

SCS ENGINEERS



2015 Annual Report

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

Prepared for:



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February 19, 2016
File No. 04216030.14

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1.0 INTRODUCTION

This report presents and evaluates the results of groundwater, stormwater, and landfill gas (LFG) compliance monitoring performed during 2015 at the closed Leichner Landfill located in Vancouver, Washington (Figure 1-1). The report also summarizes landfill maintenance, repair, and renovation activities performed during 2015. SCS Engineers (SCS) performed the monitoring, maintenance, and repair activities and prepared this report on behalf of Clark County Department of Environmental Services (County) and the Leichner Landfill Oversight Committee (LLOC), whose members include the County and City of Vancouver.

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

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

1.1 SITE DESCRIPTION

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

1.2 SITE HYDROGEOLOGY

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

2.0 GROUNDWATER MONITORING

2.1 GROUNDWATER MONITORING NETWORK AND SCHEDULE

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

- Wells 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 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 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 site groundwater monitoring wells were sampled annually or semiannually in 2015 consistent with the schedule specified in the 2013 CMP (SCS, 2013). Groundwater samples collected during the annual monitoring event conducted in February 2015 included the following 18 monitoring wells: 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 collected during the semiannual monitoring event conducted in August 2015 included the following seven monitoring wells: LB-1S, LB-5S, LB-6S, LB-10SR, LB-13I, LB-26I, and LB-27I.

First quarter (February) and third quarter (August) groundwater monitoring events were performed consistent with the procedures and methods described in the July 2013 CMP (SCS, 2013). Field water-quality parameters (temperature, pH, specific conductance, dissolved oxygen) were monitored during sampling and recorded on field sampling data sheets (FSDSs; provided in Appendix A). Historical field parameter monitoring results are provided in Appendix B (see Table B-1).

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

2.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Static groundwater levels measured on February 17 and August 10, 2015, were converted to groundwater elevations and are summarized in Appendix D, along with historical elevations. Groundwater potentiometric surface contours depicting horizontal groundwater flow in the alluvial WBZ and the Troutdale Formation water-bearing zones were interpreted using groundwater elevations

collected in February and August 2015 (see Figures 2-2 through 2-5). 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 to southeast (see Figures 2-3 and 2-5). The 2015 groundwater flow directions are consistent with historical interpretations of groundwater flow at Leichner Landfill.

Groundwater elevation hydrographs are provided in Appendix D. The 2015 groundwater elevation data are generally within the range of elevations measured historically and continued to show minor seasonal variations in some site wells. Differences in groundwater elevations in adjacent well pairs screened in the alluvial WBZ and Troutdale Formation aquifer (see groundwater elevation data in Appendix D) appear to be influenced by the presence of the silt aquitard (sandy silt and clayey silt). Where the silt aquitard is present east and south of the landfill (e.g., at existing well pair LB-5S/LB-5D south of the landfill, and former well pair LB-4S/LB-4D east of the landfill), groundwater elevations are about 20 to 30 feet higher in the alluvial WBZ indicating hydraulic separation exists between the two groundwater zones. Monitoring well pairs located southwest of the landfill (i.e., at wells LB-1S/LB-1D, LB-13I/LB-13D, and LB-26I/LB-26D), where the silt aquitard is thin or absent, exhibited much smaller differences in groundwater elevations indicating that the two groundwater zones exhibit some degree of hydraulic connection.

2.3 DATA QUALITY REVIEW

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

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

2.4 GROUNDWATER QUALITY RESULTS

Laboratory analytical results of groundwater samples collected from site monitoring wells in 2015 continue to indicate that there are little or no adverse effects on groundwater quality from the closed Leichner Landfill. Groundwater monitoring results supporting this conclusion are discussed in this section of the report and include the following:

- Laboratory results did not detect VOCs at concentrations above method reporting limits (or above compliance levels).
- The concentrations of most inorganic indicator parameters in groundwater samples collected from monitoring wells located downgradient of the former waste cells are below regulatory compliance levels, with only a few exceptions, and have either remained generally stable or showed decreasing trends.

2.4.1 Volatile Organic Compounds

No confirmed or estimated detections of VOCs were identified in the groundwater samples collected in the first and third quarter 2015, including VOCs for which compliance levels have been established and that are currently tested for (i.e., 1,4-dichlorobenzene, tetrachloroethene, and trichloroethene) (see Appendix B, Table B-2).

The 2015 VOC analytical results continued to demonstrate that the post-closure measures implemented at the closed Leichner landfill (i.e., maintenance of the engineered landfill cap, operation of the GCCS, and stormwater controls) are effective at decreasing VOC concentrations to levels below method reporting limits.

2.4.2 Inorganic Parameters and Dissolved Metals

The 2015 and historical analytical data for the inorganic parameters (nitrate, Cl, and TDS) and dissolved metals (Mn and Fe) are summarized in Appendix B (see Table B-3), and time-concentration diagrams for these parameters are provided in Appendix F. In general, the 2015 groundwater analytical results for inorganic parameters and dissolved metals were consistent with historical data.

The 2015 laboratory analytical results (see Appendix B, Table B-3) indicated that Fe and/or Mn concentrations in groundwater collected from a few wells located downgradient and in close proximity to the landfill (i.e., LB-17I, LB-17D, and LB-20S) were above the compliance levels. However, Fe and/or Mn concentrations 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:

- Fe and Mn have occasionally been detected at concentrations above the compliance levels in groundwater samples collected from cross-gradient wells LB-3S, LB-5S, and LB-10SR (see Figures 2-2 and 2-4) screened in the shallow alluvium WBZ (see time-concentration diagrams in Appendix F).
- Fe concentrations in groundwater samples collected from well LB-20S since 2006 have shown significant variability and have typically been below the compliance level, with occasional concentrations above the compliance level, including the LB-20S sample collected in February 2015 (0.4 mg/L).
- Concentrations of Fe and/or Mn in monitoring wells located hydraulically downgradient of LB-17I/17D (i.e., LB-6S, LB-13I/13D, and LB-26I/26) and well LB-20S (i.e., LB-1S/1D) are either below method reporting limits or significantly lower than the elevated concentrations detected in groundwater samples collected from LB-17I/17D and LB-20S. Additionally, Fe and Mn concentrations in these downgradient compliance wells have remained stable throughout most of their extensive monitoring history.

2.4.2.1 Statistical Analysis of Groundwater Analytical Data

Leichner Landfill groundwater quality data from 2011 to 2015 for inorganic parameters (nitrate, Cl, and TDS) and dissolved metals (Mn and Fe) were statistically evaluated using the MTCA Stat 97 program.¹ The program identifies if the data show a normal, lognormal, or non-parametric distribution. For normally and lognormally distributed data, the 95th percent upper confidence limit (UCL-95) of the mean was calculated. For distributions that were non-parametric (i.e., data not distributed normally or lognormally), data values were ranked and an estimate of the UCL-95 was determined using the Van der Parren method, as described in Statistical Guidance for Ecology Site Managers (Ecology, 1992). For non-parametric data, the Van der Parren method defaults to the highest reported value.

The MTCA Stat97 program utilizes the Land Method for calculating the UCL-95 of the mean for lognormally distributed data. The Land Method is sensitive to data distributions that deviate from lognormal. If variance or skewness is large (U.S. Environmental Protection Agency [EPA], 2002), the method may commonly yield estimated UCL-95 values that are greater than predicted for data distributions are not truly lognormal. When sample sizes are small and the variance is large, the method can be impractical. This resulted in UCL-95 values that exceeded the range of concentrations for the following inorganic parameters and monitoring wells: (1) Cl data for well LB-20S, (2) nitrate data for well LB-10DR, and (3) TDS data for wells LB-1D and LB-3D. In these cases, the highest reported values from the last 5 monitoring years (2011 to 2015) were selected (see Table 2-1).

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

- The calculated UCL-95 values for nitrate, Cl, and TDS were below their respective compliance levels.
- The calculated UCL-95 values for dissolved Fe were below the compliance of 0.3 mg/L, except the values for groundwater from wells LB-17I (9.3 mg/L) and LB-20S (0.43 mg/L).
- The calculated UCL-95 values for dissolved Mn were below the compliance level of 0.05 mg/L, except the values for groundwater from wells LB-17I (1.5 mg/L), LB-27D (4.4 mg/L), LB-20S (3.5 mg/L), LB-27I (0.46 mg/L), and LB-27D (0.11 mg/L).
- From 2011 to 2015, two VOCs for which compliance levels are established and that are currently tested for (1,4-chlorobenzene [1,4-CB] and trichloroethene [TCE]) were detected sporadically in groundwater samples collected in 2011 and 2012 from only a few wells (LB-10SR, LB-17I, and LB-20S). For these wells, the calculated UCL-95 values for 1,4-CB and TCE (which defaulted to the highest concentration detected in since 2011) were below the compliance levels.

¹ MTCA Stat97 was obtained from Ecology's website: <http://www.ecy.wa.gov/programs/tcp/tools/Mtca.exe>.

2.4.2.2 *Trend Analysis of Groundwater Data*

In addition to the statistical evaluation, time-series concentration plots were generated for each of the inorganic parameters tested (see Appendix F). The time-concentration plots were evaluated visually to assess whether groundwater parameter concentrations have increased, decreased or remained stable. Inorganic parameter concentrations in groundwater samples collected from alluvial WBZ wells and Troutdale Formation wells show either generally stable or decreasing trends, except for the parameters listed below that show increasing concentration trends. It is important to note that the current concentrations of these parameters are below their respective compliance levels.

- Cl concentrations in samples from wells LB-20S and LB-27I. The Cl concentrations detected in groundwater collected from these wells are within the range of historical concentrations (see time-concentration diagrams in Appendix F)
- Fe concentrations in samples from well LB-27D.
- Nitrate concentrations in samples collected from Troutdale Formation wells LB-10DR and LB-27D.

Changes in Cl, Fe, and nitrate concentrations detected in wells LB-10DR, LB-27I, and LB-27D are believed to be reflective of natural (i.e., non-landfill-impacted) groundwater conditions since the wells are hydraulic cross-gradient of the former landfilling areas.

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

3.0 STORMWATER MONITORING

In 2009, Ecology issued a renewed General Permit effective January 1, 2010, for industrial facilities. The General Permit (No. WAR005572B) allows Leichner Landfill to discharge stormwater from the facility to nearby Curtin Creek. Ecology modified the Industrial Stormwater General Permit (issuance date of December 3, 2014 and effective date of January 2, 2015). In accordance with the General Permit and in response to Ecology's recent changes to the General Permit, SCS (on behalf of the County) prepared an updated Storm Water Pollution and Prevention Plan (SWPPP) in January 2015 (SCS, 2015).

3.1 STORMWATER MONITORING NETWORK AND SCHEDULE

3.1.1 Quarterly Stormwater Monitoring Station

One stormwater discharge location (designated Outfall 1) has been identified for the Leichner Landfill. Outfall 1 is located at the pump station at the northern end of the North Detention Pond (see Figure 3-1) and receives stormwater runoff from the closed landfill surfaces.

Stormwater discharge at the North Detention Pond pumps (i.e., Outfall 1) are water-level float activated or can be manually activated at the pump control box. If the Outfall 1 pumps are not activated by the water-level in the North Detention Pond during a monthly inspection, then SCS would manually turn on the pumps to create discharge at the facility.

Stormwater samples were collected at Outfall 1 in 2015 consistent with the methods and schedule described in the General Permit and SWPPP (SCS, 2015). The quarterly samples were collected on February 6, May 12, and November 2, 2015. A stormwater sample for laboratory analysis was not collected in the third quarter monitoring period (July 1 to September 30) because no discharge was observed at Outfall 1 during this period. The stormwater samples were analyzed by TAL for the General Permit-required parameters including turbidity, pH, total copper and zinc.

3.1.2 Monthly Visual Inspection

SCS performed monthly visual inspections in 2015 during storm events, if any occurred in a given month that could result in stormwater being potentially discharged at Outfall 1. The inspections included examining stormwater discharge at Outfall 1 (if observed) and inspecting the stormwater conveyance system (drainage ditches and culverts) and areas where equipment and materials are stored (primarily the blower-flare station [BFS]). Observations were documented on a SWPPP monthly inspection form.

3.2 STORMWATER MONITORING RESULTS

Stormwater discharge monitoring reports (DMRs) describing the results of stormwater analytical results obtained in 2015 were submitted to Ecology on a quarterly basis using the Ecology WebDMR submittal system in accordance with the December 2014 General Permit. The quarterly DMR reports were submitted via WebDMR on March 31, June 19, October 20, and December 11, 2015. The

analytical results of stormwater samples collected in 2015 indicated that stormwater quality benchmark concentrations specified in the General Permit were not exceeded.

3.3 MODIFICATIONS TO STORMWATER CONTROL AND COLLECTION SYSTEM

A backup pneumatic, 2-inch, dual diaphragm pump was installed in 2014 inside the vault of the Module 2 stormwater collection system (constructed in 2013). The purpose of the backup pump is to supply additional pumping capacity during seasonal high flow storm events. The pump is capable of pumping up to 80 gallons per minute at 100 pounds per square inch pressure. In response to a malfunction of the existing diaphragm pump during extensive rainfall events in December 2015, a backup diaphragm pump, along with a backup trash pump, were purchased and are stored onsite for rapidly deployment in the event a similar pump malfunction occurs.

Additionally, the re-graded drainage areas around the Module 2 stormwater improvement collection trench completed in 2014², as part of the extension of the geomembrane cover system in the northwest corner of Module 2, were maintained in 2015.

² The work performed in 2014 consisted of regrading and installing 8,000 square feet of geomembrane covering the existing extent of refuse identified outside the Module 2 footprint during construction of improvements to the stormwater collection system in 2013. The construction activities were accomplished in substantial conformance with the design intent, permit conditions, and construction drawings dated June 20, 2014, and with technical specifications dated July 1, 2014 that were prepared by SCS and submitted to and approved by the County. A report documenting the stormwater improvement construction activities, including record drawings of the construction and existing site conditions, was submitted to the County under separate cover (SCS, 2014b)

4.0 LANDFILL GAS MONITORING

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

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

4.1 COMPLIANCE LFG MONITORING PROBE NETWORK AND SCHEDULE

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

Compliance LFG monitoring was performed quarterly in 2015, as approved by Ecology (Ecology, 2011). Quarterly compliance monitoring of the LFG monitoring probes was performed on January 8, June 5, September 8, and November 30, 2015.

4.2 COMPLIANCE LFG MONITORING RESULTS

LFG monitoring probe data for 2015 are provided in Appendix H. LFG compliance monitoring performed in 2015 indicated that methane concentrations were below the MFS (Chapter 173-304 WAC) regulatory limit of 5 percent methane (by volume) in the site perimeter compliance probes, except for the following occurrences:

- Methane concentrations measured in LFG probes GP-7 (at 8.9 percent) and GP-9A (at 5.5 percent) on June 5, 2015. In response to these exceedances, adjustments to the GCCS LFG extraction wells in the vicinity of these probes were performed. GP-7 and GP-9A were re-monitored on June 10, 2015. The re-monitoring showed that methane concentrations were below the MFS compliance level (re-measured concentrations were below detection limits [0.1 percent]) in both probes.

- Methane concentrations measured in LFG probes GP-7 (at 9.2 percent) and GP-9A (at 8.7 percent) on September 8, 2015. In response to these exceedances, adjustments to the GCCS LFG extractions wells in the vicinity of these probes were performed. GP-7 and GP-9A were re-monitored on September 15, 2015. The re-monitoring showed that methane concentrations were below the MFS compliance level (re-measured concentrations were below detection limits [0.1 percent]) in both probes.
- The methane concentration measured in LFG probe GP-7 (at 8.5 percent) on November 30, 2015. In response to these exceedances, adjustments to the GCCS LFG extractions wells in the vicinity of this probe were performed. GP-7 was re-monitored on December 8, 2015. The re-monitoring showed that the methane concentration was below the MFS compliance level (the re-measured concentration was below detection limits [0.1 percent]) in probe GP-7.

4.3 LFG EXTRACTION WELLS

The LFG extraction wells (see Figure 4-1) were monitored and adjusted (balanced) semi-monthly (twice a month) during 2015 to maintain balanced and efficient LFG extraction rates. There were no significant problems or concerns noted during monitoring and adjustment of the LFG extraction wells.

4.4 LFG FLARE MONITORING

The LFG flare systems were monitored regularly (i.e., at least weekly) in 2015. The monitored parameters include LFG composition, static pressure, flow rate, and temperature measured at the flare inlet. In addition, the flare operating temperature was also measured and recorded. The flare system is equipped with a continuous monitoring system, which measures and records the flare operating temperature, inlet LFG flow rate, and inlet LFG oxygen concentration. The data are stored and periodically downloaded for permanent recordkeeping. In accordance with Southwest Clean Air Agency (SWCAA) requirements, an Annual Emissions Estimate report presenting the flare monitoring data and evaluating flare performance will be submitted to the SWCAA under separate cover in accordance with the conditions specified in SWCAA Order of Approval, Appendix A, Section 3, Monitoring/Record Keeping Requirements, Item 3c.

4.5 GREENHOUSE GAS MONITORING

In November 2013, SCS completed an evaluation (and associated calculations) to determine if the Leichner Landfill is required to report greenhouse gas (GHG) monitoring results (and perform future weekly GHG monitoring) pursuant to the state of Washington GHG rule based on emissions data collected in 2013. The evaluation showed that the Leichner Landfill is exempt from GHG reporting (and from future weekly monitoring) per the Washington State's GHG Rule. Consequently, weekly GHG monitoring was suspended beginning in January 2014 and was not performed in 2015.

4.6 EVALUATION OF GCCS PERFORMANCE AND CONCEPTUAL REDESIGN OF GCCS

The GCCS at the Leichner Landfill will require future upgrades to operate efficiently. To that end, a project was initiated in 2015 focused on collecting performance data of the LFG extraction wells and BFS to support developing options for redesigning and upgrading the GCCS. The scope of work included reviewing and understanding the existing GCCS well field system and BFS and assessing whether additional monitoring and performance data needed to be collected to facilitate a redesign of the system. In general, whenever an existing system is upgraded, retrofitted, and/or replaced, the level of effort for the design is much greater than if a system is designed from scratch because of the coordination/tie-ins to the existing infrastructure.

4.6.1 Additional Data Collection Activities

The following additional data collection activities were approved by the LLOC and implemented in the fourth quarter of 2015 to assist in making decisions on the future operations of existing gas extraction wells and determine if the site would benefit from installing new LFG extraction wells and/or replacing or decommissioning some of existing wells:

- Measuring/recording flow rates and LFG composition from a subset of 50 gas wells.
- Estimating the LFG generation and potential recovery rates.

This information will also aid in redesigning the GCCS in support of future land use development of the site and estimating associated construction costs. The additional data collection activities are described in the sections below, along with a discussion of how the data will be applied to the project. Key results of the additional data collection effort performed in 2015 are also discussed

4.6.1.1 *Measuring/Recording Flow Rates from LFG Extraction Wells*

Measuring and recording LFG well flow rates will identify which individual gas wells are extracting LFG (and how much). Wells without measurable flow may be located in areas of low gas production or may be damaged and need to be repaired or replaced. In addition, this information (1) supports making decisions regarding what wells need to be operated and how frequently, and (2) identifies which wells need further examination due to little or no gas production.

To facilitate collecting this data, 25 new “state-of-the-art” QED well head control assemblies (well heads) were purchased that can accurately measure flow using a portable multi-gas analyzer (e.g., GEM2000). Flow rates cannot be measured from the existing well heads. The new well heads use throttling valves to provide better flow and vacuum control for consistent gas extraction. Aside from greatly improved operational performance of the new well heads, they can also be incorporated into the design of a final (upgraded) GCCS thus providing a long-term cost saving.

The scope of this effort involved collecting flow data from 50 of the site’s 102 gas wells (see gas wells denoted with red filled circles in Figure 4-1). Deeper gas wells located in the interior of the landfill were targeted for flow monitoring because they are expected to collect more gas and have higher flow

rates. The perimeter gas wells, in generally, are shallower, and will not collect as much landfill gas (i.e., lower flow rates) due to their proximity to native soil and potential to facilitate air intrusion.

A phased data collection approach was implemented starting in November 2015 that involved first installing the new well heads on 25 of the selected existing gas wells in the south field for gathering flow data using the following procedure:

1. Monitoring the existing well head before installing the new well heads and recording the valve positions.
2. Disconnecting the existing well heads and installing the new well heads, along with flex hose and other necessary fittings.
3. Performing an initial round of monitoring to approximate the appropriate control valve setting for achieving the optimum gas extraction rate (i.e., methane close to 50 percent or historic concentrations with oxygen levels close to 0 percent).
4. Performing three additional rounds of monitoring to gather gas composition (methane, carbon dioxide, and oxygen), flow rate, well pressure, well temperature, and system pressure at each of the new well head locations. For efficiency and cost savings, two of the four monitoring events (including the initial monitoring) were performed in conjunction with the normally scheduled bi-monthly (two times per month) monitoring. The other two rounds will be performed in the weeks between the normally scheduled rounds of monitoring.

As of the end of December 2015, three rounds of performance monitoring of the first set of 25 wells (in the south field) were completed and the preliminary results are discussed in Section 4.6.2. After the requisite data is collected from the first set of 25 wells, the above procedure will be followed for the second set of 25 selected existing gas wells (in the north field) to accommodate collecting flow data from these wells. This work will be ongoing in 2016.

4.6.1.2 Perform LFG Generation Modeling

In support of redesigning the GCCS at the Leichner Landfill, a site specific gas generation and recovery projection (gas model) will also be prepared in 2016 to identify whether the GCCS is recovering as much gas as practical. The gas modeling results will be compared with the data collected from individual gas wells (as previously described in Section 4.6.1.1), and with the total amount of gas measured at the BFS to evaluate the effectiveness of the existing GCCS. The comparison of gas generation with individual well performance data will also identify areas of underperforming gas wells and/or areas absent of effective coverage within the well field.

The gas generation and recovery will be modelled using SCS' proprietary modeling techniques and database. This methodology (1) utilizes more specific modeling parameters based on site-specific annual precipitation data and more realistic annual waste disposal quantities, and (2) refines the modeling parameters to provide a more realistic estimate of LFG generation and potential recovery.

As part of this effort, the accuracy of the existing flow meter at the BFS will be confirmed using an averaging pitot tube flow element and gauge for continuously measuring and recording flow for comparison with the measured value from the existing thermal anemometer flow meter. If there are

discrepancies, the thermal anemometer will be recalibrated for more precise measurements. This confirmation and calibration check will help to reduce errors and discrepancies when comparing flow data to the gas generation and recovery estimates and the total flow measured from all of the individual gas wells.

4.6.2 Overview and Results of Additional Data Collection Performed in 2015

4.6.2.1 Initial Data Review (October-Early November 2015)

Review of the initial gas well monitoring results identified the following:

- System vacuum was not being measured at any of the LFG extraction wells. Twenty-five (25) state-of-the-art QED well heads and sample ports were installed on a subset of LFG extraction wells in the southern portion of the landfill to measure system vacuum and help identify blockages in the LFG conveyance piping.
- Initial monitoring determined that well vacuum needed to be increased at 20 of the 25 gas wells during the first phase of testing as evidence by high methane content (over 53 percent) and very low well field vacuum.

4.6.2.2 Initiated Well Field Testing (Began in Mid/Late-November 2015)

The process of increasing overall system vacuum on the well field was initiated during this period by reprogramming of Programmable Logic Control (PLC) to allow two blowers to operate in series. The blower reconfiguration was successful in increasing the vacuum to the well field (the flow rate from the well field increased from 130 to 215 standard cubic feet per minute (scfm) corresponding to a 65 percent increase). This allowed SCS to initiate the testing of new well heads. Additional work performed during this period included the following:

- After reprogramming of blowers and increasing system vacuum, monitored and tuned the south well field (with the 25 new well heads) to achieve optimum methane concentration (51%) and flow (215 scfm) at the well heads and optimum flare performance conditions.
- Evaluated operation of the pressure transmitter (i.e., vacuum) and the oxygen meter and determined they were providing inaccurate data. After checking the flow meter accuracy, it was determined that these devices be recalibrated which is proposed to be performed in 2016.
- Evaluated the LFG monitoring results and developed recommendations for changes to optimize operation of the GCCS. An email presenting the monitoring results and system recommendations was submitted to the County in December 2015 for its consideration.

4.6.2.3 Results of Well Field Testing (Late-November through December 2015)

The first three rounds of monitoring after the vacuum was increased showed overall improvements of gas extraction and system performance as indicated by the following improvements in the flow rates and higher and more consistent methane concentrations:

- Flow rates were measured at 178, 254, and 194 scfm (previous flow rates ranged between 100 to 125 scfm).
- Methane concentrations were measured at 51.7, 48.9, and 44.7 percent.

4.6.2.4 Additional Work Planned in First Quarter 2016

The following data collection activities are planned for the first quarter 2016 to support the on-going evaluation of the GCCS and assessment of redesign options:

- Install a flow meter to provide routine calibration checks.
- Complete one more round of monitoring for the 25 new gas well heads in the south area of the landfill (Phase 1).
- Move the 25 well heads to the north area of the landfill (Phase 2) and conduct the next 4 rounds of monitoring.
- Calibrated the vacuum pressure gauge/transmitter and oxygen sensor.
- Perform LFG generation modeling as described in Section 4.6.1.2

5.0 LANDFILL MAINTENANCE AND REPAIR

The repair and maintenance activities performed in 2015 are summarized in the following sections. Routine operations, maintenance, and repair of the GCCS performed in 2015 included the following:

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

Other noteworthy non-routine maintenance, repair, and replacement activities related to the Leichner Landfill's post-closure systems and equipment performed monthly in 2015 are described below.

5.1 FIRST QUARTER

5.1.1 January

- Repaired various leaks from (1) separated LFG header lines at LFG extraction wells SW-12, NW-38, and SW-13, (2) LFG extraction well valves at LFG extraction wells NE-17, SW-4, NW-7, and SW-10, and (3) the N-8 condensate trap.
- Installed cycle counters for the QED AP-4 pneumatic autopumps in the condensate collection sumps. The purpose of the counters was to identify which condensate sump(s) were collecting surface water and/or groundwater that was responsible for an increase in the volume of liquid accumulating in the condensate collection tank.

5.1.2 February

- Replaced damaged regulators at condensate traps N-8 and S-4.
- Installed a new flare purge blower device.

- Installed an air-flow restrictor on the air supply to the diaphragm pump installed in the Module 2 stormwater collection trench vault.
- Evaluated options for replacing the existing compressor and prepared a technical memorandum summarizing the results of the evaluation and providing recommendations. The evaluation process included obtaining three contractor bids for purchasing and installing a replacement compressor.
- Installed a new compressor for the condensate collection system and Module 2 stormwater collection system. The work was performed by Pacific Air Compressors with oversight and field assistance provided by SCS.

5.1.3 March

- Replaced a damaged 2-inch valve and 3-inch LFG gas hose at LFG extraction well NW-40.
- Replaced a damaged pulse pump controller at condensate trap N-1.
- Sealed and cleaned all condensate trap control boxes.
- Installed a muffler to the discharge line of the high-capacity diaphragm pump in the Module 2 stormwater collection trench vault.
- Coordinated modifications to HVAC system associated with the newly-installed compressor to minimize discharge backpressure and promote venting through the side of the compressor storage building.
- Installed an additional compressor air tank for the condensate collection system outside the south compressor building. The tank will be used to supply backup air to the condensate pumps during high pumping events or in the event of an unanticipated system shutdown. Work performed including constructing a concrete pad for the compressor air tank.

5.2 SECOND QUARTER

5.2.1 April

- Replaced and sealed the 2-inch tank adapter at condensate trap N-8.
- Placed straw along the 6-inch header near LFG extraction well NE-16 and near condensate trap N-2.
- Replaced the pit-less adapter at condensate trap S-2.
- Finished installing the backup pressure tank associated with the recently-installed compressor located at the BFS.

- Evaluated the performance and operation of the South Detention Pond pumps. Excavated and exposed underground check valves associated with the pump discharge lines from the South Detention Pond vault. Installed new check valves on the discharge lines to increase the Pump No.1 flow rate.
- Completed upgrades to the HVAC system in the compressor shed including installing a vent on the outside of the storage building.
- Performed a boundary and easement survey; work was performed by Olson Engineering.
- Completed the following upgrades to the RMC system: (1) connected South Detention Pond pumps and vault water-level transducer to the existing RMC system for monitoring the pump discharge volumes, and (2) installed a new 360-degree rotational high-resolution surveillance camera at the BFS to replace the original camera that malfunctioned, and integrated the new camera into the RMC system..

5.2.2 May

- Performed final testing of operating pump rates for the South Detention Pond No. 1 and 2 pumps. The work was performed by Grundfos CBS with oversight by SCS.

5.2.3 June

- Made minor repairs to the GCCS components, as needed, including conveyance piping damaged during mowing operations.
- Filled oilers for the North Detection Pond pumps.
- Performed weed control around the BFS.
- Repaired an air tank pressure leak.
- Performed a Phase 1 geotechnical data review and geologic site reconnaissance of the Koski Property site in support of the Master Development Plan for the Leichner Campus. PBS Engineering and Environmental, Inc. (PBS) in Portland, Oregon conducted the Phase 1 geotechnical which included: (1) historical aerial photograph and topographic review, (2) remote sensing using Lidar imagery, (3) site reconnaissance, and (4) geologic and seismic hazard evaluation. A report documenting the results of the Phase 1 geotechnical investigation was prepared by PBS (PBS, 2015a) and a copy is provided in Appendix I.

5.3 THIRD QUARTER

5.3.1 July

- Installed two small (6-inch) culverts in the northwest section of the landfill (near LFG extraction wells NW-23/NW-34) to allow access for mowing in this area.
- Bolted lids for select condensate sumps in response to a Clark County Public Health site inspection.
- Performed a perimeter fence inspection.

5.3.2 August

- Rebuilt the wellheads at LFG extraction wells NE-4 and SE-11.
- Replaced a 3-inch hose at extraction well NE-5 and a 2-inch valve at extraction well NW-10.
- Conducted a site walk to delineate the boundary of former buried waste excavation areas (i.e., former waste burning areas) located southwest of the landfill. The areas were staked in the field in preparation for performing test pitting.

5.3.3 September

- Replaced LFG hoses on the headers at LFG extraction well NW-21 and SW-5.
- Repair an air leak at LFG extraction well SW-19.
- Excavated test pits in the former waste burning areas (see August activities above) to (1) delineate extent of former burn excavation areas, (2) assess the presence or absence of a high-density polyethylene (HDPE) liner in the former burn areas, and (3) characterize the type and extent of waste/fill material. A report documenting the findings of the test pitting was prepared by PBS (PBS, 2015b) and a copy is provided in Appendix I. As noted in the report, the HDPE liner was not observed in any of the test pits.
- Met with County workers associated with 94th Avenue enhancement project to discuss potential well and fence obstruction issues.

5.4 FOURTH QUARTER

5.4.1 October

- Secured ten condensate traps (N-1, N-3 through N-6, S-1, S-2, S-5, S-6, and S-7) with bolted lids.
- Purchased and installed a new QED AP-4 pneumatic autopump in another of the condensate collection sumps.

5.4.2 November

- Participated in a planning meeting on November 20, 2015, related to stormwater control options for the 99th Street extension. The meeting was attended by SCS, the County, HDR, Inc., and Otak, Inc.
- Evaluated damage to existing wellheads and ordered replacement parts.
- Reprogrammed the RMC system to allow the LFG blowers to run in series and to better facilitate operation of the starter motors.
- Obtained water-level measurements of the North and South Detection Pond pump vaults for calibration with the RMC system.

5.4.3 December

- Installed three temporary pumps (“trash” pumps) inside the Module 2 stormwater vault and collection trench, along with 300 feet of discharge hose, to manage stormwater during heavy rainfall events in December due to a malfunction of the dedicated diaphragm pump inside the vault (identified on December 3).
- Removed the diaphragm pump and diagnosed the cause of the malfunction; ordered replacement parts and repaired and reinstalled the pump on December 17.
- Performed air compressor service oversight and evaluation.
- Repaired separated LFG lateral at extraction well SE-20.
- Sealed an air leak on 8-inch LFG hose at extraction well SE-4.
- Filled the North Detention Pond pump oilers.

6.0 REFERENCES

- PBS Environmental and Engineering, Inc. (PBS), 2015a, Letter (re: Geotechnical Data Review and Geologic Site Reconnaissance – Phase 1_Updated, Leichner Campus Development – Koski Property, 8713 Northeast 94th Avenue, Vancouver, Washington) prepared by PBS, Portland, Oregon, for Clark County Department of Environmental Services, June 17.
- PBS Environmental and Engineering, Inc. (PBS), 2015b, Letter (re: HDPE Liner Investigation: Phase 2, Leichner Campus Development – Koski Property, 8713 Northeast 94th Avenue, Vancouver, Washington) prepared by PBS, Portland, Oregon, for Clark County Department of Environmental Services, October 20.
- SCS Engineers (SCS), 2013, Compliance Monitoring Plan, Leichner Landfill, Clark County, Washington, prepared by SCS, Inc., Portland, Oregon, for Clark County Department of Environmental Services, July 30.
- SCS Engineers (SCS), 2014a, 2013 Fourth Quarter and Annual Monitoring Report, Closed Leichner Landfill, Vancouver, Washington, Consent Decree 96-2-03081-7, Facility ID No. 1017, prepared by SCS, Inc., Portland, Oregon, for Clark County Department of Environmental Services, February 27.
- SCS Engineers (SCS), 2014b, Documentation Report, Module II Cover Extension, Leichner Landfill. Prepared by SCS, Bellevue, WA, for Clark County Department of Environmental Services, Vancouver, WA, December 4.
- SCS Engineers (SCS), 2015, Stormwater Pollution Prevention Plan, Plan Date: January 2015, State of Washington, Industrial Stormwater General Permit, Permit Number: WAR005572B, Leichner Landfill. Prepared by SCS, Portland, Oregon, for Clark County, Vancouver, WA, January.
- Washington State Department of Ecology (Ecology), 1992, Statistical guidance for Ecology site managers, Publication No. 19-54, August.
- Washington State Department of Ecology (Ecology), 2011, Periodic Review under Model Toxics Control Act (MTCA), Leichner Brothers Landfill, prepared by Ecology, Southwest Region Office, Toxics Cleanup Program, April 27.
- U.S. Environmental Protection Agency (EPA), 2002, Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites, EPA, office of Emergency and Remedial Response, December.

TABLES

Table 2-1
Statistical Summary of Groundwater Quality Data From 2011 to 2015
95 Percent Upper Confidence Limit of the Mean^a
Leichner Landfill

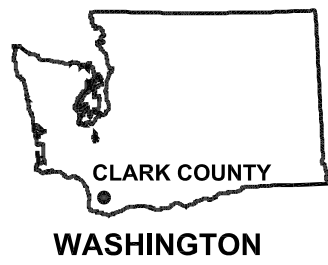
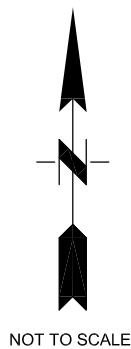
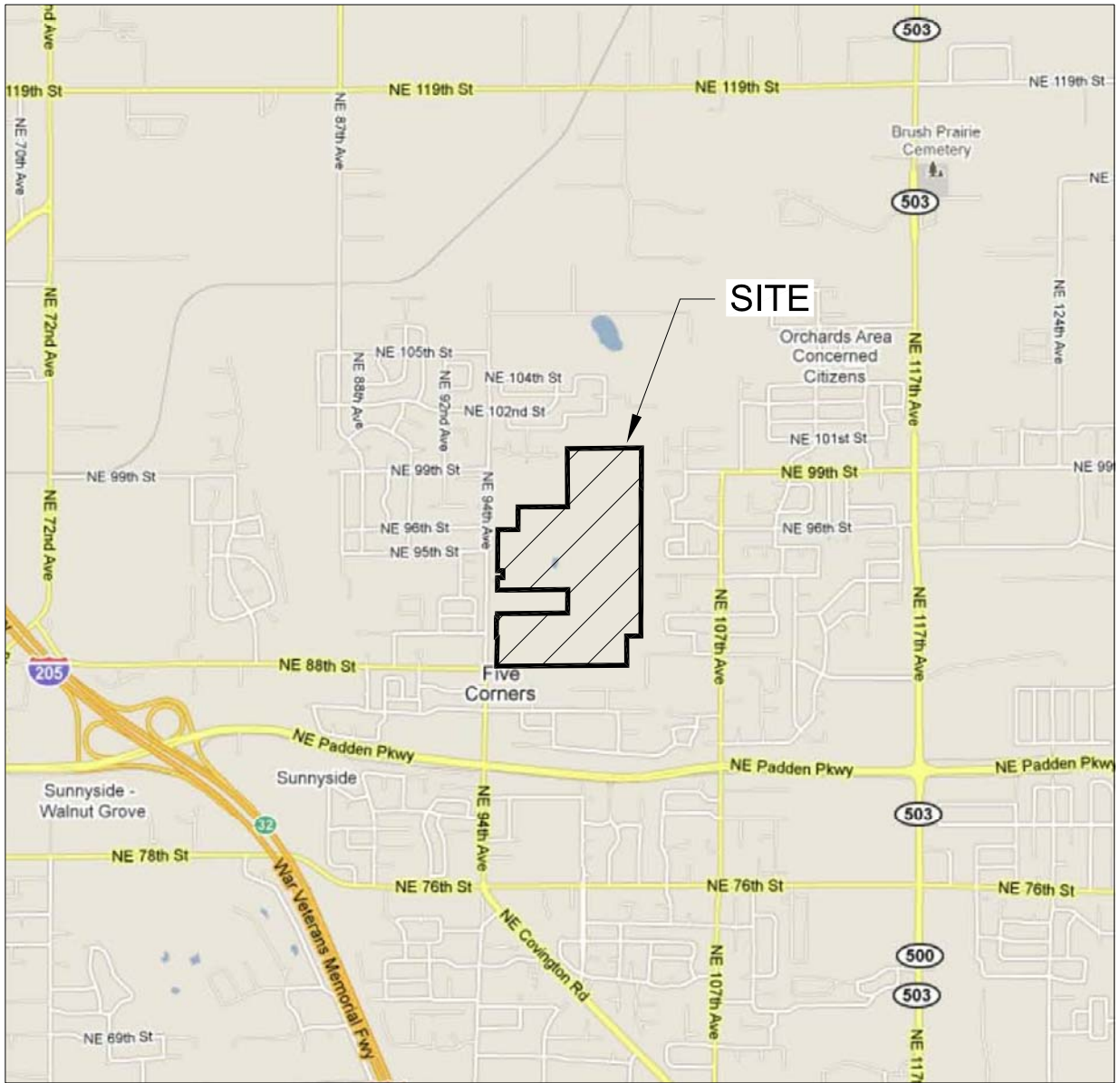
Parameter	Compliance Level	Units	LB-1S	LB-1D	LB-3S	LB-3D	LB-5S	LB-5D	LB-6S	LB-10SR	LB-10DR	LB-13I	LB-13D	LB-17I	LB-17D	LB-20S	LB-26I	LB-26D	LB-27I	LB-27D
<i>Inorganic Parameters</i>																				
Chloride	250	mg/L	M(19)	7.7	M(4.1)	4.5	M(7.1)	M(11)	7.3	26	26	10	M(5.0)	M(27.4)	17	35 ^b	8.2	5.1	43	M(13)
Nitrate	10	mg/L	6.8	M(7.1)	4.2	4.9	4.9	M(1.2)	2.0	2.8	2.6 ^b	M(4.6)	5.3	All ND	All ND	M(0.43)	M(5.2)	M(6.30)	0.25	4.2
Total Dissolved Solids	500	mg/L	M(260)	210 ^b	190	201 ^b	M(210)	M(240)	181	288	316	209	M(193)	293	M(230)	M(361)	226	194	407	256
<i>Metals</i>																				
Iron (dissolved)	0.3	mg/L	M(0.040)	M(0.040)	All ND	All ND	All ND	All ND	M(0.028)	All ND	All ND	All ND	All ND	9.3	M(0.120)	M(0.430)	M(0.064)	All ND	M(0.032)	M(0.228)
Manganese (dissolved)	0.05	mg/L	M(0.0020)	M(0.0058)	All ND	All ND	All ND	M(0.0026)	M(0.0022)	M(0.0059)	M(0.0070)	0.0043	All ND	1.5	4.4	M(3.5)	0.0040	M(0.0034)	0.46	0.11
<i>Volatile Organic Compounds</i>																				
1,4-Dichlorobenzene	1.8	µg/L	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	M(0.26)	All ND	M(0.25)	All ND	All ND	All ND	All ND
Tetrachloroethene	5	µg/L	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND
Trichloroethene	5	µg/L	All ND	All ND	All ND	All ND	All ND	All ND	All ND	M(0.15)	All ND	All ND	All ND	M(0.81)	All ND	All ND	All ND	All ND	All ND	All ND

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

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

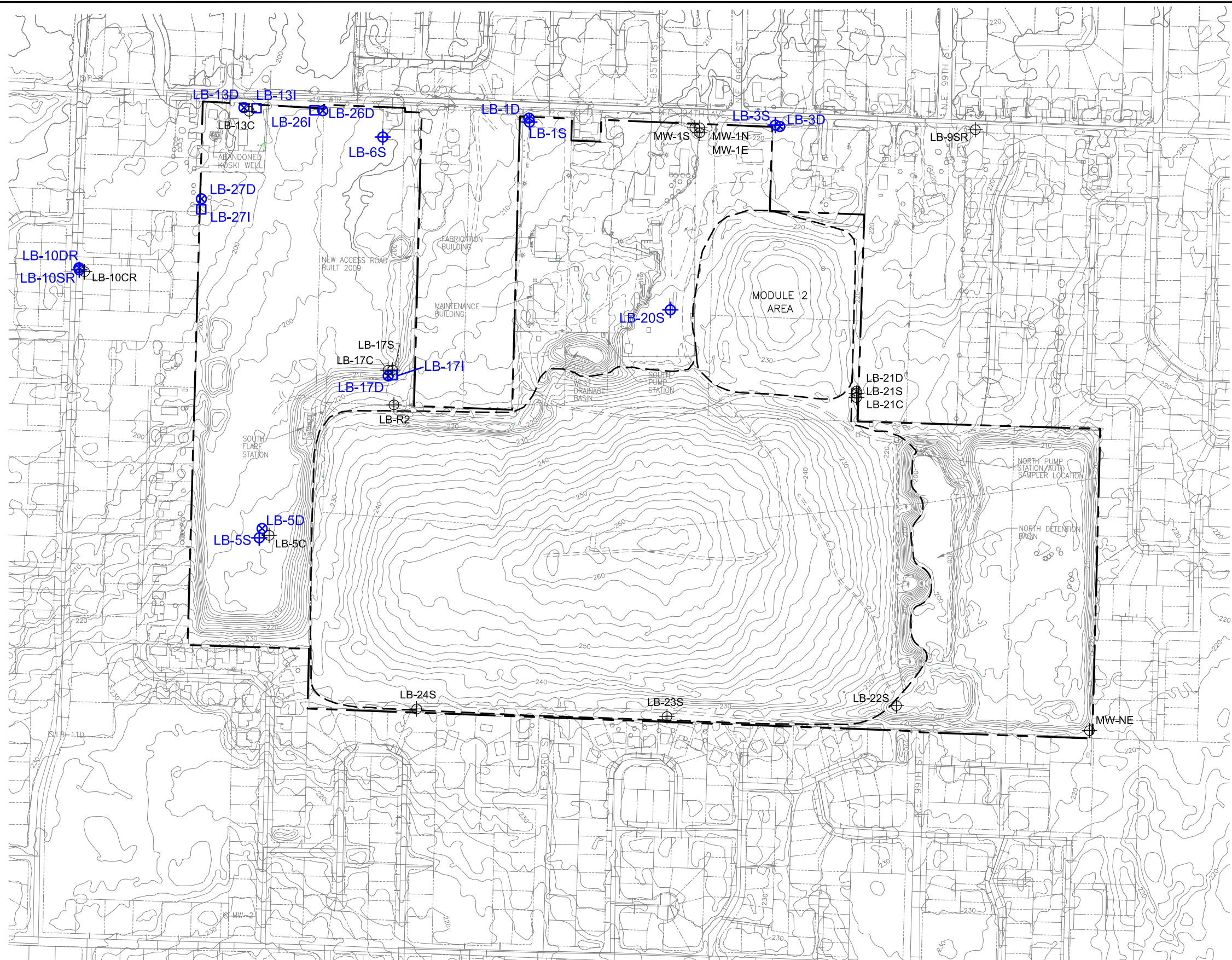
^b Calculated UCL-95 value of lognormally distributed data exceeded the range of concentrations from 2011 to 2015 using Land's method; value shown represents the maximum value detected in the last five years.

FIGURES



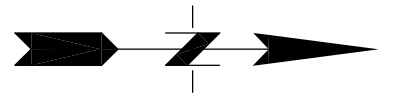
SOURCE: GOOGLE MAPS

SCS ENGINEERS Environmental Consultants and Contractors 14945 SW Sequoia Parkway, Suite 180 Portland, Oregon 97224 (503) 639-9201 FAX: (503) 684-6948	PROJECT NO. 04216030.14	DES BY T.A.	SITE LOCATION MAP LEICHER LANDFILL CLARK COUNTY, WASHINGTON	DATE FEBRUARY 2016
	SCALE AS SHOWN	CHK BY D.L.		FIGURE
	CAD FILE FIGURE 1-1	APP BY L.C.		1-1



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

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



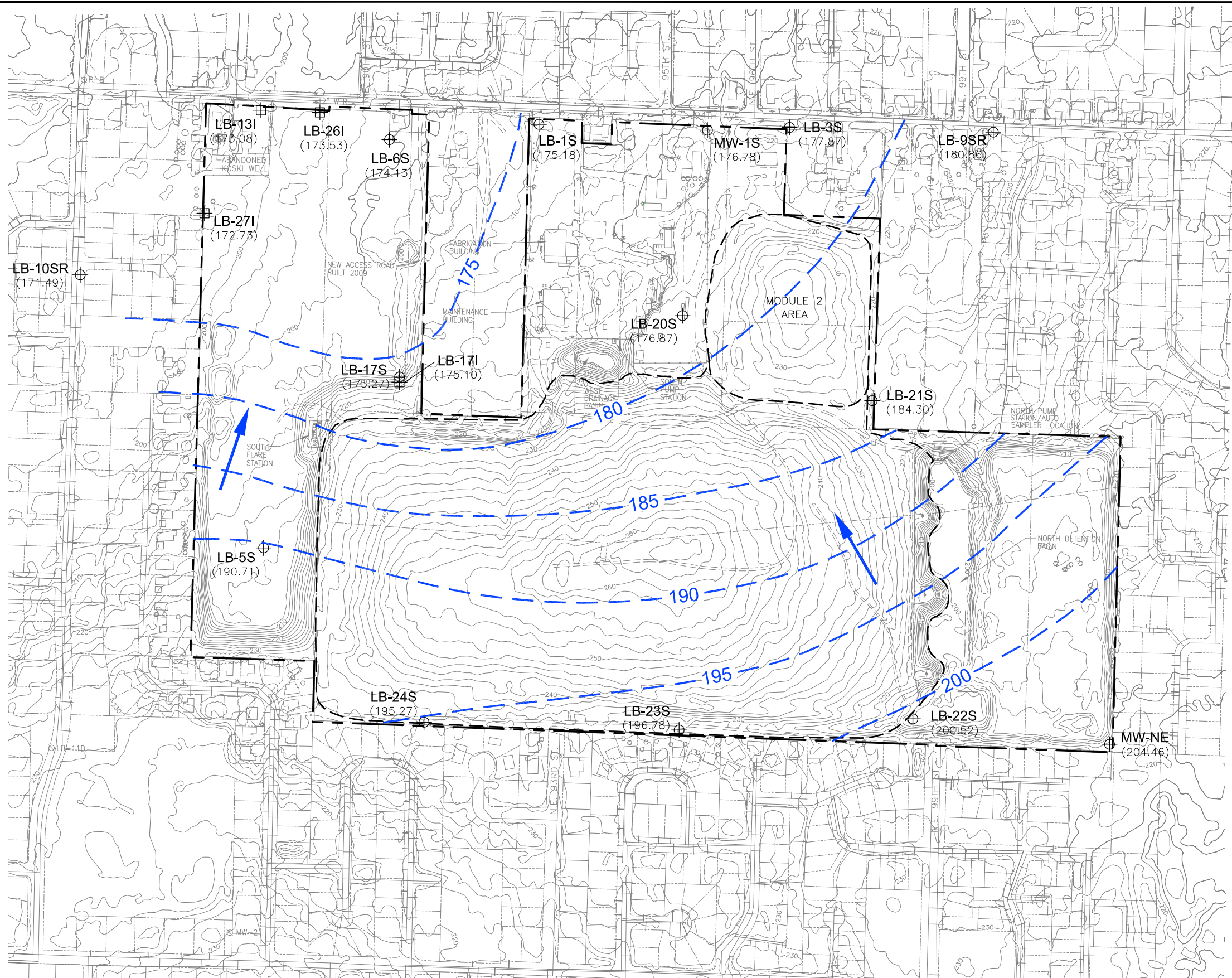
SCS ENGINEERS
 Environmental Consultants and Contractors
 14945 SW Sequoia Parkway, Suite 180
 Portland, Oregon 97224
 (503) 639-9201 FAX: (503) 684-6948



PROJECT NO.	04216030.14	DES BY	T.A.
SCALE	AS SHOWN	CHK BY	D.L.
CAD FILE	FIGURE 2-1	APP BY	L.C.

GROUNDWATER MONITORING WELL LOCATIONS
 LEICHER LANDFILL
 VANCOUVER, WASHINGTON

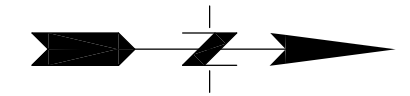
DATE
FEBRUARY 2016
 FIGURE
2-1



LEGEND:

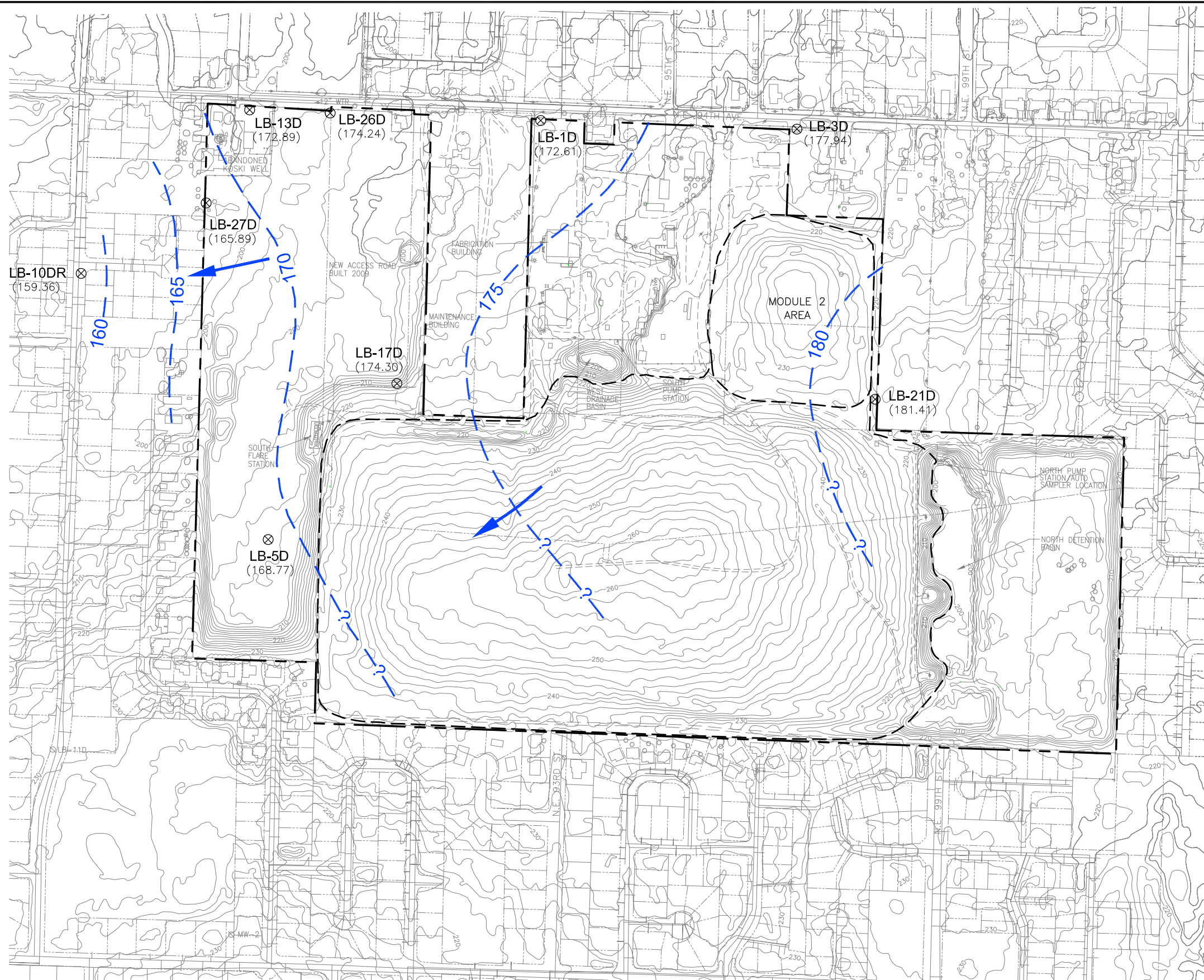
- LB-5S ⊕ Monitoring Well Location, Alluvial Water-Bearing Zone
- LB-17I ⊕ Monitoring Well Location, Middle of Alluvial Water-Bearing Zone
- Property Boundary
- - - Limit of Landfill Cover and Approximate Edge of Waste
- - -200- - - Groundwater Potentiometric Surface Contour, queried where uncertain
- (204.46) Groundwater Elevation Measured on February 17, 2015
- ➔ Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008



PROJECT NO.	04216030.14	DES BY	B.M.
SCALE	AS SHOWN	CHK BY	D.L.
CAD FILE	FIGURE 2-2	APP BY	L.C.

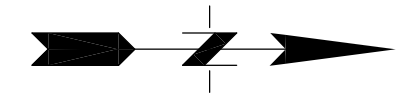
GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
ALLUVIAL WATER BEARING ZONE
FEBRUARY 17, 2015
LEICHTNER LANDFILL
VANCOUVER, WASHINGTON



LEGEND:

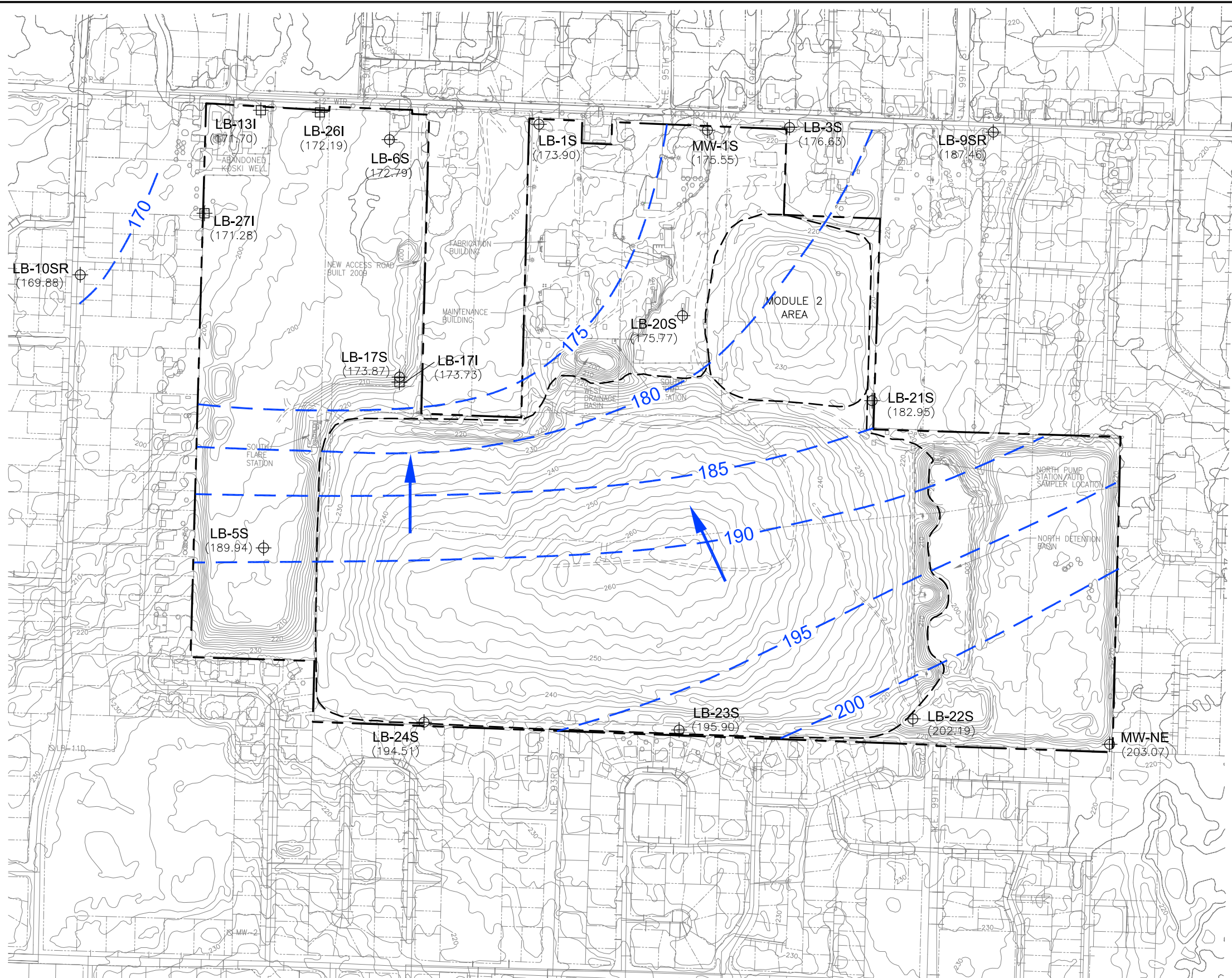
- LB-5D ⊗ Monitoring Well Location, Troutdale Aquifer
- Property Boundary
- - - - - Limit of Landfill Cover and Approximate Edge of Waste
- -180- - - Groundwater Potentiometric Surface Contour, queried where uncertain
- (181.41) Groundwater Elevation Measured on February 17, 2015
- ➔ Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008



PROJECT NO.	04216030.14	DES BY	B.M.
SCALE	AS SHOWN	CHK BY	D.L.
CAD FILE	FIGURE 2-3	APP BY	L.C.

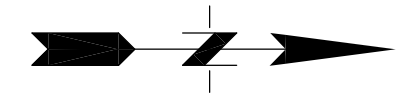
GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
TROUTDALE FORMATION AQUIFER
FEBRUARY 17, 2015
LEICHTNER LANDFILL
VANCOUVER, WASHINGTON



LEGEND:

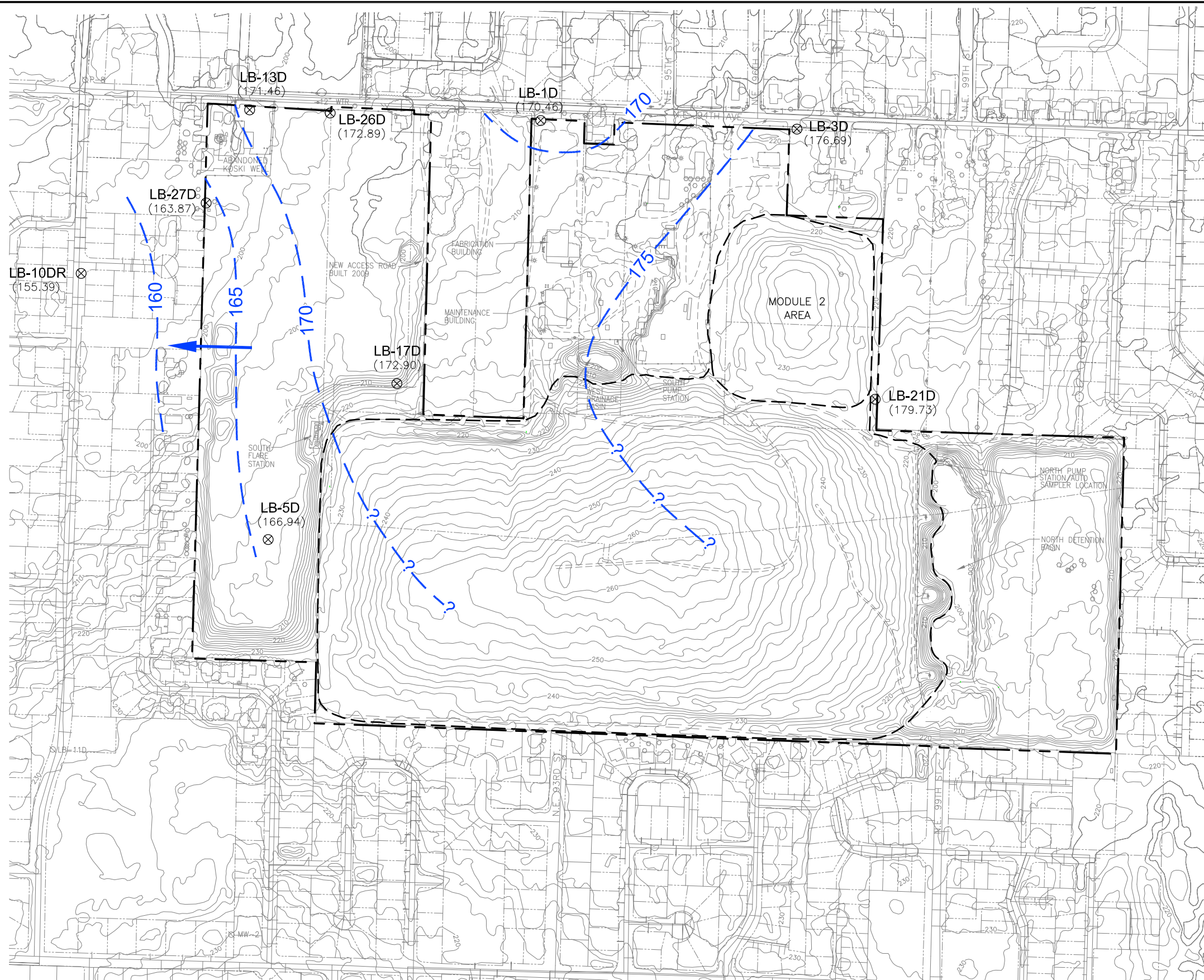
- LB-5S ⊕ Monitoring Well Location, Alluvial Water-Bearing Zone
- LB-17I ⊕ Monitoring Well Location, Middle of Alluvial Water-Bearing Zone
- Property Boundary
- - - Limit of Landfill Cover and Approximate Edge of Waste
- -195 - - Groundwater Potentiometric Surface Contour, queried where uncertain
- (203.07) Groundwater Elevation Measured on August 10, 2015
- ➔ Inferred Groundwater Flow Direction

NOTE:
 Topography Taken From Clark County GIS, December 2008



PROJECT NO.	04216030.14	DES BY	B.M.
SCALE	AS SHOWN	CHK BY	D.L.
CAD FILE	FIGURE 2-4	APP BY	L.C.

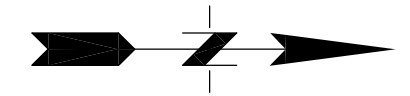
GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
 ALLUVIAL WATER BEARING ZONE
 AUGUST 10, 2015
 LEICHTNER LANDFILL
 VANCOUVER, WASHINGTON



LEGEND:

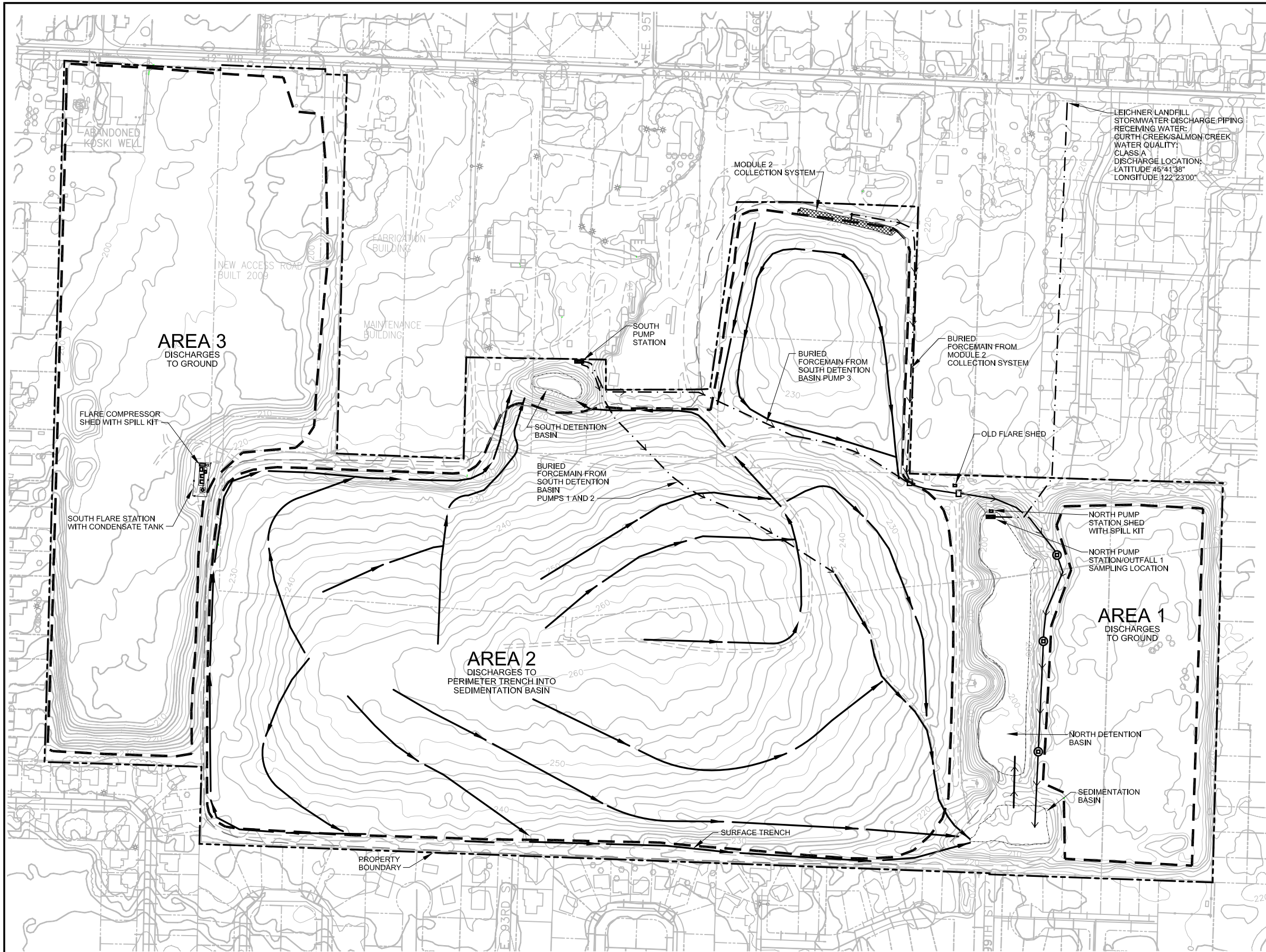
- LB-5D ⊗ Monitoring Well Location, Troutdale Aquifer
- Property Boundary
- - - - - Limit of Landfill Cover and Approximate Edge of Waste
- - - 175 - - - Groundwater Potentiometric Surface Contour, queried where uncertain
- (179.73) Groundwater Elevation Measured on August 10, 2015
- ➔ Inferred Groundwater Flow Direction

NOTE:
Topography Taken From Clark County GIS, December 2008



PROJECT NO.	04216030.14	DES BY	B.M.
SCALE	AS SHOWN	CHK BY	D.L.
CAD FILE	FIGURE 2-5	APP BY	L.C.

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
TROUTDALE FORMATION AQUIFER
AUGUST 10, 2015
LEICHTNER LANDFILL
VANCOUVER, WASHINGTON

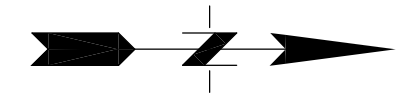


LEICHER LANDFILL
 STORMWATER DISCHARGE PIPING
 RECEIVING WATER:
 CURTH CREEK/SALMON CREEK
 WATER QUALITY:
 CLASS A
 DISCHARGE LOCATION:
 LATITUDE 45°41'38"
 LONGITUDE 122°23'00"

LEGEND:

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

NOTE:
 Topography Taken From Clark
 County GIS, December 2008



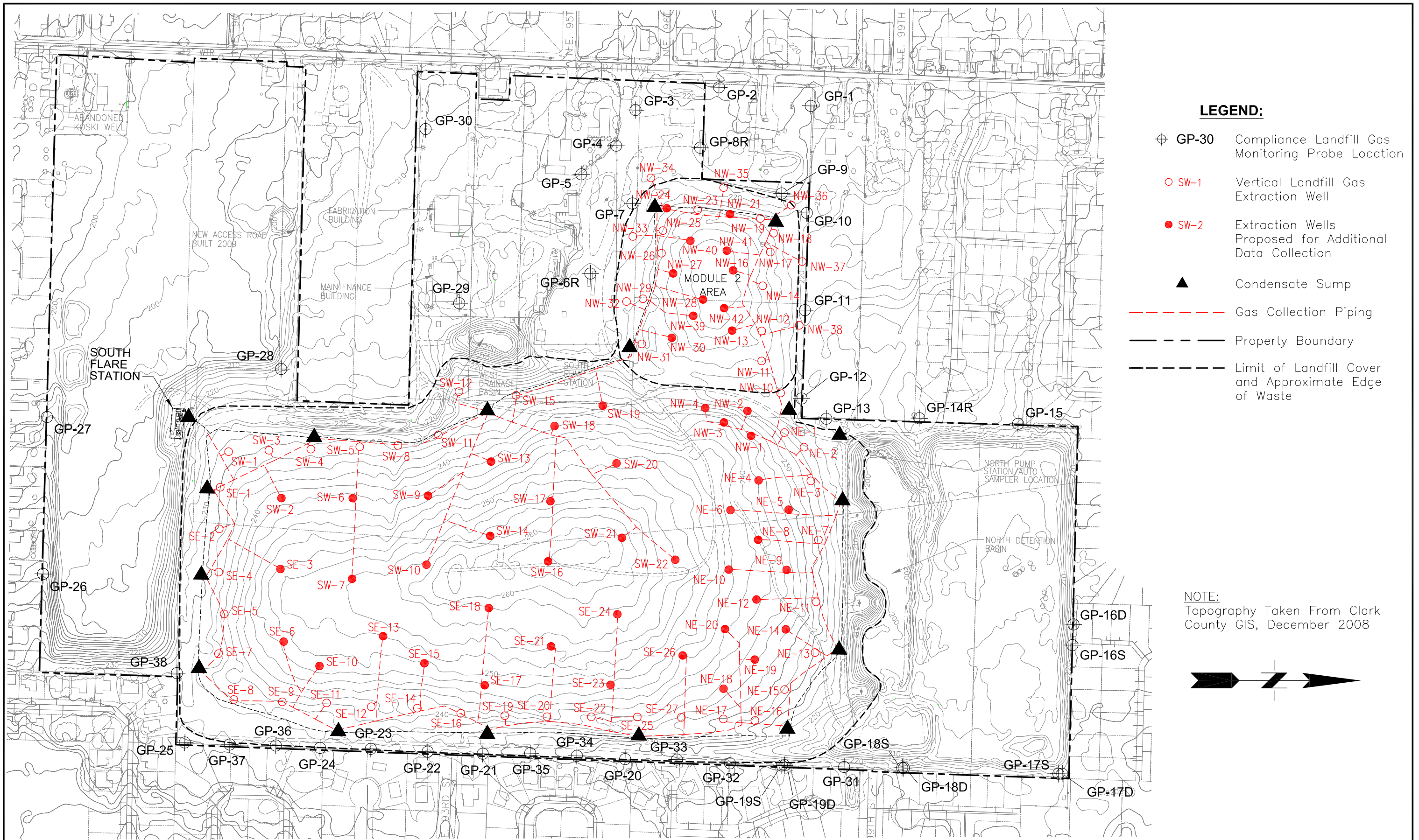
SCS ENGINEERS
 Environmental Consultants and Contractors
 14945 SW Sequoia Parkway, Suite 180
 Portland, Oregon 97224
 (503) 639-9201 FAX: (503) 684-6948



PROJECT NO. 04215030.06/17	DES BY T.B.
SCALE AS SHOWN	CHK BY T.B.
CAD FILE FIGURE 3-1	APP BY L.C.

SITE MAP AND STORMWATER SYSTEM
 LEICHER LANDFILL
 VANCOUVER, WASHINGTON

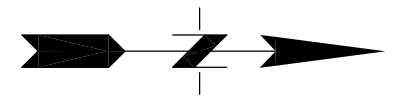
DATE
JANUARY 2015
 FIGURE
3-1



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



SCS ENGINEERS

Environmental Consultants and Contractors
14945 SW Sequoia Parkway, Suite 180
Portland, Oregon 97224
(503) 639-9201 FAX: (503) 684-6948



PROJECT NO.	04216030.14	DES BY	T.A.
SCALE	AS SHOWN	CHK BY	D.L.
CAD FILE	FIGURE 4-1	APP BY	L.C.

LANDFILL GAS PROBE AND
EXTRACTION WELL LOCATIONS

LEICHER LANDFILL
VANCOUVER, WASHINGTON

DATE	FEBRUARY 2016
FIGURE	4-1

APPENDIX A

2015 Field Sampling Data Sheets (FSDSs)

First Quarter (February) 2015 FSDSs

**Leichner Landfill
Groundwater Elevation Survey**

Project #: 04215030.01.16

Sampler: B McMullen / T Andrews

Quarter: 1 2 3 4

Date: 2/17/15

Monitoring Point Designation	Reference Elevation (ft. msl)	DTB (ft. btoc)	DTW (ft. btoc)	Time	Comments
Monitoring Wells					
MW-1 N	216.58	15.00	NR	1148	Dry @ 150'
MW-1 S	216.13	44.50	39.35	1150	
MW-1 E	216.45	29.05	NR	1152	Dry @ 29.05'
MW-NE	219.83	50.34	15.60	1345	
LB-R2	222.27	77.36	47.15	1034	
LB-1S	210.12	45.00	34.94	1240	
LB-1D	209.74	137.45	37.13	1245	
LB-3S	218.25	52.50	40.38	1145	
LB-3D	219.29	117.28	41.35	1140	
LB-5S	206.89	30.32	16.18	1023	
LB-5C	206.70	74.71	34.41	1020	
LB-5D	207.56	122.40	38.79	1021	
LB-6S	202.80	39.07	28.67	1047	
LB-9SR	217.94	49.60	37.08	1130	
LB-10SR	204.04	42.35	32.55	1235	
LB-10CR	203.05	71.95	31.44	1225	
LB-10DR	203.36	121.10	44.00	1220	
LB-13I	202.36	55.03	29.28	1055	
LB-13C	202.68	66.00	29.70	1056	
LB-13D	202.96	88.88	30.07	1058	
LB-17S	208.18	34.38	32.91	1044	
LB-17I	213.14	51.95	38.04	1038	
LB-17C	206.55	72.35	31.70	1042	
LB-17D	213.17	100.91	38.87	1040	
LB-20S	221.22	61.50	41.75	1200	
LB-21S	223.35	54.24	39.05	1252	
LB-21C	223.32	79.10	39.48	1250	
LB-21D	223.63	110.73	42.22	1255	
LB-22S	208.42	36.97	7.90	1335	
LB-23S	229.19	45.40	32.41	1330	
LB-24S	235.13	54.16	39.86	1320	
LB-26I	200.22	58.30	26.69	1051	
LB-26D	200.75	101.78	26.51	1049	
LB-27I	205.35	57.15	32.62	1103	
LB-27D	204.65	115.10	38.74	1101	

Notes:

Sunny - 61°F
Probe degraded between locations

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-15

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

BLIND ID: LB-021915-16

DUP ID:

NA

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

TEMPERATURE: 51.0 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/15	09:46	45.00	—	34.91	—	10.09	X 1 1.64
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Sample Depth:

[v if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/19/15	10:10	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/15	10:10	A	1 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/15	10:10	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE
	VOA - Glass	(8260) (8011)	OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)	
YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)	
GREEN - Poly	(Cyanide)	
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)	
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA

Purge Start Time: 09:48

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(0950)	0.00	5.28	202.3	335	11.95	34.90	5.98	clear/colorless
1	A(0953)	0.30	5.81	189.0	331	12.08	34.90	5.83	clear/colorless
2	A(0956)	0.70	6.03	182.9	332	12.06	34.90	4.36	clear/colorless
3	A(0959)	0.90	6.25	171.8	332	12.04	34.90	4.15	clear/colorless
4	A(1002)	1.10	6.26	169.9	331	12.05	34.90	4.16	clear/colorless
5	A(1005)	1.30	6.26	168.7	331	12.05	34.90	4.16	clear/colorless
6									

[Casing]

[Select A-G]

[Cumulative Totals]

[Circle units]

[Clarity, Color]

low flow purge method ~ 9/6/35psi: 100ml/pulse 400ml/min

SAMPLER: Bimulus

(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LR-10

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-021915-17

DUP ID: NA

WIND FROM: N NE E SE S SW W (NW) LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 65.1 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/15	10:20	137.45	-	37.11	-	100.34	X1 16.35
/ /	:	.	.	.	.	.	X3 .

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

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

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

Bottle Type	Date	Time	Method	Amount & Volume mL	Preservative (circle)	Ice	Filter	pH	✓
VOA Glass	2/19/15	10:40	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/15	10:40	A	1 (250, 500 (1L))	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/15	10:40	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []
	VOA - Glass	(8260) (8011)		WA [X]
	AMBER - Glass	(8080) (8150) (TOX)		WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)			

WATER QUALITY DATA		Purge Start Time: 10:21					Pump/Bailer Inlet Depth:			
Meas.	Method	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp	DTW	Diss O ₂ (mg/l)	Water Quality	
0	A(1024)	0.00	6.75	324.1	228	11.95	37.11	7.26	clear/colorless	
1	A(1027)	0.40	6.87	252.9	224	11.93	37.11	6.60	clear/colorless	
2	A(1030)	0.65	6.77	215.8	221	11.91	37.11	6.56	clear/colorless	
3	A(1033)	0.90	6.76	211.4	220	11.91	37.11	6.49	clear/colorless	
4	A(1036)	1.10	6.76	209.4	220	11.91	37.11	6.43	clear/colorless	
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

Low flow purge method ~ 8/7/90 psi

100ml/pulse 400ml/min

SAMPLER: B McMullen
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-35
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-021915-19

DUP ID: _____ **NA** _____
WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 85 °C

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

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/15	12:09	52.50	—	40.35	—	12.15	X 1 1.98
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/19/15	12:35	A	3 (40 ml)	<u>HO</u>	<u>YES</u>	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/15	12:35	A	1 (250, 500, 1L)	<u>None</u>	<u>YES</u>	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/15	12:35	A	1 (250) 500, 1L	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		250, 500, 1L		YES			

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

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA [X]
	VOA - Glass	<u>(8260)</u> (8011)		
	AMBER - Glass	(8080) (8150) (TOX)		
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (K) (Na)		

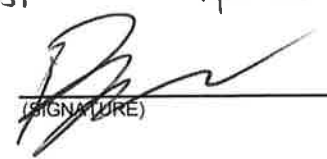
WATER QUALITY DATA Purge Start Time: 12:10 Pump/Bailer Inlet Depth: _____

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1213)	0.00	7.14	267.4	203	12.15	40.35	6.76	clear/colorless
1	A(1216)	0.25	6.95	219.8	201	12.03	40.35	5.60	clear/colorless
2	A(1219)	0.45	6.72	203.1	201	11.91	40.35	5.07	clear/colorless
3	A(1222)	0.60	6.57	194.0	200	11.85	40.35	5.00	clear/colorless
4	A(1225)	0.75	6.54	185.0	200	11.83	40.35	4.87	clear/colorless
5	A(1228)	0.85	6.54	184.3	200	11.84	40.35	4.84	clear/colorless
6	A(1231)	1.0	6.53	182.7	200	11.84	40.35	4.81	clear/colorless

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

Low flow purge method ~ 8/7/30psi 50ml/pulse 200ml/min

SAMPLER: B memullen
(PRINTED NAME)


(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: FBI

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

BLIND ID: LB-02715-08

DUP ID:

NA

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

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

[Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
/ /	:	X 1	
/ /	:	X 3	
Gal/ft = (dia./2) ² x 0.163		1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

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

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

Sample Depth:

[v if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/17/15	16:30	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/15	16:30	A	1 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/15	16:30	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

5

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []
	VOA - Glass	(8260) (8011)		WA (X)
	AMBER - Glass	(8080) (8150) (TOX)		WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)		

WATER QUALITY DATA

Purge Start Time: :

Pump/Bailer Inlet Depth:

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

[Casing]

[Select A-G]

[Cumulative Totals]

[Circle units]

[Clarity, Color]

Collected near LB-3D

SAMPLER:

(PRINTED NAME)

B. McMullen

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
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-021715-07

DUP ID: NA

WIND FROM: N NE E SE S SW W (NW) (LIGHT) MEDIUM HEAVY
WEATHER: (SUNNY) CLOUDY RAIN ? **TEMPERATURE:** (61) °F () °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)
2/17/15	15:40	117.28	—	41.28	—	76.00	X 1 12.38
/ /	:						X 3 .

