# 2020 Annual Report
# Closed Leichner Landfill
# Vancouver, Washington
# Consent Decree 96-2-03081-7
# Facility ID No. 1017

Clark County Public Health
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SCS ENGINEERS

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# 1.0 INTRODUCTION

This report presents and evaluates the results of groundwater and landfill gas (LFG) compliance monitoring performed during 2020 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 2020. SCS Engineers (SCS) performed the monitoring, maintenance, and repair activities and prepared this report on behalf of Clark County Public Health (County) and the Leichner Landfill Oversight Committee (LLOC), whose members include the County and City of Vancouver.

Compliance monitoring of groundwater and LFG is performed at Leichner Landfill to fulfill certain requirements of the 1996 Consent Decree and associated Cleanup Action Plan (CAP), as well as to concurrently fulfill the requirements of Leichner Landfill's post-closure monitoring under Minimum Functional Standards (MFS), Chapter 173-304, of the Washington Administrative Code (WAC). Compliance monitoring is performed in accordance with the methods and procedures described in the site's Compliance Monitoring Plan (CMP) submitted to the Washington State Department of Ecology (Ecology) and Clark County Public Health (CCPH) in July 2013 (SCS, 2013).

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

## 1.1 SITE DESCRIPTION

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

## 1.2 SITE HYDROGEOLOGY

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

# 2.0 GROUNDWATER MONITORING

## 2.1 GROUNDWATER MONITORING NETWORK AND SCHEDULE

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

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

The compliance groundwater monitoring well network consists of 18 monitoring wells[1] that were sampled during the annual monitoring event performed in February 2020: LB-1S, LB-1D, LB-3S, LB-3D, LB-5S, LB-5D, LB-6S, LB-10SR, LB-10DR, LB-13I, LB-13D, LB-17I, LB-17D, LB-20S, LB-26I, LB-26D, LB-27I, and LB-27D. Groundwater samples were collected from the following monitoring these during the semiannual monitoring event performed in July 2020: LB-1S, LB-5S, LB-6S, LB-10SR, LB-13I, LB-26I, and LB-27I.

Field water-quality parameters (temperature, pH, specific conductance, dissolved oxygen) were monitored during sampling, and recorded on field sampling data sheets (FSDSs) provided in Appendix A. The 2020 field parameter monitoring results are provided in Appendix B (see Table B-1).

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

## 2.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Static depth-to-groundwater levels were measured on February 4 and July 28, 2020, 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 2020 and historical groundwater elevation data are presented in Appendix D.

[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).

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 2020 groundwater flow directions were consistent with historical interpretations of groundwater flow at Leichner Landfill.

Groundwater elevation hydrographs are provided in Appendix D. The 2020 groundwater elevation data are within the range of elevations measured historically and continued to show minor seasonal variations in some site wells.

Differences in groundwater elevations in adjacent well pairs screened in the alluvial WBZ and Troutdale Formation aquifer (see groundwater elevation data and hydrographs in Appendix D) appear to be influenced by the presence of the silty (sandy silt and clayey silt) aquitard. Where the silt aquitard is present east and south of the landfill (e.g., at existing well pair LB-5S/LB-5D south of the landfill), groundwater elevations are about 18 to 25 feet higher in the alluvial WBZ indicating hydraulic separation exists between the two groundwater zones. Monitoring well pairs located southwest of the landfill (i.e., at wells LB-1S/LB-1D, LB-13I/LB-13D, and LB-26I/LB-26D) and west of the landfill (LB-3S/LB-3D), where the silt aquitard is thin or absent, exhibited much smaller differences in groundwater elevations indicating that the two groundwater zones exhibit some degree of hydraulic connection.

## 2.3 DATA QUALITY REVIEW

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

SCS reviewed field and laboratory data and QA/QC procedures to evaluate whether the data met U.S. Environmental Protection Agency (EPA) quality control requirements. The QA/QC reviews (Appendix E) indicated that no laboratory QA/QC issues were identified that required corrective action, and the data were acceptable for their intended use.

## 2.4 GROUNDWATER ANALYTICAL RESULTS

Laboratory analytical results of groundwater samples collected from site monitoring wells in 2020 continue to indicate that there are little or no adverse effects on groundwater quality from the closed Leichner Landfill. Groundwater monitoring results supporting this conclusion are discussed below.

### 2.4.1 Volatile Organic Compounds

VOCs for which compliance levels were established in the 1996 Consent Decree, and that are still part of the analytical testing program (including 1,4-dichlorobenzene, tetrachloroethene, and trichloroethene)[2], were not detected above the laboratory method reporting limits (MRLs) in groundwater samples collected in February and July 2020

[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.

Low-level concentrations of a few VOCs (bromodichloromethane [BDCM], chloroform and chloromethane) were detected during the July 2020 sampling event in groundwater samples collected from wells LB-1S, LB-10SR and LB-27I. These three wells were resampled in October 2020 to verify the July 2020 results. The October 2020 verification resampling results confirmed the presence of VOCs in in these monitoring wells; however, the specific VOCs detected between sampling events were not consistent, except for chloroform at well LB-27I. The July and October 2020 VOC results are summarized in Table 2-1. Some of the VOC concentrations exceeded the Washington state groundwater quality criteria (WAC 173-200-040); a criterion for chloromethane is not available. Concentrations above the criteria were for chloroform and BDCM in well LB-10SR in October and BDCM in well LB-27I in July (Table 2-1). It should be noted that there is a U.S. Environmental Protection Agency (EPA) tap water regional screening level (RSL) for chloromethane of 190 micrograms per liter (µg/L). The chloromethane concentrations in July were about three orders of magnitude below the RSL.

The source of the recent 2020 VOC concentrations is undetermined. The detected VOCs are considered anomalous because (1) they have not been historically detected in groundwater at Leichner Landfill and (2) VOCs have not been detected in these three monitoring wells since 1999, except for isolated detections of trichloroethene in well LB-10SR and vinyl chloride in well LB-27I, both in 2011 (See Table 2-2). While LFG and/or leachate was historically a source of VOC contamination to groundwater, these recent VOC detections are inconsistent with VOC results for at least the last 10 years. Additionally, the 2020 VOCs signature is not characteristic of VOCs typically found in groundwater due to a leachate release or from LFG, such as other halogenated VOCs; fluorinated VOCs dichlorofluoromethane (DCFM) and trichlorofluoromethane (TCFM); and benzene, toluene, ethylbenzene, and xylenes (BTEX).

Additional analytical data are needed to determine if the presence of BDCM, chloroform, and chloromethane persists and to identify potential trends if they do persist. As a result, quarterly monitoring of VOCs will be performed in 2021 for wells LB-1S, LB-10SR, and LB-27I to further evaluate the occurrence of VOCs.

Notification of the VOC detections in groundwater samples collected in 2020 from these wells, and of the County's proposed follow-up activities were provided in a memorandum to CCPH and City of Vancouver which was later provided to Ecology in November 2020 (SCS, 2020c).

### 2.4.2 Inorganic Parameters and Dissolved Metals

The 2020 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, 2020 groundwater analytical results for inorganic parameters and dissolved metals were generally consistent with historical data. Table 2-3 summarizes 2020 groundwater concentrations above compliance levels. Concentrations of Mn and/or Fe above the compliance levels were detected in a few wells located downgradient and near the landfill areas (i.e., LB-17I, LB-17D, and LB-20S), and at well LB-27I along the southwest corner of the site (see Figure 2-1).[3] 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:

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

- The concentrations of other leachate indicator parameters, including TDS and Cl, have not shown increasing or elevated concentrations in groundwater collected from these wells and are significantly below compliance levels (see time-concentration graphs in Appendix F).
- Fe and Mn have occasionally been detected at concentrations above the compliance levels in groundwater samples collected from cross-gradient well LB-10SR (see Figures 2-2 and 2-4) screened in the shallow alluvium WBZ (see time-concentration diagrams in Appendix F).
- Mn concentrations in groundwater samples collected from well LB-20S since 2006 have been variable but were typically below the compliance level (see time-concentration diagrams in Appendix F).
- Fe and/or Mn concentrations in 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).

Nitrate was detected in well LB-10SR groundwater at a concentration of 23.4 milligrams per liter (mg/L) in February 2020, above the compliance level of 10 mg/L, and then decreased to 6.04 mg/L in July 2020. Historical nitrate concentrations in groundwater at this replacement well (and former well LB-10S) have fluctuated and previously ranged from 0.35 to 28.14 mg/L, and notably, the concentrations have not exhibited an increasing concentration trend over the historical dataset (see time-concentration graph in Appendix F). Additionally, while the February 2020 concentration was elevated, none of the other leachate indicator parameters were elevated in in the February 2020 sample. As previously reported in past annual reports, nitrate concentrations in groundwater collected from well LB-10SR are likely reflective of natural background concentrations, and not affected by the landfill.

#### 2.4.2.1 Statistical Analysis of Groundwater Analytical Data

Leichner Landfill groundwater quality data from 2016 to 2020 for inorganic parameters (nitrate, Cl, and TDS) and dissolved metals (Mn and Fe) were statistically evaluated using the MTCA Stat97 program.[4] 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 2-4 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-20S groundwater that exceeded the range of concentrations. In these cases, the highest reported value from the last 5 monitoring years (2016 to 2020) was selected (see Table 2-4).

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

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 two orders of magnitude (0.35 to 23.4 mg/L) between 2016 and 2020. As noted in the previous section, historical nitrate concentrations in well LB-10SR (and former well LB-10S) have shown notable fluctuations that are reflective of natural background concentrations.
- Iron: The calculated UCL-95 values, or default highest reported values, for dissolved Fe were below the compliance of 0.3 mg/L, except for well LB-17I (UCL-95 of 9.7 mg/L) and LB-20S (UCL-95 of 0.43 mg/L).
- Manganese: The calculated UCL-95 values, or default highest reported values, for dissolved Mn were below the compliance level of 0.05 mg/L, except for wells LB-17I (UCL-95 of 1.58 mg/L), LB-17D (UCL-95 of 4.29 mg/L), LB-20S (UCL-95 of 2.3 mg/L), and LB-27I (UCL-95 of 0.30 mg/L).

The above results are similar to those reported in 2019 annual report.

#### 2.4.2.2 Trend Analysis of Groundwater Analytical Data

Time-series concentration plots were generated for each of the inorganic parameters tested (see Appendix F). The time-concentration plots were evaluated visually to assess whether groundwater parameter concentrations exhibit increasing, decreasing or stable trends.

Inorganic parameter concentrations in groundwater samples collected from alluvial WBZ wells and Troutdale Formation wells show either generally stable or decreasing trends (particularly since about 2001), except for nitrate concentrations in samples collected from wells LB-10DR and LB-27D. As previously discussed, changes in nitrate concentrations detected in these wells are believed to be reflective of natural (i.e., non-landfill-impacted) groundwater conditions. It should be noted that the maximum detected nitrate concentrations in groundwater collected from these well are well below the regulatory compliance level of 10 mg/L.

Some parameters show notable fluctuations (e.g., Cl in well MW-20 groundwater) but do not exhibit increasing trends. While recent nitrate fluctuations in LB-10SR included detections above the compliance level of 10 mg/L, the concentrations are within the range detected historically in this well and former well LB-20S and do not show an increasing trend. As noted above, these appear to be reflected of natural background concentrations.

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

# 3.0 STORMWATER MONITORING

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

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

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

# 4.0 LANDFILL GAS MONITORING

This section describes the GCCS that was initially installed at the Leichner Landfill in 1978, and presents compliance and performance monitoring results associated with the GCCS. The GCCS has been modified several times over the years, including installation of a single, smaller enclosed flare station in 2007 in response to decreasing methane production, and installation of a new micro-flare in October 2020 (discussed in Section 4.3.1) to replace the former flare due to further decreases in methane production. The current GCCS includes an LFG extraction well field with 102 gas extraction wells, a condensate collection system, an LFG blower and flare station (BFS), and an integrated remote monitoring and control (RMC) system. The RMC system monitors the operation and performance of the BFS and other components of the GCCS and stormwater collection system. The GCCS components are shown in Figure 4-1.

## 4.1 COMPLIANCE LANDFILL GAS MIGRATION MONITORING RESULTS

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

The LFG compliance monitoring network is comprised of 51 probes located along the perimeter of the landfill property boundary to monitor subsurface LFG migration, and in areas within the property, to more closely monitor the performance of the GCCS (see Figure 4-1). Compliance LFG monitoring probes constructed as dual-completion probes (i.e., a shallow and deep probe constructed within the same borehole) are designated with an “A” for the shallow probe and “B” for the deep probe. Compliance LFG monitoring probes with the same probe number but constructed in different boreholes are designated with an “S” for the shallow probe and “D” for the deep probe.

Compliance LFG monitoring was performed quarterly in 2020 (March, June, September, and December). Quarterly monitoring data collected in 2020 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 2020 to maintain balanced and efficient LFG extraction rates. There were no significant problems or concerns noted during monitoring and adjustment of the LFG extraction wells.

## 4.3 LANDFILL GAS FLARE

### 4.3.1 Installation of New Micro-Flare

The LLCO approved in 2019 the installation of a new, smaller, more efficient LFG micro-flare. The contract for the micro-flare installation project was awarded to Perennial Energy LLC in March 2020. Prior to installation, SCS submitted to the County and Southwest Clean Air Agency (SWCAA) an air discharge permit modification application, dated August 6, 2020, for replacement of the existing LFG flare with a new micro-flare. Preparation for the installation of the new micro-flare occurred during July, August and September 2020. An existing concrete pad at the BFS was evaluated and approved

by Livermore Architecture & Engineering, Inc., for use to support the new micro-flare and associated equipment. The old flare was turned off and disassembled on September 28, 2020, and the new flare was started on October 2, 2020.

A new SWCAA Air Discharge Permit (20-3433) was obtained. As required, an emissions source test of the newly installed micro-flare was conducted by Montrose Air Quality Services, LLC on December 9, 2020. A report presenting the source test results was submitted to SWCAA in January 2021 and is currently under review. A report documenting the installation of the new flare will be submitted to SWCAA under separate cover in March 2021.

### 4.3.2 Landfill Gas Flare Monitoring

The LFG flare system was monitored regularly (typically on a weekly basis) in 2020 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.

The following summarizes additional activities performed related to LFG flare monitoring in 2020:

- To meet the annual reporting requirements of the ADP, the 2019 Annual Flare Emissions Estimate report, dated March 13, 2020 (SCS, 2020a), was submitted to the SWCAA. The report presents and evaluates flare monitoring data and performance objectives. The 2020 annual report will be submitted to the SWCAA on or before March 15, 2021.
- Several instances of elevated flare temperatures in 2020 resulted in a Notice of Violation (NOV) issued from SWCAA. SCS assisted the County with follow-up actions required in the NOV, including submitting a Notice to Correct letter and a Notice to Correct flare data report.
- Letters were submitted to SWCAA each month regarding deviations in the temperature of the LFG flare (May through September 2020). These letters were submitted as required per condition 2.2 (5) of the facility's air discharge permit (No. 07-2714) within 30 days of the end of each month where a deviation occurs, and as requested in SWCAA's April 3, 2020, Notice to Correct 6567 letter. These issues with the flare temperatures were finally resolved with the installation of the new micro-flare (as previously described in Section 4.3.1).

## 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 2020 included the following:

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

## 5.2 NON-ROUTINE ACTIVITIES

Notable non-routine maintenance, repair, and replacement activities related to the Leichner Landfill's post-closure systems and equipment performed in 2020 are described in this section.

### 5.2.1 First Quarter 2020

- Performed Module 2 battery/solar controller test, and subsequently replaced the battery.
- Replaced the pumps in LFG condensate collection sumps N-3 and S-3.
- Installed a new flow meter (Dynasonics TFX 5000) to continuously monitor discharge pumping rates from North Detention Pond, including setting up the meter to connect to the Remote Monitoring Control (RMC) system and integrating the flow meter into the RMC system.
- Replaced pumps in LFG condensate collection sumps N-7 and S-3 and reset the condensate pump counters.

### 5.2.2 Second Quarter 2020

- The County selected Perennial Energy LLC to manufacture, deliver, and provide technical installation support of a new micro-flare, in response to the County's Request for Proposal dated February 12, 2020.
- Straightened a section of above ground header pipe along the eastern portion of the landfill.
- Repaired a section of liner for the North Detention Pond.
- Repaired damaged airline to condensate trap N-4.
- Resloped the header at LFG extraction well NW-10.
- Repaired a pitless adapter for a condensate trap near LFG extraction well NW-36.
- Installed pressure gauges on two pumps in the South Pond vault and tested pump discharge capabilities.
- Conducted a site inspection of the South Pond pump configuration and associated conveyance lines. SCS evaluated engineering options for the South Pond force main modification based on the site inspection and historical engineering drawings. Result of this work was presented in an SCS memorandum to the County (July 2020) describing a proposed scope of work for the South Pond force main realignment, including modifying the existing pump discharges and constructing a manifold within the pump vault.
- Conducted an LFG extraction well liquid levels evaluation and submitted a report discussing the correlation of ground water elevations with liquid levels in LFG wells.

### 5.2.3 Third Quarter 2020

- Repaired the aboveground (surface) completions for LFG monitoring probes GP-5 and GP-7 (located on the adjacent Waste Connections, Inc. property) with traffic-rated, flush-mount monuments due to minor damage at both locations. A Washington-licensed well drilling contractor (Steadfast Services LLC) made the repairs with coordination and oversight provided by SCS. A memorandum documenting the repair was submitted to the County (SCS, 2020b).
- Replaced the programmable logic control (PLC) card at the flare station control panel that was inoperable due to a temporary power outage. Performed initial evaluation of the flare monitoring data after the PLC card was replaced.
- Replaced an electrical breaker at the North Detention Pond electrical panel.
- Coordinated changes to flare alarm notifications with the RMC team.
- Began onsite activities for installing the new micro-flare, including (1) removing and staging on-site the existing flare, (2) installing and bolting in the new micro-flare, (3) installing and wiring the new control panel, (4) performing associated electrical work, and (5) providing construction quality assurance and documentation. The former flare was shut down on September 28, 2020, and startup of the new flare began on October 2, 2020.

### 5.2.4 Fourth Quarter 2020

- Continued work on the new micro-flare with installation of instruments and gauges, control panel wiring, connection to the RMC, voltage protection, new transmitters, new nitrogen tank and propane line.
- Filled propane tank and completed leak test.
- Repaired North Pond flow meter.
- Coordinated and oversaw an emissions source test of the newly installed micro-flare, conducted by Montrose on December 9, 2020.
- Spread rock and hay for erosion control in the Phase 2 and South Detention Pond areas.

# 6.0 REFERENCES


City of Vancouver, 2020, Letter (re: Consent Decree 96-2-03081-7 Leichner Brothers Landfill), from B. Carlson, City of Vancouver, to M. Kourehdar, Ecology, Olympia, Washington, January 15.

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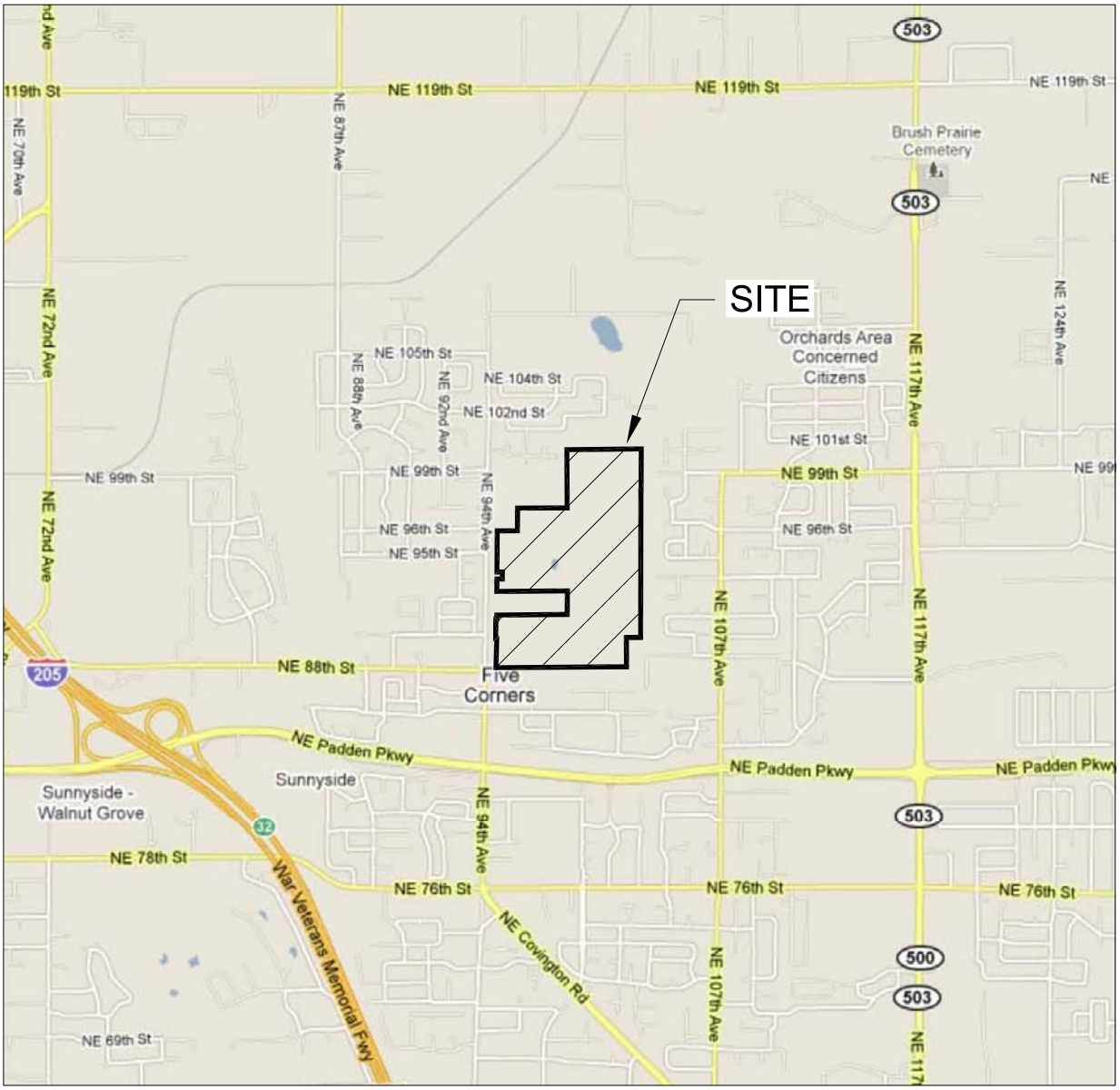
# FIGURES

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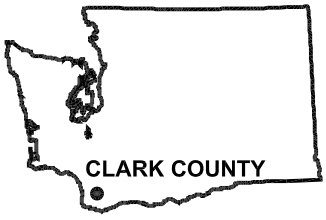


**WASHINGTON**

SOURCE: GOOGLE MAPS

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15940 S.W. 72nd Avenue
Portland, Oregon 97224
(503) 639-9201 FAX: (503) 684-6948

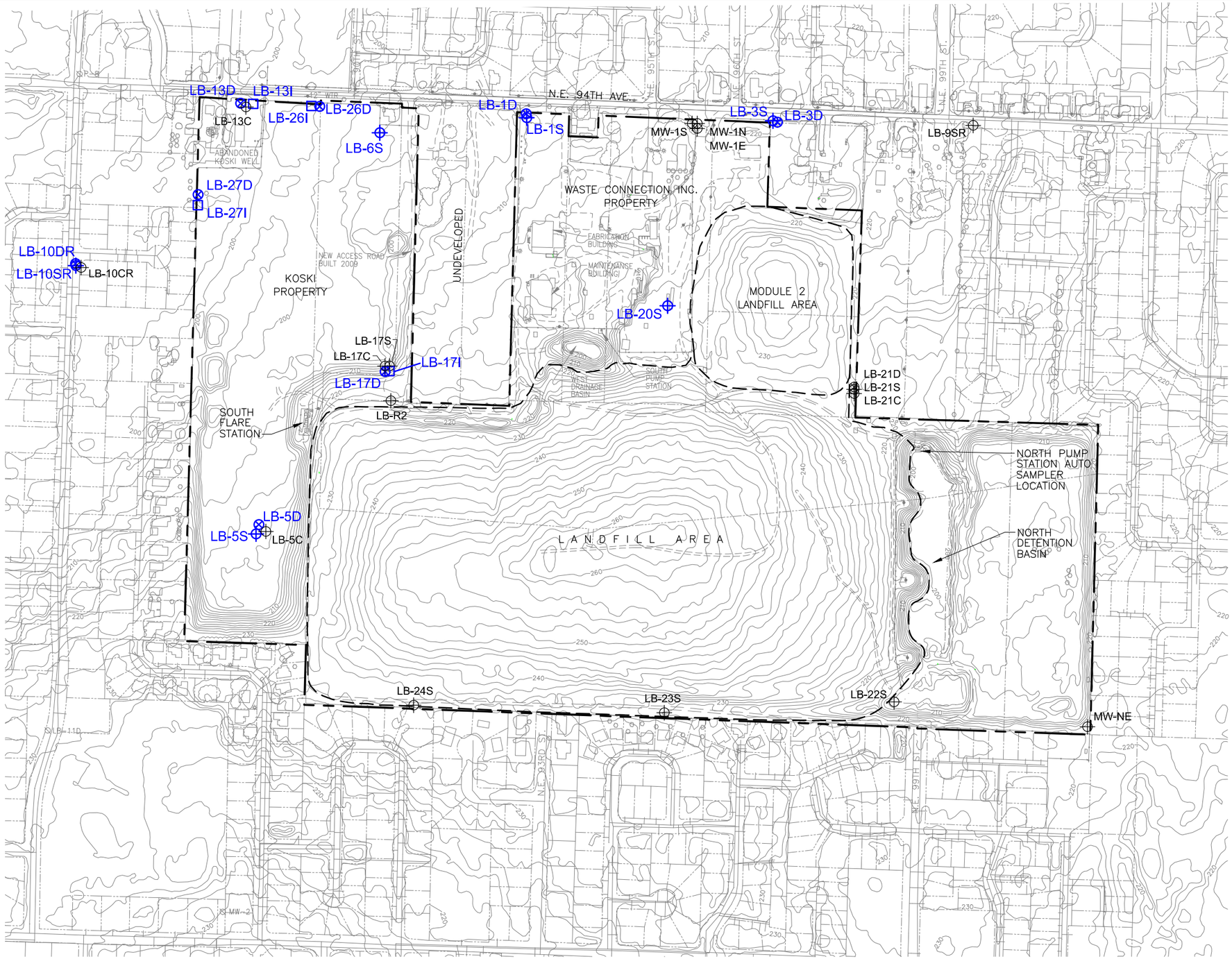
| PROJECT NO. | DES BY |
|---|---|
| 04221030.14 | B.L. |
| SCALE | CHK BY |
| AS SHOWN | D.L. |
| CAD FILE | APP BY |
| FIGURE 1-1 | L.C. |

# SITE LOCATION MAP

LEICHNER LANDFILL
CLARK COUNTY, WASHINGTON

DATE
FEBRUARY 2021

FIGURE
1-1




**LEGEND:**

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

**NOTES:**

1. Monitoring wells designated by blue color are compliance monitoring wells.
2. Topography taken from Clark County GIS, December 2008.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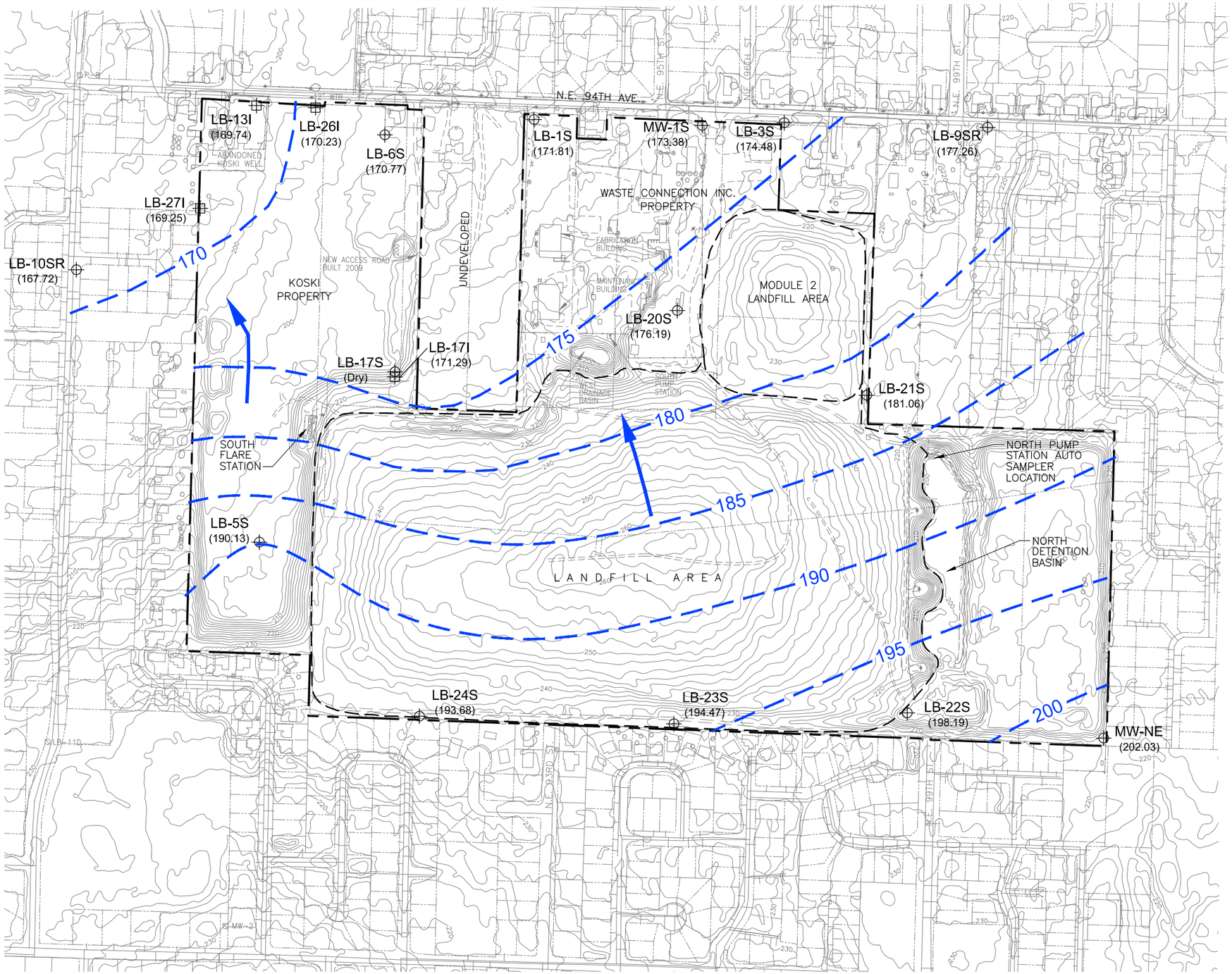
SCALE
0 400 800 FEET

| | | | |
|---|---|---|---|
| PROJECT NO. 04221030.14 | DES BY B.L. | GROUNDWATER MONITORING WELL LOCATIONS | DATE FEBRUARY 2021 |
| SCALE AS SHOWN | CHK BY D.L. | LEICHNER LANDFILL VANCOUVER, WASHINGTON | FIGURE 2-1 |
| CAD FILE FIGURE 2-1 | APP BY L.C. | | |




**LEGEND:**

| | |
|---|---|
| LB-5S ⊕ | Monitoring Well Location, Alluvial Water–Bearing Zone |
| LB-17I ⊕ | Monitoring Well Location, Middle of Alluvial Water–Bearing Zone |
| — — — | Property Boundary |
| — — — | Limit of Landfill Cover and Approximate Edge of Waste |
| — —200— — | Groundwater Potentiometric Surface Contour, queried where uncertain |
| (177.26) | Groundwater Elevation Measured on February 4, 2020 |
| → | Inferred Groundwater Flow Direction |

NOTE:
Topography Taken From Clark County GIS, December 2008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SCALE
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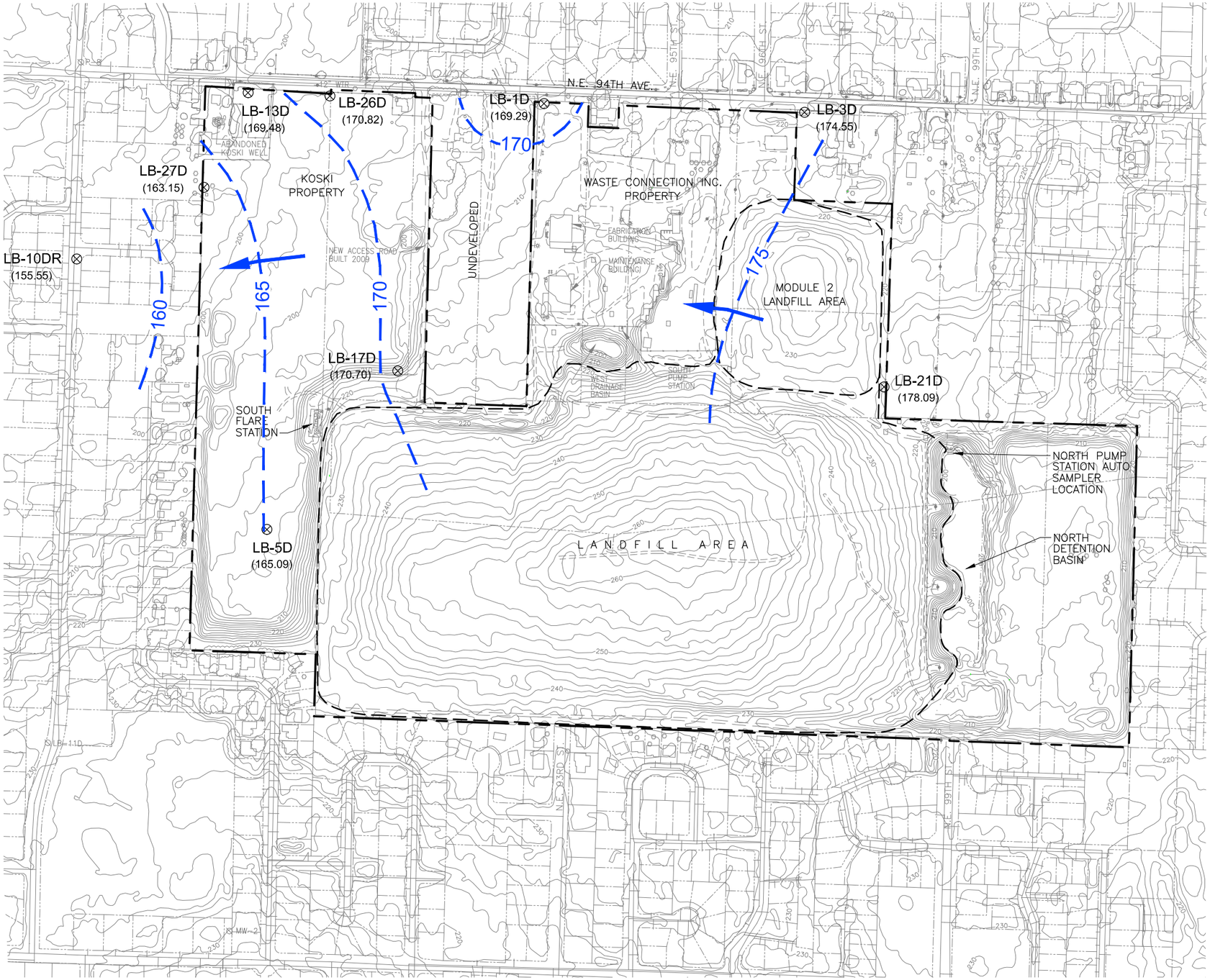
| PROJECT NO. 04221030.14 | DES BY B.L. | GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS<br>ALLUVIAL WATER BEARING ZONE<br>FEBRUARY 4, 2020<br>LEICHNER LANDFILL<br>VANCOUVER, WASHINGTON | DATE FEBRUARY 2021 |
| SCALE AS SHOWN | CHK BY D.L. | | FIGURE 2-2 |
| CAD FILE FIGURE 2-2 | APP BY L.C. | | |




**LEGEND:**

| | |
|---|---|
| LB-5D ⊗ | Monitoring Well Location, Troutdale Aquifer |
| — — — — | Property Boundary |
| — — — — — | Limit of Landfill Cover and Approximate Edge of Waste |
| – –175– – | Groundwater Potentiometric Surface Contour, queried where uncertain |
| (178.09) | Groundwater Elevation Measured on February 4, 2020 |
| → | Inferred Groundwater Flow Direction |

NOTE:
Topography Taken From Clark County GIS, December 2008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SCALE
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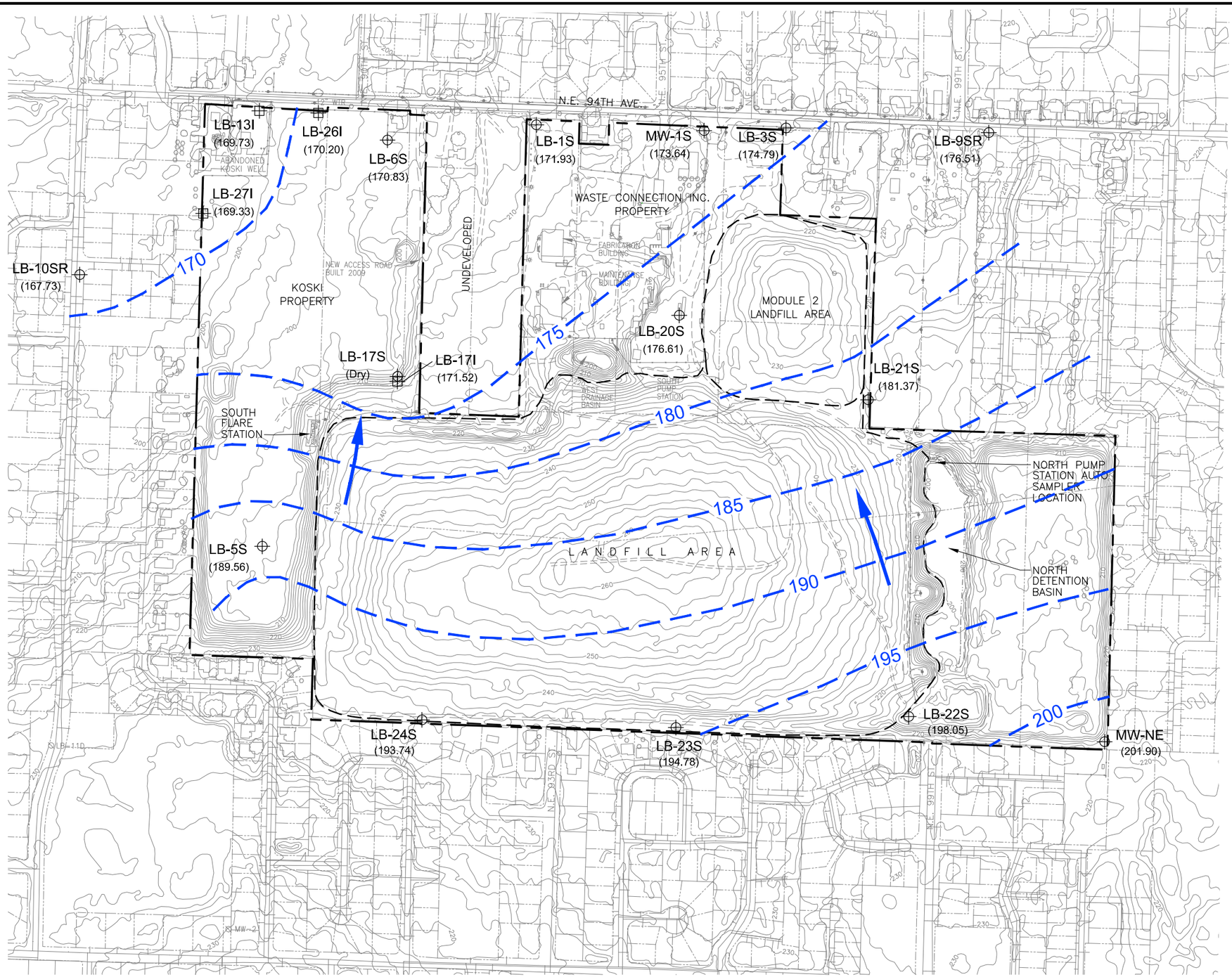
|---|---|---|---|
| PROJECT NO. 04221030.14 | DES BY B.L. | GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS<br>TROUTDALE FORMATION AQUIFER<br>FEBRUARY 4, 2020<br>LEICHNER LANDFILL<br>VANCOUVER, WASHINGTON | DATE JANUARY 2021 |
| SCALE AS SHOWN | CHK BY D.L. | | FIGURE 2-3 |
| CAD FILE FIGURE 2-3 | APP BY L.C. | | |




**LEGEND:**

| | |
|---|---|
| LB-5S ⊕ | Monitoring Well Location, Alluvial Water–Bearing Zone |
| LB-17I ⊕ | Monitoring Well Location, Middle of Alluvial Water–Bearing Zone |
| ——— | Property Boundary |
| – – – – | Limit of Landfill Cover and Approximate Edge of Waste |
| – –195– – | Groundwater Potentiometric Surface Contour, queried where uncertain |
| (176.51) | Groundwater Elevation Measured on July 28, 2020 |
| → | Inferred Groundwater Flow Direction |

NOTE:
Topography Taken From Clark County GIS, December 2008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SCALE
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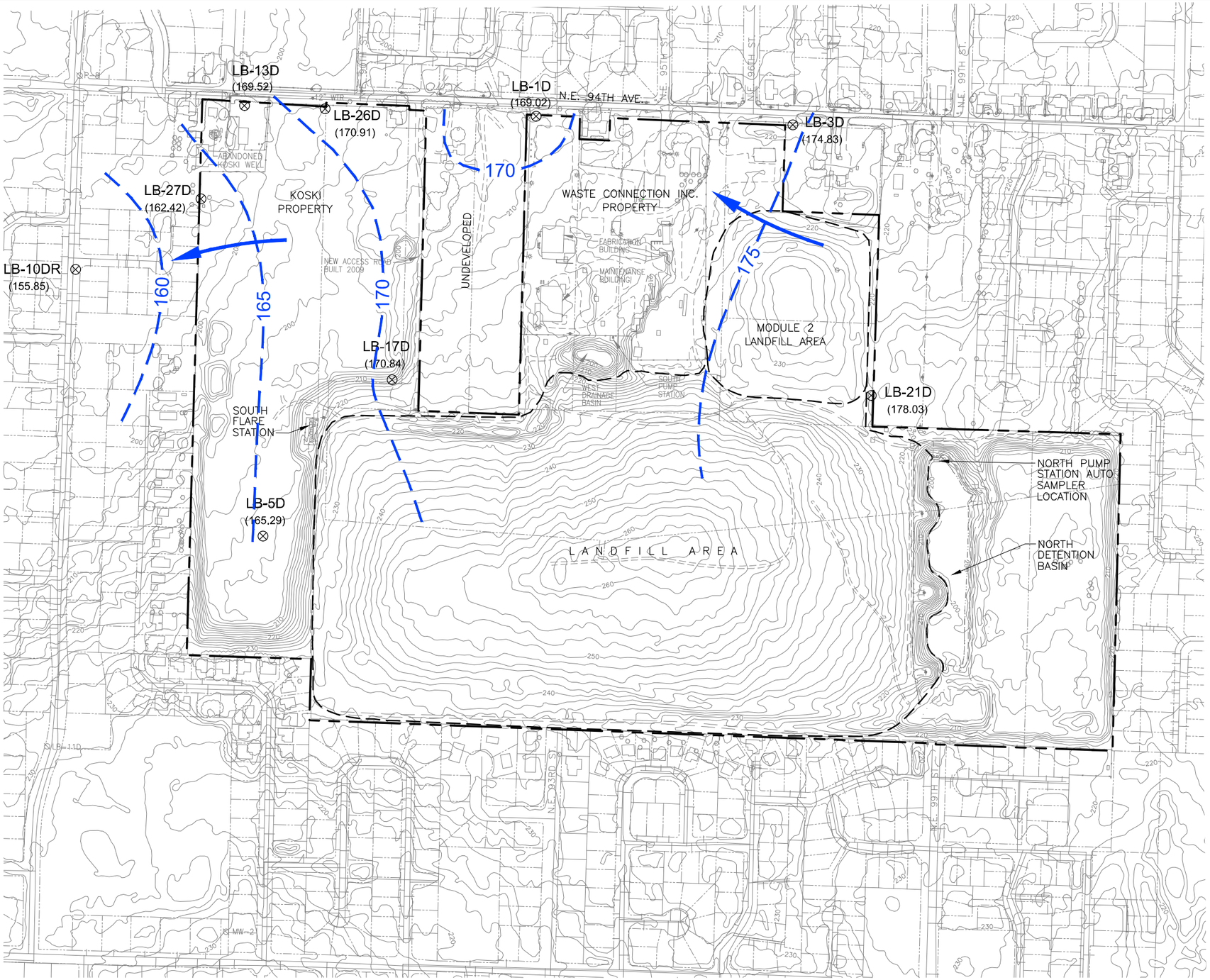
| | | | |
|---|---|---|---|
| PROJECT NO. 04221030.14 | DES BY B.L. | GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS<br>ALLUVIAL WATER BEARING ZONE<br>JULY 28, 2020<br>LEICHNER LANDFILL<br>VANCOUVER, WASHINGTON | DATE FEBRUARY 2021 |
| SCALE AS SHOWN | CHK BY D.L. | | FIGURE 2-4 |
| CAD FILE FIGURE 2-4 | APP BY L.C. | | |




**LEGEND:**

| | |
|---|---|
| LB-5D ⊗ | Monitoring Well Location, Troutdale Aquifer |
| — — — — | Property Boundary |
| — — — — — | Limit of Landfill Cover and Approximate Edge of Waste |
| — —175— — | Groundwater Potentiometric Surface Contour, queried where uncertain |
| (165.29) | Groundwater Elevation Measured on July 28, 2020 |
| → | Inferred Groundwater Flow Direction |

NOTE:
Topography Taken From Clark County GIS, December 2008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SCALE
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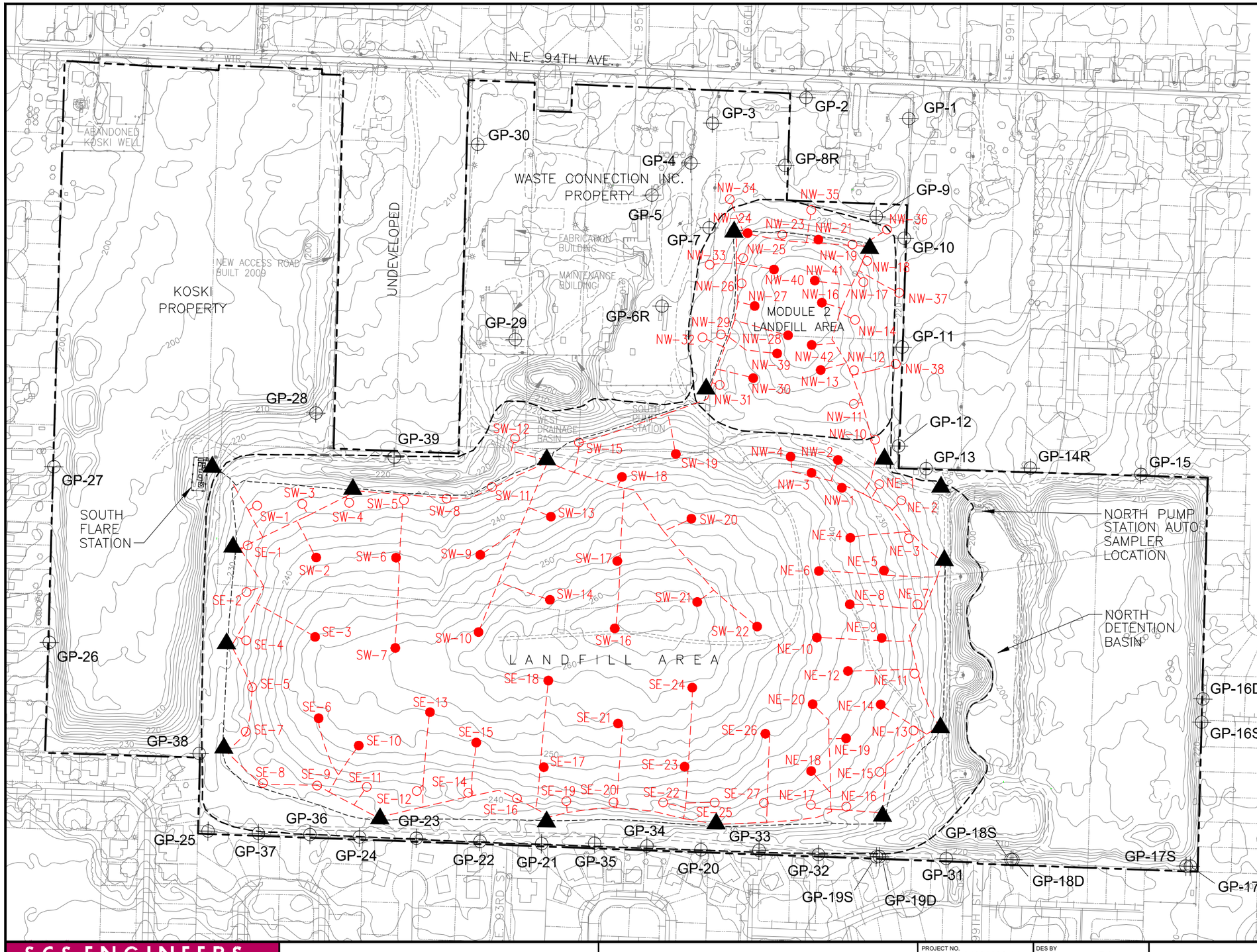
| PROJECT NO. 04221030.14 | DES BY B.L. | GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS TROUTDALE FORMATION AQUIFER JULY 28, 2020 LEICHNER LANDFILL VANCOUVER, WASHINGTON | DATE JANUARY 2021 |
| SCALE AS SHOWN | CHK BY D.L. | | FIGURE 2-5 |
| CAD FILE FIGURE 2-5 | APP BY L.C. | | |




**LEGEND:**

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

NOTE:
Topography Taken From Clark County GIS, December 2008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| PROJECT NO. 04221030.14 | DES BY B.L. |
| SCALE AS SHOWN | CHK BY D.L. |
| CAD FILE FIGURE 4-1 | APP BY L.C. |

# LANDFILL GAS PROBE AND EXTRACTION WELL LOCATIONS

LEICHNER LANDFILL
VANCOUVER, WASHINGTON

DATE FEBRUARY 2021

FIGURE 4-1

# TABLES

# Table 2-1
# July 2020 VOC Detections
# and October 2020 Verification Resampling Results
# Leichner Landfill

| Location | Sample Number | Date Sampled | Chloromethane (µg/L) | Choroform (µg/L) | Bromodichloro-methane (µg/L) |
|---|---|---|---|---|---|
| LB-1S | LB-072920-01-1S | 7/29/20 | **0.63** | 0.5 U | 0.5 U |
| LB-1S | LB-101420-04-1S | 10/14/20 | 0.5 U | **3.3** | 0.5 U |
| LB-10SR | LB-072920-03-10SR | 7/29/20 | **0.54** | 0.5 U | 0.5 U |
| LB-10SR | LB-101420-05-10SR | 10/14/20 | 0.5 U | **11** | **1.5** |
| LB-27I | LB-072820-02-27I | 728/20 | 0.5 U | **1.20** | **0.91** |
| LB-27I | LB-101420-01-27I | 10/14/20 | 0.5 U | **0.88** | 0.5 U |
| LB-27I (DUP) | LB-101420-03-DUP | 10/14/20 | 0.5 U | **0.80** | 0.5 U |
| Washhington Groundwater Quality Criteria (WAC 173-200-040) | | | NA | 7.0 | 0.30 |

Notes:

µg/L = micrograms per liter

DUP = field duplicate sample

NA = not available

U = not detected at or above the laboratory method reporting limit indicated

VOCs = volatile organic compounds

= concentration is above the groundwater quality criteria

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location [b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-1S | LB-01S | 5/11/87 | 2.0 L | 2.0 L | 5.0 L | 4.0 L | NT | 2.0 L | 2.0 L | 5.0 L | NT | 2.0 L |
| LB-1S | LB-01S | 7/21/87 | 2.0 L | 2.0 L | 5.0 L | 4.0 L | NT | 1.0 L | 2.0 L | 5.0 L | NT | 2.0 L |
| LB-1S | LB-01S | 9/4/87 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | NT | 1.0 L |
| LB-1S | LB-01S | 11/6/87 | 0.9 | 1.1 | 1.0 L | 1.0 | 1.0 L | 1.8 | 1.0 L | 1.0 L | NT | 1.0 L |
| LB-1S | LB-01S | 2/11/88 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | NT | 1.0 L |
| LB-1S | LB-01S | 6/22/88 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | NT | 1.0 L |
| LB-1S | LB-01S | 8/30/88 | 1.0 L | 1.0 L | 1.0 L | 3.0 L | 1.0 L | 1.0 L | 1.0 L | 2.0 L | 5.0 | 1.0 L |
| LB-1S | LB-01S | 12/5/88 | 1.0 L | 1.0 L | 1.0 L | 10.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | NT | 1.0 L |
| LB-1S | LB-289-W05 | 2/28/89 | 1.0 L | 1.0 L | 1.0 | 1.0 L | 1.0 L | 1.0 | 1.0 L | 1.0 L | 4.5 | 1.0 L |
| LB-1S | LB-589-W04 | 5/23/89 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 8.3 | 1.0 L |
| LB-1S | LB-989-W15 | 9/12/89 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 8.0 | 1.0 L |
| LB-1S | LB-1289-W12 | 12/15/89 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 | 1.0 L | 1.0 L | 8.5 | 1.0 L |
| LB-1S | LB-390-W10 | 3/14/90 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.1 | 1.0 L | 1.0 L | 9.1 | 1.0 L |
| LB-1S | LB-690-W10 | 6/20/90 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.3 | 1.0 L | 1.0 L | 5.5 | 1.0 L |
| LB-1S | LB-990-W06 | 9/14/90 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.5 | 1.0 L | 1.8 | 3.1 | 1.0 L |
| LB-1S | LB-1290-W05 | 12/11/90 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 3.7 | 1.0 L | 1.0 L | 2.6 | 1.0 L |
| LB-1S | LB-391-W10 | 3/20/91 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 2.2 | 1.0 L | 1.0 L | 3.7 | 1.0 L |
| LB-1S | LB-691-W05 | 6/26/91 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 2.4 | 1.0 L |
| LB-1S | LB-991-05 | 9/24/91 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 | 1.0 L |
| LB-1S | LB-1291-13 | 12/23/91 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 2.0 | 1.0 L |
| LB-1S | LB-392-15 | 3/23/92 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-1S | LB-63092-1 | 6/30/92 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.5 | 0.5 L | 0.3 L | 0.8 B | 0.2 L |
| LB-1S | LB-92292-2 | 9/22/92 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-1S | LB-121192-15 | 12/11/92 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.3 | 0.5 L | 0.3 L | 0.3 | 0.2 L |
| LB-1S | LB-031093-3 | 3/10/93 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 1.8 | 0.5 L | 0.3 L | 0.9 | 0.2 L |
| LB-1S | LB-060293-5 | 6/2/93 | 0.2 L | 0.2 | 0.2 L | 0.2 L | 0.2 L | 0.7 | 0.5 L | 0.3 L | 0.6 | 0.2 L |
| LB-1S | LB-092393-9 | 9/23/93 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.3 | 0.5 L | 0.3 L | 0.2 | 0.2 L |
| LB-1S | LB-092393-9 | 9/23/93 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 L | NT | NT | 0.3 L | NT | NT |
| LB-1S | LB-121593-1 | 12/15/93 | 0.2 L | 0.2 L | 0.3 | 0.2 L | 0.2 L | 0.2 L | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-1S | LB-032494-1 | 3/24/94 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.5 | 0.5 L | 0.3 L | 0.2 | 0.2 L |
| LB-1S | LB-062194-4 | 6/21/94 | 0.2 L | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 0.2 L | 0.3 L | 0.3 L | 0.3 L | 0.3 L |
| LB-1S | LB-090694-1 | 9/6/94 | 0.2 L | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 0.3 | 0.3 L | 0.3 L | 0.3 L | 0.3 L |
| LB-1S | LB-121494-11 | 12/14/94 | 0.2 L | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 0.2 L | 0.3 L | 0.3 L | 0.3 L | 0.3 L |
| LB-1S | LB-121995-5 | 2/19/95 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-030995-1 | 3/9/95 | 0.3 L | 0.2 L | 0.1 L | 0.1 L | 0.1 L | 0.1 B | 0.1 L | 0.1 L | 0.1 L | 0.1 L |

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location [b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-1S | LB-062095-12 | 6/20/95 | 0.3 L | 0.2 L | 0.1 L | 0.1 L | 0.1 L | 0.1 B | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-1S | LB-092295-13 | 9/22/95 | 0.3 L | 0.3 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-1S | LB-121995-5 | 12/19/95 | 0.3 L | 0.2 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-1S | LB-032096-17 | 3/20/96 | 0.3 L | 0.2 L | 0.1 L | 0.1 L | 0.1 L | 0.2 | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-1S | LB-061896-9 | 6/18/96 | 0.1 L | 0.1 L | 0.3 L | 0.1 L | 0.0 L | 0.1 L | 0.1 L | 0.1 L | 0.2 L | 0.1 L |
| LB-1S | LB-091796-5 | 9/17/96 | 0.1 L | 0.1 L | 0.3 L | 0.1 L | 0.0 L | 0.1 L | 0.1 L | 0.1 L | 0.2 L | 0.1 L |
| LB-1S | LB121796-1 | 12/17/96 | 0.1 L | 0.1 L | 0.3 L | 0.1 L | 0.0 L | 0.1 L | 0.1 L | 0.1 L | 0.2 L | 0.1 L |
| LB-1S | LB-031997-3 | 3/19/97 | 0.1 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-061797-3 | 6/17/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-091697-2 | 9/16/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-121697-5 | 12/16/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-031998-3 | 3/19/98 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.1 B | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-061698-5 | 6/16/98 | 0.1 L | 0.1 L | 0.3 L | 0.1 L | 0.1 | 0.1 L | 0.1 L | 0.1 L | 0.2 L | 0.1 L |
| LB-1S | LB-091798-4 | 9/17/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.3 B | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-1S | LB-121898-9 | 12/18/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-1S | LB-031799-3 | 3/17/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-1S | LB-062399-14 | 6/23/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-1S | LB-091799-10 | 9/17/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.3 J | NT | NT | 0.2 L | NT | 0.2 L |
| LB-1S | LB-091799-9 | 9/17/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.3 J | NT | NT | 0.2 L | NT | 0.2 L |
| LB-1S | LB-121699-13 | 12/15/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | NT | NT | 0.2 L | NT | 0.2 L |
| LB-1S | LB-031700-15 | 3/17/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-061300-7 | 6/13/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-091100-1 | 9/11/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-121500-9 | 12/15/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.1 J | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-031401-14 | 3/14/01 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-031902-1 | 3/19/02 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-091802-1 | 9/18/02 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-031303-10 | 3/13/03 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-031303-11 | 3/13/03 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-092203-6 | 9/22/03 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-022404-2 | 2/24/04 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-090104-1 | 9/1/04 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S (Dup) | LB-090104-30 | 9/1/04 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-030905-14 | 3/9/05 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-091405-1 | 9/14/05 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location [b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-1S (Dup) | LB-091405-2 | 9/14/05 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-031406-3 | 3/14/06 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-091306-5 | 9/13/06 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S (Dup) | LB-091306-6 | 9/13/06 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-030507-1 | 3/5/07 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-091907-1 | 9/19/07 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S (Dup) | LB-091907-2 | 9/19/07 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-032408-14 | 3/24/08 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-091608-1 | 9/16/08 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-1S | 3/17/09 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LBLF1S091109 | 9/11/09 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-1S032310 | 3/23/10 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB1S092310 | 9/23/10 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-1S | LB-1S | 3/24/11 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-1S | LB-090811-07 | 9/8/11 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-1S | LB-031312-14 | 3/13/12 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-1S | LB-091212-08 | 9/12/12 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-1S | LB-020513-09 | 2/5/2013 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-1S | LB-082213-08 | 8/22/2013 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-1S | LB-021914-18 | 2/19/14 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-1S (Dup) | LB-021914-19 | 2/19/14 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-1S | LB-081414-09 | 8/14/14 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-1S | LB-021915-16 | 2/19/15 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-081115-02 | 8/11/15 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-021716-14 | 2/17/16 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-082416-05 | 8/24/16 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-030917-11 | 3/9/17 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-081617-07-1S | 8/16/17 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-022718-11-1S | 2/27/18 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-081418-03-1S | 8/14/18 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-012919-03-1S | 1/29/19 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-072219-01-1S | 7/22/19 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-020520-02-1S | 2/5/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-072920-01-1S | 7/29/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-101420-04-1S | 10/14/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location[b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-10S | LB-989-W18 | 9/12/89 | 1.2 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 2.4 | 1.0 L | 1.0 L | 6.8 | 1.0 L |
| LB-10S | LB-1089-W05 | 10/17/89 | 2.3 | 1.3 | 1.0 L | 1.0 L | 1.0 L | 4.2 | 1.0 L | 1.0 L | 13.0 | 1.0 L |
| LB-10S | LB-1189-W07 | 11/14/89 | 2.2 | 1.1 | 1.0 L | 1.0 L | 1.0 L | 2.8 | 1.0 L | 1.0 L | 7.7 | 1.0 L |
| LB-10S | LB-1289-W09 | 12/14/89 | 2.1 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 2.6 | 1.0 L |
| LB-10S | LB-390-W05 | 3/13/90 | 1.4 B | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-690-W03 | 6/19/90 | 1.6 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 2.5 | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-990-W04 | 9/13/90 | 2.7 | 1.2 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-1290-W03 | 12/11/90 | 1.3 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 3.2 | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-391-W22 | 3/21/91 | 1.2 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-691-W03 | 6/26/91 | 1.7 | 1.0 L | 2.5 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-991-03 | 9/24/91 | 2.0 | 1.0 L | 2.0 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-1291-03 | 12/19/91 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-392-06 | 3/20/92 | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L | 1.0 L |
| LB-10S | LB-62692-3 | 6/26/92 | 1.7 | 0.5 B | 0.2 L | 0.2 L | 0.2 L | 1.5 | 0.5 L | 0.3 L | 0.5 B | 0.2 L |
| LB-10S | LB-92192-1 | 9/21/92 | 1.4 | 0.3 | 0.2 L | 0.2 L | 0.2 L | 0.9 | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-10S | LB-12992-6 | 12/9/92 | 0.8 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.2 | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-10S | LB-031293-17 | 3/12/93 | 0.7 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.4 | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-10S | LB-060493-18 | 6/4/93 | 0.9 | 0.2 | 0.2 L | 0.2 L | 0.2 L | 0.5 | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-10S | LB-092393-5 | 9/23/93 | 1.0 | 0.2 | 0.2 L | 0.2 L | 0.2 L | 0.6 | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-10S | LB-092393-5 | 9/23/93 | | | 0.2 L | 0.2 L | 0.2 L | | | 0.3 L | 0.2 L | |
| LB-10S | LB-121693-8 | 12/16/93 | 0.5 | 0.2 L | 0.2 | 0.2 L | 0.2 L | 0.2 L | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-10S | LB-032894-14 | 3/28/94 | 0.4 | 0.2 L | 0.2 L | 0.2 L | 0.2 L | 0.5 L | 0.5 L | 0.3 L | 0.2 L | 0.2 L |
| LB-10S | LB-062494-17 | 6/24/94 | 0.3 | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 0.2 L | 0.3 L | 0.3 L | 0.3 L | 0.3 L |
| LB-10S | LB-090894-17 | 9/8/94 | 0.5 | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 0.3 | 0.3 L | 0.3 L | 0.3 L | 0.3 L |
| LB-10S | LB-121594-17 | 12/15/94 | 0.2 L | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 0.2 L | 0.3 L | 0.3 L | 0.3 L | 0.3 L |
| LB-10S | LB-031095-15 | 3/10/95 | 0.3 L | 0.2 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-10S | LB-062195-15 | 6/21/95 | 0.5 | 0.2 L | 0.1 L | 0.1 L | 0.1 L | 0.1 B | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-10S | LB-092295-17 | 9/22/95 | 1.4 | 0.3 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-10S | LB-121995-9 | 12/19/95 | 0.7 | 0.2 L | 0.1 L | 0.1 L | 0.1 | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-10S | LB-032096-12 | 3/20/96 | 0.4 | 0.2 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L |
| LB-10S | LB-061996-18 | 6/19/96 | 0.5 | 0.1 | 0.3 L | 0.1 L | 0.0 L | 0.5 | 0.1 L | 1.0 | 0.2 L | 0.1 L |
| LB-10S | LB-091796-1 | 9/17/96 | 0.1 | 0.1 L | 0.3 L | 0.1 L | 0.0 L | 0.4 | 0.1 L | 0.7 | 0.2 L | 0.1 L |
| LB-10S | LB121896-12 | 12/18/96 | 0.1 L | 0.1 L | 0.3 L | 0.1 L | 0.0 L | 0.6 | 0.1 L | 1.0 | 0.2 L | 0.1 L |
| LB-10S | LB-032097-21 | 3/20/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.2 | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10S | LB-061897-13 | 6/18/97 | 0.5 L | 0.1 | 0.5 L | 0.5 L | 0.5 L | 0.2 | 0.5 L | 0.5 L | 0.5 L | 0.5 L |

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location[b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-10S | LB-091897-15 | 9/18/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.3 | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10S | LB-121597-3 | 12/15/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10S | LB-032098-15 | 3/20/98 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10S | LB-032098-16 | 3/20/98 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10S | LB-061598-3 | 6/15/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 | 0.3 L | 0.2 L |
| LB-10S | LB-091898-11 | 9/18/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.3 B | 0.2 L | 0.3 L | 0.4 | 0.3 L | 0.2 L |
| LB-10S | LB-121798-7 | 12/17/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-10S | LB-031999-17 | 3/19/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-10S | LB-031999-18 | 3/19/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-10S | LB-062299-4 | 6/22/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-10S | LB-062299-5 | 6/22/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-10SR | LB-031005-21 | 3/10/05 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-091505-7 | 9/15/05 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-031406-6 | 3/14/06 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-091306-9 | 9/13/06 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-030607-19 | 3/6/07 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-091907-7 | 9/19/07 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-032408-21 | 3/24/08 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR (Re) | MW10SR-043008 | 4/30/08 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-091608-4 | 9/16/08 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-10S | 3/17/09 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR (Dup) | Dup-1 | 3/17/09 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LBLF10S091109 | 9/11/09 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-10SR032310 | 3/23/10 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB10S092310 | 9/23/10 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-10SR | LB-10SR | 3/29/11 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-10SR (Dup) | DUP2 | 3/29/11 | 0.1 L | 0.15 | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-10SR | LB-090811-08 | 9/8/11 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-10SR | LB-031312-08 | 3/13/12 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-10SR | LB-091212-09 | 9/12/12 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-10SR | LB-020713-20 | 2/7/2013 | 1.00 L | 1.00 L | 1.0 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L |
| LB-10SR | LB-082213-09 | 8/22/2013 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-10SR | LB-021914-16 | 2/19/14 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-10SR | LB-081414-08 | 8/14/14 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-10SR | LB-021915-21 | 2/19/15 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location[b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-10SR | LB-081015-01 | 8/10/15 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-021716-11 | 2/17/16 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-082416-07 | 8/23/16 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-030917-13 | 3/9/17 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-081617-06-10SR | 8/16/17 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-022718-09-10SR | 2/27/18 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-081418-04-10SR | 8/14/18 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-012819-02-10SR | 1/28/19 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-072319-03-10SR | 7/23/19 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-020620-01-10SR | 2/6/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-072920-03-10SR | 7/29/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-101420-05-10SR | 10/14/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-0892-3 | 8/27/92 | 0.8 J | 0.5 J | 0.2 L J | 0.2 L J | 0.2 L J | 2.1 J | 0.5 L J | 1.6 J | 0.9 J | 0.2 J |
| LB-27I | LB-92292-4 | 9/22/92 | 1.1 | 0.6 | 1.0 L | 0.2 L | 0.2 L | 1.9 | 0.5 L | 1.5 | 1.2 | 0.2 L |
| LB-27I | LB-121192-20 | 12/11/92 | 0.9 | 0.5 | 0.2 L | 0.2 L | 0.2 L | 2.4 | 0.5 L | 0.3 L | 1.6 | 0.2 |
| LB-27I | LB-031293-21 | 3/12/93 | 0.9 | 0.5 | 0.2 L | 0.2 L | 0.2 L | 1.3 | 0.5 L | 0.8 | 1.7 | 0.2 L |
| LB-27I | LB-060193-2 | 6/1/93 | 0.7 | 0.4 | 0.2 L | 0.2 L | 0.2 L | 1.0 | 0.5 L | 1.3 | 1.0 | 0.2 L |
| LB-27I | LB-092493-14 | 9/24/93 | NT | NT | 0.2 L | 0.2 L | 0.2 L | 0.7 | 0.5 L | NT | 0.4 | 0.2 L |
| LB-27I | LB-092493-14 | 9/24/93 | 0.5 | 0.2 | 0.2 L | 0.2 L | 0.2 L | NT | NT | 1.2 | NT | NT |
| LB-27I | LB-092493-15 | 9/24/93 | NT | 0.2 | 0.2 L | 0.2 L | 0.2 L | 0.7 | 0.5 L | 1.2 | 0.4 | 0.2 L |
| LB-27I | LB-092493-15 | 9/24/93 | 0.6 | NT | 0.2 L | 0.2 L | 0.2 L | NT | NT | NT | NT | NT |
| LB-27I | LB-121693-19 | 12/16/93 | 0.5 | 0.2 L | 0.6 | 0.2 L | 0.2 L | 0.2 L | 0.5 L | 0.6 | 0.5 | 0.2 L |
| LB-27I | LB-121693-20 | 12/16/93 | 0.5 | 0.2 | 0.7 | 0.2 L | 0.2 L | 0.2 L | 0.5 L | 0.6 | 0.5 | 0.2 L |
| LB-27I | LB-032494-3 | 3/24/94 | 0.6 | 0.3 | 0.2 L | 0.2 L | 0.2 L | 1.0 | 0.5 L | 0.3 L | 1.2 | 0.2 L |
| LB-27I | LB-062294-8 | 6/22/94 | 0.5 | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 0.9 | 0.3 L | 0.3 L | 1.0 | 0.3 L |
| LB-27I | LB-090894-11 | 9/8/94 | 0.5 | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 1.0 | 0.3 L | 0.5 | 1.0 | 0.3 L |
| LB-27I | LB-121394-1 | 12/13/94 | 0.6 | 0.3 L | 0.1 L | 0.3 L | 0.4 L | 0.6 | 0.3 L | 0.3 L | 0.6 | 0.3 L |
| LB-27I | LB-031095-7 | 3/10/95 | 0.7 | 0.3 | 0.1 L | 0.1 L | 0.1 | 0.6 B | 0.1 B | 0.3 | 0.5 | 0.1 L |
| LB-27I | LB-061995-3 | 6/19/95 | 0.7 | 0.2 | 0.1 L | 0.1 L | 0.1 | 0.6 B | 0.1 L | 0.5 | 0.2 | 0.1 L |
| LB-27I | LB-092095-3 | 9/20/95 | 0.3 | 0.3 L | 0.1 L | 0.1 L | 0.1 | 0.3 | 0.1 L | 0.7 | 0.2 | 0.1 L |
| LB-27I | LB-122095-16 | 12/20/95 | 0.3 | 0.2 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.1 L | 0.8 | 0.1 L | 0.1 L |
| LB-27I | LB-031996-4 | 3/19/96 | 0.4 | 0.2 L | 0.1 L | 0.1 L | 0.1 B | 0.3 | 0.1 L | 1.4 | 0.1 L | 0.1 L |
| LB-27I | LB-061896-3 | 6/18/96 | 0.2 | 0.1 L | 0.3 L | 0.1 | 0.2 | 0.1 L | 0.1 L | 2.0 | 0.3 | 0.1 L |
| LB-27I | LB-091796-7 | 9/17/96 | 0.4 | 0.2 | 0.3 L | 0.1 L | 0.1 | 1.1 | 0.1 L | 2.6 | 0.3 | 0.2 |
| LB-27I | LB-091796-8 | 9/17/96 | 0.1 L | 0.1 | 0.3 L | 0.1 L | 0.1 | 1.2 | 0.1 L | 2.9 | 0.3 | 0.4 |

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location[b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-27I | LB121796-6 | 12/17/96 | 0.2 | 0.1 | 0.3 L | 0.1 L | 0.2 | 0.7 | 0.1 L | 1.7 | 0.2 L | 0.1 |
| LB-27I | LB121796-7 | 12/17/96 | 0.2 | 0.1 | 0.3 L | 0.1 L | 0.2 | 0.6 | 0.1 L | 1.6 | 0.2 L | 0.1 |
| LB-27I | LB-031997-10 | 3/19/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.2 | 0.2 | 0.5 L | 0.8 | 0.5 L | 0.5 L |
| LB-27I | LB-031997-11 | 3/19/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.2 | 0.2 | 0.5 L | 0.8 | 0.5 L | 0.5 L |
| LB-27I | LB-061797-9 | 6/17/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.1 | 0.2 | 0.5 L | 1.0 | 0.5 L | 0.5 L |
| LB-27I | LB-061797-9 | 6/17/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | NT | NT | 0.5 L | 1.1 | 0.5 L | 0.5 L |
| LB-27I | LB-091697-6 | 9/16/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.1 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-091697-7 | 9/16/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-121797-11 | 12/17/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.1 | 0.5 L | 0.5 L | 0.2 | 0.5 L | 0.5 L |
| LB-27I | LB-121797-12 | 12/17/97 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.1 | 0.5 L | 0.5 L | 0.4 | 0.5 L | 0.5 L |
| LB-27I | LB-031998-10 | 3/19/98 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.1 | 0.5 L | 0.5 L | 0.3 | 0.5 L | 0.5 L |
| LB-27I | LB-031998-11 | 3/19/98 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.1 | 0.5 L | 0.5 L | 0.3 | 0.5 L | 0.5 L |
| LB-27I | LB-061798-11 | 6/17/98 | 0.1 L | 0.1 L | 0.3 L | 0.1 L | 0.1 | 0.1 L | 0.1 L | 0.1 L | 0.2 L | 0.1 L |
| LB-27I | LB-061798-12 | 6/17/98 | 0.1 L | 0.1 L | 0.3 L | 0.1 L | 0.1 | 0.1 L | 0.1 L | 0.1 L | 0.2 L | 0.1 L |
| LB-27I | LB-091798-10 | 9/17/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-27I | LB-091798-9 | 9/17/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 B | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-27I | LB-121798-4 | 12/17/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-27I | LB-121798-5 | 12/17/98 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-27I | LB-031899-7 | 3/18/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-27I | LB-031899-8 | 3/18/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-27I | LB-062399-8 | 6/23/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L |
| LB-27I | LB-091599-2 | 9/15/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | NT | NT | NT | NT | NT |
| LB-27I | LB-121599-6 | 12/15/99 | 0.2 L | 0.3 L | 0.2 L | 0.3 L | 0.2 L | NT | NT | NT | NT | NT |
| LB-27I | LB-031600-1 | 3/16/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-031600-2 | 3/16/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-061300-1 | 6/13/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.2 J | 0.5 L | 0.5 L |
| LB-27I | LB-061300-2 | 6/13/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-091300-10 | 9/13/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.2 J | 0.5 L | 0.5 L |
| LB-27I | LB-121500-6 | 12/15/00 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.2 J | 0.5 L | 0.5 L |
| LB-27I | LB-031301-4 | 3/13/01 | 0.3 J | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.3 J | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-031902-10 | 3/19/02 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-091802-5 | 9/18/02 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-031203-1 | 3/12/03 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-031203-2 | 3/12/03 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-092203-2 | 9/22/03 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location[b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-27I | LB-092203-3 | 9/22/03 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-022604-17 | 2/26/04 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-090104-27 | 9/1/04 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB030805-5 | 3/8/05 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-091405-3 | 9/14/05 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-031606-18 | 3/16/06 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-091206-2 | 9/12/06 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-030507-8 | 3/5/07 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-0919-07-4 | 9/19/07 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-031908-4 | 3/19/08 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-091608-7 | 9/16/08 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-27I | 3/18/09 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LBLF27i091109 | 9/11/09 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-27I032410 | 3/24/10 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-27I092310 | 9/23/10 | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L | 0.5 L |
| LB-27I | LB-27I | 3/25/11 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-27I | LB-090711-01 | 9/7/11 | 0.1 L | 0.1 L | 0.1 L | 0.053 | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-27I | LB-032212-18 | 3/22/12 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-27I | LB-091112-02 | 9/11/12 | 0.1 L | 0.1 L | 0.1 L | 0.02 L | 0.2 L | 0.1 L | 0.1 L | 0.25 L | 0.1 L | 0.1 L |
| LB-27I | LB-020613-11 | 2/6/2013 | 1.00 L | 1.00 L | 1.0 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L |
| LB-27I (Dup) | LB-020613-12 | 2/6/2013 | 1.00 L | 1.00 L | 1.0 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L | 1.00 L |
| LB-27I | LB-082113-03 | 8/21/2013 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-27I (Dup) | LB-082113-04 | 8/21/2013 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.18 J | 0.16 L | 0.11 L |
| LB-27I | LB-021814-14 | 2/18/14 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-27I | LB-081314-03 | 8/13/14 | 0.15 L | 0.13 L | NT | NT | 0.16 L | 0.14 L | 0.14 L | 0.17 L | 0.16 L | 0.11 L |
| LB-27I | LB-021815-10 | 2/18/15 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-081215-09 | 8/12/15 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-021816-19 | 2/18/16 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-082316-02 | 8/23/16 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-031517-16 | 3/15/17 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-081617-03-27I | 8/16/17 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-030118-19-27I | 3/1/18 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-081418-01-27I | 8/14/18 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I (Dup) | LB-081418-02-DUP | 8/14/18 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-013019-03-27I | 1/30/19 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |

# Table 2-2

## Historical VOC Detections[a]
## Monitoring Wells LB-1S, LB-10SR, and LB-27I
## (µg/L)
## Leichner Landfill

| Location [b] | Sample Number | Date | PCE | TCE | 1,1-DCE | Vinyl Chloride | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | Chloroethane | cis-1,2-DCE | Chlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-27I | LB-072219-04-27I | 7/22/19 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-020520-06-27I | 2/5/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-072820-02-27I | 7/28/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-101420-01-27I | 10/14/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I (Dup) | LB-101420-03-DUP | 10/14/20 | 0.50 L | 0.50 L | NT | NT | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |

Notes:

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

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

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

[a] Only VOCs that have historically been detected are listed, excluding one-time detections of chloromethane, chloroform, and/or bromodichloromethane in July 2020 (semiannual monitoring event) and October 2020 (verification resampling event).

[b] Former monitoring well LB-10S is included because it was decommissioned in 1999 and replaced with existing monitoring well MW-10SR in 2005.

# Table 2-3
# 2020 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) | Bromodichloro-methane (µg/L) (WGQC: 0.30 ug/L) | Chloroform (µg/L) (WGQC: 7.0 ug/L) |
|---|---|---|---|---|---|---|---|
| LB-10SR | LB-012819-02-10SR | 1/28/19 | --- | --- | --- | --- | --- |
| LB-10SR | LB-072319-03-10SR | 7/23/19 | 10.4 | --- | --- | --- | --- |
| LB-10SR | LB-020620-01-10SR | 2/6/20 | 23.40 | --- | --- | --- | --- |
| LB-10SR | LB-101420-05-10SR | 10/14/20 | --- | --- | --- | 1.50 | 11 |
| LB-17D | LB-012919-01-17D | 1/29/19 | --- | --- | 4.10 | --- | --- |
| LB-17D | LB-020520-03-17D | 2/5/20 | --- | --- | 4.17 | --- | --- |
| LB-17I | LB-012919-07-17I | 1/29/19 | --- | 7.94 | 1.34 | --- | --- |
| LB-17I | LB-020520-05-17I | 2/5/20 | --- | 9.42 | 1.58 | --- | --- |
| LB-20S | LB-012919-05-20S | 1/29/19 | --- | --- | 1.06 | --- | --- |
| LB-20S | LB-020620-02-20S | 2/6/20 | --- | --- | 0.12 | --- | --- |
| LB-27I | LB-013019-03-27I | 1/30/19 | --- | --- | 0.23 | --- | --- |
| LB-27I | LB-072219-4-27I | 7/22/19 | --- | --- | 0.35 | --- | --- |
| LB-27I | LB-020520-06-27I | 2/5/20 | --- | --- | 0.13 | --- | --- |
| LB-27I | LB-072820-02-27I | 7/28/20 | --- | --- | 0.32 | 0.91 | --- |

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 2-4**
**Statistical Summary of Groundwater Quality Data From 2016 to 2020**
**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) | 6.9 | 4.0 | 6.0 | 4.7 | M(9.1) | 6.2 | M(31.1) | M(17.2) | 9.7 | M(10.8) | M(10.9) | 15.7 | M(10.6) | 8.9 | M(5.88) | M(33.2) | M(8.86) |
| Nitrate | 10 | mg/L | 6.0 | M(6.15) | M(3.87) | 5.6 | M(6.6) | M(0.95) | 2.5 | **M(23.4)** | 3.6 | 4.1 | M(5.23) | All ND | All ND | M(0.68) | 3.9 | M(5.76) | M(2.75) | M(4.63) |
| Total Dissolved Solids | 500 | mg/L | 202.4 | 184.1 | 163.7 | 174.9 | M(194) | 216.6 | 159.2 | M(323) | 247.4 | 200.0 | M(170) | 228.1 | 208.2 | 220.1 | 197.3 | M(176) | 341.5 | 212.7 |
| ***Metals*** | | | | | | | | | | | | | | | | | | | | |
| Iron (dissolved) | 0.3 | mg/L | All ND | All ND | All ND | All ND | All ND | All ND | All ND | All ND | All ND | All ND | All ND | **9.7** | 0.14 | **M(0.43)** | M(0.046) | All ND | All ND | M(0.037) |
| Manganese (dissolved) | 0.05 | mg/L | All ND | M(0.001) | All ND | All ND | All ND | 0.0023 | All ND | M(0.0041) | M(0.002) | 0.0054 | All ND | **M(1.58)** | **M(4.29)** | **2.3** | 0.0024 | All ND | **0.30** | M(0.0086) |

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

[a] Values shown are the 95 percent upper confidence limit on the mean (UCL-95) calculated using MTCA Stat 97 program and Statistical Guidance for Ecology Site Managers (Ecology, 1992).

# Table 4-1
# 2020 Compliance Landfill Gas Monitoring Probe Data
# Leichner Landfill

| Probe | Date | Methane | Carbon Dioxide | Oxygen | Balance Gases |
|---|---|---|---|---|---|
| | | Percent by Volume | | | |
| GP-1A | 3/18/2020 | 0 | 2.5 | 18.4 | 79.1 |
| GP-1A | 6/29/2020 | 0 | 2.5 | 18.6 | 78.9 |
| GP-1A | 9/4/2020 | 0 | 2.1 | 18.8 | 79.1 |
| GP-1A | 12/14/2020 | 0 | 1.9 | 19.4 | 78.7 |
| GP-1B | 3/18/2020 | 0 | 2.5 | 18.3 | 79.2 |
| GP-1B | 6/29/2020 | 0 | 2.3 | 18.8 | 78.9 |
| GP-1B | 9/4/2020 | 0 | 1.6 | 19.1 | 79.3 |
| GP-1B | 12/14/2020 | 0 | 1.7 | 19.8 | 78.5 |
| GP-02 | 3/18/2020 | 0 | 2.3 | 18.2 | 79.5 |
| GP-02 | 6/29/2020 | 0 | 2.6 | 17.3 | 80.1 |
| GP-02 | 9/4/2020 | 0 | 2.4 | 18 | 79.6 |
| GP-02 | 12/14/2020 | 0 | 3 | 18.4 | 78.6 |
| GP-03 | 3/18/2020 | 0.1 | 3.4 | 17.3 | 79.2 |
| GP-03 | 6/29/2020 | 0 | 3.2 | 17.4 | 79.4 |
| GP-03 | 9/4/2020 | 0 | 2.5 | 18.2 | 79.3 |
| GP-03 | 12/14/2020 | 0 | 2.6 | 18.2 | 79.2 |
| GP-4A | 3/18/2020 | 0 | 2.4 | 14.2 | 83.4 |
| GP-4A | 6/29/2020 | 0 | 3.9 | 15.1 | 81 |
| GP-4A | 9/4/2020 | 0 | 2.7 | 17.1 | 80.2 |
| GP-4A | 12/14/2020 | 0 | 3.3 | 16.1 | 80.6 |
| GP-4B | 3/18/2020 | 0 | 3.9 | 13.1 | 83 |
| GP-4B | 6/29/2020 | 0 | 3.4 | 16.3 | 80.3 |
| GP-4B | 9/4/2020 | 0 | 2.7 | 15.8 | 81.5 |
| GP-4B | 12/14/2020 | 0 | 3.9 | 14.4 | 81.7 |
| GP-05 | 3/18/2020 | 0 | 4.6 | 14.3 | 81.1 |
| GP-05 | 6/29/2020 | 0 | 4.9 | 15.6 | 79.5 |
| GP-05 | 9/4/2020 | 0 | 2.8 | 17.3 | 79.9 |
| GP-05 | 12/14/2020 | 0 | 4 | 16.4 | 79.6 |
| GP-06 | 3/18/2020 | 0 | 5.4 | 12.8 | 81.7 |
| GP-06 | 6/29/2020 | 0 | 6.4 | 13.8 | 79.8 |
| GP-06 | 9/4/2020 | 0 | 4.7 | 15.4 | 79.9 |
| GP-06 | 12/14/2020 | 0 | 4.8 | 14.6 | 80.6 |
| GP-07 | 3/18/2020 | 0 | 9.6 | 0 | 85.1 |
| GP-07 | 6/29/2020 | 0 | 13.8 | 0.1 | 85.5 |
| GP-07 | 9/4/2020 | 0 | 4.5 | 15.3 | 80.2 |
| GP-07 | 12/14/2020 | 0 | 5.1 | 10.1 | 84.8 |
| GP-8R | 3/18/2020 | 0 | 2.5 | 18.4 | 79.1 |
| GP-8R | 6/29/2020 | 0 | 2 | 18.8 | 79.2 |
| GP-8R | 9/4/2020 | 0 | 1.5 | 19.6 | 78.9 |
| GP-8R | 12/14/2020 | 0 | 0.6 | 20.4 | 79 |
| GP-9A | 3/18/2020 | 0 | 13.2 | 0.5 | 78.9 |
| GP-9A | 6/29/2020 | 0 | 5.9 | 11 | 83.1 |

# Table 4-1
# 2020 Compliance Landfill Gas Monitoring Probe Data
# Leichner Landfill

| Probe | Date | Methane | Carbon Dioxide | Oxygen | Balance Gases |
|---|---|---|---|---|---|
| | | Percent by Volume | | | |
| GP-9A (cont.) | 9/4/2020 | 0 | 4.6 | 14.5 | 80.9 |
| GP-9A | 12/14/2020 | 0 | 6.5 | 10 | 83.5 |
| GP-9B | 3/18/2020 | 0 | 14 | 1.6 | 84.1 |
| GP-9B | 6/29/2020 | 0 | 13.1 | 2.1 | 84.8 |
| GP-9B | 9/4/2020 | 0 | 12.6 | 3.2 | 84.2 |
| GP-9B | 12/14/2020 | 0 | 16.5 | 1.9 | 81.6 |
| GP-10A | 3/18/2020 | 0 | 8.7 | 13.5 | 77.7 |
| GP-10A | 6/29/2020 | 0 | 6.5 | 14.1 | 79.4 |
| GP-10A | 9/4/2020 | 0 | 5.1 | 14.2 | 80.7 |
| GP-10A | 12/14/2020 | 0 | 6.2 | 13.1 | 80.7 |
| GP-10B | 3/18/2020 | 0 | 5.7 | 15.6 | 78.7 |
| GP-10B | 6/29/2020 | 0 | 3.7 | 17.2 | 79.1 |
| GP-10B | 9/4/2020 | 0 | 2.5 | 18.1 | 79.4 |
| GP-10B | 12/14/2020 | 0 | 2.4 | 17.4 | 80.2 |
| GP-11 | 3/18/2020 | 0 | 1.7 | 16.4 | 81.9 |
| GP-11 | 6/29/2020 | 0 | 1.3 | 18.5 | 80.2 |
| GP-11 | 9/4/2020 | 0 | 1.4 | 18.2 | 80.4 |
| GP-11 | 12/14/2020 | 0 | 1.8 | 18.5 | 79.7 |
| GP-12 | 3/18/2020 | 0 | 2.8 | 18.8 | 78.3 |
| GP-12 | 6/29/2020 | 0 | 1.4 | 20.2 | 78.4 |
| GP-12 | 9/4/2020 | 0 | 1.3 | 19.7 | 79 |
| GP-12 | 12/14/2020 | 0 | 1.1 | 19.4 | 79.5 |
| GP-13 | 3/18/2020 | 0 | 1.6 | 18.2 | 80.2 |
| GP-13 | 6/29/2020 | 0 | 2.8 | 17 | 80.2 |
| GP-13 | 9/4/2020 | 0 | 2.3 | 17.9 | 79.8 |
| GP-13 | 12/14/2020 | 0 | 1.9 | 19.1 | 79 |
| GP-14 | 3/18/2020 | 0 | 1.4 | 19.7 | 78.9 |
| GP-14 | 6/29/2020 | 0 | 1.8 | 20 | 78.2 |
| GP-14 | 9/4/2020 | 0 | 1.1 | 19.9 | 79 |
| GP-14 | 12/14/2020 | 0 | 0.8 | 20.2 | 79 |
| GP-15 | 3/18/2020 | 0 | 1.2 | 19.2 | 79.6 |
| GP-15 | 6/29/2020 | 0 | 1.4 | 19.2 | 79.4 |
| GP-15 | 9/4/2020 | 0 | 1.2 | 18.8 | 80 |
| GP-15 | 12/14/2020 | 0 | 2.3 | 19.4 | 78.3 |
| GP-16D | 3/18/2020 | 0 | 1.2 | 18.4 | 80.4 |
| GP-16D | 6/29/2020 | 0 | 2.1 | 17.9 | 80 |
| GP-16D | 9/4/2020 | 0 | 2.3 | 17.9 | 79.8 |
| GP-16D | 12/14/2020 | 0 | 2.7 | 19.1 | 78.2 |
| GP-16S | 3/18/2020 | 0 | 1.7 | 19.3 | 79 |
| GP-16S | 6/29/2020 | 0 | 2.1 | 18.4 | 79.5 |
| GP-16S | 9/4/2020 | 0 | 1.9 | 18.6 | 79.5 |
| GP-16S | 12/14/2020 | 0 | 1.6 | 19.6 | 78.8 |

# Table 4-1
# 2020 Compliance Landfill Gas Monitoring Probe Data
# Leichner Landfill

| Probe | Date | Methane | Carbon Dioxide | Oxygen | Balance Gases |
|---|---|---|---|---|---|
| | | Percent by Volume | | | |
| GP-17D | 3/18/2020 | 0 | 1.8 | 16.9 | 81.3 |
| GP-17D | 6/29/2020 | 0 | 3.6 | 17 | 79.4 |
| GP-17D (cont.) | 9/4/2020 | 0 | 2.7 | 17.2 | 80.1 |
| GP-17D | 12/14/2020 | 0 | 4.8 | 17.4 | 77.8 |
| GP-17S | 3/18/2020 | 0 | 3.1 | 17 | 79.9 |
| GP-17S | 6/29/2020 | 0 | 3.8 | 17.7 | 78.5 |
| GP-17S | 9/4/2020 | 0 | 2.6 | 18.1 | 79.3 |
| GP-17S | 12/14/2020 | 0 | 4.2 | 17.3 | 78.5 |
| GP-18D | 3/18/2020 | 0 | 3.3 | 18.1 | 78.6 |
| GP-18D | 6/29/2020 | 0 | 2 | 18.4 | 79.6 |
| GP-18D | 9/4/2020 | 0 | 1.8 | 18.4 | 79.8 |
| GP-18D | 12/14/2020 | 0 | 2.6 | 18.8 | 78.6 |
| GP-18S | 3/18/2020 | 0 | 2.3 | 19 | 78.7 |
| GP-18S | 6/29/2020 | 0 | 2 | 19 | 79 |
| GP-18S | 9/4/2020 | 0 | 1.6 | 19.2 | 79.2 |
| GP-18S | 12/14/2020 | 0 | 1.7 | 18.9 | 79.4 |
| GP-19D | 3/18/2020 | 0 | 1.6 | 19 | 79.4 |
| GP-19D | 6/29/2020 | 0 | 1.6 | 18.6 | 79.8 |
| GP-19D | 9/4/2020 | 0 | 1.5 | 18.4 | 80.1 |
| GP-19D | 12/14/2020 | 0 | 2.3 | 19.6 | 78.1 |
| GP-19S | 3/18/2020 | 0 | 1.5 | 19.2 | 79.3 |
| GP-19S | 6/29/2020 | 0 | 1.4 | 19.8 | 78.8 |
| GP-19S | 9/4/2020 | 0 | 1.2 | 19.3 | 79.5 |
| GP-19S | 12/14/2020 | 0 | 1.5 | 19.2 | 79.3 |
| GP-20 | 3/18/2020 | 0 | 3.1 | 10.7 | 86.2 |
| GP-20 | 6/29/2020 | 0 | 5.6 | 11.6 | 82.8 |
| GP-20 | 9/4/2020 | 0 | 4.4 | 13 | 82.6 |
| GP-20 | 12/14/2020 | 0 | 8.1 | 10.6 | 81.3 |
| GP-21A | 3/18/2020 | 0 | 2.5 | 18.1 | 79.4 |
| GP-21A | 6/29/2020 | 0 | 1.5 | 19.3 | 79.2 |
| GP-21A | 9/4/2020 | 0 | 1.3 | 18.2 | 80.5 |
| GP-21A | 12/14/2020 | 0 | 1.3 | 19.3 | 79.4 |
| GP-21B | 3/18/2020 | 0 | 1.7 | 18.1 | 80.2 |
| GP-21B | 6/29/2020 | 0 | 1.4 | 19 | 79.6 |
| GP-21B | 9/4/2020 | 0 | 1.2 | 17.8 | 81 |
| GP-21B | 12/14/2020 | 0 | 1.9 | 18.7 | 79.4 |
| GP-22 | 3/18/2020 | 0 | 1.6 | 18.8 | 79.6 |
| GP-22 | 6/29/2020 | 0 | 1.1 | 19.9 | 79 |
| GP-22 | 9/4/2020 | 0 | 1 | 19.1 | 79.9 |
| GP-22 | 12/14/2020 | 0 | 1.4 | 19.7 | 78.9 |
| GP-23 | 3/18/2020 | 0 | 1.4 | 18.5 | 80.1 |
| GP-23 | 6/29/2020 | 0 | 1.1 | 19.6 | 79.3 |

# Table 4-1
# 2020 Compliance Landfill Gas Monitoring Probe Data
# Leichner Landfill

| Probe | Date | Methane | Carbon Dioxide | Oxygen | Balance Gases |
|---|---|---|---|---|---|
| | | Percent by Volume | | | |
| GP-23 (cont.) | 9/4/2020 | 0 | 1 | 18.9 | 80.1 |
| GP-23 | 12/14/2020 | 0 | 1.9 | 19.5 | 78.6 |
| GP-24A | 3/18/2020 | 0 | 1.6 | 19.3 | 79.1 |
| GP-24A | 6/29/2020 | 0 | 0.9 | 20.2 | 78.9 |
| GP-24A | 9/4/2020 | 0 | 0.7 | 19.6 | 79.7 |
| GP-24A | 12/14/2020 | 0 | 0.5 | 20.3 | 79.2 |
| GP-24B | 3/18/2020 | 0 | 1.5 | 19.8 | 78.7 |
| GP-24B | 6/29/2020 | 0 | 0.6 | 20.4 | 79 |
| GP-24B | 9/4/2020 | 0 | 0.5 | 19.7 | 79.8 |
| GP-24B | 12/14/2020 | 0 | 0.5 | 20.6 | 78.9 |
| GP-25A | 3/18/2020 | 0 | 1.6 | 18.6 | 79.8 |
| GP-25A | 6/29/2020 | 0 | 1.1 | 20 | 78.9 |
| GP-25A | 9/4/2020 | 0 | 0.8 | 19.6 | 79.6 |
| GP-25A | 12/14/2020 | 0 | 3.5 | 16.7 | 79.8 |
| GP-25B | 3/18/2020 | 0 | 1.8 | 18.5 | 79.7 |
| GP-25B | 6/29/2020 | 0 | 2.1 | 17.9 | 80 |
| GP-25B | 9/4/2020 | 0 | 1.7 | 17.1 | 81.2 |
| GP-25B | 12/14/2020 | 0 | 3.3 | 17.7 | 79 |
| GP-26 | 3/18/2020 | 0 | 1.8 | 19.5 | 78.7 |
| GP-26 | 6/18/2020 | 0 | 34.1 | 0.5 | 25.2 |
| GP-26 | 6/29/2020 | 0 | 1.1 | 20.1 | 78.8 |
| GP-26 | 9/4/2020 | 0 | 1.1 | 19.5 | 79.4 |
| GP-26 | 12/14/2020 | 0 | 0.6 | 19.1 | 80.3 |
| GP-27 | 3/18/2020 | 0 | 1.4 | 19.4 | 79.2 |
| GP-27 | 6/29/2020 | 0 | 0.9 | 19.6 | 79.5 |
| GP-27 | 9/4/2020 | 0 | 0.9 | 18.9 | 80.2 |
| GP-27 | 12/14/2020 | 0 | 0.8 | 19.9 | 79.3 |
| GP-28 | 3/18/2020 | 0 | 5.3 | 12.5 | 82 |
| GP-28 | 6/29/2020 | 0 | 3.2 | 15.1 | 81.7 |
| GP-28 | 9/4/2020 | 0 | 3.8 | 15.9 | 80.2 |
| GP-28 | 12/14/2020 | 0 | 4.6 | 14.7 | 80.6 |
| GP-29 | 3/18/2020 | 0 | 4.3 | 10.9 | 84.8 |
| GP-29 | 6/29/2020 | 0 | 4.9 | 11.2 | 83.9 |
| GP-29 | 9/4/2020 | 0 | 4.5 | 11.3 | 84.2 |
| GP-29 | 12/14/2020 | 0 | 6 | 11 | 83 |
| GP-30A | 3/18/2020 | 0 | 4.5 | 15.9 | 79.6 |
| GP-30A | 6/29/2020 | 0 | 4.8 | 15.4 | 79.8 |
| GP-30A | 9/4/2020 | 0 | 4.3 | 15.1 | 80.6 |
| GP-30A | 12/14/2020 | 0 | 3.2 | 17.2 | 79.6 |
| GP-30B | 3/18/2020 | 0 | 3.8 | 16.2 | 80 |
| GP-30B | 6/29/2020 | 0 | 4.5 | 15.9 | 79.6 |
| GP-30B | 9/4/2020 | 0 | 4.3 | 15.7 | 80 |

