2021c). Road construction activities were completed by the fourth quarter 2023, and replacement monitoring wells were installed close to the original well locations during the first quarter 2024.

Groundwater samples collected from the site monitoring wells in 2023 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 (on CD). The 2023 field parameter monitoring results are provided in Appendix B (see Table B-1).

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).

2.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Static depth-to-groundwater levels were measured on March 20, 2023 and July 25, 2023, 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 2023 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 2023 groundwater flow directions were consistent with historical interpretations of groundwater flow at Leichner Landfill.

Groundwater elevation hydrographs are provided in Appendix D. The 2023 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 20 to 25 feet higher in the alluvial WBZ indicating hydraulic separation exists between the two groundwater zones. Monitoring well pairs located southwest of the landfill (i.e., at wells LB-1S/LB-1D, LB-13I/LB-13D, and LB-26I/LB-26D) 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 quality monitoring included the following field quality assurance/quality control (QA/QC) procedures: 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 the laboratory reports. ALS Environmental incorporated its laboratory data quality review comments in the Case Narrative of each laboratory report (see Appendix C on CD).

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 on CD) 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 2023 continue to indicate that there are little or no adverse effects on groundwater quality from the closed Leichner Landfill. Groundwater monitoring results supporting this conclusion are discussed in the sections below.

2.4.1 Volatile Organic Compounds

The 2023 analytical data for are summarized in Appendix B (see Table B-2). VOCs for which compliance levels were established in the 1996 Consent Decree, and that are still part of the analytical testing program (i.e., 1,4-dichlorobenzene, tetrachloroethene, and trichloroethene)², were not detected above the laboratory method reporting limits (MRLs) in groundwater samples collected in March and July 2023.

During the March 2023 semiannual monitoring event, chloroform was detected in groundwater collected from monitoring well LB-3S at a concentration of 0.51 micrograms per liter ($\mu\text{g/L}$) (Table B-2), just above the detection limit of 0.5 $\mu\text{g/L}$. Given that low levels of chloroform were also detected in two field blanks collected during the March event, the chloroform detected in the LB-3S samples is not reflective of intrinsic groundwater conditions.

2.4.2 Inorganic Parameters and Dissolved Metals

The 2023 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, 2023 groundwater analytical results for inorganic parameters and dissolved metals were generally consistent with historical data. Table 2-1 summarizes 2023 groundwater concentrations above compliance levels. Concentrations of Mn and/or Fe above the compliance levels were detected in four wells located downgradient and near the landfill areas (i.e., LB-17I, LB-17D, LB-20S, and LB-27I). However, Fe and/or Mn concentrations detected above the compliance levels in groundwater collected from these wells may be attributed, in part, to localized variations in natural groundwater chemistry, as previously reported to Ecology, based on the following:

- The concentrations of other leachate indicator parameters, including TDS and Cl, have not shown increasing or elevated concentrations in groundwater collected from these wells and are significantly below compliance levels (see time-concentration graphs in Appendix F).
- Fe has 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 have shown an overall decreasing trend since 2013 and are typically below the compliance level (see time-concentration diagrams in Appendix F). Although the recent sampling events indicate a slight increasing trend, these concentrations are still within historical ranges and may be due to regional variations.
- 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).

² 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.

2.4.2.1 Statistical Analysis of Groundwater Analytical Data

Leichner Landfill groundwater analytical data for inorganic parameters (nitrate, Cl, and TDS) and dissolved metals (Mn and Fe collected from 2019 to 2023) were statistically evaluated using the MTCA Stat97 program.³ 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.

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 chloride in LB-10DR groundwater that exceeded the range of concentrations. In these cases, the highest reported value from the last 5 monitoring years (2019 to 2023) 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 respectively 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 one order of magnitude (2.39 to 23.4 mg/L) between 2019 and 2023. 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 above the compliance of 0.3 mg/L in groundwater from well LB-17I (UCL-95 of 13.53 mg/L), and LB-20S (UCL-95 of 1.46 mg/L).
- **Manganese:** The calculated UCL-95 values, or default highest reported values, for dissolved Mn were above the compliance level of 0.05 mg/L, in groundwater from wells LB-17I (UCL-95 of 2.99 mg/L), LB-17D (UCL-95 of 4.17 mg/L), LB-20S (UCL-95 of 1.75 mg/L), and LB-27I (UCL-95 of 0.347 mg/L).

The above results are consistent with those previously reported in 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) and evaluated visually to assess whether groundwater parameter concentrations exhibit increasing, decreasing or stable trends. Key results are presented below.

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

³ MTCA Stat97 was obtained from Ecology's website: <http://www.ecy.wa.gov/programs/tcp/tools/Mtca.exe>.

2001), except for nitrate concentrations in samples collected from wells MW-5D, LB-10SR, LB-10DR, LB-13I, 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, except for LB-10SR groundwater. While recent nitrate fluctuations in LB-10SR samples 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.

Some parameters show notable fluctuations but do not exhibit increasing trends. For example, LB-17D groundwater had elevated chloride and nitrate concentrations in February 2022 which immediately decreased during the March 2023 monitoring event, although the concentrations were below their respective compliance levels.

It is also noteworthy that 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 and/or exhibited decreasing trends since about 2001 (see time-concentration diagrams in Appendix F).

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.

In 2023, the County coordinated with Clark County Public Works (CCPW) in the construction of a stormwater control system for the extension of 99th Street through the northern portion of the Leichner Landfill. The road project required decommissioning and filling of the North Detention Pond (completed in 2022), redesigning the stormwater control system, and repairing the landfill liner system along the southern edge of the North Detention Pond impacted by the road construction project. This work was completed in summer of 2023 including the installation of the stormwater vault and modification of the associated stormwater conveyance system to handle the South Pond and Module 2 discharge. Four new conveyance lines were installed to discharge stormwater into the new North Drain vault; two lines convey stormwater from Module 2 (to the west of the vault) and two lines convey stormwater from South Pond (to the south of the vault). The Module 2 surface water is gravity fed and empties into the top of the vault through a grated lid.

Drainage issues that arose with the installation of the landfill liner are currently being addressed and CCPH 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 originally installed at the Leichner Landfill in 1978, and presents compliance and performance monitoring results associated with the GCCS. The GCCS has been upgraded several times over the years, including most recently with the installation of the new micro-flare in October 2020 in response to decreasing methane production (discussed in Section 4.3.1). 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) approved by Ecology. A September 2021 report documenting the probe decommissioning (SCS, 2021d) was submitted to Ecology and CCPH. As noted in the May 2021 work plan (SCS, 2021c), two replacement probes were planned to be installed once road construction activities completed in 2023. To keep monitoring spacing consistent, three replacement probes were installed along the northern border of the landfill in January 2024.

Compliance LFG monitoring was performed quarterly in 2023 (March, June, September, and December). Quarterly monitoring data collected in 2023 are summarized in Table 4-1. Monitoring results indicate methane was predominantly not detected in the LFG monitoring probes.

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 2023 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 2023.

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 October 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, 2021a).

4.3.2 Landfill Gas Flare Monitoring

The LFG flare system was monitored regularly (typically on a weekly or biweekly basis) in 2023 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 2022 Annual Flare Emissions Estimate report, dated March 14, 2023 (SCS, 2022a), was submitted to the SWCAA. The report presents and evaluates flare monitoring data and performance objectives.

On August 3, 2023, SWCAA issued a Notice of Violation (NOV) to CCPH for not operating the LFG flare at the Leichner Landfill within the temperature range at which compliance was demonstrated during the 2020 source test, and which is specified in the Requirement 8 of the October 2020 ADP. The NOV resulted in issuance by SWCAA of a \$1,275.00 civil penalty. CCPH conducted verbal communications with SWCAA in September and October (including a meeting on September 27), to discuss the issues related to the established flare operating temperature range and challenges with operating the flare due to lowering LFG generation rates and an antiquated LFG collection conveyance system. In a letter dated November 15, 2023, CCPH requested remission or mitigation of the civil penalty and provided the rationale as to why its request was justified. SWCAA responded to CCPH's request in a letter dated November 30, 2023 stating that although the criteria of "extraordinary circumstances and factors not considered in setting the original penalty" had not been met, it agreed to suspend the civil penalty as long as there are no additional violations related to operating the flare within the permit required temperature range within the next two years following the acceptance of these settlement terms. CCPH acknowledged SWCAA's decision in a letter dated December 14, 2023.

CCPH is planning to perform a source test in 2024 (one year earlier than is required by the ADP) to reestablish the optimum range of temperatures for operating the flare.

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 2023 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) 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 and access road maintenance.
- 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 2023 are described in this section unless already previously discussed in this report.

5.2.1 First Quarter 2023

- Performed inspection and maintenance of discharge pumps at South Pond and repaired the 8-inch discharge line from South Pond which was damaged during construction.
- Conducted discussions with Nutter Corporation (Nutter) regarding damage to the drain line and pump from construction and dewatering activities during major rainstorm in late December 2022.
- Submitted the Greenhouse Gas (GHG) project information to Ecology along with additional analyses to show that Leichner is below the reporting requirements.
- Pulled Pump 2 from South Pond pump vault and removed debris and repaired inlet line at South Pond stormwater vault.

5.2.2 Second Quarter 2023

- Attended meetings with Nutter regarding damage to the drain line and pump, including viewing a video of the damage from construction and dewatering activities during major rainstorm in late December 2022.
- Met with the CCPW Inspector for 99th Street road project to discuss site issues including (1) liner placement, (2) the addition of three culverts under the final road, and (3) site drainage into infiltration gallery intakes.
- Coordinated, performed, and supervised Construction Quality Assurance (CQA) and engineering oversight activities for replacement liner installation project associated with the NE 99th Street Extension including the following.
 - Performing field CQA monitoring and reporting during subgrade preparation, liner installation, and cover soil placement.
 - Documenting construction activities that included performing daily record keeping, and preparing testing and installation reports, progress reports, and photographic records.
 - Coordinating and reviewing third party laboratory conformance testing of geomembrane liner components (by TRI Environmental) and density testing for the soils used to construct NE 99th Street liner system subgrade (by Columbia West Engineering, Inc.).
 - Creating specifications and communicating these with the contractor related to soil placement on the installed liner and modifications to the culvert design in the liner installation area.

5.2.3 Third Quarter 2023

- Resolved problem with power to the flare that included an evaluation of the programming functionality of the RMC system.
- Excavated and installed 10-inch stormwater discharge pipe for South Pond pumps beneath North access road.
- Installed the force main stormwater vault and modified the associated stormwater conveyance system to handle South Pond and Module 2 stormwater discharge.
- Completed field CQA monitoring and reporting during liner installation and cover soil placement activities associated with the NE 99th Street Extension. Compiling field documentation and prepared CQA report for the liner repair project.
- Responded to low level alarm at the South Pond and to a low temperature alarm at the flare. Reset alarms after problems were resolved.
- Planned, coordinated and performed a test pit investigation to verify the liner location along the southern boundary of the landfill and determine whether waste material was present in proposed locations for LFG monitoring probes in preparation for City of Vancouver's (City) Operations Center construction project. Prepared a technical memorandum presenting the test pit results including documenting/verifying the location of the landfill liner.

5.2.4 Fourth Quarter 2023

- Installed a culvert in the northern borrow area and restored the site access road; added gravel as needed.
- Made final adjustments to the force main stormwater vault and finished grading and seed placement in the area around the vault.
- Checked on final grades, seeding, drain lines and erosion control in association with final 99th Street road construction project.
- Extended stormwater pipe from Module 2 to the new North Drain stormwater vault, which was modified to accept increased amount of stormwater flow.
- Inspected all the stormwater inflow points during a large rain event and checked matting on drain areas.
- Conducted onsite meeting to discuss and document issues with water getting below the new liner system installed as part of the 99th Street road project during heavy rain events.

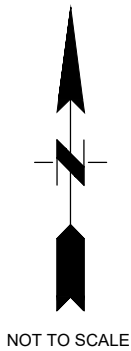
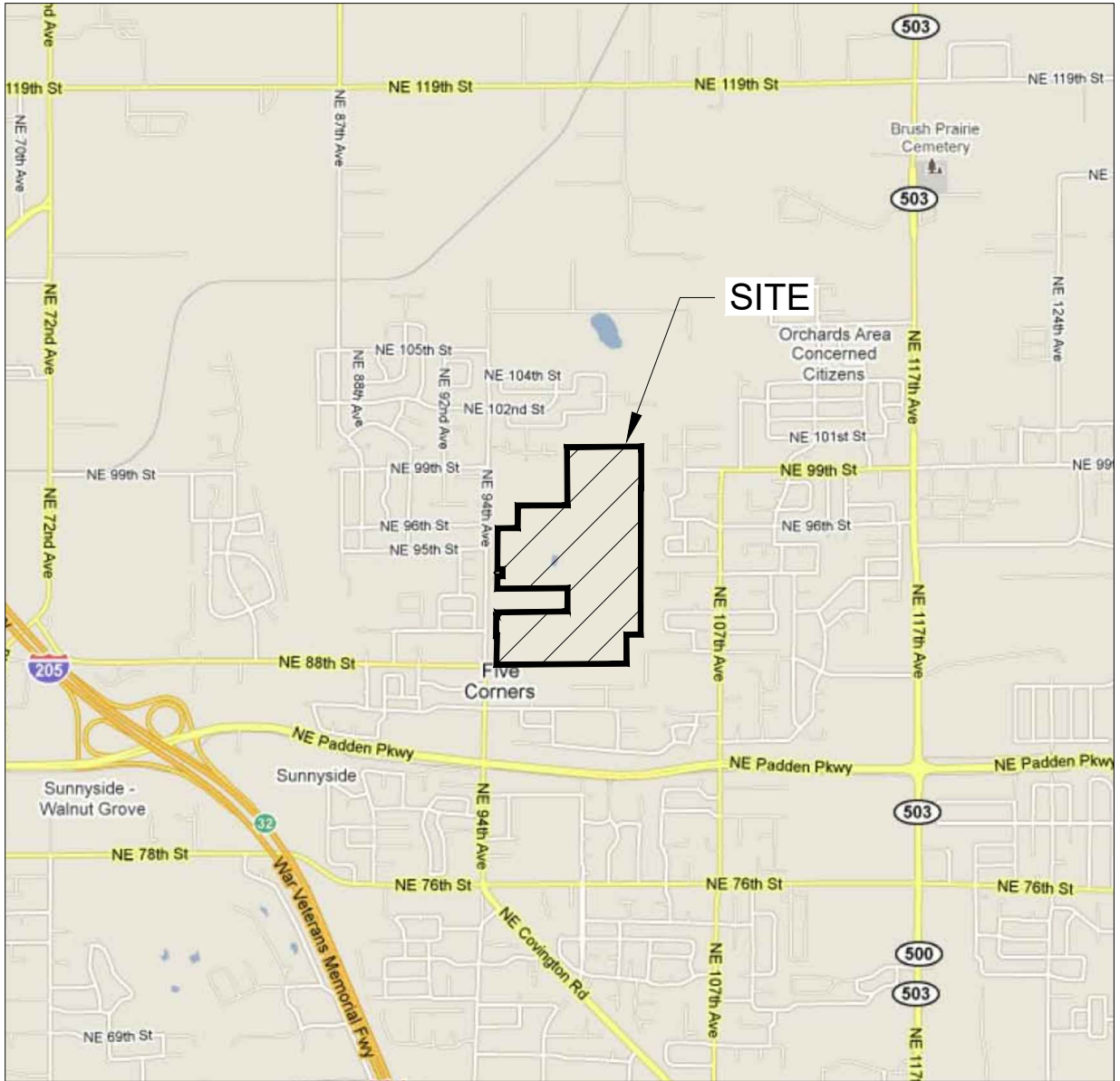
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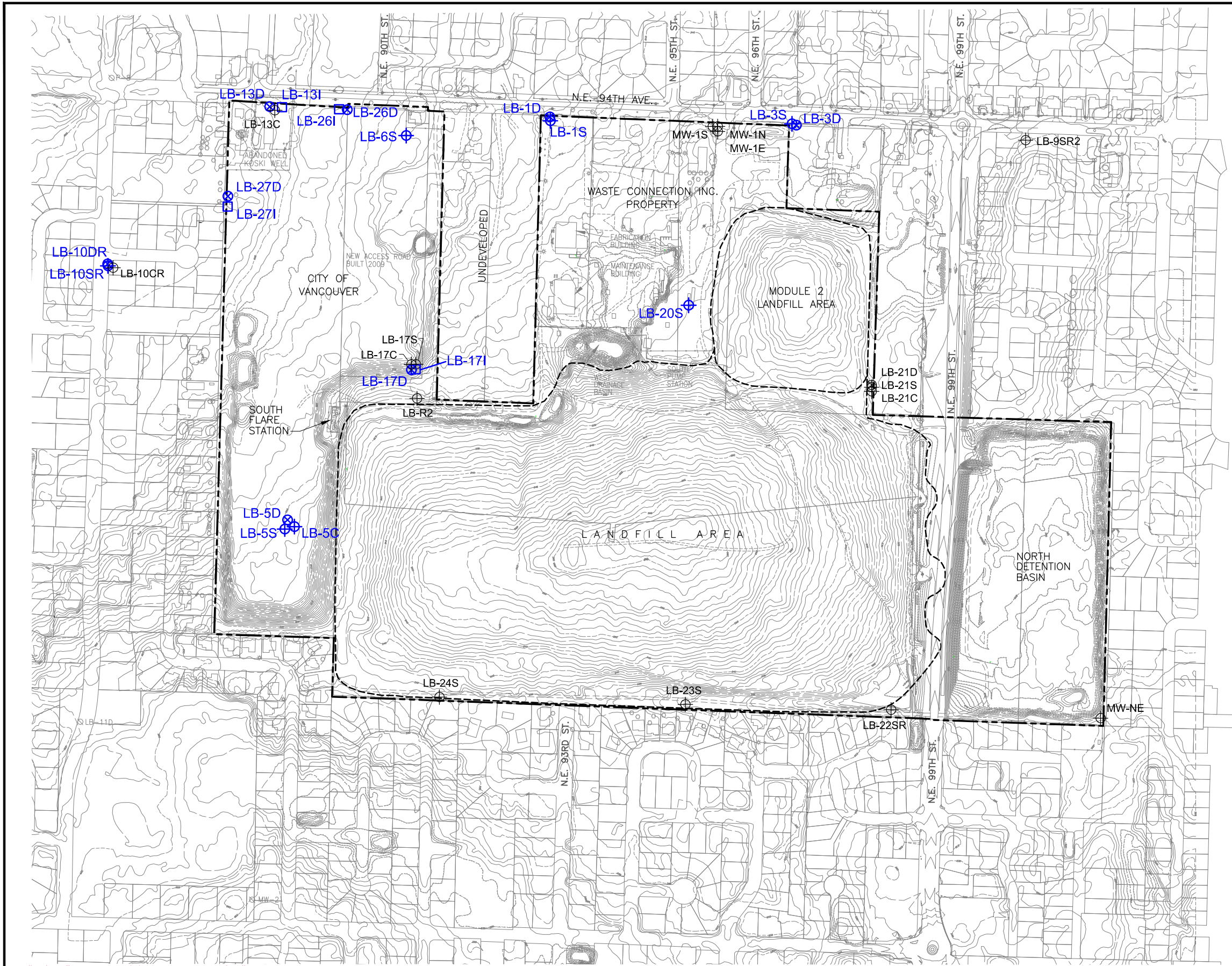
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FIGURES



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. 04224030.14	DES BY B.R.	SITE LOCATION MAP LEICHER LANDFILL CLARK COUNTY, WASHINGTON	DATE FEBRUARY 2024
	SCALE AS SHOWN	CHK BY B.L.		FIGURE
	CAD FILE FIGURE 1-1	APP BY L.C.		1-1

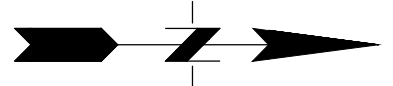


LEGEND:

- 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
- 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 2023.



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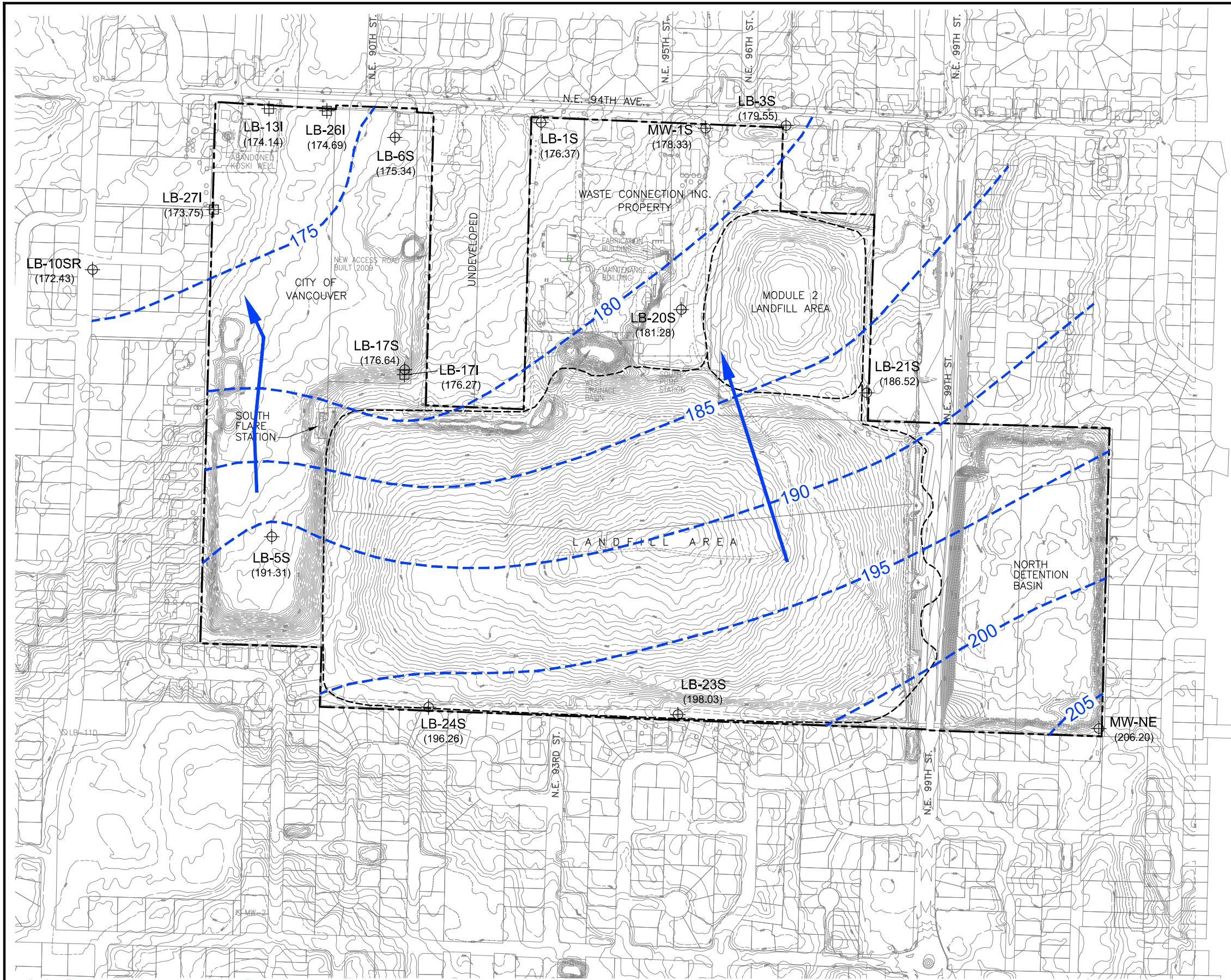


PROJECT NO.	04224030.14	DES BY	B.R.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-1	APP BY	L.C.

GROUNDWATER MONITORING WELL LOCATIONS
 LEICHER LANDFILL
 VANCOUVER, WASHINGTON

DATE
FEBRUARY 2024
 FIGURE
2-1

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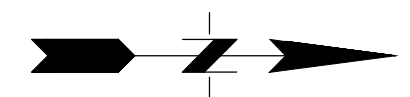


LEGEND:

- LB-5S ⊕ Monitoring Well Location, Alluvial Water-Bearing Zone
- LB-171 ⊕ 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
- (176.27) Groundwater Elevation Measured on March 20, 2023
- ➔ Inferred Groundwater Flow Direction

NOTES:

1. Monitoring wells designated by blue color are compliance monitoring wells.
2. Topography taken from Clark County GIS, December 2023.



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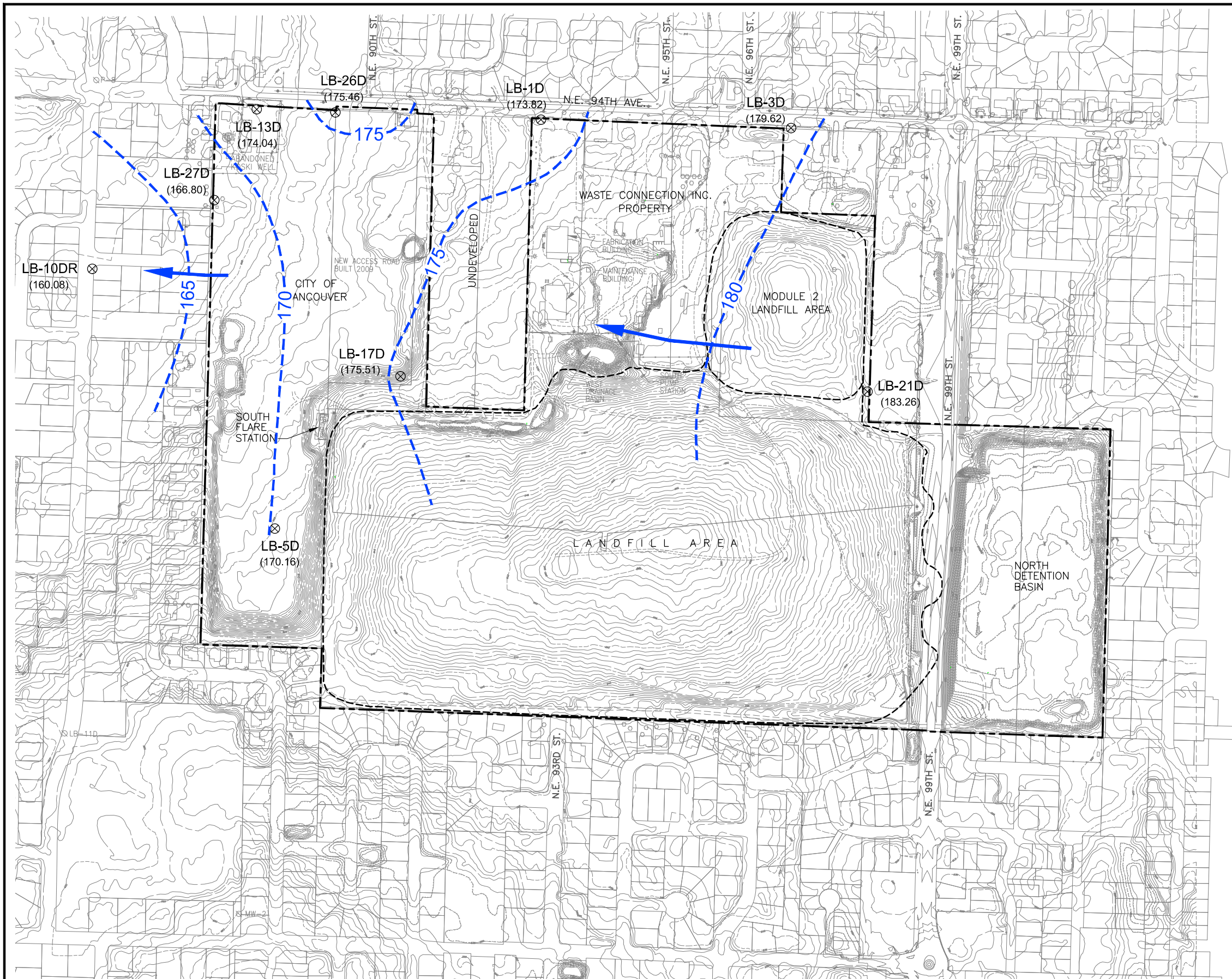


PROJECT NO.	04224030.14	DES BY	B.R.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-2	APP BY	L.C.

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
 ALLUVIAL WATER BEARING ZONE
 MARCH 20, 2023
 LEICHER LANDFILL
 VANCOUVER, WASHINGTON

DATE
 FEBRUARY 2024
 FIGURE
2-2

C:\Users\jw\Documents\Projects\2024\20240210\20240210.dwg Figure 2-2.dwg, Layout 1, 2/20/24, 2:46:48 PM, 2/20/24 2:46:48 PM

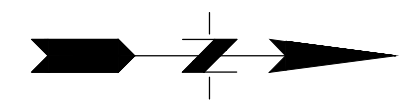


LEGEND:

- 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
- (170.16) Groundwater Elevation Measured on March 20, 2023
- ➔ Inferred Groundwater Flow Direction

NOTES:

1. Monitoring wells designated by blue color are compliance monitoring wells.
2. Topography taken from Clark County GIS, December 2023.



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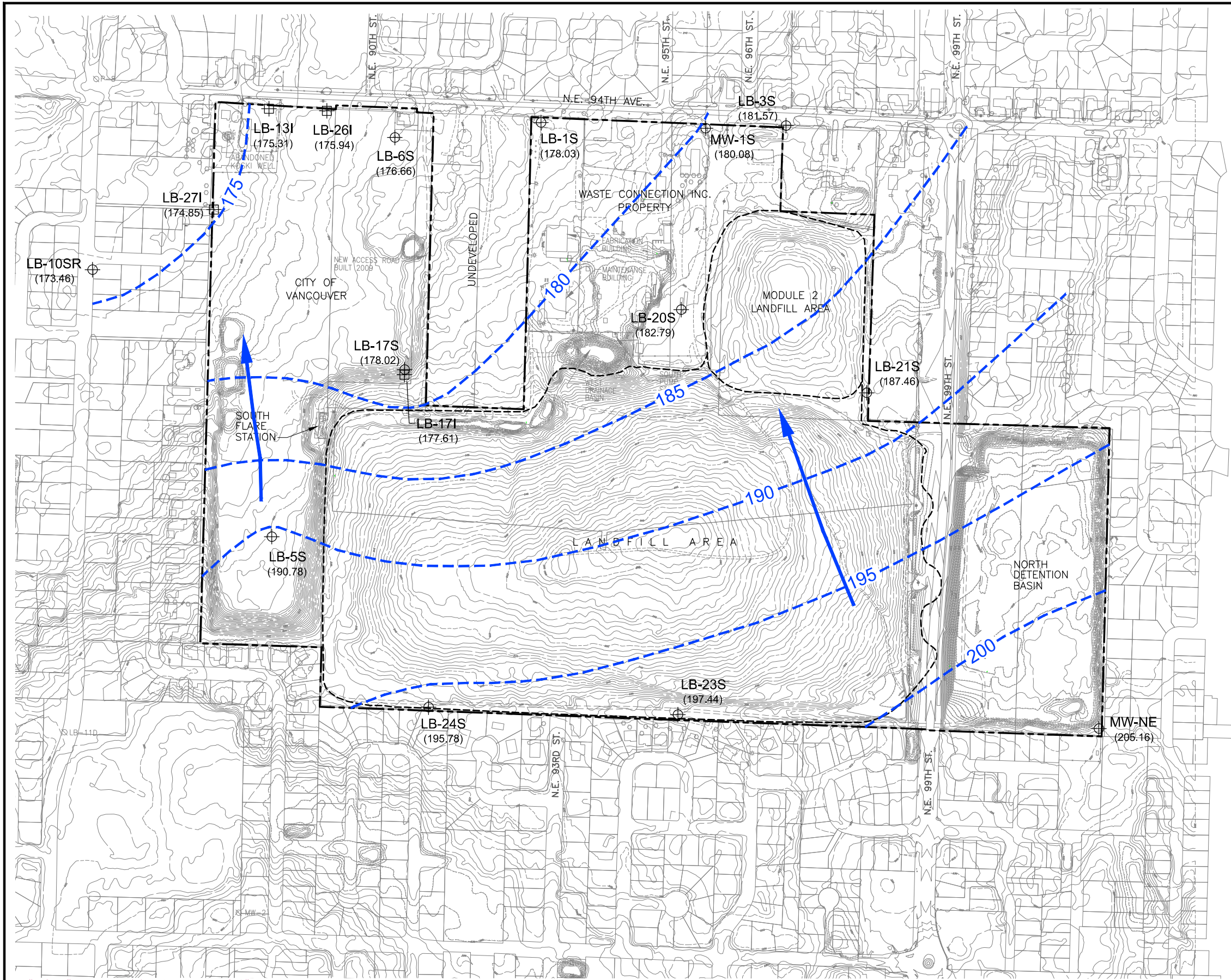


PROJECT NO.	04224030.14	DES BY	B.R.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-3	APP BY	L.C.

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
 TROUTDALE FORMATION AQUIFER
 MARCH 20, 2023
 LEICHER LANDFILL
 VANCOUVER, WASHINGTON

DATE
 FEBRUARY 2024
 FIGURE
2-3

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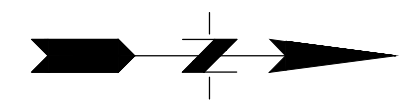


LEGEND:

- 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
- (177.61) Groundwater Elevation Measured on July 25, 2023
- ➔ Inferred Groundwater Flow Direction

NOTES:

1. Monitoring wells designated by blue color are compliance monitoring wells.
2. Topography taken from Clark County GIS, December 2023.



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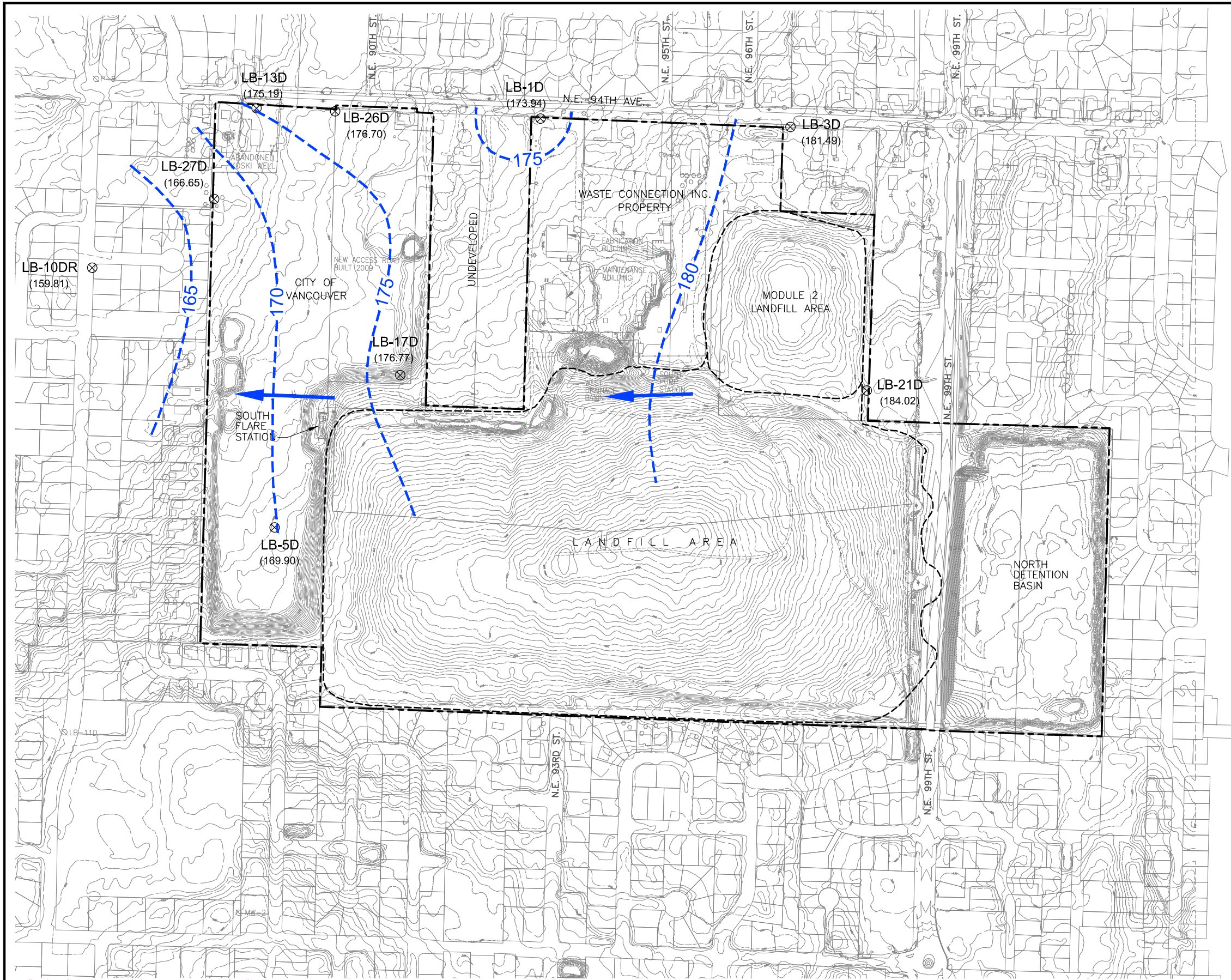


PROJECT NO.	04224030.14	DES BY	B.R.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-4	APP BY	L.C.

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
 ALLUVIAL WATER BEARING ZONE
 JULY 25, 2023
 LEICHTNER LANDFILL
 VANCOUVER, WASHINGTON

DATE
 FEBRUARY 2024
 FIGURE
2-4

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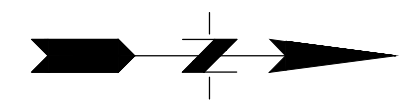


LEGEND:

- LB-5D ⊗ Monitoring Well Location, Troutdale Aquifer
- Property Boundary
- - - - - Limit of Landfill Cover and Approximate Edge of Waste
- 175--- Groundwater Potentiometric Surface Contour, queried where uncertain
- (169.90) Groundwater Elevation Measured on July 25, 2023
- ➡ Inferred Groundwater Flow Direction

NOTES:

1. Monitoring wells designated by blue color are compliance monitoring wells.
2. Topography taken from Clark County GIS, December 2023.



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SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 2-5	APP BY	L.C.

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
 TROUTDALE FORMATION AQUIFER
 JULY 25, 2023
 LEICHTNER LANDFILL
 VANCOUVER, WASHINGTON

DATE
 FEBRUARY 2024
 FIGURE
2-5

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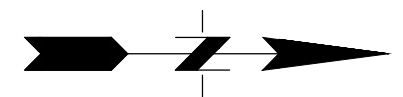


LEGEND:

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

NOTES:

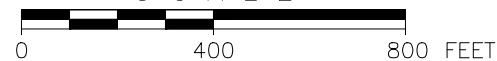
1. Topography taken from Clark County GIS, December 2023.



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SCALE



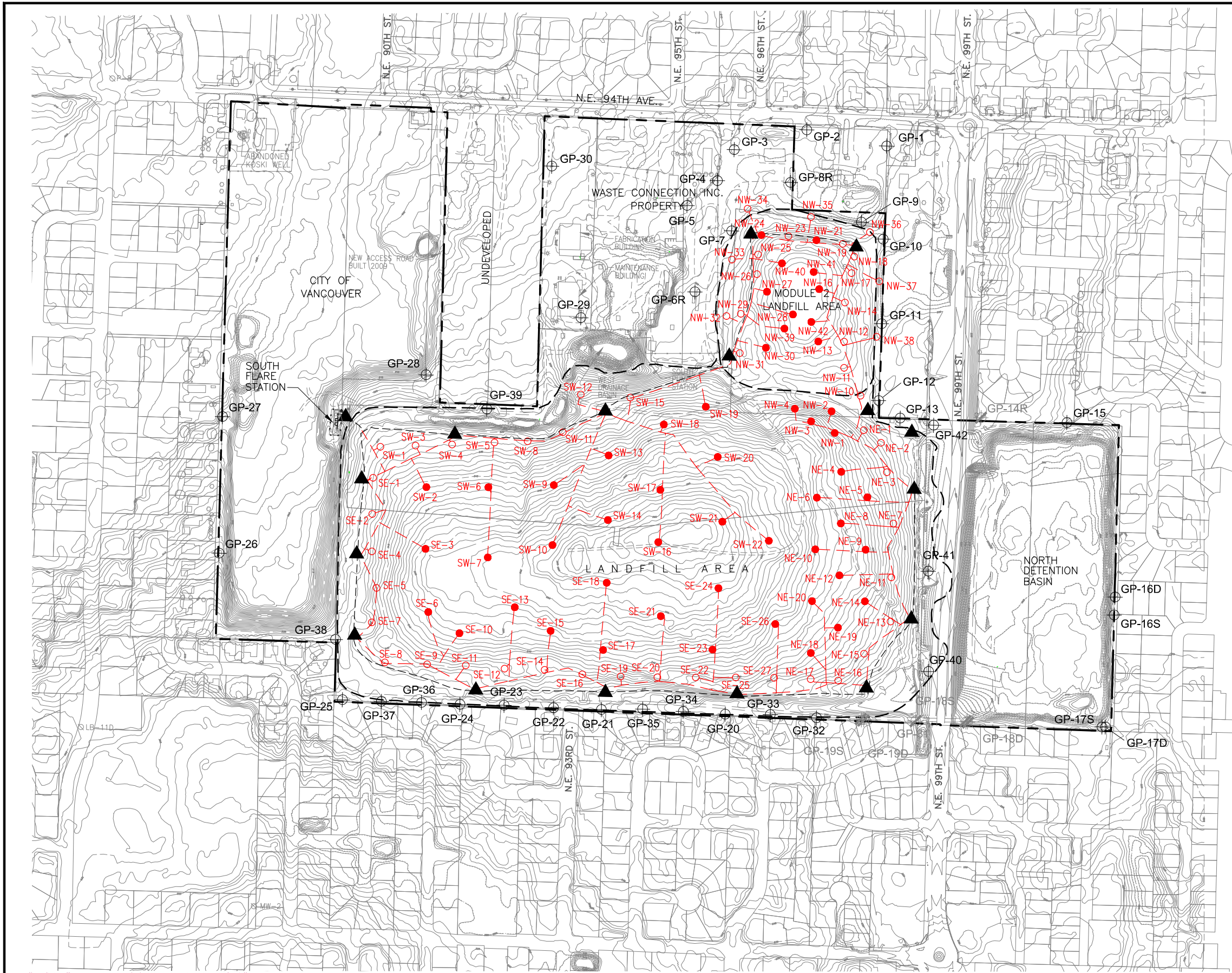
PROJECT NO.	04224030.14	DES BY	B.R.
SCALE	AS SHOWN	CHK BY	B.L.
CAD FILE	FIGURE 3-1	APP BY	L.C.

SITE MAP AND STORMWATER SYSTEM

LEICHER LANDFILL
 VANCOUVER, WASHINGTON

DATE
 FEBRUARY 2024

FIGURE
3-1

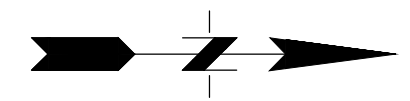


LEGEND:

- ⊕ 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 2023.



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**LANDFILL GAS PROBE AND
EXTRACTION WELL LOCATIONS**

LEICHER LANDFILL
VANCOUVER, WASHINGTON

DATE
FEBRUARY 2024

FIGURE
4-1

TABLES

**Table 2-1
2023 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-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-10SR	LB-021522-08-10SR	2/15/22	---	---	---
LB-10SR	LB-072622-05-10SR	7/26/22	---	---	---
LB-10SR	LB-032023-05-10SR	3/20/23	---	---	---
LB-10SR (DUP)	LB-032023-06-DUP1	3/20/23	---	---	---
LB-10SR	LB-072623-03-10SR	7/26/23	---	---	---
LB-17D	LB-020520-03-17D	2/5/20	---	---	4.17
LB-17D	LB-021821-09-17D	2/18/21	---	---	4.06
LB-17D	LB-021422-04-17D	2/14/22	---	0.326	3.58
LB-17D	LB-032123-10-17D	3/21/23	---	---	3.82
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-17I	LB-021622-09-17I	2/16/22	---	11.00	2.41
LB-17I	LB-032123-11-17I	3/21/23	---	9.07	2.04
LB-20S	LB-020620-02-20S	2/6/20	---	---	0.119
LB-20S	LB-021921-01-20S	2/19/21	---	---	0.251
LB-20S	LB-021522-04-20S	2/15/22	---	---	0.0779
LB-20S	LB-072622-01-20S	7/26/22	---	---	0.445
LB-20S	LB-112922-03-20S	11/29/22	---	---	---
LB-20S	LB-032123-01-20S	3/21/23	---	1.46	1.75
LB-27I	LB-020520-06-27I	2/5/20	---	---	0.134
LB-27I	LB-072820-02-27I	7/28/20	---	---	0.320
LB-27I	LB-021921-04-27I	2/19/21	---	---	0.079
LB-27I (DUP)	LB-021921-04-27I	2/19/21	---	---	0.082
LB-27I	LB-021622-02-27I	2/16/22	---	---	---
LB-27I	LB-072522-03-27I	7/25/22	---	---	---
LB-27I	LB-032123-03-27I	3/21/23	---	---	---
LB-27I (DUP)	LB-032123-04-DUP2	3/21/23	---	---	---
LB-27I	LB-072523-02-27I	7/25/23	---	---	0.118
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					

**Table 2-2
Statistical Summary of Groundwater Quality Data From 2019 to 2023
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)	6.35	5.86	M(10.1)	5.09	M(8.11)	7.11	5.57	M(10.1)	10.39	NC	17.71	11.21	M(109.11)	8.71	M(6.21)	24.46	M(7.62)
Nitrate	10	mg/L	4.5	M(5.86)	M(6.82)	M(9.14)	5.40	M(1.92)	4.23	16.95	3.64	4.68	4.86	All ND	NC	NC	4.29	NC	2.17	M(4.17)
Total Dissolved Solids	500	mg/L	M(205)	M(170)	M(165)	M(180)	163.34	215.42	179.43	245.34	217.42	M(224)	177.38	308.08	199.22	303.02	197.67	M(197)	M(380)	M(207)
Metals																				
Iron (dissolved)	0.3	mg/L	NC	NC	All ND	NC	NC	NC	NC	NC	NC	NC	NC	13.53	M(0.3)	M(1.46)	NC	NC	NC	NC
Manganese (dissolved)	0.05	mg/L	NC	NC	All ND	NC	NC	0.0055	All ND	NC	NC	0.0071	NC	2.99	M(4.17)	M(1.75)	0.0065	All ND	M(0.347)	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 due to lack of data above the detection limit. 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
2023 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-1A	3/1/2023	0.0	2.1	19.0	78.9
GP-1A	6/20/2023	0.0	2.6	18.7	78.7
GP-1A	9/20/2023	0.0	1.8	19.0	79.2
GP-1A	12/11/2023	0.0	2.0	18.4	79.6
GP-1B	3/1/2023	0.0	2.0	19.1	78.9
GP-1B	6/20/2023	0.0	2.2	19.0	78.8
GP-1B	9/20/2023	0.0	1.8	19.1	79.1
GP-1B	12/11/2023	0.0	2.5	18.4	79.1
GP-02	3/1/2023	0.0	2.2	19.1	78.7
GP-02	6/20/2023	0.0	2.4	18.4	79.2
GP-02	9/20/2023	0.0	2.2	18.8	79.0
GP-02	12/11/2023	0.0	2.4	17.9	79.7
GP-03	3/1/2023	0.0	2.1	16.7	81.2
GP-03	6/20/2023	0.0	2.4	17.6	80.0
GP-03	9/20/2023	0.0	2.4	18.2	79.4
GP-03	12/8/2023	0.1	1.9	18.5	79.5
GP-4A	3/1/2023	0.0	4.5	13.1	82.4
GP-4A	6/20/2023	0.0	3.5	16.1	80.4
GP-4A	9/20/2023	0.0	2.6	18.1	79.3
GP-4A	12/8/2023	0.0	4.4	13.8	81.8
GP-4B	3/1/2023	0.0	4.4	13.3	82.3
GP-4B	6/20/2023	0.0	3.1	16.0	80.9
GP-4B	9/20/2023	0.0	2.7	17.3	80.0
GP-4B	12/8/2023	0.0	5.1	11.9	83.0
GP-05	3/1/2023	0.0	5.0	14.6	80.4
GP-05	6/20/2023	0.0	4.5	14.7	80.8
GP-05	9/20/2023	0.0	4.3	15.4	80.3
GP-05	12/8/2023	0.1	5.5	13.2	81.2
GP-06	3/1/2023	0.0	5.5	12.1	82.4
GP-06	6/20/2023	0.0	5.3	12.0	82.7
GP-06	9/20/2023	0.0	5.5	12.9	81.6
GP-06	12/8/2023	0.1	5.4	12.5	82.0
GP-07	3/1/2023	0.0	1.4	14.9	83.7
GP-07	6/20/2023	0.0	4.6	16.6	78.8
GP-07	9/20/2023	0.0	4.8	16.2	79.0
GP-07	12/8/2023	0.0	1.2	13.0	85.8

**Table 4-1
2023 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-8R	3/1/2023	0.0	0.5	19.4	80.1
GP-8R	6/20/2023	0.0	1.2	19.8	79.0
GP-8R	9/20/2023	0.0	1.1	19.4	79.5
GP-8R	12/8/2023	0.0	0.7	20.1	79.2
GP-9A	3/1/2023	0.0	6.2	10.7	83.1
GP-9A	6/20/2023	0.0	5.4	13.4	81.2
GP-9A	9/20/2023	0.0	3.6	18.2	78.2
GP-9A	12/11/2023	0.0	4.7	11.9	83.4
GP-9B	3/1/2023	0.1	16.5	0.9	82.5
GP-9B	6/20/2023	0.0	8.1	2.3	89.6
GP-9B	9/20/2023	0.0	11.9	3.4	84.7
GP-9B	12/11/2023	0.1	12.8	2.2	84.9
GP-10A	3/1/2023	0.0	7.2	12.1	80.7
GP-10A	6/20/2023	0.0	3.3	14.8	81.9
GP-10A	9/20/2023	0.0	4.4	15.7	79.9
GP-10A	12/11/2023	0.1	4.4	14.9	80.6
GP-10B	3/1/2023	0.0	2.1	18.3	79.6
GP-10B	6/20/2023	0.0	2.8	17.3	79.9
GP-10B	9/20/2023	0.0	1.4	18.9	79.7
GP-10B	12/11/2023	0.0	1.7	18.1	80.2
GP-11	3/1/2023	0.0	0.9	19.4	79.7
GP-11	6/20/2023	0.0	2.3	18.3	79.4
GP-11	9/20/2023	0.0	1.6	19.1	79.3
GP-11	12/11/2023	0.0	1.0	17.6	81.4
GP-12	3/1/2023	0.0	0.5	20.1	79.4
GP-12	6/20/2023	0.0	0.9	20.5	78.6
GP-12	9/20/2023	0.0	0.6	19.7	79.7
GP-12	12/11/2023	0.0	0.8	20.0	79.2
GP-13	3/1/2023	0.0	1.4	19.0	79.6
GP-13	6/20/2023	0.0	2.3	18.5	79.2
GP-13	9/20/2023	0.0	2.2	18.7	79.1
GP-13	12/11/2023	0.0	2.0	18.1	79.9
GP-15	3/1/2023	0.0	3.1	17.9	79.0
GP-15	6/20/2023	0.0	3.4	17.4	79.2
GP-15	9/21/2023	0.0	3.0	18.2	78.8
GP-15	12/8/2023	0.1	2.8	18.5	78.6

**Table 4-1
2023 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-16D	3/1/2023	0.0	2.3	19.2	78.5
GP-16D	6/20/2023	0.0	2.8	18.1	79.1
GP-16D	9/21/2023	0.0	1.9	18.6	79.5
GP-16D	12/8/2023	0.0	2.7	18.5	78.8
GP-16S	3/1/2023	0.0	1.1	20.3	78.6
GP-16S	6/20/2023	0.0	1.9	19.0	79.1
GP-16S	9/21/2023	0.0	2.7	18.3	79.0
GP-16S	12/8/2023	0.0	0.2	20.1	79.7
GP-17D	3/1/2023	0.0	6.5	15.9	77.6
GP-17D	6/20/2023	0.0	5.8	16.0	78.2
GP-17D	9/21/2023	0.0	4.2	17.4	78.4
GP-17D	12/8/2023	0.0	5.4	15.9	78.7
GP-17S	3/1/2023	0.0	4.8	16.9	78.3
GP-17S	6/20/2023	0.0	4.7	17.2	78.1
GP-17S	9/21/2023	0.0	2.9	18.1	79.0
GP-17S	12/8/2023	0.0	4.7	16.4	78.9
GP-20	3/1/2023	0.0	7.9	9.8	82.3
GP-20	6/20/2023	0.0	4.9	13.1	82.0
GP-20	9/20/2023	0.0	6.8	14.2	79.0
GP-20	12/11/2023	0.0	8.6	8.0	83.4
GP-21A	3/1/2023	0.0	0.3	20.3	79.4
GP-21A	6/20/2023	0.0	1.0	20.0	79.0
GP-21A	9/20/2023	0.0	1.1	19.4	79.5
GP-21A	12/11/2023	0.0	1.4	19.3	79.3
GP-21B	3/1/2023	0.0	1.7	19.0	79.3
GP-21B	6/20/2023	0.0	1.2	19.5	79.3
GP-21B	9/20/2023	0.0	1.4	18.8	79.8
GP-21B	12/11/2023	0.0	2.0	18.1	79.9
GP-22	3/1/2023	0.0	1.3	19.8	78.9
GP-22	6/20/2023	0.0	0.9	20.2	78.9
GP-22	9/20/2023	0.0	1.2	19.6	79.2
GP-22	12/11/2023	0.0	1.8	19.5	78.7
GP-23	3/1/2023	0.0	1.6	19.6	78.8
GP-23	6/20/2023	0.0	0.8	20.2	79.0
GP-23	9/20/2023	0.0	1.1	19.6	79.3
GP-23	12/11/2023	0.0	2.3	18.9	78.8


**Table 4-1
2023 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-24A	3/1/2023	0.0	0.3	20.5	79.2
GP-24A	6/20/2023	0.0	0.7	20.7	78.6
GP-24A	9/20/2023	0.0	0.2	20.3	79.5
GP-24A	12/11/2023	0.0	0.9	20.1	79.0
GP-24B	3/1/2023	0.0	0.4	20.6	79.0
GP-24B	6/20/2023	0.0	0.4	20.8	78.8
GP-24B	9/20/2023	0.0	0.3	20.3	79.4
GP-24B	12/11/2023	0.0	1.2	20.0	78.8
GP-25A	3/1/2023	0.0	2.4	18.8	78.8
GP-25A	6/20/2023	0.0	1.3	19.7	79.0
GP-25A	9/20/2023	0.0	0.5	19.9	79.6
GP-25A	12/11/2023	0.0	2.2	19.2	78.6
GP-25B	3/1/2023	0.0	3.0	18.2	78.8
GP-25B	6/20/2023	0.0	2.3	18.2	79.5
GP-25B	9/20/2023	0.0	2.5	18.0	79.5
GP-25B	12/11/2023	0.0	3.0	18.4	78.6
GP-26	3/1/2023	0.0	0.5	20.9	78.6
GP-26	6/20/2023	0.0	0.7	20.7	78.6
GP-26	9/20/2023	0.0	1.0	19.6	79.4
GP-26	12/11/2023	0.0	0.5	20.6	78.9
GP-27	3/1/2023	0.0	0.8	20.3	78.9
GP-27	6/20/2023	0.0	0.7	20.4	78.9
GP-27	9/20/2023	0.0	1.1	19.5	79.4
GP-27	12/11/2023	0.0	0.7	20.3	79.0
GP-28	3/1/2023	0.0	5.2	12.2	82.6
GP-28	6/20/2023	0.0	5.4	13.2	81.4
GP-28	9/20/2023	0.0	5.2	15.9	78.9
GP-28	12/8/2023	0.4	4.9	14.1	80.6
GP-29	3/1/2023	0.0	7.3	6.4	86.3
GP-29	6/20/2023	0.0	5.5	6.7	87.8
GP-29	9/20/2023	0.0	6.6	7.8	85.6
GP-29	12/8/2023	0.0	6.8	7.4	85.8
GP-30A	3/1/2023	0.0	3.5	16.7	79.8
GP-30A	6/20/2023	0.0	5.6	15.5	78.9
GP-30A	9/20/2023	0.0	4.7	15.3	80.0
GP-30A	12/11/2023	0.1	3.0	16.9	80.0

**Table 4-1
2023 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date	Methane	Carbon Dioxide	Oxygen	Balance Gases
		Percent by Volume			
GP-30B	3/1/2023	0.0	3.4	17.0	79.6
GP-30B	6/20/2023	0.0	4.6	16.0	79.4
GP-30B	9/20/2023	0.0	4.1	16.6	79.3
GP-30B	12/11/2023	0.0	3.0	17.0	80.0
GP-32	3/1/2023	0.0	2.2	18.5	79.3
GP-32	6/20/2023	0.0	1.3	19.6	79.1
GP-32	9/20/2023	0.0	1.9	18.6	79.5
GP-32	12/11/2023	0.0	2.9	18.2	78.9
GP-33	3/1/2023	0.0	1.8	18.9	79.3
GP-33	6/20/2023	0.0	1.2	19.7	79.1
GP-33	9/20/2023	0.0	1.8	18.2	80.0
GP-33	12/11/2023	0.0	3.1	15.0	81.9
GP-34	3/1/2023	0.0	4.3	14.3	81.4
GP-34	6/20/2023	0.0	3.7	16.1	80.2
GP-34	9/20/2023	0.0	4.4	13.7	81.9
GP-34	12/11/2023	0.0	5.2	13.0	81.8
GP-35	3/1/2023	0.0	1.8	17.9	80.3
GP-35	6/20/2023	0.0	2.3	18.3	79.4
GP-35	9/20/2023	0.0	1.8	18.0	80.2
GP-35	12/11/2023	0.0	2.3	17.0	80.7
GP-36	3/1/2023	0.0	2.4	17.3	80.3
GP-36	6/20/2023	0.0	1.5	19.9	78.6
GP-36	9/20/2023	0.0	1.8	18.6	79.6
GP-36	12/11/2023	0.0	2.1	18.8	79.1
GP-37	3/1/2023	0.0	3.3	17.5	79.2
GP-37	6/20/2023	0.0	2.0	19.2	78.8
GP-37	9/20/2023	0.0	1.6	18.4	80.0
GP-37	12/11/2023	0.0	2.6	18.7	78.7
GP-38	3/1/2023	0.0	1.4	18.7	79.9
GP-38	6/20/2023	0.0	1.0	20.5	78.5
GP-38	9/20/2023	0.0	0.9	19.7	79.4
GP-38	12/11/2023	0.0	1.1	19.8	79.1
GP-39	3/1/2023	0.7	16.7	3.4	79.2
GP-39	6/20/2023	0.0	11.8	12.1	76.1
GP-39	9/20/2023	0.0	20.3	2.6	77.1
GP-39	12/11/2023	0.1	17.6	6.8	75.5

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
2023 Field Sampling Data Sheets (FSDSs)

First Quarter (March) 2023 FSDSs

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 LF*
 Inspector *B. Rapozo*
 Date *3/20/23*
 Reason for inspection
 2nd, 3rd, or 4th groundwater monitoring event
 Other

Notes: *Cloudy, 44°F*

Field Calibration Log SCS Engineers

Equipment:			Serial Number:		Field Staff:			
YSI Pro Plus			19K102542		B. Rapozo			
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)
Leitchner / 04223030.13	3/20/23	0750	14.7	9.88	4.00	7.00	1413	219.8
Notes: 748.9 mmHg - 3/20/23								

Field Calibration Log

SCS Engineers

Equipment:			Serial Number:		Field Staff:			
YSI Pro Plus			17J102717		B. Rapozz			
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)
Beichner / 04223030.13	3/24/23	0720	14.3	9.87	4.00	7.00	1413	221.1
" "	3/22/23	0730	14.0	9.96	4.00	7.00	1412	220.0
Notes: 750.2 mmHg - 3/21								
749.0 mmHg - 3/21								

**Leichner Landfill
Groundwater Elevation Survey**

Project #: 04 223030.13

Sampler: B. Rapozo

Quarter: 1 2 3 4

Date: 3/20/23

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	0934	Dry @ 14.97
MW-1 S	216.13	44.50	37.81	0930	
MW-1 E	216.45	29.05	N/A	0932	Dry @ 29.02
MW-NE	219.83	50.34	13.86	1035	
LB-R2	222.27	77.36	45.71	1058	
LB-1S	210.12	45.00	33.75	1018	
LB-1D	209.74	137.45	35.92	0913	
LB-3S	218.25	52.50	38.70	1356	
LB-3D	219.29	117.28	39.67	1314	
LB-5S	206.89	30.32	15.58	1210	
LB-5C	206.70	74.71	33.47	1211	
LB-5D	207.56	122.40	37.40	1207	
LB-6S	202.80	39.07	27.46	1241	
LB-10SR	204.04	42.35	31.61	1208	
LB-10CR	203.05	71.95	30.48	1117	
LB-10DR	203.36	121.10	43.28	1111	
LB-13I	202.36	55.03	28.22	1231	
LB-13C	202.68	66.00	28.62	1230	
LB-13D	202.96	88.88	28.92	1227	
LB-17S	208.18	34.38	21.54	1134	
LB-17I	213.14	51.95	36.69	1136	
LB-17C	206.55	72.35	30.40	1132	
LB-17D	213.17	100.91	37.66	1129	
LB-20S	221.22	61.50	39.94	0925	
LB-21S	223.35	54.24	36.83	1007	
LB-21C	223.32	79.10	37.35	1013	
LB-21D	223.63	110.73	40.37	1009	
LB-23S	229.19	45.40	31.16	1028	
LB-24S	235.13	54.16	38.87	1023	
LB-26I	200.22	58.30	25.53	1236	
LB-26D	200.75	101.78	25.29	1238	
LB-27I	205.35	57.15	31.60	1218	
LB-27D	204.65	115.10	37.83	1221	

Notes:

Probe disconnected between readings, Cloudy 46°F

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-15

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

BLIND ID: LB-032023-02-15

DUP ID:

NA

WIND FROM:	N	NE	E	SE	(S)	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?				TEMPERATURE:	64.6 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

(Circle appropriate units)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/20/23	10:18	.	.	33.75	.	.	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
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§ 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	3/20/23	10:40	A	3 (40 ml)	(HCl)	YES	(NO)		✓
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	10:40	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	3/20/23	10:40	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 []
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (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: 10:19

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(1020)	0.00	6.73	164.4	247.1	10.2	33.75	11.66	clear/colorless
1	A(1023)	0.15	5.88	170.3	248.8	11.5	33.75	9.15	c/c
2	A(1026)	0.35	5.79	175.5	252.2	11.7	33.75	15.22	c/c
3	A(1029)	0.60	5.82	174.0	252.2	11.8	33.75	8.81	c/c
4	A(1032)	0.80	5.78	174.4	251.8	11.8	33.75	8.75	c/c
5	A(1035)	1.05	5.77	174.0	252.2	11.7	33.75	8.77	c/c
6									

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

Low Flow Collected at: (9/6/30 psi) ~ 250 ml/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: Leichner Landfill

WELL ID: LB-10

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

BLIND ID: LB-032023-01-10

DUP ID:

NA

WIND FROM:	N	NE	E	SE	(S)	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	LOUDY	RAIN	?					TEMPERATURE: 44.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/20/23	09:13	137.95	.	35.92	.	.	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	3/20/23	09:40	A	3 40 ml	HCl	YES	NO		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	09:40	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	3/20/23	09:40	A	1 250, 500, 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 []
	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: 09:21

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(0924)	0.00	6.87	178.5	413.0	8.9	35.91	11.07	clear/colorless
1	A(0927)	0.10	6.80	158.3	262.0	9.7	35.91	9.79	c/c
2	A(0930)	0.25	6.82	153.6	233.2	10.4	35.91	9.50	c/c
3	A(0933)	0.40	6.84	149.8	215.9	10.6	35.91	9.55	c/c
4	A(0936)	0.50	6.83	151.8	214.3	10.6	35.91	9.49	c/c
5	A(0939)	0.60	6.83	151.3	213.9	10.6	35.91	9.52	c/c
6									

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

[Circle units]

[Clarity, Color]

Collected at:

low flow (20/10/70 psi) ~ 150 ml/min

SAMPLER:

(PRINTED NAME)

B. Rapozo

(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:

DUP ID:

NA

WIND FROM:	N	NE	E	SE	(S)	SW	W	NW	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY CLOUDY RAIN ?									TEMPERATURE: °F 48 °C	

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/20/23	13:56	52.55	.	38.70	.	.	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	3/20/23	14:20	A	3	40 ml (HCl)	YES	NO		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	14:20	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	3/20/23	14:20	A	1	125, 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)	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: :

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(1408)	0.00	6.64	162.4	178.2	11.0	38.72	8.18	clear/colorless
1	A(1406)	0.25	6.66	158.0	175.6	11.6	38.72	7.52	c/c
2	A(1409)	0.45	6.65	157.6	178.1	11.6	38.72	7.37	c/c
3	A(1412)	0.65	6.64	156.6	178.5	11.7	38.72	7.30	c/c
4	A(1415)	0.80	6.63	155.1	178.7	11.6	38.72	7.28	c/c
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

[Casing]

[Select A-G]

[Cumulative Totals]

[Circle units]

[Clarity, Color]

Collected at:

(9/6/30) ~ 300 ^{1/4} min

SAMPLER:

(PRINTED NAME)

B. Raporo

(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-3D

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

BLIND ID: LB-032023-07-3D

DUP ID:

NA

WIND FROM:	N	NE	E	SE	(S)	SW	W	NW	LIGHT	MEDIUM	HEAVY	
	WEATHER:									TEMPERATURE: °F 48 °C		
			CLOUDY	RAIN			?					

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)
3/20/23	13:14	117.28	.	39.67	.	.	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	3/20/23	13:35	A	3 400ml	HCl	YES	NO		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	13:35	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	3/20/23	13:35	A	1 250, 500, 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	(8280) (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: 13:15

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(1318)	0.00	6.59	165.4	200.0	11.4	39.76	7.75	clear/colorless
1	A(1321)	0.25	6.62	161.9	203.2	11.6	39.76	7.59	c/c
2	A(1324)	0.45	6.62	158.7	204.0	11.6	39.76	7.59	c/c
3	A(1327)	0.60	6.61	155.2	204.4	11.7	39.76	7.51	c/c
4	A(1330)	0.75	6.61	152.2	204.7	11.7	39.76	7.	c/c
5									
6									

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

Collected at: (8/7/70 psi) ~ 300 ml/min

SAMPLER: B. Raparo

(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-032223-01-55

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 040 °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)	
3/22/23	08:15	30.32	.	15.66	.	.	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:

[N if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/22/23	08:45	A	3	10 ml	HO	YES	NO	
Amber Glass	/ /	:			(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/22/23	08:45	A	1	250, 500, 1L	None	YES	NO	NA
Yellow Poly	/ /	:			H ₂ SO ₄	YES	NO		
Green Poly	/ /	:			NaOH	YES	NO		
Red Total Poly	/ /	:			HNO ₃	YES	NO		
Red Diss. Poly	3/22/23	08:45	A	1	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: 08:28

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(0828)	0.00	6.18	107.3	130.7	4.0	15.66	8.00	clear/colorless
1	A(0832)	0.25	5.84	111.7	147.6	11.4	15.66	5.92	c/c
2	A(0835)	0.50	5.85	110.6	150.3	11.6	15.66	5.24	c/c
3	A(0838)	0.75	5.87	107.7	151.9	11.7	15.66	5.31	c/c
4	A(0841)	2.00	5.91	103.6	152.5	11.7	15.66	5.33	c/c
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

Low Flow Collected at:

(8/7/20 psi) ~ 380 in/min

SAMPLER:

(PRINTED NAME)

B. Lopez

(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-50

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

BLIND ID: LB-032123-09-50

DUP ID:

NA

WIND FROM:	N	NE	<u>(E)</u>	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: <u>60</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)
3/21/23	13:42	122.40	.	37.68	.	.	X 1
1/1	:	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
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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	3/21/23	14:25	A	3	40 ml	(HCl)	YES	NO	
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	14:25	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	3/21/23	14:25	A	1	<u>(25)</u> 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	(820) (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) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA

Purge Start Time: 1409 or 13:54

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1410)	0.00	6.87	84.5	284.0	14.2	37.70	13.93	clear/colorless
1	A(1413)	0.25	6.70	83.1	283.1	13.2	37.70	1.52	C/C
2	A(1416)	0.50	6.74	80.4	282.8	12.9	37.70	1.17	C/C
3	A(1419)	0.80	6.75	79.3	282.7	12.9	37.70	1.09	C/C
4	A(1422)	1.10	6.76	79.8	282.8	13.0	37.70	1.10	C/C
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

[Circle units]

[Clarity, Color]

Collected at: (11/9/65 psi) ~ 350 mL/min

***NEEDS TUBING REPLACED**

SAMPLER:

B. Rapozo

(PRINTED NAME)

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

PROJECT NAME: Lechner Landfill

Office: 503.639.9201

Fax: 503.684.6984

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

WELL ID: LB-65

BLIND ID: LB-032023-09-65

WIND FROM: N NE E SE S SW W NW **DUP ID:** NA

WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 69 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/20/23	14:54	39.07	.	27.55	.	.	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	3/20/23	15:16	A	3 (40 ml)	(HCl)	YES	NO		√
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	15:10	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	3/20/23	15:10	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
	VOA - Glass	(8280) (8011)	(Circle applicable or write non-standard analysis below)
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)	OR [] WA []
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

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Pump/Bailer Inlet Depth:	Diss O ₂ (mg/l)	Water Quality
0	A(1456)	0.00	6.68	167.2	221.6	10.7	27.56	11.44		clear/colorless
1	A(1459)	0.25	6.66	160.1	226.7	11.6	27.56	11.25		c/c
2	A(1502)	0.60	6.64	156.4	232.8	11.7	27.56	10.85		c/c
3	A(1505)	0.96	6.62	154.7	236.3	11.7	27.56	10.78		c/c
4	A(1508)	1.20	6.62	154.5	235.8	11.7	27.56	10.71		c/c
5										
6										

Purge Start Time: 14:55

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

Low Flow Collected at: (8/7/30 psi) ~ 400 ml/min

SAMPLER: B. Rapozo
(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-10SR
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-032023-05-10SR

DUP ID: NA

WIND FROM:	N	NE	E	SE	(S)	SW	W	NW	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY			CLOUDY			RAIN			TEMPERATURE: 64.7 °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)
3/20/23	12:08	42.35	.	31.61	.	.	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	3/20/23	12:30	A	3 40 ml	(HCl)	YES	NO		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	12:30	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	3/20/23	12:30	A	1 250, 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 []
	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: 12:09 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(1216)	0.00	6.65	137.9	121.0	11.8	31.61	8.15	clear/colorless
1	A(1213)	0.20	6.32	125.3	142.9	12.3	31.61	5.27	c/c
2	A(1216)	0.50	6.27	122.5	139.7	12.5	31.61	6.64	c/c
3	A(1219)	0.70	6.23	124.8	133.7	12.4	31.61	6.70	c/c
4	A(1222)	0.85	6.22	126.2	135.5	12.4	31.61	6.78	c/c
5	A(1225)	1.00	6.21	126.9	137.6	12.4	31.61	6.65	c/c
6									

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

Collected at: (9/6(30 psi) ~ 300' in

SAMPLER: B. Raposo
(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:** _____
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-032023-06-DUPI

DUP ID: _____ **NA**

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** °F 47 °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)
1/1	:	/	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	3/20/23	12:35	A	3 40 ml	HCl	YES	NO		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	12:35	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	3/20/23	12:35	A	1 125, 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 [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: _____ 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(1235)	0.00							
1		.	.			.	.	.
2		.	.			.	.	.
3		.	.			.	.	.
4		.	.			.	.	.
5		.	.			.	.	.
6		.	.			.	.	.

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

Collected at: LB-105R

SAMPLER: B. Rapoco
(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-032023-03-10DR

DUP ID:

NA

WIND FROM:	N	NE	E	SE	<u>S</u>	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY			CLOUDY		RAIN		?	TEMPERATURE: 54.7 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/20/23	11:11	.	.	43.28	.	.	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	3/20/23	11:35	A	3 40 ml	HCl	YES	NO		
Amber Glass	3/1/23	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	11:35	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	3/20/23	11:35	A	1 125, 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)	OR []	WA []
	VOA - Glass	(8260) (8011)		WA [X]
	AMBER - Glass	(8080) (8150) (TOX)		WA []
	WHITE - Poly	(pH) (Conductivity) (DS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (C) (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(1115)	0.00	6.43	326.0	1.3	10.7	43.29	14.36	clear/colorless
1	A(1118)	0.20	6.76	164.8	245.7	11.7	43.29	3.40	c/c
2	A(1121)	0.40	6.76	160.9	256.2	11.8	43.29	2.58	c/c
3	A(1124)	0.55	6.77	156.2	270.0	11.9	43.29	3.06	c/c
4	A(1127)	0.75	6.78	148.1	275.8	11.9	43.29	3.10	c/c
5	A(1130)	0.90	6.79	139.8	280.3	12.0	43.29	3.12	c/c
6									

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

Low Flow Collected at: (12/8165 psi) ~ 200 yds

SAMPLER:

B. Repozo
(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:** _____
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-032023-04-FBI

DUP ID: NA

WIND FROM:	N	NE	E	SE	(S)	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY			RAIN	?			TEMPERATURE: °F 46 °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)
/ /	:						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 = 6cab

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	3/20/23	11:45	A	3 40 ml	(HCl)	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/20/23	11:45	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	3/20/23	11:45	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 (Circle applicable or write non-standard analysis below)								OR []	WA []	
	VOA - Glass	(8280) (8011)										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: _____

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	6(1145)	0.00							
1									
2									
3									
4									
5									
6									

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

[Circle units]

[Clarity, Color]

Collected at: DR pt LB-105R

SAMPLER: B. Rapone
(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-13I

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

BLIND ID: LB-032123-05-13I

DUP ID:

NA

WIND FROM:	(N)	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	(SUNNY)	CLOUDY			RAIN			?	TEMPERATURE: °64.9 °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)
3/21/23	10:33	54.98	.	28.27	.	.	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	3/21/23	11:00	A	3 40 ml	(HCl)	(YES)	(NO)		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	11:00	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	3/21/23	11:00	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	(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: 10:36

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O ₂ (mg/l)	Water Quality
1038 0	A(1037)	0.00	6.59	84.5	215.3	15.4	28.30	9.42	clear/colorless
1	A(1041)	0.25	6.37	82.2	231.0	12.5	28.30	4.94	c/c
2	A(1044)	0.55	6.40	80.1	232.1	12.6	28.30	4.40	c/c
3	A(1047)	0.85	6.40	79.3	232.3	12.5	28.30	4.31	c/c
4	A(1050)	1.20	6.40	79.8	231.8	12.6	28.30	4.27	c/c
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

[Casing]

[Select A-G]

[Cumulative Totals]

[Circle units]

[Clarity, Color]

Collected at: (8/7/30psi) ~ 300 ml/min

SAMPLER:

(PRINTED NAME)

B. Rapuzo

(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-13D

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

BLIND ID: LB-032123-07-13D

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 55.0 °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)	
3/21/23	12:09	88.88	.	28.97	.	.	X 1 .	
/ /	:	.	.	.	.	.	X 3 .
Gal/ft = (dia/2) ² x 0.163		1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

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

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

Sample Depth:

(√ if used)

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/21/23	12:30	A	3 40 mL	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	12:30	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	3/21/23	12:30	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	(8265) (8011) OR [] WA []
	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: 12:12

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E-Cond (µS)	°F Temp	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1212)	0.00	6.96	74.1	189.7	11.9	29.05	1.19	clear/colorless
1	A(1215)	0.30	6.43	76.0	189.0	12.2	29.05	2.65	C/C
2	A(1218)	0.70	6.37	76.6	191.4	12.2	29.05	3.14	C/C
3	A(1221)	1.00	6.36	76.6	195.7	12.3	29.05	3.25	C/C
4	A(1224)	1.25	6.36	76.5	195.6	12.3	29.05	3.30	C/C
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

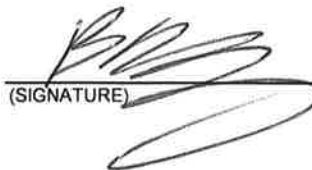
Low Flow Collected at: (8/7/60 psi) ~ 350 mL/min

SAMPLER:

(PRINTED NAME)

B. Rapozo

(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-17I

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

BLIND ID: LB-032123-11-17I

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY	
WEATHER:	SUNNY			CLOUDY	RAIN			?	TEMPERATURE: °F 61 °C			

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/21/23	:	.	.	36.73	.	.	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 ^s	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	3/21/23	15:50	A	3 (40 ml)	(HCl)	(YES)	(NO)		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	15:50	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	3/21/23	15:50	A	1 (125) 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)	OR []	WA []
	VOA - Glass	(826) (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 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) (Pb) (Mg) (Mn) (K) (Na)		

WATER QUALITY DATA

Purge Start Time: 15:30

Pump/Bailer Inlet Depth:

Meas.	Method ^s	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1531)	0.00	6.41	89.8	293.1	15.2	36.75	2.30	clear/colorless
1	A(1534)	0.20	6.42	88.0	315.2	14.7	36.75	1.37	c/c
2	A(1537)	0.40	6.44	83.0	325.1	14.5	36.75	1.28	c/c
3	A(1540)	0.60	6.47	83.0	331.5	14.5	36.75	1.30	c/c
4	A(1543)	0.80	6.48	82.1	333.5	14.6	36.75	1.26	c/c
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

[Circle units]

[Clarity, Color]

Collected at: (8.5/6.5/30 psi) ~ 250 ml/min

SAMPLER: B. Rapozo

(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-17D

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

BLIND ID: LB-032123-10-17D

DUP ID:

NA

WIND FROM:	N	NE	<u>E</u>	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: <u>60</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/21/23	:	100.91	.	37.70	.	.	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	3/21/23	15:15	A	3	40 pH	(HCl)	YES	NO	
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	15:15	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	3/21/23	15:15	A	1	<u>25</u> 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	(8267) (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 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> (Mg) <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA Purge Start Time: 14:53 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(1455)	0.00	6.62	85.8	235.3	16.9	37.72	4.20	clear/colorless
1	A(1458)	0.15	6.53	87.2	239.5	15.7	37.72	2.20	c/c
2	A(1501)	0.30	6.59	84.8	242.1	15.7	37.72	1.38	c/c
3	A(1504)	0.45	6.61	83.5	242.5	15.7	37.72	1.29	c/c
4	A(1507)	0.60	6.61	83.1	242.6	15.7	37.72	1.31	c/c
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

Low Flow Collected at: (9/6/60 psi) ~ 300 mL/min

SAMPLER: B. Rapozo
(PRINTED NAME)

(SIGNATURE) 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Leichner Landfill

WELL ID: LB-20S

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

BLIND ID: LB-032123-01-20S

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY			CLOUDY		RAIN		?		TEMPERATURE: 54.0 °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)
3/21/23	08:30	61.50	.	40.03	.	.	X 1
/ /	:	.	.	.	.	.	X 3
Gal/ft = (dia./2) ² x 0.163		1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080
							12" = 5.875

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

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

Sample Depth:

[√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/21/23	08:30	A	3 (40 ml)	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	08:30	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	3/21/23	08:30	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)	OR []	WA []
	VOA - Glass	(B260) (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: 08:06

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(0808)	0.00	6.12	121.1	520.6	9.1	39.95	10.35	light tan/clear
1	A(0811)	0.15	6.31	106.4	526.7	10.8	39.95	5.20	cloudy/light tan
2	A(0814)	0.30	6.42	96.9	508.0	11.0	39.95	3.64	clear/light tan
3	A(0817)	0.50	6.51	90.5	499.8	11.3	39.95	2.95	clear/light tan
4	A(0820)	0.65	6.56	86.3	502.2	11.4	39.95	2.91	" "
5	A(0823)	0.80	6.58	84.6	502.4	11.3	39.95	2.89	" "
6									

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

[Circle units]

[Clarity, Color]

Low Flow Purge: (716/33 psi) ~ 200 mL/min
Collected at:

SAMPLER:

(PRINTED NAME)

B. Raposo

(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: Leichner Landfill **WELL ID:**

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-032123-02-FBI

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY			CLOUDY			RAIN			?	
TEMPERATURE:										° F	° 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)	
/ /	:	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 = Gub

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	3/2/23	08:40	A	3	40 ml	(HCl)	YES	NO	
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO	
White Poly	3/2/23	08:40	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	3/2/23	08:40	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 []
	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	6/0840	0.00							
1									
2									
3									
4									
5									
6									

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

Collected at: LB-205

SAMPLER: B. Rapozo
(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: ~~28~~ LB-26I

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

BLIND ID: LB-03223-02-26I

DUP ID:

NA

WIND FROM:	(N)	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY						
	WEATHER: SUNNY									CLOUDY			RAIN			?	
										TEMPERATURE: 67.4 °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)
3/12/23	09:23	58.30	.	25.56	.	.	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 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	3/12/23	09:40	A	3 40 ml	HO	YES	NO		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/12/23	09:40	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	3/12/23	09:40	A	1 250, 500, 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	(826) (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 09:24

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(0925)	0.00	6.45	100.8	210.4	10.9	25.55	10.40	clear/redness
1	A(0928)	0.20	6.27	99.5	212.2	11.9	25.55	5.29	c/c
2	A(0931)	0.40	6.28	98.4	212.7	12.0	25.55	4.74	c/c
3	A(0934)	0.60	6.29	97.4	212.4	12.1	25.55	4.65	c/c
4	A(0937)	0.80	6.30	96.8	212.6	12.1	25.55	4.60	c/c
5									
6									

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

[Circle units]

[Clarity, Color]

Collected at: (9.5/5.5/35 psi) ~ 300 ^{ml}/_{min}

SAMPLER:

(PRINTED NAME)

B. Rapozo

(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-260

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

BLIND ID: LD-032123-08-260

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 65.7 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

(Circle appropriate units)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
3/21/23	12:48	101.28	.	25.34	.	.	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 ^s	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	3/21/23	13:10	A	3	40 ml	NO	YES	NO	
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	13:10	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	3/21/23	13:10	A	1	250, 500, 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 []
	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: 12:49

Pump/Bailor Inlet Depth:

Meas.	Method ^s	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1250)	0.00	6.85	76.3	202.3	13.7	24.72	3.60	clear/colorless
1	A(1253)	0.25	6.42	78.3	206.5	13.1	24.72	5.75	c/c
2	A(1256)	0.50	6.35	76.3	207.1	13.1	24.72	5.68	c/c
3	A(1259)	0.75	6.35	76.4	207.0	13.1	24.72	5.70	c/c
4		.	.	.	.	.	.	.
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

[Circle units]

[Clarity, Color]

Collected at:

(8/7/60 ft) ~ 350 mL/min

SAMPLER:

(PRINTED NAME)

B. Rapero

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-27I
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-032123-03-27I

DUP ID: NA
WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** °F 44 °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)
3/21/23	09:30	.	.	31.62	.	.	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	3/21/23	:	A	3	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	:	A	1	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	3/21/23	:	A	1	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) (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: 09:33 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(0944)	0.00	7.37	89.1	221.7	10.4	31.70	6.53	clear/colorless
1	A(0947)	0.25	6.96	90.0	219.5	12.0	31.70	5.54	c/c
2	A(0950)	0.50	6.72	88.5	230.3	12.1	31.70	4.54	c/c
3	A(0953)	0.75	6.60	88.2	239.8	12.2	31.70	2.46	c/c
4	A(0956)	1.00	6.55	87.8	248.2	12.2	31.70	2.42	c/c
5	A(0959)	1.25	6.55	87.5	251.3	12.1	31.70	2.35	c/c
6									

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

Collected at: (8/7/35 psi) ~ 350 ml/min

SAMPLER: B. Rapier
(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:

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

BLIND ID: LB-03223-04-DUPI

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: °F <u>44</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

(Circle appropriate units)

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	3/21/23	10:05	A	3	40 ml	(HCl)	YES	NO	
Amber Glass	/ /	:			(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	10:05	A	1	250, 500, 1L	(None)	YES	NO	NA
Yellow Poly	/ /	:			H ₂ SO ₄	YES	NO		
Green Poly	/ /	:			NaOH	YES	NO		
Red Total Poly	/ /	:			HNO ₃	YES	NO		
Red Diss. Poly	3/21/23	10:05	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	(B260) (B011) OR [] WA [X]
	AMBER - Glass	(B080) (B150) (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: :

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	B(1005)	0.00	.	.	.	.	.	.	.
1		.	.	.	.	.	.	.	.
2		.	.	.	.	.	.	.	.
3		.	.	.	.	.	.	.	.
4		.	.	.	.	.	.	.	.
5		.	.	.	.	.	.	.	.
6		.	.	.	.	.	.	.	.

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

[Circle units]

[Clarity, Color]

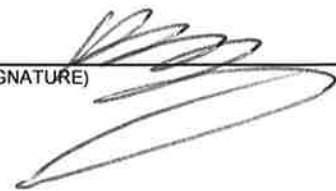
Collected at: LB-27I

SAMPLER:

(PRINTED NAME)

(SIGNATURE)

B. Rapozo



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:** _____
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-032123-06-270

DUP ID: _____ **NA**
WIND FROM:

N	NE	E	SE	S	SW	W	NW
---	----	---	----	---	----	---	----

LIGHT **MEDIUM** **HEAVY**
WEATHER: **SUNNY** **CLOUDY** **RAIN** **?** **TEMPERATURE:** 52.0 °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)
3/21/23	11:23	.	.	36.75	.	.	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	3/21/23	11:45	A	3 40 ml	HCl	YES	NO		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	3/21/23	11:45	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	3/21/23	11:45	A	1 250, 500, 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	(253) (8011) OR [] WA []
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (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: 11:25 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(1127)	0.00	6.94	77.2	240.3	8.8	37.75	3.31	clear/colorless
1	A(1130)	0.15	6.68	75.4	241.2	10.3	38.25	4.38	c/c
2	A(1133)	0.30	6.56	74.5	244.9	10.6	38.90	4.42	c/c
3	A(1136)	0.50	6.65	74.4	245.7	10.6	39.05	4.27	c/c
4	A(1139)	0.65	6.65	74.3	245.8	10.6	39.18	4.28	c/c
5									
6									

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

Low Flow: Collected at: (20/10/60 psi) ~ 200 ml/min

SAMPLER: B. Rapozo (PRINTED NAME) [Signature] (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 1 OF 1 COC# _____

PROJECT NAME	Leicher Landfill	
PROJECT NUMBER	04223050.13	
PROJECT MANAGER	Bobb Lery	
COMPANY NAME	S/S Engineers	
ADDRESS	15440 SW 77th Ave	
CITY/STATE/ZIP	Portland, OR 97224	
E-MAIL ADDRESS	Blery@ssecngineers.com	
PHONE #	(971) 289-1297	FAX #
SAMPLER'S SIGNATURE		

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	ANALYSIS CHECKS																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 Gas <input type="checkbox"/> 8021 <input type="checkbox"/>	Oil & Grease/TRPH Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	PCBs 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	Aroclors <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 814 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) Tetra <input type="checkbox"/> 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	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"/>			
TR1	3/20/23	0700		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"/>	<input checked="" type="checkbox"/>	
LB-0320 ²³ -01-10	3/24/23	0940		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"/>	
LB-032023-02-15	3/24/23	1040		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"/>	
LB-032023-03-100R	3/20/23	1135		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"/>	
LB-032023-04-FB1	3/20/23	1145		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"/>	
LB-032023-05-105R	3/20/23	1230		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"/>	
LB-032023-06-DUP1	3/20/23	1235		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"/>	
LB-032023-07-30	3/20/23	1335		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"/>	
LB-032023-08-3S	3/20/23	1420		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"/>	
LB-032023-09-6S	3/20/23	1510		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"/>	

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 Fe 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)

RELINQUISHED BY: Signature _____ Printed Name _____ Date/Time 3/21/23 Firm S/S	RECEIVED BY: Signature _____ Printed Name _____ Date/Time 3-21-23 1125 Firm ALS	RELINQUISHED BY: Signature _____ Printed Name _____ Date/Time _____ Firm _____	RECEIVED BY: Signature _____ Printed Name _____ Date/Time _____ Firm _____
---	--	---	---



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 2 OF 2

COC# _____

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"/> Volatile Organics 824 <input type="checkbox"/> 8260 <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 <input type="checkbox"/> HEM <input type="checkbox"/>	<input type="checkbox"/> PCBs 1664 <input type="checkbox"/> SGT <input type="checkbox"/>	<input type="checkbox"/> Aroclors <input type="checkbox"/>	<input type="checkbox"/> Pesticides/Herbicides 808 <input type="checkbox"/> 8081 <input type="checkbox"/> 8141 <input type="checkbox"/>	<input type="checkbox"/> Chlorophenolics - 8151M 8151 <input type="checkbox"/>	<input type="checkbox"/> Metals Total or Dissolved (See List below) PCP <input type="checkbox"/>	<input type="checkbox"/> Cyanide <input type="checkbox"/>	<input type="checkbox"/> (circle) pH, Cond., Cl, 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"/>	<input type="checkbox"/> Ethane <input type="checkbox"/>	
PROJECT NUMBER <i>09223030.13</i>																								
PROJECT MANAGER <i>Barb Lory</i>																								
COMPANY NAME <i>SCS Engineers</i>																								
ADDRESS <i>15940 SW 42nd Ave</i>																								
CITY/STATE/ZIP <i>Portland, OR 97204</i>																								
E-MAIL ADDRESS <i>RLory@SCSEngineers.com</i>																								
PHONE # <i>503 284 1897</i>																								
FAX #																								
SAMPLER'S SIGNATURE <i>John Andrews for Raporo</i>																								
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX															REMARKS					
<i>LR-032133-06-270</i>	<i>3/21/23</i>	<i>1145</i>	<i>W</i>	<i>5</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>TB2</i>	<i>3/21/23</i>	<i>0700</i>	<i>W</i>	<i>2</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
REPORT REQUIREMENTS					INVOICE INFORMATION					Circle which metals are to be analyzed:														
<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					P.O. # _____ Bill To: _____ _____					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					*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)																			
<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: <i>Metals are field filtered</i> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)																			
RELINQUISHED BY:					RECEIVED BY:					RELINQUISHED BY:					RECEIVED BY:									
<i>Barb Lory</i> Signature Printed Name Date/Time <i>3/22/23</i> Firm <i>SCS</i>					<i>Greg Rich</i> Signature Printed Name Date/Time <i>3-22-23 0940</i> Firm <i>ALS</i>					Signature _____ Printed Name _____ Date/Time _____ Firm _____					Signature _____ Printed Name _____ Date/Time _____ Firm _____									



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 _____ OF _____ COC# _____

PROJECT NAME <i>Leichter Landfill</i>	NUMBER OF CONTAINERS
PROJECT NUMBER <i>0422303013</i>	
PROJECT MANAGER <i>Bob Loran</i>	
COMPANY NAME <i>SFS Engineers</i>	
ADDRESS <i>15940 SW 72nd Ave</i>	
CITY/STATE/ZIP <i>Portland, OR 97224</i>	
E-MAIL ADDRESS <i>bloran@sfsengineers.com</i>	
PHONE # <i>(971) 284-1297</i> FAX # _____	
SAMPLER'S SIGNATURE <i>[Signature]</i>	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	625	624	8021	Oil & Grease/TFPH	1664 HEM	1664 SGT	608	814	815	PCPBs	Aroclors	Congeners	8081	815M	PCP	Cyanide	Hex-Chrom	NO ₃ , BOD, TSS, TDS, Turb.	DOC, NO ₂ +NO ₃ , COD, TKN, TOC,	AOX	1650	506	HCO ₃	8290	CO ₂	Ethane	Ethene	REMARKS
<i>LB-032023-01-ES</i>	<i>3/22/23</i>	<i>0845</i>		<i>W</i>	<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"/>	<input checked="" type="checkbox"/>	
<i>LB-032023-02-26</i>	<i>3/22/23</i>	<i>0940</i>		<i>W</i>	<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"/>	<input checked="" type="checkbox"/>	
<i>TB3</i>	<i>3/22/23</i>	<i>0700</i>		<i>W</i>	<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"/>	<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 *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 type="checkbox"/> Standard (15 working days) <input type="checkbox"/> 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: <i>[Signature]</i> <i>3/22/23 1102</i> Signature _____ Date/Time _____ Printed Name _____ Firm _____	RECEIVED BY: <i>[Signature]</i> <i>3-22-23 1102</i> Signature _____ Date/Time _____ Printed Name _____ Firm _____	RELINQUISHED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____	RECEIVED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____
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Third Quarter (July) 2023 FSDSs

Field Calibration Log SCS Engineers

Equipment: <div style="text-align: center; font-size: 1.2em;">YSI Pro Quattro</div>			Serial Number: <div style="text-align: center; font-size: 1.2em;">23C106804</div>		Field Staff: <div style="text-align: center; font-size: 1.2em;">B. Rapozo</div>			
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 / 04223030.13	7/25/23	1040	22.9	8.02	4.00	7.00	1413	220.0
"	7/26/23	0740	21.7	8.79	4.00	7.00	1413	220.0
Notes:								

**Leichner Landfill
Groundwater Elevation Survey**

Project #: 04223030.13

Sampler: B. Raposo

Quarter: 1 2 3 4

Date: 07/25/23

Monitoring Point Designation	Reference Elevation (ft. msl)	DTB (ft. btoc)	DTW (ft. btoc)	Time	Comments
Monitoring Wells					
MW-1 N	216.58	15.00	Dry	0759	Dry @ 1505
MW-1 S	216.13	44.50	36.05	0802	
MW-1 E	216.45	29.05	Dry	0800	Dry @ 29.02
MW-NE	219.83	50.34	14.90	0847	
LB-R2	222.27	77.36	44.37	0930	
LB-1S	210.12	45.00	32.09	0813	
LB-1D	209.74	137.45	35.80	0816	
LB-3S	218.25	52.50	36.67	0837	
LB-3D	219.29	117.28	37.80	0830	
LB-5S	206.89	30.32	16.11	1114	
LB-5C	206.70	74.71	32.76	1106	
LB-5D	207.56	122.40	37.66	1108	
LB-6S	202.80	39.07	26.14	0954	
LB-10SR	204.04	42.35	30.58	0742	
LB-10CR	203.05	71.95	29.49	0748	
LB-10DR	203.36	121.10	43.55	0745	
LB-13I	202.36	55.03	27.05	1009	
LB-13C	202.68	66.00	27.47	1006	
LB-13D	202.96	88.88	27.77	1004	
LB-17S	208.18	34.38	30.16	0912	
LB-17I	213.14	51.95	35.35	0916	
LB-17C	206.55	72.35	29.05	0910	
LB-17D	213.17	100.91	36.40	0914	
LB-20S	221.22	61.50	38.43	0807	
LB-21S	223.35	54.24	35.89	0900	
LB-21C	223.32	79.10	36.36	0858	
LB-21D	223.63	110.73	39.61	0902	
LB-23S	229.19	45.40	31.75	0947	
LB-24S	235.13	54.16	39.35	0938	
LB-26I	200.22	58.30	24.28	0959	
LB-26D	200.75	101.78	24.05	0956	
LB-27I	205.35	57.15	30.50	1014	
LB-27D	204.65	115.10	37.98	1016	

Notes:

Cloudy, 67°F

Probe disconnected between locations.