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

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

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) [v if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative (circle)	Ice	Filter	pH	✓
VOA Glass	2/17/15	16:00	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/15	16:00	A	1 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/15	16:00	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

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

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)								
	VOA - Glass	(8260) (8011)	OR [] WA [X]							
	AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []							
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T) (NO ₃)								
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)								
	GREEN - Poly	(Cyanide)								
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)								
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)									

WATER QUALITY DATA Purge Start Time: 15:42 Pump/Bailor Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1544)	0.00	7.54	104.0	214	14.32	39.27	4.43	clear/colorless
1	A(1547)	0.25	7.06	90.3	211	13.00	39.33	5.68	clear/colorless
2	A(1550)	0.50	6.68	99.6	210	12.69	39.40	5.64	clear/colorless
3	A(1553)	0.75	6.56	100.2	209	12.70	39.40	5.74	clear/colorless
4	A(1556)	1.0	6.55	101.2	209	12.68	39.40	5.75	clear/colorless
5	A(1559)	1.20	6.55	101.8	209	12.67	39.40	5.77	clear/colorless
6									

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

Low flow purge Method ~ 8/7/75psi 75ml/pulse 300ml/min

SAMPLER: BMcMullen
(PRINTED NAME)

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-55

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

BLIND ID: LB-021815-09

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 53.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/15	10:16	30.32	-	16.21	-	14.11	X 1 = 2.29
/ /	:	.	.	.	.	.	X 3 = .

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

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

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

Sample Depth:

[√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	2/18/15	10:45	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/15	10:45	A	1 (250, 500, 1L)	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/15	10:45	A	1 (250, 500, 1L)	HNO ₃	YES	YES		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

Total Bottles (include duplicate count): 5

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) (SO ₄) (Silica, T.) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 10 : 18

Pump/Bailor Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1020)	0.00	7.84	168.4	596	11.69	16.20	7.69	cloudy/colorless
1	A(1023)	0.25	6.92	164.0	270	12.12	16.20	7.06	clear/colorless
2	A(1026)	0.60	6.77	149.7	201	12.29	16.20	6.98	clear/colorless
3	A(1029)	0.90	6.65	145.1	181	12.35	16.20	6.92	clear/colorless
4	A(1032)	1.25	6.54	144.1	177	12.39	16.20	6.81	clear/colorless
5	A(1035)	1.40	6.46	146.1	177	12.42	16.20	6.84	clear/colorless
6	A(1038)	1.75	6.44	141.5	177	12.44	16.20	6.71	clear/colorless

[Casing] A(1041) [Select A-G] [Cumulative Totals] 2.00 6.43 141.2 177 [Circle units] 12.45 16.20 6.69 [Clarity, Color] clear/colorless

Low flow purge method ~ 8/7/25psi 75 ml/pulse 300ml/min

SAMPLER: B McMullen
(PRINTED NAME)


(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-5D
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-021715-01

DUP ID: NA

WIND FROM: N NE E SE S SW W (NW) LIGHT MEDIUM HEAVY
WEATHER: (SUNNY) CLOUDY RAIN ? **TEMPERATURE:** 62.0 °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/17/15	11:30	122.40	—	38.73	—	83.67	X 1 13.63
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	2/17/15	11:55	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/15	11:55	A	1 250, 500 (1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/15	11:55	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

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

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260) (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA			Purge Start Time: 11:32				Pump/Bailor Inlet Depth:		
Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1140)	0.00	6.78	107.4	311	14.77	38.75	4.21	clear/colorless
1	A(1143)	0.20	6.04	119.6	309	13.85	38.76	1.12	clear/colorless
2	A(1146)	0.40	6.25	101.3	309	13.75	38.76	0.82	clear/colorless
3	A(1149)	0.60	6.27	100.0	309	13.76	38.76	0.81	clear/colorless
4	A(1152)	0.90	6.27	99.9	309	13.77	38.76	0.79	clear/colorless
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

Low flow purge method ~ 8/7/60psi: 50ml/pulse 200ml/min

SAMPLER: R Mammulin
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-68

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

BLIND ID: LB-021815-14

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	<u>NIGHT</u>	MEDIUM	HEAVY
WEATHER:	SUNNY		<u>CLOUDY</u>		RAIN		?		TEMPERATURE: <u>53</u> °F °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/15	13:09	39.07	—	28.63	—	10.44	X 1 1.70
/ /	:	.	.	.	.	.	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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (F) Dedicated Pump (G) Other =

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

Sample Depth:

[√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	2/18/15	13:35	A	3 <u>40 ml</u>	HCl	<u>YES</u>	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/15	13:35	A	1 250, 500, <u>1L</u>	None	<u>YES</u>	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/15	13:35	A	1 <u>250</u> , 500, 1L	HNO ₃	<u>YES</u>	<u>YES</u>		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

5

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)								OR []	WA []	
	VOA - Glass	<u>8260</u> (8011)										<u>WA</u>
	AMBER - Glass	(8080) (8150) (TOX)										WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>										
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)										
	GREEN - Poly	(Cyanide)										
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)										
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (K) (Na)										

WATER QUALITY DATA

Purge Start Time: 13:11

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1313)	0.00	7.12	270.9	191	12.10	28.61	6.53	clear/colorless
1	A(1316)	0.25	7.05	221.6	194	12.03	28.61	5.67	clear/colorless
2	A(1319)	0.50	6.93	191.2	205	11.97	28.61	4.92	clear/colorless
3	A(1322)	0.70	6.87	178.3	211	11.97	28.61	4.13	clear/colorless
4	A(1325)	1.00	6.86	175.4	211	11.95	28.61	3.98	clear/colorless
5	A(1328)	1.20	6.86	174.9	211	11.95	28.61	3.79	clear/colorless
6									

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

Low flow purge method ~ 8/7/25 psi; 75 ml/pulse 300 ml/min

SAMPLER: B mamullen
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-105R

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

BLIND ID: LB-021915-21

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN				TEMPERATURE: 52 °F		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/15	13:49	42.35	—	32.50	—	9.85	X 1: 1.60
/ /	:	.	.	.	.	.	X 3: .

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

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

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

Sample Depth:

[v if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/19/15	14:10	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/15	14:10	A	1 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/15	14:10	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []
	VOA - Glass	(8260) (8011)		WA [X]
	AMBER - Glass	(8080) (8150) (TOX)		WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hardness)		
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)		

WATER QUALITY DATA

Purge Start Time: 13:51

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(1353)	0.00	7.07	270.5	212	13.66	32.50	3.66	cloudy/colorless
1	A(1356)	0.20	6.91	211.8	220	13.42	32.50	1.53	cloudy/colorless
2	A(1359)	0.40	6.66	191.0	220	13.32	32.50	1.15	cloudy/colorless
3	A(1402)	0.60	6.65	189.3	220	13.31	32.50	1.10	clear/colorless
4	A(1405)	0.80	6.64	188.9	221	13.31	32.50	1.08	clear/colorless
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

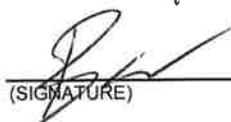
Low flow purge method ~ 9/6/27psi 50ml/pulse 200ml/min

SAMPLER:

(PRINTED NAME)

B Mammullen

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-10DR

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

BLIND ID: LB-021915-20

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 65.3 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/15	13:12	121.10	---	44.10	---	77.00	X 1 12.55
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Sample Depth:

[if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/19/15	13:30	A	3 (40 ml)	(HCl)	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/15	13:30	A	1 (250, 500, 1L)	(None)	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/15	13:30	A	1 (250, 500, 1L)	(HNO ₃)	YES	YES		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []
	VOA - Glass	(8260) (8011)		X
	AMBER - Glass	(8080) (8150) (TOX)		
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)		

WATER QUALITY DATA

Purge Start Time: 13:14

Pump/Bailor Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1317)	0.00	7.10	276.5	309	13.85	44.10	4.08	clear/colorless
1	A(1320)	0.50	7.06	196.0	320	13.25	44.10	1.45	clear/colorless
2	A(1323)	0.70	6.87	172.4	338	13.06	44.10	1.45	clear/colorless
3	A(1326)	0.90	6.86	170.1	338	13.09	44.10	1.47	clear/colorless
4	A(1329)	1.10	6.85	169.9	339	13.11	44.10	1.47	clear/colorless
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

[Circle units]

[Clarity, Color]

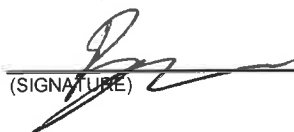
Low flow purge method ~ 8/7/80psi; 50ml/pulse 200ml/min

SAMPLER:

Brian McMullen

(PRINTED NAME)

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-13I

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

BLIND ID: LB-021815-11

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 53.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/15	11:42	55.03	—	29.27	—	25.76	X 1 4.19
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Sample Depth:

[if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/18/15	12:05	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/15	12:05	A	1 (250, 500, 1L)	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/15	12:05	A	1 (250, 500, 1L)	HNO ₃	YES	YES		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []
	VOA - Glass	(8260) (8011)		WA [X]
	AMBER - Glass	(8080) (8150) (TOX)		WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)			

WATER QUALITY DATA

Purge Start Time: 11:45

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1148)	0.00	7.40	231.1	271	11.51	29.30	3.74	clear/colorless
1	A(1151)	0.25	7.21	197.5	269	11.66	29.30	1.85	clear/colorless
2	A(1154)	0.50	7.07	181.8	270	11.71	29.30	1.45	clear/colorless
3	A(1157)	0.75	6.98	170.9	273	11.75	29.30	1.30	clear/colorless
4	A(1200)	1.00	6.96	169.7	274	11.76	29.30	1.28	clear/colorless
5	A(1203)	1.25	6.96	164.3	274	11.77	29.30	1.25	clear/colorless
6		.	.	.	.	.	.	.

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

Low flow purge method ~ 8/7/35 psi; 50ml/pulse 200ml/min

SAMPLER: B Mcmullen

(PRINTED NAME)

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-13D

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

BLIND ID: LB-021715-03

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 67. °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

[Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
2/17/15	13:19	88.88	—	30.04	—	58.84	X 1 9.59	
/ /	:	.	.	.	.	.	X 3 .
Gal/ft = (dia./2) ² x 0.163		1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

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

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

Sample Depth:

[v if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/17/15	13:40	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/15	13:40	A	1 (250, 500, 1L)	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/15	13:40	A	1 (250, 500, 1L)	HNO ₃	YES	YES		✓
	/ /	:		250, 500, 1L	.	YES			

White no acid, Yellow H₂SO₄, Red HNO₃

5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260) (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 13:21

Pump/Bailor Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1323)	0.00	6.96	173.5	213	12.57	30.04	5.31	clear/colorless
1	A(1326)	0.5	6.73	163.4	212	12.26	30.05	5.59	clear/colorless
2	A(1329)	0.8	6.46	158.7	211	12.11	30.05	5.86	clear/colorless
3	A(1332)	1.10	6.47	160.3	211	12.10	30.05	5.99	clear/colorless
4	A(1335)	1.40	6.51	155.7	211	12.08	30.06	5.93	clear/colorless
5	A(1338)	1.60	6.53	150.9	211	12.04	30.06	5.98	clear/colorless
6		.	.	.	.	.	.	.

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

[Circle units]

[Clarity, Color]

Low flow purge method ~ 8/7/60psi: 75ml/pulse 300ml/min

SAMPLER: B McMullen
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LR-17E

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

BLIND ID: LR-021815-15

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	<u>NGHT</u>	MEDIUM	HEAVY
WEATHER:	SUNNY		<u>CLOUDY</u>		RAIN		?		TEMPERATURE: <u>51</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

[Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/15	14:00	51.95	—	38.02	—	13.93	X 1 2.27
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Sample Depth:

[if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/18/15	14:30	A	3 <u>40 ml</u>	<u>(HCl)</u>	<u>YES</u>	NO		✓
Amber Glass	2/18/15 Bm :			250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/15	14:30	A	250, 500, <u>1L</u>	<u>(None)</u>	<u>YES</u>	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/15	14:30	A	<u>250</u> , 500, 1L	<u>(HNO₃)</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

5

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)								OR []	WA [X]	
	VOA - Glass	<u>8260</u> (8011)										
	AMBER - Glass	(8080) (8150) <u>(TOX)</u>										
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>										
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)										
	GREEN - Poly	(Cyanide)										
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)										
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)										

WATER QUALITY DATA

Purge Start Time: 14:02

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp <u>(C)</u>	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1411)	0.00	7.02	151.7	354	13.81	38.00	4.53	clear/colorless
1	A(1414)	0.25	7.08	51.8	394	13.73	38.00	1.28	clear/colorless
2	A(1417)	0.50	7.11	-27.9	410	13.72	38.00	0.65	clear/colorless
3	A(1420)	0.75	7.11	-46.6	410	13.69	38.00	0.59	clear/colorless
4	A(1423)	1.10	7.11	-51.1	409	13.67	38.00	0.55	clear/colorless
5	A(1426)	1.30	7.11	-55.4	409	13.69	38.00	0.52	clear/colorless
6	A(1429)	1.50	7.11	-56.1	408	13.69	38.00	0.48	clear/colorless

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

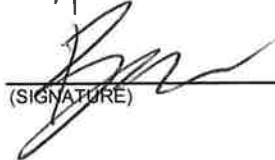
Low flow purge method ~ 8/7/40ps:

100ml/pulse 400ml/min

SAMPLER:

B McMullen
(PRINTED NAME)

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** LB-17D
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-021715-05

DUP ID: NA

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

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

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/17/15	14:42	100.91	-	38.82	-	62.09	X 1 10.12
2/17/15							X 3 .

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

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

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/17/15	15:00	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/15	15:00	A	250, 500, <u>1L</u>	<u>None</u>	<u>YES</u>	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/15	15:00	A	<u>250</u> , 500, 1L	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		250, 500, 1L		YES			

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

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []
	VOA - Glass	<u>(8260)</u> (8011)			X
AMBER - Glass	(8080) (8150) (TOX)			<u>X</u>
WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₂)</u>			
YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)			
GREEN - Poly	(Cyanide)			
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)			
RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)			

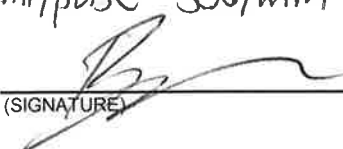
WATER QUALITY DATA Purge Start Time: 14:43 Pump/Bailor Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1445)	0.00	7.07	120.5	285	15.31	38.81	3.20	clear/colorless
1	A(1448)	0.20	6.93	94.4	293	14.62	38.82	1.35	clear/colorless
2	A(1451)	0.60	6.86	86.7	296	14.42	38.82	1.12	clear/colorless
3	A(1454)	0.90	6.82	82.3	296	14.37	38.82	0.99	clear/colorless
4	A(1457)	1.20	6.82	81.6	296	14.39	38.82	0.96	clear/colorless
5									
6									

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

Low flow purge method ~ 8/7/65 psi 75ml/pulse 300/min

SAMPLER: B McMullen
(PRINTED NAME)


(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
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-021715-06

DUP ID:

NA

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

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

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

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

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

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

Sample Depth:

[N if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/17/15	15:05	A	3 (40 mL)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/15	15:05	A	1 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/15	15:05	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []
	VOA - Glass	(8260) (8011)		<input checked="" type="checkbox"/>
	AMBER - Glass	(8080) (8150) (TOX)		<input type="checkbox"/>
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T) (NO ₃)		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)		

WATER QUALITY DATA

Purge Start Time: :

Pump/Bailer Inlet Depth:

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

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

[Circle units]

[Clarity, Color]

Collected at LB-17D

SAMPLER: B. McMullen

(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-205

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

BLIND ID: LB-021915-18

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 51 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

[Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/19/15	11:14	61.50	---	41.71	---	19.79	X 1 3.22
/ /	:	.	.	.	.	.	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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (F) Dedicated Pump (G) Other =

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

Sample Depth:

[if used]

Bottle Type	Date	Time	Method	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/19/15	11:35	A	3 (40 mL)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/19/15	11:35	A	250, 500, (1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/19/15	11:35	A	(250) 500, 1L	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

5

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)								OR []	WA [X]	
	VOA - Glass	(8260) (8011)										
	AMBER - Glass	(8080) (8150) (TOX)										
	WHITE - Poly	(pH) (Conductivity) (DS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T) (NO ₃)										
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)										
	GREEN - Poly	(Cyanide)										
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)										
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)										

WATER QUALITY DATA

Purge Start Time: 11:15

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1119)	0.00	7.05	313.2	281	12.91	41.75	3.43	cloudy/pale orange
1	A(1122)	0.25	7.11	239.2	281	12.70	41.75	1.89	cloudy/pale orange
2	A(1125)	0.50	7.06	207.1	280	12.59	41.75	1.14	clear/pale orange
3	A(1128)	0.70	7.00	191.1	280	12.60	41.75	0.84	clear/pale orange
4	A(1131)	0.80	6.99	189.6	281	12.58	41.75	0.82	clear/pale orange
5	A(1134)	1.00	6.99	182.6	281	12.57	41.75	0.79	clear/pale orange
6									

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

[Circle units]

[Clarity, Color]

Black material on tubing when pulled from well/Replaced with new tubing.
Low flow purge method 8/7/30psi 50ml/pulse 200ml/min

SAMPLER: B McMullen

(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LR-267

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

BLIND ID: LB-021815-12

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	LIGHT	MEDIUM	HEAVY
	WEATHER: SUNNY		CLOUDY		RAIN		?		TEMPERATURE: <u>53</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

[Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/15	12:23	58.30	—	26.65	—	31.65	X 1 5.15
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Sample Depth:

[√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	2/18/15	12:50	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/15	12:50	A	1 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/15	12:50	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)									
	VOA - Glass	(8260) (8011)								OR []	WA [X]
	AMBER - Glass	(8080) (8150) (TOX)								OR []	WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T) (NO ₃)									
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)									
	GREEN - Poly	(Cyanide)									
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)									
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)									

WATER QUALITY DATA

Purge Start Time: 12:25

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(1227)	0.00	7.11	284.6	228	11.65	26.64	5.78	clear/colorless
1	A(1230)	0.40	7.05	288.4	232	11.77	26.64	4.73	clear/colorless
2	A(1233)	0.75	6.97	290.6	235	11.81	26.64	4.48	clear/colorless
3	A(1236)	1.20	6.89	184.1	243	11.82	26.64	4.26	clear/colorless
4	A(1239)	1.45	6.87	181.7	269	11.83	26.64	3.62	cloudy/colorless
5	A(1242)	1.75	6.87	186.1	268	11.85	26.64	3.57	cloudy/colorless
6	A(1245)		6.87	184.1	270	11.86	26.64	3.54	cloudy/colorless

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

[Circle units]

[Clarity, Color]

Low flow purge method ~ 8/7/45psi 100ml/pulse 400ml/min

SAMPLER: B Membran
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: DVPD

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

BLIND ID: LB-021815-13

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY	
WEATHER:	SUNNY			CLOUDY			RAIN			?		
										TEMPERATURE: 53.0 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
/ /	:	X 1	
/ /	:	X 3	
Gal/ft = (dia./2) ² x 0.163		1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

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

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

Sample Depth:

[v if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/18/15	13:30	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/15	13:30	A	1 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/15	13:30	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

5

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []	
	VOA - Glass	(8269) (8011)		[]	[X]
	AMBER - Glass	(8080) (8150) (TOX)		[]	[]
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)			
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)			
	GREEN - Poly	(Cyanide)			
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (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-6S

SAMPLER:

B. Mumtaz

(PRINTED NAME)

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Leichner Landfill

WELL ID: LB-260

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

BLIND ID: LB-021715-04

DUP ID:

NA

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

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness]

[Water Column]

[Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/17/15	14:01	101.78	-	26.44	-	75.34	X 1 12.28
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Sample Depth:

[if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/17/15	14:20	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/15	14:20	A	1 (250, 500, 1L)	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	2/17/15	14:20		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	/ /	:	A	1 (250, 500, 1L)	HNO ₃	YES	YES		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260) (8011)	OR [ ] WA [X]
AMBER - Glass	(8080) (8150) (TOX)	OR [] WA []
WHITE - Poly	(pH) (Conductivity) (DS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)	
YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)	
GREEN - Poly	(Cyanide)	
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)	
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)	

WATER QUALITY DATA			Purge Start Time: 14:02				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	6.88	219.4	223	12.93	26.45	5.86	clear/colorless
1	A(1406)	0.60	6.73	185.4	221	12.40	26.46	3.03	clear/colorless
2	A(1409)	0.80	6.58	175.2	221	12.32	26.47	2.87	clear/colorless
3	A(1412)	1.20	6.57	169.0	221	12.23	26.47	2.88	clear/colorless
4	A(1415)	1.45	6.58	167.8	221	12.22	26.47	2.96	clear/colorless
5	A(1418)	1.70	6.57	165.1	221	12.19	26.47	3.00	clear/colorless
6									

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

[Circle units]

[Clarity, Color]

Low flow purge method ~ 8/7/60psi 100ml/pulse 400ml/min

SAMPLER:

B. McMullen
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

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

SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LR-021815-10

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	SUNNY		(CLOUDY)		RAIN		?		TEMPERATURE: 85.3 °C		

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

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/18/15	11:02	57.15	-	32.62	-	24.53	X 1 3.99
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/18/15	11:20	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/18/15	11:20	A	1 250, 500, (1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/18/15	11:20	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

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

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260) (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 11:04 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(1106)	0.00	6.79	183.7	505	11.62	32.62	6.48	cloudy/Colorless
1	A(1109)	0.25	6.92	159.9	593	11.95	32.62	6.92	clear/Colorless
2	A(1112)	0.40	6.93	152.6	608	12.09	32.62	2.19	clear/Colorless
3	A(1115)	0.65	6.93	147.1	613	12.16	32.62	1.99	clear/Colorless
4	A(1118)	0.85	6.94	146.1	613	12.19	32.62	1.96	clear/Colorless
5		.	.	.	.	.	.	.
6		.	.	.	.	.	.	.

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

Low flow purge method ~ 8/7/35 psi while filling VOAs noticed sample was slightly turbid

SAMPLER: B Memullen

(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LR-27D

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

BLIND ID: LR-021715-02

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: 63 °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
2/17/15	12:25	115.10	-	37.67	-	77.43	X 1 12.62
1/1							X 3 .

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

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

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

Sample Depth:

[if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	2/17/15	12:50	A	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	1/1	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	2/17/15	12:50	A	1 250, 500, (1L)	None	YES	NO	NA	✓
Yellow Poly	1/1	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	1/1	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	1/1	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	2/17/15	12:50	A	1 (250, 500, 1L)	HNO ₃	YES	YES		✓
	1/1	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

5 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA [X]
	VOA - Glass	(8268) (8011)		
	AMBER - Glass	(8080) (8150) (TOX)		
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T) (NO ₃)		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)		
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)			

WATER QUALITY DATA

Purge Start Time: 12:27

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1229)	0.00	6.97	121.8	303	12.65	39.00	6.31	cloudy/colorless
1	A(1232)	0.25	6.83	111.9	299	12.54	39.98	4.58	cloudy/colorless
2	A(1235)	0.50	6.54	118.4	299	12.43	40.37	4.40	cloudy/colorless
3	A(1238)	0.75	6.48	117.2	299	12.39	41.16	3.90	cloudy/colorless
4	A(1241)	0.90	6.49	113.4	299	12.39	41.17	3.86	cloudy/colorless
5	A(1244)	1.10	6.50	112.6	299	12.41	41.18	3.82	cloudy/colorless
6									

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

Low flow purge method ~ 8/7/65psi 75ml/pulse 300ml/min

SAMPLER: B McMullen
(PRINTED NAME)


(SIGNATURE)

Third Quarter (August) FSDSs

**Leichner Landfill
Groundwater Elevation Survey**

Project #: 04215030.01/16

Sampler: B McMullen

Quarter: 1 2 3 4

Date: 8/10/15

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	1210	Dry @ 14.98'
MW-1 S	216.13	44.50	40.58	1214	
MW-1 E	216.45	29.05	NA	1211	Dry @ 29.05'
MW-NE	219.83	50.34	16.99	1021	
LB-R2	222.27	77.36	48.51	1132	
LB-1S	210.12	45.00	36.22	1156	
LB-1D	209.74	137.45	39.28	1158	
LB-3S	218.25	52.50	41.62	1222	
LB-3D	219.29	117.28	42.60	1227	
LB-5S	206.89	30.32	16.95	1043	Bees
LB-5C	206.70	74.71	35.96	1050	Bees
LB-5D	207.56	122.40	40.62	1038	
LB-6S	202.80	39.07	30.01	1139	
LB-9SR	217.94	49.60	30.48	1233	
LB-10SR	204.04	42.35	34.16	1241	
LB-10CR	203.05	71.95	33.05	1238	
LB-10DR	203.36	121.10	47.97	1240	
LB-13I	202.36	55.03	30.66	1104	
LB-13C	202.68	66.00	31.10	1103	
LB-13D	202.96	88.88	31.50	1101	
LB-17S	208.18	34.38	34.31	1150	
LB-17I	213.14	51.95	39.41	1146	
LB-17C	206.55	72.35	33.06	1137	
LB-17D	213.17	100.91	40.27	1135	
LB-20S	221.22	61.50	42.85	1206	
LB-21S	223.35	54.24	40.40	1012	
LB-21C	223.32	79.10	40.81	1011	
LB-21D	223.63	110.73	43.90	1014	concrete around casing cracked
LB-22S	208.42	36.97	6.23	1026	replaced missing rock
LB-23S	229.19	45.40	33.29	1030	
LB-24S	235.13	54.16	40.62	1033	
LB-26I	200.22	58.30	28.03	1110	
LB-26D	200.75	101.78	27.86	1112	
LB-27I	205.35	57.15	34.07	1055	
LB-27D	204.65	115.10	40.76	1057	

Notes:

Sunny 84°F wind 3mph NW
performed standard decan between
locations.

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
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-081115-02

DUP ID: **NA**

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

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

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
8/11/15	09:56	45.00	—	36.25	—	8.75	X 1 1.42	
/ /	:	.	.	.	.	.	X 3 .
Gal/ft = (dia./2) ² x 0.163		1" = 0.041	<u>(2")</u> = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

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

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	8/11/15	10:15	A	3 <u>(40 ml)</u>	<u>(HCl)</u>	<u>(YES)</u>	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/11/15	10:15	A	3 <u>(250 500 1L)</u>	<u>(None)</u>	<u>(YES)</u>	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/11/15	10:15	A	1 <u>(250 500 1L)</u>	<u>(HNO₃)</u>	<u>(YES)</u>	<u>(YES)</u>		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃ 7 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA [X]
	VOA - Glass	<u>(8260)</u> (8011)		
	AMBER - Glass	(8080) (8150) (TOX)	OR []	WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> <u>(Mg)</u> <u>(Mn)</u> (K) (Na)		

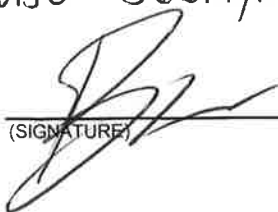
WATER QUALITY DATA Purge Start Time: 09:58 Pump/Bailer Inlet Depth: []

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1001)	0.00	7.03	163.2	249	14.90	36.28	8.28	clear/colorless
1	A(1004)	0.50	6.77	168.2	242	13.55	36.28	6.39	clear/colorless
2	A(1007)	0.75	6.67	170.6	240	13.30	36.28	5.83	clear/colorless
3	A(1010)	1.00	6.66	170.8	240	13.25	36.28	5.77	clear/colorless
4	A(1013)	1.20	6.65	171.1	239	13.19	36.28	5.76	clear/colorless
5									
6									

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

Low flow purge method 9/6/38psi 75ml/pulse 300ml/min

SAMPLER: B McMullen
(PRINTED NAME)


(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Leichner Landfill

WELL ID: LB-55

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

BLIND ID: LB-08/25-08

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>(NW)</u>	<u>(LIGHT)</u>	MEDIUM	HEAVY	
WEATHER:	<u>(SUNNY)</u>	CLOUDY	RAIN			?			TEMPERATURE: <u>(78)</u> °F °C			

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/12/15	10:13	30.32	-	16.98	-	13.34	X 1 2.17
/ /	:	.	.	.	.	.	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	✓
VOA Glass	8/12/15	10:40	A	3 (40 ml)	<u>(HCl)</u>	<u>(YES)</u>	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/12/15	10:40	A	3 (250, 500, 1L)	<u>(None)</u>	<u>(YES)</u>	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/12/15	10:40	A	1 (250, 500, 1L)	<u>(HNO₃)</u>	<u>(YES)</u>	<u>(YES)</u>		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

7 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA [X]
	VOA - Glass	<u>(826)</u> (8011)		
	AMBER - Glass	(8080) (8150) (TOX)		
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₂) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO3)</u>		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)		

WATER QUALITY DATA

Purge Start Time: 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(1017)	0.00	6.68	248.6	200	17.03	16.98	11.18	clear/colorless
1	A(1020)	0.25	6.37	257.6	204	15.18	16.98	8.73	clear/colorless
2	A(1023)	0.50	5.27	304.5	205	14.16	16.98	8.12	clear/colorless
3	A(1026)	0.80	5.16	301.8	206	14.11	16.98	7.77	clear/colorless
4	A(1029)	1.10	5.24	293.2	207	13.99	16.98	7.75	clear/colorless
5	A(1032)	1.40	5.76	261.4	208	13.99	16.98	7.84	clear/colorless
6	A(1035)	1.75	5.77	259.2	208	13.93	16.98	7.73	clear/colorless

[Casing] A(1038) [Cumulative Totals] 2.10 5.79 259.1 208 13.93 16.98 7.66 Clear/colorless [Circle Units] [Clarity/Color]

Low flow purge method 8/7/25psi 75ml/pulse 300ml/min

SAMPLER: B McMullen
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** FR1
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-081215-07

DUP ID: NA

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN **TEMPERATURE:** 81 °F °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
/ /	:	X 1
/ /	:	X 3
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	8/12/15	10:00	G	3 (40 ml)	HCl	YES	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/12/15	10:00	G	3 (250, 500, 1L)	(None)	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/12/15	10:00	G	1 (250, 500, 1L)	HNO ₃	YES	YES		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃ 7 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260) (8011) OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₂ /NO ₃) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: : 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-55

SAMPLER: B McMullen
(PRINTED NAME)

[Signature]
(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
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-08115-03

DUP ID:

NA

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

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/11/15	10:53	39.07	-	30.04	-	9.03	X 1 1.47
/ /	:	.	.	.	.	.	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:

[N if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	8/11/15	11:20	A	3 (40 ml)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/11/15	11:20	A	3 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/11/15	11:20	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

7 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []
	VOA - Glass	(8260) (8011)		
	AMBER - Glass	(8080) (8150) (TOX)		
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T) (NO ₃)		
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)		
	GREEN - Poly	(Cyanide)		
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)		
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)			

WATER QUALITY DATA

Purge Start Time: 10:54

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1056)	0.00	7.39	162.5	188	15.82	30.04	9.61	clear/colorless
1	A(1059)	0.25	7.15	163.1	183	13.75	30.04	7.73	clear/colorless
2	A(1102)	0.40	7.00	166.8	180	13.34	30.05	6.91	clear/colorless
3	A(1105)	0.70	6.89	168.2	179	13.12	30.05	6.67	clear/colorless
4	A(1108)	1.00	6.85	169.8	179	12.91	30.05	6.57	clear/colorless
5	A(1111)	1.15	6.84	171.1	179	12.95	30.05	6.52	clear/colorless
6	A(1114)	1.40	6.83	171.5	179	12.97	30.05	6.60	clear/colorless

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

[Circle units]

[Clarity, Color]

Low flow purge method 8/7/28psi 75 ml/pulse 300ml/min

SAMPLER: B McMullen

(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill **WELL ID:** Dup1
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-081115-04

DUP ID: NA

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

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

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)	
/ /	:	X 1 .	
/ /	:	X 3 .	
Gal/ft = (dia/2) ² x 0.163		1" = 0.041	(2) = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

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

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	8/11/15	11:15	A	3 (40 mL)	(HCl)	(YES)	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/11/15	11:15	A	3 (250, 500, 1L)	(None)	(YES)	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/11/15	11:15	A	1 (250) 500, 1L	(HNO₃)	(YES)	(YES)		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃ Total Bottles (include duplicate count): 7

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

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

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

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

Collected at LB-65

SAMPLER: B Mendenhall
(PRINTED NAME)


(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
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-081015-01

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>NW</u>	<u>NIGHT</u>	MEDIUM	HEAVY
WEATHER:	<u>SUNNY</u>		CLOUDY		RAIN		?		TEMPERATURE: (°F) <u>84</u> °C		

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/10/15	13:29	42.35	-	34.15	-	8.20	X 1 1.33
/ /	:	.	.	.	.	.	X 3 .

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

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

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

Sample Depth:

[√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	8/10/15	13:55	A	3 (40 ml)	<u>HCl</u>	<u>YES</u>	NO		y
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/10/15	13:55	A	3 (250, 500, 1L)	<u>None</u>	<u>YES</u>	NO	NA	y
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/10/15	13:55	A	1 (250, 500, 1L)	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		y
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

7

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	<u>(8260)</u> (8011) OR [] WA []
	AMBER - Glass	(8080) (8150) (TOX) OR [] WA []
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>
	YELLOW - Poly	(COD) (TOC) (NH ₄) (NO ₃ /NO ₂) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)

WATER QUALITY DATA

Purge Start Time: 13:3

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp <u>°C</u>	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1334)	0.00	7.22	219.9	386	17.97	34.12	2.08	cloudy/light tan
1	A(1337)	0.25	6.84	211.0	383	16.07	34.15	0.92	clear/Colorless
2	A(1340)	0.55	6.45	213.1	386	15.50	34.15	0.51	clear/Colorless
3	A(1343)	0.80	6.56	188.3	401	15.25	34.15	0.42	clear/colorless
4	A(1346)	1.05	6.65	178.3	410	15.09	34.15	0.44	clear/Colorless
5	A(1349)	1.25	6.63	175.4	411	15.10	34.15	0.46	clear/colorless
6	A(1352)	1.50	6.65	171.3	412	15.11	34.15	0.50	clear/Colorless

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

[Circle units]

[Clarity, Color]

Low flow purge method ~ 9/6/30psi 75 ml/pulse 300ml/min

SAMPLER:

B. McMullen
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
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-08115-05

DUP ID: NA
WIND FROM: N NE E SE S SW W **NW** **LIGHT** MEDIUM HEAVY
WEATHER: **SUNNY** CLOUDY RAIN ? **TEMPERATURE:** **78** °F °C

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)							[Product Thickness]	[Water Column]	[Water Column x Gal/ft]
Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW			Volume (gal)
8/11/15	12:00	55.03	-	30.70	-	24.33			X 1 3.96
/ /	:	.	.	.	.	.			X 3 .
Gal/ft = (dia./2) ² x 0.163		1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875	

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

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)							Sample Depth:				[if used]
Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓		
VOA Glass	8/11/15	12:25	A	3 (40 ml)	(HCl)	(YES)	NO		✓		
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO				
White Poly	8/11/15	12:25	A	3 (250, 500, 1L)	(None)	(YES)	NO	NA	✓		
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO				
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO				
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO				
Red Diss. Poly	8/11/15	12:25	A	1 (250, 500, 1L)	(HNO ₃)	(YES)	(YES)		✓		
	/ /	:		250, 500, 1L		YES					

White no acid, Yellow H₂SO₄, Red HNO₃

Total Bottles (include duplicate count): 7

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)						
	VOA - Glass	(8260) (8011)						OR [] WA [X]
	AMBER - Glass	(8080) (8150) (TOX)						OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (Cl) (SO ₄) (Silica, T.) (NO ₃)						
	YELLOW - Poly	(COD) (TOC) (NH ₄) (NO ₃ /NO ₂) (Tannin/Lignin)						
	GREEN - Poly	(Cyanide)						
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)						
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)						

WATER QUALITY DATA			Purge Start Time: 12:05				Pump/Bailer Inlet Depth:		
Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1207)	0.00	7.52	154.9	254	16.08	30.70	7.16	clear/colorless
1	A(1210)	0.25	7.29	152.4	244	14.50	30.70	3.54	clear/colorless
2	A(1213)	0.50	7.10	152.3	242	13.86	30.70	2.58	clear/colorless
3	A(1216)	0.75	7.05	150.9	243	13.80	30.71	2.32	clear/colorless
4	A(1219)	1.00	7.03	149.5	246	13.75	30.70	2.20	clear/colorless
5	A(1222)	1.25	7.02	149.0	247	13.71	30.70	2.18	clear/colorless
6									

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

Low flow purge method ~ 8/7/40psi 75ml/pulse 300ml/min

SAMPLER: B. McMullen
(PRINTED NAME)


(SIGNATURE)

FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Lechner Landfill

WELL ID: LB-26I

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

BLIND ID: LB-081115-06

DUP ID:

NA

WIND FROM:	N	NE	E	SE	S	SW	W	<u>(NW)</u>	LIGHT	MEDIUM	HEAVY	
WEATHER:	<u>(SUNNY)</u>	CLOUDY	RAIN					?	TEMPERATURE: <u>(F) 83</u> °C			

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/11/15	12:57	58.30	-	28.06	-	30.24	X 1 4.92
/ /	:	.	.	.	.	.	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	✓
VOA Glass	8/11/15	13:20	A	3	<u>(40 ml)</u>	<u>(HCl)</u>	<u>(YES)</u>	NO	✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/11/15	13:20	A	3	<u>(250)</u> <u>(500)</u> <u>(1L)</u>	<u>(None)</u>	<u>(YES)</u>	NO	NA ✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/11/15	13:20	A	1	<u>(250)</u> <u>(500)</u> <u>(1L)</u>	<u>(HNO₃)</u>	<u>(YES)</u>	<u>(YES)</u>	✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

7 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)	OR []	WA []	
	VOA - Glass	<u>(8260)</u> (8011)		[]	[]
	AMBER - Glass	(8080) (8150) (TOX)		[]	[]
	WHITE - Poly	(pH) (Conductivity) <u>(TDS)</u> (TSS) (Alkalinity) (HCO ₃ /CO ₃) <u>(Cl)</u> (SO ₄) (Silica, T.) <u>(NO₃)</u>			
	YELLOW - Poly	(COD) (TOC) (NH ₄) (NO ₃ /NO ₂) (Tannin/Lignin)			
	GREEN - Poly	(Cyanide)			
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)			
	RED DISSOLVED - Poly	(Ca) <u>(Fe)</u> (Mg) <u>(Mn)</u> (K) (Na)			

WATER QUALITY DATA

Purge Start Time: 12:58

Pump/Bailer Inlet Depth:

Meas.	Method [§]	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1259)	0.00	7.22	173.6	220	16.06	28.06	7.61	clear/Colorless
1	A(1302)	0.30	6.91	178.3	208	14.57	28.06	5.59	clear/Colorless
2	A(1305)	0.60	6.69	183.3	206	13.76	28.06	5.24	clear/Colorless
3	A(1308)	0.85	6.64	183.3	206	13.69	28.06	5.14	clear/Colorless
4	A(1311)	1.15	6.69	180.5	212	13.73	28.06	4.65	clear/Colorless
5	A(1314)	1.50	6.70	178.0	213	13.72	28.06	4.51	clear/Colorless
6	A(1317)	1.75	6.71	177.5	215	13.73	28.06	4.48	clear/Colorless

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

[Circle units]

[Clarity, Color]

Low flow purge method ~ 8/7/40psi

100ml/pulse

400ml/min

SAMPLER:

B. McMillan
(PRINTED NAME)

(SIGNATURE)



FIELD SAMPLING DATA SHEET

SCS ENGINEERS

14945 SW Sequoia Parkway, Suite 180,
Portland, OR 97224

Office: 503.639.9201

Fax: 503.684.6984

PROJECT NAME: Leichner Landfill **WELL ID:** LB-27E
SITE ADDRESS: 9411 NE 94th Avenue, Vancouver, WA 98662 **BLIND ID:** LB-081215-09

DUP ID: NA

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? **TEMPERATURE:** 83 °C

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

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW	Volume (gal)
8/12/15	11:23	57.15	—	34.12	—	23.03	X 1 3.75
/ /	:	.	.	.	.	.	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 Bailor (D) PVC/Teflon Bailor (E) Dedicated Bailor (F) Dedicated Pump (G) Other =

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

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative (circle)	Ice	Filter	pH	✓
VOA Glass	8/12/15	11:50	A	3 <u>40 ml</u>	<u>HCl</u>	<u>YES</u>	NO		✓
Amber Glass	/ /	:		250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		
White Poly	8/12/15	11:50	A	3 <u>250, 500, 1L</u>	<u>None</u>	<u>YES</u>	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		125, 250, 500	HNO ₃	YES	NO		
Red Diss. Poly	8/12/15	11:50	A	1 <u>250, 500, 1L</u>	<u>HNO₃</u>	<u>YES</u>	<u>YES</u>		✓
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃ 7 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)								
	VOA - Glass	<u>(8260)</u> (8011)								OR [] WA [<u>X</u>]
	AMBER - Glass	(8080) (8150) (<u>TOX</u>)								OR [] WA []
	WHITE - Poly	(pH) (Conductivity) (<u>TDS</u>) (TSS) (Alkalinity) (HCO ₃ /CO ₃) (<u>Cl</u>) (SO ₄) (Silica, T.) (<u>NO₃</u>)								
	YELLOW - Poly	(COD) (TOC) (NH ₃) (NO ₃ /NO ₂) (Tannin/Lignin)								
	GREEN - Poly	(Cyanide)								
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hardness)								
	RED DISSOLVED - Poly	(Ca) (<u>Fe</u>) (Mg) (<u>Mn</u>) (K) (Na)								

WATER QUALITY DATA Purge Start Time: 11:25 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O ₂ (mg/l)	Water Quality
0	A(1127)	0.00	7.75	229.5	503	15.91	34.12	7.96	Clear/Colorless
1	A(1130)	0.25	7.24	230.4	556	14.48	34.12	1.58	Clear/Colorless
2	A(1133)	0.50	6.45	241.2	569	14.09	34.12	0.96	Clear/Colorless
3	A(1136)	0.75	6.66	224.4	572	14.15	34.12	0.65	Clear/Colorless
4	A(1139)	1.00	6.74	211.7	574	14.06	34.12	0.60	Clear/Colorless
5	A(1142)	1.25	6.73	208.4	575	13.97	34.12	0.57	Clear/Colorless
6	A(1145)	1.50	6.75	207.1	575	13.99	34.12	0.54	Clear/Colorless

Low flow purge method ~ 8/7/40psi 75ml/pulse 300ml/min

SAMPLER: B McMullen
(PRINTED NAME)

(SIGNATURE)

APPENDIX B

Summary Tables of Historical Groundwater Field Parameter Measurements and Analytical Data

Field Parameters

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-1D	LB-289-W04	2/28/89	6.18	225	10.0	NT
LB-1D	LB-589-W03	5/23/89	7.01	220	11.5	NT
LB-1D	LB-1089-W01	10/17/89	6.60	213	10.5	NT
LB-1D	LB-1189-W04	11/14/89	7.25	191	10.5	NT
LB-1D	LB-1289-W22	12/19/89	7.01	190	9.0	NT
LB-1D	LB-390-W09	3/14/90	6.92	188	11.0	NT
LB-1D	LB-690-W11	6/20/90	7.11	188	13.0	NT
LB-1D	LB-990-W08	9/14/90	6.79	223	12.5	NT
LB-1D	LB-1290-W06	12/11/90	6.90	199	10.7	NT
LB-1D	LB-391-W11	3/20/91	6.95	171	13.2	NT
LB-1D	LB-691-W06	6/25/91	7.05	226	11.7	NT
LB-1D	LB-991-06	9/24/91	7.05	184	10.7	NT
LB-1D	LB-1291-14	12/23/91	7.26	202	10.3	NT
LB-1D	LB-392-14	3/23/92	7.17	200	13.0	NT
LB-1D	LB-63092-2	6/30/92	6.73	217	13.0	NT
LB-1D	LB-92292-3	9/22/92	7.09	202	12.0	NT
LB-1D	LB-121192-16	12/11/92	7.03	205	12.0	NT
LB-1D	LB-031093-4	3/10/93	7.06	202	12.0	NT
LB-1D	LB-060293-6	6/2/93	7.00	196	13.5	NT
LB-1D	LB-092393-8	9/23/93	7.21	195	13.0	8.00
LB-1D	LB-121593-2	12/15/93	7.00	206	10.0	7.40
LB-1D	LB-032494-2	3/24/94	7.11	203	14.0	7.60
LB-1D	LB-062194-1	6/21/94	7.02	206	16.0	7.70
LB-1D	LB-090694-2	9/6/94	7.01	201	14.5	NT
LB-1D	LB-121494-12	12/14/94	7.29	259	11.0	9.90
LB-1D	LB-030995-2	3/9/95	7.01	219	13.5	7.70
LB-1D	LB-062095-13	6/20/95	7.11	227	13.0	7.20
LB-1D	LB-092295-14	9/22/95	6.97	211	12.6	NT
LB-1D	LB-12995-6	12/19/95	7.21	196	8.4	NT
LB-1D	LB-032096-18	3/20/96	6.98	233	14.5	NT
LB-1D	LB-061896-10	6/18/96	7.25	188	14.0	NT
LB-1D	LB-091796-6	9/17/96	7.13	181	13.4	NT
LB-1D	LB121796-2	12/17/96	7.48	207	10.6	NT
LB-1D	LB-031997-4	3/19/97	6.90	228	12.0	NT
LB-1D	LB-061797-4	6/17/97	7.21	211	13.7	NT
LB-1D	LB-091697-1	9/16/97	6.80	118	12.3	NT
LB-1D	LB-121697-4	12/16/97	7.03	223	11.9	8.30
LB-1D	LB-031998-4	3/19/98	6.71	220	12.2	NT
LB-1D	LB-061698-6	6/16/98	7.10	198	12.5	NT
LB-1D	LB-091798-3	9/17/98	8.12	134.6	12.6	NT
LB-1D	LB-121898-10	12/18/98	7.18	231	11.3	NT
LB-1D	LB-031799-04	3/17/99	7.18	184	13.2	NT
LB-1D	LB-062399-15	6/23/99	7.08	157	13.3	NT
LB-1D	LB-091799-11	9/17/99	6.91	222	12.2	NT
LB-1D	LB-121699-12	12/16/99	7.02	170	12.2	NT
LB-1D	LB-091100-2	9/11/00	7.02	221	13.0	NT
LB-1D	LB-121500-10	12/15/00	7.06	188	11.8	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-1D	LB-031501-15	3/15/01	6.92	220	11.5	NT
LB-1D	LB-031902-2	3/19/02	7.17	216	11.8	NT
LB-1D	LB-031303-12	3/13/03	6.77	200	12.0	NT
LB-1D	LB-022404-1	2/24/04	7.54	158	52.5	NT
LB-1D	LB-030905-13	3/9/05	6.69	215	12.0	8.39
LB-1D	LB-031406-1	3/14/06	6.90	162	11.5	8.55
LB-1D	LB-030507-2	3/5/07	6.24	170	12.6	8.90
LB-1D	LB-032408-15	3/24/08	6.97	300	10.8	NT
LB-1D	LB-1D	3/17/09	6.89	221	11.4	10.18
LB-1D	LB-1D032310	3/23/10	7.15	266	11.6	NT
LB-1D	LB-1D	3/28/11	7.45	355	11.9	6.54
LB-1D	LB-031312-13	3/13/12	6.67	249	11.5	7.55
LB-1D	LB-020513-07	2/5/13	6.70	240	11.8	8.25
LB-1D	LB-021914-17	2/19/14	6.73	218	11.6	6.94
LB-1D	LB-021915-17	2/19/15	6.76	220	11.9	6.43
LB-1S	LB-589-W04	5/23/89	6.61	572	12.5	NT
LB-1S	LB-1289-W12	12/15/89	6.56	352	9.5	NT
LB-1S	LB-390-W10	3/14/90	6.26	367	11.5	NT
LB-1S	LB-690-W10	6/20/90	6.58	446	12.0	NT
LB-1S	LB-990-W06	9/14/90	6.40	416	13.0	NT
LB-1S	LB-1290-W05	12/11/90	6.38	554	11.2	NT
LB-1S	LB-391-W10	3/20/91	6.30	565	13.1	NT
LB-1S	LB-691-W05	6/25/91	6.63	546	12.5	NT
LB-1S	LB-991-05	9/24/91	6.67	316	11.7	NT
LB-1S	LB-1291-13	12/23/91	6.94	377	11.1	NT
LB-1S	LB-392-15	3/23/92	6.64	416	14.0	NT
LB-1S	LB-63092-1	6/30/92	6.71	414	14.0	NT
LB-1S	LB-92292-2	9/22/92	6.47	358	12.5	NT
LB-1S	LB-121192-15	12/11/92	6.51	353	12.0	NT
LB-1S	LB-031093-3	3/10/93	6.46	630	12.0	NT
LB-1S	LB-060293-5	6/2/93	6.20	565	14.5	NT
LB-1S	LB-092393-09	9/23/93	6.62	475	15.0	4.90
LB-1S	LB-121593-1	12/15/93	6.41	456	12.5	3.80
LB-1S	LB-032494-1	3/24/94	6.29	567	15.0	NT
LB-1S	LB-062194-4	6/21/94	6.30	554	16.5	4.70
LB-1S	LB-090694-1	9/6/94	6.36	516	14.5	NT
LB-1S	LB-121494-11	12/14/94	7.49	589	10.0	6.20
LB-1S	LB-030995-1	3/9/95	6.61	455	13.5	NT
LB-1S	LB-062095-12	6/20/95	6.74	553	13.5	7.30
LB-1S	LB-092295-13	9/22/95	6.98	448	13.1	NT
LB-1S	LB-121995-5	12/19/95	6.74	390	10.2	NT
LB-1S	LB-032096-17	3/20/96	6.71	496	18.0	NT
LB-1S	LB-061896-9	6/18/96	6.82	361	14.0	NT
LB-1S	LB-091796-5	9/17/96	6.73	401	12.6	NT
LB-1S	LB121796-1	12/17/96	7.40	398	11.5	NT
LB-1S	LB-031997-3	3/19/97	6.61	517	12.8	NT
LB-1S	LB-061797-3	6/17/97	6.55	350	14.7	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-1S	LB-091697-2	9/16/97	6.50	323	13.1	NT
LB-1S	LB-121697-5	12/16/97	6.52	465	13.1	6.30
LB-1S	LB-031998-3	3/19/98	6.78	538	13.0	NT
LB-1S	LB-061698-5	6/16/98	6.49	329	13.5	NT
LB-1S	LB-091798-4	9/17/98	6.76	281	13.8	NT
LB-1S	LB-121898-9	12/18/98	6.69	344	12.4	NT
LB-1S	LB-031799-3	3/17/99	6.85	327	14.6	NT
LB-1S	LB-062399-14	6/23/99	6.72	266	14.4	NT
LB-1S	LB-091799-9	9/17/99	6.57	442	13.3	NT
LB-1S	LB-121699-13	12/16/99	6.64	310	13.6	NT
LB-1S	LB-091100-1	9/11/00	6.59	371	13.9	NT
LB-1S	LB-121500-9	12/15/00	6.69	305	13.0	NT
LB-1S	LB-031401-14	3/14/01	6.58	276	13.3	NT
LB-1S	LB-092001-6	9/20/01	6.63	305	13.2	NT
LB-1S	LB-031902-1	3/19/02	7.45	288	12.7	6.89
LB-1S	LB-091802-1	9/18/02	7.20	240	14.0	5.50
LB-1S	LB-031303-10	3/13/03	6.97	230	12.0	NT
LB-1S	LB-092203-6	9/22/03	6.50	170	14.0	6.17
LB-1S	LB-022404-2	2/24/04	6.68	173	53.9	NT
LB-1S	LB-090104-1	9/1/04	6.50	225	13.2	NT
LB-1S	LB-030905-14	3/9/05	6.59	227	13.0	6.52
LB-1S	LB-091405-1	9/14/05	6.86	190	13.5	5.12
LB-1S	LB-031406-3	3/14/06	6.68	239	12.1	8.03
LB-1S	LB-091306-5	9/13/06	6.58	242	12.7	4.90
LB-1S	LB-030507-1	3/5/07	6.18	187	12.4	8.24
LB-1S	LB-091907-1	9/19/07	6.66	246	12.6	6.36
LB-1S	LB-032408-14	3/24/08	6.60	381	10.1	NT
LB-1S	LB-091608-1	9/16/08	6.79	267	12.4	NT
LB-1S	LB-1S	3/17/09	6.75	265	12.0	8.45
LB-1S	LBLF1S091109	9/11/09	7.10	261	13.1	5.86
LB-1S	LB-1S032310	3/23/10	6.89	345	12.1	NT
LB-1S	LB1S092310	9/23/10	7.20	170	11.7	NT
LB-1S	LB-1S	3/24/11	6.75	271	12.3	5.66
LB-1S	LB-090811-07	9/8/11	6.61	296	14.2	5.35
LB-1S	LB-031312-14	3/13/12	6.50	335	12.5	4.44
LB-1S	LB-091212-08	9/12/12	6.70	177	13.0	2.91
LB-1S	LB-020513-09	2/5/13	6.50	279	12.1	6.00
LB-1S	LB-082213-08	8/22/13	5.84	312	13.0	4.12
LB-1S	LB-021914-18	2/19/14	6.48	357	11.7	4.15
LB-1S	LB-081414-09	8/14/14	6.36	258	13.4	4.93
LB-1S	LB-021915-16	2/19/15	6.26	331	12.1	4.16
LB-1S	LB-081115-02	8/11/15	6.65	239	13.2	5.76
LB-3D	LB-1189-W01	11/13/89	6.77	240	10.0	NT
LB-3D	LB-1289-W20	12/18/89	6.71	225	9.5	NT
LB-3D	LB-032097-14	3/20/97	6.79	271	12.1	NT
LB-3D	LB-032098-21	3/20/98	6.70	242	12.1	NT
LB-3D	LB-031899-15	3/18/99	6.75	198	13.5	NT
LB-3D	LB-031501-17	3/15/01	6.68	220	11.3	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-3D	LB-032002-18	3/20/02	6.78	216	11.5	7.82
LB-3D	LB-031303-14	3/13/03	6.43	170	12.0	NT
LB-3D	LB-022404-5	2/24/04	6.74	129	51.9	NT
LB-3D	LB-030905-15	3/9/05	6.56	176	11.9	7.20
LB-3D	LB031606-21	3/16/06	6.73	158	11.0	8.84
LB-3D	LB-030507-4	3/5/07	5.94	138	12.0	7.43
LB-3D	LB-032408-17	3/24/08	6.74	292	12.1	NT
LB-3D	LB-3D	3/18/09	6.68	204	12.9	8.52
LB-3D	LB-3D032410	3/24/10	6.66	233	14.3	NT
LB-3D	LB-3D	3/28/11	7.37	336	11.8	5.46
LB-3D	LB-031312-09	3/13/12	6.48	231	10.3	5.38
LB-3D	LB-020713-18	2/7/13	6.49	221	11.2	5.14
LB-3D	LB-021914-22	2/19/14	6.38	209	11.2	5.18
LB-3D	LB-021715-07	2/17/15	6.55	208	12.7	5.77
LB-3S	LB-1089-W02	10/17/89	7.36	241	11.0	NT
LB-3S	LB-1189-W02	11/13/89	6.63	224	10.5	NT
LB-3S	LB-1289-W11	12/15/89	6.14	220	10.0	NT
LB-3S	LB-390-W11	3/14/90	6.57	216	11.0	NT
LB-3S	LB-690-W06	6/19/90	NT	208	13.0	NT
LB-3S	LB-990-W10	9/14/90	6.93	211	11.5	NT
LB-3S	LB-1290-W08	12/12/90	6.72	209	11.1	NT
LB-3S	LB-391-W07	3/20/91	6.36	214	11.3	NT
LB-3S	LB-691-W10	6/26/91	6.04	222	11.9	NT
LB-3S	LB-991-16	9/24/91	6.38	222	11.1	NT
LB-3S	LB-1291-06	12/20/91	6.65	239	10.7	NT
LB-3S	LB-392-10	3/20/92	6.74	227	13.5	NT
LB-3S	LB-62692-8	6/26/92	7.22	243	13.0	NT
LB-3S	LB-91792-3	9/17/92	7.90	262	12.0	NT
LB-3S	LB-121092-14	12/10/92	6.41	274	12.0	NT
LB-3S	LB-031593-25	3/15/93	6.61	303	11.5	NT
LB-3S	LB-060393-14	6/3/93	6.87	281	13.5	NT
LB-3S	LB-092393-01	9/23/93	6.18	266	14.0	1.50
LB-3S	LB-121593-5	12/15/93	9.51	277	10.5	3.00
LB-3S	LB-032594-11	3/25/94	6.83	284	13.0	5.80
LB-3S	LB-062394-13	6/23/94	6.64	290	14.5	5.40
LB-3S	LB-090794-8	9/7/94	6.95	286	14.0	NT
LB-3S	LB-121494-13	12/14/94	6.62	356	11.5	3.30
LB-3S	LB-031395-20	3/13/95	6.48	348	13.0	6.10
LB-3S	LB-052095-14	6/20/95	6.58	352	13.0	4.80
LB-3S	LB-092195-11	9/21/95	6.77	280	12.2	NT
LB-3S	LB-121995-4	12/19/95	6.89	170	10.0	NT
LB-3S	LB-032096-21	3/20/96	6.70	312	11.4	NT
LB-3S	LB-061996-11	6/19/96	6.54	261	13.5	NT
LB-3S	LB-032097-13	3/20/97	6.73	274	11.6	NT
LB-3S	LB-032098-20	3/20/98	6.70	242	12.8	NT
LB-3S	LB-031899-14	3/18/99	6.72	173	13.3	NT
LB-3S	LB-031501-18	3/15/01	6.67	173	11.2	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-3S	LB-032002-17	3/20/02	6.89	182	11.4	7.48
LB-3S	LB-031303-13	3/13/03	6.53	150	11.7	NT
LB-3S	LB-022404-6	2/24/04	6.62	121	52.2	NT
LB-3S	LB-030905-16	3/9/05	6.50	164	11.9	6.12
LB-3S	LB-031606-22	3/16/06	6.71	142	11.1	8.30
LB-3S	LB-030507-3	3/5/07	5.93	134	12.0	7.44
LB-3S	LB-032408-18	3/24/08	6.62	302	11.6	NT
LB-3S	LB-3S	3/18/09	6.61	223	12.2	7.39
LB-3S	LB-3S032410	3/24/10	6.76	239	13.9	NT
LB-3S	LB-3S	3/28/11	7.29	352	11.6	5.73
LB-3S	LB-031312-10	3/13/12	6.44	239	11.1	4.57
LB-3S	LB-020713-17	2/7/13	6.46	236	11.5	5.36
LB-3S	LB-021914-22	2/19/14	6.22	215	11.6	6.39
LB-3S	LB-021915-19	2/19/15	6.53	200	11.8	4.81
LB-5D	LB-289-W13	3/1/89	6.36	635	10.0	NT
LB-5D	LB-589-W13	5/24/89	6.71	534	13.0	NT
LB-5D	LB-1289-W24	12/19/89	6.62	559	10.5	NT
LB-5D	LB-690-W14	6/20/90	6.69	531	13.0	NT
LB-5D	LB-990-W15	9/18/90	6.43	554	13.0	NT
LB-5D	LB-1290-W24	12/14/90	6.75	550	10.2	NT
LB-5D	LB-391-W18	3/21/91	6.50	546	12.0	NT
LB-5D	LB-691-W17	6/26/91	6.73	513	13.2	NT
LB-5D	LB-991-06	9/25/91	6.44	547	12.1	NT
LB-5D	LB-1291-11	12/20/91	6.83	569	10.7	NT
LB-5D	LB-392-03	3/19/92	6.73	526	13.0	NT
LB-5D	LB-63092-4	6/30/92	6.77	576	13.5	NT
LB-5D	LB-91892-2	9/18/92	6.99	566	11.0	NT
LB-5D	LB-121092-11	12/10/92	6.76	550	13.0	NT
LB-5D	LB-031193-12	3/11/93	6.71	547	13.0	NT
LB-5D	LB-060293-8	6/2/93	6.42	515	14.0	NT
LB-5D	LB-092793-19	9/27/93	6.72	544	14.0	7.00
LB-5D	LB-121593-4	12/15/93	6.73	523	12.5	1.20
LB-5D	LB-032894-13	3/28/94	6.71	610	14.0	2.40
LB-5D	LB-062194-3	6/21/94	6.76	538	15.0	3.00
LB-5D	LB-090694-4	9/6/94	6.83	537	16.0	NT
LB-5D	LB-121394-8	12/13/94	6.84	577	13.5	2.20
LB-5D	LB-030995-4	3/9/95	6.98	563	14.0	2.90
LB-5D	LB-061995-7	6/19/95	6.87	600	13.0	4.70
LB-5D	LB-092195-9	9/21/95	6.50	582	13.3	NT
LB-5D	LB-121895-2	12/18/95	6.72	591	12.3	NT
LB-5D	LB-031996-9	3/19/96	6.65	519	13.0	NT
LB-5D	LB-061896-8	6/18/96	7.01	511	13.5	NT
LB-5D	LB-031997-9	3/19/97	6.81	509	12.3	NT
LB-5D	LB-031998-6	3/19/98	6.71	539	14.4	NT
LB-5D	LB-031899-11	3/18/99	6.76	343	15.2	NT
LB-5D	LB-031401-11	3/14/01	6.73	409	13.5	NT
LB-5D	LB-031902-13	3/19/02	6.85	430	12.7	4.29

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-5D	LB-031303-9	3/13/03	6.53	410	12.0	NT
LB-5D	LB-022504-7	2/25/04	6.80	307	52.7	NT
LB-5D	LB-030805-1	3/8/05	6.82	400	15.2	3.91
LB-5D	LB-031606-14	3/16/06	6.75	339	12.3	7.38
LB-5D	LB-030507-7	3/5/07	6.34	275	13.4	4.40
LB-5D	LB-031908-2	3/19/08	6.88	0.566	11.8	NT
LB-5D	LB-5D	3/17/09	6.88	351	13.1	4.22
LB-5D	LB-5D032410	3/24/10	7.00	365	15.0	NT
LB-5D	LB-5D	3/23/11	7.69	338	12.8	2.43
LB-5D	LB-031212-03	3/12/12	6.63	363	11.4	0.33
LB-5D	LB-020513-03	2/5/13	6.69	333	11.3	0.39
LB-5D	LB-021714-01	2/17/14	6.42	256	11.1	0.68
LB-5D	LB-021715-01	2/17/15	6.27	309	13.8	0.79
LB-5S	LB-390-W17	3/15/90	6.41	135	10.0	NT
LB-5S	LB-690-W13	6/20/90	6.84	161	12.0	NT
LB-5S	LB-990-W14	9/18/90	6.59	186	11.5	NT
LB-5S	LB-1290-W25	12/14/90	6.61	187	10.6	NT
LB-5S	LB-391-W17	3/21/91	6.31	162	11.1	NT
LB-5S	LB-691-W16	6/26/91	7.16	162.3	12.0	NT
LB-5S	LB-991-09	9/25/91	6.61	206	10.8	NT
LB-5S	LB-1291-10	12/20/91	6.86	124	10.8	NT
LB-5S	LB-392-04	3/19/92	6.66	168	12.0	NT
LB-5S	LB-63092-3	6/30/92	6.19	206	13.0	NT
LB-5S	LB-91892-1	9/18/92	6.57	208	11.5	NT
LB-5S	LB-121092-10	12/10/92	6.70	182	12.5	NT
LB-5S	LB-031193-11	3/11/93	6.63	179	12.0	NT
LB-5S	LB-060293-7	6/2/93	6.33	198	13.0	NT
LB-5S	LB-092793-18	9/27/93	6.72	180	14.5	9.60
LB-5S	LB-121593-3	12/15/93	6.78	161	12.0	11.00
LB-5S	LB-032894-12	3/28/94	6.28	200	13.0	11.00
LB-5S	LB-062194-2	6/21/94	6.59	219	15.0	10.50
LB-5S	LB-090694-3	9/6/94	6.50	178	15.5	NT
LB-5S	LB-121394-9	12/13/94	6.61	142	13.5	11.00
LB-5S	LB-030995-3	3/9/95	6.94	158	13.5	10.40
LB-5S	LB-051995-6	6/19/95	6.54	275	12.0	7.70
LB-5S	LB-092195-8	9/20/95	6.50	229	12.3	NT
LB-5S	LB-121895-1	12/18/95	7.49	89	11.7	NT
LB-5S	LB-031996-7	3/19/96	6.45	217	12.5	NT
LB-5S	LB-061896-7	6/18/96	6.65	238	12.5	NT
LB-5S	LB-031997-8	3/19/97	6.93	226	11.3	NT
LB-5S	LB-031998-5	3/19/98	6.39	226	12.1	NT
LB-5S	LB-031899-10	3/18/99	6.89	180	13.6	NT
LB-5S	LB-031401-12	3/14/01	6.53	177	11.9	NT
LB-5S	LB-092001-1	9/20/01	6.38	218	12.7	NT
LB-5S	LB-031902-12	3/19/02	6.76	185	11.6	8.89
LB-5S	LB-091802-6	9/18/02	6.90	220	14.0	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-5S	LB-031303-8	3/13/03	6.67	167	12.0	NT
LB-5S	LB-092203-1	9/22/03	6.08	190	13.5	7.00
LB-5S	LB-022504-9	2/25/04	6.45	146	54.3	NT
LB-5S	LB-090104-5	9/1/04	6.36	200	14.5	NT
LB-5S	LB-030805-2	3/8/05	6.19	200	12.8	9.26
LB-5S	LB-091405-4	9/14/05	6.37	180	13.3	8.16
LB-5S	LB-031606-16	3/16/06	6.60	203	11.4	11.18
LB-5S	LB-091206-1	9/12/06	6.27	264	13.6	7.18
LB-5S	LB-030507-6	3/5/07	5.82	175	12.4	9.72
LB-5S	LB-091907-3	9/19/07	6.27	223	13.0	9.42
LB-5S	LB-031908-1	3/19/08	6.45	0.457	10.7	NT
LB-5S	LB-091608-2	9/16/08	6.42	204	12.9	NT
LB-5S	LB-5S	3/17/09	6.55	213	11.9	9.21
LB-5S	LBLF5S091109	9/11/09	6.70	197	13.3	9.74
LB-5S	LB-5S032410	3/24/10	6.54	190	13.4	NT
LB-5S	LB-5S092310	9/23/10	6.70	174	12.4	NT
LB-5S	LB-5S	3/23/11	6.89	228	11.8	7.82
LB-5S	LB-090811-06	9/8/11	5.92	273	13.3	8.10
LB-5S	LB-032212-17	3/22/12	6.16	204	10.9	9.22
LB-5S	LB-091112-01	9/11/12	6.11	188	13.4	8.13
LB-5S	LB-020513-04	2/5/13	6.20	183	11.7	8.34
LB-5S	LB-082113-01	8/21/13	6.10	127	13.7	6.01
LB-5S	LB-021714-02	2/17/14	6.14	166	12.2	5.11
LB-5S	LB-081314-01	8/13/14	6.19	173	13.5	7.98
LB-5S	LB-021815-09	2/18/15	6.43	177	12.4	6.69
LB-5S	LB-081215-08	8/12/15	5.79	208	13.9	7.66
LB-6S	LB-289-W17	3/1/89	6.43	801	10.0	NT
LB-6S	LB-589-W17	5/24/89	6.80	630	13.5	NT
LB-6S	LB-1289-W13	12/15/89	6.89	835	10.5	NT
LB-6S	LB-390-W24	3/15/90	6.54	667	13.5	NT
LB-6S	LB-690-W22	6/21/90	6.99	567	13.0	NT
LB-6S	LB-990-W11	9/14/90	6.49	741	13.0	NT
LB-6S	LB-1290-W13	12/12/90	6.83	765	10.4	NT
LB-6S	LB-391-W16	3/21/91	6.44	522	12.4	NT
LB-6S	LB-691-W19	6/27/91	6.10	640	13.3	NT
LB-6S	LB-991-14	9/25/91	6.84	665	12.9	NT
LB-6S	LB-1291-08	12/20/91	6.69	694	11.9	NT
LB-6S	LB-392-07	3/20/92	6.69	520	14.0	NT
LB-6S	LB-62692-5	6/26/92	7.02	649	13.5	NT
LB-6S	LB-92192-4	9/21/92	6.76	676	12.0	NT
LB-6S	LB-12992-4	12/9/92	6.77	727	13.0	NT
LB-6S	LB-031093-7	3/10/93	6.90	614	12.5	NT
LB-6S	LB-060393-11	6/3/93	6.64	410	14.0	NT
LB-6S	LB-092493-13	9/24/93	6.64	470	14.0	5.20
LB-6S	LB-121593-6	12/15/93	6.68	579	13.0	3.40
LB-6S	LB-032994-18	3/29/94	6.37	390	14.5	7.40
LB-6S	LB-062394-11	6/23/94	6.62	505	13.5	5.90

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-6S	LB-090694-5	9/6/94	6.69	531	18.0	NT
LB-6S	LB-121394-6	12/13/94	6.61	524	13.0	3.00
LB-6S	LB-031095-10	3/10/95	6.81	320	12.0	8.90
LB-6S	LB-062095-9	6/20/95	6.50	487	12.0	5.60
LB-6S	LB-092095-6	9/20/95	6.74	495	15.0	NT
LB-6S	LB-122095-12	12/20/95	6.21	386	12.1	NT
LB-6S	LB-031996-5	3/19/96	6.29	336	13.5	NT
LB-6S	LB-061996-12	6/19/96	6.54	367	13.0	NT
LB-6S	LB-091896-12	9/18/96	6.31	362	12.8	NT
LB-6S	LB121796-3	12/17/96	7.01	431	12.2	NT
LB-6S	LB-031997-7	3/19/97	6.89	430	12.5	NT
LB-6S	LB-061797-6	6/17/97	6.45	456	13.4	NT
LB-6S	LB-091697-3	9/16/97	6.50	351	12.1	NT
LB-6S	LB-121797-14	12/17/97	6.43	584	12.5	0.60
LB-6S	LB-031998-7	3/19/98	6.46	633	13.4	NT
LB-6S	LB-061698-7	6/16/98	6.54	384	13.1	NT
LB-6S	LB-091798-5	9/17/98	6.54	292	13.5	NT
LB-6S	LB-121798-01	12/17/98	6.74	398	12.5	NT
LB-6S	LB-031799-2	3/17/99	6.75	352	14.5	NT
LB-6S	LB-062399-11	6/23/99	6.77	298	13.7	NT
LB-6S	LB-091699-5	9/16/99	6.56	554	13.2	NT
LB-6S	LB-121599-10	12/14/99	6.66	440	12.5	NT
LB-6S	LB-091200-3	9/12/00	6.42	413	13.2	NT
LB-6S	LB-121200-1	12/12/00	6.61	467	13.0	NT
LB-6S	LB-031301-7	3/13/01	6.58	531	13.2	NT
LB-6S	LB-092001-5	9/20/01	6.69	405	13.6	NT
LB-6S	LB-032002-15	3/20/02	6.82	468	13.2	4.54
LB-6S	LB-091802-2	9/18/02	7.00	430	14.5	NT
LB-6S	LB-031303-21	3/13/03	6.70	497	13.0	NT
LB-6S	LB-092203-5	9/22/03	6.50	310	13.5	5.70
LB-6S	LB-022604-18	2/26/04	6.79	279	54.4	NT
LB-6S	LB-090104-6	9/1/04	6.69	335	13.3	NT
LB-6S	LB-030805-9	3/8/05	6.84	432	14.5	3.13
LB-6S	LB-091405-6	9/14/05	6.67	302	13.4	2.34
LB-6S	LB-0301506-13	3/15/06	6.67	287	12.1	8.38
LB-6S	LB-091206-4	9/12/06	6.66	344	13.1	5.80
LB-6S	LB-030507-12	3/5/07	6.20	249	13.0	9.40
LB-6S	LB-091907-6	9/19/07	6.72	349	12.6	3.59
LB-6S	LB-031908-9	3/19/08	6.69	418	13.0	NT
LB-6S	LB-091608-3	9/16/08	6.47	334	14.5	NT
LB-6S	LB-6S	3/18/09	6.63	304	12.4	4.61
LB-6S	LBLF6S091109	9/11/09	7.16	292	12.4	2.28
LB-6S	LB-6S032310	3/23/10	6.79	322	6.2	NT
LB-6S	LB6S092310	9/23/10	7.00	192	11.6	NT
LB-6S	LB-6S	3/22/11	7.58	241	12.2	7.52
LB-6S	LB-090711-05	9/7/11	6.76	219	15.0	7.01

**Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill**

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-6S	LB-032212-23	3/22/12	6.54	240	11.7	6.65
LB-6S	LB-091212-06	9/12/12	6.40	214	12.7	4.02
LB-6S	LB-020613-15	2/6/13	6.66	200	11.7	3.23
LB-6S	LB-082113-07	8/21/13	6.03	181	13.6	4.61
LB-6S	LB-021914-23	2/19/14	6.39	179	11.5	3.44
LB-6S	LB-081314-06	8/13/14	6.33	152	12.6	6.43
LB-6S	LB-021815-14	2/18/15	6.86	211	12.0	3.79
LB-6S	LB-081115-03	8/11/15	6.83	179	13.0	6.60
LB-10DR	LB-031005-19	3/10/05	7.15	523	13.6	1.61
LB10-DR	LB-031406-5	3/14/06	6.83	389	12.3	2.98
LB10-DR	LB-030607-20	3/6/07	6.39	375	13.3	6.33
LB10-DR	LB-032408-22	3/24/08	6.92	535	12.6	NT
LB10-DR	LB-10DR	3/17/09	6.86	495	12.4	5.12
LB-10DR	LB-10DR032310	3/23/10	6.95	525	12.2	NT
LB-10DR	LB-10DR	3/29/11	6.33	491	11.8	2.81
LB-10DR	LB-0313012-07	3/13/12	6.70	463	11.7	1.42
LB-10DR	LB-020713-19	2/7/13	6.68	458	12.5	0.89
LB-10DR	LB-021914-15	2/19/14	6.94	357	12.5	1.50
LB-10DR	LB-021915-20	2/19/15	6.85	339	13.1	1.47
LB-10SR	LB-031005-21	3/10/05	6.86	319	13.4	2.64
LB-10SR	LB-091505-7	9/14/05	6.89	150	13.1	3.40
LB10-SR	LB-031406-6	3/14/06	6.79	160	12.6	9.40
LB10-SR	LB-091306-9	9/13/06	6.57	431	13.4	6.94
LB10-SR	LB-030607-19	3/6/07	5.97	119	13.1	10.60
LB10-SR	LB-091907-7	9/19/07	6.57	435	13.3	4.99
LB10-SR	LB-032408-21	3/24/08	6.40	291	12.3	NT
LB10-SR	LB-091608-4	9/16/08	6.54	278	14.1	NT
LB10-SR	LB-10SR	3/17/09	6.84	358	12.1	7.87
LB10-SR	LBLF10S091109	9/11/09	7.11	252	13.4	2.32
LB10-SR	LB-10S032310	3/23/10	6.87	286	12.9	NT
LB10-SR	LB10R092310	9/23/10	6.60	123	12.3	NT
LB-10SR	LB-10SR	3/29/11	6.01	360	12.5	2.05
LB-10SR	LB-090811-08	9/8/11	6.52	410	14.8	0.80
LB-10SR	LB-031312-08	3/13/12	6.62	550	11.8	0.26
LB-10SR	LB-091212-09	9/12/12	6.78	480	14.5	0.59
LB-10SR	LB-020713-20	2/7/13	6.66	473	12.7	0.26
LB-10SR	LB-082213-09	8/22/13	6.70	319	14.0	0.26
LB-10SR	LB-021914-16	2/19/14	6.77	353	12.8	0.60
LB-10SR	LB-081414-08	8/14/14	6.52	401	14.4	0.48
LB-10SR	LB-021915-21	2/19/15	6.64	221	13.3	1.08
LB-10SR	LB-081015-01	8/10/15	6.65	412	15.1	0.50
LB-13D	LB-1089-W15	10/19/89	6.90	237	11.0	NT
LB-13D	LB-1189-W20	11/16/89	6.56	249	11.0	NT
LB-13D	LB-1289-W18	12/18/89	6.62	229	9.5	NT
LB-13D	LB-390-W18	3/15/90	6.79	232	12.0	NT
LB-13D	LB-690-W20	6/21/90	7.27	277	12.0	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-13D	LB-990-W17	9/18/90	6.64	236	13.0	NT
LB-13D	LB-1290-W20	12/13/90	6.64	234	10.7	NT
LB-13D	LB-391-W15	3/20/91	6.76	232	11.8	NT
LB-13D	LB-691-W22	6/27/91	6.91	235	13.1	NT
LB-13D	LB-991-13	9/25/91	7.15	240	12.0	NT
LB-13D	LB-1291-19	12/23/91	6.97	249	10.7	NT
LB-13D	LB-392-19	3/24/92	6.88	247	13.0	NT
LB-13D	LB-7292-2	7/2/92	7.40	250	13.0	NT
LB-13D	LB-91792-2	9/17/92	7.40	246	12.0	NT
LB-13D	LB-121092-9	12/9/92	6.82	251	12.0	NT
LB-13D	LB-031293-20	3/12/93	6.92	264	11.0	NT
LB-13D	LB-060493-21	6/4/93	6.99	231	13.5	NT
LB-13D	LB-092393-07	9/23/93	6.75	251	13.0	6.10
LB-13D	LB-121693-12	12/16/93	6.78	252	11.0	6.90
LB-13D	LB-032894-17	3/28/94	6.73	290	15.0	8.20
LB-13D	LB-062894-20	6/28/94	6.77	274	14.0	6.80
LB-13D	LB-090794-10	9/7/94	6.94	265	13.0	NT
LB-13D	LB-121594-21	12/15/94	6.68	304	11.0	6.90
LB-13D	LB-031395-18	3/13/95	6.80	296	12.5	7.10
LB-13D	LB-062195-19	6/21/95	6.73	353	12.0	7.10
LB-13D	LB-092295-16	9/22/95	6.99	256	12.6	NT
LB-13D	LB-121995-8	12/19/95	7.02	234	10.2	NT
LB-13D	LB-132096-15	3/20/96	6.58	271	13.2	NT
LB-13D	LB-061996-16	6/19/96	6.78	258	13.0	NT
LB-13D	LB-091796-4	9/17/96	6.81	257	13.9	NT
LB-13D	LB121796-9	12/17/96	7.25	300	11.0	NT
LB-13D	LB-032097-18	3/20/97	6.96	323	11.8	NT
LB-13D	LB-061897-15	6/18/97	6.88	291	12.9	NT
LB-13D	LB-091897-11	9/18/97	6.46	310	12.0	NT
LB-13D	LB-121797-9	12/17/97	6.60	301	11.8	11.00
LB-13D	LB-032098-19	3/20/98	7.11	296	12.9	NT
LB-13D	LB-061798-14	6/17/98	6.69	238	13.2	NT
LB-13D	LB-091898-15	9/18/98	7.42	218	12.9	NT
LB-13D	LB-121898-12	12/18/98	6.76	270	11.7	NT
LB-13D	LB-031999-23	3/19/99	6.78	222	14.2	NT
LB-13D	LB-062399-12	6/23/99	6.81	195	12.7	NT
LB-13D	LB-091799-13	9/17/99	6.69	256	12.6	NT
LB-13D	LB-121499-3	12/14/99	6.75	252	12.1	NT
LB-13D	LB-091300-11	9/13/00	6.95	225	13.0	NT
LB-13D	LB-121500-12	12/15/00	6.80	198	12.1	NT
LB-13D	LB-031501-19	3/15/01	6.67	229	12.2	NT
LB-13D	LB-032002-20	3/20/02	6.87	223	12.3	6.53
LB-13D	LB-031303-16	3/13/03	6.93	197	13.0	NT
LB-13D	LB-022404-3	2/24/04	6.73	150	54.4	NT
LB-13D	LB-031005-17	3/10/05	6.62	194	12.3	7.65
LB-13D	LB-031506-9	3/15/06	6.75	175	11.8	8.09
LB-13D	LB-030607-18	3/6/07	6.26	143	12.2	11.33