# Table 4-1
# 2020 Compliance Landfill Gas Monitoring Probe Data
# Leichner Landfill

| Probe | Date | Methane | Carbon Dioxide | Oxygen | Balance Gases |
|---|---|---|---|---|---|
| | | Percent by Volume | | | |
| GP-30B (cont.) | 12/14/2020 | 0 | 3.3 | 17.4 | 79.3 |
| GP-31 | 3/18/2020 | 0 | 1.8 | 19.3 | 78.9 |
| GP-31 | 6/29/2020 | 0 | 1.5 | 19.7 | 78.8 |
| GP-31 | 9/4/2020 | 0 | 1.4 | 19.4 | 79.2 |
| GP-31 | 12/14/2020 | 0 | 1.4 | 19.6 | 79 |
| GP-32 | 3/18/2020 | 0 | 1.5 | 18 | 80.5 |
| GP-32 | 6/29/2020 | 0 | 1.5 | 19.1 | 79.4 |
| GP-32 | 9/4/2020 | 0 | 1.3 | 18.7 | 80 |
| GP-32 | 12/14/2020 | 0 | 2.8 | 18.5 | 78.7 |
| GP-33 | 3/18/2020 | 0 | 2 | 17.1 | 80.9 |
| GP-33 | 6/29/2020 | 0 | 1.7 | 17.7 | 80.6 |
| GP-33 | 9/4/2020 | 0 | 1.3 | 18 | 80.7 |
| GP-33 | 12/14/2020 | 0 | 2.7 | 17.1 | 80.2 |
| GP-34 | 3/18/2020 | 0 | 4.8 | 14.4 | 80.8 |
| GP-34 | 6/29/2020 | 0 | 4.1 | 15 | 80.9 |
| GP-34 | 9/4/2020 | 0 | 3.7 | 15.2 | 81.1 |
| GP-34 | 12/14/2020 | 0 | 4.9 | 14.7 | 80.4 |
| GP-35 | 3/18/2020 | 0 | 4 | 17.2 | 78.8 |
| GP-35 | 6/29/2020 | 0 | 2.4 | 18 | 79.6 |
| GP-35 | 9/4/2020 | 0 | 1.9 | 18.2 | 79.9 |
| GP-35 | 12/14/2020 | 0 | 2.3 | 17.6 | 80.1 |
| GP-36 | 3/18/2020 | 0 | 1 | 17.6 | 81.4 |
| GP-36 | 6/29/2020 | 0 | 1.1 | 18.2 | 80.7 |
| GP-36 | 9/4/2020 | 0 | 1.1 | 17.6 | 81.3 |
| GP-36 | 12/14/2020 | 0 | 3 | 17.6 | 79.4 |
| GP-37 | 3/18/2020 | 0 | 1.1 | 17.7 | 81.2 |
| GP-37 | 6/29/2020 | 0 | 1.5 | 18.3 | 80.2 |
| GP-37 | 9/4/2020 | 0 | 1.3 | 17.8 | 80.9 |
| GP-37 | 12/14/2020 | 0 | 3.5 | 17 | 79.5 |
| GP-38 | 3/18/2020 | 0 | 2 | 17.7 | 80.3 |
| GP-38 | 6/29/2020 | 0 | 1.9 | 18 | 80.1 |
| GP-38 | 9/4/2020 | 0 | 1.7 | 18.2 | 80.1 |
| GP-38 | 12/14/2020 | 0 | 2 | 17.6 | 80.4 |
| GP-39 | 3/18/2020 | 0 | 15.1 | 0 | 78.9 |
| GP-39 | 3/19/2020 | 0 | 13.1 | 0.3 | 86.2 |
| GP-39 | 6/29/2020 | 0 | 1.4 | 20.5 | 78.1 |
| GP-39 | 9/4/2020 | 0 | 1.5 | 18.7 | 79 |
| GP-39 | 12/14/2020 | 0 | 18.9 | 3.4 | 74.3 |

# APPENDIX A

## 2020 Field Sampling Data Sheets (FSDSs)

First Quarter (February) 2020 FSDSs

**SCS ENGINEERS**

**Field Report Form**



| | | |
|---|---|---|
| Client: ~~Ea~~ Clark County | | Weather: cloudy 36°F |
| Project: 04120030.13 | | |
| Event: 1Q20 Leichner GW | | Date: 2/4/20 |
| Prepared By: S Nilsson | Address: Vancouver, WA | Arrival: 830 |
| | | Departure: 1600 |

- Picked up ice and DI water
- Onsite, calibrated YSI
- Began LB-27D while EF conducts WL survey
- WL survey finished while sampling LB-27D, 13D, 26D, 5D, & 3D, 10DR +DUP1
- LB-9SR could not be located due to mulch/dirt layer on top
- Branch in car while looking
- Offsite, samples prepped for ALS pickup in AM

Signed:

**SCS ENGINEERS**

**Field Report Form**



| | | |
|---|---|---|
| Client: Clark Co. | | Weather: Rain 44°F |
| Project: 042200030.13 | | |
| Event: 1Q20 Leicher LF GW | | Date: 2/5/2020 |
| Prepared By: S Nilsson | Address: Vancouver, WA | Arrival: 0840 |
| | | Departure: 1600 |

- Picked up ice/DI water
- Arrived onsite w/ E Fadely & calibrated YSI
- Completed remaining deep/intermediate wells. TA onsite in AM to video sampling procedure for internal use.
- Wells sampled: LB-1D, -1S, -13I, -17D + FB, -17I, -26I, & -27I.
- Samples stored on ice for AM pick up by ALS on the 6th

Signed:

**SCS ENGINEERS**

**Field Report Form**



| | | |
|---|---|---|
| Client: Clark County | | Weather: Rain 54°F |
| Project: 04220030.13 | | |
| Event: 1Q20 Leichner LF GW | | Date: 2/6/2020 |
| Prepared By: S Nilsson | Address: Vancouver, WA | Arrival: 930 |
| | | Departure: 1500 |

- Picked up ice / DI water
- Arrived on site, calibrated YSI
- Finished sampling all wells on site: LB-3S, LB-5S + DUP2, LB-6S, LB-10SR, & LB-20S
- Departed site for SCS
- Samples stored on ice for AM pick-up

Signed:

# *Landfill Visual Inspection Program*

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

Landfill Leichner LF
Inspector S. Nilsson
Date 2/4/2020
Reason for inspection
(1st, 2nd, 3rd, or 4th groundwater monitoring event)
Other

Notes:
Cloudy/Rain 34°F

# Leichner Landfill
## Groundwater Elevation Survey

Project #: 042200030.13

Sampler: EFadely/SNilsson

Quarter: (1) 2 3 4

Date: 2/4/2020

| Monitoring Point Designation | Reference Elevation (ft. msl) | DTB (ft. btoc) | DTW (ft. btoc) | Time | Comments |
|---|---|---|---|---|---|
| ***Monitoring Wells*** | | | | | |
| MW-1 N | 216.58 | 15.00 | NA | 1100 | Dry @ 15.11 |
| MW-1 S | 216.13 | 44.50 | 42.75 | 1104 | |
| MW-1 E | 216.45 | 29.05 | NA | 1107 | Dry @ 29.30 |
| MW-NE | 219.83 | 50.34 | 18.03 | 0920 | |
| LB-R2 | 222.27 | 77.36 | 50.86 | 1035 | |
| LB-1S | 210.12 | 45.00 | 38.31 | 1120 | |
| LB-1D | 209.74 | 137.45 | 40.45 | 1123 | |
| LB-3S | 218.25 | 52.50 | 43.77 | 1425 | |
| LB-3D | 219.29 | 117.28 | 44.74 | 1330 | |
| LB-5S | 206.89 | 30.32 | 16.76 | 1245 | |
| LB-5C | 206.70 | 74.71 | 38.38 | 1242 | |
| LB-5D | 207.56 | 122.40 | 42.47 | 1216 | |
| LB-6S | 202.80 | 39.07 | 32.03 | 1025 | |
| LB-9SR | 217.94 | 49.60 | 40.68 | 1035 | |
| LB-10SR | 204.04 | 42.35 | 36.32 | 1520 | |
| LB-10CR | 203.05 | 71.95 | 36.20 | 1514 | |
| LB-10DR | 203.36 | 121.10 | 47.81 | 1510 | |
| LB-13I | 202.36 | 55.03 | 32.62 | 1000 | |
| LB-13C | 202.68 | 66.00 | 33.02 | 1005 | |
| LB-13D | 202.96 | 88.88 | 33.48 | 1015 | |
| LB-17S | 208.18 | 34.38 | Dry | 1030 | Dry @ 34.70' |
| LB-17I | 213.14 | 51.95 | 41.67 | 1040 | |
| LB-17C | 206.55 | 72.35 | 35.35 | 1043 | |
| LB-17D | 213.17 | 100.91 | 42.47 | 1200 | |
| LB-20S | 221.22 | 61.50 | 45.03 | 1140 | |
| LB-21S | 223.35 | 54.24 | 42.29 | 0905 | |
| LB-21C | 223.32 | 79.10 | 42.70 | 0908 | |
| LB-21D | 223.63 | 110.73 | 45.54 | 0912 | |
| LB-22S | 208.42 | 36.97 | 10.23 | 0927 | |
| LB-23S | 229.19 | 45.40 | 34.72 | 0940 | |
| LB-24S | 235.13 | 54.16 | 41.45 | 0945 | |
| LB-26I | 200.22 | 58.30 | 29.99 | 1020 | |
| LB-26D | 200.75 | 101.78 | 29.93 | 1106 | |
| LB-27I | 205.35 | 57.15 | 36.10 | 0950 | |
| LB-27D | 204.65 | 115.10 | 41.48 | 0920 | |

Notes: Rainy 34°F
Probe decon'ed between locations

# Field Calibration Log
## SCS Engineers

| Equipment: | | | Serial Number: | | Field Staff: | | | |
|---|---|---|---|---|---|---|---|---|
| YSI ProPlus | | | 17510277 | | S Nilsson / E Fadely | | | |
| 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) |
| 04220038.13 | 2/4/20 | 845 | 12.8 | 10.72 | 4.0 | 7.0 | 1413 | 220 |
| ↓ | 2/5/20 | 845 | 12.7 | 10.78 | 4.0 | 7.0 | 1413 | 220 |
| ↓ | 2/6/20 | 900 | 12.7 | 10.76 | 4.0 | 7.0 | 1413 | 220 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes:

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-1D
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020320-01-1D
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | SW | W | NW | LIGHT | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | °F 43. | °C |

[Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/5/20 | 9:20 | 137.45 | — | 40.26 | — | 97.19 | X 1 | 15.84 |
| / / | : | | . | . | . | | X 3 | . |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/5/20 | 9:45 | A | 3 | 40 ml | HCl | YES | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/5/20 | 9:45 | A | 1 | 250, 500, 1L | None | YES | NO | NA | √ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/5/20 | 9:45 | 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) (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: 9:23 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(925) | 0.00 | 5.69 | 111.2 | 327.6 | 9.8 | 40.25 | 8.96 | c/c |
| 1 | A(928) | 0.2 | 6.93 | 86.8 | 268.6 | 10.7 | 40.25 | 7.91 | c/c |
| 2 | A(931) | 0.5 | 7.08 | 60.3 | 242.2 | 10.9 | 40.25 | 7.92 | c/c |
| 3 | A(934) | 0.65 | 7.03 | 49.8 | 236.1 | 10.9 | 40.25 | 7.81 | c/c |
| 4 | A(937) | 0.8 | 6.98 | 43.2 | 234.0 | 11.0 | 40.25 | 7.79 | c/c |
| 5 | A(940) | 0.95 | 6.98 | 39.4 | 234.0 | 11.0 | 40.25 | 7.75 | c/c |
| 6 | | | . | | | . | . | . | |

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

c/c = clear & colorless

Low Flow Purge Method: 8/7/80 psi ~ 250 mL/min

**SAMPLER:** S Nilsson (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-1S

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020520-02-1S

**DUP ID:** NA

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

(Circle appropriate units)

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/5/20 | 10:07 | 45.00 | - | 37.51 | - | 7.49 | X 1 | 1.22 |
| / / | : | . | . | . | . | | X 3 | . |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/5/20 | 10:35 | A | 3 | 40 ml | HCl | YES | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/5/20 | 10:35 | A | 1 | 250, 500, 1L | None | YES | NO | NA | √ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/5/20 | 10:35 | 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.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |
| | |

## WATER QUALITY DATA

Purge Start Time: 10:10 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp °C | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1015) | 0.00 | 7.02 | 21.1 | 233.3 | 10.2 | 38.26 | 6.10 | C/C |
| 1 | A(1018) | 0.15 | 7.03 | 13.2 | 239.1 | 11.1 | 38.26 | 4.31 | C/C |
| 2 | A(1021) | 0.25 | 7.05 | 8.6 | 241.7 | 11.4 | 38.26 | 4.31 | C/C |
| 3 | A(1024) | 0.4 | 7.05 | 7.5 | 243.6 | 11.4 | 38.26 | 4.27 | C/C |
| 4 | A(1027) | 0.55 | 7.05 | 6.2 | 243.8 | 11.4 | 38.26 | 4.37 | C/C |
| 5 | A(1030) | 0.7 | 7.06 | 5.9 | 244.3 | 11.5 | 38.26 | 4.40 | C/C |
| 6 | | | . | | | . | . | . | |

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

C/C = clear & colorless

Low Flow Purge Method: 9/6/25 psi 150 mL/min

**SAMPLER:** S Nilsson (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-3D

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020420-06-3D

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | (N) | NE | E | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | CLOUDY | (RAIN) | ? | **TEMPERATURE:** | (°F) 35 . | °C | | | | |

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/4/20 | 13:32 | 117.28 | — | 44.74 | — | 72.54 | X 1 | 11.82 |
| / / | : | . | . | . | . | | X 3 | — |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | | Preservative [circle] | Ice | Filter | pH | √ |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/4/20 | 1355 | A | 3 | (40 ml) | HCl | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/4/20 | 13:55 | A | 1 | 250, (500) 1L | (None) | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/4/20 | 13:55 | 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) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

**WATER QUALITY DATA** Purge Start Time: 13:36 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp (°C) | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1336) | 0.00 | 7.29 | 33.8 | 213.4 | 10.3 | 44.78 | 3.12 | clear/colorless |
| 1 | A(1341) | 0.3 | 7.21 | 28.3 | 239.7 | 11.0 | 44.79 | 4.94 | clear/colorless |
| 2 | A(1344) | 0.50 | 7.19 | 11.9 | 246.5 | 11.1 | 44.79 | 5.40 | clear/colorless |
| 3 | A(1347) | 0.75 | 7.19 | 6.5 | 250.7 | 11.0 | 44.79 | 5.48 | clear/colorless |
| 4 | A(1350) | 1.0 | 7.18 | 3.2 | 252.5 | 11.0 | 44.79 | 5.52 | clear/colorless |
| 5 | A(1353) | 1.2 | 7.17 | 1.9 | 252.8 | 11.0 | 44.79 | 5.51 | clear/colorless |
| 6 | | . | | | | . | . | . | |

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

Low Flow Purge Method: 6/7/70 psi ~300mL/min

**SAMPLER:** S Nilsson (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-3S

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020620-06-3S

**DUP ID:** NA

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

(Circle appropriate units)

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/6/20 | 14:05 | 52.55 | — | 43.62 | — | 8.93 | X 1 | 1.46 |
| / / | : | . | . | . | . | | X 3 | — |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/6/20 | 14:30 | A | 3 | ~~40 ml~~ | HCl | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/6/20 | 14:30 | A | 1 | 250, (500) 1L | None | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/6/20 | 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 | (8260) (8011) OR [ ] WA [ ] |
| AMBER - Glass | (8080) (8150) (TOX) OR [ ] WA [ ] |
| WHITE - Poly | (pH) (Conductivity) (TDS) (TSS) (Alkalinity) ($HCO_3/CO_3$) (Cl) ($SO_4$) (Silica, T.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

**WATER QUALITY DATA** Purge Start Time: 14:06 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(1410) | 0.00 | 8.19 | 61.5 | 211.4 | 11.9 | 4362 | 8.51 | C/C |
| 1 | A(1413) | 0.2 | 8.23 | 38.7 | 212.3 | 11.8 | 4362 | 6.39 | C/C |
| 2 | A(1416) | 0.4 | 8.07 | 38.3 | 212.2 | 11.8 | 4362 | 5.64 | C/C |
| 3 | A(1419) | 0.6 | 7.99 | 34.8 | 212.2 | 11.8 | 43.62 | 5.43 | C/C |
| 4 | A(1422) | 0.75 | 7.94 | 35.0 | 212.1 | 11.8 | 4362 | 5.30 | C/C |
| 5 | A(1425) | 0.9 | 7.94 | 43.2 | 212.1 | 11.9 | 43.62 | 5.39 | C/C |
| 6 | | | . | | | . | . | . | |

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

C/C = clear/colorless

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

**SAMPLER:** S Nilsson
(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-5D
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020420-05-5D
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | (N) | NE | E | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | (CLOUDY) | | RAIN | | | ? | **TEMPERATURE:** | (°F) 36 | °C |

[Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product [Product Thickness] | DT-Water | DTP-DTW [Water Column] | DTB-DTW | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 2/4/20 | 12:16 | 122.40 | — | 42.47 | — | 79.93 | X 1 | 13.03 |
| / / | : | . | . | . | . | | X 3 | — |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/4/20 | 12:40 | A | 3 (40 ml) | (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/4/20 | 12:40 | A | 1 250, (500) 1L | (None) | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/4/20 | 12:40 | A | 1 (125), 250, 500 | ($HNO_3$) | (YES) | (YES) | | ✓ |
| | / / | : | | 250, 500, 1L | | YES | | | |

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

**Analysis Allowed per Bottle Type**

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

## WATER QUALITY DATA

Purge Start Time: 12:19 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp (°C) | DTW | Diss $O_2$ (mg/l) | SM Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1224) | 0.00 | 7.33 | 7.4 | 315.8 | 10.1 | 42.47 | 2.67 | ~~42.47~~ clear/colorless |
| 1 | A(1227) | 0.15 | 7.25 | -7.2 | 317.6 | 11.1 | 42.47 | 1.30 | clear/colorless |
| 2 | A(1230) | 0.3 | 7.22 | -7.6 | 320.9 | 11.2 | 42.47 | 0.78 | clear/colorless |
| 3 | A(1233) | 0.45 | 7.21 | -18.6 | 322.9 | 11.3 | 42.47 | 0.67 | clear/colorless |
| 4 | A(1236) | 0.6 | 7.21 | -21.4 | 322.8 | 11.2 | 42.47 | 0.63 | clear/colorless |
| 5 | A(1239) | 0.75 | 7.22 | -21.6 | 322.6 | 11.3 | 42.47 | 0.62 | clear/colorless |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 11/9/60 psi 175 ml/min

**SAMPLER:** S Nilsson
(PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LR-SS

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-020620-03-SS

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | (NE) | E | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | (SUNNY) | | CLOUDY | | (RAIN) | | ? | | **TEMPERATURE:** | (°F) 57. | °C |

[Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product [Product Thickness] | DT-Water | DTP-DTW [Water Column] | DTB-DTW | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 2/6/20 | 11:38 | 30.32 | - | 16.75 | - | 13.57 | X 1 | 2.21 |
| / / | : | . | . | . | . | — | X 3 | - |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/6/20 | 12:00 | A | 3 | (40 ml) | (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/6/20 | 12:00 | A | 1 | 250, (500), 1L | (None) | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/6/20 | 12:00 | A | 1 | (125), 250, 500 | ($HNO_3$) | (YES) | (YES) | | ✓ |
| | / / | : | | | 250, 500, 1L | | YES | | | |

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

**Analysis Allowed per Bottle Type**

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

## WATER QUALITY DATA

Purge Start Time: 11:42 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp (°C) | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1143) | 0.00 | 8.06 | 112.9 | 93.3 | 12.3 | 16.76 | 10.55 | C/C |
| 1 | A(1146) | 0.3 | 7.87 | 76.8 | 110.7 | 12.5 | 16.76 | 10.17 | C/C |
| 2 | A(1149) | 0.5 | 7.85 | 74.0 | 111.6 | 12.5 | 16.76 | 10.17 | C/C |
| 3 | A(1152) | 0.7 | 7.71 | 71.9 | 115.4 | 12.5 | 16.76 | 10.10 | C/C |
| 4 | A(1155) | 0.9 | 7.73 | 68.4 | 115.1 | 12.5 | 16.76 | 9.99 | C/C |
| 5 | A(1158) | 1.2 | 7.72 | 66.4 | 114.8 | 12.6 | 16.76 | 9.98 | C/C |
| 6 | | | . | | | . | . | . | |

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

C/C = clear/colorless

Low Flow Purge Method: 8/7/20 psi 225 mL/min

**SAMPLER:** S Nilsson
(PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** DUP2

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020620-04-DUP2

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | (NE) | E | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | CLOUDY | | (RAIN) | | ? | | **TEMPERATURE:** (°F) 57 . °C | | |

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

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

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/6/20 | 12:05 | A | 3 | 40 ml HCl | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/6/20 | 12:05 | A | 1 | 250, 500, 1L None | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/6/20 | 12:05 | 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 | (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) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

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

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

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

Low Flow Purge Method: Collected at LB-SS

**SAMPLER:** S Nilsson
(PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-6S

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-012620-05-6S

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | (NE) | E | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | (SUNNY) | | CLOUDY | | (RAIN) | | | ? | **TEMPERATURE:** | (°F) 57. | °C |

(Circle appropriate units)

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/6/20 | 12:34 | 39.07 | — | 31.91 | — | 7.16 | X 1 | 1.17 |
| / / | : | . | . | . | . | — | X 3 | — |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/6/20 | 13:00 | A | 3 | (40 ml) | HCl | (YES) | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/6/20 | 13:00 | A | 1 | 250, (500) 1L | (None) | (YES) | NO | NA | √ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/6/20 | 13:00 | 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.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

**WATER QUALITY DATA** Purge Start Time: 12 : 40 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp (°C) | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1241) | 0.00 | 8.10 | 40.8 | 206.0 | 11.8 | 31.91 | 10.79 | C/C |
| 1 | A(1244) | 0.3 | 8.09 | 30.0 | 229.7 | 11.8 | 31.91 | 10.18 | C/C |
| 2 | A(1247) | 0.6 | 8.01 | 26.5 | 240.2 | 11.8 | 31.91 | 9.75 | C/C |
| 3 | A(1250) | 0.8 | 7.96 | 21.5 | 248.4 | 11.8 | 31.91 | 9.48 | C/C |
| 4 | A(1253) | 1.1 | 7.94 | 21.0 | 249.0 | 11.8 | 31.91 | 9.32 | C/C |
| 5 | A(1256) | 1.3 | 7.93 | 20.2 | 249.6 | 11.8 | 31.91 | 9.33 | C/C |
| 6 | | | . | | | . | . | . | |

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

C/C = clear/colorless

Low Flow Purge Method: 8/7/25 psi ~400 mL/min

**SAMPLER:** S. Nilsson
(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-10DR
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020420-07-10DR
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | (N) | NE | E | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | CLOUDY | (RAIN) | ? | **TEMPERATURE:** | (°F) 38. °C | | | | | |

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/4/20 | 15:20 | 121.10 | ~ | 47.81 | - | 73.29 | X 1 | 11.95 |
| / / | : | . | . | . | . | | X 3 | - |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/4/20 | 15:40 | A | 3 | 40 ml (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/4/20 | 15:40 | A | 1 | 250, 500, 1L (None) | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/4/20 | 15:40 | A | 1 | 125, 250, 500 ($HNO_3$) | (YES) | (YES) | | ✓ |
| | / / | : | | | 250, 500, 1L | YES | | | |

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

Analysis Allowed per Bottle Type

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

**WATER QUALITY DATA** Purge Start Time: 15:25 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(1524) | 0.00 | 7.07 | 0.8 | 285.6 | 11.1 | 47.81 | 4.74 | clear/colorless |
| 1 | A(1527) | 0.2 | 7.15 | 14.0 | 292.1 | 11.6 | 47.81 | 2.91 | clear/colorless |
| 2 | A(1530) | 0.4 | 7.18 | -2.8 | 295.1 | 11.8 | 47.81 | 2.61 | clear/colorless |
| 3 | A(1533) | 0.7 | 7.17 | -4.1 | 294.1 | 11.8 | 47.81 | 2.63 | clear/colorless |
| 4 | A(1536) | 0.9 | 7.19 | -6.4 | 297.1 | 11.8 | 47.81 | 2.55 | clear/colorless |
| 5 | A(1539) | 1.1 | 7.20 | -8.3 | 305.9 | 11.8 | 47.81 | 2.50 | clear/colorless |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 817/70 psi 275 ml/min

**SAMPLER:** S Nilsson
(PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-10SR
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020620-01-10SR
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | (E) | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | (CLOUDY) | | RAIN | | | ? | **TEMPERATURE:** | (°F) 51. | °C |

[Circle appropriate units]

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

| Date | Time | DT-Bottom | DT-Product | DT-Water | DTP-DTW | DTB-DTW | | Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/6/20 | 9:17 | 42.35 | — | 36.20 | — | 6.15 | X 1 | 1.00 |
| / / | : | . | . | . | . | | X 3 | . |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | | Preservative [circle] | Ice | Filter | pH | √ |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/6/20 | 9:45 | A | 3 | 40 ml | (HCl) | (YES) | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/6/20 | 9:45 | A | 1 | 250, 500, 1L | (None) | (YES) | NO | NA | √ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/6/20 | 9:45 | 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) (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: 9:23 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(926) | 0.00 | 6.21 | 91.7 | 457.5 | 11.6 | 36.20 | 5.46 | C/C |
| 1 | A(929) | 0.15 | 6.76 | 79.8 | 398.3 | 12.4 | 36.20 | 3.40 | C/C |
| 2 | A(932) | 0.3 | 6.92 | 58.2 | 394.4 | 12.5 | 36.20 | 3.10 | C/C |
| 3 | A(935) | 0.4 | 6.77 | 64.1 | 392.1 | 12.5 | 36.20 | 2.96 | C/C |
| 4 | A(938) | 0.55 | 6.80 | 57.1 | 390.9 | 12.6 | 36.20 | 2.84 | C/C |
| 5 | A(941) | 0.7 | 6.79 | 54.1 | 390.1 | 12.6 | 36.20 | 2.74 | C/C |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 9/6/25 psi 125 mL/min C/C: clear/colorless

**SAMPLER:** S Nilsson (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-13I

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020420-02-13I

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | SW | W | NW | LIGHT | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | °F 33. | °C |

(Circle appropriate units)

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/4/20 | 10:15 | 88.68 | - | 33.48 | - | 55.40 | X 1 | 9.03 |
| / / | : | . | . | . | . | | X 3 | - |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/4/20 | 10:35 | A | 3 | 40 ml | HCl | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/4/20 | 10:35 | A | 1 | 250, 500, 1L | None | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/4/20 | 10:35 | 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) (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: 10:16

Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp °C | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1019) | 0.00 | 7.57 | 5.9 | 224.1 | 10.3 | 33.48 | 4.37 | clear/colorless |
| 1 | A(1022) | 0.3 | 7.21 | -0.2 | 224.1 | 11.0 | 33.48 | 3.12 | clear/colorless |
| 2 | A(1025) | 0.6 | 7.17 | -5.0 | 223.0 | 11.1 | 33.48 | 3.00 | clear/colorless |
| 3 | A(1028) | 0.8 | 7.14 | -5.7 | 222.6 | 11.2 | 33.48 | 3.50 | clear/colorless |
| 4 | A(1031) | 1.1 | 7.14 | -5.4 | 224.6 | 11.1 | 33.48 | 3.71 | clear/colorless |
| 5 | A(1034) | 1.5 | 7.13 | -4.3 | 225.1 | 11.1 | 33.48 | 3.69 | clear/colorless |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 8/7/60 psi ~350 mL/min

**SAMPLER:** S Nilsson
(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-13I
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020520-07-13I
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | (E) | SE | S | SW | W | NW | LIGHT | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | CLOUDY | | (RAIN) | | ? | | **TEMPERATURE:** | (°F) 44. | °C |

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/5/20 | 13:52 | 55.03 | — | 32.57 | — | 22.46 | X 1 | 3.66 |
| / / | : | . | . | . | . | | X 3 | — |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/5/20 | 14:10 | A | 3 | 40 ml (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/5/20 | 14:10 | A | 1 | 250, (500) 1L (None) | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/5/20 | 14:10 | 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) (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: 13:53 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(1354) | 0.00 | 7.51 | -45.2 | 274.9 | 10.8 | 32.50 | 7.78 | C/C |
| 1 | A(1357) | 0.25 | 7.26 | -45.7 | 311.4 | 11.4 | 32.52 | 6.97 | C/C |
| 1400 2 | A(~~1360~~) | 0.45 | 7.26 | -47.0 | 316.2 | 11.5 | 32.52 | 6.81 | C/C |
| 1403 3 | A(~~1363~~) | 0.60 | 7.26 | -46.0 | 315.9 | 11.6 | 32.52 | 6.71 | C/C |
| 1406 4 | A(~~1366~~) | 0.75 | 7.26 | -48.7 | 315.7 | 11.6 | 32.52 | 6.59 | C/C |
| 5 | A(1409) | 1.0 | 7.26 | -49.0 | 314.8 | 11.5 | 32.52 | 6.67 | C/C |
| 6 | | . | . | | | . | . | . | |

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

C/C = clear/colorless

Low Flow Purge Method: 8/7/35 psi

**SAMPLER:** S Nilsson
(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-020520-03-17D
**DUP ID:** NA

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

[Circle abbropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/5/20 | 11:08 | 100.91 | - | 42.39 | - | 58.52 | X 1 | 9.54 |
| / / | : | . | . | . | . | | X 3 | - |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | √ |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/5/20 | 11:30 | A | 3 | 40 ml | HCl | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/5/20 | 11:30 | A | 1 | 250, 500, 1L | None | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/5/20 | 11:30 | A | 1 | 125, 250, 500 | $HNO_3$ | YES | YES | | ✓ |
| | / / | : | | | 250, 500, 1L | | YES | | | |

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

Analysis Allowed per Bottle Type

| BOTTLE TYPE | TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) |
|---|---|
| VOA - Glass | (8260) (8011) 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: 11:09 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(1111) | 0.00 | 7.20 | -17.0 | 285.9 | 11.9 | 42.39 | 2.24 | C/C |
| 1 | A(1114) | 0.25 | 6.83 | -32.2 | 296.4 | 12.4 | 42.39 | 1.09 | C/C |
| 2 | A(1117) | 0.55 | 6.73 | -33.1 | 302.2 | 12.4 | 42.39 | 0.99 | C/C |
| 3 | A(1120) | 0.8 | 6.66 | -33.3 | 307.2 | 12.9 | 42.39 | 0.84 | C/C |
| 4 | A(1123) | 1.0 | 6.65 | -33.6 | 308.1 | 12.5 | 42.39 | 0.84 | C/C |
| 5 | A(1126) | 1.2 | 6.64 | -34.3 | 309.4 | 12.6 | 42.39 | 0.79 | C/C |
| 6 | | | . | | | . | . | . | |

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

C/C = clear & colorless

Low Flow Purge Method: 8/7/65 psi 300 mL/min

**SAMPLER:** S.N. Kson
(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-D20520-04-FB

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

**DUP ID:** NA

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

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| / / | : | . | . | . | . | . | 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 | 2/5/20 | 11:20 | A | 3 (40 ml) | HCl | (YES) | NO | | ✓ |
| Amber Glass | / / | : | G | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/5/20 | 11:20 | A | 1 | 250, (500) 1L None | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | G | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/5/20 | 11:20 | A | 1 | (125, 250, 500) $HNO_3$ | (YES) | (YES) | | ✓ |
| | / / | : | G | | 250, 500, 1L | YES | | | |

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

Analysis Allowed per Bottle Type

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

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

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

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

Low Flow Purge Method: Collected near LB-17D using lab-supplied DI water

**SAMPLER:** E Fadely (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-17I

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020520-05-17I

**DUP ID:** NA

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

(Circle appropriate units)

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/5/20 | 11:52 | 51.95 | - | 41.57 | - | 10.38 | X 1 | 1.69 |
| / / | : | . | . | . | . | | X 3 | - |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/5/20 | 12:15 | A | 3 | 40 ml | (HCl) | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/5/20 | 12:15 | A | 1 | 250, 500, 1L | None | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/5/20 | 12:15 | 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 | (8260) (8011) OR [ ] WA [X] |
| AMBER - Glass | (8080) (8150) (TOX) OR [ ] WA [ ] |
| WHITE - Poly | (pH) (Conductivity) (TDS) (TSS) (Alkalinity) ($HCO_3/CO_3$) (Cl) ($SO_4$) (Silica, T.) ($NO_3$) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |
| | |

## WATER QUALITY DATA

Purge Start Time: 11:52 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp °C | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1155) | 0.00 | 7.29 | -22.2 | 368.8 | 11.0 | 41.57 | 2.61 | c/c |
| 1 | A(1158) | 0.2 | 7.34 | -63.4 | 389.5 | 11.8 | 41.57 | 0.68 | c/c |
| 2 | A(1201) | 0.4 | 7.36 | -76.9 | 403.7 | 12.1 | 41.57 | 0.54 | c/c |
| 3 | A(1204) | 0.55 | 7.36 | -82.7 | 408.7 | 12.0 | 41.57 | 0.53 | c/c |
| 4 | A(1207) | 0.7 | 7.36 | -88.0 | 407.9 | 12.1 | 41.57 | 0.49 | c/c |
| 5 | A(1210) | 0.85 | 7.37 | -89.4 | 408.8 | 12.2 | 41.57 | 0.51 | c/c |
| 6 | | | | | | | | | |

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

c/c = clear & colorless

Low Flow Purge Method: 8/7/30 psi 250 ml/min

**SAMPLER:** S Nilsson

(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-020620-02-20S

**DUP ID:** NA

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

[Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | DTP-DTW [Product Thickness] | DTB-DTW [Water Column] | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 2/6/20 | 10:06 | 61.50 | - | 44.91 | - | 16.59 | X 1 | 2.70 |
| / / | : | . | . | . | . | | X 3 | - |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/6/20 | 10:45 | A | 3 | 40 ml | HCl | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/6/20 | 10:45 | A | 1 | 250, (500) 1L | None | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/6/20 | 10:45 | A | 1 | 125, 250, 500 | $HNO_3$ | (YES) | (YES) | | ✓ |
| | / / | : | | | 250, 500, 1L | | YES | | | |

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

**Analysis Allowed per Bottle Type**

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

## WATER QUALITY DATA

Purge Start Time: 10:25 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(1028) | 0.00 | 7.32 | 51.1 | 359.9 | 11.4 | 44.91 | 5.86 | cloudy/Tan |
| 1 | A(1031) | 0.15 | 7.30 | 43.7 | 360.9 | 12.0 | 44.91 | 1.97 | cloudy/Tan |
| 2 | A(1034) | 0.25 | 7.27 | 30.0 | 369.5 | 12.2 | 44.91 | 1.30 | cloudy/Tan |
| 3 | A(1037) | 0.4 | 7.22 | 20.7 | 367.3 | 12.2 | 44.91 | 1.07 | cloudy/Tan |
| 4 | A(1040) | 0.55 | 7.22 | 28.8 | 366.5 | 12.2 | 44.91 | 1.00 | Cloudy/Tan |
| 5 | A(1043) | 0.7 | 7.20 | 31.9 | 366.8 | 12.3 | 44.91 | 1.03 | cloudy/Tan |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 8/7/30psi ~125 mL/min

**SAMPLER:** S Nilsson
(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-261

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020420-03-261

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | SW | W | NW | LIGHT | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | CLOUDY | | RAIN | | ? | | | | |

**TEMPERATURE:** °F 34. °C [Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | DTP-DTW [Product Thickness] | DTB-DTW [Water Column] | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 2/4/20 | 11:05 | 101.78 | - | 29.93 | - | 71.85 | X 1 | 11.71 |
| / / | : | | . | . | . | | X 3 | - |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/4/20 | 11:25 | A | 3 | 40 ml HCl | YES | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/4/20 | 11:25 | A | 1 | 250, 500, 1L None | YES | NO | NA | √ |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/4/20 | 11:25 | A | 1 | 125, 250, 500 $HNO_3$ | YES | YES | | √ |
| | / / | : | | | 250, 500, 1L | YES | | | |

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

**Analysis Allowed per Bottle Type**

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

## WATER QUALITY DATA

Purge Start Time: 11 : 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(1100) | 0.00 | 7.41 | 12.9 | 234.2 | 10.8 | 29.93 | 2.82 | clear/colorless |
| 1 | A(1112) | 0.4 | 7.12 | 3.7 | 233.0 | 11.1 | 29.93 | 1.55 | clear/colorless |
| 2 | A(1115) | 0.8 | 7.11 | 0.2 | 233.2 | 11.0 | 29.93 | 1.50 | clear/colorless |
| 3 | A(1118) | 1.1 | 7.09 | -5.9 | 233.2 | 11.1 | 29.93 | 1.54 | clear/colorless |
| 4 | A(1121) | 1.4 | 7.08 | -6.3 | 233.3 | 11.1 | 29.93 | 1.65 | clear/colorless |
| 5 | A(1124) | 1.6 | 7.08 | -8.2 | 233.2 | 11.1 | 29.93 | 1.66 | clear/colorless |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 8/7/60 psi ~ 375 mL/min

**SAMPLER:** S Nilsson
(PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

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

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020420-04-DUP1

**DUP ID:** NA

| **WIND FROM:** | N | NE | E | SE | S | SW | W | NW | LIGHT | MEDIUM | HEAVY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WEATHER:** | SUNNY | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | °F 34 . | °C |

[Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

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

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/4/20 | 11 :30 | A | 3 | 40 ml -HCl | YES | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/4/20 | 11 :30 | A | 1 | 250, 500, 1L None | YES | NO | NA | √ |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/4/20 | 11 :30 | A | 1 | 125, 250, 500 $HNO_3$ | YES | YES | | √ |
| | / / | : | | | 250, 500, 1L | YES | | | |

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

Analysis Allowed per Bottle Type

| BOTTLE TYPE | TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) |
|---|---|
| VOA - Glass | (8260) (8011) 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) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

## WATER QUALITY DATA

Purge Start Time: : Pump/Bailer Inlet Depth:

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

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

Low Flow Purge Method: Collected at LB-26D

**SAMPLER:** S Nilsson
(PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-26I

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020520-08-26I

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | (E) | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | CLOUDY | | (RAIN) | | ? | | **TEMPERATURE:** | (°F) 46 . | °C |

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/5/20 | 14:41 | 58.30 | - SN | 29.41 | - | 29.65 | X 1 | 4.83 |
| / / | : | . | . | 28.65 | . | | X 3 | . |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/5/20 | 15:00 | A | 3 | 40 ml HCl | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/5/20 | 15:00 | A | 1 | 250, 500, 1L None | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/5/20 | 15:00 | 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.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

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

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp °C | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1444) | 0.00 | 7.35 | -28.2 | 312.8 | 11.6 | 28.65 | 3.06 | C/C |
| 1 | A(1447) | 0.25 | 7.35 | -29.6 | 317.0 | 11.6 | 28.65 | 2.97 | C/C |
| 2 | A(1450) | 0.55 | 7.35 | -29.9 | 317.4 | 11.6 | 28.65 | 2.93 | C/C |
| 3 | A(1453) | 0.8 | 7.37 | -31.4 | 319.8 | 11.6 | 28.65 | 2.84 | C/C |
| 4 | A(1456) | 1.1 | 7.37 | -32.0 | 320.3 | 11.6 | 28.65 | 2.78 | C/C |
| 5 | A(1459) | 1.3 | 7.36 | -34.7 | 321.2 | 11.6 | 28.65 | 2.78 | C/C |
| 6 | | . | . | | | . | . | . | |

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

Low Flow Purge Method: 8/7/40 psi 320 mL/min C/C = clear & colorless

**SAMPLER:** S Nilsson (PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-27D
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020420-01-27D
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | (SW) | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | (CLOUDY) | | RAIN | | | ? | **TEMPERATURE:** | (°F) 31 . | °C |

(Circle appropriate units)

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | DTP-DTW [Product Thickness] | DTB-DTW [Water Column] | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/4/20 | 9:20 | 115.10 | — | 41.48 | — | 73.62 | X 1 | 12.00 |
| / / | : | . | . | . | . | | X 3 | — |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/4/20 | 9:40 | A | 3 | (40 ml) | (HCl) | (YES) | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/4/20 | 9:40 | A | 1 | 250, (500) 1L | (None) | (YES) | NO | NA | √ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/4/20 | 9:40 | A | 1 | (125) 250, 500 | ($HNO_3$) | (YES) | (YES) | | √ |
| | / / | : | | | 250, 500, 1L | | YES | | | |

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

Analysis Allowed per Bottle Type

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

**WATER QUALITY DATA** Purge Start Time: 9 : 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 (924) | 0.00 | 7.05 | 177.8 | 305 | 5.7 | 42.45 | 10.92 | clear/colorless |
| 1 | A (927) | 0.20 | 7.26 | 101.9 | 332.4 | 9.7 | 43.22 | 4.86 | clear/colorless |
| 2 | A (930) | 0.45 | 7.34 | 81.9 | 294.5 | 10.0 | 43.41 | 4.27 | clear/colorless |
| 3 | A (933) | 0.70 | 7.34 | 80.2 | 299.6 | 10.1 | 43.44 | 4.24 | clear/colorless |
| 4 | A (936) | 0.9 | 7.33 | 71.8 | 297.0 | 10.1 | 43.45 | 4.20 | clear/colorless |
| 5 | A (939) | 1.85 | 7.33 | 62.5 | 296.3 | 10.2 | 43.45 | 4.04 | clear/colorless |
| 6 | | . | | | | . | . | . | |

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

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

**SAMPLER:** S Nilsson
(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-27I

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-020520-06-27I

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | (E) | SE | S | SW | W | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | SUNNY | | CLOUDY | | (RAIN) | | | ? | **TEMPERATURE:** | (°F) 43. | °C |

[Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 2/5/20 | 12:51 | 57.15 | - | 35.99 | - | 21.16 | X 1 | 3.45 |
| / / | : | . | . | . | . | | X 3 | - |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 2/5/20 | 13:15 | A | 3 | 40 ml | HCl | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 2/5/20 | 13:15 | A | 1 | 250, 500, 1L | None | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 2/5/20 | 13:15 | 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 | (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) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

## WATER QUALITY DATA

Purge Start Time: 12:54 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp (°C) | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1258) | 0.00 | 7.49 | -13.5 | 309.0 | 11.0 | 36.01 | 1.91 | C/C |
| 1 | A(1301) | 0.2 | 7.45 | -30.4 | 318.3 | 11.6 | 36.01 | 0.90 | slightly turbid |
| 2 | A(1304) | 0.5 | 7.46 | -31.1 | 327.1 | 11.8 | 36.01 | 0.61 | C/C |
| 3 | A(1307) | 0.7 | 7.48 | -36.8 | 338.7 | 11.7 | 36.01 | 0.49 | C/C |
| 4 | A(1310) | 1.0 | 7.48 | -40.3 | 340.4 | 11.8 | 36.01 | 0.45 | C/C |
| 5 | A(1313) | 1.2 | 7.48 | -41.3 | 342.8 | 11.8 | 36.01 | 0.47 | C/C |
| 6 | | | . | | | . | . | . | |

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

C/C=clear/colorless

Low Flow Purge Method: 8/7/35 psi 225 mL/min

**SAMPLER:** S Nilsson
(PRINTED NAME) (SIGNATURE)

# CHAIN OF CUSTODY

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

SR# _____ PAGE 1 OF 1 COC# _____

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 042200030.13)
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE #: 503-639-9735 FAX #:
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond., Cl, $SO_4$, $PO_4$, F, $NO_2$, $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity ☐ $CO_3$☐ $HCO_3$☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases RSK 175☐ $CO_2$☐ Methane☐ Ethane☐ Ethene☐ | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-020420-06-3D | 2/4/20 | 1355 | | W | 5 | | X | | | | | | X | | X | | | | | | | | |
| LB-020420-05-5D | 2/4/20 | 1240 | | W | 5 | | X | | | | | | X | | X | | | | | | | | |
| LB-020420-07-10DR | 2/4/20 | 1540 | | W | 5 | | X | | | | | | X | | X | | | | | | | | |
| LB-020420-02-13D | 2/4/20 | 1035 | | W | 5 | | X | | | | | | X | | X | | | | | | | | |
| LB-020420-03-26D | 2/4/20 | 1125 | | W | 5 | | X | | | | | | X | | X | | | | | | | | |
| LB-020420-04-DUP | 2/4/20 | 1130 | | W | 5 | | X | | | | | | X | | X | | | | | | | | |
| LB-020420-01-27D | 2/4/20 | 940 | | W | 5 | | X | | | | | | X | | X | | | | | | | | |
| Trip Blanks | 2/4/20 | 800 | | W | 2 | | X | | | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. # _____
Bill To: _____

**TURNAROUND REQUIREMENTS**

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

Requested Report Date _____

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:
cc Tiffany Andrews
Tandrews@scsengineers.com
Metals field filtered

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

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: |
|---|---|---|---|
| Signature: [signature] | Signature: [signature] | Signature: | Signature: |
| Date/Time: 2/5/20 11:55 | Date/Time: 2/5/20 1155 | Date/Time: | Date/Time: |
| Printed Name: David Lamadrid | Printed Name: [illegible] | Printed Name: | Printed Name: |
| Firm: SCS Engineers | Firm: ALS | Firm: | Firm: |

# CHAIN OF CUSTODY

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

SR# _____

PAGE 1 OF 1 COC# _____

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 04220030.13
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE # 503 639-9736 FAX #
SAMPLER'S SIGNATURE

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond., Cl, $SO_4$, $PO_4$, F, $NO_2$, $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity☐ $CO_3$☐ $HCO_3$☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases $CO_2$☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐ | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-020520-01-ID | 2/5/20 | 945 | | W | 5 | | X | | | | | X | | | X | | | | | | | | | | |
| LB-020520-02-IS | 2/5/20 | 1035 | | W | 5 | | X | | | | | X | | | X | | | | | | | | | | |
| LB-020520-07-13I | 2/5/20 | 1410 | | W | 5 | | X | | | | | X | | | X | | | | | | | | | | |
| LB-020520-03-17D | 2/5/20 | 1130 | | W | 5 | | X | | | | | X | | | X | | | | | | | | | | |
| LB-020520-04-FB | 2/5/20 | 1120 | | W | 5 | | X | | | | | X | | | X | | | | | | | | | | |
| LB-020520-05-ITI | 2/5/20 | 1215 | | W | 5 | | X | | | | | X | | | X | | | | | | | | | | |
| LB-020520-08-25I | 2/5/20 | 1500 | | W | 5 | | X | | | | | X | | | X | | | | | | | | | | |
| LB-020520-06-27I | 2/5/20 | 1315 | | W | 5 | | X | | | | | X | | | X | | | | | | | | | | |
| Trip Blanks | 2/5/20 | 800 | | W | 2 | | X | | | | | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. # _____
Bill To: _____

**TURNAROUND REQUIREMENTS**

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

Requested Report Date

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:

cc: Tiffany Andrews
tandrews@scsengineers.com
Metals are field filtered

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

| RELINQUISHED BY: | | RECEIVED BY: | | RELINQUISHED BY: | | RECEIVED BY: | |
|---|---|---|---|---|---|---|---|
| Signature | Date/Time 2/6/20 0900 | Signature | Date/Time 2/6/20 0900 | Signature | Date/Time | Signature | Date/Time |
| Printed Name David Lamadrid | Firm SCS Engineers | Printed Name | Firm | Printed Name | Firm | Printed Name | Firm |

# CHAIN OF CUSTODY

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

SR# _____ PAGE 1 OF 1 COC# _____

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 04220030.13
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE #: 503 639 9736 FAX #:
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond., Cl, $SO_4$, $PO_4$, F, $NO_2$, $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity☐ $CO_3$☐ $HCO_3$☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases $CO_2$☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-020620-06-3S | 2/6/20 | 1430 | | W | 5 | | X | | | | | X | | X | | | | | | | | |
| LB-020620-03-5S | 2/6/20 | 1200 | | W | 5 | | X | | | | | X | | X | | | | | | | | |
| LB-020620-04-DUP2 | 2/6/20 | 1205 | | W | 5 | | X | | | | | X | | X | | | | | | | | |
| LB-020620-05-6S | 2/6/20 | 1305 | | W | 5 | | X | | | | | X | | X | | | | | | | | |
| LB-020620-01-10SR | 2/6/20 | 945 | | W | 5 | | X | | | | | X | | X | | | | | | | | |
| LB-020620-02-2DS | 2/6/20 | 1045 | | W | 5 | | X | | | | | X | | X | | | | | | | | |
| Trip Blanks | 2/6/20 | 950 | | W | 3 | | X | | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. # _____
Bill To: _____

**TURNAROUND REQUIREMENTS**

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

Requested Report Date

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:

cc Tiffany Andrews
tandrews@scsengineers.com

Metals are field filtered

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

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: |
|---|---|---|---|
| Signature: 2/7/2020 0900 | Signature: 2/7/20 0900 | Signature: | Signature: |
| Date/Time: | Date/Time: | Date/Time: | Date/Time: |
| Printed Name: Sam Nilsson | Printed Name: | Printed Name: | Printed Name: |
| Firm: SCS | Firm: AK | Firm: | Firm: |

# Third Quarter (July) 2020 FSDSs

**SCS ENGINEERS**

**Field Report Form**



| | | |
|---|---|---|
| Client: Clark County | | Weather: Sunny 70°F |
| Project: ~~04219030.13~~ IH 04220030.13 | | |
| Event: 3Q20 Leichner LF GW | | Date: 7/28/2020 |
| Prepared By: I. Hultquist | Address: 9411 NE 94th Ave Vancouver WA 98662 | Arrival: 0830 |
| | | Departure: 1600 |

Packed up truck, departed from SCS portland, picked up ice and water on way to site.

Met T. Andrews, did site tour.

T. Andrews sampled LB-5S, LB-27I, & LB-13I while IH completed water level survey

T Andrews showed IH where offsite wells were located.

T Andrews departed site @ ~ 1345

IH Sampled LB-26I, DUP (LB-26I), LB-06S

- Departed site at approx 1600

Signed: _____

**SCS ENGINEERS**

**Field Report Form**



| | | |
|---|---|---|
| Client: Clark County | | Weather: Sunny 65°F |
| Project: ~~04219030.13~~ IH 04220030.13 | | |
| Event: 3Q Leichner LF GW | | Date: 7/29/20 |
| Prepared By: I. Holtquist | Address: 9411 NE 94th Ave Vancouver WA 98662 | Arrival: 0820 |
| | | Departure: 1100 |

Calibrated YSI @ office - Packed up truck, departed from SCS portland.

Picked up ice and water on way to site

Arrived @ LB-1S IH on WCI property

Sample LB-1S, and took IH FB at LB-1S

Sampled LB-10SR.

Met Kristi Morrow (ALS Courier) @ 1045

Gave Kristi 7/28 samples and 7/29 samples

Leichner Equipment Inventory:

- ~ 23 Grab Plates
- ~ 76 Bladders
- ~ 2000' New bonded tubing and 3 partial rolls

Departed Site

Signed: [signature]

# Field Calibration Log
## SCS Engineers

| Equipment: | | | Serial Number: | | Field Staff: | | | |
|---|---|---|---|---|---|---|---|---|
| YSI Pro Plus | | | 17J102712 | | T. Andrews / J. Hultquist | | | |
| Location/ Project Number | Date | Time | Temperature (°C) | Dissolved Oxygen (mg/L) | pH 4.0 Buffer (S.U.) | pH 7.0 Buffer (S.U.) | Conductivity 1413 µS/cm standard (µS/cm) | ORP 220 mV standard (mV) |
| 041220030.13 / Leichner Landfill | 7/28/20 | 0925 | 22.8 | 8.61 | 4.00 | 7.00 | 1413 | 220.0 |
| 〃 | 7/29/20 | 0715 | 23.3 | 8.49 | 4.00 | 7.00 | 1413 | 220.0 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes:

# *Landfill Visual Inspection Program*

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

Landfill Leichner Bros. LF
Inspector I. Hultquist
Date 7/28/2020
Reason for inspection
1st, 2nd, (3rd) or 4th groundwater monitoring event
Other

Notes: Sunny 70°F

# Leichner Landfill
## Groundwater Elevation Survey

Project #: 0472O030.13 Sampler: J. Hultquist

Quarter: 1 2 (3) 4 Date: 7/28/2020

| Monitoring Point Designation | Reference Elevation (ft. msl) | DTB (ft. btoc) | DTW (ft. btoc) | Time | Comments |
|---|---|---|---|---|---|
| ***Monitoring Wells*** | | | | | |
| MW-1 N | 216.58 | 15.00 | — | 1256 | Dry @ 14.97 |
| MW-1 S | 216.13 | 44.50 | 42.49 | 1255 | |
| MW-1 E | 216.45 | 29.05 | — | 1256 | Dry @ 28.96 |
| MW-NE | 219.83 | 50.34 | 18.16 | 1010 | |
| LB-R2 | 222.27 | 77.36 | 50.57 | 1026 | |
| LB-1S | 210.12 | 45.00 | 38.19 | 1239 | |
| LB-1D | 209.74 | 137.45 | 40.72 | 1237 | |
| LB-3S | 218.25 | 52.50 | 43.46 | 1304 | |
| LB-3D | 219.29 | 117.28 | 44.46 | 1312 | |
| LB-5S | 206.89 | 30.32 | 17.33 | 0921 | |
| LB-5C | 206.70 | 74.71 | 38.08 | 0923 | |
| LB-5D | 207.56 | 122.40 | 42.27 | 0919 | |
| LB-6S | 202.80 | 39.07 | 31.97 | 1109 | |
| LB-9SR | 217.94 | 49.60 | 41.43 | 1329 | |
| LB-10SR | 204.04 | 42.35 | 36.31 | 1207 | |
| LB-10CR | 203.05 | 71.95 | 35.15 | 1202 | |
| LB-10DR | 203.36 | 121.10 | ~~36.37~~ ~~1207~~ 47.51 | 1204 | D+W - 47.51 1204 - time |
| LB-13I | 202.36 | 55.03 | 32.63 | 1057 | |
| LB-13C | 202.68 | 66.00 | 33.04 | 1059 | |
| LB-13D | 202.96 | 88.88 | 33.44 | 1055 | |
| LB-17S | 208.18 | 34.38 | ~~35~~ Dry | 1118 | Dry @ 34.36 |
| LB-17I | 213.14 | 51.95 | 41.44 | 1116 | |
| LB-17C | 206.55 | 72.35 | 35.11 | 1120 | |
| LB-17D | 213.17 | 100.91 | 42.33 | 1125 | |
| LB-20S | 221.22 | 61.50 | 44.61 | 1232 | |
| LB-21S | 223.35 | 54.24 | 41.98 | 1019 | |
| LB-21C | 223.32 | 79.10 | 42.41 | 1020 | |
| LB-21D | 223.63 | 110.73 | 45.60 | 1017 | |
| LB-22S | 208.42 | 36.97 | 10.37 | 1005 | |
| LB-23S | 229.19 | 45.40 | 34.41 | 1002 | |
| LB-24S | 235.13 | 54.16 | 41.39 | 0958 | |
| LB-26I | 200.22 | 58.30 | 30.02 | 1106 | |
| LB-26D | 200.75 | 101.78 | 29.84 | 1104 | |
| LB-27I | 205.35 | 57.15 | 36.02 | 1032 | |
| LB-27D | 204.65 | 115.10 | 42.21 | 1051 | |

Notes: Probe decorned between wells

Sunny ~ 80°F

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LR-55
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-072820-01-55
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | SW | (W) | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | (SUNNY) | | CLOUDY | | RAIN | | | ? | **TEMPERATURE:** | (°F) 76. | °C |

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product [Product Thickness] | DT-Water | DTP-DTW | DTB-DTW [Water Column] | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 7/28/20 | 9:21 | 30.32 | — | 17.33 | — | . | 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 | 7/28/20 | 10:15 | A | 3 | (40 ml) | (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/28/20 | 10:15 | A | 1 | 250 (500) 1L | None | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/28/20 | 10:15 | 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 | (8260) (8011) OR [ ] WA [X] |
| AMBER - Glass | (8080) (8150) (TOX) OR [ ] WA [ ] |
| WHITE - Poly | (pH) (Conductivity) (TDS) (TSS) (Alkalinity) ($HCO_3/CO_3$) (Cl) ($SO_4$) (Silica, T.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

**WATER QUALITY DATA** Purge Start Time: 9:55 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 (957) | 0.00 | 6.46 | 99.8 | 191.3 | 13.8 | 17.33 | 11.56 | Clear/colorless |
| 1 | A (1060) | 0.25 | 6.28 | 90.7 | 164.4 | 13.1 | 17.33 | 11.29 | Clear/colorless |
| 2 | A (1003) | 0.55 | 6.26 | 89.6 | 167.4 | 13.0 | 17.33 | 10.70 | Clear/colorless |
| 3 | A (1006) | 0.80 | 6.28 | 88.6 | 155.1 | 13.0 | 17.33 | 10.10 | Clear/colorless |
| 4 | A (1009) | 1.10 | 6.30 | 88.6 | 154.9 | 13.0 | 17.33 | 10.08 | Clear/colorless |
| 5 | A (1012) | 1.30 | 6.30 | 88.5 | 154.7 | 13.0 | 17.33 | 10.11 | Clear/colorless |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 8/7/20 psi ~ 300mL/min

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

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LR-27I
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-072820-02-27I
**DUP ID:** NA

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

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product [Product Thickness] | DT-Water | DTP-DTW [Water Column] | DTB-DTW | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 7/28/20 | 10:32 | 57.15 | — | 36.02 | — | 21.13 | X 1 | 3.44 |
| / / | : | . | . | . | . | | X 3 | . |

| Gal/ft = $(dia./2)^2 \times 0.163$ | 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 | 7/28/20 | 11:15 | A | 3 | (40 ml) | (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/28/20 | 11:15 | A | 1 | 250, (500) 1L | (None) | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/28/20 | 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 | (8260) (8011) OR [ ] WA [X] |
| AMBER - Glass | (8080) (8150) (TOX) OR [ ] WA [ ] |
| WHITE - Poly | (pH) (Conductivity) (TDS) (TSS) (Alkalinity) ($HCO_3/CO_3$) (Cl) ($SO_4$) (Silica, T.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

**WATER QUALITY DATA** Purge Start Time: 10:53 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 (1055) | 0.00 | 7.08 | 108.8 | 237.8 | 14.8 | 36.02 | 8.69 | Slightly turbid |
| 1 | A (1058) | 0.20 | 7.09 | 104.0 | 260.0 | 13.1 | 36.02 | 3.11 | slightly turbid |
| 2 | A (1101) | 0.46 | 7.14 | 97.4 | 258.9 | 13.0 | 36.02 | 2.32 | clear/colorless |
| 3 | A (1104) | 0.65 | 7.15 | 96.4 | 260.0 | 13.0 | 36.02 | 2.32 | clear/colorless |
| 4 | A (1107) | 0.85 | 7.16 | 96.9 | 259.3 | 13.1 | 36.02 | 2.31 | clear/colorless |
| 5 | A (1110) | 1.10 | 7.16 | 96.1 | 259.7 | 13.0 | 36.02 | 2.32 | slightly turbid/colorless |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 8/7/35psi → 270mL/min → 8/7/30 → 250mL/min

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

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LR - 13I

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-072820-03-13I

**DUP ID:** NA

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

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product [Product Thickness] | DT-Water | DTP-DTW | DTB-DTW [Water Column] | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 7/28/20 | 11:55 | 55.03 | — | 32.56 | — | 22.47 | X 1 | 3.66 |
| / / | : | . | . | . | . | | 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 | 7/28/20 | 12:20 | A | 3 | (40 ml) (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/28/20 | 12:20 | A | 1 | 250, (500) 1L (None) | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/28/20 | 12:20 | A | 1 | (125) 250, 500 (HNO$_3$) | (YES) | (YES) | | ✓ |
| | / / | : | | | 250, 500, 1L | YES | | | |

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

Analysis Allowed per Bottle Type

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

**WATER QUALITY DATA** Purge Start Time: 12:00 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(1201) | 0.00 | 7.08 | 117.9 | 204.0 | 14.0 | 32.56 | 5.22 | clear/colorless |
| 1 | A(1204) | 0.25 | 6.96 | 115.0 | 294.1 | 13.7 | 32.56 | 3.68 | clear/colorless |
| 2 | A(1207) | 0.45 | 7.20 | 108.1 | 294.4 | 13.6 | 32.56 | 3.21 | clear/colorless |
| 3 | A(1210) | 0.70 | 7.00 | 108.4 | 293.9 | 13.6 | 32.56 | 3.18 | clear/colorless |
| 4 | A(1213) | 0.90 | 7.01 | 108.2 | 294.2 | 13.6 | 32.56 | 3.15 | clear/colorless |
| 5 | A(1216) | 1.20 | 6.99 | 108.4 | 295.1 | 13.6 | 32.56 | 3.16 | clear/colorless |
| 6 | | | . | | | . | . | . | |

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

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

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

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LR-26I
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-072820-04-26I
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | SW | (W) | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | (SUNNY) | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | (°F) 81.0 °C | |

[Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | [Product Thickness] DTP-DTW | [Water Column] DTB-DTW | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 7/28/20 | 11:06 | 58.30 | — | 29.30.02 | — | — | 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 | 7/28/20 | 14:05 | A | 3 | (40 ml) | (HCl) | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/28/20 | 14:05 | A | 1 | 250 (500) 1L | (None) | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/28/20 | 14:05 | 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 | (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) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

## WATER QUALITY DATA

Purge Start Time: 13:41 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(1342) | 0.00 | 7.09 | 125.5 | 260.0 | 13.9 | 29.93 | 7.81 | clear/colorless |
| 1 | A(1345) | 0.40 | 7.35 | 107.2 | 272.2 | 13.4 | 29.96 | 6.16 | clear/colorless |
| 2 | A(1348) | 0.80 | 7.39 | 104.4 | 274.4 | 13.3 | 29.96 | 6.13 | clear/colorless |
| 3 | A(1351) | 1.20 | 7.26 | 101.9 | 278.8 | 13.4 | 29.96 | 5.82 | clear/colorless |
| 4 | A(1354) | 1.60 | 7.23 | 97.3 | 286.5 | 13.4 | 29.96 | 5.39 | clear/colorless |
| 5 | A(1357) | 2.0 | 7.27 | 92.0 | 293.4 | 13.2 | 29.96 | 5.09 | clear/colorless |
| 6 | A(1400) | 2.4 | 7.20 | 90.4 | 294.0 | 13.0 | 29.96 | 5.02 | clear/colorless |

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

Low Flow Purge Method: 8/7/40 psi ~ 350ml/min

**SAMPLER:** I. Hultquist
(PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

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

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-072820-05-DUP

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | (SW) | W | NW | ~~LIGHT~~ | MEDIUM | HEAVY |
| **WEATHER:** | (SUNNY) | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | °F 81.0 | °C |

[Circle appropriate units]

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

| Date | Time | DT-Bottom | DT-Product | DT-Water | DTP-DTW | DTB-DTW | | Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| JH 7/28/20 | : | 5. | . | . | . | . | 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 | 7/28/20 | 14 : 10 | A | 3 | (40 ml) | (HCl) | YES ~~NO~~ | ~~NO~~ | | |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/28/20 | 14 : 10 | A | 1 | 250, (500), 1L ~~None~~ | ~~YES~~ | ~~NO~~ | NA | |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/28/20 | 14 : 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) (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: : Pump/Bailer Inlet Depth:

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

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

Collected at: LB-26I

**SAMPLER:** I. Hufhines (PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-6S
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-072820-06-6S
**DUP ID:** NA

| WIND FROM: | N | NE | E | SE | S | SW | W | NW | LIGHT | MEDIUM | HEAVY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WEATHER:** | SUNNY | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | (°F) 82. | °C |

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product [Product Thickness] | DT-Water | DTP-DTW | DTB-DTW [Water Column] | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 7/28/20 | 14 :38 | 39.07 | — | 31.91 | — | . | 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 | 7/28/20 | 14 :55 | A | 3 | 40 ml / HCl | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L / (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/28/20 | 14 :55 | A | 1 | 250, 500, 1L / None | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L / $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L / NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 / $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/28/20 | 14 :55 | 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) (TDS) (TSS) (Alkalinity) ($HCO_3/CO_3$) (Cl) ($SO_4$) (Silica, T.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |
| | |

**WATER QUALITY DATA** Purge Start Time: ~~14~~ 13:38 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) [Cumulative Totals] | pH | ORP | E Cond (µS) | °F Temp °C [Circle units] | DTW | Diss $O_2$ (mg/l) | Water Quality [Clarity, Color] |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A(1439) | 0.00 | 7.20 | 86.3 | 209.3 | 17.6 | 31.95 | 13.14 | Clear/colorless |
| 1 | A(1442) | 0.18 | 7.35 | 86.9 | 227.0 | 14.0 | 31.96 | 10.85 | clear/colorless |
| 2 | A(1445) | 0.36 | 7.46 | 83.7 | 230.1 | 13.4 | 31.96 | 9.86 | Clear/colorless |
| 3 | A(1448) | 0.54 | 7.48 | 81.0 | 231.0 | 13.2 | 31.96 | 9.70 | clear/colorless |
| 4 | A(1451) | 0.72 | 7.42 | 80.8 | 231.4 | 13.1 | 31.96 | 9.62 | clear/colorless |
| 5 | | . | . | | | . | . | . | |
| 6 | | | . | | | . | . | . | |

[Casing] [Select A-G]

Low Flow Purge Method: 8/7/25 psi ~ 225 ml/min

**SAMPLER:** T. Hultquist (PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-15
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-072920-01-15
**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | SW | (W) | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | (SUNNY) | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | (°F) 63.0 °C | |

[Circle appropriate units]

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

| Date | Time | DT-Bottom | DT-Product | DT-Water | DTP-DTW | DTB-DTW | | Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 7/29/20 | 08:33 | 45.00 | - | 38.15 | - | . | 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 | 7/29/20 | 09:06 | A | 3 | (40 ml) | (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/29/20 | 09:06 | A | 1 | 250 (500) 1L | (None) | (YES) | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/29/20 | 09:06 | 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.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

**WATER QUALITY DATA** Purge Start Time: 08:38 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 | 0840 | 0.00 | 5.77 | 149.0 | 299.1 | 14.4 | 38.17 | 6.70 | clear/colorless |
| 1 | 0854 | 1.12 | 6.20 | 117.0 | 256.8 | 12.9 | 38.17 | 4.55 | clear/colorless |
| 2 | 0857 | 1.37 | 6.35 | 111.5 | 257.0 | 12.5 | 38.17 | 4.17 | clear/colorless |
| 3 | 0900 | 1.62 | 6.40 | 110.3 | 261.8 | 12.4 | 38.17 | 4.10 | clear/colorless |
| 4 | 0903 | 1.87 | 6.43 | 109.6 | 266.7 | 12.4 | 38.17 | 4.10 | clear/colorless |
| 5 | | . | . | | | . | . | . | |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 0/7/30 psi ~ 300 ml/min

**SAMPLER:** I. Holtquist
(PRINTED NAME) (SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

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

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-072920-02-FB

**DUP ID:** NA

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WIND FROM:** | N | NE | E | SE | S | SW | (W) | NW | (LIGHT) | MEDIUM | HEAVY |
| **WEATHER:** | (SUNNY) | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | (63.0) °C | |

(Circle appropriate units)

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

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

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 7/29/20 | 09 : 15 | A | 3 | (40 ml) | (HCl) | YES | NO | | |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/29/20 | 09 : 15 | A | 1 | 250, 500, 1L | (None) | YES | NO | NA | |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/29/20 | 09 : 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 | (8260) ( 8011 ) OR [ ] WA [X] |
| AMBER - Glass | ( 8080 ) ( 8150 ) ( TOX ) OR [ ] WA [ ] |
| WHITE - Poly | (pH) (Conductivity) (TDS) (TSS) (Alkalinity) ($HCO_3/CO_3$) (Cl) ($SO_4$) (Silica, T.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |

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

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

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

Collected at: LB-15

**SAMPLER:** I. Hultquist
(PRINTED NAME)

(SIGNATURE)

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-10SR
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-072920-03-10SR
**DUP ID:** NA

| WIND FROM: | N | NE | E | SE | S | SW | (W) | NW | LIGHT | MEDIUM | HEAVY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WEATHER:** | (SUNNY) | | CLOUDY | | RAIN | | ? | | **TEMPERATURE:** | (°F) 64 .0 °C | |

[Circle appropriate units]

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

| Date | Time | DT-Bottom | DT-Product | DT-Water | DTP-DTW | DTB-DTW | | Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 7/29/20 | 09 :32 | 42 .35 | — | 36 .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 | 7/29/20 | 10 :00 | A | 3 | (40 mL) | (HCl) | YES | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | 7/29/20 | 10 :00 | A | 1 | 250 (500) 1L | (None) | YES | NO | NA | ✓ |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | 7/29/20 | 10 :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 [✓] |
| AMBER - Glass | (8080) (8150) (TOX) OR [ ] WA [ ] |
| WHITE - Poly | (pH) (Conductivity) (TDS) (TSS) (Alkalinity) ($HCO_3/CO_3$) (Cl) ($SO_4$) (Silica, T.) (NO3) |
| YELLOW - Poly | (COD) (TOC) ($NH_3$) ($NO_3/NO_2$) (Tannin/Lignin) |
| GREEN - Poly | (Cyanide) |
| RED TOTAL - Poly | (As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness) |
| RED DISSOLVED - Poly | (Ca) (Fe) (Mg) (Mn) (K) (Na) |
| | |

**WATER QUALITY DATA** Purge Start Time: 09 :38 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(0941) | 0.00 | 6.90 | 111.8 | 252.5 | 15 .6 | 36.27 | 2 .06 | clear/colorless |
| 1 | A(0944) | 0 .16 | 6.87 | 111.4 | 251.3 | 14 .8 | 36.27 | 1 .87 | clear/colorless |
| 2 | A(0947) | 0 .32 | 6.88 | 110.9 | 252.0 | 14 .5 | 36.27 | 1 .50 | clear/colorless |
| 3 | A(0950) | 0 .48 | 6.89 | 110.4 | 252.8 | 14 .3 | 36.27 | 1 .86 | clear/colorless |
| 4 | A(0953) | 0 .64 | 6.89 | 110.1 | 252.9 | 14 .2 | 36.27 | 1 .00 | clear/colorless |
| 5 | A(0956) | 0 .80 | 6.89 | 109.8 | 252.9 | 14 .1 | 36.27 | 0 .97 | clear/colorless |
| 6 | A(0959) | 0 .96 | 6.89 | 109.6 | 252.8 | 14 .1 | 36.27 | 0 .97 | clear/colorless |

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

Low Flow Purge Method: 9/6/25 psi ~ 200 ml/min

**SAMPLER:** I. Hultquist (PRINTED NAME) (SIGNATURE)

# CHAIN OF CUSTODY

ALS Environmental

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

SR# _____

PAGE 1 OF 1 COC# _____

PROJECT NAME: Beecher Landfill
PROJECT NUMBER: 072820013.13
PROJECT MANAGER: Tiffany Andrews
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Avenue
CITY/STATE/ZIP: Portland OR 97224
E-MAIL ADDRESS: tandrews@scsengineers.com
PHONE #: 503 724-0112 FAX #:
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270L☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond., Cl, $SO_4$, $PO_4$, F, $NO_2$; $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity ☐ $CO_3$☐ $HCO_3$☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases $CO_2$☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐ | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-072820-01-SS | 7/28/20 | 1015 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| LB-072820-02-27I | 7/28/20 | 1115 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| LB-072820-03-13I | 7/28/20 | 1220 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| LB-072820-04-26I | 7/28/20 | 1405 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| LB-072820-05-DUP | 7/28/20 | 1410 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| LB-072820-06-GS | 7/28/20 | 1455 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| LB-072920-01-15 | 7/29/20 | 0906 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| LB-072920-02-FB | 7/29/20 | 0915 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| LB-072920-03-10I | 7/29/20 | 1000 | | W | 5 | | | X | | | | | X | | X | | | | | | | | | | |
| Trip Blank | 7/28/20 | 0700 | | W | 1 | | | X | | | | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. # _____
Bill To: _____

**TURNAROUND REQUIREMENTS**

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

Requested Report Date

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:

Metals are field Filtered

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

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: |
|---|---|---|---|
| Signature: [signature] | Signature: [signature] | Signature: | Signature: |
| Date/Time: 7-29-20 / 1045 | Date/Time: 7/29/20 1045 | Date/Time: | Date/Time: |
| Printed Name: Ian Huttquist | Printed Name: | Printed Name: | Printed Name: |
| Firm: SCS Engineers | Firm: ALS | Firm: | Firm: |

# Resampling Event (October) 2020 FSDSs

# Field Calibration Log
## SCS Engineers

| Equipment: | | | Serial Number: | | Field Staff: | | | |
|---|---|---|---|---|---|---|---|---|
| YSI Pro Plus | | | 17J102712 | | TAndrews | | | |
| Location/ Project Number | Date | Time | Temperature (°C) | Dissolved Oxygen (mg/L) | pH 4.0 Buffer (S.U.) | pH 7.0 Buffer (S.U.) | Conductivity 1413 µS/cm standard (µS/cm) | ORP 220 mV standard (mV) |
| 04220030.13 | 10/14/20 | 730 | 21.5 | 8.76 | 4.0 | 7.0 | 1413 µS/cm | 220mV |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes:

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LR-27I
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-101420-01-27I
**DUP ID:** NA

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

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product [Product Thickness] | DT-Water | DTP-DTW | DTB-DTW [Water Column] | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 10/14/20 | 11:10 | 57.15 | — | 37.57 | — | 19.58 | X 1 | 3.19 |
| / / | : | . | . | . | . | | X 3 | . |

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

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

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

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 10/14/20 | 11:35 | A | 3 (40 ml) | (HCl) | (YES) | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | / / | : | | | 250, 500, 1L None | YES | NO | NA | |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | YES | | |
| | / / | : | | | 250, 500, 1L | YES | | | |

White no acid, Yellow H2SO4, Red HNO3 — 3 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

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

**WATER QUALITY DATA** Purge Start Time: 11:19 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 (1120) | 0.00 | 6.96 | 112.7 | 229.5 | 12.6 | 37.58 | 4.19 | clear/colorless |
| 1 | A (1123) | 0.20 | 7.05 | 228.5 | 270.2 | 12.1 | 37.58 | 3.12 | slightly turbid |
| 2 | A (1126) | 0.40 | 7.14 | 230.6 | 269.1 | 12.1 | 37.59 | 2.36 | clear/colorless |
| 3 | A (1129) | 0.65 | 7.14 | 230.9 | 262.4 | 12.1 | 37.58 | 2.30 | clear/colorless |
| 4 | A (1132) | 0.85 | 7.15 | 231.5 | 262.2 | 12.2 | 37.59 | 2.31 | slightly turbid/colorless |
| 5 | A (1135) | 1.10 | 7.15 | 231.5 | 262.0 | 12.1 | 37.59 | 2.30 | slightly turbid/colorless |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 8/17/35 psi → 270mL/min → 8/17/30 → 250mL/min

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

# FIELD SAMPLING DATA SHEET


**SCS ENGINEERS**

15940 SW 72nd Avenue,
Portland, OR 97224

Office: 503.639.9201 Fax: 503.684.6984


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

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-101420-02-FB

**DUP ID:** NA

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

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

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

Gal/ft = $(dia./2)^2 \times 0.163$ | 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 | 10/14/20 | 10 30 | G | 3 | 40 ml HCl | YES | NO | | √ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | / / | : | | | 250, 500, 1L None | YES | NO | NA | |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | YES | | |
| | / / | : | | | 250, 500, 1L | YES | | | |

White no acid, Yellow H2SO4, Red HNO3 | 3 | Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

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

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

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

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

Collected Near: LB-27I

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

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-101420-03-DUP
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:**
**DUP ID:** NA

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

(Circle appropriate units)

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

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

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | | Preservative [circle] | Ice | Filter | pH | [√ if used] |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 10/14/20 | 11:40 | A | 3 | 40 ml | HCl | YES | NO | | |
| Amber Glass | / / | : | | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | / / | : | | | 250, 500, 1L | None | YES | NO | NA | |
| Yellow Poly | / / | : | | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | / / | : | | | 125, 250, 500 | $HNO_3$ | YES | YES | | |
| | / / | : | | | 250, 500, 1L | | YES | | | |

White no acid, Yellow H2SO4, Red HNO3 — 3 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

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

## WATER QUALITY DATA

Purge Start Time: : Pump/Bailer Inlet Depth:

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

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

Collected at: LB-27I

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

# FIELD SAMPLING DATA SHEET

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

**PROJECT NAME:** Leichner Landfill **WELL ID:** LB-15
**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB.101420-04-15
**DUP ID:** NA

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

[Circle appropriate units]

## HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product | DT-Water | DTP-DTW [Product Thickness] | DTB-DTW [Water Column] | | [Water Column x Gal/ft] Volume (gal) |
|---|---|---|---|---|---|---|---|---|
| 10/14/20 | 12:50 | 45.00 | - | 39.66 | - | 5.34 | X 1 | 0.87 |
| / / | : | . | . | . | . | | X 3 | . |

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

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

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

Sample Depth:

| Bottle Type | Date | Time | Method § | Amount & Volume mL | Preservative [circle] | Ice | Filter | pH | [√ if used] √ |
|---|---|---|---|---|---|---|---|---|---|
| VOA Glass | 10/14/20 | 13:10 | A | 3 40 ml | HCl | YES | NO | | ✓ |
| Amber Glass | / / | : | | 250, 500, 1L | (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | / / | : | | 250, 500, 1L | None | YES | NO | NA | |
| Yellow Poly | / / | : | | 250, 500, 1L | $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | 250, 500, 1L | NaOH | YES | NO | | |
| Red Total Poly | / / | : | | 125, 250, 500 | $HNO_3$ | YES | NO | | |
| Red Diss. Poly | / / | : | | 125, 250, 500 | $HNO_3$ | YES | YES | | |
| | / / | : | | 250, 500, 1L | | YES | | | |

White no acid, Yellow H2SO4, Red HNO3 | 3 | Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

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

## WATER QUALITY DATA

Purge Start Time: 12:50 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp (°C) | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A (1251) | 0.00 | 6.94 | 90.9 | 258.5 | 14.6 | 39.69 | 5.75 | clear/colorless |
| 1 | A (1254) | 0.20 | 6.69 | 88.2 | 237.4 | 13.1 | 39.69 | 4.20 | clear/colorless |
| 2 | A (1257) | 0.45 | 6.62 | 81.0 | 236.0 | 12.9 | 39.69 | 4.18 | clear/colorless |
| 3 | A (1300) | 0.70 | 6.61 | 80.7 | 235.7 | 12.8 | 39.69 | 4.15 | clear/colorless |
| 4 | A (1303) | 0.95 | 6.61 | 80.6 | 235.4 | 12.7 | 39.69 | 4.15 | clear/colorless |
| 5 | | . | . | | | . | . | . | |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 8 17 / 30psi → 295mL/min

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

# FIELD SAMPLING DATA SHEET

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

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

**SITE ADDRESS:** 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-101420-05-10SR

**DUP ID:** NA

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

[Circle appropriate units]

**HYDROLOGY/LEVEL MEASUREMENTS** (Nearest 0.01 ft)

| Date | Time | DT-Bottom | DT-Product [Product Thickness] | DT-Water [Water Column] | DTP-DTW | DTB-DTW | | Volume (gal) [Water Column x Gal/ft] |
|---|---|---|---|---|---|---|---|---|
| 10/14/20 | 14:00 | 42.35 | - | 37.74 | - | 4.61 | X 1 | 0.75 |
| / / | : | . | . | . | . | | 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 | 10/14/20 | 14:20 | A | 3 | 40 ml (HCl) | (YES) | NO | | ✓ |
| Amber Glass | / / | : | | | 250, 500, 1L (None) (HCl) ($H_2SO_4$) | YES | NO | | |
| White Poly | / / | : | | | 250, 500, 1L None | YES | NO | NA | |
| Yellow Poly | / / | : | | | 250, 500, 1L $H_2SO_4$ | YES | NO | | |
| Green Poly | / / | : | | | 250, 500, 1L NaOH | YES | NO | | |
| Red Total Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | NO | | |
| Red Diss. Poly | / / | : | | | 125, 250, 500 $HNO_3$ | YES | YES | | |
| | / / | : | | | 250, 500, 1L | YES | | | |

White no acid, Yellow H2SO4, Red HNO3 | 3 | Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

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

**WATER QUALITY DATA** Purge Start Time: 14:01 Pump/Bailer Inlet Depth:

| Meas. | Method § | Purged (gal) | pH | ORP | E Cond (µS) | °F Temp (°C) | DTW | Diss $O_2$ (mg/l) | Water Quality |
|---|---|---|---|---|---|---|---|---|---|
| 0 | A (1403) | 0.00 | 7.02 | 108.6 | 250.1 | 14.3 | 37.74 | 2.11 | Clear/colorless |
| 1 | A (1405) | 0.20 | 6.98 | 102.4 | 250.6 | 14.1 | 37.74 | 1.75 | Clear/colorless |
| 2 | A (1408) | 0.35 | 6.95 | 101.6 | 249.5 | 13.6 | 37.74 | 1.48 | Clear/colorless |
| 3 | A (1411) | 0.50 | 6.94 | 100.9 | 249.4 | 13.4 | 37.74 | 1.16 | Clear/colorless |
| 4 | A (1414) | 0.65 | 6.94 | 100.6 | 249.4 | 13.4 | 37.74 | 1.14 | Clear/colorless |
| 5 | A (1417) | 0.85 | 6.94 | 100.4 | 249.4 | 13.4 | 37.74 | 1.14 | Clear/colorless |
| 6 | | | . | | | . | . | . | |

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

Low Flow Purge Method: 9/6/25 psi → 200mL/min

**SAMPLER:** J Andrews (PRINTED NAME) (SIGNATURE)

# CHAIN OF CUSTODY

ALS Environmental

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

SR# K2009361

PAGE 1 OF 1 COC#

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 0422030.11
PROJECT MANAGER: Tiffany Andrews
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: tandrews@scsengineers.com
PHONE #: 503 724-0113 FAX #:
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond., Cl, $SO_4$, $PO_4$, F, $NO_2$, $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity ☐ $CO_3$ ☐ $HCO_3$ ☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases RSK 175☐ $CO_2$☐ Methane☐ Ethane☐ Ethene☐ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-101420-01-27E | 10/14/20 | 1135 | | W | 3 | | X | | | | | | | | | | | | | | | |
| LB-101420-02-FB | 10/14/20 | 1030 | | W | 3 | | X | | | | | | | | | | | | | | | |
| LB-101420-03-DUP | 10/14/20 | 1140 | | W | 3 | | X | | | | | | | | | | | | | | | |
| LB-101420-04-18 | 10/14/20 | 1310 | | W | 3 | | X | | | | | | | | | | | | | | | |
| LB-101420-05-10SR | 10/14/20 | 1420 | | W | 3 | | X | | | | | | | | | | | | | | | |
| Trip Blank | — | — | - | W | 2 | | X | | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. # _____
Bill To: _____

**TURNAROUND REQUIREMENTS**

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

Requested Report Date

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:

Container Supply Number

108175

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

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: @LAB |
|---|---|---|---|
| Signature: | Signature: | Signature: | Signature: |
| Date/Time: 10/15/20 0800 | Date/Time: 10/15/20 | Date/Time: | Date/Time: 10/15/2020 1200 |
| Printed Name: Andrews | Printed Name: Kim Morrow | Printed Name: | Printed Name: Cody Graves |
| Firm: SCS | Firm: ALS 1050 | Firm: | Firm: ALS |

# APPENDIX B

## Summary Tables of 2020 Groundwater Field Parameter Measurements and Analytical Data

# Table B-1
# 2020 Groundwater Chemistry
# Field Parameters
# Leichner Landfill

| Location | Sample Number | Date | Field pH (S.U.) | Field Conductivity (umhos/cm) | Temperature ($^{o}$C) | Dissolved Oxygen (mg/L) |
|---|---|---|---|---|---|---|
| LB-1D | LB-020520-01-1D | 2/5/20 | 6.98 | 234 | 11.0 | 7.75 |
| LB-1S | LB-020520-02-1S | 2/5/20 | 7.05 | 244 | 11.5 | 4.40 |
| LB-1S | LB-072920-01-1S | 7/29/20 | 6.43 | 267 | 12.4 | 4.10 |
| LB-1S | LB-101420-04-1S | 10/14/20 | 6.61 | 235 | 12.7 | 4.15 |
| LB-3D | LB-020420-06-3D | 2/4/20 | 7.17 | 253 | 11.0 | 5.51 |
| LB-3S | LB-020620-06-3S | 2/6/20 | 7.94 | 212 | 11.9 | 5.39 |
| LB-5D | LB-020420-05-5D | 2/4/20 | 7.22 | 323 | 11.3 | 0.62 |
| LB-5S | LB-020620-03-5S | 2/6/20 | 7.72 | 115 | 12.6 | 9.98 |
| LB-5S (Dup) | LB-020620-04-DUP2 | 2/6/20 | 7.72 | 115 | 12.6 | 9.98 |
| LB-5S | LB072820-01-5S | 7/28/20 | 6.30 | 155 | 13.0 | 10.11 |
| LB-6S | LB-020620-05-6S | 2/6/20 | 7.93 | 250 | 11.8 | 9.33 |
| LB-6S | LB-072820-06-6S | 7/28/20 | 7.42 | 231 | 13.1 | 9.62 |
| LB-10DR | LB-020420-07-10DR | 2/4/20 | 7.20 | 306 | 11.8 | 2.50 |
| LB-10SR | LB-020620-01-10SR | 2/6/20 | 6.79 | 390 | 12.6 | 2.74 |
| LB-10SR | LB-072920-03-10SR | 7/29/20 | 6.89 | 253 | 14.1 | 0.97 |
| LB-10SR | LB-101420-05-10SR | 10/14/20 | 6.94 | 249 | 13.4 | 1.14 |
| LB-13D | LB-020420-02-13D | 2/4/20 | 7.13 | 225 | 11.1 | 3.69 |
| LB-13I | LB-020520-07-13I | 2/5/20 | 7.26 | 315 | 11.5 | 6.67 |
| LB-13I | LB-072820-03-13I | 7/28/20 | 6.99 | 295 | 13.6 | 3.16 |
| LB-17D | LB-020520-03-17D | 2/5/20 | 6.64 | 309 | 12.6 | 0.79 |
| LB-17I | LB-020520-05-17I | 2/5/20 | 7.37 | 409 | 12.2 | 0.51 |
| LB-20S | LB-020620-02-20S | 2/6/20 | 7.20 | 367 | 12.3 | 1.03 |
| LB-26D | LB-020420-03-26D | 2/4/20 | 7.08 | 233 | 11.1 | 1.66 |
| LB-26D | LB-020420-04-DUP1 | 2/4/20 | 7.08 | 233 | 11.1 | 1.66 |
| LB-26I | LB-020520-08-26I | 2/5/20 | 7.36 | 321 | 11.6 | 2.78 |
| LB-26I | LB-072820-04-26I | 7/28/20 | 7.20 | 294 | 13.0 | 5.02 |
| LB-26I | LB-072820-05-DUP | 7/28/20 | 7.20 | 294 | 13.0 | 5.02 |
| LB-27D | LB-020420-01-27D | 2/4/20 | 7.33 | 296 | 10.2 | 4.04 |
| LB-27I | LB-020520-06-27I | 2/5/20 | 7.48 | 343 | 11.8 | 0.47 |
| LB-27I | LB-072820-02-27I | 7/28/20 | 7.16 | 260 | 13.0 | 2.32 |
| LB-27I | LB-101420-01-27I | 10/14/20 | 7.15 | 262 | 12.1 | 2.30 |
| LB-27I | LB-101420-03-DUP | 10/14/20 | 7.15 | 262 | 12.1 | 2.30 |
| FIELDQC | LB-020520-04-FB | 2/5/20 | N/A | N/A | N/A | N/A |
| FIELDQC | LB-072920-02-FB | 7/29/20 | N/A | N/A | N/A | N/A |
| FIELDQC | LB-101420-02-FB | 10/14/20 | N/A | N/A | N/A | N/A |

Notes:
N/A = Not Applicable

# Table B-2
# 2020 Groundwater Chemistry
# Volatile Organic Compounds (µg/L)
# Leichner Landfill

| Location | Sample Number | Date | Bromo-dichloro-methane | Chloro-benzene | Chloro-ethane | Chloroform | Chloro-methane | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | cis-1,2-DCE | PCE | TCE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-1D | LB-020520-01-1D | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-020520-02-1S | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-072920-01-1S | 7/29/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | **0.63** | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-1S | LB-101420-04-1S | 10/14/20 | 0.50 L | 0.50 L | 0.50 L | **3.3** | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-3D | LB-020420-06-3D | 2/4/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-3S | LB-020620-06-3S | 2/6/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-5D | LB-020420-05-5D | 2/4/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-5S | LB-020620-03-5S | 2/6/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-5S (Dup) | LB-020620-04-DUP2 | 2/6/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-5S | LB-072820-01-5S | 7/28/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-5S (Dup) | LB-072820-05-DUP | 7/28/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-6S | LB-020620-05-6S | 2/6/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-6S | LB-072820-06-6S | 7/28/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10DR | LB-020420-07-10DR | 2/4/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-020620-01-10SR | 2/6/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-072920-03-10SR | 7/29/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | **0.54** | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-10SR | LB-101420-05-10SR | 10/14/20 | **1.5** | 0.50 L | 0.50 L | **11** | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-13D | LB-020420-02-13D | 2/4/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-13I | LB-020520-07-13I | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-13I | LB-072820-03-13I | 7/28/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-17D | LB-020520-03-17D | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-17I | LB-020520-05-17I | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-20S | LB-011919-05-20S | 1/29/19 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-20S | LB-020620-02-20S | 2/6/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-26D | LB-012819-07-26D | 1/28/19 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-26D | LB-020420-03-26D | 2/4/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-26I | LB-020520-08-26I | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-26I | LB-072820-04-26I | 7/28/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27D | LB-020420-01-27D | 2/4/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27D (Dup) | LB-020420-04-DUP1 | 2/4/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |

# Table B-2
# 2020 Groundwater Chemistry
# Volatile Organic Compounds (µg/L)
# Leichner Landfill

| Location | Sample Number | Date | Bromo-dichloro-methane | Chloro-benzene | Chloro-ethane | Chloroform | Chloro-methane | 1,4-DCB | 1,1-DCA | 1,1,1-TCA | cis-1,2-DCE | PCE | TCE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-27I | LB-020520-06-27I | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-072820-02-27I | 7/28/20 | **0.91** | 0.50 L | 0.50 L | **1.20** | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-101420-01-27I | 10/14/20 | 0.50 L | 0.50 L | 0.50 L | **0.88** | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| LB-27I | LB-101420-03-DUP | 10/14/20 | 0.50 L | 0.50 L | 0.50 L | **0.80** | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| FIELDQC | LB-020520-04-FB | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| FIELDQC | LB-072920-02-FB | 7/29/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| FIELDQC | LB-101420-02-FB | 10/14/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| FIELDQC | Trip Blank | 2/4/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| FIELDQC | Trip Blank | 2/5/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| FIELDQC | Trip Blank | 2/6/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| FIELDQC | Trip Blank | 7/28/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |
| FIELDQC | Trip Blank | 10/14/20 | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L |

Notes:

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

B = above the laboratory method detection limit (MDL) but below the method reporting limit (MRL); Dup = field duplicate sample; L = not detected at or above MRL.

# Table B-3
# 2020 Groundwater Chemistry
# Inorganic Parameters and
# Dissolved Metals Concentrations (mg/L)
# Leichner Landfill

| Location | Sample Number | Date | Conductivity (µmhos/cm) | Chloride (CL = 250 mg/L) | Nitrate as Nitrogen (CL = 10 mg/L) | Total Dissolved Solids (CL = 500 mg/L) | Dissolved Iron (CL = 0.3 mg/L) | Dissolved Manganese (CL = 0.05 mg/L) |
|---|---|---|---|---|---|---|---|---|
| LB-1D | LB-020520-01-1D | 2/5/20 | NT | 6.29 | 5.82 | 167 | 0.021 L | 0.0011 L |
| LB-1S | LB-020520-02-1S | 2/5/20 | NT | 6.2 | 3.64 | 176 | 0.021 L | 0.0011 L |
| LB-1S | LB-072920-01-1S | 7/29/20 | NT | 6.2 | 4.83 | 200 | 0.021 L | 0.0011 L |
| LB-3D | LB-020420-06-3D | 2/4/20 | NT | 6.18 | 5.70 | 180 | 0.021 L | 0.0019 |
| LB-3S | LB-020620-06-3S | 2/6/20 | NT | 3.77 | 3.87 | 165 | 0.021 L | 0.0011 L |
| LB-5D | LB-020420-05-5D | 2/4/20 | NT | 7.91 | 0.95 | 205 | 0.021 L | 0.0014 |
| LB-5S | LB-020620-03-5S | 2/6/20 | NT | 2.43 | 1.54 | 116 | 0.021 L | 0.0011 L |
| LB-5S | LB-072820-01-5S | 7/28/20 | NT | 3.38 | 4.07 | 194 | 0.021 L | 0.0011 L |
| LB-5S (Dup) | LB-072820-05-DUP | 7/28/20 | NT | 8.83 | 3.82 | 197 | 0.021 L | 0.0030 |
| LB-6S | LB-020620-05-6S | 2/6/20 | NT | 5.27 | 3.68 | 186 | 0.021 L | 0.0011 L |
| LB-6S (Dup) | LB-020620-04-DUP2 | 2/6/20 | NT | 2.44 | 1.54 | 111 | 0.021 L | 0.0011 L |
| LB-6S | LB-072820-06-6S | 7/28/20 | NT | 7.50 | 1.51 | 163 | 0.021 L | 0.0011 L |
| LB-10DR | LB-020420-07-10DR | 2/4/20 | NT | 9.3 | 2.99 | 204 | 0.021 L | 0.0011 L |
| LB-10SR | LB-020620-01-10SR | 2/6/20 | NT | 4.20 | 23.4 | 296 | 0.021 L | 0.0011 L |
| LB-10SR | LB-072920-03-10SR | 7/29/20 | NT | 5.30 | 6.04 | 177 | 0.021 L | 0.0011 L |
| LB-13D | LB-020420-02-13D | 2/4/20 | NT | 4.92 | 4.94 | 163 | 0.021 L | 0.0011 L |
| LB-13I | LB-020520-07-13I | 2/5/20 | NT | 9.1 | 4.99 | 200 | 0.021 L | 0.0089 |
| LB-13I | LB-072820-03-13I | 7/28/20 | NT | 11.6 | 4.88 | 224 | 0.021 L | 0.0012 |
| LB-17D | LB-020520-03-17D | 2/5/20 | NT | 6.8 | 0.10 L | 188 | 0.145 | 4.17 |
| LB-17I | LB-020520-05-17I | 2/5/20 | NT | 6.7 | 0.10 L | 213 | 9.42 | 1.58 |
| LB-20S | LB-020620-02-20S | 2/6/20 | NT | 2.27 | 0.68 | 225 | 0.021 L | 0.12 |
| LB-26D | LB-020420-03-26D | 2/4/20 | NT | 5.15 | 4.61 | 168 | 0.021 L | 0.0011 L |
| LB-26I | LB-020520-08-26I | 2/5/20 | NT | 10.10 | 3.85 | 196 | 0.021 L | 0.0011 L |
| LB-26I | LB-072820-04-26I | 7/28/20 | NT | 8.79 | 3.80 | 206 | 0.021 L | 0.0030 |
| LB-27D | LB-020420-01-27D | 2/4/20 | NT | 7.48 | 4.06 | 206 | 0.021 L | 0.0011 L |
| LB-27D (Dup) | LB-020420-04-DUP1 | 2/4/20 | NT | 5.15 | 4.63 | 164 | 0.021 L | 0.0011 L |

# Table B-3
# 2020 Groundwater Chemistry
# Inorganic Parameters and
# Dissolved Metals Concentrations (mg/L)
# Leichner Landfill

| Location | Sample Number | Date | Conductivity (µmhos/cm) | Chloride (CL = 250 mg/L) | Nitrate as Nitrogen (CL = 10 mg/L) | Total Dissolved Solids (CL = 500 mg/L) | Dissolved Iron (CL = 0.3 mg/L) | Dissolved Manganese (CL = 0.05 mg/L) |
|---|---|---|---|---|---|---|---|---|
| LB-27I | LB-020520-06-27I | 2/5/20 | NT | 5.3 | 1.85 | 209 | 0.021 L | 0.134 |
| LB-27I | LB-072820-02-27I | 7/28/20 | NT | 23.6 | 2.75 | 213 | 0.021 L | 0.324 |
| FIELDQC | LB-020520-04-FB | 2/5/20 | NT | 0.20 L | 0.10 L | 5.0 L | 0.021 L | 0.0011 L |
| FIELDQC | LB-072920-02-FB | 7/29/20 | NT | 0.20 L | 0.10 L | 5.0 L | 0.021 L | 0.0011 L |

Notes:

CL = compliance leve for inorganic parameters and metals in groundwater at Leichner Landfill; µmhos/cm = microohms per centimer; mg/L = milligrams per liter; B = estimated concentration detected above the method detection limit (MDL) but below the method reporting limit (MRL); L = not detected at or above MRL; J = estimated concentration; NT = not tested.