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-55
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-072523-01-55

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY	
WEATHER:	SUNNY	CLOUDY	RAIN	?				TEMPERATURE:	(F) 71 °C			

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
7/25/23	11:23	30.32	.	16.11	.	.	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	7/25/23	11:45	A	3 40 ml	(HCl)	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/25/23	11:45	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	7/25/23	11:45	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 (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) (DS) (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 : 24 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(1125)	0.00	6.63	177.3	232.4	17.2	16.11	8.87	clear/colorless
1	A(1128)	0.30	6.57	157.3	225.8	15.7	16.11	7.94	"
2	A(1131)	0.60	6.46	148.4	223.6	15.3	16.11	7.77	"
3	A(1134)	0.80	6.43	145.6	222.0	15.4	16.11	7.80	"
4	A(1137)	1.05	6.41	143.3	221.6	15.2	16.11	7.74	"
5	A(1140)	1.25	6.43	141.8	220.3	15.2	16.11	7.78	"
6									

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

Low Flow Purge Method: (8/7/20 psi) ~ 400 mL/min

SAMPLER: B. Rapozo
(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-072523-02-27I

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

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
7/25/23	12:20	57.15	.	30.49	.	.	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:** [V if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	7/25/23	12:45	A	3 (40 ml)	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/25/23	12:45	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	7/25/23	12:45	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 (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) (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: 12:26 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(1227)	0.00	7.31	153.0	131.6	17.8	30.51	5.32	Clear/colorless
1	A(1230)	0.25	7.11	92.0	403.5	15.0	30.51	1.31	" "
2	A(1233)	0.50	7.00	85.5	403.5	14.9	30.51	0.50	" "
3	A(1236)	0.75	7.02	76.5	437.6	14.8	30.51	0.41	" "
4	A(1239)	1.00	7.06	65.7	449.5	14.6	30.51	0.39	" "
5	A(1242)	1.25	7.07	63.2	450.1	14.8	30.51	0.39	" "
6									

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

Low Flow Purge Method: (8/7/30 psi) ~ 300 ml/min

SAMPLER: B. Lapozzo
(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-072523-03-13J

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 76 °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)
7/25/23	13:10	55.03	.	27.05	.	.	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	7/25/23	13:30	A	3 (40 ml)	(HCl)	YES	NO		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/25/23	13:30	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	7/25/23	13:30	A	1 (125) 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)	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 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 : 11

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(1313)	0.00	7.23	124.8	294.0	23.2	27.08	7.25	clear/colorless
1	A(1316)	0.25	7.14	123.6	308.7	19.3	27.08	3.68	"
2	A(1319)	0.50	7.04	114.7	308.8	18.4	27.08	2.61	"
3	A(1322)	0.70	6.96	111.3	307.7	17.8	27.08	2.58	"
4	A(1325)	0.90	6.94	107.9	306.4	17.3	27.08	2.54	"
5	A(1328)	1.10	6.96	105.8	306.3	16.3	27.08	2.51	"
6									

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

Low Flow Purge Method: (8/7/30psi) ~ 300 ^m/_{min}

SAMPLER: B. Rapozo
(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-26I

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

BLIND ID: LB-072523-04-26I

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN				?	TEMPERATURE: 76 °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)	
7/25/23	14:05	58.30	.	24.27	.	.	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	7/25/23	14:30	A	3 (40 ml)	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/25/23	14:30	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	7/25/23	14:30	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	(E260) (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: 14 : 08

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(1409)	0.00	7.27	142.5	285.6	21.3	24.28	8.41	clear/colorless
1	A(1412)	0.25	7.06	125.9	280.1	16.2	24.28	5.02	" "
2	A(1415)	0.60	6.92	119.7	276.3	15.6	24.28	4.51	" "
3	A(1418)	1.00	6.79	118.7	273.8	16.0	24.28	4.42	" "
4	A(1421)	1.35	6.81	114.0	273.5	15.8	24.28	4.47	" "
5	A(1424)	1.60	6.83	110.8	273.5	15.6	24.28	4.48	" "
6									

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

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

SAMPLER:

B. Rapozo
(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

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

BLIND ID: LB-072523-05-FB

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY	
WEATHER:	SUNNY	CLOUDY	RAIN					?	TEMPERATURE: 77. °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)

Sample Depth: [if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	7/25/23	14:50	A	3 (40 m)	(HCl)	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/25/23	14:50	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	7/25/23	14:50	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)	OR []	WA []
	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 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	(61450)	0.00	.	.	.	.	.	.	.
1		.	.	.	.	.	.	.	.
2		.	.	.	.	.	.	.	.
3		.	.	.	.	.	.	.	.
4		.	.	.	.	.	.	.	.
5		.	.	.	.	.	.	.	.
6		.	.	.	.	.	.	.	.

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

Low Flow Purge Method: LB-26I using lab supplied DI water

SAMPLER: B. Rapozo
(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-65

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

BLIND ID: LB-072623 - 01 - 65

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN					?	TEMPERATURE: °F 61 °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)
7/26/23	08:35	39.07	.	26.16	.	.	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	7/26/23	09:06	A	3 40 ml	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/26/23	09:00	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	7/26/23	09:00	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 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: 08:39

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(0840)	0.00	6.77	188.8	255.2	15.6	26.17	12.11	clear / colorless
1	A(0843)	0.25	6.69	181.0	265.4	14.2	26.17	9.67	" "
2	A(0846)	0.50	6.68	173.1	256.9	14.0	26.17	9.61	" "
3	A(0849)	0.75	6.71	158.0	262.3	14.0	26.17	9.01	" "
4	A(0852)	1.00	6.70	154.9	265.9	13.9	26.17	8.83	" "
5	A(0855)	1.25	6.72	151.2	266.5	14.0	26.17	8.84	" "
6									

[Casing]

[Select A-G]

[Cumulative Totals]

[Circle units]

[Clarity, Color]

Low Flow Purge Method:

(8/7/25 psi) ~ 300 ml/min

SAMPLER:

(PRINTED NAME)

B. Rapozo

(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-15

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

BLIND ID: LB-072623-02-15

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)
7/26/23	09:30	45.00	.	32.14	.	.	X 1
1/1	:	.	.	32.14	.	.	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	7/26/23	09:55	A	3 40 ml	(HCl)	(YES)	(NO)		
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/26/23	09:55	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	7/26/23	09:55	A	1 (125, 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 []
	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: 09:33

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(0934)	0.00	7.03	149.2	290.5	16.5	32.15	8.30	clear/colorless
1	A(0937)	0.30	6.96	136.7	288.5	14.5	32.15	5.31	" "
2	A(0940)	0.60	6.90	123.1	286.3	14.3	32.15	5.38	" "
3	A(0943)	0.90	6.87	114.7	284.6	14.2	32.15	5.34	" "
4	A(0946)	1.20	6.86	111.2	282.4	14.3	32.15	5.30	" "
5	A(0949)	1.40	6.85	114.8	282.1	14.2	32.15	5.37	" "
6									

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

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

SAMPLER: B. Rapuzo
(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-10SR

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

BLIND ID: LB-072623-03-10SR

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 66.9 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

(Circle appropriate units)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
7/26/23	10:45	42.35	.	30.58	.	.	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: (R) 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	7/26/23	11:10	A	3 (40 ml)	(HCl)	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/26/23	11:10	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	7/26/23	11:10	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 []
	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 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: 10:46

Pump/Bailer Inlet Depth:

Meas.	Method	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1049)	0.00	6.50	159.4	190.8	20.9	30.60	6.34	clear/colorless
1	A(1052)	0.20	6.51	147.4	217.0	18.5	30.60	3.78	"
2	A(1055)	0.40	6.51	133.2	230.5	18.1	30.60	2.96	"
3	A(1058)	0.60	6.50	126.7	236.9	18.4	30.60	2.48	"
4	A(1101)	0.80	6.49	121.8	232.9	18.4	30.60	2.46	"
5	A(1104)	1.00	6.52	120.7	236.1	18.1	30.60	2.42	"
6									

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

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

SAMPLER: B. Rapozo
(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:** _____
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-072623-04-DUP

DUP ID: _____ **NA**

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 69 °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 =

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	7/26/23	11:15	A	3 40 ml	HCl	YES	NO		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	7/26/23	11:15	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	7/26/23	11:15	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) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (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)	0.00	/	/	/	/	/	/	/
1		.	.	.	.	.	.	.	.
2		.	.	.	.	.	.	.	.
3		.	.	.	.	.	.	.	.
4		.	.	.	.	.	.	.	.
5		.	.	.	.	.	.	.	.
6		.	.	.	.	.	.	.	.

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

Low-Flow-Purge-Method: Collected @ LB-10SR

SAMPLER: B. Rapozo (PRINTED NAME) [Signature] (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 _____ OF _____ COC# _____

PROJECT NAME <i>Lechner Landfill</i>	NUMBER OF CONTAINERS
PROJECT NUMBER <i>04223030.13</i>	
PROJECT MANAGER <i>Burb Lory</i>	
COMPANY NAME <i>SCS Engineers</i>	
ADDRESS <i>15940 SW 72nd Ave</i>	
CITY/STATE/ZIP <i>Portland OR 97224</i>	
E-MAIL ADDRESS <i>Blory@scsengineers.com</i>	
PHONE # <i>(971)-284-1297</i> FAX # _____	
SAMPLER'S SIGNATURE <i>[Signature]</i>	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	623	624	8260	8021	1664	1664	608	8081	814	8151	PCP	Hex-Chrom	NO3	DOC	TOX	Alkalinity	Dioxins/Furans	Dissolved Gases	CO2	Ethane	Ethene	REMARKS
<i>TBI</i>	<i>7/25/23</i>	<i>0700</i>		<i>W</i>	<i>2</i>																					
<i>LB-072523-01-55</i>	<i>7/25/23</i>	<i>1145</i>		<i>W</i>	<i>5</i>																					
<i>LQ-072523-02-27</i>	<i>7/25/23</i>	<i>1245</i>		<i>W</i>	<i>5</i>																					
<i>LB-072523-03-15</i>	<i>7/25/23</i>	<i>1230</i>		<i>W</i>	<i>5</i>																					
<i>LB-072523-04-26</i>	<i>7/25/23</i>	<i>1430</i>		<i>W</i>	<i>5</i>																					
<i>LB-072523-05-PB</i>	<i>7/25/23</i>	<i>1450</i>		<i>W</i>	<i>5</i>																					

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 checked="" 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: <i>Short Holds - NO3</i> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: <i>[Signature]</i> Signature _____ Date/Time <i>7/25/23 1155</i> Printed Name _____ Firm <i>SCS</i>	RECEIVED BY: <i>1155</i> <i>[Signature]</i> Signature _____ Date/Time _____ Printed Name _____ Firm <i>ALS</i>	RELINQUISHED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____	RECEIVED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____
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APPENDIX B

Summary Tables of 2023 Groundwater Field Parameter Measurements and Analytical Data

Field Parameters

**Table B-1 Field Parameters
Closed Lechner Landfill
Vancouver, Washington**

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (µmhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-1D	LB-032023-01-1D	03/20/23	6.83	213.9	10.6	9.52
LB-1S	LB-032023-02-1S	03/20/23	5.77	252	11.7	8.77
LB-1S	LB-072623-02-1S	07/26/23	6.85	282	14.2	5.37
LB-3D	LB-032023-07-3D	03/20/23	6.61	204.7	11.7	7.51
LB-3S	LB-032023-08-3S	03/20/23	6.63	199	11.6	7.28
LB-5D	LB-032123-09-5D	03/21/23	6.76	282.8	13	1.1
LB-5S	LB-032223-01-5S	03/22/23	5.91	153	11.7	5.33
LB-5S	LB-072523-01-5S	07/25/23	6.43	220	15.2	7.78
LB-6S	LB-032023-09-6S	03/20/23	6.62	235.8	11.7	10.71
LB-6S	LB-072623-01-6S	07/26/23	6.72	266.5	14	8.84
LB-10DR	LB-032023-03-10DR	03/20/23	6.79	280.3	12	3.12
LB-10SR	LB-032023-05-10SR	03/20/23	6.21	137.6	12.4	6.65
LB-10SR	LB-072623-03-10SR	07/26/23	6.52	236.1	18.1	2.42
LB-13D	LB-032123-07-13D	03/21/23	6.36	195.6	12.3	3.3
LB-13I	LB-032123-05-13I	03/21/23	6.4	231.8	12.6	4.27
LB-13I	LB-072523-03-13I	07/25/23	6.96	306.3	16.3	2.51
LB-17D	LB-032123-10-17D	03/21/23	6.61	242.6	15.7	1.31
LB-17I	LB-032123-11-17I	03/21/23	6.48	333.5	14.5	1.26
LB-20S	LB-032123-01-20S	03/21/23	6.58	502.4	11.3	2.89
LB-26D	LB-032123-08-26D	03/21/23	6.35	207	13.1	5.7
LB-26I	LB-032223-02-26I	03/22/23	6.3	213	12.1	4.6
LB-26I	LB-072523-04-26I	07/25/23	6.83	274	15.6	4.48
LB-27D	LB-032123-06-27D	03/21/23	6.65	245.8	10.6	4.28
LB-27I	LB-032123-03-27I	03/21/23	6.55	251	12.1	2.35
LB-27I	LB-072523-02-27I	07/25/23	7.07	450	14.8	0.39

Notes:
N/A = Not Applicable

Volatile Organic Compounds

**Table B-2 Historical VOC Detections
Closed Leichner Landfill, Vancouver, Washington**

Location	Sample Number	Date	Bromo-dichloro-methane (µg/L)	Chloro-benzene (µg/L)	Chloro-ethane (µg/L)	Chloroform (µg/L)	Chloro-methane (µg/L)	1,4-DCB (µg/L)	1,1-DCA (µg/L)	1,1,1-TCA (µg/L)	cis-1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)
LB-1D	LB-032023-01-1D	03/20/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-032023-02-1S	03/20/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-072623-02-1S	07/26/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-032023-07-3D	03/20/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-032023-08-3S	03/20/23	0.5 L	0.5 L	0.5 L	0.51	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-032123-09-5D	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-032223-01-5S	03/22/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-072523-01-5S	07/25/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-032023-09-6S	03/20/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-072623-01-6S	07/26/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10DR	LB-032023-03-10DR	03/20/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-032023-05-10SR	03/20/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-032023-06-DUP1	03/20/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-072623-03-10SR	07/26/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-072623-03-DUP	07/26/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-032123-07-13D	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-032123-05-13I	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-072523-03-13I	07/25/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-032123-10-17D	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-032123-11-17I	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-32123-01-20S	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-032123-08-26D	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-032223-02-26I	03/22/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-032223-02-26I	07/25/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-032123-06-27D	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-032123-03-27I	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-032123-04-DUP1	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-072523-02-27I	07/25/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
FIELD QC	LB-032023-04-FB1	03/20/23	0.5 L	0.5 L	0.5 L	3.3	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
FIELD QC	LB-032123-02-FB1	03/21/23	0.5 L	0.5 L	0.5 L	3.3	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
FIELD QC	LB-072523-05-FB1	07/25/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
FIELDQC	TB1, TB2 and TB3	03/21/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
FIELDQC	TB1 and TB2	07/25/23	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 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;

µg/L = micrograms per liter

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

**Table B-3 Inorganic Parameters
Closed Lechner Landfill, Vancouver, Washington**

Location	Sample Number	Date	Chloride (mg/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Dissolved Iron (mg/L)	Dissolved Manganese (mg/L)
Compliance Level (mg/L)			250	10	500	0.3	0.05
LB-1D	LB-032023-01-1D	03/20/23	5.97	5.58	167	0.021 L	0.0021
LB-1S	LB-032023-02-1S	03/20/23	4.57	3.69	184	0.021 L	0.0011
LB-1S	LB-072623-02-1S	07/26/23	6.15	4.34	191	0.021 L	0.0011 L
LB-3D	LB-032023-07-3D	03/20/23	4.32	4.05	169	0.021 L	0.0011 L
LB-3S	LB-032023-08-3S	03/20/23	4.21	3.56	162	0.021 L	0.0011 L
LB-5D	LB-032123-09-5D	03/21/23	8.11	1.2	215	0.021 L	0.0035
LB-5S	LB-032223-01-5S	03/22/23	3.98	4.19	145	0.021 L	0.0013
LB-5S	LB-072523-01-5S	07/25/23	4.74	5.03	153	0.021 L	0.0011 L
LB-6S	LB-032023-09-6S	03/20/23	5.77	3.44	179	0.021 L	0.0011 L
LB-6S	LB-072623-01-6S	07/26/23	5.76	3.1	182	0.021 L	0.0011
LB-9SR	LB-081121-01-9SR	08/11/21	3.56	3.65	175	0.021 L	0.0011 L
LB-10DR	LB-032023-03-10DR	03/20/23	10.1	2.36	221	0.026	0.0013
LB-10SR	LB-032023-05-10SR	03/20/23	3.47	2.45	130	0.023	0.0011 L
LB-10SR	LB-032023-06-DUP1	03/20/23	3.54	2.47	129	0.021 L	0.0011 L
LB-10SR	LB-072623-03-10SR	07/26/23	6.28	2.44	181	0.025	0.0011 L
LB-10SR	LB-072623-04-DUP	07/26/23	6.38	2.39	182	0.024	0.0011 L
LB-13D	LB-032123-07-13D	03/21/23	5.04	4.58	174	0.021 L	0.0011 L
LB-13I	LB-032123-05-13I	03/21/23	5.6	3.58	189	0.021 L	0.0042
LB-13I	LB-072523-03-13I	07/25/23	5.9	3.50	190	0.021 L	0.0026
LB-17D	LB-032123-10-17D	03/21/23	7.4	0.1 L	183	0.122	3.82
LB-17I	LB-032123-11-17I	03/21/23	11.2	0.1 L	218	9.07	2.04
LB-20S	LB-032123-01-20S	03/21/23	18.4	0.1 L	321	1.46	1.75
LB-26D	LB-032123-08-26D	03/21/23	5.01	4.45	180	0.021 L	0.0011 L
LB-26I	LB-032223-02-26I	03/22/23	5.28	4.25	172	0.021 L	0.0011 L
LB-26I	LB-072523-04-26I	07/25/23	5.05	4.2	181	0.021 L	0.0011 L
LB-27D	LB-032123-06-27D	03/21/23	7.2	4.17	195	0.021 L	0.0011
LB-27I	LB-032123-03-27I	03/21/23	9.42	1.69	232	0.021 L	0.0431
LB-27I (Dup)	LB-032123-04-DUP2	03/21/23	9.41	1.66	231	0.021 L	0.0483
LB-27I	LB-072523-02-27I	07/25/23	12.1	1.12	273	0.033	0.118
Notes:							
CL = compliance level for inorganic parameters and metals in groundwater at Lechner Landfill.							
mg/L = milligrams per liter; L = not detected at or above MRL; NT = not tested.							
B = estimated concentration; detected above the method detection limit (MDL) but below the method reporting limit (MRL)							
J = estimated concentration							
H = due to laboratory error, sample was extracted and analyzed past the recommended 7-day hold time							
[Shaded] = concentration is above the compliance level							

APPENDIX C

2023 Laboratory Analytical Data Reports
(Provided on attached CD only)

First Quarter (March) 2023 Laboratory Reports



March 31, 2023

Service Request No:K2303308

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 March 21, 2023
For your reference, these analyses have been assigned our service request number **K2303308**.

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

for 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: K2303308
Date Received: 03/21/2023

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:

Ten ground water samples were received for analysis at ALS Environmental on 03/21/2023. 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:

Method 8260C, 03/24/2023: Bromomethane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Approved by 

Date 03/31/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: LB-032023-01-1D	Lab ID: K2303308-002
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.97			0.20	mg/L	300.0
Manganese, Dissolved	2.1			1.1	ug/L	6010C
Nitrate as Nitrogen	5.58			0.10	mg/L	300.0
Solids, Total Dissolved	167			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032023-01-1S	Lab ID: K2303308-003
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	4.57			0.20	mg/L	300.0
Manganese, Dissolved	1.1			1.1	ug/L	6010C
Nitrate as Nitrogen	3.69			0.10	mg/L	300.0
Solids, Total Dissolved	184			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032023-03-10DR	Lab ID: K2303308-004
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	10.1			0.20	mg/L	300.0
Iron, Dissolved	26			21	ug/L	6010C
Manganese, Dissolved	1.3			1.1	ug/L	6010C
Nitrate as Nitrogen	2.36			0.10	mg/L	300.0
Solids, Total Dissolved	221			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032023-05-10SR	Lab ID: K2303308-006
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	3.47			0.20	mg/L	300.0
Iron, Dissolved	23			21	ug/L	6010C
Nitrate as Nitrogen	2.45			0.10	mg/L	300.0
Solids, Total Dissolved	130			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032023-06-DUP1	Lab ID: K2303308-007
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	3.54			0.20	mg/L	300.0
Nitrate as Nitrogen	2.47			0.10	mg/L	300.0
Solids, Total Dissolved	129			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032023-07-3D	Lab ID: K2303308-008
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	4.32			0.20	mg/L	300.0
Nitrate as Nitrogen	4.05			0.10	mg/L	300.0
Solids, Total Dissolved	169			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032023-08-3S	Lab ID: K2303308-009
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	4.21			0.20	mg/L	300.0
Chloroform	0.51			0.50	ug/L	8260C



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: LB-032023-08-3S	Lab ID: K2303308-009
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Nitrate as Nitrogen	3.56			0.10	mg/L	300.0
Solids, Total Dissolved	162			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032023-09-6S	Lab ID: K2303308-010
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.77			0.20	mg/L	300.0
Nitrate as Nitrogen	3.44			0.10	mg/L	300.0
Solids, Total Dissolved	179			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032023-04-FB1	Lab ID: K2303308-005
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloroform	3.3			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: Lechner Landfill/04223030.13

Service Request:K2303308

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2303308-001	TB1	3/20/2023	0700
K2303308-002	LB-032023-01-1D	3/20/2023	0940
K2303308-003	LB-032023-01-1S	3/20/2023	1040
K2303308-004	LB-032023-03-10DR	3/20/2023	1135
K2303308-005	LB-032023-04-FB1	3/20/2023	1145
K2303308-006	LB-032023-05-10SR	3/20/2023	1230
K2303308-007	LB-032023-06-DUP1	3/20/2023	1235
K2303308-008	LB-032023-07-3D	3/20/2023	1335
K2303308-009	LB-032023-08-3S	3/20/2023	1420
K2303308-010	LB-032023-09-6S	3/20/2023	1510



CHAIN OF CUSTODY


SR# 172503308

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	Leicher Landfill	
PROJECT NUMBER	04223030.13	
PROJECT MANAGER	Bobb Lary	
COMPANY NAME	SCS Engineers	
ADDRESS	15940 SW 72nd Ave	
CITY/STATE/ZIP	Portland, OR 97224	
E-MAIL ADDRESS	Blary@scsengineers.com	
PHONE #	(971) 284-1297	FAX #
SAMPLER'S SIGNATURE	<i>[Signature]</i>	

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 type="checkbox"/>	Hydrocarbons Gas <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <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"/> 1664 SGT <input type="checkbox"/>	Aroclors Congeners <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/>	Metals, Total or PCB (See List below) <input type="checkbox"/>	Cyanide <input type="checkbox"/>	(circle) pH, Cond., 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	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"/> Ethylene <input type="checkbox"/>	REMARKS
TBI	3/20/23	0700	W	Z			X														
LB-0320 ²³ 01-1D	3/20/23	0940	W	S			Y						Y		X						
UB-032023-02-1S	3/20/23	1040	W	S			Y						Y		X						
UB-032023-03-10DR	3/20/23	1135	W	S			Y						Y		Y						
LB-032023-04-FB1	3/20/23	1145	W	S			X						Y		X						
LB-032023-05-10SR	3/20/23	1230	W	S			X						Y		Y						
LB-032023-06-DUP1	3/20/23	1235	W	S			Y						Y		Y						
LB-032023-07-3D	3/20/23	1335	W	S			X						Y		Y						
LB-032023-08-3S	3/20/23	1420	W	S			Y						X		Y						
LB-032023-09-6S	3/20/23	1510	W	S			Y						X		Y						

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 <div style="text-align: center;"> Container Supply Number  129003 </div> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: <i>[Signature]</i> Signature B. LARY Printed Name 3/21/23 Date/Time SCS Firm	RECEIVED BY: <i>[Signature]</i> Signature Greg Rich Printed Name 3-21-23 1125 Date/Time ALS Firm	RELINQUISHED BY: <i>[Signature]</i> Signature Greg Rich Printed Name 3-21-23 1315 Date/Time ALS Firm	RECEIVED BY: <i>[Signature]</i> Signature [Signature] Printed Name 3/21/23 Date/Time ALS Firm
--	---	---	--

PM 12

Cooler Receipt and Preservation Form

Client SLS Service Request K23 03308
Received: 3/21/23 Opened: 3/21/23 By: [Signature] Unloaded: 3/21/23 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

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 type="checkbox"/> NA	Filed
<u>44</u>		<u>1202</u>	<u>129003</u>				

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
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 # above and notify the PM. NA Y N

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

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
- 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
- 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

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.
- 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.
- 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/04223030.13

Service Request: K2303308

Sample Name: TB1
Lab Code: K2303308-001
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
8260C

Extracted/Digested By

Analyzed By
GROETTGER

Sample Name: LB-032023-01-1D
Lab Code: K2303308-002
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ACOUCH

Sample Name: LB-032023-01-1S
Lab Code: K2303308-003
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ACOUCH

Sample Name: LB-032023-03-10DR
Lab Code: K2303308-004
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ACOUCH

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13

Service Request: K2303308

Sample Name: LB-032023-04-FB1
Lab Code: K2303308-005
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032023-05-10SR
Lab Code: K2303308-006
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032023-06-DUP1
Lab Code: K2303308-007
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032023-07-3D
Lab Code: K2303308-008
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0

Extracted/Digested By

Analyzed By
NFOTH

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13

Service Request: K2303308

Sample Name: LB-032023-07-3D
Lab Code: K2303308-008
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
6010C
8260C
SM 2540 C

Extracted/Digested By
ACOUCH

Analyzed By
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032023-08-3S
Lab Code: K2303308-009
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By
ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032023-09-6S
Lab Code: K2303308-010
Sample Matrix: Ground Water

Date Collected: 03/20/23
Date Received: 03/21/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By
ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN



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.
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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 07:00
Date Received: 03/21/23 13:15

Sample Name: TB1
Lab Code: K2303308-001

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	03/24/23 15:04	
Benzene	ND U	0.50	1	03/24/23 15:04	
Bromobenzene	ND U	2.0	1	03/24/23 15:04	
Bromochloromethane	ND U	0.50	1	03/24/23 15:04	
Bromodichloromethane	ND U	0.50	1	03/24/23 15:04	
Bromoform	ND U	0.50	1	03/24/23 15:04	
Bromomethane	ND U	0.50	1	03/24/23 15:04	*
2-Butanone (MEK)	ND U	20	1	03/24/23 15:04	
n-Butylbenzene	ND U	4.0	1	03/24/23 15:04	
sec-Butylbenzene	ND U	2.0	1	03/24/23 15:04	
tert-Butylbenzene	ND U	2.0	1	03/24/23 15:04	
Carbon Disulfide	ND U	0.50	1	03/24/23 15:04	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 15:04	
Chlorobenzene	ND U	0.50	1	03/24/23 15:04	
Chloroethane	ND U	0.50	1	03/24/23 15:04	
Chloroform	ND U	0.50	1	03/24/23 15:04	
Chloromethane	ND U	0.50	1	03/24/23 15:04	
2-Chlorotoluene	ND U	2.0	1	03/24/23 15:04	
4-Chlorotoluene	ND U	2.0	1	03/24/23 15:04	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 15:04	
Dibromochloromethane	ND U	0.50	1	03/24/23 15:04	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 15:04	
Dibromomethane	ND U	0.50	1	03/24/23 15:04	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 15:04	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 15:04	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 15:04	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 15:04	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 15:04	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 15:04	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 15:04	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 15:04	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 15:04	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 15:04	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 15:04	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 15:04	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 15:04	
Ethylbenzene	ND U	0.50	1	03/24/23 15:04	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 15:04	
2-Hexanone	ND U	20	1	03/24/23 15:04	
Isopropylbenzene	ND U	2.0	1	03/24/23 15:04	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 15:04	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 07:00
Date Received: 03/21/23 13:15

Sample Name: TB1
Lab Code: K2303308-001

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	03/24/23 15:04	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 15:04	
Methylene Chloride	ND U	2.0	1	03/24/23 15:04	
Naphthalene	ND U	2.0	1	03/24/23 15:04	
n-Propylbenzene	ND U	2.0	1	03/24/23 15:04	
Styrene	ND U	0.50	1	03/24/23 15:04	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 15:04	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 15:04	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 15:04	
Toluene	ND U	0.50	1	03/24/23 15:04	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 15:04	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 15:04	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 15:04	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 15:04	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 15:04	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 15:04	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 15:04	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 15:04	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 15:04	
Vinyl Chloride	ND U	0.50	1	03/24/23 15:04	
o-Xylene	ND U	0.50	1	03/24/23 15:04	
m,p-Xylenes	ND U	0.50	1	03/24/23 15:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	03/24/23 15:04	
Dibromofluoromethane	117	73 - 122	03/24/23 15:04	
Toluene-d8	100	65 - 144	03/24/23 15:04	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 09:40
Date Received: 03/21/23 13:15

Sample Name: LB-032023-01-1D
Lab Code: K2303308-002

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	03/24/23 15:24	
Benzene	ND U	0.50	1	03/24/23 15:24	
Bromobenzene	ND U	2.0	1	03/24/23 15:24	
Bromochloromethane	ND U	0.50	1	03/24/23 15:24	
Bromodichloromethane	ND U	0.50	1	03/24/23 15:24	
Bromoform	ND U	0.50	1	03/24/23 15:24	
Bromomethane	ND U	0.50	1	03/24/23 15:24	*
2-Butanone (MEK)	ND U	20	1	03/24/23 15:24	
n-Butylbenzene	ND U	4.0	1	03/24/23 15:24	
sec-Butylbenzene	ND U	2.0	1	03/24/23 15:24	
tert-Butylbenzene	ND U	2.0	1	03/24/23 15:24	
Carbon Disulfide	ND U	0.50	1	03/24/23 15:24	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 15:24	
Chlorobenzene	ND U	0.50	1	03/24/23 15:24	
Chloroethane	ND U	0.50	1	03/24/23 15:24	
Chloroform	ND U	0.50	1	03/24/23 15:24	
Chloromethane	ND U	0.50	1	03/24/23 15:24	
2-Chlorotoluene	ND U	2.0	1	03/24/23 15:24	
4-Chlorotoluene	ND U	2.0	1	03/24/23 15:24	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 15:24	
Dibromochloromethane	ND U	0.50	1	03/24/23 15:24	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 15:24	
Dibromomethane	ND U	0.50	1	03/24/23 15:24	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 15:24	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 15:24	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 15:24	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 15:24	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 15:24	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 15:24	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 15:24	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 15:24	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 15:24	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 15:24	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 15:24	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 15:24	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 15:24	
Ethylbenzene	ND U	0.50	1	03/24/23 15:24	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 15:24	
2-Hexanone	ND U	20	1	03/24/23 15:24	
Isopropylbenzene	ND U	2.0	1	03/24/23 15:24	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 15:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 09:40
Date Received: 03/21/23 13:15

Sample Name: LB-032023-01-1D
Lab Code: K2303308-002

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	03/24/23 15:24	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 15:24	
Methylene Chloride	ND U	2.0	1	03/24/23 15:24	
Naphthalene	ND U	2.0	1	03/24/23 15:24	
n-Propylbenzene	ND U	2.0	1	03/24/23 15:24	
Styrene	ND U	0.50	1	03/24/23 15:24	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 15:24	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 15:24	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 15:24	
Toluene	ND U	0.50	1	03/24/23 15:24	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 15:24	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 15:24	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 15:24	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 15:24	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 15:24	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 15:24	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 15:24	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 15:24	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 15:24	
Vinyl Chloride	ND U	0.50	1	03/24/23 15:24	
o-Xylene	ND U	0.50	1	03/24/23 15:24	
m,p-Xylenes	ND U	0.50	1	03/24/23 15:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	03/24/23 15:24	
Dibromofluoromethane	122	73 - 122	03/24/23 15:24	
Toluene-d8	103	65 - 144	03/24/23 15:24	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 10:40
Date Received: 03/21/23 13:15

Sample Name: LB-032023-01-1S
Lab Code: K2303308-003

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	03/24/23 15:44	
Benzene	ND U	0.50	1	03/24/23 15:44	
Bromobenzene	ND U	2.0	1	03/24/23 15:44	
Bromochloromethane	ND U	0.50	1	03/24/23 15:44	
Bromodichloromethane	ND U	0.50	1	03/24/23 15:44	
Bromoform	ND U	0.50	1	03/24/23 15:44	
Bromomethane	ND U	0.50	1	03/24/23 15:44	*
2-Butanone (MEK)	ND U	20	1	03/24/23 15:44	
n-Butylbenzene	ND U	4.0	1	03/24/23 15:44	
sec-Butylbenzene	ND U	2.0	1	03/24/23 15:44	
tert-Butylbenzene	ND U	2.0	1	03/24/23 15:44	
Carbon Disulfide	ND U	0.50	1	03/24/23 15:44	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 15:44	
Chlorobenzene	ND U	0.50	1	03/24/23 15:44	
Chloroethane	ND U	0.50	1	03/24/23 15:44	
Chloroform	ND U	0.50	1	03/24/23 15:44	
Chloromethane	ND U	0.50	1	03/24/23 15:44	
2-Chlorotoluene	ND U	2.0	1	03/24/23 15:44	
4-Chlorotoluene	ND U	2.0	1	03/24/23 15:44	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 15:44	
Dibromochloromethane	ND U	0.50	1	03/24/23 15:44	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 15:44	
Dibromomethane	ND U	0.50	1	03/24/23 15:44	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 15:44	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 15:44	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 15:44	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 15:44	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 15:44	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 15:44	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 15:44	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 15:44	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 15:44	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 15:44	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 15:44	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 15:44	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 15:44	
Ethylbenzene	ND U	0.50	1	03/24/23 15:44	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 15:44	
2-Hexanone	ND U	20	1	03/24/23 15:44	
Isopropylbenzene	ND U	2.0	1	03/24/23 15:44	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 15:44	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 10:40
Date Received: 03/21/23 13:15

Sample Name: LB-032023-01-1S
Lab Code: K2303308-003

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	03/24/23 15:44	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 15:44	
Methylene Chloride	ND U	2.0	1	03/24/23 15:44	
Naphthalene	ND U	2.0	1	03/24/23 15:44	
n-Propylbenzene	ND U	2.0	1	03/24/23 15:44	
Styrene	ND U	0.50	1	03/24/23 15:44	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 15:44	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 15:44	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 15:44	
Toluene	ND U	0.50	1	03/24/23 15:44	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 15:44	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 15:44	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 15:44	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 15:44	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 15:44	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 15:44	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 15:44	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 15:44	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 15:44	
Vinyl Chloride	ND U	0.50	1	03/24/23 15:44	
o-Xylene	ND U	0.50	1	03/24/23 15:44	
m,p-Xylenes	ND U	0.50	1	03/24/23 15:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	03/24/23 15:44	
Dibromofluoromethane	121	73 - 122	03/24/23 15:44	
Toluene-d8	101	65 - 144	03/24/23 15:44	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 11:35
Date Received: 03/21/23 13:15

Sample Name: LB-032023-03-10DR
Lab Code: K2303308-004

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	03/24/23 16:04	
Benzene	ND U	0.50	1	03/24/23 16:04	
Bromobenzene	ND U	2.0	1	03/24/23 16:04	
Bromochloromethane	ND U	0.50	1	03/24/23 16:04	
Bromodichloromethane	ND U	0.50	1	03/24/23 16:04	
Bromoform	ND U	0.50	1	03/24/23 16:04	
Bromomethane	ND U	0.50	1	03/24/23 16:04	*
2-Butanone (MEK)	ND U	20	1	03/24/23 16:04	
n-Butylbenzene	ND U	4.0	1	03/24/23 16:04	
sec-Butylbenzene	ND U	2.0	1	03/24/23 16:04	
tert-Butylbenzene	ND U	2.0	1	03/24/23 16:04	
Carbon Disulfide	ND U	0.50	1	03/24/23 16:04	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 16:04	
Chlorobenzene	ND U	0.50	1	03/24/23 16:04	
Chloroethane	ND U	0.50	1	03/24/23 16:04	
Chloroform	ND U	0.50	1	03/24/23 16:04	
Chloromethane	ND U	0.50	1	03/24/23 16:04	
2-Chlorotoluene	ND U	2.0	1	03/24/23 16:04	
4-Chlorotoluene	ND U	2.0	1	03/24/23 16:04	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 16:04	
Dibromochloromethane	ND U	0.50	1	03/24/23 16:04	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 16:04	
Dibromomethane	ND U	0.50	1	03/24/23 16:04	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 16:04	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 16:04	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 16:04	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 16:04	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 16:04	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 16:04	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 16:04	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 16:04	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 16:04	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 16:04	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 16:04	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 16:04	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 16:04	
Ethylbenzene	ND U	0.50	1	03/24/23 16:04	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 16:04	
2-Hexanone	ND U	20	1	03/24/23 16:04	
Isopropylbenzene	ND U	2.0	1	03/24/23 16:04	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 16:04	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 11:35
Date Received: 03/21/23 13:15

Sample Name: LB-032023-03-10DR
Lab Code: K2303308-004

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	03/24/23 16:04	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 16:04	
Methylene Chloride	ND U	2.0	1	03/24/23 16:04	
Naphthalene	ND U	2.0	1	03/24/23 16:04	
n-Propylbenzene	ND U	2.0	1	03/24/23 16:04	
Styrene	ND U	0.50	1	03/24/23 16:04	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 16:04	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 16:04	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 16:04	
Toluene	ND U	0.50	1	03/24/23 16:04	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 16:04	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 16:04	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 16:04	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 16:04	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 16:04	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 16:04	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 16:04	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 16:04	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 16:04	
Vinyl Chloride	ND U	0.50	1	03/24/23 16:04	
o-Xylene	ND U	0.50	1	03/24/23 16:04	
m,p-Xylenes	ND U	0.50	1	03/24/23 16:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	03/24/23 16:04	
Dibromofluoromethane	121	73 - 122	03/24/23 16:04	
Toluene-d8	101	65 - 144	03/24/23 16:04	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 11:45
Date Received: 03/21/23 13:15

Sample Name: LB-032023-04-FB1
Lab Code: K2303308-005

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	03/24/23 16:24	
Benzene	ND U	0.50	1	03/24/23 16:24	
Bromobenzene	ND U	2.0	1	03/24/23 16:24	
Bromochloromethane	ND U	0.50	1	03/24/23 16:24	
Bromodichloromethane	ND U	0.50	1	03/24/23 16:24	
Bromoform	ND U	0.50	1	03/24/23 16:24	
Bromomethane	ND U	0.50	1	03/24/23 16:24	*
2-Butanone (MEK)	ND U	20	1	03/24/23 16:24	
n-Butylbenzene	ND U	4.0	1	03/24/23 16:24	
sec-Butylbenzene	ND U	2.0	1	03/24/23 16:24	
tert-Butylbenzene	ND U	2.0	1	03/24/23 16:24	
Carbon Disulfide	ND U	0.50	1	03/24/23 16:24	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 16:24	
Chlorobenzene	ND U	0.50	1	03/24/23 16:24	
Chloroethane	ND U	0.50	1	03/24/23 16:24	
Chloroform	3.3	0.50	1	03/24/23 16:24	
Chloromethane	ND U	0.50	1	03/24/23 16:24	
2-Chlorotoluene	ND U	2.0	1	03/24/23 16:24	
4-Chlorotoluene	ND U	2.0	1	03/24/23 16:24	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 16:24	
Dibromochloromethane	ND U	0.50	1	03/24/23 16:24	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 16:24	
Dibromomethane	ND U	0.50	1	03/24/23 16:24	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 16:24	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 16:24	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 16:24	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 16:24	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 16:24	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 16:24	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 16:24	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 16:24	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 16:24	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 16:24	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 16:24	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 16:24	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 16:24	
Ethylbenzene	ND U	0.50	1	03/24/23 16:24	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 16:24	
2-Hexanone	ND U	20	1	03/24/23 16:24	
Isopropylbenzene	ND U	2.0	1	03/24/23 16:24	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 16:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 11:45
Date Received: 03/21/23 13:15

Sample Name: LB-032023-04-FB1
Lab Code: K2303308-005

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	03/24/23 16:24	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 16:24	
Methylene Chloride	ND U	2.0	1	03/24/23 16:24	
Naphthalene	ND U	2.0	1	03/24/23 16:24	
n-Propylbenzene	ND U	2.0	1	03/24/23 16:24	
Styrene	ND U	0.50	1	03/24/23 16:24	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 16:24	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 16:24	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 16:24	
Toluene	ND U	0.50	1	03/24/23 16:24	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 16:24	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 16:24	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 16:24	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 16:24	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 16:24	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 16:24	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 16:24	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 16:24	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 16:24	
Vinyl Chloride	ND U	0.50	1	03/24/23 16:24	
o-Xylene	ND U	0.50	1	03/24/23 16:24	
m,p-Xylenes	ND U	0.50	1	03/24/23 16:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	03/24/23 16:24	
Dibromofluoromethane	118	73 - 122	03/24/23 16:24	
Toluene-d8	100	65 - 144	03/24/23 16:24	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 12:30
Date Received: 03/21/23 13:15

Sample Name: LB-032023-05-10SR
Lab Code: K2303308-006

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	03/24/23 16:44	
Benzene	ND U	0.50	1	03/24/23 16:44	
Bromobenzene	ND U	2.0	1	03/24/23 16:44	
Bromochloromethane	ND U	0.50	1	03/24/23 16:44	
Bromodichloromethane	ND U	0.50	1	03/24/23 16:44	
Bromoform	ND U	0.50	1	03/24/23 16:44	
Bromomethane	ND U	0.50	1	03/24/23 16:44	*
2-Butanone (MEK)	ND U	20	1	03/24/23 16:44	
n-Butylbenzene	ND U	4.0	1	03/24/23 16:44	
sec-Butylbenzene	ND U	2.0	1	03/24/23 16:44	
tert-Butylbenzene	ND U	2.0	1	03/24/23 16:44	
Carbon Disulfide	ND U	0.50	1	03/24/23 16:44	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 16:44	
Chlorobenzene	ND U	0.50	1	03/24/23 16:44	
Chloroethane	ND U	0.50	1	03/24/23 16:44	
Chloroform	ND U	0.50	1	03/24/23 16:44	
Chloromethane	ND U	0.50	1	03/24/23 16:44	
2-Chlorotoluene	ND U	2.0	1	03/24/23 16:44	
4-Chlorotoluene	ND U	2.0	1	03/24/23 16:44	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 16:44	
Dibromochloromethane	ND U	0.50	1	03/24/23 16:44	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 16:44	
Dibromomethane	ND U	0.50	1	03/24/23 16:44	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 16:44	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 16:44	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 16:44	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 16:44	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 16:44	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 16:44	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 16:44	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 16:44	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 16:44	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 16:44	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 16:44	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 16:44	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 16:44	
Ethylbenzene	ND U	0.50	1	03/24/23 16:44	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 16:44	
2-Hexanone	ND U	20	1	03/24/23 16:44	
Isopropylbenzene	ND U	2.0	1	03/24/23 16:44	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 16:44	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 12:30
Date Received: 03/21/23 13:15

Sample Name: LB-032023-05-10SR
Lab Code: K2303308-006

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	03/24/23 16:44	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 16:44	
Methylene Chloride	ND U	2.0	1	03/24/23 16:44	
Naphthalene	ND U	2.0	1	03/24/23 16:44	
n-Propylbenzene	ND U	2.0	1	03/24/23 16:44	
Styrene	ND U	0.50	1	03/24/23 16:44	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 16:44	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 16:44	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 16:44	
Toluene	ND U	0.50	1	03/24/23 16:44	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 16:44	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 16:44	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 16:44	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 16:44	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 16:44	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 16:44	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 16:44	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 16:44	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 16:44	
Vinyl Chloride	ND U	0.50	1	03/24/23 16:44	
o-Xylene	ND U	0.50	1	03/24/23 16:44	
m,p-Xylenes	ND U	0.50	1	03/24/23 16:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	03/24/23 16:44	
Dibromofluoromethane	119	73 - 122	03/24/23 16:44	
Toluene-d8	102	65 - 144	03/24/23 16:44	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 12:35
Date Received: 03/21/23 13:15

Sample Name: LB-032023-06-DUP1
Lab Code: K2303308-007

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	03/24/23 17:04	
Benzene	ND U	0.50	1	03/24/23 17:04	
Bromobenzene	ND U	2.0	1	03/24/23 17:04	
Bromochloromethane	ND U	0.50	1	03/24/23 17:04	
Bromodichloromethane	ND U	0.50	1	03/24/23 17:04	
Bromoform	ND U	0.50	1	03/24/23 17:04	
Bromomethane	ND U	0.50	1	03/24/23 17:04	*
2-Butanone (MEK)	ND U	20	1	03/24/23 17:04	
n-Butylbenzene	ND U	4.0	1	03/24/23 17:04	
sec-Butylbenzene	ND U	2.0	1	03/24/23 17:04	
tert-Butylbenzene	ND U	2.0	1	03/24/23 17:04	
Carbon Disulfide	ND U	0.50	1	03/24/23 17:04	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 17:04	
Chlorobenzene	ND U	0.50	1	03/24/23 17:04	
Chloroethane	ND U	0.50	1	03/24/23 17:04	
Chloroform	ND U	0.50	1	03/24/23 17:04	
Chloromethane	ND U	0.50	1	03/24/23 17:04	
2-Chlorotoluene	ND U	2.0	1	03/24/23 17:04	
4-Chlorotoluene	ND U	2.0	1	03/24/23 17:04	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 17:04	
Dibromochloromethane	ND U	0.50	1	03/24/23 17:04	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 17:04	
Dibromomethane	ND U	0.50	1	03/24/23 17:04	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 17:04	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 17:04	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 17:04	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 17:04	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 17:04	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 17:04	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 17:04	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 17:04	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 17:04	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 17:04	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 17:04	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 17:04	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 17:04	
Ethylbenzene	ND U	0.50	1	03/24/23 17:04	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 17:04	
2-Hexanone	ND U	20	1	03/24/23 17:04	
Isopropylbenzene	ND U	2.0	1	03/24/23 17:04	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 17:04	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 12:35
Date Received: 03/21/23 13:15

Sample Name: LB-032023-06-DUP1
Lab Code: K2303308-007

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	03/24/23 17:04	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 17:04	
Methylene Chloride	ND U	2.0	1	03/24/23 17:04	
Naphthalene	ND U	2.0	1	03/24/23 17:04	
n-Propylbenzene	ND U	2.0	1	03/24/23 17:04	
Styrene	ND U	0.50	1	03/24/23 17:04	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 17:04	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 17:04	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 17:04	
Toluene	ND U	0.50	1	03/24/23 17:04	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 17:04	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 17:04	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 17:04	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 17:04	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 17:04	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 17:04	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 17:04	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 17:04	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 17:04	
Vinyl Chloride	ND U	0.50	1	03/24/23 17:04	
o-Xylene	ND U	0.50	1	03/24/23 17:04	
m,p-Xylenes	ND U	0.50	1	03/24/23 17:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	03/24/23 17:04	
Dibromofluoromethane	118	73 - 122	03/24/23 17:04	
Toluene-d8	101	65 - 144	03/24/23 17:04	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 13:35
Date Received: 03/21/23 13:15

Sample Name: LB-032023-07-3D
Lab Code: K2303308-008

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	03/24/23 17:24	
Benzene	ND U	0.50	1	03/24/23 17:24	
Bromobenzene	ND U	2.0	1	03/24/23 17:24	
Bromochloromethane	ND U	0.50	1	03/24/23 17:24	
Bromodichloromethane	ND U	0.50	1	03/24/23 17:24	
Bromoform	ND U	0.50	1	03/24/23 17:24	
Bromomethane	ND U	0.50	1	03/24/23 17:24	*
2-Butanone (MEK)	ND U	20	1	03/24/23 17:24	
n-Butylbenzene	ND U	4.0	1	03/24/23 17:24	
sec-Butylbenzene	ND U	2.0	1	03/24/23 17:24	
tert-Butylbenzene	ND U	2.0	1	03/24/23 17:24	
Carbon Disulfide	ND U	0.50	1	03/24/23 17:24	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 17:24	
Chlorobenzene	ND U	0.50	1	03/24/23 17:24	
Chloroethane	ND U	0.50	1	03/24/23 17:24	
Chloroform	ND U	0.50	1	03/24/23 17:24	
Chloromethane	ND U	0.50	1	03/24/23 17:24	
2-Chlorotoluene	ND U	2.0	1	03/24/23 17:24	
4-Chlorotoluene	ND U	2.0	1	03/24/23 17:24	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 17:24	
Dibromochloromethane	ND U	0.50	1	03/24/23 17:24	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 17:24	
Dibromomethane	ND U	0.50	1	03/24/23 17:24	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 17:24	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 17:24	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 17:24	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 17:24	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 17:24	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 17:24	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 17:24	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 17:24	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 17:24	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 17:24	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 17:24	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 17:24	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 17:24	
Ethylbenzene	ND U	0.50	1	03/24/23 17:24	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 17:24	
2-Hexanone	ND U	20	1	03/24/23 17:24	
Isopropylbenzene	ND U	2.0	1	03/24/23 17:24	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 17:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 13:35
Date Received: 03/21/23 13:15

Sample Name: LB-032023-07-3D
Lab Code: K2303308-008

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	03/24/23 17:24	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 17:24	
Methylene Chloride	ND U	2.0	1	03/24/23 17:24	
Naphthalene	ND U	2.0	1	03/24/23 17:24	
n-Propylbenzene	ND U	2.0	1	03/24/23 17:24	
Styrene	ND U	0.50	1	03/24/23 17:24	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 17:24	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 17:24	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 17:24	
Toluene	ND U	0.50	1	03/24/23 17:24	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 17:24	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 17:24	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 17:24	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 17:24	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 17:24	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 17:24	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 17:24	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 17:24	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 17:24	
Vinyl Chloride	ND U	0.50	1	03/24/23 17:24	
o-Xylene	ND U	0.50	1	03/24/23 17:24	
m,p-Xylenes	ND U	0.50	1	03/24/23 17:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	03/24/23 17:24	
Dibromofluoromethane	122	73 - 122	03/24/23 17:24	
Toluene-d8	101	65 - 144	03/24/23 17:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-08-3S
Lab Code: K2303308-009

Service Request: K2303308
Date Collected: 03/20/23 14:20
Date Received: 03/21/23 13:15

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	03/24/23 17:43	
Benzene	ND U	0.50	1	03/24/23 17:43	
Bromobenzene	ND U	2.0	1	03/24/23 17:43	
Bromochloromethane	ND U	0.50	1	03/24/23 17:43	
Bromodichloromethane	ND U	0.50	1	03/24/23 17:43	
Bromoform	ND U	0.50	1	03/24/23 17:43	
Bromomethane	ND U	0.50	1	03/24/23 17:43	*
2-Butanone (MEK)	ND U	20	1	03/24/23 17:43	
n-Butylbenzene	ND U	4.0	1	03/24/23 17:43	
sec-Butylbenzene	ND U	2.0	1	03/24/23 17:43	
tert-Butylbenzene	ND U	2.0	1	03/24/23 17:43	
Carbon Disulfide	ND U	0.50	1	03/24/23 17:43	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 17:43	
Chlorobenzene	ND U	0.50	1	03/24/23 17:43	
Chloroethane	ND U	0.50	1	03/24/23 17:43	
Chloroform	0.51	0.50	1	03/24/23 17:43	
Chloromethane	ND U	0.50	1	03/24/23 17:43	
2-Chlorotoluene	ND U	2.0	1	03/24/23 17:43	
4-Chlorotoluene	ND U	2.0	1	03/24/23 17:43	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 17:43	
Dibromochloromethane	ND U	0.50	1	03/24/23 17:43	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 17:43	
Dibromomethane	ND U	0.50	1	03/24/23 17:43	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 17:43	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 17:43	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 17:43	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 17:43	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 17:43	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 17:43	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 17:43	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 17:43	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 17:43	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 17:43	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 17:43	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 17:43	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 17:43	
Ethylbenzene	ND U	0.50	1	03/24/23 17:43	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 17:43	
2-Hexanone	ND U	20	1	03/24/23 17:43	
Isopropylbenzene	ND U	2.0	1	03/24/23 17:43	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 17:43	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 14:20
Date Received: 03/21/23 13:15

Sample Name: LB-032023-08-3S
Lab Code: K2303308-009

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	03/24/23 17:43	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 17:43	
Methylene Chloride	ND U	2.0	1	03/24/23 17:43	
Naphthalene	ND U	2.0	1	03/24/23 17:43	
n-Propylbenzene	ND U	2.0	1	03/24/23 17:43	
Styrene	ND U	0.50	1	03/24/23 17:43	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 17:43	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 17:43	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 17:43	
Toluene	ND U	0.50	1	03/24/23 17:43	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 17:43	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 17:43	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 17:43	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 17:43	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 17:43	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 17:43	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 17:43	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 17:43	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 17:43	
Vinyl Chloride	ND U	0.50	1	03/24/23 17:43	
o-Xylene	ND U	0.50	1	03/24/23 17:43	
m,p-Xylenes	ND U	0.50	1	03/24/23 17:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	03/24/23 17:43	
Dibromofluoromethane	122	73 - 122	03/24/23 17:43	
Toluene-d8	101	65 - 144	03/24/23 17:43	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-09-6S
Lab Code: K2303308-010

Service Request: K2303308
Date Collected: 03/20/23 15:10
Date Received: 03/21/23 13:15

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	03/24/23 18:03	
Benzene	ND U	0.50	1	03/24/23 18:03	
Bromobenzene	ND U	2.0	1	03/24/23 18:03	
Bromochloromethane	ND U	0.50	1	03/24/23 18:03	
Bromodichloromethane	ND U	0.50	1	03/24/23 18:03	
Bromoform	ND U	0.50	1	03/24/23 18:03	
Bromomethane	ND U	0.50	1	03/24/23 18:03	*
2-Butanone (MEK)	ND U	20	1	03/24/23 18:03	
n-Butylbenzene	ND U	4.0	1	03/24/23 18:03	
sec-Butylbenzene	ND U	2.0	1	03/24/23 18:03	
tert-Butylbenzene	ND U	2.0	1	03/24/23 18:03	
Carbon Disulfide	ND U	0.50	1	03/24/23 18:03	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 18:03	
Chlorobenzene	ND U	0.50	1	03/24/23 18:03	
Chloroethane	ND U	0.50	1	03/24/23 18:03	
Chloroform	ND U	0.50	1	03/24/23 18:03	
Chloromethane	ND U	0.50	1	03/24/23 18:03	
2-Chlorotoluene	ND U	2.0	1	03/24/23 18:03	
4-Chlorotoluene	ND U	2.0	1	03/24/23 18:03	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 18:03	
Dibromochloromethane	ND U	0.50	1	03/24/23 18:03	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 18:03	
Dibromomethane	ND U	0.50	1	03/24/23 18:03	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 18:03	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 18:03	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 18:03	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 18:03	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 18:03	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 18:03	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 18:03	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 18:03	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 18:03	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 18:03	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 18:03	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 18:03	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 18:03	
Ethylbenzene	ND U	0.50	1	03/24/23 18:03	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 18:03	
2-Hexanone	ND U	20	1	03/24/23 18:03	
Isopropylbenzene	ND U	2.0	1	03/24/23 18:03	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 18:03	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23 15:10
Date Received: 03/21/23 13:15

Sample Name: LB-032023-09-6S
Lab Code: K2303308-010

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	03/24/23 18:03	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 18:03	
Methylene Chloride	ND U	2.0	1	03/24/23 18:03	
Naphthalene	ND U	2.0	1	03/24/23 18:03	
n-Propylbenzene	ND U	2.0	1	03/24/23 18:03	
Styrene	ND U	0.50	1	03/24/23 18:03	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 18:03	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 18:03	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 18:03	
Toluene	ND U	0.50	1	03/24/23 18:03	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 18:03	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 18:03	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 18:03	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 18:03	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 18:03	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 18:03	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 18:03	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 18:03	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 18:03	
Vinyl Chloride	ND U	0.50	1	03/24/23 18:03	
o-Xylene	ND U	0.50	1	03/24/23 18:03	
m,p-Xylenes	ND U	0.50	1	03/24/23 18:03	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	03/24/23 18:03	
Dibromofluoromethane	118	73 - 122	03/24/23 18:03	
Toluene-d8	102	65 - 144	03/24/23 18:03	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-01-1D
Lab Code: K2303308-002

Service Request: K2303308
Date Collected: 03/20/23 09:40
Date Received: 03/21/23 13:15
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	03/31/23 08:41	03/23/23	
Manganese	6010C	2.1	ug/L	1.1	1	03/31/23 08:41	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-01-1S
Lab Code: K2303308-003

Service Request: K2303308
Date Collected: 03/20/23 10:40
Date Received: 03/21/23 13:15
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	03/31/23 08:50	03/23/23	
Manganese	6010C	1.1	ug/L	1.1	1	03/31/23 08:50	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-03-10DR
Lab Code: K2303308-004

Service Request: K2303308
Date Collected: 03/20/23 11:35
Date Received: 03/21/23 13:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	26	ug/L	21	1	03/31/23 08:53	03/23/23	
Manganese	6010C	1.3	ug/L	1.1	1	03/31/23 08:53	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-04-FB1
Lab Code: K2303308-005

Service Request: K2303308
Date Collected: 03/20/23 11:45
Date Received: 03/21/23 13:15
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	03/31/23 08:55	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/31/23 08:55	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-05-10SR
Lab Code: K2303308-006

Service Request: K2303308
Date Collected: 03/20/23 12:30
Date Received: 03/21/23 13:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	23	ug/L	21	1	03/31/23 08:58	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/31/23 08:58	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-06-DUP1
Lab Code: K2303308-007

Service Request: K2303308
Date Collected: 03/20/23 12:35
Date Received: 03/21/23 13:15
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	03/31/23 09:08	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/31/23 09:08	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-07-3D
Lab Code: K2303308-008

Service Request: K2303308
Date Collected: 03/20/23 13:35
Date Received: 03/21/23 13:15
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	03/31/23 09:10	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/31/23 09:10	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-08-3S
Lab Code: K2303308-009

Service Request: K2303308
Date Collected: 03/20/23 14:20
Date Received: 03/21/23 13:15
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	03/31/23 09:13	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/31/23 09:13	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-09-6S
Lab Code: K2303308-010

Service Request: K2303308
Date Collected: 03/20/23 15:10
Date Received: 03/21/23 13:15
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	03/31/23 09:15	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/31/23 09:15	03/23/23	



General Chemistry

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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 Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-01-1D
Lab Code: K2303308-002

Service Request: K2303308
Date Collected: 03/20/23 09:40
Date Received: 03/21/23 13:15
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.97	mg/L	0.20	2	03/21/23 17:43	
Nitrate as Nitrogen	300.0	5.58	mg/L	0.10	2	03/21/23 17:43	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-01-1D
Lab Code: K2303308-002

Service Request: K2303308
Date Collected: 03/20/23 09:40
Date Received: 03/21/23 13:15
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	167	mg/L	5.0	1	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-01-1S
Lab Code: K2303308-003

Service Request: K2303308
Date Collected: 03/20/23 10:40
Date Received: 03/21/23 13:15
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	4.57	mg/L	0.20	2	03/21/23 20:46	
Nitrate as Nitrogen	300.0	3.69	mg/L	0.10	2	03/21/23 20:46	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-01-1S
Lab Code: K2303308-003

Service Request: K2303308
Date Collected: 03/20/23 10:40
Date Received: 03/21/23 13:15
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	184	mg/L	5.0	1	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-03-10DR
Lab Code: K2303308-004

Service Request: K2303308
Date Collected: 03/20/23 11:35
Date Received: 03/21/23 13:15
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	10.1	mg/L	0.20	2	03/21/23 20:58	
Nitrate as Nitrogen	300.0	2.36	mg/L	0.10	2	03/21/23 20:58	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-03-10DR
Lab Code: K2303308-004

Service Request: K2303308
Date Collected: 03/20/23 11:35
Date Received: 03/21/23 13:15
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	221	mg/L	5.0	1	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-04-FB1
Lab Code: K2303308-005

Service Request: K2303308
Date Collected: 03/20/23 11:45
Date Received: 03/21/23 13:15
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	03/21/23 21:11	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.10	2	03/21/23 21:11	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-04-FB1
Lab Code: K2303308-005

Service Request: K2303308
Date Collected: 03/20/23 11:45
Date Received: 03/21/23 13:15
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	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-05-10SR
Lab Code: K2303308-006

Service Request: K2303308
Date Collected: 03/20/23 12:30
Date Received: 03/21/23 13:15
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	3.47	mg/L	0.20	2	03/21/23 21:24	
Nitrate as Nitrogen	300.0	2.45	mg/L	0.10	2	03/21/23 21:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-05-10SR
Lab Code: K2303308-006

Service Request: K2303308
Date Collected: 03/20/23 12:30
Date Received: 03/21/23 13:15
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	130	mg/L	5.0	1	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-06-DUP1
Lab Code: K2303308-007

Service Request: K2303308
Date Collected: 03/20/23 12:35
Date Received: 03/21/23 13:15
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	3.54	mg/L	0.20	2	03/21/23 22:02	
Nitrate as Nitrogen	300.0	2.47	mg/L	0.10	2	03/21/23 22:02	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-06-DUP1
Lab Code: K2303308-007

Service Request: K2303308
Date Collected: 03/20/23 12:35
Date Received: 03/21/23 13:15
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	129	mg/L	5.0	1	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-07-3D
Lab Code: K2303308-008

Service Request: K2303308
Date Collected: 03/20/23 13:35
Date Received: 03/21/23 13:15
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	4.32	mg/L	0.20	2	03/21/23 22:15	
Nitrate as Nitrogen	300.0	4.05	mg/L	0.10	2	03/21/23 22:15	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-07-3D
Lab Code: K2303308-008

Service Request: K2303308
Date Collected: 03/20/23 13:35
Date Received: 03/21/23 13:15
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	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-08-3S
Lab Code: K2303308-009

Service Request: K2303308
Date Collected: 03/20/23 14:20
Date Received: 03/21/23 13:15
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	4.21	mg/L	0.20	2	03/21/23 22:27	
Nitrate as Nitrogen	300.0	3.56	mg/L	0.10	2	03/21/23 22:27	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-08-3S
Lab Code: K2303308-009

Service Request: K2303308
Date Collected: 03/20/23 14:20
Date Received: 03/21/23 13:15
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	162	mg/L	5.0	1	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-09-6S
Lab Code: K2303308-010

Service Request: K2303308
Date Collected: 03/20/23 15:10
Date Received: 03/21/23 13:15
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.77	mg/L	0.20	2	03/21/23 22:40	
Nitrate as Nitrogen	300.0	3.44	mg/L	0.10	2	03/21/23 22:40	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032023-09-6S
Lab Code: K2303308-010

Service Request: K2303308
Date Collected: 03/20/23 15:10
Date Received: 03/21/23 13:15
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	03/22/23 15:08	



QC Summary Forms

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



Volatile Organic Compounds by GC/MS

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308

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	K2303308-001	80	117	100
LB-032023-01-1D	K2303308-002	81	122	103
LB-032023-01-1S	K2303308-003	80	121	101
LB-032023-03-10DR	K2303308-004	81	121	101
LB-032023-04-FB1	K2303308-005	80	118	100
LB-032023-05-10SR	K2303308-006	80	119	102
LB-032023-06-DUP1	K2303308-007	80	118	101
LB-032023-07-3D	K2303308-008	81	122	101
LB-032023-08-3S	K2303308-009	80	122	101
LB-032023-09-6S	K2303308-010	82	118	102
Method Blank	KQ2305746-05	81	118	102
Lab Control Sample	KQ2305746-03	91	107	106
Duplicate Lab Control Sample	KQ2305746-04	91	106	106

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305746-05

Service Request: K2303308
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	03/24/23 12:05	
Benzene	ND U	0.50	1	03/24/23 12:05	
Bromobenzene	ND U	2.0	1	03/24/23 12:05	
Bromochloromethane	ND U	0.50	1	03/24/23 12:05	
Bromodichloromethane	ND U	0.50	1	03/24/23 12:05	
Bromoform	ND U	0.50	1	03/24/23 12:05	
Bromomethane	ND U	0.50	1	03/24/23 12:05	
2-Butanone (MEK)	ND U	20	1	03/24/23 12:05	
n-Butylbenzene	ND U	4.0	1	03/24/23 12:05	
sec-Butylbenzene	ND U	2.0	1	03/24/23 12:05	
tert-Butylbenzene	ND U	2.0	1	03/24/23 12:05	
Carbon Disulfide	ND U	0.50	1	03/24/23 12:05	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 12:05	
Chlorobenzene	ND U	0.50	1	03/24/23 12:05	
Chloroethane	ND U	0.50	1	03/24/23 12:05	
Chloroform	ND U	0.50	1	03/24/23 12:05	
Chloromethane	ND U	0.50	1	03/24/23 12:05	
2-Chlorotoluene	ND U	2.0	1	03/24/23 12:05	
4-Chlorotoluene	ND U	2.0	1	03/24/23 12:05	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 12:05	
Dibromochloromethane	ND U	0.50	1	03/24/23 12:05	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 12:05	
Dibromomethane	ND U	0.50	1	03/24/23 12:05	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 12:05	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 12:05	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 12:05	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 12:05	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 12:05	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:05	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:05	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 12:05	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 12:05	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 12:05	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 12:05	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:05	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:05	
Ethylbenzene	ND U	0.50	1	03/24/23 12:05	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 12:05	
2-Hexanone	ND U	20	1	03/24/23 12:05	
Isopropylbenzene	ND U	2.0	1	03/24/23 12:05	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 12:05	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305746-05

Service Request: K2303308
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	03/24/23 12:05	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 12:05	
Methylene Chloride	ND U	2.0	1	03/24/23 12:05	
Naphthalene	ND U	2.0	1	03/24/23 12:05	
n-Propylbenzene	ND U	2.0	1	03/24/23 12:05	
Styrene	ND U	0.50	1	03/24/23 12:05	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:05	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:05	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 12:05	
Toluene	ND U	0.50	1	03/24/23 12:05	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 12:05	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 12:05	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 12:05	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 12:05	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 12:05	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 12:05	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 12:05	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 12:05	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 12:05	
Vinyl Chloride	ND U	0.50	1	03/24/23 12:05	
o-Xylene	ND U	0.50	1	03/24/23 12:05	
m,p-Xylenes	ND U	0.50	1	03/24/23 12:05	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	03/24/23 12:05	
Dibromofluoromethane	118	73 - 122	03/24/23 12:05	
Toluene-d8	102	65 - 144	03/24/23 12:05	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Analyzed: 03/24/23
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: 798797

Analyte Name	Lab Control Sample KQ2305746-03			Duplicate Lab Control Sample KQ2305746-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.62	10.0	96	10.4	10.0	104	66-124	8	30
1,1,1-Trichloroethane (TCA)	11.8	10.0	118	12.5	10.0	125	59-136	6	30
1,1,2,2-Tetrachloroethane	9.15	10.0	92	10.1	10.0	101	70-127	9	30
1,1,2-Trichloroethane	9.29	10.0	93	9.57	10.0	96	74-118	3	30
1,1-Dichloroethane	11.0	10.0	110	11.8	10.0	118	68-132	7	30
1,1-Dichloropropene	11.3	10.0	113	12.2	10.0	122	59-134	8	30
1,2,3-Trichlorobenzene	8.99	10.0	90	9.37	10.0	94	68-120	4	30
1,2,3-Trichloropropane	8.80	10.0	88	10.1	10.0	101	69-123	13	30
1,2,4-Trichlorobenzene	8.66	10.0	87	9.02	10.0	90	58-126	4	30
1,2,4-Trimethylbenzene	10.5	10.0	105	10.7	10.0	107	63-122	2	30
1,2-Dibromo-3-chloropropane	8.67	10.0	87	9.20	10.0	92	55-132	6	30
1,2-Dibromoethane (EDB)	9.16	10.0	92	10.1	10.0	101	74-118	10	30
1,2-Dichlorobenzene	9.41	10.0	94	9.87	10.0	99	72-115	5	30
1,2-Dichloropropane	10.1	10.0	101	11.0	10.0	110	67-126	9	30
1,3,5-Trimethylbenzene	10.2	10.0	102	10.6	10.0	106	62-126	4	30
1,3-Dichlorobenzene	9.69	10.0	97	9.95	10.0	100	70-116	3	30
1,3-Dichloropropane	9.15	10.0	92	9.99	10.0	100	75-116	9	30
1,4-Dichlorobenzene	9.76	10.0	98	10.0	10.0	100	73-115	2	30
2,2-Dichloropropane	11.0	10.0	110	11.8	10.0	118	37-145	7	30
2-Butanone (MEK)	48.6	50.0	97	55.2	50.0	110	71-149	13	30
2-Chlorotoluene	10.0	10.0	100	10.3	10.0	103	55-131	3	30
2-Hexanone	41.7	50.0	83	50.2	50.0	100	59-131	18	30
4-Chlorotoluene	10.1	10.0	101	10.4	10.0	104	66-121	3	30
4-Isopropyltoluene	10.4	10.0	104	10.5	10.0	105	61-128	<1	30
4-Methyl-2-pentanone (MIBK)	44.0	50.0	88	54.1	50.0	108	64-134	21	30
Acetone	46.6	50.0	93	53.8	50.0	108	68-135	14	30
Benzene	10.9	10.0	109	11.6	10.0	116	69-124	7	30
Bromobenzene	9.47	10.0	95	9.81	10.0	98	72-116	4	30
Bromochloromethane	10.5	10.0	105	11.3	10.0	113	75-131	7	30
Bromodichloromethane	10.3	10.0	103	11.2	10.0	112	63-129	9	30
Bromoform	9.29	10.0	93	10.2	10.0	102	52-144	9	30
Bromomethane	9.10	10.0	91	10.4	10.0	104	35-113	13	30
Carbon Disulfide	19.4	20.0	97	20.7	20.0	103	46-144	6	30
Carbon Tetrachloride	11.7	10.0	117	12.6	10.0	126	55-140	8	30
Chlorobenzene	9.97	10.0	100	10.5	10.0	105	72-116	5	30
Chloroethane	10.8	10.0	108	11.4	10.0	114	58-134	6	30
Chloroform	10.9	10.0	109	11.7	10.0	117	70-129	7	30
Chloromethane	10.2	10.0	102	11.0	10.0	110	34-130	7	30
cis-1,2-Dichloroethene	10.5	10.0	105	11.3	10.0	113	71-118	7	30
cis-1,3-Dichloropropene	10.1	10.0	101	11.4	10.0	114	62-132	12	30
Dibromochloromethane	9.22	10.0	92	9.91	10.0	99	67-126	7	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Analyzed: 03/24/23
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: 798797

Analyte Name	Lab Control Sample KQ2305746-03			Duplicate Lab Control Sample KQ2305746-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	10.1	10.0	101	11.2	10.0	112	69-128	10	30
Dichlorodifluoromethane	11.0	10.0	110	11.3	10.0	113	32-124	3	30
Ethylbenzene	10.2	10.0	102	10.8	10.0	108	67-121	6	30
Hexachlorobutadiene	9.32	10.0	93	9.23	10.0	92	57-119	<1	30
Isopropylbenzene	10.7	10.0	107	11.3	10.0	113	67-129	5	30
m,p-Xylenes	21.1	20.0	105	22.3	20.0	111	69-121	5	30
Methyl tert-Butyl Ether	9.18	10.0	92	10.9	10.0	109	54-126	17	30
Methylene Chloride	10.2	10.0	102	11.0	10.0	110	71-122	8	30
Naphthalene	8.19	10.0	82	9.08	10.0	91	64-126	10	30
n-Butylbenzene	10.2	10.0	102	10.5	10.0	105	55-130	3	30
n-Propylbenzene	10.3	10.0	103	10.6	10.0	106	61-124	3	30
o-Xylene	10.4	10.0	104	10.8	10.0	108	71-119	4	30
sec-Butylbenzene	11.1	10.0	111	11.3	10.0	113	59-128	2	30
Styrene	10.8	10.0	108	11.2	10.0	112	74-121	4	30
tert-Butylbenzene	10.3	10.0	103	10.7	10.0	107	61-127	4	30
Tetrachloroethene (PCE)	10.4	10.0	104	10.8	10.0	108	62-126	4	30
Toluene	11.0	10.0	110	11.9	10.0	119	69-124	9	30
trans-1,2-Dichloroethene	10.8	10.0	108	11.4	10.0	114	67-125	6	30
trans-1,3-Dichloropropene	9.30	10.0	93	10.2	10.0	102	59-125	9	30
Trichloroethene (TCE)	10.5	10.0	105	11.3	10.0	113	67-128	7	30
Trichlorofluoromethane (CFC 11)	11.5	10.0	115	12.4	10.0	124	52-141	8	30
Vinyl Chloride	11.3	10.0	113	12.3	10.0	123	55-123	9	30



Metals

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305153-03

Service Request: K2303308
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	03/31/23 08:36	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/31/23 08:36	03/23/23	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23
Date Received: 03/21/23
Date Analyzed: 03/31/23
Date Extracted: 03/23/23

Matrix Spike Summary
Dissolved Metals

Sample Name: LB-032023-01-1D
Lab Code: K2303308-002
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2305153-01

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	ND U	915	1000	92	75-125
Manganese	2.1	468	500	93	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/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23
Date Received: 03/21/23
Date Analyzed: 03/31/23

Replicate Sample Summary

Dissolved Metals

Sample Name: LB-032023-01-1D
Lab Code: K2303308-002

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				KQ2305153-02 Result			
Iron	6010C	21	ND U	ND U	ND	-	20
Manganese	6010C	1.1	2.1	2.0	2.1	5	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/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Analyzed: 03/31/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2305153-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2360	2500	95	80-120
Manganese	6010C	1200	1250	96	80-120



General Chemistry

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1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303308-MB1

Service Request: K2303308
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	03/21/23 13:41	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/21/23 13:41	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303308-MB1

Service Request: K2303308
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	03/22/23 15:08	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303308-MB2

Service Request: K2303308
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	03/21/23 19:16	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/21/23 19:16	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303308-MB2

Service Request: K2303308
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	03/22/23 15:08	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303308-MB3

Service Request: K2303308
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	03/22/23 00:10	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/22/23 00:10	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request:K2303308
Date Collected:03/20/23
Date Received:03/21/23
Date Analyzed:3/21/23

**Duplicate Matrix Spike Summary
General Chemistry Parameters**

Sample Name: LB-032023-01-1D
Lab Code: K2303308-002

Units:mg/L
Basis:NA

**Matrix Spike
K2303308-002MS**

**Duplicate Matrix Spike
K2303308-002DMS**

Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Chloride	300.0	5.97	13.5	8.00	94	13.4	8.00	93	90-110	<1	20
Nitrate as Nitrogen	300.0	5.58	9.35	4.00	94	9.26	4.00	92	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/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23
Date Received: 03/21/23
Date Analyzed: 03/21/23

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-032023-01-1D
Lab Code: K2303308-002

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K2303308-002DUP Result	Average	RPD	RPD Limit
Chloride	300.0	0.20	5.97	5.86	5.92	2	20
Nitrate as Nitrogen	300.0	0.10	5.58	5.50	5.54	2	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/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Collected: 03/20/23
Date Received: 03/21/23
Date Analyzed: 03/22/23

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-032023-09-6S
Lab Code: K2303308-010

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2303308-010DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total Dissolved	SM 2540 C	5.0	179	180	179	<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 Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Analyzed: 03/21/23 - 03/22/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303308-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.87	5.00	97	90-110
Nitrate as Nitrogen	300.0	2.45	2.50	98	90-110
Solids, Total Dissolved	SM 2540 C	1920	1920	100	85-115

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Analyzed: 03/21/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303308-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.87	5.00	97	90-110
Nitrate as Nitrogen	300.0	2.46	2.50	98	90-110

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303308
Date Analyzed: 03/21/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303308-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.89	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.47	2.50	99	90-110



March 31, 2023

Service Request No:K2303351

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 March 22, 2023
For your reference, these analyses have been assigned our service request number **K2303351**.

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

for 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.
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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: K2303351
Date Received: 03/22/2023

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 03/22/2023. 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:

Method 8260C, 03/24/2023: Bromomethane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8260C, 03/23/2023: Bromomethane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Approved by



Date

03/31/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: LB-032123-09-5D	Lab ID: K2303351-001
-----------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	8.11			0.20	mg/L	300.0
Manganese, Dissolved	3.5			1.1	ug/L	6010C
Nitrate as Nitrogen	1.20			0.10	mg/L	300.0
Solids, Total Dissolved	215			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-05-13I	Lab ID: K2303351-002
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.60			0.20	mg/L	300.0
Manganese, Dissolved	4.2			1.1	ug/L	6010C
Nitrate as Nitrogen	3.58			0.10	mg/L	300.0
Solids, Total Dissolved	189			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-07-13D	Lab ID: K2303351-003
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.04			0.20	mg/L	300.0
Nitrate as Nitrogen	4.58			0.10	mg/L	300.0
Solids, Total Dissolved	174			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-11-17I	Lab ID: K2303351-004
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	11.2			0.20	mg/L	300.0
Iron, Dissolved	9070			21	ug/L	6010C
Manganese, Dissolved	2040			1.1	ug/L	6010C
Solids, Total Dissolved	218			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-10-17D	Lab ID: K2303351-005
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	7.40			0.20	mg/L	300.0
Iron, Dissolved	122			21	ug/L	6010C
Manganese, Dissolved	3820			1.1	ug/L	6010C
Solids, Total Dissolved	183			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-01-20S	Lab ID: K2303351-006
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	18.4			0.20	mg/L	300.0
Iron, Dissolved	1460			21	ug/L	6010C
Manganese, Dissolved	1750			1.1	ug/L	6010C
Solids, Total Dissolved	321			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-08-26D	Lab ID: K2303351-008
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.01			0.20	mg/L	300.0
Nitrate as Nitrogen	4.45			0.10	mg/L	300.0



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: LB-032123-08-26D	Lab ID: K2303351-008
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	180			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-03-27I	Lab ID: K2303351-009
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	9.42			0.20	mg/L	300.0
Manganese, Dissolved	43.1			1.1	ug/L	6010C
Nitrate as Nitrogen	1.69			0.10	mg/L	300.0
Solids, Total Dissolved	232			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-04-DUP1	Lab ID: K2303351-010
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	9.41			0.20	mg/L	300.0
Manganese, Dissolved	48.3			1.1	ug/L	6010C
Nitrate as Nitrogen	1.66			0.10	mg/L	300.0
Solids, Total Dissolved	231			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-06-27D	Lab ID: K2303351-011
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	7.20			0.20	mg/L	300.0
Manganese, Dissolved	1.1			1.1	ug/L	6010C
Nitrate as Nitrogen	4.17			0.10	mg/L	300.0
Solids, Total Dissolved	195			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032123-02-FB1	Lab ID: K2303351-007
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloroform	3.3			0.50	ug/L	8260C
Solids, Total Dissolved	7.2			5.0	mg/L	SM 2540 C



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/04223030.13

Service Request:K2303351

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2303351-001	LB-032123-09-5D	3/21/2023	1425
K2303351-002	LB-032123-05-13I	3/21/2023	1100
K2303351-003	LB-032123-07-13D	3/21/2023	1230
K2303351-004	LB-032123-11-17I	3/21/2023	1550
K2303351-005	LB-032123-10-17D	3/21/2023	1515
K2303351-006	LB-032123-01-20S	3/21/2023	0830
K2303351-007	LB-032123-02-FB1	3/21/2023	0840
K2303351-008	LB-032123-08-26D	3/21/2023	1310
K2303351-009	LB-032123-03-27I	3/21/2023	1000
K2303351-010	LB-032123-04-DUP1	3/21/2023	1005
K2303351-011	LB-032123-06-27D	3/21/2023	1145
K2303351-012	TB2	3/21/2023	0700



CHAIN OF CUSTODY

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


PAGE

OF

SR# H2303350

COC#

PROJECT NAME <u>Lechner Landfill</u>																					
PROJECT NUMBER <u>04223030013</u>																					
PROJECT MANAGER <u>B Barb Lary</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>BLary@SCSEngineers.com</u>																					
PHONE # <u>971-284-1297</u>																					
SAMPLER SIGNATURE <u>BLary</u>																					
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 type="checkbox"/>	Hydrocarbons Gas <input type="checkbox"/> 8021 <input type="checkbox"/>	Oil & Grease/TRPH Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	1664 HEM <input type="checkbox"/>	1664 SGT <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 8151 <input type="checkbox"/>	Cyanide <input type="checkbox"/>	(Circle) pH, Cond (NO ₃ -BOD, TSS, TDS) (Circle) NH ₃ -N, COD, TKN, TOC, DOC, NO ₂ -NO ₃ , T-Phos	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"/>	REMARKS	
<u>LB-032123-09-50</u>	<u>3/21/23</u>	<u>1425</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LR-032123-05-13E</u>	<u>3/21/23</u>	<u>1100</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LB-032123-07-13D</u>	<u>3/21/23</u>	<u>1230</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LB-032123-11-17E</u>	<u>3/21/23</u>	<u>1550</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LB-032123-10-17D</u>	<u>3/21/23</u>	<u>1515</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LR-032123-01-20S</u>	<u>3/21/23</u>	<u>830</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LB-032123-02-FBI</u>	<u>3/21/23</u>	<u>840</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LR-032123-08-26D</u>	<u>3/21/23</u>	<u>1310</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LR-032123-03-27E</u>	<u>3/21/23</u>	<u>1000</u>	<u>W</u>	<u>S</u>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<u>LR-032123-09-00E</u>	<u>3/21/23</u>	<u>1005</u>	<u>W</u>	<u>S</u>		<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 _____ 24 hr. _____ 48 hr. _____ 5 day <input checked="" type="checkbox"/> Standard (15 working days) _____ Provide FAX Results Requested Report Date _____	*INDICATE STATE HYDROCARBON PROCEDURE: <u>AK CA WI</u> NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: Metals are field Filtered Container Supply Number  129003 <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: <u>B Barb Lary</u> Signature Printed Name Firm <u>SCS</u>	RECEIVED BY: <u>Greg Rich</u> Signature Printed Name Firm <u>ALS</u> Date/Time <u>3-22-23 0940</u>	RELINQUISHED BY: <u>Greg Rich</u> Signature Printed Name Firm <u>ALS</u> Date/Time <u>3-22-23 12:10 pm</u>	RECEIVED BY: <u>Michael M. Hoto</u> Signature Printed Name Firm <u>ALS</u> Date/Time <u>3/22/23 12:10</u>
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CHAIN OF CUSTODY


SR# 12303351

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#

PROJECT NAME <i>Lechner Landfill</i>				
PROJECT NUMBER <i>0722303013</i>				
PROJECT MANAGER <i>Barb Lary</i>				
COMPANY NAME <i>SCS Engineers</i>				
ADDRESS <i>15940 SW 42nd Ave</i>				
CITY/STATE/ZIP <i>Portland, OR 97224</i>				
E-MAIL ADDRESS <i>BLary@scsengineers.com</i>				
PHONE # <i>503 284 1297</i>				
FAX #				
SAMPLER'S SIGNATURE <i>Jim Andrews for Blary</i>				

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"/>	Volatiles 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"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 808 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) POP <input type="checkbox"/>	Cyanide <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, T-Phos	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"/>	CO2 <input type="checkbox"/>
<i>LB-032103-06-270</i>	<i>3/21/23</i>	<i>1145</i>		<i>W</i>	<i>5</i>		<input checked="" type="checkbox"/>														
<i>TB2</i>	<i>3/21/23</i>	<i>0700</i>		<i>W</i>	<i>2</i>		<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 <input checked="" type="checkbox"/> Fe Pb Mg <input checked="" type="checkbox"/> Mn 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: <i>Metals are field filtered</i> Container Supply Number  129003 <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)	

RELINQUISHED BY: <i>[Signature]</i> Signature: <i>Barb Lary</i> Date/Time: <i>3/22/23 940</i> Printed Name: Barb Lary Firm: SCS	RECEIVED BY: <i>[Signature]</i> Signature: <i>Greg Rich</i> Date/Time: <i>3-22-23 0840</i> Printed Name: Greg Rich Firm: ALS	RELINQUISHED BY: <i>[Signature]</i> Signature: <i>Greg Rich</i> Date/Time: <i>3-22-23 1210pm</i> Printed Name: Greg Rich Firm: ALS	RECEIVED BY: <i>[Signature]</i> Signature: <i>Michelle</i> Date/Time: <i>3/22/23 1210</i> Printed Name: Michelle Firm: ALS
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PM 172

Cooler Receipt and Preservation Form

Client SOS Service Request K23 03357
Received: 3/22/23 Opened: 3/22/23 By: VHM Unloaded: 3/22/23 By: VHM

- 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

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>6.5</u>	<u>2.8</u>	<u>IR02</u>					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
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 # above and notify the PM. NA Y N

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

- 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
- 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
- 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

SHORT HOLD

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.
- 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.
- 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/04223030.13

Service Request: K2303351

Sample Name: LB-032123-09-5D
Lab Code: K2303351-001
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032123-05-13I
Lab Code: K2303351-002
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032123-07-13D
Lab Code: K2303351-003
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032123-11-17I
Lab Code: K2303351-004
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0

Extracted/Digested By

Analyzed By
NFOTH

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13

Service Request: K2303351

Sample Name: LB-032123-11-17I
Lab Code: K2303351-004
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
6010C
8260C
SM 2540 C

Extracted/Digested By
ACOUCH

Analyzed By
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032123-10-17D
Lab Code: K2303351-005
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By
ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032123-01-20S
Lab Code: K2303351-006
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By
ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032123-02-FB1
Lab Code: K2303351-007
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C

Extracted/Digested By
ACOUCH

Analyzed By
NFOTH
AMCKORNEY

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13

Service Request: K2303351

Sample Name: LB-032123-02-FB1
Lab Code: K2303351-007
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
GROETTGER
JBYMAN

Sample Name: LB-032123-08-26D
Lab Code: K2303351-008
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ACOUCH

Sample Name: LB-032123-03-27I
Lab Code: K2303351-009
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ACOUCH

Sample Name: LB-032123-04-DUP1
Lab Code: K2303351-010
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER

ACOUCH

ALS Group USA, Corp.
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Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13

Service Request: K2303351

Sample Name: LB-032123-04-DUP1
Lab Code: K2303351-010
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
SM 2540 C

Extracted/Digested By

Analyzed By
JBYMAN

Sample Name: LB-032123-06-27D
Lab Code: K2303351-011
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: TB2
Lab Code: K2303351-012
Sample Matrix: Ground Water

Date Collected: 03/21/23
Date Received: 03/22/23

Analysis Method
8260C

Extracted/Digested By

Analyzed By
GROETTGER



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 Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 14:25
Date Received: 03/22/23 12:10

Sample Name: LB-032123-09-5D
Lab Code: K2303351-001

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	03/23/23 15:52	
Benzene	ND U	0.50	1	03/23/23 15:52	
Bromobenzene	ND U	2.0	1	03/23/23 15:52	
Bromochloromethane	ND U	0.50	1	03/23/23 15:52	
Bromodichloromethane	ND U	0.50	1	03/23/23 15:52	
Bromoform	ND U	0.50	1	03/23/23 15:52	
Bromomethane	ND U	0.50	1	03/23/23 15:52	*
2-Butanone (MEK)	ND U	20	1	03/23/23 15:52	
n-Butylbenzene	ND U	4.0	1	03/23/23 15:52	
sec-Butylbenzene	ND U	2.0	1	03/23/23 15:52	
tert-Butylbenzene	ND U	2.0	1	03/23/23 15:52	
Carbon Disulfide	ND U	0.50	1	03/23/23 15:52	
Carbon Tetrachloride	ND U	0.50	1	03/23/23 15:52	
Chlorobenzene	ND U	0.50	1	03/23/23 15:52	
Chloroethane	ND U	0.50	1	03/23/23 15:52	
Chloroform	ND U	0.50	1	03/23/23 15:52	
Chloromethane	ND U	0.50	1	03/23/23 15:52	
2-Chlorotoluene	ND U	2.0	1	03/23/23 15:52	
4-Chlorotoluene	ND U	2.0	1	03/23/23 15:52	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/23/23 15:52	
Dibromochloromethane	ND U	0.50	1	03/23/23 15:52	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/23/23 15:52	
Dibromomethane	ND U	0.50	1	03/23/23 15:52	
1,2-Dichlorobenzene	ND U	0.50	1	03/23/23 15:52	
1,3-Dichlorobenzene	ND U	0.50	1	03/23/23 15:52	
1,4-Dichlorobenzene	ND U	0.50	1	03/23/23 15:52	
Dichlorodifluoromethane	ND U	0.50	1	03/23/23 15:52	
1,1-Dichloroethane	ND U	0.50	1	03/23/23 15:52	
cis-1,2-Dichloroethene	ND U	0.50	1	03/23/23 15:52	
trans-1,2-Dichloroethene	ND U	0.50	1	03/23/23 15:52	
1,2-Dichloropropane	ND U	0.50	1	03/23/23 15:52	
1,3-Dichloropropane	ND U	0.50	1	03/23/23 15:52	
2,2-Dichloropropane	ND U	0.50	1	03/23/23 15:52	
1,1-Dichloropropene	ND U	0.50	1	03/23/23 15:52	
cis-1,3-Dichloropropene	ND U	0.50	1	03/23/23 15:52	
trans-1,3-Dichloropropene	ND U	0.50	1	03/23/23 15:52	
Ethylbenzene	ND U	0.50	1	03/23/23 15:52	
Hexachlorobutadiene	ND U	2.0	1	03/23/23 15:52	
2-Hexanone	ND U	20	1	03/23/23 15:52	
Isopropylbenzene	ND U	2.0	1	03/23/23 15:52	
4-Isopropyltoluene	ND U	2.0	1	03/23/23 15:52	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 14:25
Date Received: 03/22/23 12:10

Sample Name: LB-032123-09-5D
Lab Code: K2303351-001

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	03/23/23 15:52	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/23/23 15:52	
Methylene Chloride	ND U	2.0	1	03/23/23 15:52	
Naphthalene	ND U	2.0	1	03/23/23 15:52	
n-Propylbenzene	ND U	2.0	1	03/23/23 15:52	
Styrene	ND U	0.50	1	03/23/23 15:52	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/23/23 15:52	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/23/23 15:52	
Tetrachloroethene (PCE)	ND U	0.50	1	03/23/23 15:52	
Toluene	ND U	0.50	1	03/23/23 15:52	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/23/23 15:52	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/23/23 15:52	
1,1,2-Trichloroethane	ND U	0.50	1	03/23/23 15:52	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/23/23 15:52	
Trichloroethene (TCE)	ND U	0.50	1	03/23/23 15:52	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/23/23 15:52	
1,2,3-Trichloropropane	ND U	0.50	1	03/23/23 15:52	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/23/23 15:52	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/23/23 15:52	
Vinyl Chloride	ND U	0.50	1	03/23/23 15:52	
o-Xylene	ND U	0.50	1	03/23/23 15:52	
m,p-Xylenes	ND U	0.50	1	03/23/23 15:52	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	03/23/23 15:52	
Dibromofluoromethane	118	73 - 122	03/23/23 15:52	
Toluene-d8	100	65 - 144	03/23/23 15:52	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 11:00
Date Received: 03/22/23 12:10

Sample Name: LB-032123-05-13I
Lab Code: K2303351-002

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	03/23/23 16:12	
Benzene	ND U	0.50	1	03/23/23 16:12	
Bromobenzene	ND U	2.0	1	03/23/23 16:12	
Bromochloromethane	ND U	0.50	1	03/23/23 16:12	
Bromodichloromethane	ND U	0.50	1	03/23/23 16:12	
Bromoform	ND U	0.50	1	03/23/23 16:12	
Bromomethane	ND U	0.50	1	03/23/23 16:12	*
2-Butanone (MEK)	ND U	20	1	03/23/23 16:12	
n-Butylbenzene	ND U	4.0	1	03/23/23 16:12	
sec-Butylbenzene	ND U	2.0	1	03/23/23 16:12	
tert-Butylbenzene	ND U	2.0	1	03/23/23 16:12	
Carbon Disulfide	ND U	0.50	1	03/23/23 16:12	
Carbon Tetrachloride	ND U	0.50	1	03/23/23 16:12	
Chlorobenzene	ND U	0.50	1	03/23/23 16:12	
Chloroethane	ND U	0.50	1	03/23/23 16:12	
Chloroform	ND U	0.50	1	03/23/23 16:12	
Chloromethane	ND U	0.50	1	03/23/23 16:12	
2-Chlorotoluene	ND U	2.0	1	03/23/23 16:12	
4-Chlorotoluene	ND U	2.0	1	03/23/23 16:12	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/23/23 16:12	
Dibromochloromethane	ND U	0.50	1	03/23/23 16:12	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/23/23 16:12	
Dibromomethane	ND U	0.50	1	03/23/23 16:12	
1,2-Dichlorobenzene	ND U	0.50	1	03/23/23 16:12	
1,3-Dichlorobenzene	ND U	0.50	1	03/23/23 16:12	
1,4-Dichlorobenzene	ND U	0.50	1	03/23/23 16:12	
Dichlorodifluoromethane	ND U	0.50	1	03/23/23 16:12	
1,1-Dichloroethane	ND U	0.50	1	03/23/23 16:12	
cis-1,2-Dichloroethene	ND U	0.50	1	03/23/23 16:12	
trans-1,2-Dichloroethene	ND U	0.50	1	03/23/23 16:12	
1,2-Dichloropropane	ND U	0.50	1	03/23/23 16:12	
1,3-Dichloropropane	ND U	0.50	1	03/23/23 16:12	
2,2-Dichloropropane	ND U	0.50	1	03/23/23 16:12	
1,1-Dichloropropene	ND U	0.50	1	03/23/23 16:12	
cis-1,3-Dichloropropene	ND U	0.50	1	03/23/23 16:12	
trans-1,3-Dichloropropene	ND U	0.50	1	03/23/23 16:12	
Ethylbenzene	ND U	0.50	1	03/23/23 16:12	
Hexachlorobutadiene	ND U	2.0	1	03/23/23 16:12	
2-Hexanone	ND U	20	1	03/23/23 16:12	
Isopropylbenzene	ND U	2.0	1	03/23/23 16:12	
4-Isopropyltoluene	ND U	2.0	1	03/23/23 16:12	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 11:00
Date Received: 03/22/23 12:10

Sample Name: LB-032123-05-13I
Lab Code: K2303351-002

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	03/23/23 16:12	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/23/23 16:12	
Methylene Chloride	ND U	2.0	1	03/23/23 16:12	
Naphthalene	ND U	2.0	1	03/23/23 16:12	
n-Propylbenzene	ND U	2.0	1	03/23/23 16:12	
Styrene	ND U	0.50	1	03/23/23 16:12	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/23/23 16:12	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/23/23 16:12	
Tetrachloroethene (PCE)	ND U	0.50	1	03/23/23 16:12	
Toluene	ND U	0.50	1	03/23/23 16:12	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/23/23 16:12	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/23/23 16:12	
1,1,2-Trichloroethane	ND U	0.50	1	03/23/23 16:12	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/23/23 16:12	
Trichloroethene (TCE)	ND U	0.50	1	03/23/23 16:12	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/23/23 16:12	
1,2,3-Trichloropropane	ND U	0.50	1	03/23/23 16:12	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/23/23 16:12	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/23/23 16:12	
Vinyl Chloride	ND U	0.50	1	03/23/23 16:12	
o-Xylene	ND U	0.50	1	03/23/23 16:12	
m,p-Xylenes	ND U	0.50	1	03/23/23 16:12	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	03/23/23 16:12	
Dibromofluoromethane	118	73 - 122	03/23/23 16:12	
Toluene-d8	102	65 - 144	03/23/23 16:12	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 12:30
Date Received: 03/22/23 12:10

Sample Name: LB-032123-07-13D
Lab Code: K2303351-003

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	03/23/23 17:14	
Benzene	ND U	0.50	1	03/23/23 17:14	
Bromobenzene	ND U	2.0	1	03/23/23 17:14	
Bromochloromethane	ND U	0.50	1	03/23/23 17:14	
Bromodichloromethane	ND U	0.50	1	03/23/23 17:14	
Bromoform	ND U	0.50	1	03/23/23 17:14	
Bromomethane	ND U	0.50	1	03/23/23 17:14	*
2-Butanone (MEK)	ND U	20	1	03/23/23 17:14	
n-Butylbenzene	ND U	4.0	1	03/23/23 17:14	
sec-Butylbenzene	ND U	2.0	1	03/23/23 17:14	
tert-Butylbenzene	ND U	2.0	1	03/23/23 17:14	
Carbon Disulfide	ND U	0.50	1	03/23/23 17:14	
Carbon Tetrachloride	ND U	0.50	1	03/23/23 17:14	
Chlorobenzene	ND U	0.50	1	03/23/23 17:14	
Chloroethane	ND U	0.50	1	03/23/23 17:14	
Chloroform	ND U	0.50	1	03/23/23 17:14	
Chloromethane	ND U	0.50	1	03/23/23 17:14	
2-Chlorotoluene	ND U	2.0	1	03/23/23 17:14	
4-Chlorotoluene	ND U	2.0	1	03/23/23 17:14	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/23/23 17:14	
Dibromochloromethane	ND U	0.50	1	03/23/23 17:14	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/23/23 17:14	
Dibromomethane	ND U	0.50	1	03/23/23 17:14	
1,2-Dichlorobenzene	ND U	0.50	1	03/23/23 17:14	
1,3-Dichlorobenzene	ND U	0.50	1	03/23/23 17:14	
1,4-Dichlorobenzene	ND U	0.50	1	03/23/23 17:14	
Dichlorodifluoromethane	ND U	0.50	1	03/23/23 17:14	
1,1-Dichloroethane	ND U	0.50	1	03/23/23 17:14	
cis-1,2-Dichloroethene	ND U	0.50	1	03/23/23 17:14	
trans-1,2-Dichloroethene	ND U	0.50	1	03/23/23 17:14	
1,2-Dichloropropane	ND U	0.50	1	03/23/23 17:14	
1,3-Dichloropropane	ND U	0.50	1	03/23/23 17:14	
2,2-Dichloropropane	ND U	0.50	1	03/23/23 17:14	
1,1-Dichloropropene	ND U	0.50	1	03/23/23 17:14	
cis-1,3-Dichloropropene	ND U	0.50	1	03/23/23 17:14	
trans-1,3-Dichloropropene	ND U	0.50	1	03/23/23 17:14	
Ethylbenzene	ND U	0.50	1	03/23/23 17:14	
Hexachlorobutadiene	ND U	2.0	1	03/23/23 17:14	
2-Hexanone	ND U	20	1	03/23/23 17:14	
Isopropylbenzene	ND U	2.0	1	03/23/23 17:14	
4-Isopropyltoluene	ND U	2.0	1	03/23/23 17:14	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 12:30
Date Received: 03/22/23 12:10