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-13D	LB-032008-13	3/20/08	6.76	263	11.7	NT
LB-13D	LB-13D	3/17/09	6.71	271	11.6	7.86
LB-13D	LB-13D032410	3/24/10	6.78	227	12.0	NT
LB-13D	LB-13D	3/25/11	6.99	216	11.6	6.18
LB-13D	LB-031212-01	3/12/12	6.27	235	11.5	5.32
LB-13D	LB-020713-22	2/7/13	6.46	228	11.7	5.88
LB-13D	LB-021814-08	2/18/14	6.70	220	11.6	5.84
LB-13D	LB-021715-03	2/17/15	6.53	211	12.0	5.98
LB-13I	LB-1089-W17	10/18/89	6.91	693	13.0	NT
LB-13I	LB-1189-W17	11/16/89	6.78	721	11.0	NT
LB-13I	LB-1289-W16	12/18/89	6.72	692	10.5	NT
LB-13I	LB-390-W19	3/15/90	6.61	676	12.5	NT
LB-13I	LB-690-W19	6/21/90	6.82	654	13.0	NT
LB-13I	LB-990-W16	9/18/90	6.83	706	13.0	NT
LB-13I	LB-1290-W21	12/13/90	6.82	744	11.5	NT
LB-13I	LB-391-W14	3/20/91	6.80	742	12.4	NT
LB-13I	LB-691-W21	6/27/91	6.74	619	13.2	NT
LB-13I	LB-991-12	9/25/91	7.05	757	11.8	NT
LB-13I	LB-1291-18	12/23/91	7.02	707	11.2	NT
LB-13I	LB-392-20	3/24/92	6.60	663	12.0	NT
LB-13I	LB-7292-1	7/2/92	6.88	679	13.0	NT
LB-13I	LB-91792-1	9/17/92	6.84	631	13.0	NT
LB-13I	LB-12992-8	12/9/92	6.92	671	12.0	NT
LB-13I	LB-031293-19	3/12/93	6.93	689	12.0	NT
LB-13I	LB-060493-20	6/4/93	6.80	640	15.0	NT
LB-13I	LB-092393-06	9/23/93	6.88	570	14.0	3.10
LB-13I	LB-121693-14	12/16/93	6.82	537	11.0	0.50
LB-13I	LB-032894-16	3/28/94	6.82	680	15.0	3.00
LB-13I	LB-062894-19	6/28/94	7.00	495	15.0	1.90
LB-13I	LB-090794-9	9/7/94	7.09	503	14.0	NT
LB-13I	LB-121994-20	12/15/94	6.84	543	12.5	4.40
LB-13I	LB-031395-17	3/13/95	6.93	486	13.5	4.50
LB-13I	LB-052195-18	6/21/95	6.80	509	12.5	3.50
LB-13I	LB-092295-15	9/22/95	6.87	408	14.5	NT
LB-13I	LB-121995-7	12/19/95	6.78	357	10.9	NT
LB-13I	LB-032096-14	3/20/96	6.84	504	13.2	NT
LB-13I	LB-061996-15	6/19/96	6.91	547	14.0	NT
LB-13I	LB-091796-3	9/17/96	6.63	501	14.0	NT
LB-13I	LB121796-10	12/17/96	7.24	630	12.2	NT
LB-13I	LB-032097-19	3/20/97	6.76	706	13.1	NT
LB-13I	LB-061897-14	6/18/97	6.87	540	13.8	NT
LB-13I	LB-091897-12	9/18/97	6.88	890	14.0	NT
LB-13I	LB-121797-8	12/17/97	6.88	624	12.4	NT
LB-13I	LB-032098-18	3/20/98	6.90	752	14.4	NT
LB-13I	LB-061798-15	6/17/98	6.88	447	14.7	NT
LB-13I	LB-091898-14	9/18/98	7.11	294	13.7	NT
LB-13I	LB-121898-11	12/18/98	6.82	425	12.6	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-13I	LB-031999-22	3/19/99	6.93	422	15.0	NT
LB-13I	LB-062399-13	6/23/99	7.05	348	14.3	NT
LB-13I	LB-091799-12	9/17/99	6.91	648	13.9	NT
LB-13I	LB-121499-4	12/14/99	7.03	657	13.3	NT
LB-13I	LB-091300-12	9/13/00	6.97	634	13.7	NT
LB-13I	LB-121500-11	12/15/00	6.89	496	13.0	NT
LB-13I	LB-031501-20	3/15/01	6.75	509	13.1	NT
LB-13I	LB-092001-8	9/20/01	6.71	360	13.4	NT
LB-13I	LB-032002-19	3/20/02	6.81	325	13.0	4.14
LB-13I	LB-091802-7	9/18/02	7.00	460	14.0	NT
LB-13I	LB-031303-15	3/13/03	6.80	306	12.0	NT
LB-13I	LB-092203-7	9/22/03	6.52	330	14.0	4.37
LB-13I	LB-022404-4	2/24/04	6.70	240	54.7	NT
LB-13I	LB-090104-13	9/1/04	6.60	315	14.0	NT
LB-13I	LB-031005-18	3/10/05	6.68	286	12.8	2.04
LB-13I	LB-091505-9	9/15/05	6.80	202	12.9	3.65
LB-13I	LB-031506-10	3/15/06	6.75	228	12.0	3.90
LB-13I	LB-091306-8	9/13/06	6.74	263	12.8	3.80
LB-13I	LB-030607-17	3/6/07	6.42	203	12.5	9.15
LB-13I	LB-091907-8	9/19/07	6.70	352	12.5	6.65
LB-13I	LB-032008-12	3/20/08	7.15	329	11.4	NT
LB-13I	LB-091608/5	9/16/08	6.91	290	14.6	NT
LB-13I	LB-13I	3/17/09	6.88	285	11.7	5.64
LB-13I	LBLF13i091109	9/11/09	7.70	301	12.8	4.76
LB-13I	LB-13I032410	3/24/10	7.09	297	12.2	NT
LB-13I	LB-13I092310	9/23/10	7.10	204	11.6	NT
LB-13I	LB-13I	3/23/11	7.91	276	12.1	2.96
LB-13I	LB-090711-02	9/7/11	6.85	252	13.9	1.38
LB-13I	LB-032212-19	3/22/12	6.58	255	11.7	2.40
LB-13I	LB-091112-03	9/11/12	6.47	266	14.1	2.40
LB-13I	LB-020613-13	2/6/13	6.74	290	11.7	1.75
LB-13I	LB-082113-05	8/21/13	6.01	280	14.5	2.31
LB-13I	LB-021814-10	2/18/14	6.61	305	11.6	0.81
LB-13I	LB-081314-04	8/13/14	6.63	281	13.4	1.82
LB-13I	LB-021815-11	2/18/15	6.96	274	11.8	1.25
LB-13I	LB-081115-05	8/11/15	7.02	247	13.7	2.18
LB-17D	LB-1089-W10	10/18/89	6.95	830	13.0	NT
LB-17D	LB-1189-W12	11/15/89	6.82	890	13.0	NT
LB-17D	LB-1289-W28	12/20/89	6.76	930	13.0	NT
LB-17D	LB-390-W21	3/15/90	6.83	905	13.5	NT
LB-17D	LB-690-W18	6/21/90	6.91	882	15.5	NT
LB-17D	LB-990-W19	9/19/90	6.92	864	14.5	NT
LB-17D	LB-1290-W23	12/13/90	6.82	867	13.5	NT
LB-17D	LB-391-W19	3/21/91	6.74	829	14.2	NT
LB-17D	LB-691-W14	6/26/91	6.85	744	15.4	NT
LB-17D	LB-991-10	9/25/91	6.95	818	14.3	NT
LB-17D	LB-1291-16	12/23/91	7.09	1030	13.1	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-17D	LB-392-11	3/23/92	6.86	906	16.0	NT
LB-17D	LB-63092-5	6/30/92	6.72	919	16.5	NT
LB-17D	LB-031093-6	3/10/93	6.92	715	15.0	NT
LB-17D	LB-060493-22	6/4/93	6.65	637	15.5	NT
LB-17D	LB-092793-21	9/27/93	6.92	723	16.0	3.20
LB-17D	LB-121593-7	12/15/93	6.71	768	14.0	1.30
LB-17D	LB-032994-20	3/29/94	7.13	780	17.5	2.00
LB-17D	LB-052394-14	6/23/94	7.09	669	16.0	5.20
LB-17D	LB-090794-7	9/7/94	7.06	657	17.0	NT
LB-17D	LB-121494-10	12/14/94	6.98	657	13.0	NT
LB-17D	LB-030995-5	3/9/95	7.01	593	14.0	1.00
LB-17D	LB-062095-11	6/20/95	6.90	681	14.5	6.00
LB-17D	LB-092195-10	9/21/95	6.50	732	16.3	NT
LB-17D	LB-121895-3	12/18/95	7.21	542	12.0	NT
LB-17D	LB-031996-10	3/19/96	5.84	586	14.1	NT
LB-17D	LB-061996-14	6/19/96	6.98	587	12.0	NT
LB-17D	LB-032097-16	3/20/97	7.08	571	15.1	NT
LB-17D	LB-031998-14	3/19/98	6.97	573	15.5	NT
LB-17D	LB-031899-13	3/18/99	6.98	352	16.6	NT
LB-17D	LB-031401-9	3/14/01	6.98	333	15.1	NT
LB-17D	LB-031902-7	3/19/02	7.17	335	15.0	2.22
LB-17D	LB-031203-7	3/12/03	7.33	337	14.7	3.60
LB-17D	LB-022504-10	2/25/04	6.97	257	57.6	NT
LB-17D	LB-030905-10	3/9/05	7.06	313	15.4	0.74
LB-17D	LB-031506-7	3/15/06	7.06	301	13.7	3.45
LB-17D	LB-030607-14	3/6/07	6.39	258	15.1	9.31
LB-17D	LB-032008-11	3/20/08	7.07	353	12.9	NT
LB-17D	LB-17D	3/18/09	7.14	295	14.2	3.53
LB-17D	LB-17D032410	3/24/10	7.00	299	15.2	NT
LB-17D	LB-17D	3/22/11	7.45	278	13.8	2.42
LB-17D	LB-031212-04	3/12/12	6.68	388	13.1	0.20
LB-17D	LB-020513-05	2/5/13	6.73	344	13.5	0.14
LB-17D	LB-021714-03	2/17/14	6.48	330	13.3	0.40
LB-17D	LB-021715-05	2/17/15	6.82	296	14.4	0.96
LB-17I	LB-1089-W14	10/19/89	6.83	1231	14.0	NT
LB-17I	LB-1189-W14	11/15/89	6.65	1192	14.0	NT
LB-17I	LB-1289-W29	12/20/89	6.57	1167	13.5	NT
LB-17I	LB-390-W20	3/15/90	6.59	807	13.0	NT
LB-17I	LB-690-W17	6/21/90	6.48	1202	16.0	NT
LB-17I	LB-990-W18	9/19/90	6.47	1200	15.0	NT
LB-17I	LB-1290-W22	12/13/90	6.62	1125	13.4	NT
LB-17I	LB-391-W20	3/21/91	6.40	1069	14.2	NT
LB-17I	LB-392-13	3/23/92	6.71	1036	16.0	NT
LB-17I	LB-63092-6	6/30/92	6.57	1337	16.0	NT
LB-17I	LB-91892-3	9/18/92	6.72	1300	14.0	NT
LB-17I	LB-121192-18	12/11/92	6.85	992	15.0	NT
LB-17I	LB-031093-5	3/10/93	6.79	930	15.0	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-17I	LB-032994-21	3/29/94	6.85	960	18.0	2.80
LB-17I	LB-030995-6	3/9/95	6.93	695	14.0	2.60
LB-17I	LB-031996-11	3/19/96	6.87	782	13.2	NT
LB-17I	LB-032097-17	3/20/97	6.99	674	15.9	NT
LB-17I	LB-031998-13	3/19/98	6.87	567	17.2	NT
LB-17I	LB-031899-12	3/18/99	6.86	410	17.5	NT
LB-17I	LB-031401-10	3/14/01	6.80	359	16.4	NT
LB-17I	LB-031902-6	3/19/02	7.03	478	15.9	2.23
LB-17I	LB-031203-6	3/12/03	6.93	510	16.0	1.00
LB-17I	LB-022504-11	2/25/04	6.90	362	59.9	NT
LB-17I	LB-030905-11	3/9/05	7.08	507	15.8	1.68
LB-17I	LB-031506-8	3/15/06	6.80	538	14.5	2.03
LB-17I	LB-030607-13	3/6/07	6.36	458	15.4	12.80
LB-17I	LB-032008-10	3/20/08	7.04	483	13.0	NT
LB-17I	LB-17I	3/18/09	6.95	343	14.8	3.85
LB-17I	LB-171032410	3/24/10	7.13	476	4.1	NT
LB-17I	LB-17I	3/22/11	7.74	528	14.0	2.35
LB-17I	LB-031312-16	3/13/12	6.85	414	12.9	0.15
LB-17I	LB-020513-06	2/5/13	6.89	362	14.1	0.10
LB-17I	LB-021714-04	2/17/14	6.77	376	13.8	0.40
LB-17I	LB-021815-15	2/18/15	7.11	408	13.7	0.48
LB-20S	LB-1289-W36	12/21/89	6.69	817	11.5	NT
LB-20S	LB-390-W12	3/14/90	6.32	1255	13.0	NT
LB-20S	LB-690-W08	6/19/90	NT	1312	13.5	NT
LB-20S	LB-990-W09	9/14/90	6.68	881	14.0	NT
LB-20S	LB-1290-W10	12/12/90	6.62	1164	13.2	NT
LB-20S	LB-391-W08	3/20/91	6.62	716	13.1	NT
LB-20S	LB-691-W11	6/26/91	6.44	869	13.8	NT
LB-20S	LB-991-19	9/26/91	6.68	942	13.2	NT
LB-20S	LB-1291-05	12/19/91	6.08	1130	12.7	NT
LB-20S	LB-392-18	3/24/92	6.62	770	15.0	NT
LB-20S	LB-031593-26	3/15/93	6.75	686	14.0	NT
LB-20S	LB-032994-23	3/29/94	6.77	890	17.0	4.90
LB-20S	LB-031395-19	3/13/95	6.86	1020	16.0	8.30
LB-20S	LB-032096-20	3/20/96	6.91	796	15.0	NT
LB-20S	LB-032097-15	3/20/97	6.94	798	13.7	NT
LB-20S	LB-032098-23	3/20/98	6.93	542	14.6	NT
LB-20S	LB-031899-16	3/18/99	6.89	287	15.4	NT
LB-20S	LB-031401-13	3/14/01	6.65	424	13.6	NT
LB-20S	LB-032002-14	3/20/02	6.63	481	12.8	2.21
LB-20S	LB-031203-20	3/12/03	6.47	377	13.0	NT
LB-20S	LB-022604-19	2/26/04	6.87	281	53.7	NT
LB-20S	LB-030905-12	3/9/05	6.85	517	12.6	12.06
LB-20S	LB-031406-4	3/14/06	6.41	246	12.5	3.94
LB-20S	LB-030607-16	3/6/07	6.17	300	13.0	9.53
LB-20S	LB-032408-16	3/24/08	6.83	504	12.1	NT
LB-20S	LB-20S	3/18/09	7.02	457	13.3	4.93

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-20S	LB-20S032410	3/24/10	6.83	405	12.9	NT
LB-20S	LB-20S	3/24/11	6.81	586	12.1	2.09
LB-20S	LB-031312-15	3/13/12	6.78	385	11.6	0.17
LB-20S	LB-020513-10	2/5/13	6.76	574	12.2	0.15
LB-20S	LB-021914-20	2/19/14	6.80	400	12.0	0.51
LB-20S	LB-021915-18	2/19/15	6.99	281	12.6	0.79
LB-26D	LB-0892-2	8/27/92	6.51	364	13.5	NT
LB-26D	LB-92192-7	9/21/92	6.60	370	13.0	NT
LB-26D	LB-121092-13	12/10/92	6.72	326	11.5	NT
LB-26D	LB-031193-14	3/11/93	7.16	302	11.5	NT
LB-26D	LB-060193-3	6/1/93	6.36	280	13.0	NT
LB-26D	LB-092493-12	9/24/93	6.55	295	13.5	6.60
LB-26D	LB-121693-16	12/16/93	6.76	295	13.0	6.50
LB-26D	LB-032494-7	3/24/94	6.70	307	14.0	6.90
LB-26D	LB-062294-6	6/22/94	6.66	325	15.0	6.50
LB-26D	LB-090894-15	9/8/94	6.70	309	14.0	NT
LB-26D	LB-121394-5	12/13/94	6.59	343	13.0	5.90
LB-26D	LB-031095-14	3/10/95	6.66	302	13.0	8.00
LB-26D	LB-061995-2	6/19/95	6.72	343	13.0	4.30
LB-26D	LB-092095-4	9/20/95	6.68	324	15.0	NT
LB-26D	LB-122095-15	12/20/95	6.76	291	10.2	NT
LB-26D	LB-031996-2	3/19/96	6.06	330	12.5	NT
LB-26D	LB-061896-2	6/18/96	6.60	335	12.0	NT
LB-26D	LB-091896-11	9/18/96	6.71	320	12.1	NT
LB-26D	LB-121796-4	12/17/96	7.09	352	11.5	NT
LB-26D	LB-031997-6	3/19/97	6.67	366	11.8	NT
LB-26D	LB-061797-8	6/17/97	6.58	329	12.7	NT
LB-26D	LB-091697-4	9/16/97	6.84	285	11.7	NT
LB-26D	LB-121697-6	12/16/97	6.61	350	12.0	5.00
LB-26D	LB-031998-9	3/19/98	6.93	355	13.2	NT
LB-26D	LB-061698-9	6/16/98	6.62	281	12.9	NT
LB-26D	LB-091798-6	9/17/98	6.81	230	13.0	NT
LB-26D	LB-121798-3	12/17/98	6.98	279	11.9	NT
LB-26D	LB-031899-6	3/18/99	6.60	287	14.5	NT
LB-26D	LB-062399-9	6/23/99	6.79	214	13.0	NT
LB-26D	LB-091699-3	9/16/99	6.54	290	12.2	NT
LB-26D	LB-121599-9	12/15/99	6.90	285	12.0	NT
LB-26D	LB-091200-4	9/12/00	6.69	252	12.3	NT
LB-26D	LB-121500-7	12/15/00	6.72	222	11.7	NT
LB-26D	LB-031301-5	3/13/01	6.72	247	11.9	NT
LB-26D	LB-031902-8	3/19/02	6.87	226	11.9	5.92
LB-26D	LB-031203-5	3/12/03	7.43	210	12.0	NT
LB-26D	LB-022504-12	2/25/04	6.56	149	52.4	NT
LB-26D	LB-030805-7	3/8/05	6.62	199	12.3	7.22
LB-26D	LB-031606-19	3/16/06	6.81	183	11.4	8.60
LB-26D	LB-030507-11	3/5/07	6.38	156	12.1	8.93
LB-26D	LB-031908-8	3/19/08	6.79	319	12.5	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-26D	LB-26D	3/17/09	6.83	230	11.5	8.02
LB-26D	LB-26D032410	3/24/10	6.86	237	11.7	NT
LB-26D	LB-26D	3/23/11	7.60	230	12.3	6.13
LB-26D	LB-031212-05	3/12/12	6.39	234	11.6	4.92
LB-26D	LB-020713-23	2/7/13	6.45	236	11.8	4.43
LB-26D	LB-021714-05	2/17/14	6.43	226	11.9	2.09
LB-26D	LB-021715-04	2/17/15	6.57	221	12.2	3.00
LB-26I	LB-0892-1	8/27/92	6.64	571	14.0	NT
LB-26I	LB-92192-6	9/21/92	6.88	576	13.0	NT
LB-26I	LB-121092-12	12/10/92	6.89	616	12.0	NT
LB-26I	LB-031193-13	3/11/93	6.89	626	13.0	NT
LB-26I	LB-060193-1	6/1/93	6.78	544	13.5	NT
LB-26I	LB-092493-11	9/24/93	6.76	525	14.0	4.20
LB-26I	LB-121693-15	12/16/93	6.96	547	13.0	1.90
LB-26I	LB-032494-6	3/24/94	6.90	508	14.0	2.90
LB-26I	LB-062294-5	6/22/94	6.89	550	16.0	1.90
LB-26I	LB-09894-16	9/8/94	6.96	492	15.0	NT
LB-26I	LB-121394-4	12/13/94	6.78	536	13.5	4.40
LB-26I	LB-031095-12	3/10/95	6.98	499	13.0	0.80
LB-26I	LB-061995-1	6/19/95	6.81	503	13.5	3.20
LB-26I	LB-092095-5	9/20/95	6.91	437	15.0	NT
LB-26I	LB-122095-14	12/20/95	7.05	395	10.4	NT
LB-26I	LB-031996-1	3/19/96	6.25	428	12.0	NT
LB-26I	LB-061896-1	6/18/96	6.93	412	12.0	NT
LB-26I	LB-091896-10	9/18/96	6.96	426	12.6	NT
LB-26I	LB121796-5	12/17/96	7.18	437	12.1	NT
LB-26I	LB-031997-5	3/19/97	6.75	468	12.2	NT
LB-26I	LB-061797-7	6/17/97	6.75	415	14.0	NT
LB-26I	LB-091697-5	9/16/97	6.82	359	12.0	NT
LB-26I	LB-121697-7	12/16/97	6.86	607	12.9	0.80
LB-26I	LB-031998-8	3/19/98	6.81	590	13.3	NT
LB-26I	LB-061698-8	6/16/98	6.88	391	13.1	NT
LB-26I	LB-091798-7	9/17/98	6.67	287	13.4	NT
LB-26I	LB-121798-2	12/17/98	7.13	369	12.6	NT
LB-26I	LB-031799-1	3/17/99	7.29	328	14.8	NT
LB-26I	LB-062399-10	6/23/99	6.96	281	13.6	NT
LB-26I	LB-091699-4	9/16/99	6.78	541	13.0	NT
LB-26I	LB-121599-8	12/15/99	7.01	510	12.6	NT
LB-26I	LB-091200-5	9/12/00	6.93	448	13.1	NT
LB-26I	LB-121500-8	12/15/00	7.01	385	12.5	NT
LB-26I	LB-031301-6	3/13/01	6.94	407	12.5	NT
LB-26I	LB-092001-3	9/20/01	6.87	384	13.6	NT
LB-26I	LB-031902-9	3/19/02	6.96	353	12.4	4.11
LB-26I	LB-091802-4	9/18/02	7.10	350	13.0	NT
LB-26I	LB-031203-4	3/12/03	6.68	293	13.0	NT
LB-26I	LB-092203-4	9/22/03	7.30	250	15.0	5.37

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-26I	LB-022504-13	2/25/04	6.80	200	53.5	NT
LB-26I	LB-090104-26	9/1/04	6.77	288	13.5	NT
LB-26I	LB-030805-8	3/8/05	6.80	306	12.7	3.23
LB-26I	LB-091405-5	9/14/05	6.76	239	13.7	3.69
LB-26I	LB-031606-20	3/16/06	6.90	267	11.7	7.18
LB-26I	LB-091206-3	9/12/06	7.00	297	13.3	3.02
LB-26I	LB-030507-10	3/5/07	6.37	223	12.6	5.78
LB-26I	LB-091907-5	9/19/07	6.94	315	12.3	4.67
LB-26I	LB-031908-7	3/19/08	7.00	385	13.2	NT
LB-26I	LB-091608-6	9/16/08	6.40	220	17.8	NT
LB-26I	LB-26I	3/17/09	6.92	328	11.6	7.05
LB-26I	LBLF26I091109	9/11/09	7.39	234	12.9	7.06
LB-26I	LB-23I032410	3/24/10	7.07	331	12.0	NT
LB-26I	LB26I092310	9/23/10	7.10	229	11.6	NT
LB-26I	LB-26I	3/23/11	7.75	300	12.1	4.41
LB-26I	LB-090711-03	9/7/11	6.77	230	15.1	4.41
LB-26I	LB-032212-21	3/22/12	6.57	274	11.5	4.96
LB-26I	LB-091112-04	9/11/12	6.31	253	13.1	5.07
LB-26I	LB-020613-14	2/6/13	6.61	250	11.8	4.65
LB-26I	LB-082113-06	8/21/13	6.00	244	13.7	4.25
LB-26I	LB-021714-06	2/17/14	6.30	255	11.7	2.88
LB-26I	LB-081314-05	8/13/14	6.50	234	13.9	4.92
LB-26I	LB-021815-12	2/18/15	6.87	270	11.9	3.54
LB-26I	LB-081115-06	8/11/15	6.71	215	13.7	4.48
LB-27D	LB-0892-4	8/27/92	6.85	289	14.0	NT
LB-27D	LB-92292-5	9/22/92	7.34	258	13.0	NT
LB-27D	LB-121192-21	12/11/92	7.12	321	13.0	NT
LB-27D	LB-031193-16	3/11/93	6.50	311	11.5	NT
LB-27D	LB-060193-4	6/1/93	7.28	305	13.5	NT
LB-27D	LB-092493-16	9/24/93	7.24	273	14.0	4.60
LB-27D	LB-121693-17	12/16/93	7.24	315	13.0	5.00
LB-27D	LB-032494-4	3/24/94	7.25	306	13.0	5.10
LB-27D	LB-062294-9	6/22/94	7.19	321	15.5	5.30
LB-27D	LB-090894-12	9/8/94	7.09	319	13.5	NT
LB-27D	LB-121394-2	12/12/94	7.48	337	11.5	6.60
LB-27D	LB-031095-8	3/10/95	7.18	339	13.5	7.60
LB-27D	LB-051995.4	6/19/95	7.20	343	14.0	5.60
LB-27D	LB-092095-1	9/20/95	7.16	301	16.0	NT
LB-27D	LB-122095-17	12/20/95	7.05	270	11.2	NT
LB-27D	LB-031996-3	3/19/96	7.26	295	13.0	NT
LB-27D	LB-061896-4	6/18/96	7.16	280	14.0	NT
LB-27D	LB-091796-9	9/17/96	7.02	290	14.2	NT
LB-27D	LB121796-8	12/17/96	7.61	290	13.1	NT
LB-27D	LB-031997-12	3/19/97	7.01	302	12.3	NT
LB-27D	LB-061797-11	6/17/97	7.00	260	15.3	NT
LB-27D	LB-091697-8	9/16/97	7.24	258	12.5	NT
LB-27D	LB-121797-13	12/17/97	6.97	300	12.0	4.20

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-27D	LB-031998-12	3/19/98	6.97	292	13.6	NT
LB-27D	LB-061798-10	6/17/98	6.92	254	13.0	NT
LB-27D	LB-091798-8	9/17/98	7.07	224	14.9	NT
LB-27D	LB-121798-6	12/17/98	7.19	276	12.8	NT
LB-27D	LB-031899-9	3/18/99	7.04	238	14.5	NT
LB-27D	LB-062399-7	6/23/99	6.99	199	13.7	NT
LB-27D	LB-091599-1	9/15/99	6.85	270	12.9	NT
LB-27D	LB-121599-7	12/15/99	7.13	282	12.6	NT
LB-27D	LB-091300-8	9/13/00	6.95	268	13.2	NT
LB-27D	LB-091300-9	9/13/00	6.95	268	13.2	NT
LB-27D	LB-121500-5	12/15/00	7.03	254	12.5	NT
LB-27D	LB-031301-3	3/13/01	6.97	288	12.9	NT
LB-27D	LB-031902-11	3/19/02	6.99	308	12.9	5.02
LB-27D	LB-031203-3	3/12/03	6.96	293	13.0	NT
LB-27D	LB-022604-15	2/26/04	6.88	237	54.7	NT
LB-27D	LB-030805	3/8/05	6.82	322	13.0	4.20
LB-27D	LB-031606-17	3/16/06	6.90	298	12.4	6.81
LB-27D	LB-030507-9	3/5/07	6.20	270	13.5	9.54
LB-27D	LB-031908-5	3/19/08	7.00	0.489	12.4	NT
LB-27D	LB-27D	3/18/09	6.98	315	13.3	7.65
LB-27D	LB-27D032410	3/24/10	7.01	331	13.0	NT
LB-27D	LB-27D	3/25/11	7.43	317	11.3	4.47
LB-27D	LB-031212-02	3/12/12	6.60	338	12.1	3.32
LB-27D	LB-020713-21	2/7/13	6.77	330	11.0	3.64
LB-27D	LB-021814-13	2/18/14	6.66	313	11.3	3.32
LB-27D	LB-021715-02	2/17/15	6.50	299	12.4	3.82
LB-27I	LB-0892-3	8/27/92	6.60	811	14.0	NT
LB-27I	LB-92292-4	9/22/92	7.36	836	14.0	NT
LB-27I	LB-121192-20	12/11/92	6.62	783	13.5	NT
LB-27I	LB-031293-21	3/12/93	7.24	756	13.0	NT
LB-27I	LB-060193-2	6/1/93	6.77	664	14.0	NT
LB-27I	LB-092493-14	9/24/93	6.97	769	14.0	7.20
LB-27I	LB-121693-14	12/16/93	6.81	707	13.0	2.30
LB-27I	LB-032494-3	3/24/94	6.67	718	15.5	6.00
LB-27I	LB-062294-8	6/22/94	6.73	649	17.0	2.40
LB-27I	LB-090894-11	9/8/94	6.84	568	14.0	NT
LB-27I	LB-121394-1	12/13/94	8.12	671	12.0	11.00
LB-27I	LB-031095-7	3/10/95	6.77	661	13.5	4.20
LB-27I	LB-061995-3	6/19/95	6.83	673	14.0	3.20
LB-27I	LB-092095-3	9/20/95	6.85	585	14.5	NT
LB-27I	LB-122095-16	12/20/95	6.89	482	11.6	NT
LB-27I	LB-031996-4	3/19/96	7.05	640	14.7	NT
LB-27I	LB-061896-3	6/18/96	6.94	609	14.0	NT
LB-27I	LB-091796-7	9/17/96	6.99	752	14.3	NT
LB-27I	LB121796-6	12/17/96	7.31	947	12.9	NT
LB-27I	LB-031997-10	3/19/97	6.87	771	12.8	NT
LB-27I	LB-061797-9	6/17/97	6.98	548	14.1	NT

Table B-1
Groundwater Chemistry, Field Parameters
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Field pH (S.U.)	Field Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)
LB-27I	LB-091697-6	9/16/97	6.93	544	12.6	NT
LB-27I	LB-121797-11	12/17/97	6.86	750	12.8	0.80
LB-27I	LB-031998-10	3/19/98	6.80	917	15.7	NT
LB-27I	LB-061798-11	6/17/98	6.85	494	14.1	NT
LB-27I	LB-091798-9	9/17/98	6.82	327	15.6	NT
LB-27I	LB-121798-4	12/17/98	6.96	446	13.8	NT
LB-27I	LB-031899-7	3/18/99	6.83	476	15.5	NT
LB-27I	LB-062399-8	6/23/99	7.00	396	14.5	NT
LB-27I	LB-091599-2	9/15/99	6.76	914	14.3	NT
LB-27I	LB-121599-6	12/15/99	7.02	940	12.8	NT
LB-27I	LB-091300-10	9/13/00	6.86	741	14.4	NT
LB-27I	LB-121500-6	12/15/00	6.85	778	13.3	NT
LB-27I	LB-031301-4	3/13/01	6.81	665	13.8	NT
LB-27I	LB-092001-2	9/20/01	6.68	612	14.1	NT
LB-27I	LB-031902-10	3/19/02	6.82	685	13.5	2.62
LB-27I	LB-091802-5	9/18/02	7.30	590	15.0	NT
LB-27I	LB-031203-1	3/12/03	6.88	563	14.0	NT
LB-27I	LB-092203-2	9/22/03	6.10	540	14.5	2.40
LB-27I	LB-022604-17	2/26/04	6.82	382	55.7	NT
LB-27I	LB-090104-27	9/1/04	6.76	554	14.2	NT
LB-27I	LB-030805-5	3/8/05	6.85	525	13.7	2.81
LB-27I	LB-091405-3	9/14/05	6.91	353	14.0	2.80
LB-27I	LB-031606-18	3/16/06	6.98	376	12.6	6.90
LB-27I	LB-091206-2	9/12/06	6.78	564	13.8	1.50
LB-27I	LB-030507-8	3/5/07	6.05	445	13.7	3.88
LB-27I	LB-091907-4	9/19/07	6.78	486	13.2	2.30
LB-27I	LB-031908-4	3/19/08	6.91	0.786	12.9	NT
LB-27I	LB-091608-7	9/16/08	7.00	531	14.3	NT
LB-27I	LB-27I	3/18/09	6.94	557	13.4	4.44
LB-27I	LBLF27i091109	9/11/09	7.01	538	14.5	3.07
LB-27I	LB-27I032410	3/24/10	6.97	419	12.7	NT
LB-27I	LB27I092310	9/23/10	7.00	401	12.3	NT
LB-27I	LB-27I	3/25/11	7.39	523	11.6	3.20
LB-27I	LB-090711-01	9/7/11	6.46	707	14.2	1.11
LB-27I	LB-032212-18	3/22/12	6.82	643	11.7	0.32
LB-27I	LB-091112-02	9/11/12	6.72	706	14.0	1.02
LB-27I	LB-020613-11	2/6/13	6.81	670	12.1	0.29
LB-27I	LB-082113-03	8/21/13	6.00	720	14.5	0.38
LB-27I	LB-021814-14	2/18/14	6.85	574	11.9	0.81
LB-27I	LB-081314-03	8/13/14	6.79	576	13.6	0.66
LB-27I	LB-021815-10	2/18/15	6.94	613	12.2	1.96
LB-27I	LB-081215-09	8/12/15	6.75	575	14.0	0.54
FIELDQC	LB-021715-08	2/17/15	N/A	N/A	N/A	N/A
FIELDQC	LB-081215-07	8/12/15	N/A	N/A	N/A	N/A
Notes: NT = not tested; N/A = Not Applicable						

Volatile Organic Compounds

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Lechner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1D	LB-01D	6/2/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-1D	LB-01D	7/21/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-1D	LB-01D	9/4/87	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1D	LB-01D	11/6/87	0.6	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1D	LB-01D	6/22/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1D	LB-01D	8/30/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0 L	1.0 L	1.0 L
LB-1D	LB-01D	9/1/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0 L	1.0 L	1.0 L
LB-1D	LB-01D	12/5/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1D	LB-289-W04	2/28/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-589-W03	5/23/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-989-W16	9/12/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1089-W01	10/17/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1189-W04	11/14/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1289-W22	12/19/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-390-W09	3/14/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-690-W11	6/20/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-990-W08	9/14/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1290-W06	12/11/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-391-W11	3/21/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-691-W06	6/26/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-991-06	9/24/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-1291-14	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-392-14	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1D	LB-63092-2	6/30/92	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-92292-3	9/22/92	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-121192-16	12/11/92	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-031093-4	3/10/93	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-060293-6	6/2/93	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-092393-8	9/23/93	0.2 L	0.2 L	0.2 L	0.2 L	1.0 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-092393-8	9/23/93	0.2 L	0.2 L	0.2 L	0.2 L	NT	0.3 L	0.2 L	NT
LB-1D	LB-121593-2	12/15/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-032494-2	3/24/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-1D	LB-062194-1	6/21/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1D	LB-090694-2	9/6/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1D	LB-121494-12	12/14/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1D	LB-030995-2	3/9/95	0.3 L	0.2	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-1D	LB-062095-13	6/20/95	0.3 L	0.2 L	0.1 L	0.1 L	0.3 B	0.1 L	0.1 L	0.1 L
LB-1D	LB-092295-14	9/22/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-1D	LB-121995-6	12/19/95	0.2	0.2 L	0.1 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1D	LB-032096-18	3/20/96	0.3 L	0.2 L	0.1 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L
LB-1D	LB-061896-10	6/18/96	0.2	0.1 L	0.0 L	0.1 L	0.2	0.1 L	0.2 L	0.1 L
LB-1D	LB-091796-6	9/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.2	0.1 L	0.2 L	0.1 L
LB-1D	LB121796-2	12/17/96	0.2	0.1 L	0.0 L	0.1 L	0.2	0.1 L	0.2 L	0.1 L
LB-1D	LB-031997-4	3/19/97	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-061797-4	6/17/97	0.2	0.1	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L
LB-1D	LB-091697-1	9/16/97	0.2	0.5 L	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L
LB-1D	LB-121697-4	12/16/97	0.1	0.5 L	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L
LB-1D	LB-031998-4	3/19/98	0.2	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-061698-6	6/16/98	0.1	0.1 L	0.0 L	0.1 L	0.4	0.1 L	0.2 L	0.1 L
LB-1D	LB-091798-3	9/17/98	0.2 L	0.3 L	0.2 B	0.2 L	0.5	0.2 L	0.3 L	0.2 L
LB-1D	LB-121898-10	12/18/98	0.2 L	0.3 L	0.2 L	0.2 L	0.4	0.2 L	0.3 L	0.2 L
LB-1D	LB-031799-4	3/17/99	0.2 L	0.3 L	0.2 L	0.2 L	0.5	0.2 L	0.3 L	0.2 L
LB-1D	LB-062399-15	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.6	0.2 L	0.3 L	0.2 L
LB-1D	LB-091799-11	9/17/99	0.2 L	0.3 L	0.3 J	NT	0.5	0.2 L	NT	NT
LB-1D	LB-121699-12	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-1D	LB-031700-16	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB-061300-8	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.8	0.5 L	0.5 L	0.5 L
LB-1D	LB-091100-2	9/11/00	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-121500-10	12/15/00	0.2 J	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB-031501-15	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-031501-16	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-031902-2	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-031303-12	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L	0.5 L
LB-1D	LB-022404-1	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB030905-13	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB-031406-1	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D (Dup)	LB-031406-2	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.6	0.5 L	0.5 L	0.5 L
LB-1D	LB-030507-2	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-032408-15	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-1D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-1D032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1D	LB-1D	3/24/11	0.1 L	0.1 L	0.2 L	0.1 L	0.28	0.25 L	0.1 L	0.1 L
LB-1D	LB-031312-13	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1D	LB-020513-07	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-1D	LB-021914-17	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1D	LB-021915-17	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1S	LB-01S	5/11/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-1S	LB-01S	7/21/87	2.0 L	2.0 L	NT	1.0 L	2.0 L	5.0 L	NT	2.0 L
LB-1S	LB-01S	9/4/87	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-01S	11/6/87	0.9	1.1	1.0 L	1.8	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-01S	2/11/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-01S	6/22/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-01S	8/30/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0 L	5.0	1.0 L
LB-1S	LB-01S	12/5/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-1S	LB-289-W05	2/28/89	1.0 L	1.0 L	1.0 L	1.0	1.0 L	1.0 L	4.5	1.0 L
LB-1S	LB-589-W04	5/23/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	8.3	1.0 L
LB-1S	LB-989-W15	9/12/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	8.0	1.0 L
LB-1S	LB-1289-W12	12/15/89	1.0 L	1.0 L	1.0 L	1.0	1.0 L	1.0 L	8.5	1.0 L
LB-1S	LB-390-W10	3/14/90	1.0 L	1.0 L	1.0 L	1.1	1.0 L	1.0 L	9.1	1.0 L
LB-1S	LB-690-W10	6/20/90	1.0 L	1.0 L	1.0 L	1.3	1.0 L	1.0 L	5.5	1.0 L
LB-1S	LB-990-W06	9/14/90	1.0 L	1.0 L	1.0 L	1.5	1.0 L	1.8	3.1	1.0 L
LB-1S	LB-1290-W05	12/11/90	1.0 L	1.0 L	1.0 L	3.7	1.0 L	1.0 L	2.6	1.0 L
LB-1S	LB-391-W10	3/20/91	1.0 L	1.0 L	1.0 L	2.2	1.0 L	1.0 L	3.7	1.0 L
LB-1S	LB-691-W05	6/26/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.4	1.0 L
LB-1S	LB-991-05	9/24/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0	1.0 L
LB-1S	LB-1291-13	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0	1.0 L
LB-1S	LB-392-15	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1S	LB-63092-1	6/30/92	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.8 B	0.2 L
LB-1S	LB-92292-2	9/22/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-1S	LB-121192-15	12/11/92	0.2 L	0.2 L	0.2 L	0.3	0.5 L	0.3 L	0.3	0.2 L
LB-1S	LB-031093-3	3/10/93	0.2 L	0.2 L	0.2 L	1.8	0.5 L	0.3 L	0.9	0.2 L
LB-1S	LB-060293-5	6/2/93	0.2 L	0.2	0.2 L	0.7	0.5 L	0.3 L	0.6	0.2 L
LB-1S	LB-092393-9	9/23/93	0.2 L	0.2 L	0.2 L	0.3	0.5 L	0.3 L	0.2	0.2 L
LB-1S	LB-092393-9	9/23/93	0.2 L	0.2 L	0.2 L	NT	NT	0.3 L	NT	NT
LB-1S	LB-121593-1	12/15/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-1S	LB-032494-1	3/24/94	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.2	0.2 L
LB-1S	LB-062194-4	6/21/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1S	LB-090694-1	9/6/94	0.2 L	0.3 L	0.4 L	0.3	0.3 L	0.3 L	0.3 L	0.3 L
LB-1S	LB-121494-11	12/14/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-1S	LB-121995-5	2/19/95	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-030995-1	3/9/95	0.3 L	0.2 L	0.1 L	0.1 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-062095-12	6/20/95	0.3 L	0.2 L	0.1 L	0.1 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-092295-13	9/22/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-121995-5	12/19/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1S	LB-032096-17	3/20/96	0.3 L	0.2 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L	0.1 L
LB-1S	LB-061896-9	6/18/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-1S	LB-091796-5	9/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-1S	LB121796-1	12/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-1S	LB-031997-3	3/19/97	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-061797-3	6/17/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091697-2	9/16/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-121697-5	12/16/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031998-3	3/19/98	0.5 L	0.5 L	0.5 L	0.1 B	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-061698-5	6/16/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-1S	LB-091798-4	9/17/98	0.2 L	0.3 L	0.3 B	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-1S	LB-121898-9	12/18/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-1S	LB-031799-3	3/17/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-1S	LB-062399-14	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-1S	LB-091799-10	9/17/99	0.2 L	0.3 L	0.3 J	NT	NT	0.2 L	NT	0.2 L
LB-1S	LB-091799-9	9/17/99	0.2 L	0.3 L	0.3 J	NT	NT	0.2 L	NT	0.2 L
LB-1S	LB-121699-13	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	0.2 L	NT	0.2 L
LB-1S	LB-031700-15	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-061300-7	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091100-1	9/11/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-121500-9	12/15/00	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031401-14	3/14/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031902-1	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091802-1	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031303-10	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031303-11	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-092203-6	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-022404-2	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-090104-1	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S (Dup)	LB-090104-30	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-030905-14	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091405-1	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S (Dup)	LB-091405-2	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-031406-3	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091306-5	9/13/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S (Dup)	LB-091306-6	9/13/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-030507-1	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091907-1	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S (Dup)	LB-091907-2	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-1S	LB-032408-14	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-091608-1	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-1S	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LBLF1S091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-1S032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB1S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-1S	LB-1S	3/24/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1S	LB-090811-07	9/8/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1S	LB-031312-14	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1S	LB-091212-08	9/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-1S	LB-020513-09	2/5/2013	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-1S	LB-082213-08	8/22/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1S	LB-021914-18	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1S (Dup)	LB-021914-19	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1S	LB-081414-09	8/14/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-1S	LB-021915-16	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-1S	LB-081115-02	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-3D	LB-03D	5/28/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-3D	LB-1189-W01	11/13/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3D	LB-1289-W20	12/18/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3D	LB-032097-14	3/20/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-032098-21	3/20/98	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-031899-15	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-3D	LB-031600-9	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-031501-17	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-032002-18	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-031303-14	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-022404-5	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-030905-15	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-031606-21	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-030507-4	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-030507-5	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-032408-17	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-3D	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-3D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3D	LB-3D	3/28/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-3D	LB-031312-09	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-3D	LB-020713-18	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Lechner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-3D	LB-021914-22	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-3D	LB-021715-07	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-3S	LB-03S	5/12/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-3S	LB-03S	7/16/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-3S	LB-1089-W02	10/17/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3S	LB-1189-W02	11/13/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3S	LB-1289-W11	12/15/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-3S	LB-032594-11	3/25/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-3S	LB-032097-13	3/20/97	0.6	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-032098-20	3/20/98	0.5	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-031899-14	3/18/99	0.4	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-3S	LB-031600-8	3/16/00	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-031501-18	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-032002-17	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-031303-13	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-022404-6	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB030905-16	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-031606-22	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-030507-3	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-032408-18	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-3S	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-3S032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-3S	LB-3S	3/28/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-3S	LB-031312-10	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-3S	LB-020713-17	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-3S	LB-021914-22	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-3S	LB-021915-19	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5D	LB-05D	5/27/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-5D	LB-05D	7/20/87	1.0 L	1.0 L	NT	1.0 L	2.0 L	4.0 L	NT	1.0 L
LB-5D	LB-05D	2/11/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-5D	LB-05D	8/30/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	2.0 L	1.0 L	1.0 L
LB-5D	LB-1289-W24	12/19/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-5D	LB-032894-13	3/28/94	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.2 L	0.2 L
LB-5D	LB-031997-9	3/19/97	0.5 L	0.5 L	0.5 L	0.2	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031998-6	3/19/98	0.5 L	0.5 L	0.5 L	0.2	0.5 L	0.2	0.5 L	0.5 L
LB-5D	LB-031899-11	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-5D	LB-031600-5	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031401-11	3/14/01	0.5 L	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-5D	LB-031902-13	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031303-9	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-022504-7	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D (Dup)	LB-022504-8	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-030805-1	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031606-14	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D (Dup)	LB-031606-15	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-030507-7	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-031908-2	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D (Dup)	LB-031908-3	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-5D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-5D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5D	LB-5D	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5D	LB-031212-03	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5D	LB-020513-03	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-5D	LB-021714-01	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-5D	LB-021715-01	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5S	LB-05S	5/29/87	2.0 L	2.0 L	NT	2.0 L	2.0 L	5.0 L	NT	2.0 L
LB-5S	LB-05S	7/19/87	1.0 L	1.0 L	NT	2.0 L	2.0 L	4.0 L	NT	1.0 L
LB-5S	LB-05S	9/10/87	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-5S	LB-05S	11/11/87	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-5S	LB-05S	2/10/88	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	NT	1.0 L
LB-5S	LB-032894-12	3/28/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-5S	LB-031997-8	3/19/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031998-5	3/19/98	2.4	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031899-10	3/18/99	2.6	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-5S	LB-031600-4	3/16/00	1.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031401-12	3/14/01	0.4 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031902-12	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091802-6	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031303-8	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-092203-1	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-022504-9	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-090104-5	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB030805-2	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S (Dup)	LB030805-3	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091405-4	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-5S	LB-031606-16	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091206-1	9/12/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-030507-6	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091907-3	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-031908-1	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-091608-2	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S (Dup)	LB-091608-8	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-5S	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LBLF5S091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-5S032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S (Dup)	LB-DUP2032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB5S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S (Dup)	LB51S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-5S	LB-5S	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5S	LB-090811-06	9/8/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5S	LB-032212-17	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5S	LB-091112-01	9/11/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-5S	LB-020513-04	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-5S	LB-082113-01	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-5S	LB-021714-02	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-5S	LB-081314-01	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-5S	LB-021815-09	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-5S	LB-081215-08	8/12/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S	LB-06S	7/17/87	1.0 L	1.0 L	NT	3.0	2.0	4.0 L	NT	1.0 L
LB-6S	LB-06S	9/10/87	1.0 L	1.1	1.0 L	1.0 L	8.0	1.0 L	NT	1.0 L
LB-6S	LB-06S	11/11/87	1.0 L	2.6	1.0 L	4.2	7.1	1.0 L	NT	1.0 L
LB-6S	LB-06S	2/11/88	1.0 L	1.5	1.0 L	1.4	1.0 L	1.0 L	NT	1.0 L
LB-6S	LB-06S	6/22/88	1.0 L	4.0	1.0 L	6.0	1.0 L	1.0 L	NT	1.0 L
LB-6S	LB-06S	8/31/88	1.0 L	1.0	1.0 L	3.0	1.0 L	2.0 L	40.0	1.0 L
LB-6S	LB-06S	12/6/88	1.0 L	1.0 L	1.0 L	6.0	1.0 L	2.0	NT	1.0 L
LB-6S	LB-289-W17	3/1/89	1.0 L	1.0 L	1.0 L	6.9	1.0 L	2.6	24.1	1.0 L
LB-6S	LB-589-W17	5/24/89	1.0 L	1.0 L	1.0 L	5.2	1.0	1.0 L	21.0	1.0 L
LB-6S	LB-989-W07	9/7/89	1.0 L	1.0 L	1.0 L	5.6	1.0 L	1.5	20.0	1.0 L
LB-6S	LB-1289-W13	12/15/89	1.0	2.0	1.0 L	13.0	1.0 L	1.7	51.0	1.0 L
LB-6S	LB-390-W24	3/15/90	1.0 L	1.5	1.0 L	11.0	1.0 L	1.0 L	37.0	1.0 L
LB-6S	LB-690-W22	6/21/90	1.0 L	1.0 L	1.0 L	9.7	1.0 L	1.0 L	31.0	1.0 L
LB-6S	LB-990-W11	9/14/90	1.1	1.7	1.0 L	12.0	1.0 L	6.2	37.0	1.0 L
LB-6S	LB-1290-W13	12/12/90	1.0 L	1.0 L	1.0 L	10.0	1.0 L	4.5	34.0	1.0 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-6S	LB-391-W16	3/21/91	1.0 L	1.0 L	1.0 L	4.3	1.0 L	1.0 L	14.0	1.0 L
LB-6S	LB-691-W19	6/26/91	1.0 L	1.0 L	1.0 L	3.7	1.0 L	1.0 L	13.0	1.0 L
LB-6S	LB-691-W20	6/26/91	1.0 L	1.0 L	1.0 L	4.1	1.0 L	1.0 L	15.0	1.0 L
LB-6S	LB-991-14	9/25/91	1.0 L	1.0 L	1.0 L	5.0	1.0 L	1.0 L	18.0	1.0 L
LB-6S	LB-991-15	9/25/91	1.0 L	1.0 L	1.0 L	4.0	1.0 L	1.0	15.0	1.0 L
LB-6S	LB-1291-08	12/20/91	1.0 L	1.0 L	1.0 L	5.0	1.0 L	1.0 L	29.0	1.0 L
LB-6S	LB-1291-09	12/20/91	1.0 L	1.0 L	1.0 L	4.0	1.0 L	1.0 L	28.0	1.0 L
LB-6S	LB-392-07	3/20/92	1.0 L	1.0 L	1.0 L	2.0	1.0 L	1.0 L	4.0	1.0 L
LB-6S	LB-392-08	3/20/92	1.0 L	1.0 L	1.0 L	2.0	1.0 L	1.0 L	4.0	1.0 L
LB-6S	LB-62692-5	6/26/92	0.4	NT	0.2 L	NT	0.5 L	NT	NT	0.2 L
LB-6S	LB-62692-5	6/26/92	NT	0.4 B	0.2 L	2.6	NT	0.9	6.1 B	NT
LB-6S	LB-62692-6	6/26/92	NT	NT	0.2 L	NT	0.5 L	0.8	5.2 B	0.2 L
LB-6S	LB-62692-6	6/26/92	0.4	0.4 B	0.2 L	2.6	NT	NT	NT	NT
LB-6S	LB-92192-4	9/21/92	0.5	0.4	0.2 L	NT	0.5 L	2.1	5.9	0.2 L
LB-6S	LB-92192-4	9/21/92	NT	NT	0.2 L	3.0	NT	NT	NT	NT
LB-6S	LB-92192-5	9/21/92	NT	NT	0.2 L	NT	0.5 L	NT	NT	0.2 L
LB-6S	LB-92192-5	9/21/92	0.5	0.4	0.2 L	3.0	NT	1.9	5.6	NT
LB-6S	LB-12992-4	12/9/92	0.6 B	NT	0.2	NT	7.8 B	0.3 L	NT	0.2 L
LB-6S	LB-12992-4	12/9/92	NT	0.2	NT	3.6	NT	0.3 L	5.8	NT
LB-6S	LB-12992-5	12/9/92	NT	0.2 L	NT	3.9	3.1 B	0.3 L	6.6	0.2
LB-6S	LB-12992-5	12/9/92	0.4 B	0.2 L	0.2	NT	NT	0.3 L	NT	NT
LB-6S	LB-031093-7	3/10/93	0.2 L	0.2 L	0.2 L	NT	0.5 L	0.9	2.3	0.2 L
LB-6S	LB-031093-7	3/10/93	0.2 L	0.2 L	0.2 L	2.6	NT	NT	NT	NT
LB-6S	LB-031093-8	3/10/93	0.2 L	0.2 L	0.2 L	NT	0.5 L	0.3 L	2.1	0.2 L
LB-6S	LB-031093-8	3/10/93	0.2 L	0.2 L	0.2 L	2.4	NT	0.3 L	NT	NT
LB-6S	LB-060393-11	6/3/93	0.4	NT	0.2 L	1.3	0.5 L	NT	1.2	0.2 L
LB-6S	LB-060393-11	6/3/93	NT	0.3	0.2 L	NT	NT	0.6	NT	NT
LB-6S	LB-060393-12	6/3/93	0.4	NT	0.2 L	NT	0.5 L	NT	NT	0.2 L
LB-6S	LB-060393-12	6/3/93	NT	0.3	0.2 L	1.1	NT	0.4	1.0	NT
LB-6S	LB-092493-13	9/24/93	0.2 L	0.2 L	0.2 L	1.8	0.5 L	2.9	1.4	0.2 L
LB-6S	LB-092493-13	9/24/93	0.2 L	0.2 L	0.2 L	NT	NT	NT	NT	NT
LB-6S	LB-121593-6	12/15/93	0.2 L	0.2 L	0.2 L	1.6	0.5 L	1.3	1.8	0.2 L
LB-6S	LB-032994-18	3/29/94	0.2 L	0.2 L	0.2 L	0.9	0.5 L	0.6	0.5	0.2 L
LB-6S	LB-032994-19	3/29/94	0.2 L	0.2 L	0.2 L	0.9	0.5 L	0.5	0.5	0.2 L
LB-6S	LB-062394-11	6/23/94	0.2 L	0.3 L	0.4 L	0.5	0.3 L	0.3 L	0.3 L	0.3 L
LB-6S	LB-062394-12	6/23/94	0.2 L	0.3 L	0.4 L	0.6	0.3 L	0.3 L	0.3 L	0.3 L
LB-6S	LB-090694-5	9/6/94	0.2 L	0.3 L	0.4 L	0.8	0.3 L	0.8	0.4	0.3 L
LB-6S	LB-090694-6	9/6/94	0.2 L	0.3 L	0.4 L	0.8	0.3 L	0.8	0.4	0.3 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-6S	LB-121394-6	12/13/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-6S	LB-121394-7	12/13/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-6S	LB-031095-10	3/10/95	0.3 L	0.2 L	0.1 L	0.2 B	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-031095-11	3/10/95	0.3 L	0.2 L	0.1	0.2 B	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-062095-10	6/20/95	0.3 L	0.2 L	0.1 L	0.3 B	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-062095-9	6/20/95	0.3 L	0.2 L	0.1 L	0.3 B	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-092095-6	9/20/95	0.3 L	0.3 L	0.1 L	0.3	0.1 L	0.1	0.2	0.1 L
LB-6S	LB-092095-7	9/20/95	0.3 L	0.3 L	0.1 L	0.3	0.1 L	0.1	0.2	0.1 L
LB-6S	LB-122095-12	12/20/95	0.3 L	0.2 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L	0.1 L
LB-6S	LB-122095-13	12/20/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1	0.1 L
LB-6S	LB-031996-5	3/19/96	0.3 L	0.2 L	0.1 L	0.2	0.1 L	0.1 L	0.1	0.1 L
LB-6S	LB-031996-6	3/19/96	0.3 L	0.2 L	0.1 L	0.2	0.1 L	0.1 L	0.1 L	0.1 L
LB-6S	LB-061996-12	6/19/96	0.1 L	0.1 L	0.0 L	0.3	0.1 L	0.1 L	0.2	0.1 L
LB-6S	LB-061996-13	6/19/96	0.1	0.1 L	0.0 L	0.3	0.1 L	0.1 L	0.3	0.1 L
LB-6S	LB-091896-12	9/18/96	0.1 L	0.1 L	0.0 L	0.4	0.1 L	0.1 L	0.3	0.1 L
LB-6S	LB121796-3	12/17/96	0.1 L	0.1 L	0.0 L	0.4	0.1 L	0.1	0.2	0.1 L
LB-6S	LB-031997-7	3/19/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-061797-6	6/17/97	0.2	0.1	0.0	0.5	0.5 L	0.5 L	0.9	0.5 L
LB-6S	LB-091697-3	9/16/97	0.5 L	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.6	0.5 L
LB-6S	LB-121797-14	12/17/97	0.4	0.2	0.5 L	1.0	0.5 L	0.5 L	1.7	0.5 L
LB-6S	LB-031998-7	3/19/98	0.3	0.2	0.1	0.5	0.5 L	0.2	0.5 L	0.5 L
LB-6S	LB-061698-7	6/16/98	0.1	0.1	0.1	0.2	0.1 L	0.1 L	0.3	0.1 L
LB-6S	LB-091798-5	9/17/98	0.2	0.3 L	0.2 B	0.5	0.3 L	0.2 L	0.6	0.2 L
LB-6S	LB-121798-1	12/17/98	0.2 L	0.3 L	0.2 L	0.2	0.3 L	0.2 L	0.3 L	0.2 L
LB-6S	LB-031799-2	3/17/99	0.2 L	0.3 L	0.2 L	0.4	0.3 L	0.2 L	0.4	0.2 L
LB-6S	LB-062399-11	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-6S	LB-121599-10	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-6S	LB-031700-10	3/17/00	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031700-11	3/17/00	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-061300-6	6/13/00	0.5 L	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091200-3	9/12/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-121200-1	12/12/00	0.2 J	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.3 J	0.5 L
LB-6S	LB-121200-2	12/12/00	0.5 L	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.2 J	0.5 L
LB-6S	LB-031301-7	3/13/01	0.2 J	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031301-8	3/13/01	0.5 L	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-032002-15	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-032002-16	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091802-2	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091802-3	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-6S	LB-031303-21	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-092203-5	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-022604-18	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-090104-6	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-030805-9	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091405-6	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031506-13	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091206-4	9/12/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-030507-12	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091907-6	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-031908-9	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-091608-3	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-6S	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LBLF6S091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S (Dup)	LBLFDUP1091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-6S032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB6S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-6S	LB-6S	3/22/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S (Dup)	DUP1	3/22/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S	LB-090711-05	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S (Dup)	LB-090711-04	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S	LB-032212-23	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S (Dup)	LB-032212-22	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S	LB-091212-06	9/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S (Dup)	LB-091212-07	9/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-6S	LB-020613-15	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-6S (Dup)	LB-020613-16	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-6S	LB-082113-07	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-6S	LB-021914-23	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-6S	LB-081314-06	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-6S (Dup)	LB-081314-07	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-6S	LB-021815-14	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S (Dup)	LB-021815-13	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S	LB-081115-03	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-6S (Dup)	LB-081115-04	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB10-DR	LB-031005-19	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR (Dup)	LB-031005-20	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-031406-5	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB10-DR	LB-030607-20	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-032408-22	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-10D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB10-DR	LB-10D032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10DR	LB-10DR	3/29/11	0.1 L	0.1 L	0.2 L	0.18	0.1 L	0.25 L	0.1 L	0.1 L
LB-10DR	LB-0313012-07	3/13/12	0.1 L	0.1 L	0.2 L	0.12	0.1 L	0.25 L	0.1 L	0.1 L
LB-10DR	LB-020713-19	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-10DR	LB-021914-15	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-10DR	LB-021915-20	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10SR	LB-031005-21	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-091505-7	9/15/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-031406-6	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-091306-9	9/13/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-030607-19	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-091907-7	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-032408-21	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR (Re)	MW10SR-043008	4/30/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-091608-4	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-10S	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR (Dup)	Dup-1	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LBLF10S091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-10SR032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB10S092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-10SR	LB-10SR	3/29/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR (Dup)	DUP2	3/29/11	0.1 L	0.15	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR	LB-090811-08	9/8/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR	LB-031312-08	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR	LB-091212-09	9/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-10SR	LB-020713-20	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-10SR	LB-082213-09	8/22/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-10SR	LB-021914-16	2/19/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-10SR	LB-081414-08	8/14/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-10SR	LB-021915-21	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-10SR	LB-081015-01	8/10/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13D	LB-989-W20	9/13/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-1089-W15	10/19/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-1189-W20	11/16/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-1289-W18	12/18/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-13D	LB-390-W18	3/15/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-690-W20	6/21/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-990-W17	9/18/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0	1.0 L	1.0 L	1.0 L
LB-13D	LB-1290-W20	12/13/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-391-W15	3/20/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-691-W22	6/26/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-991-13	9/25/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-1291-19	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-392-19	3/24/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-13D	LB-7292-2	7/2/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-91792-2	9/17/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-121092-9	12/10/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-031293-20	3/12/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-060493-21	6/4/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-092393-7	9/23/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-092393-7	9/23/93	0.2 L	0.2 L	0.2 L	0.2 L	NT	0.3 L	0.2 L	NT
LB-13D	LB-121693-12	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-032894-17	3/28/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13D	LB-062394-20	6/28/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-13D	LB-090794-10	9/7/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-13D	LB-121594-21	12/15/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-13D	LB-031395-18	3/13/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-062195-19	6/21/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-092295-16	9/22/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-121995-8	12/19/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-032096-15	3/20/96	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-032096-16	3/20/96	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13D	LB-061996-16	6/19/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-13D	LB-091796-4	9/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-13D	LB121796-9	12/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-13D	LB-032097-18	3/20/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-061897-15	6/18/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-091897-11	9/18/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-121797-9	12/17/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.8 L	0.5 L	0.5 L
LB-13D	LB-032098-19	3/20/98	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-061798-14	6/17/98	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-13D	LB-091898-15	9/18/98	0.2 L	0.3 L	0.3 B	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13D	LB-121898-12	12/18/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-13D	LB-031999-23	3/19/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13D	LB-062399-12	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13D	LB-091799-13	9/17/99	0.2 L	0.3 L	0.3 J	NT	NT	NT	NT	NT
LB-13D	LB-121699-3	12/14/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-13D	LB-031700-18	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-061400-10	6/14/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-091300-11	9/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-121500-12	12/15/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-031501-19	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-032002-20	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-031303-16	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-022404-3	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-031005-17	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-031506-9	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-030607-18	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-032008-13	3/20/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-13D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-13D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13D	LB-13D	3/25/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13D	LB-031212-01	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13D	LB-020713-22	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-13D	LB-021814-08	2/18/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-13D	LB-021715-03	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13I	LB-989-W22	9/13/89	1.0 L	1.0 L	1.0 L	6.5	1.0 L	1.8	13.0	1.0 L
LB-13I	LB-989-W23	9/13/89	1.0 L	1.0 L	1.0 L	5.6	1.0 L	1.3	11.0	1.0 L
LB-13I	LB-1089-W17	10/19/89	1.0 L	1.0 L	1.0 L	6.0	1.0 L	2.3	10.0	1.0 L
LB-13I	LB-1189-W17	11/16/89	1.0 L	1.0 L	1.0 L	4.9	1.0 L	2.3	1.0 L	1.0 L
LB-13I	LB-1289-W16	12/18/89	1.0 L	1.0 L	1.0 L	5.7	1.0 L	1.9	10.0	1.0 L
LB-13I	LB-390-W19	3/15/90	1.0 L	1.0 L	1.0 L	2.0	1.0 L	3.7	2.2	1.0 L
LB-13I	LB-690-W19	6/21/90	1.0 L	1.0 L	1.0 L	3.6	1.0 L	1.4	8.1	1.0 L
LB-13I	LB-990-W16	9/18/90	1.0 L	1.0 L	1.0 L	5.1	1.0 L	2.4	8.3	1.0 L
LB-13I	LB-1290-W21	12/13/90	1.0 L	1.0 L	1.0 L	4.6	1.0 L	2.9	7.9	1.0 L
LB-13I	LB-391-W14	3/20/91	1.0 L	1.0 L	1.0 L	3.1	1.0 L	1.0 L	7.1	1.0 L
LB-13I	LB-691-W21	6/26/91	1.0 L	2.1	1.0 L	2.4	1.0 L	1.2	4.1	1.0 L
LB-13I	LB-991-12	9/25/91	1.0 L	1.0 L	1.0 L	3.0	1.0 L	1.0	9.0	1.0 L
LB-13I	LB-1291-18	12/23/91	1.0 L	1.0 L	1.0 L	1.0	1.0 L	1.0 L	9.0	1.0 L
LB-13I	LB-392-20	3/24/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0	1.0 L
LB-13I	LB-7292-1	7/2/92	0.2 L	0.2 L	0.2 L	0.4	0.5 L	1.4	0.2 L	0.2 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-13I	LB-91792-1	9/17/92	0.2 L	0.2 L	0.2 L	1.6	0.5 L	6.6	2.5	0.2 L
LB-13I	LB-121092-8	12/10/92	0.2 L	0.2 L	0.2 L	1.6	0.5 L	0.3 L	1.9	0.2 L
LB-13I	LB-031293-19	3/12/93	0.2 L	0.2 L	0.2 L	1.3	0.5 L	1.2	1.7	0.2 L
LB-13I	LB-060493-20	6/4/93	0.2 L	0.2	0.2 L	0.8	0.5 L	0.5	0.9	0.2 L
LB-13I	LB-092393-6	9/23/93	0.2 L	0.2 L	0.2 L	0.8	0.5 L	1.6	0.6	0.2 L
LB-13I	LB-092393-6	9/23/93	0.2 L	0.2 L	0.2 L	NT	NT	NT	NT	NT
LB-13I	LB-121693-14	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-13I	LB-032894-16	3/28/94	0.2 L	0.2 L	0.2 L	0.9	0.5 L	0.3 L	0.5	0.2 L
LB-13I	LB-0624894-19	6/28/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.6	0.3 L	0.3 L
LB-13I	LB-090794-9	9/7/94	0.2 L	0.3 L	0.4 L	0.2	0.3 L	0.6	0.3 L	0.3 L
LB-13I	LB-121594-20	12/15/94	0.2 L	0.3 L	0.4 L	0.3	0.3 L	0.3 L	0.3 L	0.3 L
LB-13I	LB-031395-17	3/13/95	0.3 L	0.2 L	0.1 L	0.2 B	0.1 L	0.2	0.1 L	0.1 L
LB-13I	LB-062195-18	6/21/95	0.3 L	0.2 L	0.1 L	0.2 B	0.1 L	0.1 L	0.1	0.1 L
LB-13I	LB-092295-15	9/22/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.2	0.1 L	0.1 L
LB-13I	LB-121995-7	12/19/95	0.3 L	0.1	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-13I	LB-032096-14	3/20/96	0.3 L	0.2 L	0.1 L	0.4	0.1 L	0.1 L	0.2 B	0.1 L
LB-13I	LB-061996-15	6/19/96	0.1 L	0.1 L	0.0	0.6	0.1 L	1.1	0.2	0.1 L
LB-13I	LB-091796-3	9/17/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.8	0.2 L	0.1 L
LB-13I	LB121796-10	12/17/96	0.1 L	0.1 L	0.0	0.1 L	0.1 L	1.1	0.2 L	0.1 L
LB-13I	LB-032097-19	3/20/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5	0.5 L	0.5 L
LB-13I	LB-061897-14	6/18/97	0.5 L	0.5 L	0.1	0.1	0.5 L	0.9	0.5 L	0.5 L
LB-13I	LB-091897-12	9/18/97	0.5 L	0.5 L	0.2	0.2	0.5 L	0.9	0.5 L	0.5 L
LB-13I	LB-121797-8	12/17/97	0.5 L	0.5 L	0.1	0.1	0.5 L	0.8	0.5 L	0.5 L
LB-13I	LB-032098-18	3/20/98	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.7	0.5 L	0.5 L
LB-13I	LB-061798-15	6/17/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.6	0.2 L	0.1 L
LB-13I	LB-091898-14	9/18/98	0.2 L	0.3 L	0.3 B	0.2 L	0.3 L	0.7	0.3 L	0.2 L
LB-13I	LB-121898-11	12/18/98	0.2 L	0.3 L	0.2 L	0.3	0.3 L	0.2 L	0.3 L	0.2 L
LB-13I	LB-031999-22	3/19/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.4	0.3 L	0.2 L
LB-13I	LB-062399-13	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-13I	LB-091799-12	9/17/99	0.2 L	0.3 L	0.3 J	NT	NT	0.4 J	NT	NT
LB-13I	LB-121699-4	12/14/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-13I	LB-031700-17	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-061400-9	6/14/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091300-12	9/13/00	0.3 J	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-121500-11	12/15/00	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-031501-20	3/15/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-032002-19	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091802-7	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-13I	LB-031303-15	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-092203-7	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-022404-4	2/24/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-090104-13	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-031005-18	3/10/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091505-9	9/15/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-031506-10	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091306-8	9/13/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-030607-17	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091907-8	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-032008-12	3/20/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-091608-5	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-13I	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LBLF13i091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-13I032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-13I092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-13I	LB-13I	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I	LB-090711-02	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I	LB-032212-19	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I (Dup)	LB-032212-20	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I	LB-091112-03	9/11/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-13I	LB-020613-13	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-13I	LB-082113-05	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-13I	LB-021814-10	2/18/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-13I	LB-081314-04	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-13I	LB-021815-11	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-13I	LB-081115-05	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-17D	LB-989-W08	9/7/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1089-W10	10/18/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1089-W11	10/18/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1189-W12	11/15/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1189-W13	11/15/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1289-W28	12/20/89	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-390-W21	3/15/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-390-W22	3/15/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-690-W18	6/21/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-17D	LB-990-W19	9/19/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-990-W20	9/19/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1290-W23	12/13/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-391-W19	3/21/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-391-W21	3/21/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-691-W14	6/11/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-691-W15	6/11/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-991-10	9/25/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-991-11	9/25/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1291-16	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-1291-17	12/23/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-392-11	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-392-12	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17D	LB-63092-5	6/30/92	0.2 L	0.2 L	0.5	0.2 L	0.5 L	0.9	0.2 L	0.2 L
LB-17D	LB-031093-6	3/10/93	0.2 L	0.2 L	0.3	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-17D	LB-060493-22	6/4/93	0.2 L	0.2 L	0.3	0.2 L	0.5 L	0.4	0.2 L	0.2 L
LB-17D	LB-092793-21	9/27/93	0.2 L	0.2 L	0.3	0.2 L	0.5 L	2.3	0.2 L	0.2 L
LB-17D	LB-092793-21	9/27/93	0.2 L	0.2 L	NT	0.2 L	NT	NT	0.2 L	NT
LB-17D	LB-121593-7	12/15/93	0.2 L	0.2 L	0.3	0.2 L	0.5 L	0.7	0.2 L	0.2 L
LB-17D	LB-032994-20	3/29/94	0.2 L	0.2 L	0.3	0.5 L	0.5 L	0.8	0.2 L	0.2 L
LB-17D	LB-062394-14	6/23/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-17D	LB-090794-7	9/7/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.7	0.3 L	0.3 L
LB-17D	LB-121494-10	12/14/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.4	0.3 L	0.3 L
LB-17D	LB-030995-5	3/9/95	0.3 L	0.4	0.2	0.1 L	0.1 L	0.4	0.2	0.1 L
LB-17D	LB-062095-11	6/20/95	0.3 L	0.2 L	0.3	0.1 L	0.1 L	0.3	0.1 L	0.1 L
LB-17D	LB-092095-10	9/20/95	0.3 L	0.3 L	0.4	0.1 L	0.1 L	0.1 L	0.1	0.1 L
LB-17D	LB-121895-3	12/18/95	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.4	0.5 L	0.5 L
LB-17D	LB-121895-3	12/18/95	0.3 L	0.2 L	NT	0.1 L	0.1 L	NT	0.1 L	0.1 L
LB-17D	LB-031996-11	3/19/96	0.3 L	0.2 L	0.3 B	0.1 L	0.1 L	0.4	0.1 L	0.1 L
LB-17D	LB-061996-14	6/19/96	0.1 L	0.1 L	0.3	0.1 L	0.1 L	0.6	0.2 L	0.1
LB-17D	LB-032097-16	3/20/97	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031998-14	3/19/98	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031899-13	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-17D	LB-031600-7	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031401-9	3/14/01	0.5 L	0.5 L	0.1 J	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031902-7	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-031203-7	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-022504-10	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-030905-10	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-17D	LB-031506-7	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-030607-14	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D (Dup)	LB-030607-15	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-032008-11	3/20/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-17D	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-17D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17D	LB-17D	3/22/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LN-17D	LB-031212-04	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-17D	LB-020513-05	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-17D	LB-021714-03	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-17D	LB-021715-05	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-17D (DUP)	LB-021715-06	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-17I	LB-989-W04	9/6/89	1.0 L	1.0 L	1.4	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-1089-W14	10/19/89	1.0 L	1.0 L	1.6	1.0 L	1.0 L	1.0 L	1.0 L	1.4
LB-17I	LB-1189-W14	11/15/89	1.0 L	1.0 L	1.3	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-1289-W29	12/20/89	1.0 L	1.0 L	1.4	1.0 L	1.0 L	1.0 L	1.0 L	1.1
LB-17I	LB-1289-W30	12/20/89	1.0 L	1.0 L	1.4	1.0 L	1.0 L	1.0 L	1.0 L	1.1
LB-17I	LB-390-W20	3/15/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-690-W17	6/21/90	1.0 L	1.0 L	1.0	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-990-W18	9/19/90	1.0 L	1.0 L	1.2	1.0 L	1.0 L	1.0 L	1.0 L	1.1
LB-17I	LB-1290-W22	12/13/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-391-W20	3/21/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-392-13	3/23/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-17I	LB-63092-6	6/30/92	0.2 L	0.2 L	0.7		0.5 L	NT	0.2 L	0.8
LB-17I	LB-63092-6	6/30/92	0.2 L	0.2 L	NT	0.2	NT	1.0	0.2 L	NT
LB-17I	LB-63092-7	6/30/92	0.2 L	0.2 L	0.7	0.3	0.5 L	1.0		0.9
LB-17I	LB-63092-7	6/30/92	0.2 L	0.2 L	NT		NT	NT	0.3 B	NT
LB-17I	LB-91892-3	9/18/92	0.2 L	0.2 L	1.0	0.2	0.5 L	4.1	0.2 L	1.3
LB-17I	LB-91892-3	9/18/92	0.2 L	0.2 L	NT		NT	NT	0.2 L	NT
LB-17I	LB-91892-4	9/18/92	0.2 L	0.2 L	0.9		0.5 L	NT	0.2 L	1.2
LB-17I	LB-91892-4	9/18/92	0.2 L	0.2 L	NT	0.2	NT	4.1	0.2 L	NT
LB-17I	LB-121192-18	12/11/92	0.2 L	0.2 L	NT	0.2 L	0.5 L	1.0	0.2 L	1.5
LB-17I	LB-121192-18	12/11/92	0.2 L	0.2 L	1.3	0.2 L	NT	NT	0.2 L	NT
LB-17I	LB-121192-19	12/11/92	0.2 L	0.2 L	1.3	0.2 L	0.5 L	NT	0.2 L	1.6
LB-17I	LB-121192-19	12/11/92	0.2 L	0.2 L	NT	0.2 L	NT	1.1	0.2 L	NT
LB-17I	LB-031093-5	3/10/93	0.2 L	0.2 L	1.5	0.2 L	0.5 L	0.8	0.2 L	1.9
LB-17I	LB-032994-21	3/29/94	0.2 L	0.2 L	0.9	0.5 L	0.5 L	0.4	0.2 L	0.8
LB-17I	LB-030995-6	3/9/95	0.3 L	0.2 L	0.8	0.1 L	0.1 L	0.2	0.1 L	1.0

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-17I	LB-031996-10	3/19/96	0.3 L	0.2 L	0.7	0.1 L	0.1 L	0.4	0.1 L	0.9
LB-17I	LB-032097-17	3/20/97	0.5 L	0.5 L	1.3	0.5 L	0.5 L	0.5 L	0.5 L	1.5
LB-17I	LB-031998-13	3/19/98	0.5 L	0.5 L	0.8 J	0.5 L	0.5 L	0.1 J	0.5 L	1.1 J
LB-17I	LB-031899-12	3/18/99	0.2 L	0.3 L	0.6	0.2 L	0.3 L	0.2 L	0.3 L	0.8
LB-17I	LB-031600-6	3/16/00	0.5 L	0.5 L	0.4 J	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J
LB-17I	LB-031401-10	3/14/01	0.5 L	0.5 L	0.4 J	0.5 L	0.5 L	0.5 L	0.5 L	0.3 J
LB-17I	LB-031902-6	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-031203-6	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-022504-11	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB030905-11	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-031506-8	3/15/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-030607-13	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-032008-10	3/20/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-17I	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-17I032310	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I (Dup)	LB-DUP1032410	3/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-17I	LB-17I	3/22/11	0.1 L	0.81	0.26	0.1 L	0.1 L	0.25 L	0.27	0.1 L
LB-17I	LB-031312-16	3/13/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-17I	LB-020513-06	2/5/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-17I	LB-021714-04	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-17I	LB-021815-15	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-20S	LB-1289-W36	12/21/89	1.0 L	1.0 L	1.0 L	1.0	22.0	2.6	1.3	1.0 L
LB-20S	LB-390-W12	3/14/90	1.0 L	1.0 L	1.0 L	2.5	1.0 L	10.0	2.0	1.1
LB-20S	LB-690-W08	6/19/90	1.0 L	1.0 L	1.0 L	1.8	1.0 L	12.0	1.1	2.2
LB-20S	LB-690-W09	6/19/90	1.0 L	1.0 L	1.0 L	2.2	1.0 L	14.0	1.8	2.4
LB-20S	LB-990-W09	9/14/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	4.9	1.0 L	1.3
LB-20S	LB-1290-W10	12/12/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	5.8	1.0 L	1.7
LB-20S	LB-1290-W11	12/12/90	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.5
LB-20S	LB-391-W08	3/20/91	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-20S	LB-392-18	3/24/92	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L	1.0 L
LB-20S	LB-031593-26	3/15/93	0.2 L	0.2 L	NT	NT	0.5 L	1.3	0.2 L	1.3
LB-20S	LB-031593-26	3/15/93	0.2 L	0.2 L	0.4	0.2	NT	NT	0.2 L	NT
LB-20S	LB-031593-27	3/15/93	0.2 L	0.2 L	0.4	NT	0.5 L	NT	0.2 L	1.5
LB-20S	LB-031593-27	3/15/93	0.2 L	0.2 L	NT	0.2	NT	1.6	0.2 L	NT
LB-20S	LB-032994-23	3/29/94	0.2 L	0.2 L	0.5	0.3	0.5 L	1.6	0.2 L	1.1
LB-20S	LB-031395-19	3/13/95	0.3 L	0.2 L	0.3	0.2 B	0.1 L	1.2	0.2	1.4
LB-20S	LB-032096-20	3/20/96	0.3 L	0.3	1.0	0.2	0.1 L	1.9	0.1 B	1.9
LB-20S	LB-032097-15	3/20/97	0.5 L	0.5 L	1.6	0.5 L	0.5 L	2.0	0.5 L	2.3