= concentrattion is above the compliance level

# APPENDIX C

## 2020 Laboratory Analytical Data
## (Provided on attached CD only)

First Quarter (February) 2020 Laboratory Reports

February 14, 2020 Service Request No:K2001096

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

**Laboratory Results for: Leichner Landfill, WA**

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory February 05, 2020
For your reference, these analyses have been assigned our service request number **K2001096.**

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

ALS Environmental

**Client:** SCS Engineers
**Project:** Leichner Landfill, WA
**Sample Matrix:** Ground Water

**Service Request:** K2001096
**Date Received:** 02/05/2020

## CASE NARRATIVE

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

**Sample Receipt:**

Eight ground water samples were received for analysis at ALS Environmental on 02/05/2020. 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, 2/7/20; The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0207F004.D: Acetone , Bromomethane, and Dichlorodifluoromethane. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8260C, 2/7/20; The recovery of Acetone in the Duplicate Laboratory Control Sample (DLCS) KQ2001844-06 was outside the recovery control limits listed in the results summary. The DLCS is used to evaluate batch precision. The relative percent difference (RPD) was within control limits indicating the quality of the sample data was not significantly affected. No further corrective action was taken.

Approved by  Date 02/14/2020

## SAMPLE DETECTION SUMMARY

| CLIENT ID: LB-020420-06-3D | | | Lab ID: K2001096-001 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 180 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 6.18 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 5.70 | | | 0.10 | mg/L | 300.0 |
| Manganese, Dissolved | 1.9 | | | 1.1 | ug/L | 6010C |

| CLIENT ID: LB-020420-05-5D | | | Lab ID: K2001096-002 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 205 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 7.91 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 0.95 | | | 0.10 | mg/L | 300.0 |
| Manganese, Dissolved | 1.4 | | | 1.1 | ug/L | 6010C |

| CLIENT ID: LB-020420-07-10DR | | | Lab ID: K2001096-003 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 204 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 9.34 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 2.99 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020420-02-13D | | | Lab ID: K2001096-004 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 163 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 4.92 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 4.94 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020420-03-26D | | | Lab ID: K2001096-005 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 168 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 5.15 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 4.61 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020420-04-DUP1 | | | Lab ID: K2001096-006 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 164 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 5.15 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 4.63 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020420-01-27D | | | Lab ID: K2001096-007 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 206 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 7.48 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 4.06 | | | 0.10 | mg/L | 300.0 |

# Sample Receipt Information

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

**Client:** SCS Engineers **Service Request:**K2001096

**Project:** Leichner Landfill, WA/04220030.13

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| K2001096-001 | LB-020420-06-3D | 2/4/2020 | 1355 |
| K2001096-002 | LB-020420-05-5D | 2/4/2020 | 1240 |
| K2001096-003 | LB-020420-07-10DR | 2/4/2020 | 1540 |
| K2001096-004 | LB-020420-02-13D | 2/4/2020 | 1035 |
| K2001096-005 | LB-020420-03-26D | 2/4/2020 | 1125 |
| K2001096-006 | LB-020420-04-DUP1 | 2/4/2020 | 1130 |
| K2001096-007 | LB-020420-01-27D | 2/4/2020 | 0940 |
| K2001096-008 | Trip Blank | 2/4/2020 | 0800 |

# CHAIN OF CUSTODY

SR# K2001096

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: Leichner Landfill
PROJECT NUMBER: 042300030.13)
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE #: 503-639-9736 FAX
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total & Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond, $SO_4$, $PO_4$, F, $NO_2$, $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity ☐ $CO_3$☐ $HCO_3$☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases $CO_2$☐ RSK 175☐Methane☐Ethane☐Ethene☐ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-020420-06-3D | 2/4/20 | 1355 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-020420-05-4D | 2/4/20 | 1240 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-020420-07-10DR | 2/4/20 | 1540 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-020420-02-13D | 2/4/20 | 1035 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-020420-03-26D | 2/4/20 | 1125 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-020420-04-DUP | 2/4/20 | 1130 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-020420-01-27D | 2/4/20 | 940 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| Trip Blanks | 2/4/20 | 800 | | W | 2 | | X | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. #
Bill To:

**TURNAROUND REQUIREMENTS**

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

Requested Report Date

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:
cc Tiffany Andrews
Tandrews@scsengineers.com
Metals field filtered

**Container Supply Number**

105914

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

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: |
|---|---|---|---|
| Signature: | Signature: | Signature: | Signature: |
| Date/Time: 2/5/20 11:55 | Date/Time: 2/5/20 1155 | Date/Time: 2/5/20 1405 | Date/Time: 2/5/2020 1405 |
| Printed Name: David Lamadrid | Printed Name: | Printed Name: | Printed Name: Cody Graves |
| Firm: SCS Engineers | Firm: ALS | Firm: | Firm: ALS Kelso |

PC H2

## Cooler Receipt and Preservation Form

Client SCS Engineers Service Request K20 01096

Received: 2/5/2020 Opened: 2/5/2020 By: CG Unloaded: 2/5/2020 By: CG

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

| Raw Cooler Temp | Corrected Cooler Temp | Raw Temp Blank | Corrected Temp Blank | Corr. Factor | Thermometer ID | Cooler/COC ID (NA) | Tracking Number (NA) | File |
|---|---|---|---|---|---|---|---|---|
| -0.4 | -0.6 | / | / | -0.2 | 396 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

4. Packing material: (*Inserts*) (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
   Ca 2/5
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y (N)
12. Was C12/Res negative? (NA) Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| Trip Blank | 2/2 vials | | X | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

*Notes, Discrepancies, & Resolutions:* _____

SHORT HOLD TIME

# Miscellaneous Forms

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

## Inorganic Data Qualifiers

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

## Metals Data Qualifiers

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

## Organic Data Qualifiers

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

## Additional Petroleum Hydrocarbon Specific Qualifiers

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

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

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water- | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

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

## 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. |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | | |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-06-3D | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-001 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-05-5D | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-002 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-07-10DR | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-003 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-02-13D | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-004 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | | |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-02-13D | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-004 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-03-26D | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-005 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-04-DUP1 | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-006 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-01-27D | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-007 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | ABOYER | AMCKORNEY |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | | |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-01-27D | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-007 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | Trip Blank | **Date Collected:** | 02/4/20 |
| **Lab Code:** | K2001096-008 | **Date Received:** | 02/5/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

# Sample Results

**ALS Environmental—Kelso Laboratory**
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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 | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 13:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-06-3D | **Units:** | ug/L |
| **Lab Code:** | K2001096-001 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 17:20 | * |
| Benzene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 17:20 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 17:20 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 17:20 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 17:20 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 17:20 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 17:20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 13:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-06-3D | **Units:** | ug/L |
| **Lab Code:** | K2001096-001 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 17:20 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 17:20 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 17:20 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/07/20 17:20 | |
| Dibromofluoromethane | 92 | 73 - 122 | 02/07/20 17:20 | |
| Toluene-d8 | 101 | 65 - 144 | 02/07/20 17:20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 12:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-05-5D | **Units:** | ug/L |
| **Lab Code:** | K2001096-002 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 17:46 | * |
| Benzene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 17:46 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 17:46 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 17:46 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 17:46 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 17:46 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 17:46 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 12:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-05-5D | **Units:** | ug/L |
| **Lab Code:** | K2001096-002 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 17:46 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 17:46 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 17:46 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 85 | 68 - 117 | 02/07/20 17:46 | |
| Dibromofluoromethane | 96 | 73 - 122 | 02/07/20 17:46 | |
| Toluene-d8 | 101 | 65 - 144 | 02/07/20 17:46 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 15:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-07-10DR | **Units:** | ug/L |
| **Lab Code:** | K2001096-003 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 18:13 | * |
| Benzene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 18:13 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 18:13 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 18:13 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 18:13 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 18:13 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 18:13 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 15:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-07-10DR | **Units:** | ug/L |
| **Lab Code:** | K2001096-003 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 18:13 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 18:13 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 18:13 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/07/20 18:13 | |
| Dibromofluoromethane | 93 | 73 - 122 | 02/07/20 18:13 | |
| Toluene-d8 | 103 | 65 - 144 | 02/07/20 18:13 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-02-13D | **Units:** | ug/L |
| **Lab Code:** | K2001096-004 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 18:39 | * |
| Benzene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 18:39 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 18:39 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 18:39 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 18:39 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 18:39 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 18:39 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-02-13D | **Units:** | ug/L |
| **Lab Code:** | K2001096-004 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 18:39 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 18:39 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 18:39 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 86 | 68 - 117 | 02/07/20 18:39 | |
| Dibromofluoromethane | 93 | 73 - 122 | 02/07/20 18:39 | |
| Toluene-d8 | 102 | 65 - 144 | 02/07/20 18:39 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:25 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-03-26D | **Units:** | ug/L |
| **Lab Code:** | K2001096-005 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 19:06 | * |
| Benzene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 19:06 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 19:06 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 19:06 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 19:06 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 19:06 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 19:06 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:25 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-03-26D | **Units:** | ug/L |
| **Lab Code:** | K2001096-005 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 19:06 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 19:06 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 19:06 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 02/07/20 19:06 | |
| Dibromofluoromethane | 95 | 73 - 122 | 02/07/20 19:06 | |
| Toluene-d8 | 102 | 65 - 144 | 02/07/20 19:06 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-04-DUP1 | **Units:** | ug/L |
| **Lab Code:** | K2001096-006 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 19:32 | * |
| Benzene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 19:32 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 19:32 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 19:32 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 19:32 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 19:32 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 19:32 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-04-DUP1 | **Units:** | ug/L |
| **Lab Code:** | K2001096-006 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 19:32 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 19:32 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 19:32 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 02/07/20 19:32 | |
| Dibromofluoromethane | 92 | 73 - 122 | 02/07/20 19:32 | |
| Toluene-d8 | 103 | 65 - 144 | 02/07/20 19:32 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 09:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-01-27D | **Units:** | ug/L |
| **Lab Code:** | K2001096-007 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 19:59 | * |
| Benzene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 19:59 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 19:59 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 19:59 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 19:59 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 19:59 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 19:59 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 09:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-01-27D | **Units:** | ug/L |
| **Lab Code:** | K2001096-007 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 19:59 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 19:59 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 19:59 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 02/07/20 19:59 | |
| Dibromofluoromethane | 96 | 73 - 122 | 02/07/20 19:59 | |
| Toluene-d8 | 103 | 65 - 144 | 02/07/20 19:59 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 08:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2001096-008 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 20:26 | * |
| Benzene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 20:26 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 20:26 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 20:26 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 20:26 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 20:26 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 20:26 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 08:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2001096-008 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 20:26 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 20:26 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 20:26 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 91 | 68 - 117 | 02/07/20 20:26 | |
| Dibromofluoromethane | 96 | 73 - 122 | 02/07/20 20:26 | |
| Toluene-d8 | 102 | 65 - 144 | 02/07/20 20:26 | |

# Metals

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 13:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-06-3D | **Basis:** | NA |
| **Lab Code:** | K2001096-001 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/13/20 12:50 | 02/06/20 | |
| Manganese | 6010C | **1.9** | ug/L | 1.1 | 1 | 02/13/20 12:50 | 02/06/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 12:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-05-5D | **Basis:** | NA |
| **Lab Code:** | K2001096-002 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/13/20 13:09 | 02/06/20 | |
| Manganese | 6010C | **1.4** | ug/L | 1.1 | 1 | 02/13/20 13:09 | 02/06/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 15:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-07-10DR | **Basis:** | NA |
| **Lab Code:** | K2001096-003 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/13/20 13:12 | 02/06/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/13/20 13:12 | 02/06/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-02-13D | **Basis:** | NA |
| **Lab Code:** | K2001096-004 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/13/20 13:15 | 02/06/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/13/20 13:15 | 02/06/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:25 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-03-26D | **Basis:** | NA |
| **Lab Code:** | K2001096-005 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/13/20 13:18 | 02/06/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/13/20 13:18 | 02/06/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-04-DUP1 | **Basis:** | NA |
| **Lab Code:** | K2001096-006 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/13/20 13:21 | 02/06/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/13/20 13:21 | 02/06/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 09:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-01-27D | **Basis:** | NA |
| **Lab Code:** | K2001096-007 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/13/20 13:24 | 02/06/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/13/20 13:24 | 02/06/20 | |

# General Chemistry

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 13:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-06-3D | **Basis:** | NA |
| **Lab Code:** | K2001096-001 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **6.18** | mg/L | 0.20 | 2 | 02/05/20 17:54 | |
| Nitrate as Nitrogen | 300.0 | **5.70** | mg/L | 0.10 | 2 | 02/05/20 17:54 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 13:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-06-3D | **Basis:** | NA |
| **Lab Code:** | K2001096-001 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **180** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 12:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-05-5D | **Basis:** | NA |
| **Lab Code:** | K2001096-002 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **7.91** | mg/L | 0.20 | 2 | 02/05/20 18:26 | |
| Nitrate as Nitrogen | 300.0 | **0.95** | mg/L | 0.10 | 2 | 02/05/20 18:26 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 12:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-05-5D | **Basis:** | NA |
| **Lab Code:** | K2001096-002 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **205** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 15:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-07-10DR | **Basis:** | NA |
| **Lab Code:** | K2001096-003 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **9.34** | mg/L | 0.20 | 2 | 02/05/20 18:37 | |
| Nitrate as Nitrogen | 300.0 | **2.99** | mg/L | 0.10 | 2 | 02/05/20 18:37 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 15:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-07-10DR | **Basis:** | NA |
| **Lab Code:** | K2001096-003 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **204** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-02-13D | **Basis:** | NA |
| **Lab Code:** | K2001096-004 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **4.92** | mg/L | 0.20 | 2 | 02/05/20 18:48 | |
| Nitrate as Nitrogen | 300.0 | **4.94** | mg/L | 0.10 | 2 | 02/05/20 18:48 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-02-13D | **Basis:** | NA |
| **Lab Code:** | K2001096-004 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **163** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:25 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-03-26D | **Basis:** | NA |
| **Lab Code:** | K2001096-005 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **5.15** | mg/L | 0.20 | 2 | 02/05/20 18:58 | |
| Nitrate as Nitrogen | 300.0 | **4.61** | mg/L | 0.10 | 2 | 02/05/20 18:58 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:25 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-03-26D | **Basis:** | NA |
| **Lab Code:** | K2001096-005 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **168** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-04-DUP1 | **Basis:** | NA |
| **Lab Code:** | K2001096-006 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **5.15** | mg/L | 0.20 | 2 | 02/05/20 19:09 | |
| Nitrate as Nitrogen | 300.0 | **4.63** | mg/L | 0.10 | 2 | 02/05/20 19:09 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-04-DUP1 | **Basis:** | NA |
| **Lab Code:** | K2001096-006 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **164** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 09:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-01-27D | **Basis:** | NA |
| **Lab Code:** | K2001096-007 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **7.48** | mg/L | 0.20 | 2 | 02/05/20 19:20 | |
| Nitrate as Nitrogen | 300.0 | **4.06** | mg/L | 0.10 | 2 | 02/05/20 19:20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 09:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 14:05 |
| **Sample Name:** | LB-020420-01-27D | **Basis:** | NA |
| **Lab Code:** | K2001096-007 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **206** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

# QC Summary Forms

**ALS Environmental—Kelso Laboratory**
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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 **Service Request:** K2001096

**Project:** Leichner Landfill, WA/04220030.13

**Sample Matrix:** Ground Water

## SURROGATE RECOVERY SUMMARY
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C

**Extraction Method:** None

| Sample Name | Lab Code | 4-Bromofluorobenzene 68-117 | Dibromofluoromethane 73-122 | Toluene-d8 65-144 |
|---|---|---|---|---|
| LB-020420-06-3D | K2001096-001 | 88 | 92 | 101 |
| LB-020420-05-5D | K2001096-002 | 85 | 96 | 101 |
| LB-020420-07-10DR | K2001096-003 | 88 | 93 | 103 |
| LB-020420-02-13D | K2001096-004 | 86 | 93 | 102 |
| LB-020420-03-26D | K2001096-005 | 87 | 95 | 102 |
| LB-020420-04-DUP1 | K2001096-006 | 87 | 92 | 103 |
| LB-020420-01-27D | K2001096-007 | 87 | 96 | 103 |
| Trip Blank | K2001096-008 | 91 | 96 | 102 |
| Method Blank | KQ2001844-07 | 86 | 91 | 104 |
| Lab Control Sample | KQ2001844-05 | 89 | 97 | 103 |
| Duplicate Lab Control Sample | KQ2001844-06 | 88 | 96 | 104 |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2001844-07 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/07/20 12:28 | |
| Benzene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Bromoform | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Bromomethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/07/20 12:28 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/07/20 12:28 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Chloroethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Chloroform | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Chloromethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| 2-Hexanone | ND U | 20 | 1 | 02/07/20 12:28 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/07/20 12:28 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2001844-07 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| Naphthalene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| Styrene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Toluene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/07/20 12:28 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| o-Xylene | ND U | 0.50 | 1 | 02/07/20 12:28 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/07/20 12:28 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 86 | 68 - 117 | 02/07/20 12:28 | |
| Dibromofluoromethane | 91 | 73 - 122 | 02/07/20 12:28 | |
| Toluene-d8 | 104 | 65 - 144 | 02/07/20 12:28 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Analyzed:** | 02/07/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 669344 |

| | Lab Control Sample KQ2001844-05 | | | Duplicate Lab Control Sample KQ2001844-06 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| 1,1,1,2-Tetrachloroethane | 8.98 | 10.0 | 90 | 8.71 | 10.0 | 87 | 66-124 | 3 | 30 |
| 1,1,1-Trichloroethane (TCA) | 9.94 | 10.0 | 99 | 9.96 | 10.0 | 100 | 59-136 | <1 | 30 |
| 1,1,2,2-Tetrachloroethane | 10.1 | 10.0 | 101 | 9.78 | 10.0 | 98 | 70-127 | 4 | 30 |
| 1,1,2-Trichloroethane | 9.15 | 10.0 | 92 | 8.71 | 10.0 | 87 | 74-118 | 5 | 30 |
| 1,1-Dichloroethane | 10.4 | 10.0 | 104 | 10.6 | 10.0 | 106 | 68-132 | 2 | 30 |
| 1,1-Dichloropropene | 10.2 | 10.0 | 102 | 10.2 | 10.0 | 102 | 59-134 | <1 | 30 |
| 1,2,3-Trichlorobenzene | 9.35 | 10.0 | 94 | 9.14 | 10.0 | 91 | 68-120 | 2 | 30 |
| 1,2,3-Trichloropropane | 9.95 | 10.0 | 100 | 9.48 | 10.0 | 95 | 69-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 9.64 | 10.0 | 96 | 9.47 | 10.0 | 95 | 63-122 | 2 | 30 |
| 1,2-Dibromo-3-chloropropane | 8.27 | 10.0 | 83 | 9.06 | 10.0 | 91 | 55-132 | 9 | 30 |
| 1,2-Dibromoethane (EDB) | 8.56 | 10.0 | 86 | 8.50 | 10.0 | 85 | 74-118 | <1 | 30 |
| 1,2-Dichlorobenzene | 9.13 | 10.0 | 91 | 9.27 | 10.0 | 93 | 72-115 | 2 | 30 |
| 1,2-Dichloropropane | 10.1 | 10.0 | 101 | 10.2 | 10.0 | 102 | 67-126 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 9.36 | 10.0 | 94 | 9.28 | 10.0 | 93 | 62-126 | <1 | 30 |
| 1,3-Dichlorobenzene | 9.18 | 10.0 | 92 | 8.86 | 10.0 | 89 | 70-116 | 4 | 30 |
| 1,3-Dichloropropane | 9.11 | 10.0 | 91 | 9.06 | 10.0 | 91 | 75-116 | <1 | 30 |
| 1,4-Dichlorobenzene | 8.90 | 10.0 | 89 | 8.86 | 10.0 | 89 | 73-115 | <1 | 30 |
| 2,2-Dichloropropane | 8.41 | 10.0 | 84 | 8.34 | 10.0 | 83 | 37-145 | <1 | 30 |
| 2-Butanone (MEK) | 60.3 | 50.0 | 121 | 56.1 | 50.0 | 112 | 71-149 | 7 | 30 |
| 2-Chlorotoluene | 9.39 | 10.0 | 94 | 9.17 | 10.0 | 92 | 55-131 | 2 | 30 |
| 2-Hexanone | 49.4 | 50.0 | 99 | 49.7 | 50.0 | 99 | 59-131 | <1 | 30 |
| 4-Chlorotoluene | 9.64 | 10.0 | 96 | 9.46 | 10.0 | 95 | 66-121 | 2 | 30 |
| 4-Isopropyltoluene | 9.62 | 10.0 | 96 | 9.53 | 10.0 | 95 | 61-128 | <1 | 30 |
| 4-Methyl-2-pentanone (MIBK) | 56.5 | 50.0 | 113 | 57.2 | 50.0 | 114 | 64-134 | 1 | 30 |
| Acetone | 66.3 | 50.0 | 133 | 67.8 | 50.0 | 136 * | 68-135 | 2 | 30 |
| Benzene | 9.90 | 10.0 | 99 | 10.0 | 10.0 | 100 | 69-124 | 1 | 30 |
| Bromobenzene | 8.99 | 10.0 | 90 | 9.00 | 10.0 | 90 | 72-116 | <1 | 30 |
| Bromochloromethane | 10.1 | 10.0 | 101 | 9.97 | 10.0 | 100 | 75-131 | <1 | 30 |
| Bromodichloromethane | 10.5 | 10.0 | 105 | 10.3 | 10.0 | 103 | 63-129 | 2 | 30 |
| Bromoform | 9.38 | 10.0 | 94 | 9.26 | 10.0 | 93 | 52-144 | 1 | 30 |
| Bromomethane | 7.75 | 10.0 | 78 | 7.90 | 10.0 | 79 | 35-113 | 2 | 30 |
| Carbon Disulfide | 20.2 | 20.0 | 101 | 20.5 | 20.0 | 103 | 46-144 | 1 | 30 |
| Carbon Tetrachloride | 10.0 | 10.0 | 100 | 10.6 | 10.0 | 106 | 55-140 | 5 | 30 |
| Chlorobenzene | 8.69 | 10.0 | 87 | 8.64 | 10.0 | 86 | 72-116 | <1 | 30 |
| Chloroethane | 10.8 | 10.0 | 108 | 10.8 | 10.0 | 108 | 58-134 | <1 | 30 |
| Chloroform | 10.1 | 10.0 | 101 | 10.2 | 10.0 | 102 | 70-129 | <1 | 30 |
| Chloromethane | 9.15 | 10.0 | 92 | 9.30 | 10.0 | 93 | 34-130 | 2 | 30 |
| cis-1,2-Dichloroethene | 9.69 | 10.0 | 97 | 9.65 | 10.0 | 97 | 71-118 | <1 | 30 |
| cis-1,3-Dichloropropene | 10.0 | 10.0 | 100 | 10.1 | 10.0 | 101 | 62-132 | 1 | 30 |
| Dibromochloromethane | 10.3 | 10.0 | 103 | 9.89 | 10.0 | 99 | 67-126 | 4 | 30 |
| Dibromomethane | 9.44 | 10.0 | 94 | 9.83 | 10.0 | 98 | 69-128 | 4 | 30 |

**ALS Group USA, Corp.**
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QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Analyzed:** | 02/07/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 669344 |

| | Lab Control Sample KQ2001844-05 | | | Duplicate Lab Control Sample KQ2001844-06 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Dichlorodifluoromethane | 7.47 | 10.0 | 75 | 7.28 | 10.0 | 73 | 32-124 | 3 | 30 |
| Ethylbenzene | 8.43 | 10.0 | 84 | 8.34 | 10.0 | 83 | 67-121 | 1 | 30 |
| Hexachlorobutadiene | 10.2 | 10.0 | 102 | 9.55 | 10.0 | 96 | 57-119 | 7 | 30 |
| Isopropylbenzene | 8.99 | 10.0 | 90 | 8.72 | 10.0 | 87 | 67-129 | 3 | 30 |
| m,p-Xylenes | 17.0 | 20.0 | 85 | 16.7 | 20.0 | 84 | 69-121 | 2 | 30 |
| Methyl tert-Butyl Ether | 10.0 | 10.0 | 100 | 9.82 | 10.0 | 98 | 54-126 | 2 | 30 |
| Methylene Chloride | 10.2 | 10.0 | 102 | 10.2 | 10.0 | 102 | 71-122 | <1 | 30 |
| n-Butylbenzene | 9.72 | 10.0 | 97 | 9.56 | 10.0 | 96 | 55-130 | 2 | 30 |
| n-Propylbenzene | 9.88 | 10.0 | 99 | 9.80 | 10.0 | 98 | 61-124 | <1 | 30 |
| o-Xylene | 8.58 | 10.0 | 86 | 8.50 | 10.0 | 85 | 71-119 | <1 | 30 |
| sec-Butylbenzene | 9.71 | 10.0 | 97 | 9.44 | 10.0 | 94 | 59-128 | 3 | 30 |
| Styrene | 8.90 | 10.0 | 89 | 8.82 | 10.0 | 88 | 74-121 | <1 | 30 |
| tert-Butylbenzene | 9.20 | 10.0 | 92 | 9.07 | 10.0 | 91 | 61-127 | 1 | 30 |
| Tetrachloroethene (PCE) | 8.34 | 10.0 | 83 | 8.36 | 10.0 | 84 | 62-126 | <1 | 30 |
| Toluene | 9.93 | 10.0 | 99 | 10.1 | 10.0 | 101 | 69-124 | 2 | 30 |
| trans-1,2-Dichloroethene | 9.63 | 10.0 | 96 | 9.45 | 10.0 | 95 | 67-125 | 2 | 30 |
| trans-1,3-Dichloropropene | 8.91 | 10.0 | 89 | 8.46 | 10.0 | 85 | 59-125 | 5 | 30 |
| Trichloroethene (TCE) | 9.56 | 10.0 | 96 | 9.77 | 10.0 | 98 | 67-128 | 2 | 30 |
| Trichlorofluoromethane (CFC 11) | 8.64 | 10.0 | 86 | 8.68 | 10.0 | 87 | 52-141 | <1 | 30 |
| Vinyl Chloride | 9.97 | 10.0 | 100 | 10.2 | 10.0 | 102 | 55-123 | 2 | 30 |

# Metals

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | KQ2001726-02 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/13/20 12:44 | 02/06/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/13/20 12:44 | 02/06/20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 |
| | | **Date Analyzed:** | 02/13/20 |
| | | **Date Extracted:** | 02/6/20 |

## Matrix Spike Summary
## Dissolved Metals

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-06-3D | **Units:** | ug/L |
| **Lab Code:** | K2001096-001 | **Basis:** | NA |
| **Analysis Method:** | 6010C | | |
| **Prep Method:** | EPA CLP ILM04.0 | | |

### Matrix Spike
KQ2001726-04

| Analyte Name | Sample Result | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Iron | ND U | 994 | 1000 | 99 | 75-125 |
| Manganese | 1.9 | 475 | 500 | 95 | 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.

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 |
| | | **Date Analyzed:** | 02/13/20 |

## Replicate Sample Summary
## Dissolved Metals

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-06-3D | **Units:** | ug/L |
| **Lab Code:** | K2001096-001 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample KQ2001726-03 Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Iron | 6010C | 21 | ND U | ND U | ND | - | 20 |
| Manganese | 6010C | 1.1 | 1.9 | ND U | NC | NC | 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** SCS Engineers
**Project:** Leichner Landfill, WA/04220030.13
**Sample Matrix:** Ground Water

**Service Request:** K2001096
**Date Analyzed:** 02/13/20

## Lab Control Sample Summary
## Dissolved Metals

**Units:**ug/L
**Basis:**NA

### Lab Control Sample
KQ2001726-01

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Iron | 6010C | 2360 | 2500 | 94 | 80-120 |
| Manganese | 6010C | 1160 | 1250 | 93 | 80-120 |

# General Chemistry

**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 | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001096-MB1 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.10 | 1 | 02/05/20 11:40 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.050 | 1 | 02/05/20 11:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001096-MB1 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001096-MB2 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.10 | 1 | 02/06/20 08:50 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.050 | 1 | 02/06/20 08:50 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project:** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001096-MB2 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 |
| | | **Date Analyzed:** | 02/07/20 |

**Replicate Sample Summary**

**General Chemistry Parameters**

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-06-3D | **Units:** | mg/L |
| **Lab Code:** | K2001096-001 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample K2001096-001DUP Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | 5.0 | 180 | 178 | 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.

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001096 |
| **Project** | Leichner Landfill, WA/04220030.13 | **Date Collected:** | 02/04/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/05/20 |
| | | **Date Analyzed:** | 02/07/20 |

**Replicate Sample Summary**

**General Chemistry Parameters**

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020420-05-5D | **Units:** | mg/L |
| **Lab Code:** | K2001096-002 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample K2001096-002DUP Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | 5.0 | 205 | 204 | 204 | <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.

**Client:** SCS Engineers
**Project:** Leichner Landfill, WA/04220030.13
**Sample Matrix:** Ground Water

**Service Request:** K2001096
**Date Analyzed:** 02/05/20 - 02/07/20

## Lab Control Sample Summary
## General Chemistry Parameters

**Units:**mg/L
**Basis:**NA

### Lab Control Sample
K2001096-LCS1

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Chloride | 300.0 | 4.86 | 5.00 | 97 | 90-110 |
| Nitrate as Nitrogen | 300.0 | 2.46 | 2.50 | 98 | 90-110 |
| Solids, Total Dissolved | SM 2540 C | 934 | 922 | 101 | 85-115 |

**Client:** SCS Engineers
**Project:** Leichner Landfill, WA/04220030.13
**Sample Matrix:** Ground Water

**Service Request:** K2001096
**Date Analyzed:** 02/06/20

## Lab Control Sample Summary
## General Chemistry Parameters

**Units:**mg/L
**Basis:**NA

### Lab Control Sample
K2001096-LCS2

| 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 |

February 21, 2020 Service Request No:K2001140

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

**Laboratory Results for: Leichner Landfill**

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory February 06, 2020
For your reference, these analyses have been assigned our service request number **K2001140.**

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**
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ALS Environmental

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

**Service Request:** K2001140
**Date Received:** 02/06/2020

## 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:**

Nine ground water samples were received for analysis at ALS Environmental on 02/06/2020. 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, 2/12/20; The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0212F004.D: Acetone, Bromomethane, and Dichlorodifluoromethane. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8260C, 2/12/20; The advisory criterion was exceeded for Dichlorodifluoromethane in Laboratory Control Sample (LCS) KQ2002101-05. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, this compound is not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

Method 8260C, 2/12/20; The recovery of Dichlorodifluoromethane in the Duplicate Laboratory Control Sample (DLCS) KQ2002101-06 was outside the recovery control limits listed in the results summary. The DLCS is used to evaluate batch precision. The relative percent difference (RPD) was within control limits indicating the quality of the sample data was not significantly affected. No further corrective action was taken.

Approved by  Date 02/21/2020

## SAMPLE DETECTION SUMMARY

| CLIENT ID: LB-020520-01-1D | | | Lab ID: K2001140-001 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 167 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 6.29 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 5.82 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020520-02-1S | | | Lab ID: K2001140-002 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 176 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 6.19 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 3.64 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020520-07-13I | | | Lab ID: K2001140-003 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 200 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 9.14 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 4.99 | | | 0.10 | mg/L | 300.0 |
| Manganese, Dissolved | 8.9 | | | 1.1 | ug/L | 6010C |

| CLIENT ID: LB-020520-03-17D | | | Lab ID: K2001140-004 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 188 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 6.81 | | | 0.20 | mg/L | 300.0 |
| Iron, Dissolved | 145 | | | 21 | ug/L | 6010C |
| Manganese, Dissolved | 4170 | | | 1.1 | ug/L | 6010C |

| CLIENT ID: LB-020520-05-17I | | | Lab ID: K2001140-006 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 213 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 6.74 | | | 0.20 | mg/L | 300.0 |
| Iron, Dissolved | 9420 | | | 21 | ug/L | 6010C |
| Manganese, Dissolved | 1580 | | | 1.1 | ug/L | 6010C |

| CLIENT ID: LB-020520-08-26I | | | Lab ID: K2001140-007 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 196 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 10.1 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 3.85 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020520-06-27I | | | Lab ID: K2001140-008 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 209 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 5.32 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 1.82 | | | 0.10 | mg/L | 300.0 |
| Manganese, Dissolved | 134 | | | 1.1 | ug/L | 6010C |

# Sample Receipt Information

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

**Client:** SCS Engineers **Service Request:**K2001140

**Project:** Leichner Landfill/04220030.13

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| K2001140-001 | LB-020520-01-1D | 2/5/2020 | 0945 |
| K2001140-002 | LB-020520-02-1S | 2/5/2020 | 1035 |
| K2001140-003 | LB-020520-07-13I | 2/5/2020 | 1410 |
| K2001140-004 | LB-020520-03-17D | 2/5/2020 | 1130 |
| K2001140-005 | LB-020520-04-FB | 2/5/2020 | 1120 |
| K2001140-006 | LB-020520-05-17I | 2/5/2020 | 1215 |
| K2001140-007 | LB-020520-08-26I | 2/5/2020 | 1500 |
| K2001140-008 | LB-020520-06-27I | 2/5/2020 | 1315 |
| K2001140-009 | Trip Blank | 2/5/2020 | 0800 |

# CHAIN OF CUSTODY

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

SR# K2001140

PAGE 1 OF 1 COC#

PROJECT NAME: Leichner Land fill
PROJECT NUMBER: 04220030.13
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 13940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE: 503 639-9736 FAX #:
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | BTEX☐ 8021☐ | Oil & Grease/TRPH 1664 HEM☐ | 1664 SGT☐ | PCBs Aroclors☐ | Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ | 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ | Hex-Chrom☐ | (circle) pH, Cond, $NO_3$, BOD, TSS, $SO_4$, $PO_4$, F, $NO_2$, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity ☐ $CO_3$ ☐ $HCO_3$ ☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases RSK 175☐ | $CO_2$☐ Methane☐ Ethane☐ Ethene☐ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-020520-01-1D | 2/5/20 | 945 | | W | 5 | | X | | | | | | | | X | | | X | | | | | | | | | |
| LB-020520-02-1S | 2/5/20 | 1035 | | W | 5 | | X | | | | | | | | X | | | X | | | | | | | | | |
| LB-020520-07-13I | 2/5/20 | 1410 | | W | 5 | | X | | | | | | | | X | | | X | | | | | | | | | |
| LB-020520-03-17D | 2/5/20 | 1130 | | W | 5 | | X | | | | | | | | X | | | X | | | | | | | | | |
| LB-020520-04-FB | 2/5/20 | 1120 | | W | 5 | | X | | | | | | | | X | | | X | | | | | | | | | |
| LB-020520-05-17I | 2/5/20 | 1215 | | W | 5 | | X | | | | | | | | X | | | X | | | | | | | | | |
| LB-020520-08-26I | 2/5/20 | 1500 | | W | 5 | | X | | | | | | | | X | | | X | | | | | | | | | |
| LB-020520-06-27I | 2/5/20 | 1315 | | W | 5 | | X | | | | | | | | X | | | X | | | | | | | | | |
| Trip Blanks | 2/5/20 | 800 | | W | 2 | | X | | | | | | | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. #
Bill To:

**TURNAROUND REQUIREMENTS**

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

Requested Report Date

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:
cc: Tiffany Andrews
tandrews@scsengineers.com
Metals are field filtered

Container Supply Number
105914

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

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: |
|---|---|---|---|
| Signature: | Signature: | Signature: | Signature: |
| Date/Time: 2/6/20 0900 | Date/Time: 2/6/20 0900 | Date/Time: 2/6/20 1200 | Date/Time: 2/6/2020 1200 |
| Printed Name: David Lamadrid | Printed Name: | Printed Name: | Printed Name: Cody Graves |
| Firm: SCS ENGINEERS | Firm: ALS | Firm: ALS | Firm: ALS |

PC 444

# Cooler Receipt and Preservation Form

Client SCS Engineers Service Request K2001140

Received: 2/6/20 Opened: 2/6/20 By: CG Unloaded: 2/6/20 By: CG

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

| Raw Cooler Temp | Corrected Cooler Temp | Raw Temp Blank | Corrected Temp Blank | Corr. Factor | Thermometer ID | Cooler/COC ID (NA) | Tracking Number (NA) | File |
|---|---|---|---|---|---|---|---|---|
| -0.8 | -0.7 | / | / | +0.1 | 384 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

4. Packing material: (*Inserts*) *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
12. Was C12/Res negative? (NA) Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

*Notes, Discrepancies, & Resolutions:* _____

SHORT HOLD TIME

# Miscellaneous Forms

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

## Inorganic Data Qualifiers

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

## Metals Data Qualifiers

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

## Organic Data Qualifiers

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

## Additional Petroleum Hydrocarbon Specific Qualifiers

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

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

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water- | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

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

## 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. |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | | |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-01-1D | **Date Collected:** | 02/5/20 |
| **Lab Code:** | K2001140-001 | **Date Received:** | 02/6/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | JHINSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-02-1S | **Date Collected:** | 02/5/20 |
| **Lab Code:** | K2001140-002 | **Date Received:** | 02/6/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | JHINSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-07-13I | **Date Collected:** | 02/5/20 |
| **Lab Code:** | K2001140-003 | **Date Received:** | 02/6/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | JHINSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-03-17D | **Date Collected:** | 02/5/20 |
| **Lab Code:** | K2001140-004 | **Date Received:** | 02/6/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | | |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-03-17D | **Date Collected:** | 02/5/20 |
| **Lab Code:** | K2001140-004 | **Date Received:** | 02/6/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 6010C | JHINSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-04-FB | **Date Collected:** | 02/5/20 |
| **Lab Code:** | K2001140-005 | **Date Received:** | 02/6/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | JHINSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-05-17I | **Date Collected:** | 02/5/20 |
| **Lab Code:** | K2001140-006 | **Date Received:** | 02/6/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | JHINSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-08-26I | **Date Collected:** | 02/5/20 |
| **Lab Code:** | K2001140-007 | **Date Received:** | 02/6/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | JHINSON | AMCKORNEY |

**Client:** SCS Engineers **Service Request:** K2001140
**Project:** Leichner Landfill/04220030.13

**Sample Name:** LB-020520-08-26I **Date Collected:** 02/5/20
**Lab Code:** K2001140-007 **Date Received:** 02/6/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-020520-06-27I **Date Collected:** 02/5/20
**Lab Code:** K2001140-008 **Date Received:** 02/6/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | JCHAN |
| 6010C | JHINSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** Trip Blank **Date Collected:** 02/5/20
**Lab Code:** K2001140-009 **Date Received:** 02/6/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

# 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

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-01-1D | **Units:** | ug/L |
| **Lab Code:** | K2001140-001 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 15:49 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 15:49 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 15:49 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 15:49 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 15:49 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 15:49 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 15:49 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-01-1D | **Units:** | ug/L |
| **Lab Code:** | K2001140-001 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 15:49 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 15:49 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 15:49 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 89 | 68 - 117 | 02/12/20 15:49 | |
| Dibromofluoromethane | 98 | 73 - 122 | 02/12/20 15:49 | |
| Toluene-d8 | 104 | 65 - 144 | 02/12/20 15:49 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-02-1S | **Units:** | ug/L |
| **Lab Code:** | K2001140-002 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 16:15 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 16:15 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 16:15 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 16:15 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 16:15 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 16:15 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 16:15 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-02-1S | **Units:** | ug/L |
| **Lab Code:** | K2001140-002 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 16:15 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 16:15 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 16:15 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 02/12/20 16:15 | |
| Dibromofluoromethane | 94 | 73 - 122 | 02/12/20 16:15 | |
| Toluene-d8 | 105 | 65 - 144 | 02/12/20 16:15 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-07-13I | **Units:** | ug/L |
| **Lab Code:** | K2001140-003 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 16:42 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 16:42 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 16:42 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 16:42 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 16:42 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 16:42 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 16:42 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-07-13I | **Units:** | ug/L |
| **Lab Code:** | K2001140-003 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 16:42 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 16:42 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 16:42 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 85 | 68 - 117 | 02/12/20 16:42 | |
| Dibromofluoromethane | 94 | 73 - 122 | 02/12/20 16:42 | |
| Toluene-d8 | 106 | 65 - 144 | 02/12/20 16:42 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-03-17D | **Units:** | ug/L |
| **Lab Code:** | K2001140-004 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 17:08 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 17:08 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 17:08 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 17:08 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 17:08 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 17:08 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 17:08 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-03-17D | **Units:** | ug/L |
| **Lab Code:** | K2001140-004 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 17:08 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 17:08 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 17:08 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/12/20 17:08 | |
| Dibromofluoromethane | 93 | 73 - 122 | 02/12/20 17:08 | |
| Toluene-d8 | 104 | 65 - 144 | 02/12/20 17:08 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-04-FB | **Units:** | ug/L |
| **Lab Code:** | K2001140-005 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 17:35 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 17:35 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 17:35 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 17:35 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 17:35 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 17:35 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 17:35 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-04-FB | **Units:** | ug/L |
| **Lab Code:** | K2001140-005 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 17:35 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 17:35 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 17:35 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 86 | 68 - 117 | 02/12/20 17:35 | |
| Dibromofluoromethane | 96 | 73 - 122 | 02/12/20 17:35 | |
| Toluene-d8 | 104 | 65 - 144 | 02/12/20 17:35 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 12:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-05-17I | **Units:** | ug/L |
| **Lab Code:** | K2001140-006 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 18:01 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 18:01 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 18:01 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 18:01 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 18:01 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 18:01 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 18:01 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 12:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-05-17I | **Units:** | ug/L |
| **Lab Code:** | K2001140-006 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 18:01 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 18:01 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 18:01 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/12/20 18:01 | |
| Dibromofluoromethane | 95 | 73 - 122 | 02/12/20 18:01 | |
| Toluene-d8 | 104 | 65 - 144 | 02/12/20 18:01 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 15:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-08-26I | **Units:** | ug/L |
| **Lab Code:** | K2001140-007 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 18:28 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 18:28 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 18:28 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 18:28 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 18:28 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 18:28 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 18:28 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 15:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-08-26I | **Units:** | ug/L |
| **Lab Code:** | K2001140-007 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 18:28 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 18:28 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 18:28 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 86 | 68 - 117 | 02/12/20 18:28 | |
| Dibromofluoromethane | 95 | 73 - 122 | 02/12/20 18:28 | |
| Toluene-d8 | 105 | 65 - 144 | 02/12/20 18:28 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 13:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-06-27I | **Units:** | ug/L |
| **Lab Code:** | K2001140-008 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 18:54 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 18:54 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 18:54 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 18:54 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 18:54 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 18:54 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 18:54 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 13:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-06-27I | **Units:** | ug/L |
| **Lab Code:** | K2001140-008 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 18:54 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 18:54 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 18:54 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 86 | 68 - 117 | 02/12/20 18:54 | |
| Dibromofluoromethane | 97 | 73 - 122 | 02/12/20 18:54 | |
| Toluene-d8 | 105 | 65 - 144 | 02/12/20 18:54 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 08:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2001140-009 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 19:21 | * |
| Benzene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 19:21 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 19:21 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 19:21 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 19:21 | * |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 19:21 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 19:21 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 08:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2001140-009 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 19:21 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 19:21 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 19:21 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/12/20 19:21 | |
| Dibromofluoromethane | 94 | 73 - 122 | 02/12/20 19:21 | |
| Toluene-d8 | 104 | 65 - 144 | 02/12/20 19:21 | |

# Metals

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-01-1D | **Basis:** | NA |
| **Lab Code:** | K2001140-001 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/19/20 11:02 | 02/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/19/20 11:02 | 02/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-02-1S | **Basis:** | NA |
| **Lab Code:** | K2001140-002 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/19/20 11:31 | 02/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/19/20 11:31 | 02/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-07-13I | **Basis:** | NA |
| **Lab Code:** | K2001140-003 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/19/20 11:34 | 02/07/20 | |
| Manganese | 6010C | **8.9** | ug/L | 1.1 | 1 | 02/19/20 11:34 | 02/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-03-17D | **Basis:** | NA |
| **Lab Code:** | K2001140-004 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | **145** | ug/L | 21 | 1 | 02/19/20 11:37 | 02/07/20 | |
| Manganese | 6010C | **4170** | ug/L | 1.1 | 1 | 02/19/20 11:37 | 02/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-04-FB | **Basis:** | NA |
| **Lab Code:** | K2001140-005 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/19/20 11:40 | 02/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/19/20 11:40 | 02/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 12:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-05-17I | **Basis:** | NA |
| **Lab Code:** | K2001140-006 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | **9420** | ug/L | 21 | 1 | 02/19/20 11:43 | 02/07/20 | |
| Manganese | 6010C | **1580** | ug/L | 1.1 | 1 | 02/19/20 11:43 | 02/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 15:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-08-26I | **Basis:** | NA |
| **Lab Code:** | K2001140-007 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/19/20 11:46 | 02/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/19/20 11:46 | 02/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 13:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-06-27I | **Basis:** | NA |
| **Lab Code:** | K2001140-008 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/19/20 11:49 | 02/07/20 | |
| Manganese | 6010C | **134** | ug/L | 1.1 | 1 | 02/19/20 11:49 | 02/07/20 | |

# General Chemistry

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-01-1D | **Basis:** | NA |
| **Lab Code:** | K2001140-001 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **6.29** | mg/L | 0.20 | 2 | 02/06/20 17:55 | |
| Nitrate as Nitrogen | 300.0 | **5.82** | mg/L | 0.10 | 2 | 02/06/20 17:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-01-1D | **Basis:** | NA |
| **Lab Code:** | K2001140-001 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **167** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-02-1S | **Basis:** | NA |
| **Lab Code:** | K2001140-002 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **6.19** | mg/L | 0.20 | 2 | 02/06/20 18:38 | |
| Nitrate as Nitrogen | 300.0 | **3.64** | mg/L | 0.10 | 2 | 02/06/20 18:38 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 10:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-02-1S | **Basis:** | NA |
| **Lab Code:** | K2001140-002 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **176** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-07-13I | **Basis:** | NA |
| **Lab Code:** | K2001140-003 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **9.14** | mg/L | 0.20 | 2 | 02/06/20 18:48 | |
| Nitrate as Nitrogen | 300.0 | **4.99** | mg/L | 0.10 | 2 | 02/06/20 18:48 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-07-13I | **Basis:** | NA |
| **Lab Code:** | K2001140-003 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **200** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-03-17D | **Basis:** | NA |
| **Lab Code:** | K2001140-004 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **6.81** | mg/L | 0.20 | 2 | 02/06/20 18:59 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.10 | 2 | 02/06/20 18:59 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-03-17D | **Basis:** | NA |
| **Lab Code:** | K2001140-004 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **188** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-04-FB | **Basis:** | NA |
| **Lab Code:** | K2001140-005 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.20 | 2 | 02/06/20 19:10 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.10 | 2 | 02/06/20 19:10 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 11:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-04-FB | **Basis:** | NA |
| **Lab Code:** | K2001140-005 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 12:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-05-17I | **Basis:** | NA |
| **Lab Code:** | K2001140-006 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **6.74** | mg/L | 0.20 | 2 | 02/06/20 19:20 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.10 | 2 | 02/06/20 19:20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 12:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-05-17I | **Basis:** | NA |
| **Lab Code:** | K2001140-006 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **213** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 15:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-08-26I | **Basis:** | NA |
| **Lab Code:** | K2001140-007 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **10.1** | mg/L | 0.20 | 2 | 02/06/20 19:31 | |
| Nitrate as Nitrogen | 300.0 | **3.85** | mg/L | 0.10 | 2 | 02/06/20 19:31 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 15:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-08-26I | **Basis:** | NA |
| **Lab Code:** | K2001140-007 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **196** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 13:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-06-27I | **Basis:** | NA |
| **Lab Code:** | K2001140-008 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **5.32** | mg/L | 0.20 | 2 | 02/06/20 20:03 | |
| Nitrate as Nitrogen | 300.0 | **1.82** | mg/L | 0.10 | 2 | 02/06/20 20:03 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 13:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 12:00 |
| **Sample Name:** | LB-020520-06-27I | **Basis:** | NA |
| **Lab Code:** | K2001140-008 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **209** | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

# 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 **Service Request:** K2001140
**Project:** Leichner Landfill/04220030.13
**Sample Matrix:** Ground Water

## SURROGATE RECOVERY SUMMARY
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Extraction Method:** None

| Sample Name | Lab Code | 4-Bromofluorobenzene 68-117 | Dibromofluoromethane 73-122 | Toluene-d8 65-144 |
|---|---|---|---|---|
| LB-020520-01-1D | K2001140-001 | 89 | 98 | 104 |
| LB-020520-02-1S | K2001140-002 | 87 | 94 | 105 |
| LB-020520-07-13I | K2001140-003 | 85 | 94 | 106 |
| LB-020520-03-17D | K2001140-004 | 88 | 93 | 104 |
| LB-020520-04-FB | K2001140-005 | 86 | 96 | 104 |
| LB-020520-05-17I | K2001140-006 | 88 | 95 | 104 |
| LB-020520-08-26I | K2001140-007 | 86 | 95 | 105 |
| LB-020520-06-27I | K2001140-008 | 86 | 97 | 105 |
| Trip Blank | K2001140-009 | 88 | 94 | 104 |
| Method Blank | KQ2002101-07 | 88 | 93 | 105 |
| Lab Control Sample | KQ2002101-05 | 90 | 101 | 104 |
| Duplicate Lab Control Sample | KQ2002101-06 | 90 | 99 | 103 |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2002101-07 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/12/20 10:57 | |
| Benzene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Bromoform | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Bromomethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/12/20 10:57 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/12/20 10:57 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Chloroethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Chloroform | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Chloromethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| 2-Hexanone | ND U | 20 | 1 | 02/12/20 10:57 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/12/20 10:57 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2002101-07 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| Naphthalene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| Styrene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Toluene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/12/20 10:57 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| o-Xylene | ND U | 0.50 | 1 | 02/12/20 10:57 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/12/20 10:57 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/12/20 10:57 | |
| Dibromofluoromethane | 93 | 73 - 122 | 02/12/20 10:57 | |
| Toluene-d8 | 105 | 65 - 144 | 02/12/20 10:57 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Analyzed:** | 02/12/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 669842 |

| | Lab Control Sample KQ2002101-05 | | | Duplicate Lab Control Sample KQ2002101-06 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| 1,1,1,2-Tetrachloroethane | 9.09 | 10.0 | 91 | 9.32 | 10.0 | 93 | 66-124 | 2 | 30 |
| 1,1,1-Trichloroethane (TCA) | 10.3 | 10.0 | 103 | 10.1 | 10.0 | 101 | 59-136 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.0 | 100 | 10.2 | 10.0 | 102 | 70-127 | 1 | 30 |
| 1,1,2-Trichloroethane | 9.33 | 10.0 | 93 | 9.50 | 10.0 | 95 | 74-118 | 2 | 30 |
| 1,1-Dichloroethane | 11.0 | 10.0 | 110 | 10.5 | 10.0 | 105 | 68-132 | 4 | 30 |
| 1,1-Dichloropropene | 10.8 | 10.0 | 108 | 10.4 | 10.0 | 104 | 59-134 | 3 | 30 |
| 1,2,3-Trichlorobenzene | 9.56 | 10.0 | 96 | 9.70 | 10.0 | 97 | 68-120 | 1 | 30 |
| 1,2,3-Trichloropropane | 9.97 | 10.0 | 100 | 10.2 | 10.0 | 102 | 69-123 | 2 | 30 |
| 1,2,4-Trimethylbenzene | 9.85 | 10.0 | 99 | 9.77 | 10.0 | 98 | 63-122 | <1 | 30 |
| 1,2-Dibromo-3-chloropropane | 9.19 | 10.0 | 92 | 9.37 | 10.0 | 94 | 55-132 | 2 | 30 |
| 1,2-Dibromoethane (EDB) | 8.69 | 10.0 | 87 | 8.76 | 10.0 | 88 | 74-118 | <1 | 30 |
| 1,2-Dichlorobenzene | 9.40 | 10.0 | 94 | 9.57 | 10.0 | 96 | 72-115 | 2 | 30 |
| 1,2-Dichloropropane | 10.6 | 10.0 | 106 | 10.4 | 10.0 | 104 | 67-126 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 9.63 | 10.0 | 96 | 9.49 | 10.0 | 95 | 62-126 | 1 | 30 |
| 1,3-Dichlorobenzene | 9.26 | 10.0 | 93 | 9.20 | 10.0 | 92 | 70-116 | <1 | 30 |
| 1,3-Dichloropropane | 9.29 | 10.0 | 93 | 9.54 | 10.0 | 95 | 75-116 | 3 | 30 |
| 1,4-Dichlorobenzene | 9.18 | 10.0 | 92 | 9.15 | 10.0 | 92 | 73-115 | <1 | 30 |
| 2,2-Dichloropropane | 8.95 | 10.0 | 90 | 8.58 | 10.0 | 86 | 37-145 | 4 | 30 |
| 2-Butanone (MEK) | 60.8 | 50.0 | 122 | 59.4 | 50.0 | 119 | 71-149 | 2 | 30 |
| 2-Chlorotoluene | 9.66 | 10.0 | 97 | 9.50 | 10.0 | 95 | 55-131 | 2 | 30 |
| 2-Hexanone | 51.2 | 50.0 | 102 | 51.2 | 50.0 | 102 | 59-131 | <1 | 30 |
| 4-Chlorotoluene | 9.88 | 10.0 | 99 | 9.84 | 10.0 | 98 | 66-121 | <1 | 30 |
| 4-Isopropyltoluene | 9.93 | 10.0 | 99 | 9.80 | 10.0 | 98 | 61-128 | 1 | 30 |
| 4-Methyl-2-pentanone (MIBK) | 59.9 | 50.0 | 120 | 58.3 | 50.0 | 117 | 64-134 | 3 | 30 |
| Acetone | 65.2 | 50.0 | 130 | 62.6 | 50.0 | 125 | 68-135 | 4 | 30 |
| Benzene | 10.3 | 10.0 | 103 | 10.4 | 10.0 | 104 | 69-124 | <1 | 30 |
| Bromobenzene | 9.31 | 10.0 | 93 | 9.64 | 10.0 | 96 | 72-116 | 3 | 30 |
| Bromochloromethane | 10.5 | 10.0 | 105 | 10.3 | 10.0 | 103 | 75-131 | 1 | 30 |
| Bromodichloromethane | 10.7 | 10.0 | 107 | 10.8 | 10.0 | 108 | 63-129 | 2 | 30 |
| Bromoform | 9.47 | 10.0 | 95 | 9.73 | 10.0 | 97 | 52-144 | 3 | 30 |
| Bromomethane | 8.11 | 10.0 | 81 | 8.16 | 10.0 | 82 | 35-113 | <1 | 30 |
| Carbon Disulfide | 20.3 | 20.0 | 102 | 19.8 | 20.0 | 99 | 46-144 | 3 | 30 |
| Carbon Tetrachloride | 10.6 | 10.0 | 106 | 10.3 | 10.0 | 103 | 55-140 | 3 | 30 |
| Chlorobenzene | 8.97 | 10.0 | 90 | 9.02 | 10.0 | 90 | 72-116 | <1 | 30 |
| Chloroethane | 11.4 | 10.0 | 114 | 11.2 | 10.0 | 112 | 58-134 | 2 | 30 |
| Chloroform | 10.4 | 10.0 | 104 | 10.5 | 10.0 | 105 | 70-129 | <1 | 30 |
| Chloromethane | 11.2 | 10.0 | 112 | 11.0 | 10.0 | 110 | 34-130 | 1 | 30 |
| cis-1,2-Dichloroethene | 10.2 | 10.0 | 102 | 10.1 | 10.0 | 101 | 71-118 | <1 | 30 |
| cis-1,3-Dichloropropene | 10.5 | 10.0 | 105 | 10.3 | 10.0 | 103 | 62-132 | 1 | 30 |
| Dibromochloromethane | 10.4 | 10.0 | 104 | 10.4 | 10.0 | 104 | 67-126 | <1 | 30 |
| Dibromomethane | 10.5 | 10.0 | 105 | 10.0 | 10.0 | 100 | 69-128 | 4 | 30 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Analyzed:** | 02/12/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 669842 |

| | Lab Control Sample KQ2002101-05 | | | Duplicate Lab Control Sample KQ2002101-06 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Dichlorodifluoromethane | 12.8 | 10.0 | 128 * | 12.7 | 10.0 | 127 * | 32-124 | <1 | 30 |
| Ethylbenzene | 8.60 | 10.0 | 86 | 8.69 | 10.0 | 87 | 67-121 | 1 | 30 |
| Hexachlorobutadiene | 10.5 | 10.0 | 105 | 9.81 | 10.0 | 98 | 57-119 | 7 | 30 |
| Isopropylbenzene | 9.18 | 10.0 | 92 | 9.03 | 10.0 | 90 | 67-129 | 2 | 30 |
| m,p-Xylenes | 17.5 | 20.0 | 87 | 17.3 | 20.0 | 86 | 69-121 | 1 | 30 |
| Methyl tert-Butyl Ether | 10.3 | 10.0 | 103 | 10.0 | 10.0 | 100 | 54-126 | 3 | 30 |
| Methylene Chloride | 10.1 | 10.0 | 101 | 10.2 | 10.0 | 102 | 71-122 | <1 | 30 |
| Naphthalene | 9.50 | 10.0 | 95 | 9.62 | 10.0 | 96 | 64-126 | 1 | 30 |
| n-Butylbenzene | 9.79 | 10.0 | 98 | 9.82 | 10.0 | 98 | 55-130 | <1 | 30 |
| n-Propylbenzene | 10.0 | 10.0 | 100 | 9.93 | 10.0 | 99 | 61-124 | <1 | 30 |
| o-Xylene | 8.82 | 10.0 | 88 | 8.87 | 10.0 | 89 | 71-119 | <1 | 30 |
| sec-Butylbenzene | 9.75 | 10.0 | 98 | 9.49 | 10.0 | 95 | 59-128 | 3 | 30 |
| Styrene | 9.15 | 10.0 | 92 | 9.21 | 10.0 | 92 | 74-121 | <1 | 30 |
| tert-Butylbenzene | 9.41 | 10.0 | 94 | 9.36 | 10.0 | 94 | 61-127 | <1 | 30 |
| Tetrachloroethene (PCE) | 8.82 | 10.0 | 88 | 8.75 | 10.0 | 88 | 62-126 | <1 | 30 |
| Toluene | 10.3 | 10.0 | 103 | 10.3 | 10.0 | 103 | 69-124 | <1 | 30 |
| trans-1,2-Dichloroethene | 10.1 | 10.0 | 101 | 9.51 | 10.0 | 95 | 67-125 | 6 | 30 |
| trans-1,3-Dichloropropene | 9.07 | 10.0 | 91 | 9.16 | 10.0 | 92 | 59-125 | <1 | 30 |
| Trichloroethene (TCE) | 9.94 | 10.0 | 99 | 10.0 | 10.0 | 100 | 67-128 | <1 | 30 |
| Trichlorofluoromethane (CFC 11) | 9.07 | 10.0 | 91 | 8.76 | 10.0 | 88 | 52-141 | 3 | 30 |
| Vinyl Chloride | 11.4 | 10.0 | 114 | 11.3 | 10.0 | 113 | 55-123 | 1 | 30 |

# Metals

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | KQ2001806-02 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/19/20 10:55 | 02/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/19/20 10:55 | 02/07/20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 |
| | | **Date Analyzed:** | 02/19/20 |
| | | **Date Extracted:** | 02/7/20 |

## Matrix Spike Summary
## Dissolved Metals

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-01-1D | **Units:** | ug/L |
| **Lab Code:** | K2001140-001 | **Basis:** | NA |
| **Analysis Method:** | 6010C | | |
| **Prep Method:** | EPA CLP ILM04.0 | | |

**Matrix Spike**
KQ2001806-04

| Analyte Name | Sample Result | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Iron | ND U | 1020 | 1000 | 102 | 75-125 |
| Manganese | ND U | 502 | 500 | 100 | 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.

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 |
| | | **Date Analyzed:** | 02/19/20 |

## Replicate Sample Summary
## Dissolved Metals

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-01-1D | **Units:** | ug/L |
| **Lab Code:** | K2001140-001 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample KQ2001806-03 Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Iron | 6010C | 21 | ND U | ND U | ND | - | 20 |
| Manganese | 6010C | 1.1 | ND U | ND U | ND | - | 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** SCS Engineers
**Project:** Leichner Landfill/04220030.13
**Sample Matrix:** Ground Water

**Service Request:** K2001140
**Date Analyzed:** 02/19/20

## Lab Control Sample Summary
## Dissolved Metals

**Units:**ug/L
**Basis:**NA

### Lab Control Sample
KQ2001806-01

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Iron | 6010C | 2500 | 2500 | 100 | 80-120 |
| Manganese | 6010C | 1260 | 1250 | 101 | 80-120 |

# General Chemistry

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001140-MB1 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.10 | 1 | 02/06/20 10:22 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.050 | 1 | 02/06/20 10:22 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001140-MB1 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001140-MB2 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 02/07/20 10:40 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** SCS Engineers
**Project:** Leichner Landfill/04220030.13
**Sample Matrix:** Ground Water

**Service Request:**K2001140
**Date Collected:**02/05/20
**Date Received:**02/06/20
**Date Analyzed:**2/6/20

## Duplicate Matrix Spike Summary
## General Chemistry Parameters

**Sample Name:** LB-020520-01-1D
**Lab Code:** K2001140-001

**Units:**mg/L
**Basis:**NA

| | | | Matrix Spike K2001140-001MS | | | Duplicate Matrix Spike K2001140-001DMS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Method** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Chloride | 300.0 | 6.29 | 14.2 | 8.00 | 99 | 14.1 | 8.00 | 98 | 90-110 | <1 | 20 |
| Nitrate as Nitrogen | 300.0 | 5.82 | 14.6 | 8.00 | 110 | 14.7 | 8.00 | 110 | 90-110 | <1 | 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001140 |
| **Project** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/05/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/06/20 |
| | | **Date Analyzed:** | 02/06/20 |

## Replicate Sample Summary
## General Chemistry Parameters

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020520-01-1D | **Units:** | mg/L |
| **Lab Code:** | K2001140-001 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample K2001140-001DUP Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | 0.20 | 6.29 | 6.28 | 6.29 | <1 | 20 |
| Nitrate as Nitrogen | 300.0 | 0.10 | 5.82 | 5.77 | 5.80 | <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/04220030.13
**Sample Matrix:** Ground Water

**Service Request:** K2001140
**Date Analyzed:** 02/06/20 - 02/07/20

**Lab Control Sample Summary**
**General Chemistry Parameters**

**Units:**mg/L
**Basis:**NA

**Lab Control Sample**
K2001140-LCS

| 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 | 2.46 | 2.50 | 98 | 90-110 |
| Solids, Total Dissolved | SM 2540 C | 934 | 922 | 101 | 85-115 |

February 20, 2020 Service Request No:K2001192

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

**Laboratory Results for: Leichner Landfill**

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory February 07, 2020
For your reference, these analyses have been assigned our service request number **K2001192.**

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

ALS Environmental

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

**Service Request:** K2001192
**Date Received:** 02/07/2020

## CASE NARRATIVE

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

**Sample Receipt:**

Seven ground water samples were received for analysis at ALS Environmental on 02/07/2020. 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, 2/13/20; The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0213F004.D: Acetone. 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, 2/13/20; The advisory criterion was exceeded for Bromomethane in Laboratory Control Sample (LCS) KQ2002181-05. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, this compound is not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

Approved by  Date 02/20/2020

## SAMPLE DETECTION SUMMARY

| CLIENT ID: LB-020620-06-3S | | | Lab ID: K2001192-001 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 165 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 3.77 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 3.87 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020620-03-5S | | | Lab ID: K2001192-002 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 116 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 2.43 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 1.54 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020620-04-DUP2 | | | Lab ID: K2001192-003 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 111 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 2.44 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 1.54 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020620-05-6S | | | Lab ID: K2001192-004 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 186 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 5.27 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 3.68 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-020620-01-10SR | | | Lab ID: K2001192-005 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 296 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 4.2 | | | 1.0 | mg/L | 300.0 |
| Nitrate as Nitrogen | 23.4 | | | 0.50 | mg/L | 300.0 |

| CLIENT ID: LB-020620-02-20S | | | Lab ID: K2001192-006 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 225 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 2.27 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 0.68 | | | 0.10 | mg/L | 300.0 |
| Manganese, Dissolved | 119 | | | 1.1 | ug/L | 6010C |

# Sample Receipt Information

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

**Client:** SCS Engineers **Service Request:**K2001192

**Project:** Leichner Landfill/04220030.13

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| K2001192-001 | LB-020620-06-3S | 2/6/2020 | 1430 |
| K2001192-002 | LB-020620-03-5S | 2/6/2020 | 1200 |
| K2001192-003 | LB-020620-04-DUP2 | 2/6/2020 | 1205 |
| K2001192-004 | LB-020620-05-6S | 2/6/2020 | 1300 |
| K2001192-005 | LB-020620-01-10SR | 2/6/2020 | 0945 |
| K2001192-006 | LB-020620-02-20S | 2/6/2020 | 1045 |
| K2001192-007 | Trip Blank | 2/6/2020 | 0800 |

# CHAIN OF CUSTODY

SR# K2001192

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: Leichner Landfill
PROJECT NUMBER: 04220030.13
PROJECT MANAGER: David Lamadrid
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: dlamadrid@scsengineers.com
PHONE #: 503 639 9736 FAX #:
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond, Cl, $SO_4$, $PO_4$, F, $NO_2$, $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity ☐ $CO_3$☐ $HCO_3$☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases $CO_2$☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-020620-06S | 2/6/20 | 1430 | | W | 5 | | X | | | | | | X | | X | | | | | | | |
| LB-020620-03-5S | 2/6/20 | 1200 | | W | 5 | | X | | | | | | X | | X | | | | | | | |
| LB-020620-01-DUP2 | 2/6/20 | 1205 | | W | 5 | | X | | | | | | X | | X | | | | | | | |
| LB-020620-05-6S | 2/6/20 | 1300 | | W | 5 | | X | | | | | | X | | X | | | | | | | |
| LB-020620-04-10SR | 2/6/20 | 945 | | W | 5 | | X | | | | | | X | | X | | | | | | | |
| LB-020620-02-20S | 2/6/20 | 1045 | | W | 5 | | X | | | | | | X | | X | | | | | | | |
| Trip Blanks | 2/6/20 | 800 | | W | 3 | | X | | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. # _____
Bill To: _____

**TURNAROUND REQUIREMENTS**

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

Requested Report Date

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:

cc Tiffany Andrews
tandrews@scsengineers.com

Metals are field filtered

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

Container Supply Number

105914

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: |
|---|---|---|---|
| Signature: 2/7/2020 0900 | Signature: 2/7/20 0900 | Signature: 2/7/20 1235 | Signature: 2/7/2020 1235 |
| Printed Name: Sam Nilsson | Printed Name: | Printed Name: | Printed Name: Cody Graves |
| Firm: SCS | Firm: ALS | Firm: ALS | Firm: ALS |
| Date/Time | Date/Time | Date/Time | Date/Time |

PC HH

# Cooler Receipt and Preservation Form

Client SCS Eng. Service Request K20 0119 7

Received: 2/7/20 Opened: 2/7/20 By: JL Unloaded: 2/7/20 By: [illegible]

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? One front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

| Raw Cooler Temp | Corrected Cooler Temp | Raw Temp Blank | Corrected Temp Blank | Corr. Factor | Thermometer ID | Cooler/COC ID NA | Tracking Number NA | File |
|---|---|---|---|---|---|---|---|---|
| 0.9 | 0.9 | — | — | 0 | 403 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

*Notes, Discrepancies, & Resolutions:* SHORT HOLD TIME

*12/18/19*

*Page* _____ *of* _____

# Miscellaneous Forms

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

## Inorganic Data Qualifiers

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

## Metals Data Qualifiers

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

## Organic Data Qualifiers

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

## Additional Petroleum Hydrocarbon Specific Qualifiers

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

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

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water- | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

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

## 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. |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | | |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020620-06-3S | **Date Collected:** | 02/6/20 |
| **Lab Code:** | K2001192-001 | **Date Received:** | 02/7/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | SPATTERSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020620-03-5S | **Date Collected:** | 02/6/20 |
| **Lab Code:** | K2001192-002 | **Date Received:** | 02/7/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | SPATTERSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020620-04-DUP2 | **Date Collected:** | 02/6/20 |
| **Lab Code:** | K2001192-003 | **Date Received:** | 02/7/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | SPATTERSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020620-05-6S | **Date Collected:** | 02/6/20 |
| **Lab Code:** | K2001192-004 | **Date Received:** | 02/7/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |

**Client:** SCS Engineers **Service Request:** K2001192
**Project:** Leichner Landfill/04220030.13

**Sample Name:** LB-020620-05-6S **Date Collected:** 02/6/20
**Lab Code:** K2001192-004 **Date Received:** 02/7/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 6010C | SPATTERSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-020620-01-10SR **Date Collected:** 02/6/20
**Lab Code:** K2001192-005 **Date Received:** 02/7/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | SPATTERSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-020620-02-20S **Date Collected:** 02/6/20
**Lab Code:** K2001192-006 **Date Received:** 02/7/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | SPATTERSON | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** Trip Blank **Date Collected:** 02/6/20
**Lab Code:** K2001192-007 **Date Received:** 02/7/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

# Sample Results

**ALS Environmental—Kelso Laboratory**
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# Volatile Organic Compounds by GC/MS

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

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 14:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-06-3S | **Units:** | ug/L |
| **Lab Code:** | K2001192-001 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/13/20 12:35 | * |
| Benzene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Bromoform | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Bromomethane | ND U | 0.50 | 1 | 02/13/20 12:35 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/13/20 12:35 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/13/20 12:35 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Chloroethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Chloroform | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Chloromethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| 2-Hexanone | ND U | 20 | 1 | 02/13/20 12:35 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/13/20 12:35 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 14:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-06-3S | **Units:** | ug/L |
| **Lab Code:** | K2001192-001 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| Naphthalene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| Styrene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Toluene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 12:35 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| o-Xylene | ND U | 0.50 | 1 | 02/13/20 12:35 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/13/20 12:35 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 02/13/20 12:35 | |
| Dibromofluoromethane | 96 | 73 - 122 | 02/13/20 12:35 | |
| Toluene-d8 | 103 | 65 - 144 | 02/13/20 12:35 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-03-5S | **Units:** | ug/L |
| **Lab Code:** | K2001192-002 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/13/20 13:01 | * |
| Benzene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Bromoform | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Bromomethane | ND U | 0.50 | 1 | 02/13/20 13:01 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/13/20 13:01 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/13/20 13:01 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Chloroethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Chloroform | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Chloromethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| 2-Hexanone | ND U | 20 | 1 | 02/13/20 13:01 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/13/20 13:01 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-03-5S | **Units:** | ug/L |
| **Lab Code:** | K2001192-002 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| Naphthalene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| Styrene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Toluene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 13:01 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| o-Xylene | ND U | 0.50 | 1 | 02/13/20 13:01 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/13/20 13:01 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/13/20 13:01 | |
| Dibromofluoromethane | 94 | 73 - 122 | 02/13/20 13:01 | |
| Toluene-d8 | 102 | 65 - 144 | 02/13/20 13:01 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-04-DUP2 | **Units:** | ug/L |
| **Lab Code:** | K2001192-003 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/13/20 14:47 | * |
| Benzene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Bromoform | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Bromomethane | ND U | 0.50 | 1 | 02/13/20 14:47 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/13/20 14:47 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/13/20 14:47 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Chloroethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Chloroform | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Chloromethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| 2-Hexanone | ND U | 20 | 1 | 02/13/20 14:47 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/13/20 14:47 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-04-DUP2 | **Units:** | ug/L |
| **Lab Code:** | K2001192-003 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| Naphthalene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| Styrene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Toluene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 14:47 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| o-Xylene | ND U | 0.50 | 1 | 02/13/20 14:47 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/13/20 14:47 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 02/13/20 14:47 | |
| Dibromofluoromethane | 94 | 73 - 122 | 02/13/20 14:47 | |
| Toluene-d8 | 103 | 65 - 144 | 02/13/20 14:47 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 13:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-05-6S | **Units:** | ug/L |
| **Lab Code:** | K2001192-004 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/13/20 15:14 | * |
| Benzene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Bromoform | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Bromomethane | ND U | 0.50 | 1 | 02/13/20 15:14 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/13/20 15:14 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/13/20 15:14 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Chloroethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Chloroform | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Chloromethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| 2-Hexanone | ND U | 20 | 1 | 02/13/20 15:14 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/13/20 15:14 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 13:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-05-6S | **Units:** | ug/L |
| **Lab Code:** | K2001192-004 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| Naphthalene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| Styrene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Toluene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 15:14 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| o-Xylene | ND U | 0.50 | 1 | 02/13/20 15:14 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/13/20 15:14 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 02/13/20 15:14 | |
| Dibromofluoromethane | 94 | 73 - 122 | 02/13/20 15:14 | |
| Toluene-d8 | 103 | 65 - 144 | 02/13/20 15:14 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-01-10SR | **Units:** | ug/L |
| **Lab Code:** | K2001192-005 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/13/20 15:40 | * |
| Benzene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Bromoform | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Bromomethane | ND U | 0.50 | 1 | 02/13/20 15:40 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/13/20 15:40 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/13/20 15:40 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Chloroethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Chloroform | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Chloromethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| 2-Hexanone | ND U | 20 | 1 | 02/13/20 15:40 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/13/20 15:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-01-10SR | **Units:** | ug/L |
| **Lab Code:** | K2001192-005 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| Naphthalene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| Styrene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Toluene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 15:40 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| o-Xylene | ND U | 0.50 | 1 | 02/13/20 15:40 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/13/20 15:40 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/13/20 15:40 | |
| Dibromofluoromethane | 95 | 73 - 122 | 02/13/20 15:40 | |
| Toluene-d8 | 107 | 65 - 144 | 02/13/20 15:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 10:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-02-20S | **Units:** | ug/L |
| **Lab Code:** | K2001192-006 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/13/20 16:07 | * |
| Benzene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Bromoform | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Bromomethane | ND U | 0.50 | 1 | 02/13/20 16:07 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/13/20 16:07 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/13/20 16:07 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Chloroethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Chloroform | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Chloromethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| 2-Hexanone | ND U | 20 | 1 | 02/13/20 16:07 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/13/20 16:07 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 10:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-02-20S | **Units:** | ug/L |
| **Lab Code:** | K2001192-006 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| Naphthalene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| Styrene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Toluene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 16:07 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| o-Xylene | ND U | 0.50 | 1 | 02/13/20 16:07 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/13/20 16:07 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/13/20 16:07 | |
| Dibromofluoromethane | 98 | 73 - 122 | 02/13/20 16:07 | |
| Toluene-d8 | 106 | 65 - 144 | 02/13/20 16:07 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 08:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2001192-007 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/13/20 16:34 | * |
| Benzene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Bromoform | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Bromomethane | ND U | 0.50 | 1 | 02/13/20 16:34 | * |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/13/20 16:34 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/13/20 16:34 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Chloroethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Chloroform | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Chloromethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| 2-Hexanone | ND U | 20 | 1 | 02/13/20 16:34 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/13/20 16:34 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 08:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2001192-007 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| Naphthalene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| Styrene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Toluene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 16:34 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| o-Xylene | ND U | 0.50 | 1 | 02/13/20 16:34 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/13/20 16:34 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 89 | 68 - 117 | 02/13/20 16:34 | |
| Dibromofluoromethane | 92 | 73 - 122 | 02/13/20 16:34 | |
| Toluene-d8 | 104 | 65 - 144 | 02/13/20 16:34 | |

# Metals

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 14:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-06-3S | **Basis:** | NA |
| **Lab Code:** | K2001192-001 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/11/20 11:17 | 02/10/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/11/20 11:17 | 02/10/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-03-5S | **Basis:** | NA |
| **Lab Code:** | K2001192-002 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/11/20 11:43 | 02/10/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/11/20 11:43 | 02/10/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-04-DUP2 | **Basis:** | NA |
| **Lab Code:** | K2001192-003 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/11/20 11:46 | 02/10/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/11/20 11:46 | 02/10/20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 13:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-05-6S | **Basis:** | NA |
| **Lab Code:** | K2001192-004 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/11/20 11:49 | 02/10/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/11/20 11:49 | 02/10/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-01-10SR | **Basis:** | NA |
| **Lab Code:** | K2001192-005 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/11/20 11:52 | 02/10/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/11/20 11:52 | 02/10/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 10:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-02-20S | **Basis:** | NA |
| **Lab Code:** | K2001192-006 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/11/20 11:55 | 02/10/20 | |
| Manganese | 6010C | **119** | ug/L | 1.1 | 1 | 02/11/20 11:55 | 02/10/20 | |

# General Chemistry

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 14:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-06-3S | **Basis:** | NA |
| **Lab Code:** | K2001192-001 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **3.77** | mg/L | 0.20 | 2 | 02/07/20 15:23 | |
| Nitrate as Nitrogen | 300.0 | **3.87** | mg/L | 0.10 | 2 | 02/07/20 15:23 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 14:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-06-3S | **Basis:** | NA |
| **Lab Code:** | K2001192-001 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **165** | mg/L | 5.0 | 1 | 02/10/20 08:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-03-5S | **Basis:** | NA |
| **Lab Code:** | K2001192-002 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **2.43** | mg/L | 0.20 | 2 | 02/07/20 15:34 | |
| Nitrate as Nitrogen | 300.0 | **1.54** | mg/L | 0.10 | 2 | 02/07/20 15:34 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-03-5S | **Basis:** | NA |
| **Lab Code:** | K2001192-002 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **116** | mg/L | 5.0 | 1 | 02/10/20 08:55 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-04-DUP2 | **Basis:** | NA |
| **Lab Code:** | K2001192-003 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **2.44** | mg/L | 0.20 | 2 | 02/07/20 15:45 | |
| Nitrate as Nitrogen | 300.0 | **1.54** | mg/L | 0.10 | 2 | 02/07/20 15:45 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 12:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-04-DUP2 | **Basis:** | NA |
| **Lab Code:** | K2001192-003 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **111** | mg/L | 5.0 | 1 | 02/10/20 08:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 13:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-05-6S | **Basis:** | NA |
| **Lab Code:** | K2001192-004 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **5.27** | mg/L | 0.20 | 2 | 02/07/20 15:55 | |
| Nitrate as Nitrogen | 300.0 | **3.68** | mg/L | 0.10 | 2 | 02/07/20 15:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 13:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-05-6S | **Basis:** | NA |
| **Lab Code:** | K2001192-004 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **186** | mg/L | 5.0 | 1 | 02/10/20 08:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-01-10SR | **Basis:** | NA |
| **Lab Code:** | K2001192-005 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **4.2** | mg/L | 1.0 | 10 | 02/07/20 16:35 | |
| Nitrate as Nitrogen | 300.0 | **23.4** | mg/L | 0.50 | 10 | 02/07/20 16:35 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 09:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-01-10SR | **Basis:** | NA |
| **Lab Code:** | K2001192-005 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **296** | mg/L | 5.0 | 1 | 02/10/20 08:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 10:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-02-20S | **Basis:** | NA |
| **Lab Code:** | K2001192-006 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **2.27** | mg/L | 0.20 | 2 | 02/07/20 16:16 | |
| Nitrate as Nitrogen | 300.0 | **0.68** | mg/L | 0.10 | 2 | 02/07/20 16:16 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 10:45 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 12:35 |
| **Sample Name:** | LB-020620-02-20S | **Basis:** | NA |
| **Lab Code:** | K2001192-006 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **225** | mg/L | 5.0 | 1 | 02/10/20 08:55 | |

# 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 **Service Request:** K2001192

**Project:** Leichner Landfill/04220030.13

**Sample Matrix:** Ground Water

## SURROGATE RECOVERY SUMMARY
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C

**Extraction Method:** None

| Sample Name | Lab Code | 4-Bromofluorobenzene 68-117 | Dibromofluoromethane 73-122 | Toluene-d8 65-144 |
|---|---|---|---|---|
| LB-020620-06-3S | K2001192-001 | 87 | 96 | 103 |
| LB-020620-03-5S | K2001192-002 | 88 | 94 | 102 |
| LB-020620-04-DUP2 | K2001192-003 | 87 | 94 | 103 |
| LB-020620-05-6S | K2001192-004 | 87 | 94 | 103 |
| LB-020620-01-10SR | K2001192-005 | 88 | 95 | 107 |
| LB-020620-02-20S | K2001192-006 | 88 | 98 | 106 |
| Trip Blank | K2001192-007 | 89 | 92 | 104 |
| Method Blank | KQ2002181-07 | 88 | 94 | 103 |
| Lab Control Sample | KQ2002181-05 | 89 | 100 | 104 |
| Duplicate Lab Control Sample | KQ2002181-06 | 89 | 99 | 102 |
| LB-020620-03-5S | KQ2002181-01 | 89 | 101 | 104 |
| LB-020620-03-5S | KQ2002181-02 | 90 | 97 | 104 |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 |
| | | **Date Analyzed:** | 02/13/20 |
| | | **Date Extracted:** | NA |

## Duplicate Matrix Spike Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020620-03-5S | **Units:** | ug/L |
| **Lab Code:** | K2001192-002 | **Basis:** | NA |
| **Analysis Method:** | 8260C | | |
| **Prep Method:** | None | | |

| | | Matrix Spike | | | Duplicate Matrix Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | KQ2002181-01 | | | KQ2002181-02 | | | | | |
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Acetone | ND U | 65.3 | 50.0 | 131 | 66.9 | 50.0 | 134 | 68-134 | 2 | 30 |
| Benzene | ND U | 11.5 | 10.0 | 115 | 10.7 | 10.0 | 107 | 63-144 | 7 | 30 |
| Bromobenzene | ND U | 9.78 | 10.0 | 98 | 9.29 | 10.0 | 93 | 72-122 | 5 | 30 |
| Bromochloromethane | ND U | 10.8 | 10.0 | 108 | 10.9 | 10.0 | 109 | 73-135 | <1 | 30 |
| Bromodichloromethane | ND U | 11.8 | 10.0 | 118 | 11.3 | 10.0 | 113 | 61-134 | 4 | 30 |
| Bromoform | ND U | 9.56 | 10.0 | 96 | 9.37 | 10.0 | 94 | 54-140 | 2 | 30 |
| Bromomethane | ND U | 11.4 | 10.0 | 114 | 10.5 | 10.0 | 105 | 36-127 | 9 | 30 |
| 2-Butanone (MEK) | ND U | 59.4 | 50.0 | 119 | 54.2 | 50.0 | 108 | 65-147 | 9 | 30 |
| n-Butylbenzene | ND U | 10.4 | 10.0 | 104 | 10.0 | 10.0 | 100 | 52-144 | 4 | 30 |
| sec-Butylbenzene | ND U | 10.5 | 10.0 | 105 | 9.84 | 10.0 | 98 | 56-142 | 7 | 30 |
| tert-Butylbenzene | ND U | 9.98 | 10.0 | 100 | 9.43 | 10.0 | 94 | 59-139 | 6 | 30 |
| Carbon Disulfide | ND U | 23.5 | 20.0 | 118 | 22.0 | 20.0 | 110 | 52-156 | 7 | 30 |
| Carbon Tetrachloride | ND U | 12.0 | 10.0 | 120 | 11.1 | 10.0 | 111 | 53-161 | 8 | 30 |
| Chlorobenzene | ND U | 9.40 | 10.0 | 94 | 9.02 | 10.0 | 90 | 69-126 | 4 | 30 |
| Chloroethane | ND U | 12.9 | 10.0 | 129 | 12.1 | 10.0 | 121 | 56-147 | 6 | 30 |
| Chloroform | ND U | 11.8 | 10.0 | 118 | 11.1 | 10.0 | 111 | 64-133 | 6 | 30 |
| Chloromethane | ND U | 12.7 | 10.0 | 127 | 12.2 | 10.0 | 122 | 49-127 | 4 | 30 |
| 2-Chlorotoluene | ND U | 10.5 | 10.0 | 105 | 9.67 | 10.0 | 97 | 55-139 | 8 | 30 |
| 4-Chlorotoluene | ND U | 10.4 | 10.0 | 104 | 9.78 | 10.0 | 98 | 57-138 | 7 | 30 |
| 1,2-Dibromo-3-chloropropane | ND U | 7.91 | 10.0 | 79 | 8.92 | 10.0 | 89 | 59-133 | 12 | 30 |
| Dibromochloromethane | ND U | 10.8 | 10.0 | 108 | 10.6 | 10.0 | 106 | 68-125 | 1 | 30 |
| 1,2-Dibromoethane (EDB) | ND U | 9.05 | 10.0 | 91 | 8.80 | 10.0 | 88 | 73-122 | 3 | 30 |
| Dibromomethane | ND U | 10.5 | 10.0 | 105 | 10.3 | 10.0 | 103 | 68-132 | 2 | 30 |
| 1,2-Dichlorobenzene | ND U | 9.64 | 10.0 | 96 | 9.39 | 10.0 | 94 | 72-119 | 3 | 30 |
| 1,3-Dichlorobenzene | ND U | 9.50 | 10.0 | 95 | 9.32 | 10.0 | 93 | 70-121 | 2 | 30 |
| 1,4-Dichlorobenzene | ND U | 9.49 | 10.0 | 95 | 9.10 | 10.0 | 91 | 72-121 | 4 | 30 |
| Dichlorodifluoromethane | ND U | 14.3 | 10.0 | 143 * | 13.3 | 10.0 | 133 | 29-133 | 7 | 30 |
| 1,1-Dichloroethane | ND U | 11.8 | 10.0 | 118 | 11.2 | 10.0 | 112 | 69-141 | 5 | 30 |
| cis-1,2-Dichloroethene | ND U | 11.0 | 10.0 | 110 | 10.6 | 10.0 | 106 | 61-139 | 4 | 30 |
| trans-1,2-Dichloroethene | ND U | 11.2 | 10.0 | 112 | 10.7 | 10.0 | 107 | 65-143 | 4 | 30 |
| 1,2-Dichloropropane | ND U | 11.2 | 10.0 | 112 | 10.9 | 10.0 | 109 | 63-131 | 3 | 30 |
| 1,3-Dichloropropane | ND U | 9.74 | 10.0 | 97 | 9.35 | 10.0 | 94 | 74-121 | 4 | 30 |
| 2,2-Dichloropropane | ND U | 10.0 | 10.0 | 100 | 9.33 | 10.0 | 93 | 39-161 | 7 | 30 |
| 1,1-Dichloropropene | ND U | 12.0 | 10.0 | 120 | 11.0 | 10.0 | 110 | 61-148 | 9 | 30 |
| cis-1,3-Dichloropropene | ND U | 11.3 | 10.0 | 113 | 11.0 | 10.0 | 110 | 66-134 | 3 | 30 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 |
| | | **Date Analyzed:** | 02/13/20 |
| | | **Date Extracted:** | NA |

**Duplicate Matrix Spike Summary**
**Volatile Organic Compounds by GC/MS**

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020620-03-5S | **Units:** | ug/L |
| **Lab Code:** | K2001192-002 | **Basis:** | NA |
| **Analysis Method:** | 8260C | | |
| **Prep Method:** | None | | |

| | | **Matrix Spike** KQ2002181-01 | | | **Duplicate Matrix Spike** KQ2002181-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| trans-1,3-Dichloropropene | ND U | 9.19 | 10.0 | 92 | 9.08 | 10.0 | 91 | 56-127 | 1 | 30 |
| Ethylbenzene | ND U | 9.47 | 10.0 | 95 | 8.99 | 10.0 | 90 | 66-136 | 5 | 30 |
| Hexachlorobutadiene | ND U | 10.3 | 10.0 | 103 | 10.1 | 10.0 | 101 | 60-132 | 2 | 30 |
| 2-Hexanone | ND U | 49.9 | 50.0 | 100 | 51.3 | 50.0 | 103 | 53-132 | 3 | 30 |
| Isopropylbenzene | ND U | 9.75 | 10.0 | 98 | 9.38 | 10.0 | 94 | 58-144 | 4 | 30 |
| 4-Isopropyltoluene | ND U | 10.6 | 10.0 | 106 | 9.94 | 10.0 | 99 | 57-141 | 7 | 30 |
| Methyl tert-Butyl Ether | ND U | 10.5 | 10.0 | 105 | 10.3 | 10.0 | 103 | 54-126 | 2 | 30 |
| 4-Methyl-2-pentanone (MIBK) | ND U | 58.1 | 50.0 | 116 | 59.5 | 50.0 | 119 | 64-139 | 2 | 30 |
| Methylene Chloride | ND U | 10.9 | 10.0 | 109 | 10.3 | 10.0 | 103 | 70-133 | 5 | 30 |
| Naphthalene | ND U | 8.27 | 10.0 | 83 | 9.20 | 10.0 | 92 | 52-147 | 11 | 30 |
| n-Propylbenzene | ND U | 10.7 | 10.0 | 107 | 10.3 | 10.0 | 103 | 55-144 | 4 | 30 |
| Styrene | ND U | 9.74 | 10.0 | 97 | 9.21 | 10.0 | 92 | 66-131 | 6 | 30 |
| 1,1,1,2-Tetrachloroethane | ND U | 9.45 | 10.0 | 95 | 8.97 | 10.0 | 90 | 67-127 | 5 | 30 |
| 1,1,2,2-Tetrachloroethane | ND U | 10.4 | 10.0 | 104 | 9.90 | 10.0 | 99 | 72-129 | 5 | 30 |
| Tetrachloroethene (PCE) | ND U | 9.36 | 10.0 | 94 | 8.81 | 10.0 | 88 | 61-131 | 6 | 30 |
| Toluene | ND U | 11.3 | 10.0 | 113 | 10.8 | 10.0 | 108 | 71-136 | 4 | 30 |
| 1,2,3-Trichlorobenzene | ND U | 8.85 | 10.0 | 89 | 9.56 | 10.0 | 96 | 57-137 | 8 | 30 |
| 1,1,2-Trichloroethane | ND U | 9.58 | 10.0 | 96 | 9.26 | 10.0 | 93 | 74-124 | 3 | 30 |
| 1,1,1-Trichloroethane (TCA) | ND U | 11.4 | 10.0 | 114 | 10.8 | 10.0 | 108 | 57-151 | 6 | 30 |
| Trichloroethene (TCE) | ND U | 11.3 | 10.0 | 113 | 10.5 | 10.0 | 105 | 53-139 | 7 | 30 |
| Trichlorofluoromethane (CFC 11) | ND U | 10.7 | 10.0 | 107 | 9.51 | 10.0 | 95 | 45-124 | 11 | 30 |
| 1,2,3-Trichloropropane | ND U | 10.3 | 10.0 | 103 | 9.99 | 10.0 | 100 | 71-127 | 3 | 30 |
| 1,2,4-Trimethylbenzene | ND U | 10.3 | 10.0 | 103 | 9.99 | 10.0 | 100 | 61-132 | 3 | 30 |
| 1,3,5-Trimethylbenzene | ND U | 10.1 | 10.0 | 101 | 9.84 | 10.0 | 98 | 60-136 | 3 | 30 |
| Vinyl Chloride | ND U | 13.4 | 10.0 | 134 | 12.4 | 10.0 | 124 | 49-136 | 7 | 30 |
| o-Xylene | ND U | 9.19 | 10.0 | 92 | 8.89 | 10.0 | 89 | 67-127 | 3 | 30 |
| m,p-Xylenes | ND U | 18.7 | 20.0 | 94 | 17.6 | 20.0 | 88 | 67-135 | 7 | 30 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2002181-07 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Acetone | ND U | 20 | 1 | 02/13/20 12:08 | |
| Benzene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Bromobenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| Bromochloromethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Bromoform | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Bromomethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 02/13/20 12:08 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 02/13/20 12:08 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Chlorobenzene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Chloroethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Chloroform | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Chloromethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| Dibromomethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Ethylbenzene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| 2-Hexanone | ND U | 20 | 1 | 02/13/20 12:08 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 02/13/20 12:08 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2002181-07 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| Naphthalene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| Styrene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Toluene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 02/13/20 12:08 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| o-Xylene | ND U | 0.50 | 1 | 02/13/20 12:08 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 02/13/20 12:08 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 02/13/20 12:08 | |
| Dibromofluoromethane | 94 | 73 - 122 | 02/13/20 12:08 | |
| Toluene-d8 | 103 | 65 - 144 | 02/13/20 12:08 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Analyzed:** | 02/13/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 670000 |

| | Lab Control Sample KQ2002181-05 | | | Duplicate Lab Control Sample KQ2002181-06 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| 1,1,1,2-Tetrachloroethane | 8.87 | 10.0 | 89 | 8.89 | 10.0 | 89 | 66-124 | <1 | 30 |
| 1,1,1-Trichloroethane (TCA) | 10.2 | 10.0 | 102 | 10.5 | 10.0 | 105 | 59-136 | 3 | 30 |
| 1,1,2,2-Tetrachloroethane | 9.70 | 10.0 | 97 | 9.84 | 10.0 | 98 | 70-127 | 1 | 30 |
| 1,1,2-Trichloroethane | 9.15 | 10.0 | 92 | 9.05 | 10.0 | 91 | 74-118 | 1 | 30 |
| 1,1-Dichloroethane | 10.4 | 10.0 | 104 | 10.7 | 10.0 | 107 | 68-132 | 3 | 30 |
| 1,1-Dichloropropene | 10.5 | 10.0 | 105 | 10.5 | 10.0 | 105 | 59-134 | <1 | 30 |
| 1,2,3-Trichlorobenzene | 9.39 | 10.0 | 94 | 9.23 | 10.0 | 92 | 68-120 | 2 | 30 |
| 1,2,3-Trichloropropane | 9.92 | 10.0 | 99 | 10.0 | 10.0 | 100 | 69-123 | 1 | 30 |
| 1,2,4-Trimethylbenzene | 9.64 | 10.0 | 96 | 9.35 | 10.0 | 94 | 63-122 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 8.76 | 10.0 | 88 | 8.85 | 10.0 | 89 | 55-132 | 1 | 30 |
| 1,2-Dibromoethane (EDB) | 8.49 | 10.0 | 85 | 8.88 | 10.0 | 89 | 74-118 | 4 | 30 |
| 1,2-Dichlorobenzene | 9.30 | 10.0 | 93 | 9.08 | 10.0 | 91 | 72-115 | 2 | 30 |
| 1,2-Dichloropropane | 10.1 | 10.0 | 101 | 10.4 | 10.0 | 104 | 67-126 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 9.21 | 10.0 | 92 | 9.16 | 10.0 | 92 | 62-126 | <1 | 30 |
| 1,3-Dichlorobenzene | 8.95 | 10.0 | 90 | 8.78 | 10.0 | 88 | 70-116 | 2 | 30 |
| 1,3-Dichloropropane | 9.10 | 10.0 | 91 | 9.19 | 10.0 | 92 | 75-116 | <1 | 30 |
| 1,4-Dichlorobenzene | 8.83 | 10.0 | 88 | 8.75 | 10.0 | 88 | 73-115 | <1 | 30 |
| 2,2-Dichloropropane | 8.73 | 10.0 | 87 | 8.93 | 10.0 | 89 | 37-145 | 2 | 30 |
| 2-Butanone (MEK) | 56.6 | 50.0 | 113 | 52.9 | 50.0 | 106 | 71-149 | 7 | 30 |
| 2-Chlorotoluene | 9.27 | 10.0 | 93 | 9.40 | 10.0 | 94 | 55-131 | 1 | 30 |
| 2-Hexanone | 49.2 | 50.0 | 98 | 48.3 | 50.0 | 97 | 59-131 | 2 | 30 |
| 4-Chlorotoluene | 9.52 | 10.0 | 95 | 9.32 | 10.0 | 93 | 66-121 | 2 | 30 |
| 4-Isopropyltoluene | 9.46 | 10.0 | 95 | 9.48 | 10.0 | 95 | 61-128 | <1 | 30 |
| 4-Methyl-2-pentanone (MIBK) | 58.1 | 50.0 | 116 | 59.2 | 50.0 | 118 | 64-134 | 2 | 30 |
| Acetone | 67.2 | 50.0 | 134 | 65.2 | 50.0 | 130 | 68-135 | 3 | 30 |
| Benzene | 10.0 | 10.0 | 100 | 10.3 | 10.0 | 103 | 69-124 | 3 | 30 |
| Bromobenzene | 9.12 | 10.0 | 91 | 9.07 | 10.0 | 91 | 72-116 | <1 | 30 |
| Bromochloromethane | 10.0 | 10.0 | 100 | 10.2 | 10.0 | 102 | 75-131 | 2 | 30 |
| Bromodichloromethane | 10.6 | 10.0 | 106 | 10.9 | 10.0 | 109 | 63-129 | 3 | 30 |
| Bromoform | 9.22 | 10.0 | 92 | 9.36 | 10.0 | 94 | 52-144 | 2 | 30 |
| Bromomethane | 12.9 | 10.0 | 129 * | 11.1 | 10.0 | 111 | 35-113 | 15 | 30 |
| Carbon Disulfide | 19.6 | 20.0 | 98 | 20.6 | 20.0 | 103 | 46-144 | 5 | 30 |
| Carbon Tetrachloride | 10.3 | 10.0 | 103 | 10.8 | 10.0 | 108 | 55-140 | 4 | 30 |
| Chlorobenzene | 8.52 | 10.0 | 85 | 8.64 | 10.0 | 86 | 72-116 | 1 | 30 |
| Chloroethane | 10.9 | 10.0 | 109 | 11.1 | 10.0 | 111 | 58-134 | 2 | 30 |
| Chloroform | 10.1 | 10.0 | 101 | 10.7 | 10.0 | 107 | 70-129 | 5 | 30 |
| Chloromethane | 11.0 | 10.0 | 110 | 11.4 | 10.0 | 114 | 34-130 | 4 | 30 |
| cis-1,2-Dichloroethene | 9.90 | 10.0 | 99 | 9.94 | 10.0 | 99 | 71-118 | <1 | 30 |
| cis-1,3-Dichloropropene | 10.2 | 10.0 | 102 | 10.5 | 10.0 | 105 | 62-132 | 3 | 30 |
| Dibromochloromethane | 9.90 | 10.0 | 99 | 10.1 | 10.0 | 101 | 67-126 | 2 | 30 |
| Dibromomethane | 9.90 | 10.0 | 99 | 10.2 | 10.0 | 102 | 69-128 | 3 | 30 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Analyzed:** | 02/13/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 670000 |

| | Lab Control Sample KQ2002181-05 | | | Duplicate Lab Control Sample KQ2002181-06 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Dichlorodifluoromethane | 11.6 | 10.0 | 116 | 12.3 | 10.0 | 123 | 32-124 | 6 | 30 |
| Ethylbenzene | 8.19 | 10.0 | 82 | 8.60 | 10.0 | 86 | 67-121 | 5 | 30 |
| Hexachlorobutadiene | 9.49 | 10.0 | 95 | 9.57 | 10.0 | 96 | 57-119 | <1 | 30 |
| Isopropylbenzene | 8.60 | 10.0 | 86 | 8.84 | 10.0 | 88 | 67-129 | 3 | 30 |
| m,p-Xylenes | 16.5 | 20.0 | 82 | 17.0 | 20.0 | 85 | 69-121 | 3 | 30 |
| Methyl tert-Butyl Ether | 10.2 | 10.0 | 102 | 9.87 | 10.0 | 99 | 54-126 | 3 | 30 |
| Methylene Chloride | 9.87 | 10.0 | 99 | 9.77 | 10.0 | 98 | 71-122 | 1 | 30 |
| Naphthalene | 9.20 | 10.0 | 92 | 8.95 | 10.0 | 90 | 64-126 | 3 | 30 |
| n-Butylbenzene | 9.36 | 10.0 | 94 | 9.44 | 10.0 | 94 | 55-130 | <1 | 30 |
| n-Propylbenzene | 9.62 | 10.0 | 96 | 9.62 | 10.0 | 96 | 61-124 | <1 | 30 |
| o-Xylene | 8.32 | 10.0 | 83 | 8.69 | 10.0 | 87 | 71-119 | 4 | 30 |
| sec-Butylbenzene | 9.26 | 10.0 | 93 | 9.39 | 10.0 | 94 | 59-128 | 1 | 30 |
| Styrene | 8.44 | 10.0 | 84 | 9.14 | 10.0 | 91 | 74-121 | 8 | 30 |
| tert-Butylbenzene | 9.08 | 10.0 | 91 | 9.18 | 10.0 | 92 | 61-127 | 1 | 30 |
| Tetrachloroethene (PCE) | 8.08 | 10.0 | 81 | 8.49 | 10.0 | 85 | 62-126 | 5 | 30 |
| Toluene | 9.78 | 10.0 | 98 | 10.3 | 10.0 | 103 | 69-124 | 5 | 30 |
| trans-1,2-Dichloroethene | 10.1 | 10.0 | 101 | 9.49 | 10.0 | 95 | 67-125 | 6 | 30 |
| trans-1,3-Dichloropropene | 8.99 | 10.0 | 90 | 8.74 | 10.0 | 87 | 59-125 | 3 | 30 |
| Trichloroethene (TCE) | 9.62 | 10.0 | 96 | 9.83 | 10.0 | 98 | 67-128 | 2 | 30 |
| Trichlorofluoromethane (CFC 11) | 8.92 | 10.0 | 89 | 9.32 | 10.0 | 93 | 52-141 | 4 | 30 |
| Vinyl Chloride | 11.0 | 10.0 | 110 | 11.5 | 10.0 | 115 | 55-123 | 5 | 30 |

# Metals

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | KQ2001893-01 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 02/11/20 11:03 | 02/10/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 02/11/20 11:03 | 02/10/20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 |
| | | **Date Analyzed:** | 02/11/20 |
| | | **Date Extracted:** | 02/10/20 |

## Matrix Spike Summary
## Dissolved Metals

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020620-06-3S | **Units:** | ug/L |
| **Lab Code:** | K2001192-001 | **Basis:** | NA |
| **Analysis Method:** | 6010C | | |
| **Prep Method:** | EPA CLP ILM04.0 | | |

**Matrix Spike**
KQ2001893-05

| Analyte Name | Sample Result | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Iron | ND U | 1010 | 1000 | 101 | 75-125 |
| Manganese | ND U | 500 | 500 | 100 | 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.