Sample Name: LB-032123-07-13D
Lab Code: K2303351-003

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	03/23/23 17:14	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/23/23 17:14	
Methylene Chloride	ND U	2.0	1	03/23/23 17:14	
Naphthalene	ND U	2.0	1	03/23/23 17:14	
n-Propylbenzene	ND U	2.0	1	03/23/23 17:14	
Styrene	ND U	0.50	1	03/23/23 17:14	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/23/23 17:14	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/23/23 17:14	
Tetrachloroethene (PCE)	ND U	0.50	1	03/23/23 17:14	
Toluene	ND U	0.50	1	03/23/23 17:14	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/23/23 17:14	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/23/23 17:14	
1,1,2-Trichloroethane	ND U	0.50	1	03/23/23 17:14	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/23/23 17:14	
Trichloroethene (TCE)	ND U	0.50	1	03/23/23 17:14	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/23/23 17:14	
1,2,3-Trichloropropane	ND U	0.50	1	03/23/23 17:14	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/23/23 17:14	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/23/23 17:14	
Vinyl Chloride	ND U	0.50	1	03/23/23 17:14	
o-Xylene	ND U	0.50	1	03/23/23 17:14	
m,p-Xylenes	ND U	0.50	1	03/23/23 17:14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	03/23/23 17:14	
Dibromofluoromethane	116	73 - 122	03/23/23 17:14	
Toluene-d8	100	65 - 144	03/23/23 17:14	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 15:50
Date Received: 03/22/23 12:10

Sample Name: LB-032123-11-17I
Lab Code: K2303351-004

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	03/23/23 17:34	
Benzene	ND U	0.50	1	03/23/23 17:34	
Bromobenzene	ND U	2.0	1	03/23/23 17:34	
Bromochloromethane	ND U	0.50	1	03/23/23 17:34	
Bromodichloromethane	ND U	0.50	1	03/23/23 17:34	
Bromoform	ND U	0.50	1	03/23/23 17:34	
Bromomethane	ND U	0.50	1	03/23/23 17:34	*
2-Butanone (MEK)	ND U	20	1	03/23/23 17:34	
n-Butylbenzene	ND U	4.0	1	03/23/23 17:34	
sec-Butylbenzene	ND U	2.0	1	03/23/23 17:34	
tert-Butylbenzene	ND U	2.0	1	03/23/23 17:34	
Carbon Disulfide	ND U	0.50	1	03/23/23 17:34	
Carbon Tetrachloride	ND U	0.50	1	03/23/23 17:34	
Chlorobenzene	ND U	0.50	1	03/23/23 17:34	
Chloroethane	ND U	0.50	1	03/23/23 17:34	
Chloroform	ND U	0.50	1	03/23/23 17:34	
Chloromethane	ND U	0.50	1	03/23/23 17:34	
2-Chlorotoluene	ND U	2.0	1	03/23/23 17:34	
4-Chlorotoluene	ND U	2.0	1	03/23/23 17:34	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/23/23 17:34	
Dibromochloromethane	ND U	0.50	1	03/23/23 17:34	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/23/23 17:34	
Dibromomethane	ND U	0.50	1	03/23/23 17:34	
1,2-Dichlorobenzene	ND U	0.50	1	03/23/23 17:34	
1,3-Dichlorobenzene	ND U	0.50	1	03/23/23 17:34	
1,4-Dichlorobenzene	ND U	0.50	1	03/23/23 17:34	
Dichlorodifluoromethane	ND U	0.50	1	03/23/23 17:34	
1,1-Dichloroethane	ND U	0.50	1	03/23/23 17:34	
cis-1,2-Dichloroethene	ND U	0.50	1	03/23/23 17:34	
trans-1,2-Dichloroethene	ND U	0.50	1	03/23/23 17:34	
1,2-Dichloropropane	ND U	0.50	1	03/23/23 17:34	
1,3-Dichloropropane	ND U	0.50	1	03/23/23 17:34	
2,2-Dichloropropane	ND U	0.50	1	03/23/23 17:34	
1,1-Dichloropropene	ND U	0.50	1	03/23/23 17:34	
cis-1,3-Dichloropropene	ND U	0.50	1	03/23/23 17:34	
trans-1,3-Dichloropropene	ND U	0.50	1	03/23/23 17:34	
Ethylbenzene	ND U	0.50	1	03/23/23 17:34	
Hexachlorobutadiene	ND U	2.0	1	03/23/23 17:34	
2-Hexanone	ND U	20	1	03/23/23 17:34	
Isopropylbenzene	ND U	2.0	1	03/23/23 17:34	
4-Isopropyltoluene	ND U	2.0	1	03/23/23 17:34	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 15:50
Date Received: 03/22/23 12:10

Sample Name: LB-032123-11-17I
Lab Code: K2303351-004

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	03/23/23 17:34	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/23/23 17:34	
Methylene Chloride	ND U	2.0	1	03/23/23 17:34	
Naphthalene	ND U	2.0	1	03/23/23 17:34	
n-Propylbenzene	ND U	2.0	1	03/23/23 17:34	
Styrene	ND U	0.50	1	03/23/23 17:34	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/23/23 17:34	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/23/23 17:34	
Tetrachloroethene (PCE)	ND U	0.50	1	03/23/23 17:34	
Toluene	ND U	0.50	1	03/23/23 17:34	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/23/23 17:34	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/23/23 17:34	
1,1,2-Trichloroethane	ND U	0.50	1	03/23/23 17:34	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/23/23 17:34	
Trichloroethene (TCE)	ND U	0.50	1	03/23/23 17:34	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/23/23 17:34	
1,2,3-Trichloropropane	ND U	0.50	1	03/23/23 17:34	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/23/23 17:34	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/23/23 17:34	
Vinyl Chloride	ND U	0.50	1	03/23/23 17:34	
o-Xylene	ND U	0.50	1	03/23/23 17:34	
m,p-Xylenes	ND U	0.50	1	03/23/23 17:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	03/23/23 17:34	
Dibromofluoromethane	117	73 - 122	03/23/23 17:34	
Toluene-d8	101	65 - 144	03/23/23 17:34	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 15:15
Date Received: 03/22/23 12:10

Sample Name: LB-032123-10-17D
Lab Code: K2303351-005

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	03/24/23 12:45	
Benzene	ND U	0.50	1	03/24/23 12:45	
Bromobenzene	ND U	2.0	1	03/24/23 12:45	
Bromochloromethane	ND U	0.50	1	03/24/23 12:45	
Bromodichloromethane	ND U	0.50	1	03/24/23 12:45	
Bromoform	ND U	0.50	1	03/24/23 12:45	
Bromomethane	ND U	0.50	1	03/24/23 12:45	*
2-Butanone (MEK)	ND U	20	1	03/24/23 12:45	
n-Butylbenzene	ND U	4.0	1	03/24/23 12:45	
sec-Butylbenzene	ND U	2.0	1	03/24/23 12:45	
tert-Butylbenzene	ND U	2.0	1	03/24/23 12:45	
Carbon Disulfide	ND U	0.50	1	03/24/23 12:45	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 12:45	
Chlorobenzene	ND U	0.50	1	03/24/23 12:45	
Chloroethane	ND U	0.50	1	03/24/23 12:45	
Chloroform	ND U	0.50	1	03/24/23 12:45	
Chloromethane	ND U	0.50	1	03/24/23 12:45	
2-Chlorotoluene	ND U	2.0	1	03/24/23 12:45	
4-Chlorotoluene	ND U	2.0	1	03/24/23 12:45	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 12:45	
Dibromochloromethane	ND U	0.50	1	03/24/23 12:45	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 12:45	
Dibromomethane	ND U	0.50	1	03/24/23 12:45	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 12:45	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 12:45	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 12:45	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 12:45	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 12:45	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:45	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:45	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 12:45	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 12:45	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 12:45	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 12:45	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:45	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:45	
Ethylbenzene	ND U	0.50	1	03/24/23 12:45	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 12:45	
2-Hexanone	ND U	20	1	03/24/23 12:45	
Isopropylbenzene	ND U	2.0	1	03/24/23 12:45	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 12:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 15:15
Date Received: 03/22/23 12:10

Sample Name: LB-032123-10-17D
Lab Code: K2303351-005

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	03/24/23 12:45	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 12:45	
Methylene Chloride	ND U	2.0	1	03/24/23 12:45	
Naphthalene	ND U	2.0	1	03/24/23 12:45	
n-Propylbenzene	ND U	2.0	1	03/24/23 12:45	
Styrene	ND U	0.50	1	03/24/23 12:45	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:45	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:45	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 12:45	
Toluene	ND U	0.50	1	03/24/23 12:45	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 12:45	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 12:45	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 12:45	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 12:45	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 12:45	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 12:45	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 12:45	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 12:45	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 12:45	
Vinyl Chloride	ND U	0.50	1	03/24/23 12:45	
o-Xylene	ND U	0.50	1	03/24/23 12:45	
m,p-Xylenes	ND U	0.50	1	03/24/23 12:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	03/24/23 12:45	
Dibromofluoromethane	115	73 - 122	03/24/23 12:45	
Toluene-d8	101	65 - 144	03/24/23 12:45	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 08:30
Date Received: 03/22/23 12:10

Sample Name: LB-032123-01-20S
Lab Code: K2303351-006

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	03/24/23 13:05	
Benzene	ND U	0.50	1	03/24/23 13:05	
Bromobenzene	ND U	2.0	1	03/24/23 13:05	
Bromochloromethane	ND U	0.50	1	03/24/23 13:05	
Bromodichloromethane	ND U	0.50	1	03/24/23 13:05	
Bromoform	ND U	0.50	1	03/24/23 13:05	
Bromomethane	ND U	0.50	1	03/24/23 13:05	*
2-Butanone (MEK)	ND U	20	1	03/24/23 13:05	
n-Butylbenzene	ND U	4.0	1	03/24/23 13:05	
sec-Butylbenzene	ND U	2.0	1	03/24/23 13:05	
tert-Butylbenzene	ND U	2.0	1	03/24/23 13:05	
Carbon Disulfide	ND U	0.50	1	03/24/23 13:05	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 13:05	
Chlorobenzene	ND U	0.50	1	03/24/23 13:05	
Chloroethane	ND U	0.50	1	03/24/23 13:05	
Chloroform	ND U	0.50	1	03/24/23 13:05	
Chloromethane	ND U	0.50	1	03/24/23 13:05	
2-Chlorotoluene	ND U	2.0	1	03/24/23 13:05	
4-Chlorotoluene	ND U	2.0	1	03/24/23 13:05	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 13:05	
Dibromochloromethane	ND U	0.50	1	03/24/23 13:05	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 13:05	
Dibromomethane	ND U	0.50	1	03/24/23 13:05	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 13:05	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 13:05	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 13:05	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 13:05	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 13:05	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:05	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:05	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 13:05	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 13:05	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 13:05	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 13:05	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:05	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:05	
Ethylbenzene	ND U	0.50	1	03/24/23 13:05	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 13:05	
2-Hexanone	ND U	20	1	03/24/23 13:05	
Isopropylbenzene	ND U	2.0	1	03/24/23 13:05	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 13:05	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 08:30
Date Received: 03/22/23 12:10

Sample Name: LB-032123-01-20S
Lab Code: K2303351-006

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	03/24/23 13:05	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 13:05	
Methylene Chloride	ND U	2.0	1	03/24/23 13:05	
Naphthalene	ND U	2.0	1	03/24/23 13:05	
n-Propylbenzene	ND U	2.0	1	03/24/23 13:05	
Styrene	ND U	0.50	1	03/24/23 13:05	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:05	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:05	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 13:05	
Toluene	ND U	0.50	1	03/24/23 13:05	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 13:05	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 13:05	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 13:05	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 13:05	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 13:05	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 13:05	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 13:05	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 13:05	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 13:05	
Vinyl Chloride	ND U	0.50	1	03/24/23 13:05	
o-Xylene	ND U	0.50	1	03/24/23 13:05	
m,p-Xylenes	ND U	0.50	1	03/24/23 13:05	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	03/24/23 13:05	
Dibromofluoromethane	117	73 - 122	03/24/23 13:05	
Toluene-d8	103	65 - 144	03/24/23 13:05	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 08:40
Date Received: 03/22/23 12:10

Sample Name: LB-032123-02-FB1
Lab Code: K2303351-007

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	03/24/23 13:24	
Benzene	ND U	0.50	1	03/24/23 13:24	
Bromobenzene	ND U	2.0	1	03/24/23 13:24	
Bromochloromethane	ND U	0.50	1	03/24/23 13:24	
Bromodichloromethane	ND U	0.50	1	03/24/23 13:24	
Bromoform	ND U	0.50	1	03/24/23 13:24	
Bromomethane	ND U	0.50	1	03/24/23 13:24	*
2-Butanone (MEK)	ND U	20	1	03/24/23 13:24	
n-Butylbenzene	ND U	4.0	1	03/24/23 13:24	
sec-Butylbenzene	ND U	2.0	1	03/24/23 13:24	
tert-Butylbenzene	ND U	2.0	1	03/24/23 13:24	
Carbon Disulfide	ND U	0.50	1	03/24/23 13:24	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 13:24	
Chlorobenzene	ND U	0.50	1	03/24/23 13:24	
Chloroethane	ND U	0.50	1	03/24/23 13:24	
Chloroform	3.3	0.50	1	03/24/23 13:24	
Chloromethane	ND U	0.50	1	03/24/23 13:24	
2-Chlorotoluene	ND U	2.0	1	03/24/23 13:24	
4-Chlorotoluene	ND U	2.0	1	03/24/23 13:24	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 13:24	
Dibromochloromethane	ND U	0.50	1	03/24/23 13:24	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 13:24	
Dibromomethane	ND U	0.50	1	03/24/23 13:24	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 13:24	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 13:24	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 13:24	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 13:24	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 13:24	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:24	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:24	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 13:24	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 13:24	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 13:24	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 13:24	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:24	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:24	
Ethylbenzene	ND U	0.50	1	03/24/23 13:24	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 13:24	
2-Hexanone	ND U	20	1	03/24/23 13:24	
Isopropylbenzene	ND U	2.0	1	03/24/23 13:24	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 13:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 08:40
Date Received: 03/22/23 12:10

Sample Name: LB-032123-02-FB1
Lab Code: K2303351-007

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	03/24/23 13:24	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 13:24	
Methylene Chloride	ND U	2.0	1	03/24/23 13:24	
Naphthalene	ND U	2.0	1	03/24/23 13:24	
n-Propylbenzene	ND U	2.0	1	03/24/23 13:24	
Styrene	ND U	0.50	1	03/24/23 13:24	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:24	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:24	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 13:24	
Toluene	ND U	0.50	1	03/24/23 13:24	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 13:24	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 13:24	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 13:24	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 13:24	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 13:24	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 13:24	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 13:24	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 13:24	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 13:24	
Vinyl Chloride	ND U	0.50	1	03/24/23 13:24	
o-Xylene	ND U	0.50	1	03/24/23 13:24	
m,p-Xylenes	ND U	0.50	1	03/24/23 13:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	03/24/23 13:24	
Dibromofluoromethane	118	73 - 122	03/24/23 13:24	
Toluene-d8	101	65 - 144	03/24/23 13:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 13:10
Date Received: 03/22/23 12:10

Sample Name: LB-032123-08-26D
Lab Code: K2303351-008

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	03/24/23 13:44	
Benzene	ND U	0.50	1	03/24/23 13:44	
Bromobenzene	ND U	2.0	1	03/24/23 13:44	
Bromochloromethane	ND U	0.50	1	03/24/23 13:44	
Bromodichloromethane	ND U	0.50	1	03/24/23 13:44	
Bromoform	ND U	0.50	1	03/24/23 13:44	
Bromomethane	ND U	0.50	1	03/24/23 13:44	*
2-Butanone (MEK)	ND U	20	1	03/24/23 13:44	
n-Butylbenzene	ND U	4.0	1	03/24/23 13:44	
sec-Butylbenzene	ND U	2.0	1	03/24/23 13:44	
tert-Butylbenzene	ND U	2.0	1	03/24/23 13:44	
Carbon Disulfide	ND U	0.50	1	03/24/23 13:44	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 13:44	
Chlorobenzene	ND U	0.50	1	03/24/23 13:44	
Chloroethane	ND U	0.50	1	03/24/23 13:44	
Chloroform	ND U	0.50	1	03/24/23 13:44	
Chloromethane	ND U	0.50	1	03/24/23 13:44	
2-Chlorotoluene	ND U	2.0	1	03/24/23 13:44	
4-Chlorotoluene	ND U	2.0	1	03/24/23 13:44	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 13:44	
Dibromochloromethane	ND U	0.50	1	03/24/23 13:44	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 13:44	
Dibromomethane	ND U	0.50	1	03/24/23 13:44	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 13:44	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 13:44	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 13:44	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 13:44	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 13:44	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:44	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:44	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 13:44	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 13:44	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 13:44	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 13:44	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:44	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:44	
Ethylbenzene	ND U	0.50	1	03/24/23 13:44	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 13:44	
2-Hexanone	ND U	20	1	03/24/23 13:44	
Isopropylbenzene	ND U	2.0	1	03/24/23 13:44	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 13:44	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 13:10
Date Received: 03/22/23 12:10

Sample Name: LB-032123-08-26D
Lab Code: K2303351-008

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	03/24/23 13:44	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 13:44	
Methylene Chloride	ND U	2.0	1	03/24/23 13:44	
Naphthalene	ND U	2.0	1	03/24/23 13:44	
n-Propylbenzene	ND U	2.0	1	03/24/23 13:44	
Styrene	ND U	0.50	1	03/24/23 13:44	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:44	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:44	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 13:44	
Toluene	ND U	0.50	1	03/24/23 13:44	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 13:44	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 13:44	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 13:44	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 13:44	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 13:44	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 13:44	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 13:44	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 13:44	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 13:44	
Vinyl Chloride	ND U	0.50	1	03/24/23 13:44	
o-Xylene	ND U	0.50	1	03/24/23 13:44	
m,p-Xylenes	ND U	0.50	1	03/24/23 13:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	03/24/23 13:44	
Dibromofluoromethane	119	73 - 122	03/24/23 13:44	
Toluene-d8	102	65 - 144	03/24/23 13:44	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 10:00
Date Received: 03/22/23 12:10

Sample Name: LB-032123-03-27I
Lab Code: K2303351-009

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	03/24/23 14:04	
Benzene	ND U	0.50	1	03/24/23 14:04	
Bromobenzene	ND U	2.0	1	03/24/23 14:04	
Bromochloromethane	ND U	0.50	1	03/24/23 14:04	
Bromodichloromethane	ND U	0.50	1	03/24/23 14:04	
Bromoform	ND U	0.50	1	03/24/23 14:04	
Bromomethane	ND U	0.50	1	03/24/23 14:04	*
2-Butanone (MEK)	ND U	20	1	03/24/23 14:04	
n-Butylbenzene	ND U	4.0	1	03/24/23 14:04	
sec-Butylbenzene	ND U	2.0	1	03/24/23 14:04	
tert-Butylbenzene	ND U	2.0	1	03/24/23 14:04	
Carbon Disulfide	ND U	0.50	1	03/24/23 14:04	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 14:04	
Chlorobenzene	ND U	0.50	1	03/24/23 14:04	
Chloroethane	ND U	0.50	1	03/24/23 14:04	
Chloroform	ND U	0.50	1	03/24/23 14:04	
Chloromethane	ND U	0.50	1	03/24/23 14:04	
2-Chlorotoluene	ND U	2.0	1	03/24/23 14:04	
4-Chlorotoluene	ND U	2.0	1	03/24/23 14:04	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 14:04	
Dibromochloromethane	ND U	0.50	1	03/24/23 14:04	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 14:04	
Dibromomethane	ND U	0.50	1	03/24/23 14:04	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 14:04	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 14:04	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 14:04	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 14:04	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 14:04	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 14:04	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 14:04	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 14:04	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 14:04	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 14:04	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 14:04	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 14:04	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 14:04	
Ethylbenzene	ND U	0.50	1	03/24/23 14:04	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 14:04	
2-Hexanone	ND U	20	1	03/24/23 14:04	
Isopropylbenzene	ND U	2.0	1	03/24/23 14:04	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 14:04	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 10:00
Date Received: 03/22/23 12:10

Sample Name: LB-032123-03-27I
Lab Code: K2303351-009

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	03/24/23 14:04	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 14:04	
Methylene Chloride	ND U	2.0	1	03/24/23 14:04	
Naphthalene	ND U	2.0	1	03/24/23 14:04	
n-Propylbenzene	ND U	2.0	1	03/24/23 14:04	
Styrene	ND U	0.50	1	03/24/23 14:04	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 14:04	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 14:04	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 14:04	
Toluene	ND U	0.50	1	03/24/23 14:04	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 14:04	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 14:04	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 14:04	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 14:04	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 14:04	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 14:04	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 14:04	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 14:04	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 14:04	
Vinyl Chloride	ND U	0.50	1	03/24/23 14:04	
o-Xylene	ND U	0.50	1	03/24/23 14:04	
m,p-Xylenes	ND U	0.50	1	03/24/23 14:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	68 - 117	03/24/23 14:04	
Dibromofluoromethane	119	73 - 122	03/24/23 14:04	
Toluene-d8	103	65 - 144	03/24/23 14:04	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 10:05
Date Received: 03/22/23 12:10

Sample Name: LB-032123-04-DUP1
Lab Code: K2303351-010

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	03/24/23 14:24	
Benzene	ND U	0.50	1	03/24/23 14:24	
Bromobenzene	ND U	2.0	1	03/24/23 14:24	
Bromochloromethane	ND U	0.50	1	03/24/23 14:24	
Bromodichloromethane	ND U	0.50	1	03/24/23 14:24	
Bromoform	ND U	0.50	1	03/24/23 14:24	
Bromomethane	ND U	0.50	1	03/24/23 14:24	*
2-Butanone (MEK)	ND U	20	1	03/24/23 14:24	
n-Butylbenzene	ND U	4.0	1	03/24/23 14:24	
sec-Butylbenzene	ND U	2.0	1	03/24/23 14:24	
tert-Butylbenzene	ND U	2.0	1	03/24/23 14:24	
Carbon Disulfide	ND U	0.50	1	03/24/23 14:24	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 14:24	
Chlorobenzene	ND U	0.50	1	03/24/23 14:24	
Chloroethane	ND U	0.50	1	03/24/23 14:24	
Chloroform	ND U	0.50	1	03/24/23 14:24	
Chloromethane	ND U	0.50	1	03/24/23 14:24	
2-Chlorotoluene	ND U	2.0	1	03/24/23 14:24	
4-Chlorotoluene	ND U	2.0	1	03/24/23 14:24	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 14:24	
Dibromochloromethane	ND U	0.50	1	03/24/23 14:24	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 14:24	
Dibromomethane	ND U	0.50	1	03/24/23 14:24	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 14:24	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 14:24	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 14:24	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 14:24	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 14:24	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 14:24	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 14:24	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 14:24	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 14:24	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 14:24	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 14:24	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 14:24	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 14:24	
Ethylbenzene	ND U	0.50	1	03/24/23 14:24	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 14:24	
2-Hexanone	ND U	20	1	03/24/23 14:24	
Isopropylbenzene	ND U	2.0	1	03/24/23 14:24	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 14:24	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 10:05
Date Received: 03/22/23 12:10

Sample Name: LB-032123-04-DUP1
Lab Code: K2303351-010

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	03/24/23 14:24	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 14:24	
Methylene Chloride	ND U	2.0	1	03/24/23 14:24	
Naphthalene	ND U	2.0	1	03/24/23 14:24	
n-Propylbenzene	ND U	2.0	1	03/24/23 14:24	
Styrene	ND U	0.50	1	03/24/23 14:24	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 14:24	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 14:24	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 14:24	
Toluene	ND U	0.50	1	03/24/23 14:24	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 14:24	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 14:24	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 14:24	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 14:24	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 14:24	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 14:24	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 14:24	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 14:24	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 14:24	
Vinyl Chloride	ND U	0.50	1	03/24/23 14:24	
o-Xylene	ND U	0.50	1	03/24/23 14:24	
m,p-Xylenes	ND U	0.50	1	03/24/23 14:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	68 - 117	03/24/23 14:24	
Dibromofluoromethane	119	73 - 122	03/24/23 14:24	
Toluene-d8	102	65 - 144	03/24/23 14:24	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 11:45
Date Received: 03/22/23 12:10

Sample Name: LB-032123-06-27D
Lab Code: K2303351-011

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	03/24/23 14:44	
Benzene	ND U	0.50	1	03/24/23 14:44	
Bromobenzene	ND U	2.0	1	03/24/23 14:44	
Bromochloromethane	ND U	0.50	1	03/24/23 14:44	
Bromodichloromethane	ND U	0.50	1	03/24/23 14:44	
Bromoform	ND U	0.50	1	03/24/23 14:44	
Bromomethane	ND U	0.50	1	03/24/23 14:44	*
2-Butanone (MEK)	ND U	20	1	03/24/23 14:44	
n-Butylbenzene	ND U	4.0	1	03/24/23 14:44	
sec-Butylbenzene	ND U	2.0	1	03/24/23 14:44	
tert-Butylbenzene	ND U	2.0	1	03/24/23 14:44	
Carbon Disulfide	ND U	0.50	1	03/24/23 14:44	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 14:44	
Chlorobenzene	ND U	0.50	1	03/24/23 14:44	
Chloroethane	ND U	0.50	1	03/24/23 14:44	
Chloroform	ND U	0.50	1	03/24/23 14:44	
Chloromethane	ND U	0.50	1	03/24/23 14:44	
2-Chlorotoluene	ND U	2.0	1	03/24/23 14:44	
4-Chlorotoluene	ND U	2.0	1	03/24/23 14:44	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 14:44	
Dibromochloromethane	ND U	0.50	1	03/24/23 14:44	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 14:44	
Dibromomethane	ND U	0.50	1	03/24/23 14:44	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 14:44	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 14:44	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 14:44	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 14:44	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 14:44	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 14:44	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 14:44	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 14:44	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 14:44	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 14:44	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 14:44	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 14:44	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 14:44	
Ethylbenzene	ND U	0.50	1	03/24/23 14:44	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 14:44	
2-Hexanone	ND U	20	1	03/24/23 14:44	
Isopropylbenzene	ND U	2.0	1	03/24/23 14:44	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 14:44	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 11:45
Date Received: 03/22/23 12:10

Sample Name: LB-032123-06-27D
Lab Code: K2303351-011

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	03/24/23 14:44	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 14:44	
Methylene Chloride	ND U	2.0	1	03/24/23 14:44	
Naphthalene	ND U	2.0	1	03/24/23 14:44	
n-Propylbenzene	ND U	2.0	1	03/24/23 14:44	
Styrene	ND U	0.50	1	03/24/23 14:44	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 14:44	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 14:44	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 14:44	
Toluene	ND U	0.50	1	03/24/23 14:44	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 14:44	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 14:44	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 14:44	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 14:44	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 14:44	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 14:44	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 14:44	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 14:44	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 14:44	
Vinyl Chloride	ND U	0.50	1	03/24/23 14:44	
o-Xylene	ND U	0.50	1	03/24/23 14:44	
m,p-Xylenes	ND U	0.50	1	03/24/23 14:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	03/24/23 14:44	
Dibromofluoromethane	118	73 - 122	03/24/23 14:44	
Toluene-d8	100	65 - 144	03/24/23 14:44	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 07:00
Date Received: 03/22/23 12:10

Sample Name: TB2
Lab Code: K2303351-012

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	03/24/23 12:25	
Benzene	ND U	0.50	1	03/24/23 12:25	
Bromobenzene	ND U	2.0	1	03/24/23 12:25	
Bromochloromethane	ND U	0.50	1	03/24/23 12:25	
Bromodichloromethane	ND U	0.50	1	03/24/23 12:25	
Bromoform	ND U	0.50	1	03/24/23 12:25	
Bromomethane	ND U	0.50	1	03/24/23 12:25	*
2-Butanone (MEK)	ND U	20	1	03/24/23 12:25	
n-Butylbenzene	ND U	4.0	1	03/24/23 12:25	
sec-Butylbenzene	ND U	2.0	1	03/24/23 12:25	
tert-Butylbenzene	ND U	2.0	1	03/24/23 12:25	
Carbon Disulfide	ND U	0.50	1	03/24/23 12:25	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 12:25	
Chlorobenzene	ND U	0.50	1	03/24/23 12:25	
Chloroethane	ND U	0.50	1	03/24/23 12:25	
Chloroform	ND U	0.50	1	03/24/23 12:25	
Chloromethane	ND U	0.50	1	03/24/23 12:25	
2-Chlorotoluene	ND U	2.0	1	03/24/23 12:25	
4-Chlorotoluene	ND U	2.0	1	03/24/23 12:25	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 12:25	
Dibromochloromethane	ND U	0.50	1	03/24/23 12:25	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 12:25	
Dibromomethane	ND U	0.50	1	03/24/23 12:25	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 12:25	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 12:25	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 12:25	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 12:25	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 12:25	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:25	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:25	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 12:25	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 12:25	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 12:25	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 12:25	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:25	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:25	
Ethylbenzene	ND U	0.50	1	03/24/23 12:25	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 12:25	
2-Hexanone	ND U	20	1	03/24/23 12:25	
Isopropylbenzene	ND U	2.0	1	03/24/23 12:25	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 12:25	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23 07:00
Date Received: 03/22/23 12:10

Sample Name: TB2
Lab Code: K2303351-012

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	03/24/23 12:25	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 12:25	
Methylene Chloride	ND U	2.0	1	03/24/23 12:25	
Naphthalene	ND U	2.0	1	03/24/23 12:25	
n-Propylbenzene	ND U	2.0	1	03/24/23 12:25	
Styrene	ND U	0.50	1	03/24/23 12:25	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:25	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:25	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 12:25	
Toluene	ND U	0.50	1	03/24/23 12:25	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 12:25	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 12:25	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 12:25	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 12:25	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 12:25	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 12:25	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 12:25	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 12:25	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 12:25	
Vinyl Chloride	ND U	0.50	1	03/24/23 12:25	
o-Xylene	ND U	0.50	1	03/24/23 12:25	
m,p-Xylenes	ND U	0.50	1	03/24/23 12:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	68 - 117	03/24/23 12:25	
Dibromofluoromethane	116	73 - 122	03/24/23 12:25	
Toluene-d8	100	65 - 144	03/24/23 12:25	



Metals

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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 Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-09-5D
Lab Code: K2303351-001

Service Request: K2303351
Date Collected: 03/21/23 14:25
Date Received: 03/22/23 12:10
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	03/30/23 12:23	03/23/23	
Manganese	6010C	3.5	ug/L	1.1	1	03/30/23 12:23	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-05-13I
Lab Code: K2303351-002

Service Request: K2303351
Date Collected: 03/21/23 11:00
Date Received: 03/22/23 12:10
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	03/30/23 12:26	03/23/23	
Manganese	6010C	4.2	ug/L	1.1	1	03/30/23 12:26	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-07-13D
Lab Code: K2303351-003

Service Request: K2303351
Date Collected: 03/21/23 12:30
Date Received: 03/22/23 12:10
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	03/30/23 12:28	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/30/23 12:28	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-11-17I
Lab Code: K2303351-004

Service Request: K2303351
Date Collected: 03/21/23 15:50
Date Received: 03/22/23 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	9070	ug/L	21	1	03/30/23 12:31	03/23/23	
Manganese	6010C	2040	ug/L	1.1	1	03/30/23 12:31	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-10-17D
Lab Code: K2303351-005

Service Request: K2303351
Date Collected: 03/21/23 15:15
Date Received: 03/22/23 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	122	ug/L	21	1	03/30/23 12:33	03/23/23	
Manganese	6010C	3820	ug/L	1.1	1	03/30/23 12:33	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-01-20S
Lab Code: K2303351-006

Service Request: K2303351
Date Collected: 03/21/23 08:30
Date Received: 03/22/23 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	1460	ug/L	21	1	03/30/23 12:36	03/23/23	
Manganese	6010C	1750	ug/L	1.1	1	03/30/23 12:36	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-02-FB1
Lab Code: K2303351-007

Service Request: K2303351
Date Collected: 03/21/23 08:40
Date Received: 03/22/23 12:10
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	03/30/23 12:46	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/30/23 12:46	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-08-26D
Lab Code: K2303351-008

Service Request: K2303351
Date Collected: 03/21/23 13:10
Date Received: 03/22/23 12:10
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	03/30/23 12:48	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/30/23 12:48	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-03-27I
Lab Code: K2303351-009

Service Request: K2303351
Date Collected: 03/21/23 10:00
Date Received: 03/22/23 12:10
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	03/30/23 12:51	03/23/23	
Manganese	6010C	43.1	ug/L	1.1	1	03/30/23 12:51	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-04-DUP1
Lab Code: K2303351-010

Service Request: K2303351
Date Collected: 03/21/23 10:05
Date Received: 03/22/23 12:10
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	03/30/23 12:53	03/23/23	
Manganese	6010C	48.3	ug/L	1.1	1	03/30/23 12:53	03/23/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-06-27D
Lab Code: K2303351-011

Service Request: K2303351
Date Collected: 03/21/23 11:45
Date Received: 03/22/23 12:10
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	03/30/23 12:56	03/23/23	
Manganese	6010C	1.1	ug/L	1.1	1	03/30/23 12:56	03/23/23	



General Chemistry

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

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-09-5D
Lab Code: K2303351-001

Service Request: K2303351
Date Collected: 03/21/23 14:25
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	8.11	mg/L	0.20	2	03/23/23 00:58	
Nitrate as Nitrogen	300.0	1.20	mg/L	0.10	2	03/23/23 00:58	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-09-5D
Lab Code: K2303351-001

Service Request: K2303351
Date Collected: 03/21/23 14:25
Date Received: 03/22/23 12:10
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	215	mg/L	5.0	1	03/24/23 14:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-05-13I
Lab Code: K2303351-002

Service Request: K2303351
Date Collected: 03/21/23 11:00
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.60	mg/L	0.20	2	03/23/23 01:33	
Nitrate as Nitrogen	300.0	3.58	mg/L	0.10	2	03/23/23 01:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-05-13I
Lab Code: K2303351-002

Service Request: K2303351
Date Collected: 03/21/23 11:00
Date Received: 03/22/23 12:10
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	189	mg/L	5.0	1	03/24/23 14:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-07-13D
Lab Code: K2303351-003

Service Request: K2303351
Date Collected: 03/21/23 12:30
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.04	mg/L	0.20	2	03/23/23 01:41	
Nitrate as Nitrogen	300.0	4.58	mg/L	0.10	2	03/23/23 01:41	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-07-13D
Lab Code: K2303351-003

Service Request: K2303351
Date Collected: 03/21/23 12:30
Date Received: 03/22/23 12:10
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	174	mg/L	5.0	1	03/24/23 14:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-11-17I
Lab Code: K2303351-004

Service Request: K2303351
Date Collected: 03/21/23 15:50
Date Received: 03/22/23 12:10

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	11.2	mg/L	0.20	2	03/23/23 01:50	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.10	2	03/23/23 01:50	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-11-17I
Lab Code: K2303351-004

Service Request: K2303351
Date Collected: 03/21/23 15:50
Date Received: 03/22/23 12:10
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	218	mg/L	5.0	1	03/24/23 14:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-10-17D
Lab Code: K2303351-005

Service Request: K2303351
Date Collected: 03/21/23 15:15
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	7.40	mg/L	0.20	2	03/23/23 01:58	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.10	2	03/23/23 01:58	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-10-17D
Lab Code: K2303351-005

Service Request: K2303351
Date Collected: 03/21/23 15:15
Date Received: 03/22/23 12:10
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	183	mg/L	5.0	1	03/24/23 14:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-01-20S
Lab Code: K2303351-006

Service Request: K2303351
Date Collected: 03/21/23 08:30
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	18.4	mg/L	0.20	2	03/23/23 02:07	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.10	2	03/23/23 02:07	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-01-20S
Lab Code: K2303351-006

Service Request: K2303351
Date Collected: 03/21/23 08:30
Date Received: 03/22/23 12:10
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	321	mg/L	5.0	1	03/24/23 14:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-02-FB1
Lab Code: K2303351-007

Service Request: K2303351
Date Collected: 03/21/23 08:40
Date Received: 03/22/23 12:10
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	03/23/23 02:15	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.10	2	03/23/23 02:15	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-02-FB1
Lab Code: K2303351-007

Service Request: K2303351
Date Collected: 03/21/23 08:40
Date Received: 03/22/23 12:10
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	7.2	mg/L	5.0	1	03/24/23 14:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-08-26D
Lab Code: K2303351-008

Service Request: K2303351
Date Collected: 03/21/23 13:10
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.01	mg/L	0.20	2	03/23/23 02:58	
Nitrate as Nitrogen	300.0	4.45	mg/L	0.10	2	03/23/23 02:58	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-08-26D
Lab Code: K2303351-008

Service Request: K2303351
Date Collected: 03/21/23 13:10
Date Received: 03/22/23 12:10
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	180	mg/L	5.0	1	03/24/23 14:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-03-27I
Lab Code: K2303351-009

Service Request: K2303351
Date Collected: 03/21/23 10:00
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	9.42	mg/L	0.20	2	03/23/23 03:07	
Nitrate as Nitrogen	300.0	1.69	mg/L	0.10	2	03/23/23 03:07	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-03-27I
Lab Code: K2303351-009

Service Request: K2303351
Date Collected: 03/21/23 10:00
Date Received: 03/22/23 12:10
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	232	mg/L	5.0	1	03/28/23 17:35	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-04-DUP1
Lab Code: K2303351-010

Service Request: K2303351
Date Collected: 03/21/23 10:05
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	9.41	mg/L	0.20	2	03/23/23 03:15	
Nitrate as Nitrogen	300.0	1.66	mg/L	0.10	2	03/23/23 03:15	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-04-DUP1
Lab Code: K2303351-010

Service Request: K2303351
Date Collected: 03/21/23 10:05
Date Received: 03/22/23 12:10
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	231	mg/L	5.0	1	03/28/23 17:35	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-06-27D
Lab Code: K2303351-011

Service Request: K2303351
Date Collected: 03/21/23 11:45
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	7.20	mg/L	0.20	2	03/23/23 03:24	
Nitrate as Nitrogen	300.0	4.17	mg/L	0.10	2	03/23/23 03:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032123-06-27D
Lab Code: K2303351-011

Service Request: K2303351
Date Collected: 03/21/23 11:45
Date Received: 03/22/23 12:10
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	195	mg/L	5.0	1	03/28/23 17:35	



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 Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351

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-032123-09-5D	K2303351-001	82	118	100
LB-032123-05-13I	K2303351-002	82	118	102
LB-032123-07-13D	K2303351-003	81	116	100
LB-032123-11-17I	K2303351-004	81	117	101
LB-032123-10-17D	K2303351-005	82	115	101
LB-032123-01-20S	K2303351-006	81	117	103
LB-032123-02-FB1	K2303351-007	80	118	101
LB-032123-08-26D	K2303351-008	80	119	102
LB-032123-03-27I	K2303351-009	79	119	103
LB-032123-04-DUP1	K2303351-010	79	119	102
LB-032123-06-27D	K2303351-011	82	118	100
TB2	K2303351-012	79	116	100
Method Blank	KQ2305635-05	83	116	102
Method Blank	KQ2305746-05	81	118	102
Lab Control Sample	KQ2305635-03	93	107	105
Duplicate Lab Control Sample	KQ2305635-04	90	105	105
Lab Control Sample	KQ2305746-03	91	107	106
Duplicate Lab Control Sample	KQ2305746-04	91	106	106

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305635-05

Service Request: K2303351
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	03/23/23 13:24	
Benzene	ND U	0.50	1	03/23/23 13:24	
Bromobenzene	ND U	2.0	1	03/23/23 13:24	
Bromochloromethane	ND U	0.50	1	03/23/23 13:24	
Bromodichloromethane	ND U	0.50	1	03/23/23 13:24	
Bromoform	ND U	0.50	1	03/23/23 13:24	
Bromomethane	ND U	0.50	1	03/23/23 13:24	
2-Butanone (MEK)	ND U	20	1	03/23/23 13:24	
n-Butylbenzene	ND U	4.0	1	03/23/23 13:24	
sec-Butylbenzene	ND U	2.0	1	03/23/23 13:24	
tert-Butylbenzene	ND U	2.0	1	03/23/23 13:24	
Carbon Disulfide	ND U	0.50	1	03/23/23 13:24	
Carbon Tetrachloride	ND U	0.50	1	03/23/23 13:24	
Chlorobenzene	ND U	0.50	1	03/23/23 13:24	
Chloroethane	ND U	0.50	1	03/23/23 13:24	
Chloroform	ND U	0.50	1	03/23/23 13:24	
Chloromethane	ND U	0.50	1	03/23/23 13:24	
2-Chlorotoluene	ND U	2.0	1	03/23/23 13:24	
4-Chlorotoluene	ND U	2.0	1	03/23/23 13:24	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/23/23 13:24	
Dibromochloromethane	ND U	0.50	1	03/23/23 13:24	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/23/23 13:24	
Dibromomethane	ND U	0.50	1	03/23/23 13:24	
1,2-Dichlorobenzene	ND U	0.50	1	03/23/23 13:24	
1,3-Dichlorobenzene	ND U	0.50	1	03/23/23 13:24	
1,4-Dichlorobenzene	ND U	0.50	1	03/23/23 13:24	
Dichlorodifluoromethane	ND U	0.50	1	03/23/23 13:24	
1,1-Dichloroethane	ND U	0.50	1	03/23/23 13:24	
cis-1,2-Dichloroethene	ND U	0.50	1	03/23/23 13:24	
trans-1,2-Dichloroethene	ND U	0.50	1	03/23/23 13:24	
1,2-Dichloropropane	ND U	0.50	1	03/23/23 13:24	
1,3-Dichloropropane	ND U	0.50	1	03/23/23 13:24	
2,2-Dichloropropane	ND U	0.50	1	03/23/23 13:24	
1,1-Dichloropropene	ND U	0.50	1	03/23/23 13:24	
cis-1,3-Dichloropropene	ND U	0.50	1	03/23/23 13:24	
trans-1,3-Dichloropropene	ND U	0.50	1	03/23/23 13:24	
Ethylbenzene	ND U	0.50	1	03/23/23 13:24	
Hexachlorobutadiene	ND U	2.0	1	03/23/23 13:24	
2-Hexanone	ND U	20	1	03/23/23 13:24	
Isopropylbenzene	ND U	2.0	1	03/23/23 13:24	
4-Isopropyltoluene	ND U	2.0	1	03/23/23 13:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305635-05

Service Request: K2303351
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	03/23/23 13:24	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/23/23 13:24	
Methylene Chloride	ND U	2.0	1	03/23/23 13:24	
Naphthalene	ND U	2.0	1	03/23/23 13:24	
n-Propylbenzene	ND U	2.0	1	03/23/23 13:24	
Styrene	ND U	0.50	1	03/23/23 13:24	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/23/23 13:24	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/23/23 13:24	
Tetrachloroethene (PCE)	ND U	0.50	1	03/23/23 13:24	
Toluene	ND U	0.50	1	03/23/23 13:24	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/23/23 13:24	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/23/23 13:24	
1,1,2-Trichloroethane	ND U	0.50	1	03/23/23 13:24	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/23/23 13:24	
Trichloroethene (TCE)	ND U	0.50	1	03/23/23 13:24	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/23/23 13:24	
1,2,3-Trichloropropane	ND U	0.50	1	03/23/23 13:24	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/23/23 13:24	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/23/23 13:24	
Vinyl Chloride	ND U	0.50	1	03/23/23 13:24	
o-Xylene	ND U	0.50	1	03/23/23 13:24	
m,p-Xylenes	ND U	0.50	1	03/23/23 13:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	68 - 117	03/23/23 13:24	
Dibromofluoromethane	116	73 - 122	03/23/23 13:24	
Toluene-d8	102	65 - 144	03/23/23 13:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305746-05

Service Request: K2303351
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	03/24/23 12:05	
Benzene	ND U	0.50	1	03/24/23 12:05	
Bromobenzene	ND U	2.0	1	03/24/23 12:05	
Bromochloromethane	ND U	0.50	1	03/24/23 12:05	
Bromodichloromethane	ND U	0.50	1	03/24/23 12:05	
Bromoform	ND U	0.50	1	03/24/23 12:05	
Bromomethane	ND U	0.50	1	03/24/23 12:05	
2-Butanone (MEK)	ND U	20	1	03/24/23 12:05	
n-Butylbenzene	ND U	4.0	1	03/24/23 12:05	
sec-Butylbenzene	ND U	2.0	1	03/24/23 12:05	
tert-Butylbenzene	ND U	2.0	1	03/24/23 12:05	
Carbon Disulfide	ND U	0.50	1	03/24/23 12:05	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 12:05	
Chlorobenzene	ND U	0.50	1	03/24/23 12:05	
Chloroethane	ND U	0.50	1	03/24/23 12:05	
Chloroform	ND U	0.50	1	03/24/23 12:05	
Chloromethane	ND U	0.50	1	03/24/23 12:05	
2-Chlorotoluene	ND U	2.0	1	03/24/23 12:05	
4-Chlorotoluene	ND U	2.0	1	03/24/23 12:05	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 12:05	
Dibromochloromethane	ND U	0.50	1	03/24/23 12:05	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 12:05	
Dibromomethane	ND U	0.50	1	03/24/23 12:05	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 12:05	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 12:05	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 12:05	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 12:05	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 12:05	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:05	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:05	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 12:05	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 12:05	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 12:05	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 12:05	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:05	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:05	
Ethylbenzene	ND U	0.50	1	03/24/23 12:05	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 12:05	
2-Hexanone	ND U	20	1	03/24/23 12:05	
Isopropylbenzene	ND U	2.0	1	03/24/23 12:05	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 12:05	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305746-05

Service Request: K2303351
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	03/24/23 12:05	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 12:05	
Methylene Chloride	ND U	2.0	1	03/24/23 12:05	
Naphthalene	ND U	2.0	1	03/24/23 12:05	
n-Propylbenzene	ND U	2.0	1	03/24/23 12:05	
Styrene	ND U	0.50	1	03/24/23 12:05	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:05	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:05	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 12:05	
Toluene	ND U	0.50	1	03/24/23 12:05	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 12:05	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 12:05	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 12:05	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 12:05	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 12:05	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 12:05	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 12:05	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 12:05	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 12:05	
Vinyl Chloride	ND U	0.50	1	03/24/23 12:05	
o-Xylene	ND U	0.50	1	03/24/23 12:05	
m,p-Xylenes	ND U	0.50	1	03/24/23 12:05	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	03/24/23 12:05	
Dibromofluoromethane	118	73 - 122	03/24/23 12:05	
Toluene-d8	102	65 - 144	03/24/23 12:05	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/23/23
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: 798668

Analyte Name	Lab Control Sample KQ2305635-03			Duplicate Lab Control Sample KQ2305635-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.74	10.0	97	9.67	10.0	97	66-124	<1	30
1,1,1-Trichloroethane (TCA)	11.9	10.0	119	11.8	10.0	118	59-136	1	30
1,1,2,2-Tetrachloroethane	11.4	10.0	114	9.96	10.0	100	70-127	13	30
1,1,2-Trichloroethane	10.2	10.0	102	9.42	10.0	94	74-118	8	30
1,1-Dichloroethane	11.0	10.0	110	11.0	10.0	110	68-132	<1	30
1,1-Dichloropropene	11.6	10.0	116	11.9	10.0	119	59-134	3	30
1,2,3-Trichlorobenzene	9.42	10.0	94	9.08	10.0	91	68-120	4	30
1,2,3-Trichloropropane	11.1	10.0	111	9.47	10.0	95	69-123	16	30
1,2,4-Trichlorobenzene	8.81	10.0	88	8.70	10.0	87	58-126	1	30
1,2,4-Trimethylbenzene	9.94	10.0	99	10.5	10.0	105	63-122	5	30
1,2-Dibromo-3-chloropropane	11.3	10.0	113	9.24	10.0	92	55-132	20	30
1,2-Dibromoethane (EDB)	11.1	10.0	111	9.60	10.0	96	74-118	15	30
1,2-Dichlorobenzene	9.30	10.0	93	9.45	10.0	95	72-115	2	30
1,2-Dichloropropane	10.3	10.0	103	10.5	10.0	105	67-126	1	30
1,3,5-Trimethylbenzene	9.69	10.0	97	10.4	10.0	104	62-126	7	30
1,3-Dichlorobenzene	9.18	10.0	92	9.56	10.0	96	70-116	4	30
1,3-Dichloropropane	10.5	10.0	105	9.62	10.0	96	75-116	9	30
1,4-Dichlorobenzene	9.23	10.0	92	9.57	10.0	96	73-115	4	30
2,2-Dichloropropane	11.2	10.0	112	11.4	10.0	114	37-145	2	30
2-Butanone (MEK)	66.2	50.0	132	52.8	50.0	106	71-149	22	30
2-Chlorotoluene	9.42	10.0	94	10.0	10.0	100	55-131	6	30
2-Hexanone	59.4	50.0	119	47.2	50.0	94	59-131	23	30
4-Chlorotoluene	9.69	10.0	97	10.1	10.0	101	66-121	4	30
4-Isopropyltoluene	9.94	10.0	99	10.5	10.0	105	61-128	5	30
4-Methyl-2-pentanone (MIBK)	63.9	50.0	128	51.2	50.0	102	64-134	22	30
Acetone	65.5	50.0	131	51.7	50.0	103	68-135	24	30
Benzene	10.8	10.0	108	11.0	10.0	110	69-124	2	30
Bromobenzene	9.36	10.0	94	9.33	10.0	93	72-116	<1	30
Bromochloromethane	11.2	10.0	112	10.7	10.0	107	75-131	5	30
Bromodichloromethane	10.7	10.0	107	10.5	10.0	105	63-129	2	30
Bromoform	11.6	10.0	116	9.92	10.0	99	52-144	16	30
Bromomethane	9.57	10.0	96	8.77	10.0	88	35-113	9	30
Carbon Disulfide	19.3	20.0	97	19.7	20.0	98	46-144	2	30
Carbon Tetrachloride	12.1	10.0	121	12.0	10.0	120	55-140	<1	30
Chlorobenzene	9.89	10.0	99	10.1	10.0	101	72-116	2	30
Chloroethane	10.4	10.0	104	10.7	10.0	107	58-134	3	30
Chloroform	10.9	10.0	109	11.2	10.0	112	70-129	3	30
Chloromethane	10.1	10.0	101	10.4	10.0	104	34-130	2	30
cis-1,2-Dichloroethene	10.9	10.0	109	10.7	10.0	107	71-118	2	30
cis-1,3-Dichloropropene	11.0	10.0	110	10.6	10.0	106	62-132	4	30
Dibromochloromethane	10.4	10.0	104	9.52	10.0	95	67-126	9	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/23/23
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: 798668

Analyte Name	Lab Control Sample KQ2305635-03			Duplicate Lab Control Sample KQ2305635-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	11.9	10.0	119	10.2	10.0	102	69-128	15	30
Dichlorodifluoromethane	10.8	10.0	108	10.8	10.0	108	32-124	<1	30
Ethylbenzene	10.2	10.0	102	10.5	10.0	105	67-121	3	30
Hexachlorobutadiene	8.95	10.0	90	9.22	10.0	92	57-119	3	30
Isopropylbenzene	10.7	10.0	107	11.1	10.0	111	67-129	4	30
m,p-Xylenes	21.0	20.0	105	21.5	20.0	108	69-121	2	30
Methyl tert-Butyl Ether	11.3	10.0	113	10.3	10.0	103	54-126	10	30
Methylene Chloride	10.6	10.0	106	10.2	10.0	102	71-122	5	30
Naphthalene	10.3	10.0	103	8.80	10.0	88	64-126	16	30
n-Butylbenzene	9.87	10.0	99	10.4	10.0	104	55-130	5	30
n-Propylbenzene	9.90	10.0	99	10.4	10.0	104	61-124	5	30
o-Xylene	10.1	10.0	101	10.6	10.0	106	71-119	4	30
sec-Butylbenzene	10.4	10.0	104	11.2	10.0	112	59-128	7	30
Styrene	10.6	10.0	106	10.3	10.0	103	74-121	3	30
tert-Butylbenzene	9.96	10.0	100	10.5	10.0	105	61-127	5	30
Tetrachloroethene (PCE)	10.1	10.0	101	10.6	10.0	106	62-126	4	30
Toluene	11.0	10.0	110	11.2	10.0	112	69-124	2	30
trans-1,2-Dichloroethene	10.7	10.0	107	11.0	10.0	110	67-125	2	30
trans-1,3-Dichloropropene	10.3	10.0	103	9.86	10.0	99	59-125	5	30
Trichloroethene (TCE)	10.7	10.0	107	10.6	10.0	106	67-128	1	30
Trichlorofluoromethane (CFC 11)	11.8	10.0	118	11.9	10.0	119	52-141	<1	30
Vinyl Chloride	11.2	10.0	112	11.9	10.0	119	55-123	6	30

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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/24/23
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: 798797

Analyte Name	Lab Control Sample KQ2305746-03			Duplicate Lab Control Sample KQ2305746-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.62	10.0	96	10.4	10.0	104	66-124	8	30
1,1,1-Trichloroethane (TCA)	11.8	10.0	118	12.5	10.0	125	59-136	6	30
1,1,2,2-Tetrachloroethane	9.15	10.0	92	10.1	10.0	101	70-127	9	30
1,1,2-Trichloroethane	9.29	10.0	93	9.57	10.0	96	74-118	3	30
1,1-Dichloroethane	11.0	10.0	110	11.8	10.0	118	68-132	7	30
1,1-Dichloropropene	11.3	10.0	113	12.2	10.0	122	59-134	8	30
1,2,3-Trichlorobenzene	8.99	10.0	90	9.37	10.0	94	68-120	4	30
1,2,3-Trichloropropane	8.80	10.0	88	10.1	10.0	101	69-123	13	30
1,2,4-Trichlorobenzene	8.66	10.0	87	9.02	10.0	90	58-126	4	30
1,2,4-Trimethylbenzene	10.5	10.0	105	10.7	10.0	107	63-122	2	30
1,2-Dibromo-3-chloropropane	8.67	10.0	87	9.20	10.0	92	55-132	6	30
1,2-Dibromoethane (EDB)	9.16	10.0	92	10.1	10.0	101	74-118	10	30
1,2-Dichlorobenzene	9.41	10.0	94	9.87	10.0	99	72-115	5	30
1,2-Dichloropropane	10.1	10.0	101	11.0	10.0	110	67-126	9	30
1,3,5-Trimethylbenzene	10.2	10.0	102	10.6	10.0	106	62-126	4	30
1,3-Dichlorobenzene	9.69	10.0	97	9.95	10.0	100	70-116	3	30
1,3-Dichloropropane	9.15	10.0	92	9.99	10.0	100	75-116	9	30
1,4-Dichlorobenzene	9.76	10.0	98	10.0	10.0	100	73-115	2	30
2,2-Dichloropropane	11.0	10.0	110	11.8	10.0	118	37-145	7	30
2-Butanone (MEK)	48.6	50.0	97	55.2	50.0	110	71-149	13	30
2-Chlorotoluene	10.0	10.0	100	10.3	10.0	103	55-131	3	30
2-Hexanone	41.7	50.0	83	50.2	50.0	100	59-131	18	30
4-Chlorotoluene	10.1	10.0	101	10.4	10.0	104	66-121	3	30
4-Isopropyltoluene	10.4	10.0	104	10.5	10.0	105	61-128	<1	30
4-Methyl-2-pentanone (MIBK)	44.0	50.0	88	54.1	50.0	108	64-134	21	30
Acetone	46.6	50.0	93	53.8	50.0	108	68-135	14	30
Benzene	10.9	10.0	109	11.6	10.0	116	69-124	7	30
Bromobenzene	9.47	10.0	95	9.81	10.0	98	72-116	4	30
Bromochloromethane	10.5	10.0	105	11.3	10.0	113	75-131	7	30
Bromodichloromethane	10.3	10.0	103	11.2	10.0	112	63-129	9	30
Bromoform	9.29	10.0	93	10.2	10.0	102	52-144	9	30
Bromomethane	9.10	10.0	91	10.4	10.0	104	35-113	13	30
Carbon Disulfide	19.4	20.0	97	20.7	20.0	103	46-144	6	30
Carbon Tetrachloride	11.7	10.0	117	12.6	10.0	126	55-140	8	30
Chlorobenzene	9.97	10.0	100	10.5	10.0	105	72-116	5	30
Chloroethane	10.8	10.0	108	11.4	10.0	114	58-134	6	30
Chloroform	10.9	10.0	109	11.7	10.0	117	70-129	7	30
Chloromethane	10.2	10.0	102	11.0	10.0	110	34-130	7	30
cis-1,2-Dichloroethene	10.5	10.0	105	11.3	10.0	113	71-118	7	30
cis-1,3-Dichloropropene	10.1	10.0	101	11.4	10.0	114	62-132	12	30
Dibromochloromethane	9.22	10.0	92	9.91	10.0	99	67-126	7	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/24/23
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: 798797

Analyte Name	Lab Control Sample KQ2305746-03			Duplicate Lab Control Sample KQ2305746-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	10.1	10.0	101	11.2	10.0	112	69-128	10	30
Dichlorodifluoromethane	11.0	10.0	110	11.3	10.0	113	32-124	3	30
Ethylbenzene	10.2	10.0	102	10.8	10.0	108	67-121	6	30
Hexachlorobutadiene	9.32	10.0	93	9.23	10.0	92	57-119	<1	30
Isopropylbenzene	10.7	10.0	107	11.3	10.0	113	67-129	5	30
m,p-Xylenes	21.1	20.0	105	22.3	20.0	111	69-121	5	30
Methyl tert-Butyl Ether	9.18	10.0	92	10.9	10.0	109	54-126	17	30
Methylene Chloride	10.2	10.0	102	11.0	10.0	110	71-122	8	30
Naphthalene	8.19	10.0	82	9.08	10.0	91	64-126	10	30
n-Butylbenzene	10.2	10.0	102	10.5	10.0	105	55-130	3	30
n-Propylbenzene	10.3	10.0	103	10.6	10.0	106	61-124	3	30
o-Xylene	10.4	10.0	104	10.8	10.0	108	71-119	4	30
sec-Butylbenzene	11.1	10.0	111	11.3	10.0	113	59-128	2	30
Styrene	10.8	10.0	108	11.2	10.0	112	74-121	4	30
tert-Butylbenzene	10.3	10.0	103	10.7	10.0	107	61-127	4	30
Tetrachloroethene (PCE)	10.4	10.0	104	10.8	10.0	108	62-126	4	30
Toluene	11.0	10.0	110	11.9	10.0	119	69-124	9	30
trans-1,2-Dichloroethene	10.8	10.0	108	11.4	10.0	114	67-125	6	30
trans-1,3-Dichloropropene	9.30	10.0	93	10.2	10.0	102	59-125	9	30
Trichloroethene (TCE)	10.5	10.0	105	11.3	10.0	113	67-128	7	30
Trichlorofluoromethane (CFC 11)	11.5	10.0	115	12.4	10.0	124	52-141	8	30
Vinyl Chloride	11.3	10.0	113	12.3	10.0	123	55-123	9	30



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 Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305258-03

Service Request: K2303351
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	03/30/23 11:30	03/23/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/30/23 11:30	03/23/23	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/30/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2305258-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2550	2500	102	80-120
Manganese	6010C	1250	1250	100	80-120



General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303351-MB1

Service Request: K2303351
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	03/22/23 19:25	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/22/23 19:25	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303351-MB1

Service Request: K2303351
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	03/24/23 14:33	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303351-MB2

Service Request: K2303351
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	03/22/23 23:07	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/22/23 23:07	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303351-MB2

Service Request: K2303351
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	03/24/23 14:33	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303351-MB3

Service Request: K2303351
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	03/23/23 02:49	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/23/23 02:49	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303351-MB3

Service Request: K2303351
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	03/28/23 17:35	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303351-MB4

Service Request: K2303351
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	03/23/23 06:32	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/23/23 06:32	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303351-MB4

Service Request: K2303351
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	03/28/23 17:35	

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request:K2303351
Date Collected:03/21/23
Date Received:03/22/23
Date Analyzed:3/23/23

**Duplicate Matrix Spike Summary
General Chemistry Parameters**

Sample Name: LB-032123-09-5D
Lab Code: K2303351-001

Units:mg/L
Basis:NA

Analyte Name	Method	Sample Result	Result	Matrix Spike K2303351-001MS		Duplicate Matrix Spike K2303351-001DMS		% Rec	% Rec Limits	RPD	RPD Limit
				Spike Amount	% Rec	Result	Spike Amount					% Rec
Chloride	300.0	8.11	15.9	8.00	97	15.8	8.00	96	90-110	<1	20
Nitrate as Nitrogen	300.0	1.20	5.26	4.00	101	5.24	4.00	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.

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QA/QC Report

Client: SCS Engineers
Project Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23
Date Received: 03/22/23
Date Analyzed: 03/23/23

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-032123-09-5D
Lab Code: K2303351-001

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K2303351-001DUP Result	Average	RPD	RPD Limit
Chloride	300.0	0.20	8.11	9.11	8.61	12	20
Nitrate as Nitrogen	300.0	0.10	1.20	1.33	1.27	10	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/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Collected: 03/21/23
Date Received: 03/22/23
Date Analyzed: 03/24/23

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-032123-01-20S
Lab Code: K2303351-006

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2303351-006DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total Dissolved	SM 2540 C	5.0	321	323	322	<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.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/22/23 - 03/24/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303351-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	2.48	2.50	99	90-110
Solids, Total Dissolved	SM 2540 C	1890	1920	99	85-115

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/22/23 - 03/28/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303351-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.90	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.50	2.50	100	90-110
Solids, Total Dissolved	SM 2540 C	1880	1920	98	85-115

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dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/23/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303351-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.91	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.50	2.50	100	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303351
Date Analyzed: 03/23/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303351-LCS4

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.92	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.52	2.50	101	90-110



March 31, 2023

Service Request No:K2303354

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 March 22, 2023
For your reference, these analyses have been assigned our service request number **K2303354**.

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

for 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: K2303354
Date Received: 03/22/2023

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:

Three ground water samples were received for analysis at ALS Environmental on 03/22/2023. 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:

Method 8260C, 03/24/2023: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Approved by 

Date 03/31/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: LB-032223-01-5S	Lab ID: K2303354-001					
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Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	3.98			0.20	mg/L	300.0
Manganese, Dissolved	1.3			1.1	ug/L	6010C
Nitrate as Nitrogen	4.19			0.10	mg/L	300.0
Solids, Total Dissolved	145			5.0	mg/L	SM 2540 C

CLIENT ID: LB-032223-01-26I	Lab ID: K2303354-002					
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Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.28			0.20	mg/L	300.0
Nitrate as Nitrogen	4.25			0.10	mg/L	300.0
Solids, Total Dissolved	172			5.0	mg/L	SM 2540 C



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/04223030.13

Service Request:K2303354

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2303354-001	LB-032223-01-5S	3/22/2023	0845
K2303354-002	LB-032223-01-26I	3/22/2023	0840
K2303354-003	TB3	3/22/2023	0700



CHAIN OF CUSTODY

SR# K2303354

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>					
PROJECT NUMBER <u>0422303013</u>					
PROJECT MANAGER <u>Bob Lory</u>					
COMPANY NAME <u>SCS Engineers</u>					
ADDRESS <u>15940 SWJ 72nd Ave</u>					
CITY/STATE/ZIP <u>Portland, Or 97224</u>					
E-MAIL ADDRESS <u>Blory@scsengineers.com</u>					
PHONE # <u>(971) 284-1297</u> FAX #					
SAMPLER'S SIGNATURE					
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	REMARKS
LB-032223-01-55	3/22/23	0845	W 5	5	X
LB-032223-02-26I	3/22/23	0910	W 5	5	X
TB3	3/22/23	0700	W 2	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 *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 type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS: <u>Metals are field filtered</u> <div style="text-align: right;"> Container Supply Number 129003 </div> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: Signature <u>Bob Lory</u> Date/Time <u>3/22/23 1102</u> Printed Name <u>Bob Lory</u> Firm <u>SCS</u>	RECEIVED BY: Signature <u>Greg Rich</u> Date/Time <u>3-22-23 1102</u> Printed Name <u>Greg Rich</u> Firm <u>ALS</u>	RELINQUISHED BY: Signature <u>Greg Rich</u> Date/Time <u>3-22-23 1210 PM</u> Printed Name <u>Greg Rich</u> Firm <u>ALS</u>	RECEIVED BY: Signature <u>John</u> Date/Time <u>3/22/23 1210</u> Printed Name <u>John</u> Firm <u>ALS</u>
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PM 112

Cooler Receipt and Preservation Form

Client SES Service Request K23 03384
Received: 3/22/23 Opened: 3/22/23 By: [Signature] Unloaded: 3/22/23 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

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>2.6</u>	<u>1.8</u>	<u>11201</u>	<u>129003</u>				<u>NA</u>	

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
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 # above and notify the PM. NA Y N

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

- 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
- 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
- 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:
SHORT HOLD TIME		

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.
- 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.
- 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/04223030.13

Service Request: K2303354

Sample Name: LB-032223-01-5S
Lab Code: K2303354-001
Sample Matrix: Ground Water

Date Collected: 03/22/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-032223-01-26I
Lab Code: K2303354-002
Sample Matrix: Ground Water

Date Collected: 03/22/23
Date Received: 03/22/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ACOUCH

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: TB3
Lab Code: K2303354-003
Sample Matrix: Ground Water

Date Collected: 03/22/23
Date Received: 03/22/23

Analysis Method
8260C

Extracted/Digested By

Analyzed By
GROETTGER



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: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Collected: 03/22/23 08:45
Date Received: 03/22/23 12:10

Sample Name: LB-032223-01-5S
Lab Code: K2303354-001

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	03/24/23 13:32	
Benzene	ND U	0.50	1	03/24/23 13:32	
Bromobenzene	ND U	2.0	1	03/24/23 13:32	
Bromochloromethane	ND U	0.50	1	03/24/23 13:32	
Bromodichloromethane	ND U	0.50	1	03/24/23 13:32	
Bromoform	ND U	0.50	1	03/24/23 13:32	
Bromomethane	ND U	0.50	1	03/24/23 13:32	*
2-Butanone (MEK)	ND U	20	1	03/24/23 13:32	
n-Butylbenzene	ND U	4.0	1	03/24/23 13:32	
sec-Butylbenzene	ND U	2.0	1	03/24/23 13:32	
tert-Butylbenzene	ND U	2.0	1	03/24/23 13:32	
Carbon Disulfide	ND U	0.50	1	03/24/23 13:32	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 13:32	
Chlorobenzene	ND U	0.50	1	03/24/23 13:32	
Chloroethane	ND U	0.50	1	03/24/23 13:32	*
Chloroform	ND U	0.50	1	03/24/23 13:32	
Chloromethane	ND U	0.50	1	03/24/23 13:32	*
2-Chlorotoluene	ND U	2.0	1	03/24/23 13:32	
4-Chlorotoluene	ND U	2.0	1	03/24/23 13:32	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 13:32	*
Dibromochloromethane	ND U	0.50	1	03/24/23 13:32	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 13:32	
Dibromomethane	ND U	0.50	1	03/24/23 13:32	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 13:32	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 13:32	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 13:32	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 13:32	*
1,1-Dichloroethane	ND U	0.50	1	03/24/23 13:32	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:32	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:32	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 13:32	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 13:32	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 13:32	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 13:32	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:32	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:32	*
Ethylbenzene	ND U	0.50	1	03/24/23 13:32	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 13:32	
2-Hexanone	ND U	20	1	03/24/23 13:32	
Isopropylbenzene	ND U	2.0	1	03/24/23 13:32	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 13:32	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Collected: 03/22/23 08:45
Date Received: 03/22/23 12:10

Sample Name: LB-032223-01-5S
Lab Code: K2303354-001

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	03/24/23 13:32	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 13:32	
Methylene Chloride	ND U	2.0	1	03/24/23 13:32	
Naphthalene	ND U	2.0	1	03/24/23 13:32	*
n-Propylbenzene	ND U	2.0	1	03/24/23 13:32	
Styrene	ND U	0.50	1	03/24/23 13:32	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:32	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:32	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 13:32	
Toluene	ND U	0.50	1	03/24/23 13:32	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 13:32	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 13:32	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 13:32	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 13:32	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 13:32	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 13:32	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 13:32	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 13:32	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 13:32	
Vinyl Chloride	ND U	0.50	1	03/24/23 13:32	*
o-Xylene	ND U	0.50	1	03/24/23 13:32	
m,p-Xylenes	ND U	0.50	1	03/24/23 13:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	03/24/23 13:32	
Dibromofluoromethane	96	73 - 122	03/24/23 13:32	
Toluene-d8	90	65 - 144	03/24/23 13:32	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Collected: 03/22/23 08:40
Date Received: 03/22/23 12:10

Sample Name: LB-032223-01-26I
Lab Code: K2303354-002

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	03/24/23 13:56	
Benzene	ND U	0.50	1	03/24/23 13:56	
Bromobenzene	ND U	2.0	1	03/24/23 13:56	
Bromochloromethane	ND U	0.50	1	03/24/23 13:56	
Bromodichloromethane	ND U	0.50	1	03/24/23 13:56	
Bromoform	ND U	0.50	1	03/24/23 13:56	
Bromomethane	ND U	0.50	1	03/24/23 13:56	*
2-Butanone (MEK)	ND U	20	1	03/24/23 13:56	
n-Butylbenzene	ND U	4.0	1	03/24/23 13:56	
sec-Butylbenzene	ND U	2.0	1	03/24/23 13:56	
tert-Butylbenzene	ND U	2.0	1	03/24/23 13:56	
Carbon Disulfide	ND U	0.50	1	03/24/23 13:56	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 13:56	
Chlorobenzene	ND U	0.50	1	03/24/23 13:56	
Chloroethane	ND U	0.50	1	03/24/23 13:56	*
Chloroform	ND U	0.50	1	03/24/23 13:56	
Chloromethane	ND U	0.50	1	03/24/23 13:56	*
2-Chlorotoluene	ND U	2.0	1	03/24/23 13:56	
4-Chlorotoluene	ND U	2.0	1	03/24/23 13:56	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 13:56	*
Dibromochloromethane	ND U	0.50	1	03/24/23 13:56	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 13:56	
Dibromomethane	ND U	0.50	1	03/24/23 13:56	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 13:56	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 13:56	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 13:56	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 13:56	*
1,1-Dichloroethane	ND U	0.50	1	03/24/23 13:56	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:56	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 13:56	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 13:56	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 13:56	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 13:56	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 13:56	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:56	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 13:56	*
Ethylbenzene	ND U	0.50	1	03/24/23 13:56	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 13:56	
2-Hexanone	ND U	20	1	03/24/23 13:56	
Isopropylbenzene	ND U	2.0	1	03/24/23 13:56	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 13:56	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Collected: 03/22/23 08:40
Date Received: 03/22/23 12:10

Sample Name: LB-032223-01-26I
Lab Code: K2303354-002

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	03/24/23 13:56	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 13:56	
Methylene Chloride	ND U	2.0	1	03/24/23 13:56	
Naphthalene	ND U	2.0	1	03/24/23 13:56	*
n-Propylbenzene	ND U	2.0	1	03/24/23 13:56	
Styrene	ND U	0.50	1	03/24/23 13:56	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:56	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 13:56	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 13:56	
Toluene	ND U	0.50	1	03/24/23 13:56	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 13:56	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 13:56	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 13:56	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 13:56	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 13:56	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 13:56	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 13:56	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 13:56	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 13:56	
Vinyl Chloride	ND U	0.50	1	03/24/23 13:56	*
o-Xylene	ND U	0.50	1	03/24/23 13:56	
m,p-Xylenes	ND U	0.50	1	03/24/23 13:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	68 - 117	03/24/23 13:56	
Dibromofluoromethane	98	73 - 122	03/24/23 13:56	
Toluene-d8	90	65 - 144	03/24/23 13:56	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Collected: 03/22/23 07:00
Date Received: 03/22/23 12:10

Sample Name: TB3
Lab Code: K2303354-003

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	03/24/23 14:21	
Benzene	ND U	0.50	1	03/24/23 14:21	
Bromobenzene	ND U	2.0	1	03/24/23 14:21	
Bromochloromethane	ND U	0.50	1	03/24/23 14:21	
Bromodichloromethane	ND U	0.50	1	03/24/23 14:21	
Bromoform	ND U	0.50	1	03/24/23 14:21	
Bromomethane	ND U	0.50	1	03/24/23 14:21	*
2-Butanone (MEK)	ND U	20	1	03/24/23 14:21	
n-Butylbenzene	ND U	4.0	1	03/24/23 14:21	
sec-Butylbenzene	ND U	2.0	1	03/24/23 14:21	
tert-Butylbenzene	ND U	2.0	1	03/24/23 14:21	
Carbon Disulfide	ND U	0.50	1	03/24/23 14:21	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 14:21	
Chlorobenzene	ND U	0.50	1	03/24/23 14:21	
Chloroethane	ND U	0.50	1	03/24/23 14:21	*
Chloroform	ND U	0.50	1	03/24/23 14:21	
Chloromethane	ND U	0.50	1	03/24/23 14:21	*
2-Chlorotoluene	ND U	2.0	1	03/24/23 14:21	
4-Chlorotoluene	ND U	2.0	1	03/24/23 14:21	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 14:21	*
Dibromochloromethane	ND U	0.50	1	03/24/23 14:21	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 14:21	
Dibromomethane	ND U	0.50	1	03/24/23 14:21	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 14:21	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 14:21	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 14:21	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 14:21	*
1,1-Dichloroethane	ND U	0.50	1	03/24/23 14:21	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 14:21	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 14:21	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 14:21	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 14:21	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 14:21	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 14:21	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 14:21	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 14:21	*
Ethylbenzene	ND U	0.50	1	03/24/23 14:21	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 14:21	
2-Hexanone	ND U	20	1	03/24/23 14:21	
Isopropylbenzene	ND U	2.0	1	03/24/23 14:21	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 14:21	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Collected: 03/22/23 07:00
Date Received: 03/22/23 12:10

Sample Name: TB3
Lab Code: K2303354-003

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	03/24/23 14:21	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 14:21	
Methylene Chloride	ND U	2.0	1	03/24/23 14:21	
Naphthalene	ND U	2.0	1	03/24/23 14:21	*
n-Propylbenzene	ND U	2.0	1	03/24/23 14:21	
Styrene	ND U	0.50	1	03/24/23 14:21	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 14:21	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 14:21	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 14:21	
Toluene	ND U	0.50	1	03/24/23 14:21	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 14:21	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 14:21	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 14:21	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 14:21	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 14:21	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 14:21	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 14:21	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 14:21	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 14:21	
Vinyl Chloride	ND U	0.50	1	03/24/23 14:21	*
o-Xylene	ND U	0.50	1	03/24/23 14:21	
m,p-Xylenes	ND U	0.50	1	03/24/23 14:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	03/24/23 14:21	
Dibromofluoromethane	98	73 - 122	03/24/23 14:21	
Toluene-d8	90	65 - 144	03/24/23 14:21	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032223-01-5S
Lab Code: K2303354-001

Service Request: K2303354
Date Collected: 03/22/23 08:45
Date Received: 03/22/23 12:10
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	03/30/23 14:02	03/24/23	
Manganese	6010C	1.3	ug/L	1.1	1	03/30/23 14:02	03/24/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032223-01-26I
Lab Code: K2303354-002

Service Request: K2303354
Date Collected: 03/22/23 08:40
Date Received: 03/22/23 12:10
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	03/30/23 14:12	03/24/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/30/23 14:12	03/24/23	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032223-01-5S
Lab Code: K2303354-001

Service Request: K2303354
Date Collected: 03/22/23 08:45
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	3.98	mg/L	0.20	2	03/23/23 08:23	
Nitrate as Nitrogen	300.0	4.19	mg/L	0.10	2	03/23/23 08:23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032223-01-5S
Lab Code: K2303354-001

Service Request: K2303354
Date Collected: 03/22/23 08:45
Date Received: 03/22/23 12:10
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	145	mg/L	5.0	1	03/28/23 17:35	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032223-01-26I
Lab Code: K2303354-002

Service Request: K2303354
Date Collected: 03/22/23 08:40
Date Received: 03/22/23 12:10
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.28	mg/L	0.20	2	03/23/23 08:31	
Nitrate as Nitrogen	300.0	4.25	mg/L	0.10	2	03/23/23 08:31	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-032223-01-26I
Lab Code: K2303354-002

Service Request: K2303354
Date Collected: 03/22/23 08:40
Date Received: 03/22/23 12:10
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	172	mg/L	5.0	1	03/28/23 17:35	



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
www.alsglobal.com

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354

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-032223-01-5S	K2303354-001	84	96	90
LB-032223-01-26I	K2303354-002	83	98	90
TB3	K2303354-003	84	98	90
Method Blank	KQ2305551-05	83	95	89
Lab Control Sample	KQ2305551-03	100	97	98
Duplicate Lab Control Sample	KQ2305551-04	100	95	99

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305551-05

Service Request: K2303354
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	03/24/23 12:19	
Benzene	ND U	0.50	1	03/24/23 12:19	
Bromobenzene	ND U	2.0	1	03/24/23 12:19	
Bromochloromethane	ND U	0.50	1	03/24/23 12:19	
Bromodichloromethane	ND U	0.50	1	03/24/23 12:19	
Bromoform	ND U	0.50	1	03/24/23 12:19	
Bromomethane	ND U	0.50	1	03/24/23 12:19	
2-Butanone (MEK)	ND U	20	1	03/24/23 12:19	
n-Butylbenzene	ND U	4.0	1	03/24/23 12:19	
sec-Butylbenzene	ND U	2.0	1	03/24/23 12:19	
tert-Butylbenzene	ND U	2.0	1	03/24/23 12:19	
Carbon Disulfide	ND U	0.50	1	03/24/23 12:19	
Carbon Tetrachloride	ND U	0.50	1	03/24/23 12:19	
Chlorobenzene	ND U	0.50	1	03/24/23 12:19	
Chloroethane	ND U	0.50	1	03/24/23 12:19	
Chloroform	ND U	0.50	1	03/24/23 12:19	
Chloromethane	ND U	0.50	1	03/24/23 12:19	
2-Chlorotoluene	ND U	2.0	1	03/24/23 12:19	
4-Chlorotoluene	ND U	2.0	1	03/24/23 12:19	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	03/24/23 12:19	
Dibromochloromethane	ND U	0.50	1	03/24/23 12:19	
1,2-Dibromoethane (EDB)	ND U	2.0	1	03/24/23 12:19	
Dibromomethane	ND U	0.50	1	03/24/23 12:19	
1,2-Dichlorobenzene	ND U	0.50	1	03/24/23 12:19	
1,3-Dichlorobenzene	ND U	0.50	1	03/24/23 12:19	
1,4-Dichlorobenzene	ND U	0.50	1	03/24/23 12:19	
Dichlorodifluoromethane	ND U	0.50	1	03/24/23 12:19	
1,1-Dichloroethane	ND U	0.50	1	03/24/23 12:19	
cis-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:19	
trans-1,2-Dichloroethene	ND U	0.50	1	03/24/23 12:19	
1,2-Dichloropropane	ND U	0.50	1	03/24/23 12:19	
1,3-Dichloropropane	ND U	0.50	1	03/24/23 12:19	
2,2-Dichloropropane	ND U	0.50	1	03/24/23 12:19	
1,1-Dichloropropene	ND U	0.50	1	03/24/23 12:19	
cis-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:19	
trans-1,3-Dichloropropene	ND U	0.50	1	03/24/23 12:19	
Ethylbenzene	ND U	0.50	1	03/24/23 12:19	
Hexachlorobutadiene	ND U	2.0	1	03/24/23 12:19	
2-Hexanone	ND U	20	1	03/24/23 12:19	
Isopropylbenzene	ND U	2.0	1	03/24/23 12:19	
4-Isopropyltoluene	ND U	2.0	1	03/24/23 12:19	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305551-05

Service Request: K2303354
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	03/24/23 12:19	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	03/24/23 12:19	
Methylene Chloride	ND U	2.0	1	03/24/23 12:19	
Naphthalene	ND U	2.0	1	03/24/23 12:19	
n-Propylbenzene	ND U	2.0	1	03/24/23 12:19	
Styrene	ND U	0.50	1	03/24/23 12:19	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:19	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	03/24/23 12:19	
Tetrachloroethene (PCE)	ND U	0.50	1	03/24/23 12:19	
Toluene	ND U	0.50	1	03/24/23 12:19	
1,2,3-Trichlorobenzene	ND U	2.0	1	03/24/23 12:19	
1,2,4-Trichlorobenzene	ND U	2.0	1	03/24/23 12:19	
1,1,2-Trichloroethane	ND U	0.50	1	03/24/23 12:19	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	03/24/23 12:19	
Trichloroethene (TCE)	ND U	0.50	1	03/24/23 12:19	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	03/24/23 12:19	
1,2,3-Trichloropropane	ND U	0.50	1	03/24/23 12:19	
1,2,4-Trimethylbenzene	ND U	2.0	1	03/24/23 12:19	
1,3,5-Trimethylbenzene	ND U	2.0	1	03/24/23 12:19	
Vinyl Chloride	ND U	0.50	1	03/24/23 12:19	
o-Xylene	ND U	0.50	1	03/24/23 12:19	
m,p-Xylenes	ND U	0.50	1	03/24/23 12:19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	68 - 117	03/24/23 12:19	
Dibromofluoromethane	95	73 - 122	03/24/23 12:19	
Toluene-d8	89	65 - 144	03/24/23 12:19	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Analyzed: 03/24/23
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: 798796

Analyte Name	Lab Control Sample KQ2305551-03			Duplicate Lab Control Sample KQ2305551-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	8.82	10.0	88	9.42	10.0	94	66-124	7	30
1,1,1-Trichloroethane (TCA)	9.40	10.0	94	9.79	10.0	98	59-136	4	30
1,1,2,2-Tetrachloroethane	8.46	10.0	85	8.85	10.0	89	70-127	5	30
1,1,2-Trichloroethane	8.91	10.0	89	9.33	10.0	93	74-118	5	30
1,1-Dichloroethane	9.69	10.0	97	10.2	10.0	102	68-132	5	30
1,1-Dichloropropene	9.98	10.0	100	10.3	10.0	103	59-134	3	30
1,2,3-Trichlorobenzene	10.1	10.0	101	10.3	10.0	103	68-120	2	30
1,2,3-Trichloropropane	8.15	10.0	82	8.57	10.0	86	69-123	5	30
1,2,4-Trichlorobenzene	9.21	10.0	92	9.78	10.0	98	58-126	6	30
1,2,4-Trimethylbenzene	9.29	10.0	93	9.34	10.0	93	63-122	<1	30
1,2-Dibromo-3-chloropropane	8.20	10.0	82	8.43	10.0	84	55-132	3	30
1,2-Dibromoethane (EDB)	9.02	10.0	90	9.46	10.0	95	74-118	5	30
1,2-Dichlorobenzene	9.32	10.0	93	9.53	10.0	95	72-115	2	30
1,2-Dichloropropane	9.26	10.0	93	9.79	10.0	98	67-126	6	30
1,3,5-Trimethylbenzene	9.56	10.0	96	9.50	10.0	95	62-126	<1	30
1,3-Dichlorobenzene	9.57	10.0	96	9.67	10.0	97	70-116	1	30
1,3-Dichloropropane	8.85	10.0	89	9.59	10.0	96	75-116	8	30
1,4-Dichlorobenzene	8.97	10.0	90	9.09	10.0	91	73-115	1	30
2,2-Dichloropropane	10.2	10.0	102	10.5	10.0	105	37-145	3	30
2-Butanone (MEK)	50.2	50.0	100	53.2	50.0	106	71-149	6	30
2-Chlorotoluene	9.57	10.0	96	9.55	10.0	96	55-131	<1	30
2-Hexanone	46.6	50.0	93	50.3	50.0	101	59-131	8	30
4-Chlorotoluene	9.43	10.0	94	9.46	10.0	95	66-121	<1	30
4-Isopropyltoluene	9.97	10.0	100	9.76	10.0	98	61-128	2	30
4-Methyl-2-pentanone (MIBK)	48.3	50.0	97	53.1	50.0	106	64-134	10	30
Acetone	50.9	50.0	102	55.9	50.0	112	68-135	9	30
Benzene	9.24	10.0	92	9.67	10.0	97	69-124	5	30
Bromobenzene	9.42	10.0	94	9.58	10.0	96	72-116	2	30
Bromochloromethane	8.93	10.0	89	9.41	10.0	94	75-131	5	30
Bromodichloromethane	8.90	10.0	89	9.35	10.0	94	63-129	5	30
Bromoform	9.01	10.0	90	9.23	10.0	92	52-144	2	30
Bromomethane	6.70	10.0	67	8.17	10.0	82	35-113	20	30
Carbon Disulfide	20.9	20.0	105	21.3	20.0	106	46-144	2	30
Carbon Tetrachloride	9.23	10.0	92	9.42	10.0	94	55-140	2	30
Chlorobenzene	9.23	10.0	92	9.62	10.0	96	72-116	4	30
Chloroethane	6.55	10.0	66	6.77	10.0	68	58-134	3	30
Chloroform	9.23	10.0	92	9.67	10.0	97	70-129	5	30
Chloromethane	6.78	10.0	68	6.81	10.0	68	34-130	<1	30
cis-1,2-Dichloroethene	9.24	10.0	92	9.64	10.0	96	71-118	4	30
cis-1,3-Dichloropropene	7.81	10.0	78	8.28	10.0	83	62-132	6	30
Dibromochloromethane	8.61	10.0	86	8.79	10.0	88	67-126	2	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Analyzed: 03/24/23
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: 798796

Analyte Name	Lab Control Sample KQ2305551-03			Duplicate Lab Control Sample KQ2305551-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	8.43	10.0	84	8.79	10.0	88	69-128	4	30
Dichlorodifluoromethane	8.20	10.0	82	8.06	10.0	81	32-124	2	30
Ethylbenzene	9.81	10.0	98	10.2	10.0	102	67-121	4	30
Hexachlorobutadiene	10.4	10.0	104	10.3	10.0	103	57-119	<1	30
Isopropylbenzene	9.01	10.0	90	9.08	10.0	91	67-129	<1	30
m,p-Xylenes	20.5	20.0	102	21.2	20.0	106	69-121	3	30
Methyl tert-Butyl Ether	9.14	10.0	91	9.66	10.0	97	54-126	6	30
Methylene Chloride	8.78	10.0	88	9.16	10.0	92	71-122	4	30
Naphthalene	7.82	10.0	78	8.62	10.0	86	64-126	10	30
n-Butylbenzene	9.67	10.0	97	9.45	10.0	95	55-130	2	30
n-Propylbenzene	9.52	10.0	95	9.36	10.0	94	61-124	2	30
o-Xylene	9.75	10.0	98	10.0	10.0	100	71-119	3	30
sec-Butylbenzene	10.1	10.0	101	9.75	10.0	98	59-128	3	30
Styrene	8.87	10.0	89	9.33	10.0	93	74-121	5	30
tert-Butylbenzene	9.60	10.0	96	9.53	10.0	95	61-127	<1	30
Tetrachloroethene (PCE)	9.67	10.0	97	10.0	10.0	100	62-126	4	30
Toluene	9.22	10.0	92	9.65	10.0	97	69-124	5	30
trans-1,2-Dichloroethene	9.64	10.0	96	9.87	10.0	99	67-125	2	30
trans-1,3-Dichloropropene	7.50	10.0	75	7.81	10.0	78	59-125	4	30
Trichloroethene (TCE)	9.15	10.0	92	9.32	10.0	93	67-128	2	30
Trichlorofluoromethane (CFC 11)	8.83	10.0	88	8.87	10.0	89	52-141	<1	30
Vinyl Chloride	7.00	10.0	70	7.19	10.0	72	55-123	3	30



Metals

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/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2305257-01

Service Request: K2303354
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	03/30/23 13:58	03/24/23	
Manganese	6010C	ND U	ug/L	1.1	1	03/30/23 13:58	03/24/23	

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Collected: 03/22/23
Date Received: 03/22/23
Date Analyzed: 03/30/23
Date Extracted: 03/24/23

Matrix Spike Summary
Dissolved Metals

Sample Name: LB-032223-01-5S
Lab Code: K2303354-001
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2305257-03

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	ND U	1010	1000	100	75-125
Manganese	1.3	509	500	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.

ALS Group USA, Corp.

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QA/QC Report

Client: SCS Engineers
Project Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Collected: 03/22/23
Date Received: 03/22/23
Date Analyzed: 03/30/23

Replicate Sample Summary

Dissolved Metals

Sample Name: LB-032223-01-5S
Lab Code: K2303354-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				KQ2305257-04 Result			
Iron	6010C	21	ND U	ND U	ND	-	20
Manganese	6010C	1.1	1.3	1.3	1.3	<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/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Analyzed: 03/30/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2305257-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2740	2500	110	80-120
Manganese	6010C	1370	1250	110	80-120



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303354-MB1

Service Request: K2303354
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	03/22/23 19:25	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/22/23 19:25	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303354-MB1

Service Request: K2303354
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	03/28/23 17:35	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303354-MB2

Service Request: K2303354
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	03/22/23 23:07	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/22/23 23:07	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303354-MB2

Service Request: K2303354
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	03/28/23 17:35	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303354-MB3

Service Request: K2303354
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	03/23/23 02:49	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/23/23 02:49	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2303354-MB4

Service Request: K2303354
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	03/23/23 06:32	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	03/23/23 06:32	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Analyzed: 03/22/23 - 03/28/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303354-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	2.48	2.50	99	90-110
Solids, Total Dissolved	SM 2540 C	1880	1920	98	85-115

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Analyzed: 03/22/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303354-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.90	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.50	2.50	100	90-110

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Analyzed: 03/23/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303354-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.91	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.50	2.50	100	90-110

ALS Group USA, Corp.
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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2303354
Date Analyzed: 03/23/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2303354-LCS4

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.92	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.52	2.50	101	90-110

Third Quarter (July) 2023 Laboratory Reports



August 11, 2023

Service Request No:K2308409

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 July 26, 2023
For your reference, these analyses have been assigned our service request number **K2308409**.