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-20S	LB-032098-23	3/20/98	0.5 L	0.5 L	0.8	0.5 L	0.5 L	0.5	0.5 L	1.0
LB-20S	LB-031899-16	3/18/99	0.2 L	0.3 L	0.5	0.2 L	0.3 L	0.9	0.3 L	0.6
LB-20S	LB-031700-14	3/17/00	0.5 L	0.5 L	0.5	0.5 L	0.5 L	0.8	0.5 L	0.8
LB-20S	LB-031401-13	3/14/01	0.5 L	0.5 L	0.4 J	0.5 L	0.5 L	0.5 L	0.5 L	0.6
LB-20S	LB-032002-14	3/20/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-031303-20	3/13/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-022604-19	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB030905-12	3/9/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-031406-4	3/14/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-030607-16	3/6/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5
LB-20S	LB-032408-16	3/24/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5
LB-20S	LB-20S	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-20S032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-20S	LB-20S	3/24/11	0.1 L	0.1 L	0.25	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-20S	LB-031312-15	3/13/12	0.1 L	0.1 L	0.2	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-20S	LB-020613-10	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-20S	LB-021914-20	2/19/14	0.15 L	0.13 L	0.23 J	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-20S	LB-021915-18	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-26D	LB-0892-2	8/27/92	0.2 L J	0.2 L J	0.2 L J	0.2 L J	0.5 L J	0.3 L J	0.3 J	0.2 L J
LB-26D	LB-92192-7	9/21/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-121092-13	12/10/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-031193-14	3/11/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-060193-3	6/1/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-092493-12	9/24/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-092493-12	9/24/93	0.2 L	0.2 L	0.2 L	0.2 L	NT	0.3 L	0.2 L	NT
LB-26D	LB-121693-16	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-032594-7	3/25/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-26D	LB-062294-6	6/22/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-26D	LB-090894-15	9/8/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-26D	LB-121394-5	12/13/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-26D	LB-031095-14	3/10/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-061995-2	6/19/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-092095-4	9/20/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-122095-15	12/20/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-031996-2	3/19/96	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26D	LB-061896-2	6/18/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.1 L	0.2 L	0.1 L
LB-26D	LB-091896-10	9/18/96	0.1 L	0.1 L	0.0 L	4.0 B	0.1 L	0.1 L	0.2 L	0.1 L
LB-26D	LB121796-4	12/17/96	0.1 L	0.1 L	0.0 L	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-26D	LB-031997-6	3/19/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-061797-8	6/17/97	0.5 L	0.5 L	0.1	0.1	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-091697-4	9/16/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-121697-5	12/16/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031998-9	3/19/98	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-061698-9	6/16/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-26D	LB-091798-6	9/17/98	0.2 L	0.3 L	0.2 B	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26D	LB-121798-3	12/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26D	LB-031899-6	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26D	LB-062399-9	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26D	LB-121599-9	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-26D	LB-031700-13	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-061300-5	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-091200-4	9/12/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-121500-7	12/15/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031301-5	3/13/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031902-8	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031203-5	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-022504-12	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-030805-7	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031606-19	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-030507-11	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-031908-8	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-26D	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-26D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26D	LB-26D	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26D	LB-031212-05	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26D	LB-020713-23	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-26D	LB-021714-05	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26D	LB-021715-04	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-26I	LB-0892-1	8/27/92	0.2 L J	0.2 L J	0.2 L J	0.5 J	0.5 L J	1.3 J	0.2 L J	0.2 L J
LB-26I	LB-92192-6	9/21/92	0.2 L	0.2 L	0.2 L	0.6	0.5 L	2.1	0.2 L	0.2 L
LB-26I	LB-121092-12	12/10/92	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.2 L	0.2 L
LB-26I	LB-031193-13	3/11/93	0.2 L	0.2 L	0.2 L	0.6	0.5 L	1.1	0.2 L	0.2 L
LB-26I	LB-060193-1	6/1/93	0.2 L	0.2 L	0.2 L	0.3	0.5 L	1.6	0.2 L	0.2 L
LB-26I	LB-092493-11	9/24/93	0.2 L	0.2 L	0.2 L	0.3	0.5 L	3.0	0.2 L	0.2 L
LB-26I	LB-092493-11	9/24/93	0.2 L	0.2 L	0.2 L	NT	NT	NT	0.2 L	NT
LB-26I	LB-121693-15	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.8	0.2 L	0.2 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-26I	LB-032594-6	3/25/94	0.2 L	0.2 L	0.2 L	0.5 L	0.5 L	0.8	0.2 L	0.2 L
LB-26I	LB-062294-5	6/22/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.3 L	0.3 L	0.3 L
LB-26I	LB-090894-16	9/8/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	1.0	0.3 L	0.3 L
LB-26I	LB-121394-4	12/13/94	0.2 L	0.3 L	0.4 L	0.2 L	0.3 L	0.6	0.3 L	0.3 L
LB-26I	LB-031095-13	3/10/95	0.3 L	0.2 L	0.1 L	0.1 B	0.1 L	0.5	0.1 L	0.1 L
LB-26I	LB-061995-1	6/19/95	0.3 L	0.2 L	0.1 L	0.1 B	0.1 L	0.5	0.1 L	0.1 L
LB-26I	LB-092095-5	9/20/95	0.3 L	0.3 L	0.1 L	0.1 L	0.1 L	0.3	0.1 L	0.1 L
LB-26I	LB-122095-14	12/20/95	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L	0.1 L
LB-26I	LB-031996-1	3/19/96	0.3 L	0.2 L	0.1 L	0.1 L	0.1 L	0.7	0.1 L	0.1 L
LB-26I	LB-061896-1	6/18/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.5	0.2 L	0.1 L
LB-26I	LB-091896-10	9/18/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.8	0.2 L	0.1 L
LB-26I	LB-121796-5	12/17/96	0.1 L	0.1 L	0.0 L	0.2	0.1 L	0.1 L	0.2 L	0.1 L
LB-26I	LB-031997-4	3/19/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-061797-7	6/17/97	0.5 L	0.5 L	0.1	0.1	0.5 L	0.4	0.5 L	0.5 L
LB-26I	LB-091697-5	9/16/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-121697-7	12/16/97	0.1	0.1	0.1	0.5	0.5 L	0.5 L	0.6	0.5 L
LB-26I	LB-031998-8	3/19/98	0.5 L	0.5 L	0.1	0.1	0.5 L	0.4	0.5 L	0.5 L
LB-26I	LB-061698-8	6/16/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-26I	LB-091798-7	9/17/98	0.2 L	0.3 L	0.3 B	0.2 L	0.3 L	0.3	0.3 L	0.2 L
LB-26I	LB-121798-2	12/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26I	LB-031799-1	3/17/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.4	0.3 L	0.2 L
LB-26I	LB-062399-10	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-26I	LB-121599-8	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-26I	LB-031700-12	3/17/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-061300-4	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L
LB-26I	LB-091200-5	9/12/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-121500-8	12/15/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031301-6	3/13/01	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031902-9	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091802-4	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031203-4	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-092203-4	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-022504-13	2/25/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-090104-26	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-030805-8	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091405-5	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031606-20	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091206	9/12/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-26I	LB-030507-10	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091907-5	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-031908-7	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-091608-6	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-26I	3/17/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-26I	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-26I	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-26I	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-26I	LB-26I	3/23/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26I	LB-090711-03	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26I	LB-032212-21	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26I	LB-091112-04	9/11/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-26I	LB-020613-14	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-26I	LB-082113-06	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26I	LB-021714-06	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26I (Dup)	LB-021714-07	2/17/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26I	LB-081314-05	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-26I	LB-021815-12	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-26I	LB-081115-06	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27D	LB-0892-4	8/27/92	0.2 L J	0.2 L J	0.2 L J	0.4 J	0.5 L J	0.3 L J	0.2 L J	0.2 L J
LB-27D	LB-92202-5	9/22/92	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	1.6 J	0.2 L	0.2 L
LB-27D	LB-121192-21	12/11/92	0.2 L	0.2	0.2 L	0.7	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-031193-16	3/11/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-060193-4	6/1/93	0.2 L	0.2 L	0.2 L	0.4	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-092493-16	9/24/93	0.2 L	0.2 L	0.2 L	NT	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-092493-16	9/24/93	0.2 L	0.2 L	0.2 L	0.4	NT	0.3 L	0.2 L	NT
LB-27D	LB-092493-17	9/24/93	0.2 L	0.2 L	0.2 L	NT	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-092493-17	9/24/93	0.2 L	0.2 L	0.2 L	0.4	NT	0.3 L	0.2 L	NT
LB-27D	LB-121693-17	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-121693-18	12/16/93	0.2 L	0.2 L	0.2 L	0.2 L	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-032494-4	3/24/94	0.2 L	0.2 L	0.2 L	0.4	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-032494-5	3/24/94	0.2 L	0.2 L	0.2 L	0.5	0.5 L	0.3 L	0.2 L	0.2 L
LB-27D	LB-062294-10	6/22/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-062294-9	6/22/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-090894-12	9/8/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-090894-13	9/8/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-121394-2	12/13/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L
LB-27D	LB-121394-3	12/13/94	0.2 L	0.3 L	0.4 L	0.4	0.3 L	0.3 L	0.3 L	0.3 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27D	LB-031095-8	3/10/95	0.3 L	0.2 L	0.1 L	0.4 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-031095-9	3/10/95	0.3	0.2 L	0.1 L	0.4 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-061995-4	6/19/95	0.3 L	0.2 L	0.1 L	0.4 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-061995-5	6/19/95	0.3 L	0.2 L	0.1 L	3.6 B	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-092095-1	9/20/95	0.3 L	0.3 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-092095-2	9/20/95	0.3 L	0.3 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-122095-17	12/20/95	0.3 L	0.2 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-122095-18	12/20/95	0.3 L	0.2 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-031996-3	3/19/96	0.3 L	0.2 L	0.1 L	0.4	0.1 L	0.1 L	0.1 L	0.1 L
LB-27D	LB-061896-4	6/18/96	0.1 L	0.1 L	0.0 L	0.5	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB-061896-5	6/18/96	0.1 L	0.1	0.0 L	0.5	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB-091796-9	9/17/96	0.1 L	0.1 L	0.0 L	0.5	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB121796-8	12/17/96	0.1 L	0.1	0.0 L	0.6	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB-031997-12	3/19/97	0.5 L	0.5 L	0.5 L	0.4	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-061797-11	6/17/97	0.5 L	0.1	0.5 L	0.4	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-091697-8	9/16/97	0.5 L	0.5 L	0.5 L	0.4	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-121797-13	12/17/97	0.5 L	0.5 L	0.5 L	0.3	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031998-12	3/19/98	0.5 L	0.1	0.5 L	0.3	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-061798-10	6/17/98	0.1 L	0.1 L	0.0 L	0.3	0.1 L	0.1 L	0.2 L	0.1 L
LB-27D	LB-091798-8	9/17/98	0.2 L	0.3 L	0.2 L	0.3	0.3 L	0.2 L	0.3 L	0.2 L
LB-27D	LB-121798-6	12/17/98	0.2 L	0.3 L	0.2 L	0.2	0.3 L	0.2 L	0.3 L	0.2 L
LB-27D	LB-031899-9	3/18/99	0.2 L	0.3 L	0.2 L	0.3	0.3 L	0.2 L	0.3 L	0.2 L
LB-27D	LB-062399-7	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27D	LB-091599-1	9/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-27D	LB-121599-7	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-27D	LB-031600-3	3/16/00	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-061300-3	6/13/00	0.5 L	0.5 L	0.5 L	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-091300-8	9/13/00	0.5 L	0.5 L	0.5 L	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-091300-9	9/13/00	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-121500-5	12/15/00	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031301-3	3/13/01	0.5 L	0.5 L	0.5 L	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031902-11	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031203-3	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-022604-15	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D (Dup)	LB-022604-16	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-030805-6	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-031606-17	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-030507-9	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27D	LB-031908-5	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D (Dup)	LB-031908-6	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-27D	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-27D032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27D	LB-27D	3/25/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27D	LB-031212-02	3/12/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27D	LB-020713-21	2/7/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-27D	LB-021814-13	2/18/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-27D	LB-021715-02	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27I	LB-0892-3	8/27/92	0.8 J	0.5 J	0.2 L J	2.1 J	0.5 L J	1.6 J	0.9 J	0.2 J
LB-27I	LB-92292-4	9/22/92	1.1	0.6	0.2 L	1.9	0.5 L	1.5	1.2	0.2 L
LB-27I	LB-121192-20	12/11/92	0.9	0.5	0.2 L	2.4	0.5 L	0.3 L	1.6	0.2
LB-27I	LB-031293-21	3/12/93	0.9	0.5	0.2 L	1.3	0.5 L	0.8	1.7	0.2 L
LB-27I	LB-060193-2	6/1/93	0.7	0.4	0.2 L	1.0	0.5 L	1.3	1.0	0.2 L
LB-27I	LB-092493-14	9/24/93	NT	NT	0.2 L	0.7	0.5 L	NT	0.4	0.2 L
LB-27I	LB-092493-14	9/24/93	0.5	0.2	0.2 L	NT	NT	1.2	NT	NT
LB-27I	LB-092493-15	9/24/93	NT	0.2	0.2 L	0.7	0.5 L	1.2	0.4	0.2 L
LB-27I	LB-092493-15	9/24/93	0.6	NT	0.2 L	NT	NT	NT	NT	NT
LB-27I	LB-121693-19	12/16/93	0.5	0.2 L	0.2 L	0.2 L	0.5 L	0.6	0.5	0.2 L
LB-27I	LB-121693-20	12/16/93	0.5	0.2	0.2 L	0.2 L	0.5 L	0.6	0.5	0.2 L
LB-27I	LB-032494-3	3/24/94	0.6	0.3	0.2 L	1.0	0.5 L	0.3 L	1.2	0.2 L
LB-27I	LB-062294-8	6/22/94	0.5	0.3 L	0.4 L	0.9	0.3 L	0.3 L	1.0	0.3 L
LB-27I	LB-090894-11	9/8/94	0.5	0.3 L	0.4 L	1.0	0.3 L	0.5	1.0	0.3 L
LB-27I	LB-121394-1	12/13/94	0.6	0.3 L	0.4 L	0.6	0.3 L	0.3 L	0.6	0.3 L
LB-27I	LB-031095-7	3/10/95	0.7	0.3	0.1	0.6 B	0.1 B	0.3	0.5	0.1 L
LB-27I	LB-061995-3	6/19/95	0.7	0.2	0.1	0.6 B	0.1 L	0.5	0.2	0.1 L
LB-27I	LB-092095-3	9/20/95	0.3	0.3 L	0.1	0.3	0.1 L	0.7	0.2	0.1 L
LB-27I	LB-122095-16	12/20/95	0.3	0.2 L	0.1 L	0.1 L	0.1 L	0.8	0.1 L	0.1 L
LB-27I	LB-031996-4	3/19/96	0.4	0.2 L	0.1 B	0.3	0.1 L	1.4	0.1 L	0.1 L
LB-27I	LB-061896-3	6/18/96	0.2	0.1 L	0.2	0.1 L	0.1 L	2.0	0.3	0.1 L
LB-27I	LB-091796-7	9/17/96	0.4	0.2	0.1	1.1	0.1 L	2.6	0.3	0.2
LB-27I	LB-091796-8	9/17/96	0.1 L	0.1	0.1	1.2	0.1 L	2.9	0.3	0.4
LB-27I	LB121796-6	12/17/96	0.2	0.1	0.2	0.7	0.1 L	1.7	0.2 L	0.1
LB-27I	LB121796-7	12/17/96	0.2	0.1	0.2	0.6	0.1 L	1.6	0.2 L	0.1
LB-27I	LB-031997-10	3/19/97	0.5 L	0.5 L	0.2	0.2	0.5 L	0.8	0.5 L	0.5 L
LB-27I	LB-031997-11	3/19/97	0.5 L	0.5 L	0.2	0.2	0.5 L	0.8	0.5 L	0.5 L
LB-27I	LB-061797-9	6/17/97	0.5 L	0.5 L	0.1	0.2	0.5 L	1.0	0.5 L	0.5 L
LB-27I	LB-061797-9	6/17/97	0.5 L	0.5 L	NT	NT	0.5 L	1.1	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27I	LB-091697-6	9/16/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091697-7	9/16/97	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-121797-11	12/17/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.2	0.5 L	0.5 L
LB-27I	LB-121797-12	12/17/97	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.4	0.5 L	0.5 L
LB-27I	LB-031998-10	3/19/98	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.3	0.5 L	0.5 L
LB-27I	LB-031998-11	3/19/98	0.5 L	0.5 L	0.1	0.5 L	0.5 L	0.3	0.5 L	0.5 L
LB-27I	LB-061798-11	6/17/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-27I	LB-061798-12	6/17/98	0.1 L	0.1 L	0.1	0.1 L	0.1 L	0.1 L	0.2 L	0.1 L
LB-27I	LB-091798-10	9/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-091798-9	9/17/98	0.2 L	0.3 L	0.2 B	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-121798-4	12/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-121798-5	12/17/98	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-031899-7	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-031899-8	3/18/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-062399-8	6/23/99	0.2 L	0.3 L	0.2 L	0.2 L	0.3 L	0.2 L	0.3 L	0.2 L
LB-27I	LB-091599-2	9/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-27I	LB-121599-6	12/15/99	0.2 L	0.3 L	0.2 L	NT	NT	NT	NT	NT
LB-27I	LB-031600-1	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031600-2	3/16/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-061300-1	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L
LB-27I	LB-061300-2	6/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091300-10	9/13/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L
LB-27I	LB-121500-6	12/15/00	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.2 J	0.5 L	0.5 L
LB-27I	LB-031301-4	3/13/01	0.3 J	0.5 L	0.5 L	0.3 J	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031902-10	3/19/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091802-5	9/18/02	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031203-1	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031203-2	3/12/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-092203-2	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-092203-3	9/22/03	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-022604-17	2/26/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-090104-27	9/1/04	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB030805-5	3/8/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091405-3	9/14/05	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-031606-18	3/16/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091206-2	9/12/06	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-030507-8	3/5/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-0919-07-4	9/19/07	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L

Table B-2
Groundwater Chemistry, Volatile Organic Compounds (µg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	PCE	TCE	1,4-DCB	1,1-DCA	1,1,1-TCA	Chloroethane	cis-1,2-DCE	Chlorobenzene
LB-27I	LB-031908-4	3/19/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-091608-7	9/16/08	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-27I	3/18/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LBLF27i091109	9/11/09	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-27I032410	3/24/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-27I092310	9/23/10	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L	0.5 L
LB-27I	LB-27I	3/25/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27I	LB-090711-01	9/7/11	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27I	LB-032212-18	3/22/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27I	LB-091112-02	9/11/12	0.1 L	0.1 L	0.2 L	0.1 L	0.1 L	0.25 L	0.1 L	0.1 L
LB-27I	LB-020613-11	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-27I (Dup)	LB-020613-12	2/6/2013	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L	1.00 L
LB-27I	LB-082113-03	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-27I (DUP)	LB-082113-04	8/21/2013	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.18 J	0.16 L	0.11 L
LB-27I	LB-021814-14	2/18/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-27I	LB-081314-03	8/13/14	0.15 L	0.13 L	0.16 L	0.14 L	0.14 L	0.17 L	0.16 L	0.11 L
LB-27I	LB-021815-10	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
LB-27I	LB-081215-09	8/12/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELDQC	LB-021715-08	2/17/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELDQC	LB-081215-07	8/12/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELDQC	Trip Blank	2/18/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELDQC	Trip Blank	2/19/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELDQC	Trip Blank	8/10/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELDQC	Trip Blank	8/11/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L
FIELDQC	Trip Blank	8/12/15	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L	0.50 L

Notes:
PCE = tetrachloroethene; TCE = trichloroethene; 1,1,1-TCA = 1,1,1-trichloroethane; 1,1-DCA = 1,1-dichloroethane; 1,4-DCB = 1,4-dichlorobenzene;
cis-1,2-DCE = cis-1,2-dichloroethene; NT = not tested; J = estimated concentration;
B = analyte detected above the MDL but below the MRL; L = not detected at or above MRL; Dup = field duplicate sample; Re = resample.

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

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-1D	LB-01D	6/2/87	234	4.0	4.7	NT	0.05 L	0.01 L
LB-1D	LB-01D	7/21/87	NT	5.0	4.5	NT	0.05 L	0.005 L
LB-1D	LB-01D	9/4/87	NT	5.0	2.6	NT	0.05 L	0.01 L
LB-1D	LB-01D	11/6/87	NT	5.9	4.7	NT	0.05 L	0.01 L
LB-1D	LB-01D	2/9/88	224	5.0	4.5	NT	0.05 L	0.01 L
LB-1D	LB-01D	6/22/88	214	5.0	3.8	NT	0.05 L	0.05 L
LB-1D	LB-01D	8/30/88	250	5.0	4.6	NT	0.05 L	0.01 L
LB-1D	LB-01D	9/1/88	206	5.0	4.5	NT	0.05 L	0.01 L
LB-1D	LB-01D	12/5/88	193	5.4	4.2	NT	0.01 L	0.01 L
LB-1D	LB-289-W04	2/28/89	210	5.0	4.5	NT	0.01 L	0.01 L
LB-1D	LB-589-W03	5/23/89	212	6.3	4.9	NT	0.05 L	0.01 L
LB-1D	LB-989-W16	9/12/89	168	4.0	5.0	NT	0.02 L	0.005 L
LB-1D	LB-1089-W01	10/17/89	188	4.2	4.5	161	0.05 L	0.005 L
LB-1D	LB-1189-W04	11/14/89	141	5.5	4.9	150	0.02 L	0.005 L
LB-1D	LB-1289-W22	12/19/89	174	5.0	4.6	NT	NT	NT
LB-1D	LB-390-W09	3/14/90	204	5.3	4.7	143	NT	NT
LB-1D	LB-690-W11	6/20/90	195	4.9	4.8	180	NT	NT
LB-1D	LB-990-W08	9/14/90	187	5.3	4.8	196	NT	NT
LB-1D	LB-1290-W06	12/11/90	203	5.5	4.7	125	NT	NT
LB-1D	LB-391-W11	3/20/91	202	5.2	4.6	187	NT	NT
LB-1D	LB-691-W06	6/26/91	200	5.0	4.5	157	NT	NT
LB-1D	LB-991-06	9/24/91	176	5.1	4.4	172	NT	NT
LB-1D	LB-1291-14	12/23/91	201	4.3	4.6	162	NT	NT
LB-1D	LB-392-14	3/23/92	197	5.5	4.6	163	NT	NT
LB-1D	LB-63092-2	6/30/92	196	4.7	5.7	167	NT	NT
LB-1D	LB-92292-3	9/22/92	201	5.1	4.7	160	NT	NT
LB-1D	LB-121192-16	12/11/92	204	5.9	4.7	176	NT	NT
LB-1D	LB-031093-3	3/10/93	199	5.7	4.2	169	NT	NT
LB-1D	LB-060293-6	6/2/93	199	5.5	4.3	156	NT	NT
LB-1D	LB-092393-8	9/23/93	187	5.5	4.3	163	NT	NT
LB-1D	LB-121593-2	12/15/93	170	6.1	4.6	163	NT	NT
LB-1D	LB-032494-2	3/24/94	208	5.8	4.6	159	NT	NT
LB-1D	LB-062194-1	6/21/94	171	5.6	4.4	167	NT	NT
LB-1D	LB-090694-2	9/6/94	186	5.1	5.1	172	NT	NT
LB-1D	LB-121494-12	12/14/94	168	5.1	4.9	147	NT	NT
LB-1D	LB-030995-02	3/9/95	160	5.8	4.6	171	NT	NT
LB-1D	LB-062095-13	6/20/95	184	5.8	5.4	145	NT	NT
LB-1D	LB-092295-14	9/22/95	239	6.1	4.6	128	NT	NT
LB-1D	LB-121995-6	12/19/95	196	6.1	5.3	162	NT	NT
LB-1D	LB-032096-18	3/20/96	193	6.0	5.2	177	NT	NT
LB-1D	LB-061896-10	6/18/96	174	6.1	5.2	169	NT	NT
LB-1D	LB-091796-6	9/17/96	190	6.6	5.1	160	0.02 L	0.005 L
LB-1D	LB121796-2	12/17/96	214	6.4	5.3	183	0.02 L	0.005 L
LB-1D	LB-031997-4	3/19/97	174	7.0	5.8	183	0.02 L	0.005 L
LB-1D	LB-061797-4	6/17/97	214	6.2	5.2	183	0.02 L	0.005 L
LB-1D	LB-091697-1	9/16/97	208	6.5	5.3	185	0.02 L	0.005 L
LB-1D	LB-121697-4	12/16/97	206	6.7	5.7	173	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-1D	LB-031998-4	3/19/98	227	7.1	6.2	184	0.02 L	0.005 L
LB-1D	LB-061698-6	6/16/98	158	6.7	6.1	184	0.02 L	0.005 L
LB-1D	LB-091798-3	9/17/98	224	6.7	5.7	196	0.02 L	0.005 L
LB-1D	LB-121898-10	12/18/98	178	7.4	6.3	201	0.02	0.005 L
LB-1D	LB-031799-4	3/17/99	182	7.4	6.1	161	0.02 L	0.005 L
LB-1D	LB-062399-15	6/23/99	187	7.2	6.2	187	0.02 L	0.005 L
LB-1D	LB-091799-11	9/17/99	204	7.6	6.0	157	0.02 L	0.005 L
LB-1D	LB-121699-12	12/16/99	190	6.9	5.6	178	0.02 L	0.005 L
LB-1D	LB-031700-16	3/17/00	180	7.0	5.8	170	0.02 L	0.005 L
LB-1D	LB-061300-8	6/13/00	190	7.3	6.0	184	0.01 B	0.005 L
LB-1D	LB-091100-2	9/11/00	215	7.6	6.4	192	0.02 L	0.005 L
LB-1D	LB-121500-10	12/15/00	219	7.0	5.7	146	0.02 L	0.005 L
LB-1D	LB-031501-15	3/15/01	NT	7.2	5.9	180	0.02 L	0.005 L
LB-1D	LB-031501-16	3/15/01	NT	7.0	5.9	166	0.02 L	0.005 L
LB-1D	LB-031902-02	3/19/02	NT	6.9	5.9	159	0.02 L	0.005 L
LB-1D	LB-031303-12	3/13/03	NT	6.6	5.7	198	0.02 L	0.005 L
LB-1D	LB-022404-1	2/24/04	NT	6.7	5.6	188	0.07	0.006
LB-1D	LB030905-13	3/9/05	NT	6.7	5.5	224	0.02 L	0.005 L
LB-1D	LB-031406-1	3/14/06	NT	6.0	5.3	168	0.02 L	0.005 L
LB-1D (Dup)	LB-031406-2	3/14/06	NT	6.1	5.3	144	0.02 L	0.005 L
LB-1D	LB-030507-2	3/5/07	NT	6.1	5.6	194	0.02 L	0.005 L
LB-1D	LB-032408-15	3/24/08	NT	6.6	5.7	154	0.02 L	0.005 L
LB-1D	LB-1D	3/17/09	NT	7.0	5.9	147	0.02 L	0.005 L
LB-1D	LB-1D032310	3/23/10	NT	6.39	6.14	162	0.02 L	0.005 L
LB-1D	LB-1D	3/28/11	220	7.49	5.87	195	0.025 L	0.002 L
LB-1D	LB-031312-13	3/13/12	NT	7.4	6.0	190	0.025 L	0.002 L
LB-1D	LB-020513-07	2/5/13	NT	7.6	6.0	160	0.036	0.0058
LB-1D	LB-021914-17	2/19/14	NT	7.7	6.0	200	0.025 L	0.0020 L
LB-1D	LB-021915-17	2/19/15	NT	7.23	7.09	210	0.025 L	0.0020 L
LB-1S	LB-01S	5/11/87	602	16.0	1.1	NT	0.05 L	0.031
LB-1S	LB-01S	7/21/87	NT	20.0	2.7	NT	0.05 L	0.006
LB-1S	LB-01S	9/4/87	NT	15.0	1.8	NT	0.05 L	0.01 L
LB-1S	LB-01S	11/6/87	NT	14.0	3.3	NT	0.05 L	0.01 L
LB-1S	LB-01S	2/11/88	410	15.0	2.3	NT	0.05 L	0.01 L
LB-1S	LB-01S	6/22/88	496	20.0	2.0	NT	0.05 L	0.05 L
LB-1S	LB-01S	8/30/88	478	18.0	3.3	NT	0.05 L	0.01 L
LB-1S	LB-01S	12/5/88	348	17.0	3.5	NT	0.01 L	0.01 L
LB-1S	LB-289-W05	2/28/89	408	14.0	3.7	NT	0.29	0.01 L
LB-1S	LB-589-W04	5/23/89	510	22.0	3.8	NT	0.05 L	0.01 L
LB-1S	LB-989-W15	9/12/89	334	13.0	4.0	NT	0.20 L	0.005 L
LB-1S	LB-1289-W12	12/15/89	300	12.0	4.7	NT	NT	NT
LB-1S	LB-390-W10	3/14/90	388	13.6	4.7	152	NT	NT
LB-1S	LB-690-W10	6/20/90	526	17.8	4.0	302	NT	NT
LB-1S	LB-990-W06	9/14/90	531	20.2	3.8	325	NT	NT
LB-1S	LB-1290-W05	12/11/90	456	23.6	2.5	328	NT	NT
LB-1S	LB-391-W10	3/20/91	602	17.7	3.1	320	NT	NT
LB-1S	LB-691-W05	6/26/91	472	14.8	4.4	294	NT	NT

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-1S	LB-991-05	9/24/91	350	10.2	5.4	253	NT	NT
LB-1S	LB-1291-13	12/23/91	382	10.0	4.0	290	NT	NT
LB-1S	LB-392-15	3/23/92	421	13.0	4.0	287	NT	NT
LB-1S	LB-63092-1	6/30/92	367	10.0	5.7	259	NT	NT
LB-1S	LB-92292-2	9/22/92	367	11.0	5.0	252	NT	NT
LB-1S	LB-121192-15	12/11/92	378	12.0	5.0	246	NT	NT
LB-1S	LB-031093-4	3/10/93	675	17.0	1.8	388	NT	NT
LB-1S	LB-060293-5	6/2/93	616	12.0	3.5	388	NT	NT
LB-1S	LB-092393-9	9/23/93	487	15.0	3.9	309	NT	NT
LB-1S	LB-121593-1	12/15/93	382	17.0	4.2	291	NT	NT
LB-1S	LB-032494-1	3/24/94	591	20.0	3.3	373	NT	NT
LB-1S	LB-052194-4	6/21/94	463	14.0	5.1	305	NT	NT
LB-1S	LB-090694-1	9/6/94	481	15.0	5.4	369	NT	NT
LB-1S	LB-121494-11	12/14/94	499	16.0	5.2	357	NT	NT
LB-1S	LB-030995-01	3/9/95	330	14.0	7.1	296	NT	NT
LB-1S	LB-062095-12	6/20/95	410	12.0	8.8	307	NT	NT
LB-1S	LB-092295-13	9/22/95	494	19.0	7.0	248	NT	NT
LB-1S	LB-121995-5	12/19/95	422	17.0	8.0	291	NT	NT
LB-1S	LB-032096-17	3/20/96	488	21.0	6.8	312	NT	NT
LB-1S	LB-061896-9	6/18/96	325	15.0	9.1	275	NT	NT
LB-1S	LB-091796-5	9/17/96	377	15.0	8.7	303	0.02 L	0.005 L
LB-1S	LB121796-1	12/17/96	455	17.0	7.9	298	0.02 L	0.005 L
LB-1S	LB-031997-3	3/19/97	444	35.0	7.2	370	0.03	0.005 L
LB-1S	LB-061797-3	6/17/97	348	12.0	7.5	279	0.02 L	0.005 L
LB-1S	LB-091697-2	9/16/97	382	21.6	7.4	291	0.02 L	0.005 L
LB-1S	LB-121697-5	12/16/97	456	22.0	8.9	310	0.03	0.005 L
LB-1S	LB-031998-3	3/19/98	526	35.1	8.7	306	0.02 L	0.005 L
LB-1S	LB-061698-5	6/16/98	303	19.6	10.2	307	0.02 L	0.005 L
LB-1S	LB-091798-4	9/17/98	448	21.6	9.0	298	0.02	0.005 L
LB-1S	LB-121898-9	12/18/98	363	18.1	9.0	332	0.34	0.008
LB-1S	LB-031799-3	3/17/99	465	29.7	9.1	355	0.02	0.005 L
LB-1S	LB-062399-14	6/23/99	363	21.0	8.1	277	0.02 L	0.005 L
LB-1S	LB-091799-10	9/17/99	447	19.6	8.3	279	0.10	0.005 L
LB-1S	LB-091799-9	9/17/99	457	21.1	7.4	285	0.03	0.005 L
LB-1S	LB-121699-13	12/16/99	358	12.1	8.1	255	0.02 L	0.005 L
LB-1S	LB-031700-15	3/17/00	383	18.5	7.3	249	0.02 L	0.005 L
LB-1S	LB-061300-7	6/13/00	297	9.8	9.8	222	0.02 L	0.005 L
LB-1S	LB-091100-1	9/11/00	365	14.2	8.9	264	0.02 L	0.005 L
LB-1S	LB-121500-9	12/15/00	362	10.2	7.4	213	0.02 L	0.005 L
LB-1S	LB-031401-14	3/14/01	NT	8.6	9.8	227	0.02 L	0.005 L
LB-1S	LB-092001-6	9/20/01	NT	8.3	7.3	212	0.02 L	0.005 L
LB-1S	LB-031902-01	3/19/02	NT	7.5	4.3	206	0.02 L	0.005 L
LB-1S	LB-091802-01	9/17/02	NT	6.0	7.0	206	0.02 L	0.005 L
LB-1S	LB-031303-10	3/13/03	NT	5.2	4.7	216	0.02 L	0.005 L
LB-1S	LB-031303-11	3/13/03	NT	5.1	4.7	198	0.03	0.005 L
LB-1S	LB-092203-6	9/22/03	NT	4.5	5.2	208	2.32	0.069

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-1S	LB-022404-2	2/24/04	NT	4.4	4.0	184	0.12	0.005 L
LB-1S	LB-090104-1	9/1/04	NT	4.0	3.6	179	0.02 L	0.005 L
LB-1S (Dup)	LB-090104-30	9/1/04	NT	4.0	3.6	186	0.02 L	0.005 L
LB-1S	LB030905-14	3/9/05	NT	4.7	3.7	220	0.24	0.203
LB-1S	LB-091405-1	9/14/05	NT	5.0	4.4	148	0.02 L	0.005 L
LB-1S (Dup)	LB-091405-2	9/14/05	NT	5.0	4.5	188	0.02 L	0.005 L
LB-1S	LB-031406-3	3/14/06	NT	6.6	2.5	234	1.62	0.045
LB-1S	LB-091306-5	9/13/06	NT	4.6	5.0	174	0.02 L	0.005 L
LB-1S (Dup)	LB-091306-6	9/13/06	NT	4.6	5.0	176	0.104	0.005 L
LB-1S	LB-030507-1	3/5/07	NT	4.6	4.9	196	1.62	0.045
LB-1S	LB-091907-1	9/19/07	NT	4.6	4.6	168	0.02 L	0.005 L
LB-1S (Dup)	LB-091907-2	9/19/07	NT	4.6	4.7	187	0.104	0.005 L
LB-1S	LB-032408-14	3/24/08	NT	8.9	4.3	196	0.020 L	0.005 L
LB-1S	LB-091608-1	9/16/08	NT	5.2	5.6	209	0.024	0.005 L
LB-1S	LB-1S	3/17/09	NT	6.0	4.8	159	0.020 L	0.005 L
LB-1S	LBLF1S091109	9/11/09	NT	4.99	4.94	202	0.051	0.005 L
LB-1S	LB-1S032310	3/23/10	NT	6.53	4.08	201	0.020 L	0.005 L
LB-1S	LB-1092310	9/23/10	NT	6.96	6.21	185	0.020 L	0.005 L
LB-1S	LB-1S	3/24/11	248	5.92	5.70	220	0.025 L	0.002 L
LB-1S	LB-090811-07	9/8/11	NT	5.71	6.87	205	0.025 L	0.002 L
LB-1S	LB-031312-14	3/13/12	NT	5.2	6.0	210	0.025 L	0.002 L
LB-1S	LB-091212-08	9/12/12	NT	14	5.9	210	0.025 L	0.002
LB-1S	LB-020513-09	2/5/13	NT	7.9	6.3	200	0.025 L	0.0020 L
LB-1S	LB-082213-08	8/22/13	NT	13.0	8.7	250	0.025 L	0.0020 L
LB-1S	LB-021914-18	2/19/14	NT	19.0	3.9	240	0.025 L	0.0020 L
LB-1S (Dup)	LB-021914-19	2/19/14	NT	19.0	3.9	260	0.025 L	0.0020 L
LB-1S	LB-081414-09	8/14/14	NT	7.1	6.7	200	0.025 L	0.0020 L
LB-1S	LB-021915-16	2/19/15	NT	7.23	7.09	210	0.025 L	0.0020 L
LB-1S	LB-081115-02	8/11/15	NT	6.79	5.66	204	0.040 L	0.0020 L
LB-3D	LB-03D	5/28/87	270	8.0	4.3	NT	0.05 L	0.01 L
LB-3D	LB-03D	7/17/87	NT	8.0	4.1	NT	0.05 L	0.005 L
LB-3D	LB-03D	9/8/87	NT	8.0	2.2	NT	0.05 L	0.05 L
LB-3D	LB-03D	11/6/87	NT	8.2	4.9	NT	0.05 L	0.01 L
LB-3D	LB-1189-W01	11/13/89	176	5.5	5.0	179	0.02 L	0.005 L
LB-3D	LB-1289-W20	12/18/89	206	6.2	4.8	173	0.02 L	0.005 L
LB-3D	LB-032097-14	3/20/97	204	5.3	6.2	196	0.02 L	0.005 L
LB-3D	LB-032098-21	3/20/98	236	5.2	7.3	175	0.02 L	0.005 L
LB-3D	LB-031899-15	3/18/99	193	5.2	7.7	182	0.03	0.005 L
LB-3D	LB-031600-9	3/16/00	199	4.7	8.0	222	0.02 L	0.005 L
LB-3D	LB-031501-17	3/15/01	NT	5.2	7.6	171	0.02 L	0.005 L
LB-3D	LB-032002-18	3/20/02	NT	5.6	6.7	157	0.02 L	0.005 L
LB-3D	LB-031303-14	3/13/03	NT	4.1	5.5	181	0.02 L	0.005 L
LB-3D	LB-022404-5	2/24/04	NT	3.3	4.4	164	0.02 L	0.005 L
LB-3D	LB-030905-15	3/9/05	NT	3.2	4.1	169	0.02 L	0.005 L
LB-3D	LB-031606-21	3/16/06	NT	3.0	4.2	122	0.02 L	0.005 L
LB-3D	LB-030507-4	3/5/07	NT	3.2	4.4	156	0.02 L	0.005 L
LB-3D (Dup)	LB-030507-5	3/5/07	NT	3.2	4.4	161	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-3D	LB-032408-17	3/24/08	NT	3.3	4.2	145	0.02 L	0.005 L
LB-3D	LB-3D	3/18/09	NT	3.5	4.5	147	0.02 L	0.005 L
LB-3D	LB-3D032410	3/24/10	NT	3.60	5.76	152	0.02 L	0.005 L
LB-3D	LB-3D	3/28/11	210	4.23	5.05	201	0.025 L	0.002 L
LB-3D	LB-031312-09	3/13/12	NT	4.1	4.6	180	0.025 L	0.002 L
LB-3D	LB-020713-18	2/7/13	NT	4.4	4.5	170	0.025 L	0.0020 L
LB-3D	LB-021914-22	2/19/14	NT	4.6	4.7	200	0.025 L	0.0020 L
LB-3D	LB-021715-07	2/17/15	NT	4.41	4.81	194	0.025 L	0.0020 L
LB-3S	LB-03S	5/11/87	308	9.0	1.9	NT	0.05 L	0.01
LB-3S	LB-03S	7/16/87	NT	7.0	2.1	NT	0.05 L	0.005 L
LB-3S	LB-03S	9/4/87	NT	7.0	1.5	NT	0.05 L	0.01 L
LB-3S	LB-03S	11/5/87	NT	6.4	3.4	NT	0.05 L	0.01 L
LB-3S	LB-1089-W02	10/17/89	192	4.0	4.0	193	0.05 L	0.005 L
LB-3S	LB-1189-W02	11/13/89	160	4.5	4.1	144	0.02	0.005 L
LB-3S	LB-1289-W11	12/15/89	190	5.0	4.0	176	0.03	0.064
LB-3S	LB-390-W11	3/14/90	218	5.3	3.8	164	NT	NT
LB-3S	LB-690-W06	6/19/90	212	4.7	3.7	148	NT	NT
LB-3S	LB-990-W10	9/14/90	213	4.9	3.6	219	NT	NT
LB-3S	LB-1290-W08	12/12/90	377	4.6	3.5	194	NT	NT
LB-3S	LB-391-W07	3/20/91	217	4.5	3.4	150	NT	NT
LB-3S	LB-691-W10	6/11/91	226	4.9	3.3	188	NT	NT
LB-3S	LB-991-16	9/26/91	250	4.6	2.4	193	NT	NT
LB-3S	LB-1291-06	12/20/91	333	4.5	3.3	186	NT	NT
LB-3S	LB-392-10	3/20/92	230	4.4	3.3	195	NT	NT
LB-3S	LB-62692-8	6/26/92	253	4.9	2.6	204	NT	NT
LB-3S	LB-91792-3	9/17/92	266	4.4	2.9	205	NT	NT
LB-3S	LB-121092-14	12/10/92	273	4.3	3.2	202	NT	NT
LB-3S	LB-031593-25	3/15/93	309	4.7	2.7	218	NT	NT
LB-3S	LB-060393-14	6/3/93	296	4.5	2.6	214	NT	NT
LB-3S	LB-092393-1	9/23/93	278	4.2	3.0	212	NT	NT
LB-3S	LB-121593-5	12/15/93	255	4.1	3.1	212	NT	NT
LB-3S	LB-032594-11	3/25/94	281	3.8	3.0	204	NT	NT
LB-3S	LB-062394-13	6/23/94	276	4.1	2.9	208	NT	NT
LB-3S	LB-090794-8	9/7/94	235	3.3	3.3	213	NT	NT
LB-3S	LB-121494-13	12/14/94	274	3.6	2.5	215	NT	NT
LB-3S	LB-031395-20	3/13/95	267	3.9	3.4	214	NT	NT
LB-3S	LB-062095-14	6/20/95	259	3.7	3.8	221	NT	NT
LB-3S	LB-092095-11	9/20/95	328	3.9	3.7	202	NT	NT
LB-3S	LB-121995-4	12/19/95	272	5.0	4.2	206	NT	NT
LB-3S	LB-032096-21	3/20/96	254	5.1	4.3	199	NT	NT
LB-3S	LB-061996-11	6/19/96	257	4.5	4.4	213	NT	NT
LB-3S	LB-032097-13	3/20/97	211	3.6	5.0	207	0.30	0.008
LB-3S	LB-032098-20	3/20/98	228	3.1	4.4	185	0.02 L	0.005 L
LB-3S	LB-031899-14	3/18/99	159	3.1	4.0	154	0.02 L	0.005 L
LB-3S	LB-031600-8	3/16/00	148	2.4	4.4	169	0.02	0.007
LB-3S	LB-031501-18	3/15/01	NT	3.2	4.6	148	0.02 L	0.005 L
LB-3S	LB-032002-17	3/20/02	NT	3.7	4.8	155	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-3S	LB-031303-13	3/13/03	NT	3.1	4.1	220	0.02 L	0.005 L
LB-3S	LB-022404-6	2/24/04	NT	2.7	3.3	159	4.59	0.07
LB-3S	LB-030905-16	3/9/05	NT	2.7	2.7	163	0.10	0.005 L
LB-3S	LB-031606-22	3/16/06	NT	2.4	2.5	134	0.02 L	0.005 L
LB-3S	LB-030507-3	3/5/07	NT	2.7	2.9	160	0.02 L	0.005 L
LB-3S	LB-032408-18	3/24/08	NT	2.8	3.2	145	0.02 L	0.005 L
LB-3S	LB-3S	3/18/09	NT	3.3	3.3	162	0.02 L	0.005 L
LB-3S	LB-3S032310	3/23/10	NT	2.83	3.56	144	0.02 L	0.005 L
LB-3S	LB-3S	3/28/11	214	3.40	3.63	188	0.025 L	0.002 L
LB-3S	LB-031312-10	3/13/12	NT	3.7	3.8	170	0.025 L	0.002 L
LB-3S	LB-020713-17	2/7/13	NT	4.1	4.3	180	0.025 L	0.0020 L
LB-3S	LB-021914-22	2/19/14	NT	3.7	4.0	180	0.025 L	0.0020 L
LB-3S	LB-021915-19	2/19/15	NT	3.38	3.90	190	0.025 L	0.0020 L
LB-5D	LB-05D	5/27/87	606	38.0	2.6	NT	0.05 L	1.5
LB-5D	LB-05D	7/20/87	NT	45.0	0.1	NT	0.05 L	0.016
LB-5D	LB-05D	9/10/87	NT	44.0	0.1	NT	0.05 L	0.01 L
LB-5D	LB-05D	11/11/87	NT	43.0	0.1	NT	0.05 L	0.01 L
LB-5D	LB-05D	2/10/88	624	41.0	0.1	NT	0.05 L	0.01 L
LB-5D	LB-05D	6/23/88	593	42.0	0.1	NT	0.05 L	0.05 L
LB-5D	LB-05D	8/31/88	616	43.0	0.1 L	NT	0.07	0.01 L
LB-5D	LB-05D	12/6/88	494	40.0	0.6	NT	0.01 L	0.01 L
LB-5D	LB-289-W03	3/1/89	548	40.0	0.2 L	NT	0.01 L	0.025
LB-5D	LB-589-W13	5/24/89	576	51.0	0.2 L	NT	0.05 L	0.01 L
LB-5D	LB-989-W11	9/8/89	460	38.0	0.2 L	NT	0.02 L	0.006
LB-5D	LB-1289-W24	12/19/89	470	40.0	0.2	325	NT	NT
LB-5D	LB-390-W16	3/15/90	562	39.8	0.2	368	NT	NT
LB-5D	LB-690-W14	6/20/90	550	39.4	0.2 L	367	NT	NT
LB-5D	LB-990-W15	9/18/90	545	37.8	0.2	394	NT	NT
LB-5D	LB-1290-W24	12/14/90	472	40.8	0.2	346	NT	NT
LB-5D	LB-391-W14	3/21/91	615	45.9	0.3	521	NT	NT
LB-5D	LB-691-W17	6/26/91	551	39.6	0.3	372	NT	NT
LB-5D	LB-991-08	9/25/91	580	42.1	0.2	336	NT	NT
LB-5D	LB-1291-11	12/20/91	527	37.7	0.3	336	NT	NT
LB-5D	LB-392-03	3/19/92	582	44.0	0.2 L	348	NT	NT
LB-5D	LB-63092-4	6/30/92	548	42.0	0.2	356	NT	NT
LB-5D	LB-91892-2	9/18/92	549	44.0	0.2 L	351	NT	NT
LB-5D	LB-121092-11	12/10/92	562	45.0	0.2 L	NT	NT	NT
LB-5D	LB-031193-12	3/11/93	552	45.0	0.2	340	NT	NT
LB-5D	LB-060293-8	6/2/93	548	45.0	0.3	332	NT	NT
LB-5D	LB-092793-19	9/27/93	511	41.0	0.3	339	NT	NT
LB-5D	LB-121593-4	12/15/93	522	48.0	0.3	360	NT	NT
LB-5D	LB-032894-13	3/28/94	553	47.0	0.4	349	NT	NT
LB-5D	LB-062194-3	6/21/94	447	44.0	0.4	359	NT	NT
LB-5D	LB-090694-4	9/6/94	529	45.0	0.4	364	NT	NT
LB-5D	LB-121394-8	12/13/94	509	46.0	0.4	364	NT	NT
LB-5D	LB-030995-04	3/9/95	486	46.0	0.3	364	NT	NT
LB-5D	LB-61995-7	6/19/95	511	46.0	0.4	345	NT	NT

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-5D	LB-092195-9	9/21/95	571	43.0	0.2 L	350	NT	NT
LB-5D	LB-121895-2	12/18/95	541	44.0	0.4	354	NT	NT
LB-5D	LB-031996-9	3/19/96	570	41.0	0.3	321	NT	NT
LB-5D	LB-061896-8	6/18/96	473	42.0	0.3	369	NT	NT
LB-5D	LB-031997-9	3/19/97	419	38.0	0.3	355	0.03	0.005 L
LB-5D	LB-031998-6	3/19/98	541	33.8	0.2 L	319	0.02	0.005 L
LB-5D	LB-031899-11	3/18/99	419	32.6	0.4	332	0.02	0.005 L
LB-5D	LB-031600-5	3/16/00	411	26.4	0.3	292	0.02 L	0.005 L
LB-5D	LB-031401-11	3/14/01	NT	25.1	0.3	278	0.02 L	0.005 L
LB-5D	LB-031902-13	3/19/02	NT	23.0	0.5	269	0.02 L	0.005 L
LB-5D	LB-031303-9	3/13/03	NT	20.0	0.8	256	0.02 L	0.005 L
LB-5D	LB-022504-7	2/25/04	NT	18.0	0.6	276	0.02 L	0.005 L
LB-5D (Dup)	LB-022504-8	2/25/04	NT	18.0	0.6	296	0.08	0.005 L
LB-5D	LB030805-1	3/8/05	NT	16.7	1.1	282	0.02 L	0.005 L
LB-5D	LB-031606-14	3/16/06	NT	17.0	0.6	324	0.03	0.005 L
LB-5D (Dup)	LB-031606-15	3/16/06	NT	16.9	0.6	344	0.02 L	0.005 L
LB-5D	LB-030507-7	3/5/07	NT	13.7	0.7	249	0.02 L	0.005 L
LB-5D	LB-031908-2	3/19/08	NT	13.3	1.0	242	0.02 L	0.005 L
LB-5D (Dup)	LB-031908-3	3/19/08	NT	13.3	1.0	225	0.02 L	0.005 L
LB-5D	LB-5D	3/17/09	NT	13.0	1.2	209	0.02 L	0.005 L
LB-5D	LB-5D032410	3/24/10	NT	11.3	1.7	228	0.02 L	0.005 L
LB-5D	LB-5D	3/23/11	328	10.8	0.78	238	0.025 L	0.002 L
LB-5D	LB-031212-03	3/12/12	NT	11	1.2	240	0.025 L	0.002 L
LB-5D	LB-020513-03	2/5/13	NT	9.3	0.68	210	0.025 L	0.0022
LB-5D	LB-021714-01	2/17/14	NT	9.3	0.74	230	0.025 L	0.0026
LB-5D	LB-021715-01	2/17/15	NT	10.0	0.78	231	0.025 L	0.00256
LB-5S	LB-05S	5/26/87	152	6.0	2.4	NT	0.07	0.007
LB-5S	LB-05S	7/19/87	NT	4.0	2.7	NT	0.05 L	0.005 L
LB-5S	LB-05S	9/10/87	NT	4.0	1.7	NT	0.05 L	0.01 L
LB-5S	LB-05S	11/11/87	NT	6.3	1.9	NT	0.05 L	0.01 L
LB-5S	LB-05S	2/10/88	149	5.0	2.7	NT	0.05 L	0.01 L
LB-5S	LB-390-W17	3/15/90	156	4.8	4.9	184	NT	NT
LB-5S	LB-690-W13	6/20/90	161	5.0	4.8	153	NT	NT
LB-5S	LB-990-W14	9/18/90	192	6.1	6.1	202	NT	NT
LB-5S	LB-1290-W25	12/14/90	207	7.4	5.8	148	NT	NT
LB-5S	LB-391-W17	3/21/91	1410	4.4	4.0	704	NT	NT
LB-5S	LB-691-W16	6/26/91	168	4.4	3.4	175	NT	NT
LB-5S	LB-991-09	9/25/91	211	6.8	7.7	161	NT	NT
LB-5S	LB-1291-10	12/20/91	126	2.7	2.9	122	NT	NT
LB-5S	LB-392-04	3/19/92	160	4.3	4.1	142	NT	NT
LB-5S	LB-63092-3	6/30/92	179	5.1	5.7	183	NT	NT
LB-5S	LB-91892-1	9/18/92	182	5.5	6.1	181	NT	NT
LB-5S	LB-121092-10	12/10/92	170	6.3	6.5	NT	NT	NT
LB-5S	LB-031193-11	3/11/93	181	7.0	5.4	175	NT	NT
LB-5S	LB-060293-7	6/2/93	195	7.6	5.0	173	NT	NT
LB-5S	LB-092793-18	9/27/93	170	4.8	4.5	147	NT	NT
LB-5S	LB-121593-3	12/15/93	162	4.9	3.9	152	NT	NT

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-5S	LB-032894-12	3/28/94	154	4.9	4.6	148	NT	NT
LB-5S	LB-062194-2	6/21/94	163	5.6	5.0	176	NT	NT
LB-5S	LB-090694-3	9/6/94	167	4.7	4.1	159	NT	NT
LB-5S	LB-121394-9	12/13/94	95	2.6	1.7	114	NT	NT
LB-5S	LB-030995-03	3/9/95	141	6.6	3.5	147	NT	NT
LB-5S	LB-061995-6	6/19/95	201	5.7	3.8	168	NT	NT
LB-5S	LB-092195-8	9/21/95	596	7.1	5.0	184	NT	NT
LB-5S	LB-121895-1	12/18/95	111	1.8	1.3	114	NT	NT
LB-5S	LB-031996-7	3/19/96	223	6.0	4.4	170	NT	NT
LB-5S	LB-061896-7	6/18/96	174	8.5	3.1	175	NT	NT
LB-5S	LB-031997-8	3/19/97	177	7.5	5.3	184	0.02	0.005 L
LB-5S	LB-031998-5	3/19/98	229	9.1	7.1	183	0.04	0.005 L
LB-5S	LB-031899-10	3/18/99	162	4.9	5.5	164	0.02 L	0.005 L
LB-5S	LB-031600-4	3/16/00	237	4.0	6.2	194	0.02 L	0.005 L
LB-5S	LB-031401-12	3/14/01	NT	4.3	4.7	159	0.02 L	0.005 L
LB-5S	LB-092001-1	9/20/01	NT	4.3	3.8	176	0.02 L	0.005 L
LB-5S	LB-031902-12	3/19/02	NT	3.1	2.7	137	0.02 L	0.005 L
LB-5S	LB-091802-06	9/17/02	NT	6.0	6.0	185	1.26	0.03
LB-5S	LB-031303-8	3/13/03	NT	4.1	3.7	138	0.02 L	0.005 L
LB-5S	LB-092203-1	9/22/03	NT	4.6	4.4	180	9.52	0.22
LB-5S	LB-022504-9	2/25/04	NT	4.0	2.7	159	14.80	0.407
LB-5S	LB-090104-5	9/1/04	NT	4.1	3.3	168	0.02 L	0.005 L
LB-5S	LB030805-2	3/8/05	NT	4.2	3.8	182	0.21	0.005 L
LB-5S (Dup)	LB030805-3	3/8/05	NT	4.0	3.6	186	0.05	0.005 L
LB-5S	LB-091405-4	9/14/05	NT	4.5	4.5	204	0.75	0.005 L
LB-5S	LB-031606-16	3/16/06	NT	3.5	3.6	192	0.02 L	0.005 L
LB-5S	LB-091206-1	9/12/06	NT	4.1	4.5	203	0.02 L	0.005 L
LB-5S	LB-030507-6	3/5/07	NT	3.6	4.5	169	0.02 L	0.005 L
LB-5S	LB-091907-3	9/19/07	NT	4.4	5.5	191	0.02 L	0.005 L
LB-5S	LB-031908-1	3/19/08	NT	4.9	5.2	186	0.14	0.005 L
LB-5S	LB-091608-2	9/16/08	NT	5.1	4.7	147	0.076	0.005 L
LB-5S (Dup)	LB-091608-8	9/16/08	NT	5.0	4.5	168	0.02 L	0.005 L
LB-5S	LB-5S	3/17/09	NT	6.1	5.3	159	0.092	0.005 L
LB-5S	LBLF5S091109	9/11/09	NT	4.42	3.91	164	0.707	0.0157
LB-5S	LB-5S032410	3/24/10	NT	7.30	4.09	163	0.020 L	0.005 L
LB-5S (Dup)	LBDUP2032410	3/24/10	NT	5.61	3.31	151	0.020 L	0.005 L
LB-5S	LB5S092310	9/23/10	NT	3.86	4.58	158	0.020 L	0.005 L
LB-5S (Dup)	LB5S1092310	9/23/10	NT	3.91	4.61	151	0.020 L	0.005 L
LB-5S	LB-5S	3/23/11	222	5.07	5.15	184	0.025 L	0.002 L
LB-5S	LB-090811-06	9/8/11	NT	7.08	6.19	210	0.025 L	0.002 L
LB-5S	LB-032212-17	3/22/12	NT	4.1	3.7	160	0.025 L	0.002 L
LB-5S	LB-091112-01	9/11/12	NT	4.2	4.7	160	0.025 L	0.002 L
LB-5S	LB-020513-04	2/5/13	NT	4.0	3.5	150	0.025 L	0.0020 L
LB-5S	LB-082113-01	8/21/13	NT	3.9	4.8	150	0.025 L	0.0020 L
LB-5S	LB-021714-02	2/17/14	NT	4.1	3.6	150	0.025 L	0.0020 L
LB-5S	LB-081314-01	8/13/14	NT	3.9	3.7	160	0.025 L	0.0020 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-5S	LB-021815-09	2/18/15	NT	3.81	4.27	150	0.025 L	0.0020 L
LB-5S	LB-081215-08	8/12/15	NT	3.35	4.38	179	0.040 U	0.0020 L
LB-6S	LB-06S	7/17/87	NT	18.0	2.5	NT	0.05 L	0.012
LB-6S	LB-06S	9/10/87	NT	NT	1.0	NT	0.05 L	0.01 L
LB-6S	LB-06S	11/11/87	NT	28.0	0.7	NT	0.05 L	0.01 L
LB-6S	LB-06S	2/12/88	692	35.0	1.1	NT	0.05 L	0.06
LB-6S	LB-06S	6/22/88	502	18.0	2.1	NT	0.05 L	0.05 L
LB-6S	LB-06S	8/31/88	586	27.0	2.0	NT	0.05 L	0.01 L
LB-6S	LB-06S	12/6/88	594	21.0	0.7	NT	0.02	0.073
LB-6S	LB-289-W13	3/1/89	655	28.0	2.5	NT	NT	NT
LB-6S	LB-289-W17	3/1/89	NT	NT	NT	NT	0.01	0.01 L
LB-6S	LB-589-W17	5/24/89	560	20.0	6.1	NT	0.05 L	0.01 L
LB-6S	LB-989-W07	9/7/89	500	32.0	1.0	NT	0.02 L	0.026
LB-6S	LB-1289-W13	12/15/89	680	34.0	0.6	462	0.02	0.078
LB-6S	LB-390-W24	3/15/90	616	17.0	2.3	376	0.03	0.923
LB-6S	LB-690-W22	6/21/90	597	24.0	1.1	401	0.02 L	0.039
LB-6S	LB-990-W11	11/21/90	713	31.1	0.8	604	0.02	0.35
LB-6S	LB-1290-W13	12/12/90	678	33.5	0.4	494	0.02 L	0.14
LB-6S	LB-391-W16	3/20/91	711	21.4	2.2	440	0.03 L	1.39
LB-6S	LB-691-W19	6/26/91	696	24.2	1.9	386	0.04 L	0.009
LB-6S	LB-691-W20	6/26/91	706	23.1	1.8	375	0.04 L	0.011
LB-6S	LB-991-14	9/25/91	676	28.2	0.8	392	0.02 L	0.017
LB-6S	LB-991-15	9/25/91	629	13.5	1.1	397	NT	NT
LB-6S	LB-1291-08	12/20/91	621	21.4	0.9	403	0.04 B	0.005 L
LB-6S	LB-1291-09	12/20/91	634	22.2	0.9	400	0.03 B	0.005 L
LB-6S	LB-392-07	3/20/92	497	16.0	2.8	333	0.02 L	0.537
LB-6S	LB-392-08	3/20/92	539	19.0	2.3	348	0.02 L	0.546
LB-6S	LB-62692-5	6/26/92	631	26.0	2.5	404	0.03	0.026
LB-6S	LB-62692-6	6/26/92	620	26.0	2.3	400	0.03	0.029
LB-6S	LB-92192-4	9/21/92	735	29.0	0.7	444	0.02	0.077
LB-6S	LB-92192-5	9/21/92	731	28.0	0.7	453	0.02	0.066
LB-6S	LB-12992-4	12/9/92	760	33.0	0.7	439	0.02 L	0.144
LB-6S	LB-12992-5	12/9/92	736	30.0	0.7	435	0.02 L	0.142
LB-6S	LB-030193-7	3/10/93	592	20.0	2.6	369	0.02 L	0.114
LB-6S	LB-030193-8	3/10/93	625	22.0	2.2	386	0.02 L	0.106
LB-6S	LB-060393-11	6/3/93	517	17.0	2.5	328	0.03	0.018
LB-6S	LB-060393-12	6/3/93	467	13.0	2.9	302	0.02 L	0.019
LB-6S	LB-092493-13	9/24/93	529	19.0	3.7	328	0.02 L	0.025
LB-6S	LB-121593-6	12/15/93	580	27.0	2.1	393	0.02	0.077
LB-6S	LB-032994-18	3/29/94	391	12.0	3.7	256	0.02 L	0.052
LB-6S	LB-032994-19	3/29/94	450	15.0	3.4	306	0.02 L	0.038
LB-6S	LB-062394-11	6/23/94	509	21.0	3.1	347	0.02 L	0.013
LB-6S	LB-062394-12	6/23/94	477	20.0	3.2	358	0.02 L	0.013
LB-6S	LB-090694-5	9/6/94	563	19.0	3.6	366	0.02 L	0.054
LB-6S	LB-090694-6	9/6/94	496	19.0	3.5	360	0.04	0.054
LB-6S	LB-121394-6	12/13/94	475	19.0	3.4	316	0.52	0.124
LB-6S	LB-121394-7	12/13/94	485	19.0	3.4	335	0.20	0.093

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-6S	LB-031095-10	3/10/95	307	5.3	2.3	217	0.04	0.005 L
LB-6S	LB-031095-11	3/10/95	282	8.2	2.3	196	0.06	0.006
LB-6S	LB-062095-10	6/20/95	397	16.0	4.3	290	0.02 L	0.005 L
LB-6S	LB-062095-9	6/20/95	386	14.0	4.4	234	0.02 L	0.005 L
LB-6S	LB-092095-6	9/20/95	530	20.0	4.3	313	0.02 L	0.005 L
LB-6S	LB-092095-7	9/20/95	518	21.0	4.3	308	0.02	0.005 L
LB-6S	LB-122095-12	12/20/95	407	10.0	3.2	289	0.03	0.005 L
LB-6S	LB-122095-13	12/20/95	448	12.0	3.3	286	0.02 L	0.005 L
LB-6S	LB-031996-5	3/19/96	316	6.2	3.3	222	0.02 L	0.005 L
LB-6S	LB-031996-6	3/19/96	326	5.4	3.6	226	0.02 L	0.005 L
LB-6S	LB-061996-12	6/19/96	NT	21.0	4.0	NT	NT	NT
LB-6S	LB-061996-13	6/19/96	451	23.0	3.8	320	0.03	0.005 L
LB-6S	LB-091896-12	9/18/96	426	22.0	2.4	280	0.02 L	0.005 L
LB-6S	LB-121796-3	12/17/96	460	20.0	1.5	312	0.02 L	0.005 L
LB-6S	LB-031997-7	3/19/97	360	26.0	3.8	318	0.03	0.005 L
LB-6S	LB-061797-6	6/17/97	578	30.0	1.3	349	0.02	0.005 L
LB-6S	LB-091697-3	9/16/97	436	28.6	1.3	364	0.02 L	0.005 L
LB-6S	LB-121797-14	12/17/97	516	22.5	3.2	340	0.16	0.005 L
LB-6S	LB-031998-7	3/19/98	628	22.6	4.9	388	0.03	0.005 L
LB-6S	LB-061698-7	6/16/98	422	30.8	2.6	375	0.02 L	0.005 L
LB-6S	LB-091798-5	9/17/98	625	22.0	3.5	372	0.03	0.005 L
LB-6S	LB-121798-1	12/17/98	519	28.0	5.1	407	0.03	0.005 L
LB-6S	LB-031799-2	3/17/99	521	25.1	3.7	389	0.03	0.005 L
LB-6S	LB-062399-11	6/23/99	443	20.6	2.1	323	0.03	0.005 L
LB-6S	LB-091699-5	9/16/99	557	26.1	3.0	350	0.03	0.005 L
LB-6S	LB-121599-11	12/15/99	518	23.8	4.9	324	0.02 L	0.005 L
LB-6S	LB-031700-10	3/17/00	397	23.0	4.9	295	0.02 L	0.008
LB-6S	LB-031700-11	3/17/00	407	25.4	5.2	328	0.02 L	0.005 L
LB-6S	LB-061300-6	6/13/00	445	28.4	4.6	318	0.01 B	0.005 L
LB-6S	LB-091200-3	9/12/00	441	29.8	4.2	313	0.02 L	0.005 L
LB-6S	LB-121200-1	12/12/00	578	31.7	3.3	352	0.02 L	0.005 L
LB-6S	LB-121200-2	12/12/00	585	35.5	2.9	338	0.02 L	0.0073
LB-6S	LB-031301-7	3/13/01	NT	36.8	3.0	326	0.02 L	0.006
LB-6S	LB-031301-8	3/13/01	NT	35.9	3.2	352	0.02 L	0.0055
LB-6S	LB-092001-5	9/20/01	NT	19.0	3.3	246	0.02 L	0.035
LB-6S	LB-032002-15	3/20/02	NT	17.7	4.3	291	0.02 L	0.005 L
LB-6S	LB-032002-16	3/20/02	NT	21.1	4.4	305	0.02 L	0.005 L
LB-6S	LB-091802-02	9/17/02	NT	16.0	5.0	302	0.02 L	0.005 L
LB-6S	LB-091802-03	9/17/02	NT	16.0	5.0	306	0.02 L	0.005 L
LB-6S	LB-031303-21	3/13/03	NT	26.0	2.9	348	0.02 L	0.005 L
LB-6S	LB-092203-5	9/22/03	NT	11.9	2.7	274	0.13	0.014
LB-6S	LB-022604-18	2/26/04	NT	13.4	2.7	284	0.02 L	0.005 L
LB-6S	LB-090104-6	9/1/04	NT	9.6	2.1	268	0.02 L	0.005 L
LB-6S	LB030805-9	3/8/05	NT	13.0	1.6	328	0.02 L	0.017
LB-6S	LB-091405-6	9/14/05	NT	9.3	2.1	254	0.02 L	0.005 L
LB-6S	LB-031506-13	3/15/06	NT	5.1	2.4	132	0.02 L	0.005 L
LB-6S	LB-091206-4	9/12/06	NT	6.9	2.9	228	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
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Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-6S	LB-030507-12	3/5/07	NT	5.6	2.7	238	0.02 L	0.005 L
LB-6S	LB-091907-6	9/19/07	NT	7.1	1.7	245	0.297	0.0369
LB-6S	LB-031908-9	3/19/08	NT	6.1	2.9	240	0.029	0.005 L
LB-6S	LB-091608-3	9/16/08	NT	5.7	1.4	222	0.02 L	0.005 L
LB-6S	LB-6S	3/18/09	NT	5.2	2.2	194	0.02 L	0.005 L
LB-6S	LBLF6S091109	9/11/09	NT	6.72	2.82	244	0.061	0.0059
LB-6S (Dup)	LBLFDUP1091109	9/11/09	NT	6.89	2.83	220	0.035	0.005 L
LB-6S	LB-6S032310	3/23/10	NT	6.64	3.53	194	0.024	0.005 L
LB-6S	LB6S092310	9/23/10	NT	5.67	2.60	192	0.379	0.031
LB-6S	LB-6S	3/22/11	248	6.29	2.79	218 H	0.025 L	0.00218
LB-6S (Dup)	DUP1	3/22/11	266	7.05	2.90	229 H	0.025 L	0.002 L
LB-6S	LB-090711-05	9/7/11	NT	9.09	0.73	178	0.025 L	0.002 L
LB-6S (Dup)	LB-090711-04	9/7/11	NT	8.97	0.73	177	0.025 L	0.002 L
LB-6S	LB-032212-23	3/22/12	NT	5.5	1.7	180	0.025 L	0.002 L
LB-6S (Dup)	LB-032212-22	3/22/12	NT	5.6	1.7	180	0.025 L	0.002 L
LB-6S	LB-091212-06	9/12/12	NT	5.5	0.78	160	0.025 L	0.002 L
LB-6S (Dup)	LB-091212-07	9/12/12	NT	9.8	0.75	160	0.025 L	0.002 L
LB-6S	LB-020613-15	2/6/13	NT	4.9	1.1	130	0.025 L	0.0020 L
LB-6S (Dup)	LB-020613-16	2/6/13	NT	8.0	1.0	150	0.028	0.0021
LB-6S	LB-082113-07	8/21/13	NT	3.7	1.5	150	0.025 L	0.0020 L
LB-6S	LB-021914-23	2/19/14	NT	4.9	1.1	170	0.025 L	0.0020 L
LB-6S	LB-081314-06	8/13/14	NT	2.4	0.89	140	0.025 L	0.0020 L
LB-6S (Dup)	LB-081314-07	8/13/14	NT	2.3	0.88	130	0.025 L	0.0020 L
LB-6S	LB-021815-14	2/18/15	NT	6.98	2.23	190	0.025 L	0.0020 L
LB-6S (Dup)	LB-021815-13	2/18/15	NT	6.98	2.18	190	0.025 L	0.0020 L
LB-6S	LB-081115-03	8/11/15	NT	4.52	2.65	164	0.040 L	0.0020 L
LB-6S (Dup)	LB-081115-04	8/11/15	NT	4.51	2.65	158	0.040 L	0.0020 L
LB10-DR	LB-031005-19	3/10/05	NT	26.8	0.7	428	1.03	0.879
LB10-DR (Dup)	LB-031005-20	3/8/05	NT	27.0	0.7	432	0.93	0.771
LB10-DR	LB-031406-5	3/14/06	NT	31.3	0.6	492	0.763	0.417
LB10-DR	LB-030607-20	3/6/07	NT	24.9	0.9	332	0.022	0.197
LB10-DR	LB-032408-22	3/24/08	NT	28.3	0.8	320	0.02 L	0.155
LB10-DR	LB-10D	3/17/09	NT	26.8	1.0	286	0.032	0.0677
LB10-DR	LB10-DR032310	3/23/10	NT	23.9	1.1	295	0.047	0.0320
LB-10DR	LB-10DR	3/29/11	479	26.0	1.27	329	0.025 L	0.00696
LB-10DR	LB-0313012-07	3/13/12	NT	20	1.8	280	0.025 L	0.002 L
LB-10DR	LB-020713-19	2/6/13	NT	22	1.7	290	0.025 L	0.0020 L
LB-10DR	LB-021914-15	2/19/14	NT	15	2.3	260	0.025 L	0.0020 L
LB-10DR	LB-021915-20	2/19/15	NT	14	2.63	290	0.025 L	0.0020 L
LB10-SR	LB031005-21	3/10/05	NT	3.8	9.8	272	0.13	2.050
LB10-SR	LB-091505-7	9/15/05	NT	4.6	6.5	506	1.04	0.0187
LB10-SR	LB-031406-6	3/14/06	NT	4.8	2.6	116	0.02 L	0.006
LB10-SR	LB-091306-9	9/13/06	NT	13.5	0.7	298	0.02 L	0.005 L
LB10-SR	LB-030607-19	3/6/07	NT	3.6	1.2	105	0.02 L	0.006
LB10-SR	LB-091907-7	9/19/07	NT	14.3	1.1	297	0.02 L	0.005 L
LB10-SR	LB-032408-21	3/24/08	NT	6.3	0.9	202	0.02 L	0.005 L
LB10-SR	LB-091608-4	9/16/08	NT	6.1	2.5	225	0.02 L	0.005 L

**Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill**

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB10-SR	LB-10S	3/17/09	NT	10.0	2.3	216	0.02 L	0.005 L
LB10-SR (Dup)	Dup-1	3/17/09	NT	10.6	2.3	207	0.02 L	0.005 L
LB10-SR	LBLF10S091190	9/11/09	NT	5.55	5.13	233	1.15	0.0138
LB10-SR	LB10-SR032310	3/23/10	NT	8.53	5.97	196	0.02 L	0.005 L
LB10-SR	LB10S092310	9/23/10	NT	3.90	2.80	176	0.02 L	0.005 L
LB-10SR	LB-10SR	3/29/11	341	15.30	1.53	270	0.025 L	0.002 L
LB-10SR (Dup)	DUP2	3/29/11	341	15.30	1.57	270	0.025 L	0.002 L
LB-10SR	LB-090811-08	9/8/11	NT	17.70	1.15	251	0.025 L	0.00205
LB-10SR	LB-031312-08	3/13/12	NT	26	1.8	330	0.025 L	0.0023
LB-10SR	LB-091212-09	9/12/12	NT	30	0.91	310	0.025 L	0.0033
LB-10SR	LB-020713-20	2/7/13	NT	32	1.1	290	0.025 L	0.0058
LB-10SR	LB-082213-09	8/22/13	NT	18	0.8	270	0.025 L	0.0025
LB-10SR	LB-021914-16	2/19/14	NT	8.1	2.5	240	0.025 L	0.0026
LB-10SR	LB-081414-08	8/14/14	NT	24	1.2	250	0.025 L	0.0023
LB-10SR	LB-021915-21	2/19/15	NT	10	4.15	220	0.025 L	0.0059
LB-10SR	LB-081015-01	8/10/15	NT	12.4	4.12	265	0.040 L	0.00207
LB-13D	LB-989-W20	9/13/89	199	6.0	4.0	244	0.02 L	0.05
LB-13D	LB-1089-W15	10/19/89	200	6.5	4.5	197	0.05 L	0.028
LB-13D	LB-1189-W20	11/16/89	176	6.0	4.7	91	0.02	0.014
LB-13D	LB-1289-W18	12/18/89	210	5.0	4.7	134	0.02 L	0.007
LB-13D	LB-390-W18	3/15/90	244	8.2	4.9	206	0.02 L	0.005 L
LB-13D	LB-690-W20	6/21/90	235	6.8	4.9	242	0.02 L	0.005 L
LB-13D	LB-990-W17	9/18/90	230	6.9	4.9	225	0.02	0.005 L
LB-13D	LB-1290-W20	12/13/90	238	6.8	4.8	160	0.02 L	0.005 L
LB-13D	LB-391-W15	3/20/91	241	6.4	4.8	179	0.03 L	0.005 L
LB-13D	LB-691-W22	6/26/91	314	6.3	4.4	258	NT	NT
LB-13D	LB-991-13	9/25/91	248	6.1	5.0	183	NT	NT
LB-13D	LB-1291-19	12/23/91	243	5.1	4.9	186	NT	NT
LB-13D	LB-392-19	3/24/92	246	5.9	4.9	190	NT	NT
LB-13D	LB-7292-2	7/2/92	239	5.7	4.8	194	NT	NT
LB-13D	LB-91792-2	9/17/92	240	5.3	4.5	190	NT	NT
LB-13D	LB-121092-9	12/10/92	240	6.2	5.1	179	NT	NT
LB-13D	LB-031293-20	3/12/93	245	6.0	4.6	180	NT	NT
LB-13D	LB-060493-21	6/4/93	238	6.1	4.4	182	NT	NT
LB-13D	LB-092393-7	9/23/93	240	5.8	4.3	178	NT	NT
LB-13D	LB-121693-12	12/16/93	220	6.1	4.9	193	NT	NT
LB-13D	LB-032894-17	3/28/94	242	6.2	4.8	188	NT	NT
LB-13D	LB-052894-20	6/28/94	220	6.0	4.8	186	NT	NT
LB-13D	LB-090794-10	9/7/94	217	5.8	5.5	191	NT	NT
LB-13D	LB-121594-21	12/15/94	216	6.3	5.3	176	NT	NT
LB-13D	LB-031395-18	3/13/95	222	6.0	5.2	170	NT	NT
LB-13D	LB-062195-19	6/21/95	239	6.5	5.7	205	NT	NT
LB-13D	LB-092295-16	9/22/95	299	6.5	5.8	165	NT	NT
LB-13D	LB-121995-8	12/19/95	249	6.9	6.4	185	NT	NT
LB-13D	LB-032096-15	3/20/96	262	6.6	6.8	200	NT	NT
LB-13D	LB-032096-16	3/20/96	253	6.6	6.7	178	NT	NT
LB-13D	LB-061996-16	6/19/96	267	7.0	7.1	224	NT	NT

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-13D	LB-091796-4	9/17/96	261	7.8	7.2	201	0.02 L	0.005 L
LB-13D	LB121796-9	12/17/96	312	9.9	7.4	223	0.02 L	0.005 L
LB-13D	LB-032097-18	3/20/97	241	9.8	0.2 L	217	0.02 L	0.005 L
LB-13D	LB-061897-15	6/18/97	305	8.8	7.1	223	0.02 L	0.005 L
LB-13D	LB-091897-11	9/18/97	310	8.8	8.1	246	0.02 L	0.005 L
LB-13D	LB-121797-9	12/17/97	239	8.3	8.0	133	0.02	0.005 L
LB-13D	LB-032098-19	3/20/98	296	7.8	7.9	207	0.05 B	0.005 L
LB-13D	LB-061798-14	6/17/98	242	7.6	8.4	210	0.02 L	0.005 L
LB-13D	LB-091898-15	9/18/98	277	7.0	7.8	172	0.02 L	0.005 L
LB-13D	LB-121898-12	12/18/98	223	7.1	8.1	245	0.02	0.005 L
LB-13D	LB-031999-23	3/19/99	219	6.5	7.6	207	0.02	0.005 L
LB-13D	LB-062399-12	6/23/99	222	6.7	7.6	198	0.02	0.005 L
LB-13D	LB-091799-13	9/17/99	246	7.2	7.5	176	0.02 L	0.005 L
LB-13D	LB-121499-3	12/14/99	243	6.3	7.4	161	0.02 L	0.005 L
LB-13D	LB-031700-18	3/17/00	210	6.0	6.8	200	0.02 L	0.005 L
LB-13D	LB-061400-10	6/14/00	215	5.9	7.8	222	0.02 L	0.005 L
LB-13D	LB-091300-11	9/13/00	231	6.0	7.5	204	0.02 L	0.005 L
LB-13D	LB-121500-12	12/15/00	233	5.2	7.5	165	2.06	0.0053
LB-13D	LB-031501-19	3/15/01	NT	5.2	7.1	170	0.02 L	0.005 L
LB-13D	LB-032002-20	3/20/02	NT	5.0	6.3	174	0.02 L	0.005 L
LB-13D	LB-031303-16	3/13/03	NT	4.3	5.8	224	0.02 L	0.005 L
LB-13D	LB-022404-3	2/24/04	NT	4.0	5.2	179	0.02 L	0.005 L
LB-13D	LB-031005-17	3/10/05	NT	3.8	4.9	190	0.02	0.005
LB-13D	LB-031506-9	3/15/06	NT	3.4	4.6	115	0.02 L	0.005 L
LB-13D	LB-030607-18	3/6/07	NT	3.6	5.0	118	0.02 L	0.005 L
LB-13D	LB-032008-13	3/20/08	NT	3.6	4.8	190	0.02 L	0.005 L
LB-13D	LB-13-D	3/17/09	NT	4.0	5.1	148	0.02 L	0.005 L
LB-13D	LB-13D032410	3/24/10	NT	3.59	5.4	167	0.02 L	0.005 L
LB-13D	LB-13D	3/25/11	214	4.36	5.3	193	0.025 L	0.002 L
LB-13D	LB-031212-01	3/12/12	NT	4.4	5.3	190	0.025 L	0.002 L
LB-13D	LB-020713-22	2/5/13	NT	5.0	5.1	170	0.025 L	0.0020 L
LB-13D	LB-021814-08	2/18/14	NT	4.6	4.9	150	0.025 L	0.0020 L
LB-13D	LB-021715-03	2/17/15	NT	4.49	4.99	185	0.025 L	0.0020 L
LB-13I	LB-989-W22	9/13/89	600	28.0	1.4	402	0.02 L	0.017
LB-13I	LB-989-W23	9/13/89	576	28.0	1.3	478	0.02 L	0.013
LB-13I	LB-1089-W17	10/17/89	600	33.0	1.3	460	0.05 L	0.012
LB-13I	LB-1189-W17	11/16/89	530	31.0	1.2	404	0.04	0.091
LB-13I	LB-1289-W16	12/18/89	596	34.0	0.8	377	0.02	0.009
LB-13I	LB-390-W19	3/15/90	704	40.0	0.2 L	462	0.02	0.009
LB-13I	LB-690-W19	6/21/90	695	38.4	0.3	481	0.02 L	0.018
LB-13I	LB-990-W16	9/18/90	703	40.5	0.6	491	0.02	0.012
LB-13I	LB-1290-W21	12/13/90	629	36.9	0.6	433	0.02 L	0.01
LB-13I	LB-391-W14	3/20/91	740	43.4	0.4	486	0.03 L	0.012
LB-13I	LB-691-W21	6/26/91	738	26.6	0.9	454	0.04 L	0.018
LB-13I	LB-991-12	9/25/91	765	35.3	0.6	444	0.02	0.016
LB-13I	LB-1291-18	12/23/91	707	32.9	0.2 L	347	0.10	0.047