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project** | Leichner Landfill/04220030.13 | **Date Collected:** | 02/06/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 02/07/20 |
| | | **Date Analyzed:** | 02/11/20 |

## Replicate Sample Summary
## Dissolved Metals

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-020620-06-3S | **Units:** | ug/L |
| **Lab Code:** | K2001192-001 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample KQ2001893-04 Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Iron | 6010C | 21 | ND U | ND U | ND | - | 20 |
| Manganese | 6010C | 1.1 | ND U | ND U | ND | - | 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** SCS Engineers
**Project:** Leichner Landfill/04220030.13
**Sample Matrix:** Ground Water

**Service Request:** K2001192
**Date Analyzed:** 02/11/20

## Lab Control Sample Summary
## Dissolved Metals

**Units:**ug/L
**Basis:**NA

### Lab Control Sample
KQ2001893-02

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Iron | 6010C | 2460 | 2500 | 98 | 80-120 |
| Manganese | 6010C | 1190 | 1250 | 95 | 80-120 |

# General Chemistry

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| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001192-MB1 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.10 | 1 | 02/07/20 10:33 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.050 | 1 | 02/07/20 10:33 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001192-MB1 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 02/10/20 08:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2001192 |
| **Project:** | Leichner Landfill/04220030.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2001192-MB2 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 02/10/20 08:55 | |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** SCS Engineers
**Project:** Leichner Landfill/04220030.13
**Sample Matrix:** Ground Water

**Service Request:** K2001192
**Date Analyzed:** 02/07/20 - 02/10/20

**Lab Control Sample Summary**
**General Chemistry Parameters**

**Units:**mg/L
**Basis:**NA

**Lab Control Sample**
K2001192-LCS

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Chloride | 300.0 | 4.85 | 5.00 | 97 | 90-110 |
| Nitrate as Nitrogen | 300.0 | 2.45 | 2.50 | 98 | 90-110 |
| Solids, Total Dissolved | SM 2540 C | 921 | 922 | 100 | 85-115 |

# Third Quarter (July) 2020 Laboratory Reports

August 19, 2020 Service Request No:K2006368

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

**Laboratory Results for: Leichner Lanfill**

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory July 29, 2020
For your reference, these analyses have been assigned our service request number **K2006368.**

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

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www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

**Client:** SCS Engineers
**Project:** Leichner Lanfill
**Sample Matrix:** Ground Water

**Service Request:** K2006368
**Date Received:** 07/29/2020

## 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 07/29/2020. 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, 8/4/20; The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0804F005.D: Bromodichloromethane. 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 08/19/2020

## SAMPLE DETECTION SUMMARY

| CLIENT ID: LB-072820-01-5S | Lab ID: K2006368-001 | | | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 194 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 3.38 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 4.07 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-072820-02-27I | Lab ID: K2006368-002 | | | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 213 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 23.6 | | | 0.50 | mg/L | 300.0 |
| Nitrate as Nitrogen | 2.75 | | | 0.25 | mg/L | 300.0 |
| Manganese, Dissolved | 32.4 | | | 1.1 | ug/L | 6010C |
| Bromodichloromethane | 0.91 | | | 0.50 | ug/L | 8260C |
| Chloroform | 1.2 | | | 0.50 | ug/L | 8260C |

| CLIENT ID: LB-072820-03-13I | Lab ID: K2006368-003 | | | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 224 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 11.6 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 4.88 | | | 0.10 | mg/L | 300.0 |
| Manganese, Dissolved | 1.2 | | | 1.1 | ug/L | 6010C |

| CLIENT ID: LB-072820-04-26I | Lab ID: K2006368-004 | | | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 206 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 8.79 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 3.80 | | | 0.10 | mg/L | 300.0 |
| Manganese, Dissolved | 3.0 | | | 1.1 | ug/L | 6010C |

| CLIENT ID: LB-072820-05-DUP | Lab ID: K2006368-005 | | | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 197 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 8.83 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 3.82 | | | 0.10 | mg/L | 300.0 |
| Manganese, Dissolved | 3.0 | | | 1.1 | ug/L | 6010C |

| CLIENT ID: LB-072820-06-6S | Lab ID: K2006368-006 | | | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 163 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 7.50 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 1.51 | | | 0.10 | mg/L | 300.0 |

| CLIENT ID: LB-072920-01-1S | Lab ID: K2006368-007 | | | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 200 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 6.21 | | | 0.20 | mg/L | 300.0 |

## SAMPLE DETECTION SUMMARY

| CLIENT ID: LB-072920-01-1S | | | Lab ID: K2006368-007 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Nitrate as Nitrogen | 4.83 | | | 0.10 | mg/L | 300.0 |
| Chloromethane | 0.63 | | | 0.50 | ug/L | 8260C |

| CLIENT ID: LB-072920-03-10SR | | | Lab ID: K2006368-009 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Solids, Total Dissolved | 177 | | | 5.0 | mg/L | SM 2540 C |
| Chloride | 5.30 | | | 0.20 | mg/L | 300.0 |
| Nitrate as Nitrogen | 6.04 | | | 0.10 | mg/L | 300.0 |
| Chloromethane | 0.54 | | | 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 **Service Request:**K2006368

**Project:** Leichner Lanfill/04220013.13

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| K2006368-001 | LB-072820-01-5S | 7/28/2020 | 1015 |
| K2006368-002 | LB-072820-02-27I | 7/28/2020 | 1115 |
| K2006368-003 | LB-072820-03-13I | 7/28/2020 | 1220 |
| K2006368-004 | LB-072820-04-26I | 7/28/2020 | 1405 |
| K2006368-005 | LB-072820-05-DUP | 7/28/2020 | 1410 |
| K2006368-006 | LB-072820-06-6S | 7/28/2020 | 1455 |
| K2006368-007 | LB-072920-01-1S | 7/29/2020 | 0906 |
| K2006368-008 | LB-072920-02-FB | 7/29/2020 | 0915 |
| K2006368-009 | LB-072920-03-10SR | 7/29/2020 | 1000 |
| K2006368-010 | Trip Blank | 7/28/2020 | 0700 |

# CHAIN OF CUSTODY

ALS Environmental

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SR# 16200 63 68

PAGE 1 OF 1 COC#

PROJECT NAME: Beecher Landfill
PROJECT NUMBER: 072200.13.13
PROJECT MANAGER: Tiffany Andrews
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Avenue
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: tandrews@scsengineers.com
PHONE #: 503 724-0112 FAX #:
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond, Cl, $SO_4$, $PO_4$, F, $NO_2$, $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity☐ $CO_3$☐ $HCO_3$☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases RSK 175☐ $CO_2$☐ Methane☐ Ethane☐ Ethene☐ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-072820-01-SS | 7/28/20 | 1015 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-072820-02-27I | 7/28/20 | 1115 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-072820-03-13I | 7/28/20 | 1220 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-072820-04-26I | 7/28/20 | 1405 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-072820-05-DUP | 7/28/20 | 1410 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-072820-06-6S | 7/28/20 | 1455 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-072920-01-1S | 7/29/20 | 0906 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-072920-02-FB | 7/29/20 | 0915 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| LB-072920-03-10R | 7/29/20 | 1000 | | W | 5 | | X | | | | | | X | | X | | | | | | |
| Trip Blank | 7/28/20 | 0700 | | W | 1 | | X | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. #
Bill To:

**TURNAROUND REQUIREMENTS**

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

Requested Report Date

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:

Metals are field Filtered

Container Supply Number

108175

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

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: |
|---|---|---|---|
| Signature | Signature | Signature | Signature |
| Date/Time 7-29-20/1045 | Date/Time 7/29/20 1045 | Date/Time 7/29/20 1145 | Date/Time 7/29/20 1145 |
| Printed Name Ian Hultquist | Printed Name | Printed Name | Printed Name |
| Firm SCS Engineers | Firm | Firm | Firm ALS EMO |

PC 111

# Cooler Receipt and Preservation Form

Client SCS Engineers Service Request K20 0 6368

Received: 7/29/20 Opened: 7/29/20 By: [signature] Unloaded: 7/29/20 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? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

| Temp Blank | Sample 1 | Sample 2 | Sample 3 | Sample 4 | IR GUN | Cooler / COC ID NA | Tracking Number NA | Filed |
|---|---|---|---|---|---|---|---|---|
| N/A | 1.6 | 2.7 | 1.7 | 2.7 | IR02 | 108176 | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

***Notes, Discrepancies, & Resolutions:*** _____

SHORT HOLD TIME

# Miscellaneous Forms

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

## Inorganic Data Qualifiers

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

## Metals Data Qualifiers

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

## Organic Data Qualifiers

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

## Additional Petroleum Hydrocarbon Specific Qualifiers

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

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

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water- | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

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

## 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. |

**Client:** SCS Engineers **Service Request:** K2006368
**Project:** Leichner Lanfill/04220013.13

**Sample Name:** LB-072820-01-5S **Date Collected:** 07/28/20
**Lab Code:** K2006368-001 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-072820-02-27I **Date Collected:** 07/28/20
**Lab Code:** K2006368-002 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-072820-03-13I **Date Collected:** 07/28/20
**Lab Code:** K2006368-003 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-072820-04-26I **Date Collected:** 07/28/20
**Lab Code:** K2006368-004 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |

**Client:** SCS Engineers **Service Request:** K2006368
**Project:** Leichner Lanfill/04220013.13

**Sample Name:** LB-072820-04-26I **Date Collected:** 07/28/20
**Lab Code:** K2006368-004 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-072820-05-DUP **Date Collected:** 07/28/20
**Lab Code:** K2006368-005 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-072820-06-6S **Date Collected:** 07/28/20
**Lab Code:** K2006368-006 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-072920-01-1S **Date Collected:** 07/29/20
**Lab Code:** K2006368-007 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | ABOYER | AMCKORNEY |

**Client:** SCS Engineers **Service Request:** K2006368
**Project:** Leichner Lanfill/04220013.13

**Sample Name:** LB-072920-01-1S **Date Collected:** 07/29/20
**Lab Code:** K2006368-007 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-072920-02-FB **Date Collected:** 07/29/20
**Lab Code:** K2006368-008 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** LB-072920-03-10SR **Date Collected:** 07/29/20
**Lab Code:** K2006368-009 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 300.0 | | MRODRIGUEZ |
| 6010C | ABOYER | AMCKORNEY |
| 8260C | | JJAMES |
| SM 2540 C | | JMADISON |

**Sample Name:** Trip Blank **Date Collected:** 07/28/20
**Lab Code:** K2006368-010 **Date Received:** 07/29/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

# Sample Results

**ALS Environmental—Kelso Laboratory**
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# Volatile Organic Compounds by GC/MS

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

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 10:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-01-5S | **Units:** | ug/L |
| **Lab Code:** | K2006368-001 | **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 | 08/04/20 16:48 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 16:48 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 16:48 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 16:48 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 16:48 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 16:48 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 10:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-01-5S | **Units:** | ug/L |
| **Lab Code:** | K2006368-001 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 16:48 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 16:48 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 16:48 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 89 | 68 - 117 | 08/04/20 16:48 | |
| Dibromofluoromethane | 95 | 73 - 122 | 08/04/20 16:48 | |
| Toluene-d8 | 100 | 65 - 144 | 08/04/20 16:48 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 11:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-02-27I | **Units:** | ug/L |
| **Lab Code:** | K2006368-002 | **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 | 08/04/20 17:14 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Bromodichloromethane | **0.91** | 0.50 | 1 | 08/04/20 17:14 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 17:14 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 17:14 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Chloroform | **1.2** | 0.50 | 1 | 08/04/20 17:14 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 17:14 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 17:14 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 11:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-02-27I | **Units:** | ug/L |
| **Lab Code:** | K2006368-002 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 17:14 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 17:14 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 17:14 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 84 | 68 - 117 | 08/04/20 17:14 | |
| Dibromofluoromethane | 98 | 73 - 122 | 08/04/20 17:14 | |
| Toluene-d8 | 105 | 65 - 144 | 08/04/20 17:14 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 12:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-03-13I | **Units:** | ug/L |
| **Lab Code:** | K2006368-003 | **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 | 08/04/20 17:41 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 17:41 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 17:41 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 17:41 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 17:41 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 17:41 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 12:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-03-13I | **Units:** | ug/L |
| **Lab Code:** | K2006368-003 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 17:41 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 17:41 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 17:41 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 08/04/20 17:41 | |
| Dibromofluoromethane | 94 | 73 - 122 | 08/04/20 17:41 | |
| Toluene-d8 | 102 | 65 - 144 | 08/04/20 17:41 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-04-26I | **Units:** | ug/L |
| **Lab Code:** | K2006368-004 | **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 | 08/04/20 18:07 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 18:07 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 18:07 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 18:07 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 18:07 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 18:07 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-04-26I | **Units:** | ug/L |
| **Lab Code:** | K2006368-004 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 18:07 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 18:07 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 18:07 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 89 | 68 - 117 | 08/04/20 18:07 | |
| Dibromofluoromethane | 97 | 73 - 122 | 08/04/20 18:07 | |
| Toluene-d8 | 98 | 65 - 144 | 08/04/20 18:07 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-05-DUP | **Units:** | ug/L |
| **Lab Code:** | K2006368-005 | **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 | 08/04/20 18:34 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 18:34 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 18:34 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 18:34 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 18:34 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 18:34 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-05-DUP | **Units:** | ug/L |
| **Lab Code:** | K2006368-005 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 18:34 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 18:34 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 18:34 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 89 | 68 - 117 | 08/04/20 18:34 | |
| Dibromofluoromethane | 99 | 73 - 122 | 08/04/20 18:34 | |
| Toluene-d8 | 101 | 65 - 144 | 08/04/20 18:34 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-06-6S | **Units:** | ug/L |
| **Lab Code:** | K2006368-006 | **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 | 08/04/20 19:00 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 19:00 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 19:00 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 19:00 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 19:00 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 19:00 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-06-6S | **Units:** | ug/L |
| **Lab Code:** | K2006368-006 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 19:00 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 19:00 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 19:00 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 08/04/20 19:00 | |
| Dibromofluoromethane | 96 | 73 - 122 | 08/04/20 19:00 | |
| Toluene-d8 | 105 | 65 - 144 | 08/04/20 19:00 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:06 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-01-1S | **Units:** | ug/L |
| **Lab Code:** | K2006368-007 | **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 | 08/04/20 19:27 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 19:27 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 19:27 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 19:27 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Chloromethane | **0.63** | 0.50 | 1 | 08/04/20 19:27 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 19:27 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 19:27 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:06 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-01-1S | **Units:** | ug/L |
| **Lab Code:** | K2006368-007 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 19:27 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 19:27 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 19:27 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 90 | 68 - 117 | 08/04/20 19:27 | |
| Dibromofluoromethane | 96 | 73 - 122 | 08/04/20 19:27 | |
| Toluene-d8 | 101 | 65 - 144 | 08/04/20 19:27 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-02-FB | **Units:** | ug/L |
| **Lab Code:** | K2006368-008 | **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 | 08/04/20 19:53 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 19:53 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 19:53 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 19:53 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 19:53 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 19:53 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-02-FB | **Units:** | ug/L |
| **Lab Code:** | K2006368-008 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 19:53 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 19:53 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 19:53 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 08/04/20 19:53 | |
| Dibromofluoromethane | 96 | 73 - 122 | 08/04/20 19:53 | |
| Toluene-d8 | 101 | 65 - 144 | 08/04/20 19:53 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 10:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-03-10SR | **Units:** | ug/L |
| **Lab Code:** | K2006368-009 | **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 | 08/04/20 20:20 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 20:20 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 20:20 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 20:20 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Chloromethane | **0.54** | 0.50 | 1 | 08/04/20 20:20 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 20:20 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 20:20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 10:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-03-10SR | **Units:** | ug/L |
| **Lab Code:** | K2006368-009 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 20:20 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 20:20 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 20:20 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 85 | 68 - 117 | 08/04/20 20:20 | |
| Dibromofluoromethane | 97 | 73 - 122 | 08/04/20 20:20 | |
| Toluene-d8 | 99 | 65 - 144 | 08/04/20 20:20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 07:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2006368-010 | **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 | 08/04/20 20:46 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 20:46 | * |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 20:46 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 20:46 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 20:46 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 20:46 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 07:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2006368-010 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 20:46 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 20:46 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 20:46 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 08/04/20 20:46 | |
| Dibromofluoromethane | 98 | 73 - 122 | 08/04/20 20:46 | |
| Toluene-d8 | 104 | 65 - 144 | 08/04/20 20:46 | |

# Metals

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 10:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-01-5S | **Basis:** | NA |
| **Lab Code:** | K2006368-001 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 09:58 | 08/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 08/19/20 09:58 | 08/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 11:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-02-27I | **Basis:** | NA |
| **Lab Code:** | K2006368-002 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 10:13 | 08/07/20 | |
| Manganese | 6010C | **32.4** | ug/L | 1.1 | 1 | 08/19/20 10:13 | 08/07/20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 12:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-03-13I | **Basis:** | NA |
| **Lab Code:** | K2006368-003 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 10:16 | 08/07/20 | |
| Manganese | 6010C | **1.2** | ug/L | 1.1 | 1 | 08/19/20 10:16 | 08/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-04-26I | **Basis:** | NA |
| **Lab Code:** | K2006368-004 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 10:20 | 08/07/20 | |
| Manganese | 6010C | **3.0** | ug/L | 1.1 | 1 | 08/19/20 10:20 | 08/07/20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-05-DUP | **Basis:** | NA |
| **Lab Code:** | K2006368-005 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 10:24 | 08/07/20 | |
| Manganese | 6010C | **3.0** | ug/L | 1.1 | 1 | 08/19/20 10:24 | 08/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-06-6S | **Basis:** | NA |
| **Lab Code:** | K2006368-006 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 10:38 | 08/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 08/19/20 10:38 | 08/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:06 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-01-1S | **Basis:** | NA |
| **Lab Code:** | K2006368-007 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 10:42 | 08/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 08/19/20 10:42 | 08/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-02-FB | **Basis:** | NA |
| **Lab Code:** | K2006368-008 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 10:46 | 08/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 08/19/20 10:46 | 08/07/20 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 10:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-03-10SR | **Basis:** | NA |
| **Lab Code:** | K2006368-009 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 10:49 | 08/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 08/19/20 10:49 | 08/07/20 | |

# General Chemistry

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| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 10:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-01-5S | **Basis:** | NA |
| **Lab Code:** | K2006368-001 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **3.38** | mg/L | 0.20 | 2 | 07/29/20 14:07 | |
| Nitrate as Nitrogen | 300.0 | **4.07** | mg/L | 0.10 | 2 | 07/29/20 14:07 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 10:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-01-5S | **Basis:** | NA |
| **Lab Code:** | K2006368-001 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **194** | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 11:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-02-27I | **Basis:** | NA |
| **Lab Code:** | K2006368-002 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **23.6** | mg/L | 0.50 | 5 | 07/29/20 17:30 | |
| Nitrate as Nitrogen | 300.0 | **2.75** | mg/L | 0.25 | 5 | 07/29/20 17:30 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 11:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-02-27I | **Basis:** | NA |
| **Lab Code:** | K2006368-002 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **213** | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 12:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-03-13I | **Basis:** | NA |
| **Lab Code:** | K2006368-003 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **11.6** | mg/L | 0.20 | 2 | 07/29/20 14:27 | |
| Nitrate as Nitrogen | 300.0 | **4.88** | mg/L | 0.10 | 2 | 07/29/20 14:27 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 12:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-03-13I | **Basis:** | NA |
| **Lab Code:** | K2006368-003 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **224** | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-04-26I | **Basis:** | NA |
| **Lab Code:** | K2006368-004 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **8.79** | mg/L | 0.20 | 2 | 07/29/20 15:28 | |
| Nitrate as Nitrogen | 300.0 | **3.80** | mg/L | 0.10 | 2 | 07/29/20 15:28 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:05 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-04-26I | **Basis:** | NA |
| **Lab Code:** | K2006368-004 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **206** | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-05-DUP | **Basis:** | NA |
| **Lab Code:** | K2006368-005 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **8.83** | mg/L | 0.20 | 2 | 07/29/20 15:38 | |
| Nitrate as Nitrogen | 300.0 | **3.82** | mg/L | 0.10 | 2 | 07/29/20 15:38 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-05-DUP | **Basis:** | NA |
| **Lab Code:** | K2006368-005 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **197** | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-06-6S | **Basis:** | NA |
| **Lab Code:** | K2006368-006 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **7.50** | mg/L | 0.20 | 2 | 07/29/20 15:48 | |
| Nitrate as Nitrogen | 300.0 | **1.51** | mg/L | 0.10 | 2 | 07/29/20 15:48 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 14:55 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072820-06-6S | **Basis:** | NA |
| **Lab Code:** | K2006368-006 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **163** | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:06 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-01-1S | **Basis:** | NA |
| **Lab Code:** | K2006368-007 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **6.21** | mg/L | 0.20 | 2 | 07/29/20 15:58 | |
| Nitrate as Nitrogen | 300.0 | **4.83** | mg/L | 0.10 | 2 | 07/29/20 15:58 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:06 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-01-1S | **Basis:** | NA |
| **Lab Code:** | K2006368-007 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **200** | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-02-FB | **Basis:** | NA |
| **Lab Code:** | K2006368-008 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.20 | 2 | 07/29/20 16:08 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.10 | 2 | 07/29/20 16:08 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 09:15 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-02-FB | **Basis:** | NA |
| **Lab Code:** | K2006368-008 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 10:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-03-10SR | **Basis:** | NA |
| **Lab Code:** | K2006368-009 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | **5.30** | mg/L | 0.20 | 2 | 07/29/20 16:18 | |
| Nitrate as Nitrogen | 300.0 | **6.04** | mg/L | 0.10 | 2 | 07/29/20 16:18 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/29/20 10:00 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 11:45 |
| **Sample Name:** | LB-072920-03-10SR | **Basis:** | NA |
| **Lab Code:** | K2006368-009 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | **177** | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

# QC Summary Forms

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# Volatile Organic Compounds by GC/MS

**ALS Environmental—Kelso Laboratory**
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**Client:** SCS Engineers **Service Request:** K2006368
**Project:** Leichner Lanfill/04220013.13
**Sample Matrix:** Ground Water

## SURROGATE RECOVERY SUMMARY
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Extraction Method:** None

| Sample Name | Lab Code | 4-Bromofluorobenzene 68-117 | Dibromofluoromethane 73-122 | Toluene-d8 65-144 |
|---|---|---|---|---|
| LB-072820-01-5S | K2006368-001 | 89 | 95 | 100 |
| LB-072820-02-27I | K2006368-002 | 84 | 98 | 105 |
| LB-072820-03-13I | K2006368-003 | 88 | 94 | 102 |
| LB-072820-04-26I | K2006368-004 | 89 | 97 | 98 |
| LB-072820-05-DUP | K2006368-005 | 89 | 99 | 101 |
| LB-072820-06-6S | K2006368-006 | 87 | 96 | 105 |
| LB-072920-01-1S | K2006368-007 | 90 | 96 | 101 |
| LB-072920-02-FB | K2006368-008 | 87 | 96 | 101 |
| LB-072920-03-10SR | K2006368-009 | 85 | 97 | 99 |
| Trip Blank | K2006368-010 | 87 | 98 | 104 |
| Method Blank | KQ2010652-06 | 91 | 94 | 101 |
| Lab Control Sample | KQ2010652-04 | 93 | 100 | 101 |
| Duplicate Lab Control Sample | KQ2010652-05 | 92 | 100 | 101 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2010652-06 | **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 | 08/04/20 12:23 | |
| Benzene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Bromobenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| Bromochloromethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Bromoform | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Bromomethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 08/04/20 12:23 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 08/04/20 12:23 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Chlorobenzene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Chloroethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Chloroform | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Chloromethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| Dibromomethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Ethylbenzene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| 2-Hexanone | ND U | 20 | 1 | 08/04/20 12:23 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 08/04/20 12:23 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2010652-06 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| Naphthalene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| Styrene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Toluene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 08/04/20 12:23 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| o-Xylene | ND U | 0.50 | 1 | 08/04/20 12:23 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 08/04/20 12:23 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 91 | 68 - 117 | 08/04/20 12:23 | |
| Dibromofluoromethane | 94 | 73 - 122 | 08/04/20 12:23 | |
| Toluene-d8 | 101 | 65 - 144 | 08/04/20 12:23 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Analyzed:** | 08/04/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 689567 |

| | Lab Control Sample KQ2010652-04 | | | Duplicate Lab Control Sample KQ2010652-05 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| 1,1,1,2-Tetrachloroethane | 9.26 | 10.0 | 93 | 9.29 | 10.0 | 93 | 66-124 | <1 | 30 |
| 1,1,1-Trichloroethane (TCA) | 10.6 | 10.0 | 106 | 10.9 | 10.0 | 109 | 59-136 | 3 | 30 |
| 1,1,2,2-Tetrachloroethane | 10.1 | 10.0 | 101 | 10.2 | 10.0 | 102 | 70-127 | <1 | 30 |
| 1,1,2-Trichloroethane | 9.27 | 10.0 | 93 | 9.30 | 10.0 | 93 | 74-118 | <1 | 30 |
| 1,1-Dichloroethane | 10.4 | 10.0 | 104 | 10.7 | 10.0 | 107 | 68-132 | 3 | 30 |
| 1,1-Dichloropropene | 10.5 | 10.0 | 105 | 10.8 | 10.0 | 108 | 59-134 | 3 | 30 |
| 1,2,3-Trichlorobenzene | 9.38 | 10.0 | 94 | 9.57 | 10.0 | 96 | 68-120 | 2 | 30 |
| 1,2,3-Trichloropropane | 10.4 | 10.0 | 104 | 10.0 | 10.0 | 100 | 69-123 | 4 | 30 |
| 1,2,4-Trichlorobenzene | 9.49 | 10.0 | 95 | 9.56 | 10.0 | 96 | 58-126 | <1 | 30 |
| 1,2,4-Trimethylbenzene | 9.97 | 10.0 | 100 | 10.1 | 10.0 | 101 | 63-122 | <1 | 30 |
| 1,2-Dibromo-3-chloropropane | 8.76 | 10.0 | 88 | 10.6 | 10.0 | 106 | 55-132 | 19 | 30 |
| 1,2-Dibromoethane (EDB) | 8.72 | 10.0 | 87 | 8.61 | 10.0 | 86 | 74-118 | 1 | 30 |
| 1,2-Dichlorobenzene | 9.52 | 10.0 | 95 | 9.66 | 10.0 | 97 | 72-115 | 1 | 30 |
| 1,2-Dichloropropane | 10.2 | 10.0 | 102 | 10.2 | 10.0 | 102 | 67-126 | <1 | 30 |
| 1,3,5-Trimethylbenzene | 9.84 | 10.0 | 98 | 9.90 | 10.0 | 99 | 62-126 | <1 | 30 |
| 1,3-Dichlorobenzene | 9.31 | 10.0 | 93 | 9.58 | 10.0 | 96 | 70-116 | 3 | 30 |
| 1,3-Dichloropropane | 9.43 | 10.0 | 94 | 9.57 | 10.0 | 96 | 75-116 | 1 | 30 |
| 1,4-Dichlorobenzene | 9.36 | 10.0 | 94 | 9.45 | 10.0 | 95 | 73-115 | <1 | 30 |
| 2,2-Dichloropropane | 9.07 | 10.0 | 91 | 9.03 | 10.0 | 90 | 37-145 | <1 | 30 |
| 2-Butanone (MEK) | 56.9 | 50.0 | 114 | 53.8 | 50.0 | 108 | 71-149 | 6 | 30 |
| 2-Chlorotoluene | 10.0 | 10.0 | 100 | 9.90 | 10.0 | 99 | 55-131 | 1 | 30 |
| 2-Hexanone | 48.6 | 50.0 | 97 | 52.1 | 50.0 | 104 | 59-131 | 7 | 30 |
| 4-Chlorotoluene | 10.1 | 10.0 | 101 | 10.2 | 10.0 | 102 | 66-121 | <1 | 30 |
| 4-Isopropyltoluene | 9.96 | 10.0 | 100 | 10.1 | 10.0 | 101 | 61-128 | 2 | 30 |
| 4-Methyl-2-pentanone (MIBK) | 56.5 | 50.0 | 113 | 56.6 | 50.0 | 113 | 64-134 | <1 | 30 |
| Acetone | 65.4 | 50.0 | 131 | 64.5 | 50.0 | 129 | 68-135 | 1 | 30 |
| Benzene | 10.1 | 10.0 | 101 | 10.2 | 10.0 | 102 | 69-124 | 1 | 30 |
| Bromobenzene | 9.61 | 10.0 | 96 | 9.54 | 10.0 | 95 | 72-116 | <1 | 30 |
| Bromochloromethane | 9.85 | 10.0 | 99 | 10.1 | 10.0 | 101 | 75-131 | 3 | 30 |
| Bromodichloromethane | 11.4 | 10.0 | 114 | 11.2 | 10.0 | 112 | 63-129 | 2 | 30 |
| Bromoform | 10.3 | 10.0 | 103 | 10.1 | 10.0 | 101 | 52-144 | 1 | 30 |
| Bromomethane | 8.83 | 10.0 | 88 | 8.86 | 10.0 | 89 | 35-113 | <1 | 30 |
| Carbon Disulfide | 19.5 | 20.0 | 98 | 20.2 | 20.0 | 101 | 46-144 | 3 | 30 |
| Carbon Tetrachloride | 11.0 | 10.0 | 110 | 11.4 | 10.0 | 114 | 55-140 | 4 | 30 |
| Chlorobenzene | 8.81 | 10.0 | 88 | 9.01 | 10.0 | 90 | 72-116 | 2 | 30 |
| Chloroethane | 10.4 | 10.0 | 104 | 10.8 | 10.0 | 108 | 58-134 | 4 | 30 |
| Chloroform | 10.7 | 10.0 | 107 | 10.6 | 10.0 | 106 | 70-129 | <1 | 30 |
| Chloromethane | 8.86 | 10.0 | 89 | 9.50 | 10.0 | 95 | 34-130 | 7 | 30 |
| cis-1,2-Dichloroethene | 9.97 | 10.0 | 100 | 10.1 | 10.0 | 101 | 71-118 | 1 | 30 |
| cis-1,3-Dichloropropene | 10.5 | 10.0 | 105 | 10.7 | 10.0 | 107 | 62-132 | 1 | 30 |
| Dibromochloromethane | 10.5 | 10.0 | 105 | 10.7 | 10.0 | 107 | 67-126 | 2 | 30 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Analyzed:** | 08/04/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 689567 |

| | Lab Control Sample KQ2010652-04 | | | Duplicate Lab Control Sample KQ2010652-05 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Dibromomethane | 9.82 | 10.0 | 98 | 10.1 | 10.0 | 101 | 69-128 | 2 | 30 |
| Dichlorodifluoromethane | 8.17 | 10.0 | 82 | 8.45 | 10.0 | 85 | 32-124 | 3 | 30 |
| Ethylbenzene | 8.62 | 10.0 | 86 | 8.84 | 10.0 | 88 | 67-121 | 3 | 30 |
| Hexachlorobutadiene | 10.4 | 10.0 | 104 | 10.0 | 10.0 | 100 | 57-119 | 3 | 30 |
| Isopropylbenzene | 9.13 | 10.0 | 91 | 9.33 | 10.0 | 93 | 67-129 | 2 | 30 |
| m,p-Xylenes | 17.4 | 20.0 | 87 | 17.7 | 20.0 | 89 | 69-121 | 2 | 30 |
| Methyl tert-Butyl Ether | 9.69 | 10.0 | 97 | 9.91 | 10.0 | 99 | 54-126 | 2 | 30 |
| Methylene Chloride | 10.1 | 10.0 | 101 | 10.4 | 10.0 | 104 | 71-122 | 3 | 30 |
| Naphthalene | 8.88 | 10.0 | 89 | 9.30 | 10.0 | 93 | 64-126 | 5 | 30 |
| n-Butylbenzene | 10.1 | 10.0 | 101 | 10.2 | 10.0 | 102 | 55-130 | <1 | 30 |
| n-Propylbenzene | 10.3 | 10.0 | 103 | 10.4 | 10.0 | 104 | 61-124 | 1 | 30 |
| o-Xylene | 8.80 | 10.0 | 88 | 8.91 | 10.0 | 89 | 71-119 | 1 | 30 |
| sec-Butylbenzene | 9.84 | 10.0 | 98 | 9.93 | 10.0 | 99 | 59-128 | <1 | 30 |
| Styrene | 9.42 | 10.0 | 94 | 8.98 | 10.0 | 90 | 74-121 | 5 | 30 |
| tert-Butylbenzene | 9.65 | 10.0 | 97 | 9.75 | 10.0 | 98 | 61-127 | 1 | 30 |
| Tetrachloroethene (PCE) | 8.83 | 10.0 | 88 | 9.15 | 10.0 | 92 | 62-126 | 4 | 30 |
| Toluene | 9.97 | 10.0 | 100 | 10.3 | 10.0 | 103 | 69-124 | 3 | 30 |
| trans-1,2-Dichloroethene | 9.90 | 10.0 | 99 | 10.3 | 10.0 | 103 | 67-125 | 4 | 30 |
| trans-1,3-Dichloropropene | 9.04 | 10.0 | 90 | 9.31 | 10.0 | 93 | 59-125 | 3 | 30 |
| Trichloroethene (TCE) | 10.1 | 10.0 | 101 | 10.5 | 10.0 | 105 | 67-128 | 4 | 30 |
| Trichlorofluoromethane (CFC 11) | 9.18 | 10.0 | 92 | 9.49 | 10.0 | 95 | 52-141 | 3 | 30 |
| Vinyl Chloride | 9.93 | 10.0 | 99 | 10.1 | 10.0 | 101 | 55-123 | 2 | 30 |

# Metals

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | KQ2010858-02 | | |

## Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|---|
| Iron | 6010C | ND U | ug/L | 21 | 1 | 08/19/20 09:51 | 08/07/20 | |
| Manganese | 6010C | ND U | ug/L | 1.1 | 1 | 08/19/20 09:51 | 08/07/20 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 |
| | | **Date Analyzed:** | 08/19/20 |
| | | **Date Extracted:** | 08/7/20 |

## Matrix Spike Summary
## Dissolved Metals

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-072820-01-5S | **Units:** | ug/L |
| **Lab Code:** | K2006368-001 | **Basis:** | NA |
| **Analysis Method:** | 6010C | | |
| **Prep Method:** | EPA CLP ILM04.0 | | |

### Matrix Spike
KQ2010858-04

| Analyte Name | Sample Result | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Iron | ND U | 969 | 1000 | 97 | 75-125 |
| Manganese | ND U | 481 | 500 | 96 | 75-125 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 |
| | | **Date Analyzed:** | 08/19/20 |

## Replicate Sample Summary
## Dissolved Metals

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-072820-01-5S | **Units:** | ug/L |
| **Lab Code:** | K2006368-001 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample KQ2010858-03 Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Iron | 6010C | 21 | ND U | ND U | ND | - | 20 |
| Manganese | 6010C | 1.1 | ND U | ND U | ND | - | 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** SCS Engineers
**Project:** Leichner Lanfill/04220013.13
**Sample Matrix:** Ground Water

**Service Request:** K2006368
**Date Analyzed:** 08/19/20

## Lab Control Sample Summary
## Dissolved Metals

**Units:**ug/L
**Basis:**NA

### Lab Control Sample
KQ2010858-01

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Iron | 6010C | 2410 | 2500 | 97 | 80-120 |
| Manganese | 6010C | 1200 | 1250 | 96 | 80-120 |

# General Chemistry

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

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2006368-MB1 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.10 | 1 | 07/29/20 12:44 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.050 | 1 | 07/29/20 12:44 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2006368-MB1 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2006368-MB2 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.10 | 1 | 07/29/20 21:55 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.050 | 1 | 07/29/20 21:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2006368-MB2 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Solids, Total Dissolved | SM 2540 C | ND U | mg/L | 5.0 | 1 | 07/30/20 10:40 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Basis:** | NA |
| **Lab Code:** | K2006368-MB3 | | |

## General Chemistry Parameters

| Analyte Name | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | ND U | mg/L | 0.10 | 1 | 07/29/20 21:55 | |
| Nitrate as Nitrogen | 300.0 | ND U | mg/L | 0.050 | 1 | 07/29/20 21:55 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** SCS Engineers
**Project:** Leichner Lanfill/04220013.13
**Sample Matrix:** Ground Water

**Service Request:**K2006368
**Date Collected:**07/28/20
**Date Received:**07/29/20
**Date Analyzed:**7/29/20

## Duplicate Matrix Spike Summary
## General Chemistry Parameters

**Sample Name:** LB-072820-01-5S
**Lab Code:** K2006368-001

**Units:**mg/L
**Basis:**NA

| | | | Matrix Spike K2006368-001MS | | | Duplicate Matrix Spike K2006368-001DMS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Method** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Chloride | 300.0 | 3.38 | 10.8 | 8.00 | 93 | 10.9 | 8.00 | 94 | 90-110 | 1 | 20 |
| Nitrate as Nitrogen | 300.0 | 4.07 | 12.0 | 8.00 | 99 | 12.1 | 8.00 | 100 | 90-110 | 1 | 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** SCS Engineers
**Project:** Leichner Lanfill/04220013.13
**Sample Matrix:** Ground Water

**Service Request:**K2006368
**Date Collected:**07/28/20
**Date Received:**07/29/20
**Date Analyzed:**7/29/20

## Duplicate Matrix Spike Summary
## General Chemistry Parameters

**Sample Name:** LB-072820-06-6S
**Lab Code:** K2006368-006

**Units:**mg/L
**Basis:**NA

| | | | Matrix Spike K2006368-006MS | | | Duplicate Matrix Spike K2006368-006DMS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Method** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Chloride | 300.0 | 7.50 | 14.9 | 8.00 | 92 | 14.8 | 8.00 | 92 | 90-110 | <1 | 20 |
| Nitrate as Nitrogen | 300.0 | 1.51 | 9.20 | 8.00 | 96 | 9.28 | 8.00 | 97 | 90-110 | <1 | 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 |
| | | **Date Analyzed:** | 07/29/20 |

## Replicate Sample Summary
## General Chemistry Parameters

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-072820-01-5S | **Units:** | mg/L |
| **Lab Code:** | K2006368-001 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample K2006368-001DUP Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | 0.20 | 3.38 | 3.40 | 3.39 | <1 | 20 |
| Nitrate as Nitrogen | 300.0 | 0.10 | 4.07 | 4.11 | 4.09 | 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.

**ALS Group USA, Corp.**

**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project** | Leichner Lanfill/04220013.13 | **Date Collected:** | 07/28/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 07/29/20 |
| | | **Date Analyzed:** | 07/29/20 |

## Replicate Sample Summary
## General Chemistry Parameters

| | | | |
|---|---|---|---|
| **Sample Name:** | LB-072820-06-6S | **Units:** | mg/L |
| **Lab Code:** | K2006368-006 | **Basis:** | NA |

| Analyte Name | Analysis Method | MRL | Sample Result | Duplicate Sample K2006368-006DUP Result | Average | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| Chloride | 300.0 | 0.20 | 7.50 | 7.46 | 7.48 | <1 | 20 |
| Nitrate as Nitrogen | 300.0 | 0.10 | 1.51 | 1.49 | 1.50 | <1 | 20 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2006368 |
| **Project:** | Leichner Lanfill/04220013.13 | **Date Analyzed:** | 07/30/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

**Lab Control Sample Summary**
**Solids, Total Dissolved**

| | | | |
|---|---|---|---|
| **Analysis Method:** | SM 2540 C | **Units:** | mg/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 689050 |

| Sample Name | Lab Code | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Lab Control Sample | K2006368-LCS2 | 897 | 922 | 97 | 85-115 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** SCS Engineers
**Project:** Leichner Lanfill/04220013.13
**Sample Matrix:** Ground Water

**Service Request:** K2006368
**Date Analyzed:** 07/29/20

## Duplicate Lab Control Sample Summary
## General Chemistry Parameters

**Units:**mg/L
**Basis:**NA

| | | Lab Control Sample | | | Duplicate Lab Control Sample | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | K2006368-LCS1 | | | K2006368-DLCS1 | | | | | |
| **Analyte Name** | **Analytical Method** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Chloride | 300.0 | 4.78 | 5.00 | 96 | 4.79 | 5.00 | 96 | 90-110 | <1 | 20 |
| Nitrate as Nitrogen | 300.0 | 2.37 | 2.50 | 95 | 2.37 | 2.50 | 95 | 90-110 | <1 | 20 |

# October 2020 Verification Sampling Laboratory Report

October 29, 2020 Service Request No:K2009361

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

**Laboratory Results for: Leichner Landfill**

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory October 15, 2020
For your reference, these analyses have been assigned our service request number **K2009361.**

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

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

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Howard Holmes
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental

# Narrative Documents

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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

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

**Service Request:** K2009361
**Date Received:** 10/15/2020

## 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 10/15/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

**Volatiles by GC/MS:**

No significant anomalies were noted with this analysis.

Approved by _____ Date 10/29/2020

## SAMPLE DETECTION SUMMARY

| CLIENT ID: LB-101420-01-27I | | | Lab ID: K2009361-001 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Chloroform | 0.88 | | | 0.50 | ug/L | 8260C |

| CLIENT ID: LB-101420-03-DUP | | | Lab ID: K2009361-003 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Chloroform | 0.80 | | | 0.50 | ug/L | 8260C |

| CLIENT ID: LB-101420-04-1S | | | Lab ID: K2009361-004 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Chloroform | 3.3 | | | 0.50 | ug/L | 8260C |

| CLIENT ID: LB-101420-05-10SR | | | Lab ID: K2009361-005 | | | |
|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **MRL** | **Units** | **Method** |
| Bromodichloromethane | 1.5 | | | 0.50 | ug/L | 8260C |
| Chloroform | 11 | | | 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 **Service Request:**K2009361
**Project:** Leichner Landfill/0422030.11

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| K2009361-001 | LB-101420-01-27I | 10/14/2020 | 1135 |
| K2009361-002 | LB-101420-02-FB | 10/14/2020 | 1030 |
| K2009361-003 | LB-101420-03-DUP | 10/14/2020 | 1140 |
| K2009361-004 | LB-101420-04-1S | 10/14/2020 | 1310 |
| K2009361-005 | LB-101420-05-10SR | 10/14/2020 | 1420 |
| K2009361-006 | Trip Blank | 10/14/2020 | |

# CHAIN OF CUSTODY

ALS Environmental

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

SR# K2093661

PAGE 1 OF 1 COC#

PROJECT NAME: Leichner Landfill
PROJECT NUMBER: 0422030.11
PROJECT MANAGER: Tiffany Andrews
COMPANY NAME: SCS Engineers
ADDRESS: 15940 SW 72nd Ave
CITY/STATE/ZIP: Portland, OR 97224
E-MAIL ADDRESS: tandrews@scsengineers.com
PHONE #: 503 724-0113 FAX #:
SAMPLER'S SIGNATURE:

| SAMPLE I.D. | DATE | TIME | LAB I.D. | MATRIX | NUMBER OF CONTAINERS | Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐ | Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐ | Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ | Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐ | PCBs Aroclors☐ Congeners☐ | Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ | Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐ | Metals, Total or Dissolved (See List below) | Cyanide☐ Hex-Chrom☐ | (circle) pH, Cond., Cl, $SO_4$, $PO_4$, F, $NO_2$, $NO_3$, BOD, TSS, TDS, Turb. | (circle) $NH_3$-N, COD, TKN, TOC, DOC, $NO_2$+$NO_3$, T-Phos | TOX 9020☐ AOX 1650☐ 506☐ | Alkalinity☐ $CO_3$☐ $HCO_3$☐ | Dioxins/Furans 1613☐ 8290☐ | Dissolved Gases $CO_2$☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB-101420-01-27E | 10/14/20 | 1135 | | W | 3 | | X | | | | | | | | | | | | | | | |
| LB-101420-02-FB | 10/14/20 | 1030 | | W | 3 | | X | | | | | | | | | | | | | | | |
| LB-101420-03-DUP | 10/14/20 | 1140 | | W | 3 | | X | | | | | | | | | | | | | | | |
| LB-101420-04-18 | 10/14/20 | 1310 | | W | 3 | | X | | | | | | | | | | | | | | | |
| LB-101420-05-10SR | 10/14/20 | 1420 | | W | 3 | | X | | | | | | | | | | | | | | | |
| Trip Blank | — | — | - | W | 2 | | X | | | | | | | | | | | | | | | |

**REPORT REQUIREMENTS**

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

**INVOICE INFORMATION**

P.O. # _____
Bill To: _____

**TURNAROUND REQUIREMENTS**

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

Requested Report Date: _____

Circle which metals are to be analyzed:

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

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

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

SPECIAL INSTRUCTIONS/COMMENTS:

Container Supply Number

108175

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

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY: |
|---|---|---|---|
| Signature: | Signature: | Signature: | Signature: |
| Date/Time: 10/15/20 8:00 | Date/Time: 10/15/20 | Date/Time: | Date/Time: 10/15/2020 1200 |
| Printed Name: T Andrews | Printed Name: KM Morrow | Printed Name: | Printed Name: Cody Graves |
| Firm: SCS | Firm: ALS 1052 | Firm: | Firm: ALS |

PM HH

# Cooler Receipt and Preservation Form

Client SCS Service Request K20 2093601

Received: OCT 15 2020 Opened: OCT 15 2020 By: CG Unloaded: OCT 15 2020 By: CG

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Was a Temperature Blank present in cooler? NA Y (N) If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

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

| Temp Blank | Sample Temp | IR Gun | Cooler #/COC ID/ (NA) | Out of temp indicate with "X" | PM Notified If out of temp | Tracking Number (NA) | Filed |
|---|---|---|---|---|---|---|---|
| / | 5.2 | IR02 | | — | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

6. Packing material: (*Inserts*) (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
14. Was C12/Res negative? (NA) Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Notes, Discrepancies, Resolutions: 1 of 3 vials for LB-101420-05-10SR is not filled.

# Miscellaneous Forms

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

## Inorganic Data Qualifiers

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

## Metals Data Qualifiers

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

## Organic Data Qualifiers

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

## Additional Petroleum Hydrocarbon Specific Qualifiers

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

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

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water- | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

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

## 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. |

**Client:** SCS Engineers **Service Request:** K2009361
**Project:** Leichner Landfill/0422030.11

**Sample Name:** LB-101420-01-27I **Date Collected:** 10/14/20
**Lab Code:** K2009361-001 **Date Received:** 10/15/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

**Sample Name:** LB-101420-02-FB **Date Collected:** 10/14/20
**Lab Code:** K2009361-002 **Date Received:** 10/15/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

**Sample Name:** LB-101420-03-DUP **Date Collected:** 10/14/20
**Lab Code:** K2009361-003 **Date Received:** 10/15/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

**Sample Name:** LB-101420-04-1S **Date Collected:** 10/14/20
**Lab Code:** K2009361-004 **Date Received:** 10/15/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

**Sample Name:** LB-101420-05-10SR **Date Collected:** 10/14/20
**Lab Code:** K2009361-005 **Date Received:** 10/15/20
**Sample Matrix:** Ground Water

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | | |

| | | | |
|---|---|---|---|
| **Sample Name:** | Trip Blank | **Date Collected:** | 10/14/20 |
| **Lab Code:** | K2009361-006 | **Date Received:** | 10/15/20 |
| **Sample Matrix:** | Ground Water | | |

| Analysis Method | Extracted/Digested By | Analyzed By |
|---|---|---|
| 8260C | | JJAMES |

# 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

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 11:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-01-27I | **Units:** | ug/L |
| **Lab Code:** | K2009361-001 | **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 | 10/22/20 15:55 | |
| Benzene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Bromobenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| Bromochloromethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Bromoform | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Bromomethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 10/22/20 15:55 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 10/22/20 15:55 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Chlorobenzene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Chloroethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Chloroform | **0.88** | 0.50 | 1 | 10/22/20 15:55 | |
| Chloromethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| Dibromomethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Ethylbenzene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| 2-Hexanone | ND U | 20 | 1 | 10/22/20 15:55 | * |
| Isopropylbenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 10/22/20 15:55 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 11:35 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-01-27I | **Units:** | ug/L |
| **Lab Code:** | K2009361-001 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| Naphthalene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| Styrene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Toluene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 15:55 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| o-Xylene | ND U | 0.50 | 1 | 10/22/20 15:55 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 10/22/20 15:55 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 87 | 68 - 117 | 10/22/20 15:55 | |
| Dibromofluoromethane | 95 | 73 - 122 | 10/22/20 15:55 | |
| Toluene-d8 | 98 | 65 - 144 | 10/22/20 15:55 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 10:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-02-FB | **Units:** | ug/L |
| **Lab Code:** | K2009361-002 | **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 | 10/22/20 16:21 | |
| Benzene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Bromobenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| Bromochloromethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Bromoform | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Bromomethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 10/22/20 16:21 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 10/22/20 16:21 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Chlorobenzene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Chloroethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Chloroform | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Chloromethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| Dibromomethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Ethylbenzene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| 2-Hexanone | ND U | 20 | 1 | 10/22/20 16:21 | * |
| Isopropylbenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 10/22/20 16:21 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 10:30 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-02-FB | **Units:** | ug/L |
| **Lab Code:** | K2009361-002 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| Naphthalene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| Styrene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Toluene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 16:21 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| o-Xylene | ND U | 0.50 | 1 | 10/22/20 16:21 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 10/22/20 16:21 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 10/22/20 16:21 | |
| Dibromofluoromethane | 95 | 73 - 122 | 10/22/20 16:21 | |
| Toluene-d8 | 99 | 65 - 144 | 10/22/20 16:21 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 11:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-03-DUP | **Units:** | ug/L |
| **Lab Code:** | K2009361-003 | **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 | 10/22/20 16:48 | |
| Benzene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Bromobenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| Bromochloromethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Bromoform | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Bromomethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 10/22/20 16:48 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 10/22/20 16:48 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Chlorobenzene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Chloroethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Chloroform | **0.80** | 0.50 | 1 | 10/22/20 16:48 | |
| Chloromethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| Dibromomethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Ethylbenzene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| 2-Hexanone | ND U | 20 | 1 | 10/22/20 16:48 | * |
| Isopropylbenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 10/22/20 16:48 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 11:40 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-03-DUP | **Units:** | ug/L |
| **Lab Code:** | K2009361-003 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| Naphthalene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| Styrene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Toluene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 16:48 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| o-Xylene | ND U | 0.50 | 1 | 10/22/20 16:48 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 10/22/20 16:48 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 88 | 68 - 117 | 10/22/20 16:48 | |
| Dibromofluoromethane | 93 | 73 - 122 | 10/22/20 16:48 | |
| Toluene-d8 | 99 | 65 - 144 | 10/22/20 16:48 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 13:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-04-1S | **Units:** | ug/L |
| **Lab Code:** | K2009361-004 | **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 | 10/22/20 17:15 | |
| Benzene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Bromobenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| Bromochloromethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Bromoform | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Bromomethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 10/22/20 17:15 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 10/22/20 17:15 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Chlorobenzene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Chloroethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Chloroform | **3.3** | 0.50 | 1 | 10/22/20 17:15 | |
| Chloromethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| Dibromomethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Ethylbenzene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| 2-Hexanone | ND U | 20 | 1 | 10/22/20 17:15 | * |
| Isopropylbenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 10/22/20 17:15 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 13:10 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-04-1S | **Units:** | ug/L |
| **Lab Code:** | K2009361-004 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| Naphthalene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| Styrene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Toluene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 17:15 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| o-Xylene | ND U | 0.50 | 1 | 10/22/20 17:15 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 10/22/20 17:15 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 90 | 68 - 117 | 10/22/20 17:15 | |
| Dibromofluoromethane | 94 | 73 - 122 | 10/22/20 17:15 | |
| Toluene-d8 | 98 | 65 - 144 | 10/22/20 17:15 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 14:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-05-10SR | **Units:** | ug/L |
| **Lab Code:** | K2009361-005 | **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 | 10/22/20 17:41 | |
| Benzene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Bromobenzene | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| Bromochloromethane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Bromodichloromethane | **1.5** | | 0.50 | 1 | 10/22/20 17:41 | |
| Bromoform | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Bromomethane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 2-Butanone (MEK) | ND | U | 20 | 1 | 10/22/20 17:41 | |
| n-Butylbenzene | ND | U | 4.0 | 1 | 10/22/20 17:41 | |
| sec-Butylbenzene | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| tert-Butylbenzene | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| Carbon Disulfide | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Carbon Tetrachloride | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Chlorobenzene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Chloroethane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Chloroform | **11** | | 0.50 | 1 | 10/22/20 17:41 | |
| Chloromethane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 2-Chlorotoluene | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| 4-Chlorotoluene | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| 1,2-Dibromo-3-chloropropane | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| Dibromochloromethane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,2-Dibromoethane (EDB) | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| Dibromomethane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,2-Dichlorobenzene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,3-Dichlorobenzene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,4-Dichlorobenzene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Dichlorodifluoromethane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,1-Dichloroethane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| cis-1,2-Dichloroethene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| trans-1,2-Dichloroethene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,2-Dichloropropane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,3-Dichloropropane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 2,2-Dichloropropane | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,1-Dichloropropene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| cis-1,3-Dichloropropene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| trans-1,3-Dichloropropene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Ethylbenzene | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| Hexachlorobutadiene | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| 2-Hexanone | ND | U | 20 | 1 | 10/22/20 17:41 | * |
| Isopropylbenzene | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| 4-Isopropyltoluene | ND | U | 2.0 | 1 | 10/22/20 17:41 | |
| Methyl tert-Butyl Ether | ND | U | 0.50 | 1 | 10/22/20 17:41 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 20 | 1 | 10/22/20 17:41 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 14:20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | LB-101420-05-10SR | **Units:** | ug/L |
| **Lab Code:** | K2009361-005 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 10/22/20 17:41 | |
| Naphthalene | ND U | 2.0 | 1 | 10/22/20 17:41 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 10/22/20 17:41 | |
| Styrene | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| Toluene | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 17:41 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 17:41 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 17:41 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 17:41 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| o-Xylene | ND U | 0.50 | 1 | 10/22/20 17:41 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 10/22/20 17:41 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 85 | 68 - 117 | 10/22/20 17:41 | |
| Dibromofluoromethane | 95 | 73 - 122 | 10/22/20 17:41 | |
| Toluene-d8 | 97 | 65 - 144 | 10/22/20 17:41 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2009361-006 | **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 | 10/22/20 18:08 | |
| Benzene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Bromobenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| Bromochloromethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Bromoform | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Bromomethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 10/22/20 18:08 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 10/22/20 18:08 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Chlorobenzene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Chloroethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Chloroform | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Chloromethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| Dibromomethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Ethylbenzene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| 2-Hexanone | ND U | 20 | 1 | 10/22/20 18:08 | * |
| Isopropylbenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 10/22/20 18:08 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | 10/14/20 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 10/15/20 12:00 |
| **Sample Name:** | Trip Blank | **Units:** | ug/L |
| **Lab Code:** | K2009361-006 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| Naphthalene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| Styrene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Toluene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 18:08 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| o-Xylene | ND U | 0.50 | 1 | 10/22/20 18:08 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 10/22/20 18:08 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 83 | 68 - 117 | 10/22/20 18:08 | |
| Dibromofluoromethane | 95 | 73 - 122 | 10/22/20 18:08 | |
| Toluene-d8 | 99 | 65 - 144 | 10/22/20 18:08 | |

# 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 **Service Request:** K2009361
**Project:** Leichner Landfill/0422030.11
**Sample Matrix:** Ground Water

## SURROGATE RECOVERY SUMMARY
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Extraction Method:** None

| Sample Name | Lab Code | 4-Bromofluorobenzene 68-117 | Dibromofluoromethane 73-122 | Toluene-d8 65-144 |
|---|---|---|---|---|
| LB-101420-01-27I | K2009361-001 | 87 | 95 | 98 |
| LB-101420-02-FB | K2009361-002 | 88 | 95 | 99 |
| LB-101420-03-DUP | K2009361-003 | 88 | 93 | 99 |
| LB-101420-04-1S | K2009361-004 | 90 | 94 | 98 |
| LB-101420-05-10SR | K2009361-005 | 85 | 95 | 97 |
| Trip Blank | K2009361-006 | 83 | 95 | 99 |
| Method Blank | KQ2016603-05 | 89 | 92 | 101 |
| Lab Control Sample | KQ2016603-03 | 96 | 95 | 103 |
| Duplicate Lab Control Sample | KQ2016603-04 | 92 | 97 | 100 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2016603-05 | **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 | 10/22/20 12:23 | |
| Benzene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Bromobenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| Bromochloromethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Bromodichloromethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Bromoform | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Bromomethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 2-Butanone (MEK) | ND U | 20 | 1 | 10/22/20 12:23 | |
| n-Butylbenzene | ND U | 4.0 | 1 | 10/22/20 12:23 | |
| sec-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| tert-Butylbenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| Carbon Disulfide | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Carbon Tetrachloride | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Chlorobenzene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Chloroethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Chloroform | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Chloromethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 2-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| 4-Chlorotoluene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| 1,2-Dibromo-3-chloropropane | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| Dibromochloromethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,2-Dibromoethane (EDB) | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| Dibromomethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,2-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,3-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,4-Dichlorobenzene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Dichlorodifluoromethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,1-Dichloroethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| cis-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| trans-1,2-Dichloroethene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,3-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 2,2-Dichloropropane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,1-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| cis-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| trans-1,3-Dichloropropene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Ethylbenzene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Hexachlorobutadiene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| 2-Hexanone | ND U | 20 | 1 | 10/22/20 12:23 | |
| Isopropylbenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| 4-Isopropyltoluene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| Methyl tert-Butyl Ether | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 4-Methyl-2-pentanone (MIBK) | ND U | 20 | 1 | 10/22/20 12:23 | |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ug/L |
| **Lab Code:** | KQ2016603-05 | **Basis:** | NA |

## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260C
**Prep Method:** None

| Analyte Name | Result | MRL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|
| Methylene Chloride | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| Naphthalene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| n-Propylbenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| Styrene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,1,1,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,1,2,2-Tetrachloroethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Tetrachloroethene (PCE) | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Toluene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,2,3-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| 1,2,4-Trichlorobenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| 1,1,2-Trichloroethane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,1,1-Trichloroethane (TCA) | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Trichloroethene (TCE) | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| Trichlorofluoromethane (CFC 11) | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,2,3-Trichloropropane | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| 1,2,4-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| 1,3,5-Trimethylbenzene | ND U | 2.0 | 1 | 10/22/20 12:23 | |
| Vinyl Chloride | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| o-Xylene | ND U | 0.50 | 1 | 10/22/20 12:23 | |
| m,p-Xylenes | ND U | 0.50 | 1 | 10/22/20 12:23 | |

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 4-Bromofluorobenzene | 89 | 68 - 117 | 10/22/20 12:23 | |
| Dibromofluoromethane | 92 | 73 - 122 | 10/22/20 12:23 | |
| Toluene-d8 | 101 | 65 - 144 | 10/22/20 12:23 | |

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Analyzed:** | 10/22/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 700420 |

| | Lab Control Sample KQ2016603-03 | | | Duplicate Lab Control Sample KQ2016603-04 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| 1,1,1,2-Tetrachloroethane | 10.3 | 10.0 | 103 | 10.4 | 10.0 | 104 | 66-124 | 1 | 30 |
| 1,1,1-Trichloroethane (TCA) | 10.5 | 10.0 | 105 | 10.9 | 10.0 | 109 | 59-136 | 3 | 30 |
| 1,1,2,2-Tetrachloroethane | 9.96 | 10.0 | 100 | 10.2 | 10.0 | 102 | 70-127 | 3 | 30 |
| 1,1,2-Trichloroethane | 9.91 | 10.0 | 99 | 9.80 | 10.0 | 98 | 74-118 | 1 | 30 |
| 1,1-Dichloroethane | 10.3 | 10.0 | 103 | 10.7 | 10.0 | 107 | 68-132 | 3 | 30 |
| 1,1-Dichloropropene | 10.7 | 10.0 | 107 | 10.4 | 10.0 | 104 | 59-134 | 3 | 30 |
| 1,2,3-Trichlorobenzene | 9.71 | 10.0 | 97 | 10.3 | 10.0 | 103 | 68-120 | 6 | 30 |
| 1,2,3-Trichloropropane | 10.3 | 10.0 | 103 | 10.8 | 10.0 | 108 | 69-123 | 5 | 30 |
| 1,2,4-Trichlorobenzene | 9.73 | 10.0 | 97 | 9.78 | 10.0 | 98 | 58-126 | <1 | 30 |
| 1,2,4-Trimethylbenzene | 10.6 | 10.0 | 106 | 10.4 | 10.0 | 104 | 63-122 | 1 | 30 |
| 1,2-Dibromo-3-chloropropane | 10.2 | 10.0 | 102 | 10.4 | 10.0 | 104 | 55-132 | 2 | 30 |
| 1,2-Dibromoethane (EDB) | 9.76 | 10.0 | 98 | 9.55 | 10.0 | 96 | 74-118 | 2 | 30 |
| 1,2-Dichlorobenzene | 10.1 | 10.0 | 101 | 10.2 | 10.0 | 102 | 72-115 | <1 | 30 |
| 1,2-Dichloropropane | 10.1 | 10.0 | 101 | 10.1 | 10.0 | 101 | 67-126 | <1 | 30 |
| 1,3,5-Trimethylbenzene | 10.3 | 10.0 | 103 | 10.4 | 10.0 | 104 | 62-126 | <1 | 30 |
| 1,3-Dichlorobenzene | 9.99 | 10.0 | 100 | 9.97 | 10.0 | 100 | 70-116 | <1 | 30 |
| 1,3-Dichloropropane | 9.62 | 10.0 | 96 | 9.97 | 10.0 | 100 | 75-116 | 4 | 30 |
| 1,4-Dichlorobenzene | 9.89 | 10.0 | 99 | 10.2 | 10.0 | 102 | 73-115 | 3 | 30 |
| 2,2-Dichloropropane | 8.54 | 10.0 | 85 | 8.92 | 10.0 | 89 | 37-145 | 4 | 30 |
| 2-Butanone (MEK) | 95.5 | 100 | 95 | 104 | 100 | 104 | 71-149 | 9 | 30 |
| 2-Chlorotoluene | 10.0 | 10.0 | 100 | 10.3 | 10.0 | 103 | 55-131 | 3 | 30 |
| 2-Hexanone | 84.5 | 100 | 85 | 90.0 | 100 | 90 | 59-131 | 6 | 30 |
| 4-Chlorotoluene | 10.4 | 10.0 | 104 | 10.4 | 10.0 | 104 | 66-121 | <1 | 30 |
| 4-Isopropyltoluene | 10.4 | 10.0 | 104 | 10.3 | 10.0 | 103 | 61-128 | <1 | 30 |
| 4-Methyl-2-pentanone (MIBK) | 99.6 | 100 | 100 | 102 | 100 | 102 | 64-134 | 2 | 30 |
| Acetone | 112 | 100 | 112 | 119 | 100 | 119 | 68-135 | 6 | 30 |
| Benzene | 10.5 | 10.0 | 105 | 10.5 | 10.0 | 105 | 69-124 | <1 | 30 |
| Bromobenzene | 10.1 | 10.0 | 101 | 10.3 | 10.0 | 103 | 72-116 | 2 | 30 |
| Bromochloromethane | 10.6 | 10.0 | 106 | 10.8 | 10.0 | 108 | 75-131 | 2 | 30 |
| Bromodichloromethane | 11.2 | 10.0 | 112 | 11.5 | 10.0 | 115 | 63-129 | 2 | 30 |
| Bromoform | 10.9 | 10.0 | 109 | 11.2 | 10.0 | 112 | 52-144 | 2 | 30 |
| Bromomethane | 10.1 | 10.0 | 101 | 9.51 | 10.0 | 95 | 35-113 | 6 | 30 |
| Carbon Disulfide | 9.67 | 10.0 | 97 | 9.81 | 10.0 | 98 | 46-144 | 1 | 30 |
| Carbon Tetrachloride | 11.3 | 10.0 | 113 | 11.4 | 10.0 | 114 | 55-140 | 1 | 30 |
| Chlorobenzene | 9.78 | 10.0 | 98 | 9.59 | 10.0 | 96 | 72-116 | 2 | 30 |
| Chloroethane | 10.5 | 10.0 | 105 | 10.2 | 10.0 | 102 | 58-134 | 3 | 30 |
| Chloroform | 10.3 | 10.0 | 103 | 11.0 | 10.0 | 110 | 70-129 | 6 | 30 |
| Chloromethane | 9.81 | 10.0 | 98 | 9.46 | 10.0 | 95 | 34-130 | 4 | 30 |
| cis-1,2-Dichloroethene | 9.77 | 10.0 | 98 | 10.6 | 10.0 | 106 | 71-118 | 8 | 30 |
| cis-1,3-Dichloropropene | 10.5 | 10.0 | 105 | 10.9 | 10.0 | 109 | 62-132 | 3 | 30 |
| Dibromochloromethane | 11.6 | 10.0 | 116 | 11.8 | 10.0 | 118 | 67-126 | 2 | 30 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | SCS Engineers | **Service Request:** | K2009361 |
| **Project:** | Leichner Landfill/0422030.11 | **Date Analyzed:** | 10/22/20 |
| **Sample Matrix:** | Ground Water | **Date Extracted:** | NA |

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

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8260C | **Units:** | ug/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 700420 |

| | Lab Control Sample KQ2016603-03 | | | Duplicate Lab Control Sample KQ2016603-04 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Dibromomethane | 10.7 | 10.0 | 107 | 10.5 | 10.0 | 105 | 69-128 | 2 | 30 |
| Dichlorodifluoromethane | 9.67 | 10.0 | 97 | 9.34 | 10.0 | 93 | 32-124 | 3 | 30 |
| Ethylbenzene | 9.73 | 10.0 | 97 | 9.73 | 10.0 | 97 | 67-121 | <1 | 30 |
| Hexachlorobutadiene | 11.0 | 10.0 | 110 | 11.2 | 10.0 | 112 | 57-119 | 1 | 30 |
| Isopropylbenzene | 9.97 | 10.0 | 100 | 10.1 | 10.0 | 101 | 67-129 | 1 | 30 |
| m,p-Xylenes | 19.6 | 20.0 | 98 | 19.5 | 20.0 | 98 | 69-121 | <1 | 30 |
| Methyl tert-Butyl Ether | 18.0 | 20.0 | 90 | 19.3 | 20.0 | 97 | 54-126 | 7 | 30 |
| Methylene Chloride | 10.9 | 10.0 | 109 | 10.8 | 10.0 | 108 | 71-122 | <1 | 30 |
| Naphthalene | 8.96 | 10.0 | 90 | 9.54 | 10.0 | 95 | 64-126 | 6 | 30 |
| n-Butylbenzene | 10.3 | 10.0 | 103 | 10.3 | 10.0 | 103 | 55-130 | <1 | 30 |
| n-Propylbenzene | 10.5 | 10.0 | 105 | 10.6 | 10.0 | 106 | 61-124 | 2 | 30 |
| o-Xylene | 9.89 | 10.0 | 99 | 9.67 | 10.0 | 97 | 71-119 | 2 | 30 |
| sec-Butylbenzene | 10.1 | 10.0 | 101 | 10.3 | 10.0 | 103 | 59-128 | 2 | 30 |
| Styrene | 9.85 | 10.0 | 99 | 9.86 | 10.0 | 99 | 74-121 | <1 | 30 |
| tert-Butylbenzene | 9.94 | 10.0 | 99 | 10.2 | 10.0 | 102 | 61-127 | 2 | 30 |
| Tetrachloroethene (PCE) | 9.90 | 10.0 | 99 | 9.93 | 10.0 | 99 | 62-126 | <1 | 30 |
| Toluene | 11.2 | 10.0 | 112 | 10.7 | 10.0 | 107 | 69-124 | 4 | 30 |
| trans-1,2-Dichloroethene | 10.1 | 10.0 | 101 | 11.0 | 10.0 | 110 | 67-125 | 9 | 30 |
| trans-1,3-Dichloropropene | 9.12 | 10.0 | 91 | 9.22 | 10.0 | 92 | 59-125 | 1 | 30 |
| Trichloroethene (TCE) | 10.3 | 10.0 | 103 | 10.4 | 10.0 | 104 | 67-128 | <1 | 30 |
| Trichlorofluoromethane (CFC 11) | 9.68 | 10.0 | 97 | 10.4 | 10.0 | 104 | 52-141 | 7 | 30 |
| Vinyl Chloride | 9.85 | 10.0 | 99 | 9.73 | 10.0 | 97 | 55-123 | 1 | 30 |

# APPENDIX D

## 2020 Groundwater Elevation Data and Groundwater Elevation Hydrographs

# Table D-1
# 2020 Groundwater Elevation Data
# Leichner Landfill

| Monitoring Well | Date | Reference Elevation (feet, AMSL) | Depth to Groundwater (feet, BTOC) | Groundwater Elevation (feet, AMSL) |
|---|---|---|---|---|
| LB-R2 | 2/4/2020 | 222.27 | 50.86 | 171.41 |
| LB-R2 | 7/28/2020 | 222.27 | 50.57 | 171.70 |
| LB-1S | 2/4/2020 | 210.12 | 38.31 | 171.81 |
| LB-1S | 7/28/2020 | 210.12 | 38.19 | 171.93 |
| LB-1D | 2/4/2020 | 209.74 | 40.45 | 169.29 |
| LB-1D | 7/28/2020 | 209.74 | 40.72 | 169.02 |
| LB-3S | 2/4/2020 | 218.25 | 43.77 | 174.48 |
| LB-3S | 7/28/2020 | 218.25 | 43.46 | 174.79 |
| LB-3D | 2/4/2020 | 219.29 | 44.74 | 174.55 |
| LB-3D | 7/28/2020 | 219.29 | 44.46 | 174.83 |
| LB-5S | 2/4/2020 | 206.89 | 16.76 | 190.13 |
| LB-5S | 7/28/2020 | 206.89 | 17.33 | 189.56 |
| LB-5C | 2/4/2020 | 206.70 | 38.38 | 168.32 |
| LB-5C | 7/28/2020 | 206.70 | 38.08 | 168.62 |
| LB-5D | 2/4/2020 | 207.56 | 42.47 | 165.09 |
| LB-5D | 7/28/2020 | 207.56 | 42.27 | 165.29 |
| LB-6S | 2/4/2020 | 202.80 | 32.03 | 170.77 |
| LB-6S | 7/28/2020 | 202.80 | 31.97 | 170.83 |
| LB-9S(R) | 2/4/2020 | 217.94 | 40.68 | 177.26 |
| LB-9S(R) | 7/28/2020 | 217.94 | 41.43 | 176.51 |
| LB-10SR | 2/4/2020 | 204.04 | 36.32 | 167.72 |
| LB-10SR | 7/28/2020 | 204.04 | 36.31 | 167.73 |
| LB-10CR | 2/4/2020 | 203.05 | 36.20 | 166.85 |
| LB-10CR | 7/28/2020 | 203.05 | 35.15 | 167.90 |
| LB-10DR | 2/4/2020 | 203.36 | 47.81 | 155.55 |
| LB-10DR | 7/28/2020 | 203.36 | 47.51 | 155.85 |
| LB-13I | 2/4/2020 | 202.36 | 32.62 | 169.74 |
| LB-13I | 7/28/2020 | 202.36 | 32.63 | 169.73 |
| LB-13C | 2/4/2020 | 202.68 | 33.02 | 169.66 |
| LB-13C | 7/28/2020 | 202.68 | 33.04 | 169.64 |
| LB-13D | 2/4/2020 | 202.96 | 33.48 | 169.48 |
| LB-13D | 7/28/2020 | 202.96 | 33.44 | 169.52 |

# Table D-1
# 2020 Groundwater Elevation Data
# Leichner Landfill

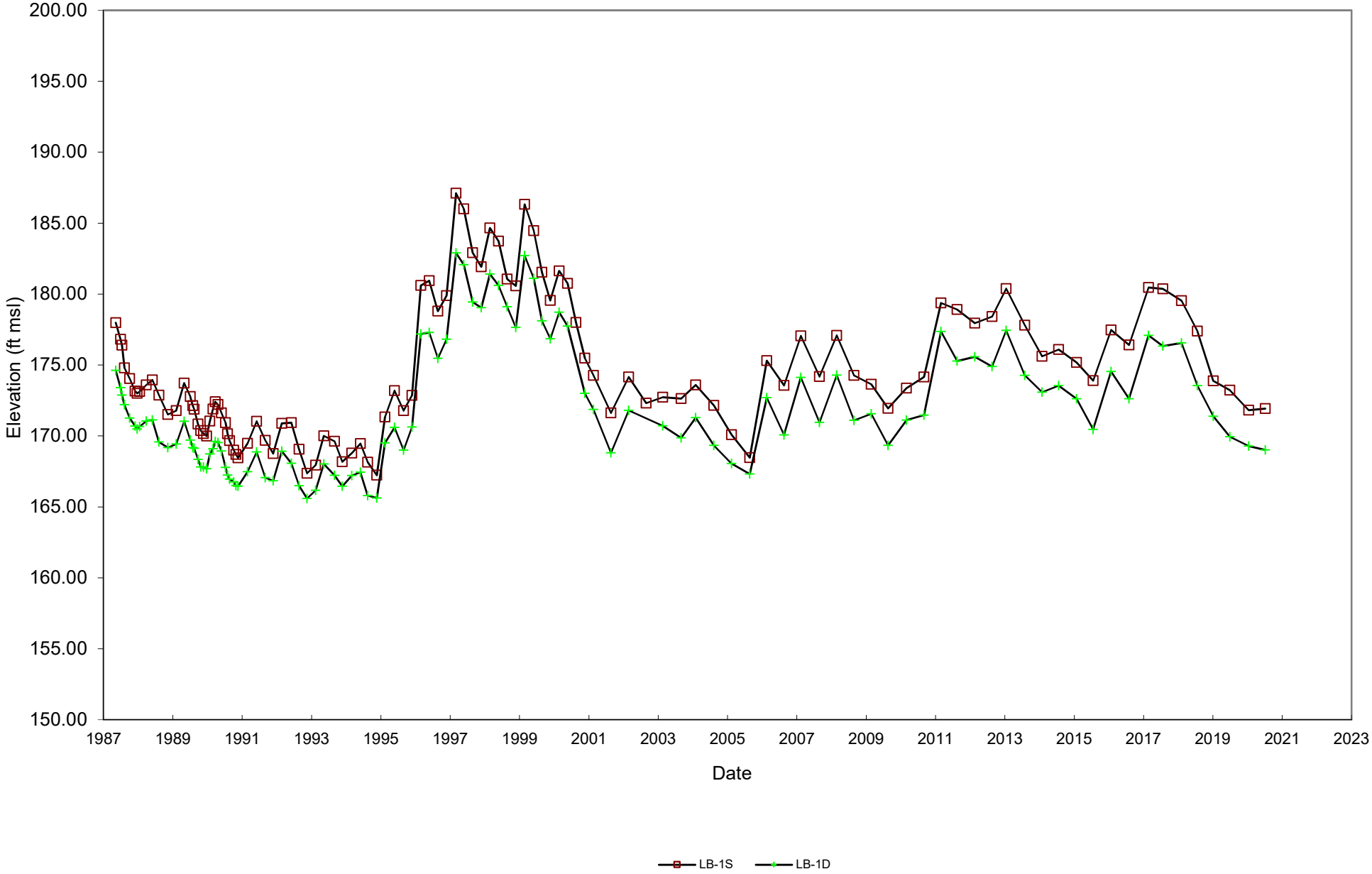
| Monitoring Well | Date | Reference Elevation (feet, AMSL) | Depth to Groundwater (feet, BTOC) | Groundwater Elevation (feet, AMSL) |
|---|---|---|---|---|
| LB-17S | 2/4/2020 | 208.18 | Dry | NA |
| LB-17S | 7/28/2020 | 208.18 | Dry | NA |
| LB-17I | 2/4/2020 | 212.96 | 41.67 | 171.29 |
| LB-17I | 7/28/2020 | 212.96 | 41.44 | 171.52 |
| LB-17C | 2/4/2020 | 207.97 | 35.35 | 172.62 |
| LB-17C | 7/28/2020 | 207.97 | 35.11 | 172.86 |
| LB-17D | 2/4/2020 | 213.17 | 42.47 | 170.70 |
| LB-17D | 7/28/2020 | 213.17 | 42.33 | 170.84 |
| LB-20S | 2/4/2020 | 221.22 | 45.03 | 176.19 |
| LB-20S | 7/28/2020 | 221.22 | 44.61 | 176.61 |
| LB-21S | 2/4/2020 | 223.35 | 42.29 | 181.06 |
| LB-21S | 7/28/2020 | 223.35 | 41.98 | 181.37 |
| LB-21C | 2/4/2020 | 223.32 | 42.70 | 180.62 |
| LB-21C | 7/28/2020 | 223.32 | 42.41 | 180.91 |
| LB-21D | 2/4/2020 | 223.63 | 45.54 | 178.09 |
| LB-21D | 7/28/2020 | 223.63 | 45.60 | 178.03 |
| LB-22S | 2/4/220 | 208.42 | 10.23 | 198.19 |
| LB-22S | 7/28/2020 | 208.42 | 10.37 | 198.05 |
| LB-23S | 2/4/2020 | 229.19 | 34.72 | 194.47 |
| LB-23S | 7/28/2020 | 229.19 | 34.41 | 194.78 |
| LB-24S | 2/4/2020 | 235.13 | 41.45 | 193.68 |
| LB-24S | 7/28/2020 | 235.13 | 41.39 | 193.74 |
| LB-26I | 2/4/2020 | 200.22 | 29.99 | 170.23 |
| LB-26I | 7/28/2020 | 200.22 | 30.02 | 170.20 |
| LB-26D | 2/4/2020 | 200.75 | 29.93 | 170.82 |
| LB-26D | 7/28/2020 | 200.75 | 29.84 | 170.91 |
| LB-27I | 2/4/2020 | 205.35 | 36.10 | 169.25 |
| LB-27I | 7/28/2020 | 205.35 | 36.02 | 169.33 |
| LB-27D | 2/4/2020 | 204.63 | 41.48 | 163.15 |
| LB-27D | 7/28/2020 | 204.63 | 42.21 | 162.42 |
| MW-1 N | 2/4/2020 | 216.58 | Dry | NA |
| MW-1 N | 7/28/2020 | 216.58 | Dry | NA |

# Table D-1
# 2020 Groundwater Elevation Data
# Leichner Landfill

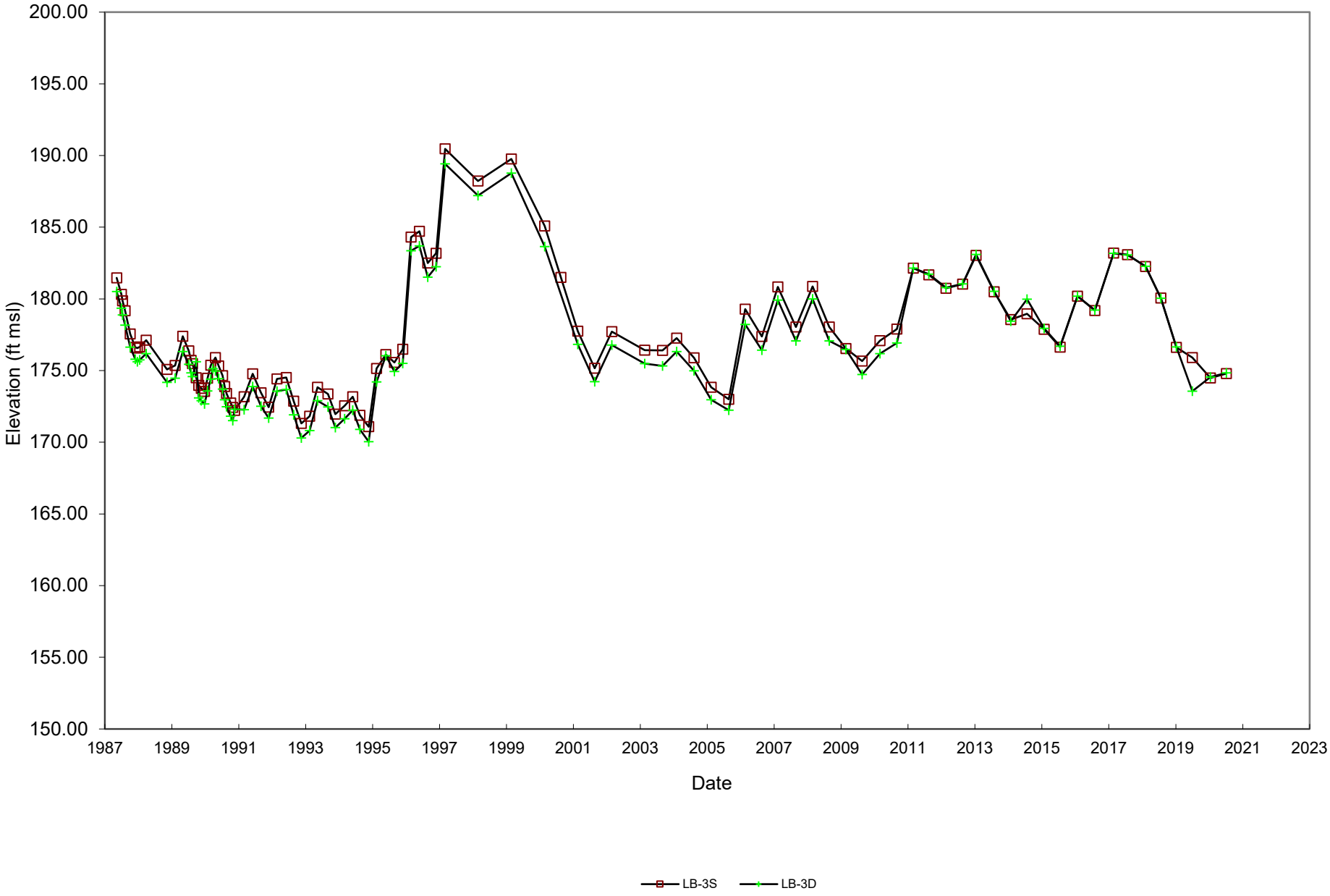
| Monitoring Well | Date | Reference Elevation (feet, AMSL) | Depth to Groundwater (feet, BTOC) | Groundwater Elevation (feet, AMSL) |
|---|---|---|---|---|
| MW-1 S | 2/4/2020 | 216.13 | 42.75 | 173.38 |
| MW-1 S | 7/28/2020 | 216.13 | 42.49 | 173.64 |
| MW-1 E | 2/4/2020 | 216.45 | Dry | NA |
| MW-1 E | 7/28/2020 | 216.45 | Dry | NA |
| MW-NE | 2/4/2020 | 220.06 | 18.03 | 202.03 |
| MW-NE | 7/28/2020 | 220.06 | 18.16 | 201.90 |

Notes:
AMSL = above mean sea level; BTOC = below top of casing; NA = not applicable.