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

for 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: K2308409
Date Received: 07/26/2023

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 07/26/2023. 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:

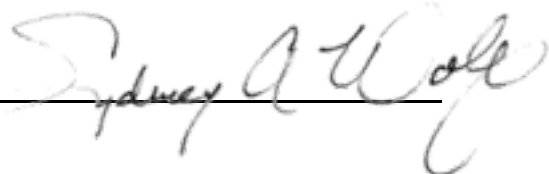
No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 07/28/2023: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8260C, 07/28/2023: The upper control criterion was exceeded for Acetone in Continuing Calibration Verification (CCV) KQ2313963-02, Laboratory Control Sample (LCS) KQ2313963-03 and Duplicate Laboratory Control Sample (DLCS) KQ2313963-04. The field samples did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Approved by



Date

08/11/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: LB-072523-01-5S **Lab ID: K2308409-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	4.74			0.20	mg/L	300.0
Nitrate as Nitrogen	5.03			0.10	mg/L	300.0
Solids, Total Dissolved	153			10	mg/L	SM 2540 C

CLIENT ID: LB-072523-02-27I **Lab ID: K2308409-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	12.1			0.20	mg/L	300.0
Iron, Dissolved	33			21	ug/L	6010C
Manganese, Dissolved	118			1.1	ug/L	6010C
Nitrate as Nitrogen	1.12			0.10	mg/L	300.0
Solids, Total Dissolved	273			10	mg/L	SM 2540 C

CLIENT ID: LB-072523-03-13I **Lab ID: K2308409-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.90			0.20	mg/L	300.0
Manganese, Dissolved	2.6			1.1	ug/L	6010C
Nitrate as Nitrogen	3.50			0.10	mg/L	300.0
Solids, Total Dissolved	190			10	mg/L	SM 2540 C

CLIENT ID: LB-072523-04-26I **Lab ID: K2308409-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.05			0.20	mg/L	300.0
Nitrate as Nitrogen	4.20			0.10	mg/L	300.0
Solids, Total Dissolved	181			10	mg/L	SM 2540 C



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/04223030.13

Service Request:K2308409

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2308409-001	TB1	7/25/2023	0700
K2308409-002	LB-072523-01-5S	7/25/2023	1145
K2308409-003	LB-072523-02-27I	7/25/2023	1245
K2308409-004	LB-072523-03-13I	7/25/2023	1330
K2308409-005	LB-072523-04-26I	7/25/2023	1430
K2308409-006	LB-072523-05-FB	7/25/2023	1450

PM HH

Cooler Receipt and Preservation Form

Client SCS Engineers Service Request K23 08409
Received: 7/7/2023 Opened: 7/7/2023 By: NP Unloaded: 7/7/2023 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

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>24</u>	<u>21</u>	<u>1 Relo</u>						

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
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 # above and notify the PM. NA Y N

- If applicable, tissue samples were received: Frozen Partially Thawed Thawed
- 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
 - 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
 - 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

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

SHORT HOLD

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.
- 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.
- 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/04223030.13

Service Request: K2308409

Sample Name: TB1
Lab Code: K2308409-001
Sample Matrix: Ground Water

Date Collected: 07/25/23
Date Received: 07/26/23

Analysis Method
8260C

Extracted/Digested By

Analyzed By
GROETTGER

Sample Name: LB-072523-01-5S
Lab Code: K2308409-002
Sample Matrix: Ground Water

Date Collected: 07/25/23
Date Received: 07/26/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ABOYER

Sample Name: LB-072523-02-27I
Lab Code: K2308409-003
Sample Matrix: Ground Water

Date Collected: 07/25/23
Date Received: 07/26/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ABOYER

Sample Name: LB-072523-03-13I
Lab Code: K2308409-004
Sample Matrix: Ground Water

Date Collected: 07/25/23
Date Received: 07/26/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ABOYER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13

Service Request: K2308409

Sample Name: LB-072523-04-26I
Lab Code: K2308409-005
Sample Matrix: Ground Water

Date Collected: 07/25/23
Date Received: 07/26/23

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

NFOTH
AMCKORNEY
GROETTGER
JBYMAN

Sample Name: LB-072523-05-FB
Lab Code: K2308409-006
Sample Matrix: Ground Water

Date Collected: 07/25/23
Date Received: 07/26/23

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

NFOTH
AMCKORNEY
GROETTGER
JBYMAN



Sample Results

ALS Environmental—Kelso Laboratory
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Volatile Organic Compounds by GC/MS

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 07:00
Date Received: 07/26/23 14:00

Sample Name: TB1
Lab Code: K2308409-001

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	07/28/23 18:15	*
Benzene	ND U	0.50	1	07/28/23 18:15	
Bromobenzene	ND U	2.0	1	07/28/23 18:15	
Bromochloromethane	ND U	0.50	1	07/28/23 18:15	
Bromodichloromethane	ND U	0.50	1	07/28/23 18:15	
Bromoform	ND U	0.50	1	07/28/23 18:15	*
Bromomethane	ND U	0.50	1	07/28/23 18:15	*
2-Butanone (MEK)	ND U	20	1	07/28/23 18:15	
n-Butylbenzene	ND U	4.0	1	07/28/23 18:15	
sec-Butylbenzene	ND U	2.0	1	07/28/23 18:15	
tert-Butylbenzene	ND U	2.0	1	07/28/23 18:15	
Carbon Disulfide	ND U	0.50	1	07/28/23 18:15	
Carbon Tetrachloride	ND U	0.50	1	07/28/23 18:15	
Chlorobenzene	ND U	0.50	1	07/28/23 18:15	
Chloroethane	ND U	0.50	1	07/28/23 18:15	
Chloroform	ND U	0.50	1	07/28/23 18:15	
Chloromethane	ND U	0.50	1	07/28/23 18:15	*
2-Chlorotoluene	ND U	2.0	1	07/28/23 18:15	
4-Chlorotoluene	ND U	2.0	1	07/28/23 18:15	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	07/28/23 18:15	*
Dibromochloromethane	ND U	0.50	1	07/28/23 18:15	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	07/28/23 18:15	
Dibromomethane	ND U	0.50	1	07/28/23 18:15	
1,2-Dichlorobenzene	ND U	0.50	1	07/28/23 18:15	
1,3-Dichlorobenzene	ND U	0.50	1	07/28/23 18:15	
1,4-Dichlorobenzene	ND U	0.50	1	07/28/23 18:15	
Dichlorodifluoromethane	ND U	0.50	1	07/28/23 18:15	
1,1-Dichloroethane	ND U	0.50	1	07/28/23 18:15	
cis-1,2-Dichloroethene	ND U	0.50	1	07/28/23 18:15	
trans-1,2-Dichloroethene	ND U	0.50	1	07/28/23 18:15	
1,2-Dichloropropane	ND U	0.50	1	07/28/23 18:15	
1,3-Dichloropropane	ND U	0.50	1	07/28/23 18:15	
2,2-Dichloropropane	ND U	0.50	1	07/28/23 18:15	
1,1-Dichloropropene	ND U	0.50	1	07/28/23 18:15	
cis-1,3-Dichloropropene	ND U	0.50	1	07/28/23 18:15	
trans-1,3-Dichloropropene	ND U	0.50	1	07/28/23 18:15	
Ethylbenzene	ND U	0.50	1	07/28/23 18:15	
Hexachlorobutadiene	ND U	2.0	1	07/28/23 18:15	
2-Hexanone	ND U	20	1	07/28/23 18:15	
Isopropylbenzene	ND U	2.0	1	07/28/23 18:15	
4-Isopropyltoluene	ND U	2.0	1	07/28/23 18:15	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 07:00
Date Received: 07/26/23 14:00

Sample Name: TB1
Lab Code: K2308409-001

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	07/28/23 18:15	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	07/28/23 18:15	
Methylene Chloride	ND U	2.0	1	07/28/23 18:15	
Naphthalene	ND U	2.0	1	07/28/23 18:15	*
n-Propylbenzene	ND U	2.0	1	07/28/23 18:15	
Styrene	ND U	0.50	1	07/28/23 18:15	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	07/28/23 18:15	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	07/28/23 18:15	
Tetrachloroethene (PCE)	ND U	0.50	1	07/28/23 18:15	
Toluene	ND U	0.50	1	07/28/23 18:15	
1,2,3-Trichlorobenzene	ND U	2.0	1	07/28/23 18:15	
1,2,4-Trichlorobenzene	ND U	2.0	1	07/28/23 18:15	
1,1,2-Trichloroethane	ND U	0.50	1	07/28/23 18:15	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	07/28/23 18:15	
Trichloroethene (TCE)	ND U	0.50	1	07/28/23 18:15	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	07/28/23 18:15	
1,2,3-Trichloropropane	ND U	0.50	1	07/28/23 18:15	
1,2,4-Trimethylbenzene	ND U	2.0	1	07/28/23 18:15	
1,3,5-Trimethylbenzene	ND U	2.0	1	07/28/23 18:15	
Vinyl Chloride	ND U	0.50	1	07/28/23 18:15	
o-Xylene	ND U	0.50	1	07/28/23 18:15	
m,p-Xylenes	ND U	0.50	1	07/28/23 18:15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	68 - 117	07/28/23 18:15	
Dibromofluoromethane	93	73 - 122	07/28/23 18:15	
Toluene-d8	102	65 - 144	07/28/23 18:15	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 11:45
Date Received: 07/26/23 14:00

Sample Name: LB-072523-01-5S
Lab Code: K2308409-002

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	07/28/23 18:38	*
Benzene	ND U	0.50	1	07/28/23 18:38	
Bromobenzene	ND U	2.0	1	07/28/23 18:38	
Bromochloromethane	ND U	0.50	1	07/28/23 18:38	
Bromodichloromethane	ND U	0.50	1	07/28/23 18:38	
Bromoform	ND U	0.50	1	07/28/23 18:38	*
Bromomethane	ND U	0.50	1	07/28/23 18:38	*
2-Butanone (MEK)	ND U	20	1	07/28/23 18:38	
n-Butylbenzene	ND U	4.0	1	07/28/23 18:38	
sec-Butylbenzene	ND U	2.0	1	07/28/23 18:38	
tert-Butylbenzene	ND U	2.0	1	07/28/23 18:38	
Carbon Disulfide	ND U	0.50	1	07/28/23 18:38	
Carbon Tetrachloride	ND U	0.50	1	07/28/23 18:38	
Chlorobenzene	ND U	0.50	1	07/28/23 18:38	
Chloroethane	ND U	0.50	1	07/28/23 18:38	
Chloroform	ND U	0.50	1	07/28/23 18:38	
Chloromethane	ND U	0.50	1	07/28/23 18:38	*
2-Chlorotoluene	ND U	2.0	1	07/28/23 18:38	
4-Chlorotoluene	ND U	2.0	1	07/28/23 18:38	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	07/28/23 18:38	*
Dibromochloromethane	ND U	0.50	1	07/28/23 18:38	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	07/28/23 18:38	
Dibromomethane	ND U	0.50	1	07/28/23 18:38	
1,2-Dichlorobenzene	ND U	0.50	1	07/28/23 18:38	
1,3-Dichlorobenzene	ND U	0.50	1	07/28/23 18:38	
1,4-Dichlorobenzene	ND U	0.50	1	07/28/23 18:38	
Dichlorodifluoromethane	ND U	0.50	1	07/28/23 18:38	
1,1-Dichloroethane	ND U	0.50	1	07/28/23 18:38	
cis-1,2-Dichloroethene	ND U	0.50	1	07/28/23 18:38	
trans-1,2-Dichloroethene	ND U	0.50	1	07/28/23 18:38	
1,2-Dichloropropane	ND U	0.50	1	07/28/23 18:38	
1,3-Dichloropropane	ND U	0.50	1	07/28/23 18:38	
2,2-Dichloropropane	ND U	0.50	1	07/28/23 18:38	
1,1-Dichloropropene	ND U	0.50	1	07/28/23 18:38	
cis-1,3-Dichloropropene	ND U	0.50	1	07/28/23 18:38	
trans-1,3-Dichloropropene	ND U	0.50	1	07/28/23 18:38	
Ethylbenzene	ND U	0.50	1	07/28/23 18:38	
Hexachlorobutadiene	ND U	2.0	1	07/28/23 18:38	
2-Hexanone	ND U	20	1	07/28/23 18:38	
Isopropylbenzene	ND U	2.0	1	07/28/23 18:38	
4-Isopropyltoluene	ND U	2.0	1	07/28/23 18:38	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 11:45
Date Received: 07/26/23 14:00

Sample Name: LB-072523-01-5S
Lab Code: K2308409-002

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	07/28/23 18:38	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	07/28/23 18:38	
Methylene Chloride	ND U	2.0	1	07/28/23 18:38	
Naphthalene	ND U	2.0	1	07/28/23 18:38	*
n-Propylbenzene	ND U	2.0	1	07/28/23 18:38	
Styrene	ND U	0.50	1	07/28/23 18:38	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	07/28/23 18:38	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	07/28/23 18:38	
Tetrachloroethene (PCE)	ND U	0.50	1	07/28/23 18:38	
Toluene	ND U	0.50	1	07/28/23 18:38	
1,2,3-Trichlorobenzene	ND U	2.0	1	07/28/23 18:38	
1,2,4-Trichlorobenzene	ND U	2.0	1	07/28/23 18:38	
1,1,2-Trichloroethane	ND U	0.50	1	07/28/23 18:38	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	07/28/23 18:38	
Trichloroethene (TCE)	ND U	0.50	1	07/28/23 18:38	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	07/28/23 18:38	
1,2,3-Trichloropropane	ND U	0.50	1	07/28/23 18:38	
1,2,4-Trimethylbenzene	ND U	2.0	1	07/28/23 18:38	
1,3,5-Trimethylbenzene	ND U	2.0	1	07/28/23 18:38	
Vinyl Chloride	ND U	0.50	1	07/28/23 18:38	
o-Xylene	ND U	0.50	1	07/28/23 18:38	
m,p-Xylenes	ND U	0.50	1	07/28/23 18:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	07/28/23 18:38	
Dibromofluoromethane	92	73 - 122	07/28/23 18:38	
Toluene-d8	96	65 - 144	07/28/23 18:38	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 12:45
Date Received: 07/26/23 14:00

Sample Name: LB-072523-02-271
Lab Code: K2308409-003

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	07/28/23 19:01	*
Benzene	ND U	0.50	1	07/28/23 19:01	
Bromobenzene	ND U	2.0	1	07/28/23 19:01	
Bromochloromethane	ND U	0.50	1	07/28/23 19:01	
Bromodichloromethane	ND U	0.50	1	07/28/23 19:01	
Bromoform	ND U	0.50	1	07/28/23 19:01	*
Bromomethane	ND U	0.50	1	07/28/23 19:01	*
2-Butanone (MEK)	ND U	20	1	07/28/23 19:01	
n-Butylbenzene	ND U	4.0	1	07/28/23 19:01	
sec-Butylbenzene	ND U	2.0	1	07/28/23 19:01	
tert-Butylbenzene	ND U	2.0	1	07/28/23 19:01	
Carbon Disulfide	ND U	0.50	1	07/28/23 19:01	
Carbon Tetrachloride	ND U	0.50	1	07/28/23 19:01	
Chlorobenzene	ND U	0.50	1	07/28/23 19:01	
Chloroethane	ND U	0.50	1	07/28/23 19:01	
Chloroform	ND U	0.50	1	07/28/23 19:01	
Chloromethane	ND U	0.50	1	07/28/23 19:01	*
2-Chlorotoluene	ND U	2.0	1	07/28/23 19:01	
4-Chlorotoluene	ND U	2.0	1	07/28/23 19:01	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	07/28/23 19:01	*
Dibromochloromethane	ND U	0.50	1	07/28/23 19:01	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	07/28/23 19:01	
Dibromomethane	ND U	0.50	1	07/28/23 19:01	
1,2-Dichlorobenzene	ND U	0.50	1	07/28/23 19:01	
1,3-Dichlorobenzene	ND U	0.50	1	07/28/23 19:01	
1,4-Dichlorobenzene	ND U	0.50	1	07/28/23 19:01	
Dichlorodifluoromethane	ND U	0.50	1	07/28/23 19:01	
1,1-Dichloroethane	ND U	0.50	1	07/28/23 19:01	
cis-1,2-Dichloroethene	ND U	0.50	1	07/28/23 19:01	
trans-1,2-Dichloroethene	ND U	0.50	1	07/28/23 19:01	
1,2-Dichloropropane	ND U	0.50	1	07/28/23 19:01	
1,3-Dichloropropane	ND U	0.50	1	07/28/23 19:01	
2,2-Dichloropropane	ND U	0.50	1	07/28/23 19:01	
1,1-Dichloropropene	ND U	0.50	1	07/28/23 19:01	
cis-1,3-Dichloropropene	ND U	0.50	1	07/28/23 19:01	
trans-1,3-Dichloropropene	ND U	0.50	1	07/28/23 19:01	
Ethylbenzene	ND U	0.50	1	07/28/23 19:01	
Hexachlorobutadiene	ND U	2.0	1	07/28/23 19:01	
2-Hexanone	ND U	20	1	07/28/23 19:01	
Isopropylbenzene	ND U	2.0	1	07/28/23 19:01	
4-Isopropyltoluene	ND U	2.0	1	07/28/23 19:01	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 12:45
Date Received: 07/26/23 14:00

Sample Name: LB-072523-02-27I
Lab Code: K2308409-003

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	07/28/23 19:01	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	07/28/23 19:01	
Methylene Chloride	ND U	2.0	1	07/28/23 19:01	
Naphthalene	ND U	2.0	1	07/28/23 19:01	*
n-Propylbenzene	ND U	2.0	1	07/28/23 19:01	
Styrene	ND U	0.50	1	07/28/23 19:01	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	07/28/23 19:01	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	07/28/23 19:01	
Tetrachloroethene (PCE)	ND U	0.50	1	07/28/23 19:01	
Toluene	ND U	0.50	1	07/28/23 19:01	
1,2,3-Trichlorobenzene	ND U	2.0	1	07/28/23 19:01	
1,2,4-Trichlorobenzene	ND U	2.0	1	07/28/23 19:01	
1,1,2-Trichloroethane	ND U	0.50	1	07/28/23 19:01	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	07/28/23 19:01	
Trichloroethene (TCE)	ND U	0.50	1	07/28/23 19:01	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	07/28/23 19:01	
1,2,3-Trichloropropane	ND U	0.50	1	07/28/23 19:01	
1,2,4-Trimethylbenzene	ND U	2.0	1	07/28/23 19:01	
1,3,5-Trimethylbenzene	ND U	2.0	1	07/28/23 19:01	
Vinyl Chloride	ND U	0.50	1	07/28/23 19:01	
o-Xylene	ND U	0.50	1	07/28/23 19:01	
m,p-Xylenes	ND U	0.50	1	07/28/23 19:01	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	07/28/23 19:01	
Dibromofluoromethane	89	73 - 122	07/28/23 19:01	
Toluene-d8	98	65 - 144	07/28/23 19:01	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 13:30
Date Received: 07/26/23 14:00

Sample Name: LB-072523-03-13I
Lab Code: K2308409-004

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	07/28/23 19:24	*
Benzene	ND U	0.50	1	07/28/23 19:24	
Bromobenzene	ND U	2.0	1	07/28/23 19:24	
Bromochloromethane	ND U	0.50	1	07/28/23 19:24	
Bromodichloromethane	ND U	0.50	1	07/28/23 19:24	
Bromoform	ND U	0.50	1	07/28/23 19:24	*
Bromomethane	ND U	0.50	1	07/28/23 19:24	*
2-Butanone (MEK)	ND U	20	1	07/28/23 19:24	
n-Butylbenzene	ND U	4.0	1	07/28/23 19:24	
sec-Butylbenzene	ND U	2.0	1	07/28/23 19:24	
tert-Butylbenzene	ND U	2.0	1	07/28/23 19:24	
Carbon Disulfide	ND U	0.50	1	07/28/23 19:24	
Carbon Tetrachloride	ND U	0.50	1	07/28/23 19:24	
Chlorobenzene	ND U	0.50	1	07/28/23 19:24	
Chloroethane	ND U	0.50	1	07/28/23 19:24	
Chloroform	ND U	0.50	1	07/28/23 19:24	
Chloromethane	ND U	0.50	1	07/28/23 19:24	*
2-Chlorotoluene	ND U	2.0	1	07/28/23 19:24	
4-Chlorotoluene	ND U	2.0	1	07/28/23 19:24	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	07/28/23 19:24	*
Dibromochloromethane	ND U	0.50	1	07/28/23 19:24	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	07/28/23 19:24	
Dibromomethane	ND U	0.50	1	07/28/23 19:24	
1,2-Dichlorobenzene	ND U	0.50	1	07/28/23 19:24	
1,3-Dichlorobenzene	ND U	0.50	1	07/28/23 19:24	
1,4-Dichlorobenzene	ND U	0.50	1	07/28/23 19:24	
Dichlorodifluoromethane	ND U	0.50	1	07/28/23 19:24	
1,1-Dichloroethane	ND U	0.50	1	07/28/23 19:24	
cis-1,2-Dichloroethene	ND U	0.50	1	07/28/23 19:24	
trans-1,2-Dichloroethene	ND U	0.50	1	07/28/23 19:24	
1,2-Dichloropropane	ND U	0.50	1	07/28/23 19:24	
1,3-Dichloropropane	ND U	0.50	1	07/28/23 19:24	
2,2-Dichloropropane	ND U	0.50	1	07/28/23 19:24	
1,1-Dichloropropene	ND U	0.50	1	07/28/23 19:24	
cis-1,3-Dichloropropene	ND U	0.50	1	07/28/23 19:24	
trans-1,3-Dichloropropene	ND U	0.50	1	07/28/23 19:24	
Ethylbenzene	ND U	0.50	1	07/28/23 19:24	
Hexachlorobutadiene	ND U	2.0	1	07/28/23 19:24	
2-Hexanone	ND U	20	1	07/28/23 19:24	
Isopropylbenzene	ND U	2.0	1	07/28/23 19:24	
4-Isopropyltoluene	ND U	2.0	1	07/28/23 19:24	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 13:30
Date Received: 07/26/23 14:00

Sample Name: LB-072523-03-13I
Lab Code: K2308409-004

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	07/28/23 19:24	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	07/28/23 19:24	
Methylene Chloride	ND U	2.0	1	07/28/23 19:24	
Naphthalene	ND U	2.0	1	07/28/23 19:24	*
n-Propylbenzene	ND U	2.0	1	07/28/23 19:24	
Styrene	ND U	0.50	1	07/28/23 19:24	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	07/28/23 19:24	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	07/28/23 19:24	
Tetrachloroethene (PCE)	ND U	0.50	1	07/28/23 19:24	
Toluene	ND U	0.50	1	07/28/23 19:24	
1,2,3-Trichlorobenzene	ND U	2.0	1	07/28/23 19:24	
1,2,4-Trichlorobenzene	ND U	2.0	1	07/28/23 19:24	
1,1,2-Trichloroethane	ND U	0.50	1	07/28/23 19:24	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	07/28/23 19:24	
Trichloroethene (TCE)	ND U	0.50	1	07/28/23 19:24	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	07/28/23 19:24	
1,2,3-Trichloropropane	ND U	0.50	1	07/28/23 19:24	
1,2,4-Trimethylbenzene	ND U	2.0	1	07/28/23 19:24	
1,3,5-Trimethylbenzene	ND U	2.0	1	07/28/23 19:24	
Vinyl Chloride	ND U	0.50	1	07/28/23 19:24	
o-Xylene	ND U	0.50	1	07/28/23 19:24	
m,p-Xylenes	ND U	0.50	1	07/28/23 19:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	68 - 117	07/28/23 19:24	
Dibromofluoromethane	89	73 - 122	07/28/23 19:24	
Toluene-d8	97	65 - 144	07/28/23 19:24	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 14:30
Date Received: 07/26/23 14:00

Sample Name: LB-072523-04-26I
Lab Code: K2308409-005

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	07/28/23 19:47	*
Benzene	ND U	0.50	1	07/28/23 19:47	
Bromobenzene	ND U	2.0	1	07/28/23 19:47	
Bromochloromethane	ND U	0.50	1	07/28/23 19:47	
Bromodichloromethane	ND U	0.50	1	07/28/23 19:47	
Bromoform	ND U	0.50	1	07/28/23 19:47	*
Bromomethane	ND U	0.50	1	07/28/23 19:47	*
2-Butanone (MEK)	ND U	20	1	07/28/23 19:47	
n-Butylbenzene	ND U	4.0	1	07/28/23 19:47	
sec-Butylbenzene	ND U	2.0	1	07/28/23 19:47	
tert-Butylbenzene	ND U	2.0	1	07/28/23 19:47	
Carbon Disulfide	ND U	0.50	1	07/28/23 19:47	
Carbon Tetrachloride	ND U	0.50	1	07/28/23 19:47	
Chlorobenzene	ND U	0.50	1	07/28/23 19:47	
Chloroethane	ND U	0.50	1	07/28/23 19:47	
Chloroform	ND U	0.50	1	07/28/23 19:47	
Chloromethane	ND U	0.50	1	07/28/23 19:47	*
2-Chlorotoluene	ND U	2.0	1	07/28/23 19:47	
4-Chlorotoluene	ND U	2.0	1	07/28/23 19:47	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	07/28/23 19:47	*
Dibromochloromethane	ND U	0.50	1	07/28/23 19:47	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	07/28/23 19:47	
Dibromomethane	ND U	0.50	1	07/28/23 19:47	
1,2-Dichlorobenzene	ND U	0.50	1	07/28/23 19:47	
1,3-Dichlorobenzene	ND U	0.50	1	07/28/23 19:47	
1,4-Dichlorobenzene	ND U	0.50	1	07/28/23 19:47	
Dichlorodifluoromethane	ND U	0.50	1	07/28/23 19:47	
1,1-Dichloroethane	ND U	0.50	1	07/28/23 19:47	
cis-1,2-Dichloroethene	ND U	0.50	1	07/28/23 19:47	
trans-1,2-Dichloroethene	ND U	0.50	1	07/28/23 19:47	
1,2-Dichloropropane	ND U	0.50	1	07/28/23 19:47	
1,3-Dichloropropane	ND U	0.50	1	07/28/23 19:47	
2,2-Dichloropropane	ND U	0.50	1	07/28/23 19:47	
1,1-Dichloropropene	ND U	0.50	1	07/28/23 19:47	
cis-1,3-Dichloropropene	ND U	0.50	1	07/28/23 19:47	
trans-1,3-Dichloropropene	ND U	0.50	1	07/28/23 19:47	
Ethylbenzene	ND U	0.50	1	07/28/23 19:47	
Hexachlorobutadiene	ND U	2.0	1	07/28/23 19:47	
2-Hexanone	ND U	20	1	07/28/23 19:47	
Isopropylbenzene	ND U	2.0	1	07/28/23 19:47	
4-Isopropyltoluene	ND U	2.0	1	07/28/23 19:47	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 14:30
Date Received: 07/26/23 14:00

Sample Name: LB-072523-04-26I
Lab Code: K2308409-005

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	07/28/23 19:47	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	07/28/23 19:47	
Methylene Chloride	ND U	2.0	1	07/28/23 19:47	
Naphthalene	ND U	2.0	1	07/28/23 19:47	*
n-Propylbenzene	ND U	2.0	1	07/28/23 19:47	
Styrene	ND U	0.50	1	07/28/23 19:47	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	07/28/23 19:47	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	07/28/23 19:47	
Tetrachloroethene (PCE)	ND U	0.50	1	07/28/23 19:47	
Toluene	ND U	0.50	1	07/28/23 19:47	
1,2,3-Trichlorobenzene	ND U	2.0	1	07/28/23 19:47	
1,2,4-Trichlorobenzene	ND U	2.0	1	07/28/23 19:47	
1,1,2-Trichloroethane	ND U	0.50	1	07/28/23 19:47	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	07/28/23 19:47	
Trichloroethene (TCE)	ND U	0.50	1	07/28/23 19:47	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	07/28/23 19:47	
1,2,3-Trichloropropane	ND U	0.50	1	07/28/23 19:47	
1,2,4-Trimethylbenzene	ND U	2.0	1	07/28/23 19:47	
1,3,5-Trimethylbenzene	ND U	2.0	1	07/28/23 19:47	
Vinyl Chloride	ND U	0.50	1	07/28/23 19:47	
o-Xylene	ND U	0.50	1	07/28/23 19:47	
m,p-Xylenes	ND U	0.50	1	07/28/23 19:47	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	68 - 117	07/28/23 19:47	
Dibromofluoromethane	91	73 - 122	07/28/23 19:47	
Toluene-d8	98	65 - 144	07/28/23 19:47	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 14:50
Date Received: 07/26/23 14:00

Sample Name: LB-072523-05-FB
Lab Code: K2308409-006

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	07/28/23 20:10	*
Benzene	ND U	0.50	1	07/28/23 20:10	
Bromobenzene	ND U	2.0	1	07/28/23 20:10	
Bromochloromethane	ND U	0.50	1	07/28/23 20:10	
Bromodichloromethane	ND U	0.50	1	07/28/23 20:10	
Bromoform	ND U	0.50	1	07/28/23 20:10	*
Bromomethane	ND U	0.50	1	07/28/23 20:10	*
2-Butanone (MEK)	ND U	20	1	07/28/23 20:10	
n-Butylbenzene	ND U	4.0	1	07/28/23 20:10	
sec-Butylbenzene	ND U	2.0	1	07/28/23 20:10	
tert-Butylbenzene	ND U	2.0	1	07/28/23 20:10	
Carbon Disulfide	ND U	0.50	1	07/28/23 20:10	
Carbon Tetrachloride	ND U	0.50	1	07/28/23 20:10	
Chlorobenzene	ND U	0.50	1	07/28/23 20:10	
Chloroethane	ND U	0.50	1	07/28/23 20:10	
Chloroform	ND U	0.50	1	07/28/23 20:10	
Chloromethane	ND U	0.50	1	07/28/23 20:10	*
2-Chlorotoluene	ND U	2.0	1	07/28/23 20:10	
4-Chlorotoluene	ND U	2.0	1	07/28/23 20:10	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	07/28/23 20:10	*
Dibromochloromethane	ND U	0.50	1	07/28/23 20:10	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	07/28/23 20:10	
Dibromomethane	ND U	0.50	1	07/28/23 20:10	
1,2-Dichlorobenzene	ND U	0.50	1	07/28/23 20:10	
1,3-Dichlorobenzene	ND U	0.50	1	07/28/23 20:10	
1,4-Dichlorobenzene	ND U	0.50	1	07/28/23 20:10	
Dichlorodifluoromethane	ND U	0.50	1	07/28/23 20:10	
1,1-Dichloroethane	ND U	0.50	1	07/28/23 20:10	
cis-1,2-Dichloroethene	ND U	0.50	1	07/28/23 20:10	
trans-1,2-Dichloroethene	ND U	0.50	1	07/28/23 20:10	
1,2-Dichloropropane	ND U	0.50	1	07/28/23 20:10	
1,3-Dichloropropane	ND U	0.50	1	07/28/23 20:10	
2,2-Dichloropropane	ND U	0.50	1	07/28/23 20:10	
1,1-Dichloropropene	ND U	0.50	1	07/28/23 20:10	
cis-1,3-Dichloropropene	ND U	0.50	1	07/28/23 20:10	
trans-1,3-Dichloropropene	ND U	0.50	1	07/28/23 20:10	
Ethylbenzene	ND U	0.50	1	07/28/23 20:10	
Hexachlorobutadiene	ND U	2.0	1	07/28/23 20:10	
2-Hexanone	ND U	20	1	07/28/23 20:10	
Isopropylbenzene	ND U	2.0	1	07/28/23 20:10	
4-Isopropyltoluene	ND U	2.0	1	07/28/23 20:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23 14:50
Date Received: 07/26/23 14:00

Sample Name: LB-072523-05-FB
Lab Code: K2308409-006

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	07/28/23 20:10	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	07/28/23 20:10	
Methylene Chloride	ND U	2.0	1	07/28/23 20:10	
Naphthalene	ND U	2.0	1	07/28/23 20:10	*
n-Propylbenzene	ND U	2.0	1	07/28/23 20:10	
Styrene	ND U	0.50	1	07/28/23 20:10	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	07/28/23 20:10	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	07/28/23 20:10	
Tetrachloroethene (PCE)	ND U	0.50	1	07/28/23 20:10	
Toluene	ND U	0.50	1	07/28/23 20:10	
1,2,3-Trichlorobenzene	ND U	2.0	1	07/28/23 20:10	
1,2,4-Trichlorobenzene	ND U	2.0	1	07/28/23 20:10	
1,1,2-Trichloroethane	ND U	0.50	1	07/28/23 20:10	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	07/28/23 20:10	
Trichloroethene (TCE)	ND U	0.50	1	07/28/23 20:10	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	07/28/23 20:10	
1,2,3-Trichloropropane	ND U	0.50	1	07/28/23 20:10	
1,2,4-Trimethylbenzene	ND U	2.0	1	07/28/23 20:10	
1,3,5-Trimethylbenzene	ND U	2.0	1	07/28/23 20:10	
Vinyl Chloride	ND U	0.50	1	07/28/23 20:10	
o-Xylene	ND U	0.50	1	07/28/23 20:10	
m,p-Xylenes	ND U	0.50	1	07/28/23 20:10	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	07/28/23 20:10	
Dibromofluoromethane	97	73 - 122	07/28/23 20:10	
Toluene-d8	99	65 - 144	07/28/23 20:10	



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-01-5S
Lab Code: K2308409-002

Service Request: K2308409
Date Collected: 07/25/23 11:45
Date Received: 07/26/23 14:00
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	07/31/23 09:39	07/27/23	
Manganese	6010C	ND U	ug/L	1.1	1	07/31/23 09:39	07/27/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-02-27I
Lab Code: K2308409-003

Service Request: K2308409
Date Collected: 07/25/23 12:45
Date Received: 07/26/23 14:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	33	ug/L	21	1	07/31/23 09:41	07/27/23	
Manganese	6010C	118	ug/L	1.1	1	07/31/23 09:41	07/27/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-03-13I
Lab Code: K2308409-004

Service Request: K2308409
Date Collected: 07/25/23 13:30
Date Received: 07/26/23 14:00
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	07/31/23 09:51	07/27/23	
Manganese	6010C	2.6	ug/L	1.1	1	07/31/23 09:51	07/27/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-04-26I
Lab Code: K2308409-005

Service Request: K2308409
Date Collected: 07/25/23 14:30
Date Received: 07/26/23 14:00
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	07/31/23 09:53	07/27/23	
Manganese	6010C	ND U	ug/L	1.1	1	07/31/23 09:53	07/27/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-05-FB
Lab Code: K2308409-006

Service Request: K2308409
Date Collected: 07/25/23 14:50
Date Received: 07/26/23 14:00
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	07/31/23 09:56	07/27/23	
Manganese	6010C	ND U	ug/L	1.1	1	07/31/23 09:56	07/27/23	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-01-5S
Lab Code: K2308409-002

Service Request: K2308409
Date Collected: 07/25/23 11:45
Date Received: 07/26/23 14:00
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	4.74	mg/L	0.20	2	07/26/23 21:18	
Nitrate as Nitrogen	300.0	5.03	mg/L	0.10	2	07/26/23 21:18	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-01-5S
Lab Code: K2308409-002

Service Request: K2308409
Date Collected: 07/25/23 11:45
Date Received: 07/26/23 14:00
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	153	mg/L	10	1	07/31/23 11:19	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-02-27I
Lab Code: K2308409-003

Service Request: K2308409
Date Collected: 07/25/23 12:45
Date Received: 07/26/23 14:00
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	12.1	mg/L	0.20	2	07/26/23 21:52	
Nitrate as Nitrogen	300.0	1.12	mg/L	0.10	2	07/26/23 21:52	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-02-27I
Lab Code: K2308409-003

Service Request: K2308409
Date Collected: 07/25/23 12:45
Date Received: 07/26/23 14:00
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	273	mg/L	10	1	07/31/23 11:19	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-03-13I
Lab Code: K2308409-004

Service Request: K2308409
Date Collected: 07/25/23 13:30
Date Received: 07/26/23 14:00
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.90	mg/L	0.20	2	07/26/23 22:01	
Nitrate as Nitrogen	300.0	3.50	mg/L	0.10	2	07/26/23 22:01	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-03-13I
Lab Code: K2308409-004

Service Request: K2308409
Date Collected: 07/25/23 13:30
Date Received: 07/26/23 14:00
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	10	1	07/31/23 11:19	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-04-26I
Lab Code: K2308409-005

Service Request: K2308409
Date Collected: 07/25/23 14:30
Date Received: 07/26/23 14:00
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	07/26/23 22:10	
Nitrate as Nitrogen	300.0	4.20	mg/L	0.10	2	07/26/23 22:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-04-26I
Lab Code: K2308409-005

Service Request: K2308409
Date Collected: 07/25/23 14:30
Date Received: 07/26/23 14:00
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	10	1	07/31/23 11:19	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-05-FB
Lab Code: K2308409-006

Service Request: K2308409
Date Collected: 07/25/23 14:50
Date Received: 07/26/23 14:00
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	07/26/23 22:18	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	07/26/23 22:18	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072523-05-FB
Lab Code: K2308409-006

Service Request: K2308409
Date Collected: 07/25/23 14:50
Date Received: 07/26/23 14:00
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	10	1	07/31/23 11:19	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409

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	K2308409-001	92	93	102
LB-072523-01-5S	K2308409-002	84	92	96
LB-072523-02-27I	K2308409-003	90	89	98
LB-072523-03-13I	K2308409-004	83	89	97
LB-072523-04-26I	K2308409-005	92	91	98
LB-072523-05-FB	K2308409-006	90	97	99
Lab Control Sample	KQ2313963-03	97	100	101
Duplicate Lab Control Sample	KQ2313963-04	98	98	102
Method Blank	KQ2313963-05	93	93	96

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2313963-05

Service Request: K2308409
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	07/28/23 11:45	
Benzene	ND U	0.50	1	07/28/23 11:45	
Bromobenzene	ND U	2.0	1	07/28/23 11:45	
Bromochloromethane	ND U	0.50	1	07/28/23 11:45	
Bromodichloromethane	ND U	0.50	1	07/28/23 11:45	
Bromoform	ND U	0.50	1	07/28/23 11:45	
Bromomethane	ND U	0.50	1	07/28/23 11:45	
2-Butanone (MEK)	ND U	20	1	07/28/23 11:45	
n-Butylbenzene	ND U	4.0	1	07/28/23 11:45	
sec-Butylbenzene	ND U	2.0	1	07/28/23 11:45	
tert-Butylbenzene	ND U	2.0	1	07/28/23 11:45	
Carbon Disulfide	ND U	0.50	1	07/28/23 11:45	
Carbon Tetrachloride	ND U	0.50	1	07/28/23 11:45	
Chlorobenzene	ND U	0.50	1	07/28/23 11:45	
Chloroethane	ND U	0.50	1	07/28/23 11:45	
Chloroform	ND U	0.50	1	07/28/23 11:45	
Chloromethane	ND U	0.50	1	07/28/23 11:45	
2-Chlorotoluene	ND U	2.0	1	07/28/23 11:45	
4-Chlorotoluene	ND U	2.0	1	07/28/23 11:45	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	07/28/23 11:45	
Dibromochloromethane	ND U	0.50	1	07/28/23 11:45	
1,2-Dibromoethane (EDB)	ND U	2.0	1	07/28/23 11:45	
Dibromomethane	ND U	0.50	1	07/28/23 11:45	
1,2-Dichlorobenzene	ND U	0.50	1	07/28/23 11:45	
1,3-Dichlorobenzene	ND U	0.50	1	07/28/23 11:45	
1,4-Dichlorobenzene	ND U	0.50	1	07/28/23 11:45	
Dichlorodifluoromethane	ND U	0.50	1	07/28/23 11:45	
1,1-Dichloroethane	ND U	0.50	1	07/28/23 11:45	
cis-1,2-Dichloroethene	ND U	0.50	1	07/28/23 11:45	
trans-1,2-Dichloroethene	ND U	0.50	1	07/28/23 11:45	
1,2-Dichloropropane	ND U	0.50	1	07/28/23 11:45	
1,3-Dichloropropane	ND U	0.50	1	07/28/23 11:45	
2,2-Dichloropropane	ND U	0.50	1	07/28/23 11:45	
1,1-Dichloropropene	ND U	0.50	1	07/28/23 11:45	
cis-1,3-Dichloropropene	ND U	0.50	1	07/28/23 11:45	
trans-1,3-Dichloropropene	ND U	0.50	1	07/28/23 11:45	
Ethylbenzene	ND U	0.50	1	07/28/23 11:45	
Hexachlorobutadiene	ND U	2.0	1	07/28/23 11:45	
2-Hexanone	ND U	20	1	07/28/23 11:45	
Isopropylbenzene	ND U	2.0	1	07/28/23 11:45	
4-Isopropyltoluene	ND U	2.0	1	07/28/23 11:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2313963-05

Service Request: K2308409
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	07/28/23 11:45	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	07/28/23 11:45	
Methylene Chloride	ND U	2.0	1	07/28/23 11:45	
Naphthalene	ND U	2.0	1	07/28/23 11:45	
n-Propylbenzene	ND U	2.0	1	07/28/23 11:45	
Styrene	ND U	0.50	1	07/28/23 11:45	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	07/28/23 11:45	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	07/28/23 11:45	
Tetrachloroethene (PCE)	ND U	0.50	1	07/28/23 11:45	
Toluene	ND U	0.50	1	07/28/23 11:45	
1,2,3-Trichlorobenzene	ND U	2.0	1	07/28/23 11:45	
1,2,4-Trichlorobenzene	ND U	2.0	1	07/28/23 11:45	
1,1,2-Trichloroethane	ND U	0.50	1	07/28/23 11:45	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	07/28/23 11:45	
Trichloroethene (TCE)	ND U	0.50	1	07/28/23 11:45	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	07/28/23 11:45	
1,2,3-Trichloropropane	ND U	0.50	1	07/28/23 11:45	
1,2,4-Trimethylbenzene	ND U	2.0	1	07/28/23 11:45	
1,3,5-Trimethylbenzene	ND U	2.0	1	07/28/23 11:45	
Vinyl Chloride	ND U	0.50	1	07/28/23 11:45	
o-Xylene	ND U	0.50	1	07/28/23 11:45	
m,p-Xylenes	ND U	0.50	1	07/28/23 11:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	68 - 117	07/28/23 11:45	
Dibromofluoromethane	93	73 - 122	07/28/23 11:45	
Toluene-d8	96	65 - 144	07/28/23 11:45	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Analyzed: 07/28/23
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: 812211

Analyte Name	Lab Control Sample KQ2313963-03			Duplicate Lab Control Sample KQ2313963-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	8.28	10.0	83	8.17	10.0	82	66-124	1	30
1,1,1-Trichloroethane (TCA)	8.83	10.0	88	8.83	10.0	88	59-136	<1	30
1,1,2,2-Tetrachloroethane	8.53	10.0	85	8.36	10.0	84	70-127	2	30
1,1,2-Trichloroethane	9.39	10.0	94	8.99	10.0	90	74-118	4	30
1,1-Dichloroethane	10.6	10.0	106	10.7	10.0	107	68-132	1	30
1,1-Dichloropropene	9.91	10.0	99	9.68	10.0	97	59-134	2	30
1,2,3-Trichlorobenzene	8.13	10.0	81	8.26	10.0	83	68-120	2	30
1,2,3-Trichloropropane	9.61	10.0	96	9.02	10.0	90	69-123	6	30
1,2,4-Trichlorobenzene	8.65	10.0	87	8.31	10.0	83	58-126	4	30
1,2,4-Trimethylbenzene	8.65	10.0	87	8.84	10.0	88	63-122	2	30
1,2-Dibromo-3-chloropropane	7.03	10.0	70	7.36	10.0	74	55-132	5	30
1,2-Dibromoethane (EDB)	8.25	10.0	83	8.26	10.0	83	74-118	<1	30
1,2-Dichlorobenzene	9.15	10.0	92	8.94	10.0	89	72-115	2	30
1,2-Dichloropropane	9.79	10.0	98	10.0	10.0	100	67-126	2	30
1,3,5-Trimethylbenzene	8.89	10.0	89	9.02	10.0	90	62-126	1	30
1,3-Dichlorobenzene	9.36	10.0	94	9.40	10.0	94	70-116	<1	30
1,3-Dichloropropane	9.38	10.0	94	9.72	10.0	97	75-116	4	30
1,4-Dichlorobenzene	9.41	10.0	94	9.70	10.0	97	73-115	3	30
2,2-Dichloropropane	9.40	10.0	94	8.93	10.0	89	37-145	5	30
2-Butanone (MEK)	51.7	50.0	103	52.8	50.0	106	71-149	2	30
2-Chlorotoluene	9.87	10.0	99	9.81	10.0	98	55-131	<1	30
2-Hexanone	44.0	50.0	88	45.7	50.0	91	59-131	4	30
4-Chlorotoluene	9.03	10.0	90	9.16	10.0	92	66-121	1	30
4-Isopropyltoluene	9.29	10.0	93	9.40	10.0	94	61-128	1	30
4-Methyl-2-pentanone (MIBK)	47.6	50.0	95	48.7	50.0	97	64-134	2	30
Acetone	75.6	50.0	151 *	73.1	50.0	146 *	68-135	3	30
Benzene	10.0	10.0	100	9.90	10.0	99	69-124	1	30
Bromobenzene	9.32	10.0	93	9.64	10.0	96	72-116	3	30
Bromochloromethane	8.63	10.0	86	8.93	10.0	89	75-131	3	30
Bromodichloromethane	8.14	10.0	81	8.39	10.0	84	63-129	3	30
Bromoform	6.27	10.0	63	5.95	10.0	60	52-144	5	30
Bromomethane	10.8	10.0	108	10.8	10.0	108	35-113	<1	30
Carbon Disulfide	17.2	20.0	86	17.3	20.0	86	46-144	<1	30
Carbon Tetrachloride	8.89	10.0	89	8.82	10.0	88	55-140	<1	30
Chlorobenzene	9.66	10.0	97	9.70	10.0	97	72-116	<1	30
Chloroethane	10.6	10.0	106	10.5	10.0	105	58-134	2	30
Chloroform	10.1	10.0	101	9.81	10.0	98	70-129	3	30
Chloromethane	11.3	10.0	113	10.9	10.0	109	34-130	3	30
cis-1,2-Dichloroethene	9.35	10.0	94	9.16	10.0	92	71-118	2	30
cis-1,3-Dichloropropene	8.92	10.0	89	8.65	10.0	87	62-132	3	30
Dibromochloromethane	7.13	10.0	71	7.34	10.0	73	67-126	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Analyzed: 07/28/23
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: 812211

Analyte Name	Lab Control Sample KQ2313963-03			Duplicate Lab Control Sample KQ2313963-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	8.14	10.0	81	8.08	10.0	81	69-128	<1	30
Dichlorodifluoromethane	7.45	10.0	75	7.45	10.0	75	32-124	<1	30
Ethylbenzene	8.92	10.0	89	9.14	10.0	91	67-121	2	30
Hexachlorobutadiene	9.74	10.0	97	9.96	10.0	100	57-119	2	30
Isopropylbenzene	8.95	10.0	90	9.16	10.0	92	67-129	2	30
m,p-Xylenes	18.0	20.0	90	18.3	20.0	91	69-121	2	30
Methyl tert-Butyl Ether	9.24	10.0	92	8.91	10.0	89	54-126	4	30
Methylene Chloride	9.78	10.0	98	10.1	10.0	101	71-122	3	30
Naphthalene	6.64	10.0	66	6.82	10.0	68	64-126	3	30
n-Butylbenzene	9.31	10.0	93	9.33	10.0	93	55-130	<1	30
n-Propylbenzene	9.53	10.0	95	9.75	10.0	98	61-124	2	30
o-Xylene	9.00	10.0	90	8.94	10.0	89	71-119	<1	30
sec-Butylbenzene	9.39	10.0	94	9.48	10.0	95	59-128	<1	30
Styrene	8.86	10.0	89	9.20	10.0	92	74-121	4	30
tert-Butylbenzene	9.25	10.0	93	9.12	10.0	91	61-127	1	30
Tetrachloroethene (PCE)	9.09	10.0	91	9.58	10.0	96	62-126	5	30
Toluene	9.35	10.0	94	9.31	10.0	93	69-124	<1	30
trans-1,2-Dichloroethene	9.63	10.0	96	9.23	10.0	92	67-125	4	30
trans-1,3-Dichloropropene	8.19	10.0	82	8.39	10.0	84	59-125	2	30
Trichloroethene (TCE)	8.85	10.0	89	8.73	10.0	87	67-128	1	30
Trichlorofluoromethane (CFC 11)	10.1	10.0	101	9.95	10.0	100	52-141	1	30
Vinyl Chloride	9.94	10.0	99	10.1	10.0	101	55-123	2	30



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2312951-01

Service Request: K2308409
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	07/31/23 08:36	07/27/23	
Manganese	6010C	ND U	ug/L	1.1	1	07/31/23 08:36	07/27/23	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Analyzed: 07/31/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2312951-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2390	2500	96	80-120
Manganese	6010C	1100	1250	88	80-120



General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308409-MB1

Service Request: K2308409
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	07/26/23 19:51	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	07/26/23 19:51	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308409-MB1

Service Request: K2308409
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	10	1	07/31/23 11:19	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308409-MB2

Service Request: K2308409
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	07/26/23 23:11	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	07/26/23 23:11	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308409-MB2

Service Request: K2308409
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	10	1	07/31/23 11:19	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request:K2308409
Date Collected:07/25/23
Date Received:07/26/23
Date Analyzed:7/26/23

**Duplicate Matrix Spike Summary
General Chemistry Parameters**

Sample Name: LB-072523-01-5S
Lab Code: K2308409-002

Units:mg/L
Basis:NA

**Matrix Spike
K2308409-002MS**

**Duplicate Matrix Spike
K2308409-002DMS**

Analyte Name	Method	Sample		Spike		Duplicate Matrix Spike		% Rec	% Rec Limits	RPD	RPD Limit
		Result	Result	Amount	% Rec	Result	Amount				
Chloride	300.0	4.74	12.4	8.00	96	12.4	8.00	96	90-110	<1	20
Nitrate as Nitrogen	300.0	5.03	8.97	4.00	99	8.94	4.00	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.

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QA/QC Report

Client: SCS Engineers
Project Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Collected: 07/25/23
Date Received: 07/26/23
Date Analyzed: 07/26/23

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-072523-01-5S
Lab Code: K2308409-002

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K2308409-002DUP Result	Average	RPD	RPD Limit
Chloride	300.0	0.20	4.74	4.69	4.71	1	20
Nitrate as Nitrogen	300.0	0.10	5.03	4.99	5.01	<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/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Analyzed: 07/26/23 - 07/31/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2308409-LCS1

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	2.51	2.50	100	90-110
Solids, Total Dissolved	SM 2540 C	1340	1430	94	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308409
Date Analyzed: 07/26/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2308409-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.90	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.52	2.50	101	90-110



August 14, 2023

Service Request No:K2308455

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 July 27, 2023
For your reference, these analyses have been assigned our service request number **K2308455**.

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: K2308455
Date Received: 07/27/2023

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 07/27/2023. 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:

Method 8260C, 08/02/2023: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria, other than Acetone. In accordance with ALS standard operating procedures, a Method Reporting Limit (MRL) check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verified 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 compound was not detected in the field sample, the data quality was not significantly affected. No further corrective action was required.

Method 8260C, 08/02/2023: The advisory criterion was exceeded for Acetone and Bromomethane in replicate Laboratory Control Sample (LCS\DLCS) KQ2314044-03\04. 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

08/14/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: LB-072623-01-6S	Lab ID: K2308455-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	5.76			0.20	mg/L	300.0
Manganese, Dissolved	1.1			1.1	ug/L	6010C
Nitrate as Nitrogen	3.10			0.10	mg/L	300.0
Solids, Total Dissolved	182			10	mg/L	SM 2540 C

CLIENT ID: LB-072623-02-1S	Lab ID: K2308455-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	6.15			0.20	mg/L	300.0
Nitrate as Nitrogen	4.34			0.10	mg/L	300.0
Solids, Total Dissolved	191			10	mg/L	SM 2540 C

CLIENT ID: LB-072623-03-10SR	Lab ID: K2308455-004
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	6.28			0.20	mg/L	300.0
Iron, Dissolved	25			21	ug/L	6010C
Nitrate as Nitrogen	2.44			0.10	mg/L	300.0
Solids, Total Dissolved	181			10	mg/L	SM 2540 C

CLIENT ID: LB-072623-04-DUP	Lab ID: K2308455-005
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chloride	6.38			0.20	mg/L	300.0
Iron, Dissolved	24			21	ug/L	6010C
Nitrate as Nitrogen	2.39			0.10	mg/L	300.0
Solids, Total Dissolved	182			10	mg/L	SM 2540 C



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/04223030.13

Service Request:K2308455

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2308455-001	TB2	7/26/2023	0700
K2308455-002	LB-072623-01-6S	7/26/2023	0900
K2308455-003	LB-072623-02-1S	7/26/2023	0955
K2308455-004	LB-072623-03-10SR	7/26/2023	1110
K2308455-005	LB-072623-04-DUP	7/26/2023	1115



CHAIN OF CUSTODY

SR# K2308455

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	Lechner Landfill
PROJECT NUMBER	04223030.13
PROJECT MANAGER	Burb Long
COMPANY NAME	SCS Engineers
ADDRESS	15040 SW 72nd Ave
CITY/STATE/ZIP	Portland OR 97224
E-MAIL ADDRESS	BLong@scsengineers.com
PHONE #	(971) 284-1297 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 type="checkbox"/>	Hydrocarbons Gas <input type="checkbox"/> 8021 <input type="checkbox"/>	Oil & Grease/TRIPH Diesel <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"/>	Chlorophenolics Tri <input type="checkbox"/> 814 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) 8151 <input type="checkbox"/>	Tetra <input type="checkbox"/> PCP <input type="checkbox"/>	Cyanide <input type="checkbox"/>	(circle) pH, Cond. <input type="checkbox"/> (NO ₃) BOD, TSS, <input type="checkbox"/> SO ₄ , PO ₄ , F, NO ₂	(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 173 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/>	Ethene <input type="checkbox"/>	REMARKS	
TB2	7/26/23	0700		W	2	<input checked="" type="checkbox"/>																		
LB-072623-01-6S	7/26/23	0900		W	5	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>											
LB-072623-02-1S	7/26/23	0955		W	5	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>											
LB-072623-03-10SR	7/26/23	1110		W	5	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>											
LB-072623-04-DUP	7/26/23	1115		W	5	<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 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)
	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: Short holds - NO ₃ Container Supply Number 132050	☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY: Signature: Greg Rich Date/Time: 7/27/23 10:10 Firm: SCS	RECEIVED BY: Signature: Greg Rich Date/Time: 7-27-23 10:10 Firm: ALS	RELINQUISHED BY: 1240 PM Signature: Zaina Kibi Date/Time: 7-27-23 Firm: ALS	RECEIVED BY: 1240 PM Signature: Zaina Kibi Date/Time: 7/27/23 Firm: ALS
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PM HH

Cooler Receipt and Preservation Form

Client SCS Engineers Service Request K23 08455

Received: 7/27/23 Opened: 7/27/23 By: MM Unloaded: 7/27/23 By: MM

- 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

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
	1.1	IR-01				-	

4. Was a Temperature Blank present in cooler? NA Y N If yes, note the temperature in the appropriate column above:
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 # above and notify the PM. NA Y N

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

- Packing material: Inserts Buggies 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
- Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N Underfilled Overfilled
- Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

SHORT HOLD

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
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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.
- 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.
- 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/04223030.13

Service Request: K2308455

Sample Name: TB2
Lab Code: K2308455-001
Sample Matrix: Ground Water

Date Collected: 07/26/23
Date Received: 07/27/23

Analysis Method
8260C

Extracted/Digested By

Analyzed By
GROETTGER

Sample Name: LB-072623-01-6S
Lab Code: K2308455-002
Sample Matrix: Ground Water

Date Collected: 07/26/23
Date Received: 07/27/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ABOYER

Sample Name: LB-072623-02-1S
Lab Code: K2308455-003
Sample Matrix: Ground Water

Date Collected: 07/26/23
Date Received: 07/27/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ABOYER

Sample Name: LB-072623-03-10SR
Lab Code: K2308455-004
Sample Matrix: Ground Water

Date Collected: 07/26/23
Date Received: 07/27/23

Analysis Method
300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

Analyzed By
NFOTH
AMCKORNEY
GROETTGER
JBYMAN

ABOYER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13

Service Request: K2308455

Sample Name: LB-072623-04-DUP
Lab Code: K2308455-005
Sample Matrix: Ground Water

Date Collected: 07/26/23
Date Received: 07/27/23

Analysis Method

300.0
6010C
8260C
SM 2540 C

Extracted/Digested By

ABOYER

Analyzed By

NFOTH
AMCKORNEY
GROETTGER
JBYMAN



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: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 07:00
Date Received: 07/27/23 12:40

Sample Name: TB2
Lab Code: K2308455-001

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	08/02/23 14:09	*
Benzene	ND U	0.50	1	08/02/23 14:09	
Bromobenzene	ND U	2.0	1	08/02/23 14:09	
Bromochloromethane	ND U	0.50	1	08/02/23 14:09	
Bromodichloromethane	ND U	0.50	1	08/02/23 14:09	
Bromoform	ND U	0.50	1	08/02/23 14:09	*
Bromomethane	ND U	0.50	1	08/02/23 14:09	*
2-Butanone (MEK)	ND U	20	1	08/02/23 14:09	
n-Butylbenzene	ND U	4.0	1	08/02/23 14:09	
sec-Butylbenzene	ND U	2.0	1	08/02/23 14:09	
tert-Butylbenzene	ND U	2.0	1	08/02/23 14:09	
Carbon Disulfide	ND U	0.50	1	08/02/23 14:09	
Carbon Tetrachloride	ND U	0.50	1	08/02/23 14:09	
Chlorobenzene	ND U	0.50	1	08/02/23 14:09	
Chloroethane	ND U	0.50	1	08/02/23 14:09	
Chloroform	ND U	0.50	1	08/02/23 14:09	
Chloromethane	ND U	0.50	1	08/02/23 14:09	*
2-Chlorotoluene	ND U	2.0	1	08/02/23 14:09	
4-Chlorotoluene	ND U	2.0	1	08/02/23 14:09	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/02/23 14:09	*
Dibromochloromethane	ND U	0.50	1	08/02/23 14:09	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/02/23 14:09	
Dibromomethane	ND U	0.50	1	08/02/23 14:09	
1,2-Dichlorobenzene	ND U	0.50	1	08/02/23 14:09	
1,3-Dichlorobenzene	ND U	0.50	1	08/02/23 14:09	
1,4-Dichlorobenzene	ND U	0.50	1	08/02/23 14:09	
Dichlorodifluoromethane	ND U	0.50	1	08/02/23 14:09	
1,1-Dichloroethane	ND U	0.50	1	08/02/23 14:09	
cis-1,2-Dichloroethene	ND U	0.50	1	08/02/23 14:09	
trans-1,2-Dichloroethene	ND U	0.50	1	08/02/23 14:09	
1,2-Dichloropropane	ND U	0.50	1	08/02/23 14:09	
1,3-Dichloropropane	ND U	0.50	1	08/02/23 14:09	
2,2-Dichloropropane	ND U	0.50	1	08/02/23 14:09	
1,1-Dichloropropene	ND U	0.50	1	08/02/23 14:09	
cis-1,3-Dichloropropene	ND U	0.50	1	08/02/23 14:09	
trans-1,3-Dichloropropene	ND U	0.50	1	08/02/23 14:09	
Ethylbenzene	ND U	0.50	1	08/02/23 14:09	
Hexachlorobutadiene	ND U	2.0	1	08/02/23 14:09	
2-Hexanone	ND U	20	1	08/02/23 14:09	
Isopropylbenzene	ND U	2.0	1	08/02/23 14:09	
4-Isopropyltoluene	ND U	2.0	1	08/02/23 14:09	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 07:00
Date Received: 07/27/23 12:40

Sample Name: TB2
Lab Code: K2308455-001

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	08/02/23 14:09	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/02/23 14:09	
Methylene Chloride	ND U	2.0	1	08/02/23 14:09	
Naphthalene	ND U	2.0	1	08/02/23 14:09	*
n-Propylbenzene	ND U	2.0	1	08/02/23 14:09	
Styrene	ND U	0.50	1	08/02/23 14:09	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/02/23 14:09	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/02/23 14:09	
Tetrachloroethene (PCE)	ND U	0.50	1	08/02/23 14:09	
Toluene	ND U	0.50	1	08/02/23 14:09	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/02/23 14:09	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/02/23 14:09	
1,1,2-Trichloroethane	ND U	0.50	1	08/02/23 14:09	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/02/23 14:09	
Trichloroethene (TCE)	ND U	0.50	1	08/02/23 14:09	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/02/23 14:09	
1,2,3-Trichloropropane	ND U	0.50	1	08/02/23 14:09	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/02/23 14:09	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/02/23 14:09	
Vinyl Chloride	ND U	0.50	1	08/02/23 14:09	
o-Xylene	ND U	0.50	1	08/02/23 14:09	
m,p-Xylenes	ND U	0.50	1	08/02/23 14:09	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	68 - 117	08/02/23 14:09	
Dibromofluoromethane	101	73 - 122	08/02/23 14:09	
Toluene-d8	104	65 - 144	08/02/23 14:09	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 09:00
Date Received: 07/27/23 12:40

Sample Name: LB-072623-01-6S
Lab Code: K2308455-002

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	08/02/23 14:32	*
Benzene	ND U	0.50	1	08/02/23 14:32	
Bromobenzene	ND U	2.0	1	08/02/23 14:32	
Bromochloromethane	ND U	0.50	1	08/02/23 14:32	
Bromodichloromethane	ND U	0.50	1	08/02/23 14:32	
Bromoform	ND U	0.50	1	08/02/23 14:32	*
Bromomethane	ND U	0.50	1	08/02/23 14:32	*
2-Butanone (MEK)	ND U	20	1	08/02/23 14:32	
n-Butylbenzene	ND U	4.0	1	08/02/23 14:32	
sec-Butylbenzene	ND U	2.0	1	08/02/23 14:32	
tert-Butylbenzene	ND U	2.0	1	08/02/23 14:32	
Carbon Disulfide	ND U	0.50	1	08/02/23 14:32	
Carbon Tetrachloride	ND U	0.50	1	08/02/23 14:32	
Chlorobenzene	ND U	0.50	1	08/02/23 14:32	
Chloroethane	ND U	0.50	1	08/02/23 14:32	
Chloroform	ND U	0.50	1	08/02/23 14:32	
Chloromethane	ND U	0.50	1	08/02/23 14:32	*
2-Chlorotoluene	ND U	2.0	1	08/02/23 14:32	
4-Chlorotoluene	ND U	2.0	1	08/02/23 14:32	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/02/23 14:32	*
Dibromochloromethane	ND U	0.50	1	08/02/23 14:32	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/02/23 14:32	
Dibromomethane	ND U	0.50	1	08/02/23 14:32	
1,2-Dichlorobenzene	ND U	0.50	1	08/02/23 14:32	
1,3-Dichlorobenzene	ND U	0.50	1	08/02/23 14:32	
1,4-Dichlorobenzene	ND U	0.50	1	08/02/23 14:32	
Dichlorodifluoromethane	ND U	0.50	1	08/02/23 14:32	
1,1-Dichloroethane	ND U	0.50	1	08/02/23 14:32	
cis-1,2-Dichloroethene	ND U	0.50	1	08/02/23 14:32	
trans-1,2-Dichloroethene	ND U	0.50	1	08/02/23 14:32	
1,2-Dichloropropane	ND U	0.50	1	08/02/23 14:32	
1,3-Dichloropropane	ND U	0.50	1	08/02/23 14:32	
2,2-Dichloropropane	ND U	0.50	1	08/02/23 14:32	
1,1-Dichloropropene	ND U	0.50	1	08/02/23 14:32	
cis-1,3-Dichloropropene	ND U	0.50	1	08/02/23 14:32	
trans-1,3-Dichloropropene	ND U	0.50	1	08/02/23 14:32	
Ethylbenzene	ND U	0.50	1	08/02/23 14:32	
Hexachlorobutadiene	ND U	2.0	1	08/02/23 14:32	
2-Hexanone	ND U	20	1	08/02/23 14:32	
Isopropylbenzene	ND U	2.0	1	08/02/23 14:32	
4-Isopropyltoluene	ND U	2.0	1	08/02/23 14:32	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 09:00
Date Received: 07/27/23 12:40

Sample Name: LB-072623-01-6S
Lab Code: K2308455-002

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	08/02/23 14:32	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/02/23 14:32	
Methylene Chloride	ND U	2.0	1	08/02/23 14:32	
Naphthalene	ND U	2.0	1	08/02/23 14:32	*
n-Propylbenzene	ND U	2.0	1	08/02/23 14:32	
Styrene	ND U	0.50	1	08/02/23 14:32	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/02/23 14:32	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/02/23 14:32	
Tetrachloroethene (PCE)	ND U	0.50	1	08/02/23 14:32	
Toluene	ND U	0.50	1	08/02/23 14:32	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/02/23 14:32	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/02/23 14:32	
1,1,2-Trichloroethane	ND U	0.50	1	08/02/23 14:32	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/02/23 14:32	
Trichloroethene (TCE)	ND U	0.50	1	08/02/23 14:32	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/02/23 14:32	
1,2,3-Trichloropropane	ND U	0.50	1	08/02/23 14:32	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/02/23 14:32	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/02/23 14:32	
Vinyl Chloride	ND U	0.50	1	08/02/23 14:32	
o-Xylene	ND U	0.50	1	08/02/23 14:32	
m,p-Xylenes	ND U	0.50	1	08/02/23 14:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	68 - 117	08/02/23 14:32	
Dibromofluoromethane	97	73 - 122	08/02/23 14:32	
Toluene-d8	102	65 - 144	08/02/23 14:32	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 09:55
Date Received: 07/27/23 12:40

Sample Name: LB-072623-02-1S
Lab Code: K2308455-003

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	08/02/23 14:55	*
Benzene	ND U	0.50	1	08/02/23 14:55	
Bromobenzene	ND U	2.0	1	08/02/23 14:55	
Bromochloromethane	ND U	0.50	1	08/02/23 14:55	
Bromodichloromethane	ND U	0.50	1	08/02/23 14:55	
Bromoform	ND U	0.50	1	08/02/23 14:55	*
Bromomethane	ND U	0.50	1	08/02/23 14:55	*
2-Butanone (MEK)	ND U	20	1	08/02/23 14:55	
n-Butylbenzene	ND U	4.0	1	08/02/23 14:55	
sec-Butylbenzene	ND U	2.0	1	08/02/23 14:55	
tert-Butylbenzene	ND U	2.0	1	08/02/23 14:55	
Carbon Disulfide	ND U	0.50	1	08/02/23 14:55	
Carbon Tetrachloride	ND U	0.50	1	08/02/23 14:55	
Chlorobenzene	ND U	0.50	1	08/02/23 14:55	
Chloroethane	ND U	0.50	1	08/02/23 14:55	
Chloroform	ND U	0.50	1	08/02/23 14:55	
Chloromethane	ND U	0.50	1	08/02/23 14:55	*
2-Chlorotoluene	ND U	2.0	1	08/02/23 14:55	
4-Chlorotoluene	ND U	2.0	1	08/02/23 14:55	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/02/23 14:55	*
Dibromochloromethane	ND U	0.50	1	08/02/23 14:55	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/02/23 14:55	
Dibromomethane	ND U	0.50	1	08/02/23 14:55	
1,2-Dichlorobenzene	ND U	0.50	1	08/02/23 14:55	
1,3-Dichlorobenzene	ND U	0.50	1	08/02/23 14:55	
1,4-Dichlorobenzene	ND U	0.50	1	08/02/23 14:55	
Dichlorodifluoromethane	ND U	0.50	1	08/02/23 14:55	
1,1-Dichloroethane	ND U	0.50	1	08/02/23 14:55	
cis-1,2-Dichloroethene	ND U	0.50	1	08/02/23 14:55	
trans-1,2-Dichloroethene	ND U	0.50	1	08/02/23 14:55	
1,2-Dichloropropane	ND U	0.50	1	08/02/23 14:55	
1,3-Dichloropropane	ND U	0.50	1	08/02/23 14:55	
2,2-Dichloropropane	ND U	0.50	1	08/02/23 14:55	
1,1-Dichloropropene	ND U	0.50	1	08/02/23 14:55	
cis-1,3-Dichloropropene	ND U	0.50	1	08/02/23 14:55	
trans-1,3-Dichloropropene	ND U	0.50	1	08/02/23 14:55	
Ethylbenzene	ND U	0.50	1	08/02/23 14:55	
Hexachlorobutadiene	ND U	2.0	1	08/02/23 14:55	
2-Hexanone	ND U	20	1	08/02/23 14:55	
Isopropylbenzene	ND U	2.0	1	08/02/23 14:55	
4-Isopropyltoluene	ND U	2.0	1	08/02/23 14:55	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 09:55
Date Received: 07/27/23 12:40

Sample Name: LB-072623-02-1S
Lab Code: K2308455-003

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	08/02/23 14:55	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/02/23 14:55	
Methylene Chloride	ND U	2.0	1	08/02/23 14:55	
Naphthalene	ND U	2.0	1	08/02/23 14:55	*
n-Propylbenzene	ND U	2.0	1	08/02/23 14:55	
Styrene	ND U	0.50	1	08/02/23 14:55	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/02/23 14:55	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/02/23 14:55	
Tetrachloroethene (PCE)	ND U	0.50	1	08/02/23 14:55	
Toluene	ND U	0.50	1	08/02/23 14:55	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/02/23 14:55	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/02/23 14:55	
1,1,2-Trichloroethane	ND U	0.50	1	08/02/23 14:55	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/02/23 14:55	
Trichloroethene (TCE)	ND U	0.50	1	08/02/23 14:55	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/02/23 14:55	
1,2,3-Trichloropropane	ND U	0.50	1	08/02/23 14:55	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/02/23 14:55	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/02/23 14:55	
Vinyl Chloride	ND U	0.50	1	08/02/23 14:55	
o-Xylene	ND U	0.50	1	08/02/23 14:55	
m,p-Xylenes	ND U	0.50	1	08/02/23 14:55	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	08/02/23 14:55	
Dibromofluoromethane	97	73 - 122	08/02/23 14:55	
Toluene-d8	99	65 - 144	08/02/23 14:55	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 11:10
Date Received: 07/27/23 12:40

Sample Name: LB-072623-03-10SR
Lab Code: K2308455-004

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	08/02/23 15:18	*
Benzene	ND U	0.50	1	08/02/23 15:18	
Bromobenzene	ND U	2.0	1	08/02/23 15:18	
Bromochloromethane	ND U	0.50	1	08/02/23 15:18	
Bromodichloromethane	ND U	0.50	1	08/02/23 15:18	
Bromoform	ND U	0.50	1	08/02/23 15:18	*
Bromomethane	ND U	0.50	1	08/02/23 15:18	*
2-Butanone (MEK)	ND U	20	1	08/02/23 15:18	
n-Butylbenzene	ND U	4.0	1	08/02/23 15:18	
sec-Butylbenzene	ND U	2.0	1	08/02/23 15:18	
tert-Butylbenzene	ND U	2.0	1	08/02/23 15:18	
Carbon Disulfide	ND U	0.50	1	08/02/23 15:18	
Carbon Tetrachloride	ND U	0.50	1	08/02/23 15:18	
Chlorobenzene	ND U	0.50	1	08/02/23 15:18	
Chloroethane	ND U	0.50	1	08/02/23 15:18	
Chloroform	ND U	0.50	1	08/02/23 15:18	
Chloromethane	ND U	0.50	1	08/02/23 15:18	*
2-Chlorotoluene	ND U	2.0	1	08/02/23 15:18	
4-Chlorotoluene	ND U	2.0	1	08/02/23 15:18	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/02/23 15:18	*
Dibromochloromethane	ND U	0.50	1	08/02/23 15:18	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/02/23 15:18	
Dibromomethane	ND U	0.50	1	08/02/23 15:18	
1,2-Dichlorobenzene	ND U	0.50	1	08/02/23 15:18	
1,3-Dichlorobenzene	ND U	0.50	1	08/02/23 15:18	
1,4-Dichlorobenzene	ND U	0.50	1	08/02/23 15:18	
Dichlorodifluoromethane	ND U	0.50	1	08/02/23 15:18	
1,1-Dichloroethane	ND U	0.50	1	08/02/23 15:18	
cis-1,2-Dichloroethene	ND U	0.50	1	08/02/23 15:18	
trans-1,2-Dichloroethene	ND U	0.50	1	08/02/23 15:18	
1,2-Dichloropropane	ND U	0.50	1	08/02/23 15:18	
1,3-Dichloropropane	ND U	0.50	1	08/02/23 15:18	
2,2-Dichloropropane	ND U	0.50	1	08/02/23 15:18	
1,1-Dichloropropene	ND U	0.50	1	08/02/23 15:18	
cis-1,3-Dichloropropene	ND U	0.50	1	08/02/23 15:18	
trans-1,3-Dichloropropene	ND U	0.50	1	08/02/23 15:18	
Ethylbenzene	ND U	0.50	1	08/02/23 15:18	
Hexachlorobutadiene	ND U	2.0	1	08/02/23 15:18	
2-Hexanone	ND U	20	1	08/02/23 15:18	
Isopropylbenzene	ND U	2.0	1	08/02/23 15:18	
4-Isopropyltoluene	ND U	2.0	1	08/02/23 15:18	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-03-10SR
Lab Code: K2308455-004

Service Request: K2308455
Date Collected: 07/26/23 11:10
Date Received: 07/27/23 12:40

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	08/02/23 15:18	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/02/23 15:18	
Methylene Chloride	ND U	2.0	1	08/02/23 15:18	
Naphthalene	ND U	2.0	1	08/02/23 15:18	*
n-Propylbenzene	ND U	2.0	1	08/02/23 15:18	
Styrene	ND U	0.50	1	08/02/23 15:18	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/02/23 15:18	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/02/23 15:18	
Tetrachloroethene (PCE)	ND U	0.50	1	08/02/23 15:18	
Toluene	ND U	0.50	1	08/02/23 15:18	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/02/23 15:18	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/02/23 15:18	
1,1,2-Trichloroethane	ND U	0.50	1	08/02/23 15:18	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/02/23 15:18	
Trichloroethene (TCE)	ND U	0.50	1	08/02/23 15:18	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/02/23 15:18	
1,2,3-Trichloropropane	ND U	0.50	1	08/02/23 15:18	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/02/23 15:18	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/02/23 15:18	
Vinyl Chloride	ND U	0.50	1	08/02/23 15:18	
o-Xylene	ND U	0.50	1	08/02/23 15:18	
m,p-Xylenes	ND U	0.50	1	08/02/23 15:18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	68 - 117	08/02/23 15:18	
Dibromofluoromethane	91	73 - 122	08/02/23 15:18	
Toluene-d8	99	65 - 144	08/02/23 15:18	

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Analytical Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 11:15
Date Received: 07/27/23 12:40

Sample Name: LB-072623-04-DUP
Lab Code: K2308455-005

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	08/02/23 15:41	*
Benzene	ND U	0.50	1	08/02/23 15:41	
Bromobenzene	ND U	2.0	1	08/02/23 15:41	
Bromochloromethane	ND U	0.50	1	08/02/23 15:41	
Bromodichloromethane	ND U	0.50	1	08/02/23 15:41	
Bromoform	ND U	0.50	1	08/02/23 15:41	*
Bromomethane	ND U	0.50	1	08/02/23 15:41	*
2-Butanone (MEK)	ND U	20	1	08/02/23 15:41	
n-Butylbenzene	ND U	4.0	1	08/02/23 15:41	
sec-Butylbenzene	ND U	2.0	1	08/02/23 15:41	
tert-Butylbenzene	ND U	2.0	1	08/02/23 15:41	
Carbon Disulfide	ND U	0.50	1	08/02/23 15:41	
Carbon Tetrachloride	ND U	0.50	1	08/02/23 15:41	
Chlorobenzene	ND U	0.50	1	08/02/23 15:41	
Chloroethane	ND U	0.50	1	08/02/23 15:41	
Chloroform	ND U	0.50	1	08/02/23 15:41	
Chloromethane	ND U	0.50	1	08/02/23 15:41	*
2-Chlorotoluene	ND U	2.0	1	08/02/23 15:41	
4-Chlorotoluene	ND U	2.0	1	08/02/23 15:41	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/02/23 15:41	*
Dibromochloromethane	ND U	0.50	1	08/02/23 15:41	*
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/02/23 15:41	
Dibromomethane	ND U	0.50	1	08/02/23 15:41	
1,2-Dichlorobenzene	ND U	0.50	1	08/02/23 15:41	
1,3-Dichlorobenzene	ND U	0.50	1	08/02/23 15:41	
1,4-Dichlorobenzene	ND U	0.50	1	08/02/23 15:41	
Dichlorodifluoromethane	ND U	0.50	1	08/02/23 15:41	
1,1-Dichloroethane	ND U	0.50	1	08/02/23 15:41	
cis-1,2-Dichloroethene	ND U	0.50	1	08/02/23 15:41	
trans-1,2-Dichloroethene	ND U	0.50	1	08/02/23 15:41	
1,2-Dichloropropane	ND U	0.50	1	08/02/23 15:41	
1,3-Dichloropropane	ND U	0.50	1	08/02/23 15:41	
2,2-Dichloropropane	ND U	0.50	1	08/02/23 15:41	
1,1-Dichloropropene	ND U	0.50	1	08/02/23 15:41	
cis-1,3-Dichloropropene	ND U	0.50	1	08/02/23 15:41	
trans-1,3-Dichloropropene	ND U	0.50	1	08/02/23 15:41	
Ethylbenzene	ND U	0.50	1	08/02/23 15:41	
Hexachlorobutadiene	ND U	2.0	1	08/02/23 15:41	
2-Hexanone	ND U	20	1	08/02/23 15:41	
Isopropylbenzene	ND U	2.0	1	08/02/23 15:41	
4-Isopropyltoluene	ND U	2.0	1	08/02/23 15:41	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23 11:15
Date Received: 07/27/23 12:40

Sample Name: LB-072623-04-DUP
Lab Code: K2308455-005

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	08/02/23 15:41	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/02/23 15:41	
Methylene Chloride	ND U	2.0	1	08/02/23 15:41	
Naphthalene	ND U	2.0	1	08/02/23 15:41	*
n-Propylbenzene	ND U	2.0	1	08/02/23 15:41	
Styrene	ND U	0.50	1	08/02/23 15:41	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/02/23 15:41	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/02/23 15:41	
Tetrachloroethene (PCE)	ND U	0.50	1	08/02/23 15:41	
Toluene	ND U	0.50	1	08/02/23 15:41	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/02/23 15:41	*
1,2,4-Trichlorobenzene	ND U	2.0	1	08/02/23 15:41	
1,1,2-Trichloroethane	ND U	0.50	1	08/02/23 15:41	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/02/23 15:41	
Trichloroethene (TCE)	ND U	0.50	1	08/02/23 15:41	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/02/23 15:41	
1,2,3-Trichloropropane	ND U	0.50	1	08/02/23 15:41	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/02/23 15:41	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/02/23 15:41	
Vinyl Chloride	ND U	0.50	1	08/02/23 15:41	
o-Xylene	ND U	0.50	1	08/02/23 15:41	
m,p-Xylenes	ND U	0.50	1	08/02/23 15:41	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	68 - 117	08/02/23 15:41	
Dibromofluoromethane	96	73 - 122	08/02/23 15:41	
Toluene-d8	98	65 - 144	08/02/23 15:41	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-01-6S
Lab Code: K2308455-002

Service Request: K2308455
Date Collected: 07/26/23 09:00
Date Received: 07/27/23 12:40
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	07/31/23 14:06	07/31/23	
Manganese	6010C	1.1	ug/L	1.1	1	07/31/23 14:06	07/31/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-02-1S
Lab Code: K2308455-003

Service Request: K2308455
Date Collected: 07/26/23 09:55
Date Received: 07/27/23 12:40
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	07/31/23 14:08	07/31/23	
Manganese	6010C	ND U	ug/L	1.1	1	07/31/23 14:08	07/31/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-03-10SR
Lab Code: K2308455-004

Service Request: K2308455
Date Collected: 07/26/23 11:10
Date Received: 07/27/23 12:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	25	ug/L	21	1	07/31/23 14:11	07/31/23	
Manganese	6010C	ND U	ug/L	1.1	1	07/31/23 14:11	07/31/23	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-04-DUP
Lab Code: K2308455-005

Service Request: K2308455
Date Collected: 07/26/23 11:15
Date Received: 07/27/23 12:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Iron	6010C	24	ug/L	21	1	07/31/23 14:13	07/31/23	
Manganese	6010C	ND U	ug/L	1.1	1	07/31/23 14:13	07/31/23	



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-01-6S
Lab Code: K2308455-002

Service Request: K2308455
Date Collected: 07/26/23 09:00
Date Received: 07/27/23 12:40
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	5.76	mg/L	0.20	2	07/28/23 00:10	
Nitrate as Nitrogen	300.0	3.10	mg/L	0.10	2	07/28/23 00:10	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-01-6S
Lab Code: K2308455-002

Service Request: K2308455
Date Collected: 07/26/23 09:00
Date Received: 07/27/23 12:40
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	10	1	08/01/23 13:30	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-02-1S
Lab Code: K2308455-003

Service Request: K2308455
Date Collected: 07/26/23 09:55
Date Received: 07/27/23 12:40
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	6.15	mg/L	0.20	2	07/28/23 00:45	
Nitrate as Nitrogen	300.0	4.34	mg/L	0.10	2	07/28/23 00:45	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-02-1S
Lab Code: K2308455-003

Service Request: K2308455
Date Collected: 07/26/23 09:55
Date Received: 07/27/23 12:40
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	10	1	08/01/23 13:30	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-03-10SR
Lab Code: K2308455-004

Service Request: K2308455
Date Collected: 07/26/23 11:10
Date Received: 07/27/23 12:40
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	300.0	6.28	mg/L	0.20	2	07/28/23 00:54	
Nitrate as Nitrogen	300.0	2.44	mg/L	0.10	2	07/28/23 00:54	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-03-10SR
Lab Code: K2308455-004

Service Request: K2308455
Date Collected: 07/26/23 11:10
Date Received: 07/27/23 12:40
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	10	1	08/01/23 13:30	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-04-DUP
Lab Code: K2308455-005

Service Request: K2308455
Date Collected: 07/26/23 11:15
Date Received: 07/27/23 12:40
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	07/28/23 01:02	
Nitrate as Nitrogen	300.0	2.39	mg/L	0.10	2	07/28/23 01:02	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: LB-072623-04-DUP
Lab Code: K2308455-005

Service Request: K2308455
Date Collected: 07/26/23 11:15
Date Received: 07/27/23 12:40
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	10	1	08/01/23 13:30	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455

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	K2308455-001	89	101	104
LB-072623-01-6S	K2308455-002	93	97	102
LB-072623-02-1S	K2308455-003	90	97	99
LB-072623-03-10SR	K2308455-004	96	91	99
LB-072623-04-DUP	K2308455-005	91	96	98
Lab Control Sample	KQ2314044-03	96	100	104
Duplicate Lab Control Sample	KQ2314044-04	96	106	107
Method Blank	KQ2314044-05	87	93	95

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2314044-05

Service Request: K2308455
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	08/02/23 13:47	
Benzene	ND U	0.50	1	08/02/23 13:47	
Bromobenzene	ND U	2.0	1	08/02/23 13:47	
Bromochloromethane	ND U	0.50	1	08/02/23 13:47	
Bromodichloromethane	ND U	0.50	1	08/02/23 13:47	
Bromoform	ND U	0.50	1	08/02/23 13:47	
Bromomethane	ND U	0.50	1	08/02/23 13:47	
2-Butanone (MEK)	ND U	20	1	08/02/23 13:47	
n-Butylbenzene	ND U	4.0	1	08/02/23 13:47	
sec-Butylbenzene	ND U	2.0	1	08/02/23 13:47	
tert-Butylbenzene	ND U	2.0	1	08/02/23 13:47	
Carbon Disulfide	ND U	0.50	1	08/02/23 13:47	
Carbon Tetrachloride	ND U	0.50	1	08/02/23 13:47	
Chlorobenzene	ND U	0.50	1	08/02/23 13:47	
Chloroethane	ND U	0.50	1	08/02/23 13:47	
Chloroform	ND U	0.50	1	08/02/23 13:47	
Chloromethane	ND U	0.50	1	08/02/23 13:47	
2-Chlorotoluene	ND U	2.0	1	08/02/23 13:47	
4-Chlorotoluene	ND U	2.0	1	08/02/23 13:47	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	08/02/23 13:47	
Dibromochloromethane	ND U	0.50	1	08/02/23 13:47	
1,2-Dibromoethane (EDB)	ND U	2.0	1	08/02/23 13:47	
Dibromomethane	ND U	0.50	1	08/02/23 13:47	
1,2-Dichlorobenzene	ND U	0.50	1	08/02/23 13:47	
1,3-Dichlorobenzene	ND U	0.50	1	08/02/23 13:47	
1,4-Dichlorobenzene	ND U	0.50	1	08/02/23 13:47	
Dichlorodifluoromethane	ND U	0.50	1	08/02/23 13:47	
1,1-Dichloroethane	ND U	0.50	1	08/02/23 13:47	
cis-1,2-Dichloroethene	ND U	0.50	1	08/02/23 13:47	
trans-1,2-Dichloroethene	ND U	0.50	1	08/02/23 13:47	
1,2-Dichloropropane	ND U	0.50	1	08/02/23 13:47	
1,3-Dichloropropane	ND U	0.50	1	08/02/23 13:47	
2,2-Dichloropropane	ND U	0.50	1	08/02/23 13:47	
1,1-Dichloropropene	ND U	0.50	1	08/02/23 13:47	
cis-1,3-Dichloropropene	ND U	0.50	1	08/02/23 13:47	
trans-1,3-Dichloropropene	ND U	0.50	1	08/02/23 13:47	
Ethylbenzene	ND U	0.50	1	08/02/23 13:47	
Hexachlorobutadiene	ND U	2.0	1	08/02/23 13:47	
2-Hexanone	ND U	20	1	08/02/23 13:47	
Isopropylbenzene	ND U	2.0	1	08/02/23 13:47	
4-Isopropyltoluene	ND U	2.0	1	08/02/23 13:47	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2314044-05

Service Request: K2308455
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	08/02/23 13:47	
4-Methyl-2-pentanone (MIBK)	ND U	20	1	08/02/23 13:47	
Methylene Chloride	ND U	2.0	1	08/02/23 13:47	
Naphthalene	ND U	2.0	1	08/02/23 13:47	
n-Propylbenzene	ND U	2.0	1	08/02/23 13:47	
Styrene	ND U	0.50	1	08/02/23 13:47	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	08/02/23 13:47	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	08/02/23 13:47	
Tetrachloroethene (PCE)	ND U	0.50	1	08/02/23 13:47	
Toluene	ND U	0.50	1	08/02/23 13:47	
1,2,3-Trichlorobenzene	ND U	2.0	1	08/02/23 13:47	
1,2,4-Trichlorobenzene	ND U	2.0	1	08/02/23 13:47	
1,1,2-Trichloroethane	ND U	0.50	1	08/02/23 13:47	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	08/02/23 13:47	
Trichloroethene (TCE)	ND U	0.50	1	08/02/23 13:47	
Trichlorofluoromethane (CFC 11)	ND U	0.50	1	08/02/23 13:47	
1,2,3-Trichloropropane	ND U	0.50	1	08/02/23 13:47	
1,2,4-Trimethylbenzene	ND U	2.0	1	08/02/23 13:47	
1,3,5-Trimethylbenzene	ND U	2.0	1	08/02/23 13:47	
Vinyl Chloride	ND U	0.50	1	08/02/23 13:47	
o-Xylene	ND U	0.50	1	08/02/23 13:47	
m,p-Xylenes	ND U	0.50	1	08/02/23 13:47	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	68 - 117	08/02/23 13:47	
Dibromofluoromethane	93	73 - 122	08/02/23 13:47	
Toluene-d8	95	65 - 144	08/02/23 13:47	

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QA/QC Report

Client: SCS Engineers
Project: Lechner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Analyzed: 08/02/23
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: 812626

Analyte Name	Lab Control Sample KQ2314044-03			Duplicate Lab Control Sample KQ2314044-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	7.99	10.0	80	8.48	10.0	85	66-124	6	30
1,1,1-Trichloroethane (TCA)	9.62	10.0	96	9.82	10.0	98	59-136	2	30
1,1,2,2-Tetrachloroethane	9.15	10.0	92	9.27	10.0	93	70-127	1	30
1,1,2-Trichloroethane	8.89	10.0	89	9.12	10.0	91	74-118	3	30
1,1-Dichloroethane	11.0	10.0	110	10.6	10.0	106	68-132	4	30
1,1-Dichloropropene	10.8	10.0	108	10.7	10.0	107	59-134	1	30
1,2,3-Trichlorobenzene	8.80	10.0	88	8.86	10.0	89	68-120	<1	30
1,2,3-Trichloropropane	9.20	10.0	92	9.30	10.0	93	69-123	1	30
1,2,4-Trichlorobenzene	8.83	10.0	88	9.15	10.0	92	58-126	4	30
1,2,4-Trimethylbenzene	9.10	10.0	91	9.25	10.0	93	63-122	2	30
1,2-Dibromo-3-chloropropane	7.08	10.0	71	6.71	10.0	67	55-132	5	30
1,2-Dibromoethane (EDB)	8.34	10.0	83	8.84	10.0	88	74-118	6	30
1,2-Dichlorobenzene	9.36	10.0	94	9.54	10.0	95	72-115	2	30
1,2-Dichloropropane	10.4	10.0	104	10.5	10.0	105	67-126	<1	30
1,3,5-Trimethylbenzene	9.46	10.0	95	9.25	10.0	93	62-126	2	30
1,3-Dichlorobenzene	9.73	10.0	97	9.72	10.0	97	70-116	<1	30
1,3-Dichloropropane	8.87	10.0	89	9.77	10.0	98	75-116	10	30
1,4-Dichlorobenzene	9.63	10.0	96	9.75	10.0	98	73-115	1	30
2,2-Dichloropropane	10.2	10.0	102	9.97	10.0	100	37-145	2	30
2-Butanone (MEK)	52.3	50.0	105	62.1	50.0	124	71-149	17	30
2-Chlorotoluene	10.0	10.0	100	10.3	10.0	103	55-131	2	30
2-Hexanone	47.8	50.0	96	49.8	50.0	100	59-131	4	30
4-Chlorotoluene	9.43	10.0	94	9.35	10.0	94	66-121	<1	30
4-Isopropyltoluene	10.0	10.0	100	10.1	10.0	101	61-128	<1	30
4-Methyl-2-pentanone (MIBK)	50.4	50.0	101	53.0	50.0	106	64-134	5	30
Acetone	79.3	50.0	159 *	75.8	50.0	152 *	68-135	5	30
Benzene	10.5	10.0	105	10.3	10.0	103	69-124	2	30
Bromobenzene	9.56	10.0	96	9.62	10.0	96	72-116	<1	30
Bromochloromethane	8.53	10.0	85	9.14	10.0	91	75-131	7	30
Bromodichloromethane	8.91	10.0	89	8.78	10.0	88	63-129	1	30
Bromoform	6.69	10.0	67	6.60	10.0	66	52-144	1	30
Bromomethane	12.5	10.0	125 *	13.4	10.0	134 *	35-113	7	30
Carbon Disulfide	18.7	20.0	93	18.7	20.0	93	46-144	<1	30
Carbon Tetrachloride	9.86	10.0	99	9.42	10.0	94	55-140	5	30
Chlorobenzene	9.46	10.0	95	9.55	10.0	96	72-116	<1	30
Chloroethane	12.3	10.0	123	12.2	10.0	122	58-134	<1	30
Chloroform	10.2	10.0	102	10.1	10.0	101	70-129	<1	30
Chloromethane	12.6	10.0	126	12.2	10.0	122	34-130	3	30
cis-1,2-Dichloroethene	9.26	10.0	93	10.2	10.0	102	71-118	10	30
cis-1,3-Dichloropropene	9.07	10.0	91	9.36	10.0	94	62-132	3	30
Dibromochloromethane	7.25	10.0	73	7.03	10.0	70	67-126	3	30

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Analyzed: 08/02/23
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: 812626

Analyte Name	Lab Control Sample KQ2314044-03			Duplicate Lab Control Sample KQ2314044-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Dibromomethane	9.26	10.0	93	8.97	10.0	90	69-128	3	30
Dichlorodifluoromethane	8.67	10.0	87	8.58	10.0	86	32-124	1	30
Ethylbenzene	9.27	10.0	93	9.15	10.0	92	67-121	1	30
Hexachlorobutadiene	9.79	10.0	98	9.92	10.0	99	57-119	1	30
Isopropylbenzene	9.36	10.0	94	9.31	10.0	93	67-129	<1	30
m,p-Xylenes	18.1	20.0	91	18.9	20.0	94	69-121	4	30
Methyl tert-Butyl Ether	9.51	10.0	95	9.60	10.0	96	54-126	<1	30
Methylene Chloride	10.3	10.0	103	10.2	10.0	102	71-122	<1	30
Naphthalene	6.97	10.0	70	7.09	10.0	71	64-126	2	30
n-Butylbenzene	10.2	10.0	102	10.2	10.0	102	55-130	<1	30
n-Propylbenzene	10.4	10.0	104	10.2	10.0	102	61-124	2	30
o-Xylene	9.26	10.0	93	9.03	10.0	90	71-119	3	30
sec-Butylbenzene	10.6	10.0	106	10.2	10.0	102	59-128	4	30
Styrene	8.68	10.0	87	8.67	10.0	87	74-121	<1	30
tert-Butylbenzene	9.95	10.0	100	9.71	10.0	97	61-127	2	30
Tetrachloroethene (PCE)	9.75	10.0	98	9.42	10.0	94	62-126	3	30
Toluene	10.2	10.0	102	10.1	10.0	101	69-124	1	30
trans-1,2-Dichloroethene	10.4	10.0	104	9.67	10.0	97	67-125	8	30
trans-1,3-Dichloropropene	7.99	10.0	80	8.49	10.0	85	59-125	6	30
Trichloroethene (TCE)	9.72	10.0	97	9.62	10.0	96	67-128	1	30
Trichlorofluoromethane (CFC 11)	11.4	10.0	114	11.1	10.0	111	52-141	3	30
Vinyl Chloride	11.4	10.0	114	11.6	10.0	116	55-123	1	30



Metals

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2313254-01

Service Request: K2308455
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	07/31/23 13:22	07/31/23	
Manganese	6010C	ND U	ug/L	1.1	1	07/31/23 13:22	07/31/23	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Analyzed: 07/31/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2313254-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	6010C	2380	2500	95	80-120
Manganese	6010C	1180	1250	94	80-120



General Chemistry

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308455-MB1

Service Request: K2308455
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	07/27/23 16:11	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	07/27/23 16:11	

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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308455-MB1

Service Request: K2308455
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	10	1	08/01/23 13:30	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308455-MB2

Service Request: K2308455
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	07/27/23 19:58	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	07/27/23 19:58	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308455-MB2

Service Request: K2308455
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	10	1	08/01/23 13:30	

ALS Group USA, Corp.
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Analytical Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: K2308455-MB3

Service Request: K2308455
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	07/27/23 23:44	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.050	1	07/27/23 23:44	

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QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request:K2308455
Date Collected:07/26/23
Date Received:07/27/23
Date Analyzed:7/28/23

**Duplicate Matrix Spike Summary
General Chemistry Parameters**

Sample Name: LB-072623-01-6S
Lab Code: K2308455-002

Units:mg/L
Basis:NA

**Matrix Spike
K2308455-002MS**

**Duplicate Matrix Spike
K2308455-002DMS**

Analyte Name	Method	Sample		Spike		Duplicate Matrix Spike		% Rec	% Rec Limits	RPD	RPD Limit
		Result	Result	Amount	% Rec	Result	Amount				
Chloride	300.0	5.76	13.4	8.00	96	13.4	8.00	96	90-110	<1	20
Nitrate as Nitrogen	300.0	3.10	7.16	4.00	102	7.18	4.00	102	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/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Collected: 07/26/23
Date Received: 07/27/23
Date Analyzed: 07/28/23

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LB-072623-01-6S
Lab Code: K2308455-002

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K2308455-002DUP Result	Average	RPD	RPD Limit
Chloride	300.0	0.20	5.76	5.73	5.75	<1	20
Nitrate as Nitrogen	300.0	0.10	3.10	3.08	3.09	<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/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Analyzed: 07/27/23 - 08/01/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2308455-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.84	5.00	97	90-110
Nitrate as Nitrogen	300.0	2.51	2.50	101	90-110
Solids, Total Dissolved	SM 2540 C	1440	1430	101	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455

Date Analyzed: 07/27/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L

Basis:NA

Lab Control Sample

K2308455-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.84	5.00	97	90-110
Nitrate as Nitrogen	300.0	2.53	2.50	101	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SCS Engineers
Project: Leichner Landfill/04223030.13
Sample Matrix: Ground Water

Service Request: K2308455
Date Analyzed: 07/27/23

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
K2308455-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	4.88	5.00	98	90-110
Nitrate as Nitrogen	300.0	2.55	2.50	102	90-110

APPENDIX D

2023 Groundwater Elevation Data and Groundwater Elevation Hydrographs

Table D-1
2023 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-R2	2/17/2021	222.27	49.69	172.58
LB-R2	8/9/2021	222.27	50.68	171.59
LB-R2	2/14/2022	222.27	48.88	173.39
LB-R2	7/25/2022	222.27	46.26	176.01
LB-R2	3/20/2023	222.27	45.71	176.56
LB-R2	7/25/2023	222.27	44.37	177.90
LB-1S	2/17/2021	210.12	37.36	172.76
LB-1S	8/9/2021	210.12	38.36	171.76
LB-1S	2/14/2022	210.12	39.34	170.78
LB-1S	7/25/2022	210.12	34.28	175.84
LB-1S	3/20/2023	210.12	33.75	176.37
LB-1S	7/25/2023	210.12	32.09	178.03
LB-1D	2/17/2021	209.74	40.43	169.31
LB-1D	8/9/2021	209.74	41.17	168.57
LB-1D	2/14/2022	209.74	38.42	171.32
LB-1D	7/25/2022	209.74	37.06	172.68
LB-1D	3/20/2023	209.74	35.92	173.82
LB-1D	7/25/2023	209.74	35.80	173.94
LB-3S	2/17/2021	218.25	43.64	174.61
LB-3S	8/9/2021	218.25	43.59	174.66
LB-3S	2/14/2022	218.25	41.71	176.54
LB-3S	7/25/2022	218.25	39.54	178.71
LB-3S	3/20/2023	218.25	38.70	179.55
LB-3S	7/25/2023	218.25	36.68	181.57
LB-3D	2/17/2021	219.29	43.61	175.68
LB-3D	8/9/2021	219.29	44.91	174.38
LB-3D	2/14/2022	219.29	42.69	176.60
LB-3D	7/25/2022	219.29	40.53	178.76
LB-3D	3/20/2023	219.29	39.67	179.62
LB-3D	7/25/2023	219.29	37.80	181.49
LB-5S	2/17/2021	206.89	16.42	190.47
LB-5S	8/9/2021	206.89	17.13	189.76
LB-5S	2/14/2022	206.89	16.15	190.74
LB-5S	7/25/2022	206.89	15.69	191.20
LB-5S	3/20/2023	206.89	15.58	191.31
LB-5S	7/25/2023	206.89	16.11	190.78
LB-5C	2/17/2021	206.70	37.38	169.32
LB-5C	8/9/2021	206.70	38.42	168.28
LB-5C	2/14/2022	206.70	36.07	170.63
LB-5C	7/25/2022	206.70	37.77	168.93
LB-5C	3/20/2023	206.70	33.47	173.23
LB-5C	7/25/2023	206.70	37.66	169.04
LB-5D	2/17/2021	207.56	41.41	166.15
LB-5D	8/9/2021	207.56	42.84	164.72
LB-5D	2/14/2022	207.56	40.18	167.38
LB-5D	7/25/2022	207.56	38.36	169.20
LB-5D	3/20/2023	207.56	37.40	170.16
LB-5D	7/25/2023	207.56	37.66	169.90

Table D-1
2023 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-6S	2/17/2021	202.80	31.11	171.69
LB-6S	8/9/2021	202.80	32.17	170.63
LB-6S	2/14/2022	202.80	30.35	172.45
LB-6S	7/25/2022	202.80	28.10	174.70
LB-6S	3/20/2023	202.80	27.46	175.34
LB-6S	7/25/2023	202.80	26.14	176.66
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	2/17/2021	204.04	35.20	168.84
LB-10SR	8/9/2021	204.04	36.62	167.42
LB-10SR	2/14/2022	204.04	34.47	169.57
LB-10SR	7/25/2022	204.04	31.99	172.05
LB-10SR	3/20/2023	204.04	31.61	172.43
LB-10SR	7/25/2023	204.04	30.58	173.46
LB-10CR	2/17/2021	203.05	34.09	168.96
LB-10CR	8/9/2021	203.05	35.50	167.55
LB-10CR	2/14/2022	203.05	33.37	169.68
LB-10CR	7/25/2022	203.05	30.91	172.14
LB-10CR	3/20/2023	203.05	30.48	172.57
LB-10CR	7/25/2023	203.05	29.49	173.56
LB-10DR	2/17/2021	203.36	46.70	156.66
LB-10DR	8/9/2021	203.36	48.58	154.78
LB-10DR	2/14/2022	203.36	45.74	157.62
LB-10DR	7/25/2022	203.36	43.43	159.93
LB-10DR	3/20/2023	203.36	43.28	160.08
LB-10DR	7/25/2023	203.36	43.55	159.81
LB-13I	2/17/2021	202.36	31.75	170.61
LB-13I	8/9/2021	202.36	32.89	169.47
LB-13I	2/14/2022	202.36	31.16	171.20
LB-13I	7/25/2022	202.36	28.80	173.56
LB-13I	3/20/2023	202.36	28.22	174.14
LB-13I	7/25/2023	202.36	27.05	175.31
LB-13C	2/17/2021	202.68	32.13	170.55
LB-13C	8/9/2021	202.68	33.30	169.38
LB-13C	2/14/2022	202.68	31.73	170.95
LB-13C	7/25/2022	202.68	29.21	173.47
LB-13C	3/20/2023	202.68	28.62	174.06
LB-13C	7/25/2023	202.68	27.47	175.21
LB-13D	2/17/2021	202.96	32.54	170.42
LB-13D	8/9/2021	202.96	33.68	169.28
LB-13D	2/14/2022	202.96	31.62	171.34
LB-13D	7/25/2022	202.96	29.50	173.46
LB-13D	3/20/2023	202.96	28.92	174.04
LB-13D	7/25/2023	202.96	27.77	175.19

Table D-1
2023 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-17S	2/17/2021	208.18	Dry	NA
LB-17S	8/9/2021	208.18	Dry	NA
LB-17S	2/14/2022	208.18	Dry	NA
LB-17S	7/25/2022	208.18	32.11	176.07
LB-17S	3/20/2023	208.18	31.54	176.64
LB-17S	7/25/2023	208.18	30.16	178.02
LB-17I	2/17/2021	212.96	40.58	172.38
LB-17I	8/9/2021	212.96	41.57	171.39
LB-17I	2/14/2022	212.96	39.58	173.38
LB-17I	7/25/2022	212.96	37.23	175.73
LB-17I	3/20/2023	212.96	36.69	176.27
LB-17I	7/25/2023	212.96	35.35	177.61
LB-17C	2/17/2021	207.97	34.25	173.72
LB-17C	8/9/2021	207.97	35.26	172.71
LB-17C	2/14/2022	207.97	33.28	174.69
LB-17C	7/25/2022	207.97	30.93	177.04
LB-17C	3/20/2023	207.97	30.40	177.57
LB-17C	7/25/2023	207.97	29.05	178.92
LB-17D	2/17/2021	213.17	41.51	171.66
LB-17D	8/9/2021	213.17	42.49	170.68
LB-17D	2/14/2022	213.17	40.51	172.66
LB-17D	7/25/2022	213.17	38.20	174.97
LB-17D	3/20/2023	213.17	37.66	175.51
LB-17D	7/25/2023	213.17	36.40	176.77
LB-20S	2/17/2021	221.22	43.92	177.30
LB-20S	8/9/2021	221.22	44.60	176.62
LB-20S	2/14/2022	221.22	43.45	177.77
LB-20S	7/25/2022	221.22	40.88	180.34
LB-20S	3/20/2023	221.22	39.94	181.28
LB-20S	7/25/2023	221.22	38.43	182.79
LB-21S	2/17/2021	223.35	40.99	182.36
LB-21S	8/9/2021	223.35	41.90	181.45
LB-21S	2/14/2022	223.35	40.08	183.27
LB-21S	7/25/2022	223.35	38.77	184.58
LB-21S	3/20/2023	223.35	36.83	186.52
LB-21S	7/25/2023	223.35	35.89	187.46
LB-21C	2/17/2021	223.32	41.42	181.90
LB-21C	8/9/2021	223.32	42.81	180.51
LB-21C	2/14/2022	223.32	40.46	182.86
LB-21C	7/25/2022	223.32	39.10	184.22
LB-21C	3/20/2023	223.32	37.35	185.97
LB-21C	7/25/2023	223.32	36.36	186.96
LB-21D	2/17/2021	223.63	44.31	179.32
LB-21D	8/9/2021	223.63	45.56	178.07
LB-21D	2/14/2022	223.63	43.38	180.25
LB-21D	7/25/2022	223.63	41.92	181.71
LB-21D	3/20/2023	223.63	40.37	183.26
LB-21D	7/25/2023	223.63	39.61	184.02

Table D-1
2023 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-22S	2/17/2021	208.42	8.88	199.54
LB-22S	8/9/2021	208.42	9.82	198.60
LB-23S	2/17/2021	229.19	33.30	195.89
LB-23S	8/9/2021	229.19	33.88	195.31
LB-23S	2/14/2022	229.19	34.63	194.56
LB-23S	7/25/2022	229.19	31.01	198.18
LB-23S	3/20/2023	229.19	31.16	198.03
LB-23S	7/25/2023	229.19	31.75	197.44
LB-24S	2/17/2021	235.13	40.36	194.77
LB-24S	8/9/2021	235.13	40.96	194.17
LB-24S	2/14/2022	235.13	39.56	195.57
LB-24S	7/25/2022	235.13	38.61	196.52
LB-24S	3/20/2023	235.13	38.87	196.26
LB-24S	7/25/2023	235.13	39.35	195.78
LB-26I	2/17/2021	200.22	29.10	171.12
LB-26I	8/9/2021	200.22	30.21	170.01
LB-26I	2/14/2022	200.22	28.43	171.79
LB-26I	7/25/2022	200.22	26.13	174.09
LB-26I	3/20/2023	200.22	25.53	174.69
LB-26I	7/25/2023	200.22	24.28	175.94
LB-26D	2/17/2021	200.75	28.94	171.81
LB-26D	8/9/2021	200.75	30.06	170.69
LB-26D	2/14/2022	200.75	29.41	171.34
LB-26D	7/25/2022	200.75	25.92	174.83
LB-26D	3/20/2023	200.75	25.29	175.46
LB-26D	7/25/2023	200.75	24.05	176.70
LB-27I	2/17/2021	205.35	35.12	170.23
LB-27I	8/9/2021	205.35	36.33	169.02
LB-27I	2/14/2022	205.35	36.42	168.93
LB-27I	7/25/2022	205.35	32.13	173.22
LB-27I	3/20/2023	205.35	31.60	173.75
LB-27I	7/25/2023	205.35	30.50	174.85
LB-27D	2/17/2021	204.63	42.06	162.57
LB-27D	8/9/2021	204.63	43.41	161.22
LB-27D	2/14/2022	204.63	40.61	164.02
LB-27D	7/25/2022	204.63	38.51	166.12
LB-27D	3/20/2023	204.63	37.83	166.80
LB-27D	7/25/2023	204.63	37.98	166.65
MW-1 N	2/17/2021	216.58	Dry	NA
MW-1 N	8/9/2021	216.58	Dry	NA
MW-1 N	2/14/2022	216.58	Dry	NA
MW-1 N	7/25/2022	216.58	Dry	NA
MW-1 N	3/20/2023	216.58	Dry	NA
MW-1 N	7/25/2023	216.58	Dry	NA

Table D-1
2023 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
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 S	2/14/2022	216.13	39.34	176.79
MW-1 S	7/25/2022	216.13	38.59	177.54
MW-1 S	3/20/2023	216.13	37.80	178.33
MW-1 S	7/25/2023	216.13	36.05	180.08
MW-1 E	2/17/2021	216.45	Dry	NA
MW-1 E	8/9/2021	216.45	Dry	NA
MW-1 E	2/14/2022	216.45	Dry	NA
MW-1 E	7/25/2022	216.45	Dry	NA
MW-1 E	3/20/2023	216.45	Dry	NA
MW-1 E	7/25/2023	216.45	Dry	NA
MW-NE	2/17/2021	220.06	16.54	203.52
MW-NE	8/9/2021	220.06	17.51	202.55
MW-NE	2/14/2022	220.06	16.31	203.75
MW-NE	7/25/2022	220.06	14.14	205.92
MW-NE	3/20/2023	220.06	13.86	206.20
MW-NE	7/25/2023	220.06	14.90	205.16

Notes: LB-9S and LB-22S were abandoned in July 2021 in preparation for a street extension across the northern portion of the landfill.
 AMSL = above mean sea level
 BTOC = below top of casing
 NA = not applicable.