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

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-13I	LB-392-20	3/24/92	661	33.0	0.2 L	422	0.02 L	0.017
LB-13I	LB-7292-1	7/2/92	659	37.0	0.2 L	402	1.16	0.039
LB-13I	LB-91792-1	9/17/92	680	31.0	0.6	429	0.48	0.025
LB-13I	LB-121092-8	12/10/92	687	33.0	0.8	393	0.02 L	0.014
LB-13I	LB-031293-19	3/12/93	681	27.0	0.9	410	0.02 L	0.014
LB-13I	LB-060493-20	6/4/93	620	23.0	1.5	376	0.02 L	0.016
LB-13I	LB-092393-6	9/23/93	568	20.0	1.5	339	0.05	0.017
LB-13I	LB-121693-14	12/16/93	511	21.0	1.8	352	0.03	0.12
LB-13I	LB-032894-16	3/28/94	590	22.0	2.2	364	0.02 L	0.017
LB-13I	LB-052894-19	6/28/94	430	22.0	0.6	309	0.02 L	0.013
LB-13I	LB-090794-9	9/7/94	418	22.0	0.8	329	0.21	0.14
LB-13I	LB-121594-20	12/15/94	453	21.0	2.6	339	0.04	0.017
LB-13I	LB-031395-17	3/13/95	468	17.0	3.1	287	0.02	0.014
LB-13I	LB-061996-15	6/19/95	NT	NT	NT	NT	0.03	0.005 L
LB-13I	LB-052195-18	6/21/95	424	18.0	2.5	289	0.02 L	0.014
LB-13I	LB-092295-15	9/22/95	469	18.0	0.9	248	0.02	0.012
LB-13I	LB-121995-7	12/19/95	463	18.0	3.6	193	0.02 L	0.005 L
LB-13I	LB-032096-14	3/20/96	477	20.0	0.9	349	0.02	0.01
LB-13I	LB-061996-15	6/19/96	549	29.0	1.3	371	0.03 L	0.005 L
LB-13I	LB-091796-3	9/17/96	548	37.0	0.2 L	348	0.02 L	0.01
LB-13I	LB121796-10	12/17/96	708	52.0	0.2 L	418	0.02 L	0.013
LB-13I	LB-032097-19	3/20/97	579	70.0	0.2 L	458	0.02	0.014
LB-13I	LB-061897-14	6/18/97	729	63.0	0.2 L	462	0.03	0.019
LB-13I	LB-091897-12	9/18/97	814	68.1	0.2 L	514	0.02	0.021
LB-13I	LB-121797-8	12/17/97	578	63.0	0.2 L	444	0.03	0.021
LB-13I	LB-032098-18	3/20/98	695	58.8	0.3	428	0.02 L	0.02
LB-13I	LB-061798-15	6/17/98	624	66.4	0.2 L	444	0.03	0.02
LB-13I	LB-091898-14	9/18/98	763	62.4	0.3	394	0.03	0.022
LB-13I	LB-121898-11	12/18/98	616	32.4	3.2	464	0.04	0.022
LB-13I	LB-031999-22	3/19/99	582	51.1	0.5	457	0.03	0.022
LB-13I	LB-062399-13	6/23/99	576	44.7	0.3	389	0.02	0.02
LB-13I	LB-091799-12	9/17/99	626	44.6	0.2	383	0.03	0.021
LB-13I	LB-121499-4	12/14/99	637	29.2	2.6	357	0.02 L	0.022
LB-13I	LB-121499-5	12/14/99	634	30.0	2.6	378	0.02 L	0.022 L
LB-13I	LB-031700-17	3/17/00	552	28.1	0.8	392	0.02 L	0.02
LB-13I	LB-061400-9	6/14/00	525	29.3	0.5	372	0.02 L	0.02
LB-13I	LB-091300-12	9/13/00	680	42.7	2.7	417	0.02 L	0.0246
LB-13I	LB-121500-11	12/15/00	577	30.0	3.5	306	0.02 L	0.0284
LB-13I	LB-031501-20	3/15/01	NT	26.1	3.4	318	0.02 L	0.0252
LB-13I	LB-092001-8	9/20/01	NT	12.9	3.3	241	0.02 L	0.023
LB-13I	LB-032002-19	3/20/02	NT	10.2	4.7	219	0.02 L	0.016
LB-13I	LB-091802-07	9/17/02	NT	22.0	6.0	292	0.31	0.042
LB-13I	LB-031303-15	3/13/03	NT	13.2	3.4	168	0.22	0.039
LB-13I	LB-092203-7	9/22/03	NT	13.7	2.9	272	0.15	0.052
LB-13I	LB-022404-4	2/24/04	NT	9.8	2.4	232	0.09	0.028
LB-13I	LB-090104-13	9/1/04	NT	7.0	1.8	232	0.03	0.024

Table B-3
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Dissolved Metals Concentrations (mg/L)
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Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-13I	LB031005-18	3/10/05	NT	7.2	2.7	232	0.02 L	0.006
LB-13I	LB-091505-9	9/15/05	NT	5.8	3.8	202	0.03	0.014
LB-13I	LB-031506-10	3/15/06	NT	4.9	4.2	152	0.02 L	0.007
LB-13I	LB-091306-8	9/13/06	NT	5.4	4.0	182	0.02 L	0.006
LB-13I	LB-030607-17	3/5/07	NT	5.5	3.2	170	0.02 L	0.006
LB-13I	LB-091907-8	9/19/07	NT	5.6	2.9	260	0.02 L	0.005 L
LB-13I	LB-032008-12	3/20/08	NT	6.6	3.4	207	0.02 L	0.0054
LB-13I	LB-091608-5	9/16/08	NT	7.0	3.9	193	0.02 L	0.005 L
LB-13I	LB-13I	3/17/09	NT	6.9	4.3	186	0.02 L	0.005 L
LB-13I	LBLF13i091109	9/11/09	NT	6.06	4.82	192	0.02 L	0.005 L
LB-13I	LB-13I032410	3/24/10	NT	5.53	5.21	193	0.02 L	0.005 L
LB-13I	LB13I092310	9/23/10	NT	5.24	5.31	196	0.02 L	0.005 L
LB-13I	LB-13I	3/23/11	270	5.56	4.58	202	0.025 L	0.00296
LB-13I	LB-090711-02	9/7/11	NT	5.99	4.53	204	0.025 L	0.002 L
LB-13I	LB-032212-19	3/22/12	NT	6.1	4.1	200	0.025 L	0.002 L
LB-13I (Dup)	LB-032212-20	3/22/12	NT	6.1	4.0	190	0.025 L	0.002 L
LB-13I	LB-091112-03	9/11/12	NT	12	4.4	220	0.025 L	0.002 L
LB-13I	LB-020613-13	2/7/13	NT	8.8	3.6	190	0.025 L	0.0031
LB-13I	LB-082113-05	8/21/13	NT	11.0	4.3	210	0.025 L	0.0020 L
LB-13I	LB-021814-10	2/18/14	NT	10.0	2.8	190	0.025 L	0.0034
LB-13I	LB-081314-04	8/13/14	NT	8.3	4.0	220	0.025 L	0.0041
LB-13I	LB-021815-11	2/18/15	NT	11.0	3.82	210	0.025 L	0.0045
LB-13I	LB-081115-05	8/11/15	NT	7.64	4.09	198	0.040 L	0.00499
LB-17D	LB-989-W08	9/7/89	640	46.0	0.2 L	518	0.33	9.73
LB-17D	LB-1089-W10	10/18/89	780	58.0	0.2 L	492	0.24	10.6
LB-17D	LB-1089-W11	10/18/89	780	60.0	0.2 L	508	0.25	10.7
LB-17D	LB-1189-W12	11/15/89	644	70.0	0.2 L	479	0.02 L	10.9
LB-17D	LB-1189-W13	11/15/89	682	70.0	0.2 L	465	0.32	10.8
LB-17D	LB-1289-W28	12/20/89	740	68.0	0.2 L	532	0.33	10.8
LB-17D	LB-390-W21	3/15/90	918	70.8	0.2 L	566	0.36	11.4
LB-17D	LB-390-W22	3/15/90	922	71.0	0.2 L	594	0.35	11.5
LB-17D	LB-690-W18	6/21/90	843	59.6	0.2 L	540	0.30	11
LB-17D	LB-990-W19	9/19/90	839	65.2	0.2 L	577	0.33	11.4
LB-17D	LB-990-W20	9/19/90	895	66.2	0.2 L	575	0.30	11.4
LB-17D	LB-1290-W23	12/14/90	945	65.6	0.2 L	538	0.19	11.3
LB-17D	LB-391-W19	3/21/91	870	56.2	0.2 L	653	0.21	10.9
LB-17D	LB-391-W21	3/21/91	1060	58.7	0.2 L	530	0.20	10.3
LB-17D	LB-691-W14	6/11/91	786	47.3	0.2 L	423	0.19	10.1
LB-17D	LB-691-W15	6/11/91	812	47.3	0.2 L	441	0.18	10.1
LB-17D	LB-991-10	9/25/91	895	58.5	0.2 L	489	0.26	10.4
LB-17D	LB-991-11	9/25/91	895	58.7	0.2 L	503	0.26	10.5
LB-17D	LB-1291-16	12/23/91	1020	19.6	0.2 L	593	0.44	13.3
LB-17D	LB-1291-17	12/23/91	1010	18.6	0.2 L	586	0.36	13.4
LB-17D	LB-392-11	3/23/92	934	68.0	0.2 L	570	0.34	12.6
LB-17D	LB-392-12	3/23/92	927	69.0	0.2 L	542	0.33	12.5
LB-17D	LB-63092-5	6/30/92	842	58.0	0.2 L	522	0.20	11.6

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Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-17D	LB-031093-6	3/10/93	712	52.0	0.2 L	432	0.18	9.57
LB-17D	LB-060493-22	6/4/93	682	44.0	0.2 L	422	0.28	9.41
LB-17D	LB-092793-21	9/27/93	719	48.0	0.2 L	424	0.25	9.54
LB-17D	LB-121593-7	12/15/93	769	59.0	0.2 L	461	0.25	9.86
LB-17D	LB-032994-20	3/29/94	695	51.0	0.2 L	425	0.25	9.75
LB-17D	LB-062394-14	6/23/94	646	43.0	0.1	401	0.20	8.21
LB-17D	LB-090794-7	9/7/94	659	39.0	0.3	390	0.17	8.57
LB-17D	LB-121494-10	12/14/94	534	41.0	0.2 L	367	0.24	8.45
LB-17D	LB-030995-05	3/9/95	511	36.0	0.2 L	366	0.21	7.62
LB-17D	LB-062095-11	6/20/95	595	44.0	1.8	377	0.20	8.37
LB-17D	LB-092095-10	9/20/95	854	55.0	0.2 L	416	0.25	9.96
LB-17D	LB-121895-3	12/18/95	611	52.0	0.2 L	394	0.25	8.75
LB-17D	LB-031996-11	3/19/96	662	43.0	0.2 L	342	0.27	8.63
LB-17D	LB-061996-14	6/19/96	593	47.0	0.2 L	387	0.22	8.59
LB-17D	LB-032097-16	3/20/97	512	50.0	0.2 L	345	0.20	7.63
LB-17D	LB-031998-14	3/19/98	540	37.2	0.2 L	340	0.25	7.09
LB-17D	LB-031899-13	3/18/99	390	19.2	0.3	304	0.17	5.62
LB-17D	LB-031600-7	3/16/00	363	16.0	0.2 L	246	0.13	4.98
LB-17D	LB-031401-9	3/14/01	NT	12.5	0.2 L	243	0.07	4.47
LB-17D	LB-031902-07	3/19/02	NT	9.4	0.2 L	192	0.02 L	3.89
LB-17D	LB-031203-7	3/12/03	NT	10.3	0.2 L	226	0.07	4.05
LB-17D	LB-022504-10	2/25/04	NT	10.9	0.2 L	208	0.06	3.76
LB-17D	LB-030905-10	3/9/05	NT	10.3	0.2 L	264	0.06	3.70
LB-17D	LB-031506-7	3/15/06	NT	8.8	0.2 L	184	0.07	3.71
LB-17D	LB-030607-14	3/6/07	NT	11.0	0.1 L	155	0.08	3.93
LB-17D (Dup)	LB-030607-15	3/6/07	NT	11.0	0.1 L	141	0.10	3.98
LB-17D	LB-032008-11	3/20/08	NT	10.1	0.1 L	205	0.078	4.04
LB-17D	LB-17D	3/18/09	NT	7.8	0.1 L	190	0.082	3.57
LB-17D	LB-17D032410	3/24/10	NT	5.8	0.1 L	185	0.090	3.66
LB-17D	LB-17D	3/22/11	277	7.97	0.1 L	209 H	0.0623	3.38
LB-17D	LB-031212-04	3/12/12	NT	19	0.1 L	230	0.12	4.6
LB-17D	LB-020513-05	2/5/13	NT	13	0.1 L	220	0.11	4.2
LB-17D	LB-021714-03	2/17/14	NT	10	0.1 L	230	0.11	4.1
LB-17D	LB-021715-05	2/17/15	NT	6.51	0.005 L	212	0.0965	3.82
LB-17D (DUP)	LB-021715-06	2/17/15	NT	6.51	0.005 L	207	0.0965	3.71
LB-17I	LB-989-W04	9/6/89	1020	85.0	0.2 L	770	45.70	13.3
LB-17I	LB-1089-W14	10/19/89	1080	125.0	0.2 L	692	46.00	10.1
LB-17I	LB-1189-W14	11/15/89	872	115.0	0.2 L	613	41.50	8.07
LB-17I	LB-1289-W29	12/20/89	920	90.0	0.2	585	36.50	7.67
LB-17I	LB-1289-W30	12/20/89	910	90.0	0.2	591	34.70	8
LB-17I	LB-390-W20	3/15/90	724	26.9	0.2 L	484	29.30	4.01
LB-17I	LB-690-W17	6/21/90	1140	96.0	0.2 L	766	48.50	6.74
LB-17I	LB-990-W18	9/19/90	1090	92.0	0.2 L	710	37.30	8.09
LB-17I	LB-1290-W22	12/13/90	967	38.4	0.2 L	666	41.50	7.17
LB-17I	LB-391-W20	3/21/91	1240	36.6	0.2 L	663	46.40	6.14
LB-17I	LB-392-13	3/23/92	1010	40.0	0.2 L	545	45.90	3.86
LB-17I	LB-63092-6	6/30/92	1210	71.0	0.2 L	708	56.20	6.5
LB-17I	LB-63092-7	6/30/92	1230	71.0	0.2 L	697	56.50	6.49

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Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-17I	LB-91892-3	9/18/92	1290	71.0	0.2 L	746	58.60	7.88
LB-17I	LB-91892-4	9/18/92	1380	74.0	0.2 L	781	59.90	7.73
LB-17I	LB-121192-18	12/11/92	1030	61.0	0.2 L	562	31.20	8.34
LB-17I	LB-121192-19	12/11/92	1040	62.0	0.2 L	544	31.30	8.51
LB-17I	LB-031093-5	3/10/93	896	51.0	0.2 L	501	32.30	7.34
LB-17I	LB-032994-21	3/29/94	719	35.0	0.2 L	450	25.90	4.89
LB-17I	LB-030995-06	3/9/95	562	27.0	0.2 L	361	21.00	3.58
LB-17I	LB-031996-10	3/19/96	869	48.0	0.2 L	484	27.00	1.82
LB-17I	LB-032097-17	3/20/97	557	56.0	0.2 L	366	16.60	1.08
LB-17I	LB-031998-13	3/19/98	464	30.8	0.2 L	284	14.00	0.913
LB-17I	LB-031899-12	3/18/99	418	18.4	0.2	297	14.40	0.987
LB-17I	LB-031600-6	3/16/00	304	12.8	0.2 L	220	8.90	0.776
LB-17I	LB-031401-10	3/14/01	NT	13.6	0.2 L	241	8.86	0.918
LB-17I	LB-031902-06	3/19/02	NT	15.8	0.2	252	8.96	1.1
LB-17I	LB-031203-6	3/12/03	NT	18.0	0.2	278	9.99	1.37
LB-17I	LB-022504-11	2/25/04	NT	18.0	0.2 L	242	8.73	1.12
LB-17I	LB-030905-11	3/9/05	NT	21.0	0.2	288	10.80	1.79
LB-17I	LB-031506-8	3/15/06	NT	22.8	0.2 L	344	12.00	1.59
LB-17I	LB-030607-13	3/6/07	NT	24.2	0.1 L	291	11.30	1.51
LB-17I	LB-032008-10	3/20/08	NT	19.2	0.1 L	221	8.5	1.3
LB-17I	LB-17I	3/18/09	NT	10.0	0.1 L	193	6.77	1.12
LB-17I	LB-17I032310	3/23/10	NT	11.8	0.1 L	217	8.44	1.52
LB-17I (Dup)	LBDUP1032310	3/23/10	NT	11.7	0.1 L	231	8.41	1.51
LB-17I	LB-17I	3/22/11	498	27.4	0.1 L	306 H	8.95	1.55
LB-17I	LB-031312-16	3/13/12	NT	12	0.1 L	240	6.8	0.98
LB-17I	LB-020513-06	2/5/13	NT	10	0.1 L	190	6.0	0.92
LB-17I	LB-021714-04	2/17/14	NT	12	0.1 L	230	7.2	1.10
LB-17I	LB-021815-15	2/18/15	NT	9.71	0.005 L	250	9.2	1.4
LB-20S	LB-991-19	9/26/81	NT	NT	NT	NT	2.81	7.64
LB-20S	LB-1289-W36	12/21/89	600	27.0	0.2 L	470	0.09	2.14
LB-20S	LB-390-W12	3/14/90	1340	45.7	0.2 L	892	2.72	13.4
LB-20S	LB-690-W08	6/19/90	1250	42.6	0.2 L	880	21.70	13.2
LB-20S	LB-690-W09	6/19/90	1220	41.8	0.2 L	832	21.00	13.3
LB-20S	LB-990-W09	9/14/90	844	22.8	0.2 L	574	0.78	6.88
LB-20S	LB-1290-W10	12/12/90	983	4.1	0.2 L	682	0.17	9
LB-20S	LB-1290-W11	12/12/90	988	21.3	0.2 L	708	0.16	9.32
LB-20S	LB-391-W08	3/20/91	667	9.9	0.2 L	374	0.09	5.07
LB-20S	LB-691-W11	6/11/91	960	NT	NT	583	4.16	9.44
LB-20S	LB-991-19	9/26/91	NT	NT	NT	620	2.81	7.64
LB-20S	LB-1291-5	12/19/91	1160	NT	NT	667	0.63	9.69
LB-20S	LB-392-18	3/24/92	778	20.0	0.2 L	485	0.10	7.34
LB-20S	LB-031593-26	3/15/93	713	10.0	0.2 L	411	1.36	5.34
LB-20S	LB-031593-27	3/15/93	720	11.0	0.2 L	415	1.30	5.28
LB-20S	LB-032994-23	3/29/94	753	20.0	0.2 L	464	2.08	6.4
LB-20S	LB-031395-19	3/13/95	933	45.0	0.2	636	0.37	5.45
LB-20S	LB-032096-20	3/20/96	1020	42.0	0.2 L	620	6.06	7.49
LB-20S	LB-032097-15	3/20/97	625	46.0	0.2 L	459	25.60	3.98

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-20S	LB-032098-23	3/20/98	467	39.0	0.2 L	297	15.90	1.83
LB-20S	LB-031899-16	3/18/99	279	13.8	0.3	210	11.80	1.28
LB-20S	LB-031700-14	3/17/00	279	14.6	0.2	228	10.60	1.53
LB-20S	LB-031401-13	3/14/01	NT	8.8	0.2 L	278	17.30	2.21
LB-20S	LB-032002-14	3/20/02	NT	3.3	0.2	283	2.07	2.09
LB-20S	LB-031303-20	3/13/03	NT	2.4	0.2 L	194	2.99	1.3
LB-20S	LB-022604-19	2/26/04	NT	2.9	0.2 L	236	0.41	1.01
LB-20S	LB-030905-12	3/9/05	NT	3.3	0.2	388	6.79	2.290
LB-20S	LB-031406-4	3/14/06	NT	2.1	0.2 L	148	0.16	0.026
LB-20S	LB-030607-16	3/6/07	NT	7.3	0.1 L	219	0.031	0.967
LB-20S	LB-032408-16	3/24/08	NT	7.9	0.1 L	186	0.08	1.22
LB-20S	LB-20S	3/18/09	NT	9.2	0.1 L	271	0.281	1.48
LB-20S	LB-20S032410	3/24/10	NT	3.0	0.1	237	0.027	0.34
LB-20S	LB-20S	3/24/11	544	22.1	0.1 L	361	0.368	2.20
LB-20S	LB-031312-15	3/13/12	NT	6.2	0.1 L	210	0.076	2.4
LB-20S	LB-020513-10	2/5/13	NT	17	0.1 L	340	0.18	3.5
LB-20S	LB-021914-20	2/19/14	NT	13	0.1 L	250	0.075	2.4
LB-20S	LB-021915-18	2/19/15	NT	35	0.42	220	0.43	2.0
LB-26D	LB-031193-14	3/11/93	307	NT	4.7	226	0.02 L	0.024
LB-26D	LB-060193-3	6/1/93	290	NT	4.7	226	0.02 L	0.017
LB-26D	LB-092493-12	9/24/93	293	NT	5.3	216	0.02 L	0.009
LB-26D	LB-121693-16	12/16/93	285	NT	5.2	240	0.14	0.007
LB-26D	LB-032594-7	3/25/94	297	8.3	5.7	223	0.02 L	0.007
LB-26D	LB-062294-6	6/22/94	277	NT	5.4	226	0.03	0.005 L
LB-26D	LB-090894-15	9/8/94	296	NT	7.0	228	0.02 L	0.005 L
LB-26D	LB-121394-5	12/13/94	274	8.5	6.5	233	0.15	0.006
LB-26D	LB-031095-14	3/10/95	252	NT	6.2	199	0.02 L	0.005 L
LB-26D	LB-061995-2	6/19/95	270	NT	7.4	230	0.02 L	0.005 L
LB-26D	LB-092095-4	9/20/95	338	NT	7.5	218	0.00 L	0.005 L
LB-26D	LB-122095-15	12/20/95	325	NT	8.1	233	0.02 L	0.002 J
LB-26D	LB-031996-2	3/19/96	336	NT	8.7	241	0.02 L	0.005 L
LB-26D	LB-061896-2	6/18/96	281	NT	7.7 J	251	0.02	0.005 L
LB-26D	LB-091896-11	9/18/96	347	10.0	8.1	246	0.02 L	0.005 L
LB-26D	LB121796-4	12/17/96	391	12.0	7.9	272	0.02 L	0.005 L
LB-26D	LB-031997-6	3/19/97	306	14.0	8.4	284	0.03	0.005 L
LB-26D	LB-061797-8	6/17/97	379	12.0	7.6	256	0.02 L	0.005 L
LB-26D	LB-091697-4	9/16/97	307	12.8	8.2	251	0.02 L	0.005 L
LB-26D	LB-121697-6	12/16/97	331	12.0	9.3	244	0.02	0.005 L
LB-26D	LB-031998-9	3/19/98	358	11.8	10.0	251	0.02 L	0.005 L
LB-26D	LB-061698-9	6/16/98	247	11.5	9.2	260	0.02	0.005 L
LB-26D	LB-091798-6	9/17/98	324	10.2	8.8	230	0.02 L	0.005 L
LB-26D	LB-121798-3	12/17/98	264	10.3	9.7	272	0.02 L	0.005 L
LB-26D	LB-031899-6	3/18/99	252	10.7	8.9	241	0.02 L	0.005 L
LB-26D	LB-062399-9	6/23/99	251	9.8	9.3	235	0.02 L	0.005 L
LB-26D	LB-091699-3	9/16/99	282	9.3	9.1	234	0.02 L	0.005 L
LB-26D	LB-121599-9	12/15/99	278	8.0	9.0	191	0.04	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-26D	LB-031700-13	3/17/00	236	7.5	8.4	209	0.02 L	0.005 L
LB-26D	LB-061300-5	6/13/00	240	7.6	9.5	206	0.02 L	0.005 L
LB-26D	LB-091200-4	9/12/00	258	8.1	9.3	203	0.02 L	0.005 L
LB-26D	LB-121500-7	12/15/00	262	6.7	8.2	168	0.02 L	0.005 L
LB-26D	LB-031301-5	3/13/01	NT	6.6	8.1	198	0.02 L	0.005 L
LB-26D	LB-031902-8	3/19/02	NT	5.5	7.2	165	0.02 L	0.005 L
LB-26D	LB-031203-5	3/12/03	NT	4.7	6.0	216	0.02 L	0.005 L
LB-26D	LB-022504-12	2/25/04	NT	4.3	5.1	173	0.02 L	0.005 L
LB-26D	LB-030805-7	3/8/05	NT	4.0	4.8	170	0.02 L	0.005 L
LB-26D	LB-031606-19	3/16/06	NT	3.6	4.9	190	0.02 L	0.005 L
LB-26D	LB-030507-11	3/5/07	NT	4.1	5.3	145	0.02 L	0.005 L
LB-26D	LB-031908-8	3/19/08	NT	4.0	5.2	177	0.02 L	0.005 L
LB-26D	LB-26D	3/17/09	NT	4.3	5.9	144	0.02 L	0.005 L
LB-26D	LB-26D032410	3/24/10	NT	3.9	6.5	194	0.02 L	0.005 L
LB-26D	LB-26D	3/23/11	224	4.97	6.3	196	0.025 L	0.002 L
LB-26D	LB-031212-05	3/12/12	NT	4.8	5.9	190	0.025 L	0.0034
LB-26D	LB-020713-23	2/6/13	NT	5.1	5.5	180	0.025 L	0.0020 L
LB-26D	LB-021714-05	2/17/14	NT	5.2	5.5	190	0.025 L	0.0020 L
LB-26D	LB-021715-04	2/17/15	NT	4.88	5.58	183	0.025 L	0.0020 L
LB-26I	LB-121092-12	12/10/92	NT	NT	0.7	NT	0.03	0.075
LB-26I	LB-031193-13	3/11/93	638	NT	0.7	380	0.02 L	0.053
LB-26I	LB-060193-1	6/1/93	577	NT	1.0	352	0.02 L	0.027
LB-26I	LB-092493-11	9/24/93	587	NT	1.0	363	0.03	0.039
LB-26I	LB-121693-15	12/16/93	531	NT	0.8	377	0.03	0.031
LB-26I	LB-032594-6	3/25/94	528	NT	1.2	326	0.02 L	0.024
LB-26I	LB-062294-5	6/22/94	488	NT	1.2	329	0.03	0.028
LB-26I	LB-090894-16	9/8/94	519	NT	1.3	327	0.03	0.031
LB-26I	LB-121394-4	12/13/94	465	25.0	1.3	307	0.02 L	0.022
LB-26I	LB-031095-13	3/10/95	499	NT	1.1	311	0.02	0.023
LB-26I	LB-061995-1	6/19/95	434	NT	1.6	296	0.02	0.025
LB-26I	LB-092095-5	9/20/95	493	NT	1.8	274	0.03	0.026
LB-26I	LB-122095-14	12/20/95	458	NT	1.9	289	0.02 L	0.013
LB-26I	LB-031996-1	3/19/96	479	NT	1.7	302	0.02 L	0.02
LB-26I	LB-061896-1	6/18/96	387	NT	2.0 J	301	0.02	0.02
LB-26I	LB-091896-10	9/18/96	469	25.0	2.0	298	0.02 L	0.016
LB-26I	LB121796-5	12/17/96	498	24.0	2.2	323	0.02 L	0.014
LB-26I	LB-031997-5	3/19/97	424	30.0	3.0	329	0.04	0.014
LB-26I	LB-061797-7	6/17/97	525	30.0	2.3	323	0.02 L	0.018
LB-26I	LB-091697-5	9/16/97	436	33.4	2.1	312	0.02 L	0.019
LB-26I	LB-121697-7	12/16/97	647	26.8	3.0	444	0.03	0.032
LB-26I	LB-031998-8	3/19/98	605	34.3	3.6	379	0.02 L	0.013
LB-26I	LB-061698-8	6/16/98	406	35.7	2.7	356	0.02 L	0.015
LB-26I	LB-091798-7	9/17/98	557	34.2	2.4	304	0.03	0.014
LB-26I	LB-121798-2	12/17/98	456	35.1	2.8	368	0.04	0.013
LB-26I	LB-031799-1	3/17/99	456	33.7	2.9	347	0.02	0.014
LB-26I	LB-062399-10	6/23/99	361	22.6	5.1	280	0.02 L	0.008

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-26I	LB-091699-4	9/16/99	535	32.9	2.2	340	0.03	0.013
LB-26I	LB-121599-8	12/15/99	499	30.7	2.9	293	0.02 L	0.01
LB-26I	LB-031700-12	3/17/00	445	28.9	2.4	298	0.02 L	0.011
LB-26I	LB-061300-4	6/13/00	440	30.0	2.6	342	0.02 L	0.01
LB-26I	LB-091200-5	9/12/00	470	26.8	2.7	304	0.02 L	0.0131
LB-26I	LB-121500-8	12/15/00	376	15.2	5.0	217	0.02 L	0.005 L
LB-26I	LB-031301-6	3/13/01	NT	18.3	2.8	284	0.02 L	0.0069
LB-26I	LB-092001-3	9/20/01	NT	15.3	3.4	251	0.02 L	0.011
LB-26I	LB-092001-4	9/20/01	NT	15.5	3.5	266	0.02 L	0.011
LB-26I	LB-031902-09	3/19/02	NT	13.0	3.2	230	0.02 L	0.006
LB-26I	LB-091802-04	9/17/02	NT	11.0	4.0	237	0.02 L	0.014
LB-26I	LB-031203-4	3/12/03	NT	10.0	2.6	238	0.02 L	0.008
LB-26I	LB-092203-4	9/22/03	NT	9.5	2.0	248	0.03	0.015
LB-26I	LB-022504-13	2/25/04	NT	8.3	2.5	192	0.02 L	0.005
LB-26I	LB-090104-26	9/1/04	NT	6.7	2.2	190	0.02 L	0.009
LB-26I	LB-030805-8	3/8/05	NT	8.5	2.3	206	0.02 L	0.006
LB-26I	LB-091405-5	9/14/05	NT	7.4	2.7	190	0.02 L	0.005 L
LB-26I	LB-031606-20	3/16/06	NT	7.1	2.7	230	0.02 L	0.009
LB-26I	LB-091206	9/12/06	NT	6.6	3.2	199	0.02 L	0.010
LB-26I	LB-030507-10	3/5/07	NT	6.7	2.6	193	0.02 L	0.009
LB-26I	LB-091907-5	9/19/07	NT	7.7	2.3	207	0.02 L	0.011
LB-26I	LB-031908-7	3/19/08	NT	10.1	2.1	213	0.02 L	0.011
LB-26I	LB-091608-6	9/16/08	NT	4.1	5.6	168	0.02 L	0.005 L
LB-26I	LB-26I	3/17/09	NT	11.6	2.5	202	0.02 L	0.0057
LB-26I	LB-26I	9/11/09	NT	4.05	5.85	173	0.02 L	0.005 L
LB-26I	LB-26I032410	3/24/10	NT	8.52	3.41	211	0.02 L	0.010
LB-26I	LB26092310	9/23/10	NT	7.71	3.76	229	0.02 L	0.010
LB-26I	LB-26I	3/23/11	226	7.97	3.71	226	0.025 L	0.00743
LB-26I	LB-090711--3	9/7/11	NT	6.22	5.02	200	0.0392	0.00356
LB-26I	LB-032212-21	3/22/12	NT	8.4	4.8	200	0.037	0.0026
LB-26I	LB-091112-04	9/11/12	NT	5.8	5.2	200	0.025 L	0.0020
LB-26I	LB-020613-14	2/6/13	NT	6.0	4.9	200	0.064	0.0020 L
LB-26I	LB-082113-06	8/21/13	NT	7.5	5.0	200	0.025 L	0.0020 L
LB-26I	LB-021714-06	2/17/14	NT	6.8	4.6	200	0.036	0.0020 L
LB-26I (Dup)	LB-021714-07	2/17/14	NT	6.9	4.6	200	0.025 L	0.0020 L
LB-26I	LB-081314-05	8/13/14	NT	6.5	5.1	190	0.025 L	0.0040
LB-26I	LB-021815-12	2/18/15	NT	11.0	3.87	210	0.025 L	0.0024
LB-26I	LB-081115-06	8/11/15	NT	8.12	4.10	204	0.040 L	0.0020 L
LB-27D	LB-031193-16	3/11/93	309	NT	1.6	217	0.02 L	0.034
LB-27D	LB-060193-4	6/1/93	302	NT	1.7	196	0.02 L	0.005 L
LB-27D	LB-092493-16	9/24/93	297	NT	1.9	205	0.02 L	0.005 L
LB-27D	LB-092493-17	9/24/93	296	NT	1.8	202	0.02 L	0.005 L
LB-27D	LB-121693-17	12/16/93	270	NT	2.0	235	0.04	0.005 L
LB-27D	LB-121693-18	12/16/93	282	NT	1.9	225	0.02	0.005 L
LB-27D	LB-032494-4	3/24/94	290	NT	0.2 L	210	0.02 L	0.005 L
LB-27D	LB-032494-5	3/24/94	293	NT	0.2 L	209	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-27D	LB-062294-10	6/22/94	291	NT	1.9	219	0.02 L	0.005 L
LB-27D	LB-062294-9	6/22/94	284	NT	1.9	214	0.02 L	0.005 L
LB-27D	LB-090894-12	9/8/94	303	NT	2.3	214	0.02 L	0.005 L
LB-27D	LB-090894-13	9/8/94	299	NT	2.1	214	0.02 L	0.005 L
LB-27D	LB-121394-2	12/13/94	264	12.0	1.9	215	0.02 L	0.005 L
LB-27D	LB-121394-3	12/13/94	259	12.0	1.9	222	0.02 L	0.005 L
LB-27D	LB-031095-7	3/10/95	274	NT	0.7	193	0.02 L	0.005 L
LB-27D	LB-031095-9	3/10/95	265	NT	1.9	190	0.02	0.005 L
LB-27D	LB-061995-4	6/19/95	272	NT	2.3	217	0.02 L	0.005 L
LB-27D	LB-061995-5	6/19/95	277	NT	2.2	208	0.02 L	0.005 L
LB-27D	LB-092095-1	9/20/95	334	NT	2.1	195	0.00 L	0.005 L
LB-27D	LB-092095-2	9/20/95	326	NT	2.0	205	0.00 L	0.005 L
LB-27D	LB-122095-17	12/20/95	306	NT	2.1	209	0.02 L	0.005 L
LB-27D	LB-122095-18	12/20/95	302	NT	2.1	210	0.06	0.001 J
LB-27D	LB-031996-3	3/19/96	302	NT	2.1	208	0.02 L	0.005 L
LB-27D	LB-061896-4	6/18/96	260	NT	2.2	220	0.10	0.005 L
LB-27D	LB-061896-5	6/18/96	251	NT	NT	217	0.09	0.005 L
LB-27D	LB-091796-9	9/17/96	286	11.0	2.1	214	0.02 L	0.005 L
LB-27D	LB121796-8	12/17/96	303	11.0	2.1	204	0.02 L	0.005 L
LB-27D	LB-031997-12	3/19/97	235	13.0	2.2	221	0.02	0.005 L
LB-27D	LB-061797-11	6/17/97	283	10.0	1.8	210	0.03	0.005 L
LB-27D	LB-091697-8	9/16/97	235	8.4	2.3	216	0.02 L	0.005 L
LB-27D	LB-121797-14	12/17/97	231	11.0	2.2	160	0.02 L	0.005 L
LB-27D	LB-031998-12	3/19/98	301	11.2	2.2	214	0.02 L	0.005 L
LB-27D	LB-061798-10	6/17/98	286	11.1	2.1	218	0.02 L	0.005 L
LB-27D	LB-091798-8	9/17/98	286	10.8	2.2	172	0.02 L	0.005 L
LB-27D	LB-121798-6	12/17/98	251	12.6	2.6	240	0.21	0.008
LB-27D	LB-031899-9	3/18/99	226	11.4	2.1	213	0.02 L	0.005 L
LB-27D	LB-062399-7	6/23/99	231	10.4	2.3	193	0.02	0.005 L
LB-27D	LB-091599-1	9/15/99	206	11.1	2.4	216	0.16	0.005 L
LB-27D	LB-121599-7	12/15/99	270	10.7	2.5	195	0.02 L	0.005 L
LB-27D	LB-031600-3	3/16/00	248	10.2	2.4	221	0.02 L	0.005 L
LB-27D	LB-061300-3	6/13/00	249	11.4	2.5	225	0.02 L	0.005 L
LB-27D	LB-091300-8	9/13/00	283	11.9	2.8	198	0.02 L	0.005 L
LB-27D	LB-091300-9	9/13/00	272	11.2	2.6	209	0.02 L	0.005 L
LB-27D	LB-121500-5	12/15/00	294	11.4	2.5	207	0.02 L	0.005 L
LB-27D	LB-031301-3	3/13/01	NT	12.2	2.7	226	0.02 L	0.005 L
LB-27D	LB-031902-11	3/19/02	NT	13.5	2.8	187	0.02 L	0.005 L
LB-27D	LB-031203-3	3/12/03	NT	12.7	3.0	218	0.02 L	0.005 L
LB-27D	LB-022604-15	2/26/04	NT	12.7	2.9	236	0.02 L	0.005 L
LB-27D (Dup)	LB-022604-16	2/26/04	NT	12.5	2.9	238	0.02 L	0.005 L
LB-27D	LB-030805-6	3/8/05	NT	13.6	3.0	248	0.02 L	0.017
LB-27D	LB-031606-17	3/16/06	NT	12.4	3.2	242	0.02 L	0.005 L
LB-27D	LB-030507-9	3/5/07	NT	11.5	3.3	209	0.02 L	0.005 L
LB-27D	LB-031908-5	3/19/08	NT	11.1	3.4	241	0.02 L	0.005 L
LB-27D	LB-031908-6	3/19/08	NT	11.9	1.4	364	0.02 L	0.285
LB-27D	LB-27D	3/18/09	NT	10.7	3.5	217	0.02 L	0.005 L

Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-27D	LB-27D032410	3/24/10	NT	9.8	3.9	238	0.02 L	0.005 L
LB-27D	LB-27D	3/25/11	307	10.4	3.77	245	0.025 L	0.002 L
LB-27D	LB-031212-02	3/12/12	NT	10	4.0	220	0.033	0.0054
LB-27D	LB-020713-21	2/7/13	NT	10	4.2	230	0.083	0.018
LB-27D	LB-021814-13	2/18/14	NT	13	4.1	230	0.057	0.0075
LB-27D	LB-021715-02	2/17/15	NT	8.88	4.09	265	0.228	0.0127
LB-27I	LB-121192-20	12/11/92	NT	NT	6.2	NT	0.04	0.471
LB-27I	LB-031293-21	3/12/93	729	NT	4.5	459	0.02 L	0.343
LB-27I	LB-060193-2	6/1/93	706	NT	3.8	436	0.02 L	0.283
LB-27I	LB-092493-14	9/24/93	785	NT	21.0	526	0.07	0.413
LB-27I	LB-092493-15	9/24/93	771	NT	20.0	504	0.08	0.381
LB-27I	LB-121693-19	12/16/93	676	NT	22.0	499	0.03	0.284
LB-27I	LB-121693-20	12/16/93	711	NT	22.0	506	0.04	0.28
LB-27I	LB-032494-3	3/24/94	685	NT	NT	469	0.02 L	0.276
LB-27I	LB-062294-8	6/22/94	582	NT	5.3	397	0.02	0.213
LB-27I	LB-090894-11	9/8/94	573	NT	6.2	402	0.03	0.238
LB-27I	LB-121394-1	12/13/94	519	13.0	16.0	410	0.02	0.267
LB-27I	LB-031095-7	3/10/95	573	NT	9.0	346	0.02	0.198
LB-27I	LB-061995-3	6/19/95	566	NT	7.5	394	0.02	0.188
LB-27I	LB-092095-3	9/20/95	651	NT	1.2	377	0.03	0.247
LB-27I	LB-122095-16	12/20/95	584	NT	0.8	353	0.02 L	0.236
LB-27I	LB-031996-4	3/19/96	653	NT	0.2 L	392	0.10	0.273
LB-27I	LB-061896-3	6/18/96	532	NT	0.0 J	414	0.03	0.282
LB-27I	LB-091796-7	9/17/96	859	38.0	0.2 L	555	0.08	0.352
LB-27I	LB-091796-8	9/17/96	874	39.0	0.2 L	552	0.03	0.356
LB-27I	LB121796-6	12/17/96	1150	30.0	30.0	650	0.04	0.373
LB-27I	LB121796-7	12/17/96	1140	29.0	60.0	650	0.02 L	0.364
LB-27I	LB-031997-10	3/19/97	681	49.0	1.1	530	0.04	0.312
LB-27I	LB-031997-11	3/19/97	747	49.0	1.1	523	0.04	0.288
LB-27I	LB-061797-10	6/17/97	762	44.0	0.1	459	0.03	0.277
LB-27I	LB-061797-9	6/17/97	764	43.0	0.1	459	0.03	0.273
LB-27I	LB-091697-6	9/16/97	844	48.9	0.2 L	690	0.03	0.396
LB-27I	LB-091697-7	9/16/97	860	49.3	0.2 L	671	0.03	0.396
LB-27I	LB-121797-11	12/17/97	720	30.7	0.2 L	609	0.03	0.406
LB-27I	LB-121797-12	12/17/97	738	30.5	0.2 L	589	0.03	0.397
LB-27I	LB-031998-10	3/19/98	877	25.9	0.2 L	576	0.04	0.381
LB-27I	LB-031998-11	3/19/98	896	26.6	0.2 L	573	0.03	0.373
LB-27I	LB-061798-11	6/17/98	869	37.0	0.4	602	0.04	0.342
LB-27I	LB-061798-12	6/17/98	729	36.7	0.4	599	0.04	0.342
LB-27I	LB-091798-10	9/17/98	1030	47.0	0.2	620	0.04	0.375
LB-27I	LB-091798-9	9/17/98	1030	46.5	0.2 L	586	0.04	0.388
LB-27I	LB-121798-4	12/17/98	714	36.0	0.2 L	545	0.04	0.354
LB-27I	LB-121798-5	12/17/98	710	36.3	0.2 L	522	0.04	0.36
LB-27I	LB-031899-7	3/18/99	712	39.3	0.7	565	0.04	0.335
LB-27I	LB-031899-8	3/18/99	707	39.5	0.7	565	0.04	0.29
LB-27I	LB-062399-8	6/23/99	693	46.4	1.0	502	0.03	0.305
LB-27I	LB-091599-2	9/15/99	691	56.7	0.3	602	0.03	0.336

**Table B-3
Groundwater Chemistry, Inorganic Parameters and
Dissolved Metals Concentrations (mg/L)
1987 through 2015
Leichner Landfill**

Location	Sample Number	Date	Conductivity	Chloride	Nitrate as Nitrogen	Total Dissolved Solids	Dissolved Iron	Dissolved Manganese
LB-27I	LB-121599-6	12/15/99	910	81.4	0.2	553	0.04	3.72
LB-27I	LB-031600-1	3/16/00	803	69.4	0.2 L	675	0.02 L	0.356
LB-27I	LB-031600-2	3/16/00	810	69.1	0.2 L	598	0.21	0.349
LB-27I	LB-061300-1	6/13/00	743	70.9	0.1 L	532	0.03	0.305
LB-27I	LB-061300-2	6/13/00	738	70.5	0.1 L	662	0.02	0.322
LB-27I	LB-091300-10	9/13/00	819	47.5	0.7	368	0.02	0.289
LB-27I	LB-121500-6	12/15/00	885	66.0	1.2	504	0.02 L	0.0851
LB-27I	LB-031301-4	3/13/01	NT	42.8	0.1 L	226	0.02 L	0.268
LB-27I	LB-092001-2	9/20/01	NT	39.7	0.1 L	378	0.02 L	0.186
LB-27I	LB-031902-10	3/19/02	NT	42.1	0.6	403	0.02 L	0.277
LB-27I	LB-091802-05	9/17/02	NT	25.0	8.0	382	0.02 L	0.243
LB-27I	LB-031203-1	3/12/03	NT	23.0	1.4	384	0.02 L	0.187
LB-27I	LB-031203-2	3/12/03	NT	23.0	1.4	312	0.02 L	0.206
LB-27I	LB-092203-2	9/22/03	NT	26.0	1.2	424	0.02 L	0.516
LB-27I	LB-092203-3	9/22/03	NT	25.0	1.2	388	0.02 L	0.545
LB-27I	LB-022604-17	2/26/04	NT	18.5	0.2 L	288	0.02 L	0.193
LB-27I	LB-090104-27	9/1/04	NT	20.4	1.1	268	0.02 L	0.217
LB-27I	LB-030805-5	3/8/05	NT	10.9	2.8	312	0.02 L	0.195
LB-27I	LB-091405-3	9/14/05	NT	12.4	2.4	316	0.02 L	0.131
LB-27I	LB-031606-18	3/16/06	NT	9.7	4.2	346	0.02 L	0.121
LB-27I	LB-091206-2	9/12/06	NT	14.8	1.9	346	0.02 L	0.185
LB-27I	LB-030507-8	3/5/07	NT	14.2	2.2	363	0.02 L	0.238
LB-27I	LB-091907-4	9/19/07	NT	16.7	0.1 L	295	0.04	0.530
LB-27I	LB-031908-4	3/19/08	NT	11.9	1.4	340	0.02 L	0.282
LB-27I	LB-091608-7	9/16/08	NT	17.0	1.0	311	0.02 L	0.196
LB-27I	LB-27I	3/18/09	NT	14.3	2.1	322	0.02 L	0.186
LB-27I	LBLF27i091109	9/11/09	NT	19.3	0.86	309	0.02 L	0.173
LB-27I	LB-27I032410	3/24/10	NT	7.7	1.82	266	0.02 L	0.121
LB-27I	LB27I092310	9/23/10	NT	19.4	0.62	311	0.02 L	0.196
LB-27I	LB-27I	3/25/11	512	20.1	0.14	335	0.025 L	0.191
LB-27I	LB-090711-01	9/7/11	NT	41.2	0.10 L	464	0.050 L	0.456
LB-27I	LB-032212-18	3/22/12	NT	23	0.2	370	0.025 L	0.38
LB-27I	LB-091112-02	9/11/12	NT	32	0.2 L, H	420	0.032	0.54
LB-27I	LB-020613-11	2/6/13	NT	41	0.22	380	0.025 L	0.52
LB-27I (Dup)	LB-020613-12	2/6/13	NT	42	0.21	380	0.025 L	0.52
LB-27I	LB-082113-03	8/21/13	NT	51	0.10 L	420	0.025 L	0.41
LB-27I (Dup)	LB-082113-05	8/21/13	NT	51	0.10 L	420	0.025 L	0.42
LB-27I	LB-021814-14	2/18/14	NT	30	0.40	340	0.025 L	0.43
LB-27I	LB-081314-03	8/13/14	NT	34	0.10 L	360	0.025 L	0.33
LB-27I	LB-021815-10	2/18/15	NT	36	0.30	390	0.025 L	0.46
LB-27I	LB-081215-09	8/12/15	NT	35.1	0.20 L	352	0.040 L	0.328
FIELDQC	LB-021715-08	2/17/15	NT	0.10 L	0.005 L	10 L	0.025 L	0.0020 L
FIELDQC	LB-081215-07	8/12/15	NT	0.04 L	0.20 L	10 L	0.040 L	0.0020 L

Notes:

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

APPENDIX C
2015 Laboratory Analytical Data

First Quarter (February) 2015 Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Portland
9405 SW Nimbus Ave.
Beaverton, OR 97008
Tel: (503)906-9200

TestAmerica Job ID: 250-24580-1

TestAmerica Sample Delivery Group: 04215030.01/16
Client Project/Site: Leichner Landfill
Revision: 1

For:

SCS Engineers
14945 SW Sequoia Parkway
Suite 180
Portland, Oregon 97224

Attn: Mr. Jason Davendonis



Authorized for release by:
3/6/2015 4:22:08 PM

Sarah Murphy, Project Manager I
(916)373-5600
sarah.murphy@testamericainc.com

LINKS

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results through
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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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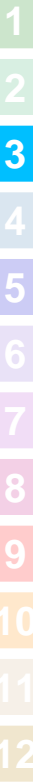
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Sample Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-24580-1	LB-021715-01	Water	02/17/15 11:55	02/18/15 10:19
250-24580-2	LB-021715-02	Water	02/17/15 12:50	02/18/15 10:19
250-24580-3	LB-021715-03	Water	02/17/15 13:40	02/18/15 10:19
250-24580-4	LB-021715-04	Water	02/17/15 14:20	02/18/15 10:19
250-24580-5	LB-021715-05	Water	02/17/15 15:00	02/18/15 10:19
250-24580-6	LB-021715-06	Water	02/17/15 15:05	02/18/15 10:19
250-24580-7	LB-021715-07	Water	02/17/15 16:00	02/18/15 10:19
250-24580-8	LB-021715-08	Water	02/17/15 16:30	02/18/15 10:19



Case Narrative

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Job ID: 250-24580-1

Laboratory: TestAmerica Portland

Narrative

Job Narrative 250-24580-1

Comments

Report revised 03/05/2015 to include custom RLs for 8260. Formatter changed from MDL reporting to RL reporting.

Receipt

The samples were received on 2/18/2015 10:19 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.1° C.

Except: A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

Headspace in 2/2 vials: Trip Blanks (250-24580-9). Per client request analysis canceled analysis of trip blank due to headspace.

GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) associated with batch 182888 recovered above the upper control limit for 2,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCVIS 580-182888/2).

Method 8260B: The laboratory control sample duplicate (LCSD) for batch 182888 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 183438 recovered outside control limits for the following analytes: trans-1,3-dichloropropene and 1,2,3-trichlorobenzene. Results were within control limits for both the LCS and LCSD, therefore results are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
*	LCS or LCSD exceeds the control limits
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021715-01

Date Collected: 02/17/15 11:55

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/20/15 15:35	1
Benzene	ND	*	0.500		ug/L			02/20/15 15:35	1
Bromobenzene	ND		2.00		ug/L			02/20/15 15:35	1
Bromochloromethane	ND		0.500		ug/L			02/20/15 15:35	1
Bromodichloromethane	ND		0.500		ug/L			02/20/15 15:35	1
Bromoform	ND		0.500		ug/L			02/20/15 15:35	1
Bromomethane	ND		1.00		ug/L			02/20/15 15:35	1
2-Butanone	ND		20.0		ug/L			02/20/15 15:35	1
Carbon disulfide	ND		0.500		ug/L			02/20/15 15:35	1
Carbon tetrachloride	ND		0.500		ug/L			02/20/15 15:35	1
Chlorobenzene	ND		0.500		ug/L			02/20/15 15:35	1
Chloroethane	ND		0.500		ug/L			02/20/15 15:35	1
Chloroform	ND		0.500		ug/L			02/20/15 15:35	1
Chloromethane	ND		0.500		ug/L			02/20/15 15:35	1
2-Chlorotoluene	ND		2.00		ug/L			02/20/15 15:35	1
4-Chlorotoluene	ND		2.00		ug/L			02/20/15 15:35	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 15:35	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 15:35	1
Dibromochloromethane	ND		0.500		ug/L			02/20/15 15:35	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/20/15 15:35	1
1,2-Dibromoethane	ND		2.00		ug/L			02/20/15 15:35	1
Dibromomethane	ND		0.500		ug/L			02/20/15 15:35	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/20/15 15:35	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/20/15 15:35	1
1,2-Dichlorobenzene	ND		0.500		ug/L			02/20/15 15:35	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/20/15 15:35	1
1,1-Dichloroethane	ND		0.500		ug/L			02/20/15 15:35	1
1,2-Dichloroethane	ND		0.500		ug/L			02/20/15 15:35	1
2,2-Dichloropropane	ND	^	0.500		ug/L			02/20/15 15:35	1
1,2-Dichloropropane	ND		0.500		ug/L			02/20/15 15:35	1
1,3-Dichloropropane	ND		0.500		ug/L			02/20/15 15:35	1
1,1-Dichloropropene	ND		0.500		ug/L			02/20/15 15:35	1
Ethylbenzene	ND		0.500		ug/L			02/20/15 15:35	1
Hexachlorobutadiene	ND		2.00		ug/L			02/20/15 15:35	1
2-Hexanone	ND		20.0		ug/L			02/20/15 15:35	1
Isopropylbenzene	ND		2.00		ug/L			02/20/15 15:35	1
Methylene Chloride	ND		2.00		ug/L			02/20/15 15:35	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/20/15 15:35	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/20/15 15:35	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/20/15 15:35	1
Naphthalene	ND		2.00		ug/L			02/20/15 15:35	1
n-Butylbenzene	ND		2.00		ug/L			02/20/15 15:35	1
N-Propylbenzene	ND		2.00		ug/L			02/20/15 15:35	1
o-Xylene	ND		0.500		ug/L			02/20/15 15:35	1
p-Isopropyltoluene	ND		2.00		ug/L			02/20/15 15:35	1
sec-Butylbenzene	ND		2.00		ug/L			02/20/15 15:35	1
Styrene	ND		0.500		ug/L			02/20/15 15:35	1
tert-Butylbenzene	ND		2.00		ug/L			02/20/15 15:35	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 15:35	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021715-01
Date Collected: 02/17/15 11:55
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 15:35	1
Tetrachloroethene	ND		0.500		ug/L			02/20/15 15:35	1
Toluene	ND		0.500		ug/L			02/20/15 15:35	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 15:35	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 15:35	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/20/15 15:35	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			02/20/15 15:35	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/20/15 15:35	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/20/15 15:35	1
Trichloroethene	ND		0.500		ug/L			02/20/15 15:35	1
Trichlorofluoromethane	ND		0.500		ug/L			02/20/15 15:35	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/20/15 15:35	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/20/15 15:35	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/20/15 15:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	97		75 - 125					02/20/15 15:35	1
<i>Trifluorotoluene (Surr)</i>	104		80 - 127					02/20/15 15:35	1
<i>Dibromofluoromethane (Surr)</i>	98		85 - 115					02/20/15 15:35	1
<i>4-Bromofluorobenzene (Surr)</i>	90		75 - 120					02/20/15 15:35	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	100		70 - 128					02/20/15 15:35	1

Client Sample ID: LB-021715-02
Date Collected: 02/17/15 12:50
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/20/15 16:01	1
Benzene	ND	*	0.500		ug/L			02/20/15 16:01	1
Bromobenzene	ND		2.00		ug/L			02/20/15 16:01	1
Bromochloromethane	ND		0.500		ug/L			02/20/15 16:01	1
Bromodichloromethane	ND		0.500		ug/L			02/20/15 16:01	1
Bromoform	ND		0.500		ug/L			02/20/15 16:01	1
Bromomethane	ND		1.00		ug/L			02/20/15 16:01	1
2-Butanone	ND		20.0		ug/L			02/20/15 16:01	1
Carbon disulfide	ND		0.500		ug/L			02/20/15 16:01	1
Carbon tetrachloride	ND		0.500		ug/L			02/20/15 16:01	1
Chlorobenzene	ND		0.500		ug/L			02/20/15 16:01	1
Chloroethane	ND		0.500		ug/L			02/20/15 16:01	1
Chloroform	ND		0.500		ug/L			02/20/15 16:01	1
Chloromethane	ND		0.500		ug/L			02/20/15 16:01	1
2-Chlorotoluene	ND		2.00		ug/L			02/20/15 16:01	1
4-Chlorotoluene	ND		2.00		ug/L			02/20/15 16:01	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 16:01	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 16:01	1
Dibromochloromethane	ND		0.500		ug/L			02/20/15 16:01	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/20/15 16:01	1
1,2-Dibromoethane	ND		2.00		ug/L			02/20/15 16:01	1
Dibromomethane	ND		0.500		ug/L			02/20/15 16:01	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:01	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:01	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021715-02
Date Collected: 02/17/15 12:50
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:01	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/20/15 16:01	1
1,1-Dichloroethane	ND		0.500		ug/L			02/20/15 16:01	1
1,2-Dichloroethane	ND		0.500		ug/L			02/20/15 16:01	1
2,2-Dichloropropane	ND	^	0.500		ug/L			02/20/15 16:01	1
1,2-Dichloropropane	ND		0.500		ug/L			02/20/15 16:01	1
1,3-Dichloropropane	ND		0.500		ug/L			02/20/15 16:01	1
1,1-Dichloropropene	ND		0.500		ug/L			02/20/15 16:01	1
Ethylbenzene	ND		0.500		ug/L			02/20/15 16:01	1
Hexachlorobutadiene	ND		2.00		ug/L			02/20/15 16:01	1
2-Hexanone	ND		20.0		ug/L			02/20/15 16:01	1
Isopropylbenzene	ND		2.00		ug/L			02/20/15 16:01	1
Methylene Chloride	ND		2.00		ug/L			02/20/15 16:01	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/20/15 16:01	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/20/15 16:01	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/20/15 16:01	1
Naphthalene	ND		2.00		ug/L			02/20/15 16:01	1
n-Butylbenzene	ND		2.00		ug/L			02/20/15 16:01	1
N-Propylbenzene	ND		2.00		ug/L			02/20/15 16:01	1
o-Xylene	ND		0.500		ug/L			02/20/15 16:01	1
p-Isopropyltoluene	ND		2.00		ug/L			02/20/15 16:01	1
sec-Butylbenzene	ND		2.00		ug/L			02/20/15 16:01	1
Styrene	ND		0.500		ug/L			02/20/15 16:01	1
tert-Butylbenzene	ND		2.00		ug/L			02/20/15 16:01	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 16:01	1
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 16:01	1
Tetrachloroethene	ND		0.500		ug/L			02/20/15 16:01	1
Toluene	ND		0.500		ug/L			02/20/15 16:01	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 16:01	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 16:01	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/20/15 16:01	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			02/20/15 16:01	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/20/15 16:01	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/20/15 16:01	1
Trichloroethene	ND		0.500		ug/L			02/20/15 16:01	1
Trichlorofluoromethane	ND		0.500		ug/L			02/20/15 16:01	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/20/15 16:01	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/20/15 16:01	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/20/15 16:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		75 - 125		02/20/15 16:01	1
Trifluorotoluene (Surr)	101		80 - 127		02/20/15 16:01	1
Dibromofluoromethane (Surr)	96		85 - 115		02/20/15 16:01	1
4-Bromofluorobenzene (Surr)	91		75 - 120		02/20/15 16:01	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 128		02/20/15 16:01	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021715-03

Date Collected: 02/17/15 13:40

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/20/15 16:28	1
Benzene	ND	*	0.500		ug/L			02/20/15 16:28	1
Bromobenzene	ND		2.00		ug/L			02/20/15 16:28	1
Bromochloromethane	ND		0.500		ug/L			02/20/15 16:28	1
Bromodichloromethane	ND		0.500		ug/L			02/20/15 16:28	1
Bromoform	ND		0.500		ug/L			02/20/15 16:28	1
Bromomethane	ND		1.00		ug/L			02/20/15 16:28	1
2-Butanone	ND		20.0		ug/L			02/20/15 16:28	1
Carbon disulfide	ND		0.500		ug/L			02/20/15 16:28	1
Carbon tetrachloride	ND		0.500		ug/L			02/20/15 16:28	1
Chlorobenzene	ND		0.500		ug/L			02/20/15 16:28	1
Chloroethane	ND		0.500		ug/L			02/20/15 16:28	1
Chloroform	ND		0.500		ug/L			02/20/15 16:28	1
Chloromethane	ND		0.500		ug/L			02/20/15 16:28	1
2-Chlorotoluene	ND		2.00		ug/L			02/20/15 16:28	1
4-Chlorotoluene	ND		2.00		ug/L			02/20/15 16:28	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 16:28	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 16:28	1
Dibromochloromethane	ND		0.500		ug/L			02/20/15 16:28	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/20/15 16:28	1
1,2-Dibromoethane	ND		2.00		ug/L			02/20/15 16:28	1
Dibromomethane	ND		0.500		ug/L			02/20/15 16:28	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:28	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:28	1
1,2-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:28	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/20/15 16:28	1
1,1-Dichloroethane	ND		0.500		ug/L			02/20/15 16:28	1
1,2-Dichloroethane	ND		0.500		ug/L			02/20/15 16:28	1
2,2-Dichloropropane	ND	^	0.500		ug/L			02/20/15 16:28	1
1,2-Dichloropropane	ND		0.500		ug/L			02/20/15 16:28	1
1,3-Dichloropropane	ND		0.500		ug/L			02/20/15 16:28	1
1,1-Dichloropropene	ND		0.500		ug/L			02/20/15 16:28	1
Ethylbenzene	ND		0.500		ug/L			02/20/15 16:28	1
Hexachlorobutadiene	ND		2.00		ug/L			02/20/15 16:28	1
2-Hexanone	ND		20.0		ug/L			02/20/15 16:28	1
Isopropylbenzene	ND		2.00		ug/L			02/20/15 16:28	1
Methylene Chloride	ND		2.00		ug/L			02/20/15 16:28	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/20/15 16:28	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/20/15 16:28	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/20/15 16:28	1
Naphthalene	ND		2.00		ug/L			02/20/15 16:28	1
n-Butylbenzene	ND		2.00		ug/L			02/20/15 16:28	1
N-Propylbenzene	ND		2.00		ug/L			02/20/15 16:28	1
o-Xylene	ND		0.500		ug/L			02/20/15 16:28	1
p-Isopropyltoluene	ND		2.00		ug/L			02/20/15 16:28	1
sec-Butylbenzene	ND		2.00		ug/L			02/20/15 16:28	1
Styrene	ND		0.500		ug/L			02/20/15 16:28	1
tert-Butylbenzene	ND		2.00		ug/L			02/20/15 16:28	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 16:28	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021715-03
Date Collected: 02/17/15 13:40
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 16:28	1
Tetrachloroethene	ND		0.500		ug/L			02/20/15 16:28	1
Toluene	ND		0.500		ug/L			02/20/15 16:28	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 16:28	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 16:28	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/20/15 16:28	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			02/20/15 16:28	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/20/15 16:28	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/20/15 16:28	1
Trichloroethene	ND		0.500		ug/L			02/20/15 16:28	1
Trichlorofluoromethane	ND		0.500		ug/L			02/20/15 16:28	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/20/15 16:28	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/20/15 16:28	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/20/15 16:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	97		75 - 125					02/20/15 16:28	1
<i>Trifluorotoluene (Surr)</i>	104		80 - 127					02/20/15 16:28	1
<i>Dibromofluoromethane (Surr)</i>	97		85 - 115					02/20/15 16:28	1
<i>4-Bromofluorobenzene (Surr)</i>	90		75 - 120					02/20/15 16:28	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	99		70 - 128					02/20/15 16:28	1

Client Sample ID: LB-021715-04
Date Collected: 02/17/15 14:20
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/20/15 16:54	1
Benzene	ND	*	0.500		ug/L			02/20/15 16:54	1
Bromobenzene	ND		2.00		ug/L			02/20/15 16:54	1
Bromochloromethane	ND		0.500		ug/L			02/20/15 16:54	1
Bromodichloromethane	ND		0.500		ug/L			02/20/15 16:54	1
Bromoform	ND		0.500		ug/L			02/20/15 16:54	1
Bromomethane	ND		1.00		ug/L			02/20/15 16:54	1
2-Butanone	ND		20.0		ug/L			02/20/15 16:54	1
Carbon disulfide	ND		0.500		ug/L			02/20/15 16:54	1
Carbon tetrachloride	ND		0.500		ug/L			02/20/15 16:54	1
Chlorobenzene	ND		0.500		ug/L			02/20/15 16:54	1
Chloroethane	ND		0.500		ug/L			02/20/15 16:54	1
Chloroform	ND		0.500		ug/L			02/20/15 16:54	1
Chloromethane	ND		0.500		ug/L			02/20/15 16:54	1
2-Chlorotoluene	ND		2.00		ug/L			02/20/15 16:54	1
4-Chlorotoluene	ND		2.00		ug/L			02/20/15 16:54	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 16:54	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 16:54	1
Dibromochloromethane	ND		0.500		ug/L			02/20/15 16:54	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/20/15 16:54	1
1,2-Dibromoethane	ND		2.00		ug/L			02/20/15 16:54	1
Dibromomethane	ND		0.500		ug/L			02/20/15 16:54	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:54	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:54	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021715-04
Date Collected: 02/17/15 14:20
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500		ug/L			02/20/15 16:54	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/20/15 16:54	1
1,1-Dichloroethane	ND		0.500		ug/L			02/20/15 16:54	1
1,2-Dichloroethane	ND		0.500		ug/L			02/20/15 16:54	1
2,2-Dichloropropane	ND	^	0.500		ug/L			02/20/15 16:54	1
1,2-Dichloropropane	ND		0.500		ug/L			02/20/15 16:54	1
1,3-Dichloropropane	ND		0.500		ug/L			02/20/15 16:54	1
1,1-Dichloropropene	ND		0.500		ug/L			02/20/15 16:54	1
Ethylbenzene	ND		0.500		ug/L			02/20/15 16:54	1
Hexachlorobutadiene	ND		2.00		ug/L			02/20/15 16:54	1
2-Hexanone	ND		20.0		ug/L			02/20/15 16:54	1
Isopropylbenzene	ND		2.00		ug/L			02/20/15 16:54	1
Methylene Chloride	ND		2.00		ug/L			02/20/15 16:54	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/20/15 16:54	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/20/15 16:54	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/20/15 16:54	1
Naphthalene	ND		2.00		ug/L			02/20/15 16:54	1
n-Butylbenzene	ND		2.00		ug/L			02/20/15 16:54	1
N-Propylbenzene	ND		2.00		ug/L			02/20/15 16:54	1
o-Xylene	ND		0.500		ug/L			02/20/15 16:54	1
p-Isopropyltoluene	ND		2.00		ug/L			02/20/15 16:54	1
sec-Butylbenzene	ND		2.00		ug/L			02/20/15 16:54	1
Styrene	ND		0.500		ug/L			02/20/15 16:54	1
tert-Butylbenzene	ND		2.00		ug/L			02/20/15 16:54	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 16:54	1
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 16:54	1
Tetrachloroethene	ND		0.500		ug/L			02/20/15 16:54	1
Toluene	ND		0.500		ug/L			02/20/15 16:54	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 16:54	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 16:54	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/20/15 16:54	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			02/20/15 16:54	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/20/15 16:54	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/20/15 16:54	1
Trichloroethene	ND		0.500		ug/L			02/20/15 16:54	1
Trichlorofluoromethane	ND		0.500		ug/L			02/20/15 16:54	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/20/15 16:54	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/20/15 16:54	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/20/15 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		75 - 125		02/20/15 16:54	1
Trifluorotoluene (Surr)	106		80 - 127		02/20/15 16:54	1
Dibromofluoromethane (Surr)	97		85 - 115		02/20/15 16:54	1
4-Bromofluorobenzene (Surr)	87		75 - 120		02/20/15 16:54	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 128		02/20/15 16:54	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021715-05

Date Collected: 02/17/15 15:00

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/28/15 15:17	1
Benzene	ND		0.500		ug/L			02/28/15 15:17	1
Bromobenzene	ND		2.00		ug/L			02/28/15 15:17	1
Bromochloromethane	ND		0.500		ug/L			02/28/15 15:17	1
Bromodichloromethane	ND		0.500		ug/L			02/28/15 15:17	1
Bromoform	ND		0.500		ug/L			02/28/15 15:17	1
Bromomethane	ND		1.00		ug/L			02/28/15 15:17	1
2-Butanone	ND		20.0		ug/L			02/28/15 15:17	1
Carbon disulfide	ND		0.500		ug/L			02/28/15 15:17	1
Carbon tetrachloride	ND		0.500		ug/L			02/28/15 15:17	1
Chlorobenzene	ND		0.500		ug/L			02/28/15 15:17	1
Chloroethane	ND		0.500		ug/L			02/28/15 15:17	1
Chloroform	ND		0.500		ug/L			02/28/15 15:17	1
Chloromethane	ND		0.500		ug/L			02/28/15 15:17	1
2-Chlorotoluene	ND		2.00		ug/L			02/28/15 15:17	1
4-Chlorotoluene	ND		2.00		ug/L			02/28/15 15:17	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 15:17	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/28/15 15:17	1
Dibromochloromethane	ND		0.500		ug/L			02/28/15 15:17	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/28/15 15:17	1
1,2-Dibromoethane	ND		2.00		ug/L			02/28/15 15:17	1
Dibromomethane	ND		0.500		ug/L			02/28/15 15:17	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/28/15 15:17	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/28/15 15:17	1
1,2-Dichlorobenzene	ND		0.500		ug/L			02/28/15 15:17	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/28/15 15:17	1
1,1-Dichloroethane	ND		0.500		ug/L			02/28/15 15:17	1
1,2-Dichloroethane	ND		0.500		ug/L			02/28/15 15:17	1
2,2-Dichloropropane	ND		0.500		ug/L			02/28/15 15:17	1
1,2-Dichloropropane	ND		0.500		ug/L			02/28/15 15:17	1
1,3-Dichloropropane	ND		0.500		ug/L			02/28/15 15:17	1
1,1-Dichloropropene	ND		0.500		ug/L			02/28/15 15:17	1
Ethylbenzene	ND		0.500		ug/L			02/28/15 15:17	1
Hexachlorobutadiene	ND		2.00		ug/L			02/28/15 15:17	1
2-Hexanone	ND		20.0		ug/L			02/28/15 15:17	1
Isopropylbenzene	ND		2.00		ug/L			02/28/15 15:17	1
Methylene Chloride	ND		2.00		ug/L			02/28/15 15:17	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/28/15 15:17	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/28/15 15:17	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/28/15 15:17	1
Naphthalene	ND		2.00		ug/L			02/28/15 15:17	1
n-Butylbenzene	ND		2.00		ug/L			02/28/15 15:17	1
N-Propylbenzene	ND		2.00		ug/L			02/28/15 15:17	1
o-Xylene	ND		0.500		ug/L			02/28/15 15:17	1
p-Isopropyltoluene	ND		2.00		ug/L			02/28/15 15:17	1
sec-Butylbenzene	ND		2.00		ug/L			02/28/15 15:17	1
Styrene	ND		0.500		ug/L			02/28/15 15:17	1
tert-Butylbenzene	ND		2.00		ug/L			02/28/15 15:17	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 15:17	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021715-05
Date Collected: 02/17/15 15:00
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 15:17	1
Tetrachloroethene	ND		0.500		ug/L			02/28/15 15:17	1
Toluene	ND		0.500		ug/L			02/28/15 15:17	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 15:17	1
trans-1,3-Dichloropropene	ND	*	0.500		ug/L			02/28/15 15:17	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/28/15 15:17	1
1,2,3-Trichlorobenzene	ND	*	2.00		ug/L			02/28/15 15:17	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/28/15 15:17	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/28/15 15:17	1
Trichloroethene	ND		0.500		ug/L			02/28/15 15:17	1
Trichlorofluoromethane	ND		0.500		ug/L			02/28/15 15:17	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/28/15 15:17	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/28/15 15:17	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/28/15 15:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	98		75 - 125					02/28/15 15:17	1
<i>Trifluorotoluene (Surr)</i>	106		80 - 127					02/28/15 15:17	1
<i>Dibromofluoromethane (Surr)</i>	104		85 - 115					02/28/15 15:17	1
<i>4-Bromofluorobenzene (Surr)</i>	97		75 - 120					02/28/15 15:17	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	111		70 - 128					02/28/15 15:17	1

Client Sample ID: LB-021715-06
Date Collected: 02/17/15 15:05
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/28/15 15:44	1
Benzene	ND		0.500		ug/L			02/28/15 15:44	1
Bromobenzene	ND		2.00		ug/L			02/28/15 15:44	1
Bromochloromethane	ND		0.500		ug/L			02/28/15 15:44	1
Bromodichloromethane	ND		0.500		ug/L			02/28/15 15:44	1
Bromoform	ND		0.500		ug/L			02/28/15 15:44	1
Bromomethane	ND		1.00		ug/L			02/28/15 15:44	1
2-Butanone	ND		20.0		ug/L			02/28/15 15:44	1
Carbon disulfide	ND		0.500		ug/L			02/28/15 15:44	1
Carbon tetrachloride	ND		0.500		ug/L			02/28/15 15:44	1
Chlorobenzene	ND		0.500		ug/L			02/28/15 15:44	1
Chloroethane	ND		0.500		ug/L			02/28/15 15:44	1
Chloroform	ND		0.500		ug/L			02/28/15 15:44	1
Chloromethane	ND		0.500		ug/L			02/28/15 15:44	1
2-Chlorotoluene	ND		2.00		ug/L			02/28/15 15:44	1
4-Chlorotoluene	ND		2.00		ug/L			02/28/15 15:44	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 15:44	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/28/15 15:44	1
Dibromochloromethane	ND		0.500		ug/L			02/28/15 15:44	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/28/15 15:44	1
1,2-Dibromoethane	ND		2.00		ug/L			02/28/15 15:44	1
Dibromomethane	ND		0.500		ug/L			02/28/15 15:44	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/28/15 15:44	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/28/15 15:44	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021715-06
Date Collected: 02/17/15 15:05
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500		ug/L			02/28/15 15:44	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/28/15 15:44	1
1,1-Dichloroethane	ND		0.500		ug/L			02/28/15 15:44	1
1,2-Dichloroethane	ND		0.500		ug/L			02/28/15 15:44	1
2,2-Dichloropropane	ND		0.500		ug/L			02/28/15 15:44	1
1,2-Dichloropropane	ND		0.500		ug/L			02/28/15 15:44	1
1,3-Dichloropropane	ND		0.500		ug/L			02/28/15 15:44	1
1,1-Dichloropropene	ND		0.500		ug/L			02/28/15 15:44	1
Ethylbenzene	ND		0.500		ug/L			02/28/15 15:44	1
Hexachlorobutadiene	ND		2.00		ug/L			02/28/15 15:44	1
2-Hexanone	ND		20.0		ug/L			02/28/15 15:44	1
Isopropylbenzene	ND		2.00		ug/L			02/28/15 15:44	1
Methylene Chloride	ND		2.00		ug/L			02/28/15 15:44	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/28/15 15:44	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/28/15 15:44	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/28/15 15:44	1
Naphthalene	ND		2.00		ug/L			02/28/15 15:44	1
n-Butylbenzene	ND		2.00		ug/L			02/28/15 15:44	1
N-Propylbenzene	ND		2.00		ug/L			02/28/15 15:44	1
o-Xylene	ND		0.500		ug/L			02/28/15 15:44	1
p-Isopropyltoluene	ND		2.00		ug/L			02/28/15 15:44	1
sec-Butylbenzene	ND		2.00		ug/L			02/28/15 15:44	1
Styrene	ND		0.500		ug/L			02/28/15 15:44	1
tert-Butylbenzene	ND		2.00		ug/L			02/28/15 15:44	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 15:44	1
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 15:44	1
Tetrachloroethene	ND		0.500		ug/L			02/28/15 15:44	1
Toluene	ND		0.500		ug/L			02/28/15 15:44	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 15:44	1
trans-1,3-Dichloropropene	ND	*	0.500		ug/L			02/28/15 15:44	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/28/15 15:44	1
1,2,3-Trichlorobenzene	ND	*	2.00		ug/L			02/28/15 15:44	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/28/15 15:44	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/28/15 15:44	1
Trichloroethene	ND		0.500		ug/L			02/28/15 15:44	1
Trichlorofluoromethane	ND		0.500		ug/L			02/28/15 15:44	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/28/15 15:44	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/28/15 15:44	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/28/15 15:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		75 - 125		02/28/15 15:44	1
Trifluorotoluene (Surr)	101		80 - 127		02/28/15 15:44	1
Dibromofluoromethane (Surr)	104		85 - 115		02/28/15 15:44	1
4-Bromofluorobenzene (Surr)	99		75 - 120		02/28/15 15:44	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 128		02/28/15 15:44	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021715-07

Date Collected: 02/17/15 16:00

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/28/15 16:12	1
Benzene	ND		0.500		ug/L			02/28/15 16:12	1
Bromobenzene	ND		2.00		ug/L			02/28/15 16:12	1
Bromochloromethane	ND		0.500		ug/L			02/28/15 16:12	1
Bromodichloromethane	ND		0.500		ug/L			02/28/15 16:12	1
Bromoform	ND		0.500		ug/L			02/28/15 16:12	1
Bromomethane	ND		1.00		ug/L			02/28/15 16:12	1
2-Butanone	ND		20.0		ug/L			02/28/15 16:12	1
Carbon disulfide	ND		0.500		ug/L			02/28/15 16:12	1
Carbon tetrachloride	ND		0.500		ug/L			02/28/15 16:12	1
Chlorobenzene	ND		0.500		ug/L			02/28/15 16:12	1
Chloroethane	ND		0.500		ug/L			02/28/15 16:12	1
Chloroform	ND		0.500		ug/L			02/28/15 16:12	1
Chloromethane	ND		0.500		ug/L			02/28/15 16:12	1
2-Chlorotoluene	ND		2.00		ug/L			02/28/15 16:12	1
4-Chlorotoluene	ND		2.00		ug/L			02/28/15 16:12	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 16:12	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/28/15 16:12	1
Dibromochloromethane	ND		0.500		ug/L			02/28/15 16:12	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/28/15 16:12	1
1,2-Dibromoethane	ND		2.00		ug/L			02/28/15 16:12	1
Dibromomethane	ND		0.500		ug/L			02/28/15 16:12	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/28/15 16:12	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/28/15 16:12	1
1,2-Dichlorobenzene	ND		0.500		ug/L			02/28/15 16:12	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/28/15 16:12	1
1,1-Dichloroethane	ND		0.500		ug/L			02/28/15 16:12	1
1,2-Dichloroethane	ND		0.500		ug/L			02/28/15 16:12	1
2,2-Dichloropropane	ND		0.500		ug/L			02/28/15 16:12	1
1,2-Dichloropropane	ND		0.500		ug/L			02/28/15 16:12	1
1,3-Dichloropropane	ND		0.500		ug/L			02/28/15 16:12	1
1,1-Dichloropropene	ND		0.500		ug/L			02/28/15 16:12	1
Ethylbenzene	ND		0.500		ug/L			02/28/15 16:12	1
Hexachlorobutadiene	ND		2.00		ug/L			02/28/15 16:12	1
2-Hexanone	ND		20.0		ug/L			02/28/15 16:12	1
Isopropylbenzene	ND		2.00		ug/L			02/28/15 16:12	1
Methylene Chloride	ND		2.00		ug/L			02/28/15 16:12	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/28/15 16:12	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/28/15 16:12	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/28/15 16:12	1
Naphthalene	ND		2.00		ug/L			02/28/15 16:12	1
n-Butylbenzene	ND		2.00		ug/L			02/28/15 16:12	1
N-Propylbenzene	ND		2.00		ug/L			02/28/15 16:12	1
o-Xylene	ND		0.500		ug/L			02/28/15 16:12	1
p-Isopropyltoluene	ND		2.00		ug/L			02/28/15 16:12	1
sec-Butylbenzene	ND		2.00		ug/L			02/28/15 16:12	1
Styrene	ND		0.500		ug/L			02/28/15 16:12	1
tert-Butylbenzene	ND		2.00		ug/L			02/28/15 16:12	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 16:12	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021715-07
Date Collected: 02/17/15 16:00
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 16:12	1
Tetrachloroethene	ND		0.500		ug/L			02/28/15 16:12	1
Toluene	ND		0.500		ug/L			02/28/15 16:12	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 16:12	1
trans-1,3-Dichloropropene	ND	*	0.500		ug/L			02/28/15 16:12	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/28/15 16:12	1
1,2,3-Trichlorobenzene	ND	*	2.00		ug/L			02/28/15 16:12	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/28/15 16:12	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/28/15 16:12	1
Trichloroethene	ND		0.500		ug/L			02/28/15 16:12	1
Trichlorofluoromethane	ND		0.500		ug/L			02/28/15 16:12	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/28/15 16:12	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/28/15 16:12	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/28/15 16:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	99		75 - 125					02/28/15 16:12	1
<i>Trifluorotoluene (Surr)</i>	100		80 - 127					02/28/15 16:12	1
<i>Dibromofluoromethane (Surr)</i>	102		85 - 115					02/28/15 16:12	1
<i>4-Bromofluorobenzene (Surr)</i>	100		75 - 120					02/28/15 16:12	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	112		70 - 128					02/28/15 16:12	1