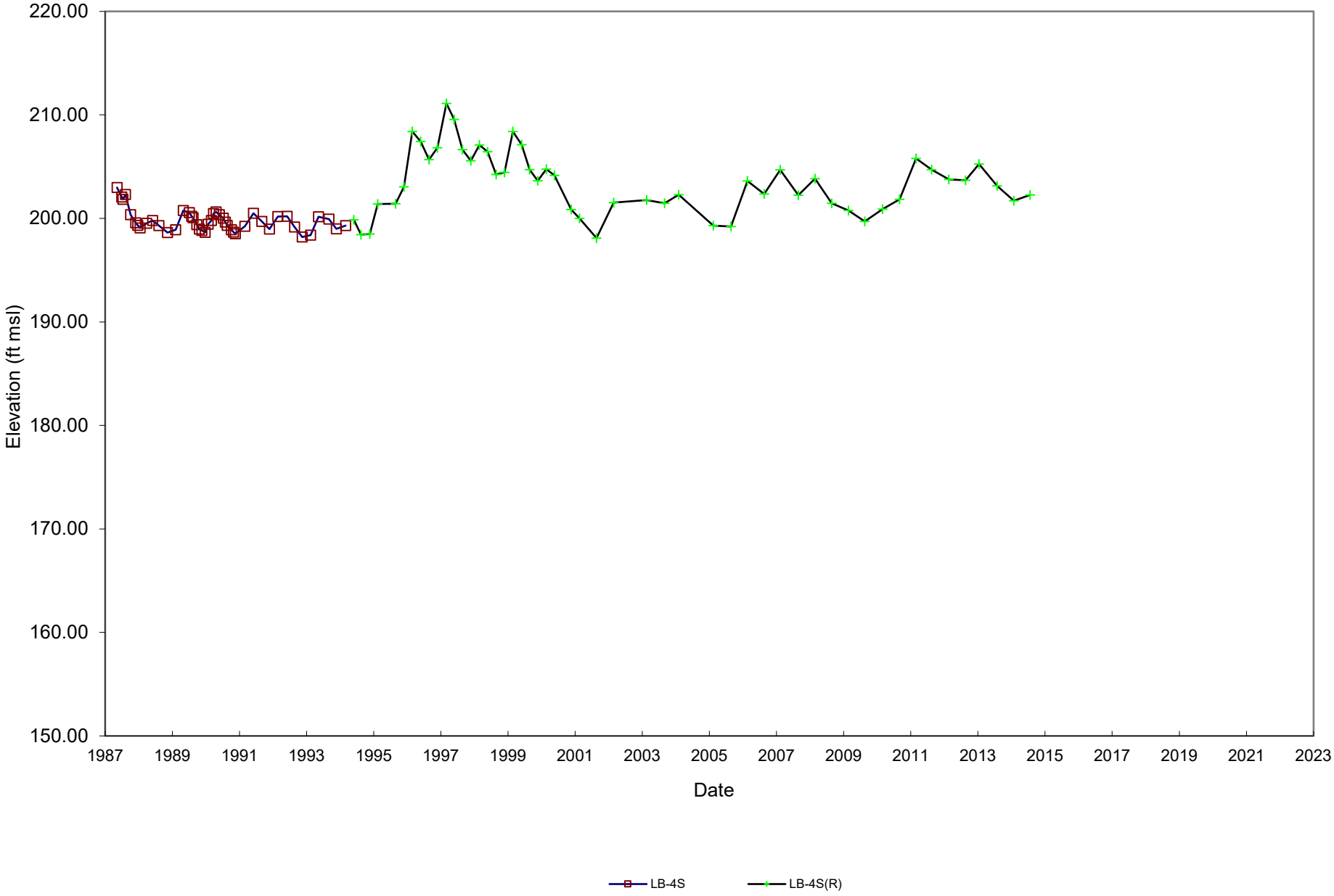
**LB-1S and LB-1D Hydrographs**
**Leichner Landfill**



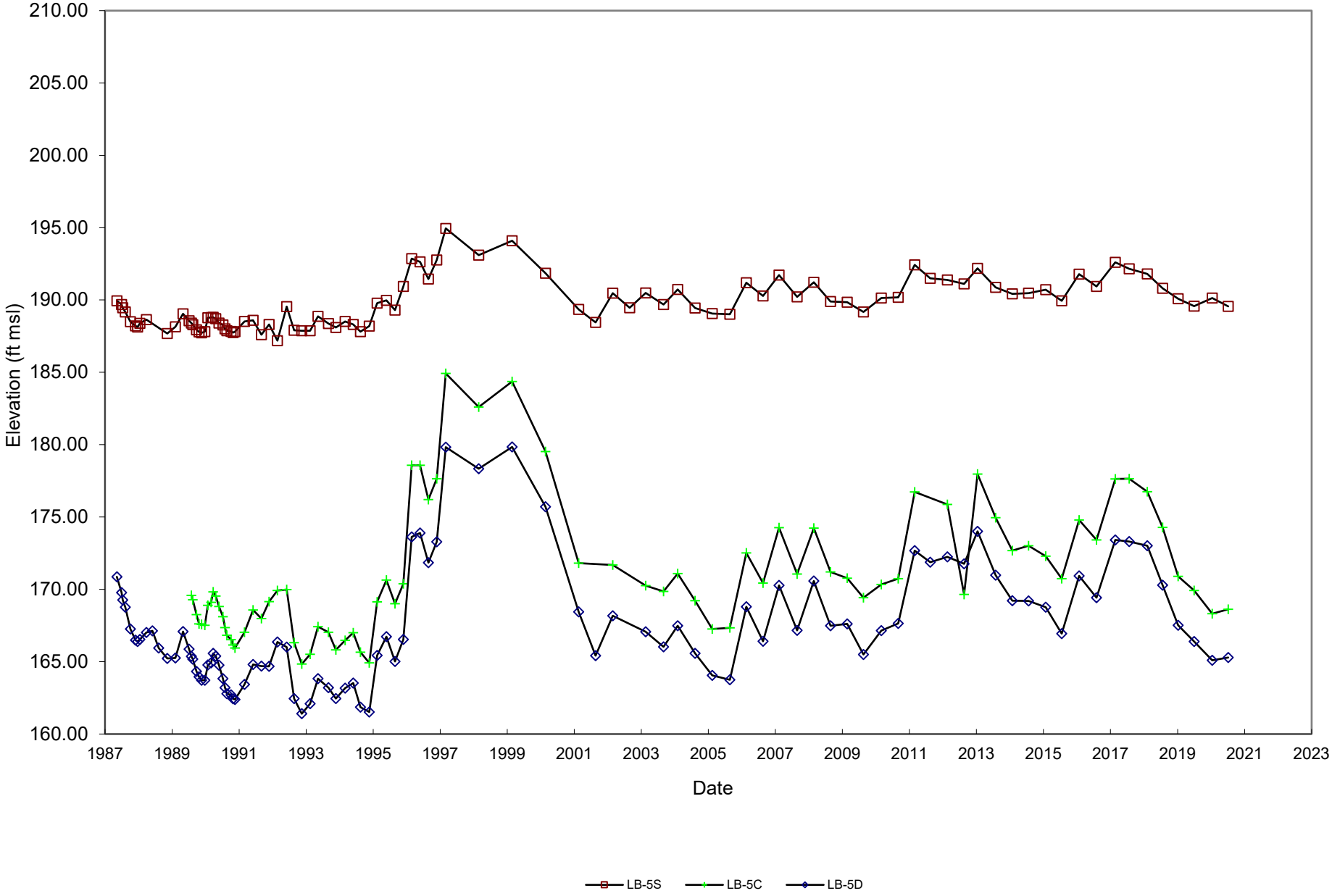
**LB-3S and LB-3D Hydrographs**
**Leichner Landfill**



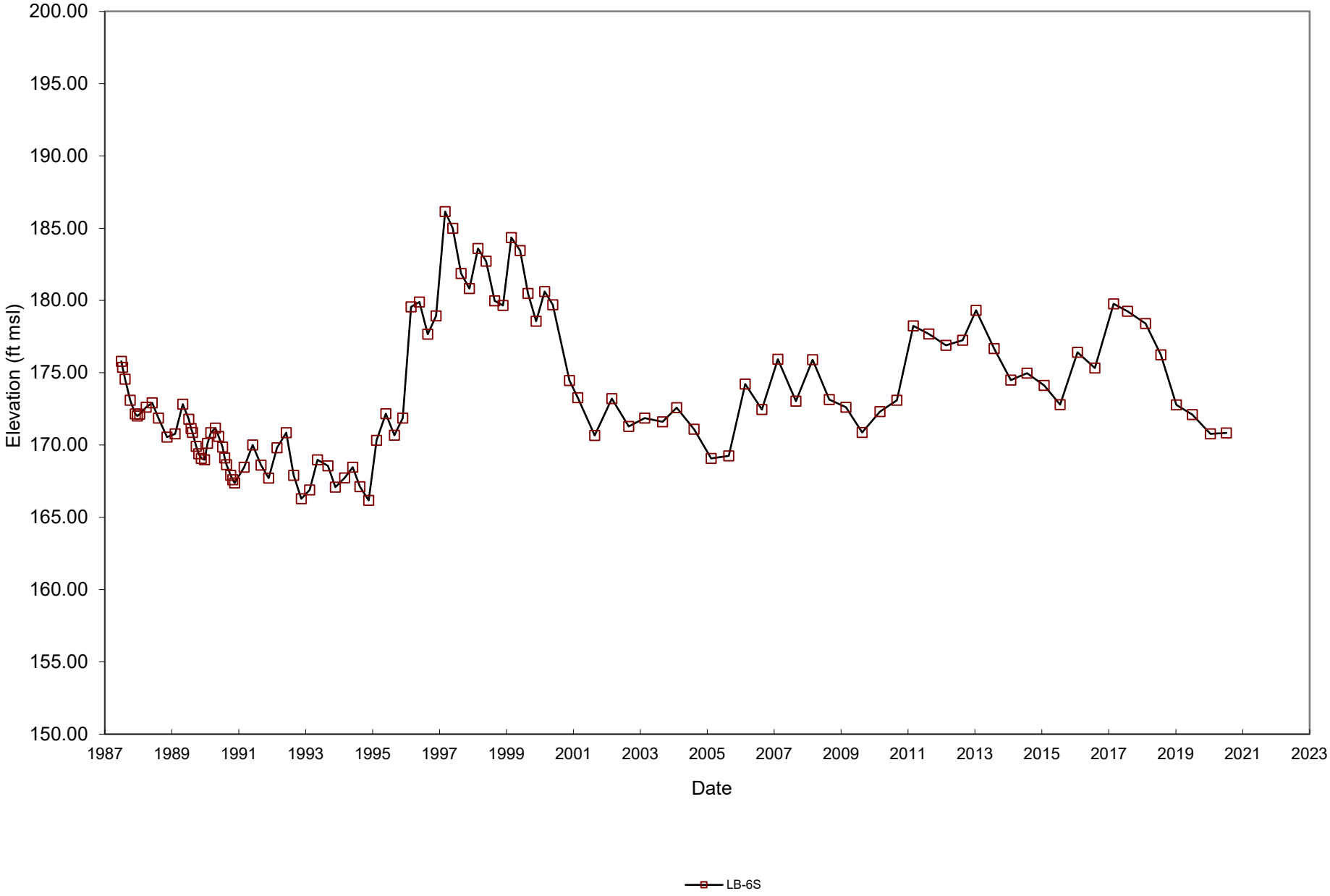
**LB-4s, and LB-4S(R)Hydrographs**
**Leichner Landfill**



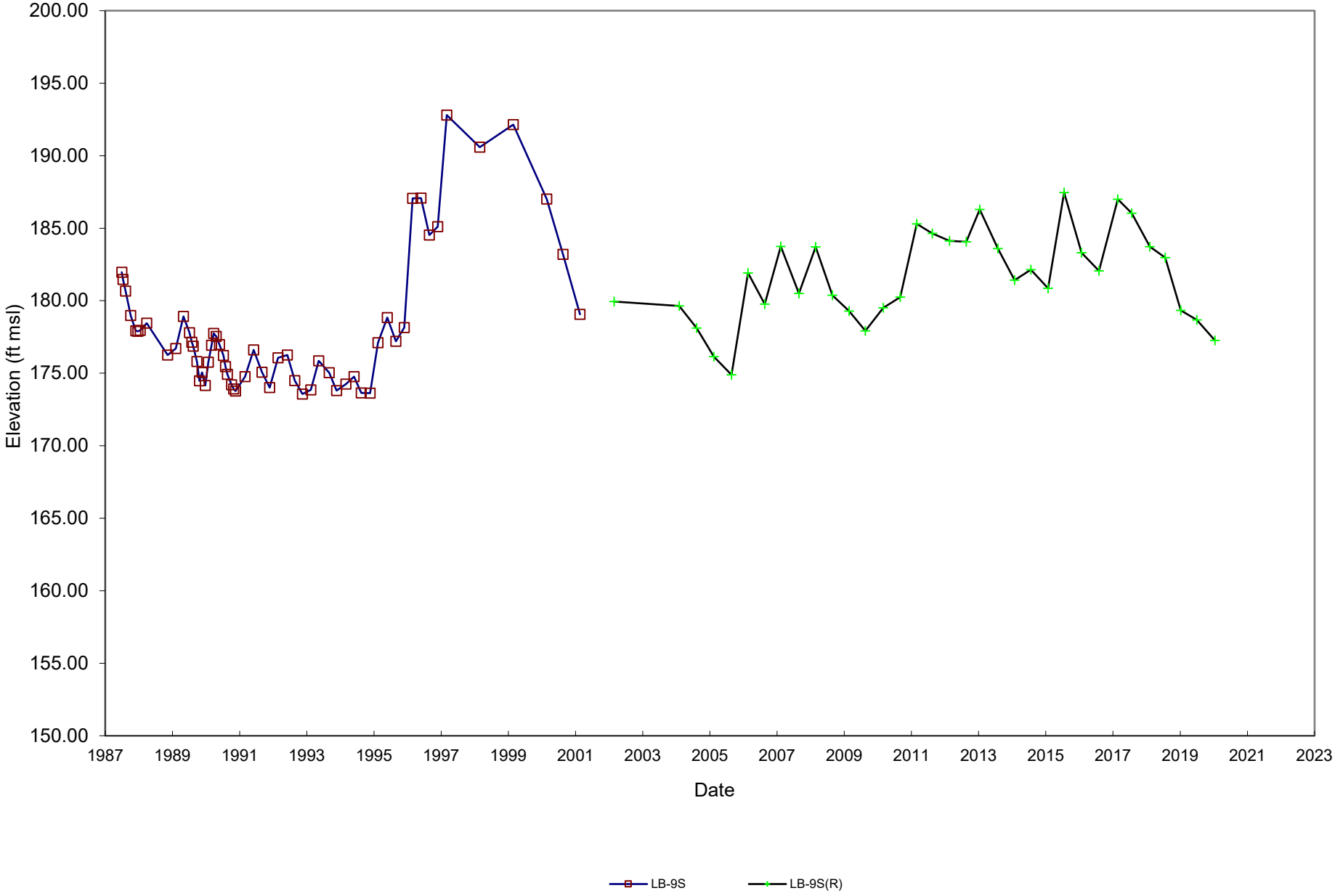
## LB 5S, LB-5C, and LB-5D Hydrographs
## Leichner Landfill

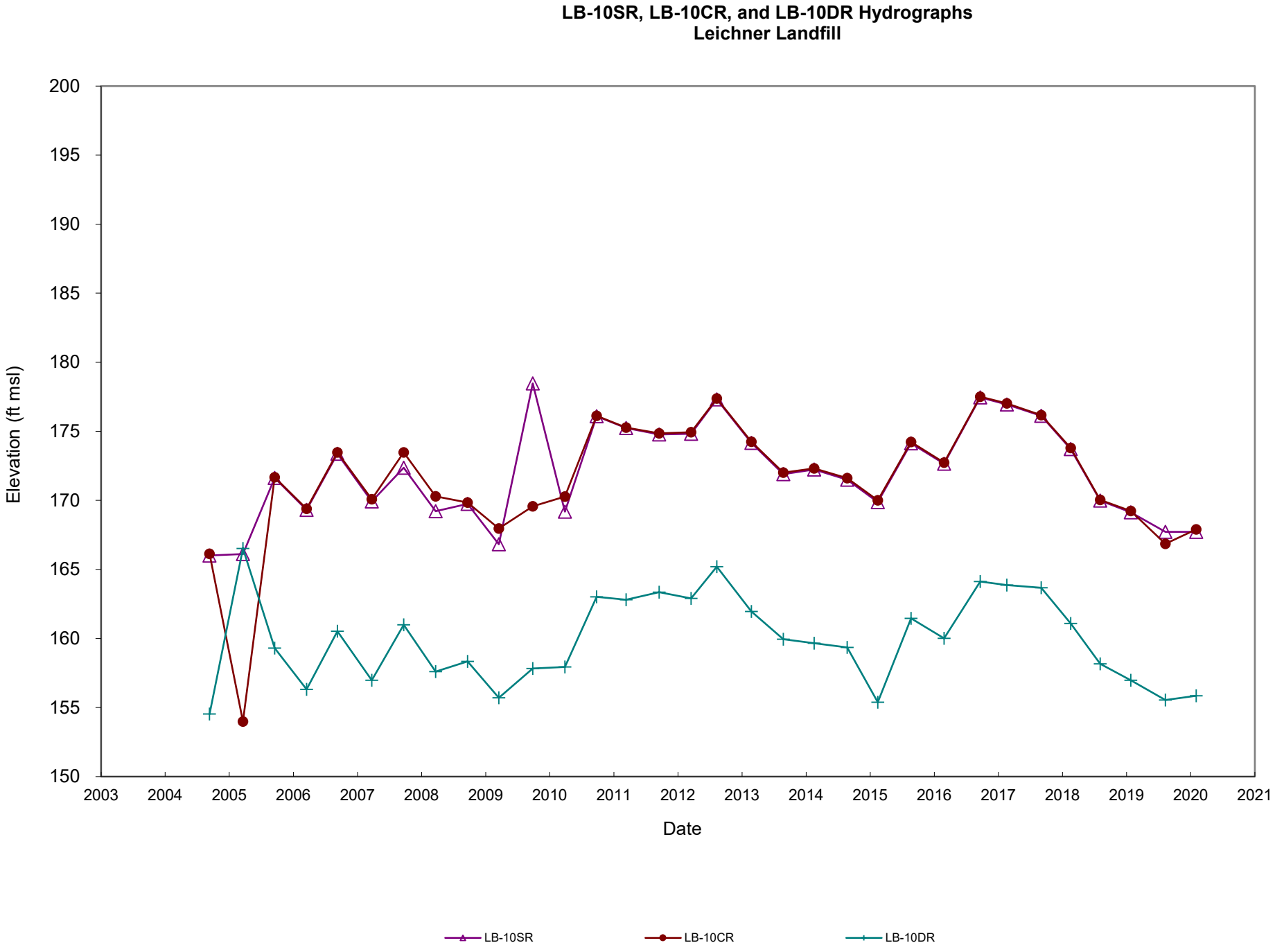


**LB-6S Hydrograph**
**Leichner Landfill**

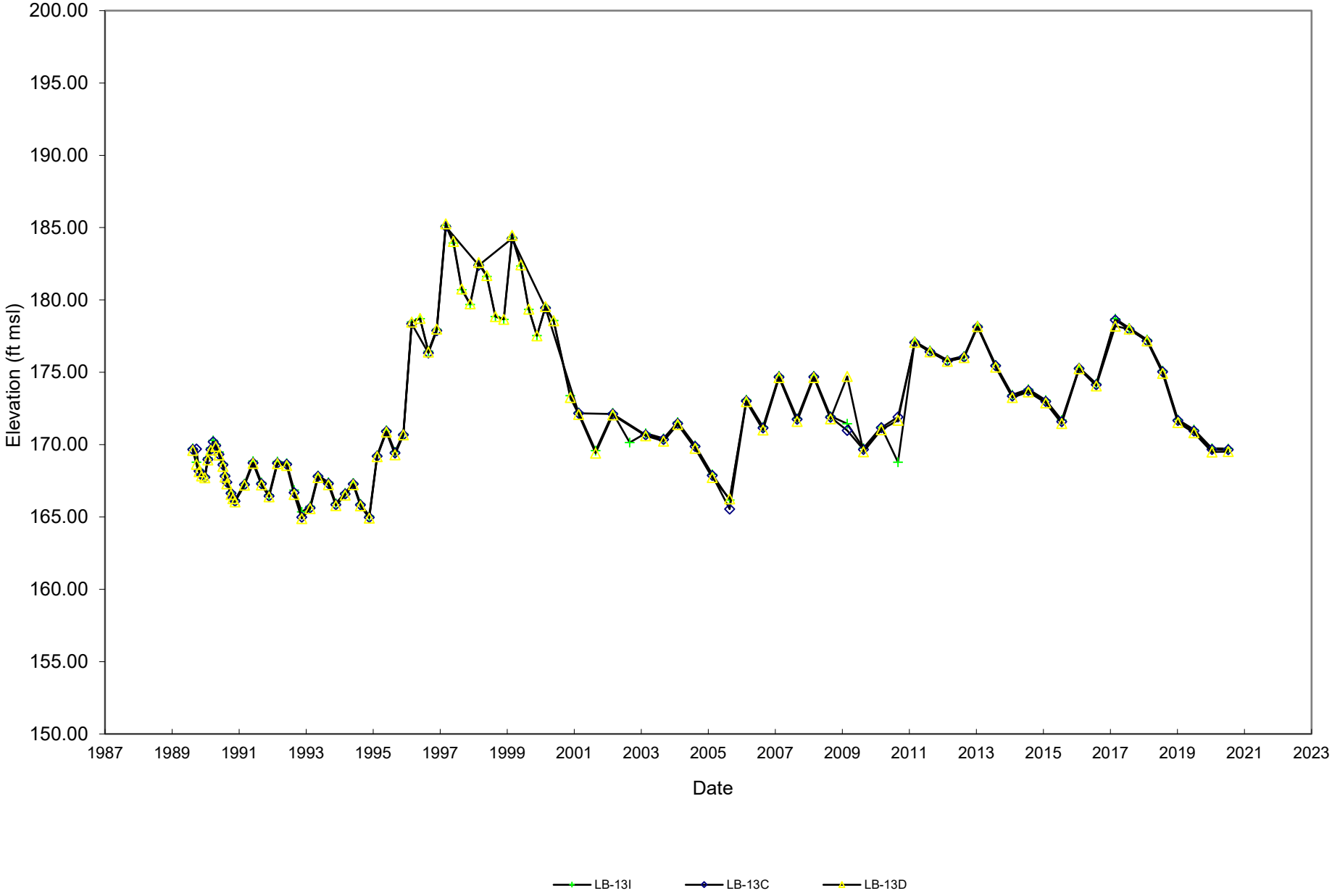


**LB-9s, and LB-9S(R) Hydrographs**
**Leichner Landfill**



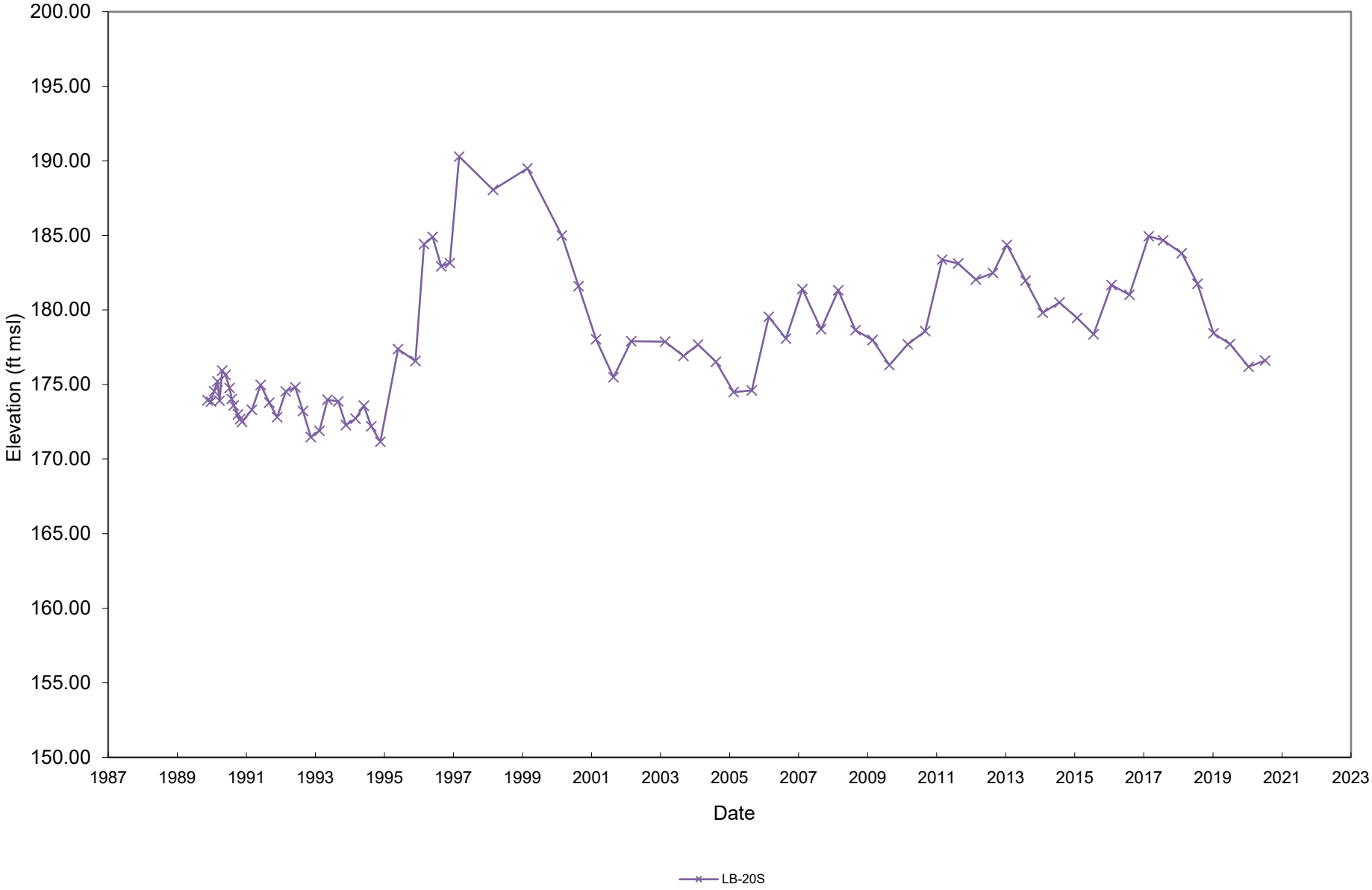

LB-10SR, LB-10CR, and LB-10DR Hydrographs
Leichner Landfill
Elevation (ft msl)
200
195
190
185
180
175
170
165
160
155
150
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Date
LB-10SR
LB-10CR
LB-10DR

**LB-13I, LB-13C, and LB-13D Hydrographs**
**Leichner Landfill**

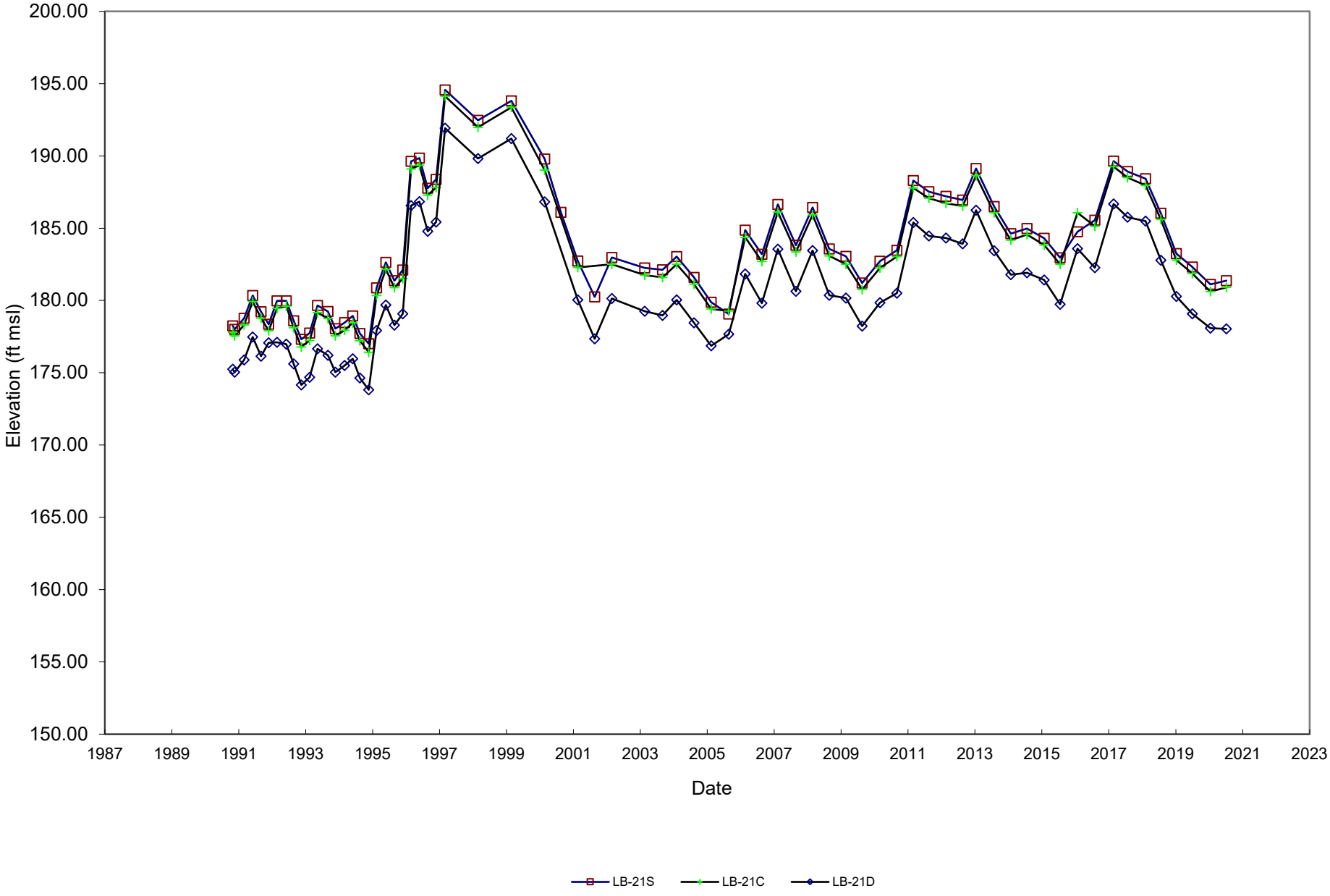


**LB-17I and LB-17D Hydrographs**
**Leichner Landfill**

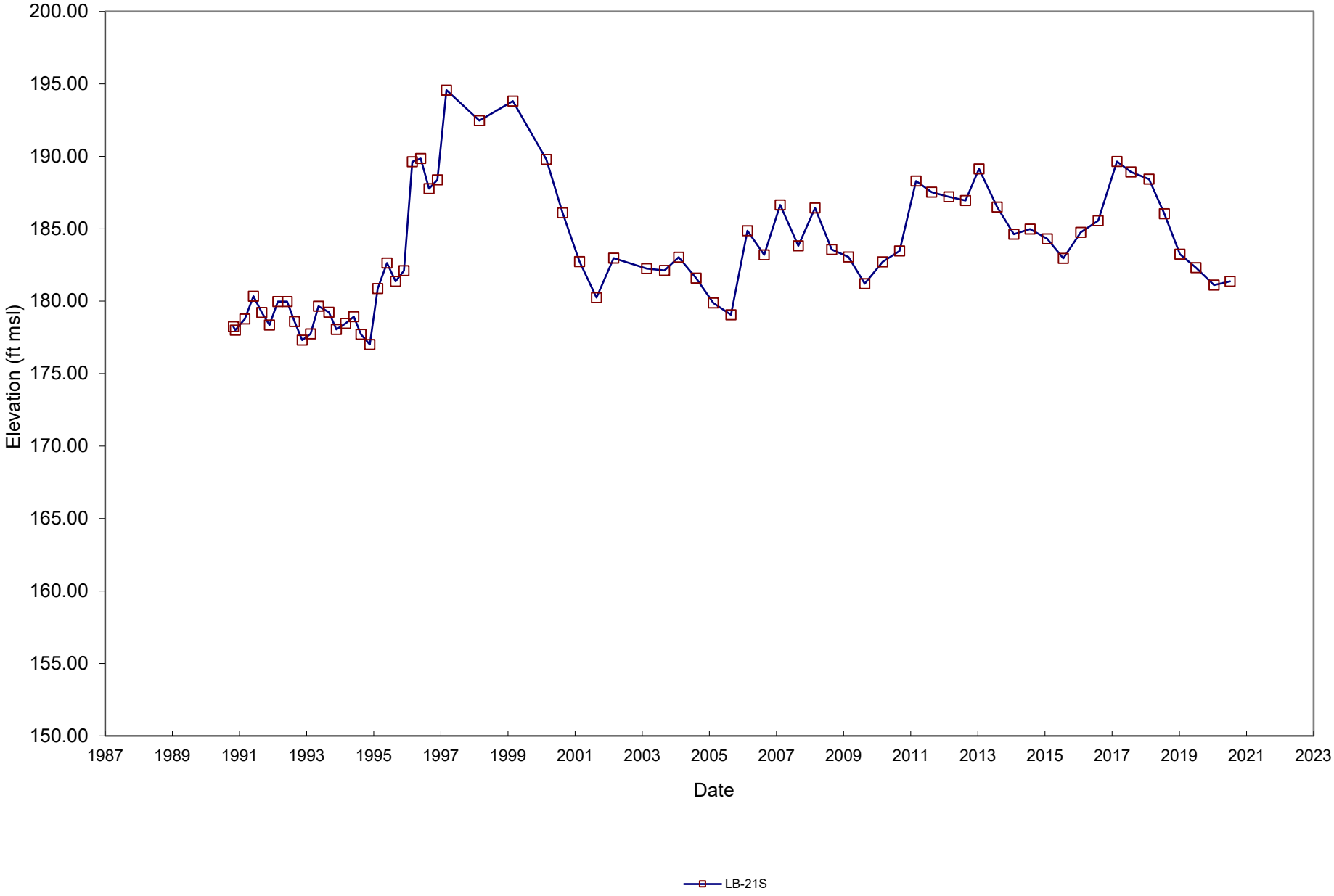
**LB-20S Hydrograph**
**Leichner Landfill**



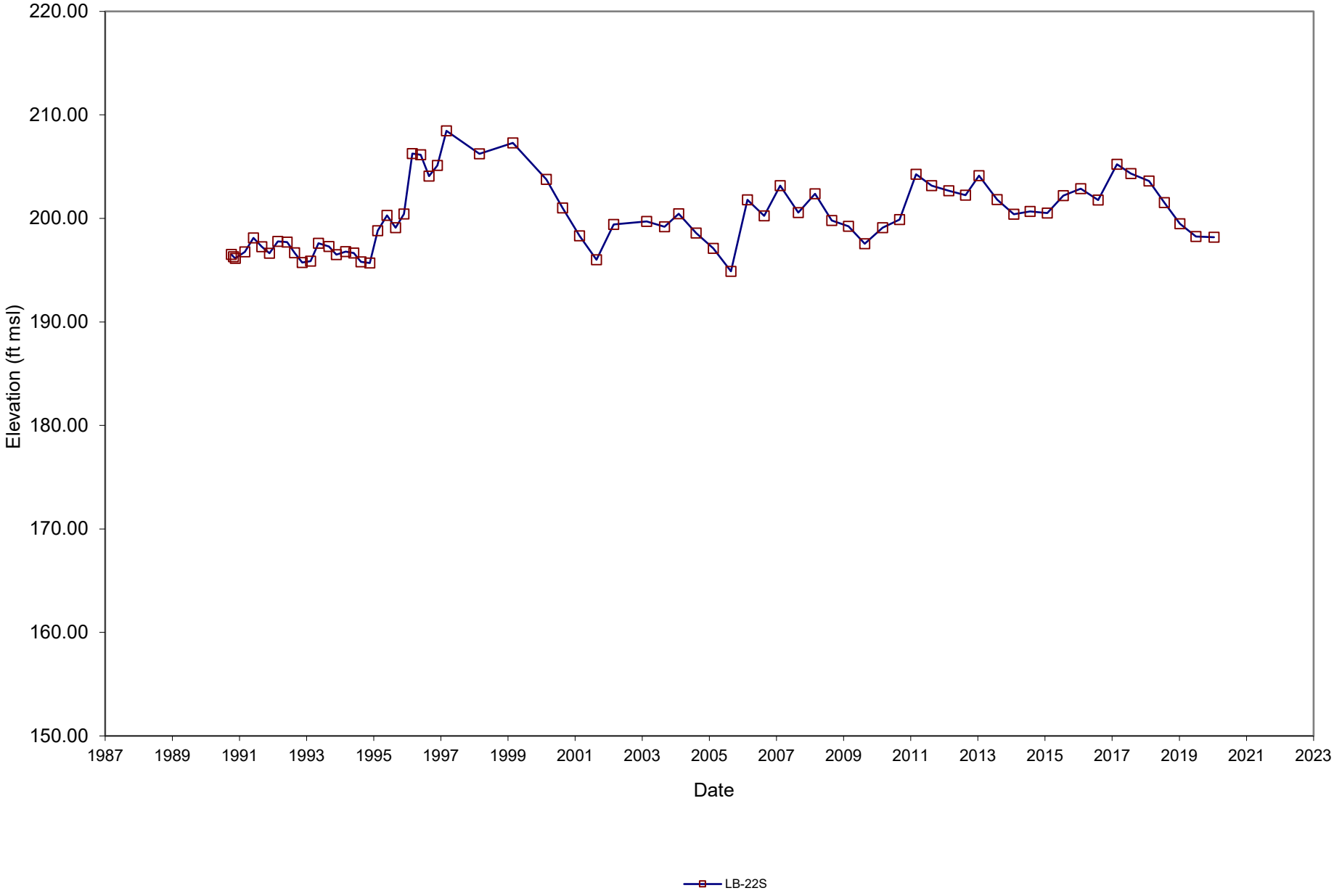
**LB-21S, LB-21C, and LB-21D Hydrographs**
**Leichner Landfill**



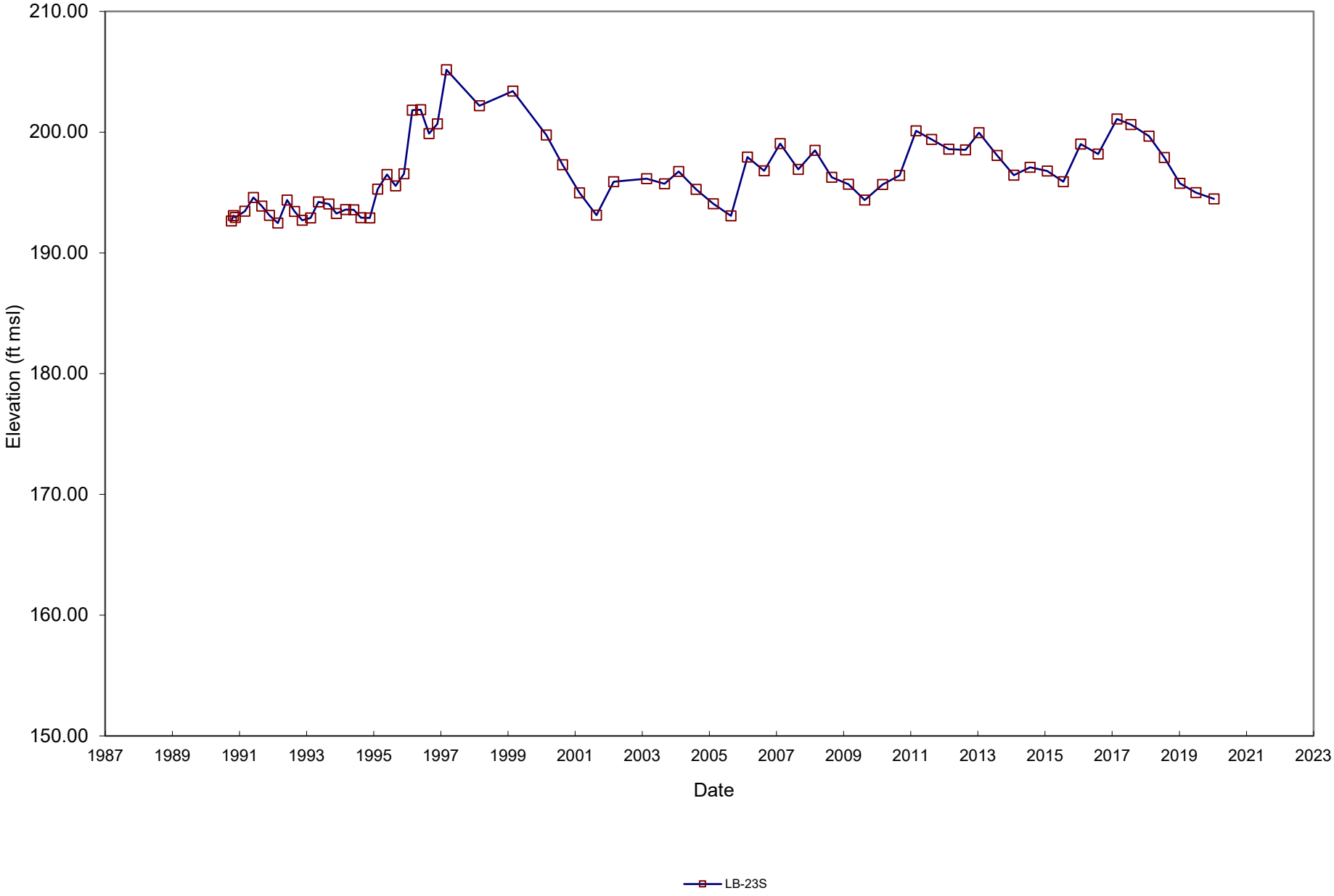
**LB-21S Hydrograph**
**Leichner Landfill**



**LB-22S Hydrograph**
**Leichner Landfill**



**LB-23S Hydrograph**
**Leichner Landfill**



**LB-26I and LB-26D Hydrographs**
**Leichner Landfill**

**LB-27I and LB-27D Hydrographs**
**Leichner Landfill**

# APPENDIX E

## Quality Assurance/Quality Control Reviews of 2020 Laboratory Analytical Data

# First Quarter (February) 2020 QA/QC Reviews

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2020 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**ALS Environmental Lab Report No. K2001096**

Samples: LB-020420-06-3D (LB-3D), LB--020420-05-5D (LB-5D), LB--020420-07-10DR (LB-10DR), LB--020420-02-13D (LB-13D), LB--020420-03-26D (LB-26D), LB-020420-04-DUP1 (DUP1), LB-020420-01-27D (LB-27D), Trip Blank.

Sample Date: 02/04/2020
Laboratory Sample Received Date: 02/05/2020
Sample Receipt Temperature: 0.6ºC
Laboratory Data Received Date: 02/14/2020
QA/QC Review Date: 02/26/2020 (IH)

**VOCs**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| Surrogates | All sample surrogates were within QC limits. |
| LCS | All % recoveries were within QC limits, and all surrogate recoveries were within control limits. |
| LCSD | All RPDs were within QC limits and all % recoveries were within QC limits except for Acetone in batch KQ2001844-06. This is noted in the case narrative and qualified in the analytical report. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries were within QC limits. |
| MSD | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| LCS | All % recoveries within control limits. |
| Duplicates | All RPDs were within QC limits. |

**Hold Times**
All analytical hold times were met.

**Reporting Limit Exceedances**
All project-specific reporting limits were met.

**Field QA/QC**
Field Duplicate
A field duplicate sample LB-02042020-04-DUP1 (DUP1) was collected at monitoring well LB-26D (LB-020420-03-26D) on 02/04/2020. All calculated RPDs were within 20%.

Trip Blank
A laboratory supplied trip blank was carried into the field on 02/04/2020 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect.

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

**Data Validation**

*Upon final review of lab report K2001096 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (02/26/2020; IH).*

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2020 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**ALS Environmental Lab Report No. K2001140**

Samples: LB-020520-01-1D (LB-1D), LB-020520-02-1S (LB-1S), LB-020520-07-13I (LB-13I), LB-020520-03-17D (LB-17D), LB-020520-04-FB (FB), LB-020520-05-17I (LB-17I), LB-020520-08-26I (LB-26I), LB-020520-06-27I (LB-27I), Trip Blank

Sample Date: 02/05/2020
Laboratory Sample Received Date: 02/06/2020
Sample Receipt Temperature: 0.7ºC
Laboratory Data Received Date: 02/21/2020
QA/QC Review Date: 02/26/2020 (IH)

**VOCs**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| Surrogates | All sample surrogates were within QC limits. |
| LCS | All % recoveries were within QC limits except for Dichlorodifluoromethane in batch KQ2002101-05, this is noted in the case narrative and qualified (*) in the analytical report. All surrogate recoveries were within control limits. |
| LCSD | All RPDs were within QC limits and all % recoveries were within QC limits except for Dichlorodifluoromethane in batch KQ2002101-06. The RPD for Dichlorodifluoromethane was within control limits indicating that sample quality was not significantly affected. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries were within QC limits. |
| MSD | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| LCS | All % recoveries within control limits. |
| Matrix Spikes | All % recoveries were within QC limits. |
| MSD | All RPDs were within QC limits. |
| Duplicates | All RPDs were within QC limits. |

**Hold Times**
All analytical hold times were met.

**Reporting Limit Exceedances**
All project-specific reporting limits were met.

**Field QA/QC**
Trip Blank
A laboratory supplied trip blank was carried into the field on 02/05/2020 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.

Field Blank
A field blank, LB-020520-04-FB (FB) was taken on 02/05/2020 near LB-17D. The field blank analytes were reported as non-detect.

**Notes**

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

**Data Validation**

*Upon final review of lab report K2001140 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (02/26/2020; IH).*

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2020 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**ALS Environmental Lab Report No. K2001192**

Samples: LB-020620-06-3S (LB-3S), LB-020620-03-5S (LB-5S), LB-020620-04-DUP2 (DUP2), LB-020620-05-6S (LB-6S), LB-020620-01-10SR (LB-10SR), LB-020620-02-20S (LB-20S), Trip Blanks

Sample Date: 02/06/2020
Laboratory Sample Received Date: 02/07/2020
Sample Receipt Temperature: 0.9ºC
Laboratory Data Received Date: 02/20/2020
QA/QC Review Date: 05/27/2020 (IH)

**VOCs**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| Surrogates | All sample surrogates were within QC limits. |
| Matrix Spikes | All % recoveries were within QC limits except for Dichlorodifluoromethane which was indicated (*) in the analytical report. |
| MSD | All % recoveries were within QC limits and all RPD were within QC limits. |
| LCS | All % recoveries were within QC limits except for Bromomethane which was indicated (*) in the analytical report, and all surrogate recoveries were within control limits. |
| LCSD | All % recoveries were within QC limits and all RPDs were within QC limits. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries were within QC limits. |
| MSD | All RPDs were within QC 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**
Field Duplicate
A field duplicate sample LB-020620-04-DUP2 (DUP2) was collected at monitoring well LB-5S (LB-020620-03-5S) on 02/06/2020. All calculated RPDs were within 20%.

Trip Blank
A laboratory supplied trip blank was carried into the field on 02/06/20 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect.

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

**Data Validation**

*Upon final review of lab report K2001192 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (05/27/2020; IH).*

# Third Quarter (July) 2020 QA/QC Reviews

**SCS Engineers QA/QC Review**
**Groundwater - 3Q 2020 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**ALS Environmental Lab Report No. K2006368**

Samples: LB-072820-01-5S (LB-5S), LB-072820-02-27I (LB-27I), LB-072820-03-13I (LB-13I), LB-072820-04-26I (LB-26I), LB-072820-05-DUP (DUP), LB-072820-06-6S (LB-6S), LB-072920-01-1S (LB-1S), LB-072920-02-FB (FB), LB-072920-03-10SR (LB-10SR), and Trip Blanks.

Sample Date: 07/28/2020 and 7/29/2020
Laboratory Sample Received Date: 07/29/2020
Sample Receipt Temperature: 1.6, 2.7, 1.7, 2.7°C
Laboratory Data Received Date: 08/19/2020
QA/QC Review Date: 09/04/2020 (IH)

**VOCs**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| Surrogates | All sample surrogates were within QC limits. |
| LCS | All % recoveries were within QC limits, and all surrogate recoveries were within control limits. |
| Notes: | Bromodichloromethane was flagged (*) as outside the control criterion for Continuing Calibration Verification (CCV). This was qualified for in the case narrative. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries were within QC limits. |
| Duplicates | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| LCS | All % recoveries within control limits. |
| LCSD | All RPDs were within QC Limits. |
| Matrix Spikes | All % recoveries were within QC limits. |
| MSD | All RPDs were within QC limits. |
| Duplicates | All RPDs were within QC limits. |

**Hold Times**
All analytical hold times were met.

**Reporting Limit Exceedances**
All project-specific reporting limits were met.

**Field QA/QC**
Field Duplicate
A field duplicate sample LB-072820-05-DUP (DUP) was collected at monitoring well LB-26I (LB-072820-05-26I) on 07/28/2020. All calculated RPDs were within 20%.

Trip Blank
A laboratory supplied trip blank was carried into the field on 07/28/2020 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect.

**Notes**
None.

**Data Validation**

*Upon final review of lab report K2006368 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (09/04/2020; IH).*

# October 2020 Verification Sampling QA/QC Review

**SCS Engineers QA/QC Review**
**Groundwater - 3Q 2020 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**ALS Environmental Lab Report No. K2009361**

Samples: LB-101420-01-27I (LB-27I), LB-101420-02-FB (LB-27I), LB-101420-03-DUP (LB-27I), LB-101420-04-1S (LB-1S), LB-101420-05-10SR (LB-10SR), and Trip Blanks.

Sample Date: 10-14-2020
Laboratory Sample Received Date: 10/15/2020
Sample Receipt Temperature: 5.2ºC
Laboratory Data Received Date: 10/29/2020
QA/QC Review Date: 01/22/2021 (IH)

**VOCs**

| | |
|---|---|
| Method Blanks | All analytes were reported as non-detect. |
| Surrogates | All sample surrogates were within QC limits. |
| LCS | All % recoveries were within QC limits. |
| LCSD | All RPDs were within QC limits. |

**Hold Times**
All analytical hold times were met.

**Reporting Limit Exceedances**
All project-specific reporting limits were met.

**Field QA/QC**
Field Duplicate
A field duplicate sample LB-101420-03-DUP (DUP) was collected at monitoring well LB-27I (LB-101420-01-27I) on 07/28/2020. All calculated RPDs were within 20%.

Trip Blank
A laboratory supplied trip blank was carried into the field on 10/14/2020 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. All trip blank analytes were reported as non-detect.

**Notes**
None.

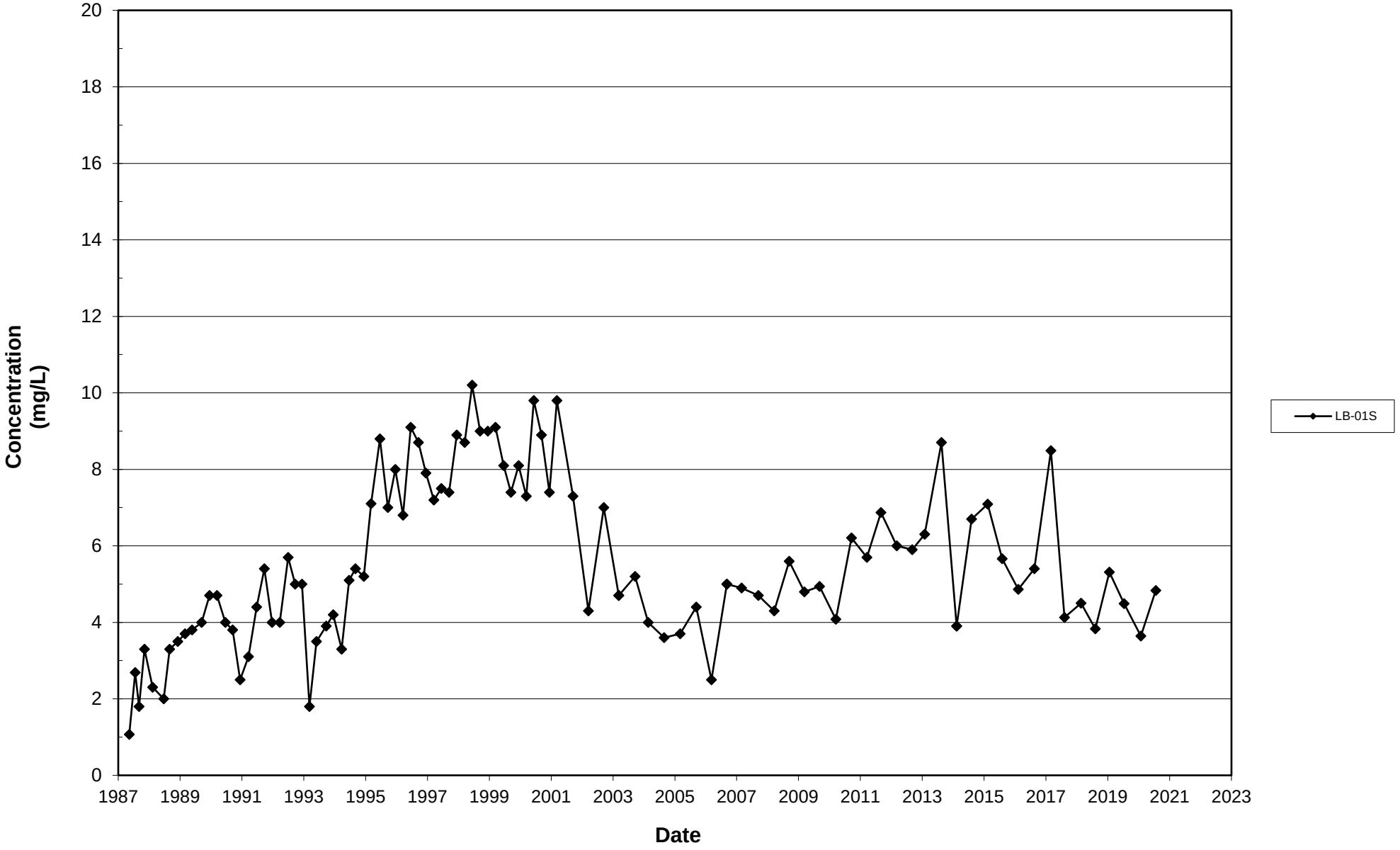
**Data Validation**
*Upon final review of lab report K2009361 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (01/22/2021; IH).*

# APPENDIX F

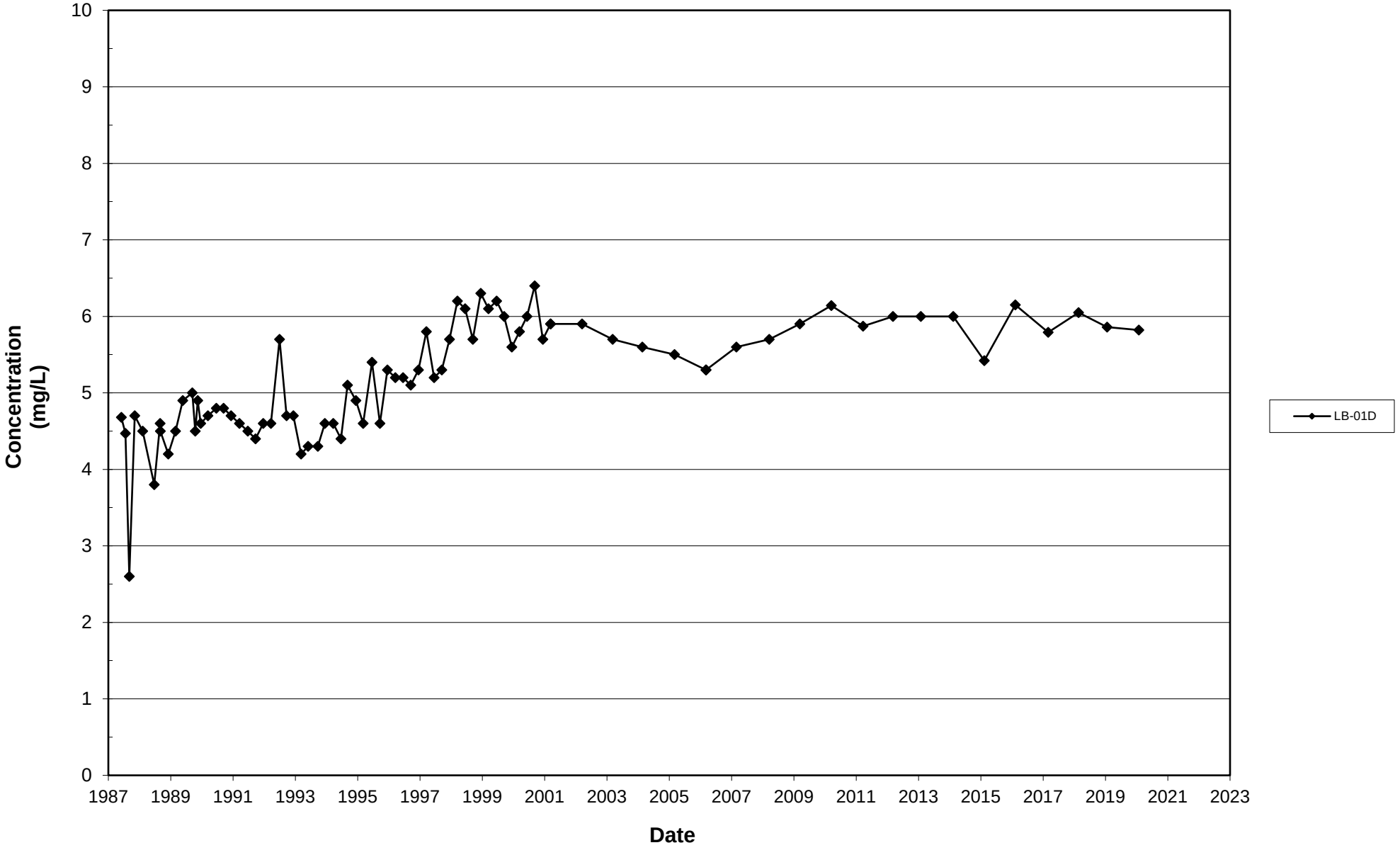
## Groundwater Time-Concentration Graphs

Nitrate

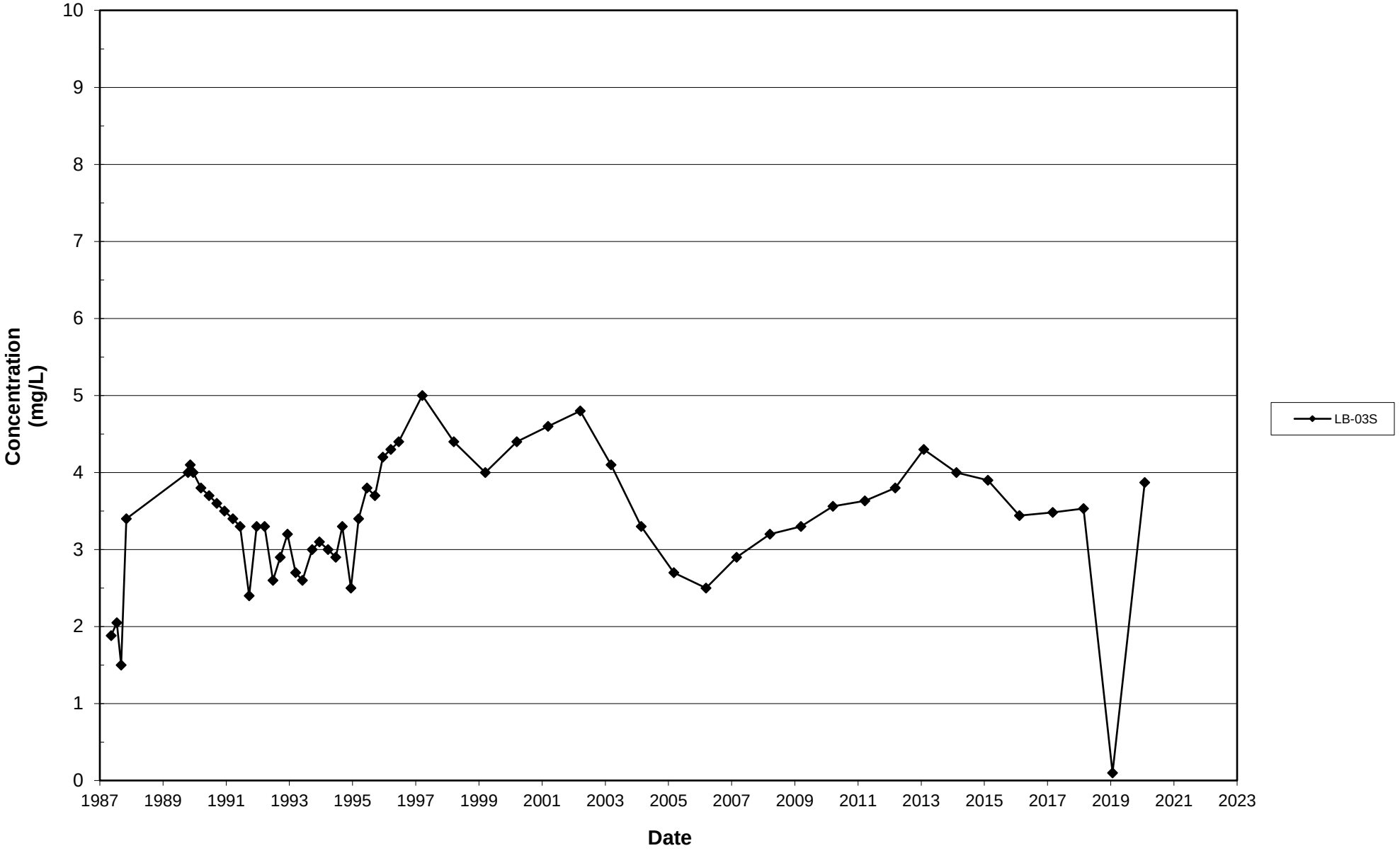
# Leichner Landfill
# Nitrate, LB-01S
# 1987 - 2020



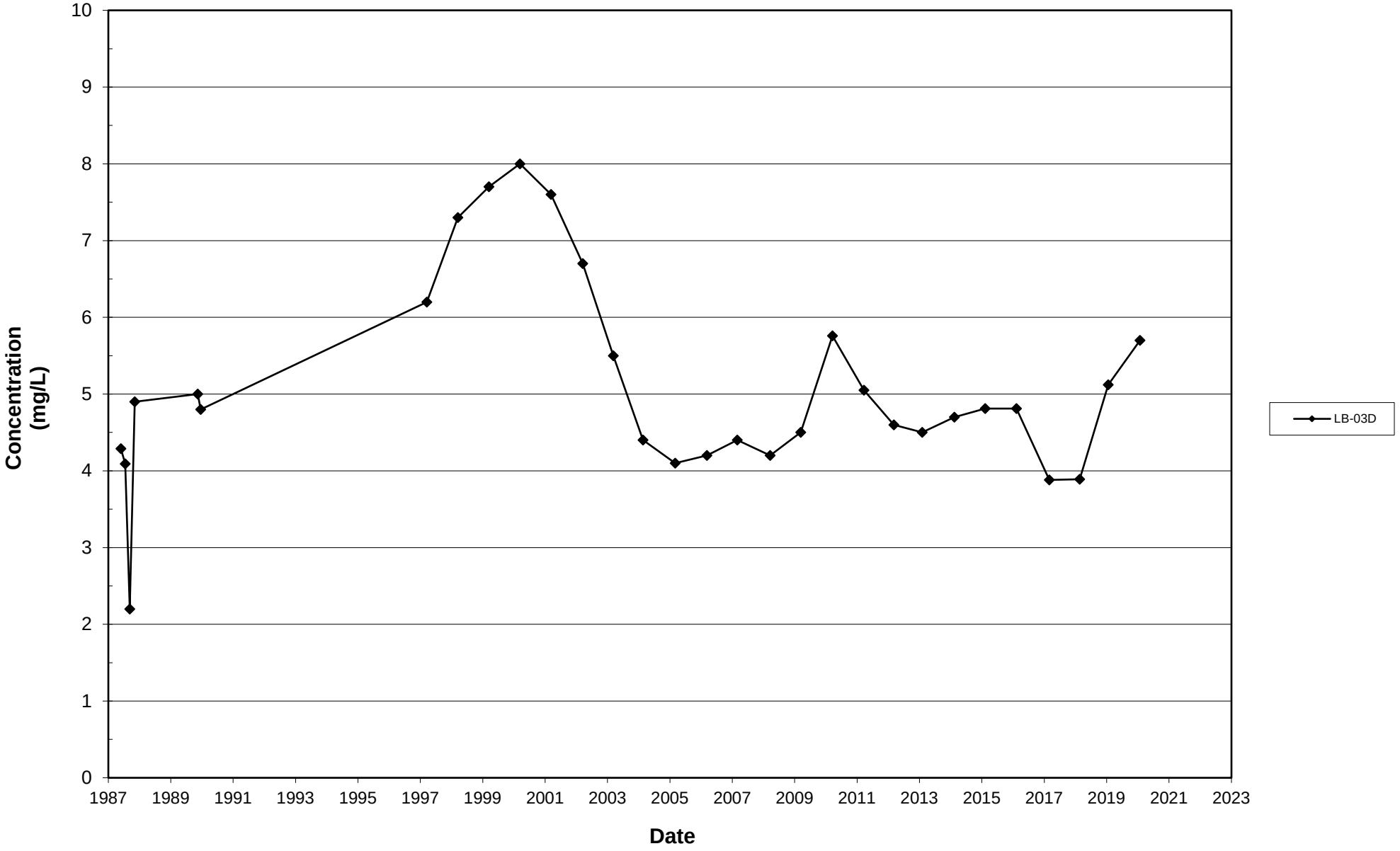
# Leichner Landfill
# Nitrate, LB-01D
# 1987 - 2020



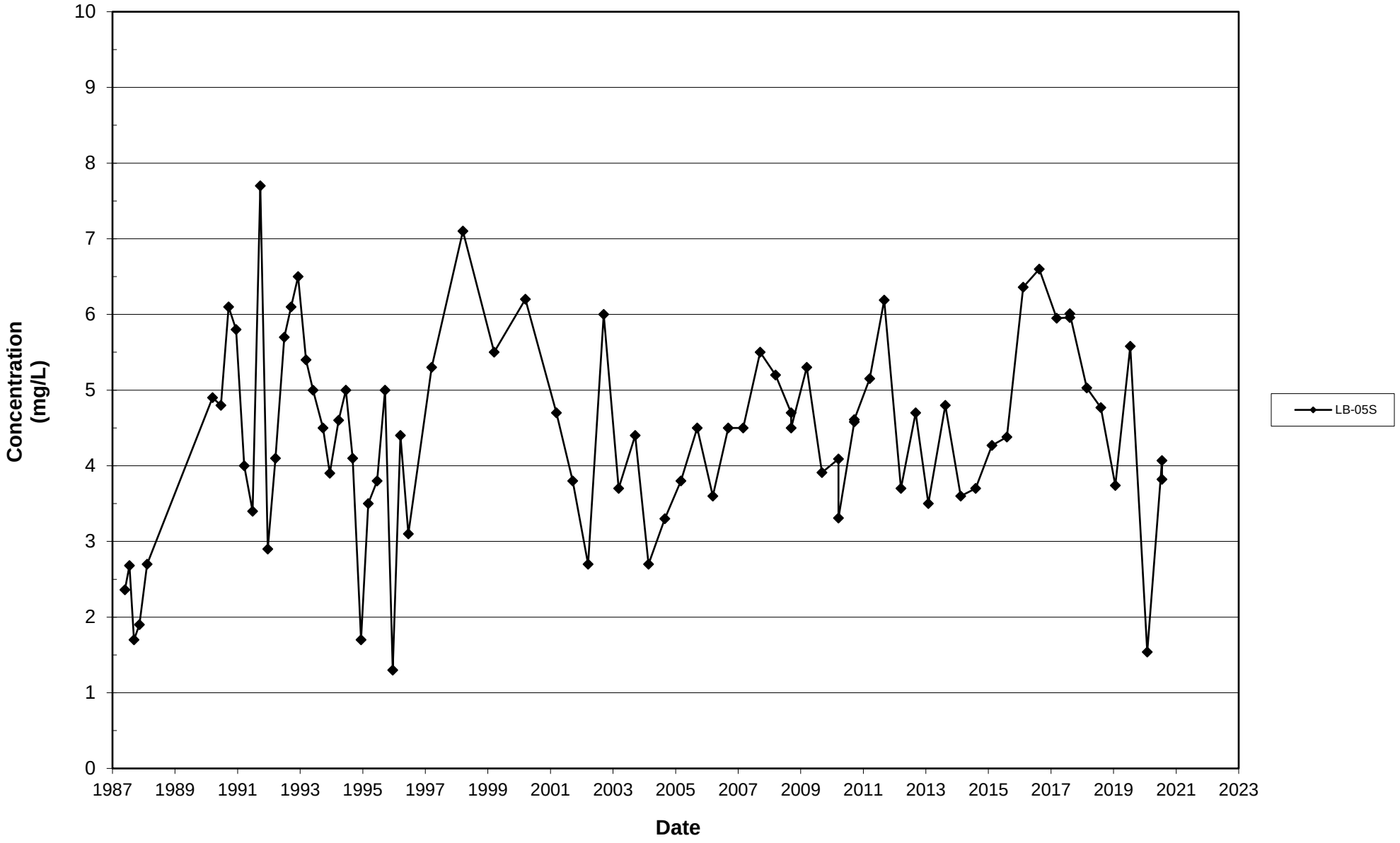
# Leichner Landfill
# Nitrate, LB-03S
# 1987 - 2020



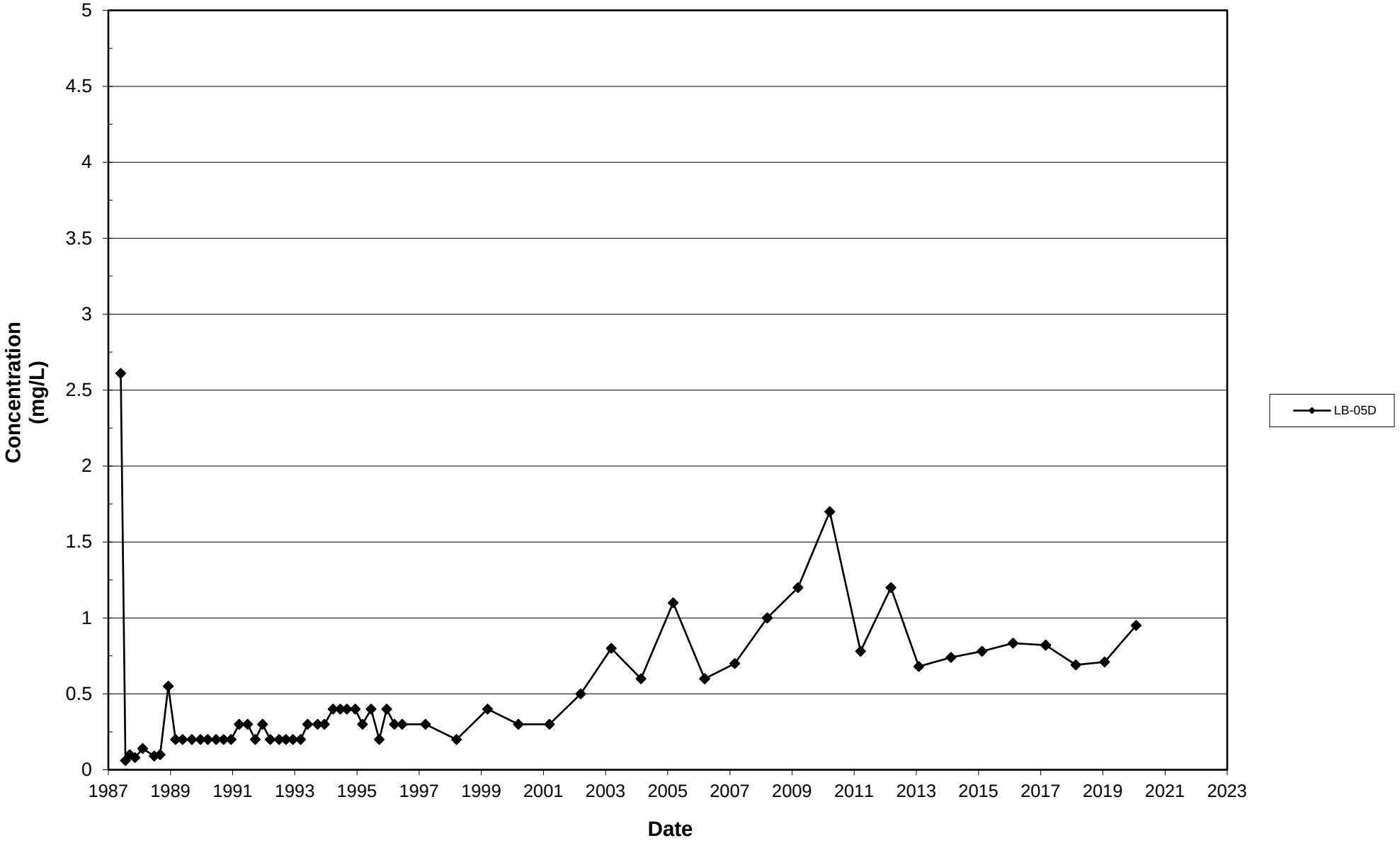
# Leichner Landfill
# Nitrate, LB-03D
# 1987 - 2020



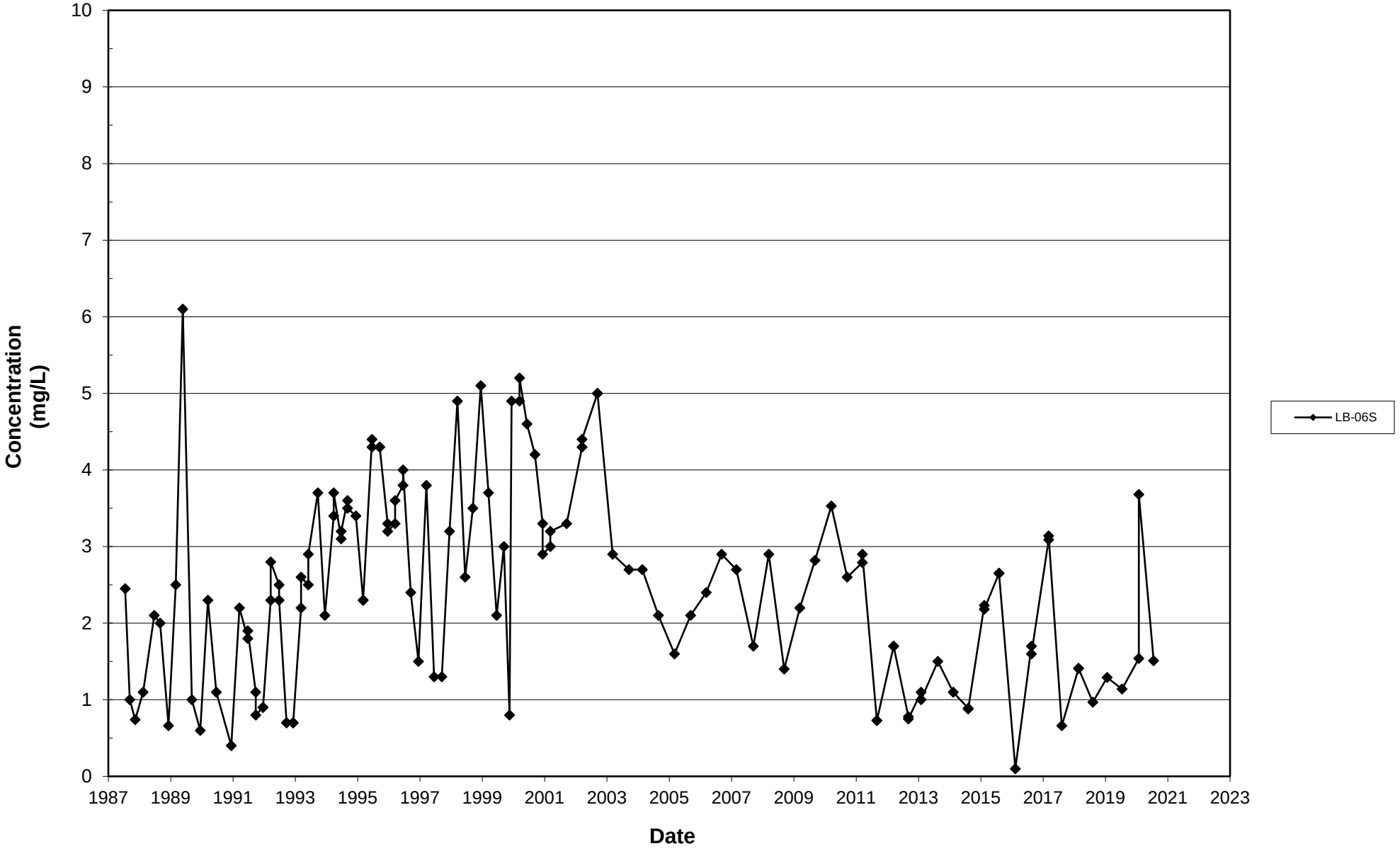
# Leichner Landfill
# Nitrate, LB-05S
# 1987 - 2020



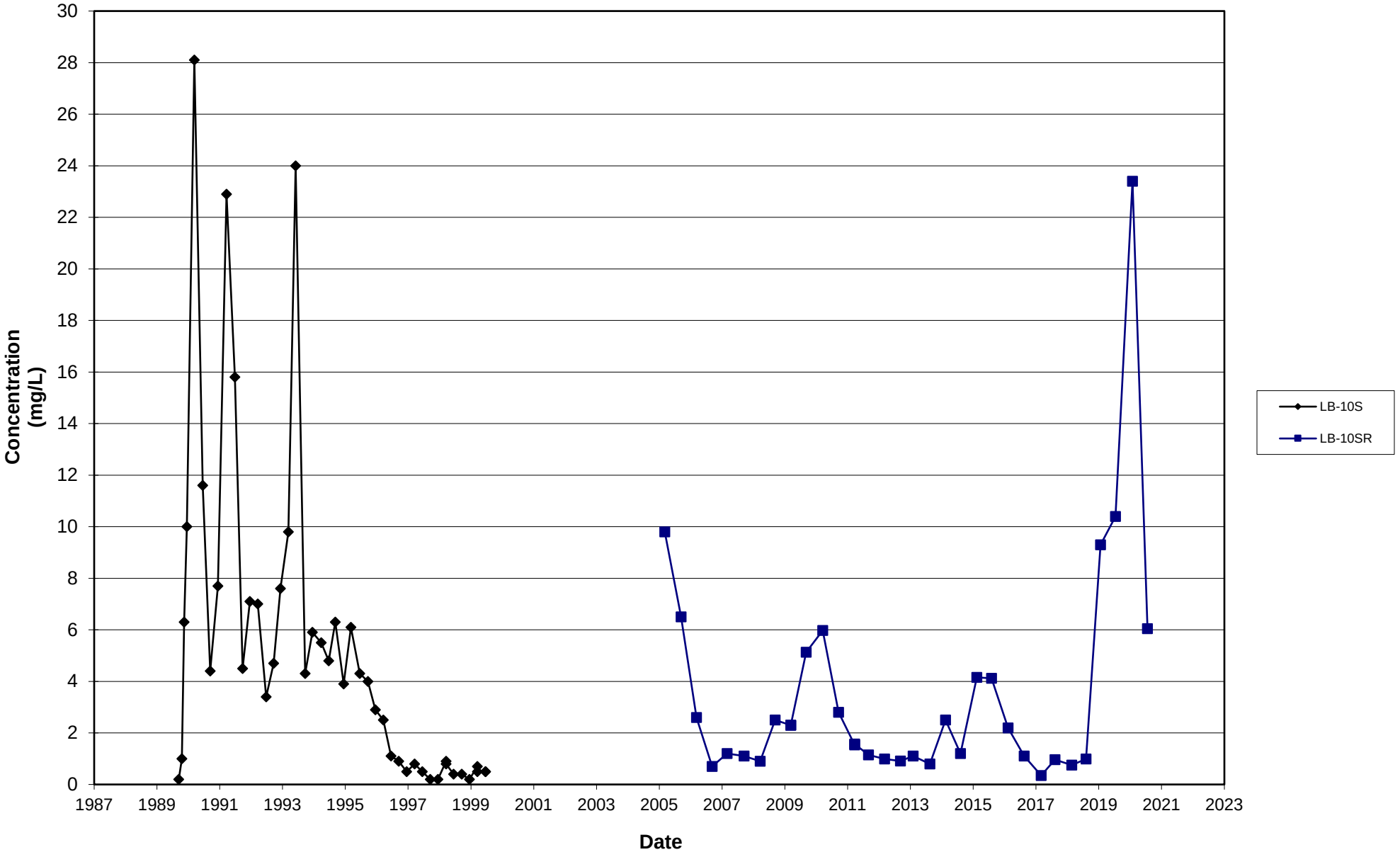
# Leichner Landfill
# Nitrate, LB-05D
# 1987 - 2020



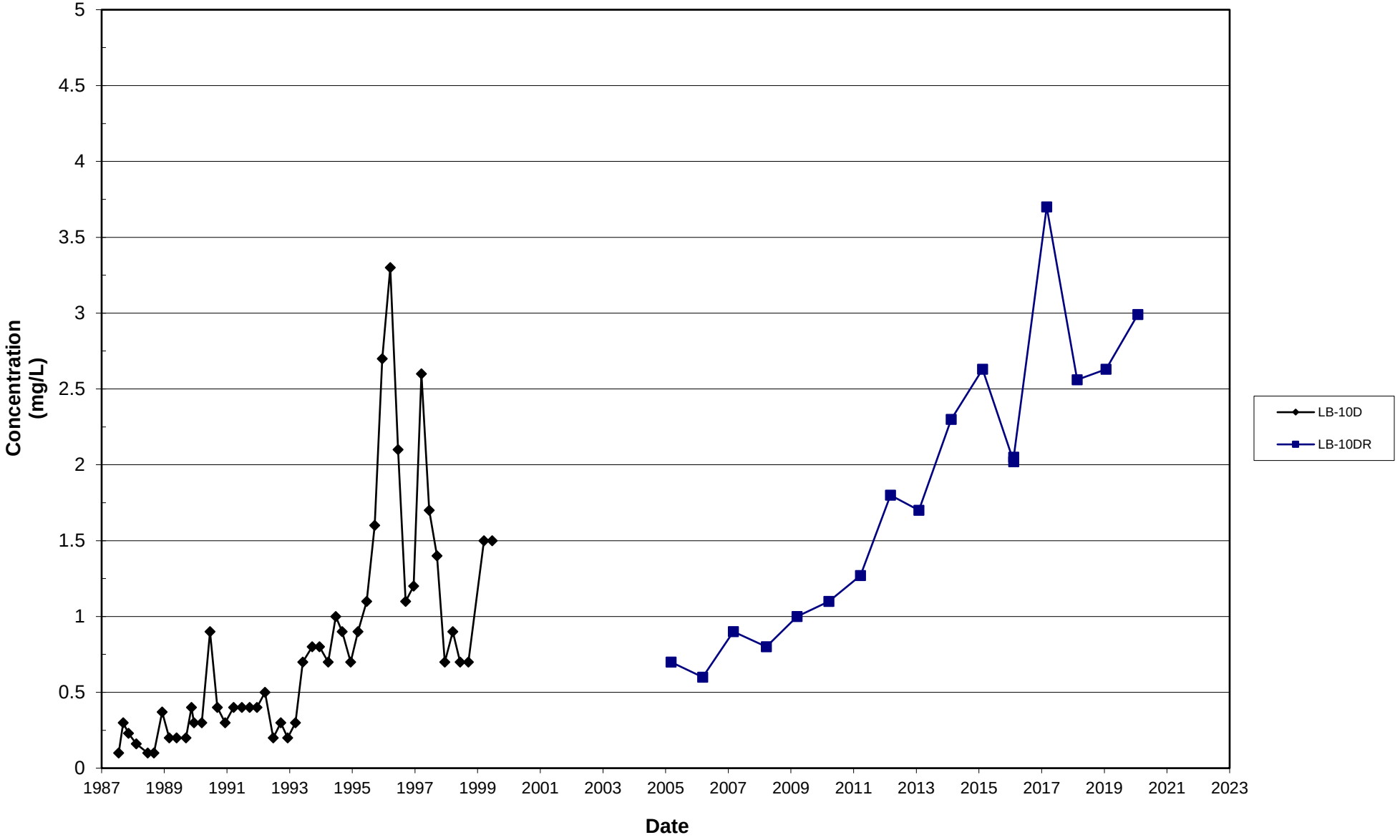
# Leichner Landfill
# Nitrate, LB-06S
# 1987 - 2020



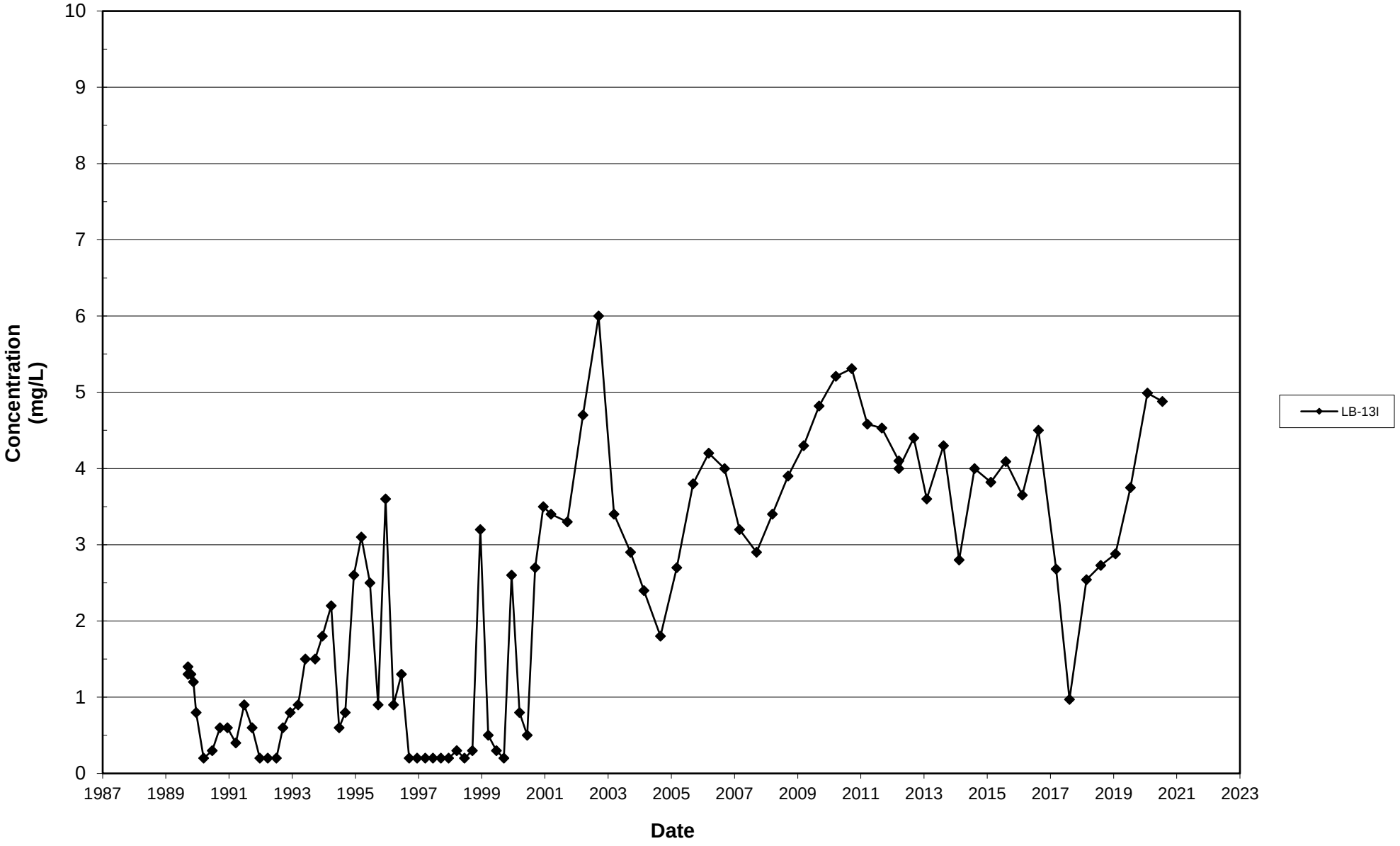
# Leichner Landfill
# Nitrate, LB-10S and LB-10SR
# 1987 - 2020



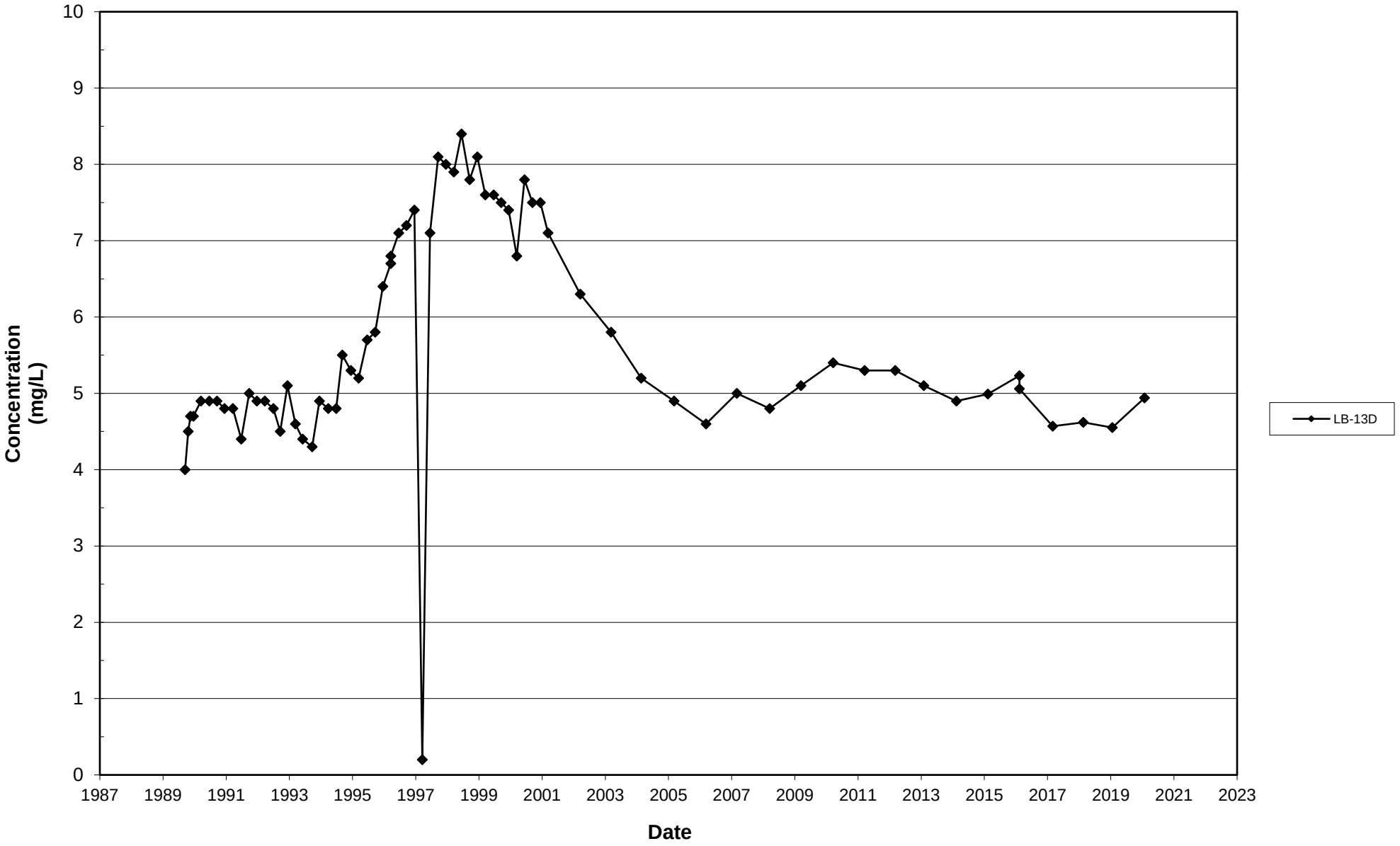
# Leichner Landfill
# Nitrate, LB-10D and LB-10DR
# 1987 - 2020



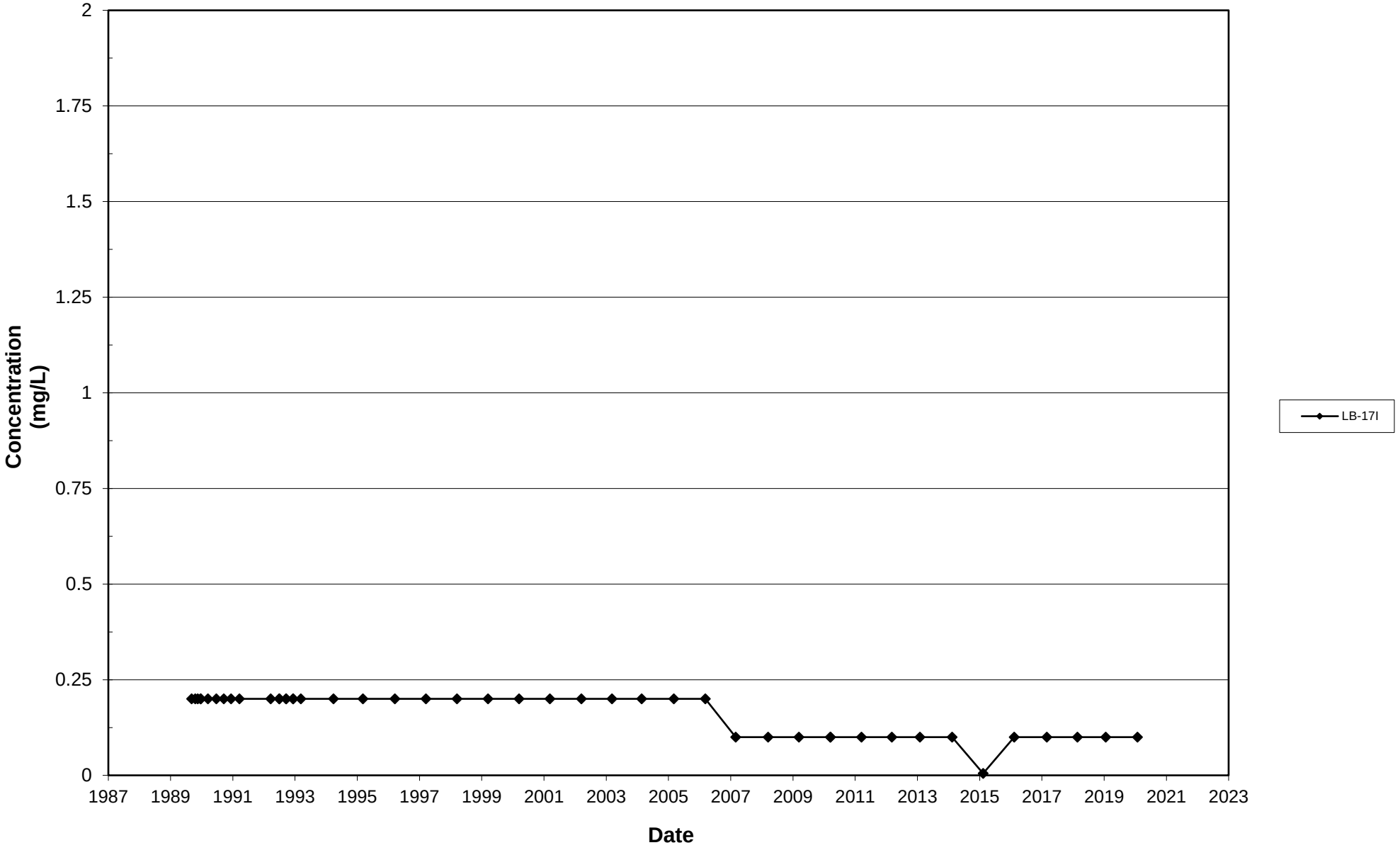
# Leichner Landfill
# Nitrate, LB-13I
# 1987 - 2020



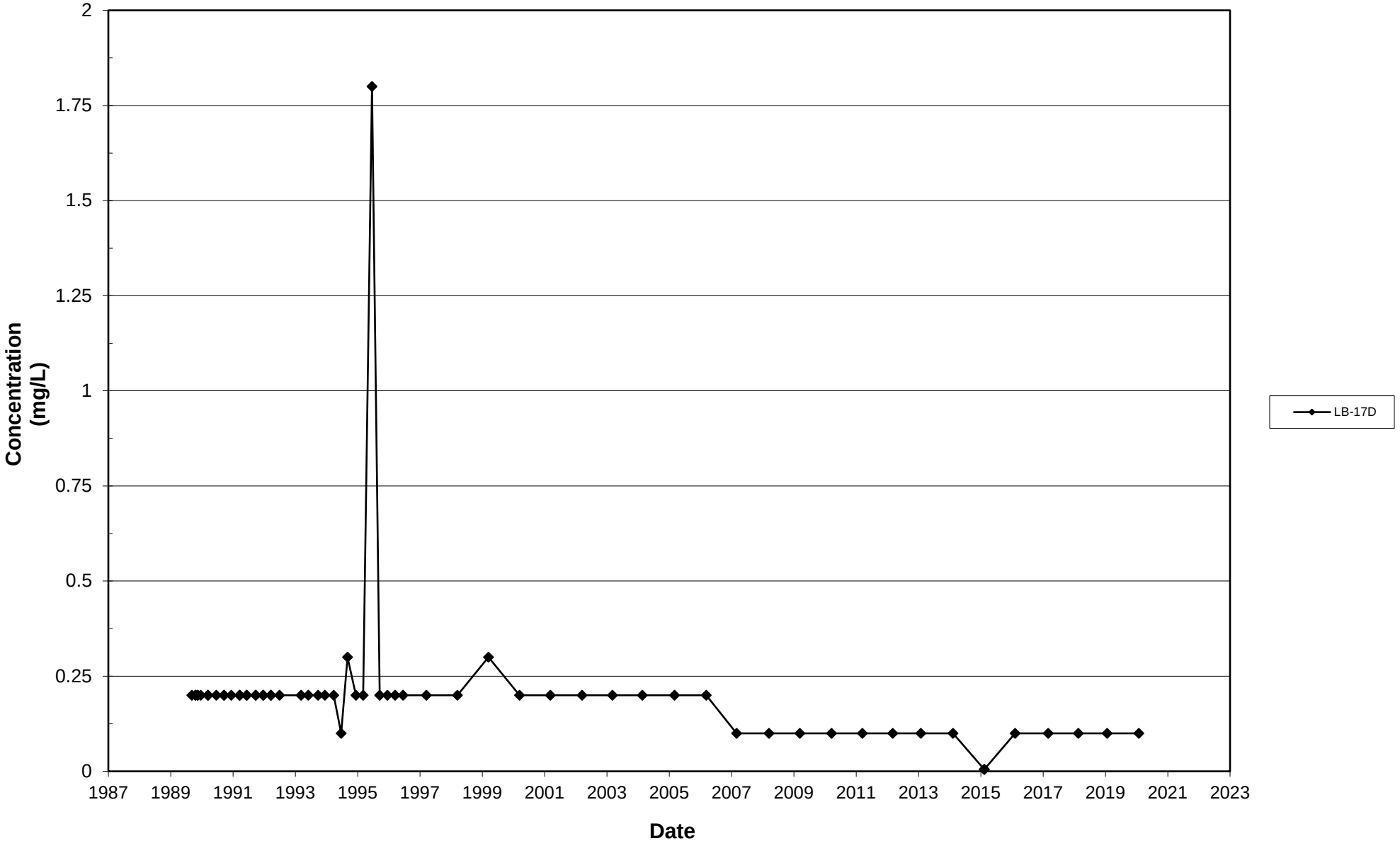
# Leichner Landfill
# Nitrate, LB-13D
# 1987 - 2020



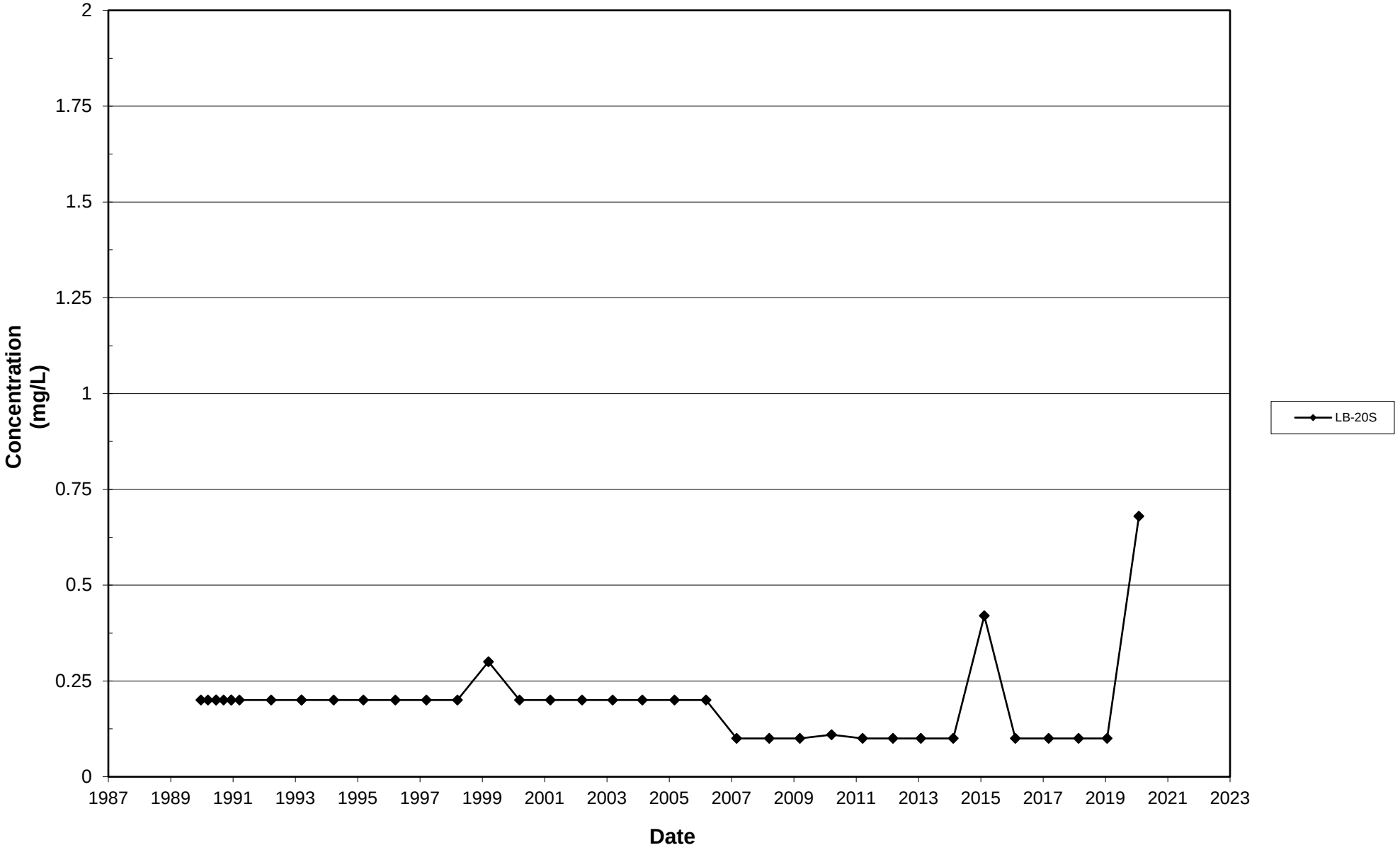
# Leichner Landfill
## Nitrate, LB-17I
## 1987 - 2020



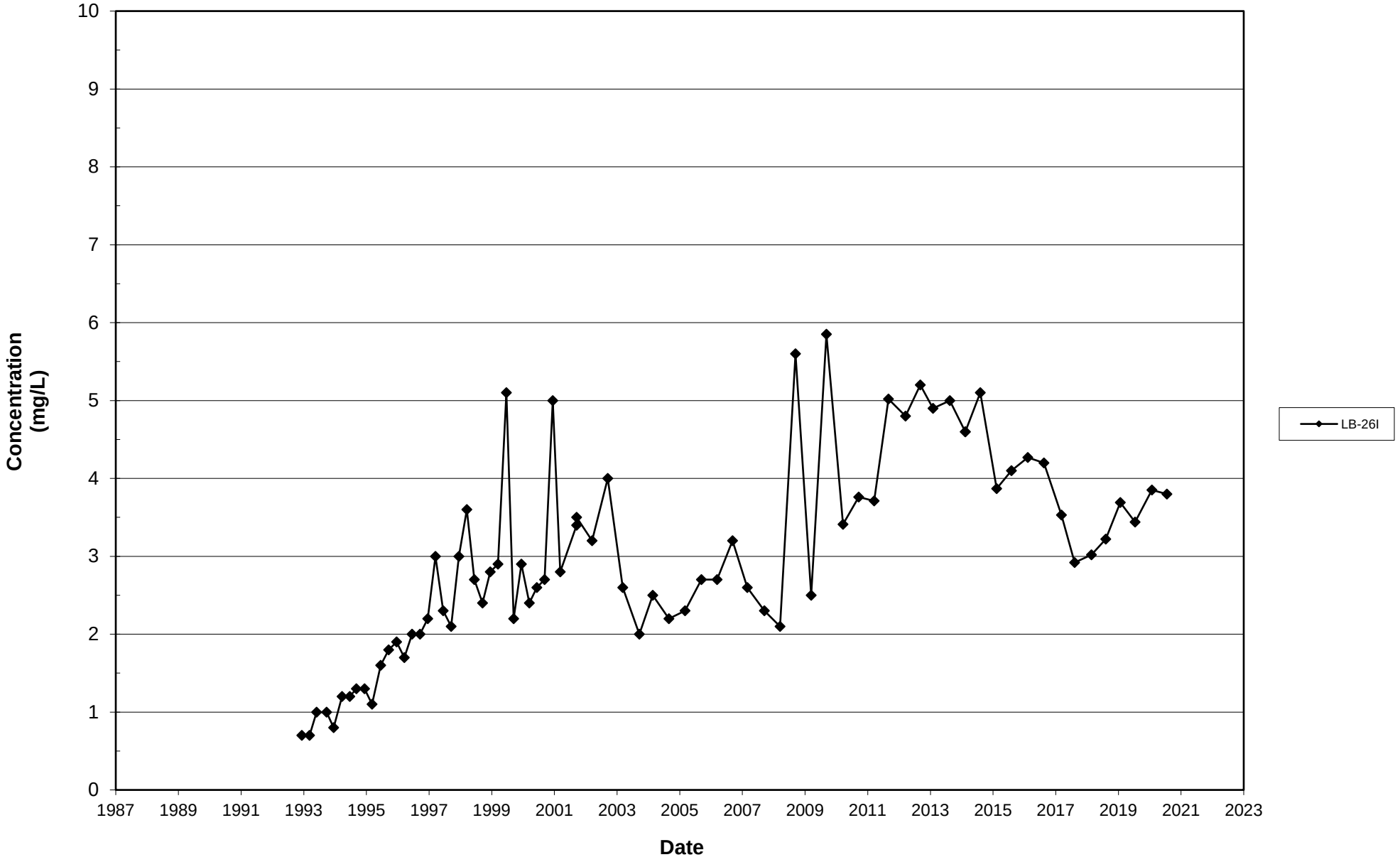
# Leichner Landfill
# Nitrate, LB-17D
# 1987 - 2020