LB-1S and LB-1D Hydrographs Leichner Landfill



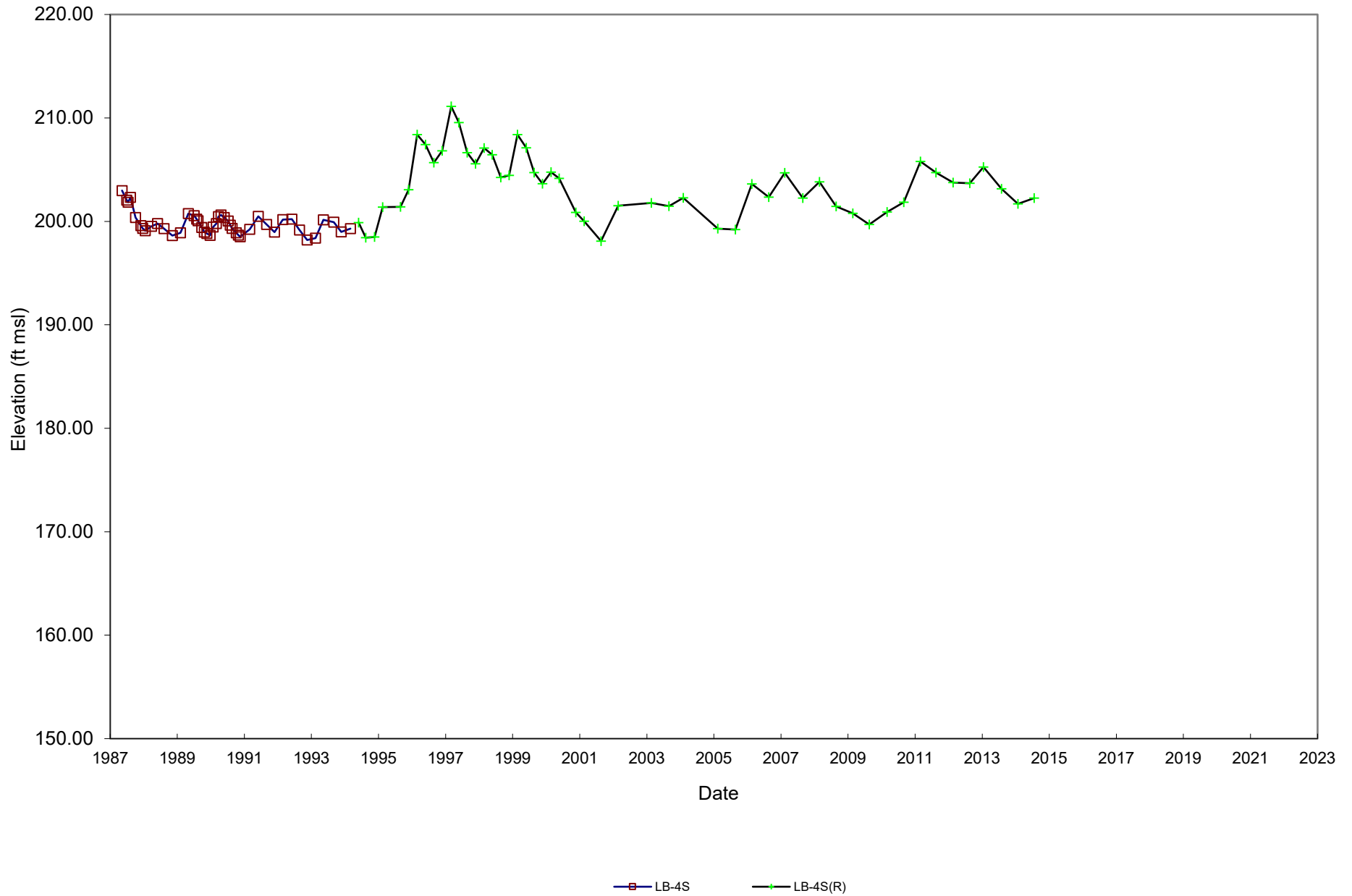
—□— LB-1S —+— LB-1D

LB-3S and LB-3D Hydrographs Leichner Landfill



—■— LB-3S —▲— LB-3D

LB-4s, and LB-4S(R) Hydrographs Leichner Landfill

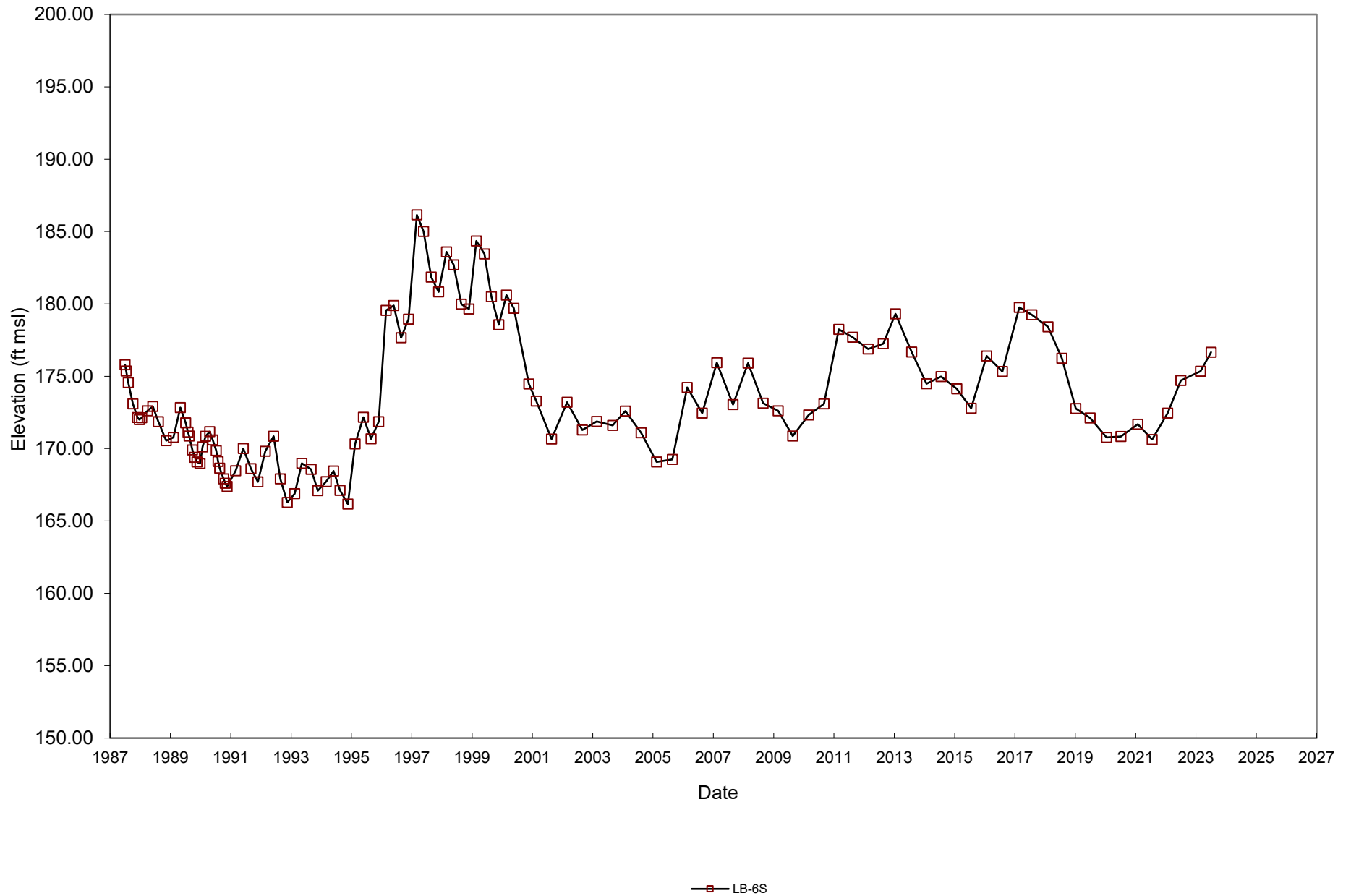


LB 5S, LB-5C, and LB-5D Hydrographs Leichner Landfill

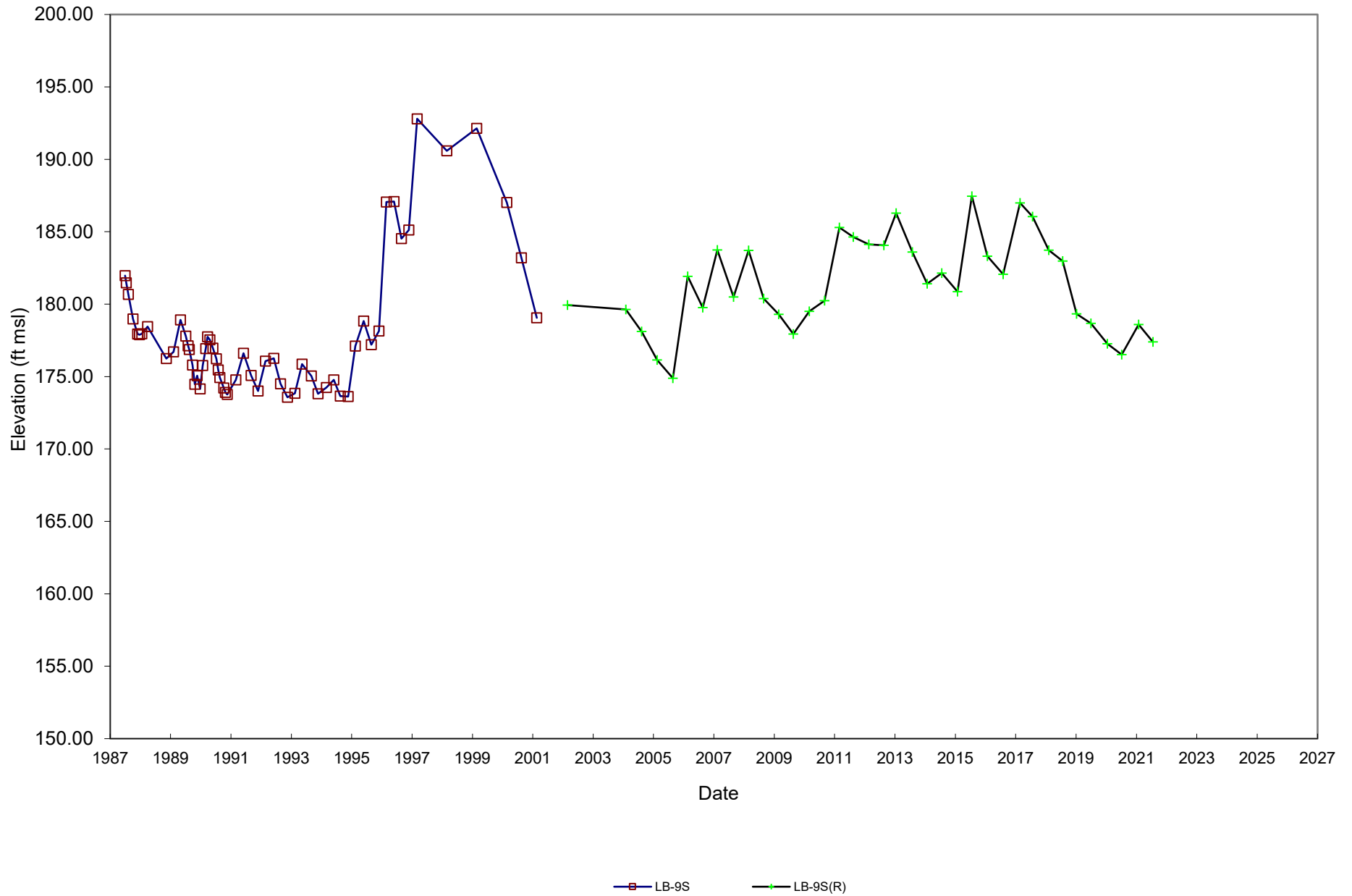


—■— LB-5S —+— LB-5C —◆— LB-5D

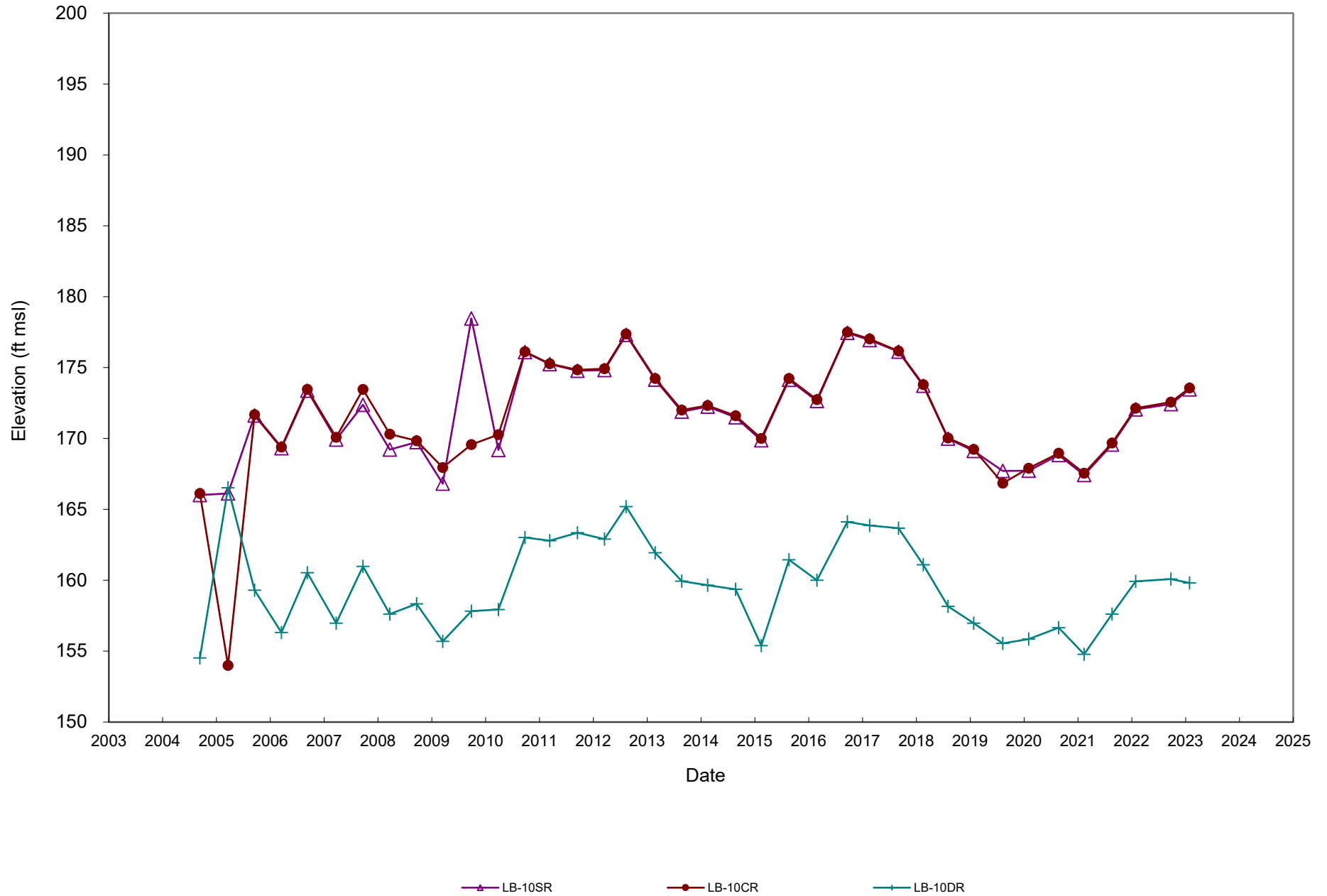
LB-6S Hydrograph Leichner Landfill



**LB-9s, and LB-9S(R) Hydrographs
Leichner Landfill**



LB-10SR, LB-10CR, and LB-10DR Hydrographs Leichner Landfill



LB-13I, LB-13C, and LB-13D Hydrographs Leichner Landfill



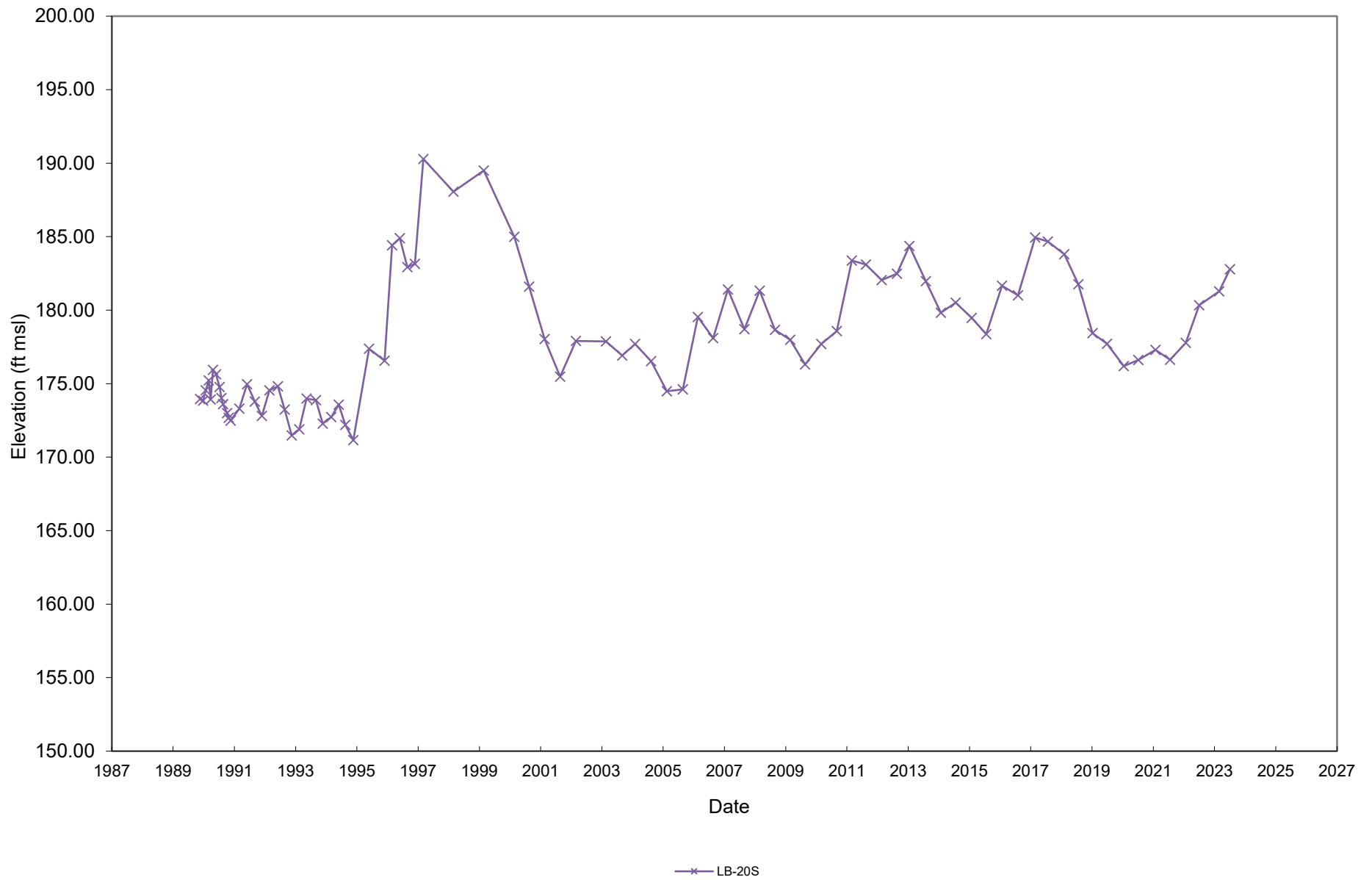
—+— LB-13I —◇— LB-13C —△— LB-13D

LB-17I and LB-17D Hydrographs Leichner Landfill



—■— LB-17I —+— LB-17D

LB-20S Hydrograph Leichner Landfill

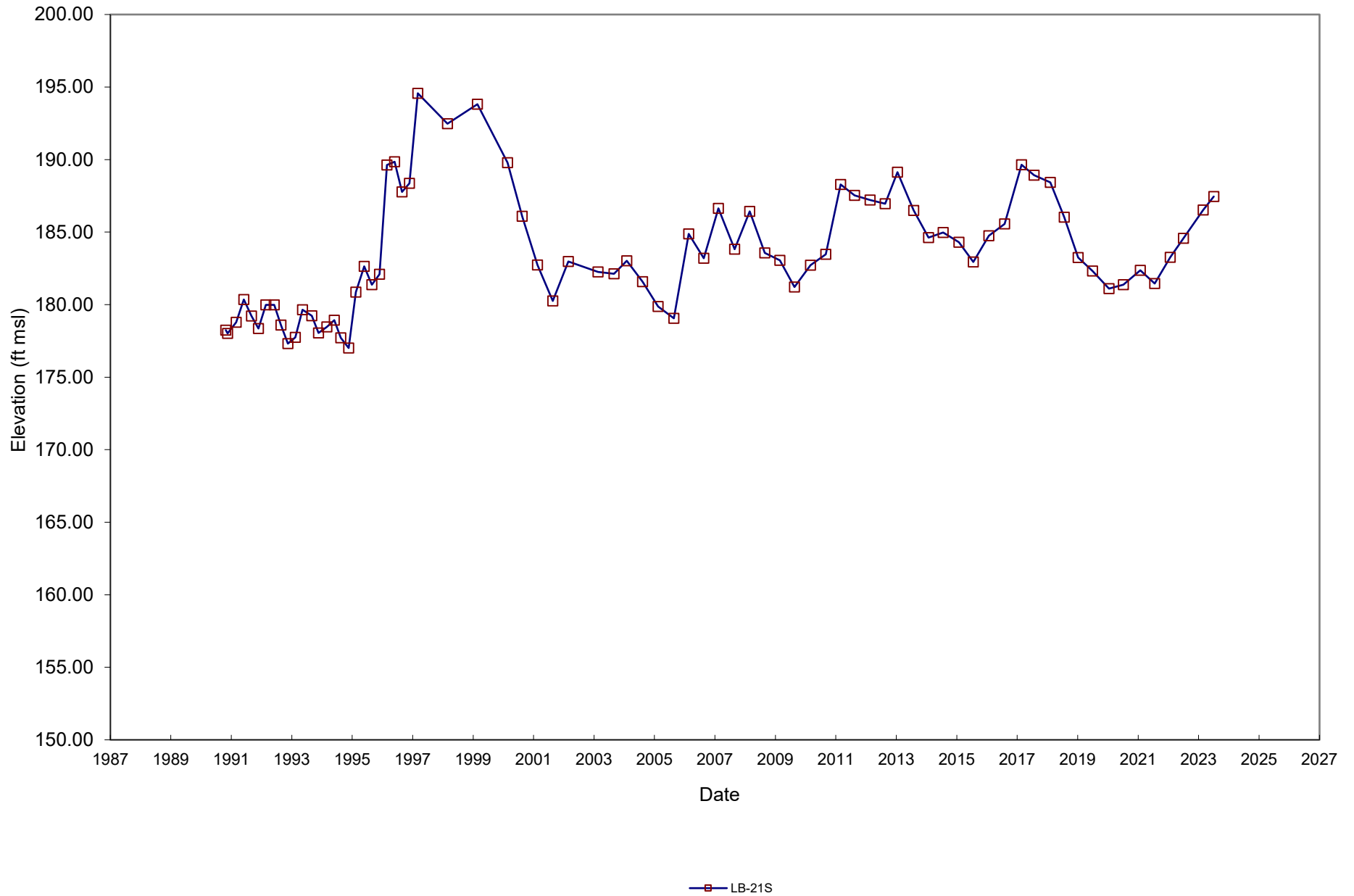


LB-21S, LB-21C, and LB-21D Hydrographs Leichner Landfill

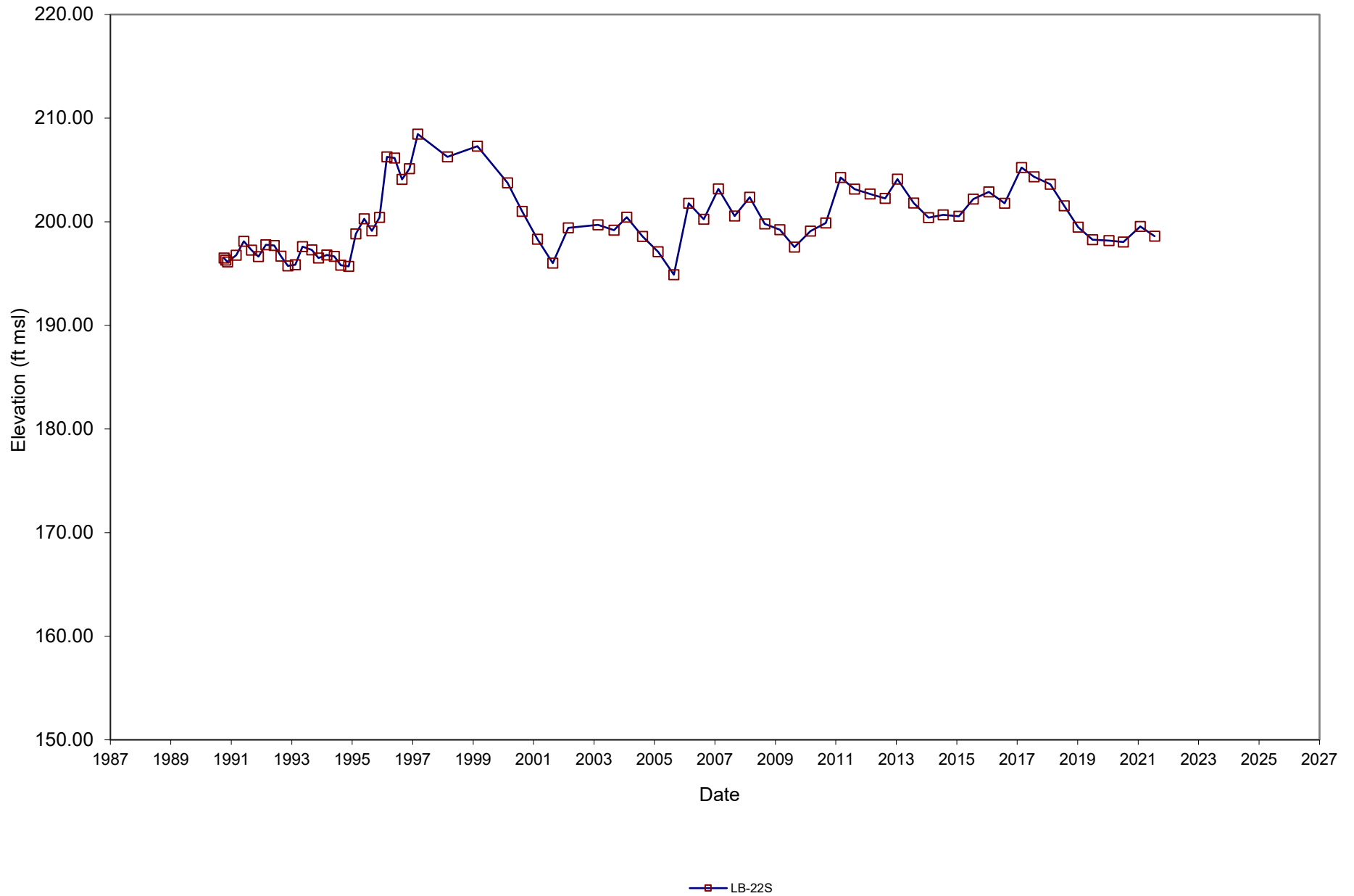


—■— LB-21S —▲— LB-21C —◆— LB-21D

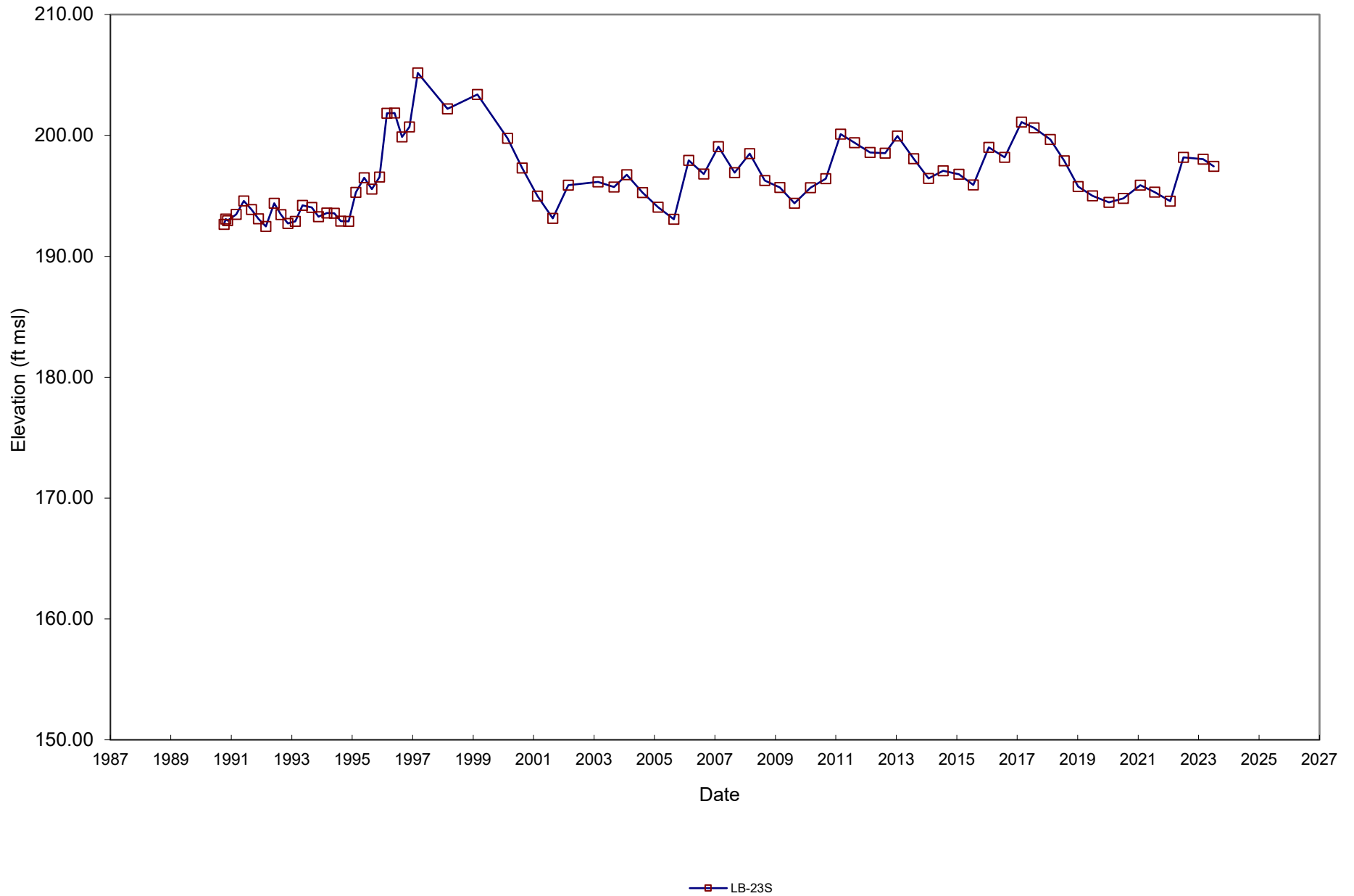
LB-21S Hydrograph Leichner Landfill



LB-22S Hydrograph Leichner Landfill



LB-23S Hydrograph Leichner Landfill

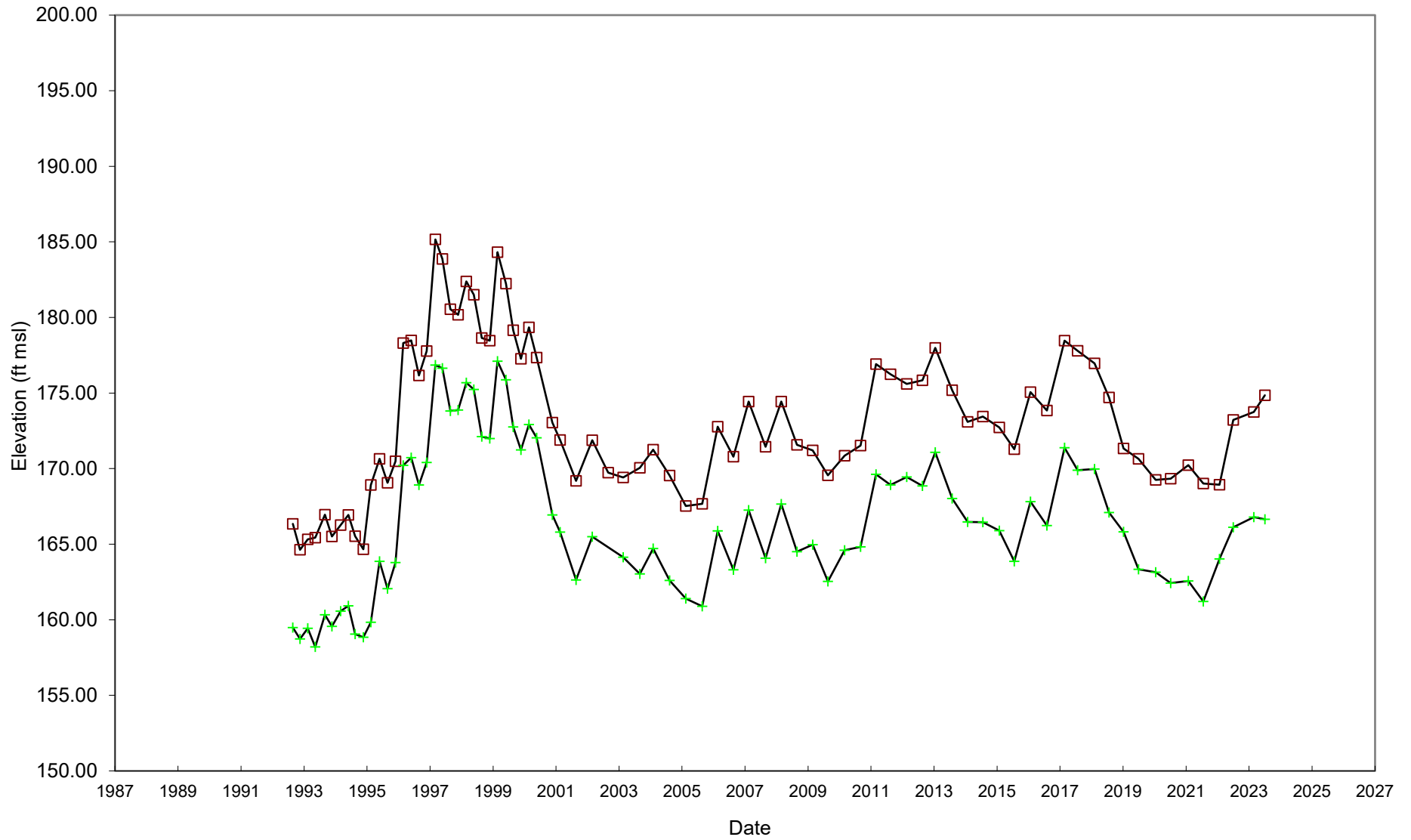


LB-26I and LB-26D Hydrographs Leichner Landfill



—■— LB-26I —+— LB-26D

LB-27I and LB-27D Hydrographs Leichner Landfill



—■— LB-27I —+— LB-27D

APPENDIX E

Quality Assurance/Quality Control Reviews of 2023 Laboratory Analytical Data

First Quarter (March) 2023 QA/QC Reviews

SCS Engineers QA/QC Review
Groundwater - 1Q 2023 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2303308

Samples: LB-032023-01-1D (LB-1D), LB-032023-01-1S (LB-1S), LB-032023-03-10DR (LB-10DR), LB-032023-04-FB1 (LB-10DR), LB-032023-05-10SR (LB-10SR), LB-032023-06-DUP1 (LB-10SR), LB-032023-07-3D (LB-3D), LB-032023-08-3S (LB-3S), LB-032023-09-6S (LB-6S), and TB1 (Trip Blank)

Sample Date: 03/20/2023
Laboratory Sample Received Date: 03/21/2023
Sample Receipt Temperature: 4.4°C
Laboratory Data Received Date: 03/31/2023
QA/QC Review Date: 04/12/2023 (BR)

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.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
MS	All spike recoveries were within control limits.
Replicate	All RPDs were within control limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
MS	All % recoveries were within control limits.
MSD	All RPDs were within control limits.
Replicate	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-032023-06-DUP1 (LB-10SR) was collected at monitoring well LB-10SR (LB-032023-05-10SR) on 3/21/2023. All calculated RPDs were within 20%.

Trip Blank

A laboratory supplied trip blank was carried into the field on 03/20/2023 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.

DOR

Notes

Method 8260C, 03/24/2023: Bromomethane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining

analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon final review of lab report K2303308 for Lechner Landfill, SCS Engineers finds the data are valid for their intended use (04/12/2023; BR).

SCS Engineers QA/QC Review
Groundwater - 1Q 2023 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2303351

Samples: LB-032123-09-5D (LB-5D), LB-032123-05-13I (LB-13I), LB-032123-07-13D (LB-13D), LB-032123-11-17I (LB-17I), LB-032123-10-17D (LB-17D), LB-032123-01-20S (LB-20S), LB-032123-02-FB1 (LB-20S), LB-032123-08-26D (LB-26D), LB-032123-03-27I (LB-27I), LB-032123-04-DUP1 (LB-27I), LB-032123-06-27D (LB-27D), and TB2 (Trip Blank).

Sample Date: 03/21/2023
Laboratory Sample Received Date: 03/22/2023
Sample Receipt Temperature: 2.8°C
Laboratory Data Received Date: 03/31/2023
QA/QC Review Date: 04/12/2023 (BR)

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.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
MS	All spike recoveries were within control limits.
Replicate	All RPDs were within control limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
MS	All % recoveries were within control limits.
MSD	All RPDs were within control limits.
Replicate	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-032123-04-DUP1 (LB-27I) was collected at monitoring well LB-27I (LB-032123-03-27I) on 3/21/2023. All calculated RPDs were within 20%.

Trip Blank

A laboratory supplied trip blank was carried into the field on 03/21/2023 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.

DQR

Notes

Method 8260C, 03/24/2023: Bromomethane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes

must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8260C, 03/23/2023:Bromomethane was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon final review of lab report K2303351 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/12/2023; BR).

**SCS Engineers QA/QC Review
Groundwater - 1Q 2023 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2303354**

Samples: LB-032223-01-5S (LB-5S), LB-032223-02-17D (LB-26I) and TB3 (Trip Blank).

Sample Date: 03/22/2023

Laboratory Sample Received Date: 03/22/2023

Sample Receipt Temperature: 1.8°C

Laboratory Data Received Date: 03/31/2023

QA/QC Review Date: 04/11/2023 (BR)

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.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits..

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries 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 (TB3) was carried into the field on 03/22/2023 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.

DQR

Notes

Method 8260C, 03/24/2023: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Data Validation

Upon review of preliminary lab report K2303354 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/11/2023; BR).

Third Quarter (July) 2023 QA/QC Reviews

**SCS Engineers QA/QC Review
Groundwater - 3Q 2023 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2308409**

Samples: LB-5S (LB-072523-01-5S), LB-13I (LB-072523-03-13I), LB-26I (LB-072523-04-26I), FB (LB-072523-05-FB), LB-27I (LB-072523-02-27I), and TB1 (Trip Blank).

Sample Date: 07/25/2023

Laboratory Sample Received Date: 07/26/2023

Sample Receipt Temperature: 2.1°C

Laboratory Data Received Date: 08/11/2023

QA/QC Review Date: 08/14/2023 (BR)

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 in batch KQ2312963 (* flags). This is noted and qualified for in the case narrative
LCSD	All RPDs were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries 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 (TB1) was carried into the field on 07/25/2023 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.

DOR

None.

Notes

Method 8260C, 07/28/2023: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8260C, 07/28/2023: The upper control criterion was exceeded for Acetone in Continuing Calibration Verification (CCV) KQ2313963-02, Laboratory Control Sample (LCS) KQ2313963-03 and Duplicate Laboratory Control Sample (DLCS) KQ2313963-04. The field samples did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Data Validation

Upon preliminary review of lab report K2308409 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (08/14/2023;BR).

**SCS Engineers QA/QC Review
Groundwater - 3Q 2023 Groundwater Monitoring Event
Leichner Brothers Landfill
ALS Environmental Lab Report No. K2308455**

Samples: LB-1S (LB-072623-02-1S), LB-6S (LB-072623-01-6S), LB-10SR (LB-072623-03-10SR), DUP (LB072623-04-DUP), and TB2 (Trip Blank).

Sample Date: 07/26/2023

Laboratory Sample Received Date: 07/27/2023

Sample Receipt Temperature: 1.1°C

Laboratory Data Received Date: 08/14/2023

QA/QC Review Date: 08/16/2023 (BR)

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 bromomethane in batch KQ2314044 (* flags). These are noted and qualified for in the case narrative
LCSD	All RPDs were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries 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 (TB2) was carried into the field on 07/26/2023 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.

DOR

None.

Notes

Method 8260C, 08/02/2023: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria, other than Acetone. In accordance with ALS standard operating procedures, a Method Reporting Limit (MRL) check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verified 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 compound was not detected in the field sample, the data quality was not significantly affected. No further corrective action was required.

Method 8260C, 08/02/2023: The advisory criterion was exceeded for Acetone and Bromomethane in replicate Laboratory Control Sample (LCS/DLCS) KQ2314044-03\04. 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.

Data Validation

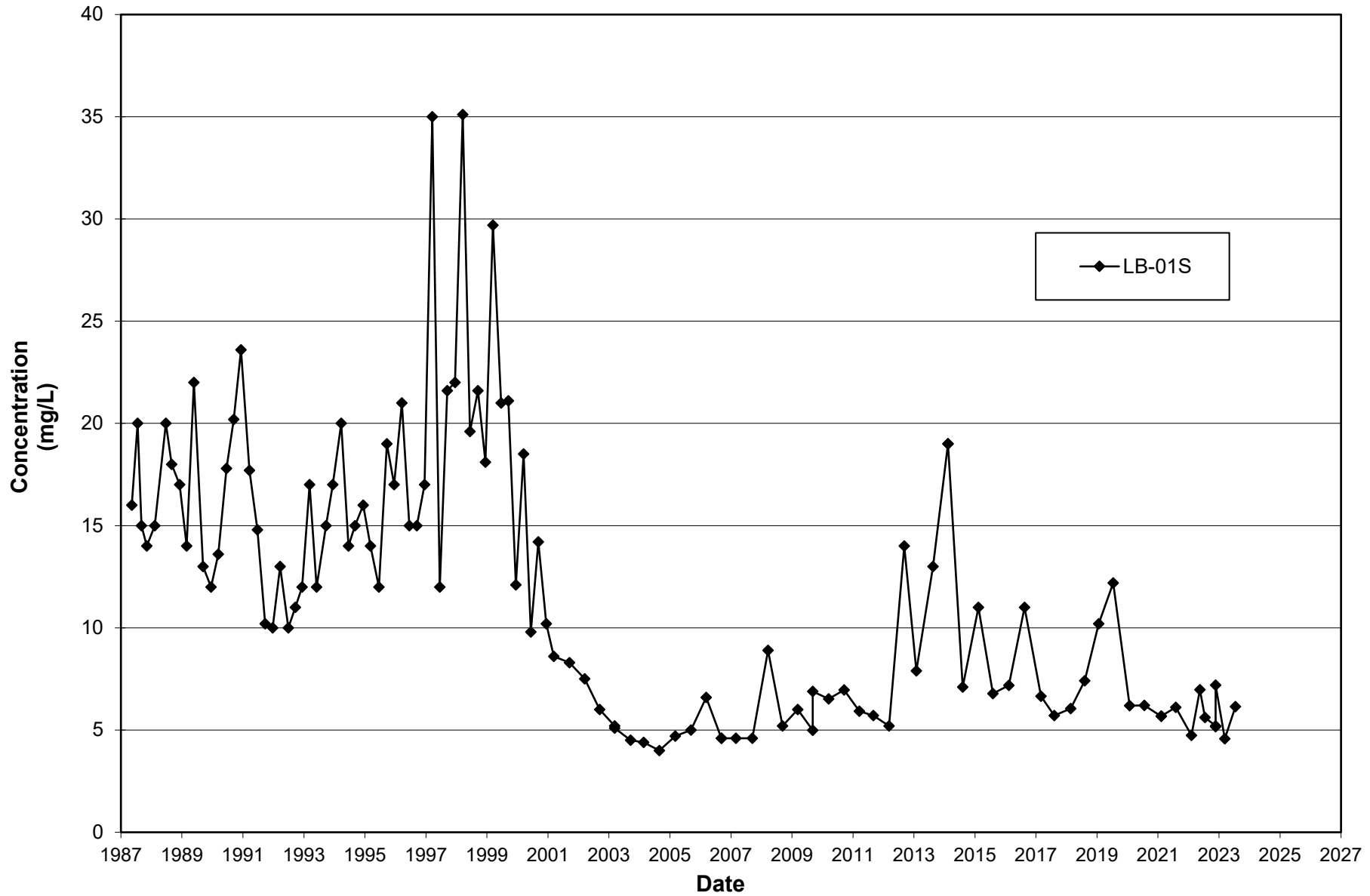
Upon preliminary review of lab report K2308455 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (08/16/2023;BR).

APPENDIX F

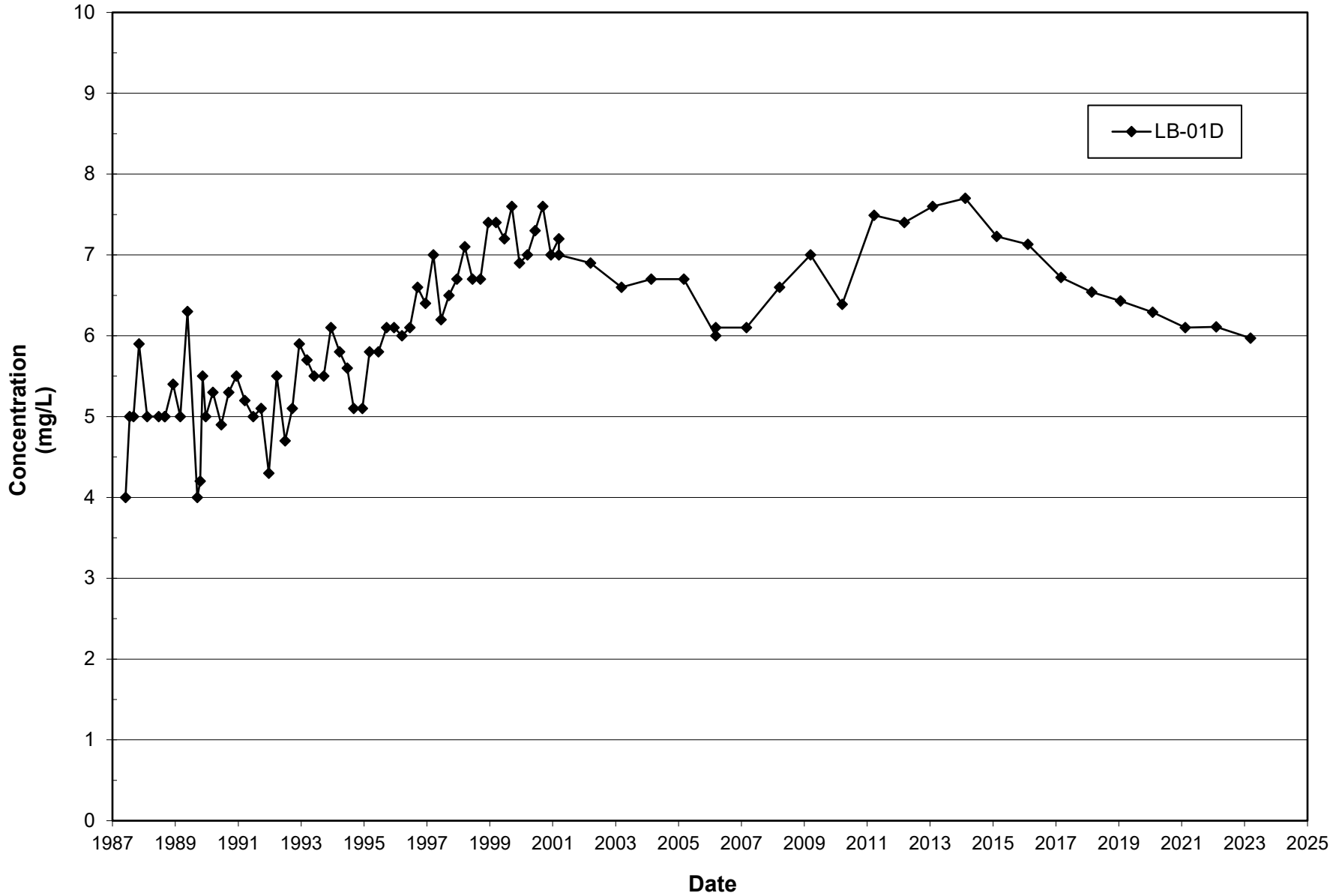
Groundwater Time-Concentration Graphs

Chloride

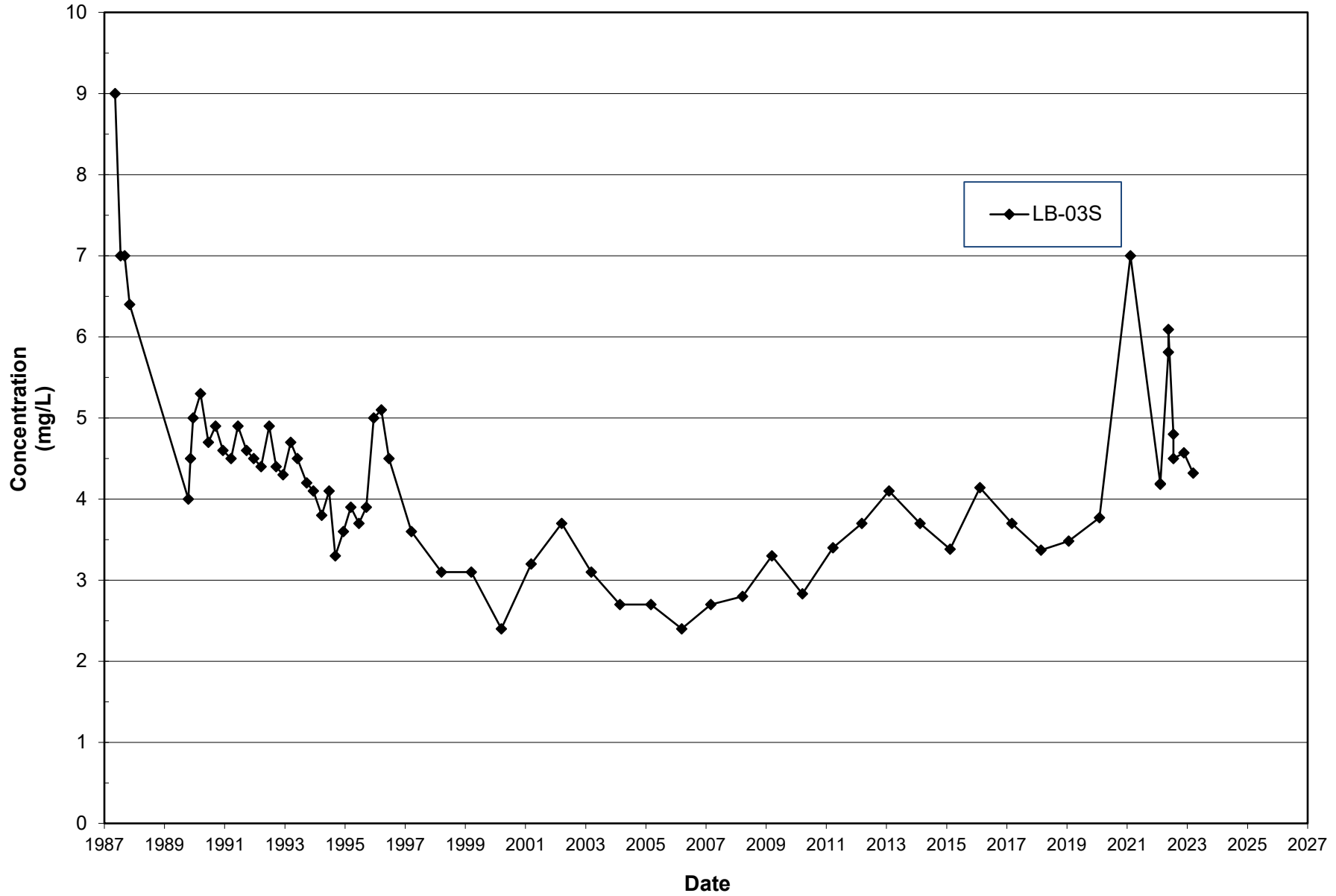
Leichner Landfill
Chloride, LB-01S
1987 - 2023



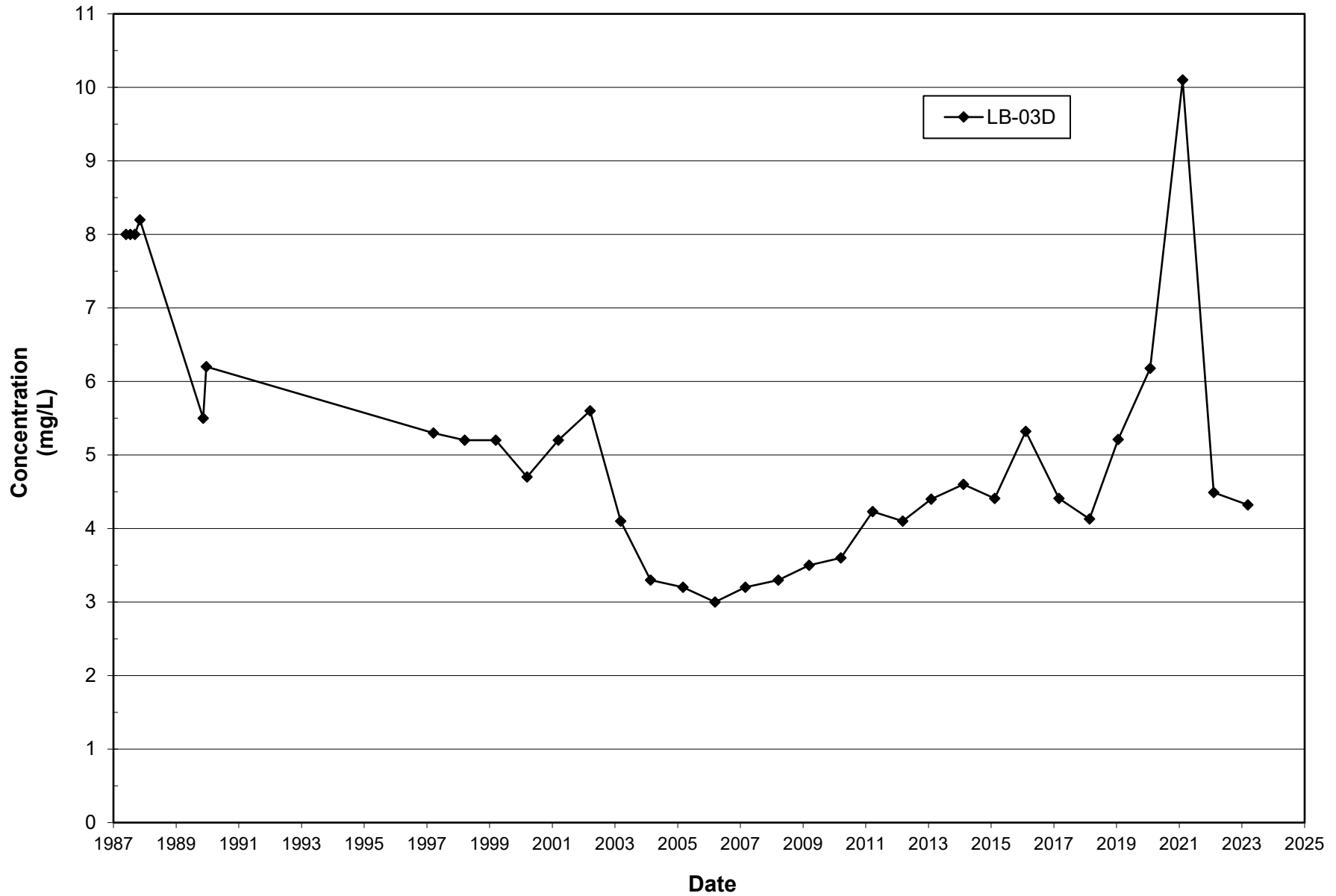
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1987 - 2023



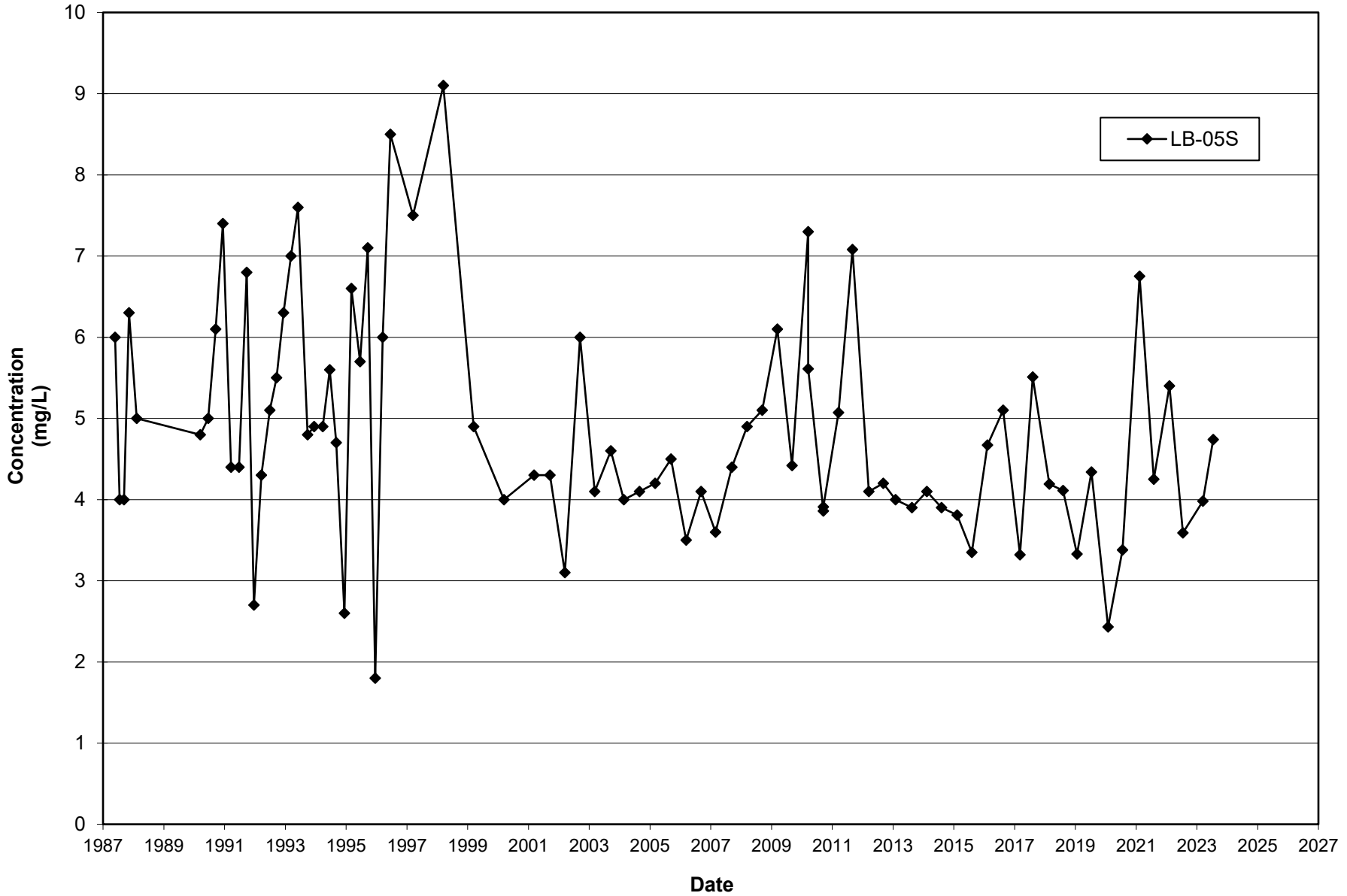
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1987 - 2023



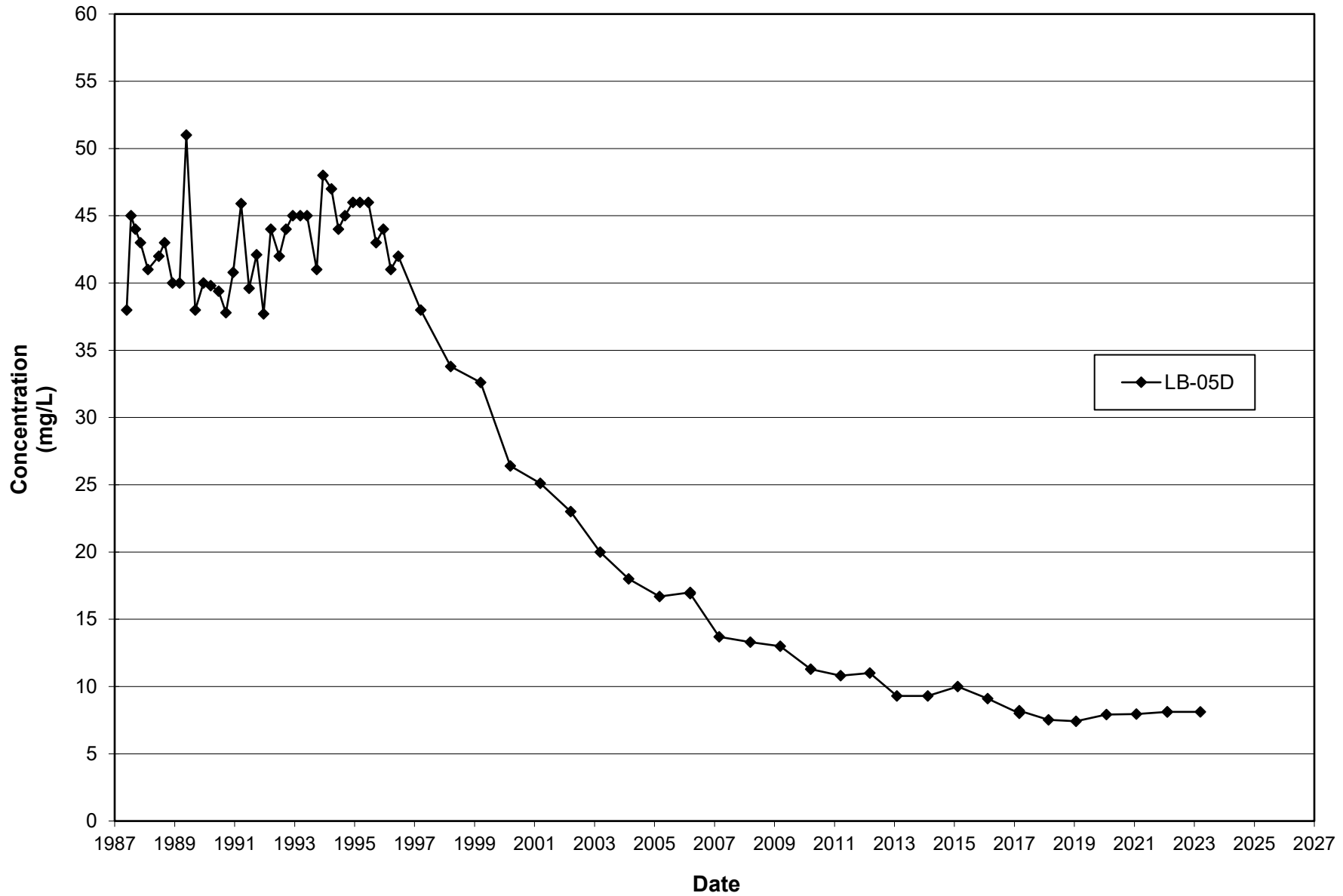
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1987 - 2023



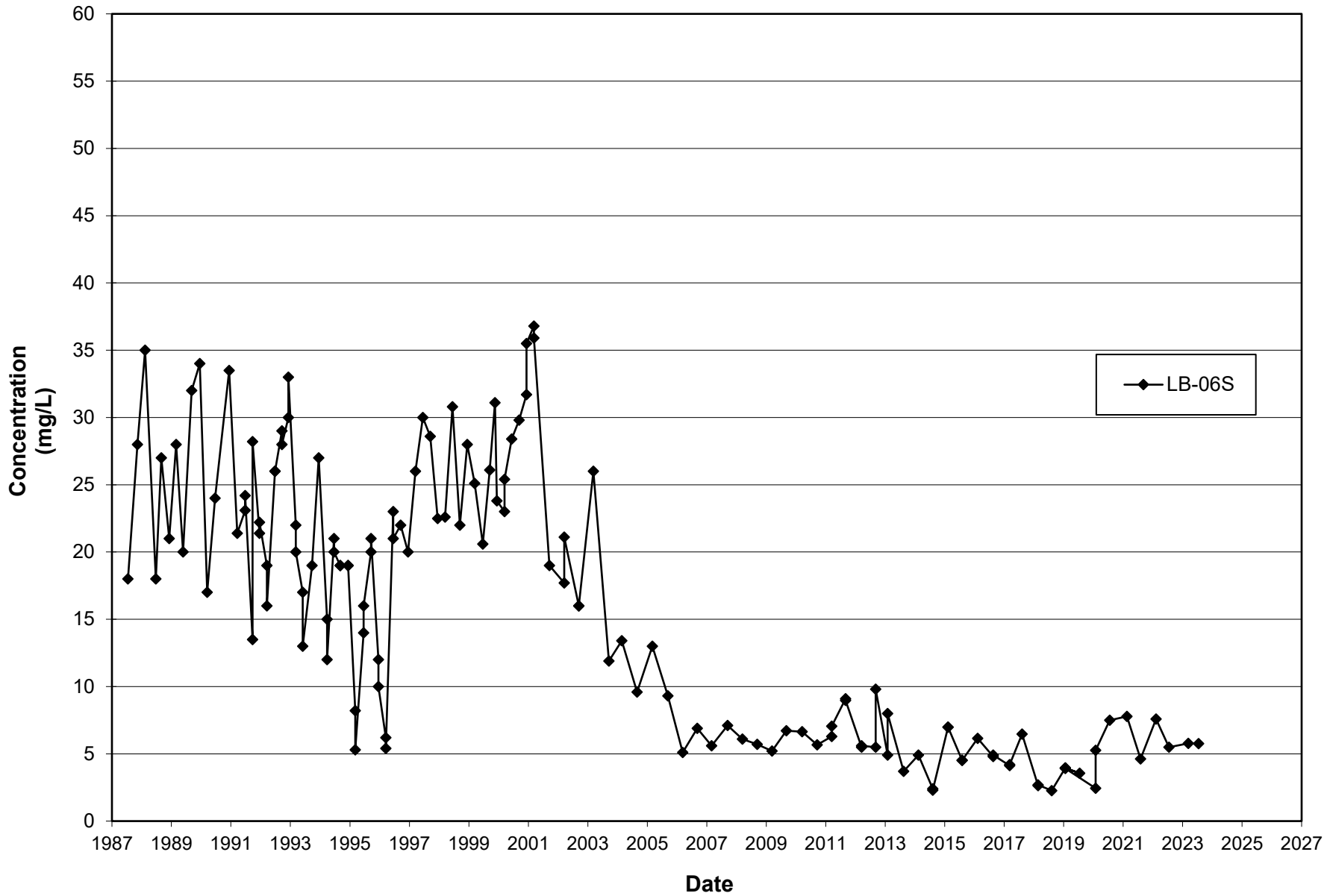
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1987 - 2023



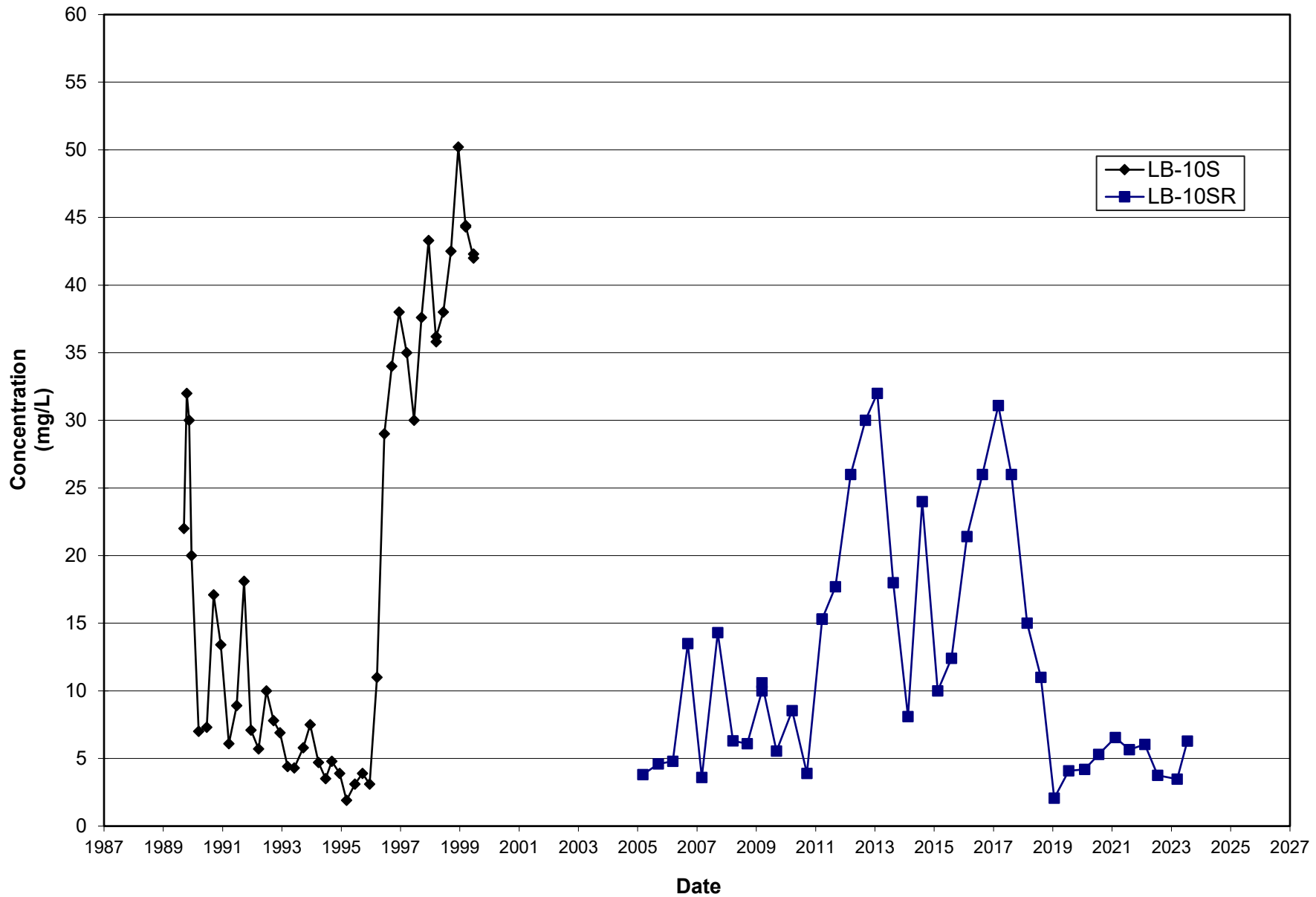
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1987 - 2023



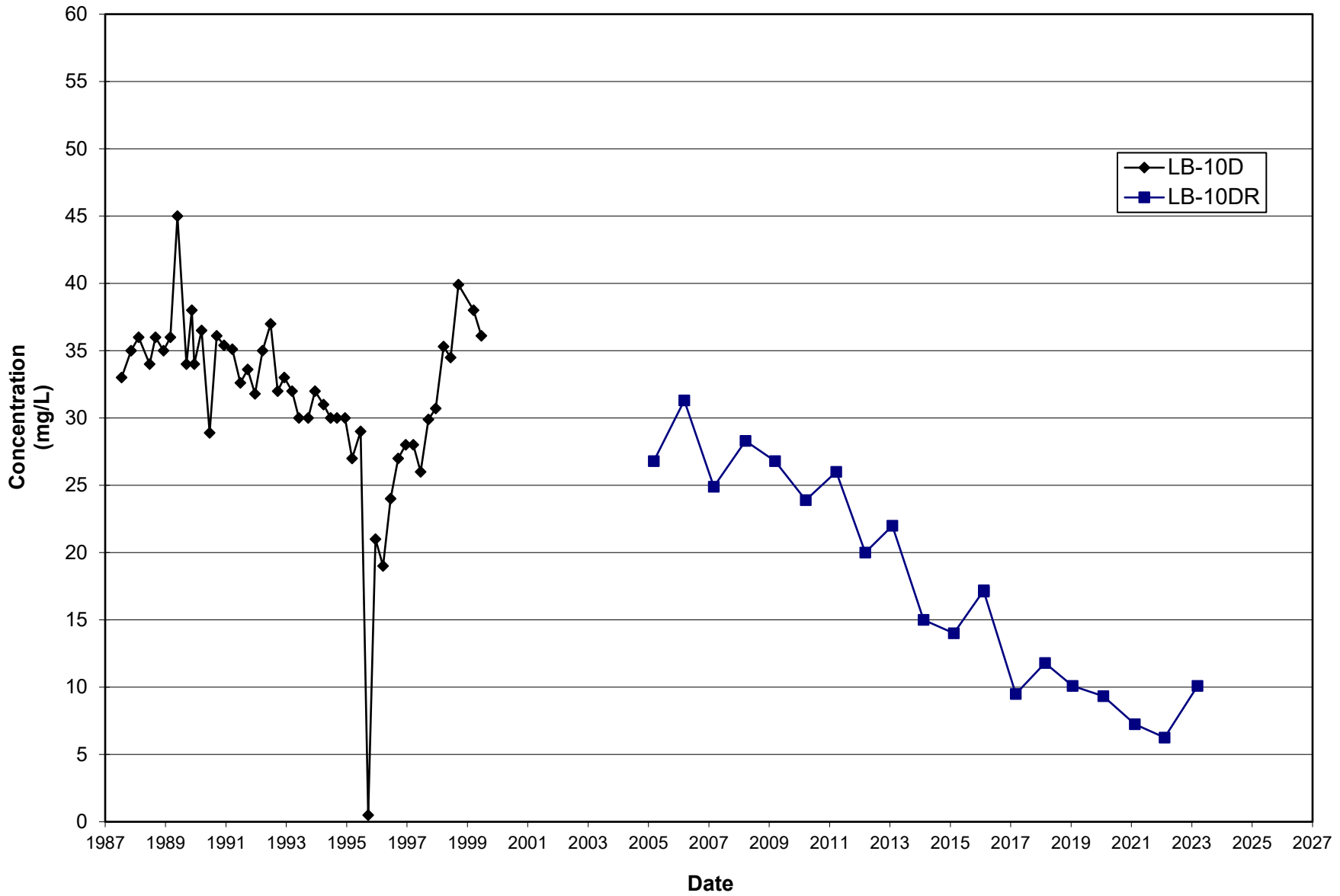
Leichner Landfill
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1987 - 2023



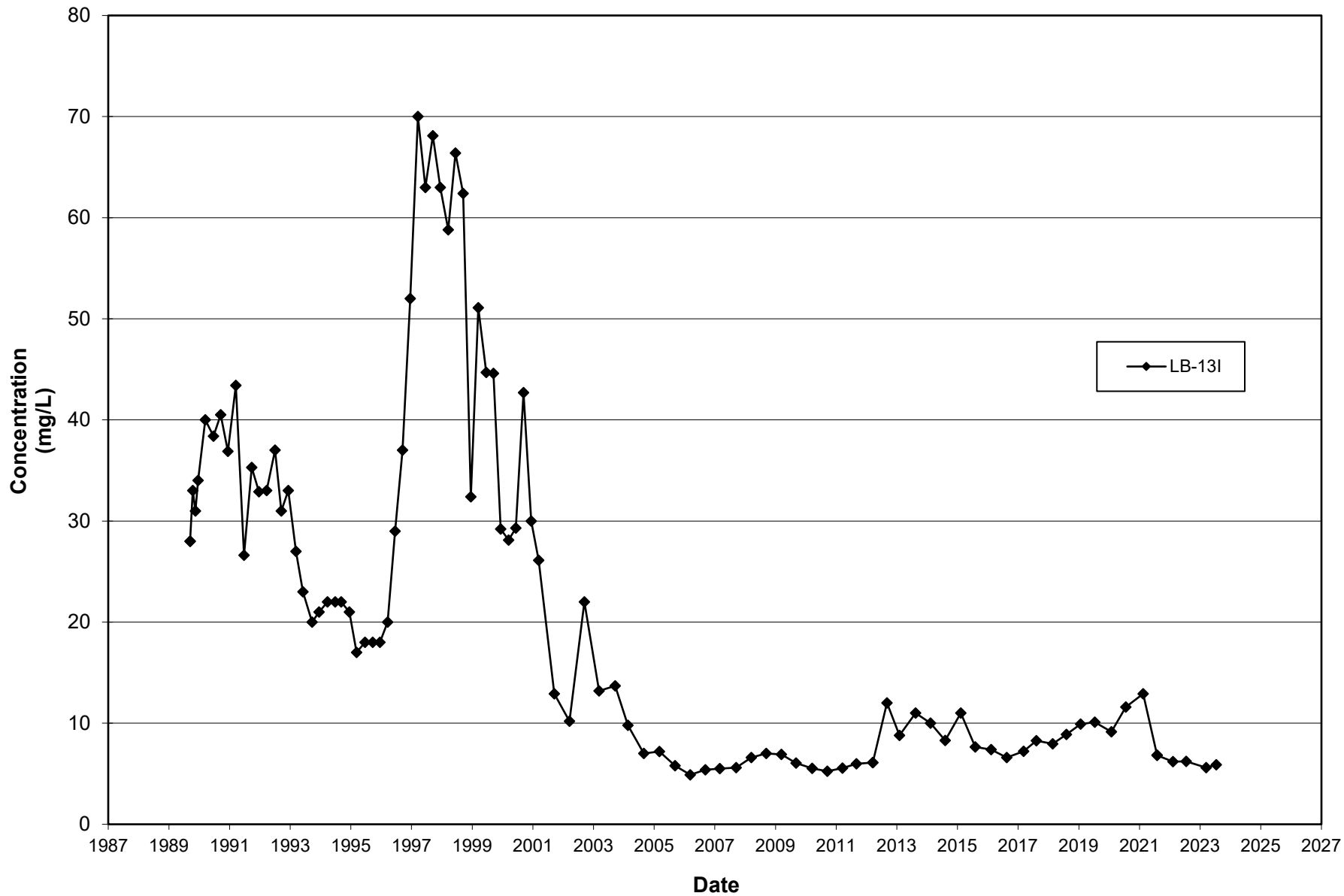
Leichner Landfill
Chloride, LB-10S and LB-10SR
1987 - 2023



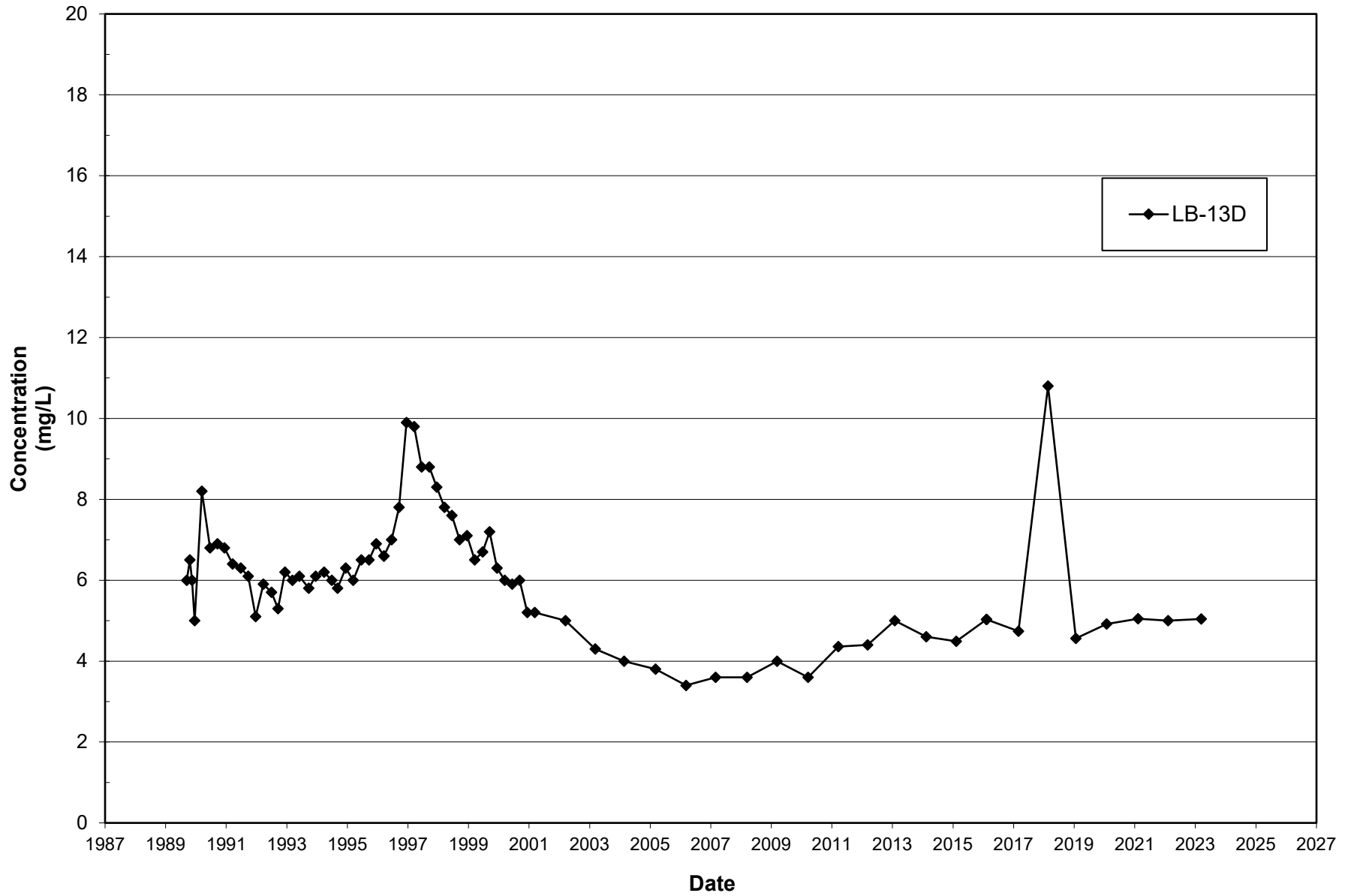
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1987 - 2023



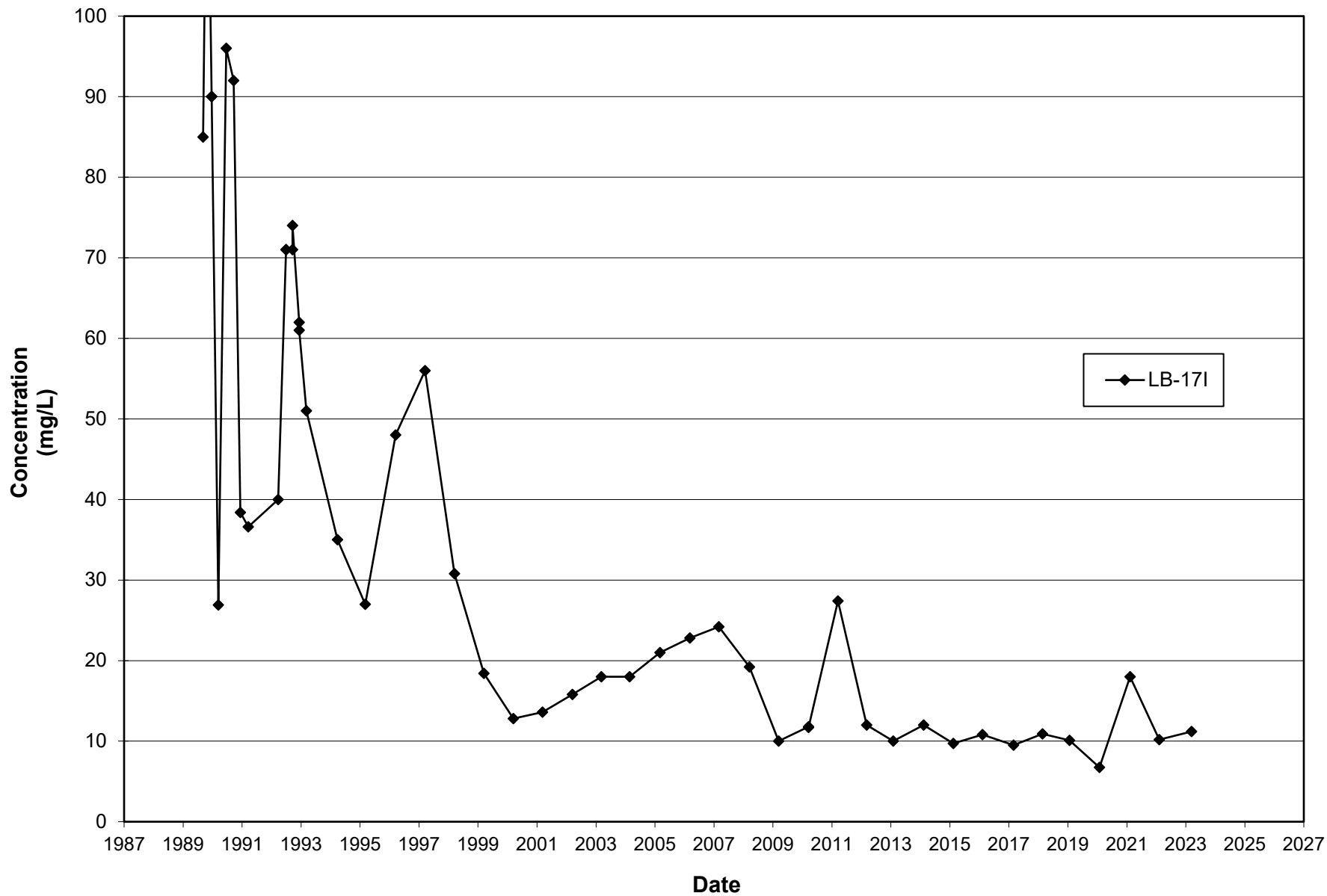
Leichner Landfill
Chloride, LB-13I
1987 - 2023



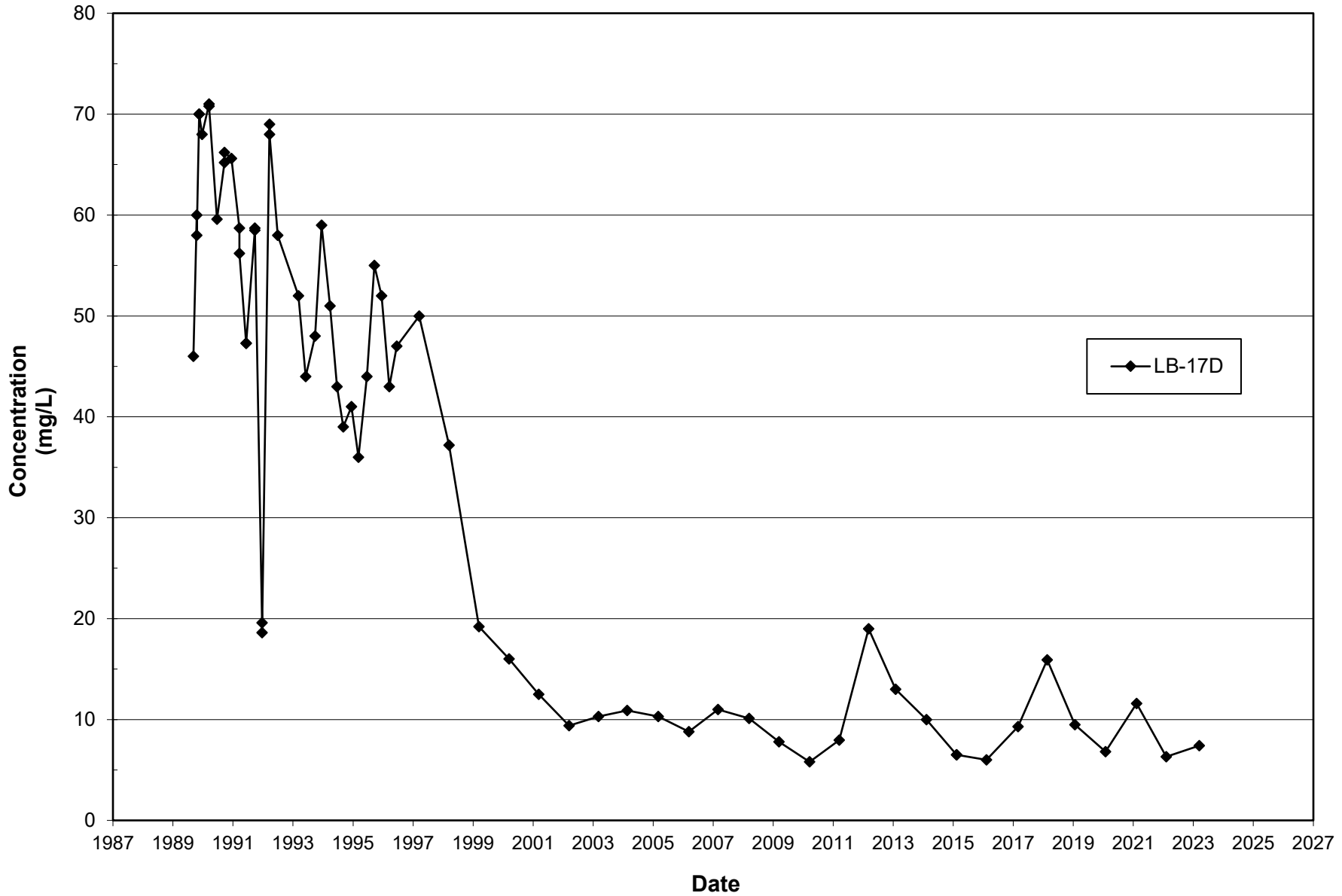
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Chloride, LB-13D
1987 - 2023



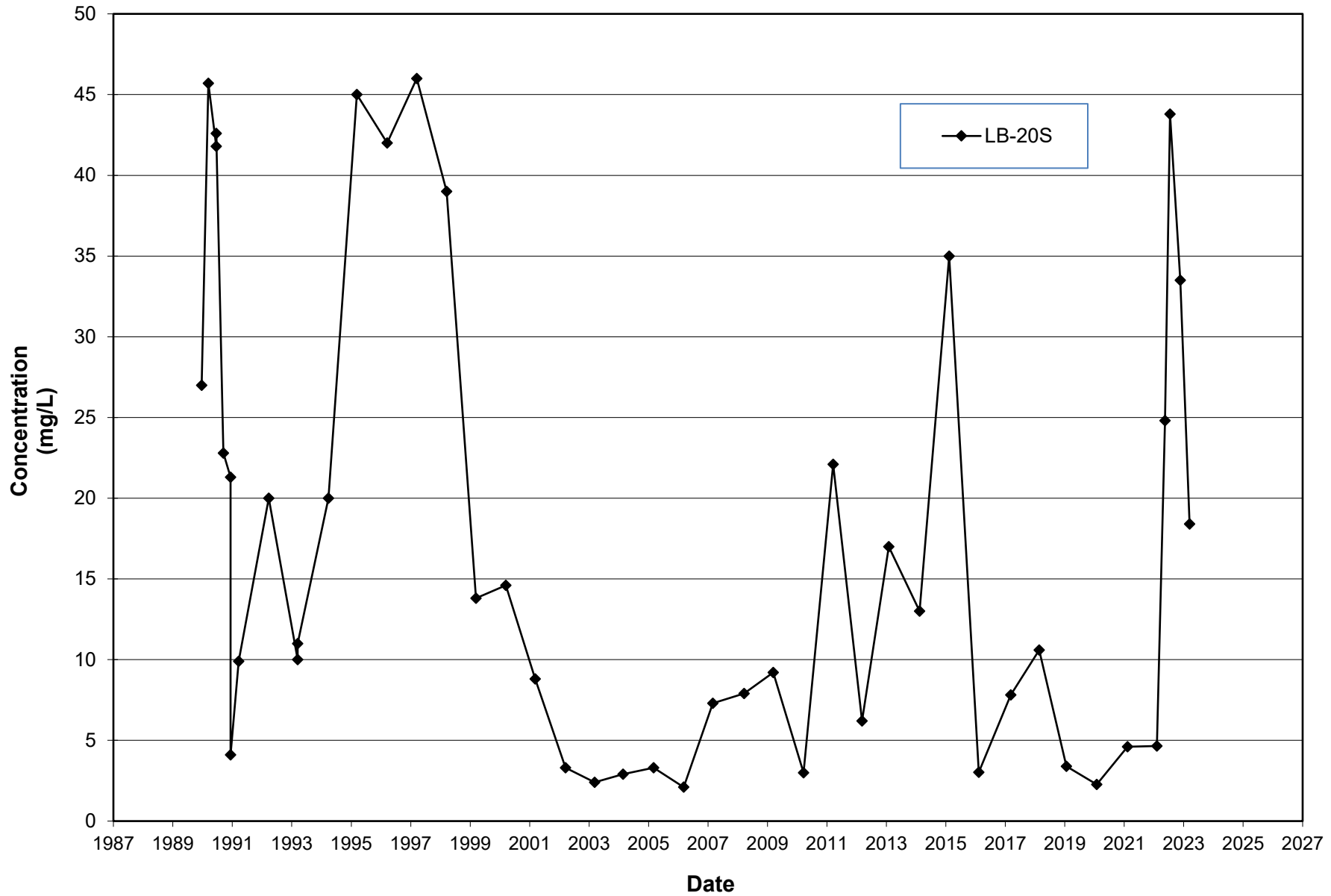
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Chloride, LB-17I
1987 - 2023