Client Sample ID: LB-021715-08
Date Collected: 02/17/15 16:30
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/28/15 16:39	1
Benzene	ND		0.500		ug/L			02/28/15 16:39	1
Bromobenzene	ND		2.00		ug/L			02/28/15 16:39	1
Bromochloromethane	ND		0.500		ug/L			02/28/15 16:39	1
Bromodichloromethane	ND		0.500		ug/L			02/28/15 16:39	1
Bromoform	ND		0.500		ug/L			02/28/15 16:39	1
Bromomethane	ND		1.00		ug/L			02/28/15 16:39	1
2-Butanone	ND		20.0		ug/L			02/28/15 16:39	1
Carbon disulfide	ND		0.500		ug/L			02/28/15 16:39	1
Carbon tetrachloride	ND		0.500		ug/L			02/28/15 16:39	1
Chlorobenzene	ND		0.500		ug/L			02/28/15 16:39	1
Chloroethane	ND		0.500		ug/L			02/28/15 16:39	1
Chloroform	ND		0.500		ug/L			02/28/15 16:39	1
Chloromethane	ND		0.500		ug/L			02/28/15 16:39	1
2-Chlorotoluene	ND		2.00		ug/L			02/28/15 16:39	1
4-Chlorotoluene	ND		2.00		ug/L			02/28/15 16:39	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 16:39	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/28/15 16:39	1
Dibromochloromethane	ND		0.500		ug/L			02/28/15 16:39	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/28/15 16:39	1
1,2-Dibromoethane	ND		2.00		ug/L			02/28/15 16:39	1
Dibromomethane	ND		0.500		ug/L			02/28/15 16:39	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/28/15 16:39	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/28/15 16:39	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021715-08
Date Collected: 02/17/15 16:30
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500		ug/L			02/28/15 16:39	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/28/15 16:39	1
1,1-Dichloroethane	ND		0.500		ug/L			02/28/15 16:39	1
1,2-Dichloroethane	ND		0.500		ug/L			02/28/15 16:39	1
2,2-Dichloropropane	ND		0.500		ug/L			02/28/15 16:39	1
1,2-Dichloropropane	ND		0.500		ug/L			02/28/15 16:39	1
1,3-Dichloropropane	ND		0.500		ug/L			02/28/15 16:39	1
1,1-Dichloropropene	ND		0.500		ug/L			02/28/15 16:39	1
Ethylbenzene	ND		0.500		ug/L			02/28/15 16:39	1
Hexachlorobutadiene	ND		2.00		ug/L			02/28/15 16:39	1
2-Hexanone	ND		20.0		ug/L			02/28/15 16:39	1
Isopropylbenzene	ND		2.00		ug/L			02/28/15 16:39	1
Methylene Chloride	ND		2.00		ug/L			02/28/15 16:39	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/28/15 16:39	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/28/15 16:39	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/28/15 16:39	1
Naphthalene	ND		2.00		ug/L			02/28/15 16:39	1
n-Butylbenzene	ND		2.00		ug/L			02/28/15 16:39	1
N-Propylbenzene	ND		2.00		ug/L			02/28/15 16:39	1
o-Xylene	ND		0.500		ug/L			02/28/15 16:39	1
p-Isopropyltoluene	ND		2.00		ug/L			02/28/15 16:39	1
sec-Butylbenzene	ND		2.00		ug/L			02/28/15 16:39	1
Styrene	ND		0.500		ug/L			02/28/15 16:39	1
tert-Butylbenzene	ND		2.00		ug/L			02/28/15 16:39	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 16:39	1
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 16:39	1
Tetrachloroethene	ND		0.500		ug/L			02/28/15 16:39	1
Toluene	ND		0.500		ug/L			02/28/15 16:39	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 16:39	1
trans-1,3-Dichloropropene	ND	*	0.500		ug/L			02/28/15 16:39	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/28/15 16:39	1
1,2,3-Trichlorobenzene	ND	*	2.00		ug/L			02/28/15 16:39	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/28/15 16:39	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/28/15 16:39	1
Trichloroethene	ND		0.500		ug/L			02/28/15 16:39	1
Trichlorofluoromethane	ND		0.500		ug/L			02/28/15 16:39	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/28/15 16:39	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/28/15 16:39	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/28/15 16:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		75 - 125		02/28/15 16:39	1
Trifluorotoluene (Surr)	101		80 - 127		02/28/15 16:39	1
Dibromofluoromethane (Surr)	106		85 - 115		02/28/15 16:39	1
4-Bromofluorobenzene (Surr)	99		75 - 120		02/28/15 16:39	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 128		02/28/15 16:39	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS) - Dissolved

Client Sample ID: LB-021715-01

Date Collected: 02/17/15 11:55

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-1

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250		mg/L		02/20/15 08:08	02/20/15 15:44	1
Manganese	0.00256		0.00200		mg/L		02/20/15 08:08	02/20/15 15:44	1

Client Sample ID: LB-021715-02

Date Collected: 02/17/15 12:50

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-2

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.228		0.0250		mg/L		02/20/15 08:08	02/20/15 15:49	1
Manganese	0.0127		0.00200		mg/L		02/20/15 08:08	02/20/15 15:49	1

Client Sample ID: LB-021715-03

Date Collected: 02/17/15 13:40

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-3

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250		mg/L		02/20/15 08:08	02/20/15 15:55	1
Manganese	ND		0.00200		mg/L		02/20/15 08:08	02/20/15 15:55	1

Client Sample ID: LB-021715-04

Date Collected: 02/17/15 14:20

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-4

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250		mg/L		02/20/15 08:08	02/20/15 16:16	1
Manganese	ND		0.00200		mg/L		02/20/15 08:08	02/20/15 16:16	1

Client Sample ID: LB-021715-05

Date Collected: 02/17/15 15:00

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-5

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.0965		0.0250		mg/L		02/20/15 08:08	02/20/15 16:22	1
Manganese	3.82		0.0100		mg/L		02/20/15 08:08	02/20/15 22:07	5

Client Sample ID: LB-021715-06

Date Collected: 02/17/15 15:05

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-6

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.0965		0.0250		mg/L		02/20/15 08:08	02/20/15 16:27	1
Manganese	3.71		0.0100		mg/L		02/20/15 08:08	02/20/15 22:13	5

Client Sample ID: LB-021715-07

Date Collected: 02/17/15 16:00

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-7

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250		mg/L		02/20/15 08:08	02/20/15 16:32	1
Manganese	ND		0.00200		mg/L		02/20/15 08:08	02/20/15 16:32	1

Client Sample ID: LB-021715-08

Date Collected: 02/17/15 16:30

Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-8

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250		mg/L		02/20/15 08:08	02/20/15 16:43	1
Manganese	ND		0.00200		mg/L		02/20/15 08:08	02/20/15 16:43	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

General Chemistry

Client Sample ID: LB-021715-01
Date Collected: 02/17/15 11:55
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-1
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	231		10.0		mg/L	-		02/23/15 12:24	1

Client Sample ID: LB-021715-02
Date Collected: 02/17/15 12:50
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-2
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	265		10.0		mg/L	-		02/23/15 12:24	1

Client Sample ID: LB-021715-03
Date Collected: 02/17/15 13:40
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-3
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	185		10.0		mg/L	-		02/23/15 12:24	1

Client Sample ID: LB-021715-04
Date Collected: 02/17/15 14:20
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-4
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	183		10.0		mg/L	-		02/23/15 12:24	1

Client Sample ID: LB-021715-05
Date Collected: 02/17/15 15:00
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-5
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	212		10.0		mg/L	-		02/23/15 12:24	1

Client Sample ID: LB-021715-06
Date Collected: 02/17/15 15:05
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-6
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	207		10.0		mg/L	-		02/23/15 12:24	1

Client Sample ID: LB-021715-07
Date Collected: 02/17/15 16:00
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-7
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	194		10.0		mg/L	-		02/23/15 12:24	1

Client Sample ID: LB-021715-08
Date Collected: 02/17/15 16:30
Date Received: 02/18/15 10:19

Lab Sample ID: 250-24580-8
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0		mg/L	-		02/23/15 12:24	1

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-182888/5

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/20/15 13:01	1
Benzene	ND		0.500		ug/L			02/20/15 13:01	1
Bromobenzene	ND		2.00		ug/L			02/20/15 13:01	1
Bromochloromethane	ND		0.500		ug/L			02/20/15 13:01	1
Bromodichloromethane	ND		0.500		ug/L			02/20/15 13:01	1
Bromoform	ND		0.500		ug/L			02/20/15 13:01	1
Bromomethane	ND		1.00		ug/L			02/20/15 13:01	1
2-Butanone	ND		20.0		ug/L			02/20/15 13:01	1
Carbon disulfide	ND		0.500		ug/L			02/20/15 13:01	1
Carbon tetrachloride	ND		0.500		ug/L			02/20/15 13:01	1
Chlorobenzene	ND		0.500		ug/L			02/20/15 13:01	1
Chloroethane	ND		0.500		ug/L			02/20/15 13:01	1
Chloroform	ND		0.500		ug/L			02/20/15 13:01	1
Chloromethane	ND		0.500		ug/L			02/20/15 13:01	1
2-Chlorotoluene	ND		2.00		ug/L			02/20/15 13:01	1
4-Chlorotoluene	ND		2.00		ug/L			02/20/15 13:01	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 13:01	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 13:01	1
Dibromochloromethane	ND		0.500		ug/L			02/20/15 13:01	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/20/15 13:01	1
1,2-Dibromoethane	ND		2.00		ug/L			02/20/15 13:01	1
Dibromomethane	ND		0.500		ug/L			02/20/15 13:01	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/20/15 13:01	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/20/15 13:01	1
1,2-Dichlorobenzene	ND		0.500		ug/L			02/20/15 13:01	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/20/15 13:01	1
1,1-Dichloroethane	ND		0.500		ug/L			02/20/15 13:01	1
1,2-Dichloroethane	ND		0.500		ug/L			02/20/15 13:01	1
2,2-Dichloropropane	ND	^	0.500		ug/L			02/20/15 13:01	1
1,2-Dichloropropane	ND		0.500		ug/L			02/20/15 13:01	1
1,3-Dichloropropane	ND		0.500		ug/L			02/20/15 13:01	1
1,1-Dichloropropene	ND		0.500		ug/L			02/20/15 13:01	1
Ethylbenzene	ND		0.500		ug/L			02/20/15 13:01	1
Hexachlorobutadiene	ND		2.00		ug/L			02/20/15 13:01	1
2-Hexanone	ND		20.0		ug/L			02/20/15 13:01	1
Isopropylbenzene	ND		2.00		ug/L			02/20/15 13:01	1
Methylene Chloride	ND		2.00		ug/L			02/20/15 13:01	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/20/15 13:01	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/20/15 13:01	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/20/15 13:01	1
Naphthalene	ND		2.00		ug/L			02/20/15 13:01	1
n-Butylbenzene	ND		2.00		ug/L			02/20/15 13:01	1
N-Propylbenzene	ND		2.00		ug/L			02/20/15 13:01	1
o-Xylene	ND		0.500		ug/L			02/20/15 13:01	1
p-Isopropyltoluene	ND		2.00		ug/L			02/20/15 13:01	1
sec-Butylbenzene	ND		2.00		ug/L			02/20/15 13:01	1
Styrene	ND		0.500		ug/L			02/20/15 13:01	1
tert-Butylbenzene	ND		2.00		ug/L			02/20/15 13:01	1

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-182888/5

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 13:01	1
1,1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/20/15 13:01	1
Tetrachloroethene	ND		0.500		ug/L			02/20/15 13:01	1
Toluene	ND		0.500		ug/L			02/20/15 13:01	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/20/15 13:01	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			02/20/15 13:01	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/20/15 13:01	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			02/20/15 13:01	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/20/15 13:01	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/20/15 13:01	1
Trichloroethene	ND		0.500		ug/L			02/20/15 13:01	1
Trichlorofluoromethane	ND		0.500		ug/L			02/20/15 13:01	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/20/15 13:01	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/20/15 13:01	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/20/15 13:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		75 - 125		02/20/15 13:01	1
Trifluorotoluene (Surr)	105		80 - 127		02/20/15 13:01	1
Dibromofluoromethane (Surr)	99		85 - 115		02/20/15 13:01	1
4-Bromofluorobenzene (Surr)	93		75 - 120		02/20/15 13:01	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 128		02/20/15 13:01	1

Lab Sample ID: LCS 580-182888/6

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.44	J	ug/L		92	30 - 200
Benzene	5.00	5.996		ug/L		120	80 - 120
Bromobenzene	5.00	4.905		ug/L		98	80 - 130
Bromochloromethane	5.00	4.831		ug/L		97	80 - 125
Bromodichloromethane	5.00	5.423		ug/L		108	80 - 125
Bromoform	5.00	3.990		ug/L		80	65 - 130
Bromomethane	5.00	4.614		ug/L		92	70 - 135
2-Butanone	20.0	20.56		ug/L		103	20 - 200
Carbon disulfide	5.00	5.850		ug/L		117	65 - 160
Carbon tetrachloride	5.00	5.584		ug/L		112	75 - 140
Chlorobenzene	5.00	5.049		ug/L		101	80 - 120
Chloroethane	5.00	4.475		ug/L		90	75 - 140
Chloroform	5.00	5.301		ug/L		106	80 - 130
Chloromethane	5.00	5.532		ug/L		111	50 - 140
2-Chlorotoluene	5.00	4.881		ug/L		98	75 - 130
4-Chlorotoluene	5.00	5.028		ug/L		101	75 - 130
cis-1,2-Dichloroethene	5.00	5.678		ug/L		114	80 - 130
cis-1,3-Dichloropropene	5.00	4.624		ug/L		92	70 - 120
Dibromochloromethane	5.00	4.484		ug/L		90	70 - 120
1,2-Dibromo-3-Chloropropane	5.00	4.174		ug/L		83	55 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-182888/6

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	5.00	4.553		ug/L		91	70 - 130
Dibromomethane	5.00	4.834		ug/L		97	80 - 130
1,3-Dichlorobenzene	5.00	5.393		ug/L		108	80 - 120
1,4-Dichlorobenzene	5.00	5.068		ug/L		101	80 - 120
1,2-Dichlorobenzene	5.00	5.214		ug/L		104	80 - 130
Dichlorodifluoromethane	5.00	3.189		ug/L		64	30 - 180
1,1-Dichloroethane	5.00	5.489		ug/L		110	75 - 135
1,2-Dichloroethane	5.00	5.263		ug/L		105	80 - 140
1,1-Dichloroethene	5.00	5.031		ug/L		101	70 - 150
2,2-Dichloropropane	5.00	6.930	^	ug/L		139	60 - 150
1,2-Dichloropropane	5.00	5.680		ug/L		114	80 - 120
1,3-Dichloropropane	5.00	4.869		ug/L		97	80 - 130
1,1-Dichloropropene	5.00	5.102		ug/L		102	80 - 130
Ethylbenzene	5.00	5.280		ug/L		106	80 - 125
Hexachlorobutadiene	5.00	5.484		ug/L		110	75 - 135
2-Hexanone	20.0	15.77	J	ug/L		79	52 - 160
Iodomethane	5.00	5.666		ug/L		113	60 - 160
Isopropylbenzene	5.00	5.094		ug/L		102	75 - 120
Methylene Chloride	5.00	5.228		ug/L		105	60 - 145
4-Methyl-2-pentanone	20.0	17.41	J	ug/L		87	55 - 135
Methyl tert-butyl ether	5.00	4.146		ug/L		83	75 - 120
m-Xylene & p-Xylene	5.00	5.036		ug/L		101	80 - 130
Naphthalene	5.00	3.634		ug/L		73	45 - 130
n-Butylbenzene	5.00	5.018		ug/L		100	75 - 125
n-Hexane	5.00	6.085		ug/L		122	60 - 140
N-Propylbenzene	5.00	5.453		ug/L		109	80 - 120
o-Xylene	5.00	5.324		ug/L		106	80 - 120
p-Isopropyltoluene	5.00	5.604		ug/L		112	80 - 120
sec-Butylbenzene	5.00	5.264		ug/L		105	80 - 125
Styrene	5.00	4.538		ug/L		91	75 - 130
tert-Butylbenzene	5.00	4.647		ug/L		93	80 - 130
1,1,1,2-Tetrachloroethane	5.00	4.828		ug/L		97	75 - 125
1,1,1,2,2-Tetrachloroethane	5.00	4.719		ug/L		94	75 - 125
Tetrachloroethene	5.00	4.405		ug/L		88	40 - 180
Toluene	5.00	5.580		ug/L		112	80 - 120
trans-1,4-Dichloro-2-butene	5.00	3.982		ug/L		80	40 - 140
trans-1,2-Dichloroethene	5.00	5.275		ug/L		106	80 - 140
trans-1,3-Dichloropropene	5.00	4.382		ug/L		88	60 - 140
1,3,5-Trichlorobenzene	5.00	5.082		ug/L		102	75 - 120
1,2,4-Trichlorobenzene	5.00	4.117		ug/L		82	60 - 125
1,2,3-Trichlorobenzene	5.00	4.175		ug/L		84	60 - 125
1,1,1-Trichloroethane	5.00	5.918		ug/L		118	80 - 140
1,1,2-Trichloroethane	5.00	4.803		ug/L		96	80 - 130
Trichloroethene	5.00	5.428		ug/L		109	80 - 130
Trichlorofluoromethane	5.00	5.359		ug/L		107	30 - 180
1,2,3-Trichloropropane	5.00	4.539		ug/L		91	75 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.489		ug/L		110	65 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-182888/6

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	5.00	5.141		ug/L		103	80 - 125
1,2,4-Trimethylbenzene	5.00	4.985		ug/L		100	80 - 125
Vinyl acetate	10.1	7.683		ug/L		76	30 - 200
Vinyl chloride	5.00	5.413		ug/L		108	65 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	97		75 - 125
Trifluorotoluene (Surr)	96		80 - 127
Dibromofluoromethane (Surr)	95		85 - 115
4-Bromofluorobenzene (Surr)	99		75 - 120
1,2-Dichloroethane-d4 (Surr)	97		70 - 128

Lab Sample ID: LCSD 580-182888/7

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	20.00		ug/L		100	30 - 200	8	20
Benzene	5.00	6.031	*	ug/L		121	80 - 120	1	20
Bromobenzene	5.00	4.967		ug/L		99	80 - 130	1	20
Bromochloromethane	5.00	5.086		ug/L		102	80 - 125	5	20
Bromodichloromethane	5.00	5.527		ug/L		111	80 - 125	2	20
Bromoform	5.00	4.279		ug/L		86	65 - 130	7	20
Bromomethane	5.00	4.683		ug/L		94	70 - 135	1	20
2-Butanone	20.0	21.51		ug/L		108	20 - 200	5	20
Carbon disulfide	5.00	5.923		ug/L		118	65 - 160	1	20
Carbon tetrachloride	5.00	5.618		ug/L		112	75 - 140	1	20
Chlorobenzene	5.00	5.053		ug/L		101	80 - 120	0	20
Chloroethane	5.00	4.395		ug/L		88	75 - 140	2	20
Chloroform	5.00	5.467		ug/L		109	80 - 130	3	20
Chloromethane	5.00	5.343		ug/L		107	50 - 140	3	20
2-Chlorotoluene	5.00	4.754		ug/L		95	75 - 130	3	20
4-Chlorotoluene	5.00	4.963		ug/L		99	75 - 130	1	20
cis-1,2-Dichloroethane	5.00	5.706		ug/L		114	80 - 130	0	20
cis-1,3-Dichloropropene	5.00	4.775		ug/L		95	70 - 120	3	20
Dibromochloromethane	5.00	4.643		ug/L		93	70 - 120	3	20
1,2-Dibromo-3-Chloropropane	5.00	4.643		ug/L		93	55 - 120	11	20
1,2-Dibromoethane	5.00	4.657		ug/L		93	70 - 130	2	20
Dibromomethane	5.00	4.937		ug/L		99	80 - 130	2	20
1,3-Dichlorobenzene	5.00	5.401		ug/L		108	80 - 120	0	20
1,4-Dichlorobenzene	5.00	5.058		ug/L		101	80 - 120	0	20
1,2-Dichlorobenzene	5.00	5.282		ug/L		106	80 - 130	1	20
Dichlorodifluoromethane	5.00	3.105		ug/L		62	30 - 180	3	20
1,1-Dichloroethane	5.00	5.710		ug/L		114	75 - 135	4	20
1,2-Dichloroethane	5.00	5.448		ug/L		109	80 - 140	3	20
1,1-Dichloroethane	5.00	5.312		ug/L		106	70 - 150	5	20
2,2-Dichloropropane	5.00	6.308	^	ug/L		126	60 - 150	9	20
1,2-Dichloropropane	5.00	5.707		ug/L		114	80 - 120	0	20

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-182888/7

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
							RPD	Limit	RPD	Limit
1,3-Dichloropropane	5.00	4.886		ug/L		98	80 - 130	0	20	
1,1-Dichloropropene	5.00	5.317		ug/L		106	80 - 130	4	20	
Ethylbenzene	5.00	5.366		ug/L		107	80 - 125	2	20	
Hexachlorobutadiene	5.00	5.812		ug/L		116	75 - 135	6	20	
2-Hexanone	20.0	16.84	J	ug/L		84	52 - 160	7	20	
Iodomethane	5.00	5.619		ug/L		112	60 - 160	1	20	
Isopropylbenzene	5.00	5.218		ug/L		104	75 - 120	2	20	
Methylene Chloride	5.00	5.350		ug/L		107	60 - 145	2	20	
4-Methyl-2-pentanone	20.0	18.30	J	ug/L		92	55 - 135	5	20	
Methyl tert-butyl ether	5.00	4.504		ug/L		90	75 - 120	8	20	
m-Xylene & p-Xylene	5.00	5.121		ug/L		102	80 - 130	2	20	
Naphthalene	5.00	4.165		ug/L		83	45 - 130	14	20	
n-Butylbenzene	5.00	5.090		ug/L		102	75 - 125	1	20	
n-Hexane	5.00	6.181		ug/L		124	60 - 140	2	20	
N-Propylbenzene	5.00	5.440		ug/L		109	80 - 120	0	20	
o-Xylene	5.00	5.389		ug/L		108	80 - 120	1	20	
p-Isopropyltoluene	5.00	5.620		ug/L		112	80 - 120	0	20	
sec-Butylbenzene	5.00	5.256		ug/L		105	80 - 125	0	20	
Styrene	5.00	4.745		ug/L		95	75 - 130	4	20	
tert-Butylbenzene	5.00	4.699		ug/L		94	80 - 130	1	20	
1,1,1,2-Tetrachloroethane	5.00	4.963		ug/L		99	75 - 125	3	20	
1,1,2,2-Tetrachloroethane	5.00	4.922		ug/L		98	75 - 125	4	20	
Tetrachloroethene	5.00	4.629		ug/L		93	40 - 180	5	20	
Toluene	5.00	5.552		ug/L		111	80 - 120	1	20	
trans-1,4-Dichloro-2-butene	5.00	4.060		ug/L		81	40 - 140	2	20	
trans-1,2-Dichloroethene	5.00	5.567		ug/L		111	80 - 140	5	20	
trans-1,3-Dichloropropene	5.00	4.477		ug/L		90	60 - 140	2	20	
1,3,5-Trichlorobenzene	5.00	5.265		ug/L		105	75 - 120	4	20	
1,2,4-Trichlorobenzene	5.00	4.491		ug/L		90	60 - 125	9	20	
1,2,3-Trichlorobenzene	5.00	4.470		ug/L		89	60 - 125	7	20	
1,1,1-Trichloroethane	5.00	5.872		ug/L		117	80 - 140	1	20	
1,1,2-Trichloroethane	5.00	4.968		ug/L		99	80 - 130	3	20	
Trichloroethene	5.00	5.500		ug/L		110	80 - 130	1	20	
Trichlorofluoromethane	5.00	5.377		ug/L		108	30 - 180	0	20	
1,2,3-Trichloropropane	5.00	4.534		ug/L		91	75 - 120	0	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.377		ug/L		108	65 - 120	2	20	
1,3,5-Trimethylbenzene	5.00	5.100		ug/L		102	80 - 125	1	20	
1,2,4-Trimethylbenzene	5.00	5.029		ug/L		101	80 - 125	1	20	
Vinyl acetate	10.1	7.990		ug/L		79	30 - 200	4	20	
Vinyl chloride	5.00	5.541		ug/L		111	65 - 140	2	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	98		75 - 125
Trifluorotoluene (Surr)	96		80 - 127
Dibromofluoromethane (Surr)	96		85 - 115
4-Bromofluorobenzene (Surr)	99		75 - 120
1,2-Dichloroethane-d4 (Surr)	97		70 - 128

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-183438/6

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			02/28/15 12:34	1
Benzene	ND		0.500		ug/L			02/28/15 12:34	1
Bromobenzene	ND		2.00		ug/L			02/28/15 12:34	1
Bromochloromethane	ND		0.500		ug/L			02/28/15 12:34	1
Bromodichloromethane	ND		0.500		ug/L			02/28/15 12:34	1
Bromoform	ND		0.500		ug/L			02/28/15 12:34	1
Bromomethane	ND		1.00		ug/L			02/28/15 12:34	1
2-Butanone	ND		20.0		ug/L			02/28/15 12:34	1
Carbon disulfide	ND		0.500		ug/L			02/28/15 12:34	1
Carbon tetrachloride	ND		0.500		ug/L			02/28/15 12:34	1
Chlorobenzene	ND		0.500		ug/L			02/28/15 12:34	1
Chloroethane	ND		0.500		ug/L			02/28/15 12:34	1
Chloroform	ND		0.500		ug/L			02/28/15 12:34	1
Chloromethane	ND		0.500		ug/L			02/28/15 12:34	1
2-Chlorotoluene	ND		2.00		ug/L			02/28/15 12:34	1
4-Chlorotoluene	ND		2.00		ug/L			02/28/15 12:34	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 12:34	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			02/28/15 12:34	1
Dibromochloromethane	ND		0.500		ug/L			02/28/15 12:34	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			02/28/15 12:34	1
1,2-Dibromoethane	ND		2.00		ug/L			02/28/15 12:34	1
Dibromomethane	ND		0.500		ug/L			02/28/15 12:34	1
1,3-Dichlorobenzene	ND		0.500		ug/L			02/28/15 12:34	1
1,4-Dichlorobenzene	ND		0.500		ug/L			02/28/15 12:34	1
1,2-Dichlorobenzene	ND		0.500		ug/L			02/28/15 12:34	1
Dichlorodifluoromethane	ND		0.500		ug/L			02/28/15 12:34	1
1,1-Dichloroethane	ND		0.500		ug/L			02/28/15 12:34	1
1,2-Dichloroethane	ND		0.500		ug/L			02/28/15 12:34	1
2,2-Dichloropropane	ND		0.500		ug/L			02/28/15 12:34	1
1,2-Dichloropropane	ND		0.500		ug/L			02/28/15 12:34	1
1,3-Dichloropropane	ND		0.500		ug/L			02/28/15 12:34	1
1,1-Dichloropropene	ND		0.500		ug/L			02/28/15 12:34	1
Ethylbenzene	ND		0.500		ug/L			02/28/15 12:34	1
Hexachlorobutadiene	ND		2.00		ug/L			02/28/15 12:34	1
2-Hexanone	ND		20.0		ug/L			02/28/15 12:34	1
Isopropylbenzene	ND		2.00		ug/L			02/28/15 12:34	1
Methylene Chloride	ND		2.00		ug/L			02/28/15 12:34	1
4-Methyl-2-pentanone	ND		20.0		ug/L			02/28/15 12:34	1
Methyl tert-butyl ether	ND		1.00		ug/L			02/28/15 12:34	1
m-Xylene & p-Xylene	ND		0.500		ug/L			02/28/15 12:34	1
Naphthalene	ND		2.00		ug/L			02/28/15 12:34	1
n-Butylbenzene	ND		2.00		ug/L			02/28/15 12:34	1
N-Propylbenzene	ND		2.00		ug/L			02/28/15 12:34	1
o-Xylene	ND		0.500		ug/L			02/28/15 12:34	1
p-Isopropyltoluene	ND		2.00		ug/L			02/28/15 12:34	1
sec-Butylbenzene	ND		2.00		ug/L			02/28/15 12:34	1
Styrene	ND		0.500		ug/L			02/28/15 12:34	1
tert-Butylbenzene	ND		2.00		ug/L			02/28/15 12:34	1

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-183438/6

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 12:34	1
1,1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			02/28/15 12:34	1
Tetrachloroethene	ND		0.500		ug/L			02/28/15 12:34	1
Toluene	ND		0.500		ug/L			02/28/15 12:34	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			02/28/15 12:34	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			02/28/15 12:34	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			02/28/15 12:34	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			02/28/15 12:34	1
1,1,1-Trichloroethane	ND		0.500		ug/L			02/28/15 12:34	1
1,1,2-Trichloroethane	ND		0.500		ug/L			02/28/15 12:34	1
Trichloroethene	ND		0.500		ug/L			02/28/15 12:34	1
Trichlorofluoromethane	ND		0.500		ug/L			02/28/15 12:34	1
1,2,3-Trichloropropane	ND		0.500		ug/L			02/28/15 12:34	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			02/28/15 12:34	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			02/28/15 12:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		75 - 125		02/28/15 12:34	1
Trifluorotoluene (Surr)	104		80 - 127		02/28/15 12:34	1
Dibromofluoromethane (Surr)	100		85 - 115		02/28/15 12:34	1
4-Bromofluorobenzene (Surr)	97		75 - 120		02/28/15 12:34	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 128		02/28/15 12:34	1

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.53	J	ug/L		93	30 - 200
Benzene	5.00	4.683		ug/L		94	80 - 120
Bromobenzene	5.00	4.440		ug/L		89	80 - 130
Bromochloromethane	5.00	4.971		ug/L		99	80 - 125
Bromodichloromethane	5.00	4.689		ug/L		94	80 - 125
Bromoform	5.00	3.952		ug/L		79	65 - 130
Bromomethane	5.00	5.679		ug/L		114	70 - 135
2-Butanone	20.0	16.68	J	ug/L		83	20 - 200
Carbon disulfide	5.00	5.261		ug/L		105	65 - 160
Carbon tetrachloride	5.00	5.952		ug/L		119	75 - 140
Chlorobenzene	5.00	4.609		ug/L		92	80 - 120
Chloroethane	5.00	5.236		ug/L		105	75 - 140
Chloroform	5.00	5.354		ug/L		107	80 - 130
Chloromethane	5.00	4.806		ug/L		96	50 - 140
2-Chlorotoluene	5.00	4.782		ug/L		96	75 - 130
4-Chlorotoluene	5.00	4.584		ug/L		92	75 - 130
cis-1,2-Dichloroethene	5.00	5.028		ug/L		101	80 - 130
cis-1,3-Dichloropropene	5.00	4.351		ug/L		87	70 - 120
Dibromochloromethane	5.00	4.111		ug/L		82	70 - 120
1,2-Dibromo-3-Chloropropane	5.00	3.880		ug/L		78	55 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	5.00	4.275		ug/L		86	70 - 130
Dibromomethane	5.00	4.442		ug/L		89	80 - 130
1,3-Dichlorobenzene	5.00	4.874		ug/L		97	80 - 120
1,4-Dichlorobenzene	5.00	4.622		ug/L		92	80 - 120
1,2-Dichlorobenzene	5.00	4.692		ug/L		94	80 - 130
Dichlorodifluoromethane	5.00	4.881		ug/L		98	30 - 180
1,1-Dichloroethane	5.00	5.279		ug/L		106	75 - 135
1,2-Dichloroethane	5.00	4.682		ug/L		94	80 - 140
1,1-Dichloroethene	5.00	4.761		ug/L		95	70 - 150
2,2-Dichloropropane	5.00	6.568		ug/L		131	60 - 150
1,2-Dichloropropane	5.00	4.433		ug/L		89	80 - 120
1,3-Dichloropropane	5.00	4.230		ug/L		85	80 - 130
1,1-Dichloropropene	5.00	5.184		ug/L		104	80 - 130
Ethylbenzene	5.00	5.139		ug/L		103	80 - 125
Hexachlorobutadiene	5.00	4.643		ug/L		93	75 - 135
2-Hexanone	20.0	16.02	J	ug/L		80	52 - 160
Iodomethane	5.00	5.391		ug/L		108	60 - 160
Isopropylbenzene	5.00	5.576		ug/L		112	75 - 120
Methylene Chloride	5.00	4.939		ug/L		99	60 - 145
4-Methyl-2-pentanone	20.0	18.46	J	ug/L		92	55 - 135
Methyl tert-butyl ether	5.00	4.904		ug/L		98	75 - 120
m-Xylene & p-Xylene	5.00	5.194		ug/L		104	80 - 130
Naphthalene	5.00	4.160		ug/L		83	45 - 130
n-Butylbenzene	5.00	4.957		ug/L		99	75 - 125
n-Hexane	5.00	5.110		ug/L		102	60 - 140
N-Propylbenzene	5.00	4.921		ug/L		98	80 - 120
o-Xylene	5.00	5.365		ug/L		107	80 - 120
p-Isopropyltoluene	5.00	4.943		ug/L		99	80 - 120
sec-Butylbenzene	5.00	5.109		ug/L		102	80 - 125
Styrene	5.00	5.080		ug/L		102	75 - 130
tert-Butylbenzene	5.00	4.956		ug/L		99	80 - 130
1,1,1,2-Tetrachloroethane	5.00	5.303		ug/L		106	75 - 125
1,1,1,2,2-Tetrachloroethane	5.00	4.326		ug/L		87	75 - 125
Tetrachloroethene	5.00	4.855		ug/L		97	40 - 180
Toluene	5.00	4.863		ug/L		97	80 - 120
trans-1,4-Dichloro-2-butene	5.00	3.659		ug/L		73	40 - 140
trans-1,2-Dichloroethene	5.00	5.029		ug/L		101	80 - 140
trans-1,3-Dichloropropene	5.00	3.748		ug/L		75	60 - 140
1,3,5-Trichlorobenzene	5.00	4.756		ug/L		95	75 - 120
1,2,4-Trichlorobenzene	5.00	4.384		ug/L		88	60 - 125
1,2,3-Trichlorobenzene	5.00	3.982		ug/L		80	60 - 125
1,1,1-Trichloroethane	5.00	5.916		ug/L		118	80 - 140
1,1,2-Trichloroethane	5.00	4.394		ug/L		88	80 - 130
Trichloroethene	5.00	4.786		ug/L		96	80 - 130
Trichlorofluoromethane	5.00	6.002		ug/L		120	30 - 180
1,2,3-Trichloropropane	5.00	4.520		ug/L		90	75 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.295		ug/L		106	65 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	5.00	5.029		ug/L		101	80 - 125
1,2,4-Trimethylbenzene	5.00	4.883		ug/L		98	80 - 125
Vinyl acetate	10.1	9.483		ug/L		94	30 - 200
Vinyl chloride	5.00	5.099		ug/L		102	65 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		75 - 125
Trifluorotoluene (Surr)	95		80 - 127
Dibromofluoromethane (Surr)	112		85 - 115
4-Bromofluorobenzene (Surr)	105		75 - 120
1,2-Dichloroethane-d4 (Surr)	105		70 - 128

Lab Sample ID: LCSD 580-183438/8

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	18.62	J	ug/L		93	30 - 200	1	20
Benzene	5.00	4.988		ug/L		100	80 - 120	6	20
Bromobenzene	5.00	5.249		ug/L		105	80 - 130	17	20
Bromochloromethane	5.00	4.973		ug/L		99	80 - 125	0	20
Bromodichloromethane	5.00	5.468		ug/L		109	80 - 125	15	20
Bromoform	5.00	4.279		ug/L		86	65 - 130	8	20
Bromomethane	5.00	5.133		ug/L		103	70 - 135	10	20
2-Butanone	20.0	19.45	J	ug/L		97	20 - 200	15	20
Carbon disulfide	5.00	5.169		ug/L		103	65 - 160	2	20
Carbon tetrachloride	5.00	5.856		ug/L		117	75 - 140	2	20
Chlorobenzene	5.00	4.891		ug/L		98	80 - 120	6	20
Chloroethane	5.00	4.631		ug/L		93	75 - 140	12	20
Chloroform	5.00	5.339		ug/L		107	80 - 130	0	20
Chloromethane	5.00	4.790		ug/L		96	50 - 140	0	20
2-Chlorotoluene	5.00	5.343		ug/L		107	75 - 130	11	20
4-Chlorotoluene	5.00	5.228		ug/L		105	75 - 130	13	20
cis-1,2-Dichloroethene	5.00	5.009		ug/L		100	80 - 130	0	20
cis-1,3-Dichloropropene	5.00	5.108		ug/L		102	70 - 120	16	20
Dibromochloromethane	5.00	4.596		ug/L		92	70 - 120	11	20
1,2-Dibromo-3-Chloropropane	5.00	4.423		ug/L		88	55 - 120	13	20
1,2-Dibromoethane	5.00	5.069		ug/L		101	70 - 130	17	20
Dibromomethane	5.00	5.073		ug/L		101	80 - 130	13	20
1,3-Dichlorobenzene	5.00	5.190		ug/L		104	80 - 120	6	20
1,4-Dichlorobenzene	5.00	4.998		ug/L		100	80 - 120	8	20
1,2-Dichlorobenzene	5.00	5.083		ug/L		102	80 - 130	8	20
Dichlorodifluoromethane	5.00	4.709		ug/L		94	30 - 180	4	20
1,1-Dichloroethane	5.00	5.153		ug/L		103	75 - 135	2	20
1,2-Dichloroethane	5.00	5.064		ug/L		101	80 - 140	8	20
1,1-Dichloroethene	5.00	4.930		ug/L		99	70 - 150	3	20
2,2-Dichloropropane	5.00	5.568		ug/L		111	60 - 150	16	20
1,2-Dichloropropane	5.00	5.006		ug/L		100	80 - 120	12	20

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-183438/8

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits	RPD	RPD	Limit
1,3-Dichloropropane	5.00	4.808		ug/L		96	80 - 130	13	20	
1,1-Dichloropropene	5.00	5.297		ug/L		106	80 - 130	2	20	
Ethylbenzene	5.00	5.328		ug/L		107	80 - 125	4	20	
Hexachlorobutadiene	5.00	5.481		ug/L		110	75 - 135	17	20	
2-Hexanone	20.0	19.25	J	ug/L		96	52 - 160	18	20	
Iodomethane	5.00	5.288		ug/L		106	60 - 160	2	20	
Isopropylbenzene	5.00	5.404		ug/L		108	75 - 120	3	20	
Methylene Chloride	5.00	5.094		ug/L		102	60 - 145	3	20	
4-Methyl-2-pentanone	20.0	19.08	J	ug/L		95	55 - 135	3	20	
Methyl tert-butyl ether	5.00	4.876		ug/L		98	75 - 120	1	20	
m-Xylene & p-Xylene	5.00	5.293		ug/L		106	80 - 130	2	20	
Naphthalene	5.00	4.988		ug/L		100	45 - 130	18	20	
n-Butylbenzene	5.00	5.424		ug/L		108	75 - 125	9	20	
n-Hexane	5.00	5.434		ug/L		109	60 - 140	6	20	
N-Propylbenzene	5.00	5.498		ug/L		110	80 - 120	11	20	
o-Xylene	5.00	5.321		ug/L		106	80 - 120	1	20	
p-Isopropyltoluene	5.00	5.471		ug/L		109	80 - 120	10	20	
sec-Butylbenzene	5.00	5.566		ug/L		111	80 - 125	9	20	
Styrene	5.00	5.405		ug/L		108	75 - 130	6	20	
tert-Butylbenzene	5.00	5.564		ug/L		111	80 - 130	12	20	
1,1,1,2-Tetrachloroethane	5.00	4.960		ug/L		99	75 - 125	7	20	
1,1,1,2,2-Tetrachloroethane	5.00	4.873		ug/L		97	75 - 125	12	20	
Tetrachloroethene	5.00	5.138		ug/L		103	40 - 180	6	20	
Toluene	5.00	5.123		ug/L		102	80 - 120	5	20	
trans-1,4-Dichloro-2-butene	5.00	4.309		ug/L		86	40 - 140	16	20	
trans-1,2-Dichloroethene	5.00	4.920		ug/L		98	80 - 140	2	20	
trans-1,3-Dichloropropene	5.00	4.686	*	ug/L		94	60 - 140	22	20	
1,3,5-Trichlorobenzene	5.00	5.127		ug/L		103	75 - 120	8	20	
1,2,4-Trichlorobenzene	5.00	5.111		ug/L		102	60 - 125	15	20	
1,2,3-Trichlorobenzene	5.00	4.914	*	ug/L		98	60 - 125	21	20	
1,1,1-Trichloroethane	5.00	5.496		ug/L		110	80 - 140	7	20	
1,1,2-Trichloroethane	5.00	4.943		ug/L		99	80 - 130	12	20	
Trichloroethene	5.00	5.062		ug/L		101	80 - 130	6	20	
Trichlorofluoromethane	5.00	4.956		ug/L		99	30 - 180	19	20	
1,2,3-Trichloropropane	5.00	5.002		ug/L		100	75 - 120	10	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.154		ug/L		103	65 - 120	3	20	
1,3,5-Trimethylbenzene	5.00	5.584		ug/L		112	80 - 125	10	20	
1,2,4-Trimethylbenzene	5.00	5.148		ug/L		103	80 - 125	5	20	
Vinyl acetate	10.1	10.62		ug/L		105	30 - 200	11	20	
Vinyl chloride	5.00	4.883		ug/L		98	65 - 140	4	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	97		75 - 125
Trifluorotoluene (Surr)	101		80 - 127
Dibromofluoromethane (Surr)	101		85 - 115
4-Bromofluorobenzene (Surr)	98		75 - 120
1,2-Dichloroethane-d4 (Surr)	104		70 - 128

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 250-34586/1-A
Matrix: Water
Analysis Batch: 34618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34586

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250		mg/L		02/20/15 08:08	02/20/15 14:03	1
Manganese	ND		0.00200		mg/L		02/20/15 08:08	02/20/15 14:03	1

Lab Sample ID: LCS 250-34586/2-A
Matrix: Water
Analysis Batch: 34618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	2.00	2.075		mg/L		104	80 - 120
Manganese	0.100	0.1041		mg/L		104	80 - 120

Lab Sample ID: 250-24580-7 MS
Matrix: Water
Analysis Batch: 34618

Client Sample ID: LB-021715-07
Prep Type: Dissolved
Prep Batch: 34586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		2.00	2.111		mg/L		105	75 - 125
Manganese	ND		0.100	0.1099		mg/L		110	75 - 125

Lab Sample ID: 590-247-B-1-B MS
Matrix: Water
Analysis Batch: 34618

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 34586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	12.9		2.00	14.75	4	mg/L		94	75 - 125
Manganese	1.56		0.100	1.660	4	mg/L		95	75 - 125

Lab Sample ID: 590-247-B-2-B DU
Matrix: Water
Analysis Batch: 34618

Client Sample ID: Duplicate
Prep Type: Dissolved
Prep Batch: 34586

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	ND		ND		mg/L		NC	20
Manganese	ND		ND		mg/L		NC	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 250-34625/1
Matrix: Water
Analysis Batch: 34625

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0		mg/L			02/23/15 12:24	1

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method: 160.1 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 250-34625/2
Matrix: Water
Analysis Batch: 34625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	99.9	105.0		mg/L		105	80 - 120

Lab Sample ID: 250-24580-1 DU
Matrix: Water
Analysis Batch: 34625

Client Sample ID: LB-021715-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	231		232.0		mg/L		0.4	5



Burlington, WA	Corporate Laboratory (a)	1620 S Walnut St	Burlington, WA 98233	800.755.9295 • 360.757.1400
Bellingham, WA	Microbiology (b)	805 Orchard Dr Ste 4	Bellingham, WA 98225	360.715.1212
Portland, OR	Microbiology/Chemistry (c)	9150 SW Pioneer Ct Ste W	Wilsonville, OR 97070	503.682.7802
Corvallis, OR	Microbiology (d)	540 SW Third Street	Corvallis, OR 97333	541.753.4946

Data Report

Client Name: TestAmerica-Portland
 9405 SW Nimbus Avenue
 Beaverton, OR 97008

Reference Number: **15-03105**
 Project: 25000286 - Leichner Landfill

Report Date: 2/25/15

Date Received: 2/18/15

Approved by: ajs,bj,tdp

Authorized by:

Thanh B Phan
 Lab Manager, Portland

Sample Description: 250-24580-1 - LB-021715-01										Sample Date: 2/17/15 11:55 am			
Lab Number: 7171		Sample Comment:								Collected By: Test America Portland			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	10	0.1	0.0211	mg/L	1.0	300.0	a	2/24/15	SRF	I150223A	
14797-55-8	NITRATE-N	0.78	0.005	0.0009	mg/L	1.0	SM4500-NO3 F	c	2/18/15	CPO	CNO3_150218	

Sample Description: 250-24580-2 - LB-021715-02										Sample Date: 2/17/15 12:50 pm			
Lab Number: 7172		Sample Comment:								Collected By: Test America Portland			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	8.88	0.1	0.0211	mg/L	1.0	300.0	a	2/20/15	SRF	I150219A	
14797-55-8	NITRATE-N	4.09	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/18/15	CPO	CNO3_150218	

Sample Description: 250-24580-3 - LB-021715-03										Sample Date: 2/17/15 1:40 pm			
Lab Number: 7173		Sample Comment:								Collected By: Test America Portland			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	4.49	0.1	0.0211	mg/L	1.0	300.0	a	2/19/15	SRF	I150219A	
14797-55-8	NITRATE-N	4.99	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/18/15	CPO	CNO3_150218	

Sample Description: 250-24580-4 - LB-021715-04										Sample Date: 2/17/15 2:20 pm			
Lab Number: 7174		Sample Comment:								Collected By: Test America Portland			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	4.88	0.1	0.0211	mg/L	1.0	300.0	a	2/19/15	SRF	I150219A	
14797-55-8	NITRATE-N	5.58	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/18/15	CPO	CNO3_150218	

Sample Description: 250-24580-5 - LB-021715-05										Sample Date: 2/17/15 3:00 pm			
Lab Number: 7175		Sample Comment:								Collected By: Test America Portland			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	6.51	0.1	0.0211	mg/L	1.0	300.0	a	2/19/15	SRF	I150219A	
------------	----------	------	-----	--------	------	-----	-------	---	---------	-----	----------	--

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
 PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 D.F. - Dilution Factor



Data Report

14797-55-8 NITRATE-N ND 0.005 0.0009 mg/L 1.0 SM4500-NO3 F c 2/18/15 CPO CNO3_150218

Sample Description: 250-24580-6 - LB-021715-06										Sample Date: 2/17/15 3:05 pm		
Lab Number: 7176		Sample Comment:								Collected By: Test America Portland		
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment

16887-00-6	CHLORIDE	6.51	0.1	0.0211	mg/L	1.0	300.0	a	2/19/15	SRF	I150219A	
14797-55-8	NITRATE-N	ND	0.005	0.0009	mg/L	1.0	SM4500-NO3 F	c	2/18/15	CPO	CNO3_150218	

Sample Description: 250-24580-7 - LB-021715-07										Sample Date: 2/17/15 4:00 pm		
Lab Number: 7177		Sample Comment:								Collected By: Test America Portland		
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment

16887-00-6	CHLORIDE	4.41	0.1	0.0211	mg/L	1.0	300.0	a	2/19/15	SRF	I150219A	
14797-55-8	NITRATE-N	4.81	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/18/15	CPO	CNO3_150218	

Sample Description: 250-24580-8 - LB-021715-08										Sample Date: 2/17/15 4:30 pm		
Lab Number: 7178		Sample Comment:								Collected By: Test America Portland		
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment

16887-00-6	CHLORIDE	ND	0.1	0.0211	mg/L	1.0	300.0	a	2/19/15	SRF	I150219A	
14797-55-8	NITRATE-N	ND	0.005	0.0009	mg/L	1.0	SM4500-NO3 F	c	2/18/15	CPO	CNO3_150218	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
 PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 D.F. - Dilution Factor



Certification Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Laboratory: TestAmerica Portland

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-012	12-26-15
California	State Program	9	2597	09-30-15
Oregon	NELAP	10	OR100021	01-09-16
USDA	Federal		P330-11-00092	04-17-17
Washington	State Program	10	C586	06-23-15

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-15 *
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-16

* Certification renewal pending - certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24580-1
SDG: 04215030.01/16

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
6020	Metals (ICP/MS)	SW846	TAL PRT
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL PRT
Wilsonville	General Sub Contract Method	NONE	SC0058
Wilsonville	General Sub Contract Method	NONE	SC0058
Location			

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NONE = NONE

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

SC0058 = Edge Analytical, 1620 S Walnut Street, Burlington, WA 98233-3231, TEL (360)757-1400

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



C

091771

250-24580 Chain of Custody

Regulatory Program: DW

Client Contact		Project Manager: <u>J DeWondt</u>		Site Contact: <u>W M W</u>		Date: <u>2/18/15</u>		COC No. _____ of _____ COCs	
Company Name: <u>SCS Engineers</u>		Tel/Fax: <u>503 639 9548</u>		Lab Contact: <u>Sarah Murphy</u>		Carrier: _____		Sampler: <u>B M W M W M</u>	
Address: <u>14945 SW Sunset Pkwy Suite 180</u>		Analysis Turnaround Time		Perform MS / MSD (Y / N)		Walk-in Client:		For Lab Use Only:	
City/State/Zip: <u>Portland, OR 97224</u>		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		Filtered Sample (Y / N)		Lab Sampling:		Job / SDG No.:	
Phone: <u>503 716 2740</u>		TAT if different from Below		Sample Date		Sample Time		Sample Type (C-Comp, G-Grab)	
Fax: _____		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Date		Sample Time		Matrix	
Project Name: <u>Leidner Landfill</u>		Sample Date		Sample Time		Matrix		# of Cont.	
Site: <u>04215030.01/16</u>		Sample Date		Sample Time		Matrix		# of Cont.	
P O # _____		Sample Date		Sample Time		Matrix		# of Cont.	
Sample Identification		Sample Date		Sample Time		Matrix		# of Cont.	
LB-021715-01		2/17/15		1155		W		5	
LB-021715-02		2/17/15		1250		W		5	
LB-021715-03		2/17/15		1340		W		5	
LB-021715-04		2/17/15		1420		W		5	
LB-021715-05		2/17/15		1500		W		5	
LB-021715-06		2/17/15		1505		W		5	
LB-021715-07		2/17/15		1600		W		5	
LB-021715-08		2/17/15		1630		W		5	
Trip Rmks		2/17/15		1100		W		2	
Sample Specific Notes:		TDS		Nitrate		Dissolved Metals (Fe, Mn)		BACO VOAs	
Preservation Used: 1=Ce, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other		Return to Client		Disposal by Lab		Archive for _____ Months		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Possible Hazard Identification:		Non-Hazard		Flammable		Skin Irritant		Poison B	
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.		Unknown		Company: <u>Senvoy</u>		Date/Time: <u>2/18/2015 9:53</u>		Received by: <u>[Signature]</u>	
Special Instructions/QC Requirements & Comments:		Cooler Temp. (C): _____		Obs'd: _____		Therm ID No.: _____		Received by: <u>[Signature]</u>	
Relinquished by: <u>[Signature]</u>		Custody Seal No.: _____		Yes <input type="checkbox"/> No <input type="checkbox"/>		Company: <u>Senvoy</u>		Date/Time: <u>2/18/15 @1019</u>	
Relinquished by: <u>[Signature]</u>		Company: <u>Senvoy</u>		Date/Time: <u>2/18/15</u>		Company: <u>TA</u>		Date/Time: <u>2/18/15 @1019</u>	



TestAmerica Portland

9405 SW Nimbus Ave.
Beaverton, OR 97008
Phone (503) 906-9200 Fax (503) 906-9210

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)
 Company: TestAmerica Laboratories, Inc.
 Address: 5755 8th Street East, Tacoma WA, 98424
 City: Tacoma
 State, Zip: WA, 98424
 Phone: 253-922-2310 (Tel) 253-922-5047 (Fax)
 Email: [Redacted]
 Project Name: Lechner Landfill
 Site: [Redacted]

Sampler: [Redacted]
Lab P.I.: Murphy, Sarah A
E-Mail: sarah.murphy@testamericainc.com
Carrier Tracking No(s): [Redacted]
COC No: 250-45228-1
Page: Page 1 of 1

Due Date Requested: 2/24/2015
TAT Requested (days): [Redacted]
PO #: [Redacted]
WO #: [Redacted]
Project #: 25000286
SSOW#: [Redacted]

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overhead)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_LL/5030B	Total Number of containers	Special Instructions/Note:
LB-021715-01 (250-24580-1)	2/17/15	11:55 Pacific		Water	X			3	
LB-021715-02 (250-24580-2)	2/17/15	12:50 Pacific		Water	X			3	
LB-021715-03 (250-24580-3)	2/17/15	13:40 Pacific		Water	X			3	
LB-021715-04 (250-24580-4)	2/17/15	14:20 Pacific		Water	X			3	
LB-021715-05 (250-24580-5)	2/17/15	15:00 Pacific		Water	X			3	
LB-021715-06 (250-24580-6)	2/17/15	15:05 Pacific		Water	X			3	
LB-021715-07 (250-24580-7)	2/17/15	16:00 Pacific		Water	X			3	
LB-021715-08 (250-24580-8)	2/17/15	16:30 Pacific		Water	X			3	

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify)
 Empty Kit Relinquished by: [Redacted]
 Relinquished by: [Redacted]
 Date/Time: 2/19/15 15:00
 Company: TRP
 Received by: [Redacted]
 Date/Time: 2/20/15 11:10
 Company: [Redacted]

Special Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client
 Disposal By Lab
 Archive For _____ Months
 Special Instructions/QC Requirements:
 Method of Shipment:
 Cooler Temperature(s) °C and Other Remarks: [Redacted]

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.: [Redacted]

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 250-24580-1

SDG Number: 04215030.01/16

Login Number: 24580

List Number: 1

Creator: Svabik-Seror, Philip M

List Source: TestAmerica Portland

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	False	Headspace in 2/2 Trip Blanks.
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	False	Sample splitting required for subcontract purposes.
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 250-24580-1
SDG Number: 04215030.01/16

Login Number: 24580

List Number: 2

Creator: Abello, Andrea N

List Source: TestAmerica Seattle

List Creation: 02/20/15 12:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR#2 = 2.2 / 1.9 & IR#2 = 0.4/ 0.1 & IR#2 = 1.9 / 1.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	False	Received Trip Blanks not listed on COC.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Portland
9405 SW Nimbus Ave.
Beaverton, OR 97008
Tel: (503)906-9200

TestAmerica Job ID: 250-24604-1

TestAmerica Sample Delivery Group: 04215030.01/16
Client Project/Site: Leichner Landfill
Revision: 2

For:

SCS Engineers
14945 SW Sequoia Parkway
Suite 180
Portland, Oregon 97224

Attn: Mr. Jason Davendonis



Authorized for release by:
4/23/2015 11:13:46 AM

Sarah Murphy, Project Manager I
(253)922-2310
sarah.murphy@testamericainc.com

LINKS

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results through
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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-24604-1	LB-021815-09	Water	02/18/15 10:45	02/19/15 10:12
250-24604-2	LB-021815-10	Water	02/18/15 11:20	02/19/15 10:12
250-24604-3	LB-021815-11	Water	02/18/15 12:05	02/19/15 10:12
250-24604-4	LB-021815-12	Water	02/18/15 12:50	02/19/15 10:12
250-24604-5	LB-021815-13	Water	02/18/15 13:30	02/19/15 10:12
250-24604-6	LB-021815-14	Water	02/18/15 13:35	02/19/15 10:12
250-24604-7	LB-021815-15	Water	02/18/15 14:30	02/19/15 10:12
250-24604-8	Trip Blanks	Water	02/18/15 00:00	02/19/15 10:12

Case Narrative

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Job ID: 250-24604-1

Laboratory: TestAmerica Portland

Narrative

Job Narrative 250-24604-1

Comments

Report revised 03/31/2015 to report to custom reporting limits for 8260.
Report revised 04/23/2015 to report data down to RLs.

Receipt

The samples were received on 2/19/2015 10:12 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.0° C.

GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) associated with batch 182888 recovered above the upper control limit for 2,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCVIS 580-182888/2).

Method 8260B: The laboratory control sample duplicate (LCSD) for batch 182888 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 183438 recovered outside control limits for the following analytes: trans-1,3-dichloropropene and 1,2,3-trichlorobenzene. Results were within control limits for both the LCS and LCSD, therefore results are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021815-09

Date Collected: 02/18/15 10:45

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 17:06	1
Benzene	ND		0.500	ug/L			02/28/15 17:06	1
Bromobenzene	ND		2.00	ug/L			02/28/15 17:06	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 17:06	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 17:06	1
Bromoform	ND		0.500	ug/L			02/28/15 17:06	1
Bromomethane	ND		1.00	ug/L			02/28/15 17:06	1
2-Butanone	ND		20.0	ug/L			02/28/15 17:06	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 17:06	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 17:06	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 17:06	1
Chloroethane	ND		0.500	ug/L			02/28/15 17:06	1
Chloroform	ND		0.500	ug/L			02/28/15 17:06	1
Chloromethane	ND		0.500	ug/L			02/28/15 17:06	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 17:06	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 17:06	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 17:06	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 17:06	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 17:06	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 17:06	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 17:06	1
Dibromomethane	ND		0.500	ug/L			02/28/15 17:06	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 17:06	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 17:06	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 17:06	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 17:06	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 17:06	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 17:06	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 17:06	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 17:06	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 17:06	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 17:06	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 17:06	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 17:06	1
2-Hexanone	ND		20.0	ug/L			02/28/15 17:06	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 17:06	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 17:06	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 17:06	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 17:06	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 17:06	1
Naphthalene	ND		2.00	ug/L			02/28/15 17:06	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 17:06	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 17:06	1
o-Xylene	ND		0.500	ug/L			02/28/15 17:06	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 17:06	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 17:06	1
Styrene	ND		0.500	ug/L			02/28/15 17:06	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 17:06	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 17:06	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021815-09
Date Collected: 02/18/15 10:45
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-1
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 17:06	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 17:06	1
Toluene	ND		0.500	ug/L			02/28/15 17:06	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 17:06	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 17:06	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 17:06	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 17:06	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 17:06	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 17:06	1
Trichloroethene	ND		0.500	ug/L			02/28/15 17:06	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 17:06	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 17:06	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 17:06	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 17:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		75 - 120				02/28/15 17:06	1
Dibromofluoromethane (Surr)	104		85 - 115				02/28/15 17:06	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 128				02/28/15 17:06	1
Toluene-d8 (Surr)	99		75 - 125				02/28/15 17:06	1
Trifluorotoluene (Surr)	100		80 - 127				02/28/15 17:06	1

Client Sample ID: LB-021815-10
Date Collected: 02/18/15 11:20
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-2
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 17:33	1
Benzene	ND		0.500	ug/L			02/28/15 17:33	1
Bromobenzene	ND		2.00	ug/L			02/28/15 17:33	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 17:33	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 17:33	1
Bromoform	ND		0.500	ug/L			02/28/15 17:33	1
Bromomethane	ND		1.00	ug/L			02/28/15 17:33	1
2-Butanone	ND		20.0	ug/L			02/28/15 17:33	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 17:33	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 17:33	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 17:33	1
Chloroethane	ND		0.500	ug/L			02/28/15 17:33	1
Chloroform	ND		0.500	ug/L			02/28/15 17:33	1
Chloromethane	ND		0.500	ug/L			02/28/15 17:33	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 17:33	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 17:33	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 17:33	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 17:33	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 17:33	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 17:33	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 17:33	1
Dibromomethane	ND		0.500	ug/L			02/28/15 17:33	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 17:33	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 17:33	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021815-10
Date Collected: 02/18/15 11:20
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-2
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 17:33	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 17:33	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 17:33	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 17:33	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 17:33	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 17:33	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 17:33	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 17:33	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 17:33	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 17:33	1
2-Hexanone	ND		20.0	ug/L			02/28/15 17:33	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 17:33	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 17:33	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 17:33	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 17:33	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 17:33	1
Naphthalene	ND		2.00	ug/L			02/28/15 17:33	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 17:33	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 17:33	1
o-Xylene	ND		0.500	ug/L			02/28/15 17:33	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 17:33	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 17:33	1
Styrene	ND		0.500	ug/L			02/28/15 17:33	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 17:33	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 17:33	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 17:33	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 17:33	1
Toluene	ND		0.500	ug/L			02/28/15 17:33	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 17:33	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 17:33	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 17:33	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 17:33	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 17:33	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 17:33	1
Trichloroethene	ND		0.500	ug/L			02/28/15 17:33	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 17:33	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 17:33	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 17:33	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		75 - 120		02/28/15 17:33	1
Dibromofluoromethane (Surr)	106		85 - 115		02/28/15 17:33	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 128		02/28/15 17:33	1
Toluene-d8 (Surr)	99		75 - 125		02/28/15 17:33	1
Trifluorotoluene (Surr)	99		80 - 127		02/28/15 17:33	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021815-11

Date Collected: 02/18/15 12:05

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 18:00	1
Benzene	ND		0.500	ug/L			02/28/15 18:00	1
Bromobenzene	ND		2.00	ug/L			02/28/15 18:00	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 18:00	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 18:00	1
Bromoform	ND		0.500	ug/L			02/28/15 18:00	1
Bromomethane	ND		1.00	ug/L			02/28/15 18:00	1
2-Butanone	ND		20.0	ug/L			02/28/15 18:00	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 18:00	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 18:00	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 18:00	1
Chloroethane	ND		0.500	ug/L			02/28/15 18:00	1
Chloroform	ND		0.500	ug/L			02/28/15 18:00	1
Chloromethane	ND		0.500	ug/L			02/28/15 18:00	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 18:00	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 18:00	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 18:00	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 18:00	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 18:00	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 18:00	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 18:00	1
Dibromomethane	ND		0.500	ug/L			02/28/15 18:00	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:00	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:00	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:00	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 18:00	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 18:00	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 18:00	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 18:00	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 18:00	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 18:00	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 18:00	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 18:00	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 18:00	1
2-Hexanone	ND		20.0	ug/L			02/28/15 18:00	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 18:00	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 18:00	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 18:00	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 18:00	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 18:00	1
Naphthalene	ND		2.00	ug/L			02/28/15 18:00	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 18:00	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 18:00	1
o-Xylene	ND		0.500	ug/L			02/28/15 18:00	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 18:00	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 18:00	1
Styrene	ND		0.500	ug/L			02/28/15 18:00	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 18:00	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 18:00	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021815-11
Date Collected: 02/18/15 12:05
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-3
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 18:00	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 18:00	1
Toluene	ND		0.500	ug/L			02/28/15 18:00	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 18:00	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 18:00	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 18:00	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 18:00	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 18:00	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 18:00	1
Trichloroethene	ND		0.500	ug/L			02/28/15 18:00	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 18:00	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 18:00	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 18:00	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 18:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120				02/28/15 18:00	1
Dibromofluoromethane (Surr)	104		85 - 115				02/28/15 18:00	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 128				02/28/15 18:00	1
Toluene-d8 (Surr)	99		75 - 125				02/28/15 18:00	1
Trifluorotoluene (Surr)	101		80 - 127				02/28/15 18:00	1

Client Sample ID: LB-021815-12
Date Collected: 02/18/15 12:50
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-4
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 18:28	1
Benzene	ND		0.500	ug/L			02/28/15 18:28	1
Bromobenzene	ND		2.00	ug/L			02/28/15 18:28	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 18:28	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 18:28	1
Bromoform	ND		0.500	ug/L			02/28/15 18:28	1
Bromomethane	ND		1.00	ug/L			02/28/15 18:28	1
2-Butanone	ND		20.0	ug/L			02/28/15 18:28	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 18:28	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 18:28	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 18:28	1
Chloroethane	ND		0.500	ug/L			02/28/15 18:28	1
Chloroform	ND		0.500	ug/L			02/28/15 18:28	1
Chloromethane	ND		0.500	ug/L			02/28/15 18:28	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 18:28	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 18:28	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 18:28	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 18:28	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 18:28	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 18:28	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 18:28	1
Dibromomethane	ND		0.500	ug/L			02/28/15 18:28	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:28	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:28	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021815-12
Date Collected: 02/18/15 12:50
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-4
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:28	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 18:28	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 18:28	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 18:28	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 18:28	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 18:28	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 18:28	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 18:28	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 18:28	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 18:28	1
2-Hexanone	ND		20.0	ug/L			02/28/15 18:28	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 18:28	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 18:28	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 18:28	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 18:28	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 18:28	1
Naphthalene	ND		2.00	ug/L			02/28/15 18:28	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 18:28	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 18:28	1
o-Xylene	ND		0.500	ug/L			02/28/15 18:28	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 18:28	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 18:28	1
Styrene	ND		0.500	ug/L			02/28/15 18:28	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 18:28	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 18:28	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 18:28	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 18:28	1
Toluene	ND		0.500	ug/L			02/28/15 18:28	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 18:28	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 18:28	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 18:28	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 18:28	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 18:28	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 18:28	1
Trichloroethene	ND		0.500	ug/L			02/28/15 18:28	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 18:28	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 18:28	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 18:28	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120		02/28/15 18:28	1
Dibromofluoromethane (Surr)	105		85 - 115		02/28/15 18:28	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 128		02/28/15 18:28	1
Toluene-d8 (Surr)	98		75 - 125		02/28/15 18:28	1
Trifluorotoluene (Surr)	101		80 - 127		02/28/15 18:28	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021815-13

Date Collected: 02/18/15 13:30

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-5

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 18:55	1
Benzene	ND		0.500	ug/L			02/28/15 18:55	1
Bromobenzene	ND		2.00	ug/L			02/28/15 18:55	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 18:55	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 18:55	1
Bromoform	ND		0.500	ug/L			02/28/15 18:55	1
Bromomethane	ND		1.00	ug/L			02/28/15 18:55	1
2-Butanone	ND		20.0	ug/L			02/28/15 18:55	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 18:55	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 18:55	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 18:55	1
Chloroethane	ND		0.500	ug/L			02/28/15 18:55	1
Chloroform	ND		0.500	ug/L			02/28/15 18:55	1
Chloromethane	ND		0.500	ug/L			02/28/15 18:55	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 18:55	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 18:55	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 18:55	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 18:55	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 18:55	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 18:55	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 18:55	1
Dibromomethane	ND		0.500	ug/L			02/28/15 18:55	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:55	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:55	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 18:55	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 18:55	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 18:55	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 18:55	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 18:55	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 18:55	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 18:55	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 18:55	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 18:55	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 18:55	1
2-Hexanone	ND		20.0	ug/L			02/28/15 18:55	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 18:55	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 18:55	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 18:55	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 18:55	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 18:55	1
Naphthalene	ND		2.00	ug/L			02/28/15 18:55	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 18:55	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 18:55	1
o-Xylene	ND		0.500	ug/L			02/28/15 18:55	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 18:55	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 18:55	1
Styrene	ND		0.500	ug/L			02/28/15 18:55	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 18:55	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 18:55	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021815-13
Date Collected: 02/18/15 13:30
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-5
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 18:55	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 18:55	1
Toluene	ND		0.500	ug/L			02/28/15 18:55	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 18:55	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 18:55	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 18:55	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 18:55	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 18:55	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 18:55	1
Trichloroethene	ND		0.500	ug/L			02/28/15 18:55	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 18:55	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 18:55	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 18:55	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 18:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		75 - 120				02/28/15 18:55	1
Dibromofluoromethane (Surr)	110		85 - 115				02/28/15 18:55	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 128				02/28/15 18:55	1
Toluene-d8 (Surr)	97		75 - 125				02/28/15 18:55	1
Trifluorotoluene (Surr)	95		80 - 127				02/28/15 18:55	1

Client Sample ID: LB-021815-14
Date Collected: 02/18/15 13:35
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-6
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 19:22	1
Benzene	ND		0.500	ug/L			02/28/15 19:22	1
Bromobenzene	ND		2.00	ug/L			02/28/15 19:22	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 19:22	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 19:22	1
Bromoform	ND		0.500	ug/L			02/28/15 19:22	1
Bromomethane	ND		1.00	ug/L			02/28/15 19:22	1
2-Butanone	ND		20.0	ug/L			02/28/15 19:22	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 19:22	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 19:22	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 19:22	1
Chloroethane	ND		0.500	ug/L			02/28/15 19:22	1
Chloroform	ND		0.500	ug/L			02/28/15 19:22	1
Chloromethane	ND		0.500	ug/L			02/28/15 19:22	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 19:22	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 19:22	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 19:22	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 19:22	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 19:22	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 19:22	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 19:22	1
Dibromomethane	ND		0.500	ug/L			02/28/15 19:22	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 19:22	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 19:22	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021815-14
Date Collected: 02/18/15 13:35
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-6
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 19:22	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 19:22	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 19:22	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 19:22	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 19:22	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 19:22	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 19:22	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 19:22	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 19:22	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 19:22	1
2-Hexanone	ND		20.0	ug/L			02/28/15 19:22	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 19:22	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 19:22	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 19:22	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 19:22	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 19:22	1
Naphthalene	ND		2.00	ug/L			02/28/15 19:22	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 19:22	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 19:22	1
o-Xylene	ND		0.500	ug/L			02/28/15 19:22	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 19:22	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 19:22	1
Styrene	ND		0.500	ug/L			02/28/15 19:22	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 19:22	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 19:22	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 19:22	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 19:22	1
Toluene	ND		0.500	ug/L			02/28/15 19:22	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 19:22	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 19:22	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 19:22	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 19:22	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 19:22	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 19:22	1
Trichloroethene	ND		0.500	ug/L			02/28/15 19:22	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 19:22	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 19:22	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 19:22	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 19:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120		02/28/15 19:22	1
Dibromofluoromethane (Surr)	104		85 - 115		02/28/15 19:22	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 128		02/28/15 19:22	1
Toluene-d8 (Surr)	97		75 - 125		02/28/15 19:22	1
Trifluorotoluene (Surr)	101		80 - 127		02/28/15 19:22	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021815-15

Date Collected: 02/18/15 14:30

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-7

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 19:49	1
Benzene	ND		0.500	ug/L			02/28/15 19:49	1
Bromobenzene	ND		2.00	ug/L			02/28/15 19:49	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 19:49	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 19:49	1
Bromoform	ND		0.500	ug/L			02/28/15 19:49	1
Bromomethane	ND		1.00	ug/L			02/28/15 19:49	1
2-Butanone	ND		20.0	ug/L			02/28/15 19:49	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 19:49	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 19:49	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 19:49	1
Chloroethane	ND		0.500	ug/L			02/28/15 19:49	1
Chloroform	ND		0.500	ug/L			02/28/15 19:49	1
Chloromethane	ND		0.500	ug/L			02/28/15 19:49	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 19:49	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 19:49	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 19:49	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 19:49	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 19:49	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 19:49	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 19:49	1
Dibromomethane	ND		0.500	ug/L			02/28/15 19:49	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 19:49	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 19:49	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 19:49	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 19:49	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 19:49	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 19:49	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 19:49	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 19:49	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 19:49	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 19:49	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 19:49	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 19:49	1
2-Hexanone	ND		20.0	ug/L			02/28/15 19:49	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 19:49	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 19:49	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 19:49	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 19:49	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 19:49	1
Naphthalene	ND		2.00	ug/L			02/28/15 19:49	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 19:49	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 19:49	1
o-Xylene	ND		0.500	ug/L			02/28/15 19:49	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 19:49	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 19:49	1
Styrene	ND		0.500	ug/L			02/28/15 19:49	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 19:49	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 19:49	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021815-15
Date Collected: 02/18/15 14:30
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-7
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 19:49	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 19:49	1
Toluene	ND		0.500	ug/L			02/28/15 19:49	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 19:49	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 19:49	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 19:49	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 19:49	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 19:49	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 19:49	1
Trichloroethene	ND		0.500	ug/L			02/28/15 19:49	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 19:49	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 19:49	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 19:49	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 19:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120				02/28/15 19:49	1
Dibromofluoromethane (Surr)	106		85 - 115				02/28/15 19:49	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 128				02/28/15 19:49	1
Toluene-d8 (Surr)	97		75 - 125				02/28/15 19:49	1
Trifluorotoluene (Surr)	99		80 - 127				02/28/15 19:49	1

Client Sample ID: Trip Blanks
Date Collected: 02/18/15 00:00
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-8
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/20/15 15:09	1
Benzene	ND		0.500	ug/L			02/20/15 15:09	1
Bromobenzene	ND		2.00	ug/L			02/20/15 15:09	1
Bromochloromethane	ND		0.500	ug/L			02/20/15 15:09	1
Bromodichloromethane	ND		0.500	ug/L			02/20/15 15:09	1
Bromoform	ND		0.500	ug/L			02/20/15 15:09	1
Bromomethane	ND		1.00	ug/L			02/20/15 15:09	1
2-Butanone	ND		20.0	ug/L			02/20/15 15:09	1
Carbon disulfide	ND		0.500	ug/L			02/20/15 15:09	1
Carbon tetrachloride	ND		0.500	ug/L			02/20/15 15:09	1
Chlorobenzene	ND		0.500	ug/L			02/20/15 15:09	1
Chloroethane	ND		0.500	ug/L			02/20/15 15:09	1
Chloroform	ND		0.500	ug/L			02/20/15 15:09	1
Chloromethane	ND		0.500	ug/L			02/20/15 15:09	1
2-Chlorotoluene	ND		2.00	ug/L			02/20/15 15:09	1
4-Chlorotoluene	ND		2.00	ug/L			02/20/15 15:09	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/20/15 15:09	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/20/15 15:09	1
Dibromochloromethane	ND		0.500	ug/L			02/20/15 15:09	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/20/15 15:09	1
1,2-Dibromoethane	ND		2.00	ug/L			02/20/15 15:09	1
Dibromomethane	ND		0.500	ug/L			02/20/15 15:09	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/20/15 15:09	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/20/15 15:09	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Trip Blanks
Date Collected: 02/18/15 00:00
Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-8
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500	ug/L			02/20/15 15:09	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/20/15 15:09	1
1,1-Dichloroethane	ND		0.500	ug/L			02/20/15 15:09	1
1,2-Dichloroethane	ND		0.500	ug/L			02/20/15 15:09	1
2,2-Dichloropropane	ND	^	0.500	ug/L			02/20/15 15:09	1
1,2-Dichloropropane	ND		0.500	ug/L			02/20/15 15:09	1
1,3-Dichloropropane	ND		0.500	ug/L			02/20/15 15:09	1
1,1-Dichloropropene	ND		0.500	ug/L			02/20/15 15:09	1
Ethylbenzene	ND		0.500	ug/L			02/20/15 15:09	1
Hexachlorobutadiene	ND		2.00	ug/L			02/20/15 15:09	1
2-Hexanone	ND		20.0	ug/L			02/20/15 15:09	1
Isopropylbenzene	ND		2.00	ug/L			02/20/15 15:09	1
Methylene Chloride	ND		2.00	ug/L			02/20/15 15:09	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/20/15 15:09	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/20/15 15:09	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/20/15 15:09	1
Naphthalene	ND		2.00	ug/L			02/20/15 15:09	1
n-Butylbenzene	ND		2.00	ug/L			02/20/15 15:09	1
N-Propylbenzene	ND		2.00	ug/L			02/20/15 15:09	1
o-Xylene	ND		0.500	ug/L			02/20/15 15:09	1
p-Isopropyltoluene	ND		2.00	ug/L			02/20/15 15:09	1
sec-Butylbenzene	ND		2.00	ug/L			02/20/15 15:09	1
Styrene	ND		0.500	ug/L			02/20/15 15:09	1
tert-Butylbenzene	ND		2.00	ug/L			02/20/15 15:09	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/20/15 15:09	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/20/15 15:09	1
Tetrachloroethene	ND		0.500	ug/L			02/20/15 15:09	1
Toluene	ND		0.500	ug/L			02/20/15 15:09	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/20/15 15:09	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/20/15 15:09	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/20/15 15:09	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/20/15 15:09	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/20/15 15:09	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/20/15 15:09	1
Trichloroethene	ND		0.500	ug/L			02/20/15 15:09	1
Trichlorofluoromethane	ND		0.500	ug/L			02/20/15 15:09	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/20/15 15:09	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/20/15 15:09	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/20/15 15:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 120		02/20/15 15:09	1
Dibromofluoromethane (Surr)	98		85 - 115		02/20/15 15:09	1
1,2-Dichloroethane-d4 (Surr)	105		70 - 128		02/20/15 15:09	1
Toluene-d8 (Surr)	96		75 - 125		02/20/15 15:09	1
Trifluorotoluene (Surr)	99		80 - 127		02/20/15 15:09	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS) - Dissolved

Client Sample ID: LB-021815-09

Date Collected: 02/18/15 10:45

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/20/15 08:08	02/20/15 15:07	1
Manganese	ND		0.00200	mg/L		02/20/15 08:08	02/20/15 15:07	1

Client Sample ID: LB-021815-10

Date Collected: 02/18/15 11:20

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/20/15 08:08	02/20/15 15:12	1
Manganese	0.462		0.00200	mg/L		02/20/15 08:08	02/20/15 15:12	1

Client Sample ID: LB-021815-11

Date Collected: 02/18/15 12:05

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/20/15 08:08	02/20/15 15:18	1
Manganese	0.00452		0.00200	mg/L		02/20/15 08:08	02/20/15 15:18	1

Client Sample ID: LB-021815-12

Date Collected: 02/18/15 12:50

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-4

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/20/15 08:08	02/20/15 15:23	1
Manganese	0.00235		0.00200	mg/L		02/20/15 08:08	02/20/15 15:23	1

Client Sample ID: LB-021815-13

Date Collected: 02/18/15 13:30

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-5

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/20/15 08:08	02/20/15 15:28	1
Manganese	0.00235		0.00200	mg/L		02/20/15 08:08	02/20/15 15:28	1

Client Sample ID: LB-021815-14

Date Collected: 02/18/15 13:35

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-6

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/20/15 08:08	02/20/15 15:33	1
Manganese	0.00233		0.00200	mg/L		02/20/15 08:08	02/20/15 15:33	1

Client Sample ID: LB-021815-15

Date Collected: 02/18/15 14:30

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-7

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	9.17		0.125	mg/L		02/20/15 08:08	02/20/15 21:57	5
Manganese	1.36		0.0100	mg/L		02/20/15 08:08	02/20/15 21:57	5

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

General Chemistry

Client Sample ID: LB-021815-09

Date Collected: 02/18/15 10:45

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	153		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021815-10

Date Collected: 02/18/15 11:20

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	393		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021815-11

Date Collected: 02/18/15 12:05

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	207		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021815-12

Date Collected: 02/18/15 12:50

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-4

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	208		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021815-13

Date Collected: 02/18/15 13:30

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-5

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	191		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021815-14

Date Collected: 02/18/15 13:35

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-6

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	189		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021815-15

Date Collected: 02/18/15 14:30

Date Received: 02/19/15 10:12

Lab Sample ID: 250-24604-7

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	249		10.0	mg/L			02/24/15 14:38	1

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-182888/5

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/20/15 13:01	1
Benzene	ND		0.500	ug/L			02/20/15 13:01	1
Bromobenzene	ND		2.00	ug/L			02/20/15 13:01	1
Bromochloromethane	ND		0.500	ug/L			02/20/15 13:01	1
Bromodichloromethane	ND		0.500	ug/L			02/20/15 13:01	1
Bromoform	ND		0.500	ug/L			02/20/15 13:01	1
Bromomethane	ND		1.00	ug/L			02/20/15 13:01	1
2-Butanone	ND		20.0	ug/L			02/20/15 13:01	1
Carbon disulfide	ND		0.500	ug/L			02/20/15 13:01	1
Carbon tetrachloride	ND		0.500	ug/L			02/20/15 13:01	1
Chlorobenzene	ND		0.500	ug/L			02/20/15 13:01	1
Chloroethane	ND		0.500	ug/L			02/20/15 13:01	1
Chloroform	ND		0.500	ug/L			02/20/15 13:01	1
Chloromethane	ND		0.500	ug/L			02/20/15 13:01	1
2-Chlorotoluene	ND		2.00	ug/L			02/20/15 13:01	1
4-Chlorotoluene	ND		2.00	ug/L			02/20/15 13:01	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/20/15 13:01	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/20/15 13:01	1
Dibromochloromethane	ND		0.500	ug/L			02/20/15 13:01	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/20/15 13:01	1
1,2-Dibromoethane	ND		2.00	ug/L			02/20/15 13:01	1
Dibromomethane	ND		0.500	ug/L			02/20/15 13:01	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/20/15 13:01	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/20/15 13:01	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/20/15 13:01	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/20/15 13:01	1
1,1-Dichloroethane	ND		0.500	ug/L			02/20/15 13:01	1
1,2-Dichloroethane	ND		0.500	ug/L			02/20/15 13:01	1
2,2-Dichloropropane	ND	^	0.500	ug/L			02/20/15 13:01	1
1,2-Dichloropropane	ND		0.500	ug/L			02/20/15 13:01	1
1,3-Dichloropropane	ND		0.500	ug/L			02/20/15 13:01	1
1,1-Dichloropropene	ND		0.500	ug/L			02/20/15 13:01	1
Ethylbenzene	ND		0.500	ug/L			02/20/15 13:01	1
Hexachlorobutadiene	ND		2.00	ug/L			02/20/15 13:01	1
2-Hexanone	ND		20.0	ug/L			02/20/15 13:01	1
Isopropylbenzene	ND		2.00	ug/L			02/20/15 13:01	1
Methylene Chloride	ND		2.00	ug/L			02/20/15 13:01	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/20/15 13:01	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/20/15 13:01	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/20/15 13:01	1
Naphthalene	ND		2.00	ug/L			02/20/15 13:01	1
n-Butylbenzene	ND		2.00	ug/L			02/20/15 13:01	1
N-Propylbenzene	ND		2.00	ug/L			02/20/15 13:01	1
o-Xylene	ND		0.500	ug/L			02/20/15 13:01	1
p-Isopropyltoluene	ND		2.00	ug/L			02/20/15 13:01	1
sec-Butylbenzene	ND		2.00	ug/L			02/20/15 13:01	1
Styrene	ND		0.500	ug/L			02/20/15 13:01	1
tert-Butylbenzene	ND		2.00	ug/L			02/20/15 13:01	1