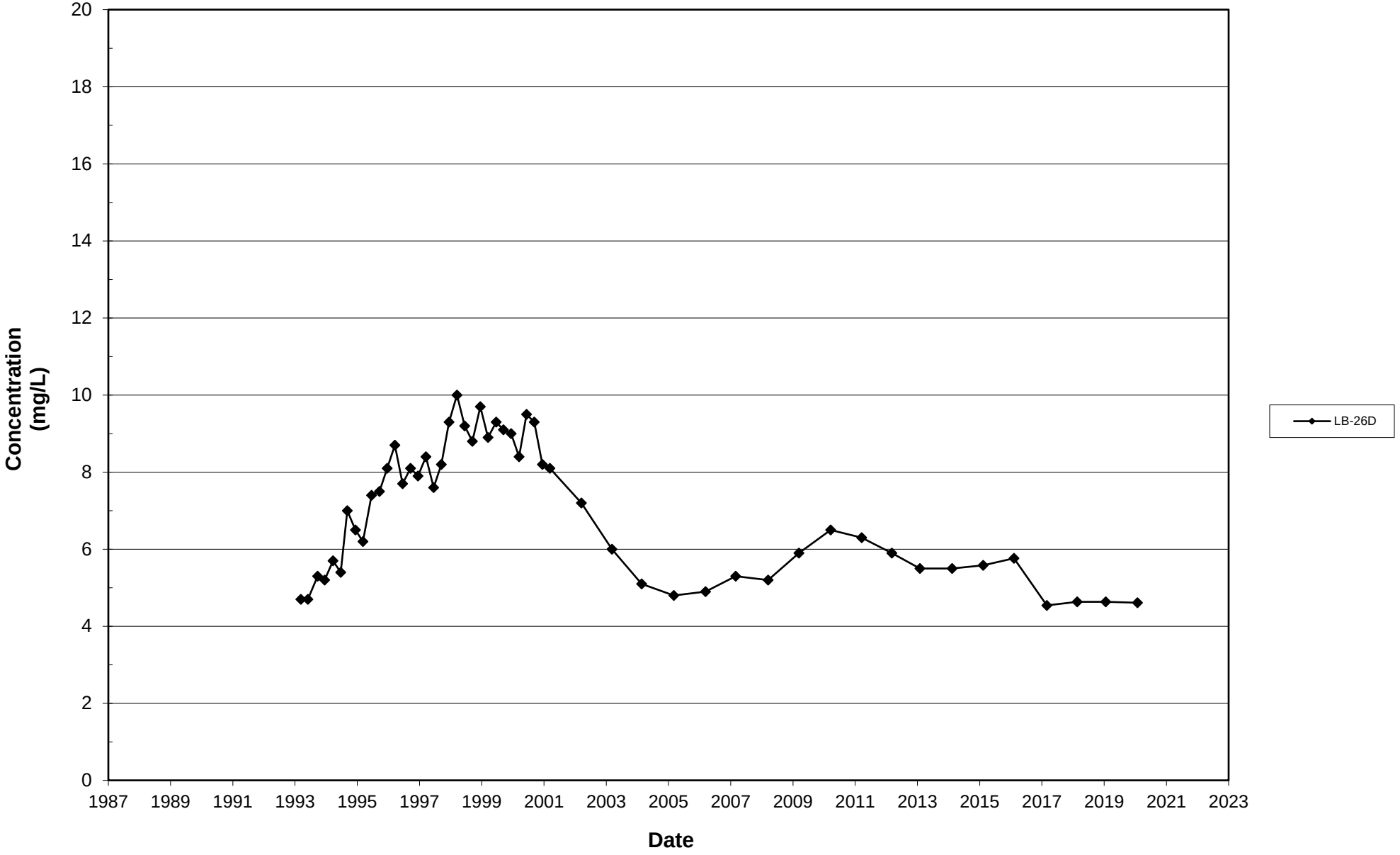
# Leichner Landfill
# Nitrate, LB-20S
# 1987 - 2020



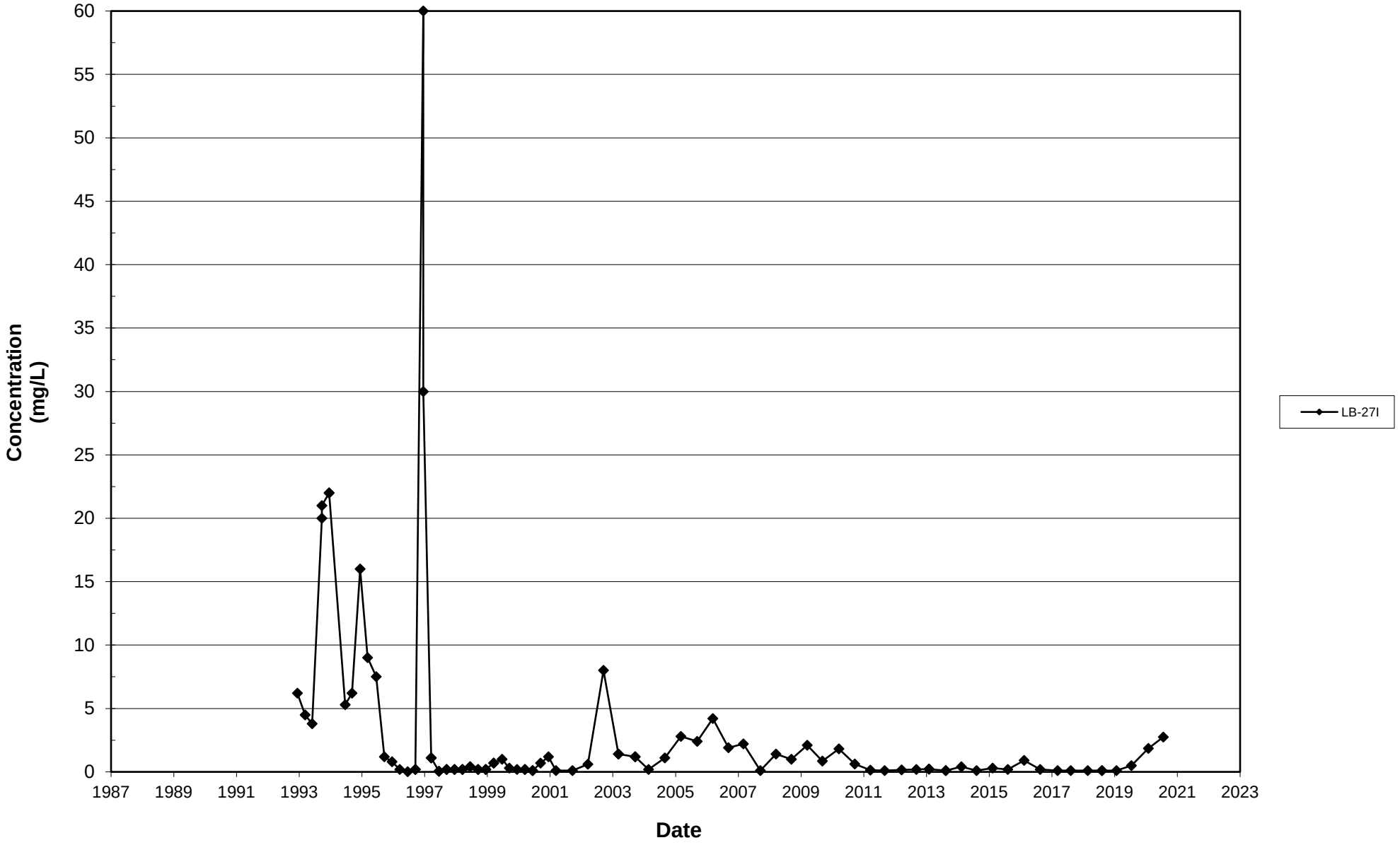
# Leichner Landfill
# Nitrate, LB-26I
# 1987 - 2020



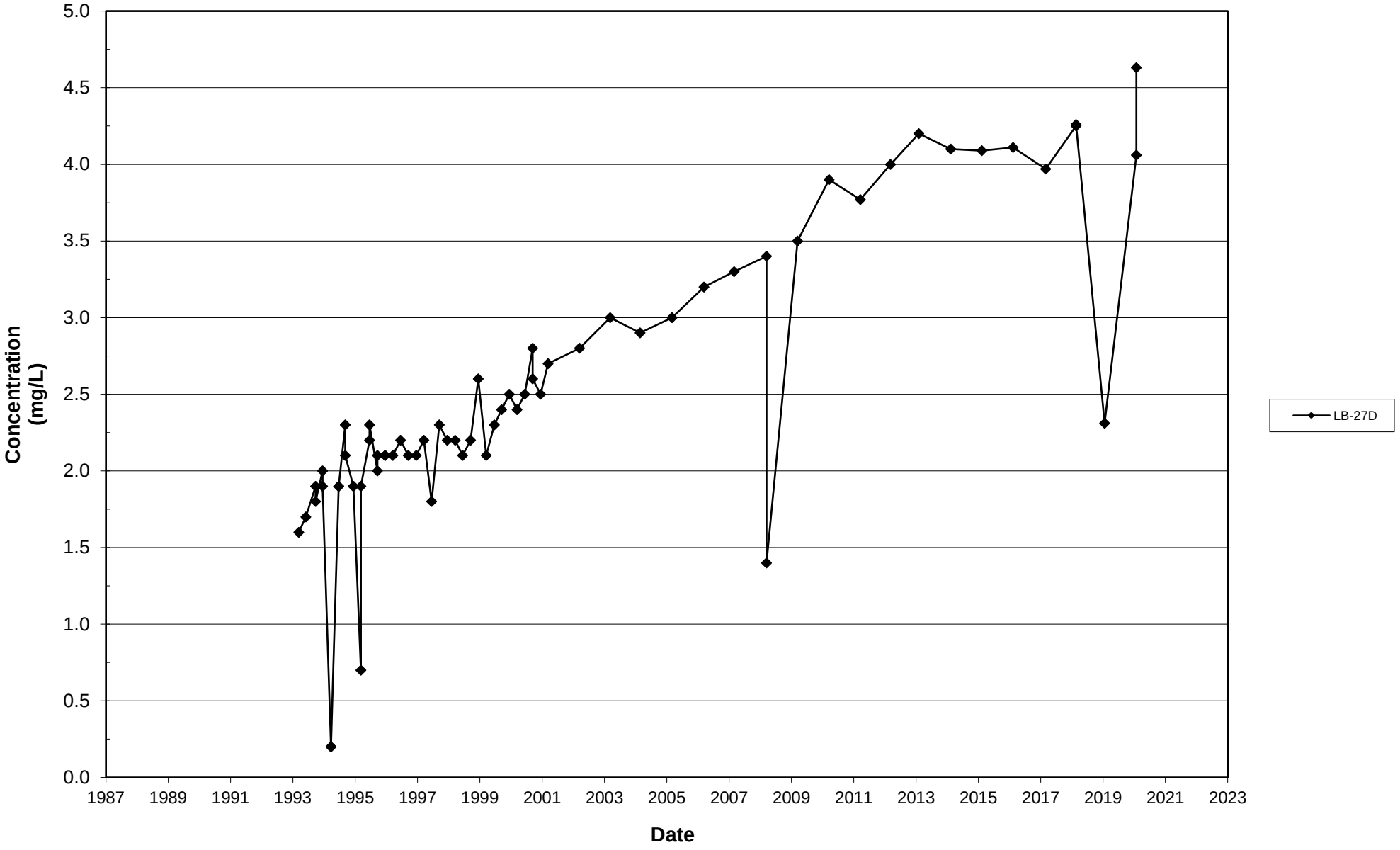
# Leichner Landfill
# Nitrate, LB-26D
# 1987 - 2020



# Leichner Landfill
# Nitrate, LB-27I
# 1987 - 2020

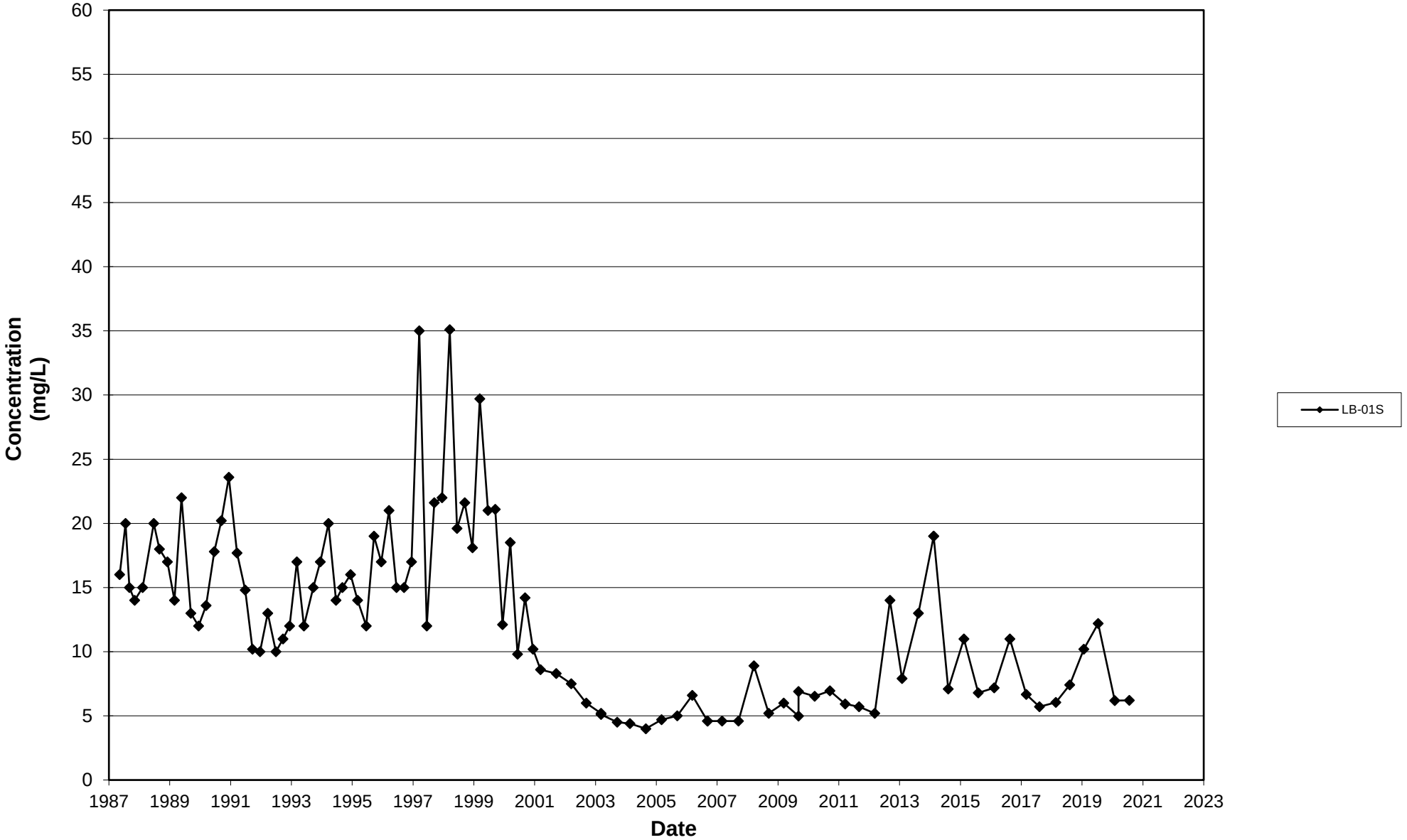


# Leichner Landfill
# Nitrate, LB-27D
# 1987 - 2020

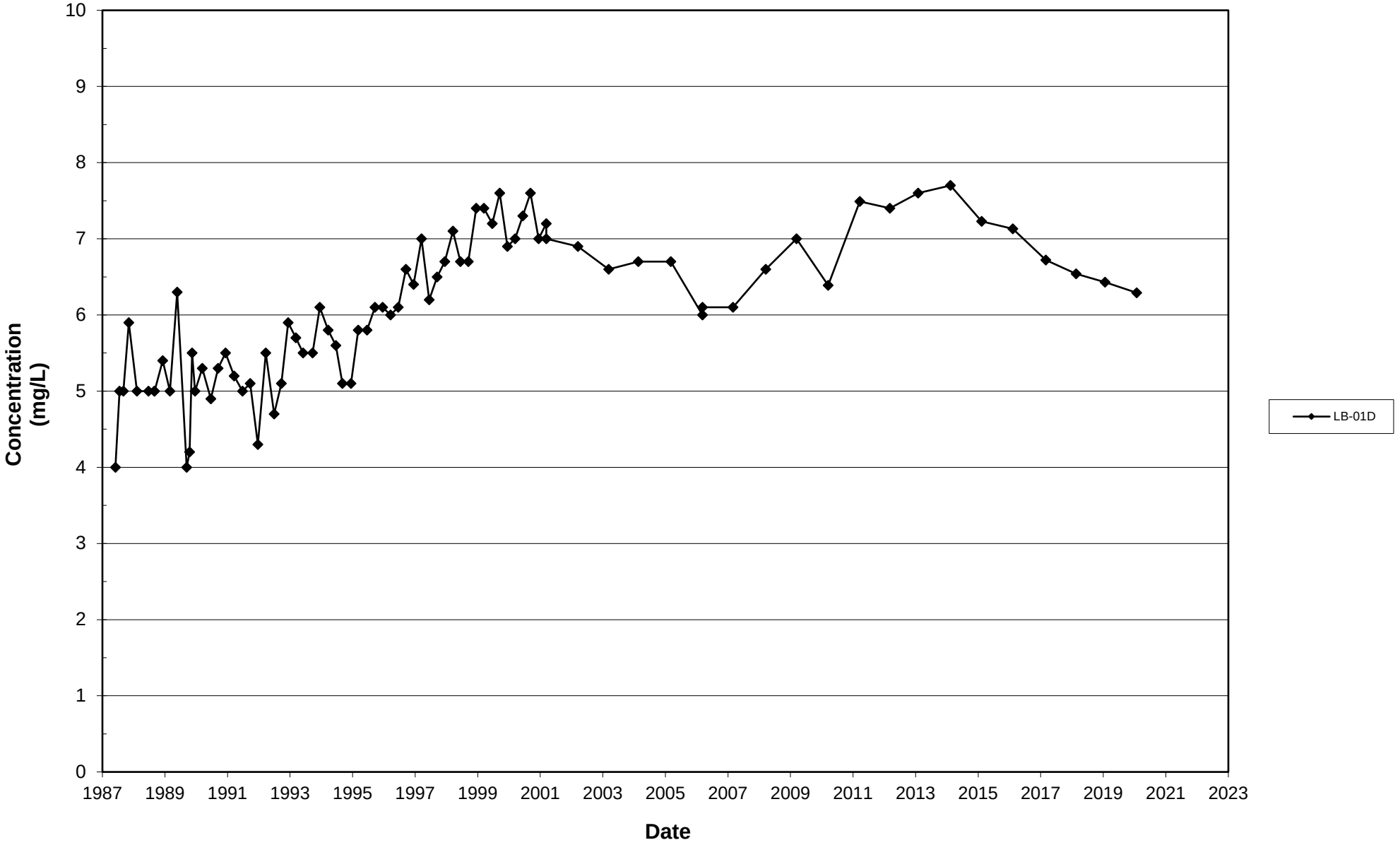


Chloride

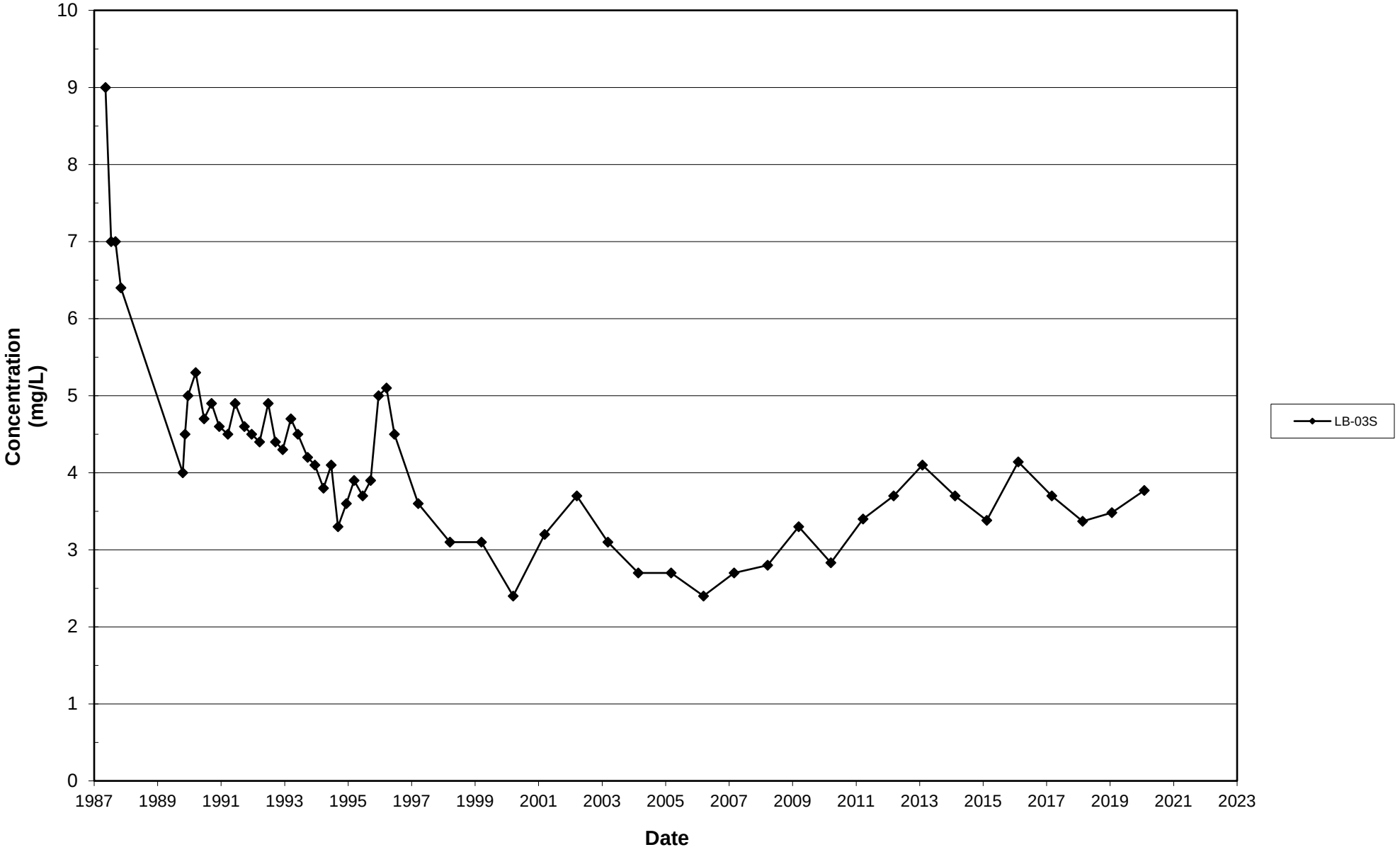
# Leichner Landfill
# Chloride, LB-01S
# 1987 - 2020



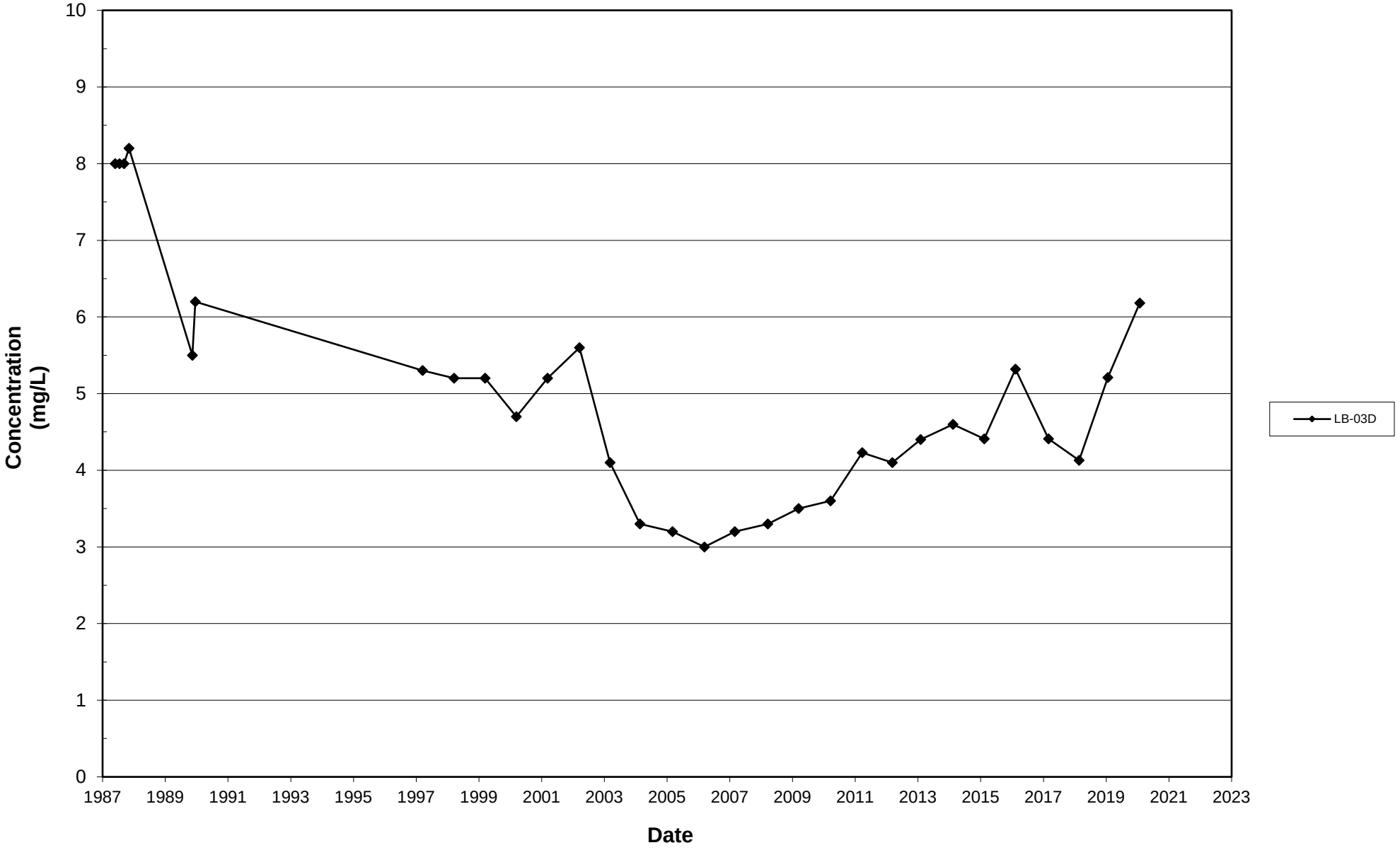
# Leichner Landfill
# Chloride, LB-01D
# 1987 - 2020



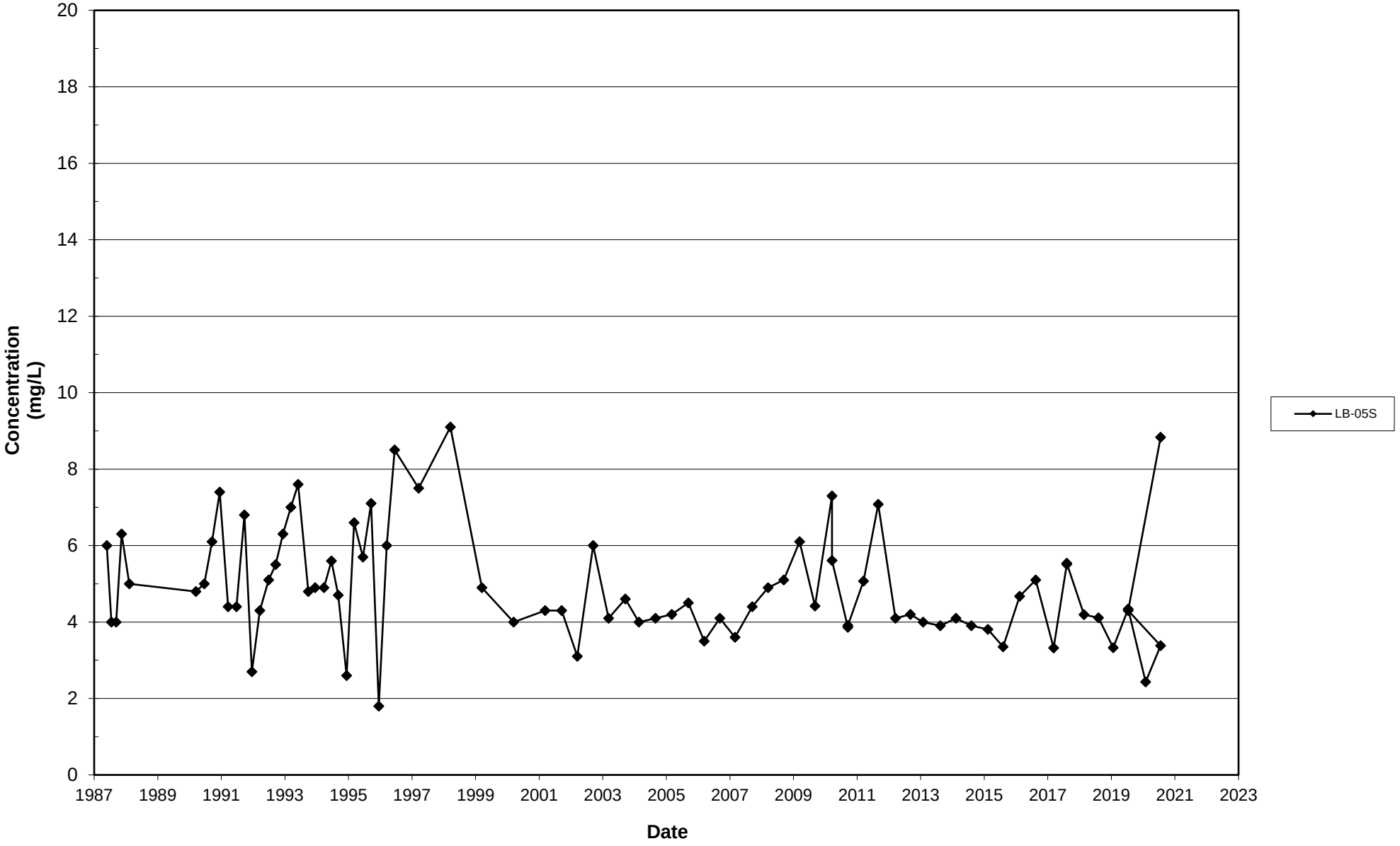
# Leichner Landfill
# Chloride, LB-03S
# 1987 - 2020



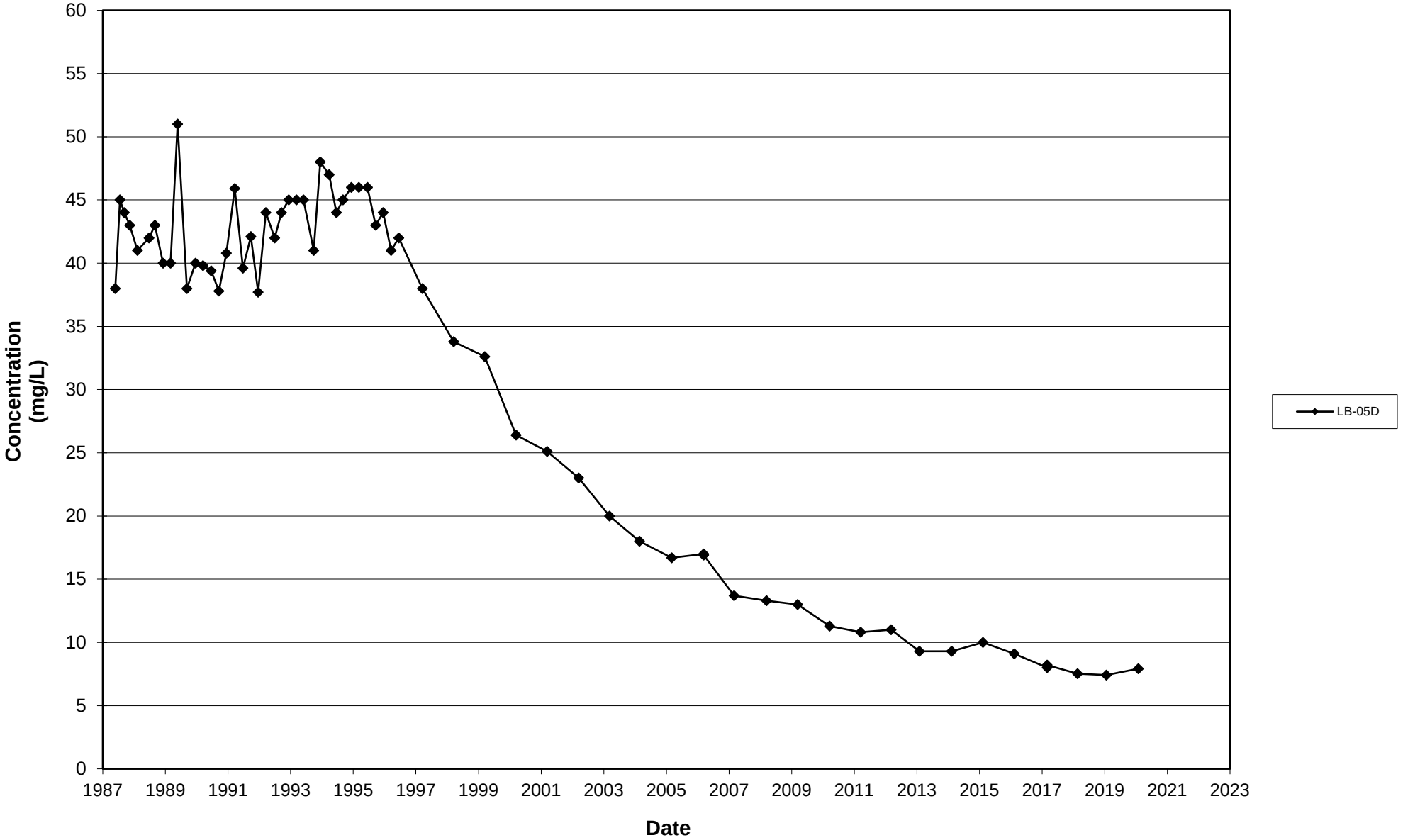
# Leichner Landfill
# Chloride, LB-03D
# 1987 - 2020



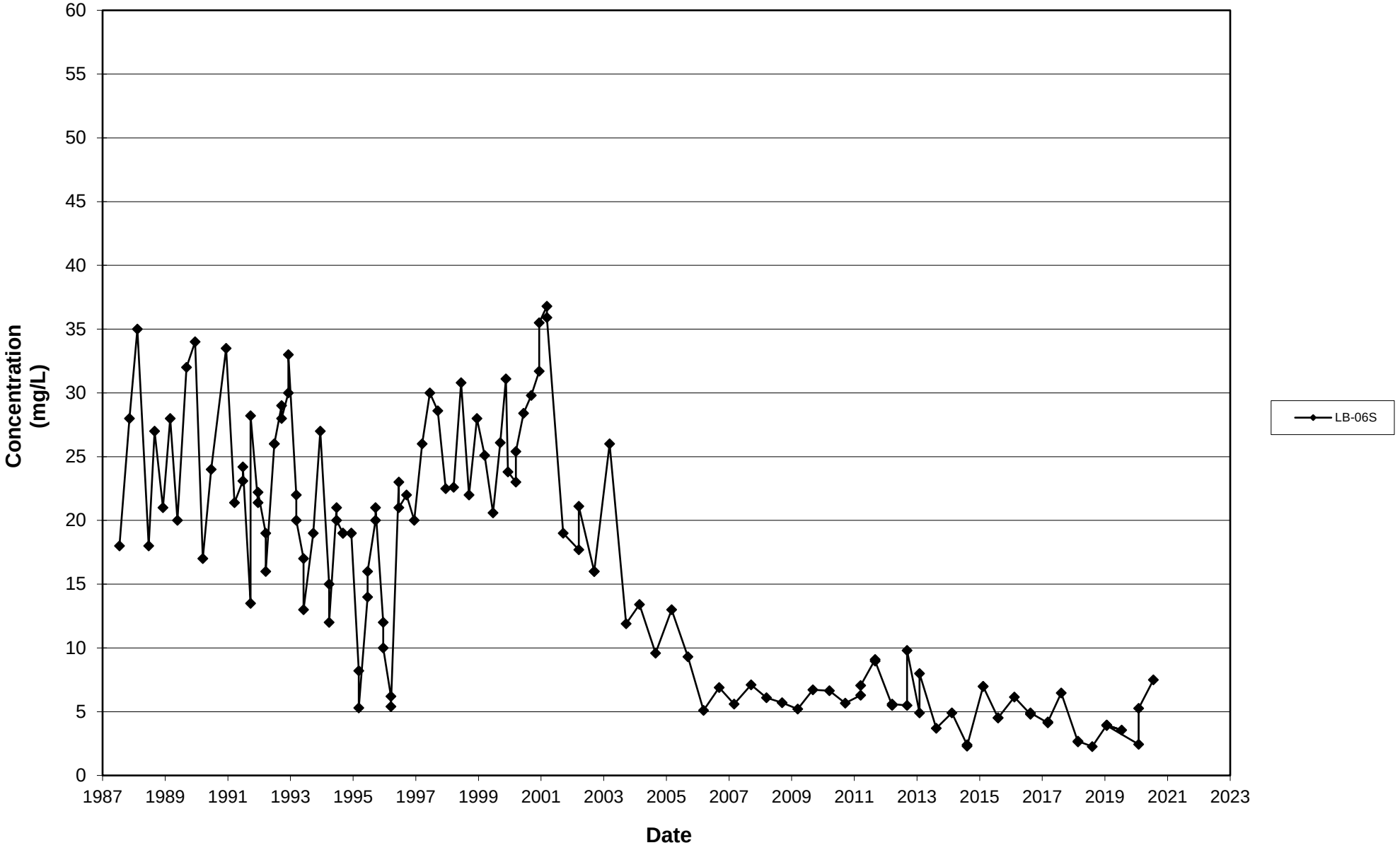
# Leichner Landfill
# Chloride, LB-05S
# 1987 - 2020



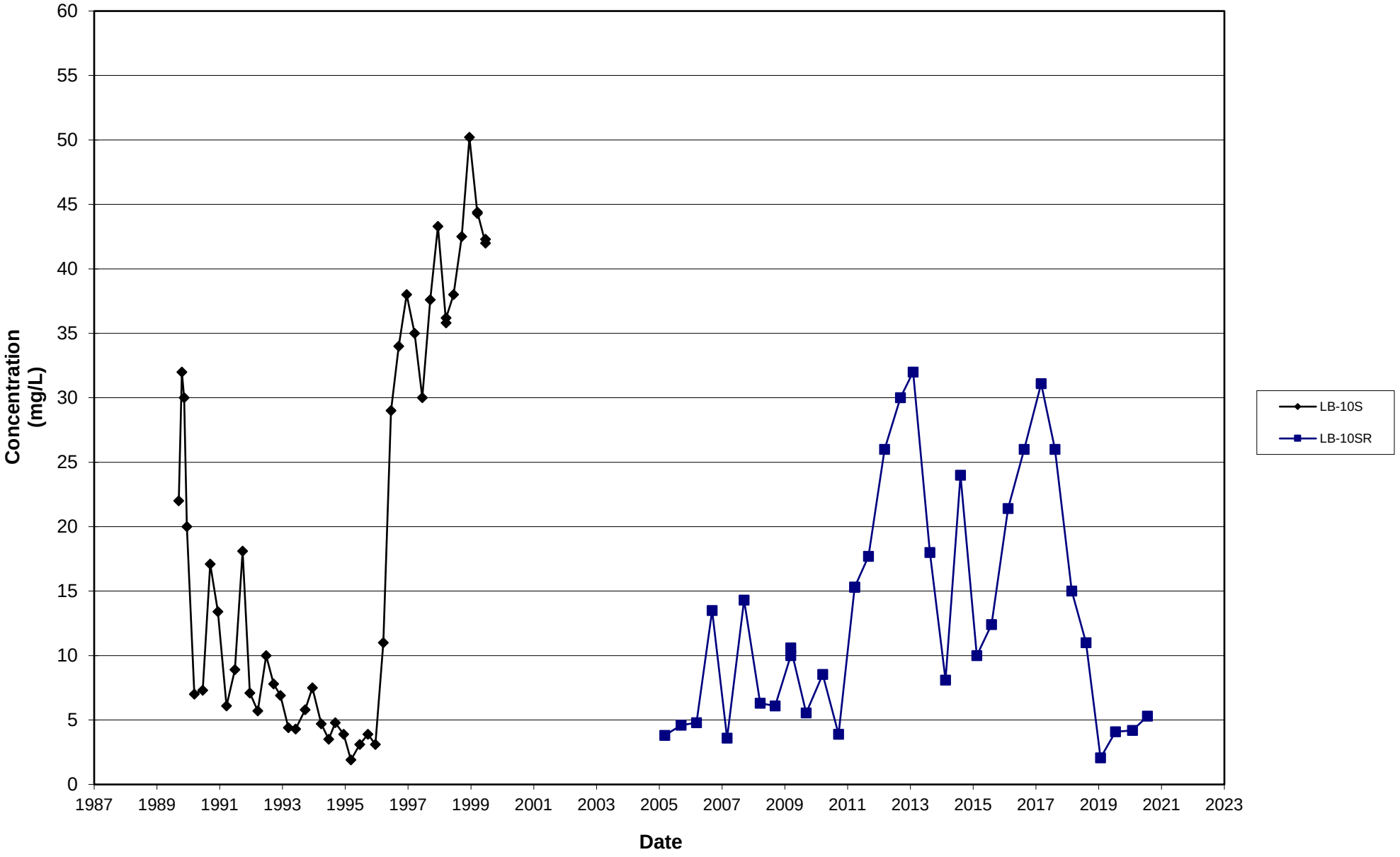
# Leichner Landfill
# Chloride, LB-05D
# 1987 - 2020



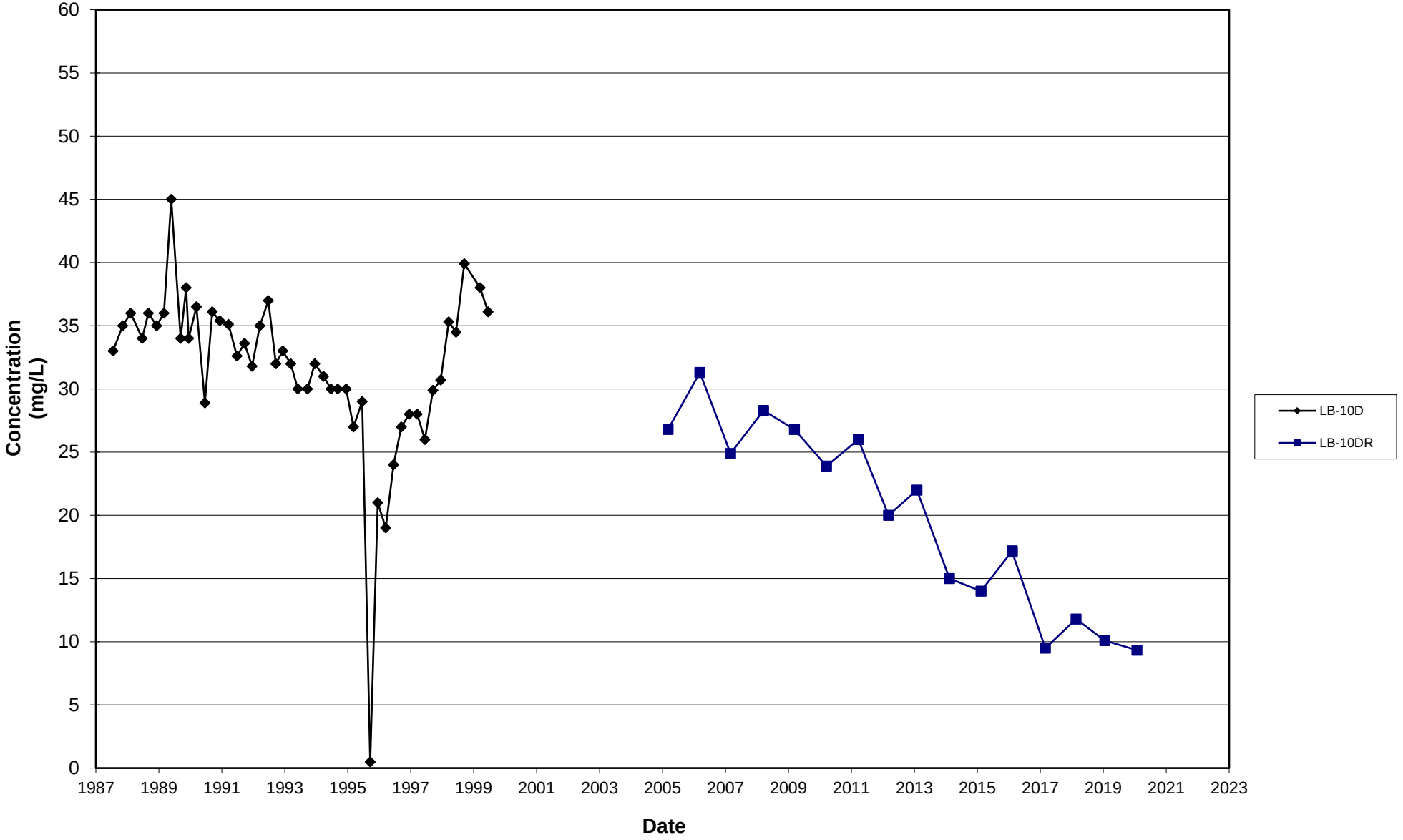
# Leichner Landfill
# Chloride, LB-06S
# 1987 - 2020



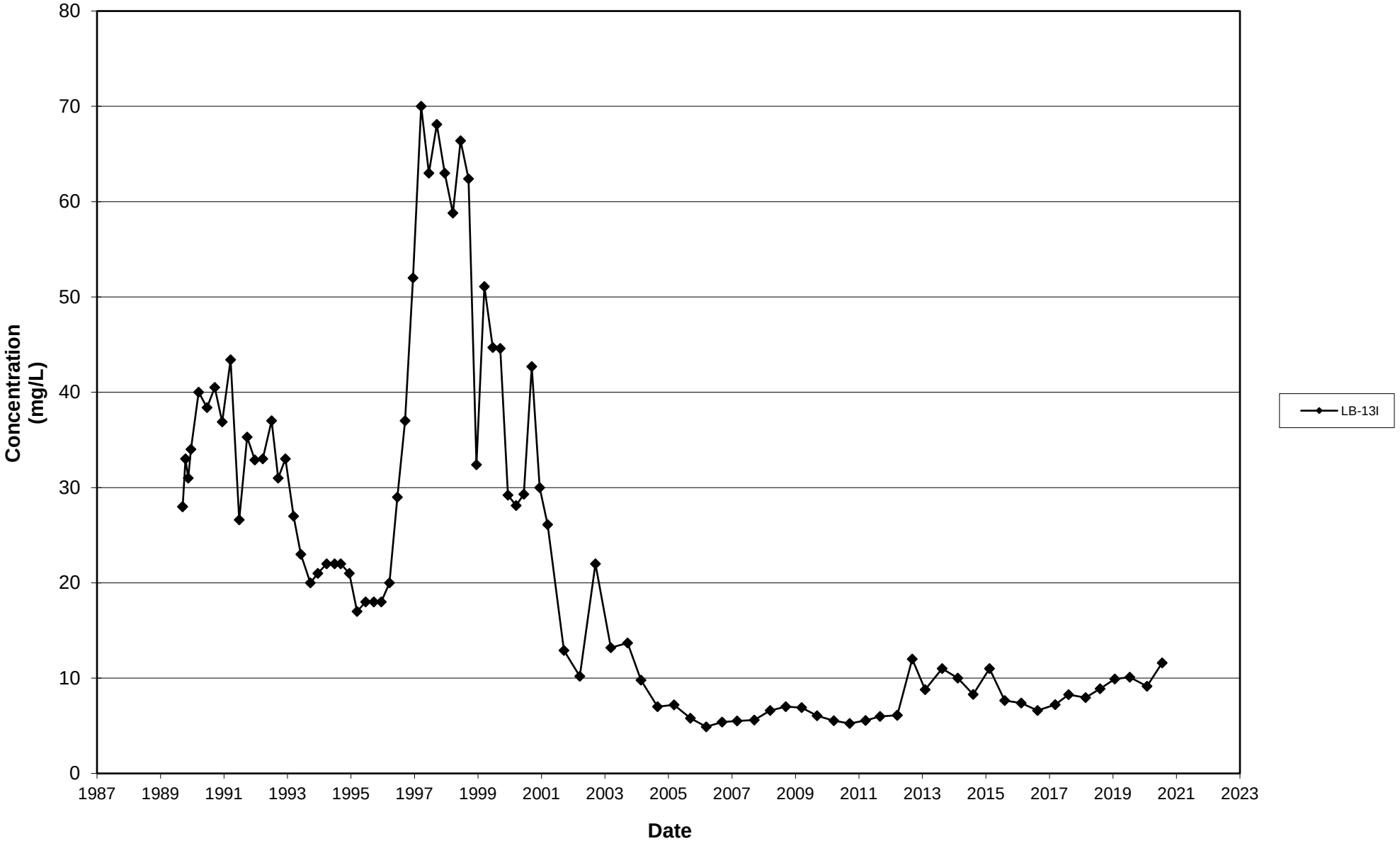
# Leichner Landfill
# Chloride, LB-10S and LB-10SR
# 1987 - 2020



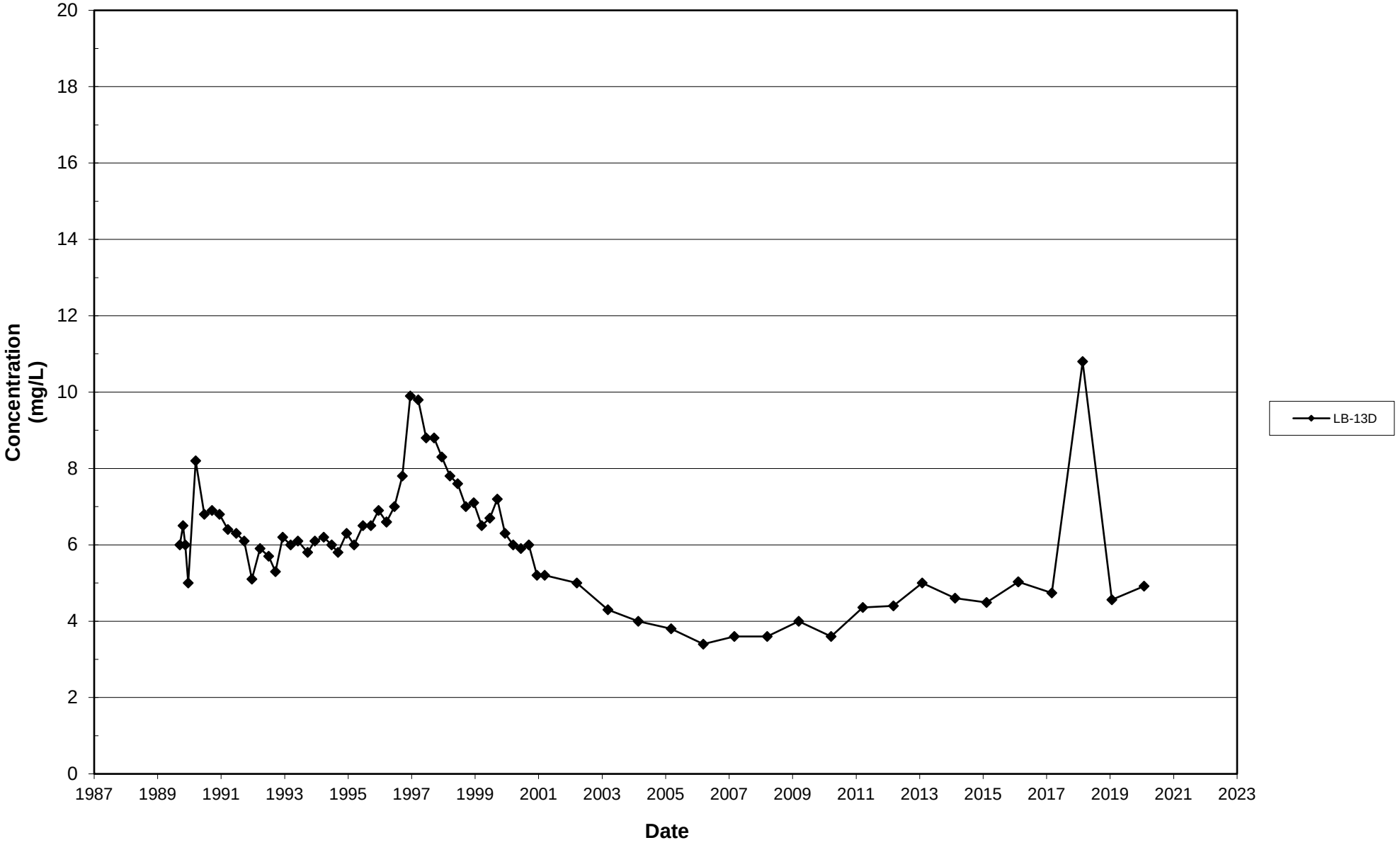
# Leichner Landfill
# Chloride, LB-10D and LB-10DR
# 1987 - 2020



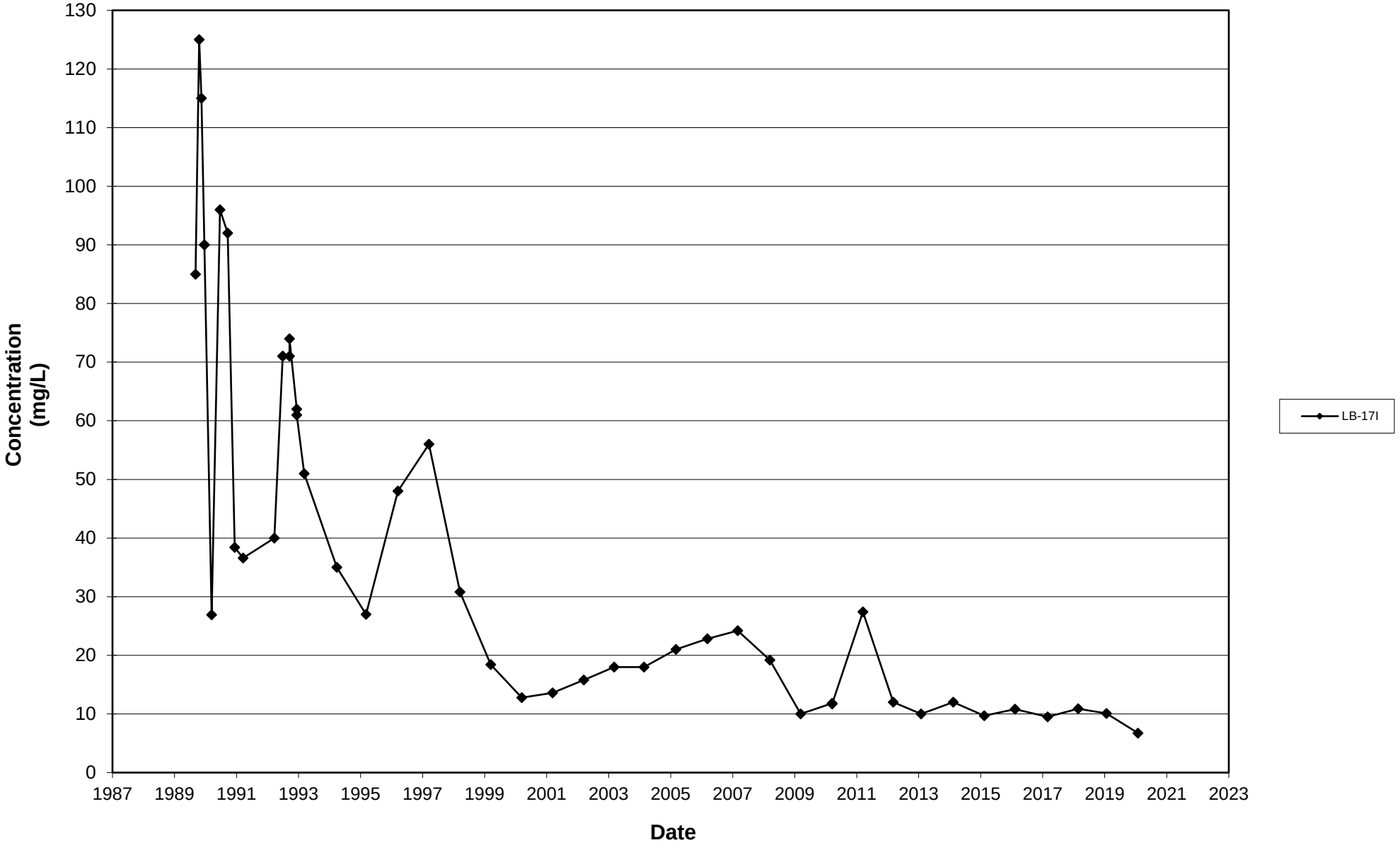
# Leichner Landfill
# Chloride, LB-13I
# 1987 - 2020



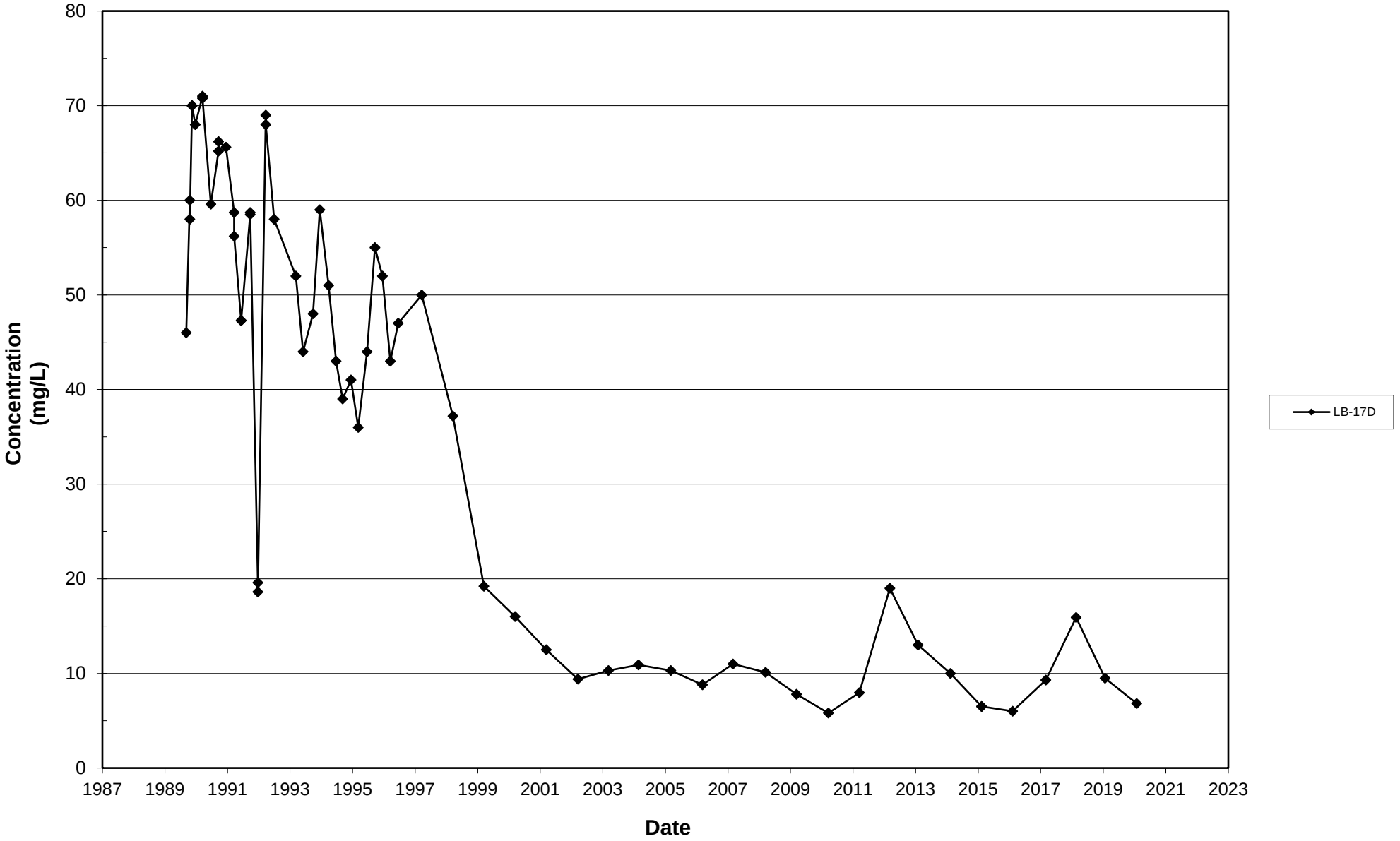
# Leichner Landfill
# Chloride, LB-13D
# 1987 - 2020



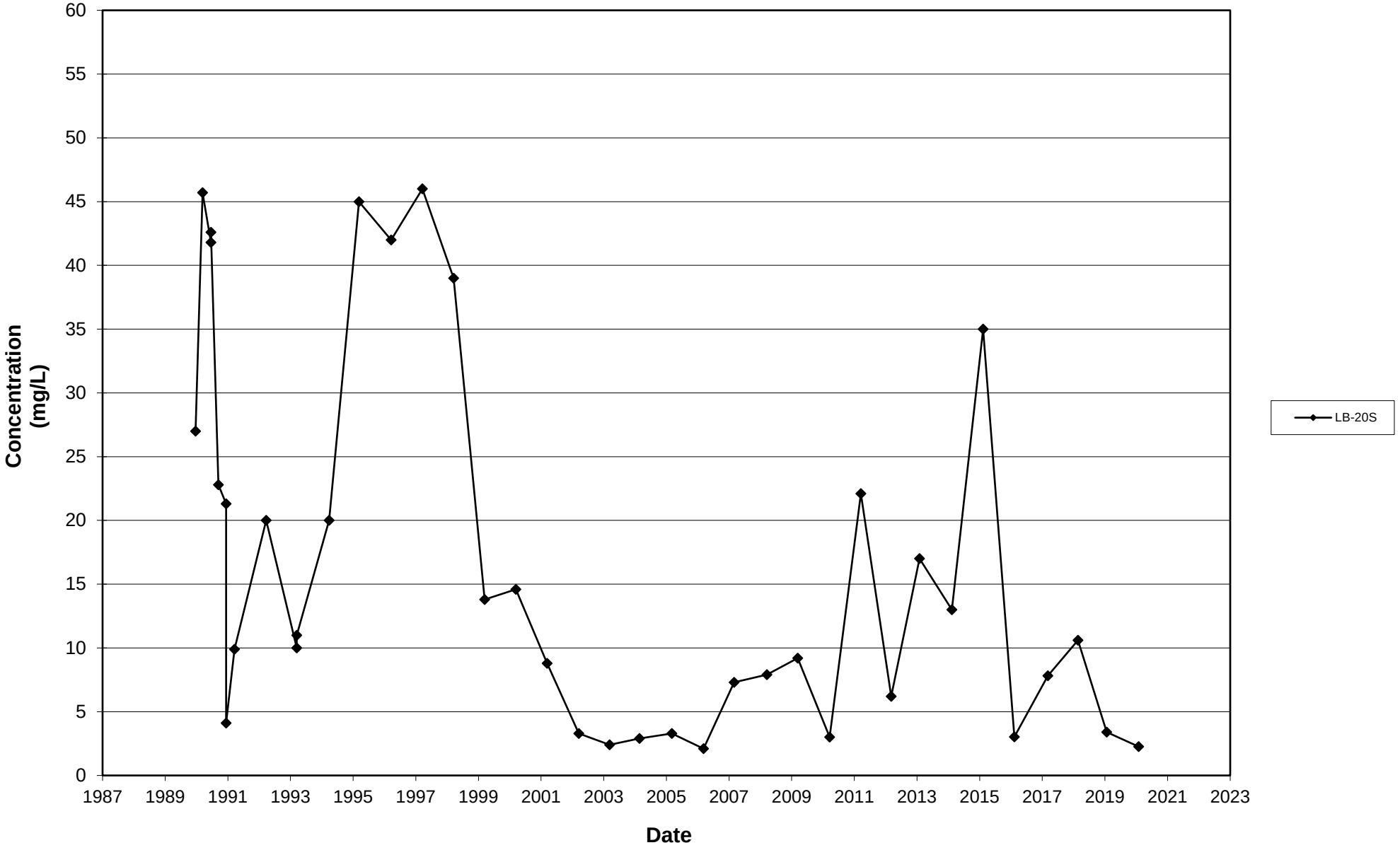
# Leichner Landfill
# Chloride, LB-17I
# 1987 - 2020



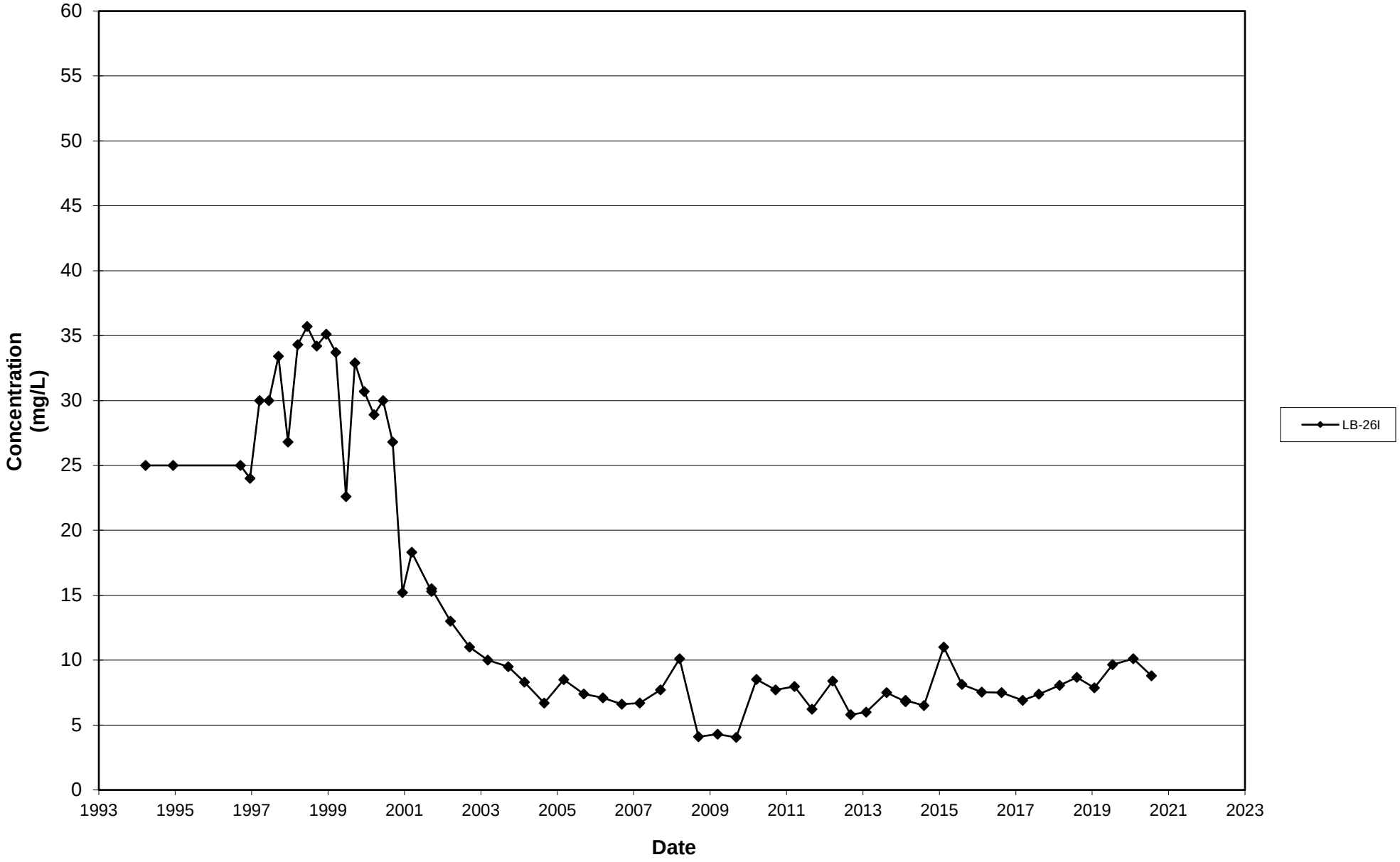
# Leichner Landfill
# Chloride, LB-17D
# 1987 - 2020



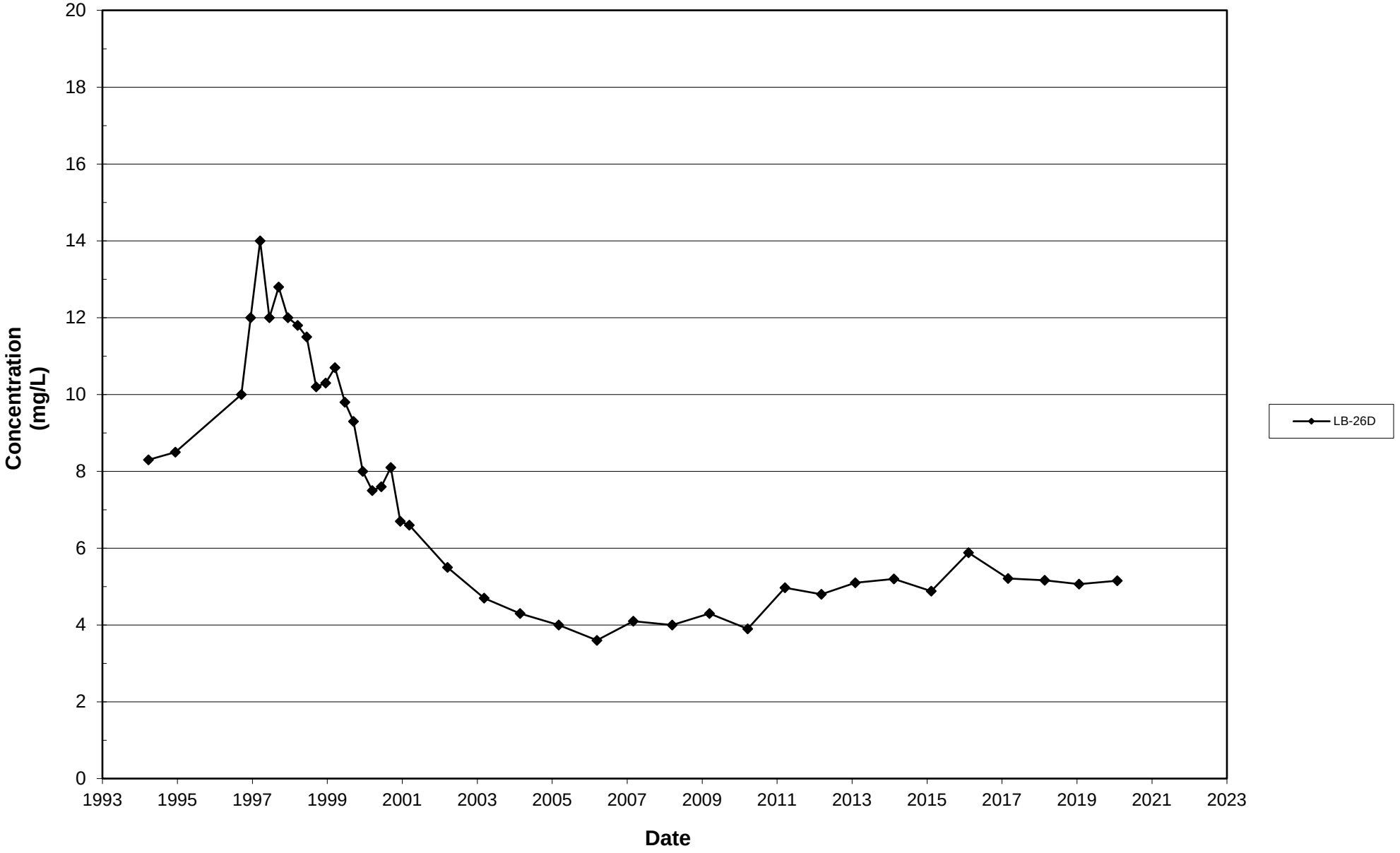
# Leichner Landfill
# Chloride, LB-20S
# 1987 - 2020



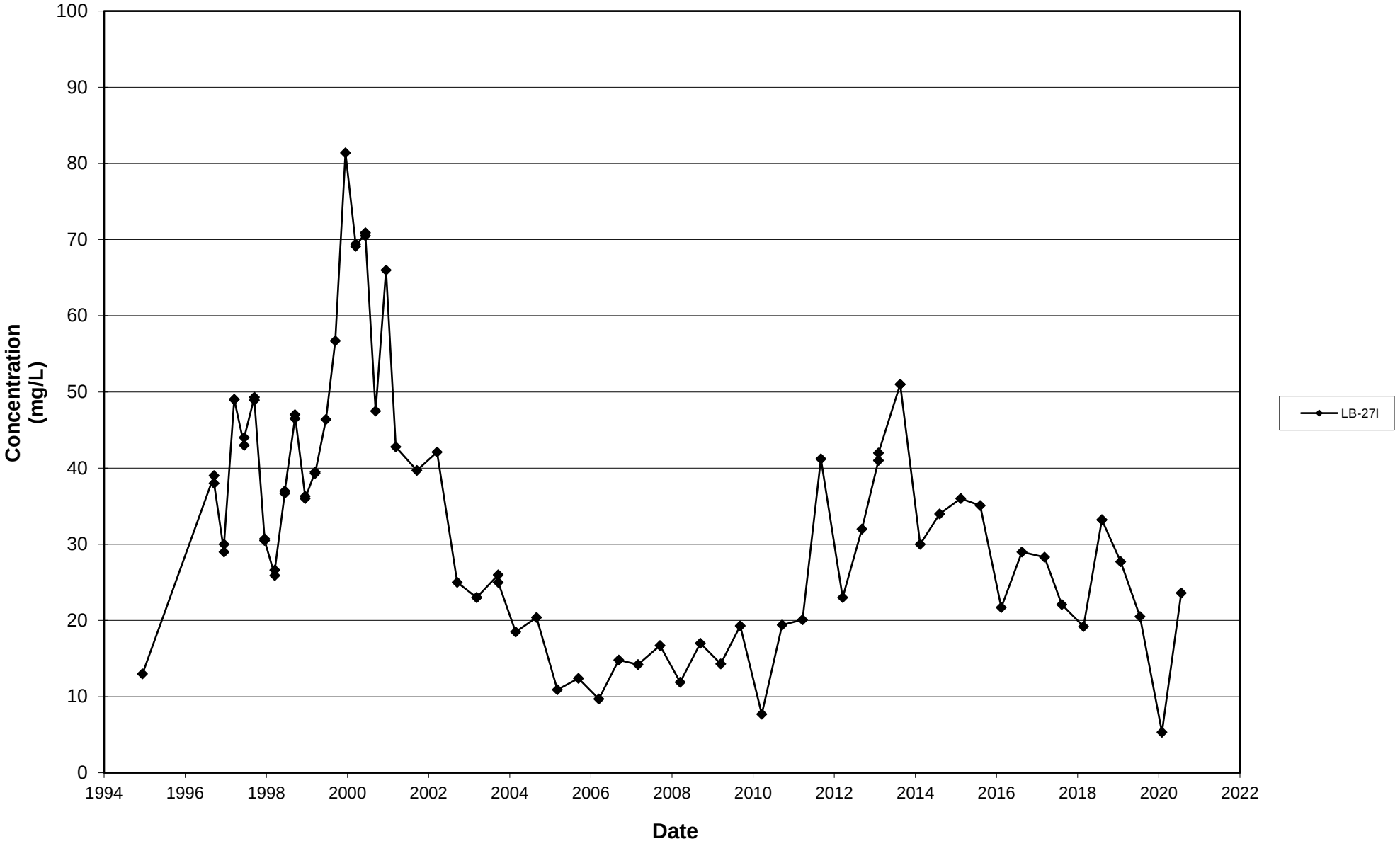
# Leichner Landfill
# Chloride, LB-26I
# 1987 - 2020



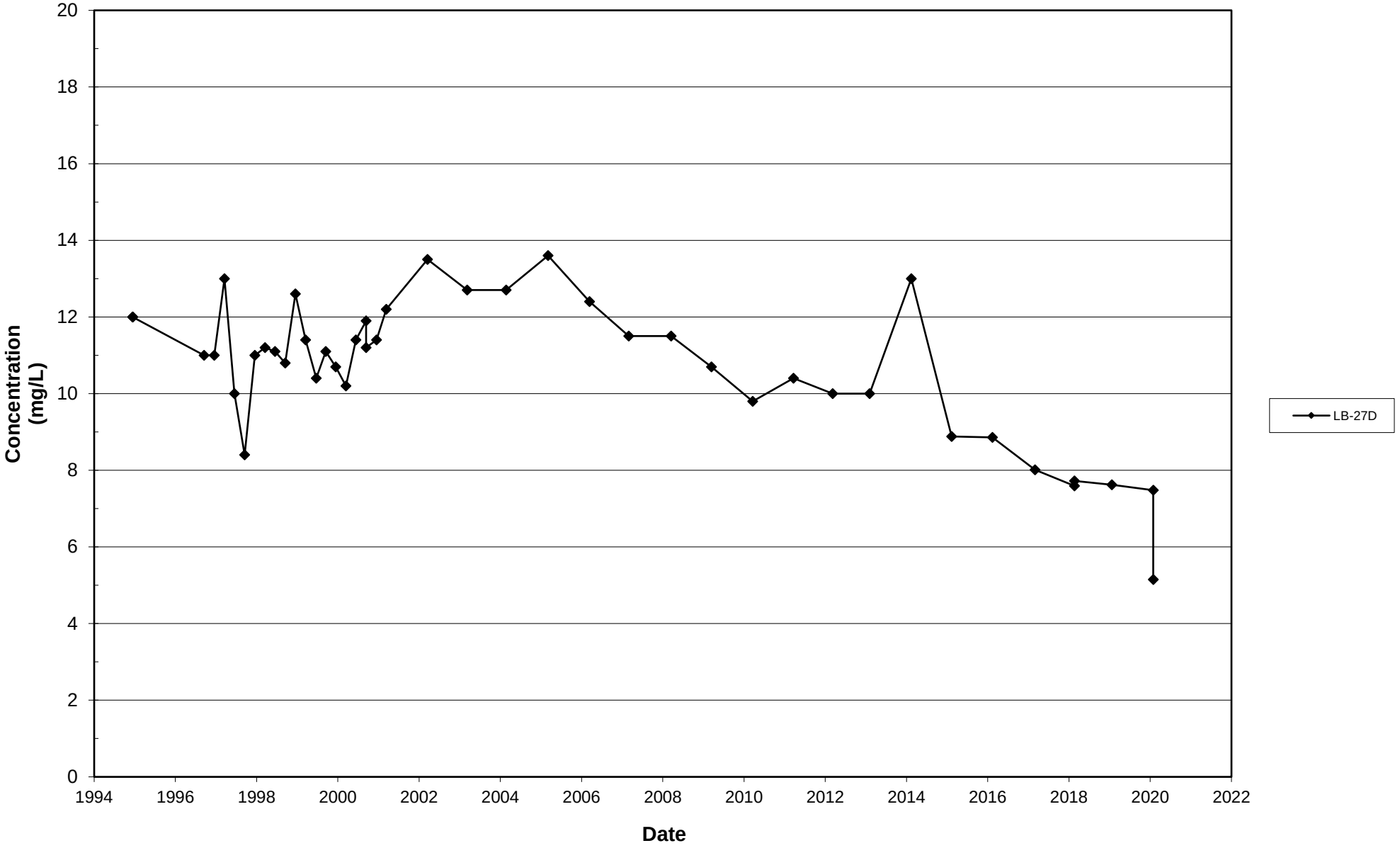
# Leichner Landfill
# Chloride, LB-26D
# 1987 - 2020



# Leichner Landfill
# Chloride, LB-27I
# 1987 - 2020

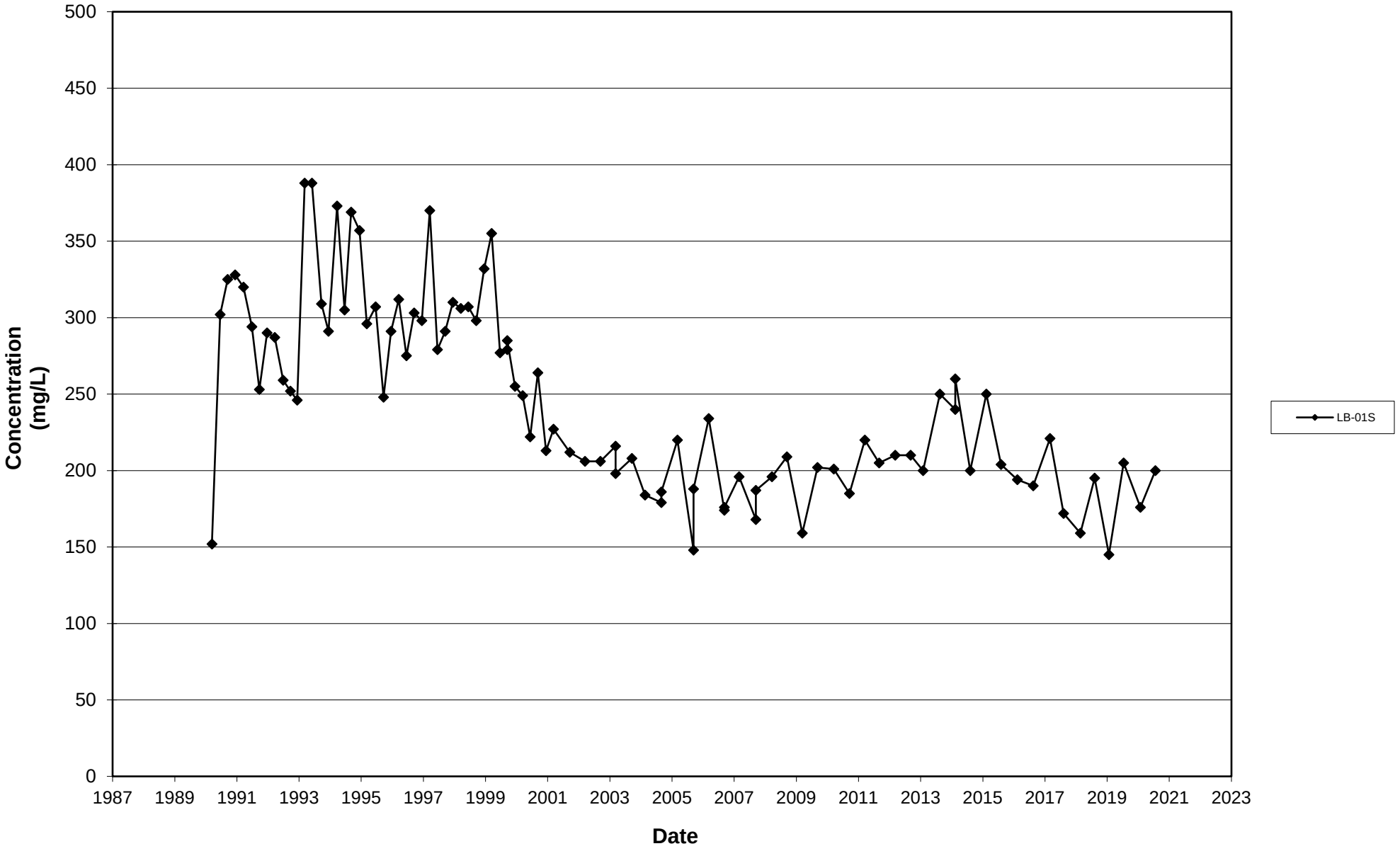


# Leichner Landfill
# Chloride, LB-27D
# 1987 - 2020

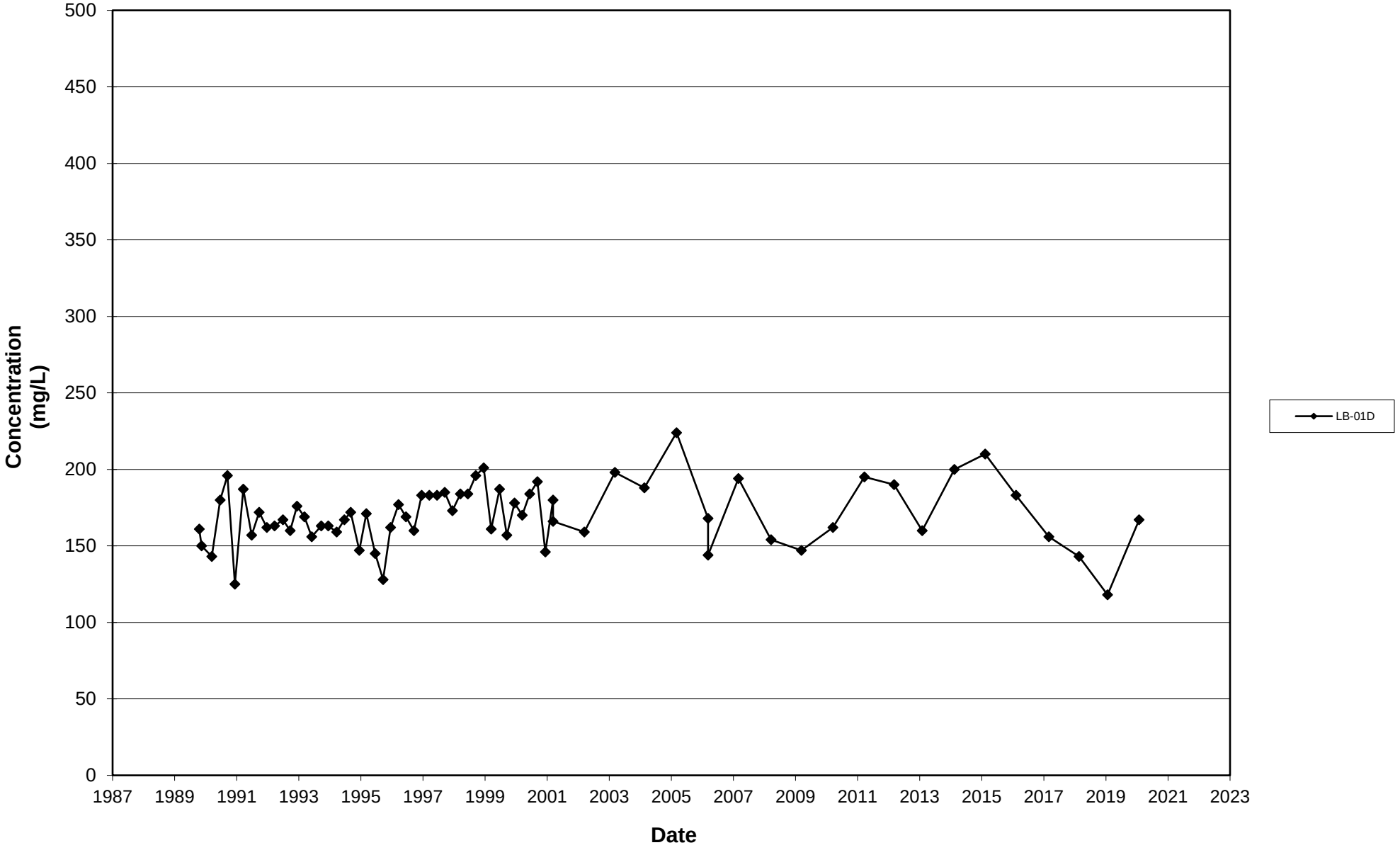


# Total Dissolved Solids

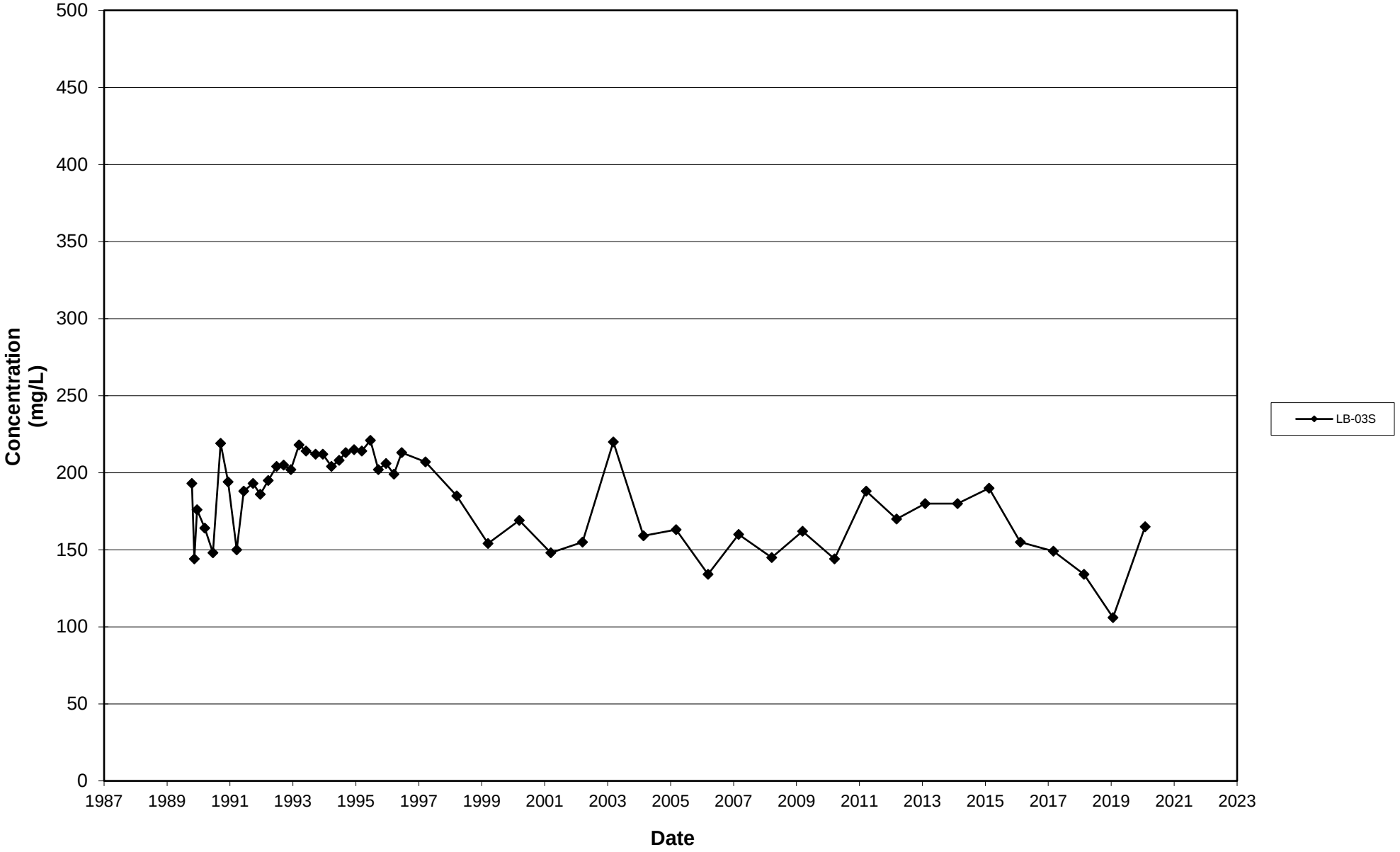
# Leichner Landfill
# Total Dissolved Solids, LB-01S
# 1987 - 2020



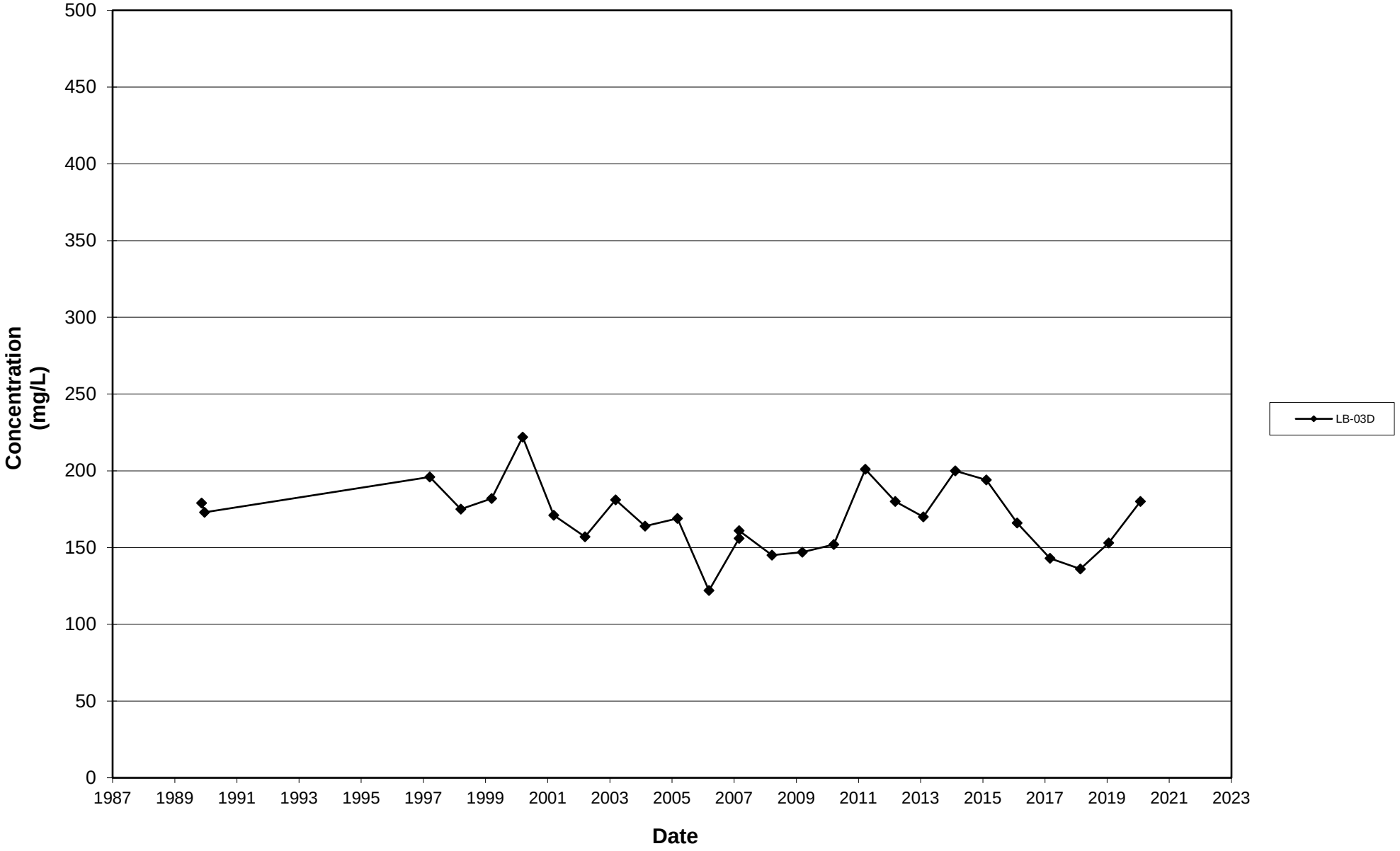
# Leichner Landfill
# Total Dissolved Solids, LB-01D
# 1987 - 2020



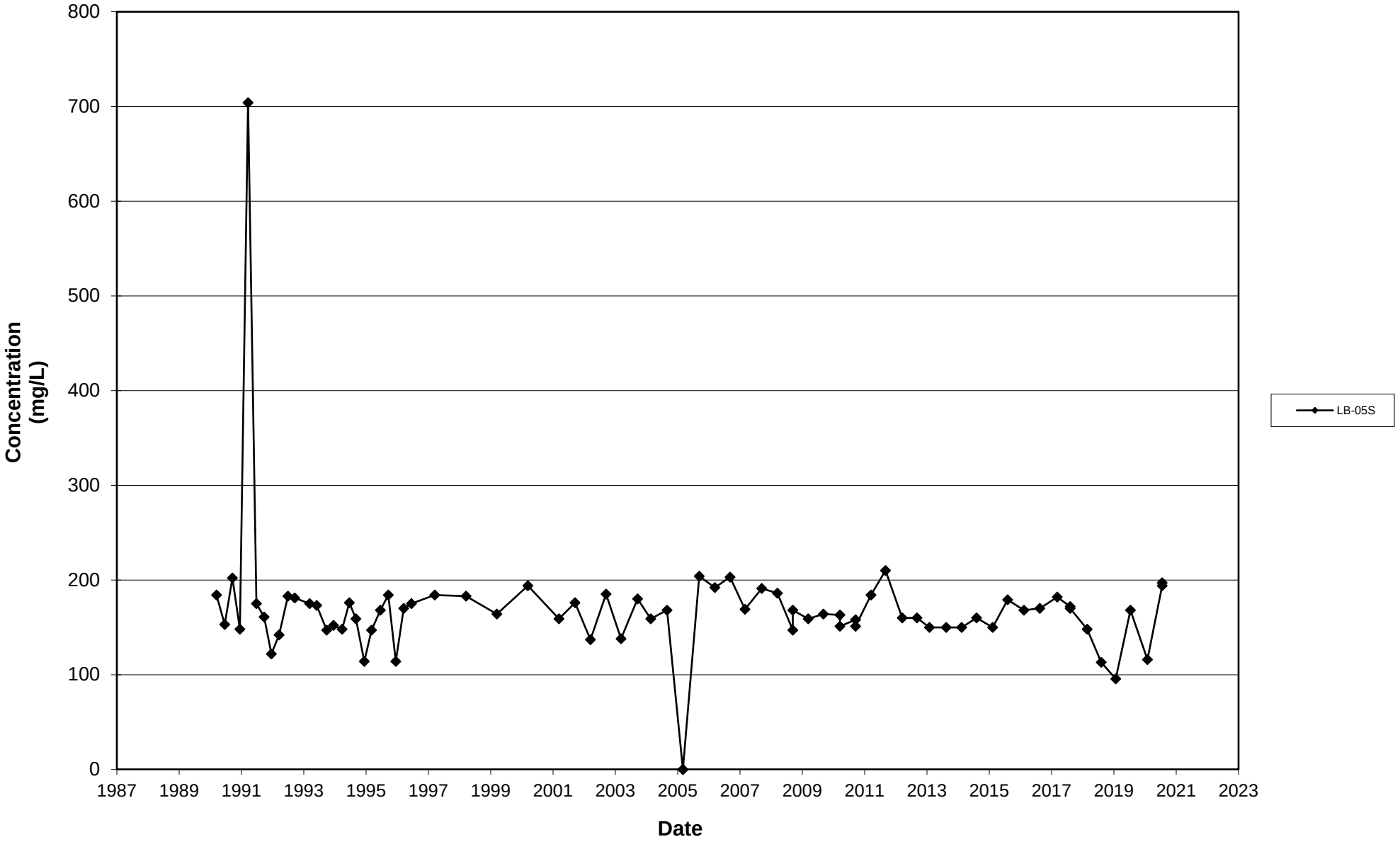
# Leichner Landfill
# Total Dissolved Solids, LB-03S
# 1987 - 2020