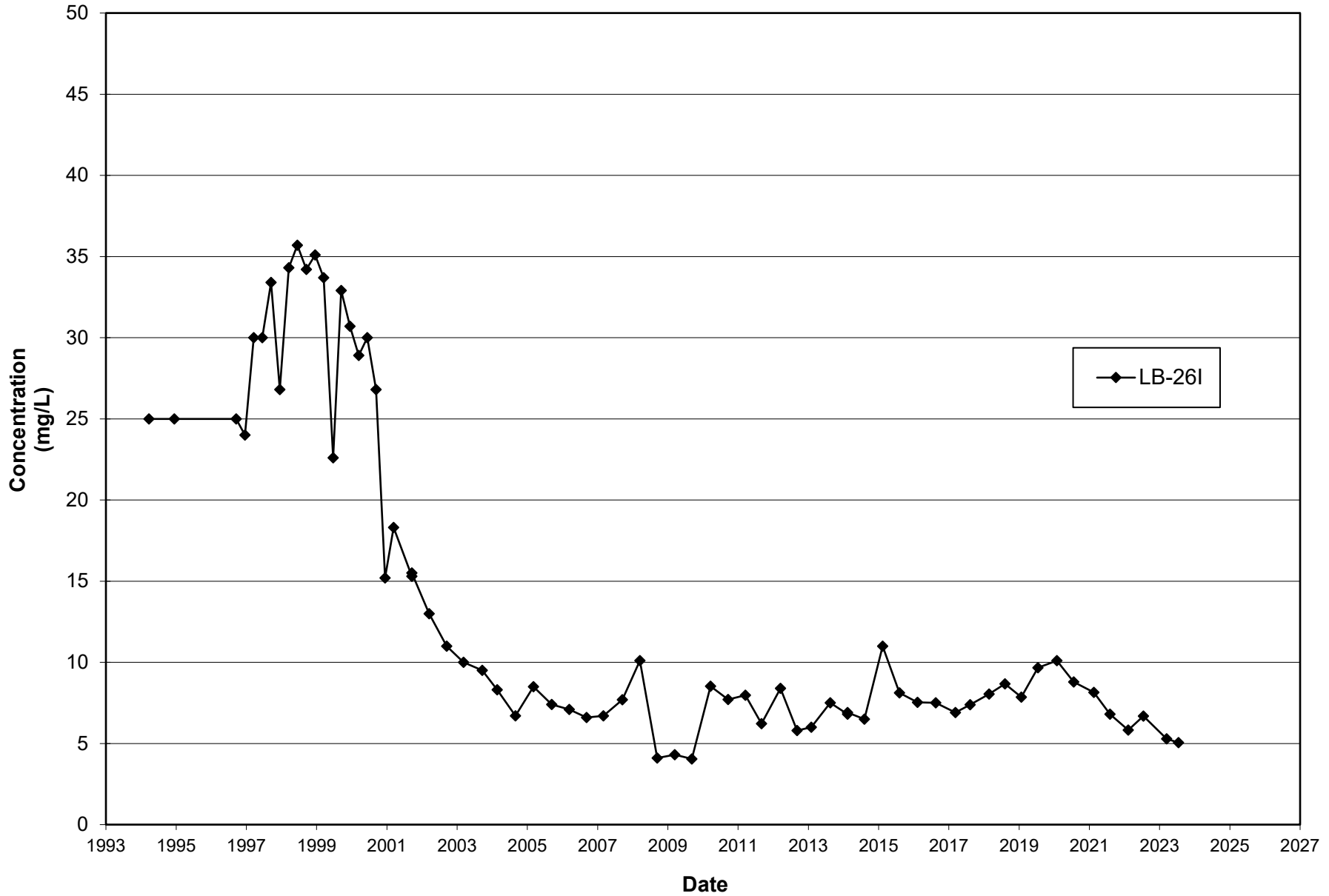
Leichner Landfill
Chloride, LB-17D
1987 - 2023



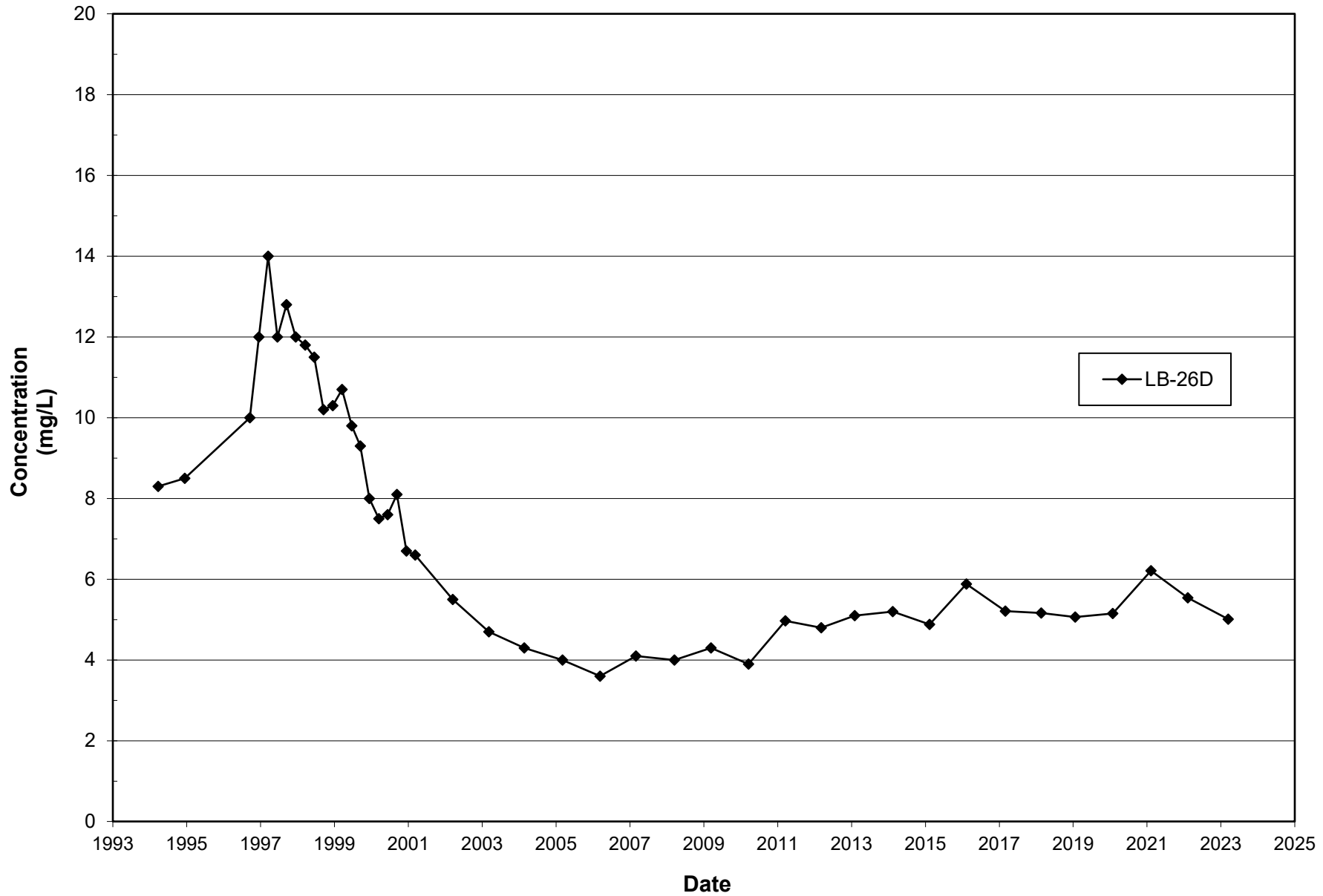
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Chloride, LB-20S
1987 - 2023



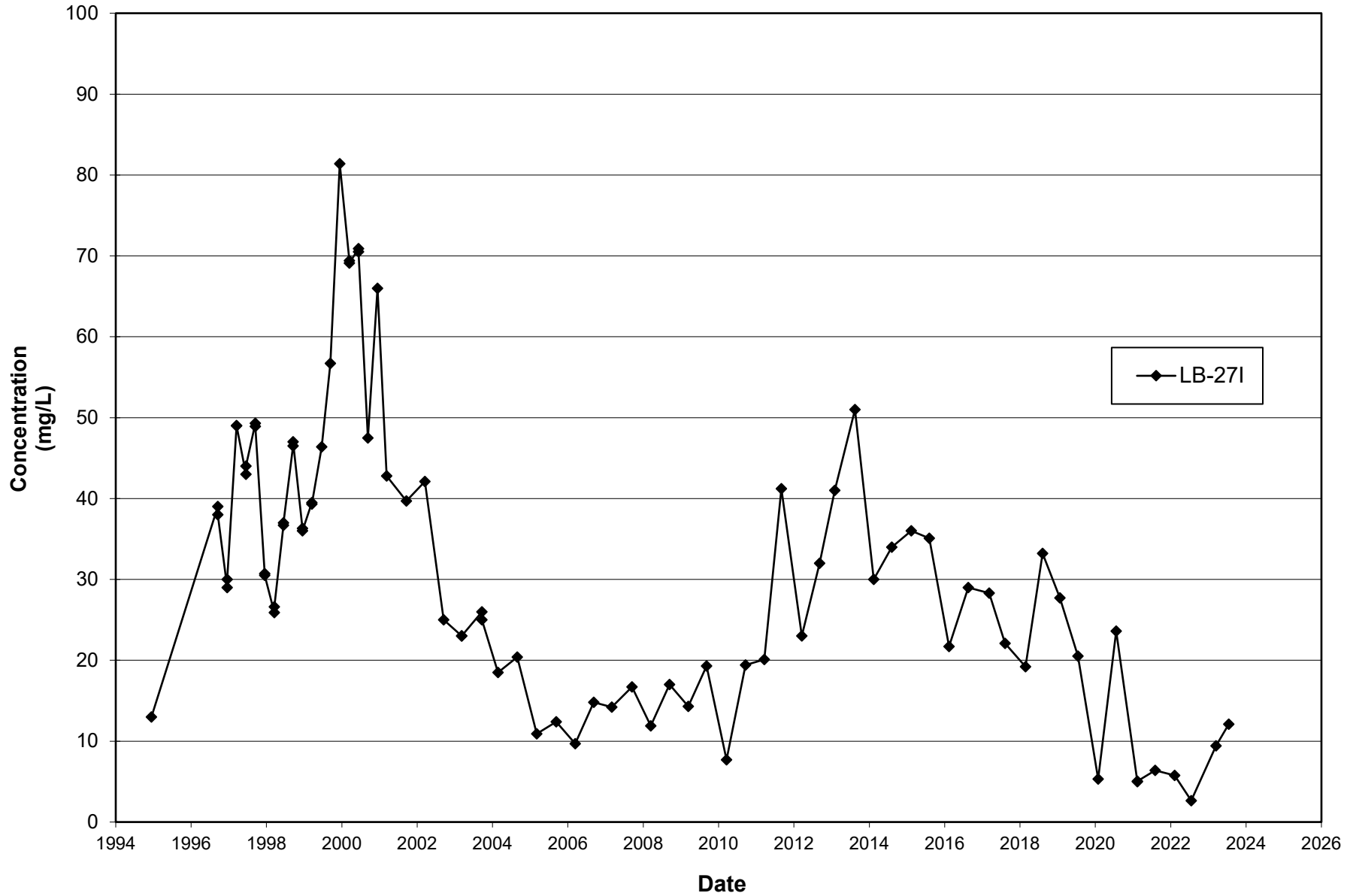
Leichner Landfill
Chloride, LB-26I
1987 - 2023



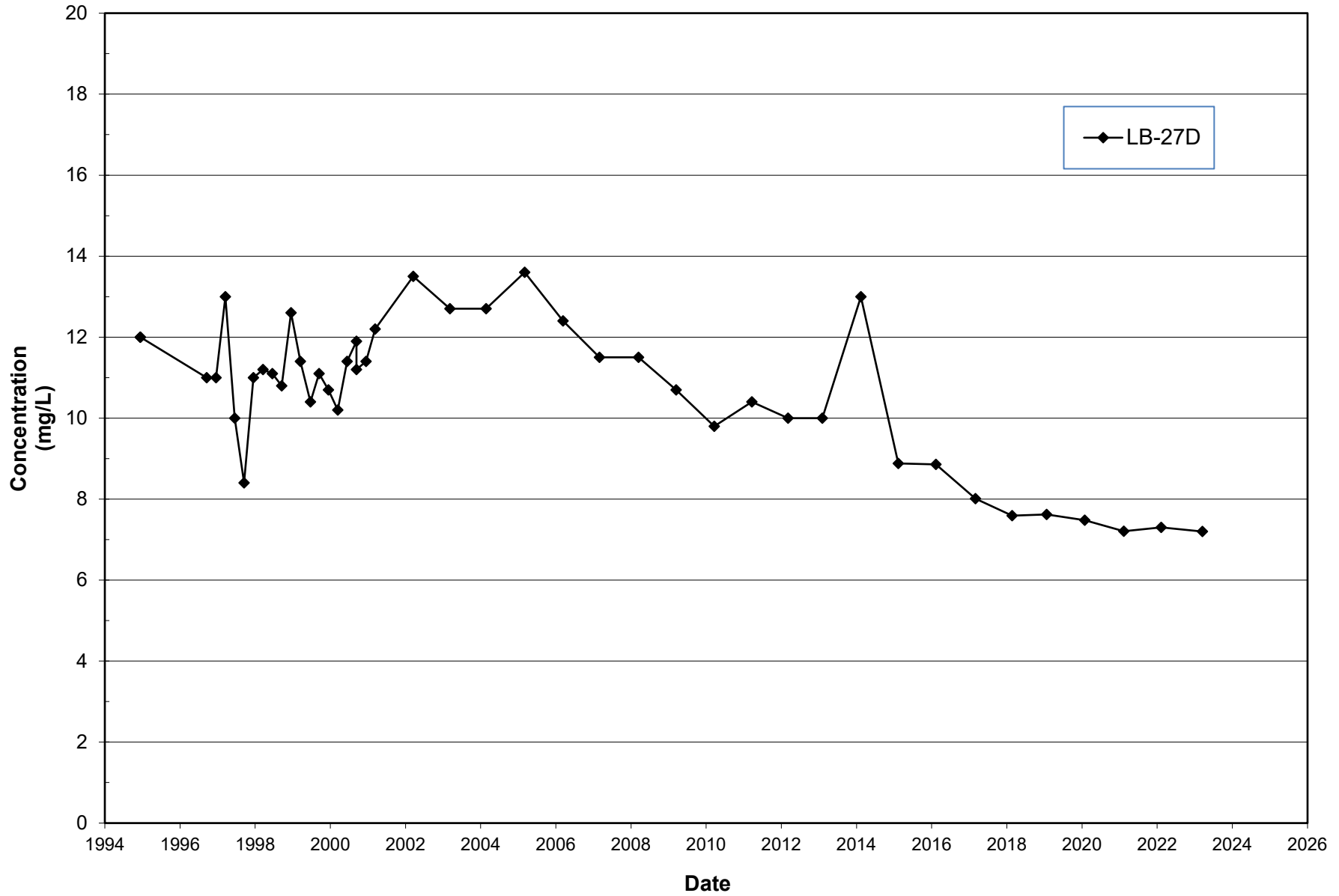
Leichner Landfill
Chloride, LB-26D
1987 - 2023



Leichner Landfill
Chloride, LB-27I
1987 - 2023

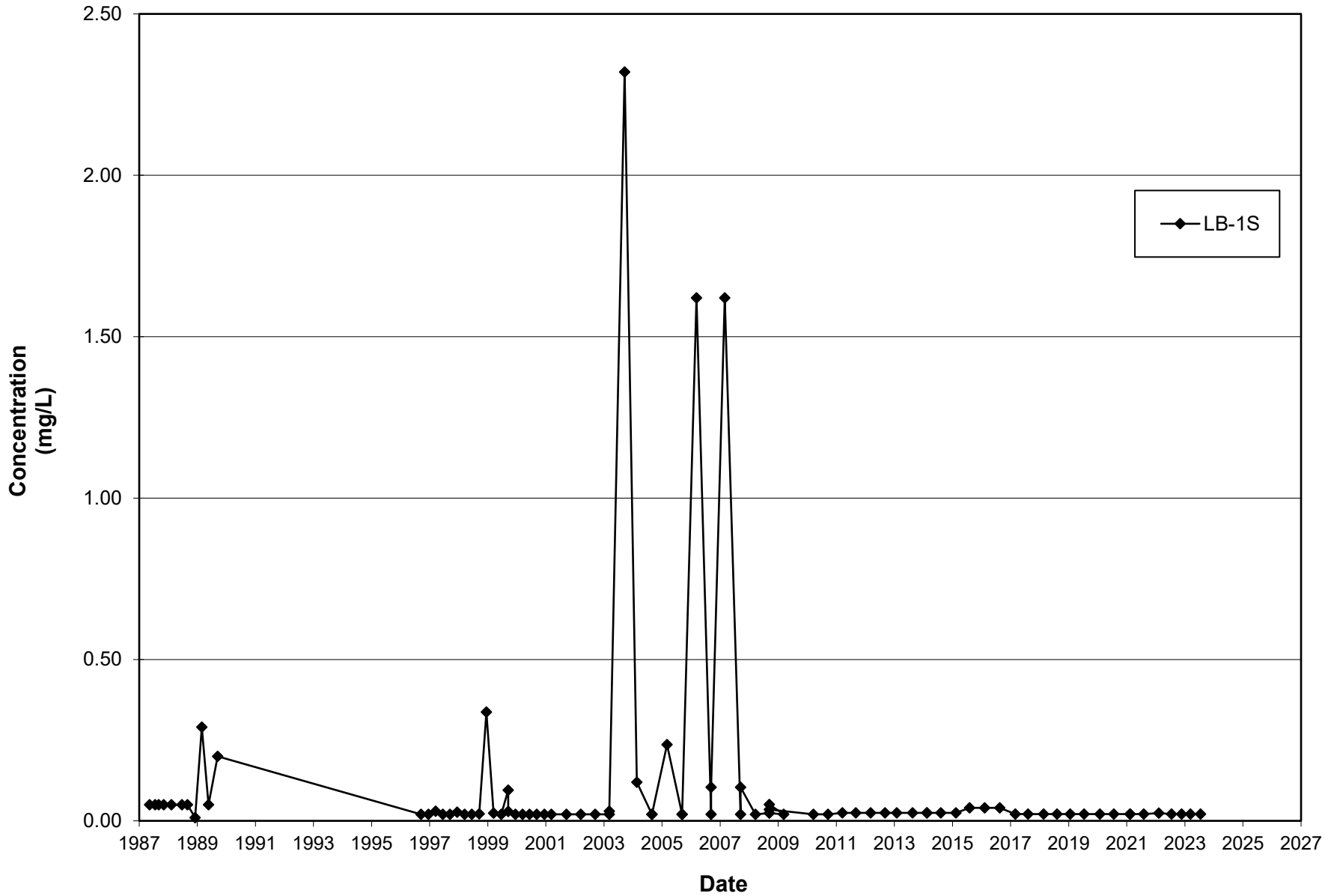


Leichner Landfill
Chloride, LB-27D
1987 - 2023

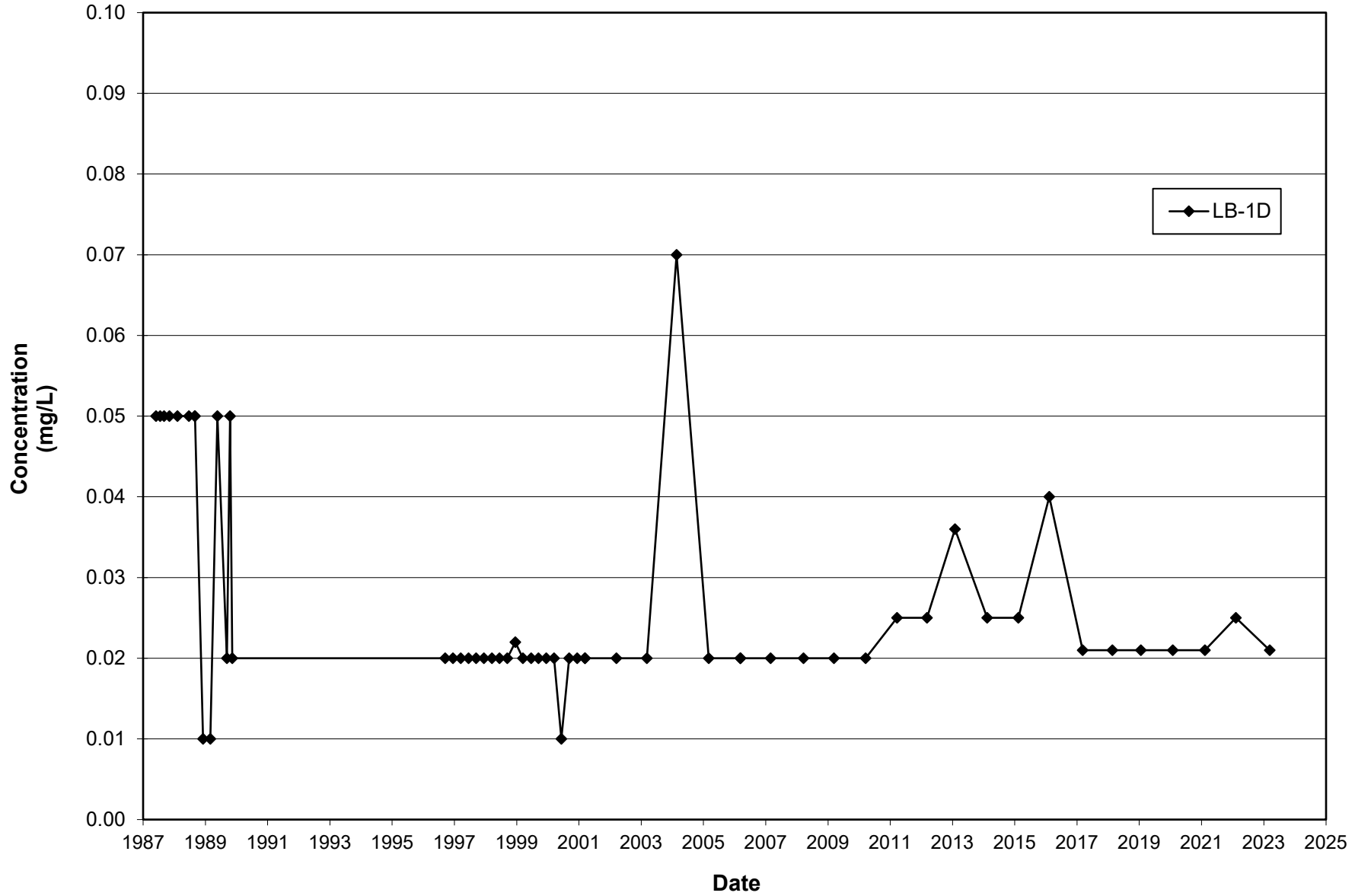


Dissolved Iron

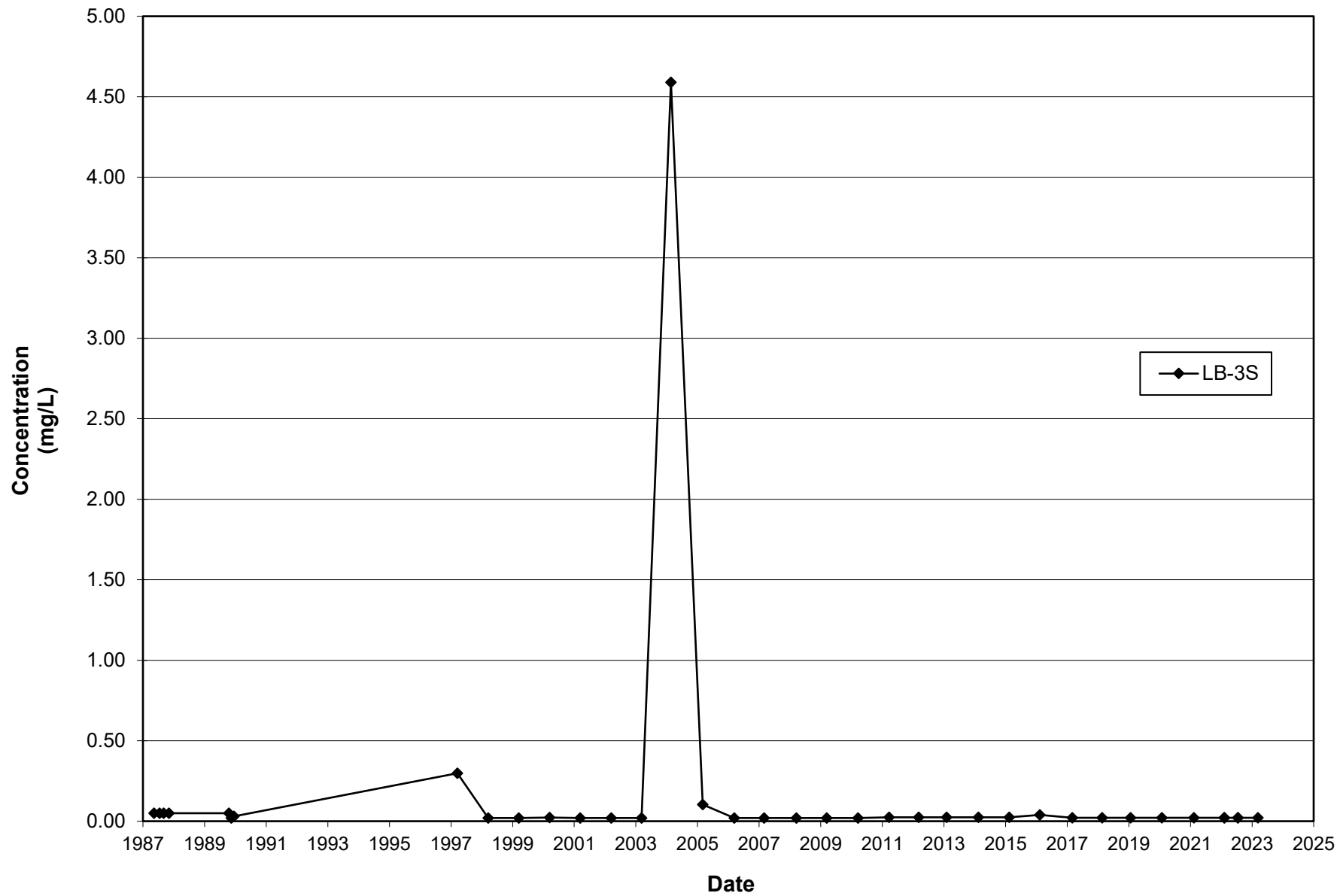
Leichner Landfill
Dissolved Iron, LB-01S
1987 - 2023



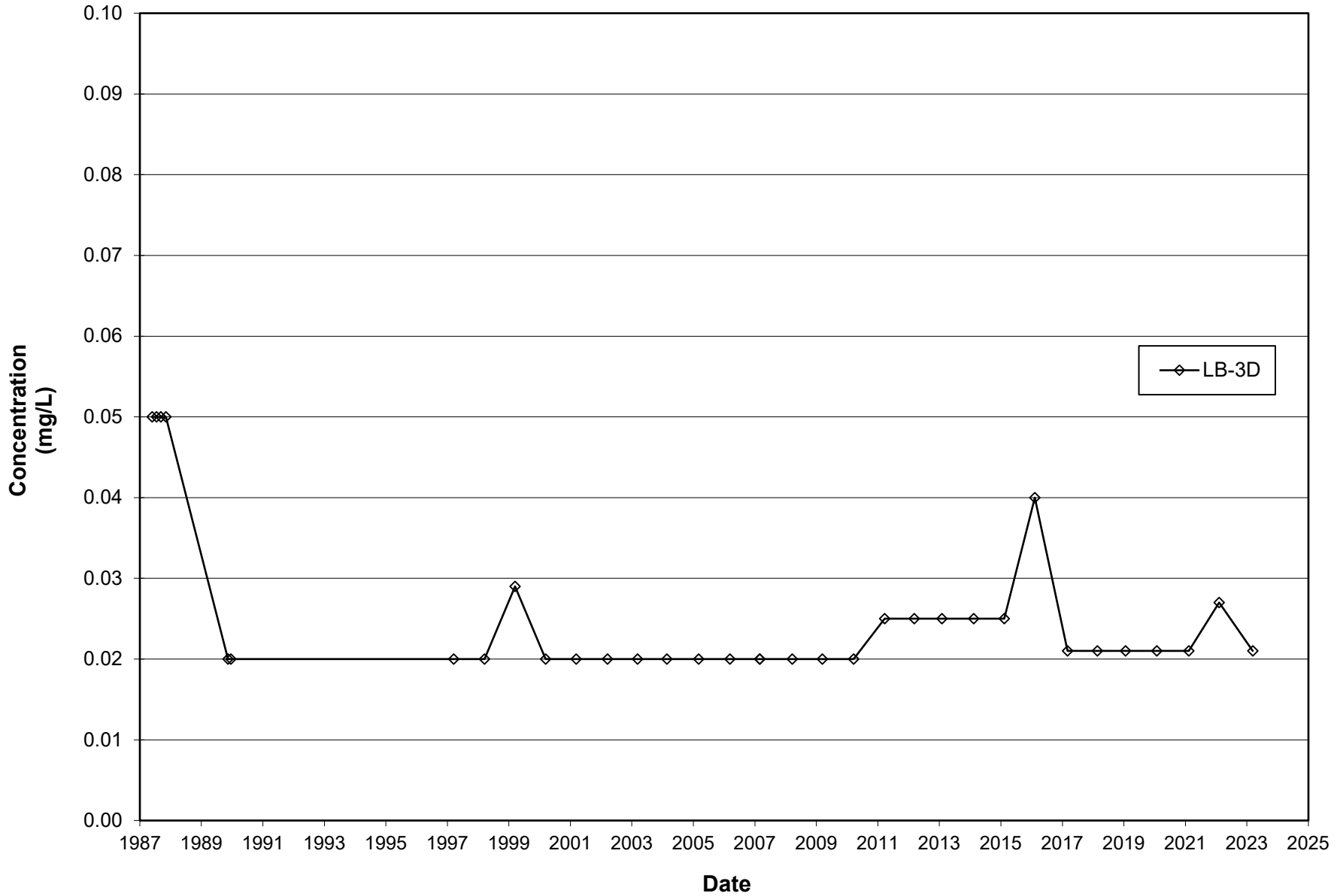
Leichner Landfill
Dissolved Iron, LB-01D
1987 - 2023



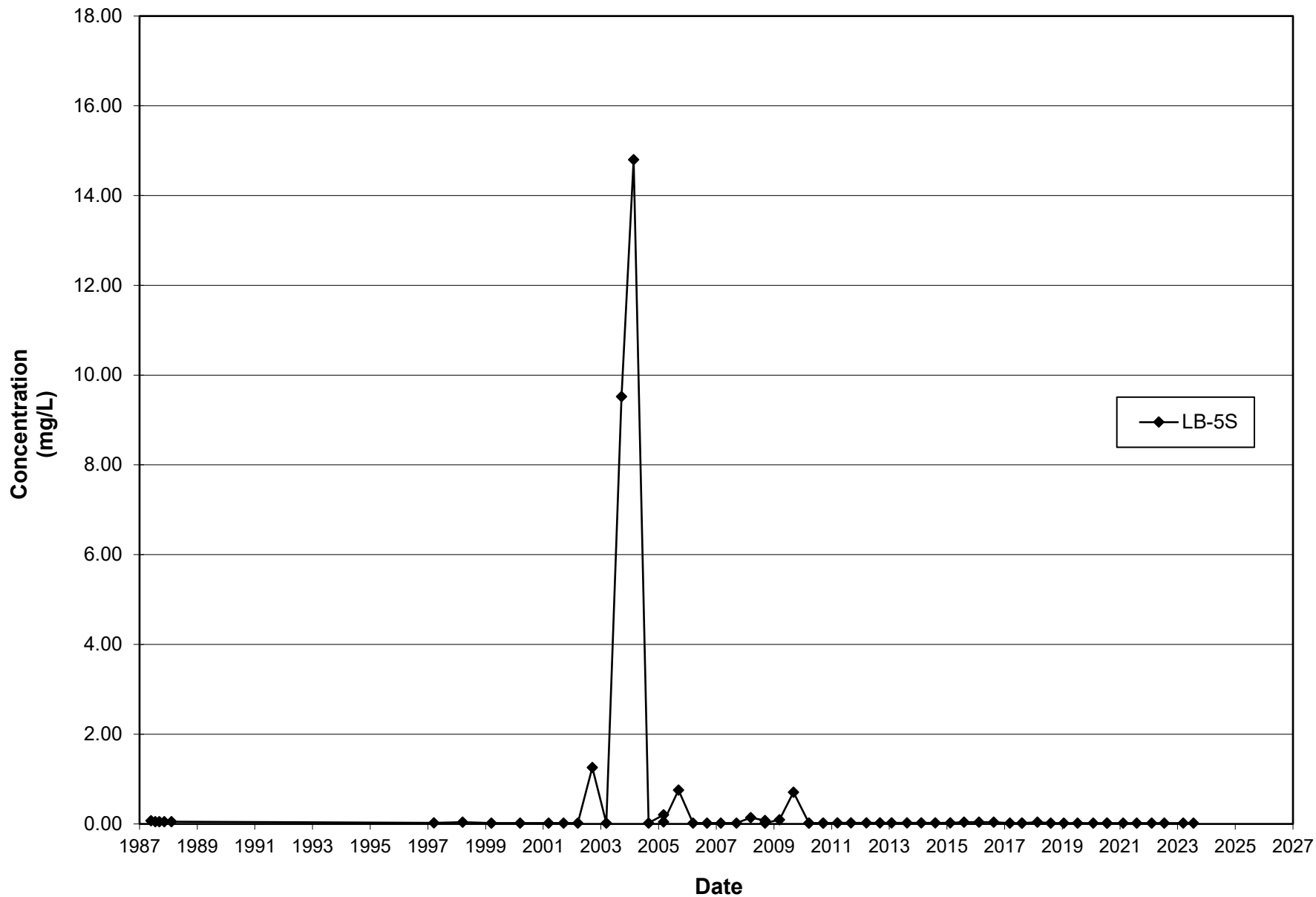
Leichner Landfill
Dissolved Iron, LB-03S
1987 - 2023



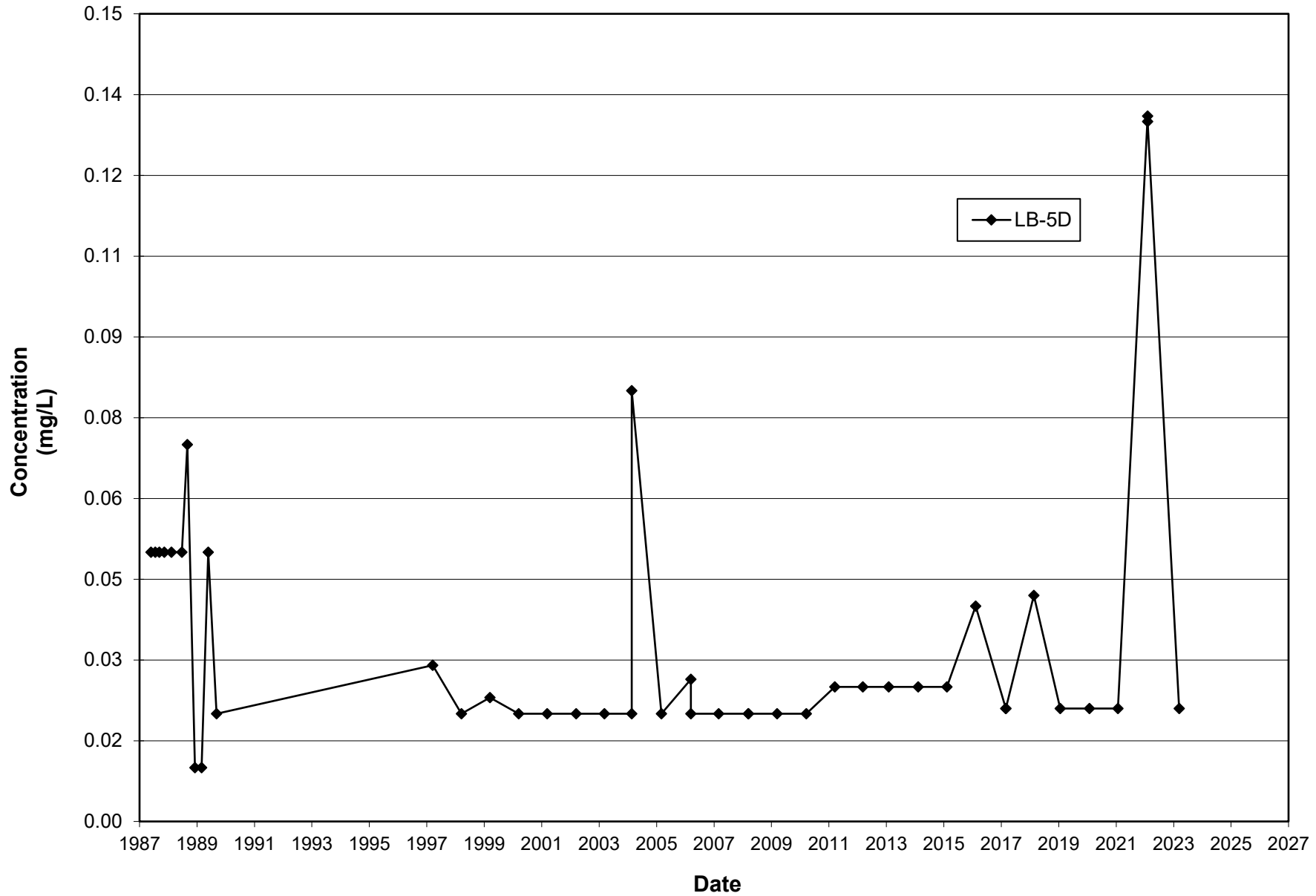
Leichner Landfill
Dissolved Iron, LB-03D
1987 - 2023



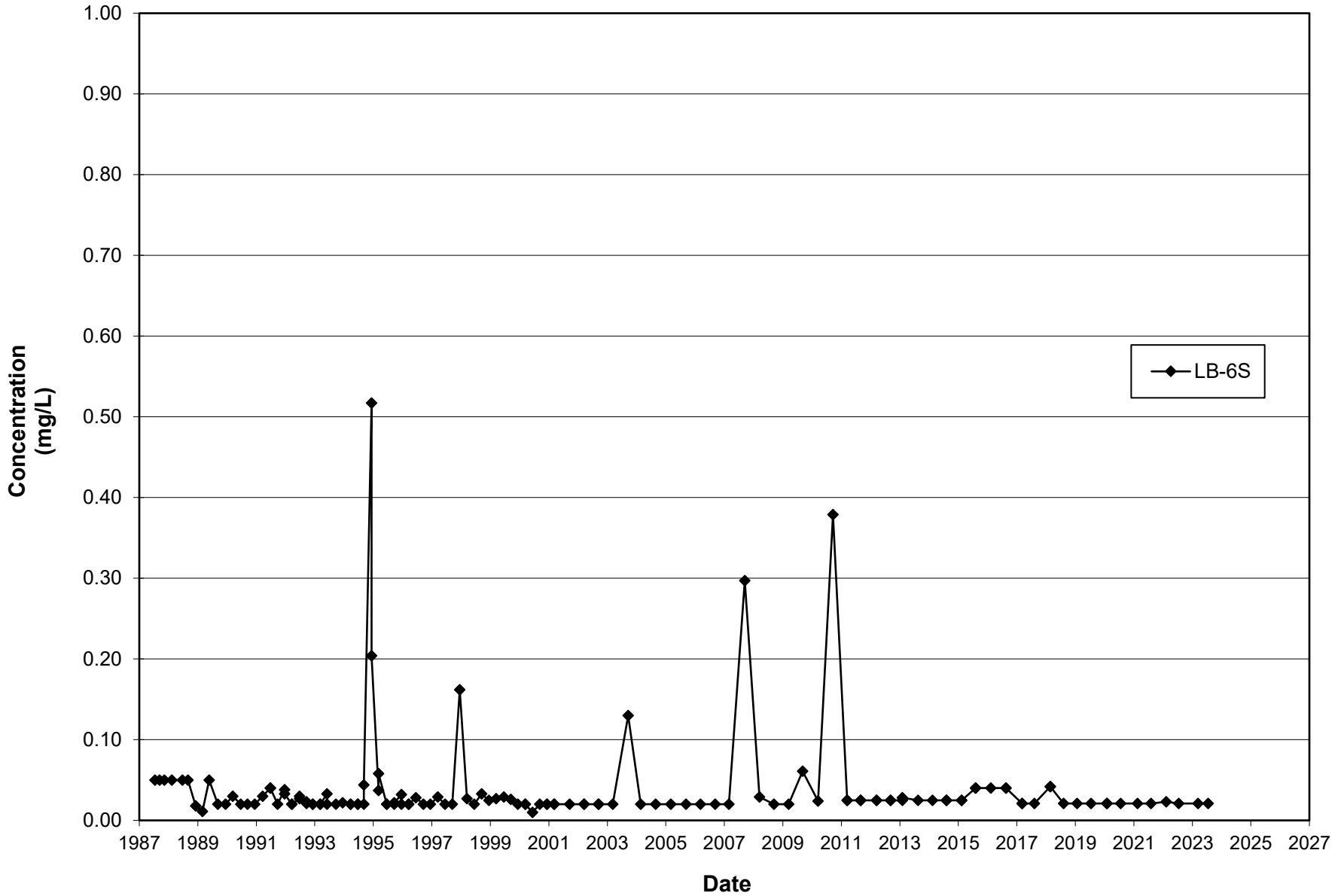
Leichner Landfill
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1987 - 2023



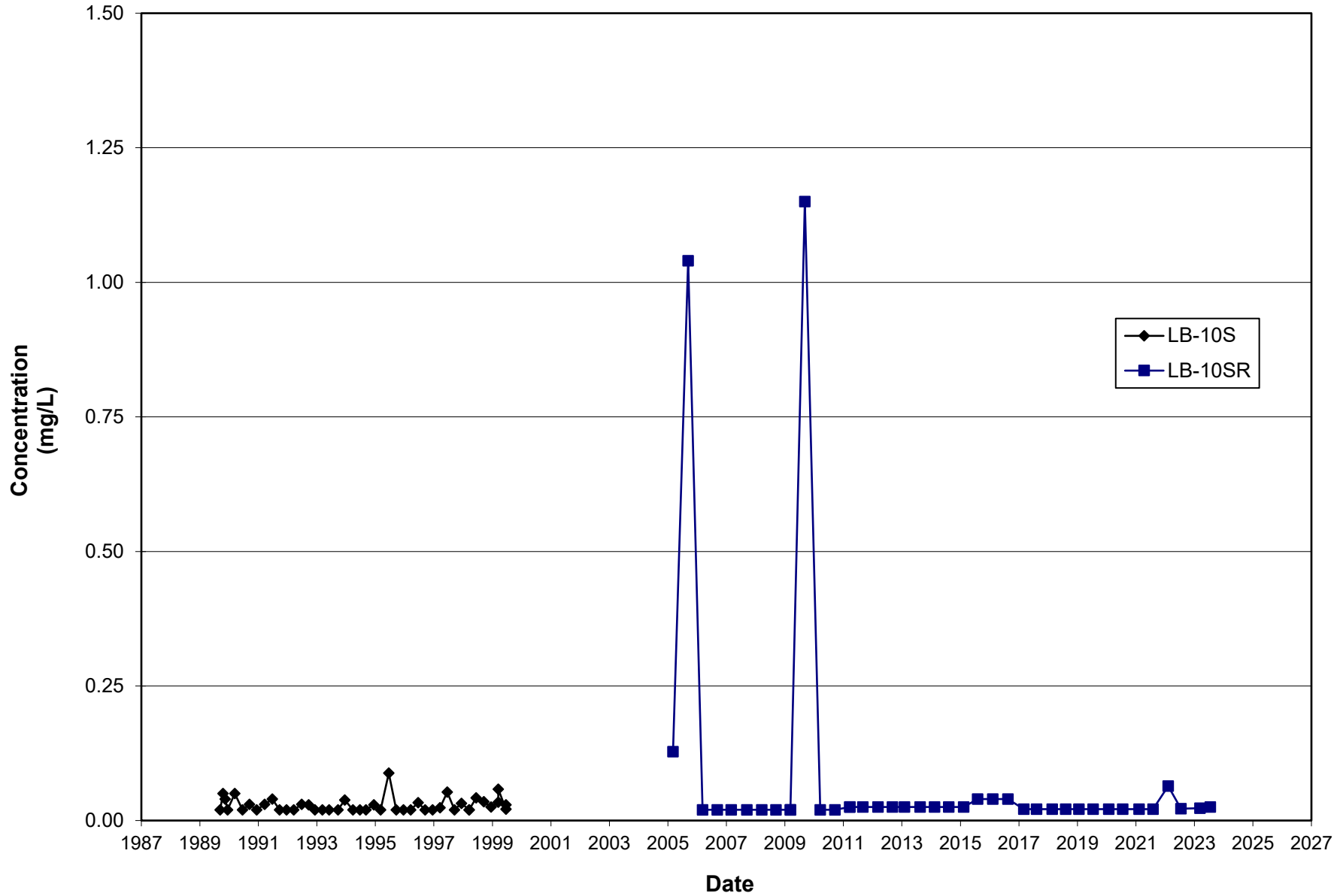
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Dissolved Iron, LB-05D
1987 - 2023



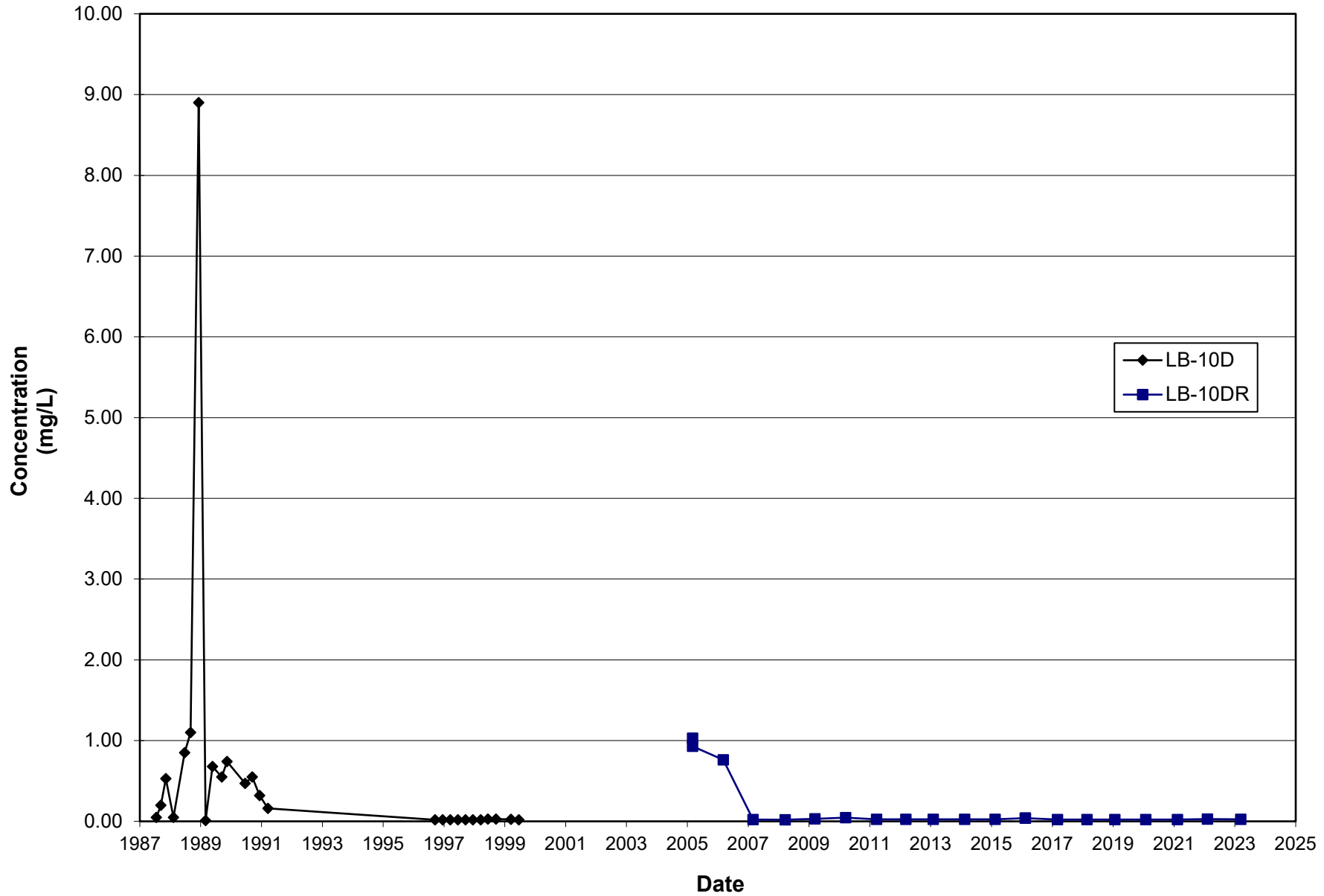
Leichner Landfill
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1987 - 2023



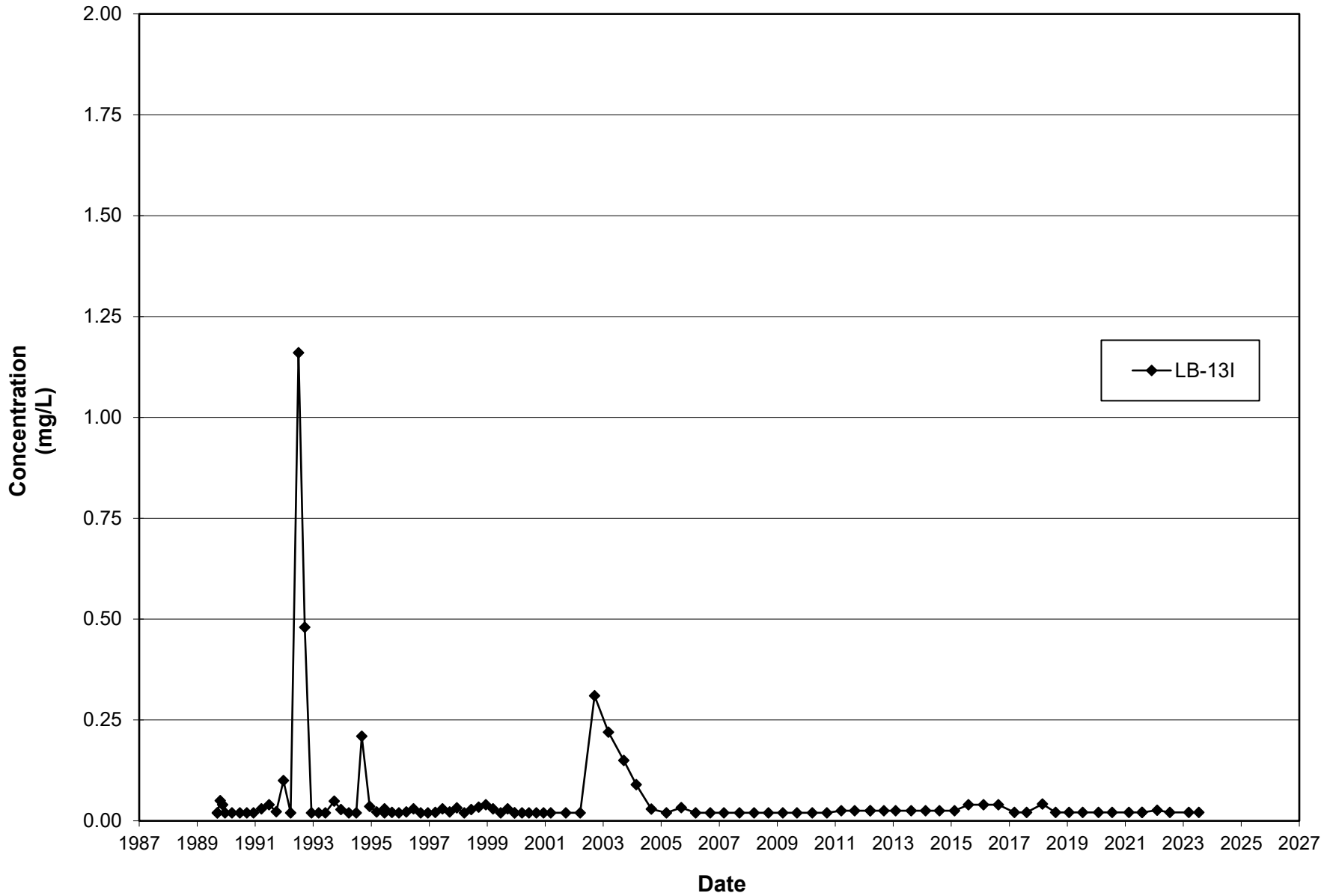
Leichner Landfill
Dissolved Iron, LB-10S and LB-10SR
1987 - 2023



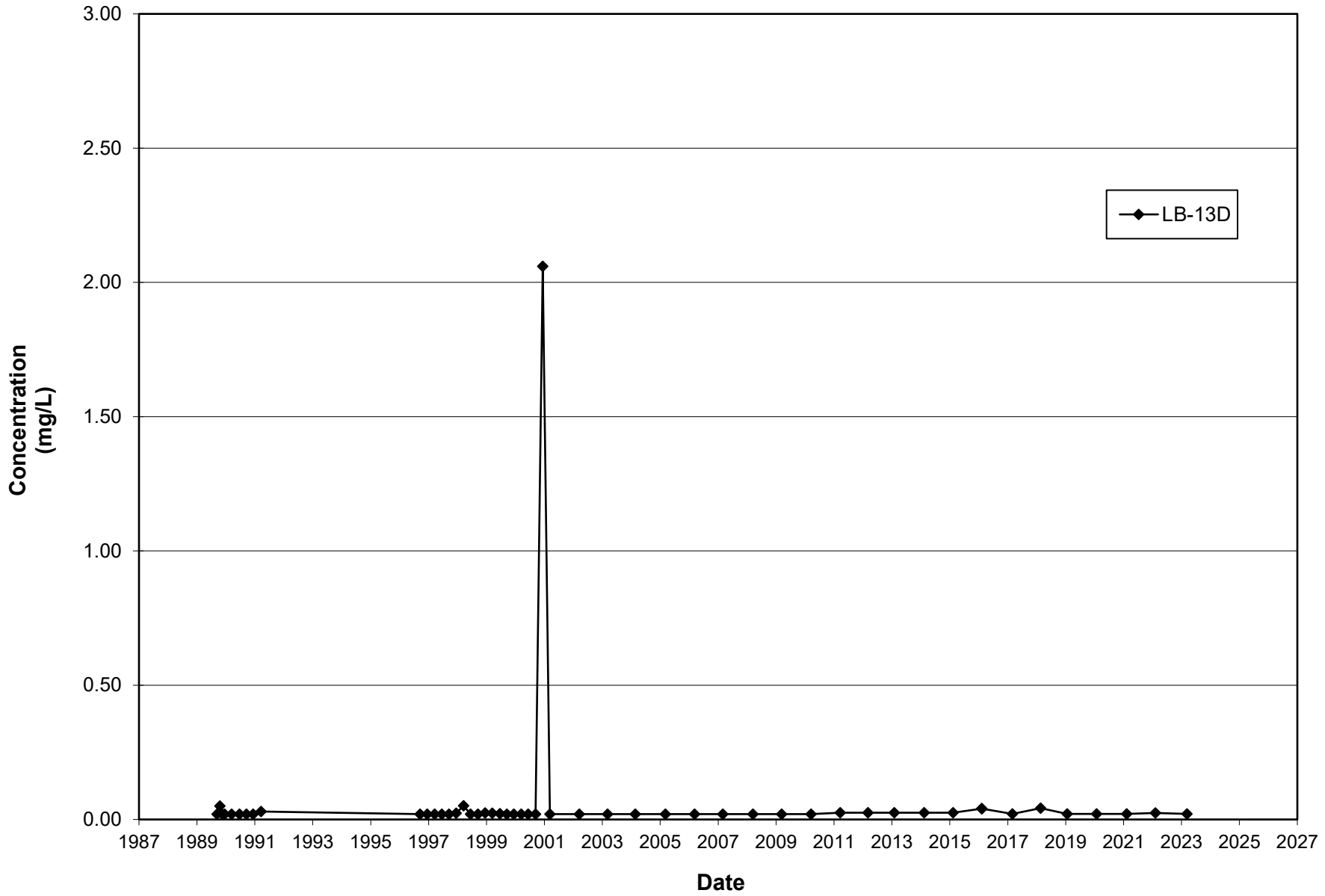
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1987 - 2023



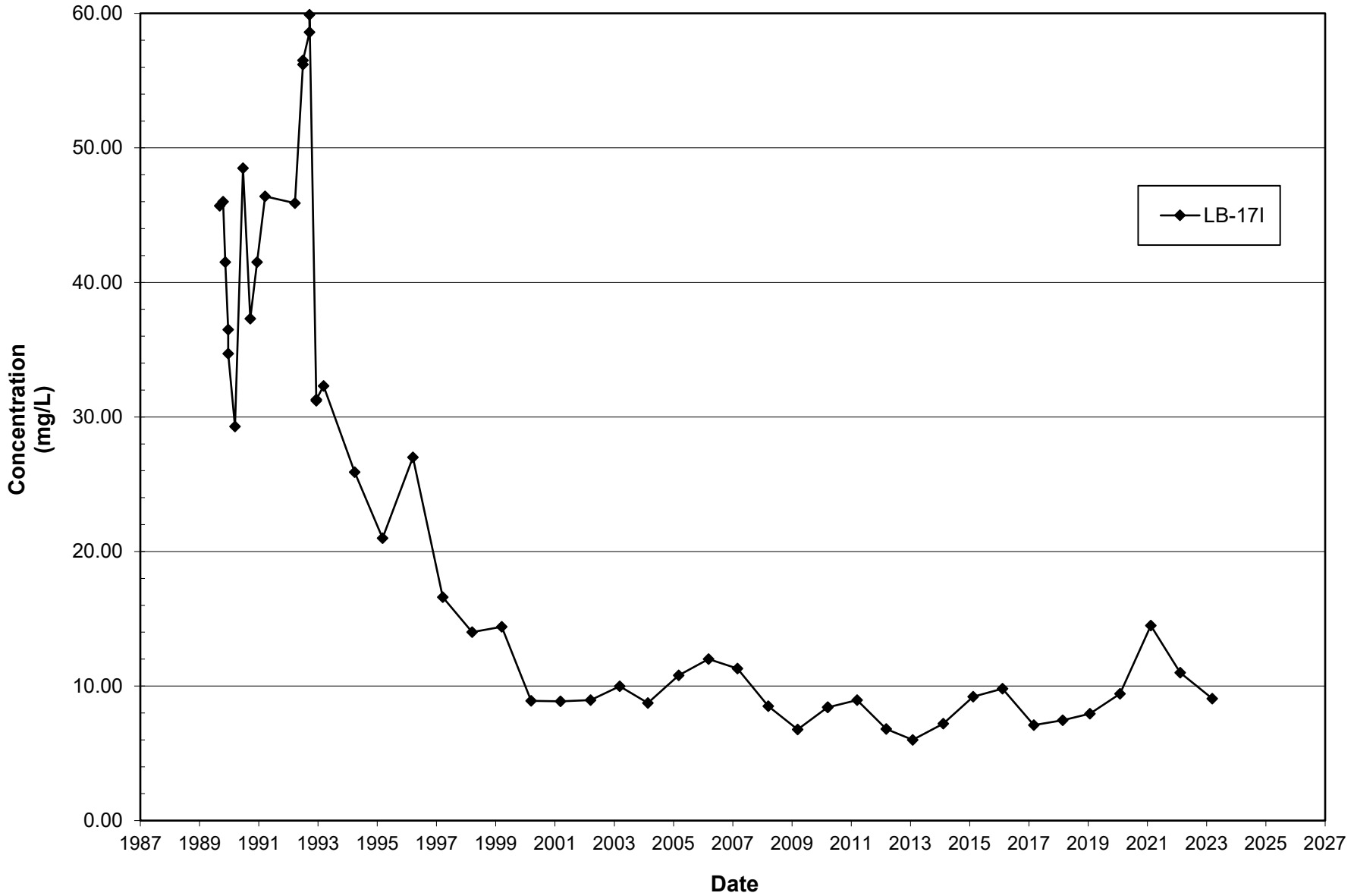
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Dissolved Iron, LB-13I
1987 - 2023



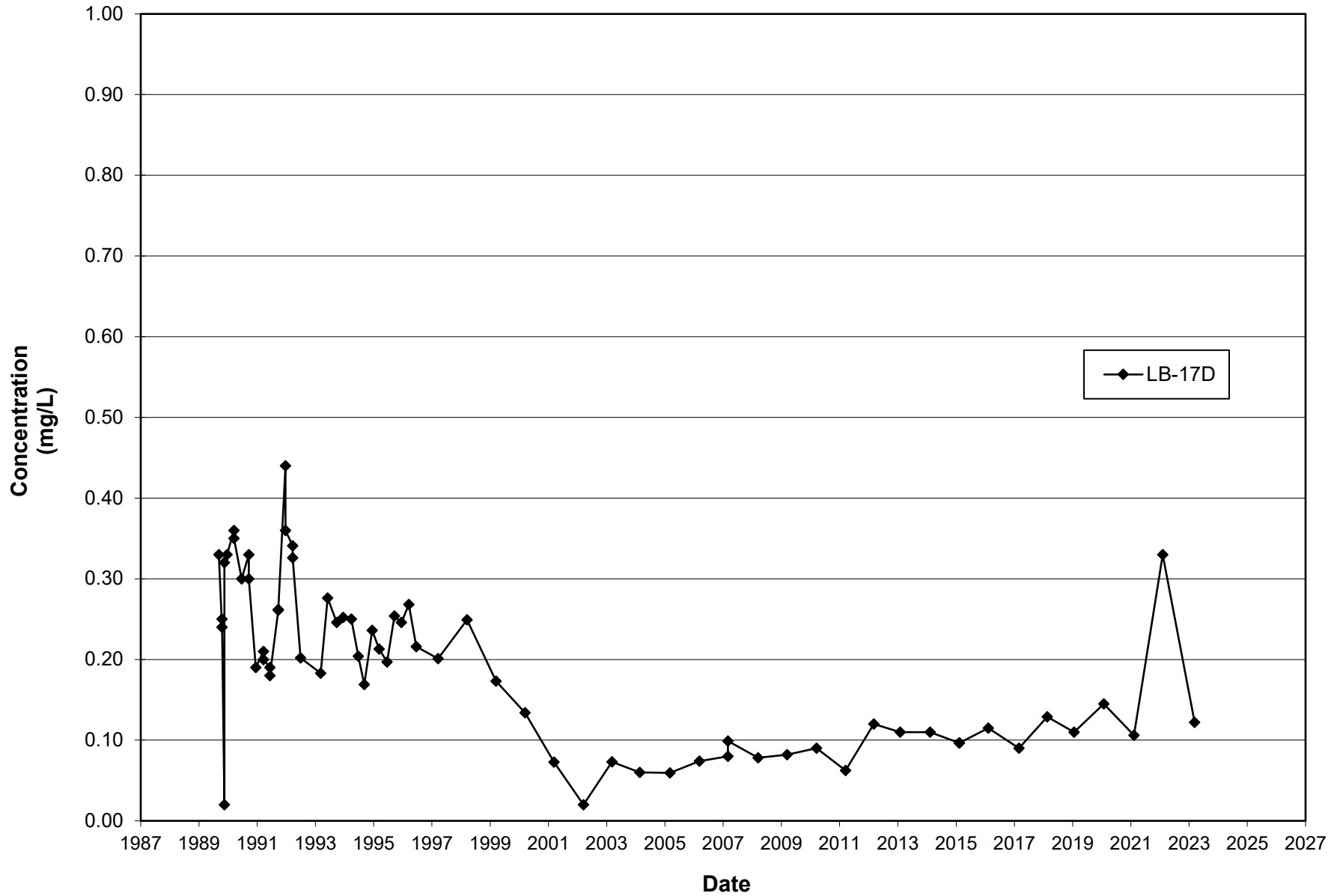
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Dissolved Iron, LB-13D
1987 - 2023



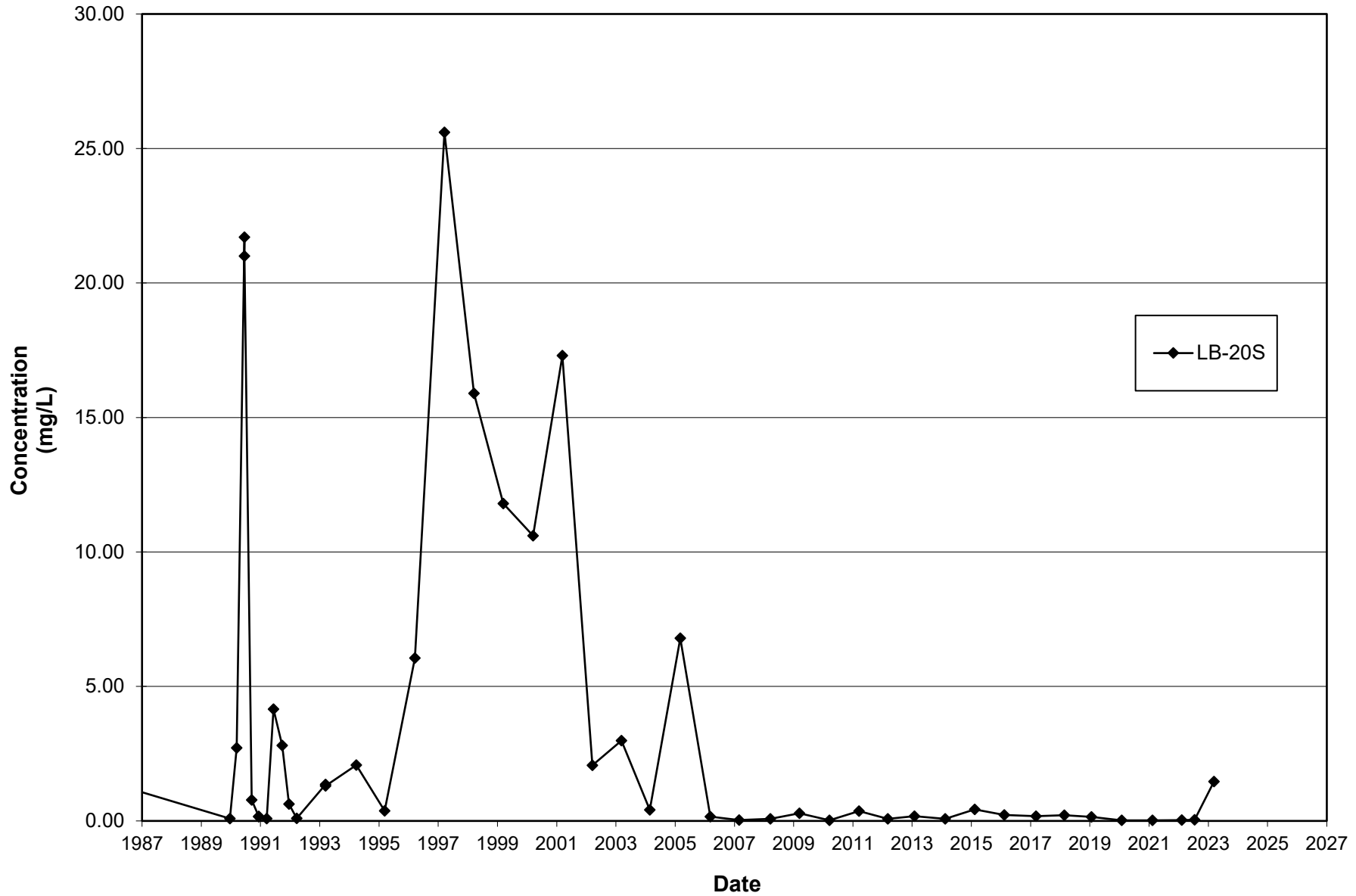
Leichner Landfill
Dissolved Iron, LB-171
1987 - 2023



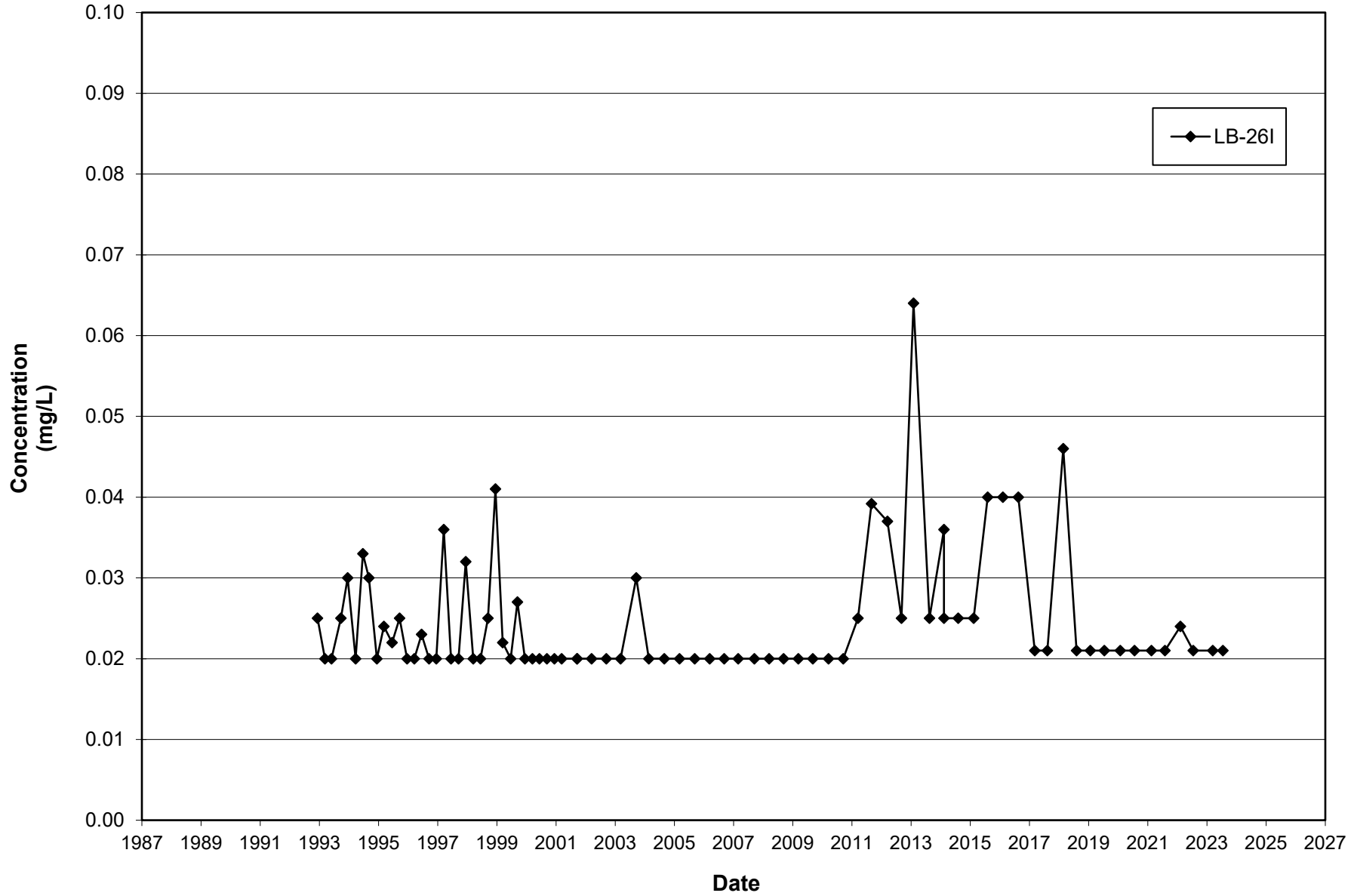
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Dissolved Iron, LB-17D
1987 - 2023



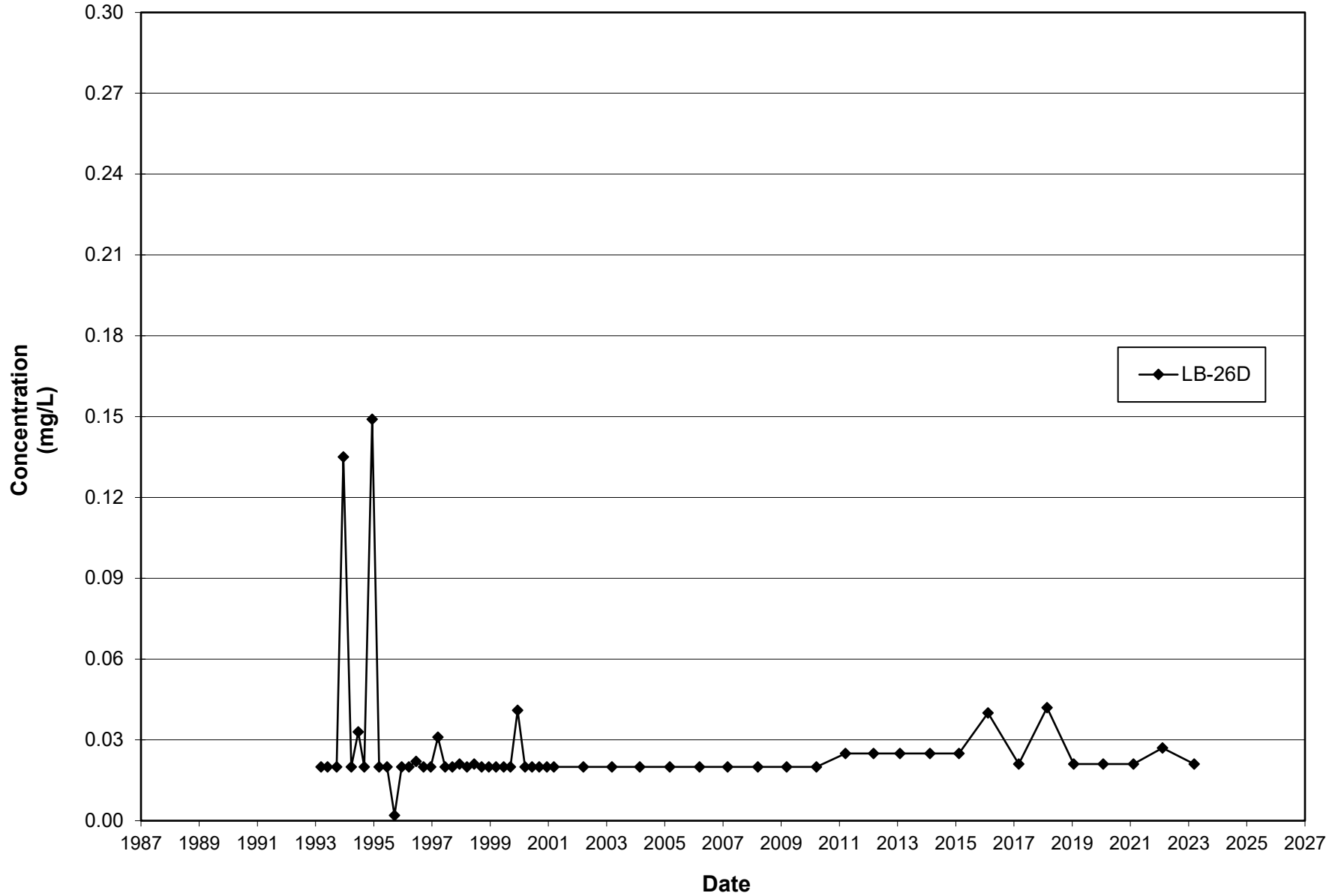
Leichner Landfill
Dissolved Iron, LB-20S
1987 - 2023



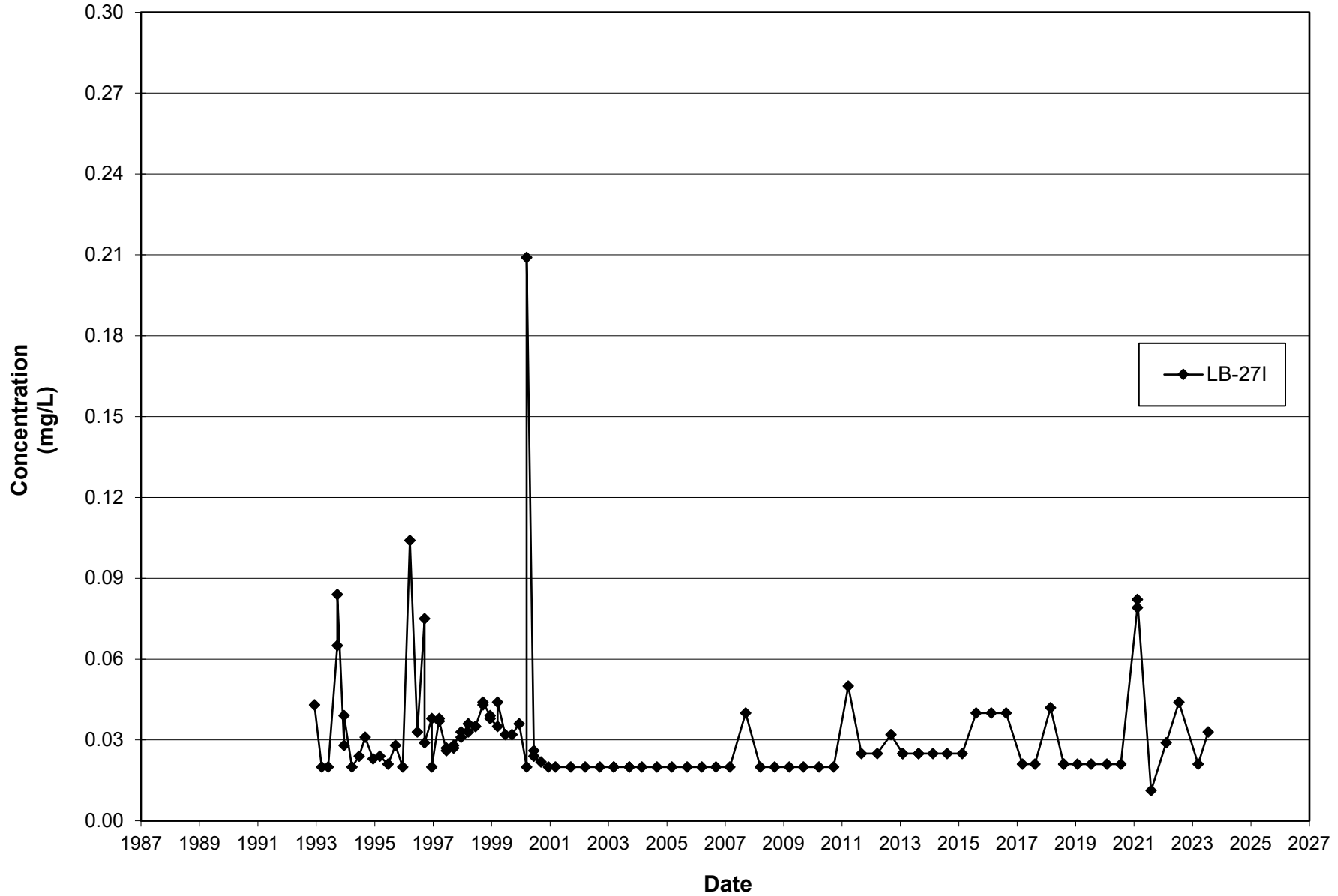
Leichner Landfill
Dissolved Iron, LB-26I
1987 - 2023



Leichner Landfill
Dissolved Iron, LB-26D
1987 - 2023

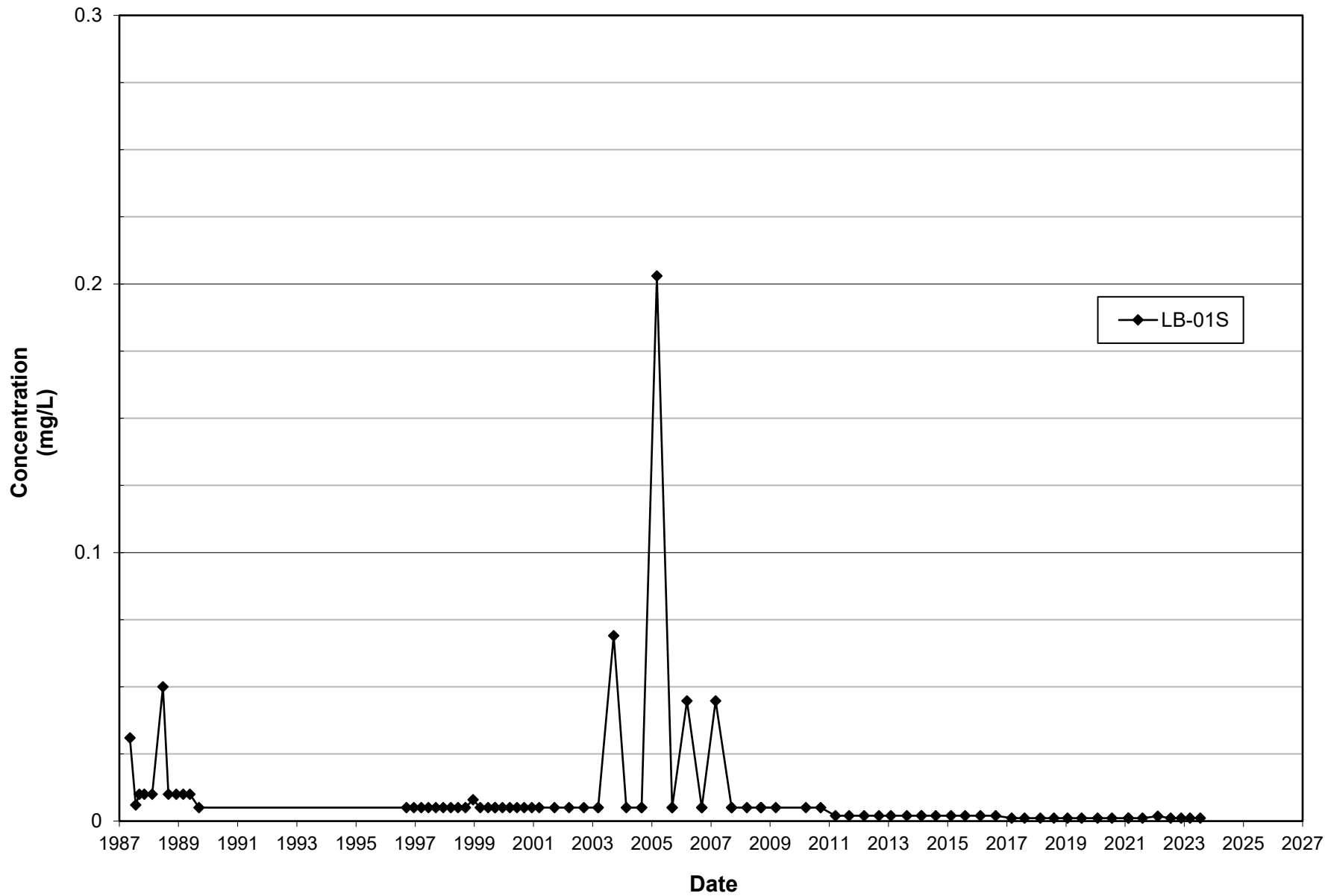


Leichner Landfill
Dissolved Iron, LB-27I
1987 - 2023

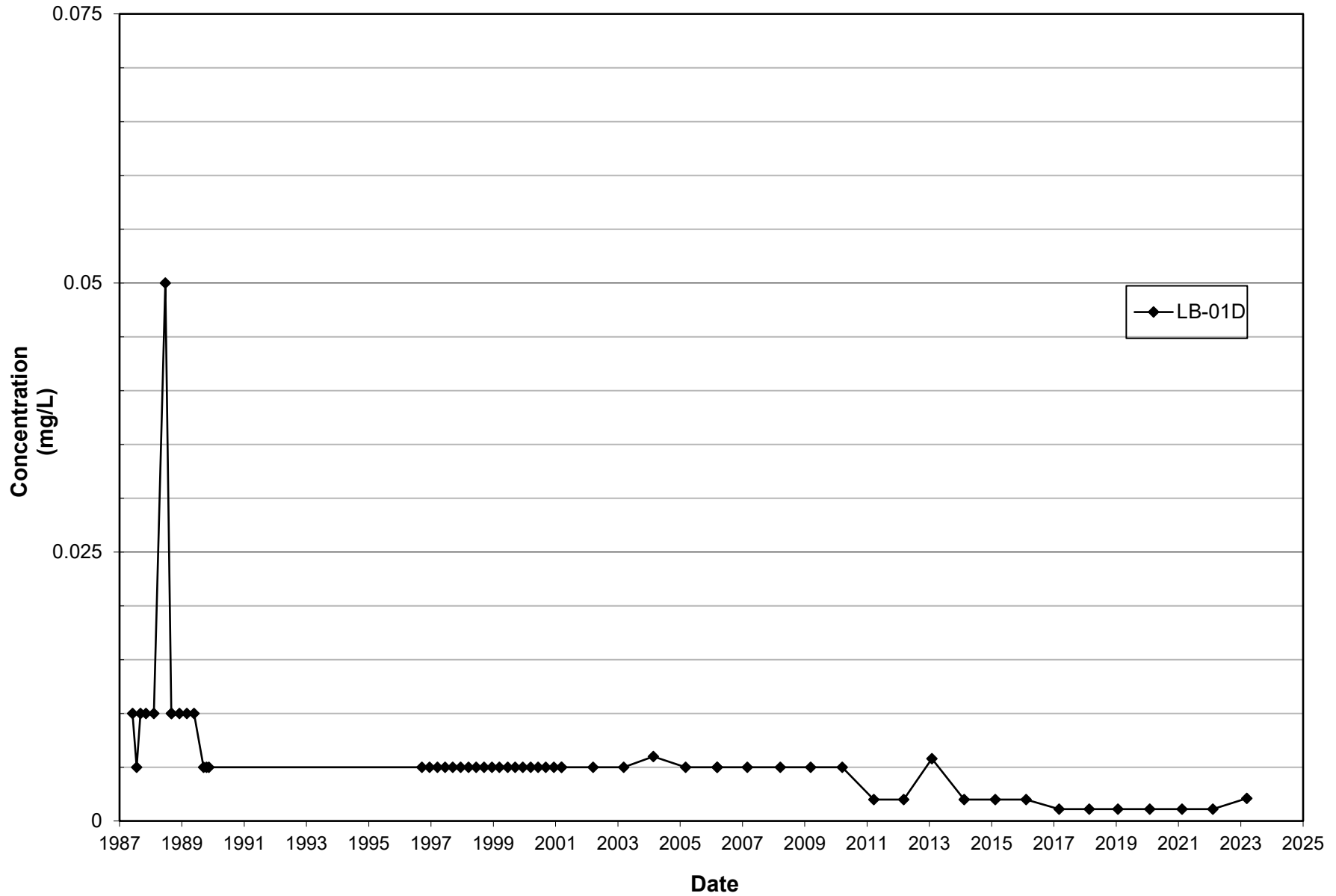


Dissolved Manganese

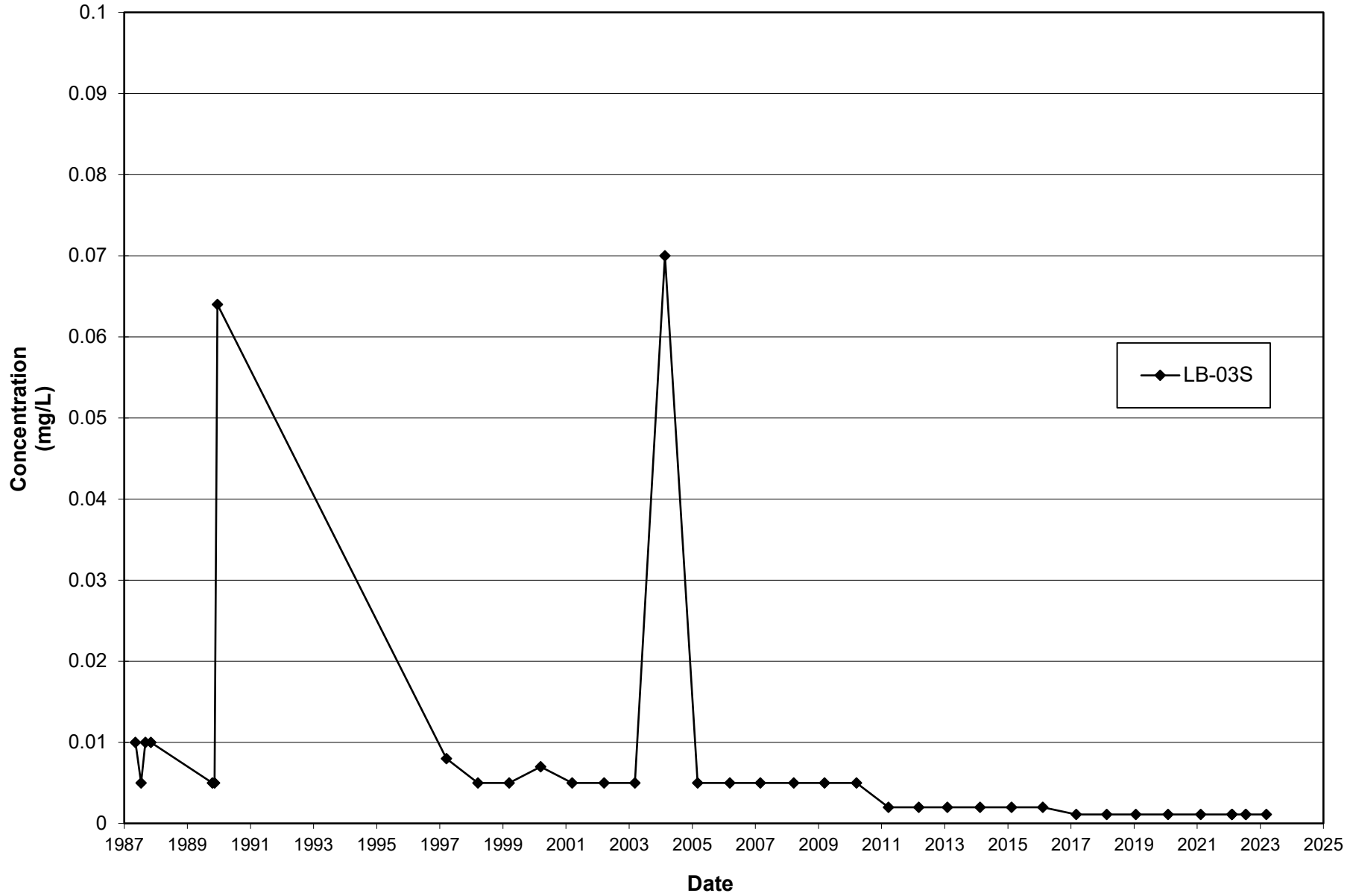
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Dissolved Manganese, LB-01S
1987 - 2023



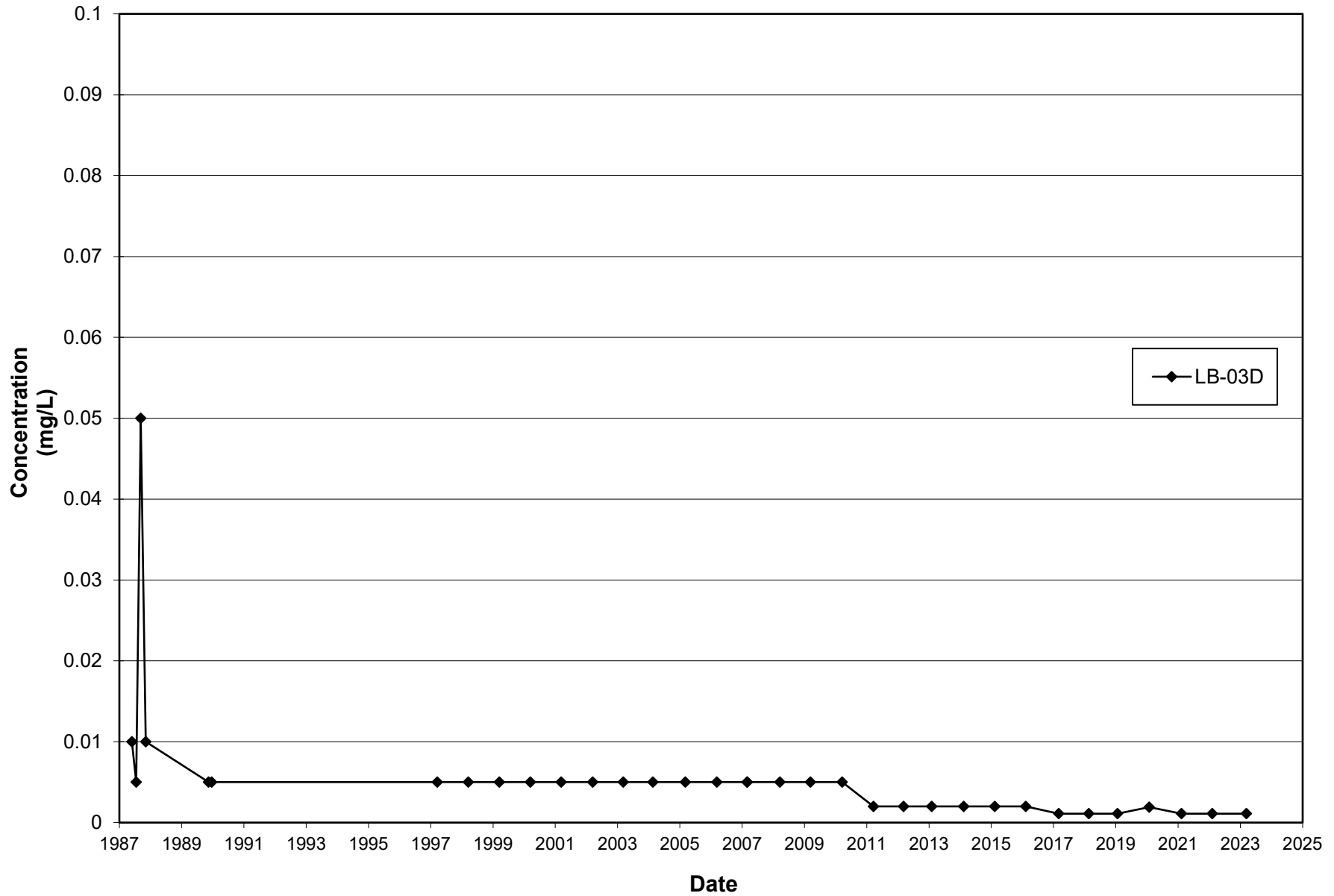
Leichner Landfill
Dissolved Manganese, LB-01D
1987 - 2023