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-182888/5

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/20/15 13:01	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/20/15 13:01	1
Tetrachloroethene	ND		0.500	ug/L			02/20/15 13:01	1
Toluene	ND		0.500	ug/L			02/20/15 13:01	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/20/15 13:01	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/20/15 13:01	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/20/15 13:01	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/20/15 13:01	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/20/15 13:01	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/20/15 13:01	1
Trichloroethene	ND		0.500	ug/L			02/20/15 13:01	1
Trichlorofluoromethane	ND		0.500	ug/L			02/20/15 13:01	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/20/15 13:01	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/20/15 13:01	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/20/15 13:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		75 - 120		02/20/15 13:01	1
Dibromofluoromethane (Surr)	99		85 - 115		02/20/15 13:01	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 128		02/20/15 13:01	1
Toluene-d8 (Surr)	98		75 - 125		02/20/15 13:01	1
Trifluorotoluene (Surr)	105		80 - 127		02/20/15 13:01	1

Lab Sample ID: LCS 580-182888/6

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.44	J	ug/L		92	30 - 200
Benzene	5.00	5.996		ug/L		120	80 - 120
Bromobenzene	5.00	4.905		ug/L		98	80 - 130
Bromochloromethane	5.00	4.831		ug/L		97	80 - 125
Bromodichloromethane	5.00	5.423		ug/L		108	80 - 125
Bromoform	5.00	3.990		ug/L		80	65 - 130
Bromomethane	5.00	4.614		ug/L		92	70 - 135
2-Butanone	20.0	20.56		ug/L		103	20 - 200
Carbon disulfide	5.00	5.850		ug/L		117	65 - 160
Carbon tetrachloride	5.00	5.584		ug/L		112	75 - 140
Chlorobenzene	5.00	5.049		ug/L		101	80 - 120
Chloroethane	5.00	4.475		ug/L		90	75 - 140
Chloroform	5.00	5.301		ug/L		106	80 - 130
Chloromethane	5.00	5.532		ug/L		111	50 - 140
2-Chlorotoluene	5.00	4.881		ug/L		98	75 - 130
4-Chlorotoluene	5.00	5.028		ug/L		101	75 - 130
cis-1,2-Dichloroethene	5.00	5.678		ug/L		114	80 - 130
cis-1,3-Dichloropropene	5.00	4.624		ug/L		92	70 - 120
Dibromochloromethane	5.00	4.484		ug/L		90	70 - 120
1,2-Dibromo-3-Chloropropane	5.00	4.174		ug/L		83	55 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-182888/6

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	5.00	4.553		ug/L		91	70 - 130
Dibromomethane	5.00	4.834		ug/L		97	80 - 130
1,3-Dichlorobenzene	5.00	5.393		ug/L		108	80 - 120
1,4-Dichlorobenzene	5.00	5.068		ug/L		101	80 - 120
1,2-Dichlorobenzene	5.00	5.214		ug/L		104	80 - 130
Dichlorodifluoromethane	5.00	3.189		ug/L		64	30 - 180
1,1-Dichloroethane	5.00	5.489		ug/L		110	75 - 135
1,2-Dichloroethane	5.00	5.263		ug/L		105	80 - 140
1,1-Dichloroethene	5.00	5.031		ug/L		101	70 - 150
2,2-Dichloropropane	5.00	6.930	^	ug/L		139	60 - 150
1,2-Dichloropropane	5.00	5.680		ug/L		114	80 - 120
1,3-Dichloropropane	5.00	4.869		ug/L		97	80 - 130
1,1-Dichloropropene	5.00	5.102		ug/L		102	80 - 130
Ethylbenzene	5.00	5.280		ug/L		106	80 - 125
Hexachlorobutadiene	5.00	5.484		ug/L		110	75 - 135
2-Hexanone	20.0	15.77	J	ug/L		79	52 - 160
Iodomethane	5.00	5.666		ug/L		113	60 - 160
Isopropylbenzene	5.00	5.094		ug/L		102	75 - 120
Methylene Chloride	5.00	5.228		ug/L		105	60 - 145
4-Methyl-2-pentanone	20.0	17.41	J	ug/L		87	55 - 135
Methyl tert-butyl ether	5.00	4.146		ug/L		83	75 - 120
m-Xylene & p-Xylene	5.00	5.036		ug/L		101	80 - 130
Naphthalene	5.00	3.634		ug/L		73	45 - 130
n-Butylbenzene	5.00	5.018		ug/L		100	75 - 125
n-Hexane	5.00	6.085		ug/L		122	60 - 140
N-Propylbenzene	5.00	5.453		ug/L		109	80 - 120
o-Xylene	5.00	5.324		ug/L		106	80 - 120
p-Isopropyltoluene	5.00	5.604		ug/L		112	80 - 120
sec-Butylbenzene	5.00	5.264		ug/L		105	80 - 125
Styrene	5.00	4.538		ug/L		91	75 - 130
tert-Butylbenzene	5.00	4.647		ug/L		93	80 - 130
1,1,1,2-Tetrachloroethane	5.00	4.828		ug/L		97	75 - 125
1,1,1,2,2-Tetrachloroethane	5.00	4.719		ug/L		94	75 - 125
Tetrachloroethene	5.00	4.405		ug/L		88	40 - 180
Toluene	5.00	5.580		ug/L		112	80 - 120
trans-1,4-Dichloro-2-butene	5.00	3.982		ug/L		80	40 - 140
trans-1,2-Dichloroethene	5.00	5.275		ug/L		106	80 - 140
trans-1,3-Dichloropropene	5.00	4.382		ug/L		88	60 - 140
1,3,5-Trichlorobenzene	5.00	5.082		ug/L		102	75 - 120
1,2,4-Trichlorobenzene	5.00	4.117		ug/L		82	60 - 125
1,2,3-Trichlorobenzene	5.00	4.175		ug/L		84	60 - 125
1,1,1-Trichloroethane	5.00	5.918		ug/L		118	80 - 140
1,1,2-Trichloroethane	5.00	4.803		ug/L		96	80 - 130
Trichloroethene	5.00	5.428		ug/L		109	80 - 130
Trichlorofluoromethane	5.00	5.359		ug/L		107	30 - 180
1,2,3-Trichloropropane	5.00	4.539		ug/L		91	75 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.489		ug/L		110	65 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-182888/6

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	5.00	5.141		ug/L		103	80 - 125
1,2,4-Trimethylbenzene	5.00	4.985		ug/L		100	80 - 125
Vinyl acetate	10.1	7.683		ug/L		76	30 - 200

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		75 - 120
Dibromofluoromethane (Surr)	95		85 - 115
1,2-Dichloroethane-d4 (Surr)	97		70 - 128
Toluene-d8 (Surr)	97		75 - 125
Trifluorotoluene (Surr)	96		80 - 127

Lab Sample ID: LCSD 580-182888/7

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	20.00		ug/L		100	30 - 200	8	20
Benzene	5.00	6.031	*	ug/L		121	80 - 120	1	20
Bromobenzene	5.00	4.967		ug/L		99	80 - 130	1	20
Bromochloromethane	5.00	5.086		ug/L		102	80 - 125	5	20
Bromodichloromethane	5.00	5.527		ug/L		111	80 - 125	2	20
Bromoform	5.00	4.279		ug/L		86	65 - 130	7	20
Bromomethane	5.00	4.683		ug/L		94	70 - 135	1	20
2-Butanone	20.0	21.51		ug/L		108	20 - 200	5	20
Carbon disulfide	5.00	5.923		ug/L		118	65 - 160	1	20
Carbon tetrachloride	5.00	5.618		ug/L		112	75 - 140	1	20
Chlorobenzene	5.00	5.053		ug/L		101	80 - 120	0	20
Chloroethane	5.00	4.395		ug/L		88	75 - 140	2	20
Chloroform	5.00	5.467		ug/L		109	80 - 130	3	20
Chloromethane	5.00	5.343		ug/L		107	50 - 140	3	20
2-Chlorotoluene	5.00	4.754		ug/L		95	75 - 130	3	20
4-Chlorotoluene	5.00	4.963		ug/L		99	75 - 130	1	20
cis-1,2-Dichloroethene	5.00	5.706		ug/L		114	80 - 130	0	20
cis-1,3-Dichloropropene	5.00	4.775		ug/L		95	70 - 120	3	20
Dibromochloromethane	5.00	4.643		ug/L		93	70 - 120	3	20
1,2-Dibromo-3-Chloropropane	5.00	4.643		ug/L		93	55 - 120	11	20
1,2-Dibromoethane	5.00	4.657		ug/L		93	70 - 130	2	20
Dibromomethane	5.00	4.937		ug/L		99	80 - 130	2	20
1,3-Dichlorobenzene	5.00	5.401		ug/L		108	80 - 120	0	20
1,4-Dichlorobenzene	5.00	5.058		ug/L		101	80 - 120	0	20
1,2-Dichlorobenzene	5.00	5.282		ug/L		106	80 - 130	1	20
Dichlorodifluoromethane	5.00	3.105		ug/L		62	30 - 180	3	20
1,1-Dichloroethane	5.00	5.710		ug/L		114	75 - 135	4	20
1,2-Dichloroethane	5.00	5.448		ug/L		109	80 - 140	3	20
1,1-Dichloroethene	5.00	5.312		ug/L		106	70 - 150	5	20
2,2-Dichloropropane	5.00	6.308	^	ug/L		126	60 - 150	9	20
1,2-Dichloropropane	5.00	5.707		ug/L		114	80 - 120	0	20
1,3-Dichloropropane	5.00	4.886		ug/L		98	80 - 130	0	20

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-182888/7

Matrix: Water

Analysis Batch: 182888

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
							RPD	Limit		
1,1-Dichloropropene	5.00	5.317		ug/L		106	80 - 130	4	20	
Ethylbenzene	5.00	5.366		ug/L		107	80 - 125	2	20	
Hexachlorobutadiene	5.00	5.812		ug/L		116	75 - 135	6	20	
2-Hexanone	20.0	16.84	J	ug/L		84	52 - 160	7	20	
Iodomethane	5.00	5.619		ug/L		112	60 - 160	1	20	
Isopropylbenzene	5.00	5.218		ug/L		104	75 - 120	2	20	
Methylene Chloride	5.00	5.350		ug/L		107	60 - 145	2	20	
4-Methyl-2-pentanone	20.0	18.30	J	ug/L		92	55 - 135	5	20	
Methyl tert-butyl ether	5.00	4.504		ug/L		90	75 - 120	8	20	
m-Xylene & p-Xylene	5.00	5.121		ug/L		102	80 - 130	2	20	
Naphthalene	5.00	4.165		ug/L		83	45 - 130	14	20	
n-Butylbenzene	5.00	5.090		ug/L		102	75 - 125	1	20	
n-Hexane	5.00	6.181		ug/L		124	60 - 140	2	20	
N-Propylbenzene	5.00	5.440		ug/L		109	80 - 120	0	20	
o-Xylene	5.00	5.389		ug/L		108	80 - 120	1	20	
p-Isopropyltoluene	5.00	5.620		ug/L		112	80 - 120	0	20	
sec-Butylbenzene	5.00	5.256		ug/L		105	80 - 125	0	20	
Styrene	5.00	4.745		ug/L		95	75 - 130	4	20	
tert-Butylbenzene	5.00	4.699		ug/L		94	80 - 130	1	20	
1,1,1,2-Tetrachloroethane	5.00	4.963		ug/L		99	75 - 125	3	20	
1,1,2,2-Tetrachloroethane	5.00	4.922		ug/L		98	75 - 125	4	20	
Tetrachloroethene	5.00	4.629		ug/L		93	40 - 180	5	20	
Toluene	5.00	5.552		ug/L		111	80 - 120	1	20	
trans-1,4-Dichloro-2-butene	5.00	4.060		ug/L		81	40 - 140	2	20	
trans-1,2-Dichloroethene	5.00	5.567		ug/L		111	80 - 140	5	20	
trans-1,3-Dichloropropene	5.00	4.477		ug/L		90	60 - 140	2	20	
1,3,5-Trichlorobenzene	5.00	5.265		ug/L		105	75 - 120	4	20	
1,2,4-Trichlorobenzene	5.00	4.491		ug/L		90	60 - 125	9	20	
1,2,3-Trichlorobenzene	5.00	4.470		ug/L		89	60 - 125	7	20	
1,1,1-Trichloroethane	5.00	5.872		ug/L		117	80 - 140	1	20	
1,1,2-Trichloroethane	5.00	4.968		ug/L		99	80 - 130	3	20	
Trichloroethene	5.00	5.500		ug/L		110	80 - 130	1	20	
Trichlorofluoromethane	5.00	5.377		ug/L		108	30 - 180	0	20	
1,2,3-Trichloropropane	5.00	4.534		ug/L		91	75 - 120	0	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.377		ug/L		108	65 - 120	2	20	
1,3,5-Trimethylbenzene	5.00	5.100		ug/L		102	80 - 125	1	20	
1,2,4-Trimethylbenzene	5.00	5.029		ug/L		101	80 - 125	1	20	
Vinyl acetate	10.1	7.990		ug/L		79	30 - 200	4	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		75 - 120
Dibromofluoromethane (Surr)	96		85 - 115
1,2-Dichloroethane-d4 (Surr)	97		70 - 128
Toluene-d8 (Surr)	98		75 - 125
Trifluorotoluene (Surr)	96		80 - 127

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-183438/6

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 12:34	1
Benzene	ND		0.500	ug/L			02/28/15 12:34	1
Bromobenzene	ND		2.00	ug/L			02/28/15 12:34	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 12:34	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 12:34	1
Bromoform	ND		0.500	ug/L			02/28/15 12:34	1
Bromomethane	ND		1.00	ug/L			02/28/15 12:34	1
2-Butanone	ND		20.0	ug/L			02/28/15 12:34	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 12:34	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 12:34	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 12:34	1
Chloroethane	ND		0.500	ug/L			02/28/15 12:34	1
Chloroform	ND		0.500	ug/L			02/28/15 12:34	1
Chloromethane	ND		0.500	ug/L			02/28/15 12:34	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 12:34	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 12:34	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 12:34	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 12:34	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 12:34	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 12:34	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 12:34	1
Dibromomethane	ND		0.500	ug/L			02/28/15 12:34	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 12:34	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 12:34	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 12:34	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 12:34	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 12:34	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 12:34	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 12:34	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 12:34	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 12:34	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 12:34	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 12:34	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 12:34	1
2-Hexanone	ND		20.0	ug/L			02/28/15 12:34	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 12:34	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 12:34	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 12:34	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 12:34	1
Naphthalene	ND		2.00	ug/L			02/28/15 12:34	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
o-Xylene	ND		0.500	ug/L			02/28/15 12:34	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 12:34	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
Styrene	ND		0.500	ug/L			02/28/15 12:34	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 12:34	1

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-183438/6

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 12:34	1
1,1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 12:34	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 12:34	1
Toluene	ND		0.500	ug/L			02/28/15 12:34	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 12:34	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 12:34	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 12:34	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 12:34	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 12:34	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 12:34	1
Trichloroethene	ND		0.500	ug/L			02/28/15 12:34	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 12:34	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 12:34	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 12:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120		02/28/15 12:34	1
Dibromofluoromethane (Surr)	100		85 - 115		02/28/15 12:34	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 128		02/28/15 12:34	1
Toluene-d8 (Surr)	99		75 - 125		02/28/15 12:34	1
Trifluorotoluene (Surr)	104		80 - 127		02/28/15 12:34	1

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.53	J	ug/L		93	30 - 200
Benzene	5.00	4.683		ug/L		94	80 - 120
Bromobenzene	5.00	4.440		ug/L		89	80 - 130
Bromochloromethane	5.00	4.971		ug/L		99	80 - 125
Bromodichloromethane	5.00	4.689		ug/L		94	80 - 125
Bromoform	5.00	3.952		ug/L		79	65 - 130
Bromomethane	5.00	5.679		ug/L		114	70 - 135
2-Butanone	20.0	16.68	J	ug/L		83	20 - 200
Carbon disulfide	5.00	5.261		ug/L		105	65 - 160
Carbon tetrachloride	5.00	5.952		ug/L		119	75 - 140
Chlorobenzene	5.00	4.609		ug/L		92	80 - 120
Chloroethane	5.00	5.236		ug/L		105	75 - 140
Chloroform	5.00	5.354		ug/L		107	80 - 130
Chloromethane	5.00	4.806		ug/L		96	50 - 140
2-Chlorotoluene	5.00	4.782		ug/L		96	75 - 130
4-Chlorotoluene	5.00	4.584		ug/L		92	75 - 130
cis-1,2-Dichloroethene	5.00	5.028		ug/L		101	80 - 130
cis-1,3-Dichloropropene	5.00	4.351		ug/L		87	70 - 120
Dibromochloromethane	5.00	4.111		ug/L		82	70 - 120
1,2-Dibromo-3-Chloropropane	5.00	3.880		ug/L		78	55 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	5.00	4.275		ug/L		86	70 - 130
Dibromomethane	5.00	4.442		ug/L		89	80 - 130
1,3-Dichlorobenzene	5.00	4.874		ug/L		97	80 - 120
1,4-Dichlorobenzene	5.00	4.622		ug/L		92	80 - 120
1,2-Dichlorobenzene	5.00	4.692		ug/L		94	80 - 130
Dichlorodifluoromethane	5.00	4.881		ug/L		98	30 - 180
1,1-Dichloroethane	5.00	5.279		ug/L		106	75 - 135
1,2-Dichloroethane	5.00	4.682		ug/L		94	80 - 140
1,1-Dichloroethene	5.00	4.761		ug/L		95	70 - 150
2,2-Dichloropropane	5.00	6.568		ug/L		131	60 - 150
1,2-Dichloropropane	5.00	4.433		ug/L		89	80 - 120
1,3-Dichloropropane	5.00	4.230		ug/L		85	80 - 130
1,1-Dichloropropene	5.00	5.184		ug/L		104	80 - 130
Ethylbenzene	5.00	5.139		ug/L		103	80 - 125
Hexachlorobutadiene	5.00	4.643		ug/L		93	75 - 135
2-Hexanone	20.0	16.02	J	ug/L		80	52 - 160
Iodomethane	5.00	5.391		ug/L		108	60 - 160
Isopropylbenzene	5.00	5.576		ug/L		112	75 - 120
Methylene Chloride	5.00	4.939		ug/L		99	60 - 145
4-Methyl-2-pentanone	20.0	18.46	J	ug/L		92	55 - 135
Methyl tert-butyl ether	5.00	4.904		ug/L		98	75 - 120
m-Xylene & p-Xylene	5.00	5.194		ug/L		104	80 - 130
Naphthalene	5.00	4.160		ug/L		83	45 - 130
n-Butylbenzene	5.00	4.957		ug/L		99	75 - 125
n-Hexane	5.00	5.110		ug/L		102	60 - 140
N-Propylbenzene	5.00	4.921		ug/L		98	80 - 120
o-Xylene	5.00	5.365		ug/L		107	80 - 120
p-Isopropyltoluene	5.00	4.943		ug/L		99	80 - 120
sec-Butylbenzene	5.00	5.109		ug/L		102	80 - 125
Styrene	5.00	5.080		ug/L		102	75 - 130
tert-Butylbenzene	5.00	4.956		ug/L		99	80 - 130
1,1,1,2-Tetrachloroethane	5.00	5.303		ug/L		106	75 - 125
1,1,1,2,2-Tetrachloroethane	5.00	4.326		ug/L		87	75 - 125
Tetrachloroethene	5.00	4.855		ug/L		97	40 - 180
Toluene	5.00	4.863		ug/L		97	80 - 120
trans-1,4-Dichloro-2-butene	5.00	3.659		ug/L		73	40 - 140
trans-1,2-Dichloroethene	5.00	5.029		ug/L		101	80 - 140
trans-1,3-Dichloropropene	5.00	3.748		ug/L		75	60 - 140
1,3,5-Trichlorobenzene	5.00	4.756		ug/L		95	75 - 120
1,2,4-Trichlorobenzene	5.00	4.384		ug/L		88	60 - 125
1,2,3-Trichlorobenzene	5.00	3.982		ug/L		80	60 - 125
1,1,1-Trichloroethane	5.00	5.916		ug/L		118	80 - 140
1,1,2-Trichloroethane	5.00	4.394		ug/L		88	80 - 130
Trichloroethene	5.00	4.786		ug/L		96	80 - 130
Trichlorofluoromethane	5.00	6.002		ug/L		120	30 - 180
1,2,3-Trichloropropane	5.00	4.520		ug/L		90	75 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.295		ug/L		106	65 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	5.00	5.029		ug/L		101	80 - 125
1,2,4-Trimethylbenzene	5.00	4.883		ug/L		98	80 - 125
Vinyl acetate	10.1	9.483		ug/L		94	30 - 200

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		75 - 120
Dibromofluoromethane (Surr)	112		85 - 115
1,2-Dichloroethane-d4 (Surr)	105		70 - 128
Toluene-d8 (Surr)	99		75 - 125
Trifluorotoluene (Surr)	95		80 - 127

Lab Sample ID: LCSD 580-183438/8

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	18.62	J	ug/L		93	30 - 200	1	20
Benzene	5.00	4.988		ug/L		100	80 - 120	6	20
Bromobenzene	5.00	5.249		ug/L		105	80 - 130	17	20
Bromochloromethane	5.00	4.973		ug/L		99	80 - 125	0	20
Bromodichloromethane	5.00	5.468		ug/L		109	80 - 125	15	20
Bromoform	5.00	4.279		ug/L		86	65 - 130	8	20
Bromomethane	5.00	5.133		ug/L		103	70 - 135	10	20
2-Butanone	20.0	19.45	J	ug/L		97	20 - 200	15	20
Carbon disulfide	5.00	5.169		ug/L		103	65 - 160	2	20
Carbon tetrachloride	5.00	5.856		ug/L		117	75 - 140	2	20
Chlorobenzene	5.00	4.891		ug/L		98	80 - 120	6	20
Chloroethane	5.00	4.631		ug/L		93	75 - 140	12	20
Chloroform	5.00	5.339		ug/L		107	80 - 130	0	20
Chloromethane	5.00	4.790		ug/L		96	50 - 140	0	20
2-Chlorotoluene	5.00	5.343		ug/L		107	75 - 130	11	20
4-Chlorotoluene	5.00	5.228		ug/L		105	75 - 130	13	20
cis-1,2-Dichloroethene	5.00	5.009		ug/L		100	80 - 130	0	20
cis-1,3-Dichloropropene	5.00	5.108		ug/L		102	70 - 120	16	20
Dibromochloromethane	5.00	4.596		ug/L		92	70 - 120	11	20
1,2-Dibromo-3-Chloropropane	5.00	4.423		ug/L		88	55 - 120	13	20
1,2-Dibromoethane	5.00	5.069		ug/L		101	70 - 130	17	20
Dibromomethane	5.00	5.073		ug/L		101	80 - 130	13	20
1,3-Dichlorobenzene	5.00	5.190		ug/L		104	80 - 120	6	20
1,4-Dichlorobenzene	5.00	4.998		ug/L		100	80 - 120	8	20
1,2-Dichlorobenzene	5.00	5.083		ug/L		102	80 - 130	8	20
Dichlorodifluoromethane	5.00	4.709		ug/L		94	30 - 180	4	20
1,1-Dichloroethane	5.00	5.153		ug/L		103	75 - 135	2	20
1,2-Dichloroethane	5.00	5.064		ug/L		101	80 - 140	8	20
1,1-Dichloroethene	5.00	4.930		ug/L		99	70 - 150	3	20
2,2-Dichloropropane	5.00	5.568		ug/L		111	60 - 150	16	20
1,2-Dichloropropane	5.00	5.006		ug/L		100	80 - 120	12	20
1,3-Dichloropropane	5.00	4.808		ug/L		96	80 - 130	13	20

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-183438/8

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
1,1-Dichloropropene	5.00	5.297		ug/L		106	80 - 130	2	20
Ethylbenzene	5.00	5.328		ug/L		107	80 - 125	4	20
Hexachlorobutadiene	5.00	5.481		ug/L		110	75 - 135	17	20
2-Hexanone	20.0	19.25	J	ug/L		96	52 - 160	18	20
Iodomethane	5.00	5.288		ug/L		106	60 - 160	2	20
Isopropylbenzene	5.00	5.404		ug/L		108	75 - 120	3	20
Methylene Chloride	5.00	5.094		ug/L		102	60 - 145	3	20
4-Methyl-2-pentanone	20.0	19.08	J	ug/L		95	55 - 135	3	20
Methyl tert-butyl ether	5.00	4.876		ug/L		98	75 - 120	1	20
m-Xylene & p-Xylene	5.00	5.293		ug/L		106	80 - 130	2	20
Naphthalene	5.00	4.988		ug/L		100	45 - 130	18	20
n-Butylbenzene	5.00	5.424		ug/L		108	75 - 125	9	20
n-Hexane	5.00	5.434		ug/L		109	60 - 140	6	20
N-Propylbenzene	5.00	5.498		ug/L		110	80 - 120	11	20
o-Xylene	5.00	5.321		ug/L		106	80 - 120	1	20
p-Isopropyltoluene	5.00	5.471		ug/L		109	80 - 120	10	20
sec-Butylbenzene	5.00	5.566		ug/L		111	80 - 125	9	20
Styrene	5.00	5.405		ug/L		108	75 - 130	6	20
tert-Butylbenzene	5.00	5.564		ug/L		111	80 - 130	12	20
1,1,1,2-Tetrachloroethane	5.00	4.960		ug/L		99	75 - 125	7	20
1,1,2,2-Tetrachloroethane	5.00	4.873		ug/L		97	75 - 125	12	20
Tetrachloroethene	5.00	5.138		ug/L		103	40 - 180	6	20
Toluene	5.00	5.123		ug/L		102	80 - 120	5	20
trans-1,4-Dichloro-2-butene	5.00	4.309		ug/L		86	40 - 140	16	20
trans-1,2-Dichloroethene	5.00	4.920		ug/L		98	80 - 140	2	20
trans-1,3-Dichloropropene	5.00	4.686	*	ug/L		94	60 - 140	22	20
1,3,5-Trichlorobenzene	5.00	5.127		ug/L		103	75 - 120	8	20
1,2,4-Trichlorobenzene	5.00	5.111		ug/L		102	60 - 125	15	20
1,2,3-Trichlorobenzene	5.00	4.914	*	ug/L		98	60 - 125	21	20
1,1,1-Trichloroethane	5.00	5.496		ug/L		110	80 - 140	7	20
1,1,2-Trichloroethane	5.00	4.943		ug/L		99	80 - 130	12	20
Trichloroethene	5.00	5.062		ug/L		101	80 - 130	6	20
Trichlorofluoromethane	5.00	4.956		ug/L		99	30 - 180	19	20
1,2,3-Trichloropropane	5.00	5.002		ug/L		100	75 - 120	10	20
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.154		ug/L		103	65 - 120	3	20
1,3,5-Trimethylbenzene	5.00	5.584		ug/L		112	80 - 125	10	20
1,2,4-Trimethylbenzene	5.00	5.148		ug/L		103	80 - 125	5	20
Vinyl acetate	10.1	10.62		ug/L		105	30 - 200	11	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	98		75 - 120
Dibromofluoromethane (Surr)	101		85 - 115
1,2-Dichloroethane-d4 (Surr)	104		70 - 128
Toluene-d8 (Surr)	97		75 - 125
Trifluorotoluene (Surr)	101		80 - 127

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 250-34586/1-A
Matrix: Water
Analysis Batch: 34618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34586

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/20/15 08:08	02/20/15 14:03	1
Manganese	ND		0.00200	mg/L		02/20/15 08:08	02/20/15 14:03	1

Lab Sample ID: LCS 250-34586/2-A
Matrix: Water
Analysis Batch: 34618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	2.00	2.075		mg/L		104	80 - 120
Manganese	0.100	0.1041		mg/L		104	80 - 120

Lab Sample ID: 590-247-B-1-B MS
Matrix: Water
Analysis Batch: 34618

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 34586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	12.9		2.00	14.75	4	mg/L		94	75 - 125
Manganese	1.56		0.100	1.660	4	mg/L		95	75 - 125

Lab Sample ID: 590-247-B-2-B DU
Matrix: Water
Analysis Batch: 34618

Client Sample ID: Duplicate
Prep Type: Dissolved
Prep Batch: 34586

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	ND		ND		mg/L		NC	20
Manganese	ND		ND		mg/L		NC	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 250-34669/1
Matrix: Water
Analysis Batch: 34669

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0	mg/L			02/24/15 14:38	1

Lab Sample ID: LCS 250-34669/2
Matrix: Water
Analysis Batch: 34669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	100	104.0		mg/L		104	80 - 120

Lab Sample ID: 250-24604-1 DU
Matrix: Water
Analysis Batch: 34669

Client Sample ID: LB-021815-09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	153		150.0		mg/L		2	5

TestAmerica Portland



Burlington, WA	Corporate Laboratory (a)	1620 S Walnut St	Burlington, WA 98233	800.755.9295 • 360.757.1400
Bellingham, WA	Microbiology (b)	805 Orchard Dr Ste 4	Bellingham, WA 98225	360.715.1212
Portland, OR	Microbiology/Chemistry (c)	9150 SW Pioneer Ct Ste W	Wilsonville, OR 97070	503.682.7802
Corvallis, OR	Microbiology (d)	540 SW Third Street	Corvallis, OR 97333	541.753.4946

Data Report

Client Name: TestAmerica-Portland
 9405 SW Nimbus Avenue
 Beaverton, OR 97008

Reference Number: **15-03190**
 Project: Leichner Landfill

Report Date: 2/24/15

Date Received: 2/19/15

Approved by: ajs,bj

Authorized by:

Thanh B Phan
 Lab Manager, Portland

Sample Description: 250-24604-1 - LB-021815-09										Sample Date: 2/18/15 10:45 am			
Lab Number: 7368		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	3.81	0.1	0.0211	mg/L	1.0	300.0	a	2/20/15	SRF	I150219A	
14797-55-8	NITRATE-N	4.27	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/19/15	CPO	CNO3_150219	

Sample Description: 250-24604-2 - LB-021815-10										Sample Date: 2/18/15 11:20 am			
Lab Number: 7369		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	36	0.1	0.0211	mg/L	1.0	300.0	a	2/20/15	SRF	I150219A	
14797-55-8	NITRATE-N	0.30	0.005	0.0009	mg/L	1.0	SM4500-NO3 F	c	2/19/15	CPO	CNO3_150219	

Sample Description: 250-24604-3 - LB-021815-11										Sample Date: 2/18/15 12:05 pm			
Lab Number: 7370		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	11	0.1	0.0211	mg/L	1.0	300.0	a	2/20/15	SRF	I150219A	
14797-55-8	NITRATE-N	3.82	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/19/15	CPO	CNO3_150219	

Sample Description: 250-24604-4 - LB-021815-12										Sample Date: 2/18/15 12:50 pm			
Lab Number: 7371		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	11	0.1	0.0211	mg/L	1.0	300.0	a	2/20/15	SRF	I150219A	
14797-55-8	NITRATE-N	3.87	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/19/15	CPO	CNO3_150219	

Sample Description: 250-24604-5 - LB-021815-13										Sample Date: 2/18/15 1:30 pm			
Lab Number: 7372		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	6.98	0.1	0.0211	mg/L	1.0	300.0	a	2/20/15	SRF	I150219A	
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Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
 PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 D.F. - Dilution Factor

If you have any questions concerning this report contact us at the above phone number.



Data Report

14797-55-8 NITRATE-N 2.18 0.005 0.0009 mg/L 1.0 SM4500-NO3 F c 2/19/15 CPO CNO3_150219

Sample Description: 250-24604-6 - LB-021815-14										Sample Date: 2/18/15 1:35 pm			
Lab Number: 7373				Sample Comment:						Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	6.98	0.1	0.0211	mg/L	1.0	300.0	a	2/20/15	SRF	I150219A	
14797-55-8	NITRATE-N	2.23	0.005	0.0009	mg/L	1.0	SM4500-NO3 F	c	2/19/15	CPO	CNO3_150219	

Sample Description: 250-24604-7 - LB-021815-15										Sample Date: 2/18/15 2:30 pm			
Lab Number: 7374				Sample Comment:						Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	9.71	0.1	0.0211	mg/L	1.0	300.0	a	2/20/15	SRF	I150219A	
14797-55-8	NITRATE-N	ND	0.005	0.0009	mg/L	1.0	SM4500-NO3 F	c	2/19/15	CPO	CNO3_150219	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor



Certification Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Laboratory: TestAmerica Portland

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-012	12-26-15
California	State Program	9	2597	09-30-15
Oregon	NELAP	10	OR100021	01-09-16
USDA	Federal		P330-11-00092	04-17-17
Washington	State Program	10	C586	06-23-15

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-16

Method Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24604-1
SDG: 04215030.01/16

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
6020	Metals (ICP/MS)	SW846	TAL PRT
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL PRT
Wilsonville	General Sub Contract Method	NONE	SC0058
Wilsonville	General Sub Contract Method	NONE	SC0058
Location			

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NONE = NONE

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

SC0058 = Edge Analytical, 1620 S Walnut Street, Burlington, WA 98233-3231, TEL (360)757-1400

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



250-24604 Chain of Custody

Regulatory Program: DW NPDES RCRA C

Client Contact
Company Name: SCS EnviroSols
Address: 14945 SW 56th Ave, PKWY, Suite 180
City/State/Zip: Portland, OR 97064
Phone: 503 716 2740
Fax:

Project Name: Leachwater Landfill
Site: 04215030.01/16
PO #

Project Manager: Jason Davidson
Tel/Fax: 503 631 8548
Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Brian Murphy
Lab Contact: Sarah Murphy
Date: 2/19/15
Carrier:

COC No.: _____ of _____ COCs
Sampler: B MCM/BA
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Sample Specific Notes:	
								Disposal by Lab	Archive for
LB-021815-09	2/18/15	1045	G	W	5	X	X	Disolved metals	Chloride Nitrate
LB-021815-10	2/18/15	1120	G	W	5	X	X		
LB-021815-11	2/18/15	1205	G	W	5	X	X		
LB-021815-12	2/18/15	1250	G	W	5	X	X		
LB-021815-13	2/18/15	1330	G	W	5	X	X		
LB-021815-14	2/18/15	1335	G	W	5	X	X		
LB-021815-15	2/18/15	1430	G	W	5	X	X		
Trip Blanks	-	1030	-	W	2				

Preservation Used: 1 Ice, 2 HCl, 3 H2SO4, 4 HNO3, 5 NaOH, 6 Other

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client
 Disposal by Lab
 Archive for _____ Months

Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
 5.0 R/P-C

Custody Seal No.: _____
 Yes No

Relinquished by: [Signature]
Relinquished by: [Signature]
Relinquished by: [Signature]

Company: SCS
Company: M-E
Company:

Received by: [Signature]
Received by: [Signature]
Received by: [Signature]

Date/Time: 2/19/15 9:50
Date/Time: 2/19/15 10:12
Date/Time: 2/19/15 @ 10:12

Company: M-E
Company: M-E
Company: M-E

Therm ID No.: _____
Cooler Temp. (°C): Obs'd: _____
Corr'd: _____



TestAmerica Portland
 9405 SW Nimbus Ave.
 Beaverton, OR 97008
 Phone (503) 906-9200 Fax (503) 906-9210

Chain of Custody Record



TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)

Company: TestAmerica Laboratories, Inc.
 Address: 5755 8th Street East,
 City: Tacoma
 State, Zip: WA, 98424
 Phone: 253-922-2310(Tel) 253-922-5047(Fax)
 Email: [blank]
 Project Name: Leichter Landfill
 Site: [blank]

Sampler: [blank]
 Lab Pkt: Murphy, Sarah A
 Client Contact: [blank]
 Phone: [blank]
 Email: sarah.murphy@testamericainc.com
 Carrier Tracking No(s): [blank]

Analysis Requested

COC No: 250-45248-1
 Page: Page 1 of 1
 Job #: 250-24604-1
 Preservation Codes:
 A - HCl M - Hexane
 B - NaOH N - None
 C - Zn Acetate O - AsNaO2
 D - Nitric Acid P - Na2CO3
 E - NaHSO4 Q - Na2SO3
 F - MeOH R - Na2S2O3
 G - Amnolite S - H2SO4
 H - Ascorbic Acid T - TSP Dodecylhydrate
 I - Ice U - Acetone
 J - DI Water V - MCAA
 K - EDTA W - pH 4-5
 L - EDA Z - other (specify)
 Other: [blank]

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overstabil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
LB-021815-09 (250-24604-1)	2/18/15	10:45	Pacific	Water	X	8260B_LL/5030B	3	
LB-021815-10 (250-24604-2)	2/18/15	11:20	Pacific	Water	X		3	
LB-021815-11 (250-24604-3)	2/18/15	12:05	Pacific	Water	X		3	
LB-021815-12 (250-24604-4)	2/18/15	12:50	Pacific	Water	X		3	
LB-021815-13 (250-24604-5)	2/18/15	13:30	Pacific	Water	X		3	
LB-021815-14 (250-24604-6)	2/18/15	13:35	Pacific	Water	X		3	
LB-021815-15 (250-24604-7)	2/18/15	14:30	Pacific	Water	X		3	
Trip Blanks (250-24604-8)	2/18/15		Pacific	Water	X		2	

Possible Hazard Identification

Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: [blank]

Relinquished by: [Signature]
 Date/Time: 2/19/15 1500
 Company: TAP

Relinquished by: [blank]
 Date/Time: [blank]
 Company: [blank]

Custody Seals Intact: [blank]
 Custody Seal No.: [blank]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For [blank] Months
 Special Instructions/QC Requirements: [blank]
 Method of Shipment: [blank]
 Received by: [Signature] Date/Time: 2/20/15
 Received by: [Signature] Date/Time: 2/20/15
 Received by: [Signature] Date/Time: 2/20/15
 Cooler Temperature(s) °C and Other Remarks: [blank]
 17#2-22/109, 0.9/0.1, 1.9/1.0

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 250-24604-1

SDG Number: 04215030.01/16

Login Number: 24604

List Number: 1

Creator: Svabik-Seror, Philip M

List Source: TestAmerica Portland

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	False	Sample splitting required for subcontract purposes.
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 250-24604-1
SDG Number: 04215030.01/16

Login Number: 24604

List Number: 2

Creator: Abello, Andrea N

List Source: TestAmerica Seattle

List Creation: 02/20/15 12:23 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR#2 = 2.2 / 1.9 & IR#2 = 0.4/ 0.1 & IR#2 = 1.9 / 1.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Portland
9405 SW Nimbus Ave.
Beaverton, OR 97008
Tel: (503)906-9200

TestAmerica Job ID: 250-24623-1

TestAmerica Sample Delivery Group: 04215030.01/16
Client Project/Site: Leichner Landfill
Revision: 2

For:

SCS Engineers
14945 SW Sequoia Parkway
Suite 180
Portland, Oregon 97224

Attn: Mr. Jason Davendonis



Authorized for release by:
4/23/2015 11:16:01 AM

Sarah Murphy, Project Manager I
(253)922-2310
sarah.murphy@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-24623-1	LB-021915-16	Water	02/19/15 10:10	02/20/15 09:55
250-24623-2	LB-021915-17	Water	02/19/15 10:40	02/20/15 09:55
250-24623-3	LB-021915-18	Water	02/19/15 11:35	02/20/15 09:55
250-24623-4	LB-021915-19	Water	02/19/15 12:35	02/20/15 09:55
250-24623-5	LB-021915-20	Water	02/19/15 13:30	02/20/15 09:55
250-24623-6	LB-021915-21	Water	02/19/15 14:10	02/20/15 09:55
250-24623-7	Trip Blank	Water	02/19/15 10:00	02/20/15 09:55

Case Narrative

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Job ID: 250-24623-1

Laboratory: TestAmerica Portland

Narrative

Job Narrative
250-24623-1

Comments

Report revised 03/31/2015 to report to custom reporting limits for 8260.
Report revised 04/23/2015 to report data down to RLs.

Receipt

The samples were received on 2/20/2015 9:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4° C.

GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) analyzed in batch 182955 was outside the method criteria for the following analyte: bromoform. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method 8260B: The continuing calibration verification (CCV) associated with batch 182955 recovered above the upper control limit for vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 183438 recovered outside control limits for the following analytes: trans-1,3-dichloropropene and 1,2,3-trichlorobenzene. Results were within control limits for both the LCS and LCSD, therefore results are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	RPD of the LCS and LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021915-16

Date Collected: 02/19/15 10:10

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 20:16	1
Benzene	ND		0.500	ug/L			02/28/15 20:16	1
Bromobenzene	ND		2.00	ug/L			02/28/15 20:16	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 20:16	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 20:16	1
Bromoform	ND		0.500	ug/L			02/28/15 20:16	1
Bromomethane	ND		1.00	ug/L			02/28/15 20:16	1
2-Butanone	ND		20.0	ug/L			02/28/15 20:16	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 20:16	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 20:16	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 20:16	1
Chloroethane	ND		0.500	ug/L			02/28/15 20:16	1
Chloroform	ND		0.500	ug/L			02/28/15 20:16	1
Chloromethane	ND		0.500	ug/L			02/28/15 20:16	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 20:16	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 20:16	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 20:16	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 20:16	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 20:16	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 20:16	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 20:16	1
Dibromomethane	ND		0.500	ug/L			02/28/15 20:16	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 20:16	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 20:16	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 20:16	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 20:16	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 20:16	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 20:16	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 20:16	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 20:16	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 20:16	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 20:16	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 20:16	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 20:16	1
2-Hexanone	ND		20.0	ug/L			02/28/15 20:16	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 20:16	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 20:16	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 20:16	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 20:16	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 20:16	1
Naphthalene	ND		2.00	ug/L			02/28/15 20:16	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 20:16	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 20:16	1
o-Xylene	ND		0.500	ug/L			02/28/15 20:16	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 20:16	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 20:16	1
Styrene	ND		0.500	ug/L			02/28/15 20:16	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 20:16	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 20:16	1

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Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021915-16
Date Collected: 02/19/15 10:10
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-1
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 20:16	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 20:16	1
Toluene	ND		0.500	ug/L			02/28/15 20:16	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 20:16	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 20:16	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 20:16	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 20:16	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 20:16	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 20:16	1
Trichloroethene	ND		0.500	ug/L			02/28/15 20:16	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 20:16	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 20:16	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 20:16	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 20:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		75 - 120				02/28/15 20:16	1
Dibromofluoromethane (Surr)	107		85 - 115				02/28/15 20:16	1
1,2-Dichloroethane-d4 (Surr)	119		70 - 128				02/28/15 20:16	1
Toluene-d8 (Surr)	99		75 - 125				02/28/15 20:16	1
Trifluorotoluene (Surr)	100		80 - 127				02/28/15 20:16	1

Client Sample ID: LB-021915-17
Date Collected: 02/19/15 10:40
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-2
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 20:43	1
Benzene	ND		0.500	ug/L			02/28/15 20:43	1
Bromobenzene	ND		2.00	ug/L			02/28/15 20:43	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 20:43	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 20:43	1
Bromoform	ND		0.500	ug/L			02/28/15 20:43	1
Bromomethane	ND		1.00	ug/L			02/28/15 20:43	1
2-Butanone	ND		20.0	ug/L			02/28/15 20:43	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 20:43	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 20:43	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 20:43	1
Chloroethane	ND		0.500	ug/L			02/28/15 20:43	1
Chloroform	ND		0.500	ug/L			02/28/15 20:43	1
Chloromethane	ND		0.500	ug/L			02/28/15 20:43	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 20:43	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 20:43	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 20:43	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 20:43	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 20:43	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 20:43	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 20:43	1
Dibromomethane	ND		0.500	ug/L			02/28/15 20:43	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 20:43	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 20:43	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021915-17
Date Collected: 02/19/15 10:40
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-2
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 20:43	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 20:43	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 20:43	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 20:43	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 20:43	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 20:43	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 20:43	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 20:43	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 20:43	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 20:43	1
2-Hexanone	ND		20.0	ug/L			02/28/15 20:43	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 20:43	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 20:43	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 20:43	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 20:43	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 20:43	1
Naphthalene	ND		2.00	ug/L			02/28/15 20:43	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 20:43	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 20:43	1
o-Xylene	ND		0.500	ug/L			02/28/15 20:43	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 20:43	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 20:43	1
Styrene	ND		0.500	ug/L			02/28/15 20:43	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 20:43	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 20:43	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 20:43	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 20:43	1
Toluene	ND		0.500	ug/L			02/28/15 20:43	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 20:43	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 20:43	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 20:43	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 20:43	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 20:43	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 20:43	1
Trichloroethene	ND		0.500	ug/L			02/28/15 20:43	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 20:43	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 20:43	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 20:43	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 20:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120		02/28/15 20:43	1
Dibromofluoromethane (Surr)	107		85 - 115		02/28/15 20:43	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 128		02/28/15 20:43	1
Toluene-d8 (Surr)	97		75 - 125		02/28/15 20:43	1
Trifluorotoluene (Surr)	103		80 - 127		02/28/15 20:43	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021915-18

Date Collected: 02/19/15 11:35

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 21:10	1
Benzene	ND		0.500	ug/L			02/28/15 21:10	1
Bromobenzene	ND		2.00	ug/L			02/28/15 21:10	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 21:10	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 21:10	1
Bromoform	ND		0.500	ug/L			02/28/15 21:10	1
Bromomethane	ND		1.00	ug/L			02/28/15 21:10	1
2-Butanone	ND		20.0	ug/L			02/28/15 21:10	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 21:10	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 21:10	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 21:10	1
Chloroethane	ND		0.500	ug/L			02/28/15 21:10	1
Chloroform	ND		0.500	ug/L			02/28/15 21:10	1
Chloromethane	ND		0.500	ug/L			02/28/15 21:10	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 21:10	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 21:10	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 21:10	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 21:10	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 21:10	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 21:10	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 21:10	1
Dibromomethane	ND		0.500	ug/L			02/28/15 21:10	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 21:10	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 21:10	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 21:10	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 21:10	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 21:10	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 21:10	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 21:10	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 21:10	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 21:10	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 21:10	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 21:10	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 21:10	1
2-Hexanone	ND		20.0	ug/L			02/28/15 21:10	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 21:10	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 21:10	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 21:10	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 21:10	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 21:10	1
Naphthalene	ND		2.00	ug/L			02/28/15 21:10	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 21:10	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 21:10	1
o-Xylene	ND		0.500	ug/L			02/28/15 21:10	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 21:10	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 21:10	1
Styrene	ND		0.500	ug/L			02/28/15 21:10	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 21:10	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 21:10	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021915-18
Date Collected: 02/19/15 11:35
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-3
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 21:10	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 21:10	1
Toluene	ND		0.500	ug/L			02/28/15 21:10	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 21:10	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 21:10	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 21:10	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 21:10	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 21:10	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 21:10	1
Trichloroethene	ND		0.500	ug/L			02/28/15 21:10	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 21:10	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 21:10	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 21:10	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 21:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		75 - 120				02/28/15 21:10	1
Dibromofluoromethane (Surr)	104		85 - 115				02/28/15 21:10	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 128				02/28/15 21:10	1
Toluene-d8 (Surr)	97		75 - 125				02/28/15 21:10	1
Trifluorotoluene (Surr)	102		80 - 127				02/28/15 21:10	1

Client Sample ID: LB-021915-19
Date Collected: 02/19/15 12:35
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-4
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 21:38	1
Benzene	ND		0.500	ug/L			02/28/15 21:38	1
Bromobenzene	ND		2.00	ug/L			02/28/15 21:38	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 21:38	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 21:38	1
Bromoform	ND		0.500	ug/L			02/28/15 21:38	1
Bromomethane	ND		1.00	ug/L			02/28/15 21:38	1
2-Butanone	ND		20.0	ug/L			02/28/15 21:38	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 21:38	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 21:38	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 21:38	1
Chloroethane	ND		0.500	ug/L			02/28/15 21:38	1
Chloroform	ND		0.500	ug/L			02/28/15 21:38	1
Chloromethane	ND		0.500	ug/L			02/28/15 21:38	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 21:38	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 21:38	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 21:38	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 21:38	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 21:38	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 21:38	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 21:38	1
Dibromomethane	ND		0.500	ug/L			02/28/15 21:38	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 21:38	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 21:38	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021915-19
Date Collected: 02/19/15 12:35
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-4
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 21:38	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 21:38	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 21:38	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 21:38	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 21:38	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 21:38	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 21:38	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 21:38	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 21:38	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 21:38	1
2-Hexanone	ND		20.0	ug/L			02/28/15 21:38	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 21:38	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 21:38	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 21:38	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 21:38	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 21:38	1
Naphthalene	ND		2.00	ug/L			02/28/15 21:38	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 21:38	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 21:38	1
o-Xylene	ND		0.500	ug/L			02/28/15 21:38	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 21:38	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 21:38	1
Styrene	ND		0.500	ug/L			02/28/15 21:38	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 21:38	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 21:38	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 21:38	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 21:38	1
Toluene	ND		0.500	ug/L			02/28/15 21:38	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 21:38	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 21:38	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 21:38	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 21:38	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 21:38	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 21:38	1
Trichloroethene	ND		0.500	ug/L			02/28/15 21:38	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 21:38	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 21:38	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 21:38	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 21:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120		02/28/15 21:38	1
Dibromofluoromethane (Surr)	106		85 - 115		02/28/15 21:38	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 128		02/28/15 21:38	1
Toluene-d8 (Surr)	98		75 - 125		02/28/15 21:38	1
Trifluorotoluene (Surr)	102		80 - 127		02/28/15 21:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: LB-021915-20

Date Collected: 02/19/15 13:30

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-5

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 22:05	1
Benzene	ND		0.500	ug/L			02/28/15 22:05	1
Bromobenzene	ND		2.00	ug/L			02/28/15 22:05	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 22:05	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 22:05	1
Bromoform	ND		0.500	ug/L			02/28/15 22:05	1
Bromomethane	ND		1.00	ug/L			02/28/15 22:05	1
2-Butanone	ND		20.0	ug/L			02/28/15 22:05	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 22:05	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 22:05	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 22:05	1
Chloroethane	ND		0.500	ug/L			02/28/15 22:05	1
Chloroform	ND		0.500	ug/L			02/28/15 22:05	1
Chloromethane	ND		0.500	ug/L			02/28/15 22:05	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 22:05	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 22:05	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 22:05	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 22:05	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 22:05	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 22:05	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 22:05	1
Dibromomethane	ND		0.500	ug/L			02/28/15 22:05	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 22:05	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 22:05	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 22:05	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 22:05	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 22:05	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 22:05	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 22:05	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 22:05	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 22:05	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 22:05	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 22:05	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 22:05	1
2-Hexanone	ND		20.0	ug/L			02/28/15 22:05	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 22:05	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 22:05	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 22:05	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 22:05	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 22:05	1
Naphthalene	ND		2.00	ug/L			02/28/15 22:05	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 22:05	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 22:05	1
o-Xylene	ND		0.500	ug/L			02/28/15 22:05	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 22:05	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 22:05	1
Styrene	ND		0.500	ug/L			02/28/15 22:05	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 22:05	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 22:05	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021915-20
Date Collected: 02/19/15 13:30
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-5
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 22:05	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 22:05	1
Toluene	ND		0.500	ug/L			02/28/15 22:05	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 22:05	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 22:05	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 22:05	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 22:05	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 22:05	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 22:05	1
Trichloroethene	ND		0.500	ug/L			02/28/15 22:05	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 22:05	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 22:05	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 22:05	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 22:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120				02/28/15 22:05	1
Dibromofluoromethane (Surr)	106		85 - 115				02/28/15 22:05	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 128				02/28/15 22:05	1
Toluene-d8 (Surr)	97		75 - 125				02/28/15 22:05	1
Trifluorotoluene (Surr)	102		80 - 127				02/28/15 22:05	1

Client Sample ID: LB-021915-21
Date Collected: 02/19/15 14:10
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-6
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 22:32	1
Benzene	ND		0.500	ug/L			02/28/15 22:32	1
Bromobenzene	ND		2.00	ug/L			02/28/15 22:32	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 22:32	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 22:32	1
Bromoform	ND		0.500	ug/L			02/28/15 22:32	1
Bromomethane	ND		1.00	ug/L			02/28/15 22:32	1
2-Butanone	ND		20.0	ug/L			02/28/15 22:32	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 22:32	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 22:32	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 22:32	1
Chloroethane	ND		0.500	ug/L			02/28/15 22:32	1
Chloroform	ND		0.500	ug/L			02/28/15 22:32	1
Chloromethane	ND		0.500	ug/L			02/28/15 22:32	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 22:32	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 22:32	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 22:32	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 22:32	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 22:32	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 22:32	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 22:32	1
Dibromomethane	ND		0.500	ug/L			02/28/15 22:32	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 22:32	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 22:32	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LB-021915-21
Date Collected: 02/19/15 14:10
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-6
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 22:32	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 22:32	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 22:32	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 22:32	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 22:32	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 22:32	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 22:32	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 22:32	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 22:32	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 22:32	1
2-Hexanone	ND		20.0	ug/L			02/28/15 22:32	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 22:32	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 22:32	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 22:32	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 22:32	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 22:32	1
Naphthalene	ND		2.00	ug/L			02/28/15 22:32	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 22:32	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 22:32	1
o-Xylene	ND		0.500	ug/L			02/28/15 22:32	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 22:32	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 22:32	1
Styrene	ND		0.500	ug/L			02/28/15 22:32	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 22:32	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 22:32	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 22:32	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 22:32	1
Toluene	ND		0.500	ug/L			02/28/15 22:32	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 22:32	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 22:32	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 22:32	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 22:32	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 22:32	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 22:32	1
Trichloroethene	ND		0.500	ug/L			02/28/15 22:32	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 22:32	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 22:32	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 22:32	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 22:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120		02/28/15 22:32	1
Dibromofluoromethane (Surr)	106		85 - 115		02/28/15 22:32	1
1,2-Dichloroethane-d4 (Surr)	119		70 - 128		02/28/15 22:32	1
Toluene-d8 (Surr)	99		75 - 125		02/28/15 22:32	1
Trifluorotoluene (Surr)	102		80 - 127		02/28/15 22:32	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: Trip Blank
Date Collected: 02/19/15 10:00
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-7
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 14:50	1
Benzene	ND		0.500	ug/L			02/28/15 14:50	1
Bromobenzene	ND		2.00	ug/L			02/28/15 14:50	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 14:50	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 14:50	1
Bromoform	ND		0.500	ug/L			02/28/15 14:50	1
Bromomethane	ND		1.00	ug/L			02/28/15 14:50	1
2-Butanone	ND		20.0	ug/L			02/28/15 14:50	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 14:50	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 14:50	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 14:50	1
Chloroethane	ND		0.500	ug/L			02/28/15 14:50	1
Chloroform	ND		0.500	ug/L			02/28/15 14:50	1
Chloromethane	ND		0.500	ug/L			02/28/15 14:50	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 14:50	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 14:50	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 14:50	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 14:50	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 14:50	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 14:50	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 14:50	1
Dibromomethane	ND		0.500	ug/L			02/28/15 14:50	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 14:50	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 14:50	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 14:50	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 14:50	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 14:50	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 14:50	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 14:50	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 14:50	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 14:50	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 14:50	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 14:50	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 14:50	1
2-Hexanone	ND		20.0	ug/L			02/28/15 14:50	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 14:50	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 14:50	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 14:50	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 14:50	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 14:50	1
Naphthalene	ND		2.00	ug/L			02/28/15 14:50	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 14:50	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 14:50	1
o-Xylene	ND		0.500	ug/L			02/28/15 14:50	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 14:50	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 14:50	1
Styrene	ND		0.500	ug/L			02/28/15 14:50	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 14:50	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 14:50	1

TestAmerica Portland

Client Sample Results

Client: SCS Engineers
 Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
 SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Trip Blank
Date Collected: 02/19/15 10:00
Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-7
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 14:50	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 14:50	1
Toluene	ND		0.500	ug/L			02/28/15 14:50	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 14:50	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 14:50	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 14:50	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 14:50	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 14:50	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 14:50	1
Trichloroethene	ND		0.500	ug/L			02/28/15 14:50	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 14:50	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 14:50	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 14:50	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 14:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120				02/28/15 14:50	1
Dibromofluoromethane (Surr)	104		85 - 115				02/28/15 14:50	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 128				02/28/15 14:50	1
Toluene-d8 (Surr)	98		75 - 125				02/28/15 14:50	1
Trifluorotoluene (Surr)	102		80 - 127				02/28/15 14:50	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS) - Dissolved

Client Sample ID: LB-021915-16

Date Collected: 02/19/15 10:10

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/25/15 17:36	02/25/15 22:54	1
Manganese	ND		0.00200	mg/L		02/25/15 17:36	02/25/15 22:54	1

Client Sample ID: LB-021915-17

Date Collected: 02/19/15 10:40

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/25/15 17:36	02/25/15 23:10	1
Manganese	ND		0.00200	mg/L		02/25/15 17:36	02/25/15 23:10	1

Client Sample ID: LB-021915-18

Date Collected: 02/19/15 11:35

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.425		0.0250	mg/L		02/25/15 17:36	02/25/15 23:28	1
Manganese	1.98		0.0200	mg/L		02/25/15 17:36	02/26/15 02:01	10

Client Sample ID: LB-021915-19

Date Collected: 02/19/15 12:35

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-4

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/25/15 17:36	02/25/15 23:20	1
Manganese	ND		0.00200	mg/L		02/25/15 17:36	02/25/15 23:20	1

Client Sample ID: LB-021915-20

Date Collected: 02/19/15 13:30

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-5

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/25/15 17:36	02/25/15 23:33	1
Manganese	0.00204		0.00200	mg/L		02/25/15 17:36	02/25/15 23:33	1

Client Sample ID: LB-021915-21

Date Collected: 02/19/15 14:10

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-6

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/25/15 17:36	02/25/15 23:55	1
Manganese	0.00590		0.00200	mg/L		02/25/15 17:36	02/25/15 23:55	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

General Chemistry

Client Sample ID: LB-021915-16

Date Collected: 02/19/15 10:10

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	253		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021915-17

Date Collected: 02/19/15 10:40

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	213		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021915-18

Date Collected: 02/19/15 11:35

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	215		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021915-19

Date Collected: 02/19/15 12:35

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-4

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	190		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021915-20

Date Collected: 02/19/15 13:30

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-5

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	291		10.0	mg/L			02/24/15 14:38	1

Client Sample ID: LB-021915-21

Date Collected: 02/19/15 14:10

Date Received: 02/20/15 09:55

Lab Sample ID: 250-24623-6

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	223		10.0	mg/L			02/24/15 14:38	1

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-183438/6

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			02/28/15 12:34	1
Benzene	ND		0.500	ug/L			02/28/15 12:34	1
Bromobenzene	ND		2.00	ug/L			02/28/15 12:34	1
Bromochloromethane	ND		0.500	ug/L			02/28/15 12:34	1
Bromodichloromethane	ND		0.500	ug/L			02/28/15 12:34	1
Bromoform	ND		0.500	ug/L			02/28/15 12:34	1
Bromomethane	ND		1.00	ug/L			02/28/15 12:34	1
2-Butanone	ND		20.0	ug/L			02/28/15 12:34	1
Carbon disulfide	ND		0.500	ug/L			02/28/15 12:34	1
Carbon tetrachloride	ND		0.500	ug/L			02/28/15 12:34	1
Chlorobenzene	ND		0.500	ug/L			02/28/15 12:34	1
Chloroethane	ND		0.500	ug/L			02/28/15 12:34	1
Chloroform	ND		0.500	ug/L			02/28/15 12:34	1
Chloromethane	ND		0.500	ug/L			02/28/15 12:34	1
2-Chlorotoluene	ND		2.00	ug/L			02/28/15 12:34	1
4-Chlorotoluene	ND		2.00	ug/L			02/28/15 12:34	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 12:34	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 12:34	1
Dibromochloromethane	ND		0.500	ug/L			02/28/15 12:34	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			02/28/15 12:34	1
1,2-Dibromoethane	ND		2.00	ug/L			02/28/15 12:34	1
Dibromomethane	ND		0.500	ug/L			02/28/15 12:34	1
1,3-Dichlorobenzene	ND		0.500	ug/L			02/28/15 12:34	1
1,4-Dichlorobenzene	ND		0.500	ug/L			02/28/15 12:34	1
1,2-Dichlorobenzene	ND		0.500	ug/L			02/28/15 12:34	1
Dichlorodifluoromethane	ND		0.500	ug/L			02/28/15 12:34	1
1,1-Dichloroethane	ND		0.500	ug/L			02/28/15 12:34	1
1,2-Dichloroethane	ND		0.500	ug/L			02/28/15 12:34	1
2,2-Dichloropropane	ND		0.500	ug/L			02/28/15 12:34	1
1,2-Dichloropropane	ND		0.500	ug/L			02/28/15 12:34	1
1,3-Dichloropropane	ND		0.500	ug/L			02/28/15 12:34	1
1,1-Dichloropropene	ND		0.500	ug/L			02/28/15 12:34	1
Ethylbenzene	ND		0.500	ug/L			02/28/15 12:34	1
Hexachlorobutadiene	ND		2.00	ug/L			02/28/15 12:34	1
2-Hexanone	ND		20.0	ug/L			02/28/15 12:34	1
Isopropylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
Methylene Chloride	ND		2.00	ug/L			02/28/15 12:34	1
4-Methyl-2-pentanone	ND		20.0	ug/L			02/28/15 12:34	1
Methyl tert-butyl ether	ND		1.00	ug/L			02/28/15 12:34	1
m-Xylene & p-Xylene	ND		0.500	ug/L			02/28/15 12:34	1
Naphthalene	ND		2.00	ug/L			02/28/15 12:34	1
n-Butylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
N-Propylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
o-Xylene	ND		0.500	ug/L			02/28/15 12:34	1
p-Isopropyltoluene	ND		2.00	ug/L			02/28/15 12:34	1
sec-Butylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
Styrene	ND		0.500	ug/L			02/28/15 12:34	1
tert-Butylbenzene	ND		2.00	ug/L			02/28/15 12:34	1

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-183438/6

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 12:34	1
1,1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			02/28/15 12:34	1
Tetrachloroethene	ND		0.500	ug/L			02/28/15 12:34	1
Toluene	ND		0.500	ug/L			02/28/15 12:34	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			02/28/15 12:34	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			02/28/15 12:34	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			02/28/15 12:34	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			02/28/15 12:34	1
1,1,1-Trichloroethane	ND		0.500	ug/L			02/28/15 12:34	1
1,1,2-Trichloroethane	ND		0.500	ug/L			02/28/15 12:34	1
Trichloroethene	ND		0.500	ug/L			02/28/15 12:34	1
Trichlorofluoromethane	ND		0.500	ug/L			02/28/15 12:34	1
1,2,3-Trichloropropane	ND		0.500	ug/L			02/28/15 12:34	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			02/28/15 12:34	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			02/28/15 12:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 120		02/28/15 12:34	1
Dibromofluoromethane (Surr)	100		85 - 115		02/28/15 12:34	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 128		02/28/15 12:34	1
Toluene-d8 (Surr)	99		75 - 125		02/28/15 12:34	1
Trifluorotoluene (Surr)	104		80 - 127		02/28/15 12:34	1

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.53	J	ug/L		93	30 - 200
Benzene	5.00	4.683		ug/L		94	80 - 120
Bromobenzene	5.00	4.440		ug/L		89	80 - 130
Bromochloromethane	5.00	4.971		ug/L		99	80 - 125
Bromodichloromethane	5.00	4.689		ug/L		94	80 - 125
Bromoform	5.00	3.952		ug/L		79	65 - 130
Bromomethane	5.00	5.679		ug/L		114	70 - 135
2-Butanone	20.0	16.68	J	ug/L		83	20 - 200
Carbon disulfide	5.00	5.261		ug/L		105	65 - 160
Carbon tetrachloride	5.00	5.952		ug/L		119	75 - 140
Chlorobenzene	5.00	4.609		ug/L		92	80 - 120
Chloroethane	5.00	5.236		ug/L		105	75 - 140
Chloroform	5.00	5.354		ug/L		107	80 - 130
Chloromethane	5.00	4.806		ug/L		96	50 - 140
2-Chlorotoluene	5.00	4.782		ug/L		96	75 - 130
4-Chlorotoluene	5.00	4.584		ug/L		92	75 - 130
cis-1,2-Dichloroethene	5.00	5.028		ug/L		101	80 - 130
cis-1,3-Dichloropropene	5.00	4.351		ug/L		87	70 - 120
Dibromochloromethane	5.00	4.111		ug/L		82	70 - 120
1,2-Dibromo-3-Chloropropane	5.00	3.880		ug/L		78	55 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	5.00	4.275		ug/L		86	70 - 130
Dibromomethane	5.00	4.442		ug/L		89	80 - 130
1,3-Dichlorobenzene	5.00	4.874		ug/L		97	80 - 120
1,4-Dichlorobenzene	5.00	4.622		ug/L		92	80 - 120
1,2-Dichlorobenzene	5.00	4.692		ug/L		94	80 - 130
Dichlorodifluoromethane	5.00	4.881		ug/L		98	30 - 180
1,1-Dichloroethane	5.00	5.279		ug/L		106	75 - 135
1,2-Dichloroethane	5.00	4.682		ug/L		94	80 - 140
1,1-Dichloroethene	5.00	4.761		ug/L		95	70 - 150
2,2-Dichloropropane	5.00	6.568		ug/L		131	60 - 150
1,2-Dichloropropane	5.00	4.433		ug/L		89	80 - 120
1,3-Dichloropropane	5.00	4.230		ug/L		85	80 - 130
1,1-Dichloropropene	5.00	5.184		ug/L		104	80 - 130
Ethylbenzene	5.00	5.139		ug/L		103	80 - 125
Hexachlorobutadiene	5.00	4.643		ug/L		93	75 - 135
2-Hexanone	20.0	16.02	J	ug/L		80	52 - 160
Iodomethane	5.00	5.391		ug/L		108	60 - 160
Isopropylbenzene	5.00	5.576		ug/L		112	75 - 120
Methylene Chloride	5.00	4.939		ug/L		99	60 - 145
4-Methyl-2-pentanone	20.0	18.46	J	ug/L		92	55 - 135
Methyl tert-butyl ether	5.00	4.904		ug/L		98	75 - 120
m-Xylene & p-Xylene	5.00	5.194		ug/L		104	80 - 130
Naphthalene	5.00	4.160		ug/L		83	45 - 130
n-Butylbenzene	5.00	4.957		ug/L		99	75 - 125
n-Hexane	5.00	5.110		ug/L		102	60 - 140
N-Propylbenzene	5.00	4.921		ug/L		98	80 - 120
o-Xylene	5.00	5.365		ug/L		107	80 - 120
p-Isopropyltoluene	5.00	4.943		ug/L		99	80 - 120
sec-Butylbenzene	5.00	5.109		ug/L		102	80 - 125
Styrene	5.00	5.080		ug/L		102	75 - 130
tert-Butylbenzene	5.00	4.956		ug/L		99	80 - 130
1,1,1,2-Tetrachloroethane	5.00	5.303		ug/L		106	75 - 125
1,1,1,2,2-Tetrachloroethane	5.00	4.326		ug/L		87	75 - 125
Tetrachloroethene	5.00	4.855		ug/L		97	40 - 180
Toluene	5.00	4.863		ug/L		97	80 - 120
trans-1,4-Dichloro-2-butene	5.00	3.659		ug/L		73	40 - 140
trans-1,2-Dichloroethene	5.00	5.029		ug/L		101	80 - 140
trans-1,3-Dichloropropene	5.00	3.748		ug/L		75	60 - 140
1,3,5-Trichlorobenzene	5.00	4.756		ug/L		95	75 - 120
1,2,4-Trichlorobenzene	5.00	4.384		ug/L		88	60 - 125
1,2,3-Trichlorobenzene	5.00	3.982		ug/L		80	60 - 125
1,1,1-Trichloroethane	5.00	5.916		ug/L		118	80 - 140
1,1,2-Trichloroethane	5.00	4.394		ug/L		88	80 - 130
Trichloroethene	5.00	4.786		ug/L		96	80 - 130
Trichlorofluoromethane	5.00	6.002		ug/L		120	30 - 180
1,2,3-Trichloropropane	5.00	4.520		ug/L		90	75 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.295		ug/L		106	65 - 120

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-183438/7

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	5.00	5.029		ug/L		101	80 - 125
1,2,4-Trimethylbenzene	5.00	4.883		ug/L		98	80 - 125
Vinyl acetate	10.1	9.483		ug/L		94	30 - 200

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		75 - 120
Dibromofluoromethane (Surr)	112		85 - 115
1,2-Dichloroethane-d4 (Surr)	105		70 - 128
Toluene-d8 (Surr)	99		75 - 125
Trifluorotoluene (Surr)	95		80 - 127

Lab Sample ID: LCSD 580-183438/8

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	18.62	J	ug/L		93	30 - 200	1	20
Benzene	5.00	4.988		ug/L		100	80 - 120	6	20
Bromobenzene	5.00	5.249		ug/L		105	80 - 130	17	20
Bromochloromethane	5.00	4.973		ug/L		99	80 - 125	0	20
Bromodichloromethane	5.00	5.468		ug/L		109	80 - 125	15	20
Bromoform	5.00	4.279		ug/L		86	65 - 130	8	20
Bromomethane	5.00	5.133		ug/L		103	70 - 135	10	20
2-Butanone	20.0	19.45	J	ug/L		97	20 - 200	15	20
Carbon disulfide	5.00	5.169		ug/L		103	65 - 160	2	20
Carbon tetrachloride	5.00	5.856		ug/L		117	75 - 140	2	20
Chlorobenzene	5.00	4.891		ug/L		98	80 - 120	6	20
Chloroethane	5.00	4.631		ug/L		93	75 - 140	12	20
Chloroform	5.00	5.339		ug/L		107	80 - 130	0	20
Chloromethane	5.00	4.790		ug/L		96	50 - 140	0	20
2-Chlorotoluene	5.00	5.343		ug/L		107	75 - 130	11	20
4-Chlorotoluene	5.00	5.228		ug/L		105	75 - 130	13	20
cis-1,2-Dichloroethene	5.00	5.009		ug/L		100	80 - 130	0	20
cis-1,3-Dichloropropene	5.00	5.108		ug/L		102	70 - 120	16	20
Dibromochloromethane	5.00	4.596		ug/L		92	70 - 120	11	20
1,2-Dibromo-3-Chloropropane	5.00	4.423		ug/L		88	55 - 120	13	20
1,2-Dibromoethane	5.00	5.069		ug/L		101	70 - 130	17	20
Dibromomethane	5.00	5.073		ug/L		101	80 - 130	13	20
1,3-Dichlorobenzene	5.00	5.190		ug/L		104	80 - 120	6	20
1,4-Dichlorobenzene	5.00	4.998		ug/L		100	80 - 120	8	20
1,2-Dichlorobenzene	5.00	5.083		ug/L		102	80 - 130	8	20
Dichlorodifluoromethane	5.00	4.709		ug/L		94	30 - 180	4	20
1,1-Dichloroethane	5.00	5.153		ug/L		103	75 - 135	2	20
1,2-Dichloroethane	5.00	5.064		ug/L		101	80 - 140	8	20
1,1-Dichloroethene	5.00	4.930		ug/L		99	70 - 150	3	20
2,2-Dichloropropane	5.00	5.568		ug/L		111	60 - 150	16	20
1,2-Dichloropropane	5.00	5.006		ug/L		100	80 - 120	12	20
1,3-Dichloropropane	5.00	4.808		ug/L		96	80 - 130	13	20

TestAmerica Portland

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-183438/8

Matrix: Water

Analysis Batch: 183438

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
1,1-Dichloropropene	5.00	5.297		ug/L		106	80 - 130	2	20
Ethylbenzene	5.00	5.328		ug/L		107	80 - 125	4	20
Hexachlorobutadiene	5.00	5.481		ug/L		110	75 - 135	17	20
2-Hexanone	20.0	19.25	J	ug/L		96	52 - 160	18	20
Iodomethane	5.00	5.288		ug/L		106	60 - 160	2	20
Isopropylbenzene	5.00	5.404		ug/L		108	75 - 120	3	20
Methylene Chloride	5.00	5.094		ug/L		102	60 - 145	3	20
4-Methyl-2-pentanone	20.0	19.08	J	ug/L		95	55 - 135	3	20
Methyl tert-butyl ether	5.00	4.876		ug/L		98	75 - 120	1	20
m-Xylene & p-Xylene	5.00	5.293		ug/L		106	80 - 130	2	20
Naphthalene	5.00	4.988		ug/L		100	45 - 130	18	20
n-Butylbenzene	5.00	5.424		ug/L		108	75 - 125	9	20
n-Hexane	5.00	5.434		ug/L		109	60 - 140	6	20
N-Propylbenzene	5.00	5.498		ug/L		110	80 - 120	11	20
o-Xylene	5.00	5.321		ug/L		106	80 - 120	1	20
p-Isopropyltoluene	5.00	5.471		ug/L		109	80 - 120	10	20
sec-Butylbenzene	5.00	5.566		ug/L		111	80 - 125	9	20
Styrene	5.00	5.405		ug/L		108	75 - 130	6	20
tert-Butylbenzene	5.00	5.564		ug/L		111	80 - 130	12	20
1,1,1,2-Tetrachloroethane	5.00	4.960		ug/L		99	75 - 125	7	20
1,1,2,2-Tetrachloroethane	5.00	4.873		ug/L		97	75 - 125	12	20
Tetrachloroethene	5.00	5.138		ug/L		103	40 - 180	6	20
Toluene	5.00	5.123		ug/L		102	80 - 120	5	20
trans-1,4-Dichloro-2-butene	5.00	4.309		ug/L		86	40 - 140	16	20
trans-1,2-Dichloroethene	5.00	4.920		ug/L		98	80 - 140	2	20
trans-1,3-Dichloropropene	5.00	4.686	*	ug/L		94	60 - 140	22	20
1,3,5-Trichlorobenzene	5.00	5.127		ug/L		103	75 - 120	8	20
1,2,4-Trichlorobenzene	5.00	5.111		ug/L		102	60 - 125	15	20
1,2,3-Trichlorobenzene	5.00	4.914	*	ug/L		98	60 - 125	21	20
1,1,1-Trichloroethane	5.00	5.496		ug/L		110	80 - 140	7	20
1,1,2-Trichloroethane	5.00	4.943		ug/L		99	80 - 130	12	20
Trichloroethene	5.00	5.062		ug/L		101	80 - 130	6	20
Trichlorofluoromethane	5.00	4.956		ug/L		99	30 - 180	19	20
1,2,3-Trichloropropane	5.00	5.002		ug/L		100	75 - 120	10	20
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.154		ug/L		103	65 - 120	3	20
1,3,5-Trimethylbenzene	5.00	5.584		ug/L		112	80 - 125	10	20
1,2,4-Trimethylbenzene	5.00	5.148		ug/L		103	80 - 125	5	20
Vinyl acetate	10.1	10.62		ug/L		105	30 - 200	11	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	98		75 - 120
Dibromofluoromethane (Surr)	101		85 - 115
1,2-Dichloroethane-d4 (Surr)	104		70 - 128
Toluene-d8 (Surr)	97		75 - 125
Trifluorotoluene (Surr)	101		80 - 127

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 250-34709/1-A
Matrix: Water
Analysis Batch: 34728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34709

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0250	mg/L		02/25/15 17:36	02/25/15 22:43	1
Manganese	ND		0.00200	mg/L		02/25/15 17:36	02/25/15 22:43	1

Lab Sample ID: LCS 250-34709/2-A
Matrix: Water
Analysis Batch: 34728

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34709

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	2.00	2.029		mg/L		101	80 - 120
Manganese	0.100	0.1057		mg/L		106	80 - 120

Lab Sample ID: 250-24623-2 MS
Matrix: Water
Analysis Batch: 34728

Client Sample ID: LB-021915-17
Prep Type: Dissolved
Prep Batch: 34709

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		2.00	1.974		mg/L		99	75 - 125
Manganese	ND		0.100	0.1062		mg/L		106	75 - 125

Lab Sample ID: 250-24623-1 DU
Matrix: Water
Analysis Batch: 34728

Client Sample ID: LB-021915-16
Prep Type: Dissolved
Prep Batch: 34709

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	ND		ND		mg/L		NC	20
Manganese	ND		ND		mg/L		NC	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 250-34669/1
Matrix: Water
Analysis Batch: 34669

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0	mg/L			02/24/15 14:38	1

Lab Sample ID: LCS 250-34669/2
Matrix: Water
Analysis Batch: 34669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	100	104.0		mg/L		104	80 - 120

Lab Sample ID: 250-24623-6 DU
Matrix: Water
Analysis Batch: 34669

Client Sample ID: LB-021915-21
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	223		226.0		mg/L		1	5

TestAmerica Portland



Burlington, WA	Corporate Laboratory (a)	1620 S Walnut St	Burlington, WA 98233	800.755.9295 • 360.757.1400
Bellingham, WA	Microbiology (b)	805 Orchard Dr Ste 4	Bellingham, WA 98225	360.715.1212
Portland, OR	Microbiology/Chemistry (c)	9150 SW Pioneer Ct Ste W	Wilsonville, OR 97070	503.682.7802
Corvallis, OR	Microbiology (d)	540 SW Third Street	Corvallis, OR 97333	541.753.4946

Data Report

Client Name: TestAmerica-Portland
9405 SW Nimbus Avenue
Beaverton, OR 97008

Reference Number: **15-03305**
Project: 25000286 - Leichner Landfill

Report Date: 2/25/15

Date Received: 2/20/15

Approved by: ajs,bj

Authorized by:

Thanh B Phan
Lab Manager, Portland

Sample Description: 250-24623-1 - LB-021915-16										Sample Date: 2/19/15 10:10 am			
Lab Number: 7603		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	11	0.1	0.0211	mg/L	1.0	300.0	a	2/25/15	SRF	I150224A	
14797-55-8	NITRATE-N	5.42	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/20/15	CPO	CNO3_150220	

Sample Description: 250-24623-2 - LB-021915-17										Sample Date: 2/19/15 10:40 am			
Lab Number: 7604		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	7.23	0.1	0.0211	mg/L	1.0	300.0	a	2/25/15	SRF	I150224A	
14797-55-8	NITRATE-N	7.09	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/20/15	CPO	CNO3_150220	

Sample Description: 250-24623-3 - LB-021915-18										Sample Date: 2/19/15 11:35 am			
Lab Number: 7605		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	35	0.1	0.0211	mg/L	1.0	300.0	a	2/25/15	SRF	I150224A	
14797-55-8	NITRATE-N	0.42	0.005	0.0009	mg/L	1.0	SM4500-NO3 F	c	2/20/15	CPO	CNO3_150220	

Sample Description: 250-24623-4 - LB-021915-19										Sample Date: 2/19/15 12:35 pm			
Lab Number: 7606		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	3.38	0.1	0.0211	mg/L	1.0	300.0	a	2/25/15	SRF	I150224A	
14797-55-8	NITRATE-N	3.90	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/20/15	CPO	CNO3_150220	

Sample Description: 250-24623-5 - LB-021915-20										Sample Date: 2/19/15 1:30 pm			
Lab Number: 7607		Sample Comment:								Collected By: TestAmerica			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	

16887-00-6	CHLORIDE	14	0.1	0.0211	mg/L	1.0	300.0	a	2/25/15	SRF	I150224A	
------------	----------	----	-----	--------	------	-----	-------	---	---------	-----	----------	--

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

Data Report

14797-55-8 **NITRATE-N** 2.63 0.005 0.0009 mg/L 1.0 SM4500-NO3 F c 2/20/15 CPO CNO3_150220

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
16887-00-6	CHLORIDE	10	0.1	0.0211	mg/L	1.0	300.0	a	2/25/15	SRF	I150224A	
14797-55-8	NITRATE-N	4.15	0.05	0.0009	mg/L	10.0	SM4500-NO3 F	c	2/20/15	CPO	CNO3_150220	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor



Certification Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Laboratory: TestAmerica Portland

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-012	12-26-15
California	State Program	9	2597	09-30-15
Oregon	NELAP	10	OR100021	01-09-16
USDA	Federal		P330-11-00092	04-17-17
Washington	State Program	10	C586	06-23-15

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-16

Method Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 250-24623-1
SDG: 04215030.01/16

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
6020	Metals (ICP/MS)	SW846	TAL PRT
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL PRT
Wilsonville	General Sub Contract Method	NONE	SC0058
Wilsonville	General Sub Contract Method	NONE	SC0058
Location			

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NONE = NONE

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

SC0058 = Edge Analytical, 1620 S Walnut Street, Burlington, WA 98233-3231, TEL (360)757-1400

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Regulatory Program: DIW NPDES RCRA

Project Manager: Jason Dawbarn
Tel/Fax: 503 631 9548

Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Client Contact
 Your Company Name here: SCS Engineers
 Address: 14945 SW Sammie Parkway Suite 180
 City/State/Zip: Portland, OR 97224
 (xxx) xxx-xxxx Phone
 (xxx) xxx-xxxx FAX
 Project Name: Leland Leland
 Site: 0415030.01716
 P O #

Site Contact: B McMillan
Date: 2/20/15
Carrier:
Lab Contact: Sephan M. King
Walk-in Client:
Lab Sampling:
Job / SDG No.:
Sampler: B McMillan
Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.
LB-021915-16	2/19/15	1010	G	W	5
LB-021915-17	2/19/15	1040	G	W	5
LB-021915-18	2/19/15	1135	G	W	5
LB-021915-19	2/19/15	1235	G	W	5
LB-021915-20	2/19/15	1330	G	W	5
LB-021915-21	2/19/15	1410	G	W	5
Trip Blank	~	1000	-	W	5

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other

Possible Hazard Identification:
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
 14°C IRP-L

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Custody Seal No.: SCS
 Relinquished by: B McMillan
 Relinquished by: Leland Leland
 Relinquished by: Leland Leland

Received by: M.E.
 Received by: M.E.
 Received in Laboratory by: M.E.