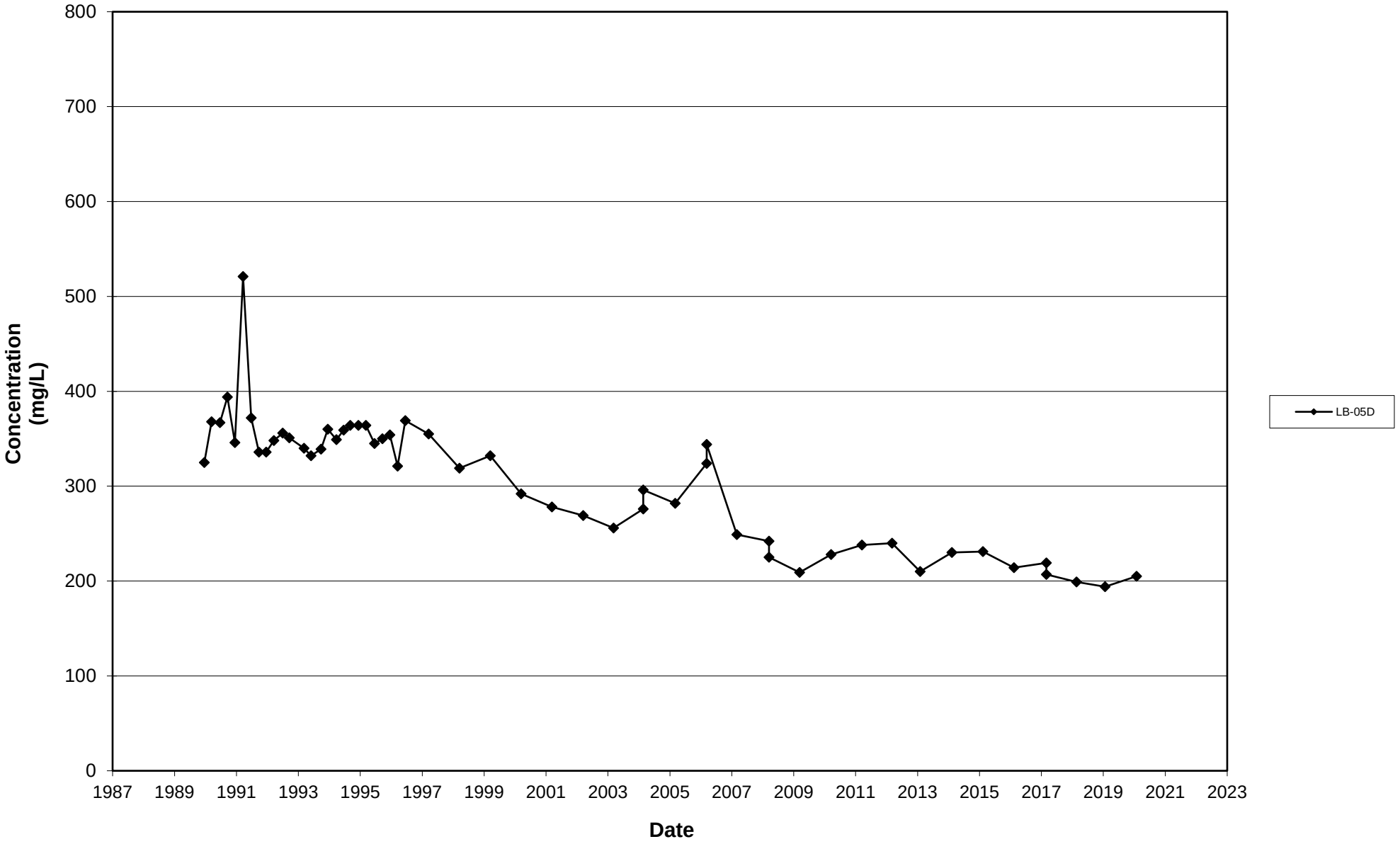
# Leichner Landfill
# Total Dissolved Solids, LB-03D
# 1987 - 2020



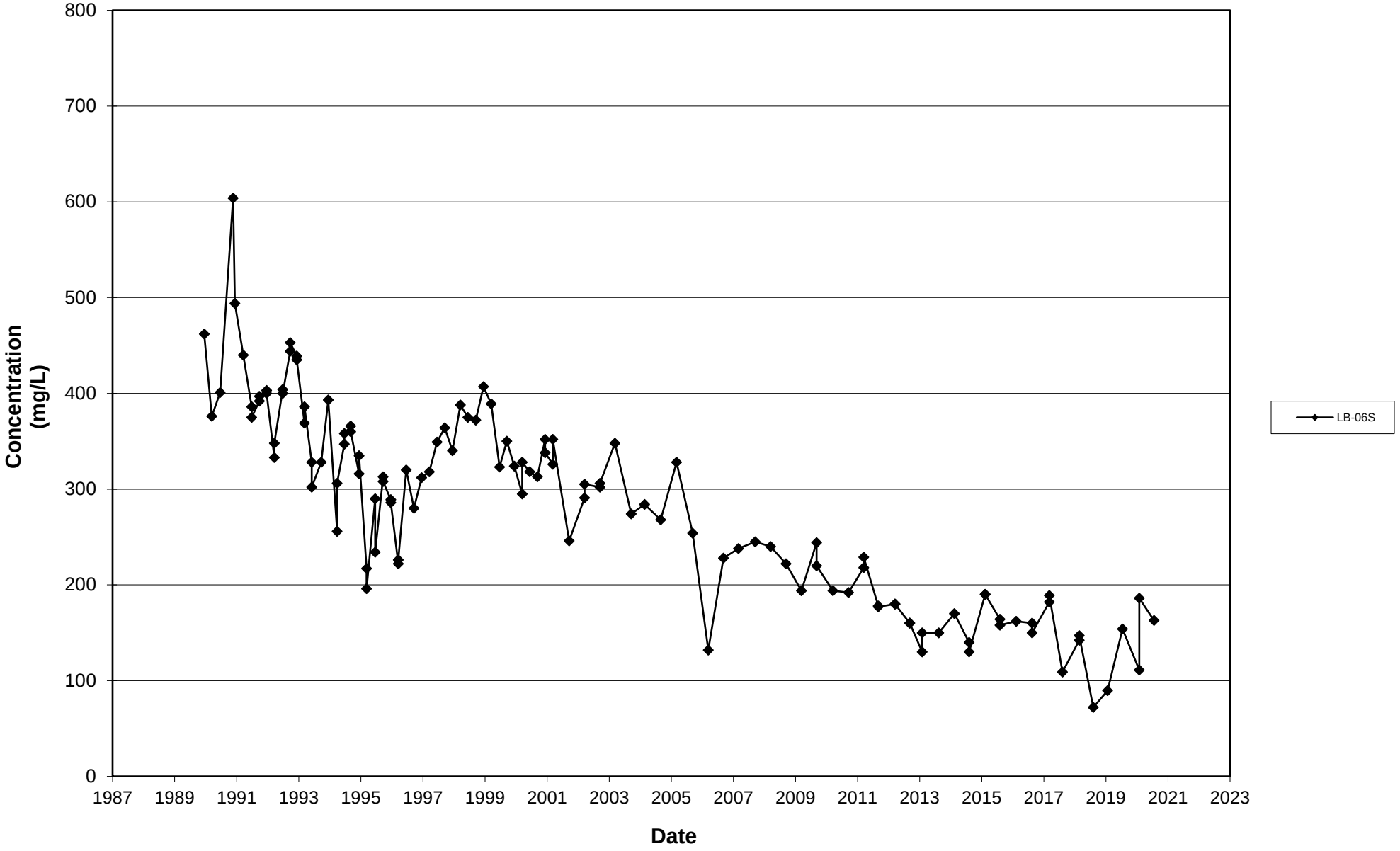
# Leichner Landfill
# Total Dissolved Solids, LB-05S
# 1987 - 2020



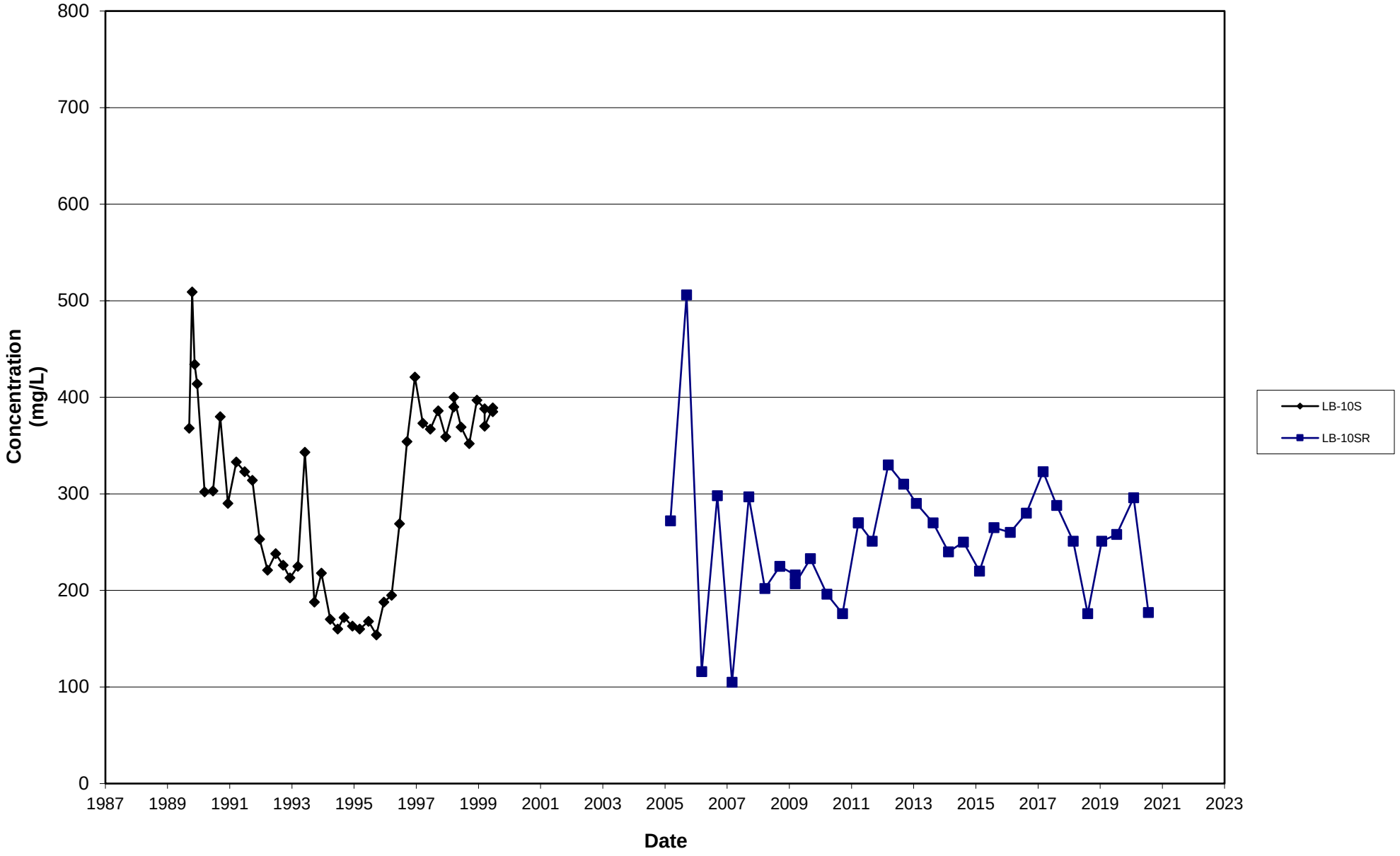
# Leichner Landfill
# Total Dissolved Solids, LB-05D
# 1987 - 2020



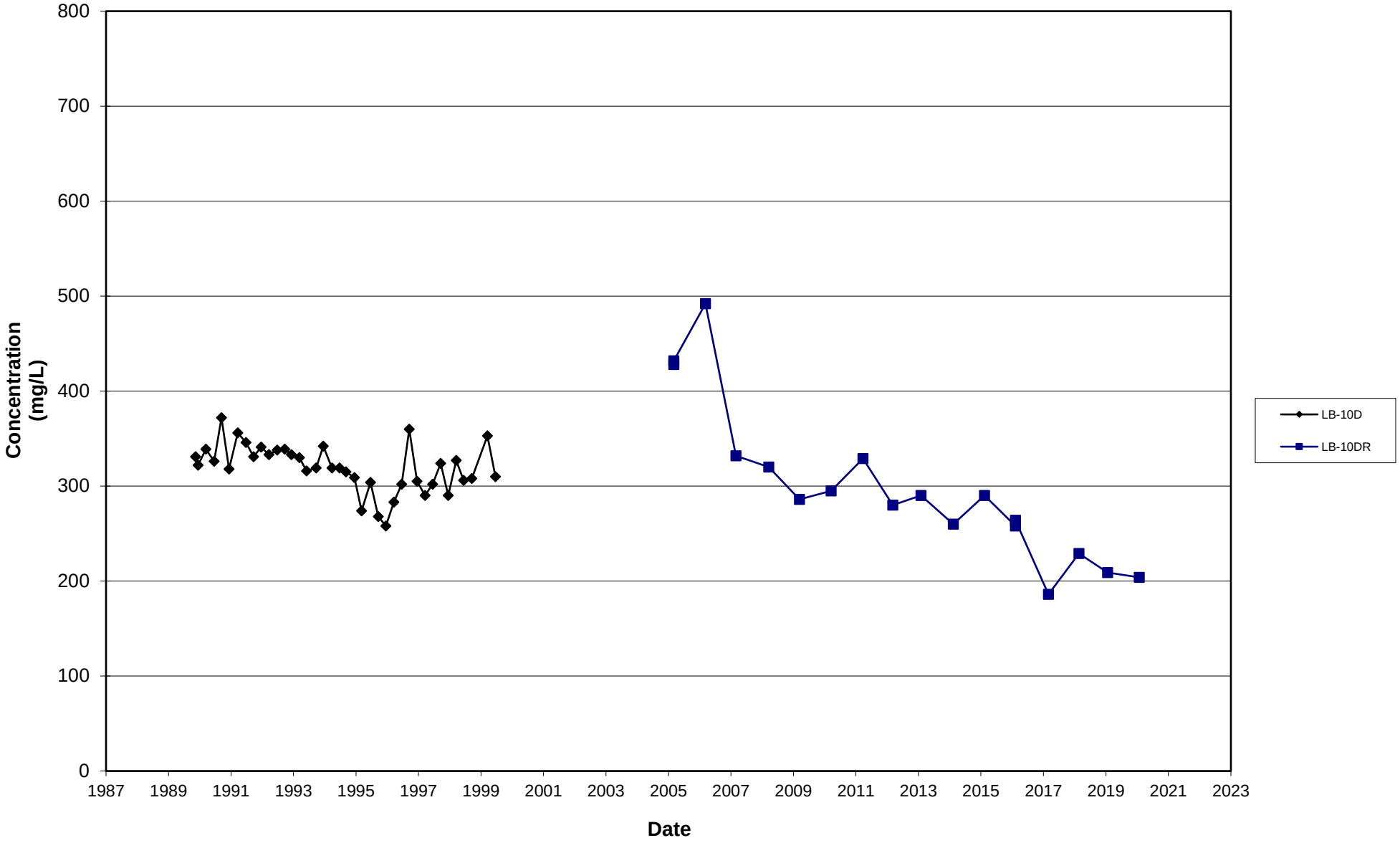
# Leichner Landfill
# Total Dissolved Solids, LB-06S
# 1987 - 2020



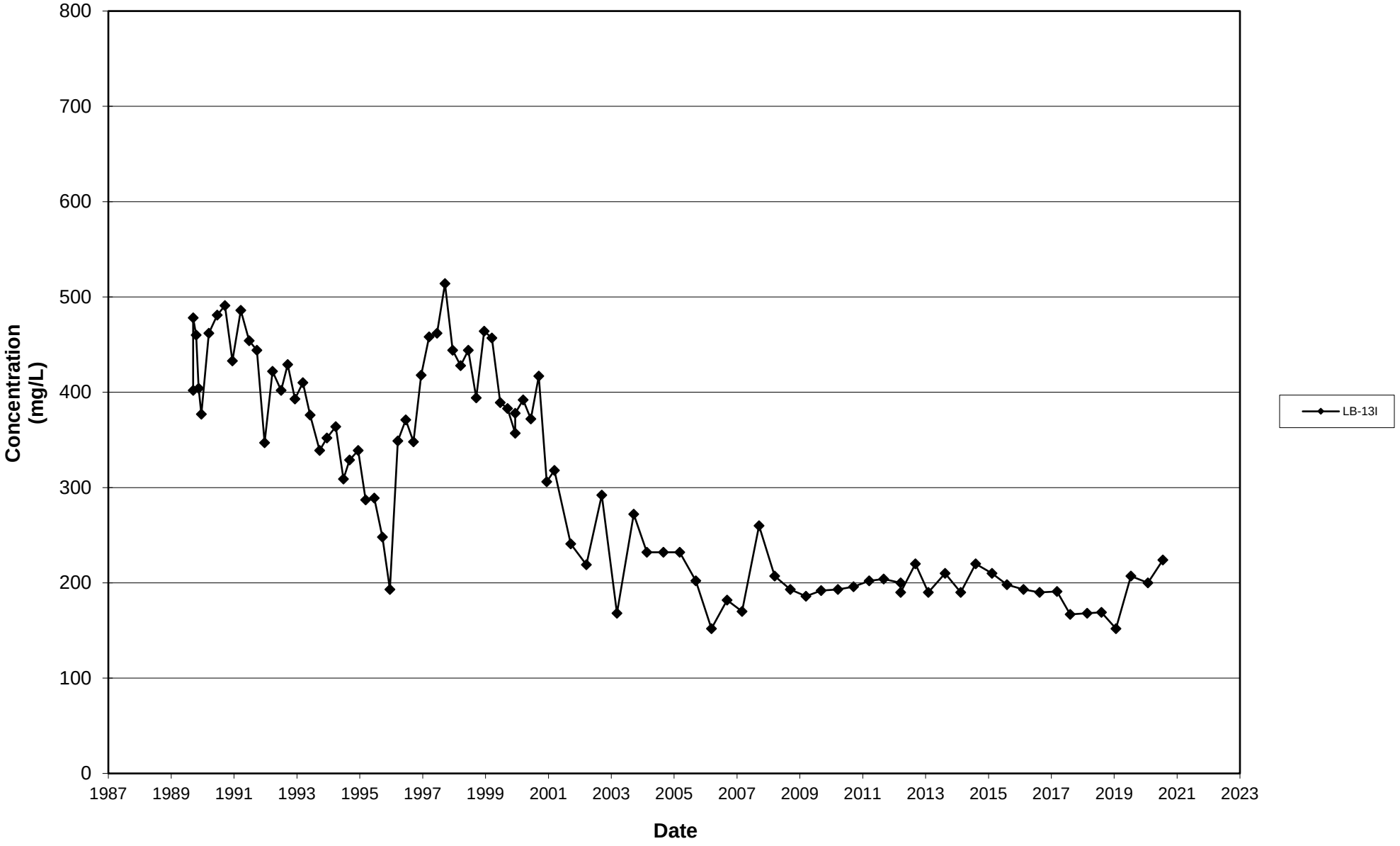
**Leichner Landfill**
**Total Dissolved Solids, LB-10S and LB-10SR**
**1987 - 2020**



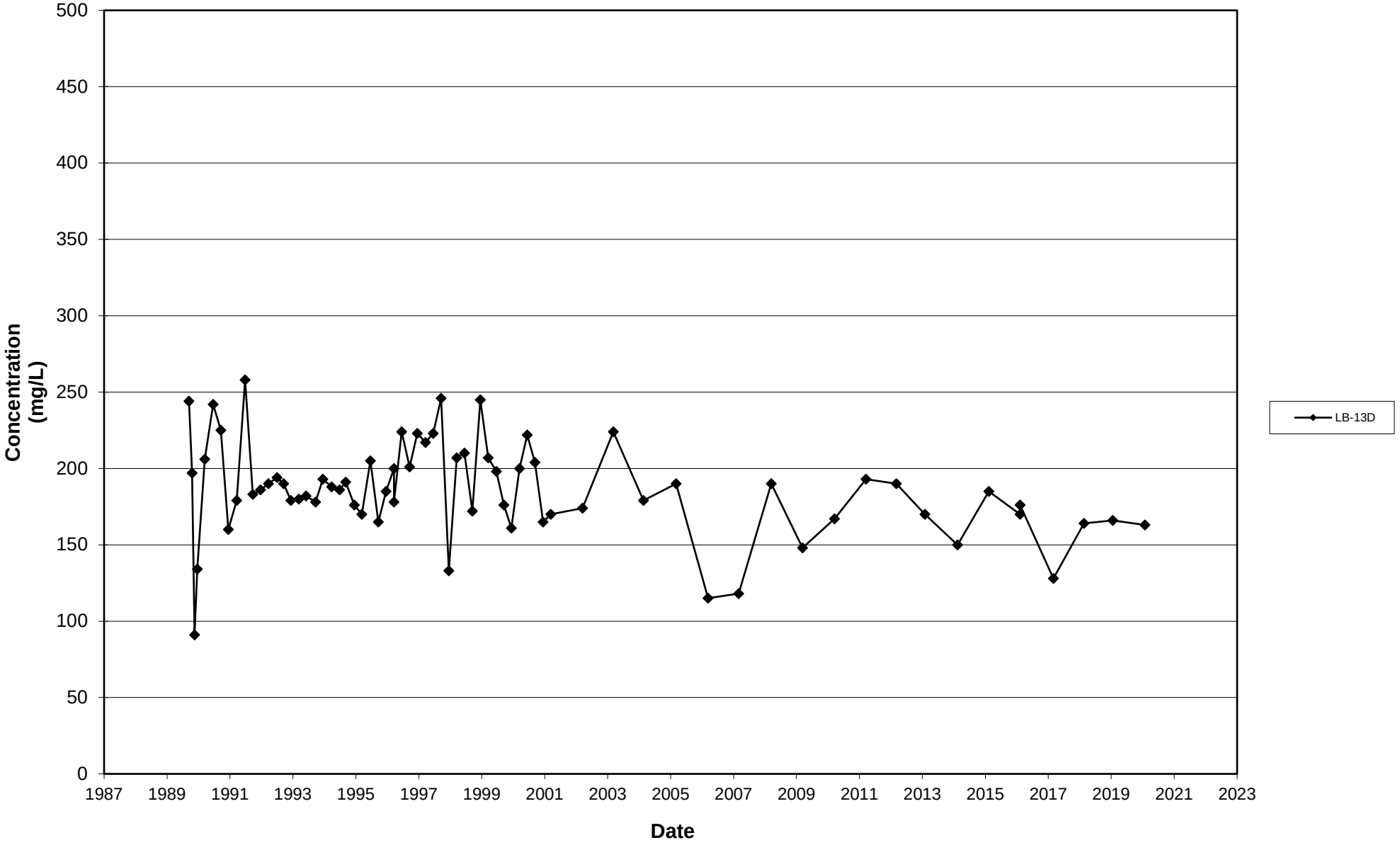
# Leichner Landfill
## Total Dissolved Solids, LB-10D and LB-10DR
## 1987 - 2020



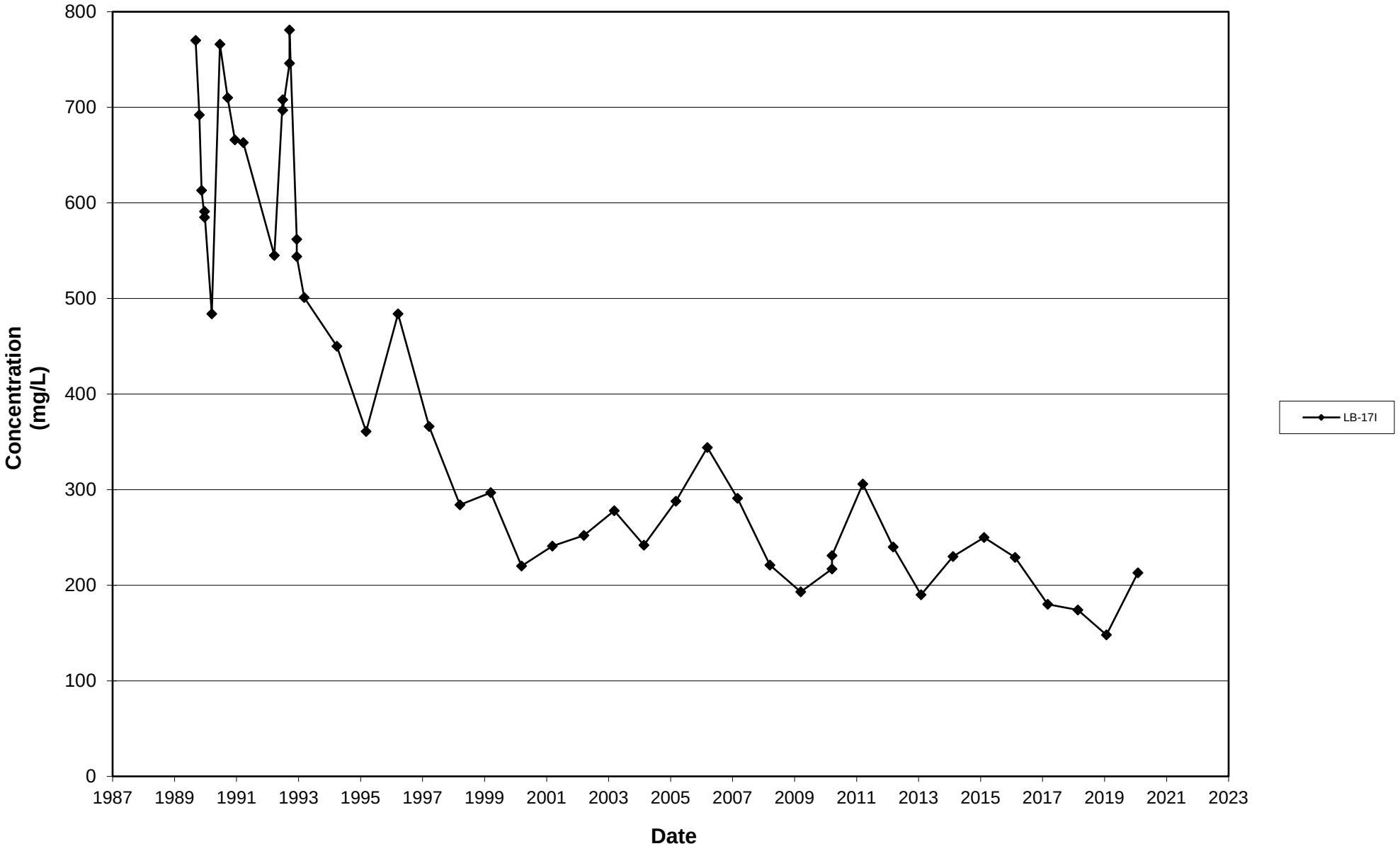
# Leichner Landfill
# Total Dissolved Solids, LB-13I
# 1987 - 2020



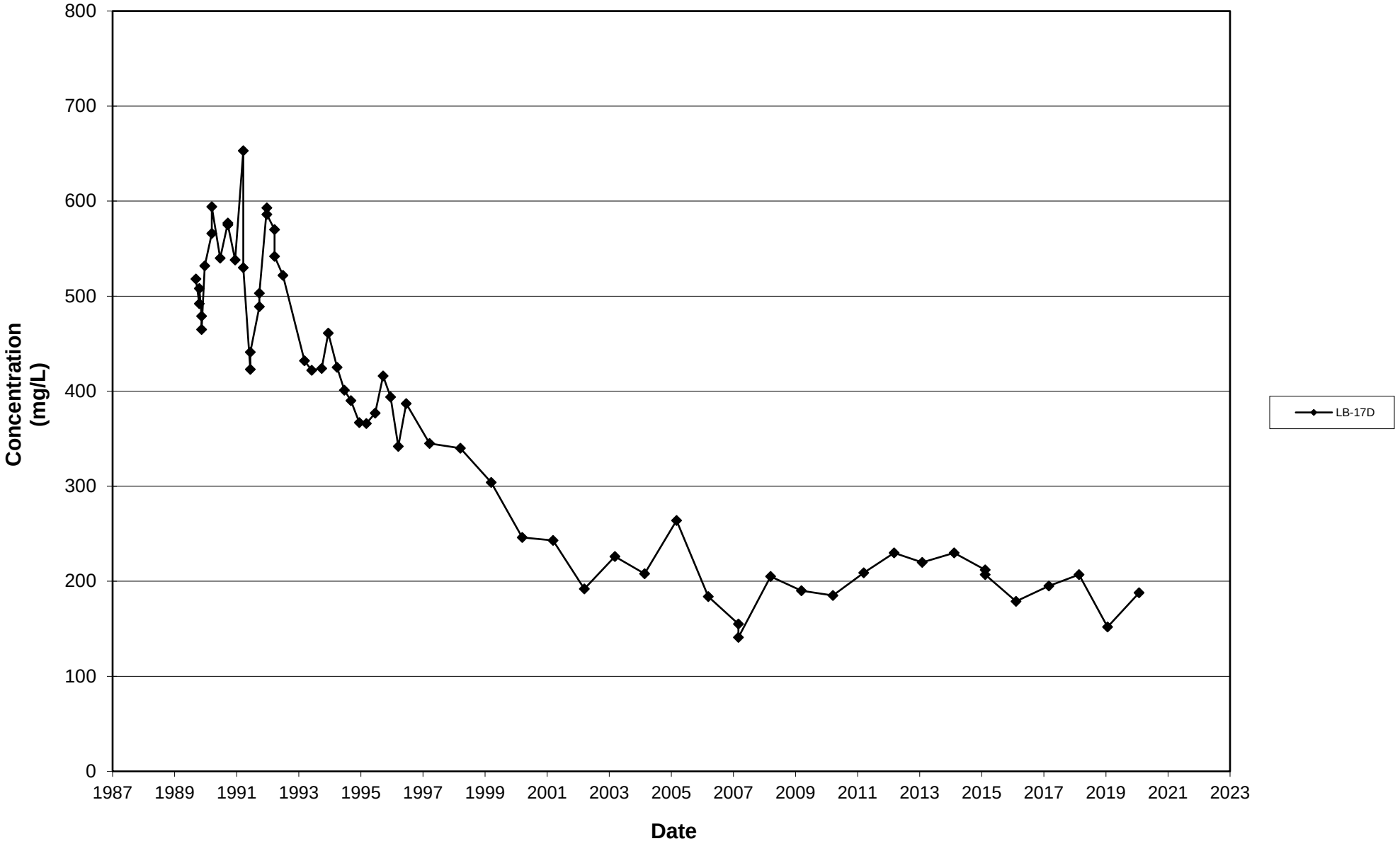
# Leichner Landfill
# Total Dissolved Solids, LB-13D
# 1987 - 2020



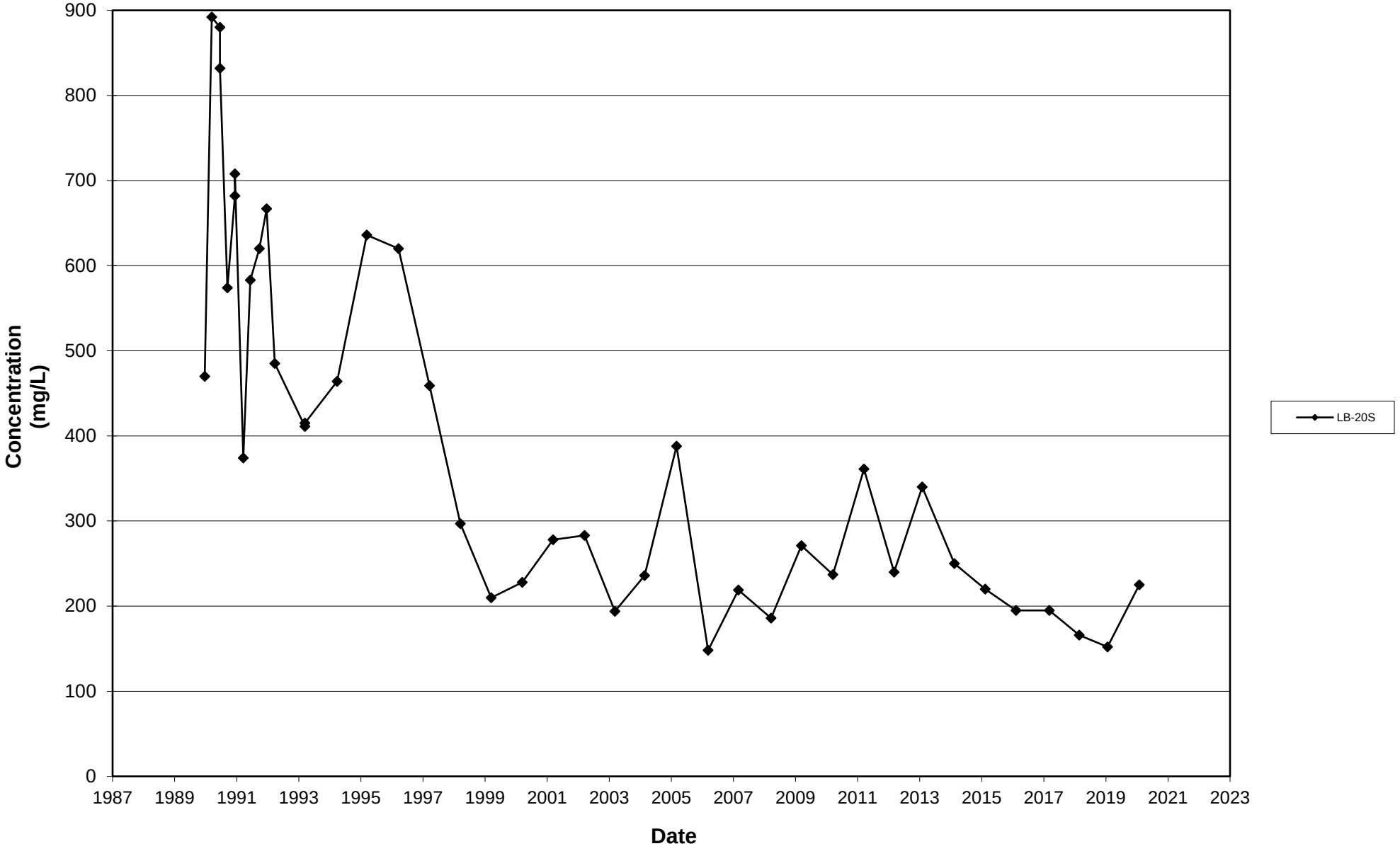
# Leichner Landfill
# Total Dissolved Solids, LB-17I
# 1987 - 2020



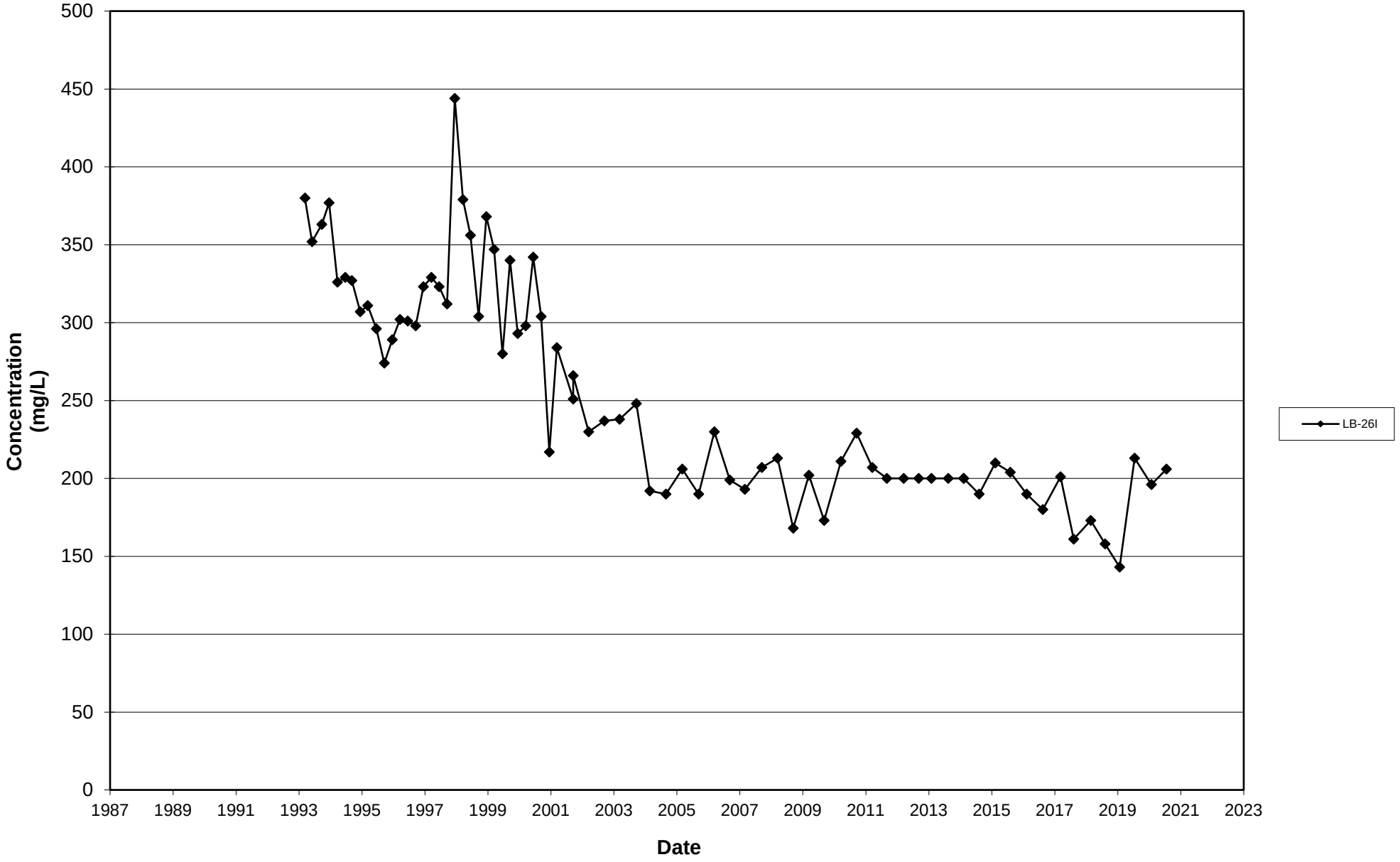
# Leichner Landfill
# Total Dissolved Solids, LB-17D
# 1987 - 2020



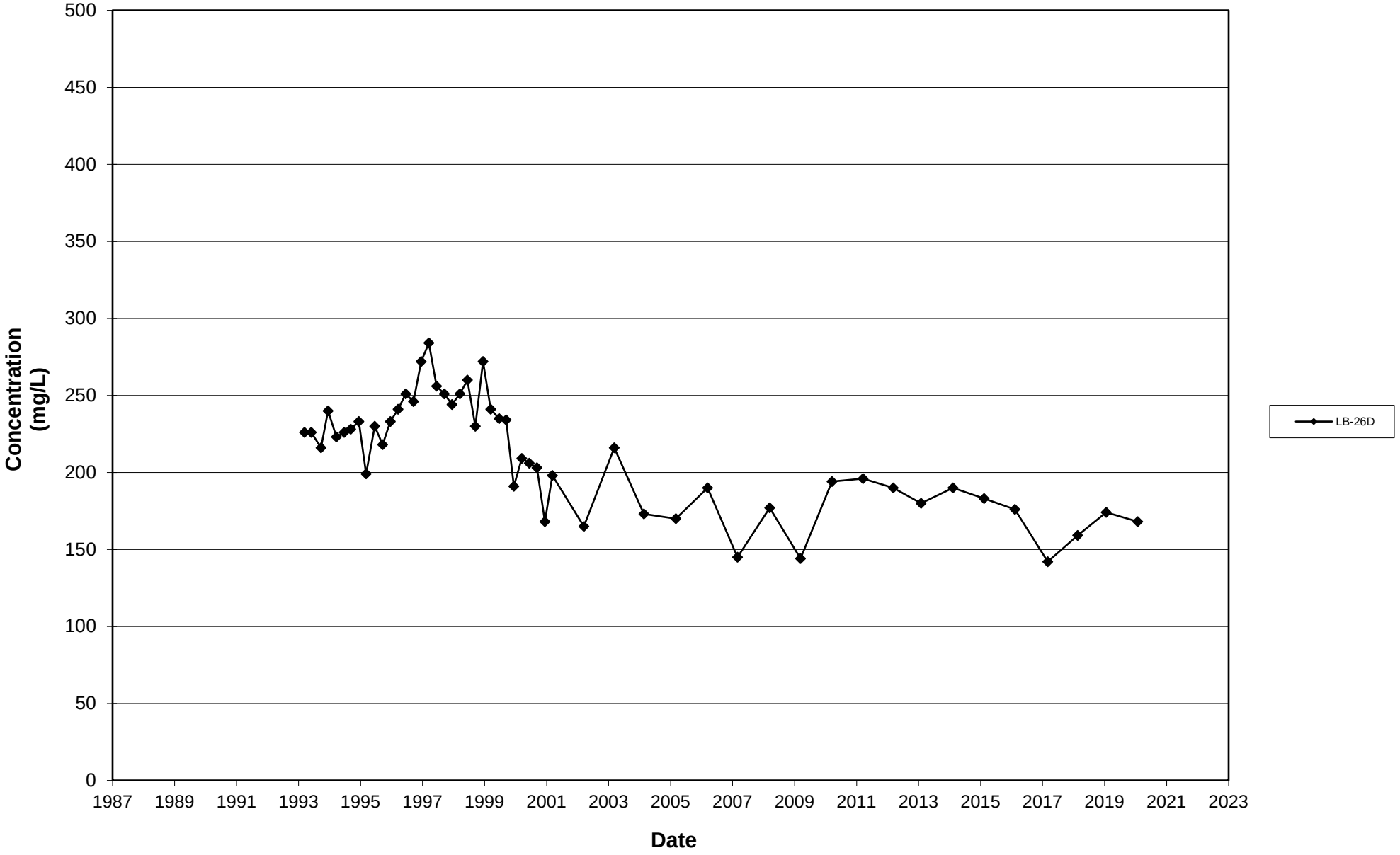
# Leichner Landfill
# Total Dissolved Solids, LB-20S
# 1987 - 2020



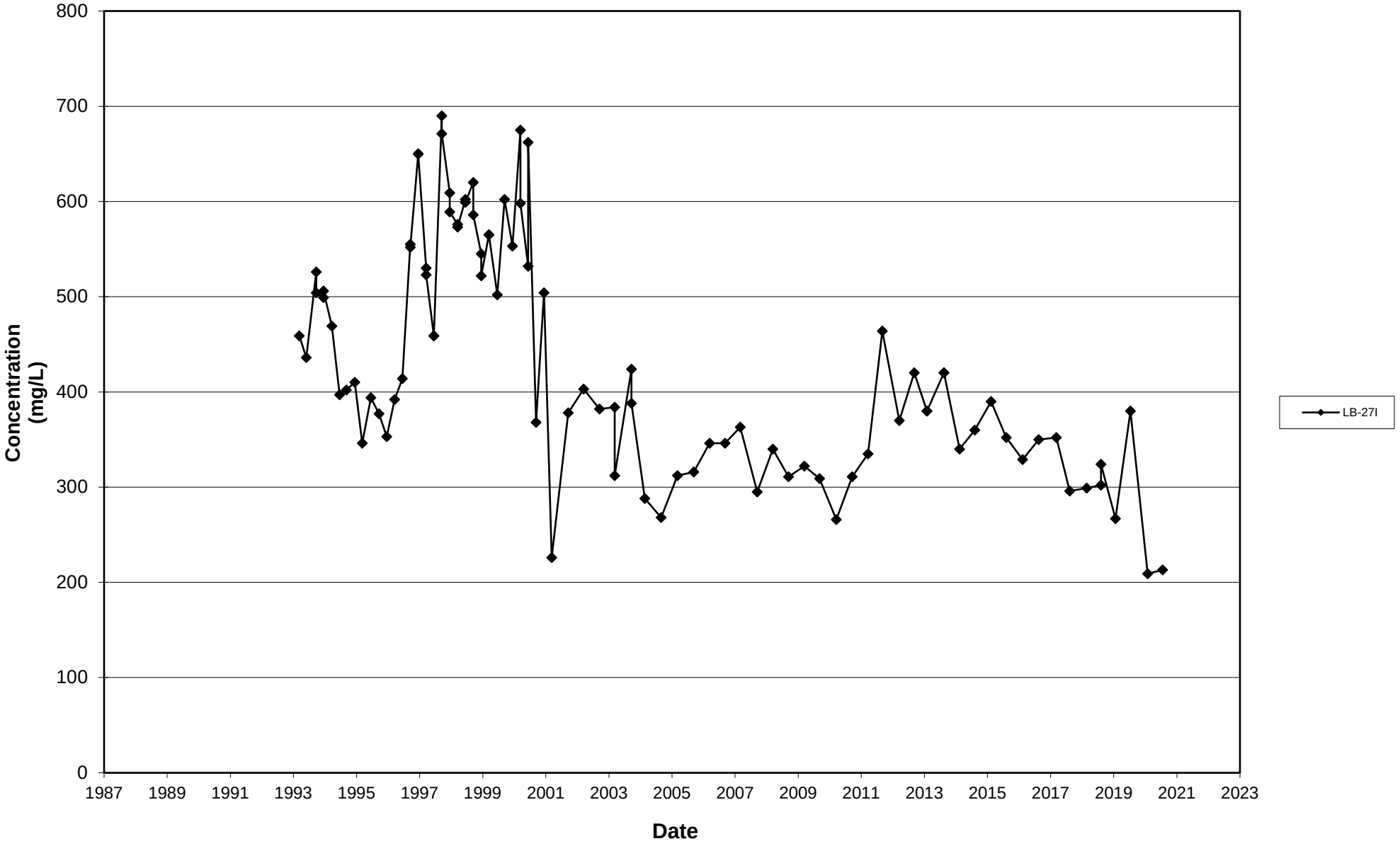
# Leichner Landfill
# Total Dissolved Solids, LB-26I
# 1987 - 2020



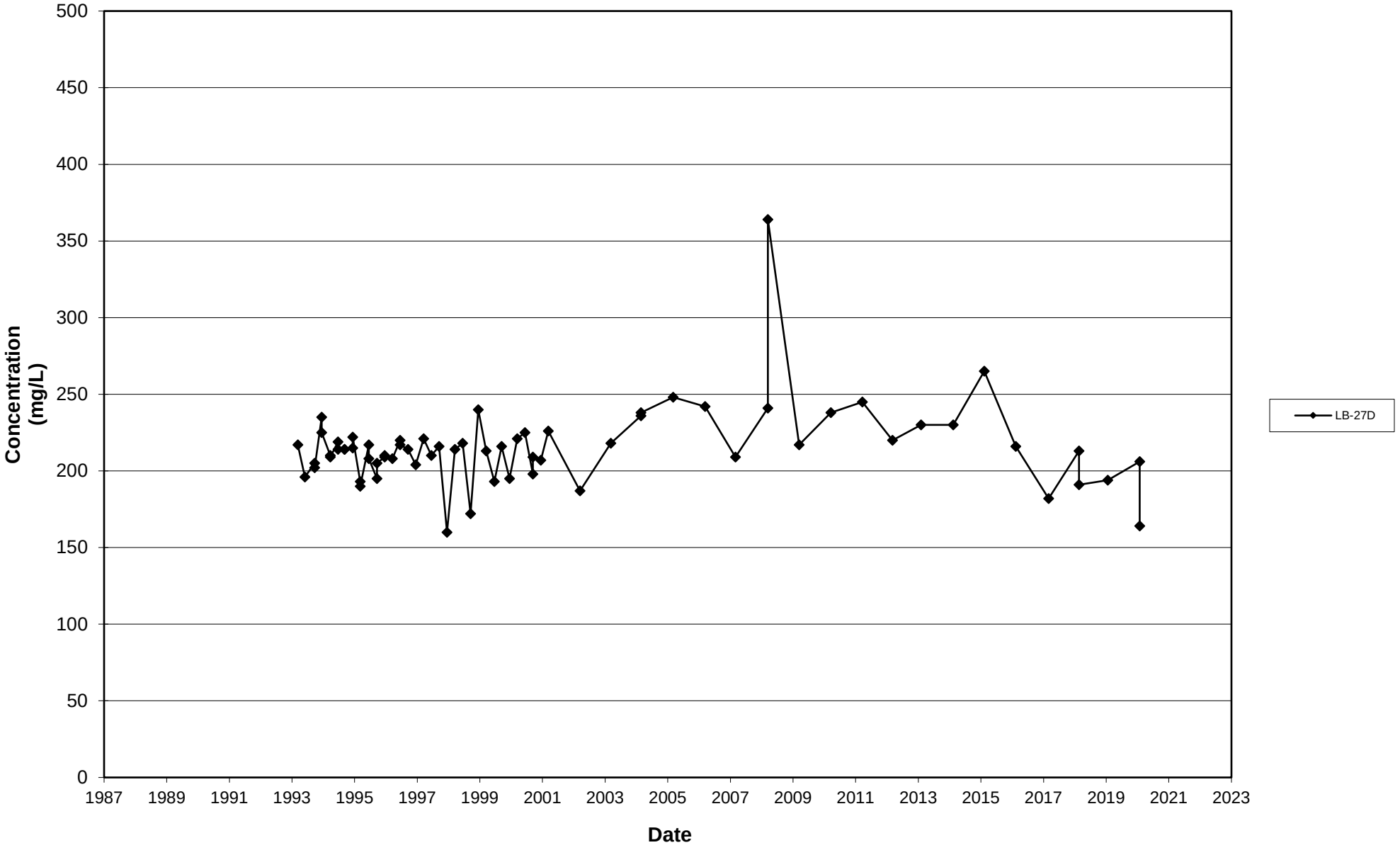
# Leichner Landfill
# Total Dissolved Solids, LB-26D
# 1987 - 2020



# Leichner Landfill
# Total Dissolved Solids, LB-27I
# 1987 - 2020

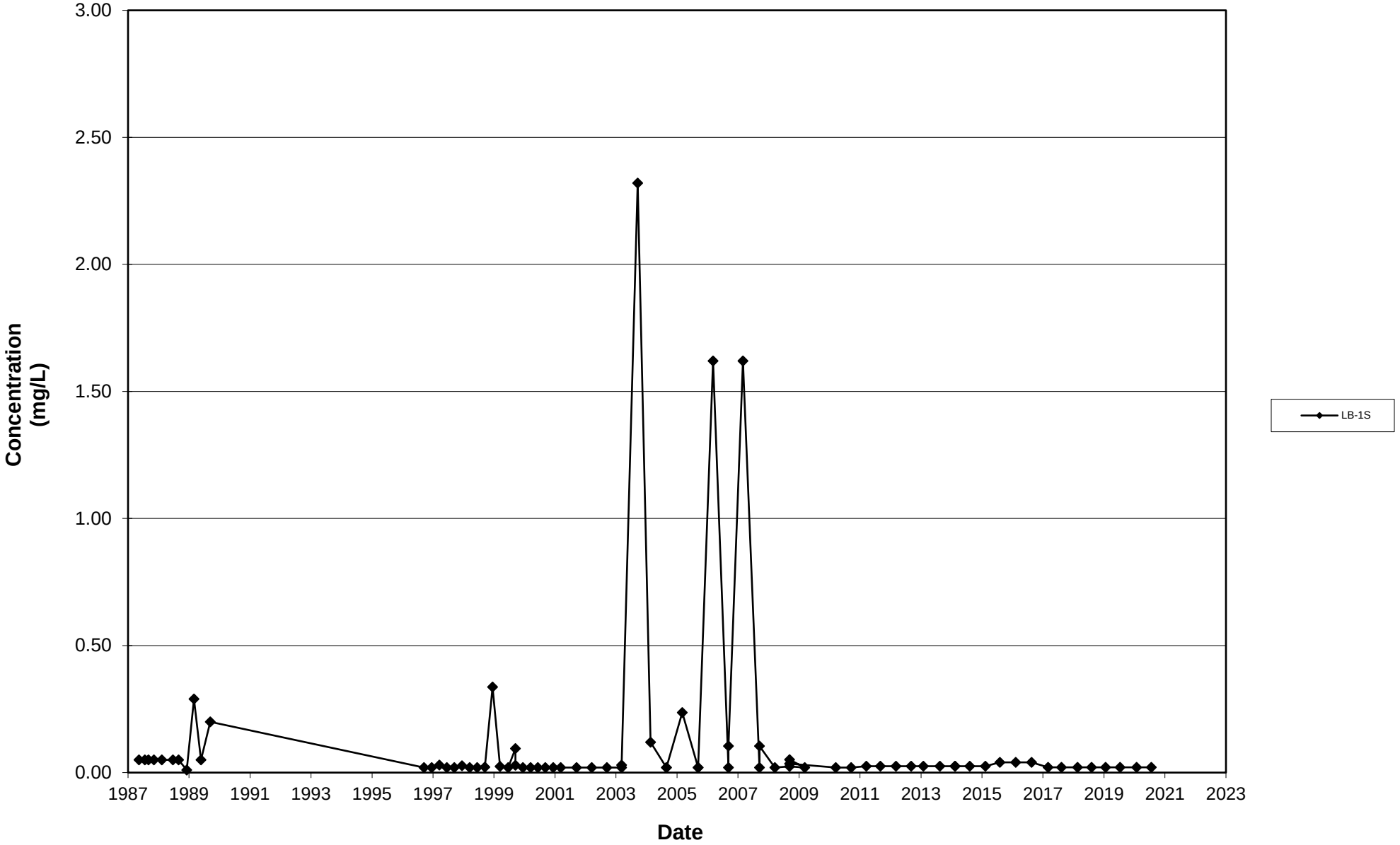


# Leichner Landfill
# Total Dissolved Solids, LB-27D
# 1987 - 2020

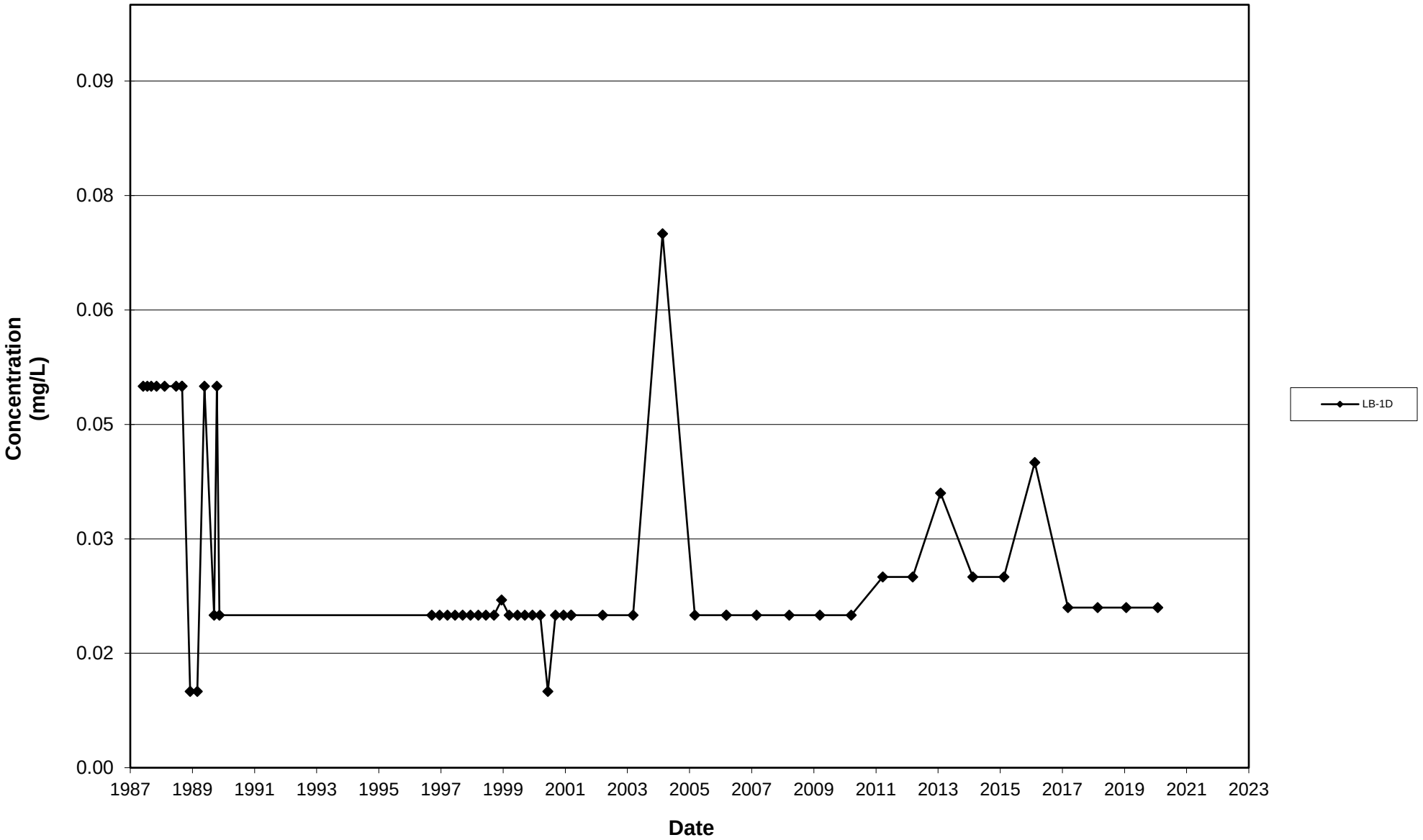


# Dissolved Iron

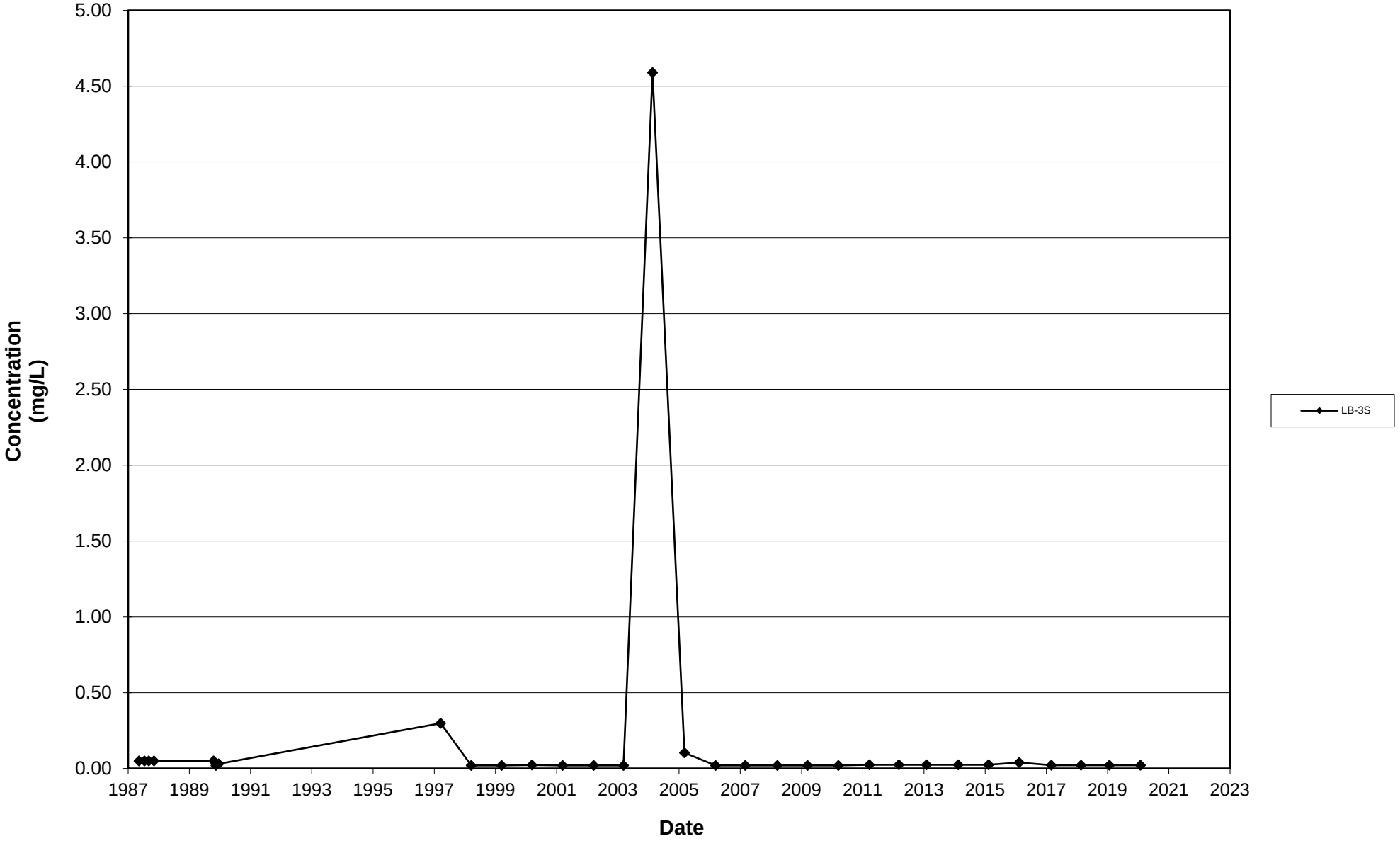
# Leichner Landfill
# Dissolved Iron, LB-01S
# 1987 - 2020



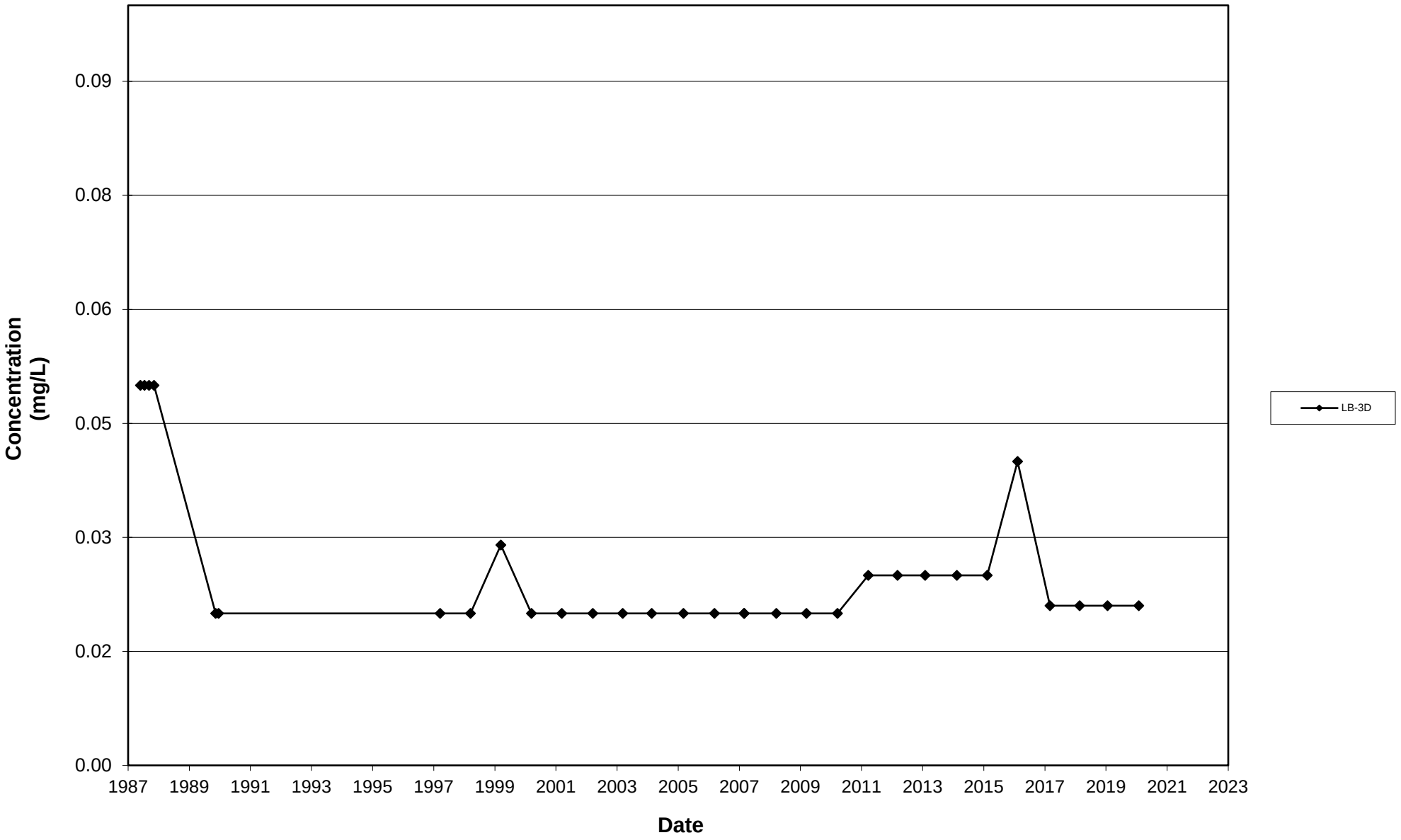
# Leichner Landfill
# Dissolved Iron, LB-01D
# 1987 - 2020



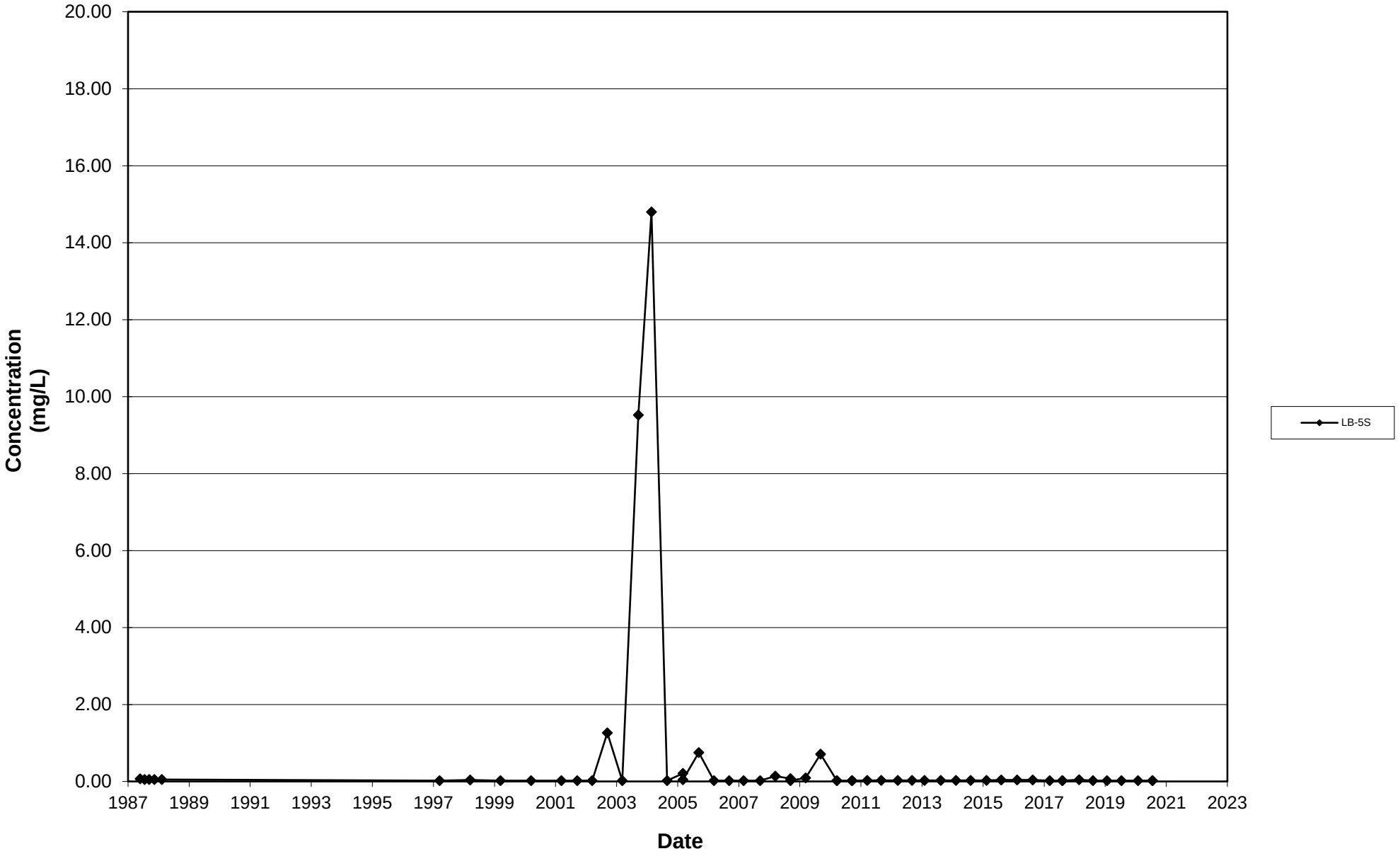
# Leichner Landfill
# Dissolved Iron, LB-03S
# 1987 - 2020



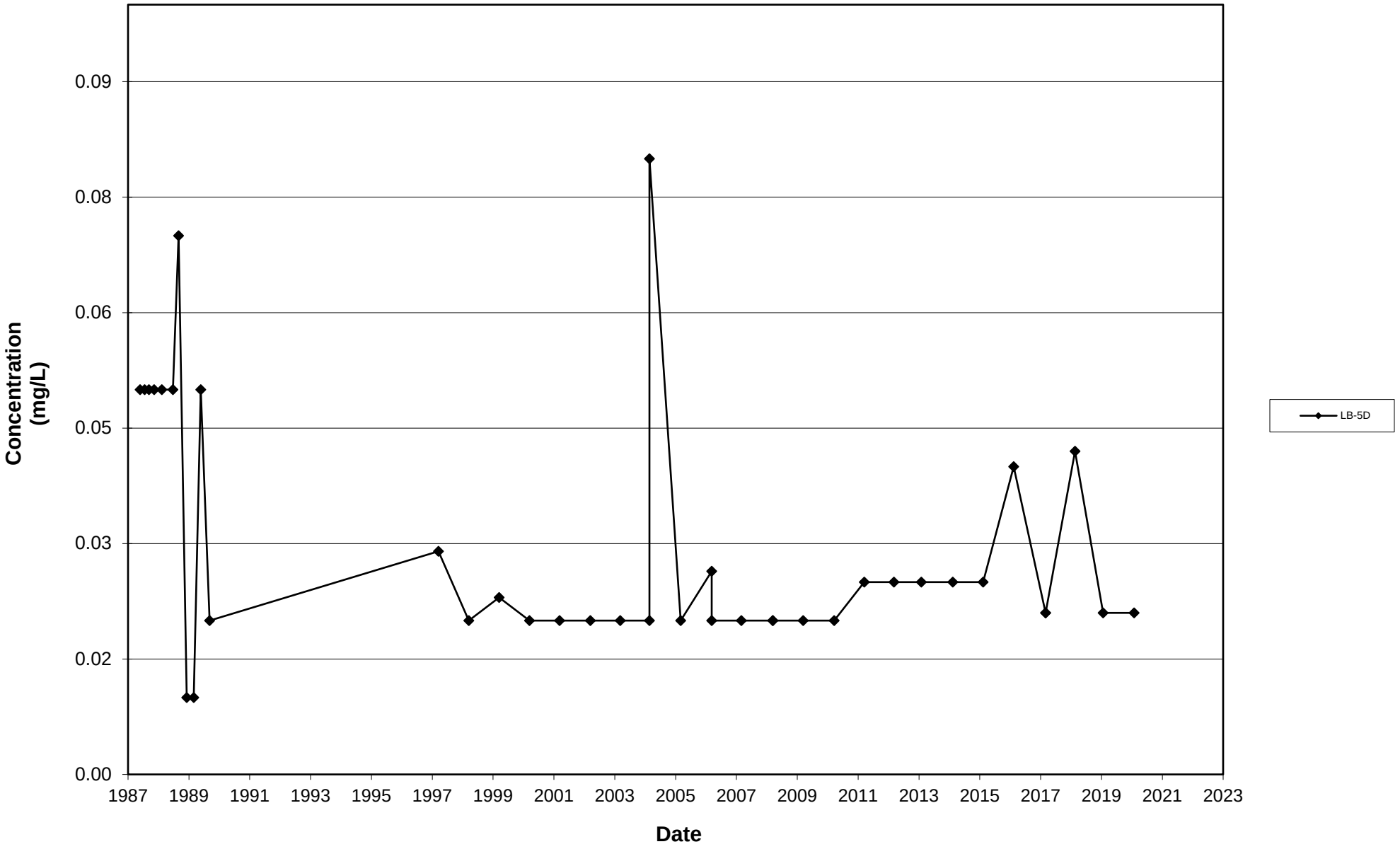
# Leichner Landfill
# Dissolved Iron, LB-03D
# 1987 - 2020



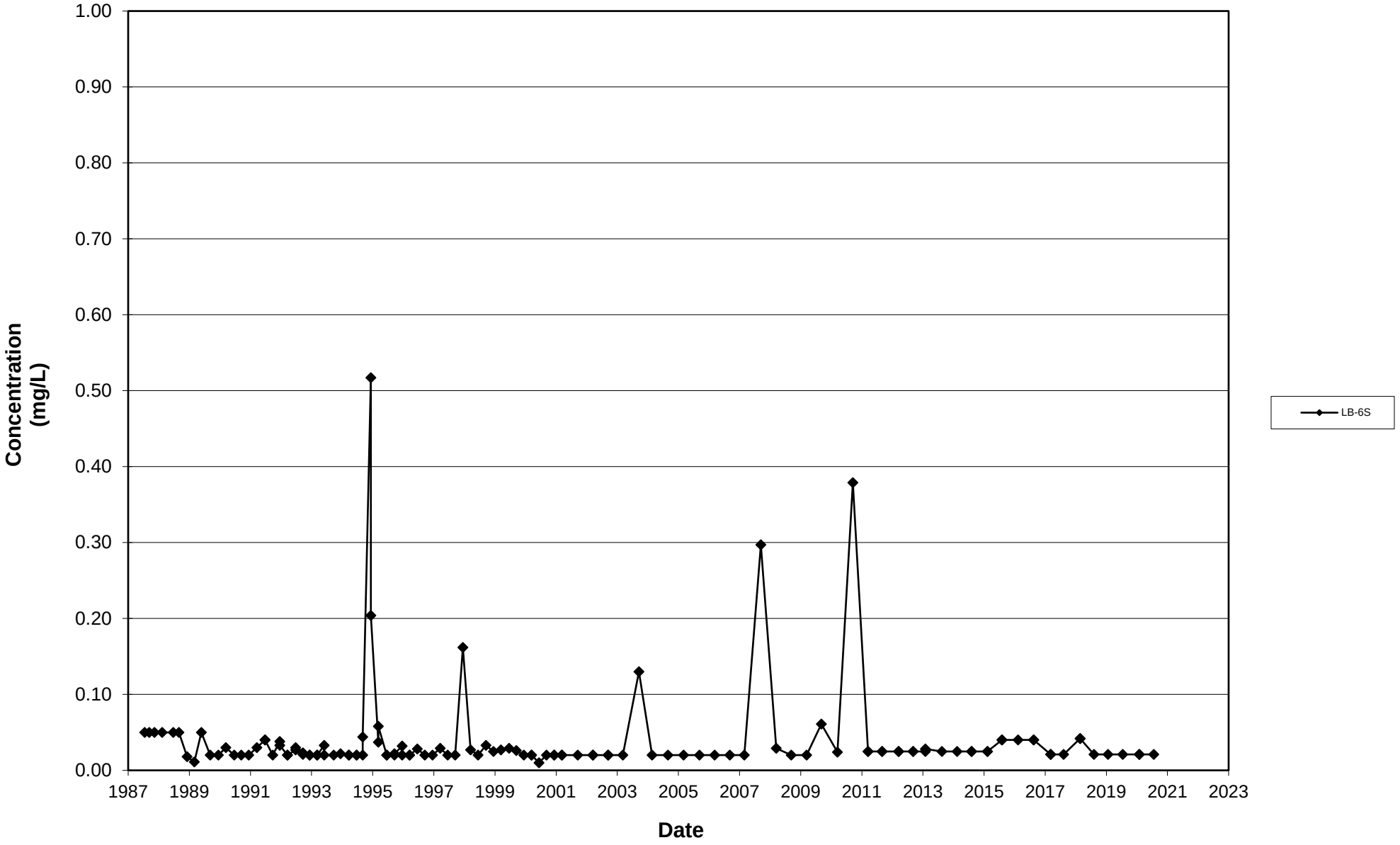
# Leichner Landfill
# Dissolved Iron, LB-05S
# 1987 - 2020



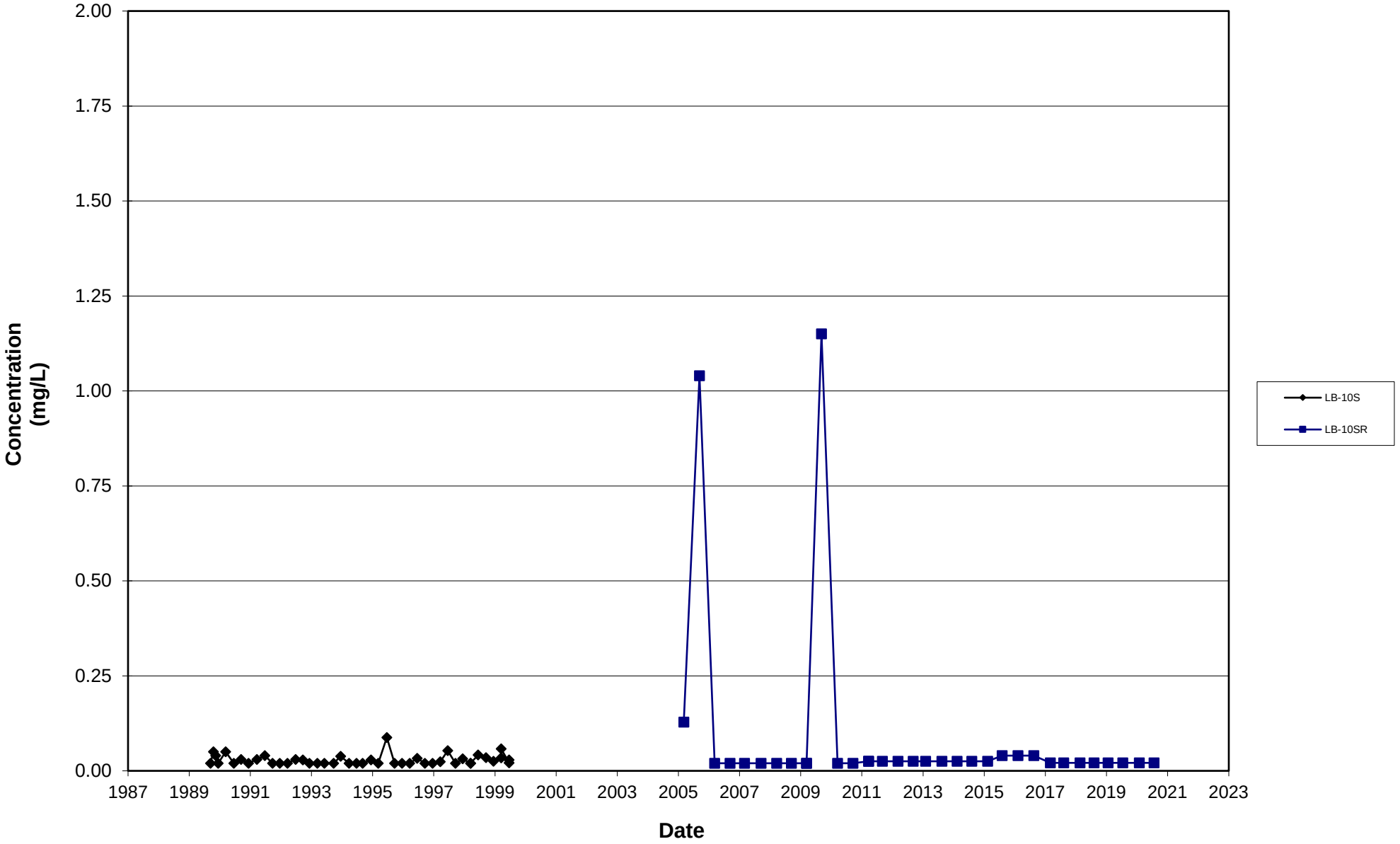
# Leichner Landfill
# Dissolved Iron, LB-05D
# 1987 - 2020



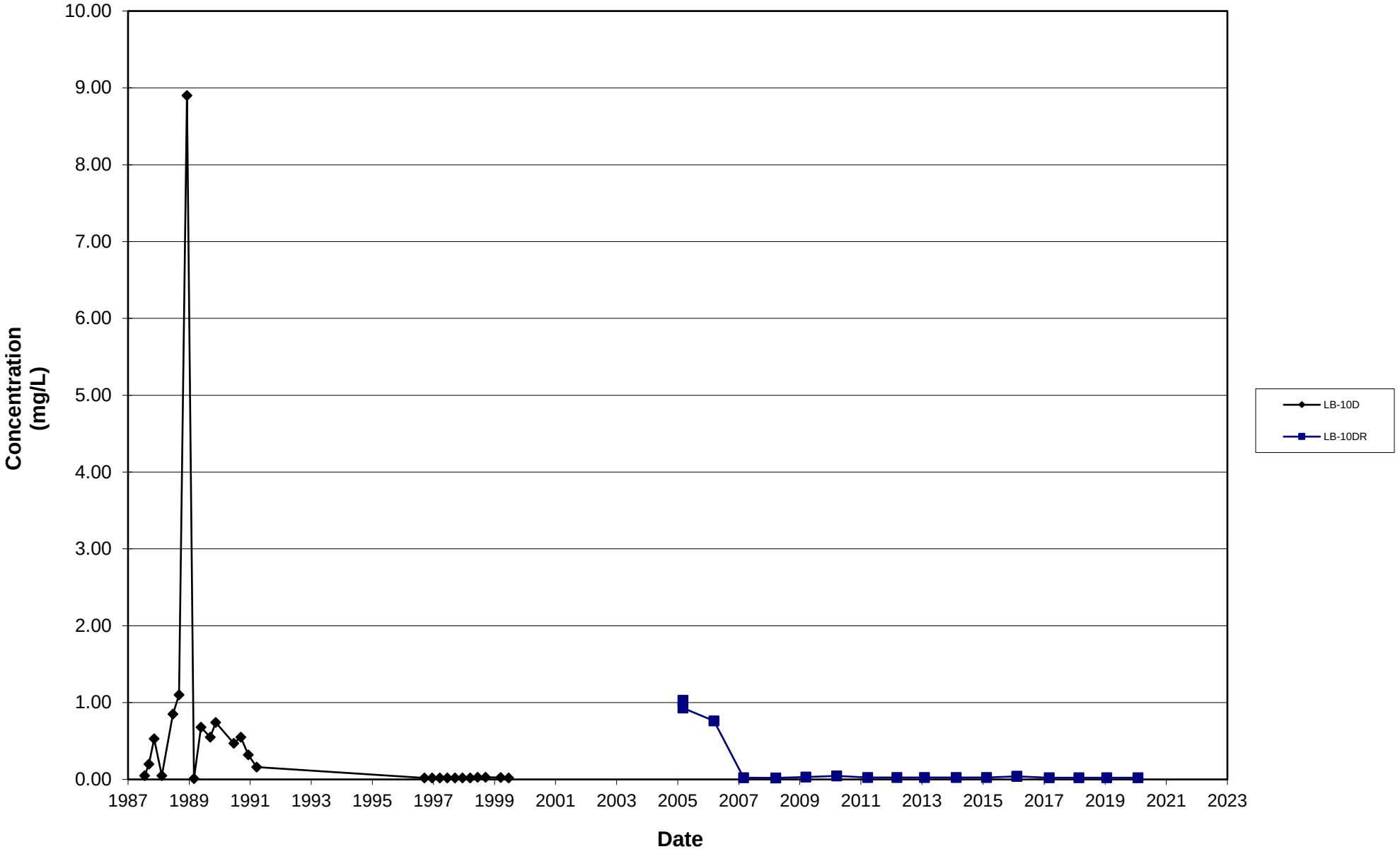
# Leichner Landfill
# Dissolved Iron, LB-06S
# 1987 - 2020



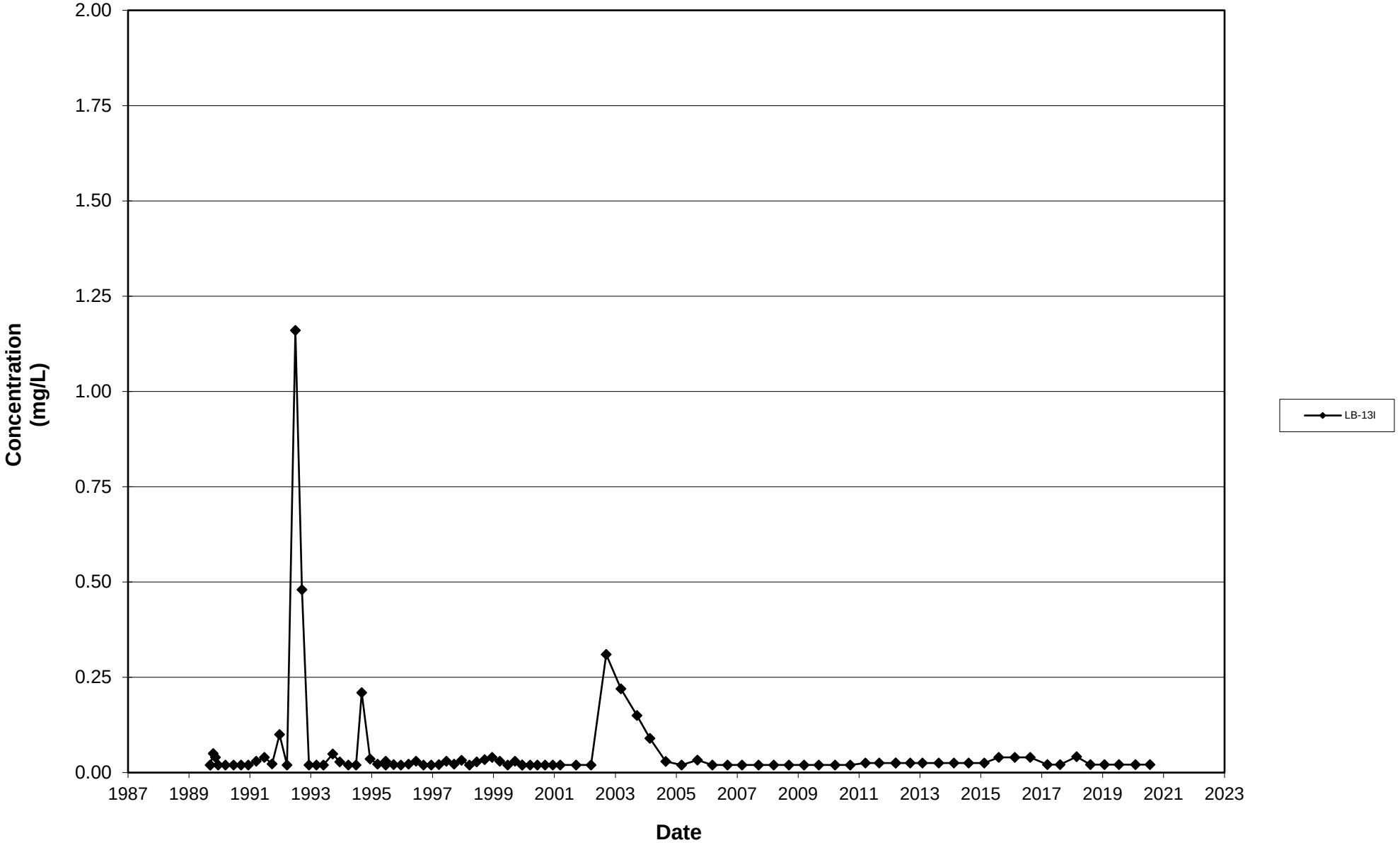
# Leichner Landfill
# Dissolved Iron, LB-10S and LB-10SR
# 1987 - 2020



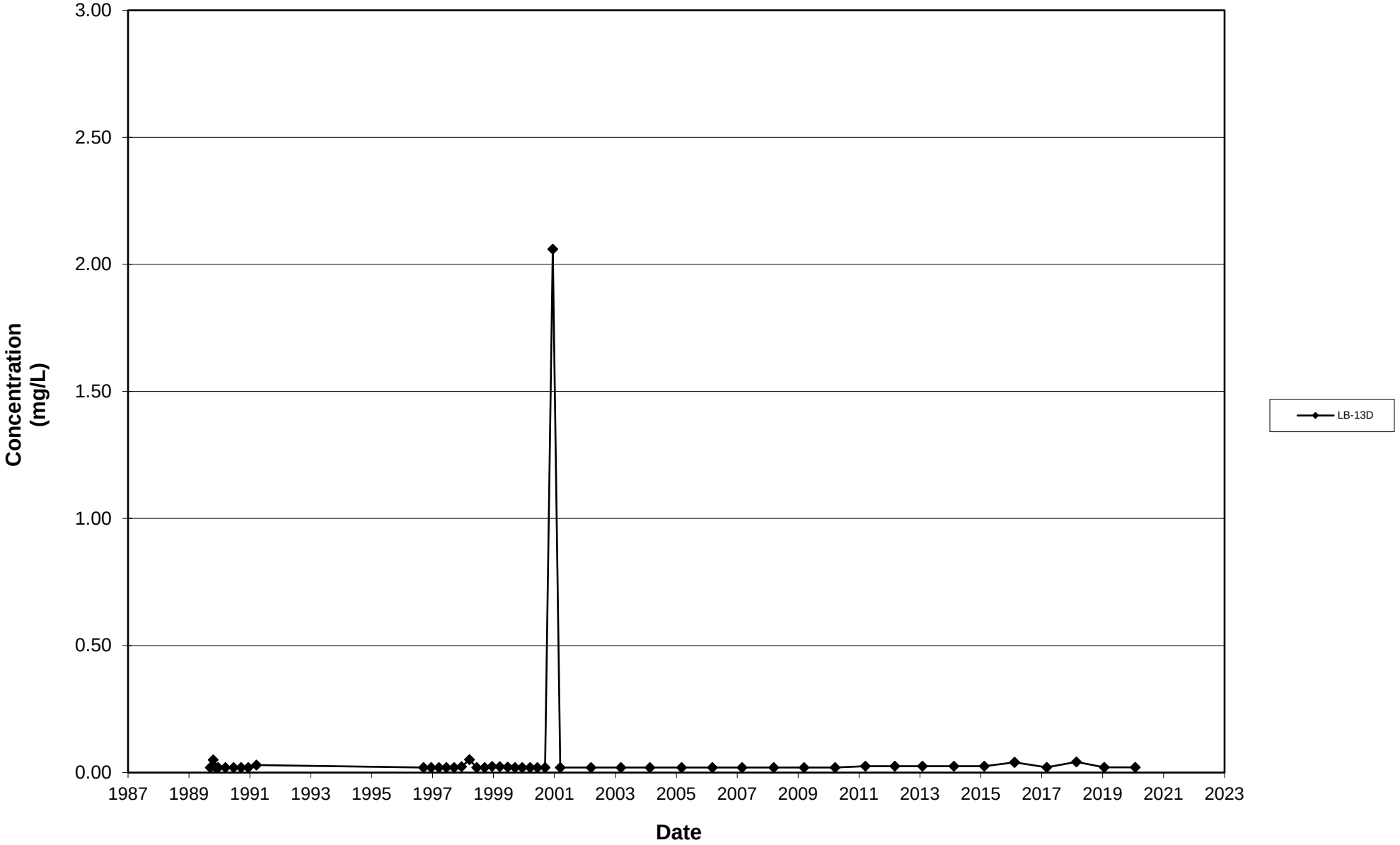
# Leichner Landfill
# Dissolved Iron, LB-10D and LB-10DR
# 1987 - 2020



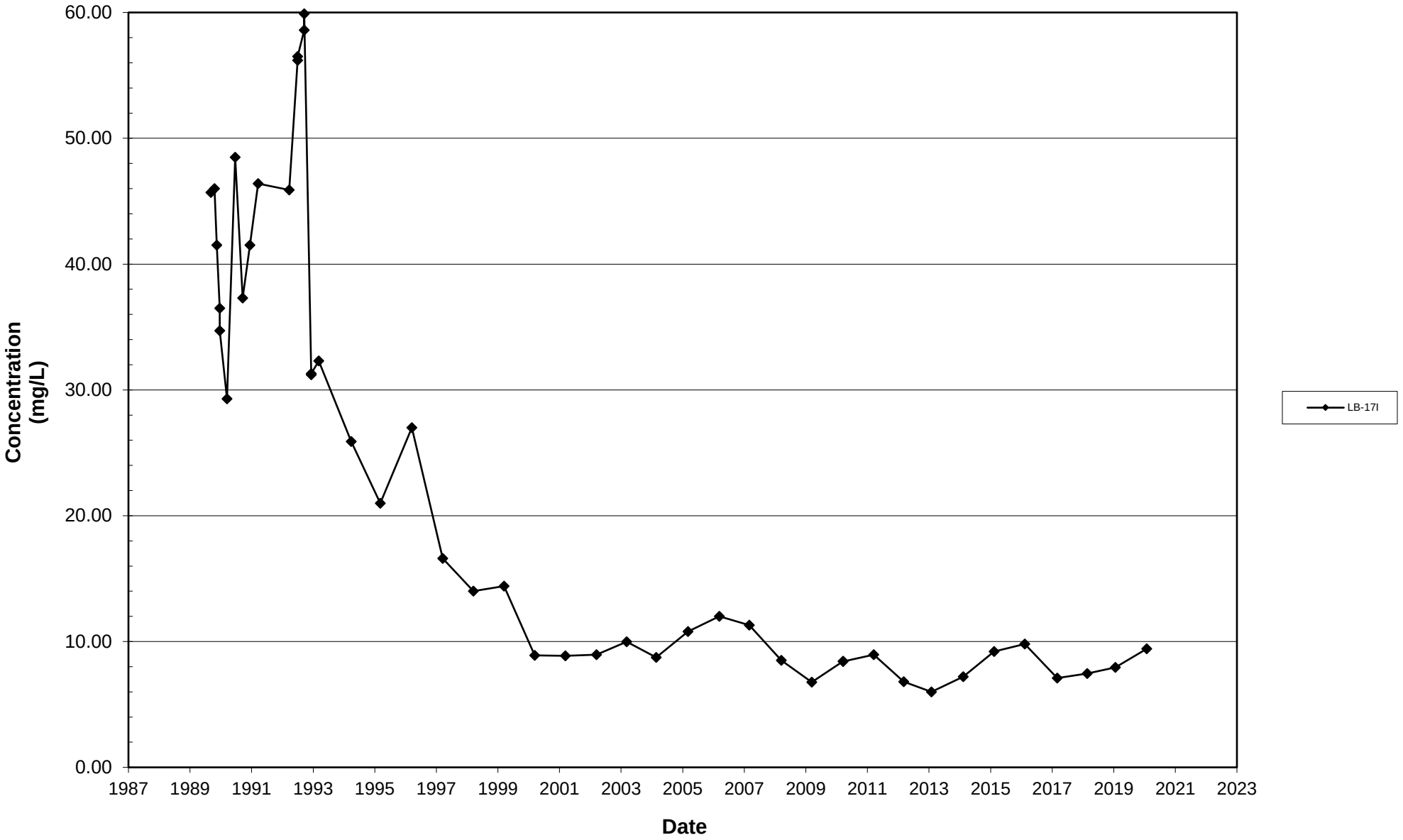
# Leichner Landfill
# Dissolved Iron, LB-13I
# 1987 - 2020