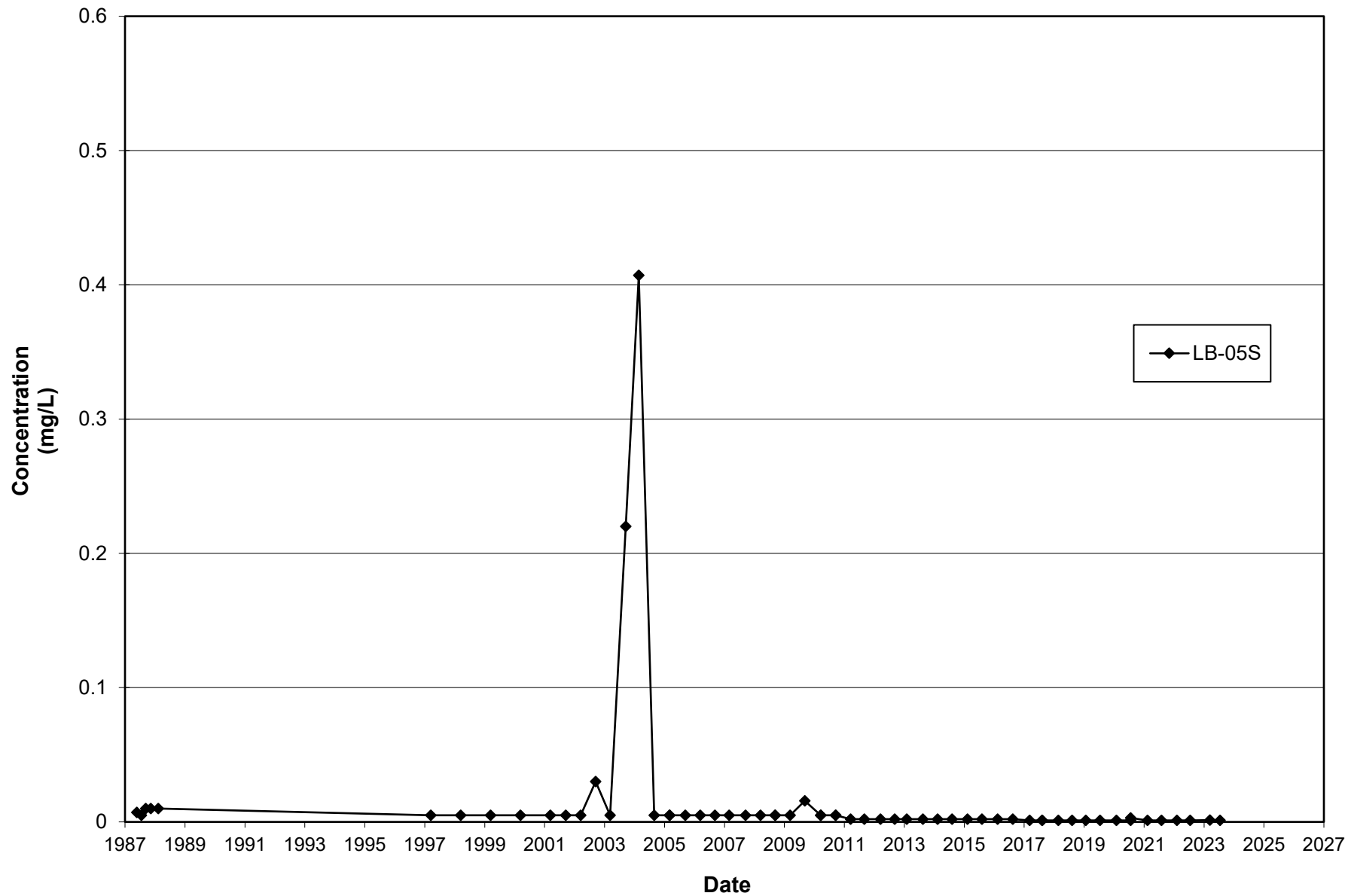
Leichner Landfill
Dissolved Manganese, LB-03S
1987 - 2023



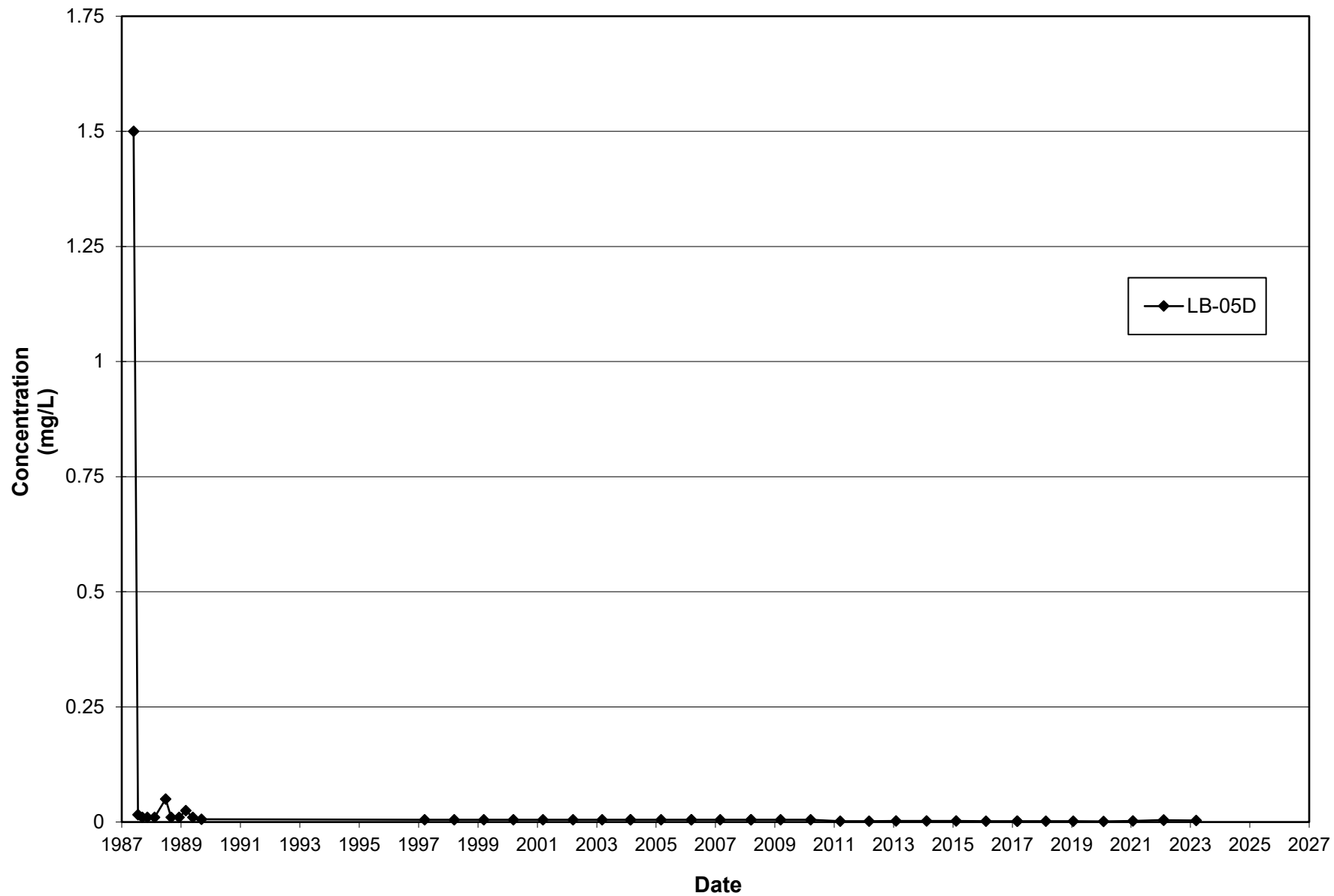
Leichner Landfill
Dissolved Manganese, LB-03D
1987 - 2023



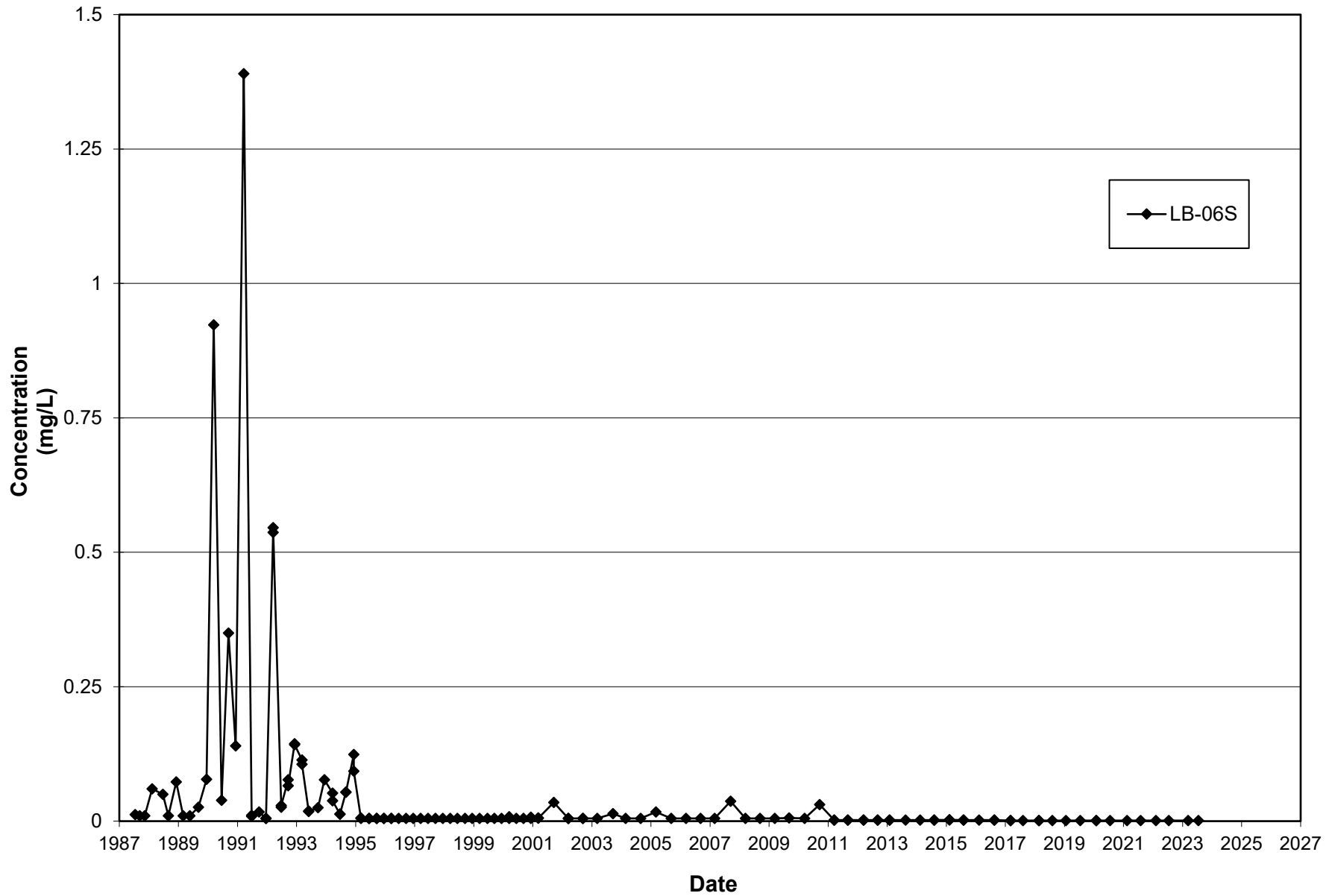
Leichner Landfill
Dissolved Manganese, LB-05S
1987 - 2023



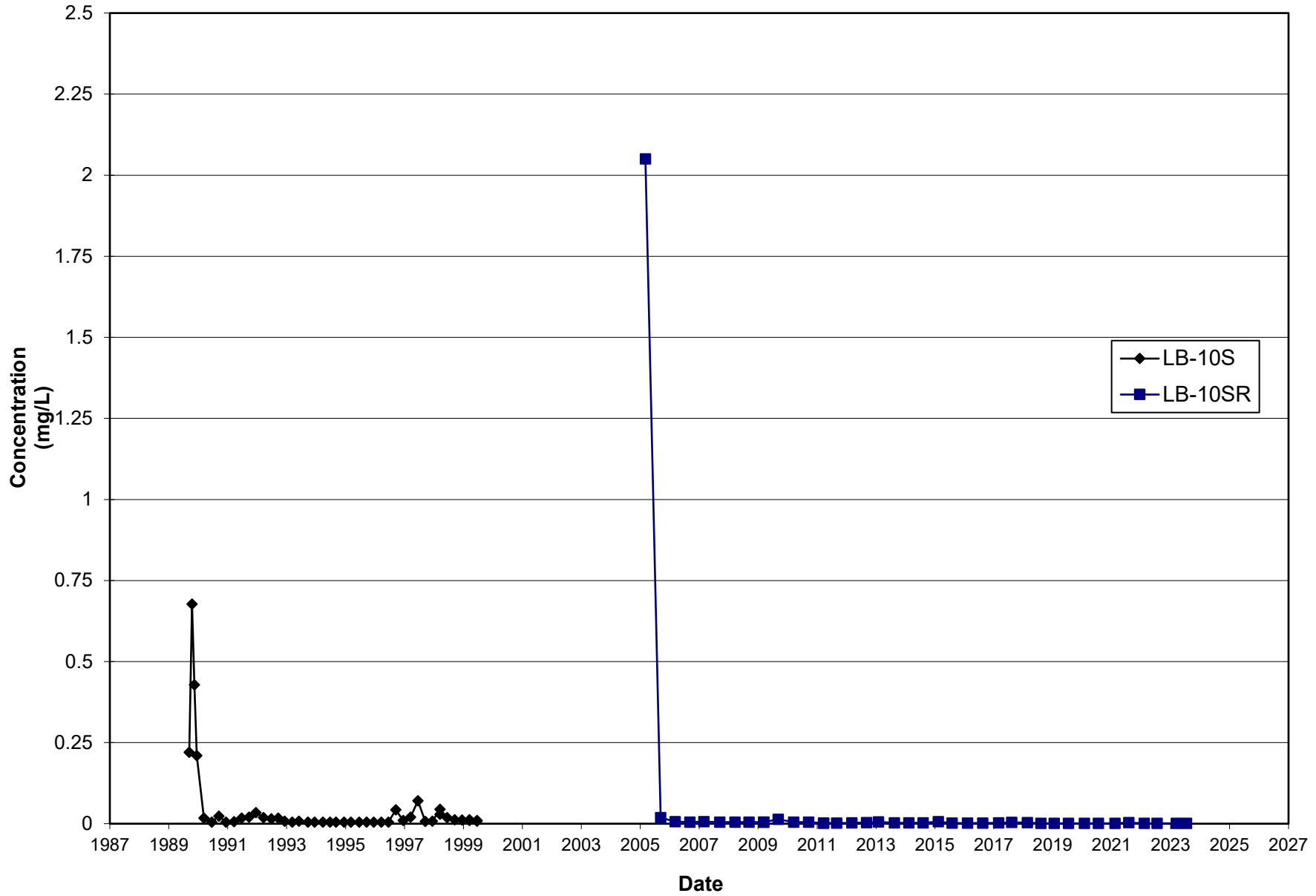
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Dissolved Manganese, LB-05D
1987 - 2023



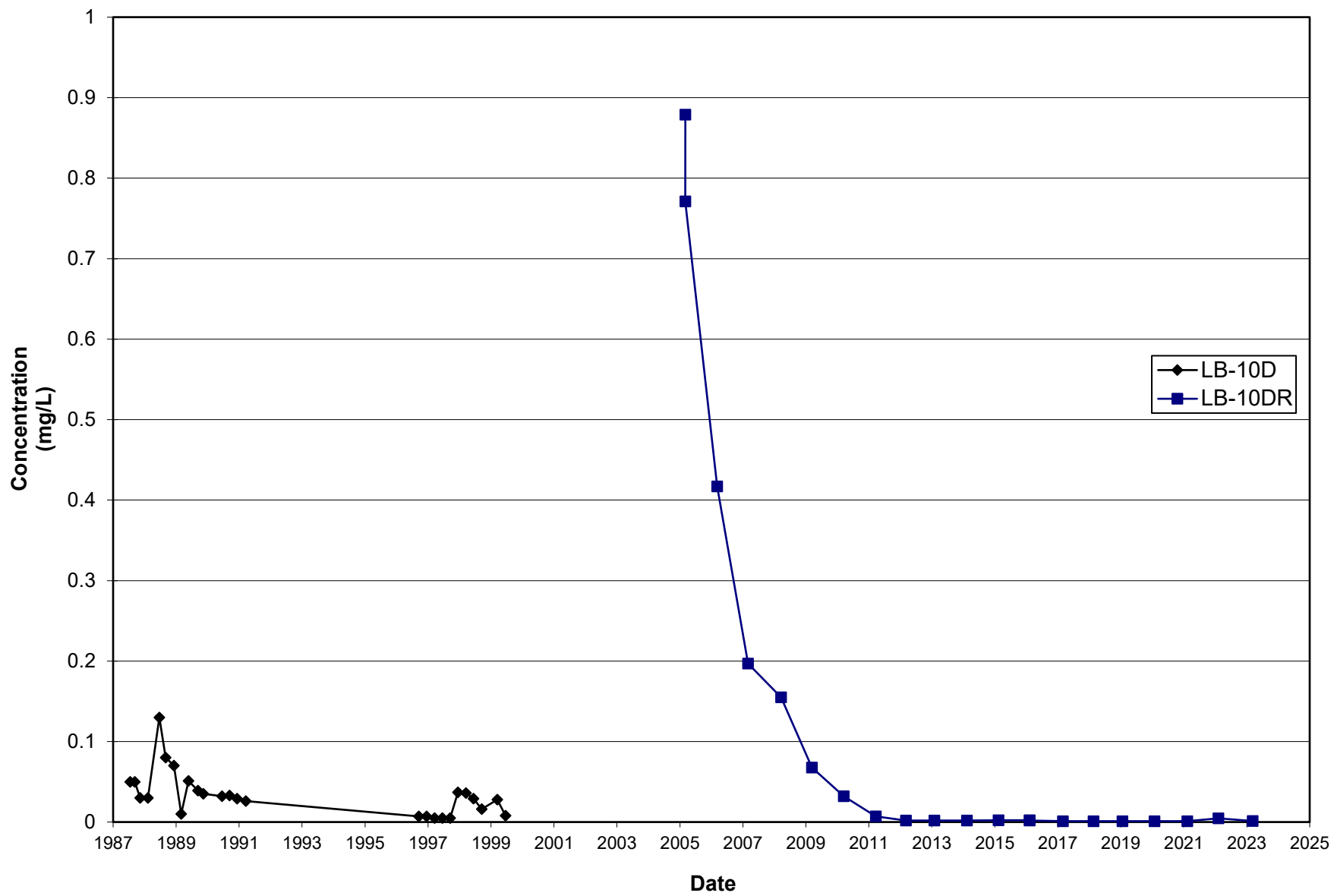
Leichner Landfill
Dissolved Manganese, LB-06S
1987 - 2023



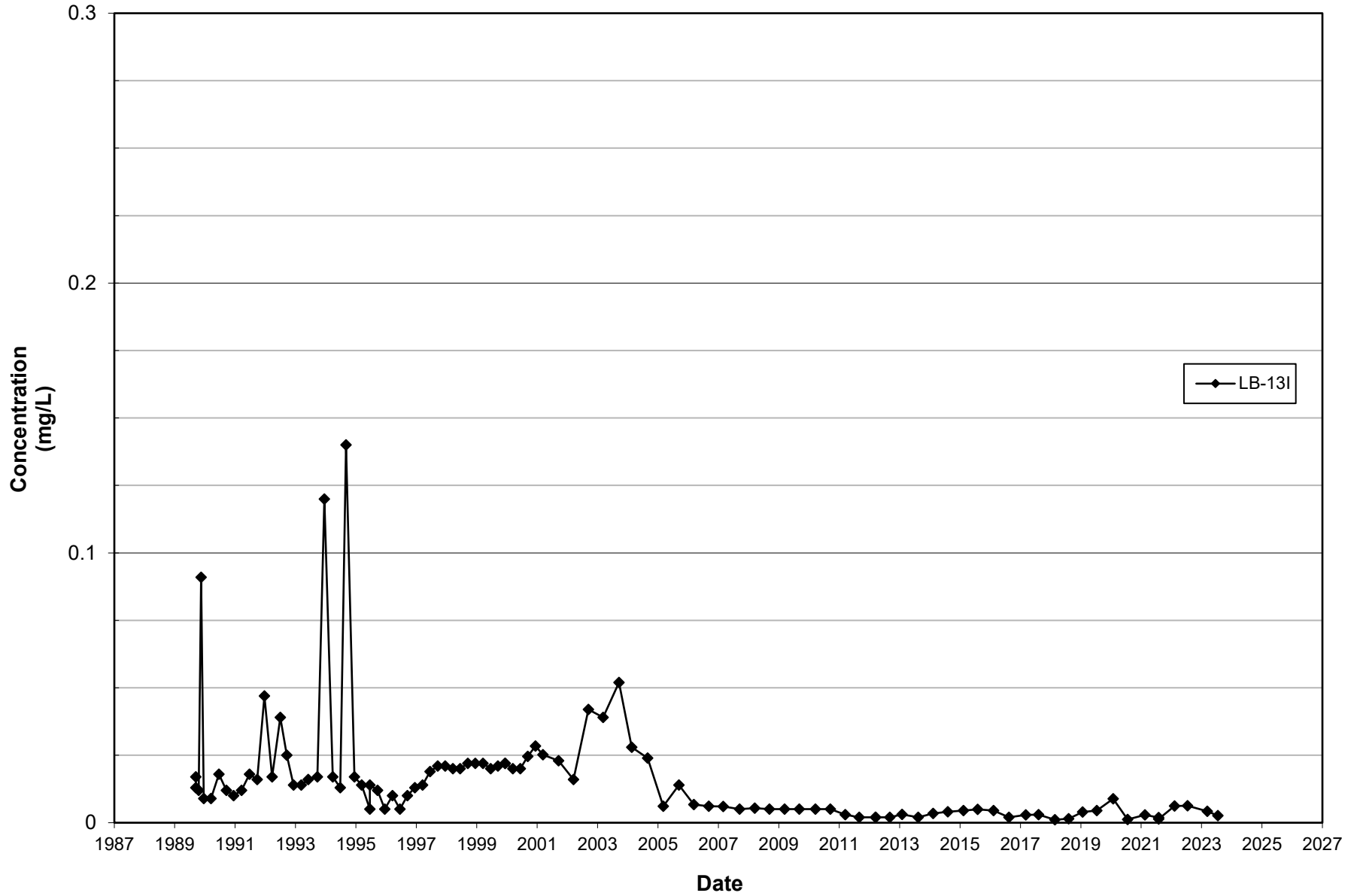
Leichner Landfill
Dissolved Manganese, LB-10S and LB-10SR
1987 - 2023



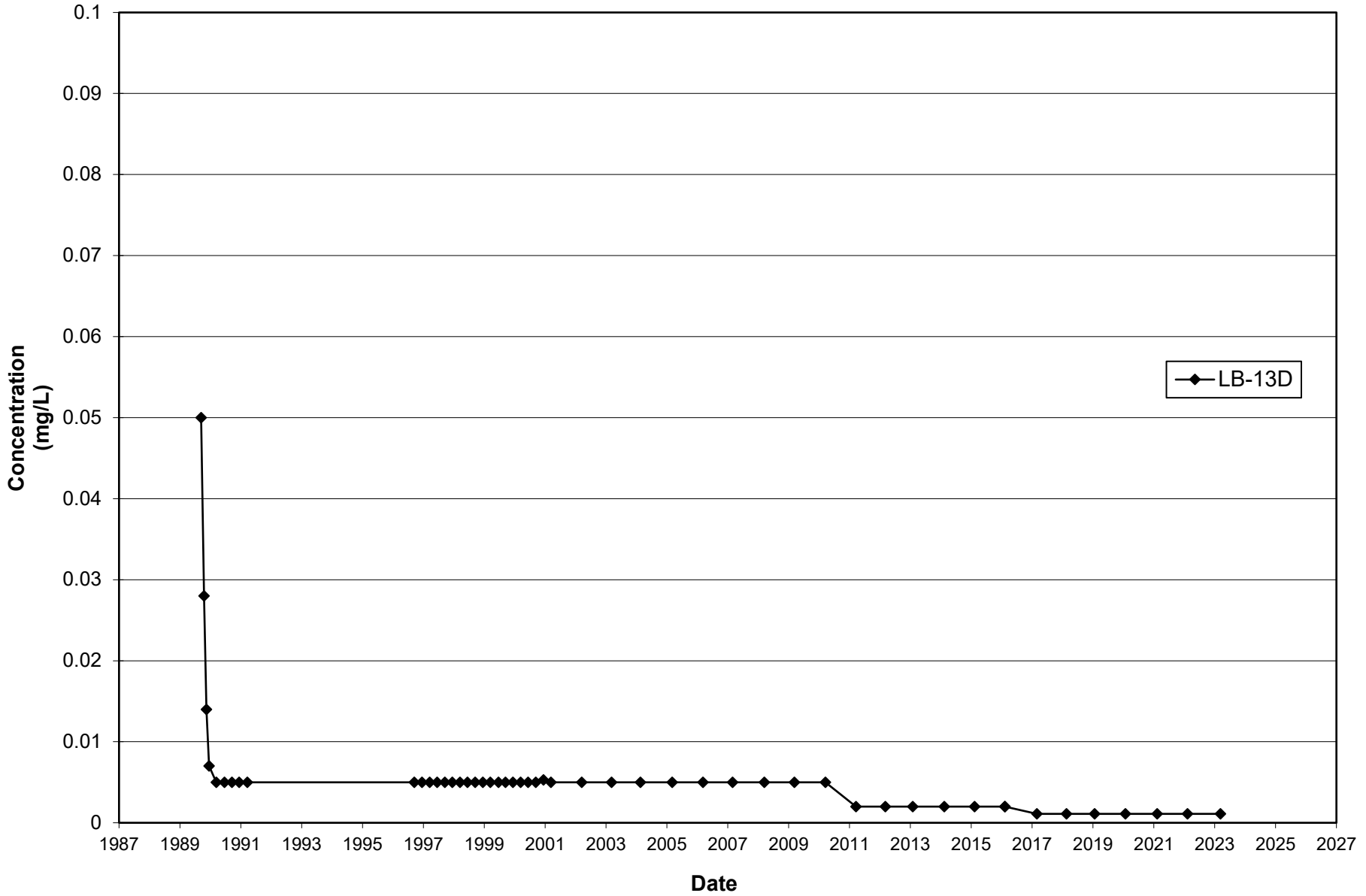
Leichner Landfill
Dissolved Manganese, LB-10D and LB-10DR
1987 - 2023



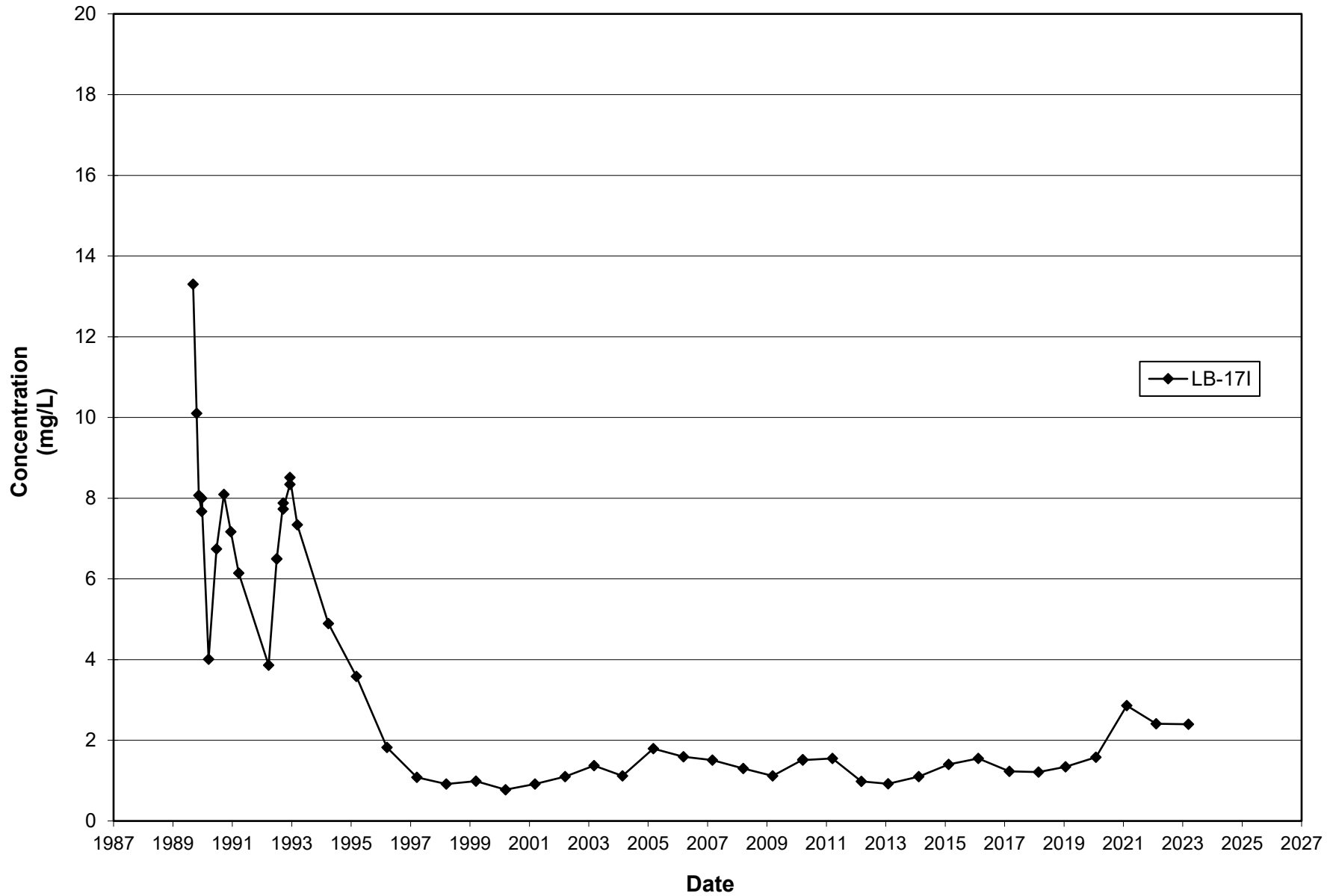
Leichner Landfill
Dissolved Manganese, LB-13I
1987 - 2023



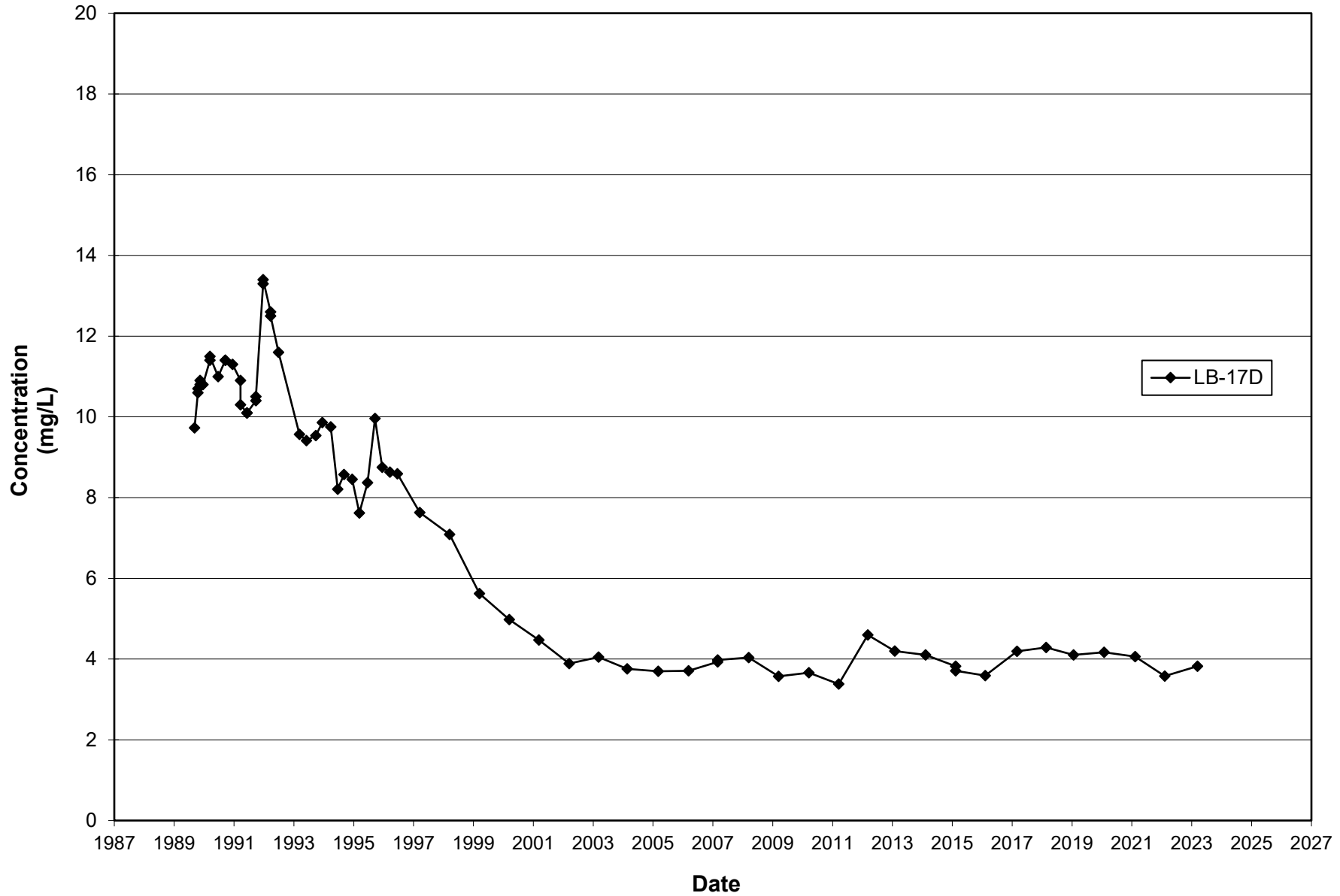
Leichner Landfill
Dissolved Manganese, LB-13D
1987 - 2023



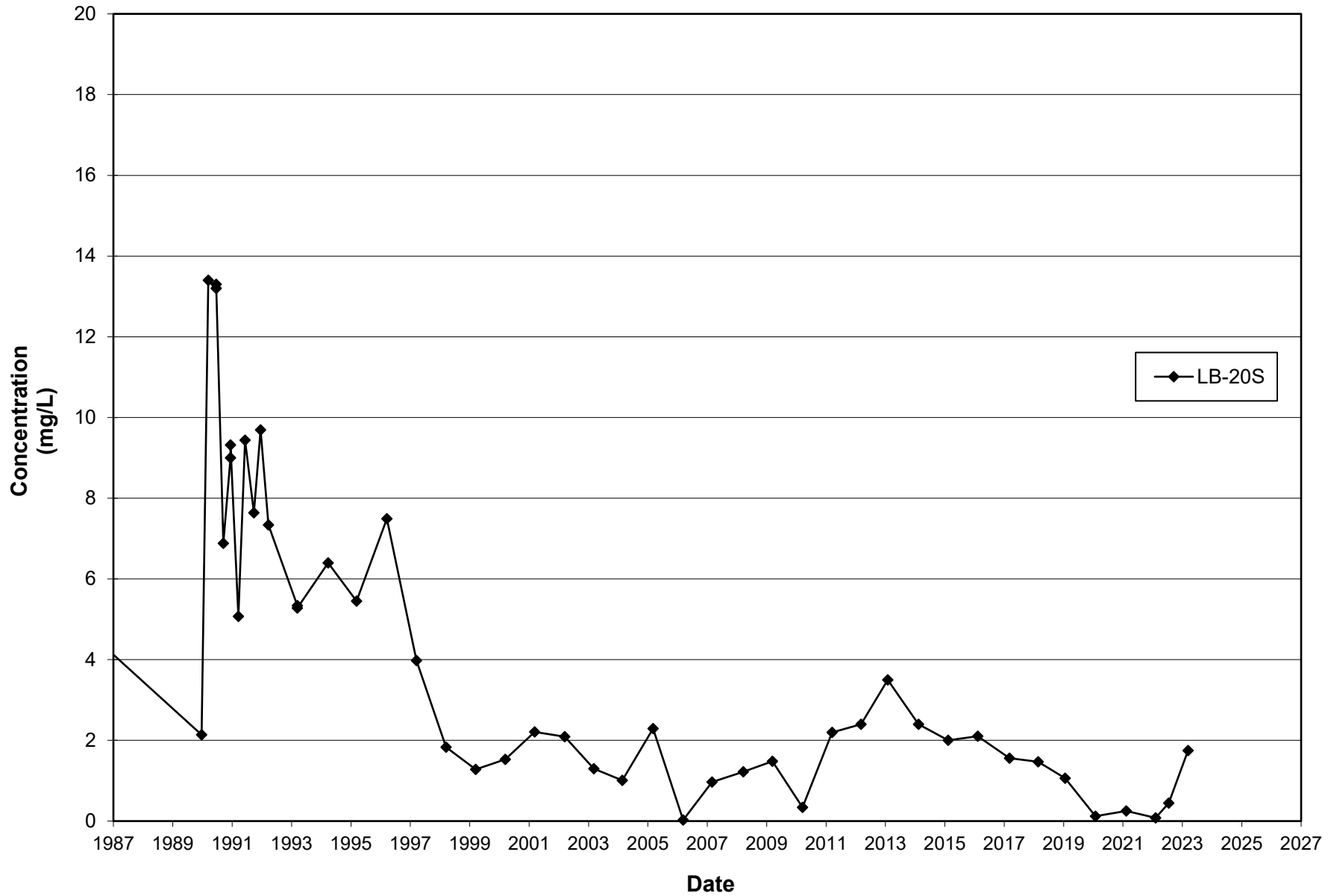
Leichner Landfill
Dissolved Manganese, LB-171
1987 - 2023



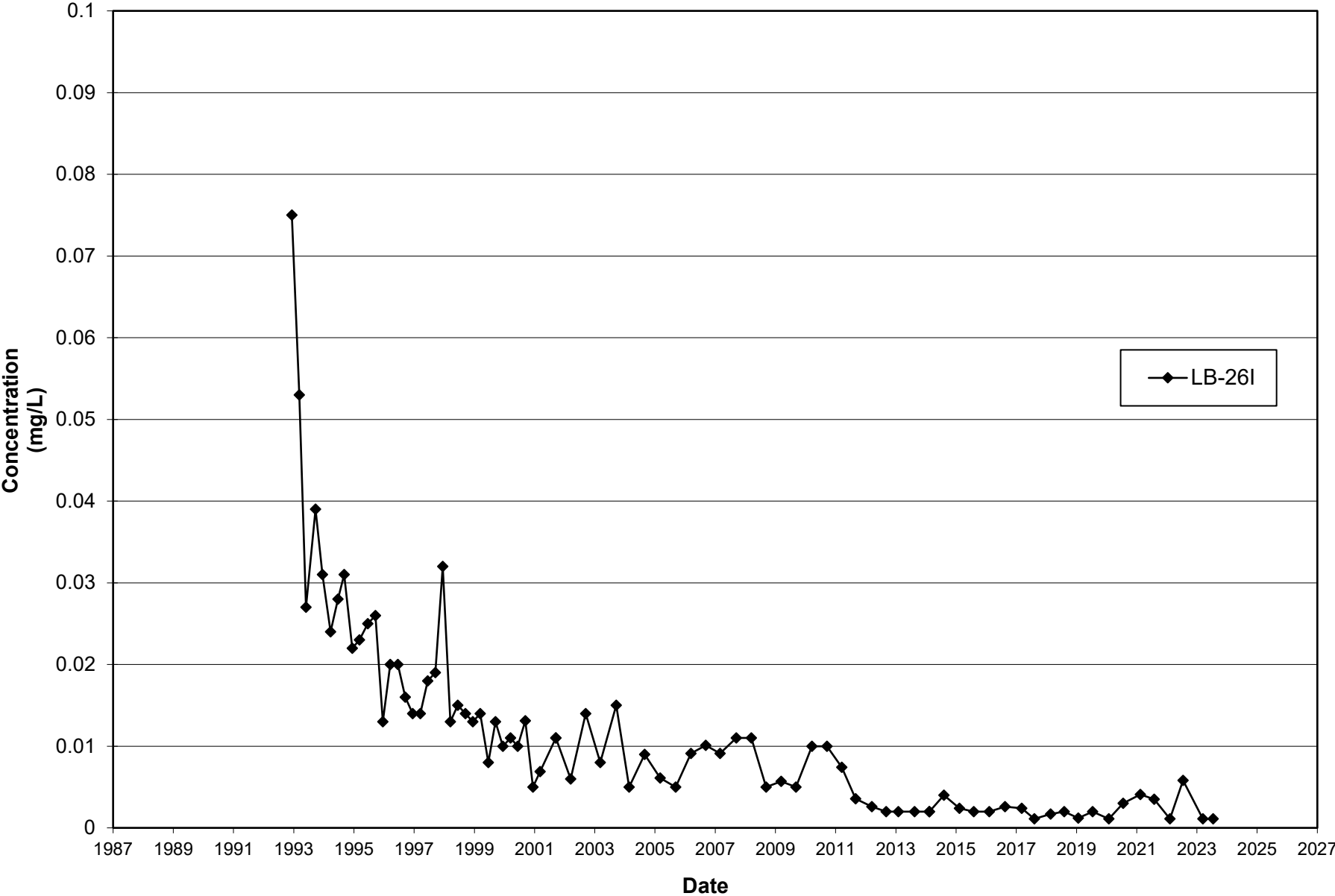
Leichner Landfill
Dissolved Manganese, LB-17D
1987 - 2023



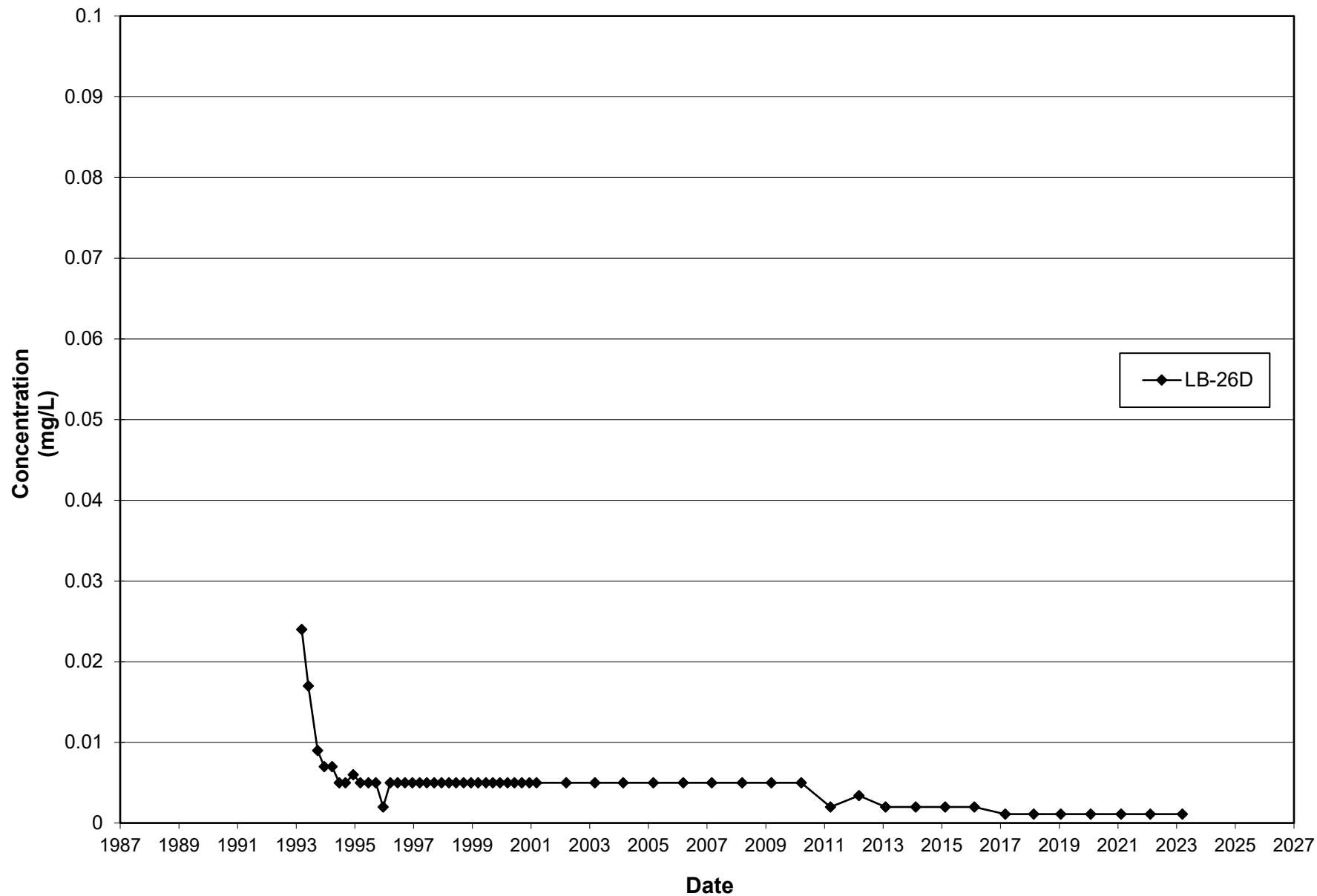
Leichner Landfill
Dissolved Manganese, LB-20S
1987 - 2023



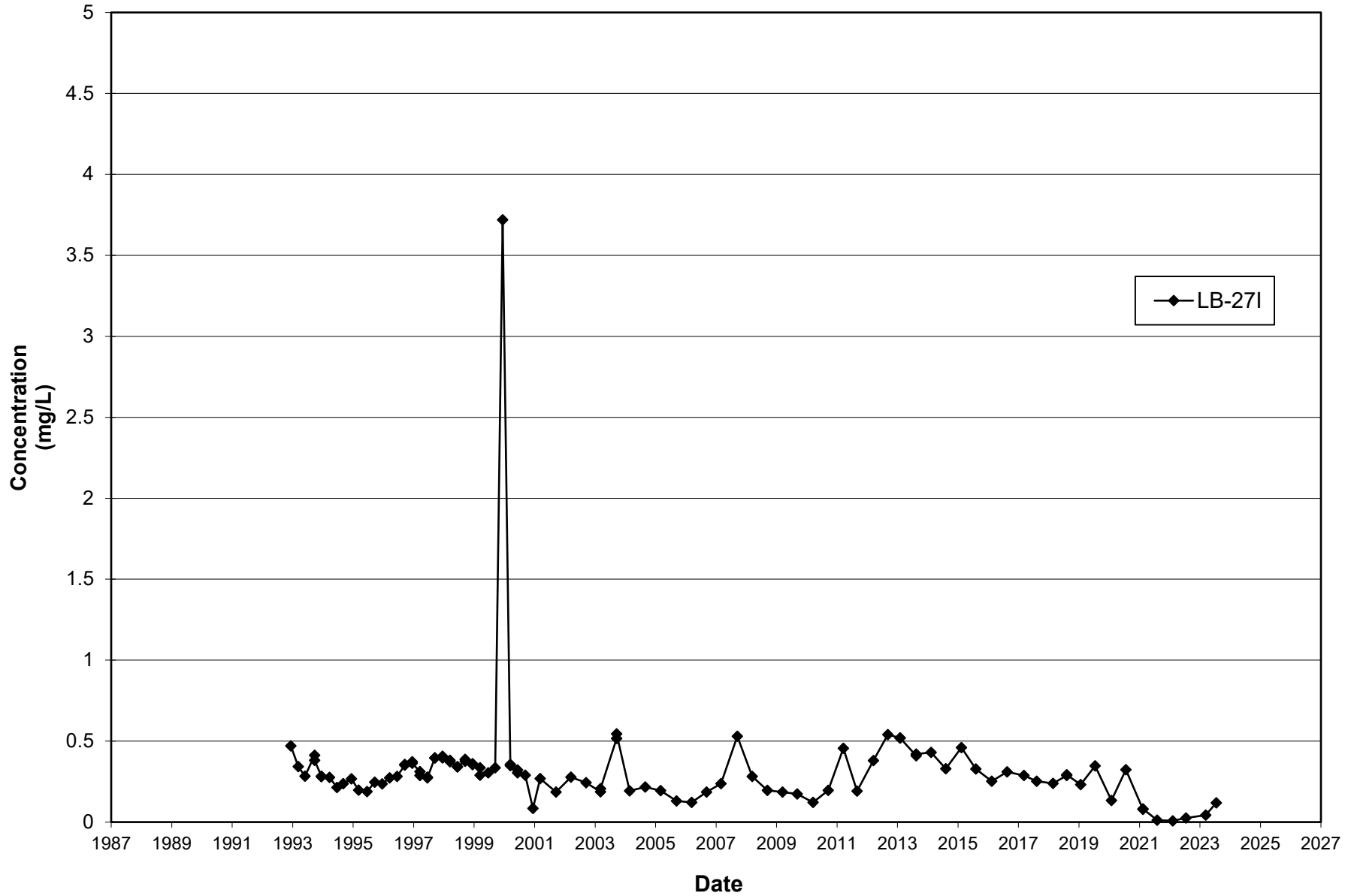
**Leichner Landfill
Dissolved Manganese, LB-26I
1987 - 2023**



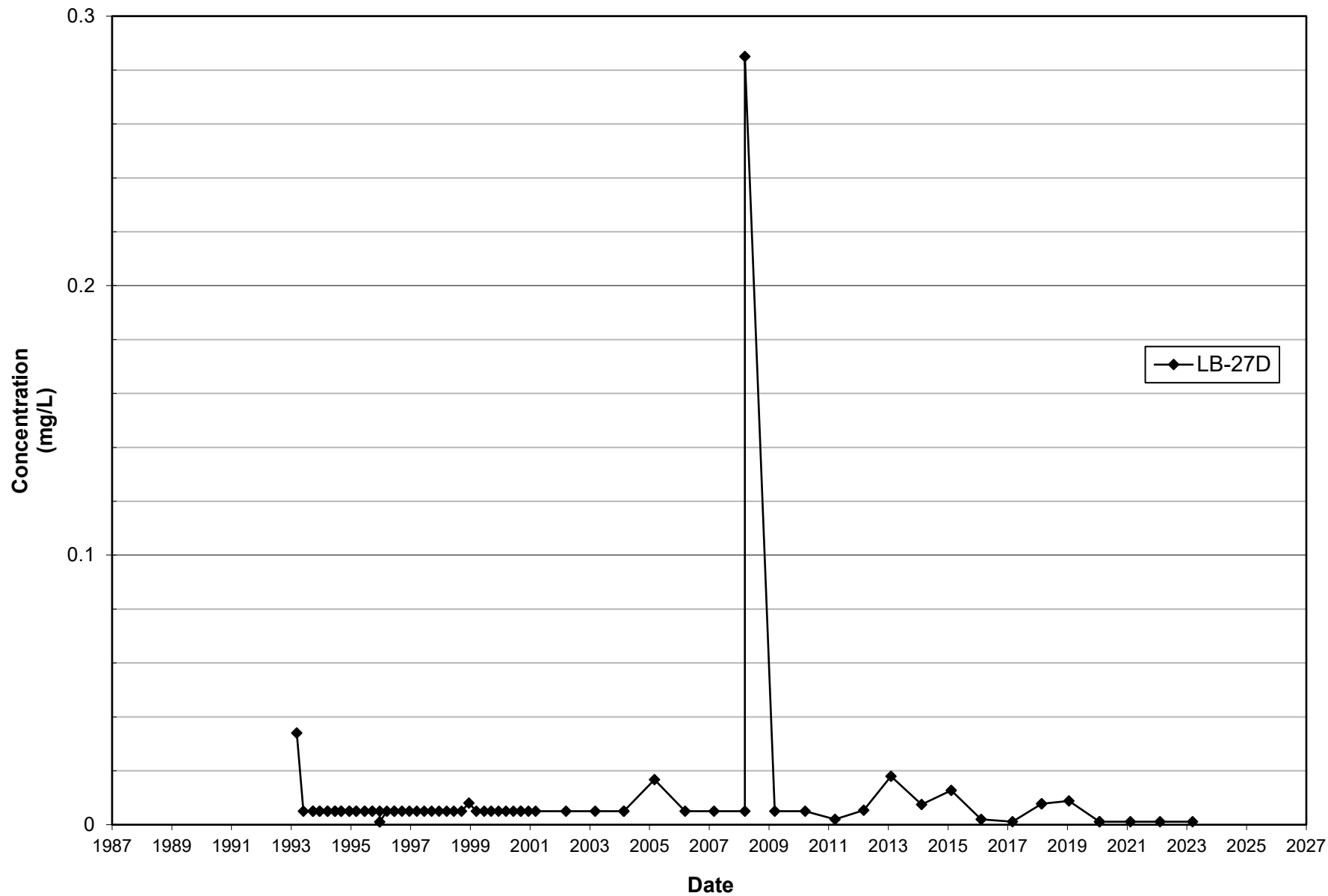
Leichner Landfill
Dissolved Manganese, LB-26D
1987 - 2023



Leichner Landfill
Dissolved Manganese, LB-271
1987 - 2023

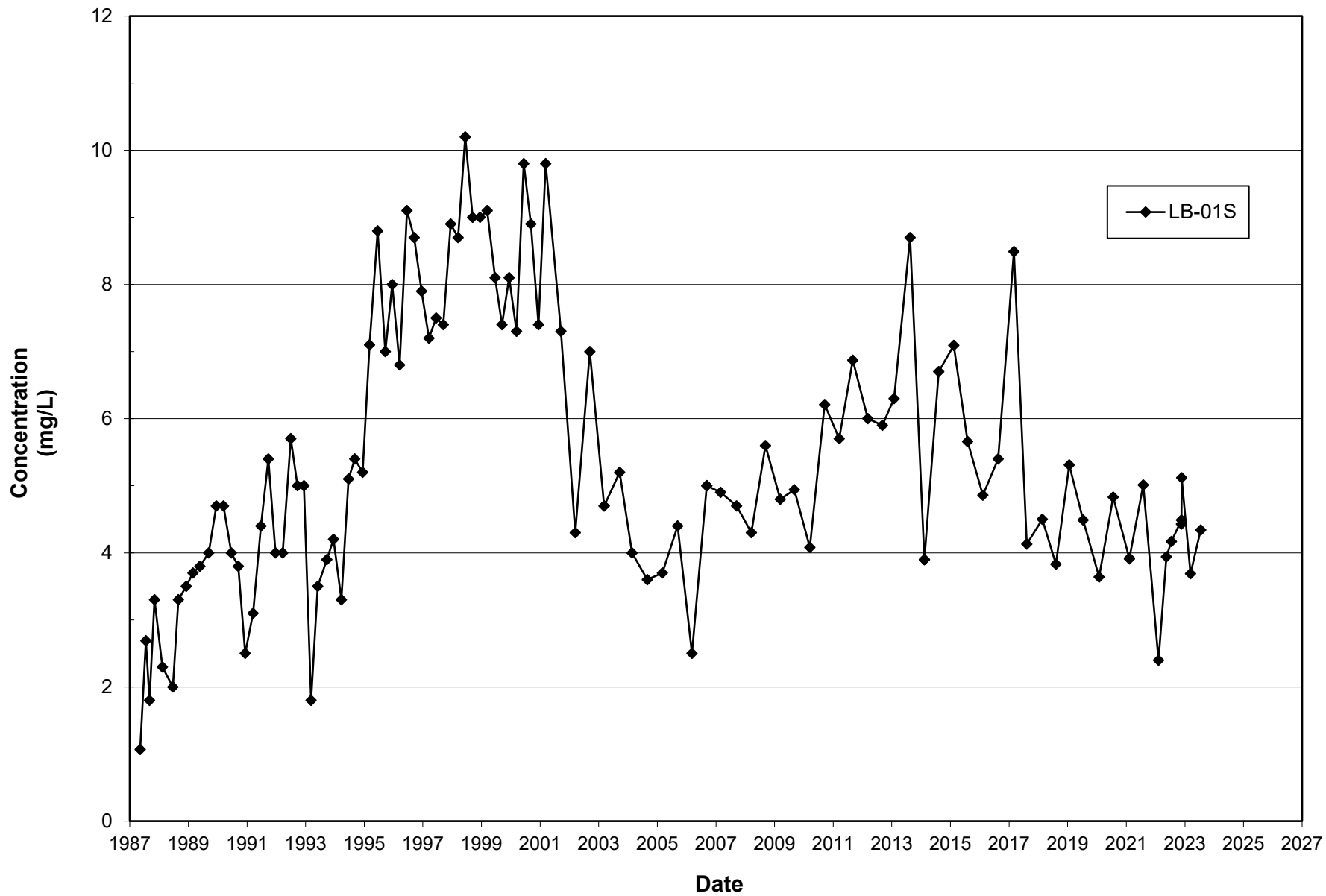


Leichner Landfill
Dissolved Manganese, LB-27D
1987 - 2023

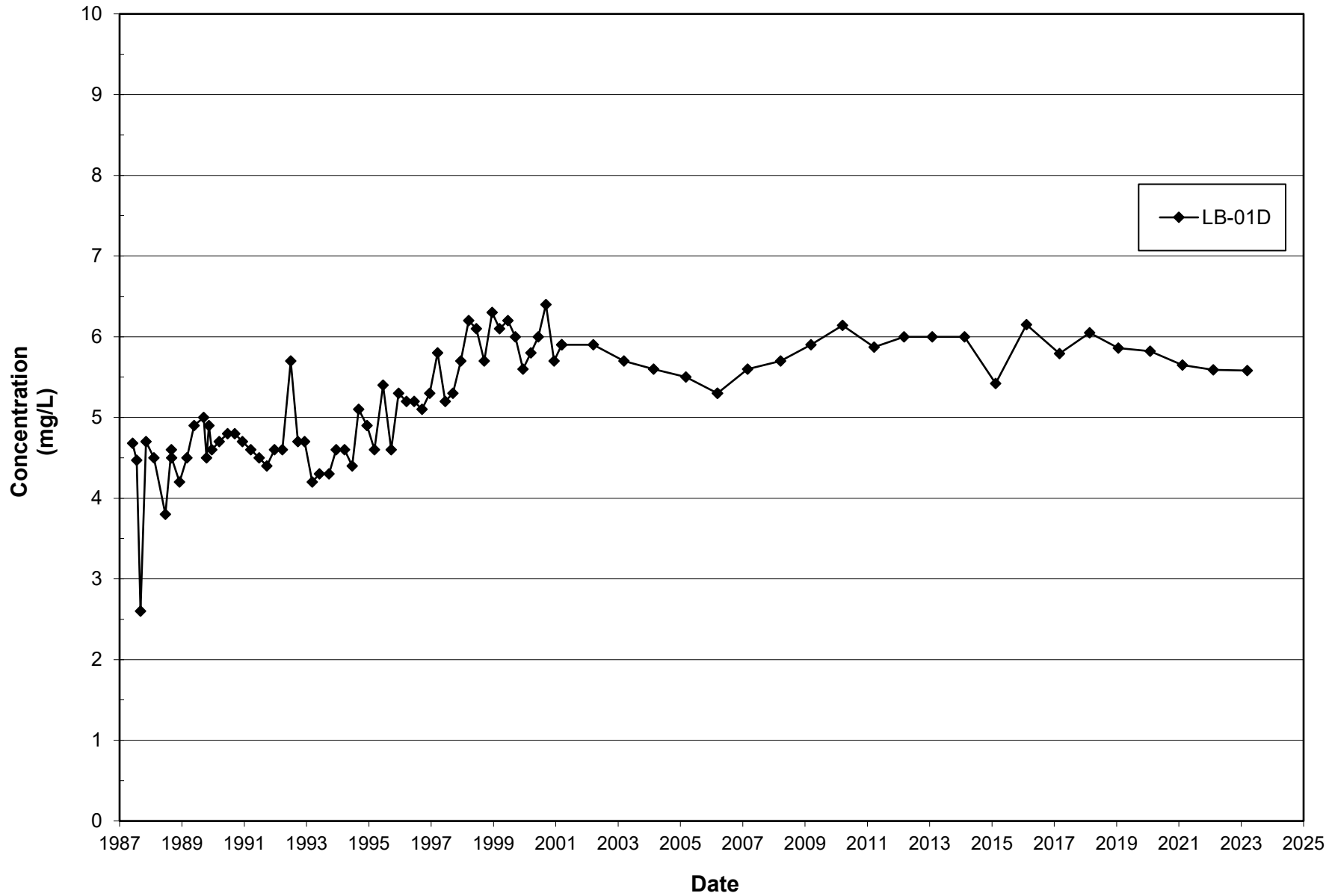


Nitrate

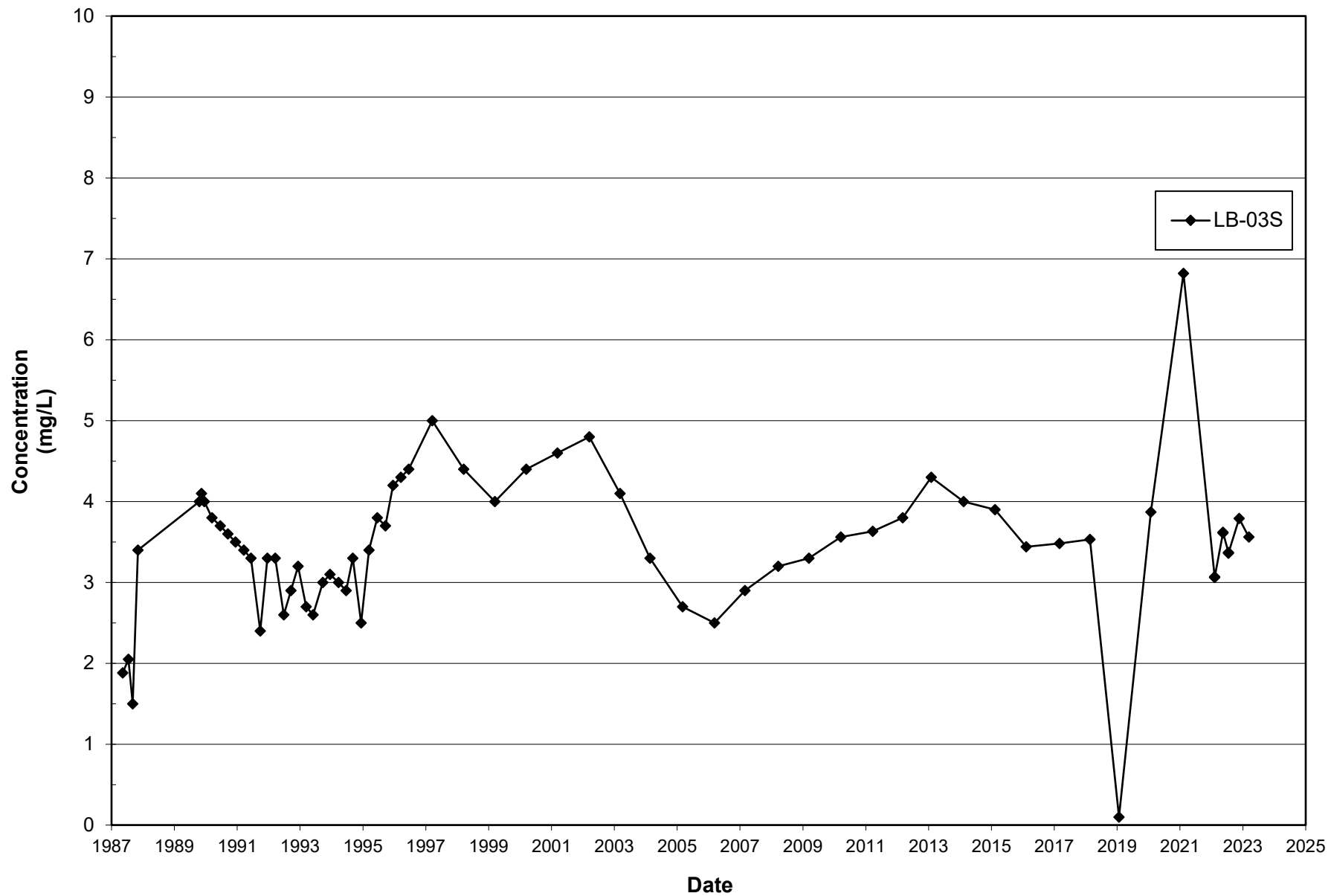
Leichner Landfill
Nitrate, LB-01S
1987 - 2023



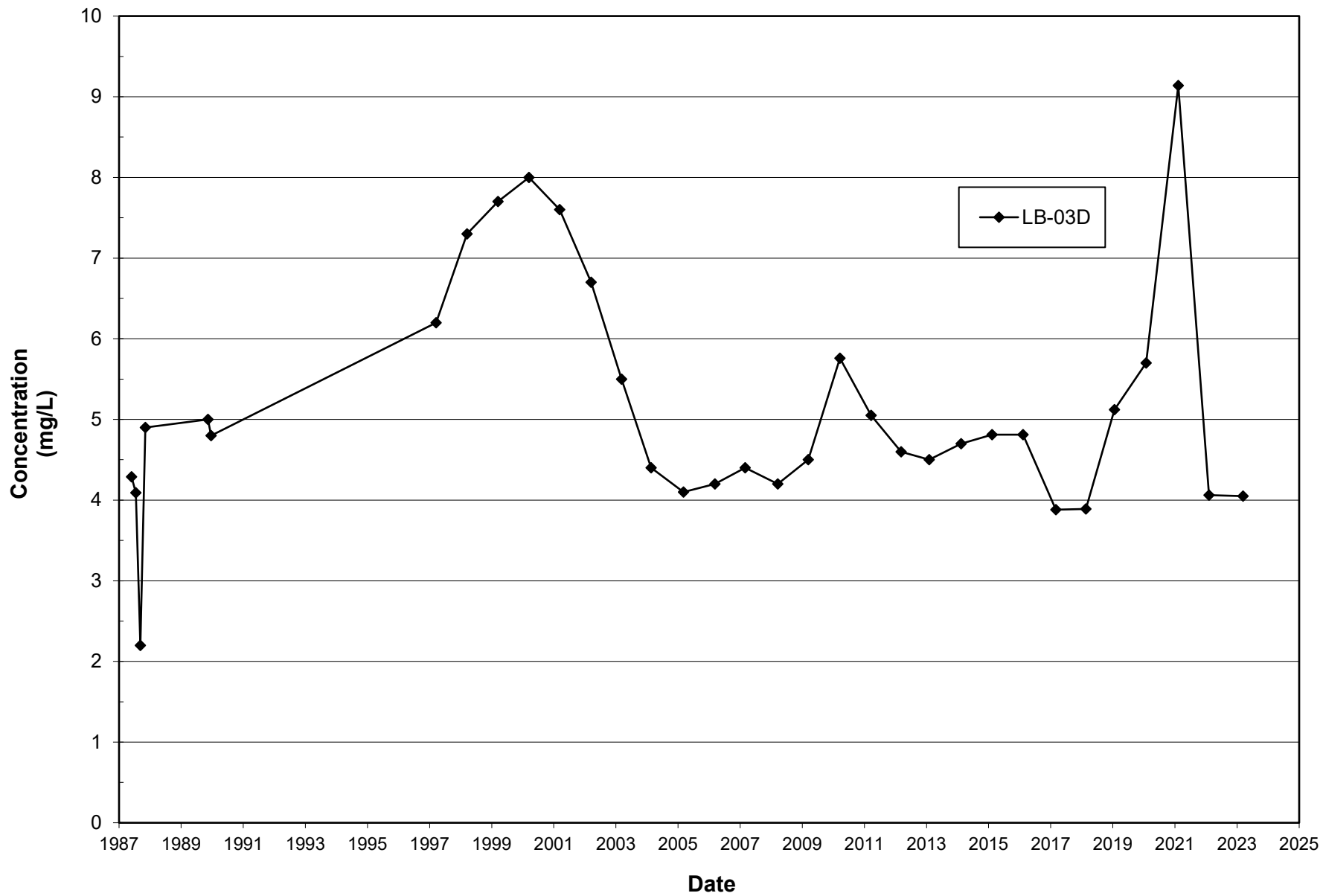
Leichner Landfill
Nitrate, LB-01D
1987 - 2023



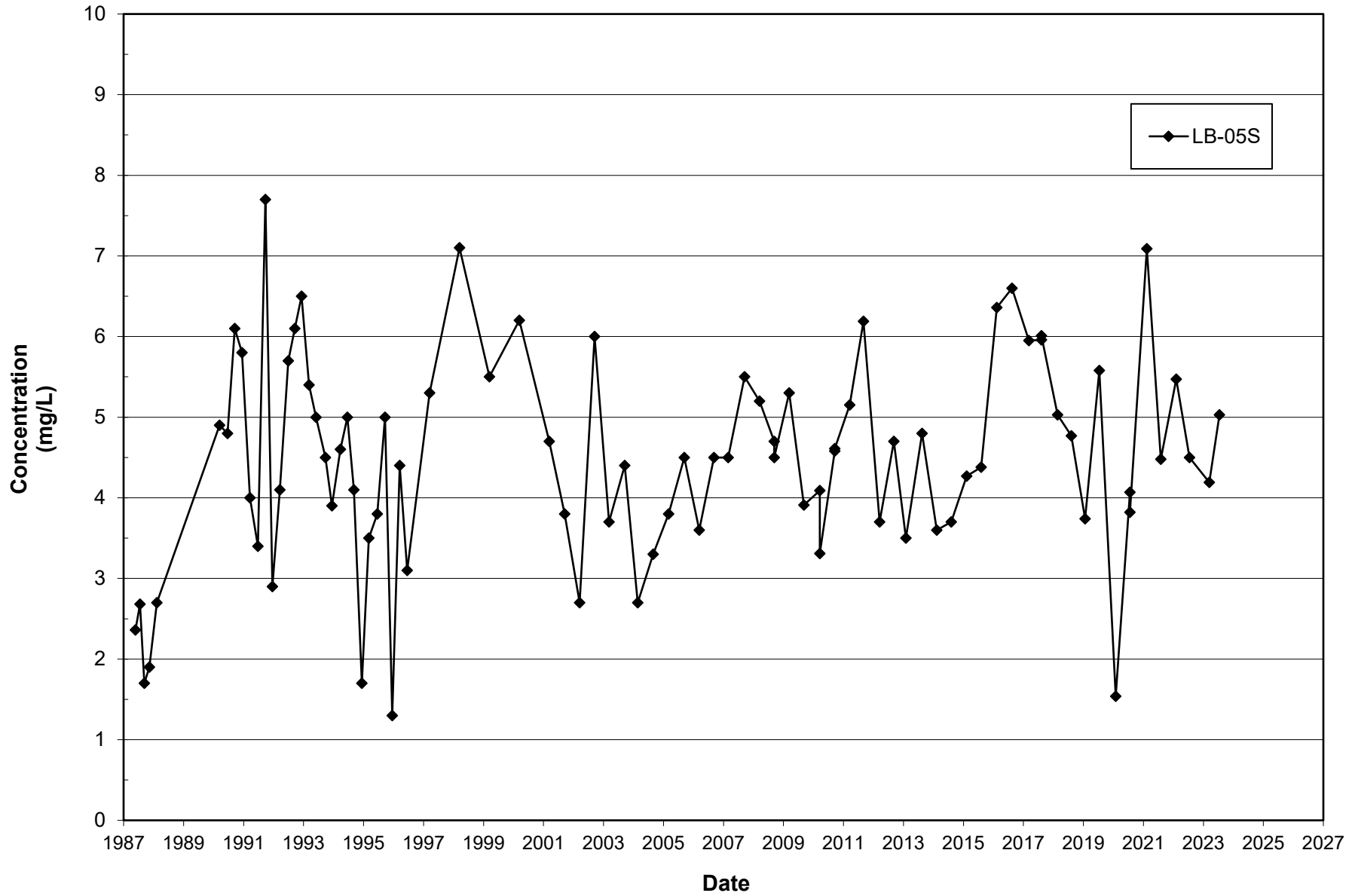
Leichner Landfill
Nitrate, LB-03S
1987 - 2023



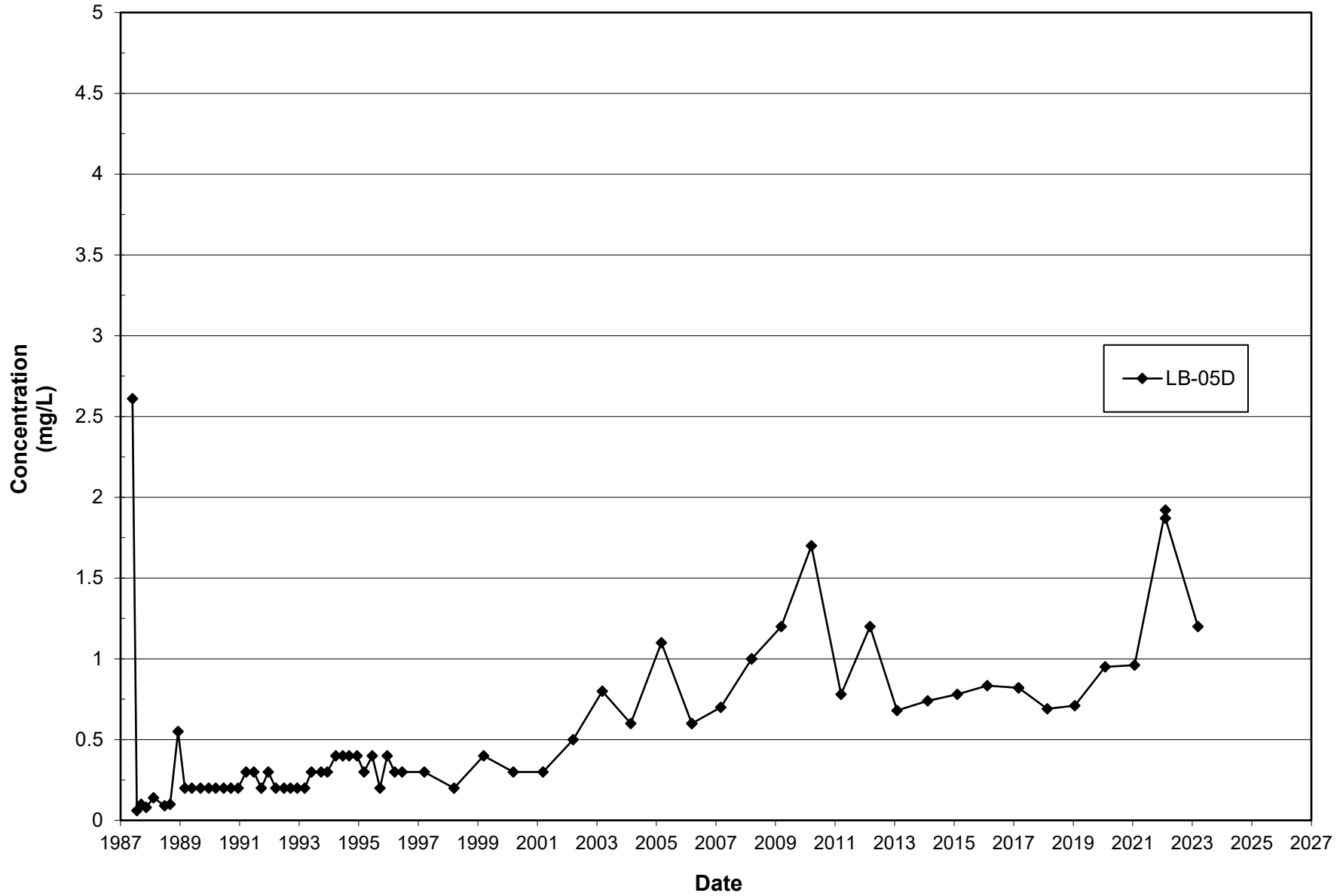
Leichner Landfill
Nitrate, LB-03D
1987 - 2023



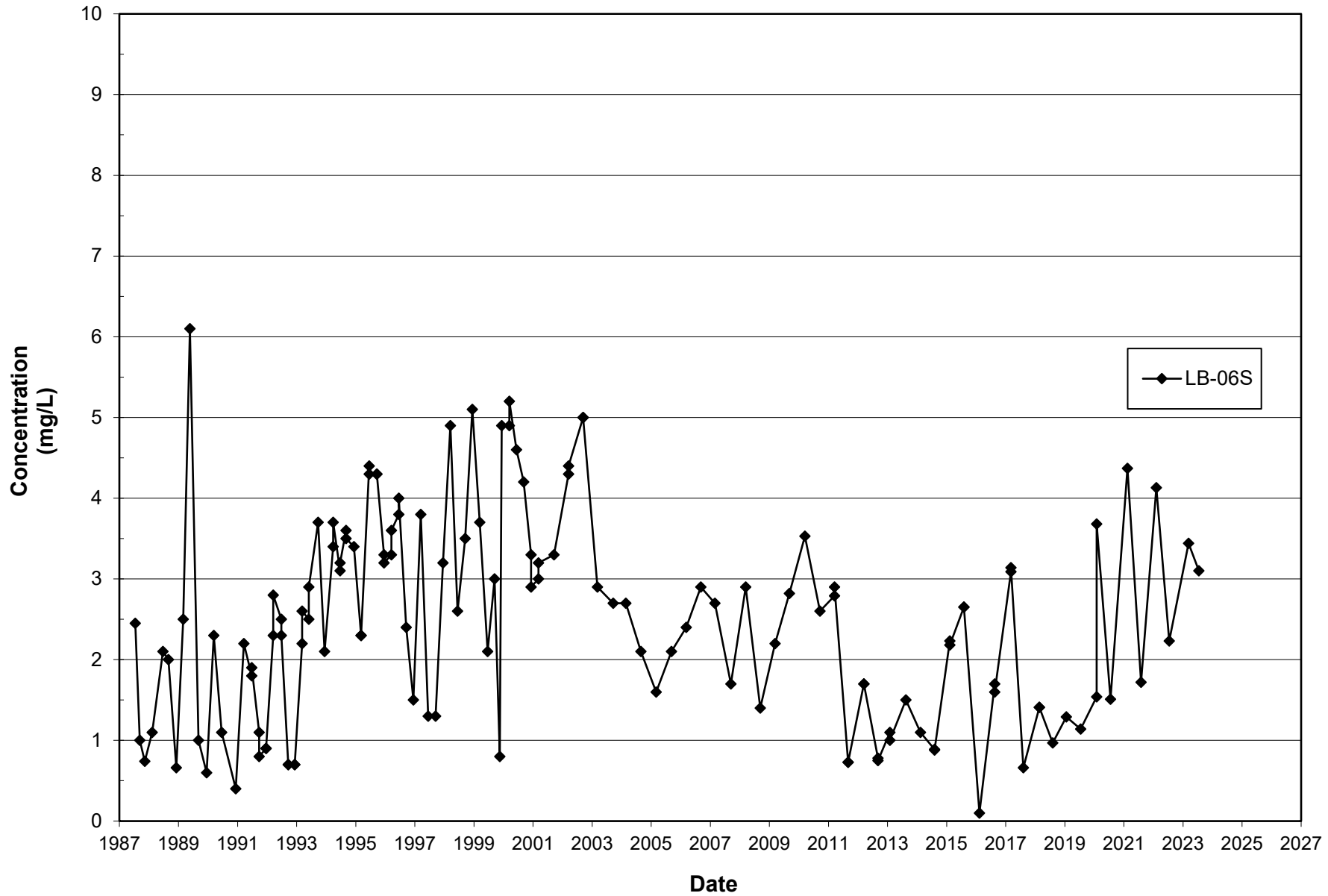
Leichner Landfill
Nitrate, LB-05S
1987 - 2023



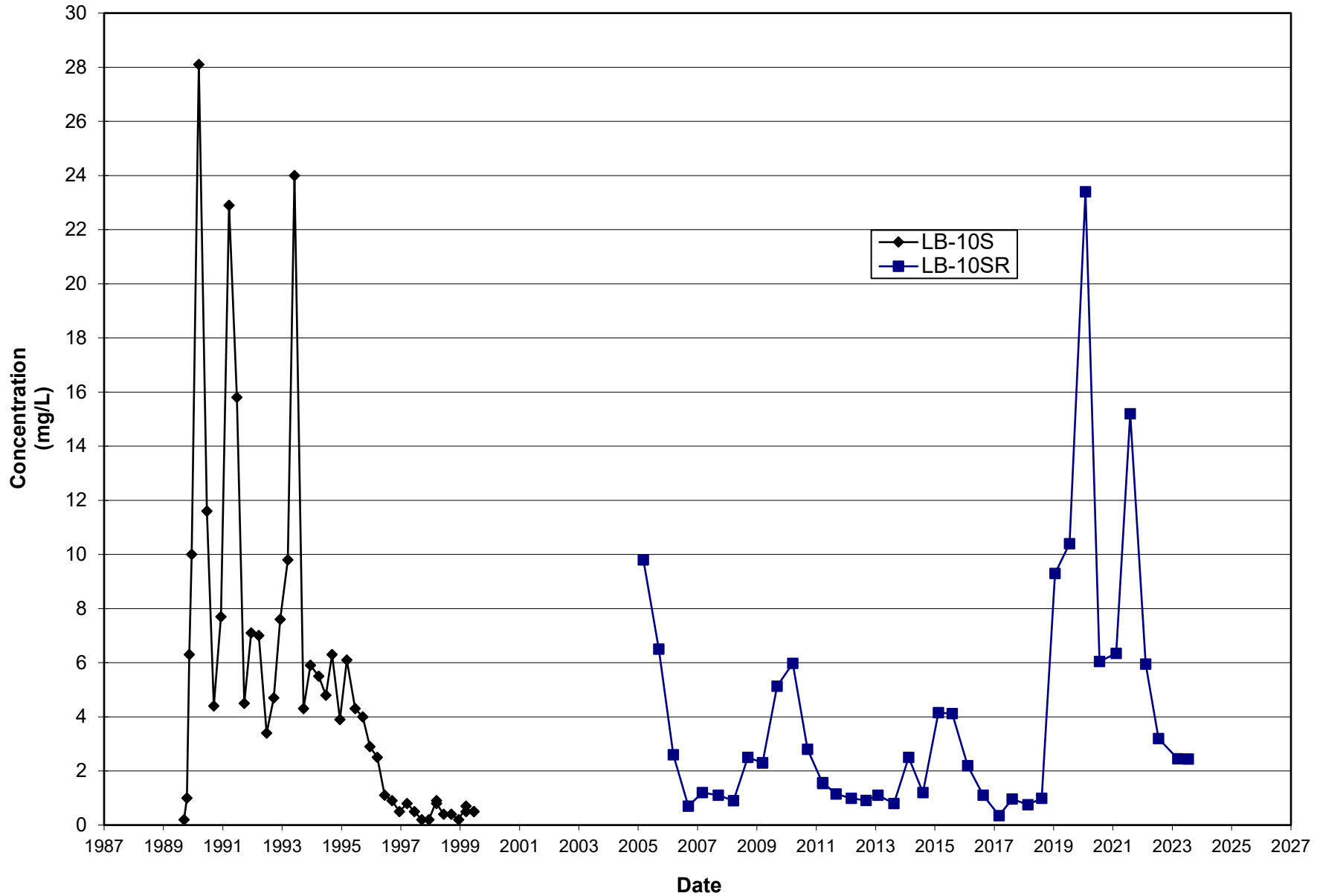
Leichner Landfill
Nitrate, LB-05D
1987 - 2023



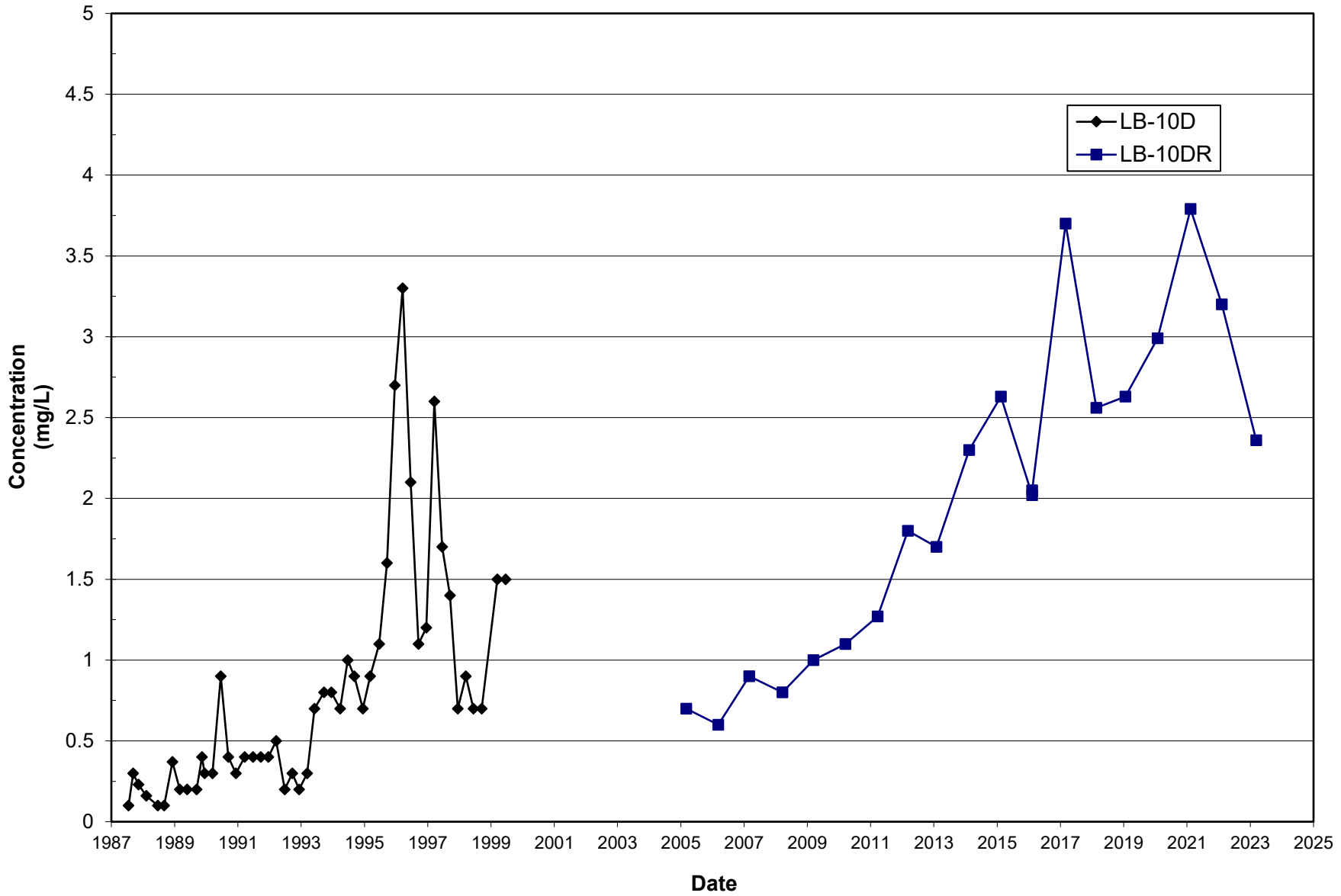
Leichner Landfill
Nitrate, LB-06S
1987 - 2023



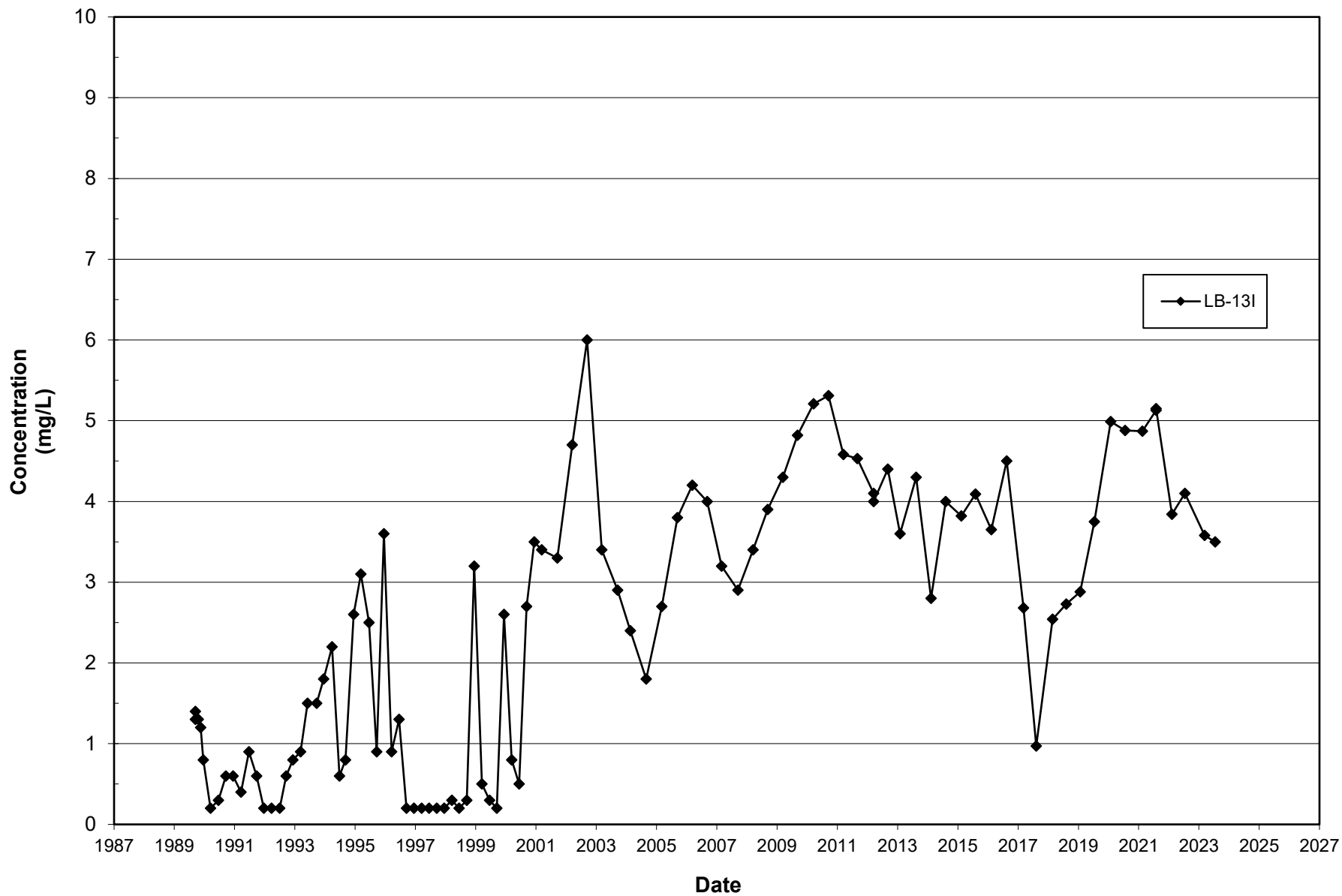
Leichner Landfill
Nitrate, LB-10S and LB-10SR
1987 - 2023



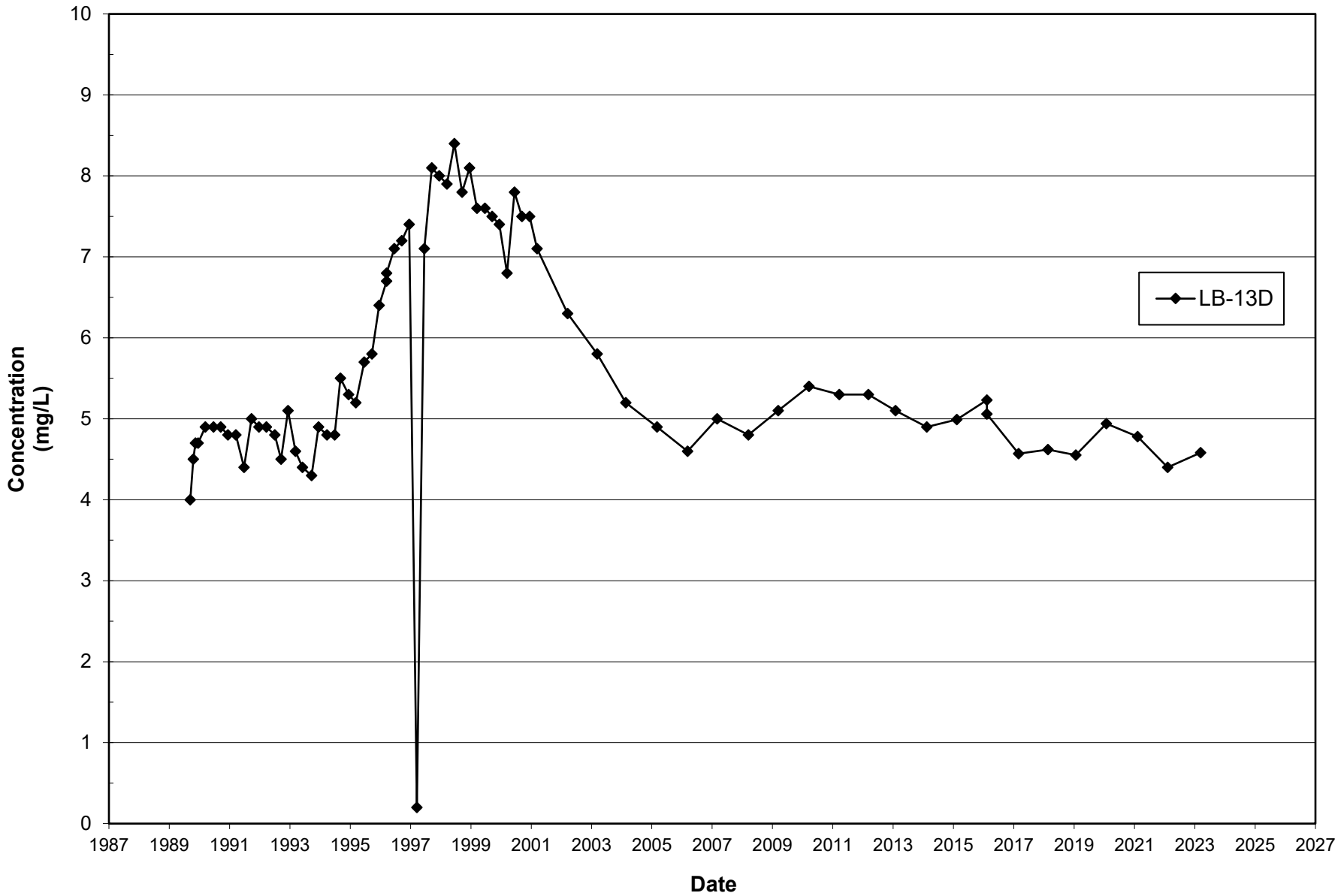
Leichner Landfill
Nitrate, LB-10D and LB-10DR
1987 - 2023



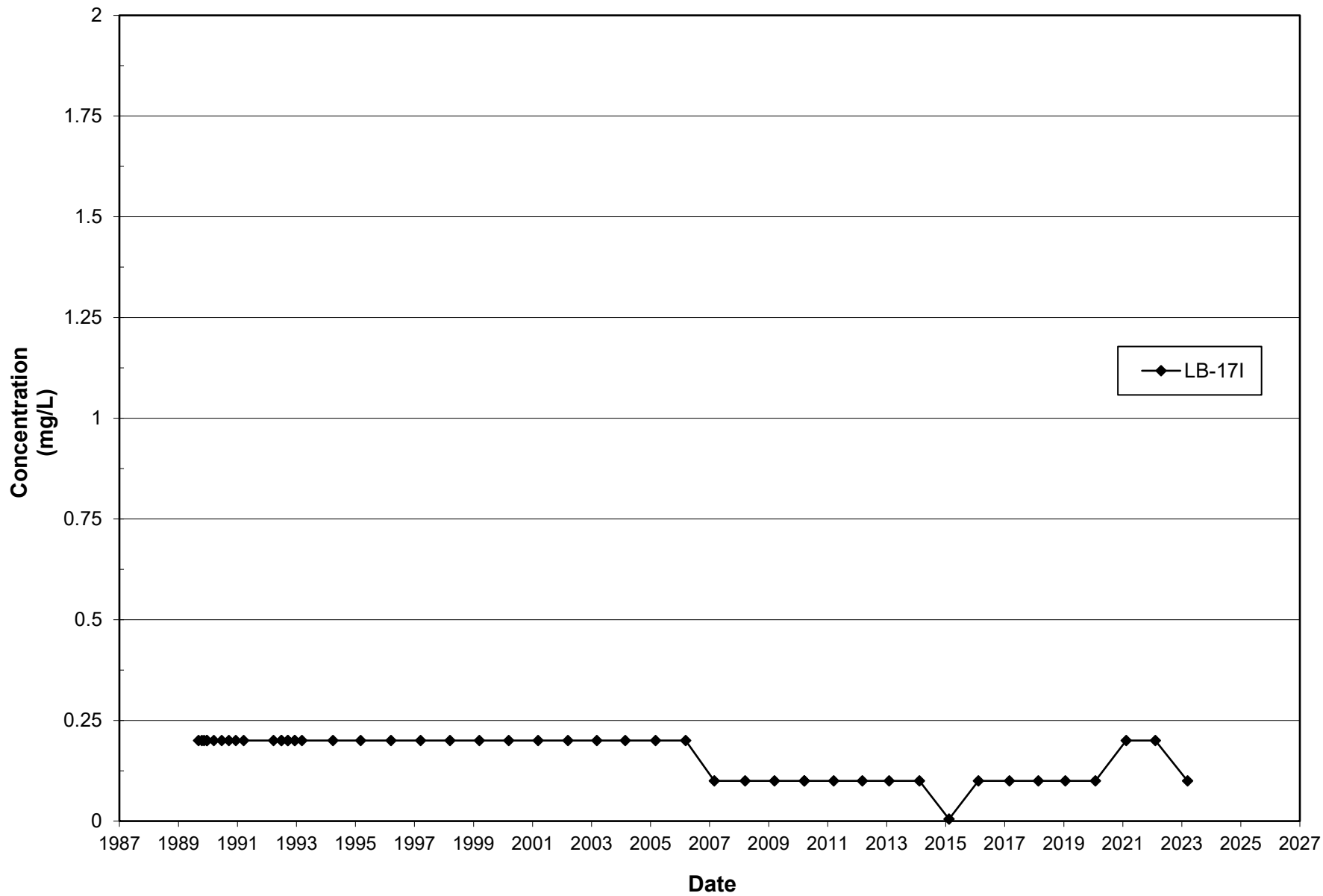
Leichner Landfill
Nitrate, LB-13I
1987 - 2023