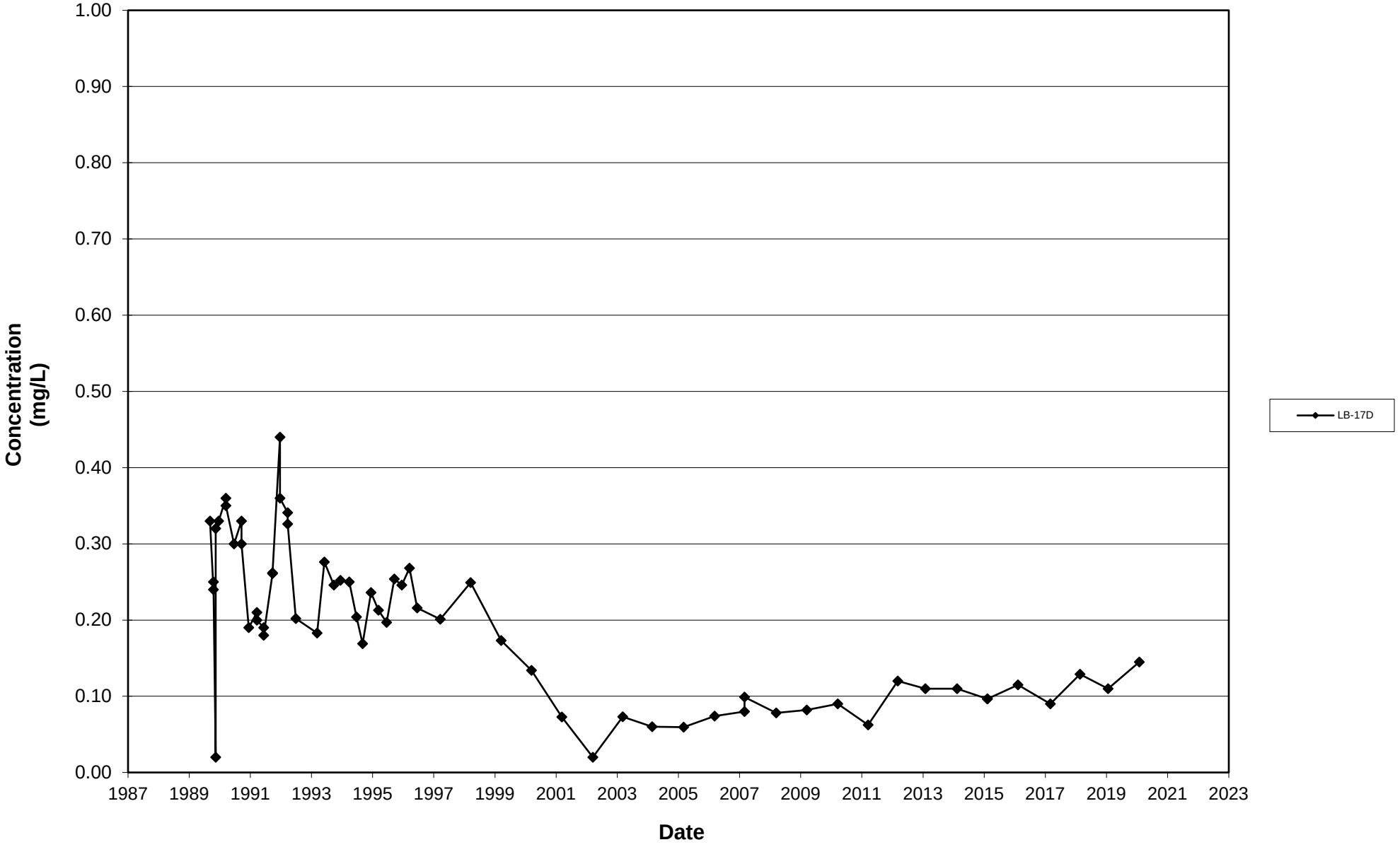
# Leichner Landfill
# Dissolved Iron, LB-13D
# 1987 - 2020



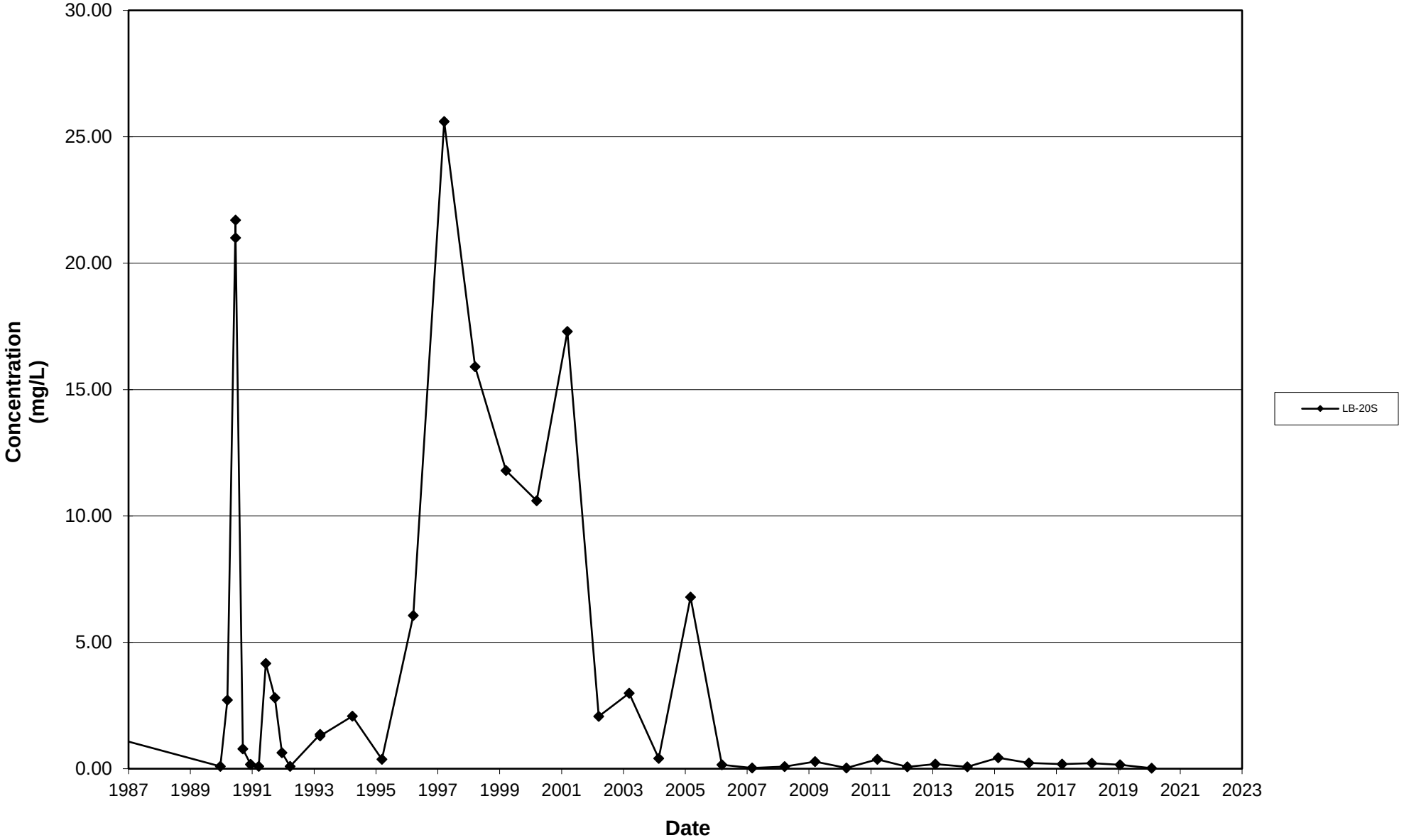
# Leichner Landfill
# Dissolved Iron, LB-17I
# 1987 - 2020



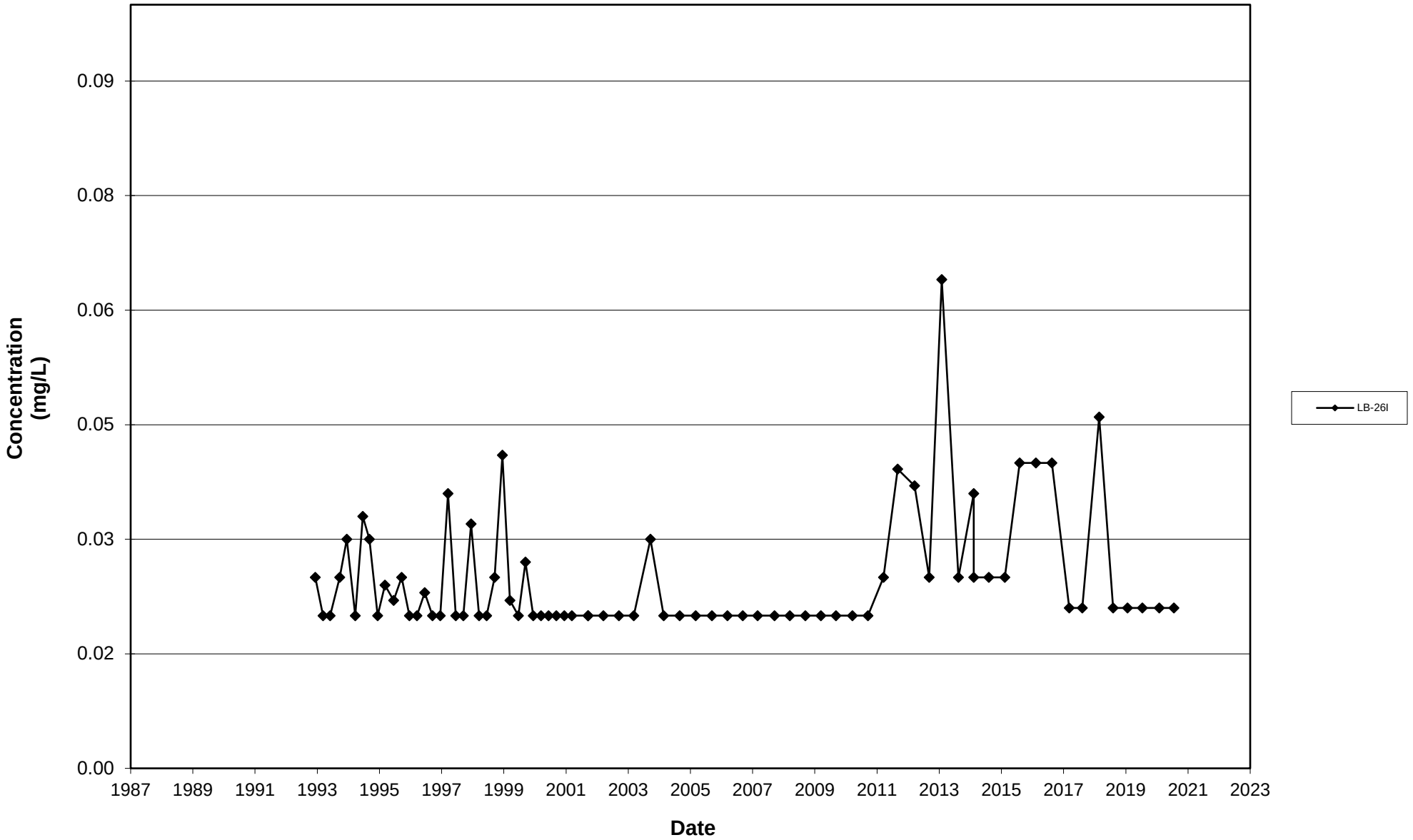
# Leichner Landfill
# Dissolved Iron, LB-17D
# 1987 - 2020



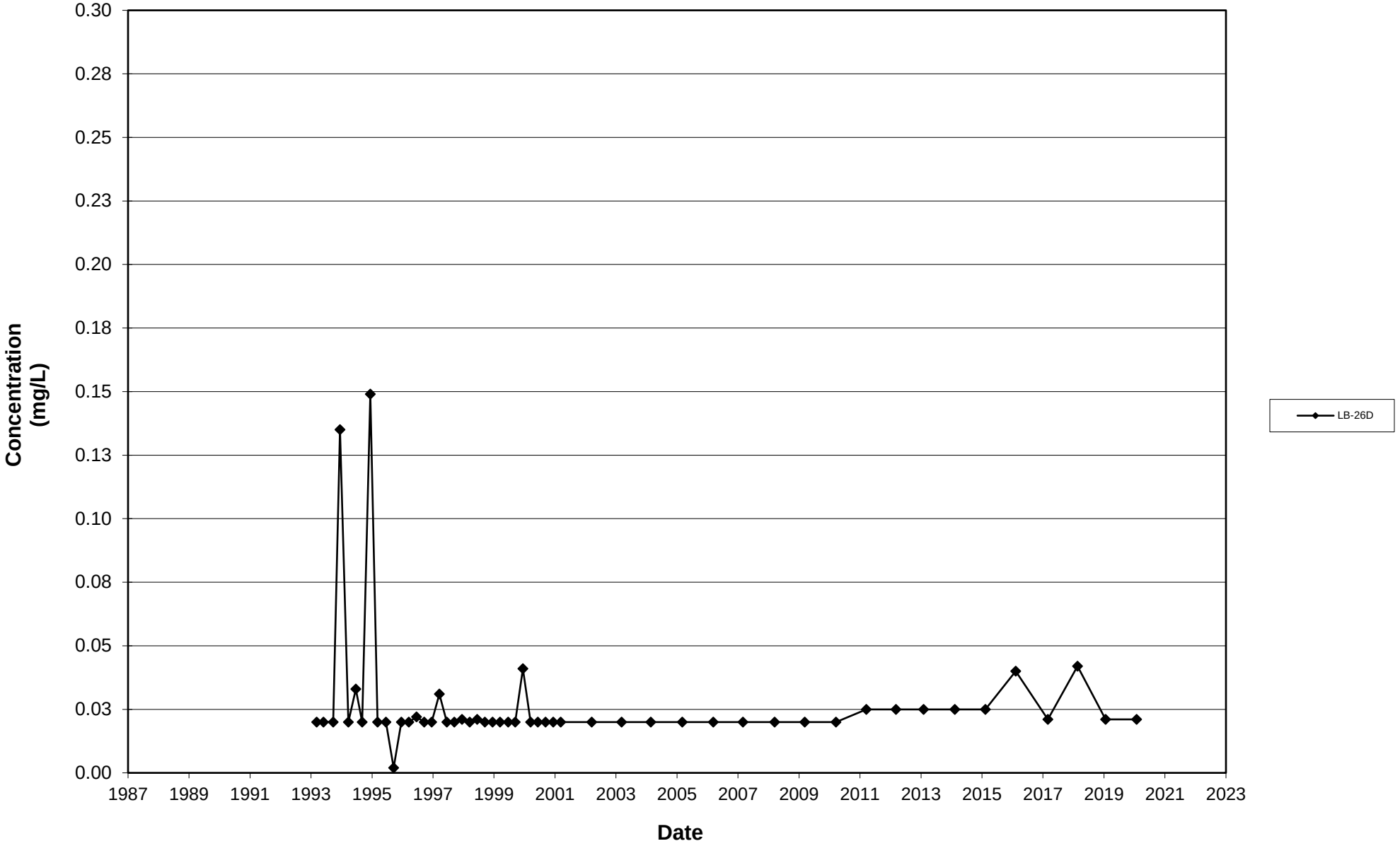
# Leichner Landfill
# Dissolved Iron, LB-20S
# 1987 - 2020



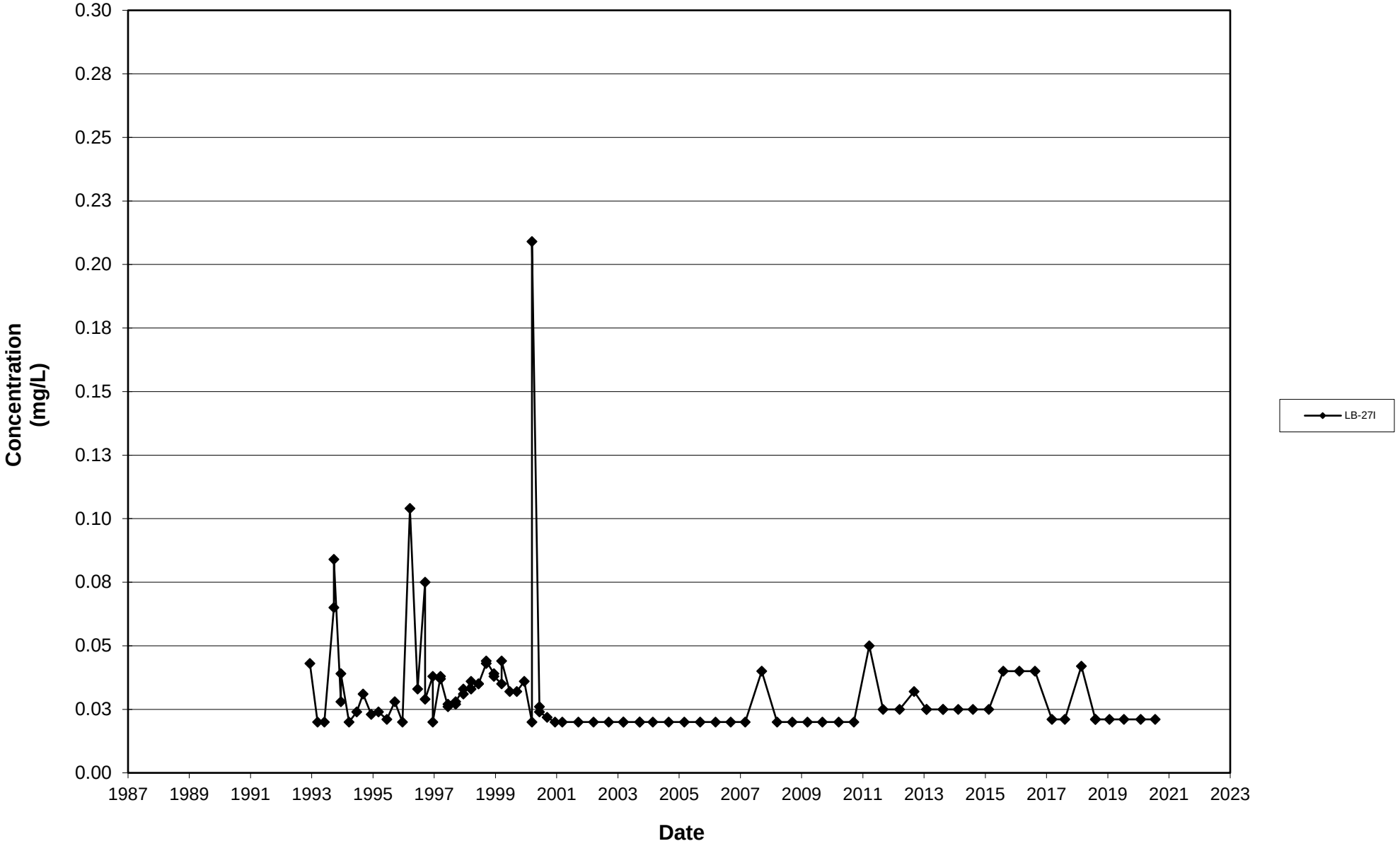
# Leichner Landfill
# Dissolved Iron, LB-26I
# 1987 - 2020



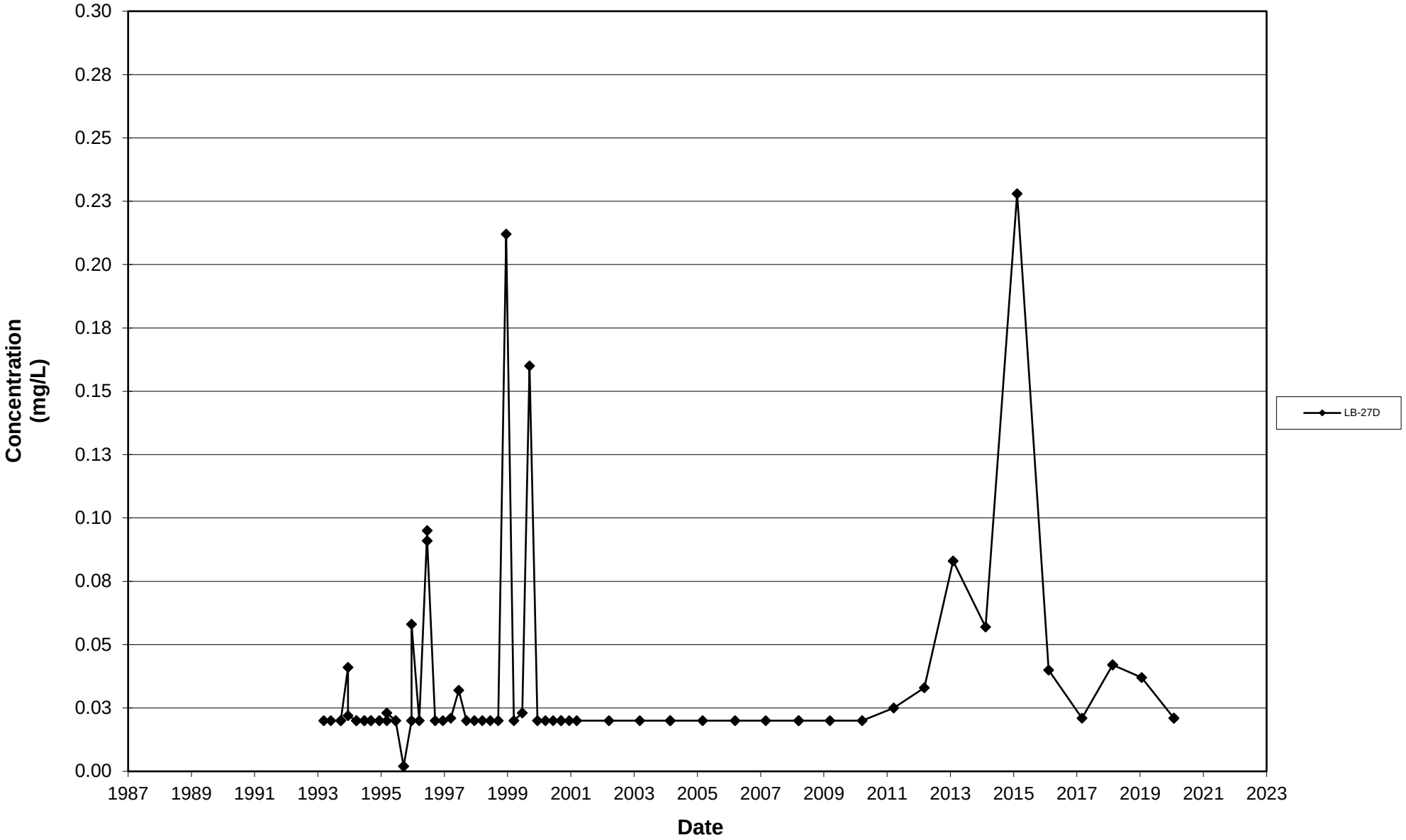
# Leichner Landfill
# Dissolved Iron, LB-26D
# 1987 - 2020



# Leichner Landfill
# Dissolved Iron, LB-27I
# 1987 - 2020

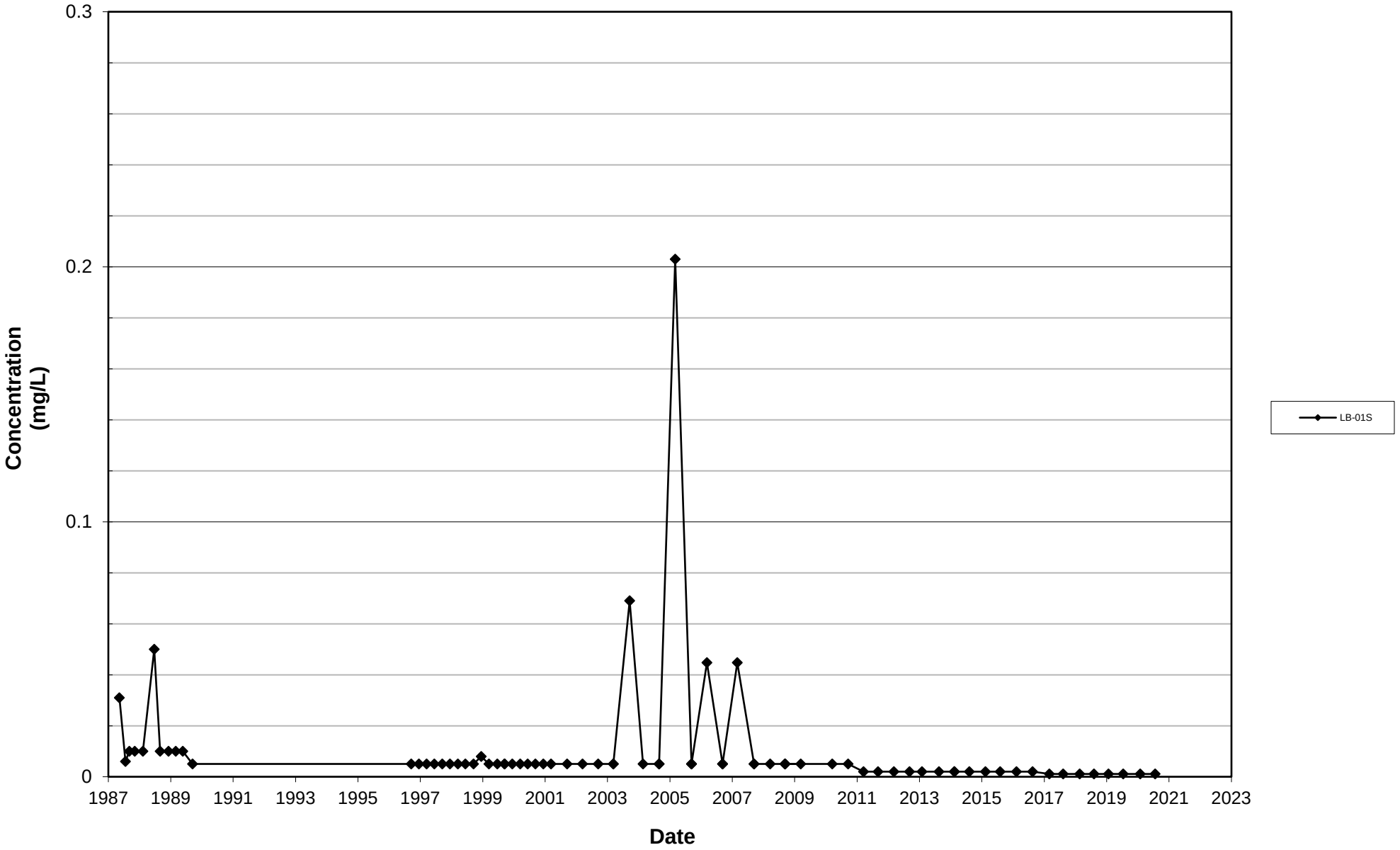


# Leichner Landfill
# Dissolved Iron, LB-27D
# 1987 - 2020

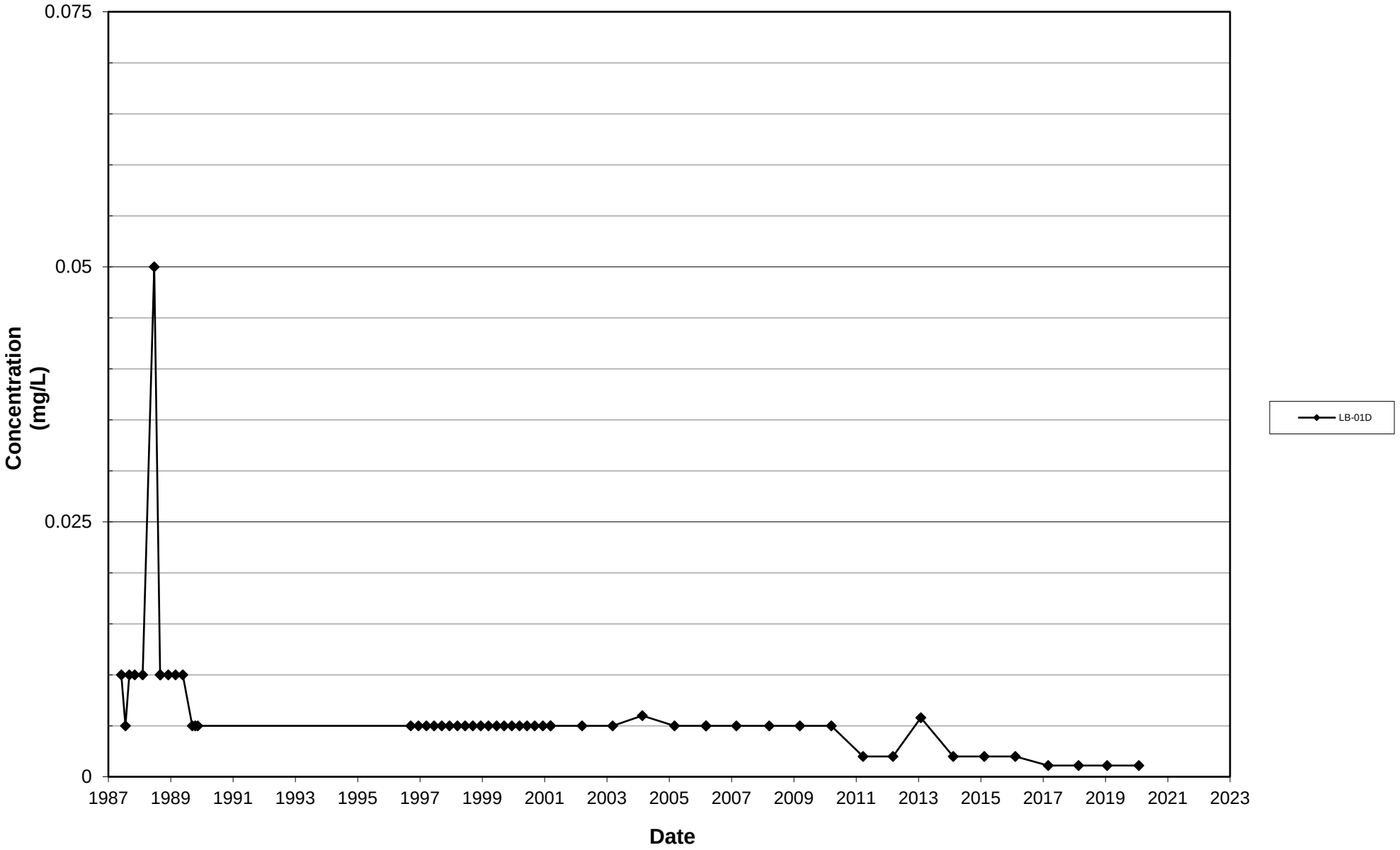


Dissolved Manganese

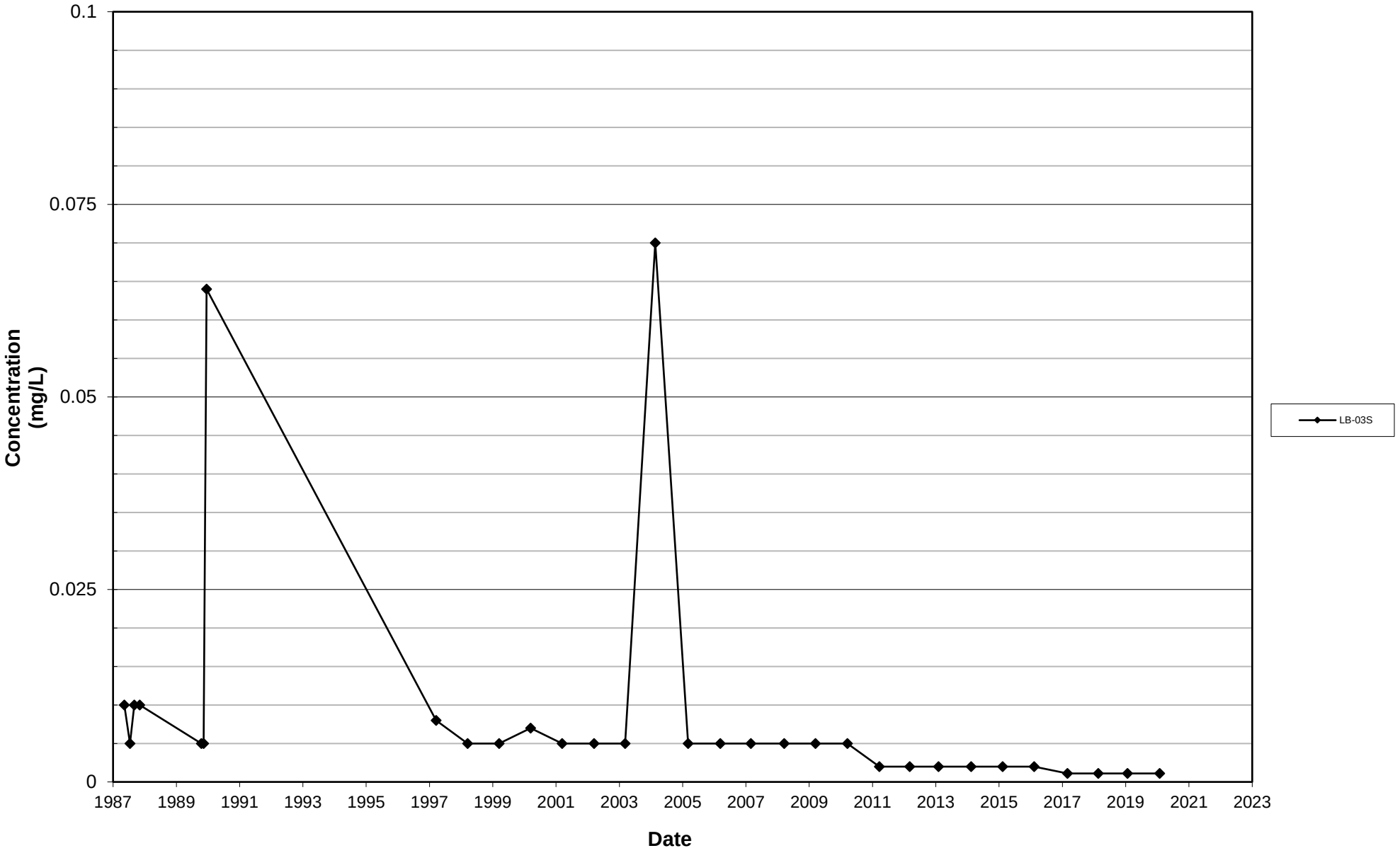
# Leichner Landfill
# Dissolved Manganese, LB-01S
# 1987 - 2020



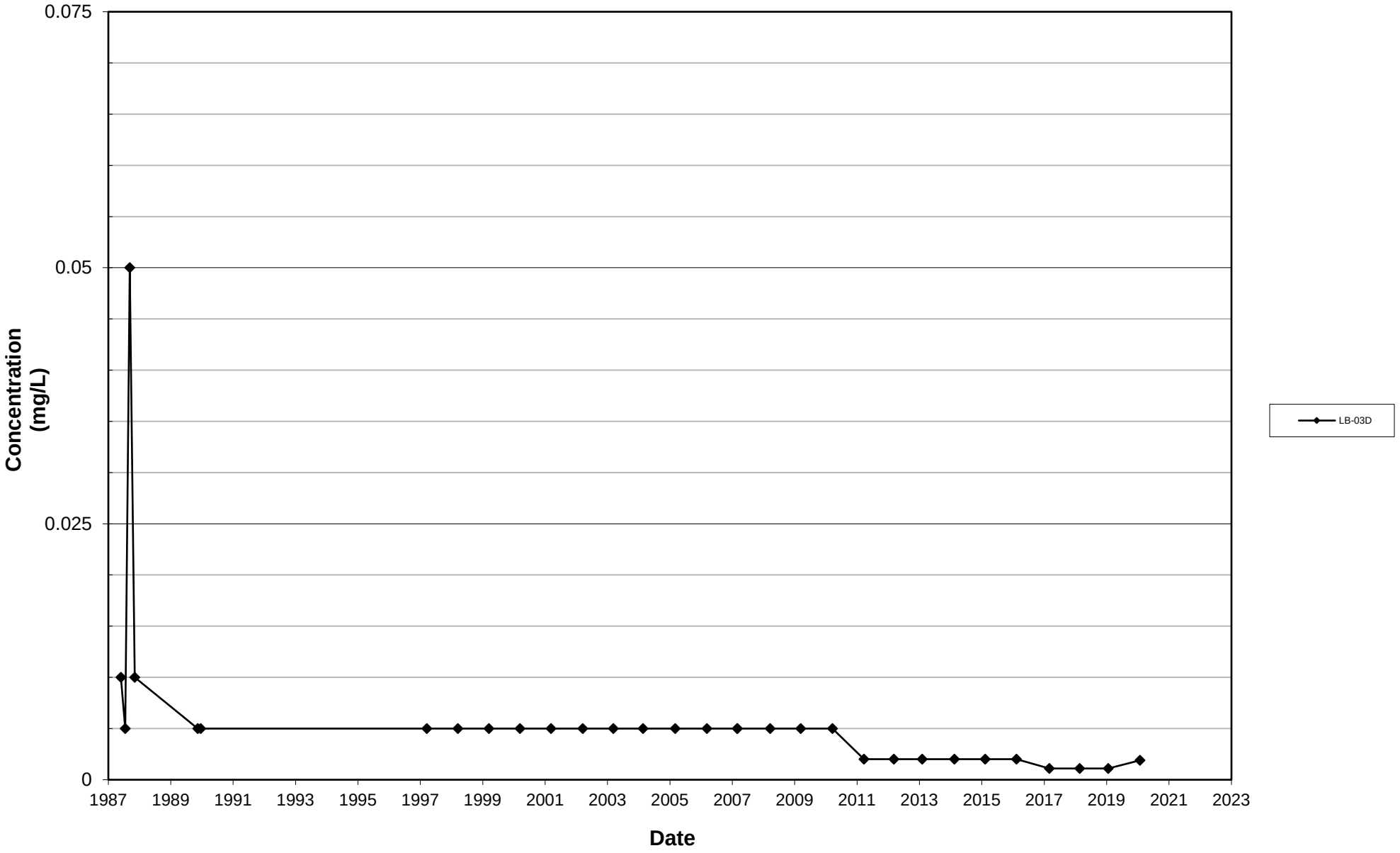
# Leichner Landfill
# Dissolved Manganese, LB-01D
# 1987 - 2020



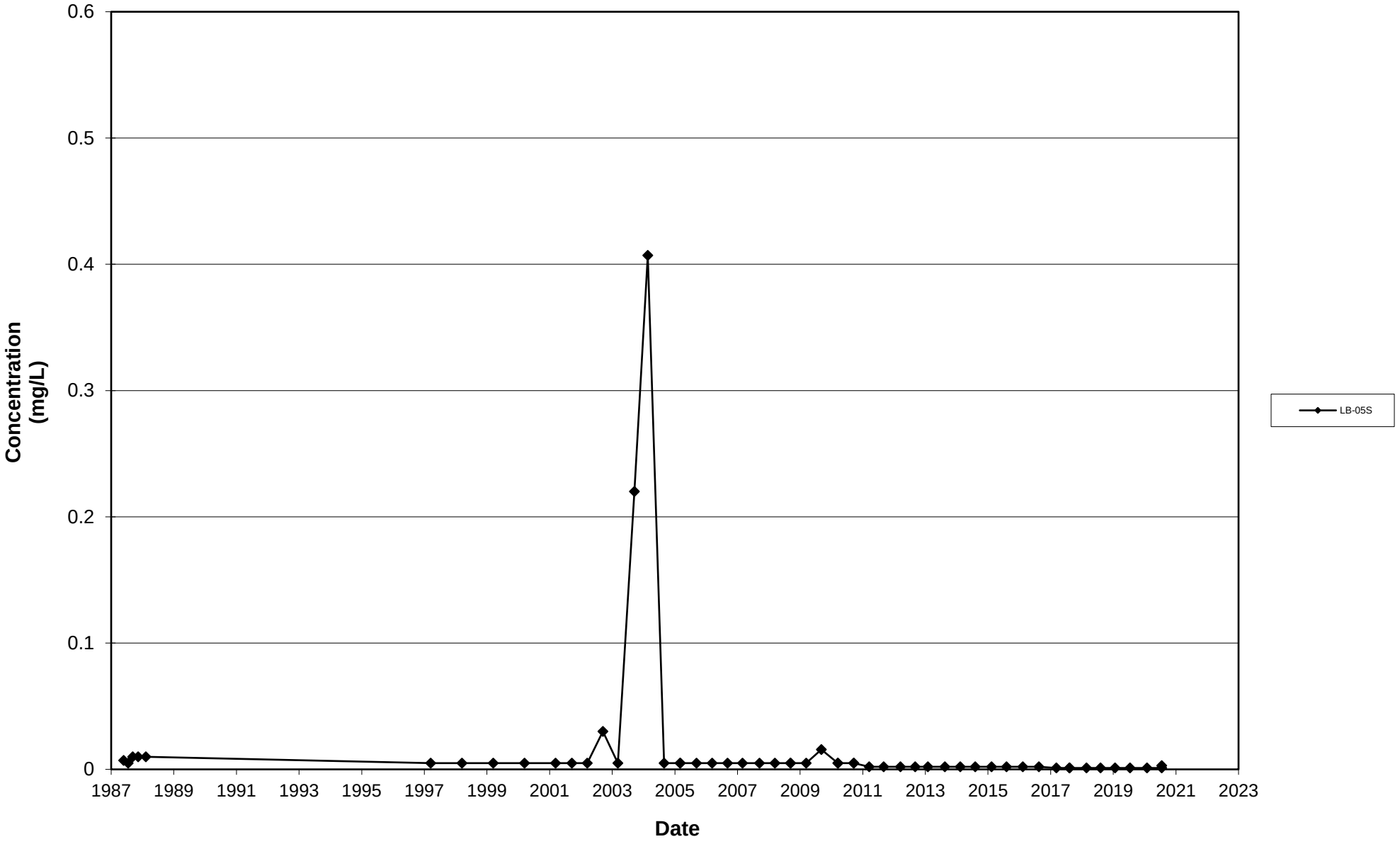
# Leichner Landfill
# Dissolved Manganese, LB-03S
# 1987 - 2020



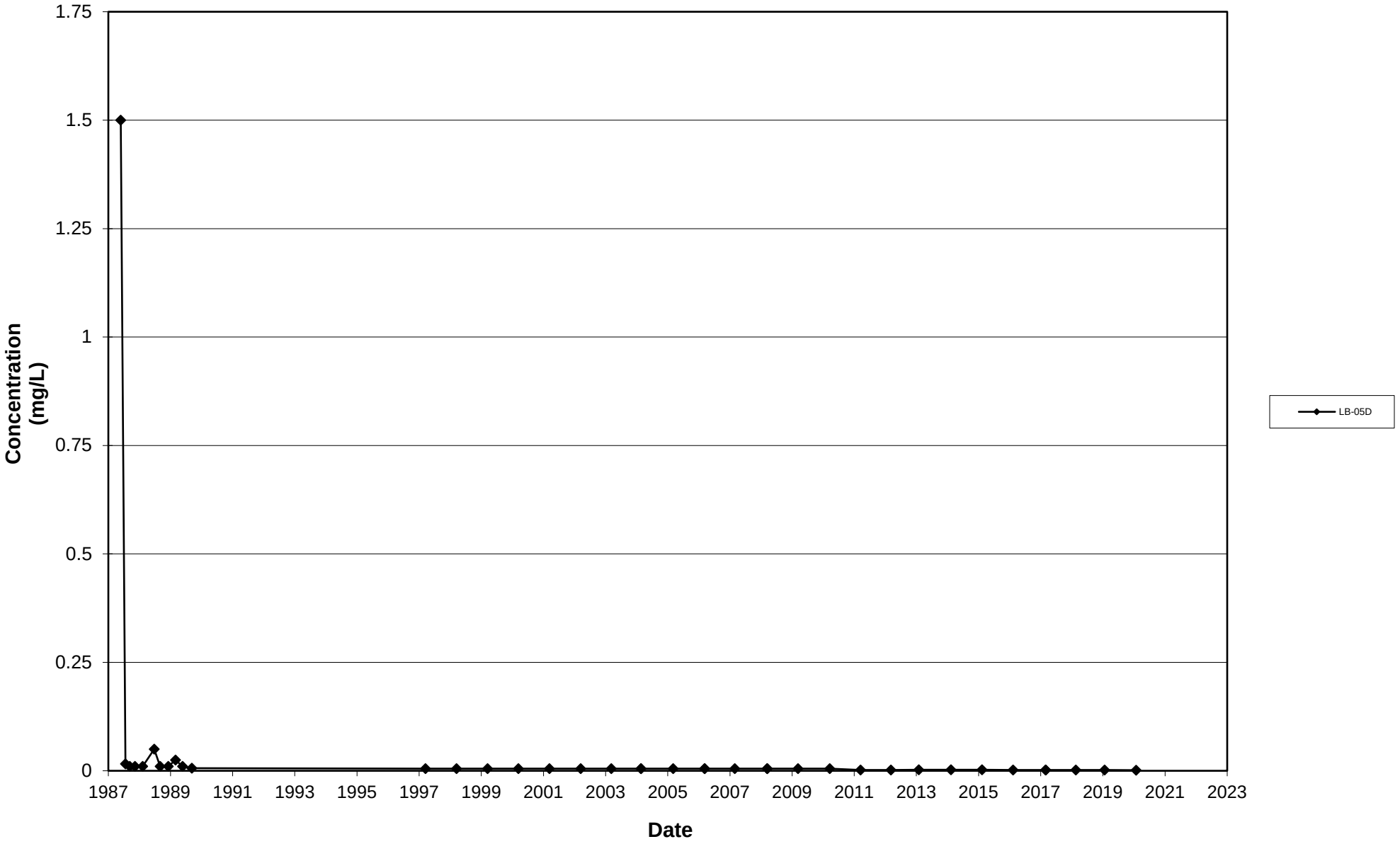
# Leichner Landfill
# Dissolved Manganese, LB-03D
# 1987 - 2020



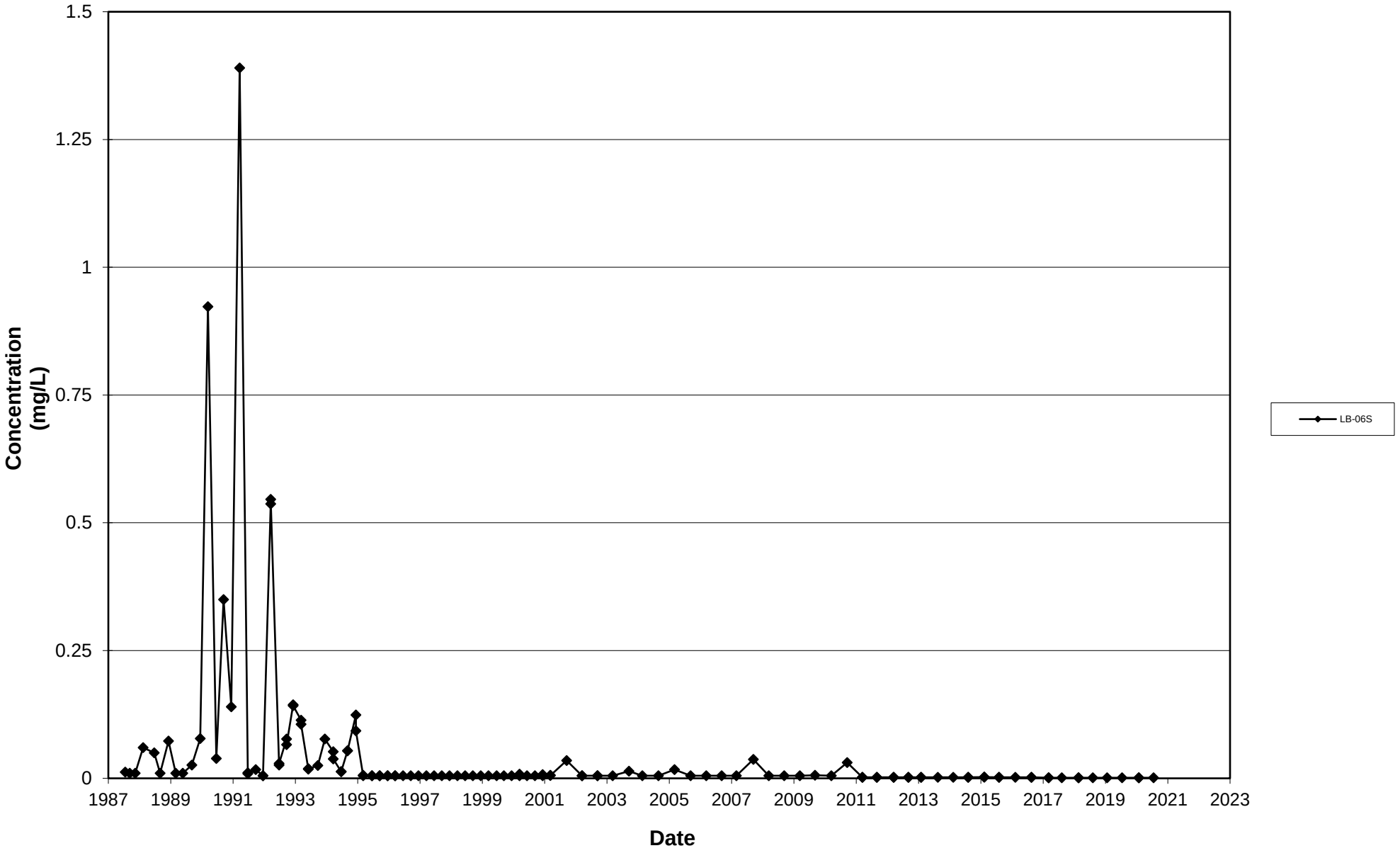
# Leichner Landfill
# Dissolved Manganese, LB-05S
# 1987 - 2020



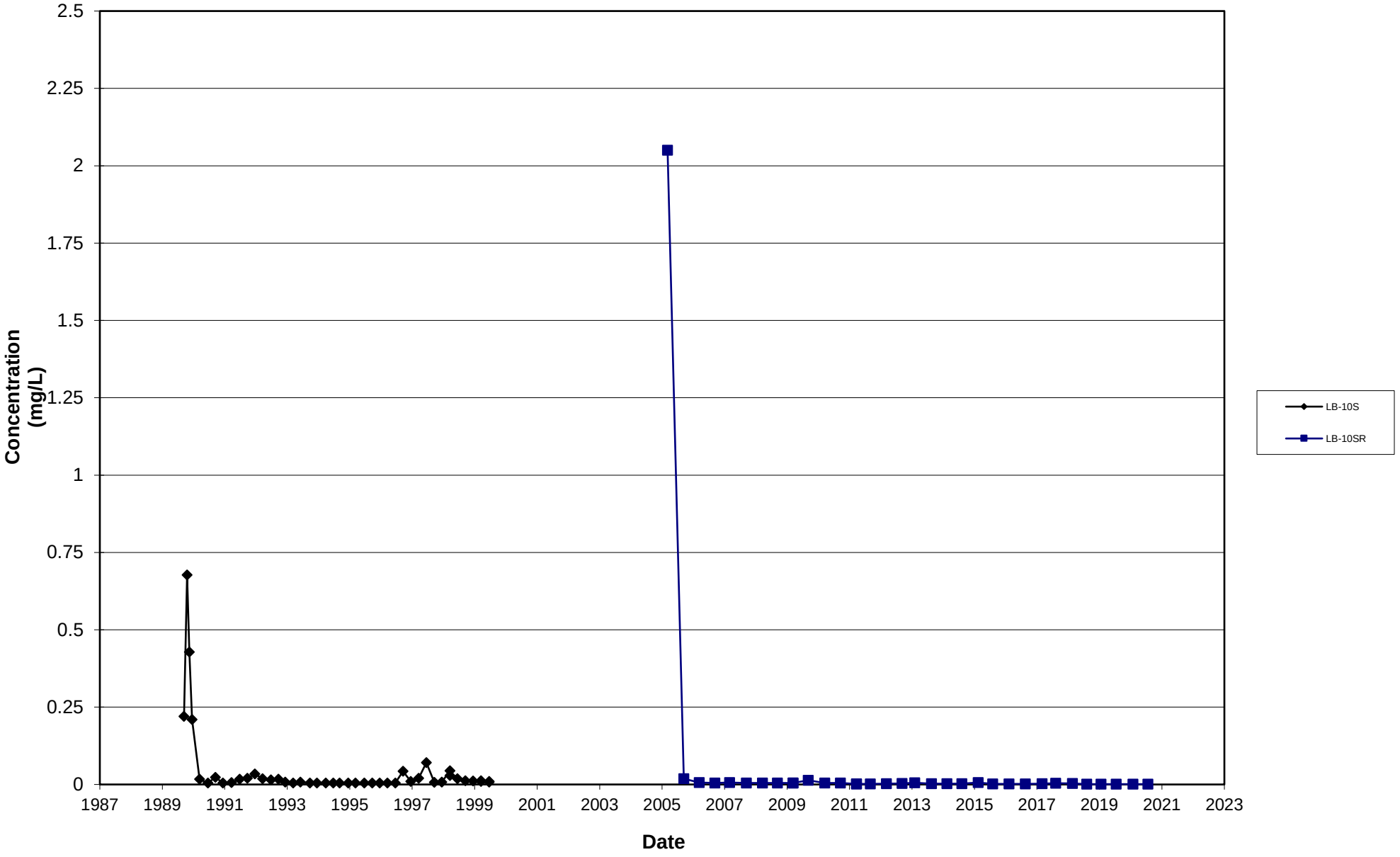
# Leichner Landfill
# Dissolved Manganese, LB-05D
# 1987 - 2020



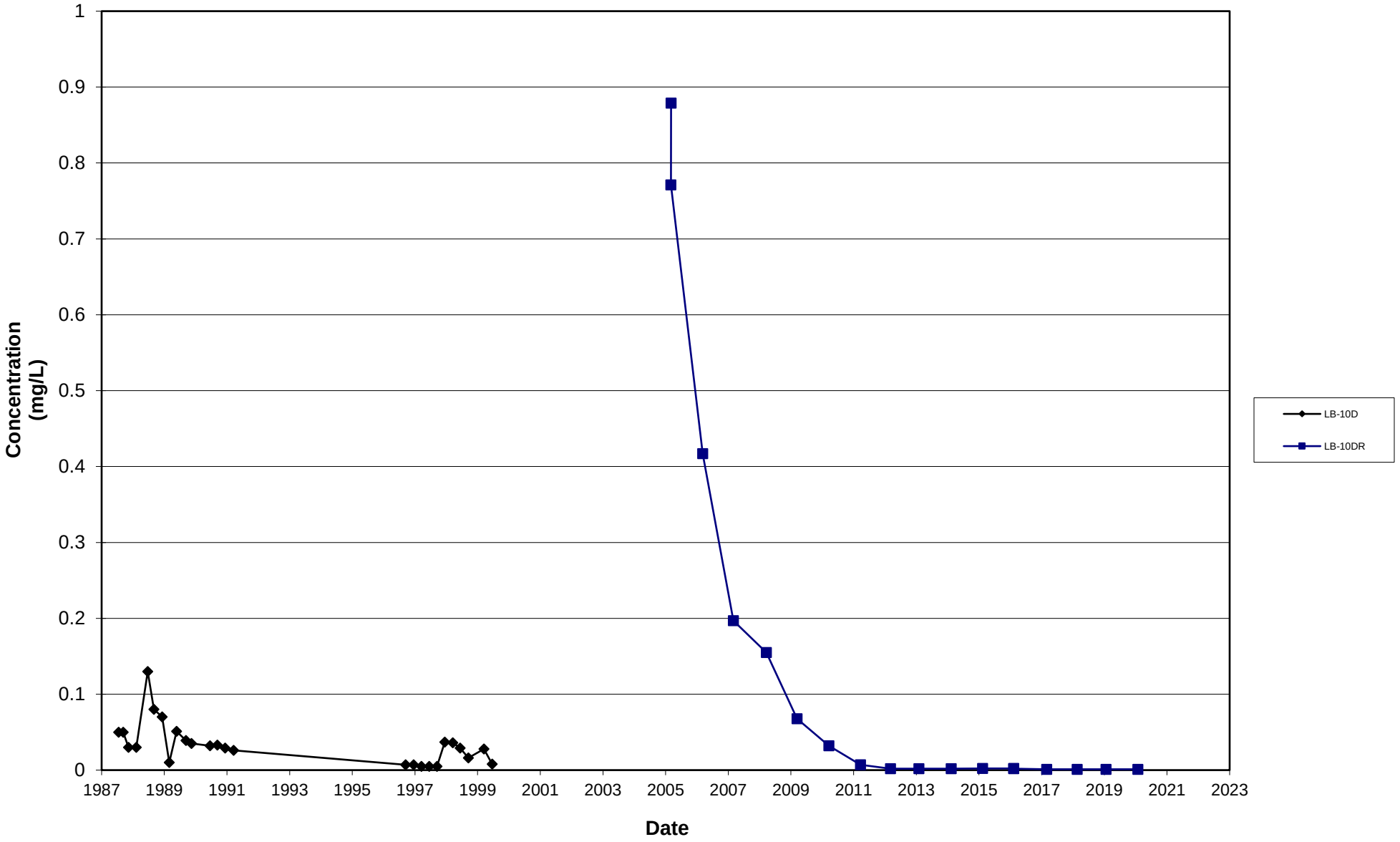
# Leichner Landfill
# Dissolved Manganese, LB-06S
# 1987 - 2020



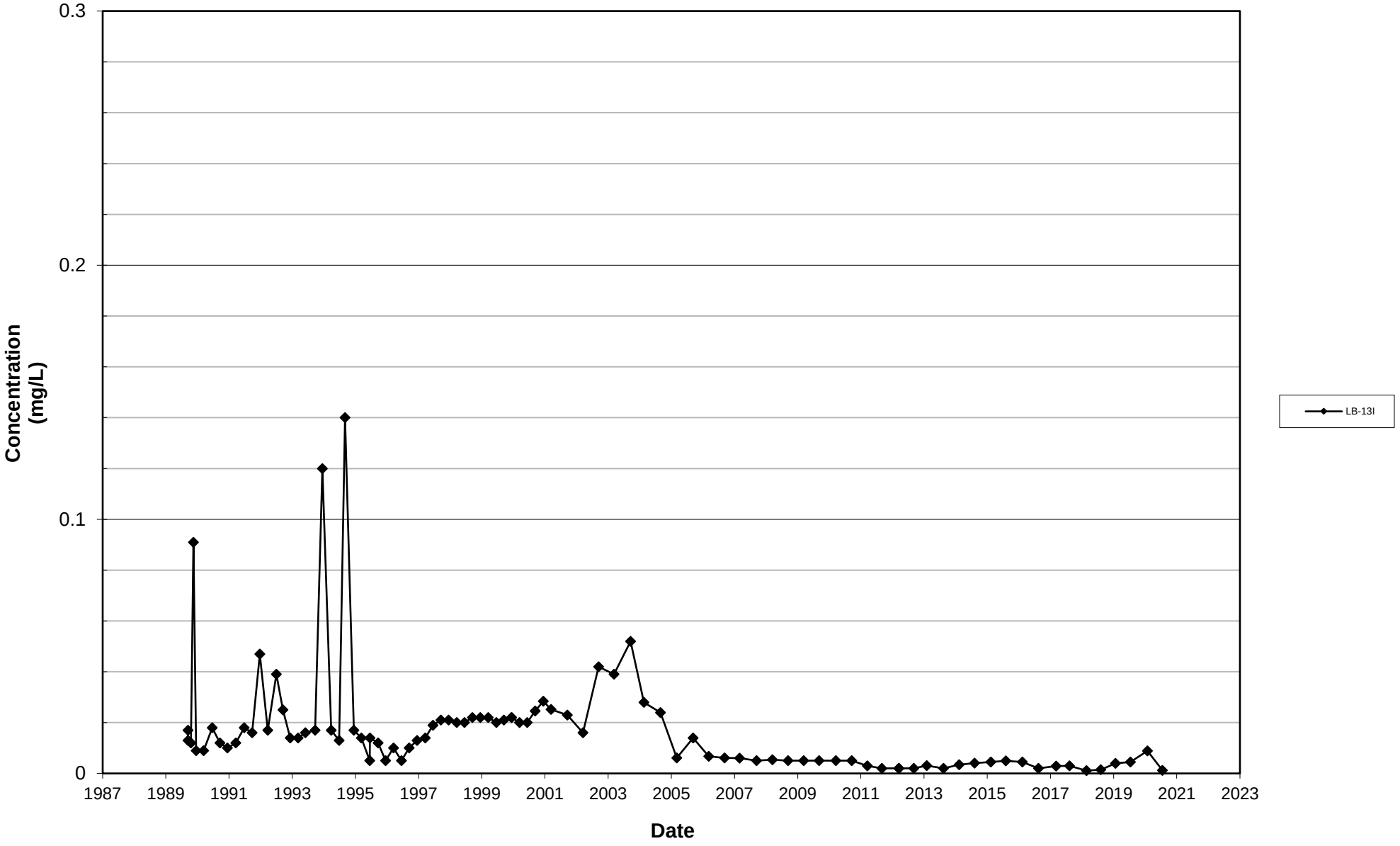
# Leichner Landfill
# Dissolved Manganese, LB-10S and LB-10SR
# 1987 - 2020



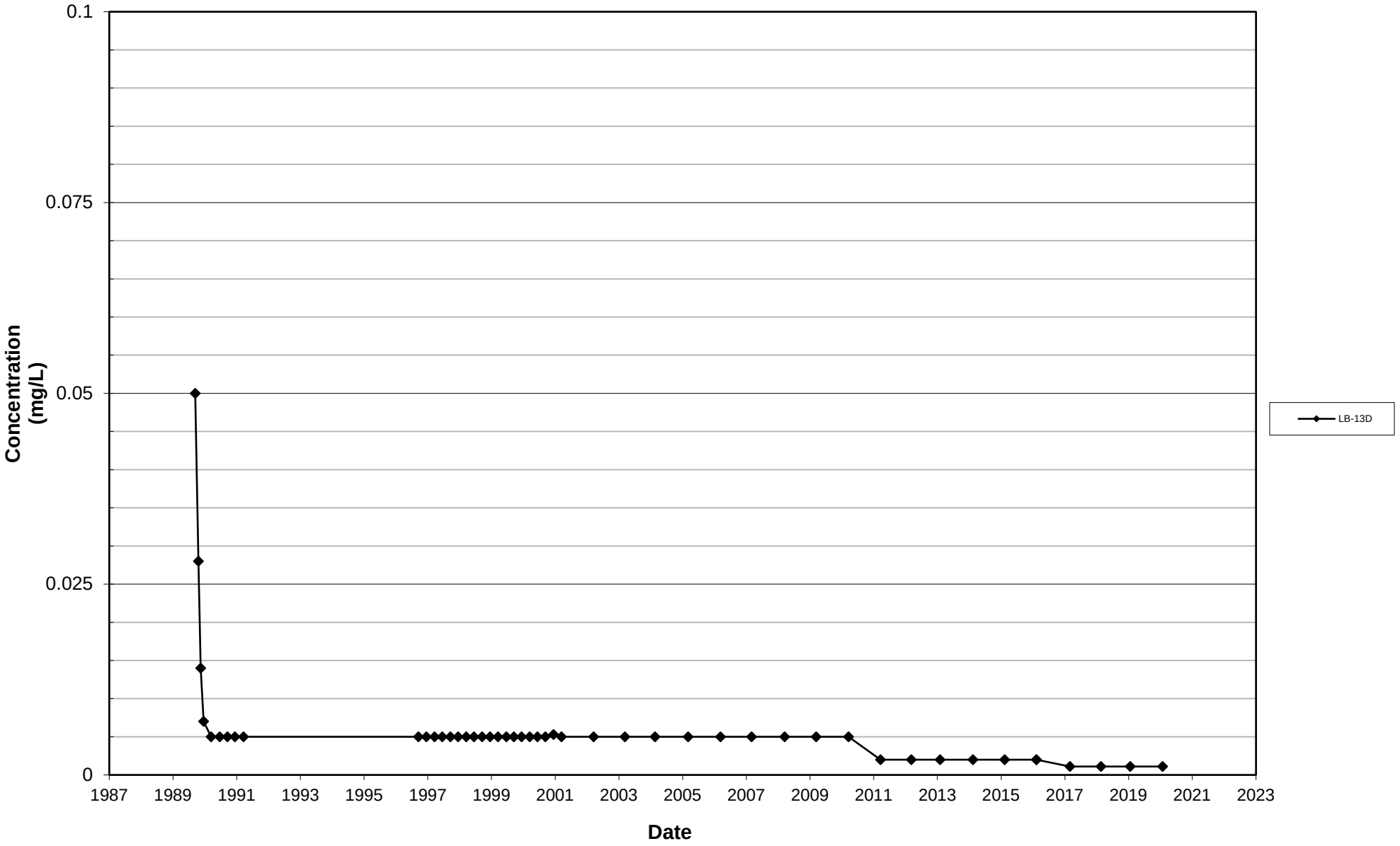
# Leichner Landfill
## Dissolved Manganese, LB-10D and LB-10DR
## 1987 - 2020



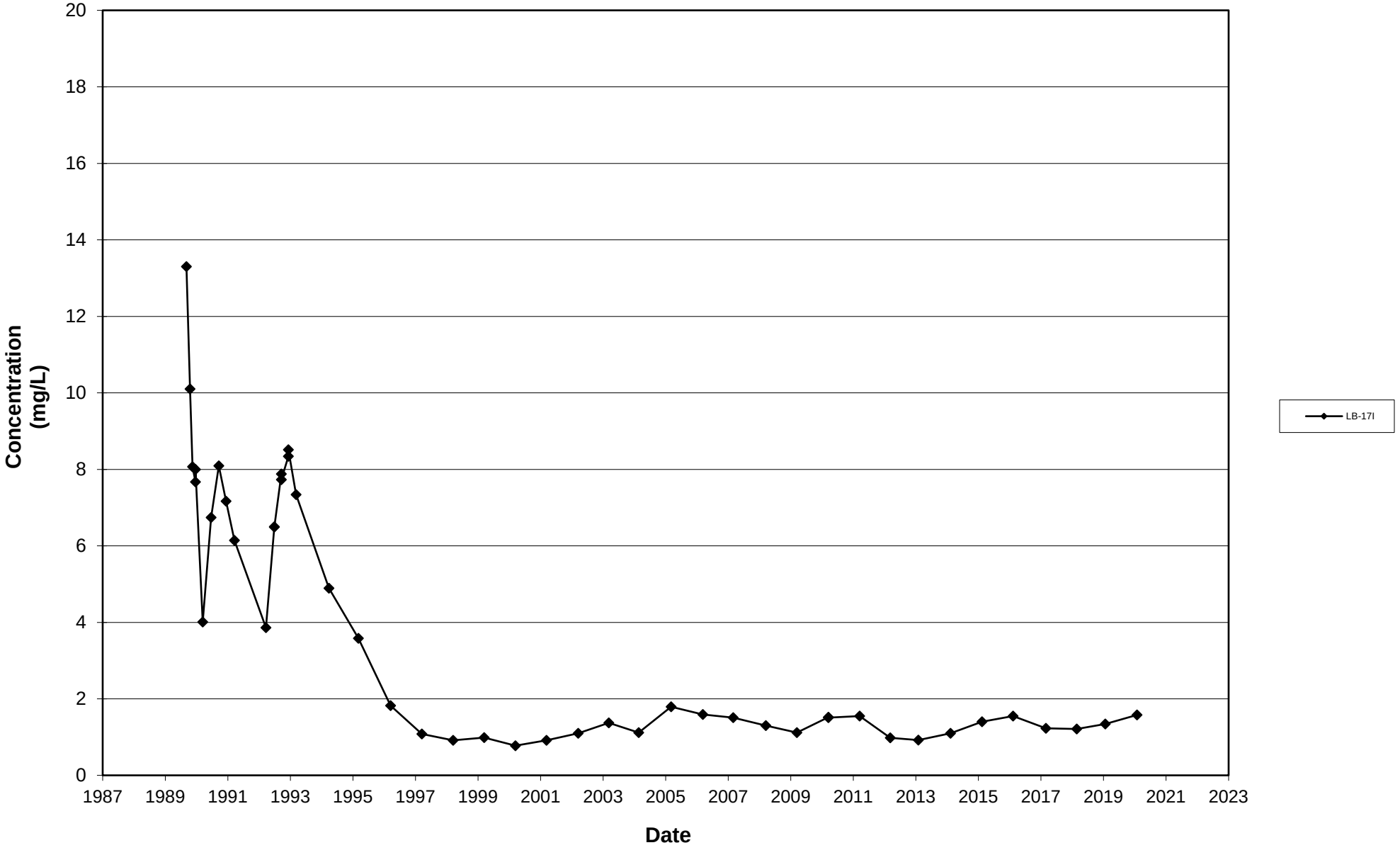
# Leichner Landfill
# Dissolved Manganese, LB-13I
# 1987 - 2020



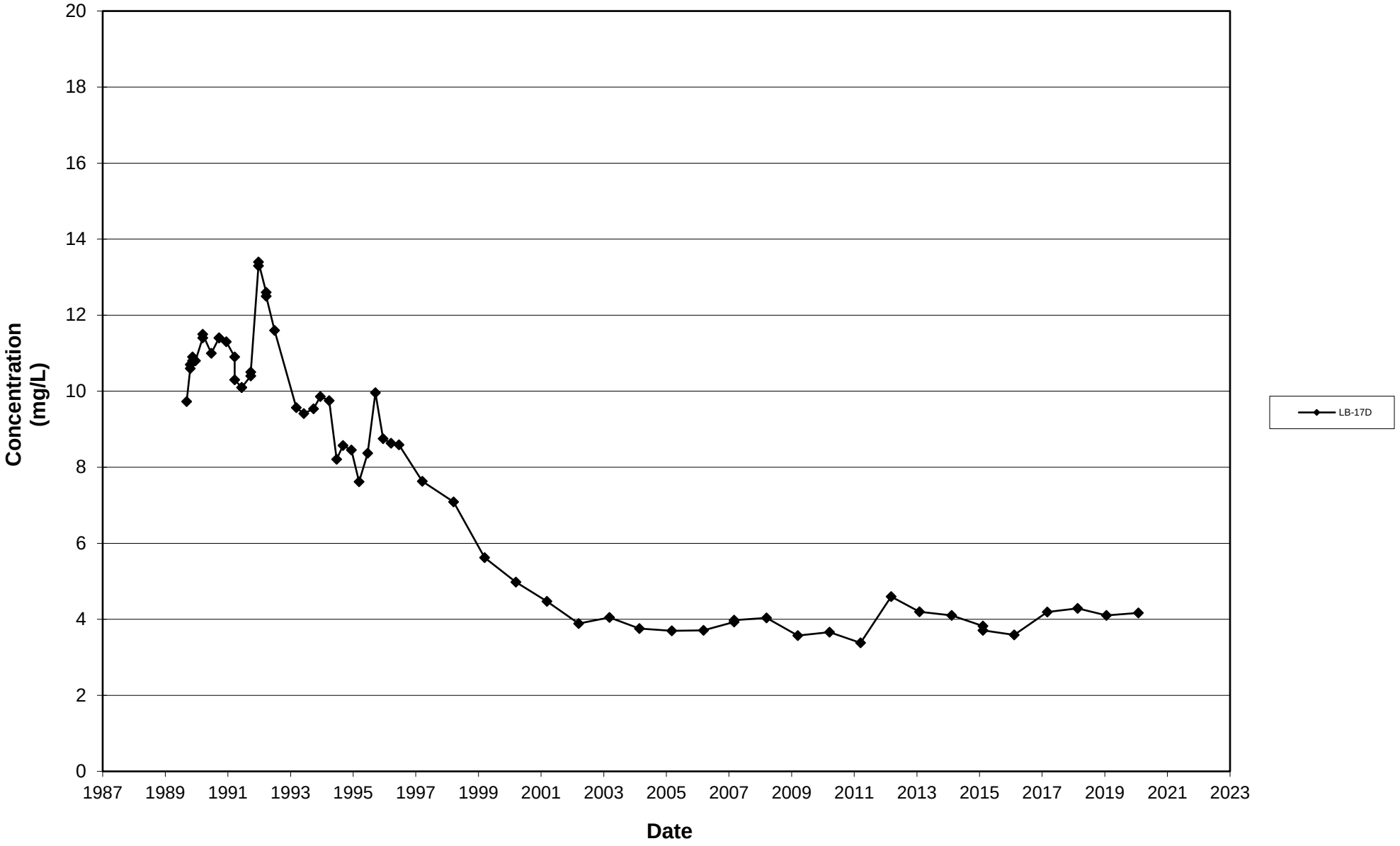
# Leichner Landfill
# Dissolved Manganese, LB-13D
# 1987 - 2020



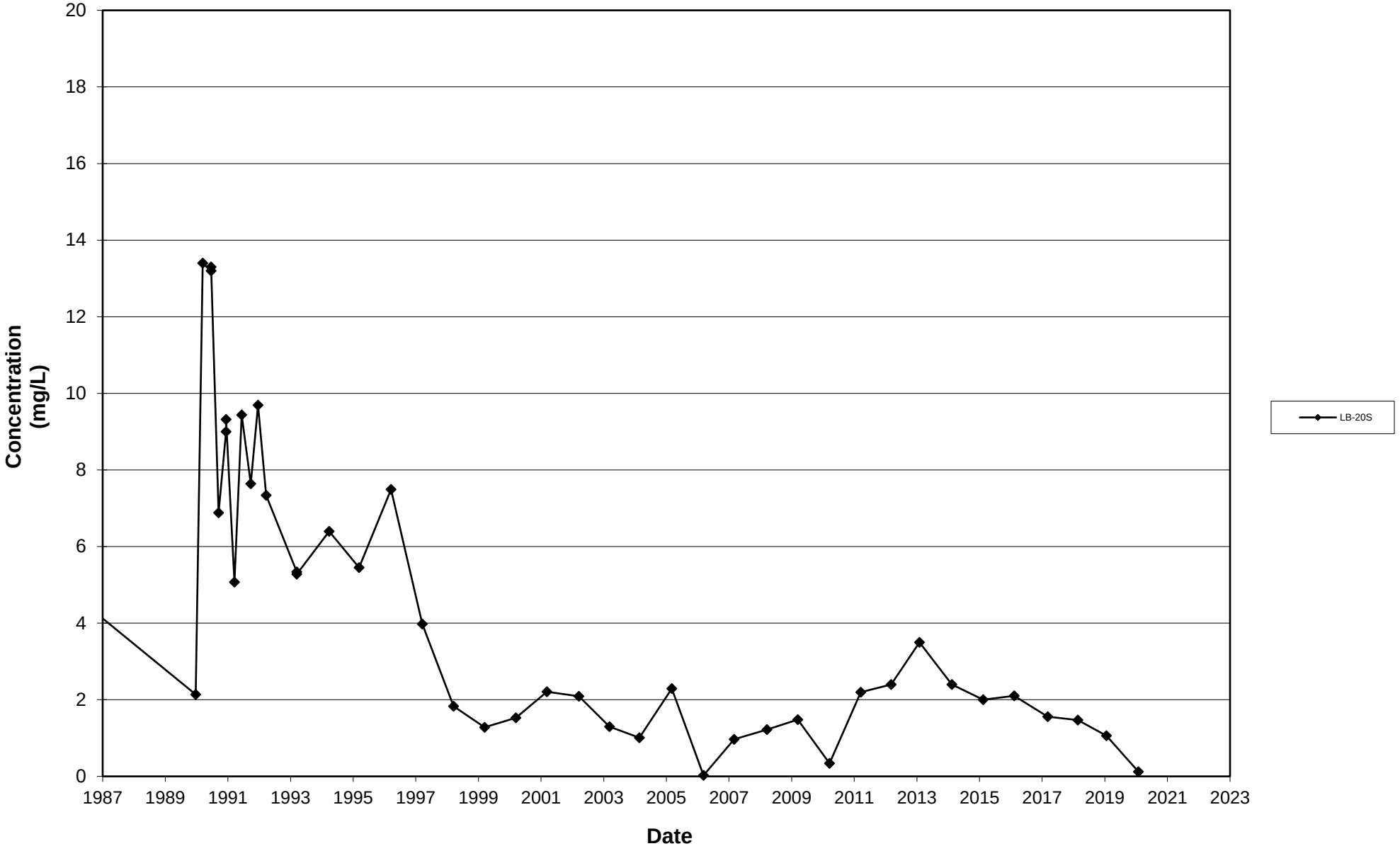
# Leichner Landfill
# Dissolved Manganese, LB-17I
# 1987 - 2020



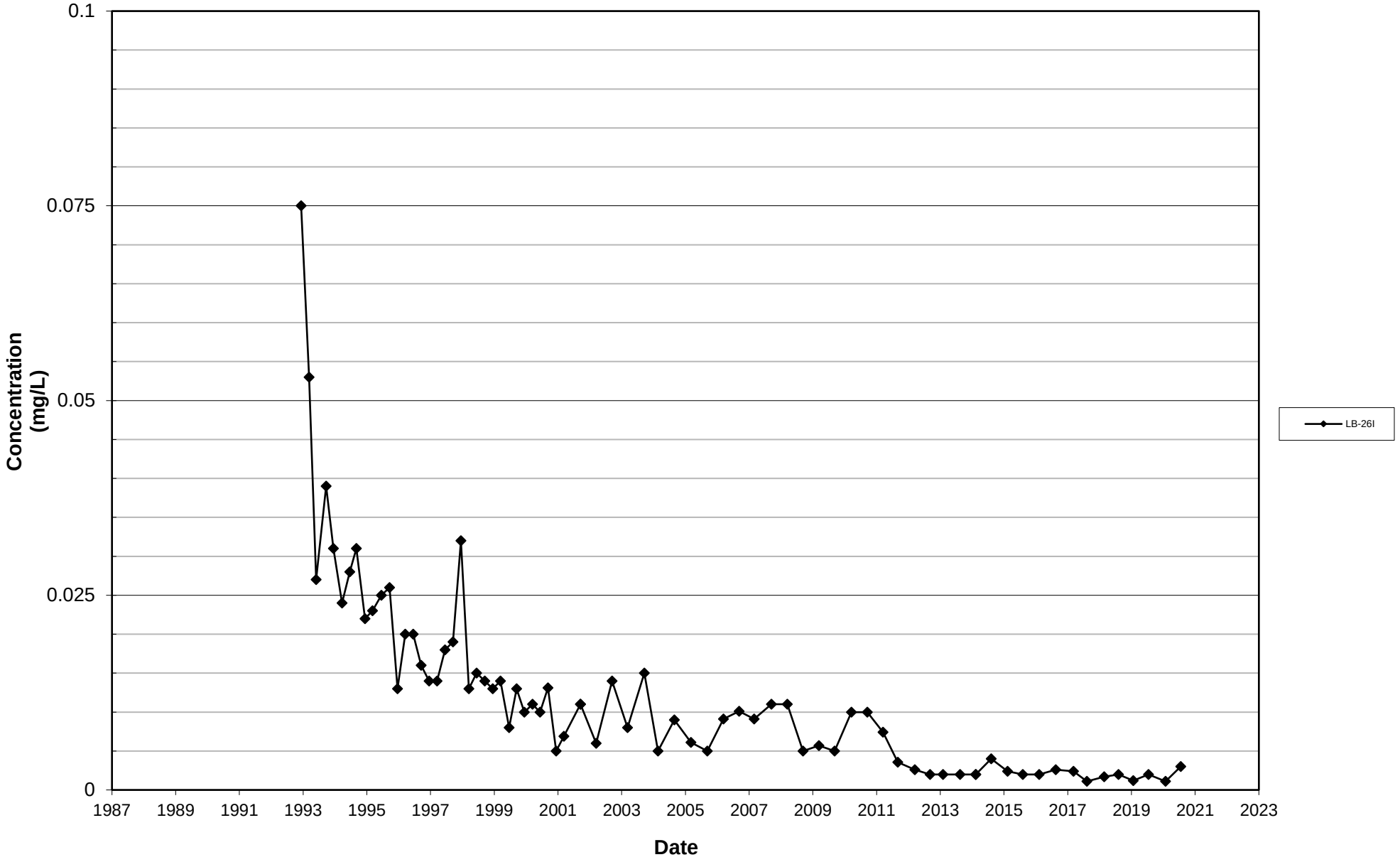
# Leichner Landfill
# Dissolved Manganese, LB-17D
# 1987 - 2020



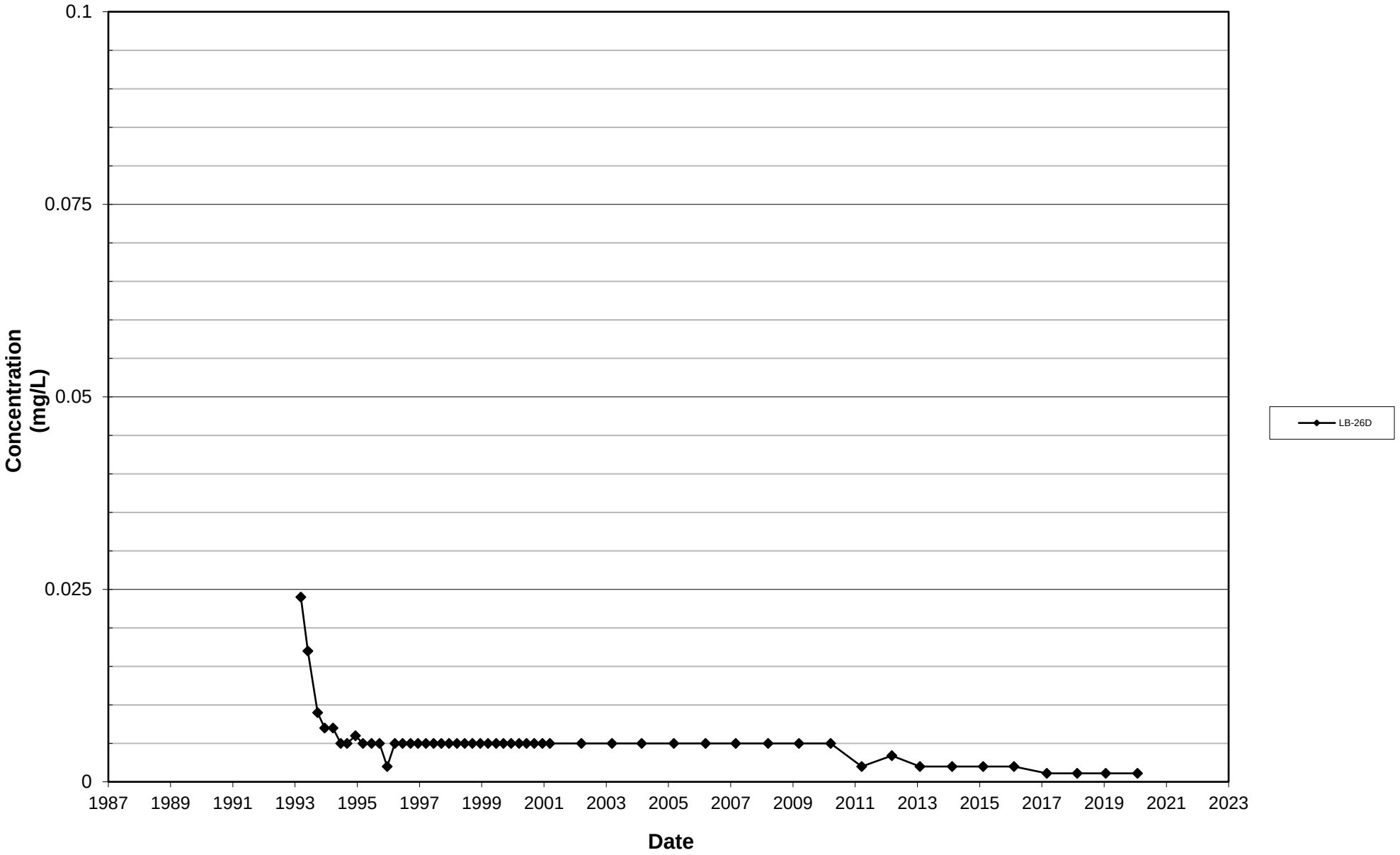
# Leichner Landfill
# Dissolved Manganese, LB-20S
# 1987 - 2020



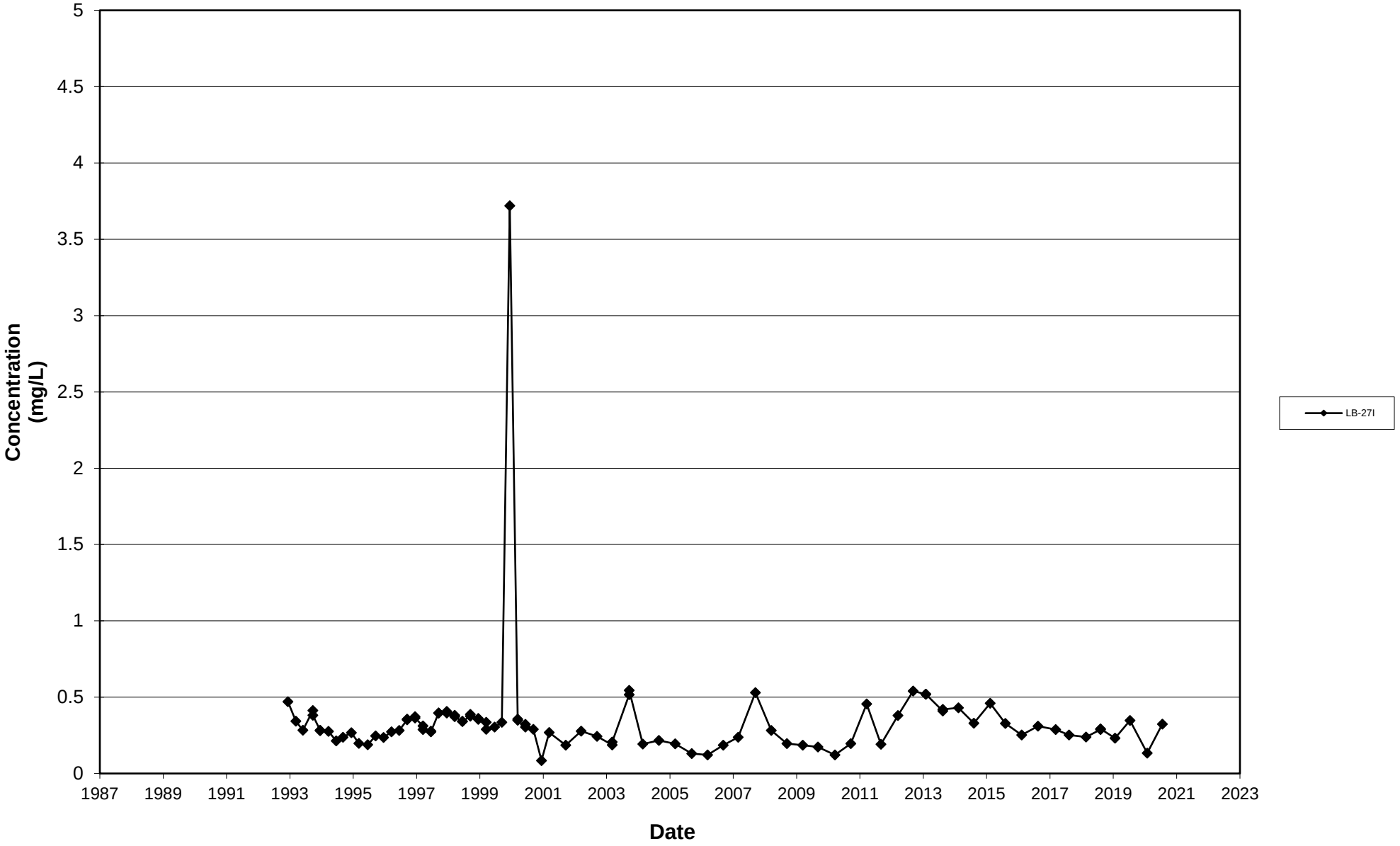
# Leichner Landfill
# Dissolved Manganese, LB-26I
# 1987 - 2020



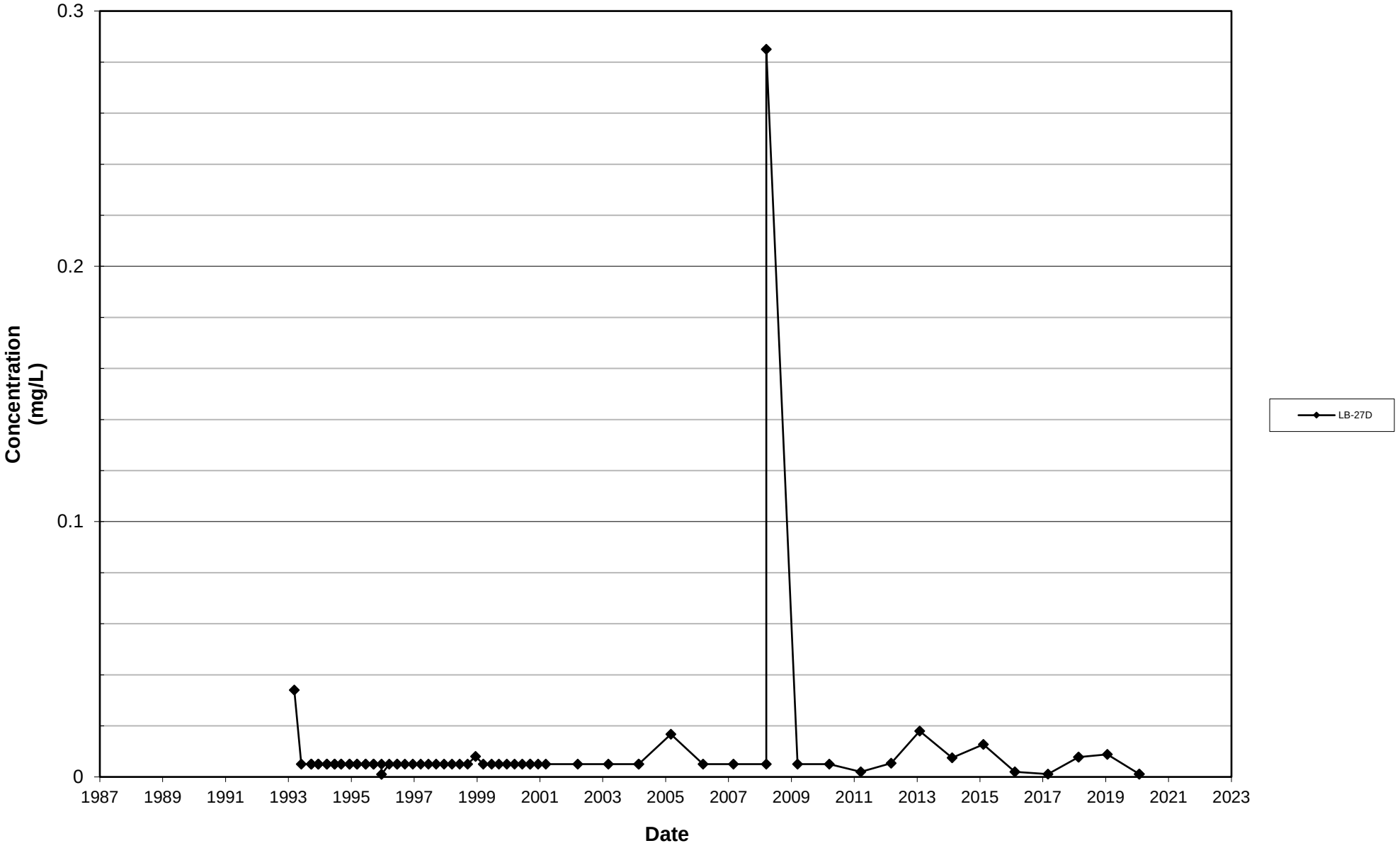
# Leichner Landfill
# Dissolved Manganese, LB-26D
# 1987 - 2020



# Leichner Landfill
# Dissolved Manganese, LB-27I
# 1987 - 2020



# Leichner Landfill
# Dissolved Manganese, LB-27D
# 1987 - 2020



# APPENDIX G

## Summary of 2020 Groundwater Statistical Calculations

# Table G-1
# Groundwater Statistics - 2016 through 2020 Data
# 95 Percent Upper Confidence Limits on the Mean
# Leichner Landfill

| Parameter | LB-1S | | | | | LB-1D | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 10 | 10 | Non | 7.88 | M(12.2) | 5 | 5 | Lognormal | 6.62 | 6.90 |
| Nitrate (mg/L) | 10 | 10 | Lognormal | 5.19 | 6.00 | 5 | 5 | Non | 5.93 | M(6.15) |
| TDS (mg/L) | 10 | 10 | Lognormal | 189.30 | 202.40 | 5 | 5 | Lognormal | 153.40 | 184.09 |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Manganese (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 1 | NC | 0.001 | M(0.001) |
| VOCs (µg/L) | | | | | | | | | | |
| 1,4-Dichlorobenzene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Tetrachloroethene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Trichloroethene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |

| Parameter | LB-3S | | | | | LB-3D | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 5 | 5 | Lognormal | 3.69 | 4.00 | 5 | 5 | Lognormal | 5.05 | 6.01 |
| Nitrate (mg/L) | 5 | 5 | Non | 3.58 | M(3.87) | 5 | 5 | Lognormal | 4.68 | 5.64 |
| TDS (mg/L) | 5 | 5 | Normal | 141.80 | 163.70 | 5 | 5 | Lognormal | 155.60 | 174.93 |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 5 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Manganese (dissolved) | 5 | 0 | NC | NC | All ND | 5 | 0 | NC | 0.0019 | M(0.0019) |
| VOCs (µg/L) | | | | | | | | | | |
| 1,4-Dichlorobenzene | 5 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Tetrachloroethene | 5 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Trichloroethene | 5 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |

# Table G-1
# Groundwater Statistics - 2016 through 2020 Data
# 95 Percent Upper Confidence Limits on the Mean
# Leichner Landfill

| Parameter | LB-5S | | | | | LB-5D | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 10 | 10 | Lognormal | 4.04 | 4.74 | 5 | 5 | Non | 7.99 | M(9.1) |
| Nitrate (mg/L) | 10 | 10 | Non | 4.96 | M(6.6) | 5 | 5 | Non | 0.65 | M(0.95) |
| TDS (mg/L) | 10 | 10 | Non | 152.65 | M(194) | 5 | 5 | Lognormal | 206.20 | 216.58 |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Manganese (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 4 | Lognormal | 0.002 | 0.0023 |
| VOCs (µg/L) | | | | | | | | | | |
| 1,4-Dichlorobenzene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Tetrachloroethene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Trichloroethene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |

| Parameter | LB-6S | | | | | LB-20S | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 10 | 10 | Lognormal | 4.67 | 6.17 | 5 | 5 | Lognormal | 5.42 | M(10.6) |
| Nitrate (mg/L) | 10 | 10 | Lognormal | 1.67 | 2.46 | 5 | 1 | NC | 0.68 | M(0.68) |
| TDS (mg/L) | 11 | 11 | Normal | 137.62 | 159.23 | 5 | 5 | Lognormal | 186.60 | 220.13 |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 5 | Non | 0.24 | M(0.43) |
| Manganese (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 5 | Lognormal | 1.64 | 2.28 |
| 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 - 2016 through 2020 Data
# 95 Percent Upper Confidence Limits on the Mean
# Leichner Landfill

| Parameter | LB-10SR | | | | | LB-10DR | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 10 | 10 | Lognormal | 14.61 | M(31.1) | 5 | 5 | Non | 11.58 | M(17.2) |
| Nitrate (mg/L) | 10 | 10 | Lognormal | 5.55 | M(23.4) | 5 | 5 | Lognormal | 2.78 | 3.58 |
| TDS (mg/L) | 10 | 10 | Non | 256 | M(323) | 5 | 5 | Lognormal | 217.20 | 247.42 |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Manganese (dissolved) | 10 | 5 | Non | 0.002 | M(0.0041) | 5 | 1 | NC | 0.002 | M(0.002) |
| VOCs (µg/L) | | | | | | | | | | |
| 1,4-Dichlorobenzene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Tetrachloroethene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Trichloroethene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |

| Parameter | LB-13I | | | | | LB-13D | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 10 | 10 | Lognormal | 8.70 | 9.71 | 5 | 5 | Non | 6.01 | M(10.8) |
| Nitrate (mg/L) | 10 | 10 | Normal | 3.56 | 4.08 | 5 | 5 | Non | 4.79 | M(5.23) |
| TDS (mg/L) | 10 | 10 | Lognormal | 186.10 | 200.03 | 5 | 5 | Non | 158.20 | M(170) |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Manganese (dissolved) | 10 | 8 | Lognormal | 0.004 | 0.0054 | 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 - 2016 through 2020 Data
# 95 Percent Upper Confidence Limits on the Mean
# Leichner Landfill

| Parameter | LB-17I | | | | | LB-17D | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 5 | 5 | Non | 9.60 | M(10.9) | 5 | 5 | Lognormal | 9.50 | 15.70 |
| Nitrate (mg/L) | 5 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| TDS (mg/L) | 5 | 5 | Lognormal | 188.80 | 228.09 | 5 | 5 | Lognormal | 184.20 | 208.17 |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 5 | 5 | Lognormal | 8.34 | 9.71 | 5 | 5 | Lognormal | 0.118 | 0.143 |
| Manganese (dissolved) | 5 | 5 | Non | 1.38 | M(1.58) | 5 | 5 | Non | 4.07 | M(4.29) |
| 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. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 10 | 10 | Lognormal | 8.24 | 8.89 | 5 | 5 | Non | 5.29 | M(5.88) |
| Nitrate (mg/L) | 10 | 10 | Lognormal | 3.59 | 3.89 | 5 | 5 | Non | 4.83 | M(5.76) |
| TDS (mg/L) | 10 | 10 | Lognormal | 182.10 | 197.32 | 5 | 5 | Non | 163.80 | M(176) |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 10 | 1 | NC | 0.046 | M(0.046) | 5 | 0 | NC | NC | All ND |
| Manganese (dissolved) | 10 | 7 | Lognormal | 0.002 | 0.0024 | 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 - 2016 through 2020 Data
# 95 Percent Upper Confidence Limits on the Mean
# Leichner Landfill

| Parameter | LB-27I | | | | | LB-27D | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] | No. Analyses | No. Detected | Distribution[a] | Mean | UCL 95[b] |
| Inorganics | | | | | | | | | | |
| Chloride (mg/L) | 10 | 10 | Non | 23.06 | M(33.2) | 6 | 6 | Non | 7.86 | M(8.86) |
| Nitrate (mg/L) | 10 | 3 | NC | 1.50 | M(2.75) | 6 | 6 | Non | 3.65 | M(4.63) |
| TDS (mg/L) | 10 | 10 | Lognormal | 299.70 | 341.49 | 6 | 6 | Lognormal | 201.33 | 212.69 |
| Metals (mg/L) | | | | | | | | | | |
| Iron (dissolved) | 10 | 0 | NC | NC | All ND | 5 | 1 | NC | 0.04 | M(0.037) |
| Manganese (dissolved) | 10 | 10 | Normal | 0.267 | 0.302 | 5 | 2 | Non | 0.008 | M(0.0086) |
| VOCs (µg/L) | | | | | | | | | | |
| 1,4-Dichlorobenzene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Tetrachloroethene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |
| Trichloroethene | 10 | 0 | NC | NC | All ND | 5 | 0 | NC | NC | All ND |

Notes:

mg/L = milligrams per liter; µg/L = micrograms per liter; NC = not calculated, more than 50% samples were non-detect; Non = neither normal nor lognormal distribution;

M = default to maximum value per Statistical Guidance for Ecology Site Managers

for the following scenarios: (a) more than 50% non-detect values, (b) both normal and lognormal distributions were rejected by MTCAStat,

and (c) UCL calculated using MTCAStat was higher than the maximum value of the data set.

[a] Distribution was determined using MTCAStat 97 program and Statistical Guidance for Ecology Site Managers.

[b] UCL 95 was calculated using MTCAStat 97 program and Statistical Guidance for Ecology Site Managers.