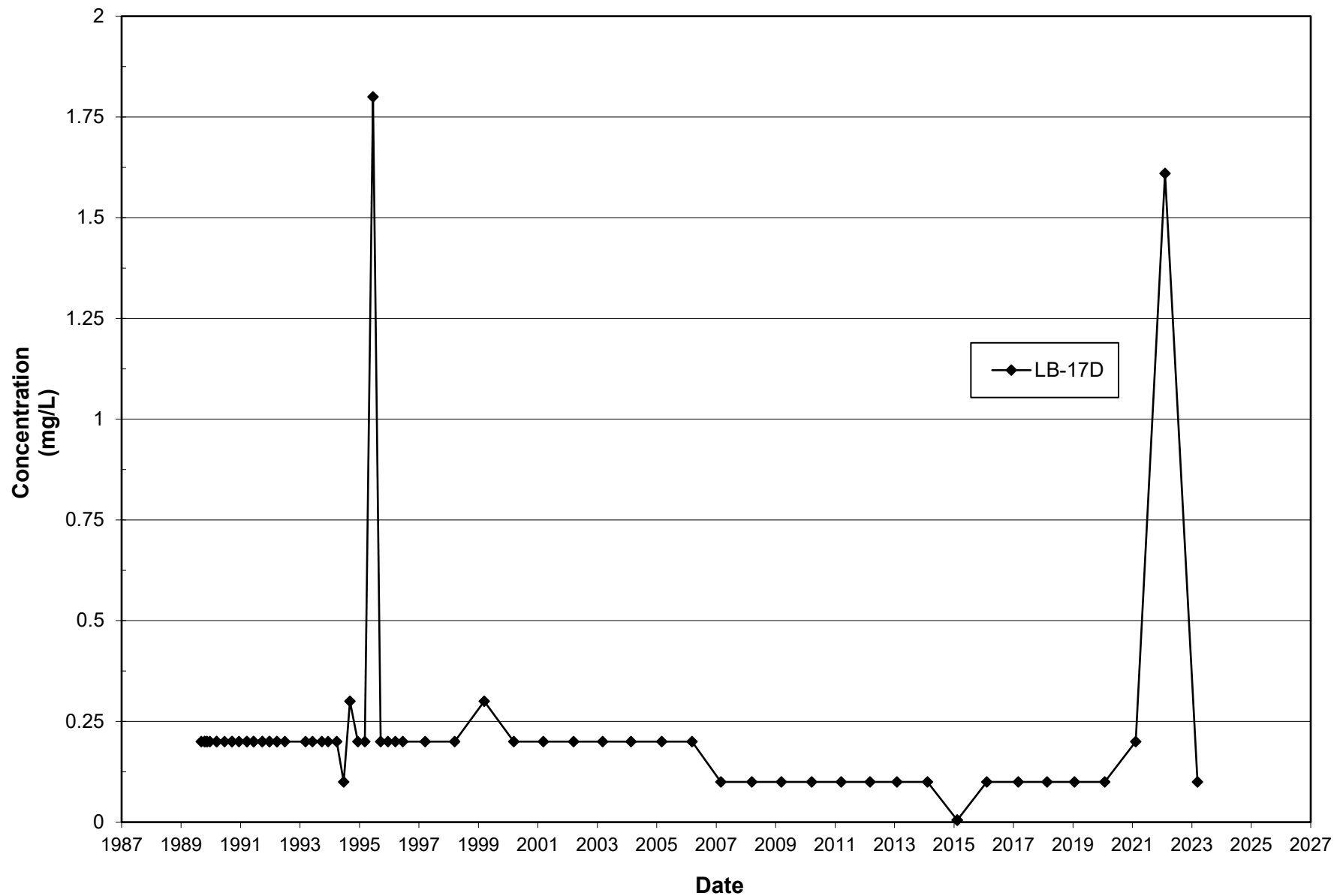
Leichner Landfill
Nitrate, LB-13D
1987 - 2023



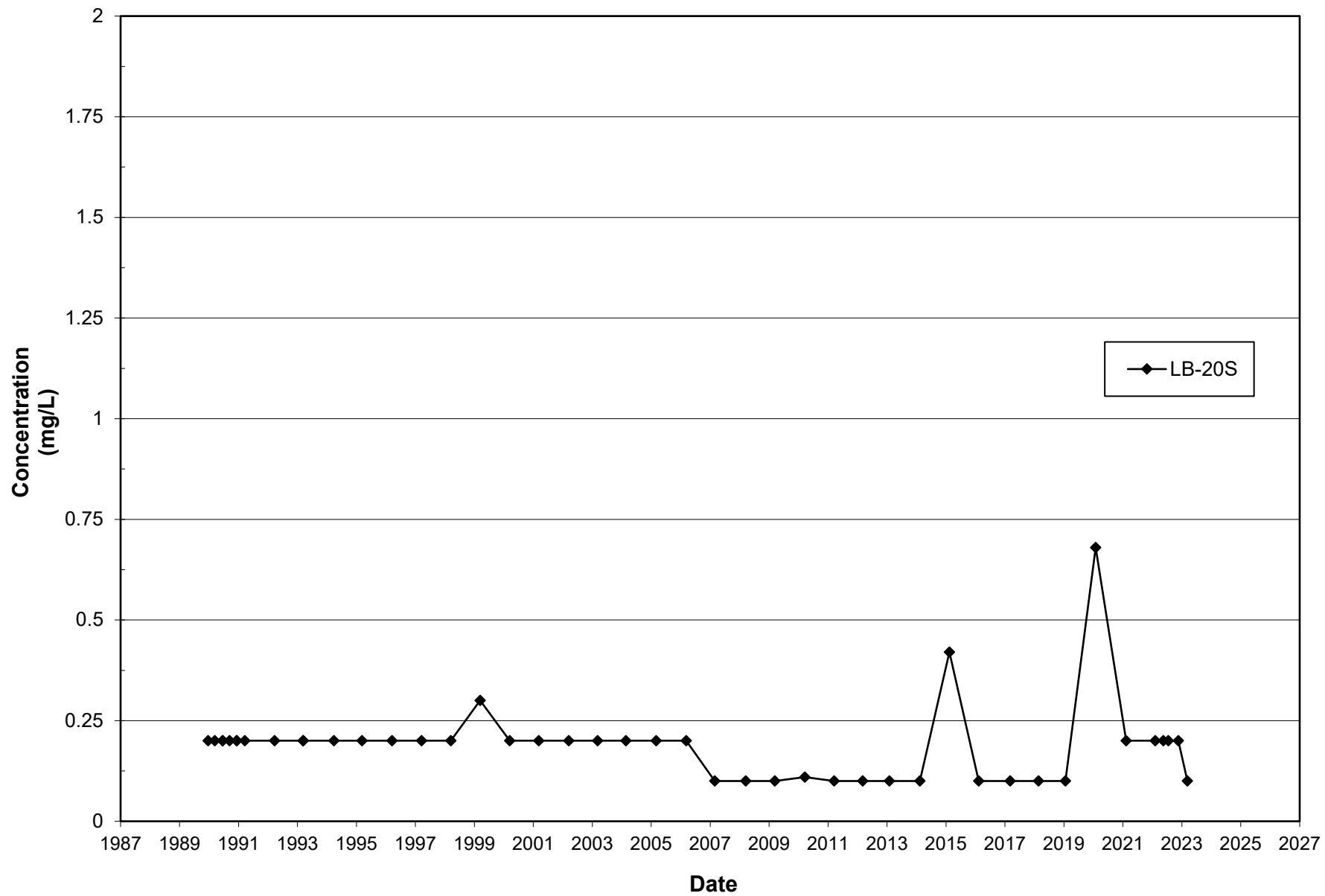
Leichner Landfill
Nitrate, LB-17I
1987 - 2023



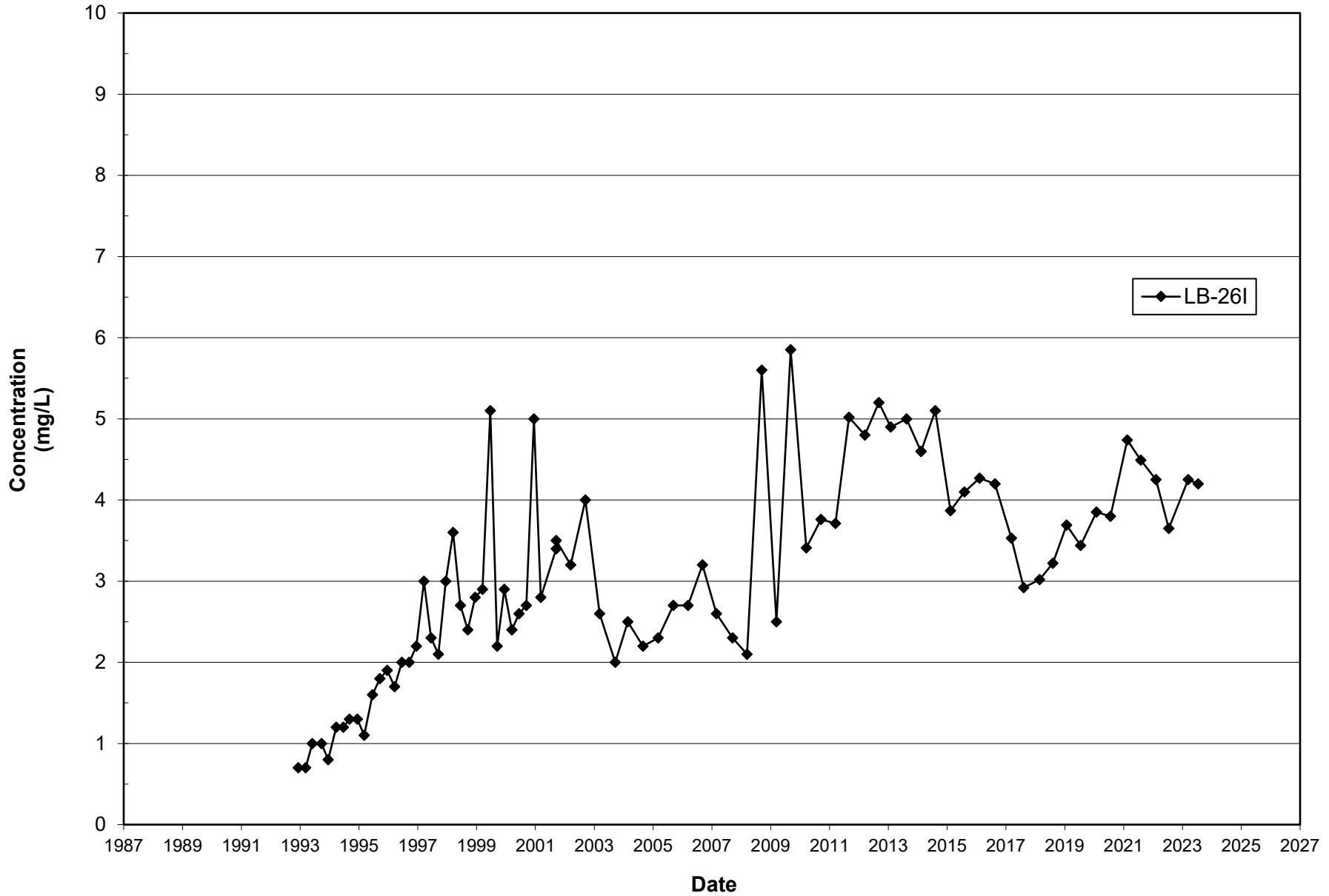
Leichner Landfill
Nitrate, LB-17D
1987 - 2023



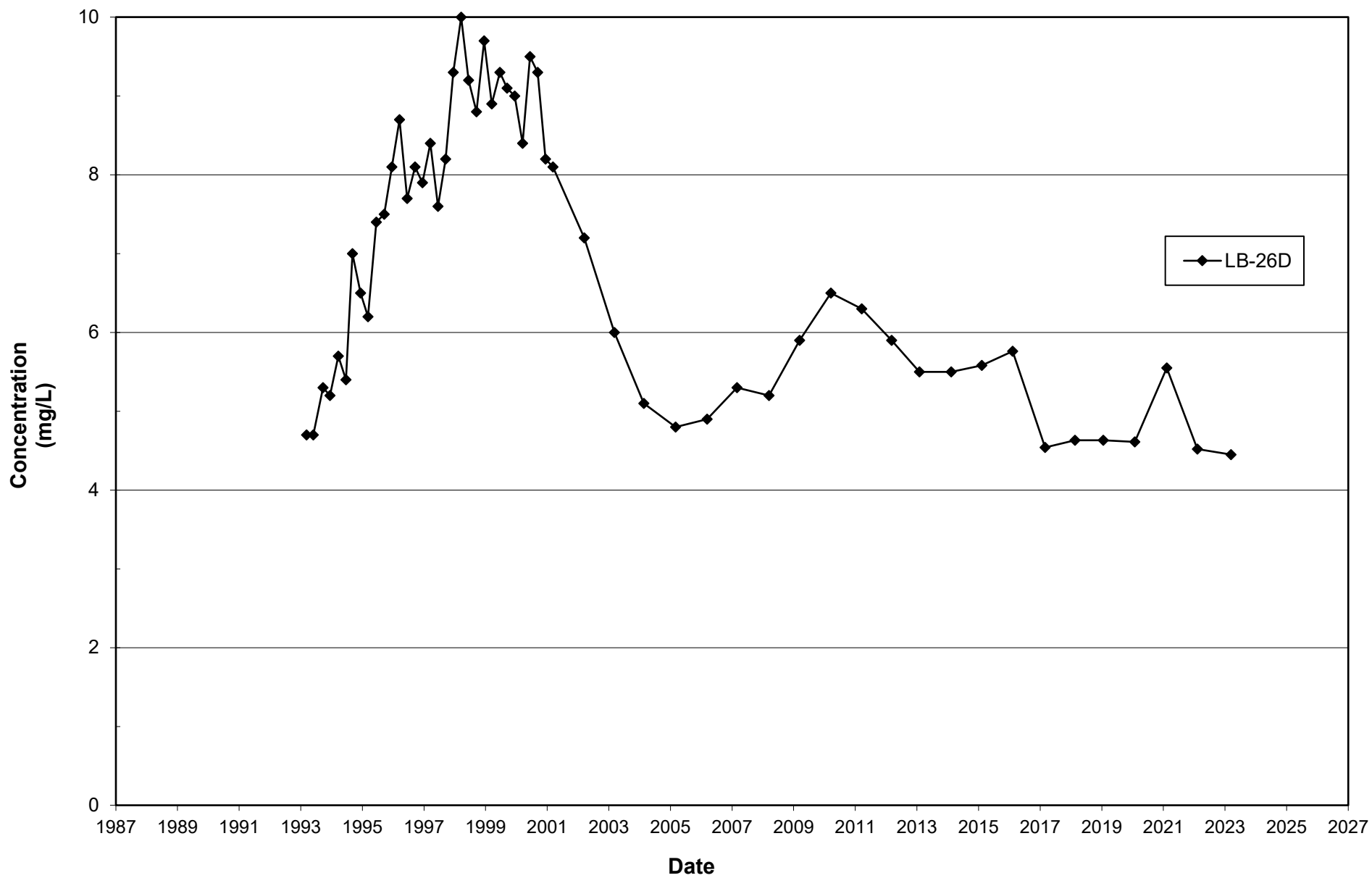
Leichner Landfill
Nitrate, LB-20S
1987 - 2023



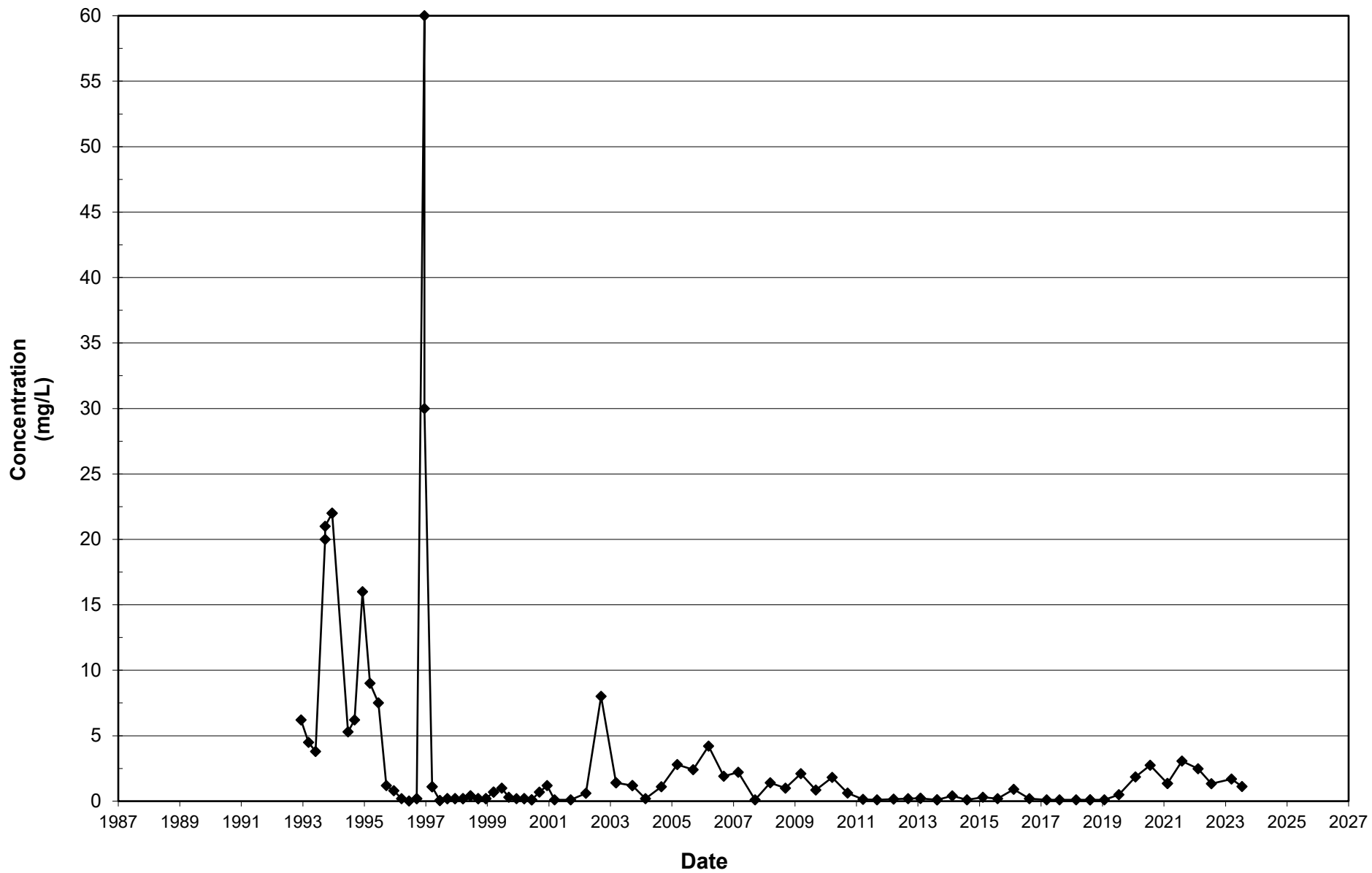
Leichner Landfill
Nitrate, LB-26I
1987 - 2023



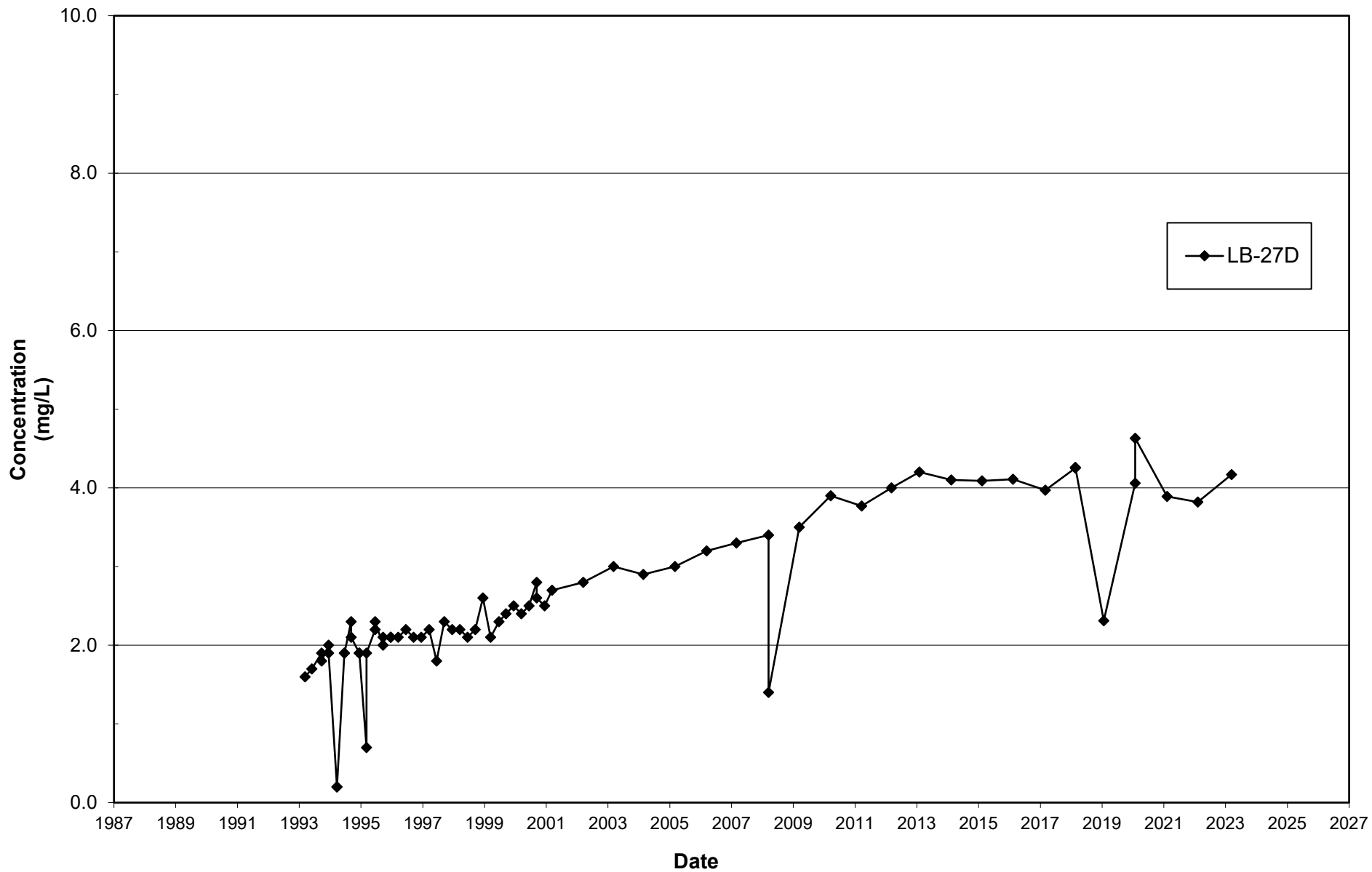
Leichner Landfill
Nitrate, LB-26D
1987 - 2023



Leichner Landfill
Nitrate, LB-27I
1987 - 2023

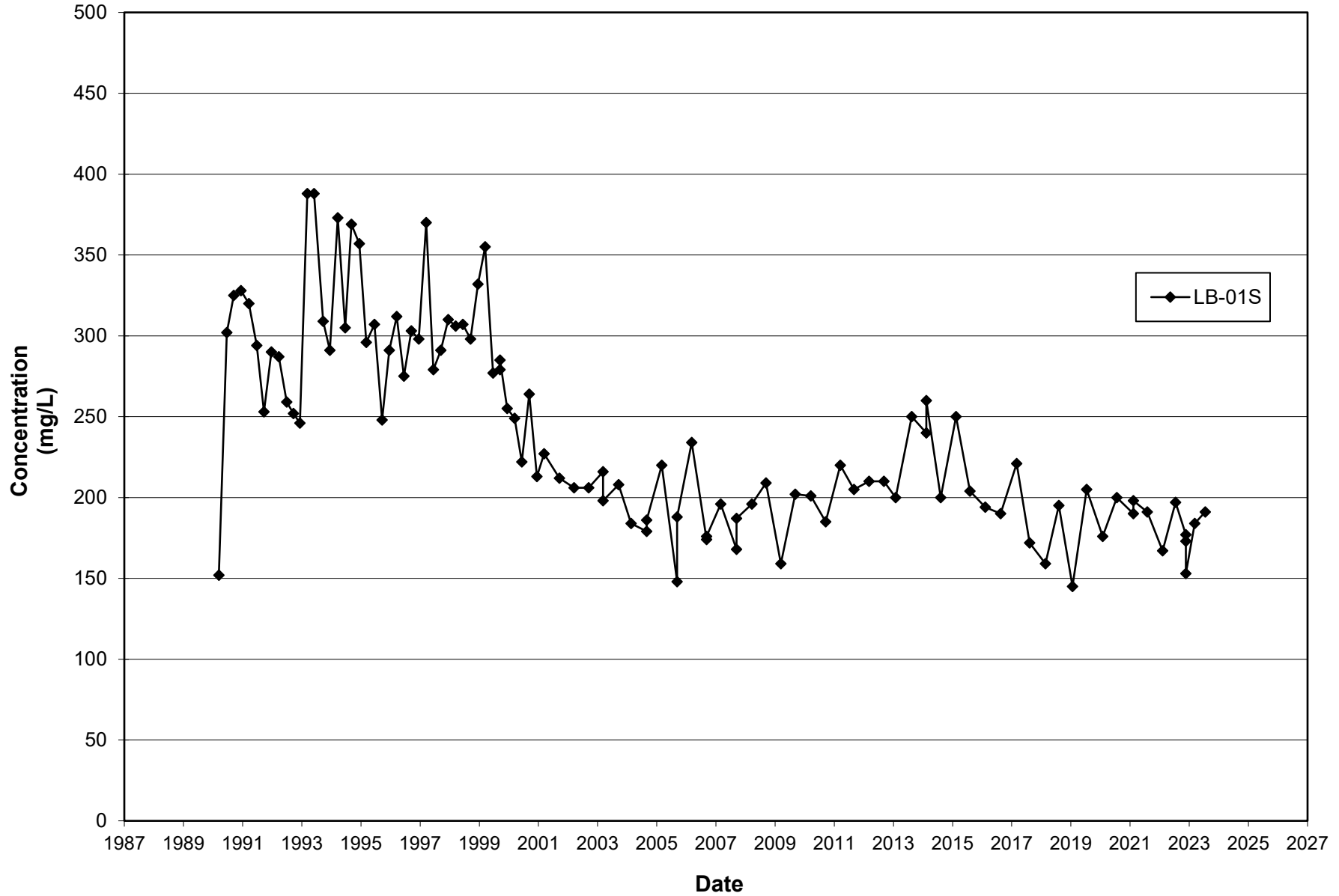


Leichner Landfill
Nitrate, LB-27D
1987 - 2023

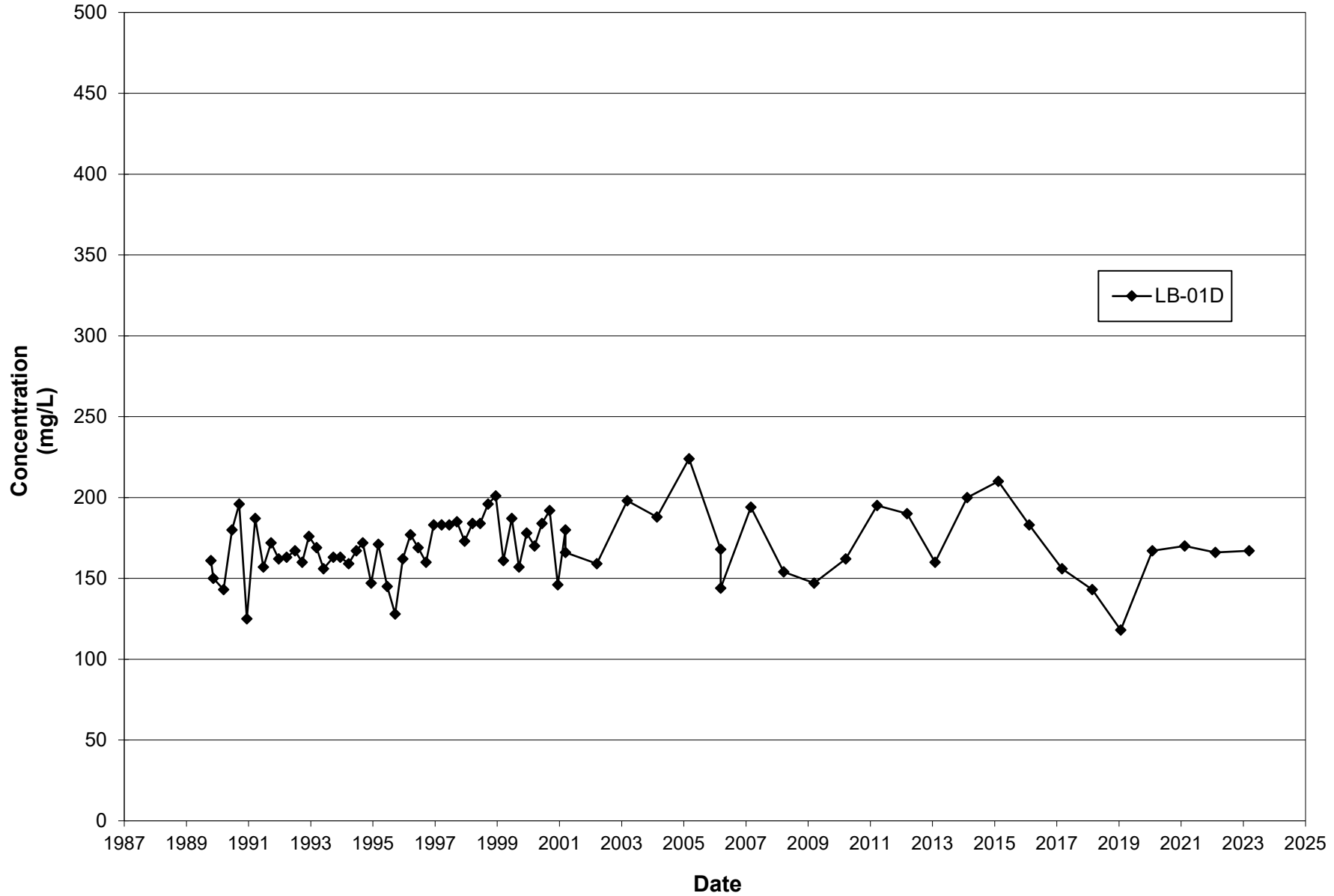


Total Dissolved Solids

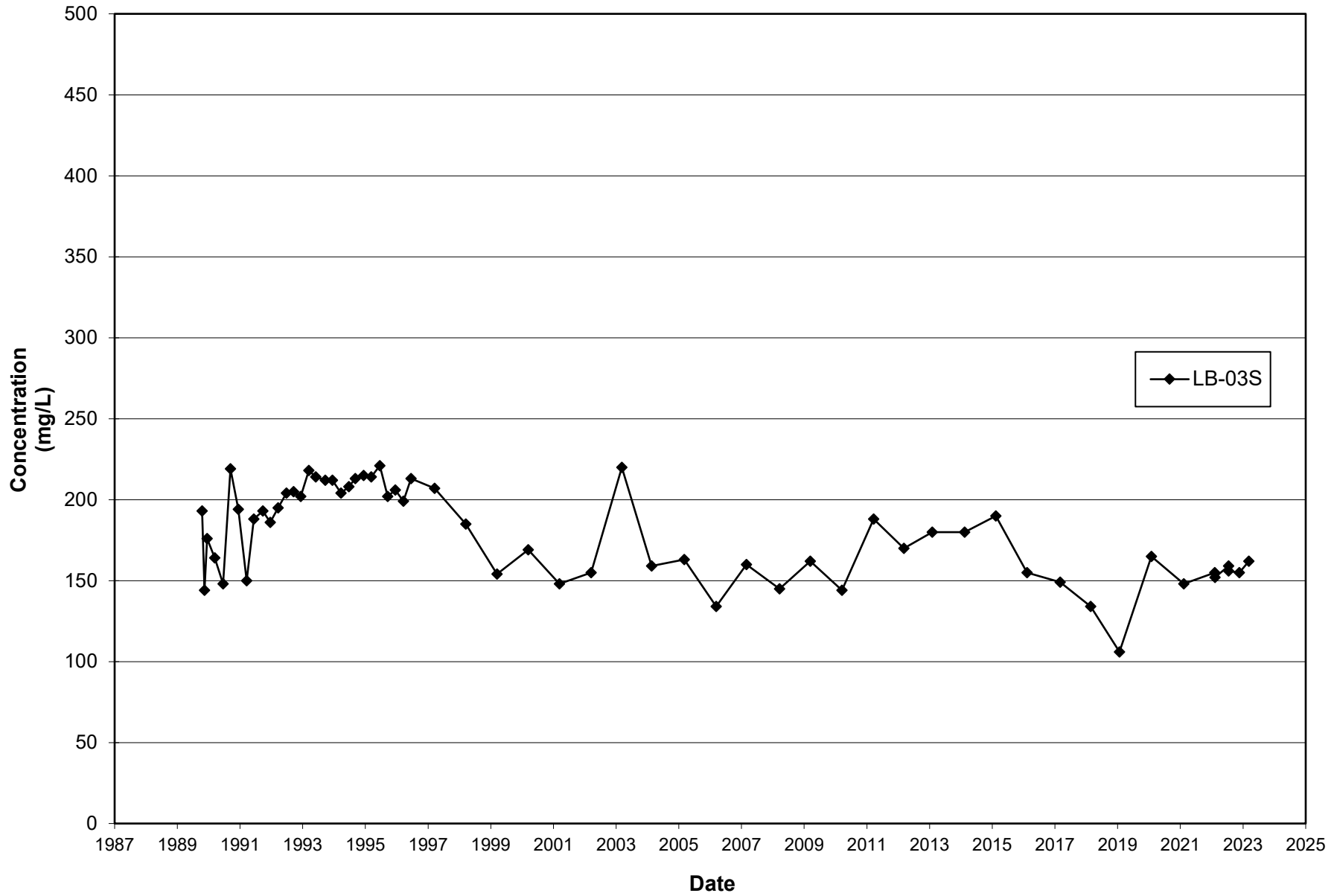
Leichner Landfill
Total Dissolved Solids, LB-01S
1987 - 2023



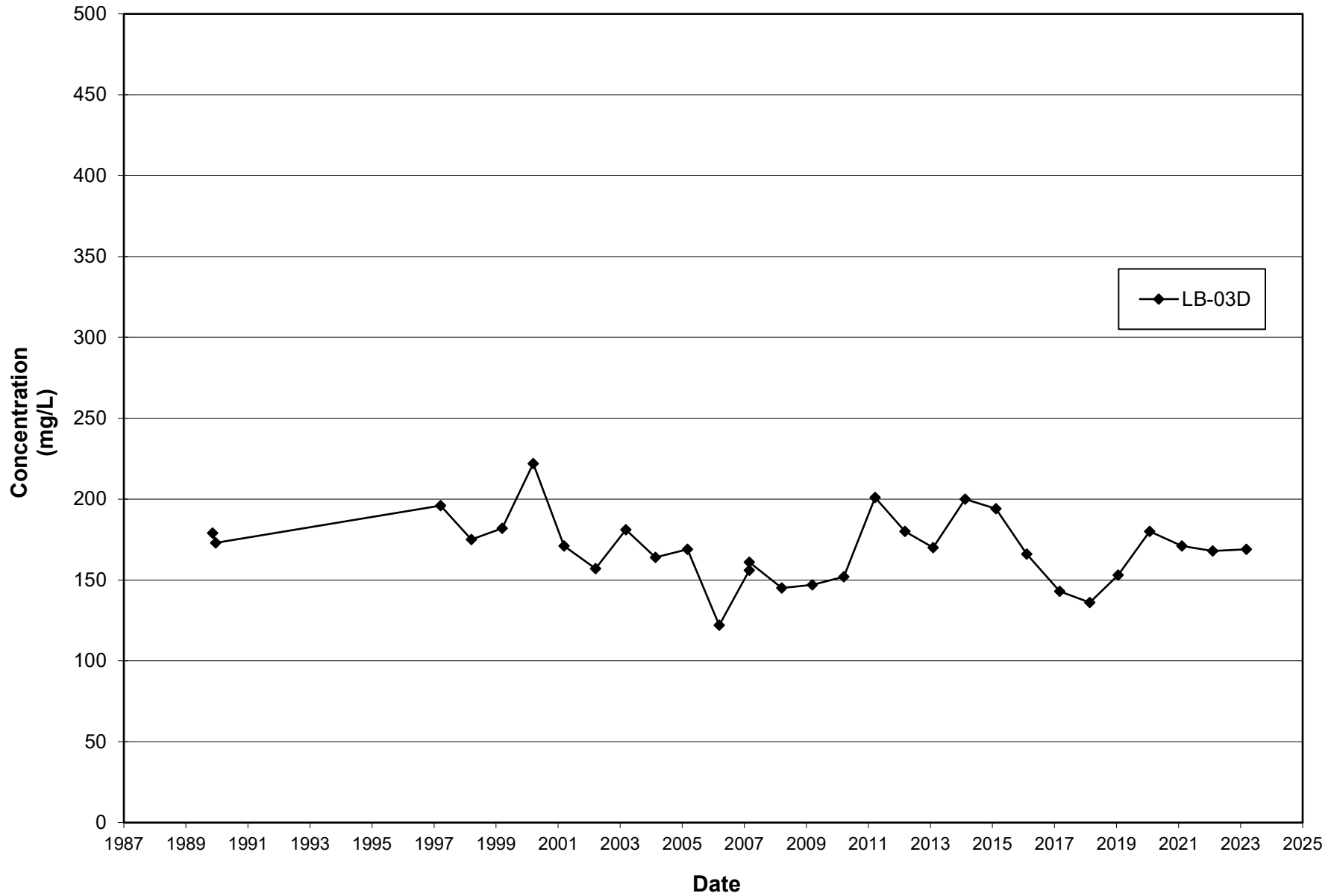
Leichner Landfill
Total Dissolved Solids, LB-01D
1987 - 2023



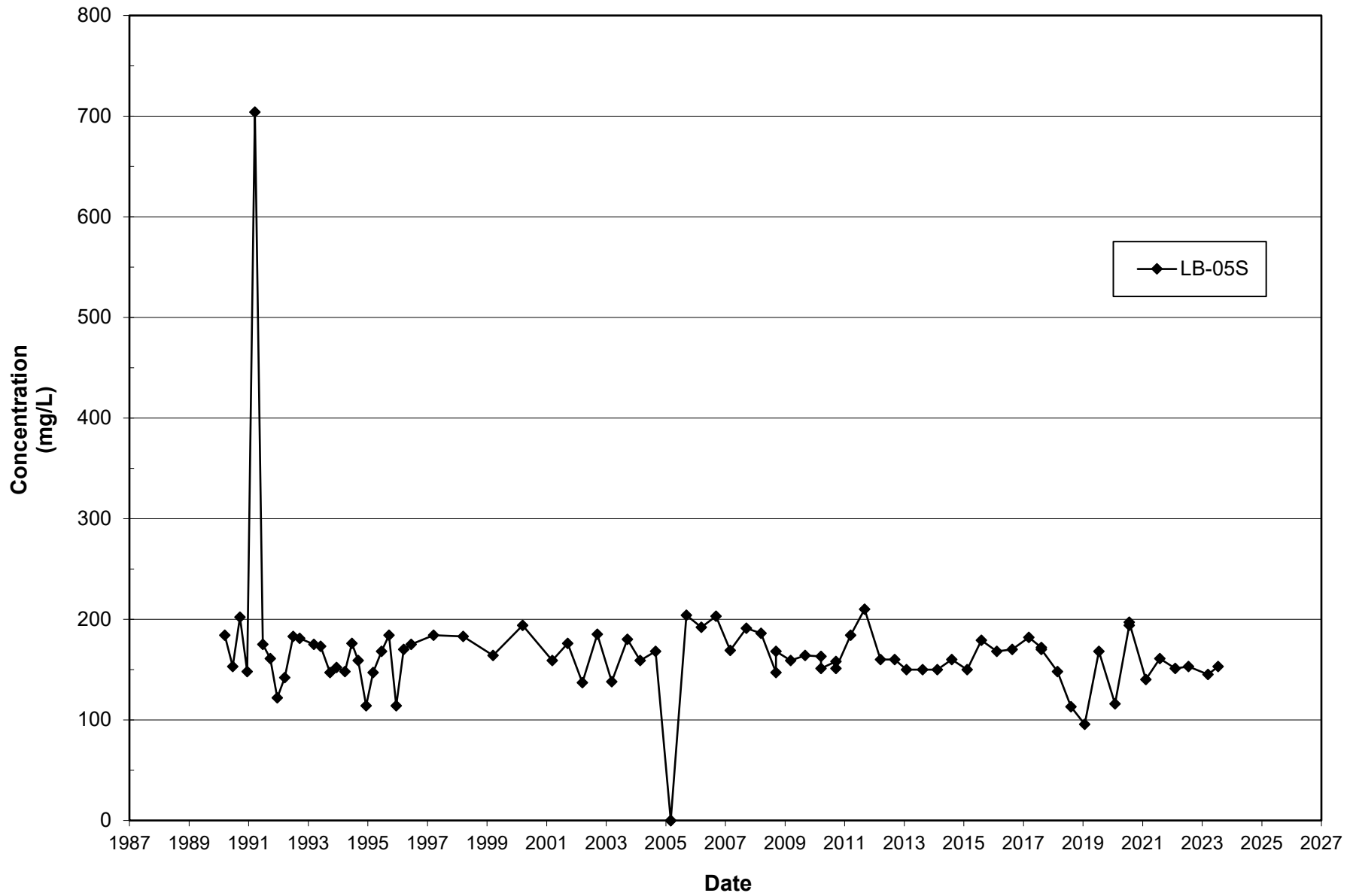
Leichner Landfill
Total Dissolved Solids, LB-03S
1987 - 2023



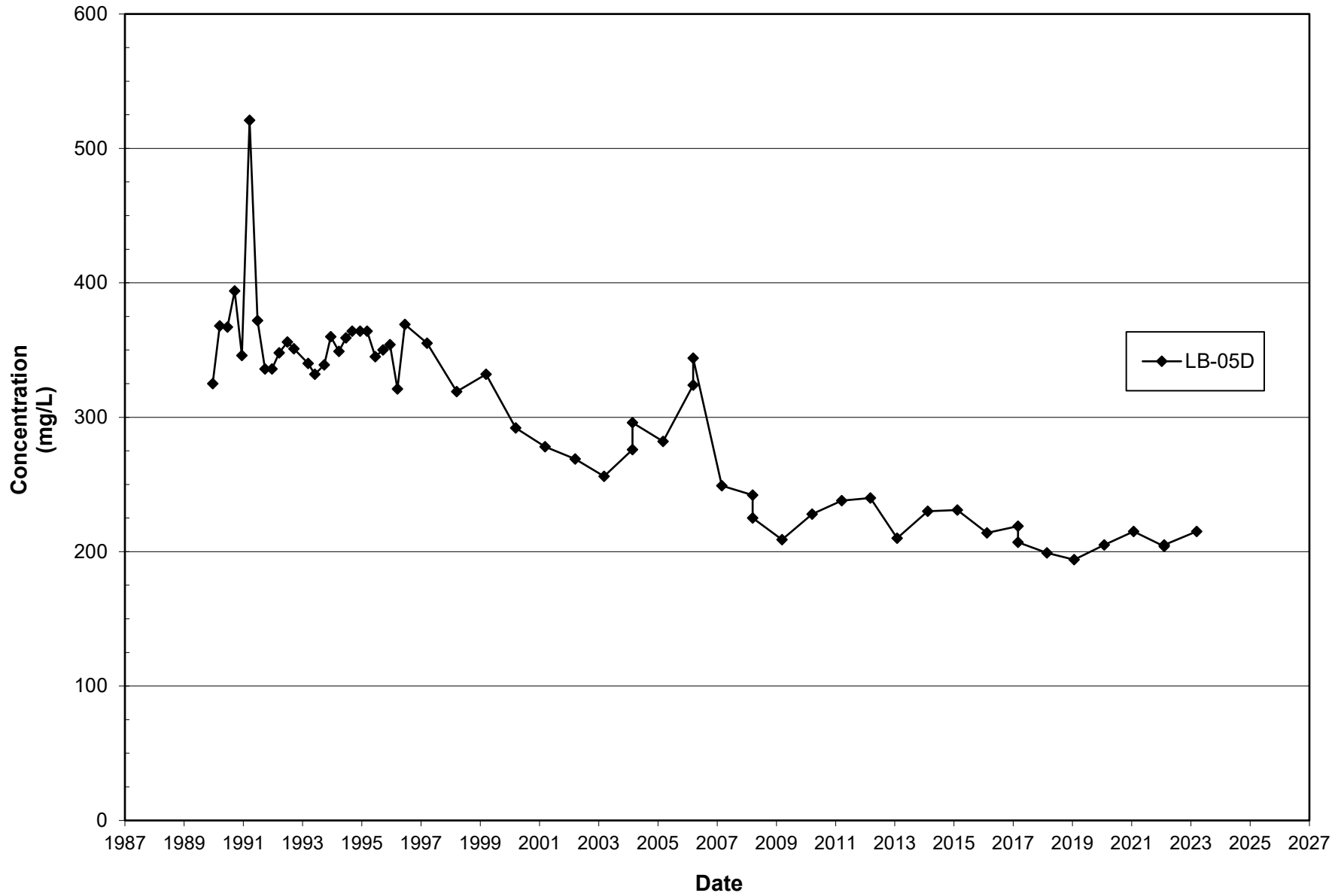
Leichner Landfill
Total Dissolved Solids, LB-03D
1987 - 2023



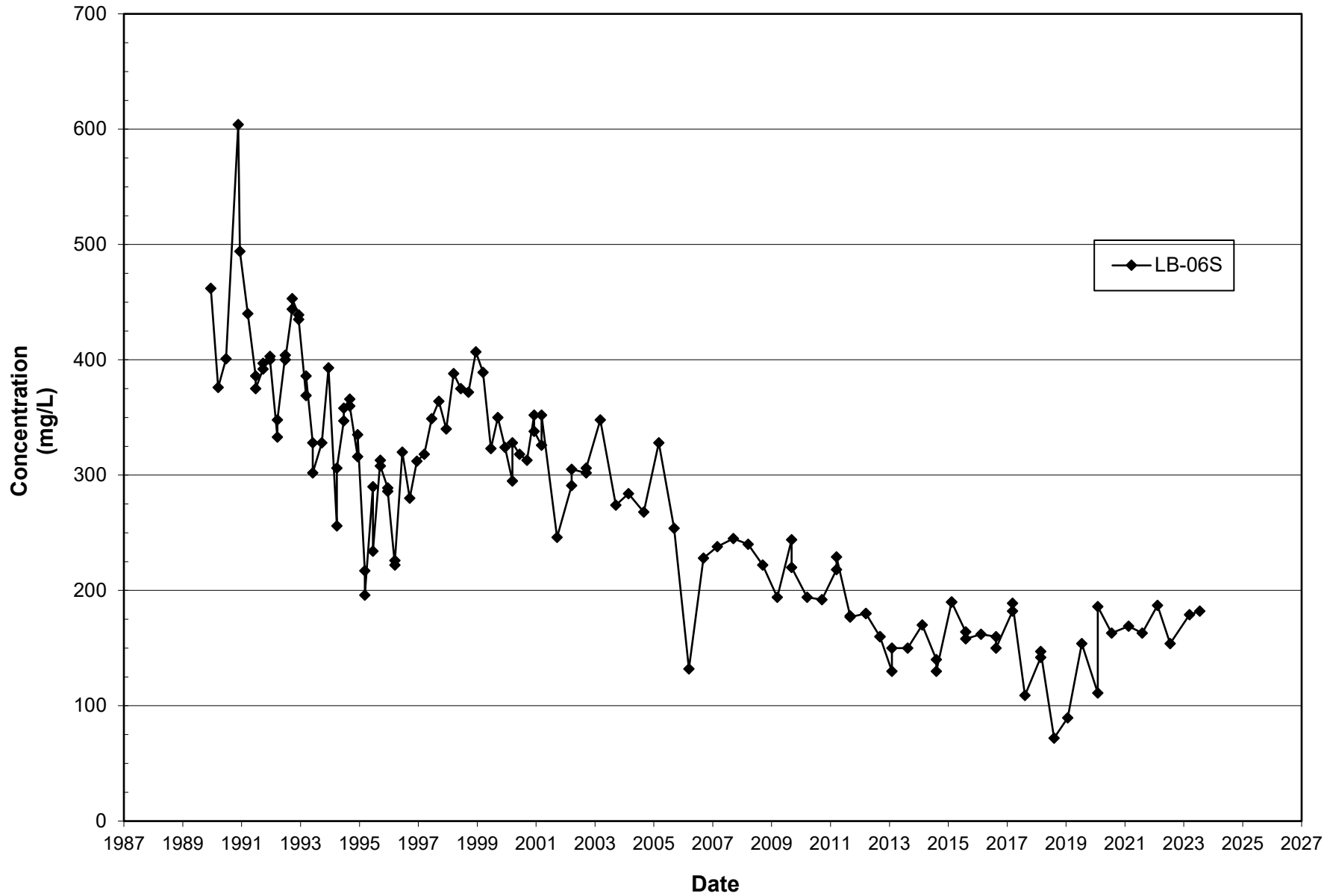
Leichner Landfill
Total Dissolved Solids, LB-05S
1987 - 2023



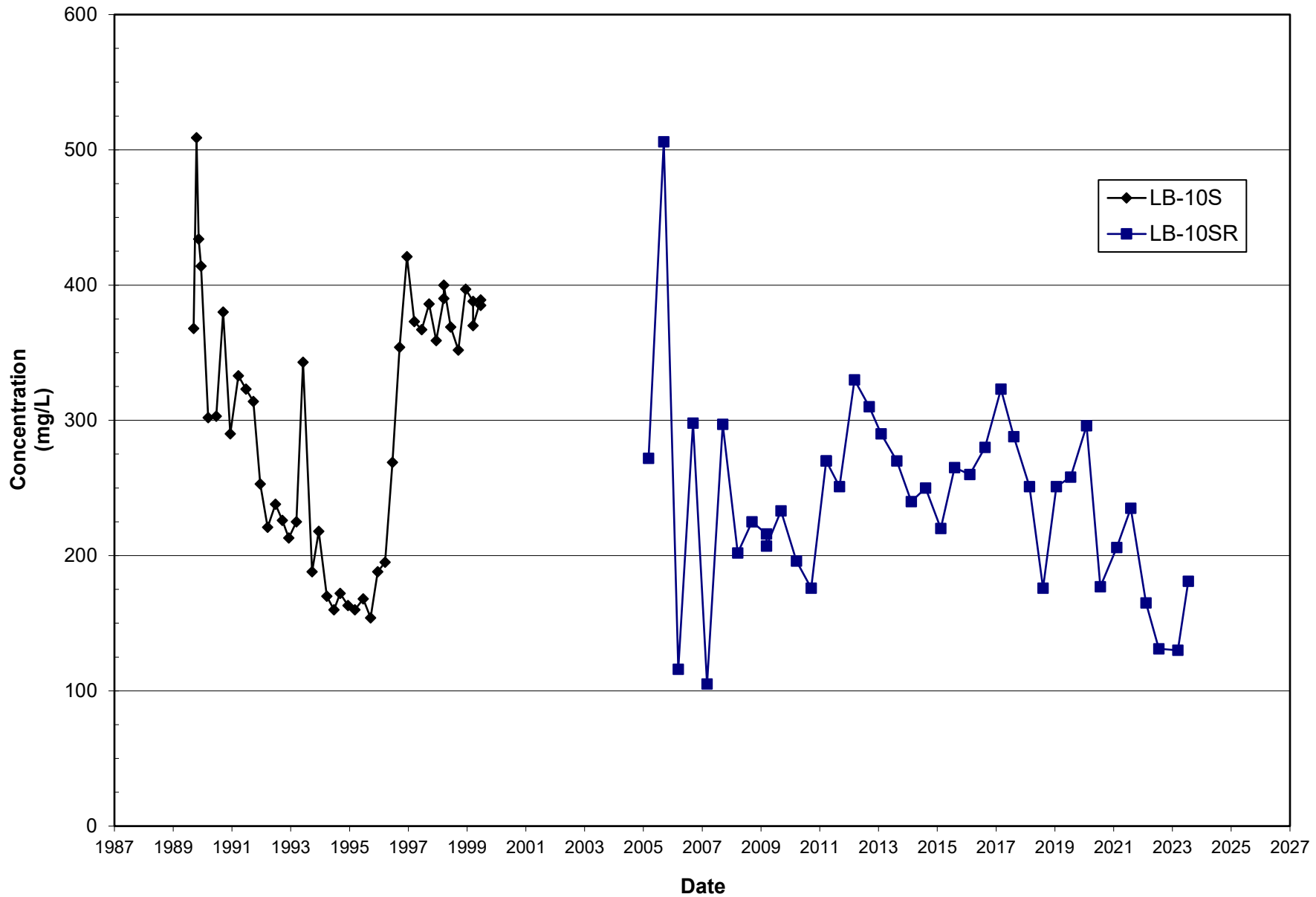
Leichner Landfill
Total Dissolved Solids, LB-05D
1987 - 2023



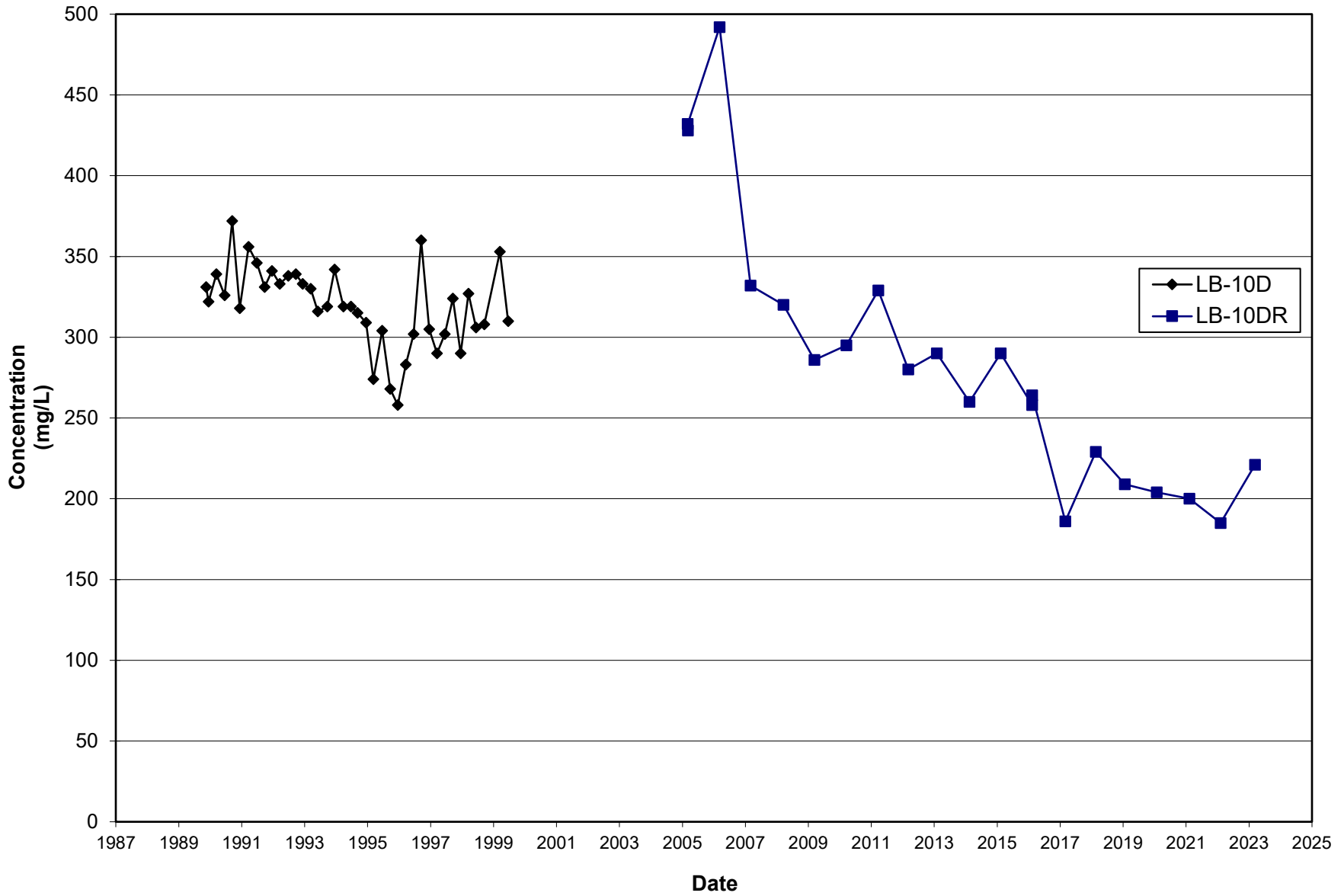
Leichner Landfill
Total Dissolved Solids, LB-06S
1987 - 2023



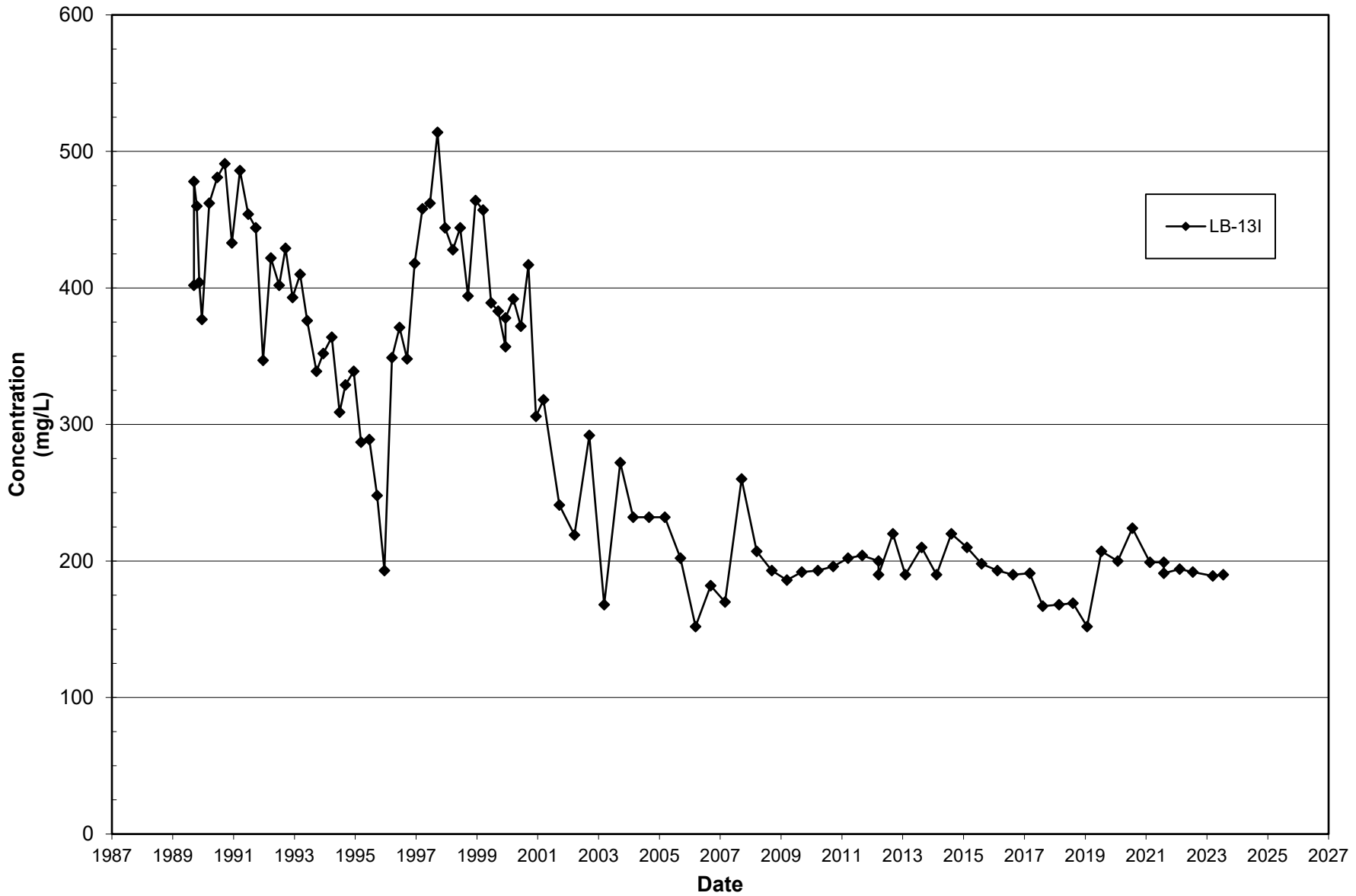
Leichner Landfill
Total Dissolved Solids, LB-10S and LB-10SR
1987 - 2023



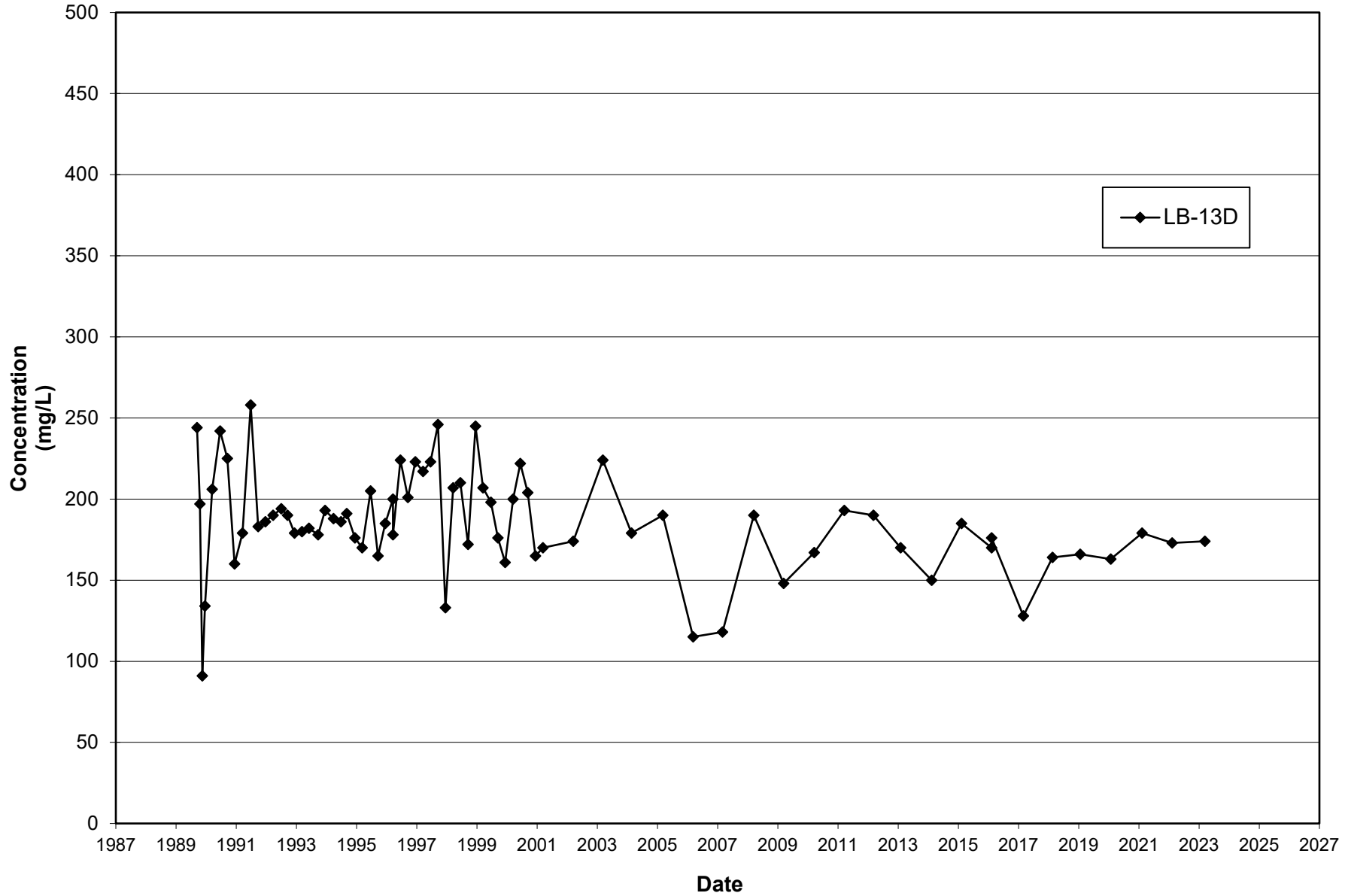
Leichner Landfill
Total Dissolved Solids, LB-10D and LB-10DR
1987 - 2023



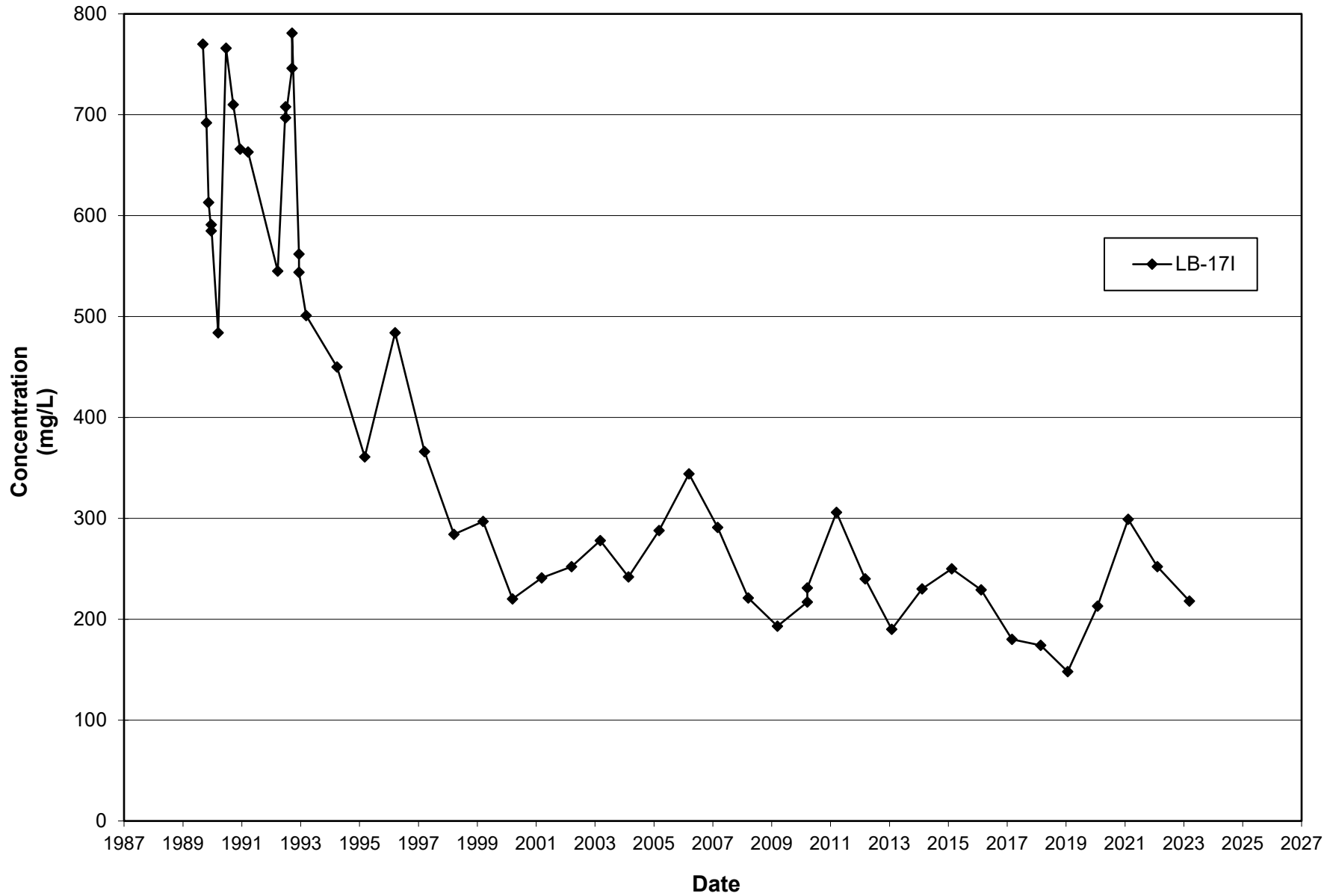
**Leichner Landfill
Total Dissolved Solids, LB-13I
1987 - 2023**



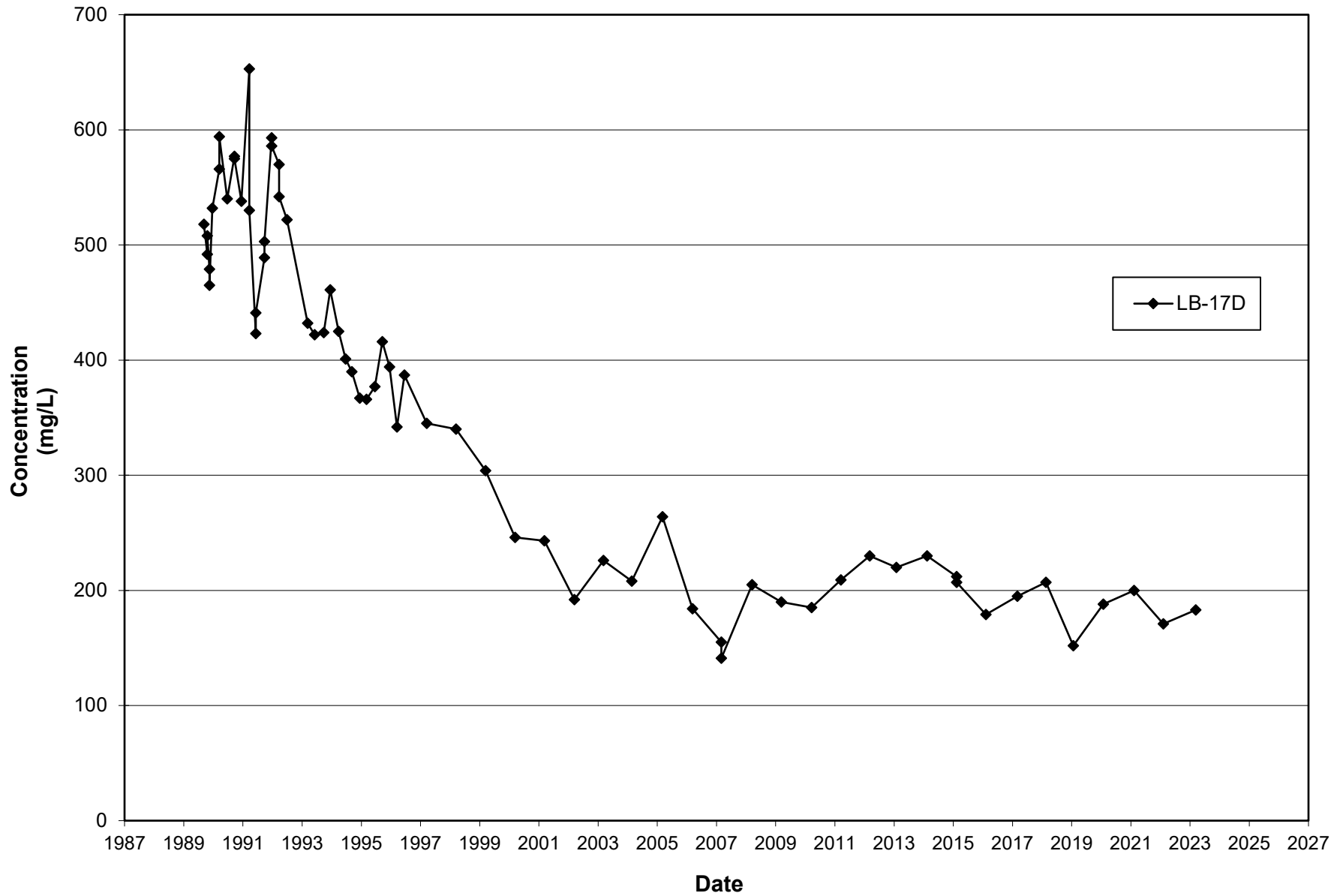
Leichner Landfill
Total Dissolved Solids, LB-13D
1987 - 2023



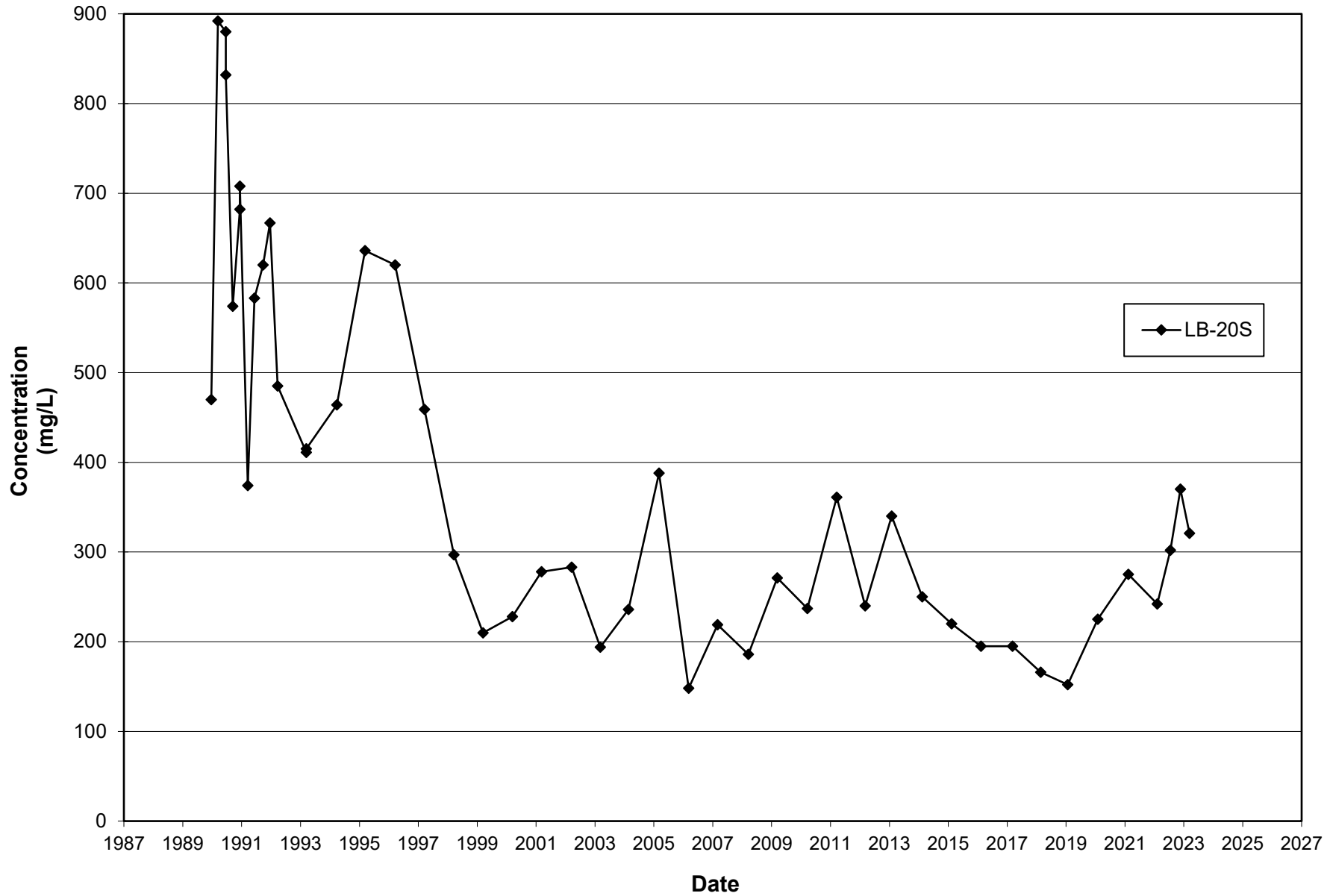
Leichner Landfill
Total Dissolved Solids, LB-171
1987 - 2023



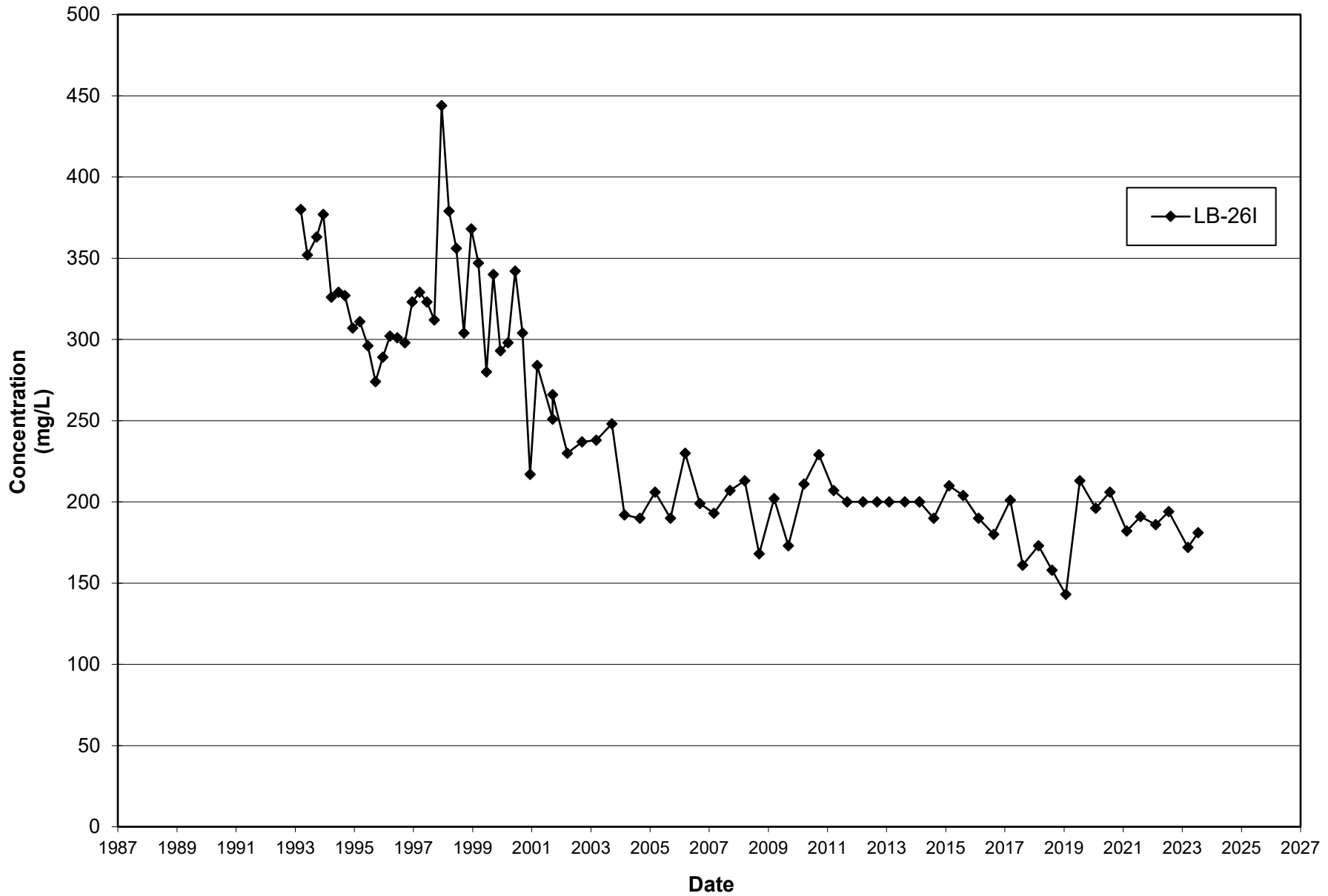
Leichner Landfill
Total Dissolved Solids, LB-17D
1987 - 2023



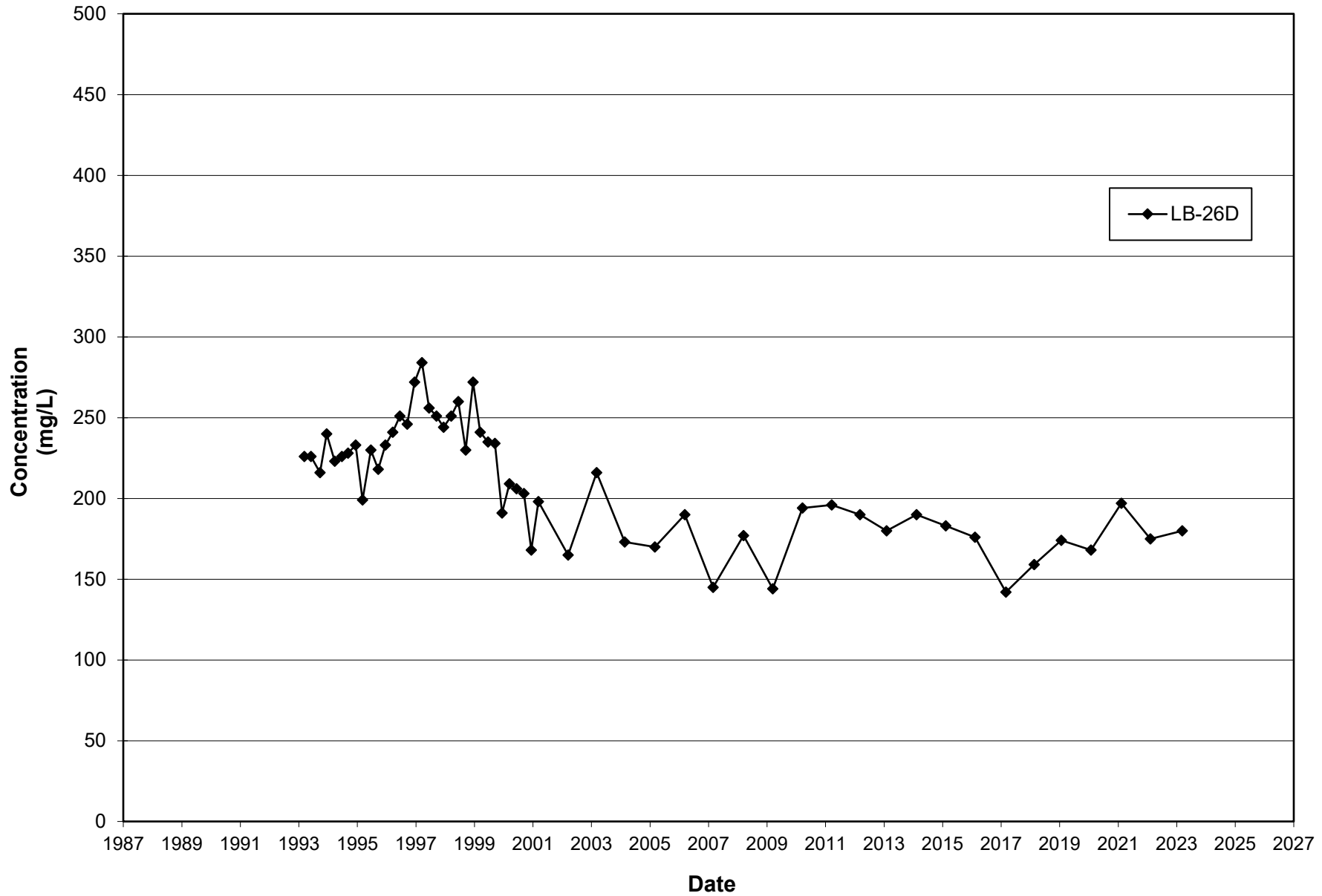
**Leichner Landfill
Total Dissolved Solids, LB-20S
1987 - 2023**



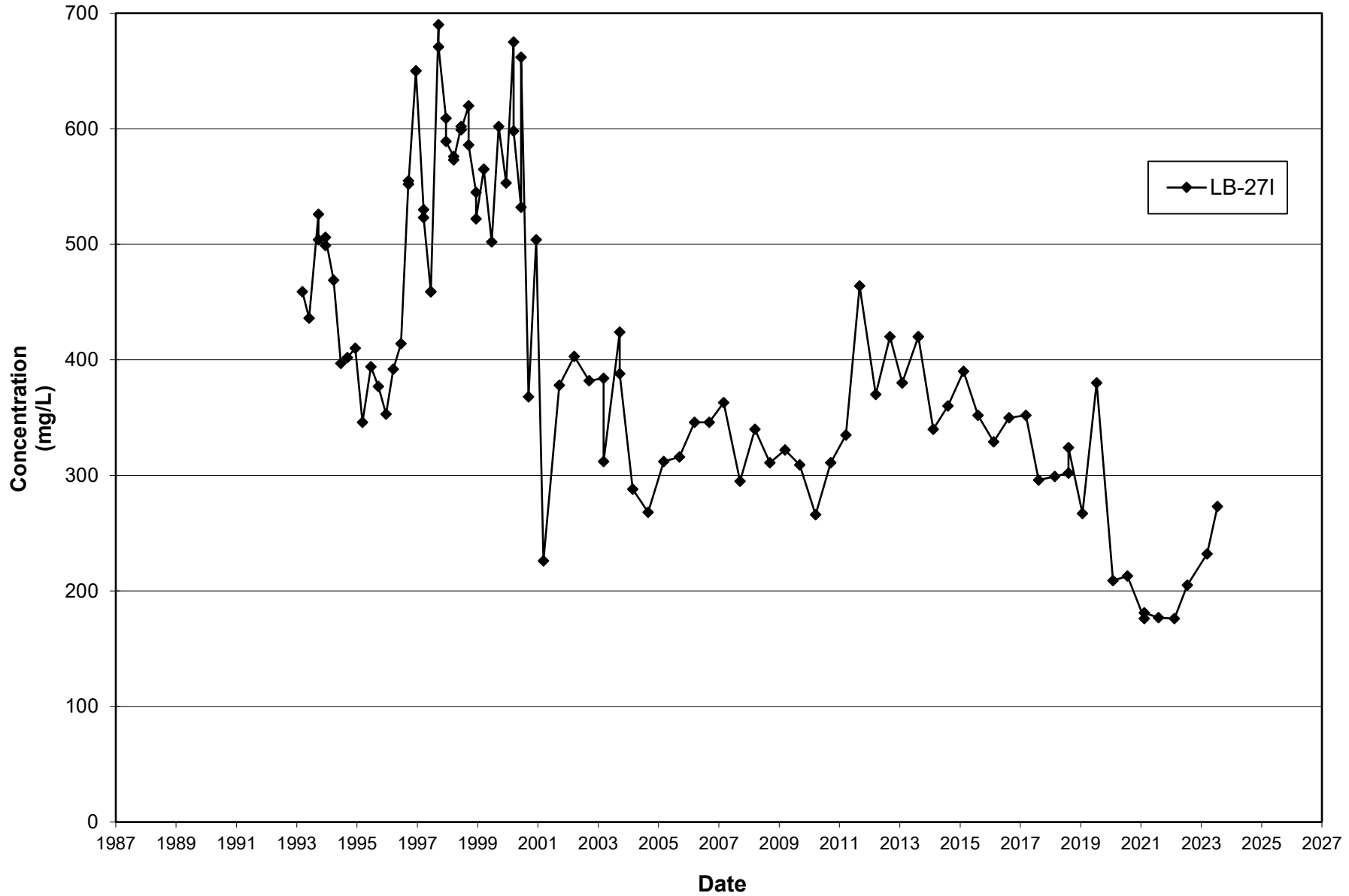
Leichner Landfill
Total Dissolved Solids, LB-26I
1987 - 2023



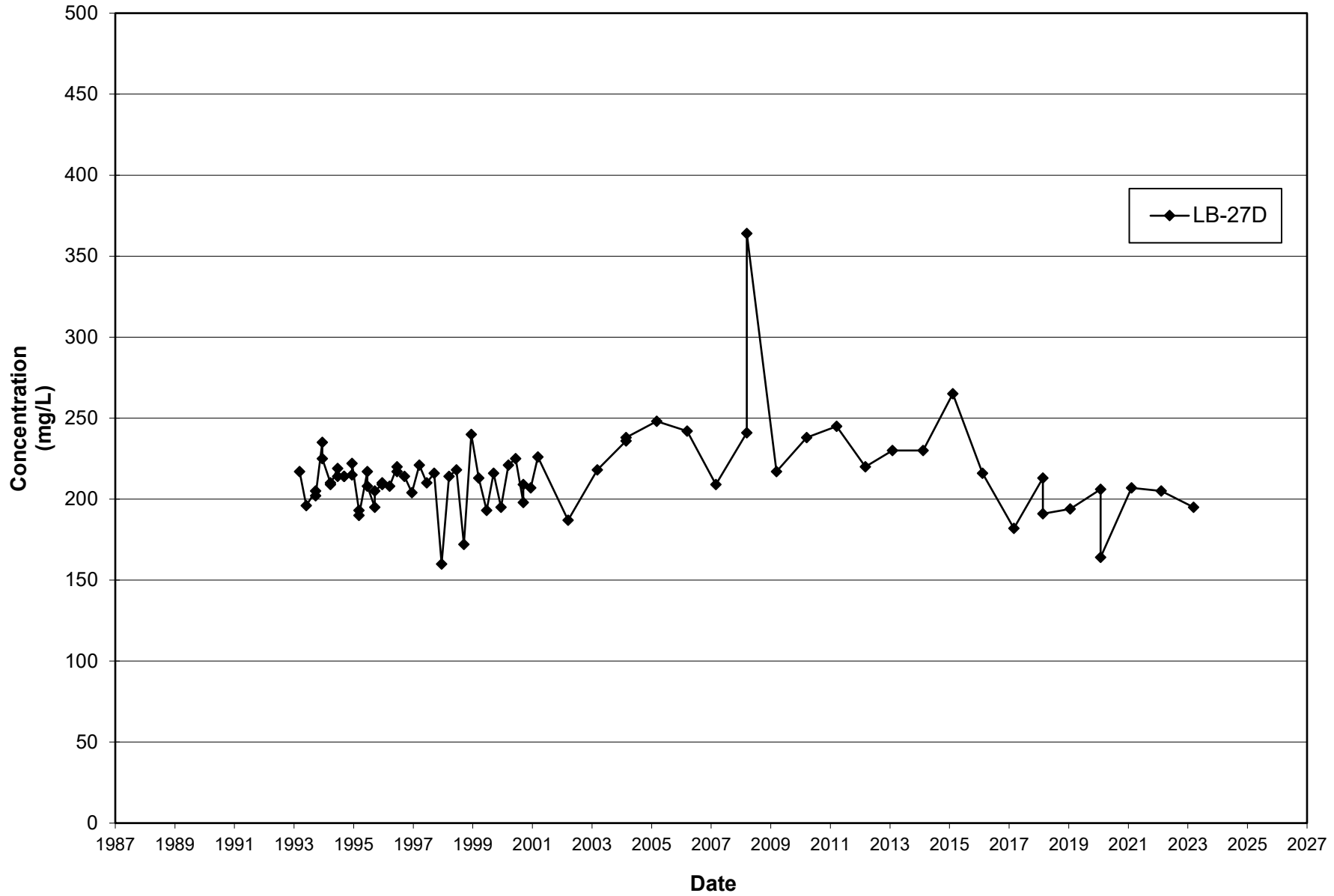
**Leichner Landfill
Total Dissolved Solids, LB-26D
1987 - 2023**



Leichner Landfill
Total Dissolved Solids, LB-271
1987 - 2023



Leichner Landfill
Total Dissolved Solids, LB-27D
1987 - 2023



APPENDIX G

Summary of 2023 Groundwater Statistical Calculations

**Table G-1
Groundwater Statistics - 2019 through 2023 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. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	12	12	Non	6.69	M(12.2)	5	5	Lognormal	6.18	6.35
Nitrate (mg/L)	12	12	Normal	4.14	4.53	5	5	Non	5.70	M(5.86)
TDS (mg/L)	11	11	Non	185.81	M(205)	5	5	Non	157.60	M(170)
Metals (mg/L)										
Iron (dissolved)	11	1	NC	NC	NC	5	1	NC	NC	NC
Manganese (dissolved)	11	1	NC	NC	NC	5	1	NC	NC	NC
VOCs (µg/L)										
1,4-Dichlorobenzene	16	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	16	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	16	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. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	7	7	Lognormal	4.75	5.86	5	5	Non	6.06	M(10.1)
Nitrate (mg/L)	7	6	Non	4.05	M(6.82)	5	5	Non	5.61	M(9.14)
TDS (mg/L)	6	6	Non	149.16	M(165)	5	5	Non	168.20	M(180)
Metals (mg/L)										
Iron (dissolved)	6	0	NC	NC	All ND	5	1	NC	NC	NC
Manganese (dissolved)	6	0	NC	NC	All ND	5	1	NC	NC	NC
VOCs (µg/L)										
1,4-Dichlorobenzene	9	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	9	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	9	0	NC	NC	All ND	5	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2019 through 2023 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. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Lognormal	4.21	5.09	5	5	Non	7.90	M(8.11)
Nitrate (mg/L)	10	10	Normal	4.56	5.40	5	5	Non	1.14	M(1.92)
TDS (mg/L)	10	10	Normal	147.65	163.34	5	5	Lognormal	206.60	215.42
Metals (mg/L)										
Iron (dissolved)	10	1	NC	NC	NC	5	1	NC	NC	NC
Manganese (dissolved)	10	1	NC	NC	NC	5	5	Lognormal	0.003	0.0055
VOCs (µg/L)										
1,4-Dichlorobenzene	10	0	NC	NC	All ND	6	0	NC	NC	All ND
Tetrachloroethene	10	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	10	0	NC	NC	All ND	6	0	NC	NC	All ND

Parameter	LB-6S					LB-20S				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	9	9	Lognormal	5.92	7.11	7	7	Lognormal	14.56	M(109.11)
Nitrate (mg/L)	9	9	Lognormal	2.81	4.23	7	1	NC	NC	NC
TDS (mg/L)	9	9	Lognormal	170.78	179.43	6	6	Normal	525.83	303.02
Metals (mg/L)										
Iron (dissolved)	9	1	NC	NC	NC	6	4	Lognormal	0.42	4040.43
Manganese (dissolved)	9	0	NC	NC	All ND	6	6	Lognormal	0.62	10.51
VOCs (µg/L)										
1,4-Dichlorobenzene	9	0	NC	NC	All ND	8	0	NC	NC	All ND
Tetrachloroethene	9	0	NC	NC	All ND	8	0	NC	NC	All ND
Trichloroethene	9	0	NC	NC	All ND	8	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2019 through 2023 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. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Normal	4.73	5.57	5	5	Non	8.61	M(10.1)
Nitrate (mg/L)	10	10	Lognormal	8.47	16.95	5	5	Lognormal	2.98	3.64
TDS (mg/L)	10	10	Lognormal	203	245.34	5	5	Lognormal	203.80	217.42
Metals (mg/L)										
Iron (dissolved)	10	4	NC	0.03	NC	5	2	NC	0.03	NC
Manganese (dissolved)	10	3	NC	0.002	NC	5	2	NC	0.00	NC
VOCs (µg/L)										
1,4-Dichlorobenzene	12	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	12	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	12	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. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Lognormal	8.44	10.39	5	5	NC	NC	NC
Nitrate (mg/L)	10	10	Lognormal	4.15	4.68	5	5	Lognormal	4.65	4.86
TDS (mg/L)	10	10	Non	194.60	M(224)	5	5	Lognormal	171.00	177.38
Metals (mg/L)										
Iron (dissolved)	10	2	NC	NC	NC	5	1	NC	NC	NC
Manganese (dissolved)	10	10	Lognormal	0.004	0.0071	5	0	NC	NC	NC
VOCs (µg/L)										
1,4-Dichlorobenzene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND

Table G-1
Groundwater Statistics - 2019 through 2023 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. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	5	5	Lognormal	11.24	17.71	5	5	Lognormal	8.31	11.21
Nitrate (mg/L)	5	0	NC	NC	All ND	5	1	NC	NC	NC
TDS (mg/L)	5	5	Lognormal	226.00	308.08	5	5	Lognormal	178.80	199.22
Metals (mg/L)										
Iron (dissolved)	5	5	Lognormal	10.38	13.53	5	5	Non	0.160	M(0.3)
Manganese (dissolved)	5	5	Lognormal	2.04	2.99	5	5	Non	3.94	M(4.17)
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. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Lognormal	7.42	8.71	5	5	Non	5.39	M(6.21)
Nitrate (mg/L)	10	10	Lognormal	4.03	4.29	5	5	NC	NC	NC
TDS (mg/L)	10	10	Normal	186.40	197.67	5	5	Non	178.80	M(197)
Metals (mg/L)										
Iron (dissolved)	10	1	NC	NC	NC	5	1	NC	NC	NC
Manganese (dissolved)	10	6	Lognormal	0.003	0.0065	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 - 2019 through 2023 Data
95 Percent Upper Confidence Limits on the Mean
Leichner Landfill

Parameter	LB-27I					LB-27D				
	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b	No. Analyses	No. Detectec	Distribution ^a	Mean	UCL 95 ^b
Inorganics										
Chloride (mg/L)	10	10	Lognormal	11.84	24.46	5	5	Non	7.36	M(7.62)
Nitrate (mg/L)	10	9	Normal	1.79	2.17	5	5	Non	3.65	M(4.17)
TDS (mg/L)	10	10	Non	230.80	M(380)	5	5	Non	201.40	M(207)
Metals (mg/L)										
Iron (dissolved)	10	3	NC	NC	NC	5	2	NC	NC	NC
Manganese (dissolved)	10	10	Lognormal	0.132	0.990	5	1	NC	NC	NC
VOCs (µg/L)										
1,4-Dichlorobenzene	12	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	12	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	12	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.										