Date/Time: 2/20/15 0900
 Date/Time: 2/20/15 0900
 Date/Time: 2/20/15 0900

Therm ID No.:
Cooler Temp. (°C):
Company: M.E.
Company: M.E.
Company: M.E.



250-24623 Chain of Custody



TestAmerica Portland
 9405 SW Nimbus Ave.
 Beaverton, OR 97008
 Phone (503) 906-9200 Fax (503) 906-9210

Chain of Custody Record



TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)
 Company: TestAmerica Laboratories, Inc.
 Address: 5755 8th Street East
 City: Tacoma
 State, Zip: WA, 98424
 Phone: 253-922-2310(Tel) 253-922-5047(Fax)
 Email: WJ@ #:
 Project Name: Lechner Landfill
 Project #: 25000286
 SSO#: #:
 Site: #:

Client Contact
 Client Contact: #:
 Shipping/Receiving: #:
 Lab PM: Murphy, Sarah A
 E-Mail: sarah.murphy@testamericainc.com

Carrier Tracking No(s):

COC No: 250-45292-1
Page: Page 1 of 1

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Seawater, Overstool, Br-Tissue, Aq/Al)	Analysis Requested		Total Number of Containers	Special Instructions/Note:
					Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)		
LB-021915-16 (250-24623-1)	2/19/15	10:10	Pacific	Water	X		3	
LB-021915-17 (250-24623-2)	2/19/15	10:40	Pacific	Water	X		3	
LB-021915-18 (250-24623-3)	2/19/15	11:35	Pacific	Water	X		3	
LB-021915-19 (250-24623-4)	2/19/15	12:35	Pacific	Water	X		3	
LB-021915-20 (250-24623-5)	2/19/15	13:30	Pacific	Water	X		3	
LB-021915-21 (250-24623-6)	2/19/15	14:10	Pacific	Water	X		3	
Trp Blank (250-24623-7)	2/19/15	10:00	Pacific	Water	X		2	

Possible Hazard Identification
 Unclassified
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ **Date:** _____ **Time:** _____ **Method of Shipment:** _____

Relinquished by: *Ann A Johnson* **Date/Time:** 2/20/15 1500 **Company:** TAP **Received by:** *M. Bell* **Date/Time:** 2/21/15 **Company:** TAP **Received by:** _____ **Date/Time:** _____ **Company:** _____

Relinquished by: _____ **Date/Time:** _____ **Company:** _____ **Received by:** _____ **Date/Time:** _____ **Company:** _____

Custody Seals Intact: Yes No **Custody Seal No.:** _____ **Cooler Temperature(s) °C and Other Remarks:** *RF# 45193, 10/08*

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 250-24623-1

SDG Number: 04215030.01/16

Login Number: 24623

List Number: 1

Creator: Svabik-Seror, Philip M

List Source: TestAmerica Portland

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	False	Sample splitting required for subcontract purposes.
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 250-24623-1
SDG Number: 04215030.01/16

Login Number: 24623

List Number: 2

Creator: Abello, Andrea N

List Source: TestAmerica Seattle

List Creation: 02/21/15 01:38 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR#1 = 4.5 / 4.3 & IR#1 = 1.0 / .8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Third Quarter (August) Laboratory Data Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-52310-1

TestAmerica Sample Delivery Group: 04215030.01/17

Client Project/Site: Leichner Landfill

Revision: 3

For:

SCS Engineers
14945 SW Sequoia Parkway
Suite 180
Portland, Oregon 97224

Attn: Mr. Jason Davendonis



Authorized for release by:

9/15/2015 8:38:23 PM

Sarah Murphy, Project Manager I

(253)922-2310

sarah.murphy@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Job ID: 580-52310-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-52310-1

Comments

Report revised 08/20/2015 to report only to RLs.

Report revised 08/28/2015 to report metals results w/out dilution.

Report revised 09/15/2015 to report confirmation metals re-run results for sample 580-52310-1 per client request.

Receipt

The samples were received on 8/10/2015 3:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.3° C.

GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 197966 recovered above the upper control limit for 2-Methyl-2-propanol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 580-197966/2).

Method(s) 8260B: The %RPD of the laboratory control standard duplicate (LCSD) for preparation batch 197966 recovered outside control limits for the following analytes: Acetone.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	RPD of the LCS and LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Client Sample ID: LB-081015-01

Lab Sample ID: 580-52310-1

Date Collected: 08/10/15 13:55

Matrix: Water

Date Received: 08/10/15 15:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 19:41	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 19:41	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 19:41	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 19:41	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 19:41	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 19:41	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 19:41	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 19:41	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 19:41	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 19:41	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 19:41	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 19:41	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 19:41	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 19:41	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 19:41	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 19:41	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 19:41	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 19:41	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 19:41	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 19:41	1
2-Butanone	ND		20.0	ug/L			08/14/15 19:41	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 19:41	1
2-Hexanone	ND		20.0	ug/L			08/14/15 19:41	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 19:41	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 19:41	1
Acetone	ND		20.0	ug/L			08/14/15 19:41	1
Benzene	ND		0.500	ug/L			08/14/15 19:41	1
Bromobenzene	ND		2.00	ug/L			08/14/15 19:41	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 19:41	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 19:41	1
Bromoform	ND		0.500	ug/L			08/14/15 19:41	1
Bromomethane	ND		1.00	ug/L			08/14/15 19:41	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 19:41	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 19:41	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 19:41	1
Chloroethane	ND		0.500	ug/L			08/14/15 19:41	1
Chloroform	ND		0.500	ug/L			08/14/15 19:41	1
Chloromethane	ND		0.500	ug/L			08/14/15 19:41	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 19:41	1
cis-1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 19:41	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 19:41	1
Dibromomethane	ND		0.500	ug/L			08/14/15 19:41	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 19:41	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 19:41	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 19:41	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 19:41	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 19:41	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 19:41	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 19:41	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Client Sample ID: LB-081015-01

Lab Sample ID: 580-52310-1

Date Collected: 08/10/15 13:55

Matrix: Water

Date Received: 08/10/15 15:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00	ug/L			08/14/15 19:41	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 19:41	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 19:41	1
o-Xylene	ND		0.500	ug/L			08/14/15 19:41	1
p-Isopropyltoluene	ND		2.00	ug/L			08/14/15 19:41	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 19:41	1
Styrene	ND		0.500	ug/L			08/14/15 19:41	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 19:41	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 19:41	1
Toluene	ND		0.500	ug/L			08/14/15 19:41	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 19:41	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 19:41	1
Trichloroethene	ND		0.500	ug/L			08/14/15 19:41	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 19:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		70 - 128		08/14/15 19:41	1
4-Bromofluorobenzene (Surr)	107		75 - 120		08/14/15 19:41	1
Dibromofluoromethane (Surr)	109		85 - 115		08/14/15 19:41	1
Toluene-d8 (Surr)	107		75 - 125		08/14/15 19:41	1
Trifluorotoluene (Surr)	107		80 - 127		08/14/15 19:41	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400	mg/L		09/09/15 19:20	09/10/15 20:50	1
Manganese	0.00207		0.00200	mg/L		09/09/15 19:20	09/10/15 20:50	1

General Chemistry

Analyte	Result	Qualifier	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.4		0.0400	mg/L			08/12/15 11:30	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	4.12		0.200	mg/L			08/12/15 11:30	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	265		10.0	mg/L			08/12/15 14:27	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Client Sample ID: Trip Blank

Date Collected: 08/10/15 13:30

Date Received: 08/10/15 15:30

Lab Sample ID: 580-52310-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			08/14/15 18:49	1
Benzene	ND		0.500	ug/L			08/14/15 18:49	1
Bromobenzene	ND		2.00	ug/L			08/14/15 18:49	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 18:49	1
Bromoform	ND		0.500	ug/L			08/14/15 18:49	1
Bromomethane	ND		1.00	ug/L			08/14/15 18:49	1
2-Butanone	ND		20.0	ug/L			08/14/15 18:49	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 18:49	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 18:49	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 18:49	1
Chloroethane	ND		0.500	ug/L			08/14/15 18:49	1
Chloroform	ND		0.500	ug/L			08/14/15 18:49	1
Chloromethane	ND		0.500	ug/L			08/14/15 18:49	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 18:49	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 18:49	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 18:49	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 18:49	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 18:49	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 18:49	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 18:49	1
Dibromomethane	ND		0.500	ug/L			08/14/15 18:49	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 18:49	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 18:49	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 18:49	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 18:49	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 18:49	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 18:49	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 18:49	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 18:49	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 18:49	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 18:49	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 18:49	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 18:49	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 18:49	1
2-Hexanone	ND		20.0	ug/L			08/14/15 18:49	1
Iodomethane	ND		0.500	ug/L			08/14/15 18:49	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 18:49	1
4-Isopropyltoluene	ND		2.00	ug/L			08/14/15 18:49	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 18:49	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 18:49	1
2-Methyl-2-propanol	ND		10.0	ug/L			08/14/15 18:49	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 18:49	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 18:49	1
Naphthalene	ND		2.00	ug/L			08/14/15 18:49	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 18:49	1
n-Hexane	ND		0.200	ug/L			08/14/15 18:49	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 18:49	1
o-Xylene	ND		0.500	ug/L			08/14/15 18:49	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 18:49	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Client Sample ID: Trip Blank

Lab Sample ID: 580-52310-2

Date Collected: 08/10/15 13:30

Matrix: Water

Date Received: 08/10/15 15:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.500	ug/L			08/14/15 18:49	1
Tert-amyl methyl ether	ND		0.500	ug/L			08/14/15 18:49	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 18:49	1
Tert-butyl ethyl ether	ND		0.500	ug/L			08/14/15 18:49	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 18:49	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 18:49	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 18:49	1
Toluene	ND		0.500	ug/L			08/14/15 18:49	1
trans-1,4-Dichloro-2-butene	ND		2.00	ug/L			08/14/15 18:49	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 18:49	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 18:49	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 18:49	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 18:49	1
1,3,5-Trichlorobenzene	ND		0.500	ug/L			08/14/15 18:49	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 18:49	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 18:49	1
Trichloroethene	ND		0.500	ug/L			08/14/15 18:49	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 18:49	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 18:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.500	ug/L			08/14/15 18:49	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 18:49	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 18:49	1
Vinyl acetate	ND		1.00	ug/L			08/14/15 18:49	1
Xylenes, Total	ND		0.500	ug/L			08/14/15 18:49	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Bromoethane TIC	ND		ug/L			74-96-4		08/14/15 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		75 - 120		08/14/15 18:49	1
Dibromofluoromethane (Surr)	108		85 - 115		08/14/15 18:49	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 128		08/14/15 18:49	1
Toluene-d8 (Surr)	110		75 - 125		08/14/15 18:49	1
Trifluorotoluene (Surr)	111		80 - 127		08/14/15 18:49	1

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-197966/4

Matrix: Water

Analysis Batch: 197966

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 14:48	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 14:48	1
2-Butanone	ND		20.0	ug/L			08/14/15 14:48	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 14:48	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 14:48	1
Acetone	ND		20.0	ug/L			08/14/15 14:48	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 14:48	1
Benzene	ND		0.500	ug/L			08/14/15 14:48	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 14:48	1
Bromobenzene	ND		2.00	ug/L			08/14/15 14:48	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 14:48	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 14:48	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 14:48	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 14:48	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 14:48	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 14:48	1
Bromoform	ND		0.500	ug/L			08/14/15 14:48	1
Bromomethane	ND		1.00	ug/L			08/14/15 14:48	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 14:48	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 14:48	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
2-Hexanone	ND		20.0	ug/L			08/14/15 14:48	1
Chloroethane	ND		0.500	ug/L			08/14/15 14:48	1
Chloroform	ND		0.500	ug/L			08/14/15 14:48	1
Chloromethane	ND		0.500	ug/L			08/14/15 14:48	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 14:48	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 14:48	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 14:48	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 14:48	1
2-Methyl-2-propanol	ND		10.0	ug/L			08/14/15 14:48	1
Dibromomethane	ND		0.500	ug/L			08/14/15 14:48	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 14:48	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 14:48	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 14:48	1
Iodomethane	ND		0.500	ug/L			08/14/15 14:48	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 14:48	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 14:48	1
Tert-amyl methyl ether	ND		0.500	ug/L			08/14/15 14:48	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 14:48	1
Naphthalene	ND		2.00	ug/L			08/14/15 14:48	1
Tert-butyl ethyl ether	ND		0.500	ug/L			08/14/15 14:48	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 14:48	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 14:48	1

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-197966/4
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Hexane	ND		0.200	ug/L			08/14/15 14:48	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
o-Xylene	ND		0.500	ug/L			08/14/15 14:48	1
4-Isopropyltoluene	ND		2.00	ug/L			08/14/15 14:48	1
p-Isopropyltoluene	ND		2.00	ug/L			08/14/15 14:48	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
Styrene	ND		0.500	ug/L			08/14/15 14:48	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 14:48	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 14:48	1
1,3,5-Trichlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 14:48	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 14:48	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 14:48	1
Toluene	ND		0.500	ug/L			08/14/15 14:48	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 14:48	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 14:48	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 14:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.500	ug/L			08/14/15 14:48	1
trans-1,4-Dichloro-2-butene	ND		2.00	ug/L			08/14/15 14:48	1
Trichloroethene	ND		0.500	ug/L			08/14/15 14:48	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 14:48	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
Vinyl acetate	ND		1.00	ug/L			08/14/15 14:48	1
Xylenes, Total	ND		0.500	ug/L			08/14/15 14:48	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Bromoethane TIC	ND		ug/L			74-96-4		08/14/15 14:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		75 - 120		08/14/15 14:48	1
1,2-Dichloroethane-d4 (Surr)	105		70 - 128		08/14/15 14:48	1
Dibromofluoromethane (Surr)	98		85 - 115		08/14/15 14:48	1
Toluene-d8 (Surr)	98		75 - 125		08/14/15 14:48	1
Trifluorotoluene (Surr)	93		80 - 127		08/14/15 14:48	1

Lab Sample ID: LCS 580-197966/5
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	5.00	4.786		ug/L		96	55 - 120
1,2-Dibromoethane	5.00	4.987		ug/L		100	70 - 130
2-Butanone	20.0	19.13	J	ug/L		96	20 - 200
2-Chlorotoluene	5.00	4.974		ug/L		99	75 - 130
1,2-Dichlorobenzene	5.00	4.874		ug/L		97	80 - 130

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-197966/5

Matrix: Water

Analysis Batch: 197966

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	5.00	4.829		ug/L		97	80 - 120
1,4-Dichlorobenzene	5.00	4.748		ug/L		95	80 - 120
4-Chlorotoluene	5.00	4.798		ug/L		96	75 - 130
Acetone	20.0	16.57	J	ug/L		83	30 - 200
1,1-Dichloroethane	5.01	5.036		ug/L		101	75 - 135
Benzene	5.00	4.694		ug/L		94	80 - 120
1,2-Dichloroethane	5.00	5.338		ug/L		107	80 - 140
Bromobenzene	5.00	4.828		ug/L		97	80 - 130
1,2-Dichloropropane	5.00	5.157		ug/L		103	80 - 120
Bromochloromethane	5.00	4.913		ug/L		98	80 - 125
1,3-Dichloropropane	5.00	5.102		ug/L		102	80 - 130
Bromodichloromethane	5.00	5.326		ug/L		106	80 - 125
2,2-Dichloropropane	5.00	5.121		ug/L		102	60 - 150
1,1-Dichloropropene	5.00	5.255		ug/L		105	80 - 130
Bromoform	5.00	5.044		ug/L		101	65 - 130
Bromomethane	6.24	6.775		ug/L		109	70 - 135
Carbon disulfide	5.00	5.086		ug/L		102	65 - 160
Carbon tetrachloride	5.00	5.545		ug/L		111	75 - 140
Chlorobenzene	5.00	4.792		ug/L		96	80 - 120
2-Hexanone	20.0	19.80	J	ug/L		99	52 - 160
Chloroethane	6.25	6.894		ug/L		110	75 - 140
Chloroform	5.00	5.308		ug/L		106	80 - 130
Chloromethane	6.26	6.372		ug/L		102	50 - 140
cis-1,2-Dichloroethene	5.00	5.005		ug/L		100	80 - 130
cis-1,3-Dichloropropene	5.00	5.083		ug/L		102	70 - 120
4-Methyl-2-pentanone	20.0	19.42	J	ug/L		97	55 - 135
Dibromochloromethane	5.00	5.106		ug/L		102	70 - 120
Dibromomethane	5.00	4.968		ug/L		99	80 - 130
Dichlorodifluoromethane	6.24	6.408		ug/L		103	30 - 180
Ethylbenzene	5.00	5.164		ug/L		103	80 - 125
Hexachlorobutadiene	5.00	4.817		ug/L		96	75 - 135
Iodomethane	5.00	5.335		ug/L		107	60 - 160
Isopropylbenzene	5.00	5.330		ug/L		107	75 - 120
Methyl tert-butyl ether	5.00	4.773		ug/L		95	75 - 120
Methylene Chloride	5.00	5.185		ug/L		104	60 - 145
m-Xylene & p-Xylene	5.00	5.021		ug/L		100	80 - 130
Naphthalene	5.00	5.002		ug/L		100	45 - 130
1,1,1,2-Tetrachloroethane	5.00	5.237		ug/L		105	75 - 125
n-Butylbenzene	5.00	5.007		ug/L		100	75 - 125
1,1,2,2-Tetrachloroethane	5.01	4.688		ug/L		94	75 - 125
n-Hexane	5.00	5.385		ug/L		108	60 - 140
N-Propylbenzene	5.00	5.170		ug/L		103	80 - 120
o-Xylene	5.00	5.104		ug/L		102	80 - 120
4-Isopropyltoluene	5.00	5.061		ug/L		101	80 - 120
p-Isopropyltoluene	5.00	5.061		ug/L		101	80 - 120
sec-Butylbenzene	5.00	5.185		ug/L		104	80 - 125
Styrene	5.00	5.020		ug/L		100	75 - 130
1,2,3-Trichlorobenzene	5.00	5.059		ug/L		101	60 - 125

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-197966/5
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	5.00	4.979		ug/L		100	60 - 125
1,3,5-Trichlorobenzene	5.00	5.031		ug/L		101	75 - 120
tert-Butylbenzene	5.00	5.117		ug/L		102	80 - 130
1,1,1-Trichloroethane	5.00	5.389		ug/L		108	80 - 140
Tetrachloroethene	5.00	7.535		ug/L		151	40 - 180
1,1,2-Trichloroethane	5.00	4.925		ug/L		98	80 - 130
Toluene	5.00	4.831		ug/L		97	80 - 120
trans-1,2-Dichloroethene	5.00	5.022		ug/L		100	80 - 140
1,2,3-Trichloropropane	5.00	4.985		ug/L		100	75 - 120
trans-1,3-Dichloropropene	5.00	4.977		ug/L		99	60 - 140
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.278		ug/L		106	65 - 120
trans-1,4-Dichloro-2-butene	5.01	4.505		ug/L		90	40 - 140
Trichloroethene	5.00	5.088		ug/L		102	80 - 130
1,2,4-Trimethylbenzene	5.00	5.101		ug/L		102	80 - 125
Trichlorofluoromethane	6.26	7.424		ug/L		119	30 - 180
1,3,5-Trimethylbenzene	5.00	5.154		ug/L		103	80 - 125
Vinyl acetate	12.5	5.630		ug/L		45	30 - 200

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		75 - 120
1,2-Dichloroethane-d4 (Surr)	101		70 - 128
Dibromofluoromethane (Surr)	99		85 - 115
Toluene-d8 (Surr)	96		75 - 125
Trifluorotoluene (Surr)	92		80 - 127

Lab Sample ID: LCSD 580-197966/6
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	5.00	4.752		ug/L		95	55 - 120	1	20
1,2-Dibromoethane	5.00	5.218		ug/L		104	70 - 130	5	20
2-Butanone	20.0	21.74		ug/L		109	20 - 200	13	20
2-Chlorotoluene	5.00	5.105		ug/L		102	75 - 130	3	20
1,2-Dichlorobenzene	5.00	4.950		ug/L		99	80 - 130	2	20
1,3-Dichlorobenzene	5.00	4.943		ug/L		99	80 - 120	2	20
1,4-Dichlorobenzene	5.00	4.887		ug/L		98	80 - 120	3	20
4-Chlorotoluene	5.00	4.810		ug/L		96	75 - 130	0	20
Acetone	20.0	22.70	*	ug/L		114	30 - 200	31	20
1,1-Dichloroethane	5.01	5.303		ug/L		106	75 - 135	5	20
Benzene	5.00	4.856		ug/L		97	80 - 120	3	20
1,2-Dichloroethane	5.00	5.475		ug/L		109	80 - 140	3	20
Bromobenzene	5.00	4.908		ug/L		98	80 - 130	2	20
1,2-Dichloropropane	5.00	5.288		ug/L		106	80 - 120	2	20
Bromochloromethane	5.00	5.056		ug/L		101	80 - 125	3	20
1,3-Dichloropropane	5.00	5.304		ug/L		106	80 - 130	4	20
Bromodichloromethane	5.00	5.260		ug/L		105	80 - 125	1	20

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-197966/6

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 197966

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,2-Dichloropropane	5.00	5.389		ug/L		108	60 - 150	5	20
1,1-Dichloropropene	5.00	5.312		ug/L		106	80 - 130	1	20
Bromoform	5.00	4.963		ug/L		99	65 - 130	2	20
Bromomethane	6.24	6.030		ug/L		97	70 - 135	12	20
Carbon disulfide	5.00	5.275		ug/L		105	65 - 160	4	20
Carbon tetrachloride	5.00	5.714		ug/L		114	75 - 140	3	20
Chlorobenzene	5.00	4.989		ug/L		100	80 - 120	4	20
2-Hexanone	20.0	20.41		ug/L		102	52 - 160	3	20
Chloroethane	6.25	6.563		ug/L		105	75 - 140	5	20
Chloroform	5.00	5.447		ug/L		109	80 - 130	3	20
Chloromethane	6.26	6.057		ug/L		97	50 - 140	5	20
cis-1,2-Dichloroethene	5.00	5.096		ug/L		102	80 - 130	2	20
cis-1,3-Dichloropropene	5.00	5.284		ug/L		106	70 - 120	4	20
4-Methyl-2-pentanone	20.0	20.01		ug/L		100	55 - 135	3	20
Dibromochloromethane	5.00	4.989		ug/L		100	70 - 120	2	20
Dibromomethane	5.00	5.131		ug/L		103	80 - 130	3	20
Dichlorodifluoromethane	6.24	6.216		ug/L		100	30 - 180	3	20
Ethylbenzene	5.00	5.217		ug/L		104	80 - 125	1	20
Hexachlorobutadiene	5.00	5.028		ug/L		101	75 - 135	4	20
Iodomethane	5.00	5.588		ug/L		112	60 - 160	5	20
Isopropylbenzene	5.00	5.325		ug/L		106	75 - 120	0	20
Methyl tert-butyl ether	5.00	4.853		ug/L		97	75 - 120	2	20
Methylene Chloride	5.00	5.508		ug/L		110	60 - 145	6	20
m-Xylene & p-Xylene	5.00	5.143		ug/L		103	80 - 130	2	20
Naphthalene	5.00	5.405		ug/L		108	45 - 130	8	20
1,1,1,2-Tetrachloroethane	5.00	5.254		ug/L		105	75 - 125	0	20
n-Butylbenzene	5.00	5.012		ug/L		100	75 - 125	0	20
1,1,2,2-Tetrachloroethane	5.01	4.747		ug/L		95	75 - 125	1	20
n-Hexane	5.00	5.457		ug/L		109	60 - 140	1	20
N-Propylbenzene	5.00	5.276		ug/L		106	80 - 120	2	20
o-Xylene	5.00	5.138		ug/L		103	80 - 120	1	20
4-Isopropyltoluene	5.00	5.158		ug/L		103	80 - 120	2	20
p-Isopropyltoluene	5.00	5.158		ug/L		103	80 - 120	2	20
sec-Butylbenzene	5.00	5.270		ug/L		105	80 - 125	2	20
Styrene	5.00	5.011		ug/L		100	75 - 130	0	20
1,2,3-Trichlorobenzene	5.00	5.459		ug/L		109	60 - 125	8	20
1,2,4-Trichlorobenzene	5.00	5.493		ug/L		110	60 - 125	10	20
1,3,5-Trichlorobenzene	5.00	5.371		ug/L		107	75 - 120	7	20
tert-Butylbenzene	5.00	5.189		ug/L		104	80 - 130	1	20
1,1,1-Trichloroethane	5.00	5.556		ug/L		111	80 - 140	3	20
Tetrachloroethene	5.00	8.073		ug/L		161	40 - 180	7	20
1,1,2-Trichloroethane	5.00	5.044		ug/L		101	80 - 130	2	20
Toluene	5.00	5.004		ug/L		100	80 - 120	4	20
trans-1,2-Dichloroethene	5.00	5.107		ug/L		102	80 - 140	2	20
1,2,3-Trichloropropane	5.00	5.023		ug/L		100	75 - 120	1	20
trans-1,3-Dichloropropene	5.00	5.056		ug/L		101	60 - 140	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.102		ug/L		102	65 - 120	3	20

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-197966/6
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,4-Dichloro-2-butene	5.01	4.690		ug/L		94	40 - 140	4	20
Trichloroethene	5.00	5.223		ug/L		104	80 - 130	3	20
1,2,4-Trimethylbenzene	5.00	5.246		ug/L		105	80 - 125	3	20
Trichlorofluoromethane	6.26	7.342		ug/L		117	30 - 180	1	20
1,3,5-Trimethylbenzene	5.00	5.282		ug/L		106	80 - 125	2	20
Vinyl acetate	12.5	5.808		ug/L		46	30 - 200	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	103		75 - 120
1,2-Dichloroethane-d4 (Surr)	103		70 - 128
Dibromofluoromethane (Surr)	100		85 - 115
Toluene-d8 (Surr)	99		75 - 125
Trifluorotoluene (Surr)	100		80 - 127

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-200357/21-A
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 200357

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.200	mg/L		09/09/15 19:20	09/10/15 19:23	5
Manganese	ND		0.0100	mg/L		09/09/15 19:20	09/10/15 19:23	5

Lab Sample ID: LCS 580-200357/22-A
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 200357

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	22.0	22.28		mg/L		101	80 - 120
Manganese	1.00	1.017		mg/L		102	80 - 120

Lab Sample ID: LCSD 580-200357/23-A
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 200357

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	22.0	23.21		mg/L		106	80 - 120	4	20
Manganese	1.00	1.028		mg/L		103	80 - 120	1	20

Lab Sample ID: 580-52974-D-3-C MS
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 200357

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		22.0	22.61		mg/L		103	80 - 120
Manganese	0.0727		1.00	1.099		mg/L		103	80 - 120

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-52974-D-3-D MSD
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 200357

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Iron	ND		22.0	22.73		mg/L		103	80 - 120	1	20
Manganese	0.0727		1.00	1.112		mg/L		104	80 - 120	1	20

Lab Sample ID: 580-52974-D-3-B DU
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Duplicate
Prep Type: Dissolved
Prep Batch: 200357

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Iron	ND		ND		mg/L		NC	20
Manganese	0.0727		0.06699		mg/L		8	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 580-197711/1
Matrix: Water
Analysis Batch: 197711

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0	mg/L			08/12/15 14:27	1

Lab Sample ID: LCS 580-197711/2
Matrix: Water
Analysis Batch: 197711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	1000	964.0		mg/L		96	80 - 120

Lab Sample ID: 580-52290-D-1 DU
Matrix: Water
Analysis Batch: 197711

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1920		1936		mg/L		0.7	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-197772/3
Matrix: Water
Analysis Batch: 197772

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.0400	mg/L			08/12/15 09:03	1

Lab Sample ID: LCS 580-197772/4
Matrix: Water
Analysis Batch: 197772

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chloride	50.0	50.91		mg/L		102	90 - 110

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Lab Sample ID: LCSD 580-197772/5
Matrix: Water
Analysis Batch: 197772

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	51.18		mg/L		102	90 - 110	1	15

Lab Sample ID: 580-52310-1 MS
Matrix: Water
Analysis Batch: 197772

Client Sample ID: LB-081015-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.4		50.0	63.62		mg/L		102	90 - 110

Lab Sample ID: 580-52310-1 DU
Matrix: Water
Analysis Batch: 197772

Client Sample ID: LB-081015-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	12.4		12.37		mg/L		0.08	10

Lab Sample ID: MB 580-197773/3
Matrix: Water
Analysis Batch: 197773

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	ND		0.200	mg/L			08/12/15 09:03	1

Lab Sample ID: LCS 580-197773/4
Matrix: Water
Analysis Batch: 197773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrate	5.00	5.100		mg/L		102	90 - 110

Lab Sample ID: LCSD 580-197773/5
Matrix: Water
Analysis Batch: 197773

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrogen, Nitrate	5.00	5.130		mg/L		103	90 - 110	1	15

Lab Sample ID: 580-52310-1 MS
Matrix: Water
Analysis Batch: 197773

Client Sample ID: LB-081015-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrate	4.12		5.00	9.020		mg/L		98	90 - 110

Lab Sample ID: 580-52310-1 DU
Matrix: Water
Analysis Batch: 197773

Client Sample ID: LB-081015-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrogen, Nitrate	4.12		4.110		mg/L		0.2	10

TestAmerica Seattle

Lab Chronicle

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Client Sample ID: LB-081015-01

Date Collected: 08/10/15 13:55

Date Received: 08/10/15 15:30

Lab Sample ID: 580-52310-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	197966	08/14/15 19:41	K1K	TAL SEA
Dissolved	Prep	3005A			200357	09/09/15 19:20	PAB	TAL SEA
Dissolved	Analysis	6020		1	200483	09/10/15 20:50	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197711	08/12/15 14:27	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197772	08/12/15 11:30	RSB	TAL SEA
Total/NA	Analysis	300.0		1	197773	08/12/15 11:30	RSB	TAL SEA

Client Sample ID: Trip Blank

Date Collected: 08/10/15 13:30

Date Received: 08/10/15 15:30

Lab Sample ID: 580-52310-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	197966	08/14/15 18:49	K1K	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

Sample Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52310-1
SDG: 04215030.01/17

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-52310-1	LB-081015-01	Water	08/10/15 13:55	08/10/15 15:30
580-52310-2	Trip Blank	Water	08/10/15 13:30	08/10/15 15:30

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580-52310 Chain of Custody

Regulatory Program:

Project Manager: S.D. Davidson Tel/Fax: 503.639.9548 Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Site Contact: Brian McMillin Lab Contact: Sam Murphy For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:		COC No.: 8/10/15 of 1 COCs Sampler: Brian McMillin	
Company Name: SCS Engineers Address: 14945 SW Seaside Place, Suite 180 City/State/Zip: Portland, OR, 97224 Phone: 503.358.7201 Fax: Project Name: Leitchawk Landfill Site: 04215030.01/17 P.O.#		Date: 8/10/15 Carrier: Perform MS / MSD (Y/N) Filtered Sample (Y/N)		Sample Specific Notes:	
Sample Identification LB-081015-01 Trip Blank		Sample Date 8/10/15 1355 8/10/15 1330	Sample Type (C=Comp, G=Grab) G G	Matrix W W	# of Cont. 7 1
Preservation Used: <input type="checkbox"/> Ce, <input type="checkbox"/> HCl, <input type="checkbox"/> H2SO4, <input type="checkbox"/> HNO3, <input type="checkbox"/> NaOH, <input type="checkbox"/> Other					
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown					
Special Instructions/QC Requirements & Comments:					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temp. (°C): Obs'd: _____ Cor'd: _____		Therm ID No.: 2-3 12/1-2	
Relinquished by: Brian McMillin		Received by: TAP		Date/Time: 8/10/15 1530	
Relinquished by:		Received by:		Date/Time:	
Relinquished by:		Received in Laboratory by:		Date/Time:	



TESTAMERICA LABORATORIES
3405 SW MIDWAY AVENUE

Beaverton, OR 97008
Phone: 503.306.9200 Fax:



580-52310 Chain of Custody

rd
090349

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program:

Client Contact

Company Name: SCS Engineers
Address: 14945 SW Sugarloaf Pkwy, Suite 180
City/State/zip: Portland, OR 97284
Phone: 503 358 7209
Fax:
Project Name: Lelehaber Landfill
Site: 04215030.01/17
P O #

Project Manager: SD Duvendans

Tel/Fax: 503 639 9548
Analysis Turnaround Time
 CALENDAR DAYS
 WORKING DAYS
TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Brian Murrill

Lab Contact: ~~Tommy~~
Date: 8/10/15
Carter:
8260 Vol
Dissolved metals
(Fe and Mn)
Sarah Murphy
TDS
Chloride
Nitrate

COC No: 1 of 1 COCs

Sampler: R Murrill
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Sample Specific Notes:
LB-081015-01	8/10/15	1355	G	W	7	X	X	
Trip Blank	8/10/15	1330	G	W	7	X	X	

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other
Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard
 Flammable
 Skin Irritant
 Poison B
 Unknown
 Return to Client
 Dispose by Lab
 Archive for _____ Months
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Cooler Temp. (°C): Obs'd: _____
Therm ID No.: 2.3 12/2-2

Special Instructions/QC Requirements & Comments:

Custody Seal Intact: Yes No
Custody Seal No.:

Relinquished by: R Murrill
Company: SCS
Date/Time: 8/10/15 1530
Received by: ~~Tommy~~
Company: TAP
Date/Time: 8/10/15 1702

Relinquished by: ~~Tommy~~
Company: TAP
Date/Time: 8/10/15 0946

IR # 2 = -0.8/H.3

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 580-52310-1
SDG Number: 04215030.01/17

Login Number: 52310
List Number: 1
Creator: Lehman, Clarissa A

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-52358-3

TestAmerica Sample Delivery Group: 04215030.01/16
Client Project/Site: Leichner Landfill
Revision: 2

For:

SCS Engineers
14945 SW Sequoia Parkway
Suite 180
Portland, Oregon 97224

Attn: Mr. Jason Davendonis



Authorized for release by:
9/16/2015 4:47:15 PM

Sarah Murphy, Project Manager I
(253)922-2310
sarah.murphy@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Job ID: 580-52358-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-52358-1

Comments

Report revised 09/03/2015 to report metals results w/out dilution.

Report revised 09/15/2015 to report confirmation metals re-run results for sample 580-52358-4 per client request.

Receipt

The samples were received on 8/11/2015 3:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7° C.

GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 197966 recovered above the upper control limit for 2-Methyl-2-propanol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 580-197966/2).

Method(s) 8260B: The %RPD of the laboratory control standard duplicate (LCSD) for preparation batch 197966 recovered outside control limits for the following analytes: Acetone.

Method(s) 8260B: The method blank for batch 198252 contained multi analytes above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	RPD of the LCS and LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-02

Lab Sample ID: 580-52358-1

Date Collected: 08/11/15 10:15

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 19:15	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 19:15	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 19:15	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 19:15	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 19:15	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 19:15	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 19:15	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 19:15	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 19:15	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 19:15	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 19:15	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 19:15	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 19:15	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 19:15	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 19:15	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 19:15	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 19:15	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 19:15	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 19:15	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 19:15	1
2-Butanone	ND		20.0	ug/L			08/14/15 19:15	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 19:15	1
2-Hexanone	ND		20.0	ug/L			08/14/15 19:15	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 19:15	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 19:15	1
Acetone	ND		20.0	ug/L			08/14/15 19:15	1
Benzene	ND		0.500	ug/L			08/14/15 19:15	1
Bromobenzene	ND		2.00	ug/L			08/14/15 19:15	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 19:15	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 19:15	1
Bromoform	ND		0.500	ug/L			08/14/15 19:15	1
Bromomethane	ND		1.00	ug/L			08/14/15 19:15	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 19:15	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 19:15	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 19:15	1
Chloroethane	ND		0.500	ug/L			08/14/15 19:15	1
Chloroform	ND		0.500	ug/L			08/14/15 19:15	1
Chloromethane	ND		0.500	ug/L			08/14/15 19:15	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 19:15	1
cis-1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 19:15	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 19:15	1
Dibromomethane	ND		0.500	ug/L			08/14/15 19:15	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 19:15	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 19:15	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 19:15	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 19:15	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 19:15	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 19:15	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 19:15	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-02

Lab Sample ID: 580-52358-1

Date Collected: 08/11/15 10:15

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00	ug/L			08/14/15 19:15	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 19:15	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 19:15	1
o-Xylene	ND		0.500	ug/L			08/14/15 19:15	1
p-Isopropyltoluene	ND		2.00	ug/L			08/14/15 19:15	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 19:15	1
Styrene	ND		0.500	ug/L			08/14/15 19:15	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 19:15	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 19:15	1
Toluene	ND		0.500	ug/L			08/14/15 19:15	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 19:15	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 19:15	1
Trichloroethene	ND		0.500	ug/L			08/14/15 19:15	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		75 - 120		08/14/15 19:15	1
Dibromofluoromethane (Surr)	113		85 - 115		08/14/15 19:15	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 128		08/14/15 19:15	1
Toluene-d8 (Surr)	109		75 - 125		08/14/15 19:15	1
Trifluorotoluene (Surr)	109		80 - 127		08/14/15 19:15	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400	mg/L		08/27/15 13:05	08/28/15 04:55	1
Manganese	ND		0.00200	mg/L		08/27/15 13:05	08/28/15 04:55	1

General Chemistry

Analyte	Result	Qualifier	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.79		0.0400	mg/L			08/13/15 09:00	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	5.66		0.200	mg/L			08/13/15 09:00	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	204		10.0	mg/L			08/13/15 13:07	1

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-03

Lab Sample ID: 580-52358-2

Date Collected: 08/11/15 11:20

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 20:07	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 20:07	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 20:07	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 20:07	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 20:07	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 20:07	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 20:07	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 20:07	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 20:07	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 20:07	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 20:07	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 20:07	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 20:07	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 20:07	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 20:07	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 20:07	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 20:07	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 20:07	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 20:07	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 20:07	1
2-Butanone	ND		20.0	ug/L			08/14/15 20:07	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 20:07	1
2-Hexanone	ND		20.0	ug/L			08/14/15 20:07	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 20:07	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 20:07	1
Acetone	ND		20.0	ug/L			08/14/15 20:07	1
Benzene	ND		0.500	ug/L			08/14/15 20:07	1
Bromobenzene	ND		2.00	ug/L			08/14/15 20:07	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 20:07	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 20:07	1
Bromoform	ND		0.500	ug/L			08/14/15 20:07	1
Bromomethane	ND		1.00	ug/L			08/14/15 20:07	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 20:07	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 20:07	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 20:07	1
Chloroethane	ND		0.500	ug/L			08/14/15 20:07	1
Chloroform	ND		0.500	ug/L			08/14/15 20:07	1
Chloromethane	ND		0.500	ug/L			08/14/15 20:07	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 20:07	1
cis-1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 20:07	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 20:07	1
Dibromomethane	ND		0.500	ug/L			08/14/15 20:07	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 20:07	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 20:07	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 20:07	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 20:07	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 20:07	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 20:07	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 20:07	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-03

Lab Sample ID: 580-52358-2

Date Collected: 08/11/15 11:20

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00	ug/L			08/14/15 20:07	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 20:07	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 20:07	1
o-Xylene	ND		0.500	ug/L			08/14/15 20:07	1
p-Isopropyltoluene	ND		2.00	ug/L			08/14/15 20:07	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 20:07	1
Styrene	ND		0.500	ug/L			08/14/15 20:07	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 20:07	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 20:07	1
Toluene	ND		0.500	ug/L			08/14/15 20:07	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 20:07	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 20:07	1
Trichloroethene	ND		0.500	ug/L			08/14/15 20:07	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 20:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		75 - 120		08/14/15 20:07	1
Dibromofluoromethane (Surr)	115		85 - 115		08/14/15 20:07	1
1,2-Dichloroethane-d4 (Surr)	122		70 - 128		08/14/15 20:07	1
Toluene-d8 (Surr)	111		75 - 125		08/14/15 20:07	1
Trifluorotoluene (Surr)	113		80 - 127		08/14/15 20:07	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400	mg/L		08/27/15 13:05	08/28/15 05:27	1
Manganese	ND		0.00200	mg/L		08/27/15 13:05	08/28/15 05:27	1

General Chemistry

Analyte	Result	Qualifier	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.52		0.0400	mg/L			08/13/15 09:14	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	2.65		0.200	mg/L			08/13/15 09:14	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	164		10.0	mg/L			08/13/15 13:07	1

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-04

Lab Sample ID: 580-52358-3

Date Collected: 08/11/15 11:15

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 20:34	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 20:34	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 20:34	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 20:34	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 20:34	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 20:34	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 20:34	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 20:34	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 20:34	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 20:34	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 20:34	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 20:34	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 20:34	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 20:34	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 20:34	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 20:34	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 20:34	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 20:34	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 20:34	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 20:34	1
2-Butanone	ND		20.0	ug/L			08/14/15 20:34	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 20:34	1
2-Hexanone	ND		20.0	ug/L			08/14/15 20:34	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 20:34	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 20:34	1
Acetone	ND		20.0	ug/L			08/14/15 20:34	1
Benzene	ND		0.500	ug/L			08/14/15 20:34	1
Bromobenzene	ND		2.00	ug/L			08/14/15 20:34	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 20:34	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 20:34	1
Bromoform	ND		0.500	ug/L			08/14/15 20:34	1
Bromomethane	ND		1.00	ug/L			08/14/15 20:34	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 20:34	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 20:34	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 20:34	1
Chloroethane	ND		0.500	ug/L			08/14/15 20:34	1
Chloroform	ND		0.500	ug/L			08/14/15 20:34	1
Chloromethane	ND		0.500	ug/L			08/14/15 20:34	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 20:34	1
cis-1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 20:34	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 20:34	1
Dibromomethane	ND		0.500	ug/L			08/14/15 20:34	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 20:34	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 20:34	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 20:34	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 20:34	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 20:34	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 20:34	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 20:34	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-04

Lab Sample ID: 580-52358-3

Date Collected: 08/11/15 11:15

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00	ug/L			08/14/15 20:34	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 20:34	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 20:34	1
o-Xylene	ND		0.500	ug/L			08/14/15 20:34	1
p-Isopropyltoluene	ND		2.00	ug/L			08/14/15 20:34	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 20:34	1
Styrene	ND		0.500	ug/L			08/14/15 20:34	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 20:34	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 20:34	1
Toluene	ND		0.500	ug/L			08/14/15 20:34	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 20:34	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 20:34	1
Trichloroethene	ND		0.500	ug/L			08/14/15 20:34	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 20:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		75 - 120		08/14/15 20:34	1
Dibromofluoromethane (Surr)	110		85 - 115		08/14/15 20:34	1
1,2-Dichloroethane-d4 (Surr)	121		70 - 128		08/14/15 20:34	1
Toluene-d8 (Surr)	107		75 - 125		08/14/15 20:34	1
Trifluorotoluene (Surr)	105		80 - 127		08/14/15 20:34	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400	mg/L		09/09/15 19:20	09/10/15 20:54	1
Manganese	ND		0.00200	mg/L		09/09/15 19:20	09/10/15 20:54	1

General Chemistry

Analyte	Result	Qualifier	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.51		0.0400	mg/L			08/13/15 09:29	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	2.65		0.200	mg/L			08/13/15 09:29	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	158		10.0	mg/L			08/13/15 13:07	1

Client Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-05

Lab Sample ID: 580-52358-4

Date Collected: 08/11/15 12:25

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 21:00	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 21:00	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 21:00	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 21:00	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 21:00	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 21:00	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 21:00	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 21:00	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 21:00	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 21:00	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 21:00	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 21:00	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 21:00	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 21:00	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 21:00	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 21:00	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 21:00	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 21:00	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 21:00	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 21:00	1
2-Butanone	ND		20.0	ug/L			08/14/15 21:00	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 21:00	1
2-Hexanone	ND		20.0	ug/L			08/14/15 21:00	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 21:00	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 21:00	1
Acetone	ND		20.0	ug/L			08/14/15 21:00	1
Benzene	ND		0.500	ug/L			08/14/15 21:00	1
Bromobenzene	ND		2.00	ug/L			08/14/15 21:00	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 21:00	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 21:00	1
Bromoform	ND		0.500	ug/L			08/14/15 21:00	1
Bromomethane	ND		1.00	ug/L			08/14/15 21:00	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 21:00	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 21:00	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 21:00	1
Chloroethane	ND		0.500	ug/L			08/14/15 21:00	1
Chloroform	ND		0.500	ug/L			08/14/15 21:00	1
Chloromethane	ND		0.500	ug/L			08/14/15 21:00	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 21:00	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 21:00	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 21:00	1
Dibromomethane	ND		0.500	ug/L			08/14/15 21:00	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 21:00	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 21:00	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 21:00	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 21:00	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 21:00	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 21:00	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 21:00	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-05

Lab Sample ID: 580-52358-4

Date Collected: 08/11/15 12:25

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00	ug/L			08/14/15 21:00	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 21:00	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 21:00	1
o-Xylene	ND		0.500	ug/L			08/14/15 21:00	1
p-Isopropyltoluene	ND		2.00	ug/L			08/14/15 21:00	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 21:00	1
Styrene	ND		0.500	ug/L			08/14/15 21:00	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 21:00	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 21:00	1
Toluene	ND		0.500	ug/L			08/14/15 21:00	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 21:00	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 21:00	1
Trichloroethene	ND		0.500	ug/L			08/14/15 21:00	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		75 - 120		08/14/15 21:00	1
Dibromofluoromethane (Surr)	115		85 - 115		08/14/15 21:00	1
1,2-Dichloroethane-d4 (Surr)	121		70 - 128		08/14/15 21:00	1
Toluene-d8 (Surr)	108		75 - 125		08/14/15 21:00	1
Trifluorotoluene (Surr)	107		80 - 127		08/14/15 21:00	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400	mg/L		08/27/15 13:05	08/28/15 05:36	1
Manganese	0.00499		0.00200	mg/L		08/27/15 13:05	08/28/15 05:36	1

General Chemistry

Analyte	Result	Qualifier	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.64		0.0400	mg/L			08/13/15 09:43	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	4.09		0.200	mg/L			08/13/15 09:43	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	198		10.0	mg/L			08/13/15 13:07	1

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-06

Lab Sample ID: 580-52358-5

Date Collected: 08/11/15 13:20

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/18/15 22:14	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/18/15 22:14	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/18/15 22:14	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/18/15 22:14	1
1,1-Dichloroethane	ND		0.500	ug/L			08/18/15 22:14	1
1,1-Dichloropropene	ND		0.500	ug/L			08/18/15 22:14	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/18/15 22:14	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/18/15 22:14	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/18/15 22:14	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/18/15 22:14	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/18/15 22:14	1
1,2-Dibromoethane	ND		2.00	ug/L			08/18/15 22:14	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/18/15 22:14	1
1,2-Dichloroethane	ND		0.500	ug/L			08/18/15 22:14	1
1,2-Dichloropropane	ND		0.500	ug/L			08/18/15 22:14	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/18/15 22:14	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/18/15 22:14	1
1,3-Dichloropropane	ND		0.500	ug/L			08/18/15 22:14	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/18/15 22:14	1
2,2-Dichloropropane	ND		0.500	ug/L			08/18/15 22:14	1
2-Butanone	ND		20.0	ug/L			08/18/15 22:14	1
2-Chlorotoluene	ND		2.00	ug/L			08/18/15 22:14	1
2-Hexanone	ND		20.0	ug/L			08/18/15 22:14	1
4-Chlorotoluene	ND		2.00	ug/L			08/18/15 22:14	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/18/15 22:14	1
Acetone	ND		20.0	ug/L			08/18/15 22:14	1
Benzene	ND		0.500	ug/L			08/18/15 22:14	1
Bromobenzene	ND		2.00	ug/L			08/18/15 22:14	1
Bromochloromethane	ND		0.500	ug/L			08/18/15 22:14	1
Bromodichloromethane	ND		0.500	ug/L			08/18/15 22:14	1
Bromoform	ND		0.500	ug/L			08/18/15 22:14	1
Bromomethane	ND		1.00	ug/L			08/18/15 22:14	1
Carbon disulfide	ND		0.500	ug/L			08/18/15 22:14	1
Carbon tetrachloride	ND		0.500	ug/L			08/18/15 22:14	1
Chlorobenzene	ND		0.500	ug/L			08/18/15 22:14	1
Chloroethane	ND		0.500	ug/L			08/18/15 22:14	1
Chloroform	ND		0.500	ug/L			08/18/15 22:14	1
Chloromethane	ND		0.500	ug/L			08/18/15 22:14	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/18/15 22:14	1
cis-1,3-Dichloropropane	ND		0.500	ug/L			08/18/15 22:14	1
Dibromochloromethane	ND		0.500	ug/L			08/18/15 22:14	1
Dibromomethane	ND		0.500	ug/L			08/18/15 22:14	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/18/15 22:14	1
Ethylbenzene	ND		0.500	ug/L			08/18/15 22:14	1
Hexachlorobutadiene	ND		2.00	ug/L			08/18/15 22:14	1
Isopropylbenzene	ND		2.00	ug/L			08/18/15 22:14	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/18/15 22:14	1
Methylene Chloride	ND		2.00	ug/L			08/18/15 22:14	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/18/15 22:14	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-06

Lab Sample ID: 580-52358-5

Date Collected: 08/11/15 13:20

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00	ug/L			08/18/15 22:14	1
n-Butylbenzene	ND		2.00	ug/L			08/18/15 22:14	1
N-Propylbenzene	ND		2.00	ug/L			08/18/15 22:14	1
o-Xylene	ND		0.500	ug/L			08/18/15 22:14	1
p-Isopropyltoluene	ND		2.00	ug/L			08/18/15 22:14	1
sec-Butylbenzene	ND		2.00	ug/L			08/18/15 22:14	1
Styrene	ND		0.500	ug/L			08/18/15 22:14	1
tert-Butylbenzene	ND		2.00	ug/L			08/18/15 22:14	1
Tetrachloroethene	ND		0.500	ug/L			08/18/15 22:14	1
Toluene	ND		0.500	ug/L			08/18/15 22:14	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/18/15 22:14	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/18/15 22:14	1
Trichloroethene	ND		0.500	ug/L			08/18/15 22:14	1
Trichlorofluoromethane	ND		0.500	ug/L			08/18/15 22:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		75 - 120		08/18/15 22:14	1
Dibromofluoromethane (Surr)	85		85 - 115		08/18/15 22:14	1
1,2-Dichloroethane-d4 (Surr)	75		70 - 128		08/18/15 22:14	1
Toluene-d8 (Surr)	99		75 - 125		08/18/15 22:14	1
Trifluorotoluene (Surr)	101		80 - 127		08/18/15 22:14	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400	mg/L		08/27/15 13:05	08/28/15 05:40	1
Manganese	ND		0.00200	mg/L		08/27/15 13:05	08/28/15 05:40	1

General Chemistry

Analyte	Result	Qualifier	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.12		0.0400	mg/L			08/13/15 09:57	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	4.10		0.200	mg/L			08/13/15 09:57	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	204		10.0	mg/L			08/13/15 13:07	1

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: Trip Blank

Lab Sample ID: 580-52358-6

Date Collected: 08/11/15 10:00

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0	ug/L			08/14/15 21:53	1
Benzene	ND		0.500	ug/L			08/14/15 21:53	1
Bromobenzene	ND		2.00	ug/L			08/14/15 21:53	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 21:53	1
Bromoform	ND		0.500	ug/L			08/14/15 21:53	1
Bromomethane	ND		1.00	ug/L			08/14/15 21:53	1
2-Butanone	ND		20.0	ug/L			08/14/15 21:53	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 21:53	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 21:53	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 21:53	1
Chloroethane	ND		0.500	ug/L			08/14/15 21:53	1
Chloroform	ND		0.500	ug/L			08/14/15 21:53	1
Chloromethane	ND		0.500	ug/L			08/14/15 21:53	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 21:53	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 21:53	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 21:53	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 21:53	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 21:53	1
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 21:53	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 21:53	1
Dibromomethane	ND		0.500	ug/L			08/14/15 21:53	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 21:53	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 21:53	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 21:53	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 21:53	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 21:53	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 21:53	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 21:53	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 21:53	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 21:53	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 21:53	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 21:53	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 21:53	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 21:53	1
2-Hexanone	ND		20.0	ug/L			08/14/15 21:53	1
Iodomethane	ND		0.500	ug/L			08/14/15 21:53	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 21:53	1
4-Isopropyltoluene	ND		2.00	ug/L			08/14/15 21:53	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 21:53	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 21:53	1
2-Methyl-2-propanol	ND		10.0	ug/L			08/14/15 21:53	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 21:53	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 21:53	1
Naphthalene	ND		2.00	ug/L			08/14/15 21:53	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 21:53	1
n-Hexane	ND		0.200	ug/L			08/14/15 21:53	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 21:53	1
o-Xylene	ND		0.500	ug/L			08/14/15 21:53	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 21:53	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: Trip Blank

Lab Sample ID: 580-52358-6

Date Collected: 08/11/15 10:00

Matrix: Water

Date Received: 08/11/15 15:20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.500	ug/L			08/14/15 21:53	1
Tert-amyl methyl ether	ND		0.500	ug/L			08/14/15 21:53	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 21:53	1
Tert-butyl ethyl ether	ND		0.500	ug/L			08/14/15 21:53	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 21:53	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 21:53	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 21:53	1
Toluene	ND		0.500	ug/L			08/14/15 21:53	1
trans-1,4-Dichloro-2-butene	ND		2.00	ug/L			08/14/15 21:53	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 21:53	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 21:53	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 21:53	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 21:53	1
1,3,5-Trichlorobenzene	ND		0.500	ug/L			08/14/15 21:53	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 21:53	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 21:53	1
Trichloroethene	ND		0.500	ug/L			08/14/15 21:53	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 21:53	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 21:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.500	ug/L			08/14/15 21:53	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 21:53	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 21:53	1
Vinyl acetate	ND		1.00	ug/L			08/14/15 21:53	1
Xylenes, Total	ND		0.500	ug/L			08/14/15 21:53	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Bromoethane TIC	ND		ug/L			74-96-4		08/14/15 21:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		75 - 120		08/14/15 21:53	1
Dibromofluoromethane (Surr)	113		85 - 115		08/14/15 21:53	1
1,2-Dichloroethane-d4 (Surr)	123		70 - 128		08/14/15 21:53	1
Toluene-d8 (Surr)	108		75 - 125		08/14/15 21:53	1
Trifluorotoluene (Surr)	108		80 - 127		08/14/15 21:53	1

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-197966/4

Matrix: Water

Analysis Batch: 197966

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/14/15 14:48	1
1,2-Dibromoethane	ND		2.00	ug/L			08/14/15 14:48	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
1,1-Dichloroethane	ND		0.500	ug/L			08/14/15 14:48	1
1,2-Dichloroethane	ND		0.500	ug/L			08/14/15 14:48	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
1,2-Dichloropropane	ND		0.500	ug/L			08/14/15 14:48	1
2-Butanone	ND		20.0	ug/L			08/14/15 14:48	1
1,3-Dichloropropane	ND		0.500	ug/L			08/14/15 14:48	1
2-Chlorotoluene	ND		2.00	ug/L			08/14/15 14:48	1
2,2-Dichloropropane	ND		0.500	ug/L			08/14/15 14:48	1
1,1-Dichloropropene	ND		0.500	ug/L			08/14/15 14:48	1
4-Chlorotoluene	ND		2.00	ug/L			08/14/15 14:48	1
Acetone	ND		20.0	ug/L			08/14/15 14:48	1
Benzene	ND		0.500	ug/L			08/14/15 14:48	1
Bromobenzene	ND		2.00	ug/L			08/14/15 14:48	1
2-Hexanone	ND		20.0	ug/L			08/14/15 14:48	1
Bromochloromethane	ND		0.500	ug/L			08/14/15 14:48	1
Bromodichloromethane	ND		0.500	ug/L			08/14/15 14:48	1
Bromoform	ND		0.500	ug/L			08/14/15 14:48	1
Bromomethane	ND		1.00	ug/L			08/14/15 14:48	1
Carbon disulfide	ND		0.500	ug/L			08/14/15 14:48	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/14/15 14:48	1
Carbon tetrachloride	ND		0.500	ug/L			08/14/15 14:48	1
2-Methyl-2-propanol	ND		10.0	ug/L			08/14/15 14:48	1
Chlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
Chloroethane	ND		0.500	ug/L			08/14/15 14:48	1
Chloroform	ND		0.500	ug/L			08/14/15 14:48	1
Chloromethane	ND		0.500	ug/L			08/14/15 14:48	1
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 14:48	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 14:48	1
Dibromochloromethane	ND		0.500	ug/L			08/14/15 14:48	1
Dibromomethane	ND		0.500	ug/L			08/14/15 14:48	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/14/15 14:48	1
Ethylbenzene	ND		0.500	ug/L			08/14/15 14:48	1
Hexachlorobutadiene	ND		2.00	ug/L			08/14/15 14:48	1
Iodomethane	ND		0.500	ug/L			08/14/15 14:48	1
Tert-amyl methyl ether	ND		0.500	ug/L			08/14/15 14:48	1
Isopropylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/14/15 14:48	1
Tert-butyl ethyl ether	ND		0.500	ug/L			08/14/15 14:48	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 14:48	1
Methylene Chloride	ND		2.00	ug/L			08/14/15 14:48	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/14/15 14:48	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/14/15 14:48	1
Naphthalene	ND		2.00	ug/L			08/14/15 14:48	1
n-Butylbenzene	ND		2.00	ug/L			08/14/15 14:48	1

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-197966/4
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Hexane	ND		0.200	ug/L			08/14/15 14:48	1
N-Propylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
o-Xylene	ND		0.500	ug/L			08/14/15 14:48	1
4-Isopropyltoluene	ND		2.00	ug/L			08/14/15 14:48	1
p-Isopropyltoluene	ND		2.00	ug/L			08/14/15 14:48	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/14/15 14:48	1
sec-Butylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/14/15 14:48	1
Styrene	ND		0.500	ug/L			08/14/15 14:48	1
1,3,5-Trichlorobenzene	ND		0.500	ug/L			08/14/15 14:48	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/14/15 14:48	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/14/15 14:48	1
tert-Butylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
Tetrachloroethene	ND		0.500	ug/L			08/14/15 14:48	1
Toluene	ND		0.500	ug/L			08/14/15 14:48	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/14/15 14:48	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/14/15 14:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.500	ug/L			08/14/15 14:48	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/14/15 14:48	1
trans-1,4-Dichloro-2-butene	ND		2.00	ug/L			08/14/15 14:48	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
Trichloroethene	ND		0.500	ug/L			08/14/15 14:48	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/14/15 14:48	1
Trichlorofluoromethane	ND		0.500	ug/L			08/14/15 14:48	1
Vinyl acetate	ND		1.00	ug/L			08/14/15 14:48	1
Xylenes, Total	ND		0.500	ug/L			08/14/15 14:48	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Bromoethane TIC</i>	ND		ug/L			74-96-4		08/14/15 14:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		75 - 120		08/14/15 14:48	1
Dibromofluoromethane (Surr)	98		85 - 115		08/14/15 14:48	1
1,2-Dichloroethane-d4 (Surr)	105		70 - 128		08/14/15 14:48	1
Toluene-d8 (Surr)	98		75 - 125		08/14/15 14:48	1
Trifluorotoluene (Surr)	93		80 - 127		08/14/15 14:48	1

Lab Sample ID: LCS 580-197966/5
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	5.00	4.786		ug/L		96	55 - 120
1,2-Dibromoethane	5.00	4.987		ug/L		100	70 - 130
1,2-Dichlorobenzene	5.00	4.874		ug/L		97	80 - 130
1,3-Dichlorobenzene	5.00	4.829		ug/L		97	80 - 120
1,1-Dichloroethane	5.01	5.036		ug/L		101	75 - 135

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-197966/5
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	5.00	5.338		ug/L		107	80 - 140
1,4-Dichlorobenzene	5.00	4.748		ug/L		95	80 - 120
1,2-Dichloropropane	5.00	5.157		ug/L		103	80 - 120
2-Butanone	20.0	19.13	J	ug/L		96	20 - 200
1,3-Dichloropropane	5.00	5.102		ug/L		102	80 - 130
2-Chlorotoluene	5.00	4.974		ug/L		99	75 - 130
2,2-Dichloropropane	5.00	5.121		ug/L		102	60 - 150
1,1-Dichloropropene	5.00	5.255		ug/L		105	80 - 130
4-Chlorotoluene	5.00	4.798		ug/L		96	75 - 130
Acetone	20.0	16.57	J	ug/L		83	30 - 200
Benzene	5.00	4.694		ug/L		94	80 - 120
Bromobenzene	5.00	4.828		ug/L		97	80 - 130
2-Hexanone	20.0	19.80	J	ug/L		99	52 - 160
Bromochloromethane	5.00	4.913		ug/L		98	80 - 125
Bromodichloromethane	5.00	5.326		ug/L		106	80 - 125
Bromoform	5.00	5.044		ug/L		101	65 - 130
Bromomethane	6.24	6.775		ug/L		109	70 - 135
Carbon disulfide	5.00	5.086		ug/L		102	65 - 160
4-Methyl-2-pentanone	20.0	19.42	J	ug/L		97	55 - 135
Carbon tetrachloride	5.00	5.545		ug/L		111	75 - 140
Chlorobenzene	5.00	4.792		ug/L		96	80 - 120
Chloroethane	6.25	6.894		ug/L		110	75 - 140
Chloroform	5.00	5.308		ug/L		106	80 - 130
Chloromethane	6.26	6.372		ug/L		102	50 - 140
cis-1,2-Dichloroethene	5.00	5.005		ug/L		100	80 - 130
cis-1,3-Dichloropropene	5.00	5.083		ug/L		102	70 - 120
Dibromochloromethane	5.00	5.106		ug/L		102	70 - 120
Dibromomethane	5.00	4.968		ug/L		99	80 - 130
Dichlorodifluoromethane	6.24	6.408		ug/L		103	30 - 180
Ethylbenzene	5.00	5.164		ug/L		103	80 - 125
Hexachlorobutadiene	5.00	4.817		ug/L		96	75 - 135
Iodomethane	5.00	5.335		ug/L		107	60 - 160
Isopropylbenzene	5.00	5.330		ug/L		107	75 - 120
Methyl tert-butyl ether	5.00	4.773		ug/L		95	75 - 120
1,1,1,2-Tetrachloroethane	5.00	5.237		ug/L		105	75 - 125
Methylene Chloride	5.00	5.185		ug/L		104	60 - 145
1,1,2,2-Tetrachloroethane	5.01	4.688		ug/L		94	75 - 125
m-Xylene & p-Xylene	5.00	5.021		ug/L		100	80 - 130
Naphthalene	5.00	5.002		ug/L		100	45 - 130
n-Butylbenzene	5.00	5.007		ug/L		100	75 - 125
n-Hexane	5.00	5.385		ug/L		108	60 - 140
N-Propylbenzene	5.00	5.170		ug/L		103	80 - 120
o-Xylene	5.00	5.104		ug/L		102	80 - 120
4-Isopropyltoluene	5.00	5.061		ug/L		101	80 - 120
p-Isopropyltoluene	5.00	5.061		ug/L		101	80 - 120
1,2,3-Trichlorobenzene	5.00	5.059		ug/L		101	60 - 125
sec-Butylbenzene	5.00	5.185		ug/L		104	80 - 125
1,2,4-Trichlorobenzene	5.00	4.979		ug/L		100	60 - 125

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-197966/5

Matrix: Water

Analysis Batch: 197966

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	5.00	5.020		ug/L		100	75 - 130
1,3,5-Trichlorobenzene	5.00	5.031		ug/L		101	75 - 120
1,1,1-Trichloroethane	5.00	5.389		ug/L		108	80 - 140
1,1,2-Trichloroethane	5.00	4.925		ug/L		98	80 - 130
tert-Butylbenzene	5.00	5.117		ug/L		102	80 - 130
Tetrachloroethene	5.00	7.535		ug/L		151	40 - 180
Toluene	5.00	4.831		ug/L		97	80 - 120
1,2,3-Trichloropropane	5.00	4.985		ug/L		100	75 - 120
trans-1,2-Dichloroethene	5.00	5.022		ug/L		100	80 - 140
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.278		ug/L		106	65 - 120
trans-1,3-Dichloropropene	5.00	4.977		ug/L		99	60 - 140
trans-1,4-Dichloro-2-butene	5.01	4.505		ug/L		90	40 - 140
1,2,4-Trimethylbenzene	5.00	5.101		ug/L		102	80 - 125
Trichloroethene	5.00	5.088		ug/L		102	80 - 130
1,3,5-Trimethylbenzene	5.00	5.154		ug/L		103	80 - 125
Trichlorofluoromethane	6.26	7.424		ug/L		119	30 - 180
Vinyl acetate	12.5	5.630		ug/L		45	30 - 200

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		75 - 120
Dibromofluoromethane (Surr)	99		85 - 115
1,2-Dichloroethane-d4 (Surr)	101		70 - 128
Toluene-d8 (Surr)	96		75 - 125
Trifluorotoluene (Surr)	92		80 - 127

Lab Sample ID: LCSD 580-197966/6

Matrix: Water

Analysis Batch: 197966

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	5.00	4.752		ug/L		95	55 - 120	1	20
1,2-Dibromoethane	5.00	5.218		ug/L		104	70 - 130	5	20
1,2-Dichlorobenzene	5.00	4.950		ug/L		99	80 - 130	2	20
1,3-Dichlorobenzene	5.00	4.943		ug/L		99	80 - 120	2	20
1,1-Dichloroethane	5.01	5.303		ug/L		106	75 - 135	5	20
1,2-Dichloroethane	5.00	5.475		ug/L		109	80 - 140	3	20
1,4-Dichlorobenzene	5.00	4.887		ug/L		98	80 - 120	3	20
1,2-Dichloropropane	5.00	5.288		ug/L		106	80 - 120	2	20
2-Butanone	20.0	21.74		ug/L		109	20 - 200	13	20
1,3-Dichloropropane	5.00	5.304		ug/L		106	80 - 130	4	20
2-Chlorotoluene	5.00	5.105		ug/L		102	75 - 130	3	20
2,2-Dichloropropane	5.00	5.389		ug/L		108	60 - 150	5	20
1,1-Dichloropropene	5.00	5.312		ug/L		106	80 - 130	1	20
4-Chlorotoluene	5.00	4.810		ug/L		96	75 - 130	0	20
Acetone	20.0	22.70	*	ug/L		114	30 - 200	31	20
Benzene	5.00	4.856		ug/L		97	80 - 120	3	20
Bromobenzene	5.00	4.908		ug/L		98	80 - 130	2	20

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-197966/6

Matrix: Water

Analysis Batch: 197966

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	20.0	20.41		ug/L		102	52 - 160	3	20
Bromochloromethane	5.00	5.056		ug/L		101	80 - 125	3	20
Bromodichloromethane	5.00	5.260		ug/L		105	80 - 125	1	20
Bromoform	5.00	4.963		ug/L		99	65 - 130	2	20
Bromomethane	6.24	6.030		ug/L		97	70 - 135	12	20
Carbon disulfide	5.00	5.275		ug/L		105	65 - 160	4	20
4-Methyl-2-pentanone	20.0	20.01		ug/L		100	55 - 135	3	20
Carbon tetrachloride	5.00	5.714		ug/L		114	75 - 140	3	20
Chlorobenzene	5.00	4.989		ug/L		100	80 - 120	4	20
Chloroethane	6.25	6.563		ug/L		105	75 - 140	5	20
Chloroform	5.00	5.447		ug/L		109	80 - 130	3	20
Chloromethane	6.26	6.057		ug/L		97	50 - 140	5	20
cis-1,2-Dichloroethene	5.00	5.096		ug/L		102	80 - 130	2	20
cis-1,3-Dichloropropene	5.00	5.284		ug/L		106	70 - 120	4	20
Dibromochloromethane	5.00	4.989		ug/L		100	70 - 120	2	20
Dibromomethane	5.00	5.131		ug/L		103	80 - 130	3	20
Dichlorodifluoromethane	6.24	6.216		ug/L		100	30 - 180	3	20
Ethylbenzene	5.00	5.217		ug/L		104	80 - 125	1	20
Hexachlorobutadiene	5.00	5.028		ug/L		101	75 - 135	4	20
Iodomethane	5.00	5.588		ug/L		112	60 - 160	5	20
Isopropylbenzene	5.00	5.325		ug/L		106	75 - 120	0	20
Methyl tert-butyl ether	5.00	4.853		ug/L		97	75 - 120	2	20
1,1,1,2-Tetrachloroethane	5.00	5.254		ug/L		105	75 - 125	0	20
Methylene Chloride	5.00	5.508		ug/L		110	60 - 145	6	20
1,1,2,2-Tetrachloroethane	5.01	4.747		ug/L		95	75 - 125	1	20
m-Xylene & p-Xylene	5.00	5.143		ug/L		103	80 - 130	2	20
Naphthalene	5.00	5.405		ug/L		108	45 - 130	8	20
n-Butylbenzene	5.00	5.012		ug/L		100	75 - 125	0	20
n-Hexane	5.00	5.457		ug/L		109	60 - 140	1	20
N-Propylbenzene	5.00	5.276		ug/L		106	80 - 120	2	20
o-Xylene	5.00	5.138		ug/L		103	80 - 120	1	20
4-Isopropyltoluene	5.00	5.158		ug/L		103	80 - 120	2	20
p-Isopropyltoluene	5.00	5.158		ug/L		103	80 - 120	2	20
1,2,3-Trichlorobenzene	5.00	5.459		ug/L		109	60 - 125	8	20
sec-Butylbenzene	5.00	5.270		ug/L		105	80 - 125	2	20
1,2,4-Trichlorobenzene	5.00	5.493		ug/L		110	60 - 125	10	20
Styrene	5.00	5.011		ug/L		100	75 - 130	0	20
1,3,5-Trichlorobenzene	5.00	5.371		ug/L		107	75 - 120	7	20
1,1,1-Trichloroethane	5.00	5.556		ug/L		111	80 - 140	3	20
1,1,2-Trichloroethane	5.00	5.044		ug/L		101	80 - 130	2	20
tert-Butylbenzene	5.00	5.189		ug/L		104	80 - 130	1	20
Tetrachloroethene	5.00	8.073		ug/L		161	40 - 180	7	20
Toluene	5.00	5.004		ug/L		100	80 - 120	4	20
1,2,3-Trichloropropane	5.00	5.023		ug/L		100	75 - 120	1	20
trans-1,2-Dichloroethene	5.00	5.107		ug/L		102	80 - 140	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.102		ug/L		102	65 - 120	3	20
trans-1,3-Dichloropropene	5.00	5.056		ug/L		101	60 - 140	2	20

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-197966/6
Matrix: Water
Analysis Batch: 197966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,4-Dichloro-2-butene	5.01	4.690		ug/L		94	40 - 140	4	20
1,2,4-Trimethylbenzene	5.00	5.246		ug/L		105	80 - 125	3	20
Trichloroethene	5.00	5.223		ug/L		104	80 - 130	3	20
1,3,5-Trimethylbenzene	5.00	5.282		ug/L		106	80 - 125	2	20
Trichlorofluoromethane	6.26	7.342		ug/L		117	30 - 180	1	20
Vinyl acetate	12.5	5.808		ug/L		46	30 - 200	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	103		75 - 120
Dibromofluoromethane (Surr)	100		85 - 115
1,2-Dichloroethane-d4 (Surr)	103		70 - 128
Toluene-d8 (Surr)	99		75 - 125
Trifluorotoluene (Surr)	100		80 - 127

Lab Sample ID: MB 580-198252/5
Matrix: Water
Analysis Batch: 198252

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		2.00	ug/L			08/18/15 15:17	1
1,2-Dibromoethane	ND		2.00	ug/L			08/18/15 15:17	1
1,2-Dichlorobenzene	ND		0.500	ug/L			08/18/15 15:17	1
1,3-Dichlorobenzene	ND		0.500	ug/L			08/18/15 15:17	1
1,1-Dichloroethane	ND		0.500	ug/L			08/18/15 15:17	1
1,2-Dichloroethane	ND		0.500	ug/L			08/18/15 15:17	1
1,4-Dichlorobenzene	ND		0.500	ug/L			08/18/15 15:17	1
1,2-Dichloropropane	ND		0.500	ug/L			08/18/15 15:17	1
2-Butanone	ND		20.0	ug/L			08/18/15 15:17	1
1,3-Dichloropropane	ND		0.500	ug/L			08/18/15 15:17	1
2-Chlorotoluene	ND		2.00	ug/L			08/18/15 15:17	1
2,2-Dichloropropane	ND		0.500	ug/L			08/18/15 15:17	1
1,1-Dichloropropene	ND		0.500	ug/L			08/18/15 15:17	1
4-Chlorotoluene	ND		2.00	ug/L			08/18/15 15:17	1
Acetone	ND		20.0	ug/L			08/18/15 15:17	1
Benzene	ND		0.500	ug/L			08/18/15 15:17	1
Bromobenzene	ND		2.00	ug/L			08/18/15 15:17	1
2-Hexanone	ND		20.0	ug/L			08/18/15 15:17	1
Bromochloromethane	ND		0.500	ug/L			08/18/15 15:17	1
Bromodichloromethane	ND		0.500	ug/L			08/18/15 15:17	1
Bromoform	ND		0.500	ug/L			08/18/15 15:17	1
Bromomethane	ND		1.00	ug/L			08/18/15 15:17	1
Carbon disulfide	ND		0.500	ug/L			08/18/15 15:17	1
4-Methyl-2-pentanone	ND		20.0	ug/L			08/18/15 15:17	1
Carbon tetrachloride	ND		0.500	ug/L			08/18/15 15:17	1
Chlorobenzene	ND		0.500	ug/L			08/18/15 15:17	1
Chloroethane	ND		0.500	ug/L			08/18/15 15:17	1
Chloroform	ND		0.500	ug/L			08/18/15 15:17	1
Chloromethane	ND		0.500	ug/L			08/18/15 15:17	1

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-198252/5
Matrix: Water
Analysis Batch: 198252

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.500	ug/L			08/18/15 15:17	1
cis-1,3-Dichloropropene	ND		0.500	ug/L			08/18/15 15:17	1
Dibromochloromethane	ND		0.500	ug/L			08/18/15 15:17	1
Dibromomethane	ND		0.500	ug/L			08/18/15 15:17	1
Dichlorodifluoromethane	ND		0.500	ug/L			08/18/15 15:17	1
Ethylbenzene	ND		0.500	ug/L			08/18/15 15:17	1
Hexachlorobutadiene	ND		2.00	ug/L			08/18/15 15:17	1
Iodomethane	ND		0.500	ug/L			08/18/15 15:17	1
Isopropylbenzene	ND		2.00	ug/L			08/18/15 15:17	1
Methyl tert-butyl ether	ND		1.00	ug/L			08/18/15 15:17	1
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L			08/18/15 15:17	1
Methylene Chloride	ND		2.00	ug/L			08/18/15 15:17	1
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L			08/18/15 15:17	1
m-Xylene & p-Xylene	ND		0.500	ug/L			08/18/15 15:17	1
Naphthalene	ND		2.00	ug/L			08/18/15 15:17	1
n-Butylbenzene	ND		2.00	ug/L			08/18/15 15:17	1
n-Hexane	ND		0.200	ug/L			08/18/15 15:17	1
N-Propylbenzene	ND		2.00	ug/L			08/18/15 15:17	1
o-Xylene	ND		0.500	ug/L			08/18/15 15:17	1
p-Isopropyltoluene	ND		2.00	ug/L			08/18/15 15:17	1
1,2,3-Trichlorobenzene	ND		2.00	ug/L			08/18/15 15:17	1
sec-Butylbenzene	ND		2.00	ug/L			08/18/15 15:17	1
1,2,4-Trichlorobenzene	ND		2.00	ug/L			08/18/15 15:17	1
Styrene	ND		0.500	ug/L			08/18/15 15:17	1
1,3,5-Trichlorobenzene	ND		0.500	ug/L			08/18/15 15:17	1
1,1,1-Trichloroethane	ND		0.500	ug/L			08/18/15 15:17	1
1,1,2-Trichloroethane	ND		0.500	ug/L			08/18/15 15:17	1
tert-Butylbenzene	ND		2.00	ug/L			08/18/15 15:17	1
Tetrachloroethene	ND		0.500	ug/L			08/18/15 15:17	1
Toluene	ND		0.500	ug/L			08/18/15 15:17	1
1,2,3-Trichloropropane	ND		0.500	ug/L			08/18/15 15:17	1
trans-1,2-Dichloroethene	ND		0.500	ug/L			08/18/15 15:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.500	ug/L			08/18/15 15:17	1
trans-1,3-Dichloropropene	ND		0.500	ug/L			08/18/15 15:17	1
trans-1,4-Dichloro-2-butene	ND		2.00	ug/L			08/18/15 15:17	1
1,2,4-Trimethylbenzene	ND		2.00	ug/L			08/18/15 15:17	1
Trichloroethene	ND		0.500	ug/L			08/18/15 15:17	1
1,3,5-Trimethylbenzene	ND		2.00	ug/L			08/18/15 15:17	1
Trichlorofluoromethane	ND		0.500	ug/L			08/18/15 15:17	1
Vinyl acetate	ND		1.00	ug/L			08/18/15 15:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		75 - 120		08/18/15 15:17	1
Dibromofluoromethane (Surr)	86		85 - 115		08/18/15 15:17	1
1,2-Dichloroethane-d4 (Surr)	72		70 - 128		08/18/15 15:17	1
Toluene-d8 (Surr)	99		75 - 125		08/18/15 15:17	1
Trifluorotoluene (Surr)	98		80 - 127		08/18/15 15:17	1

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-198252/6

Matrix: Water

Analysis Batch: 198252

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	5.00	5.499		ug/L		110	55 - 120
1,2-Dibromoethane	5.00	5.044		ug/L		101	70 - 130
1,2-Dichlorobenzene	5.00	5.116		ug/L		102	80 - 130
1,3-Dichlorobenzene	5.00	5.191		ug/L		104	80 - 120
1,1-Dichloroethane	5.01	4.538		ug/L		91	75 - 135
1,2-Dichloroethane	5.00	4.504		ug/L		90	80 - 140
1,4-Dichlorobenzene	5.00	4.886		ug/L		98	80 - 120
1,2-Dichloropropane	5.00	4.527		ug/L		91	80 - 120
2-Butanone	20.0	19.26	J	ug/L		96	20 - 200
1,3-Dichloropropane	5.00	4.621		ug/L		92	80 - 130
2-Chlorotoluene	5.00	5.317		ug/L		106	75 - 130
2,2-Dichloropropane	5.00	5.017		ug/L		100	60 - 150
1,1-Dichloropropene	5.00	5.335		ug/L		107	80 - 130
4-Chlorotoluene	5.00	5.402		ug/L		108	75 - 130
Acetone	20.0	9.844	J	ug/L		49	30 - 200
Benzene	5.00	4.903		ug/L		98	80 - 120
Bromobenzene	5.00	5.427		ug/L		108	80 - 130
2-Hexanone	20.0	19.48	J	ug/L		97	52 - 160
Bromochloromethane	5.00	5.556		ug/L		111	80 - 125
Bromodichloromethane	5.00	4.975		ug/L		99	80 - 125
Bromoform	5.00	5.012		ug/L		100	65 - 130
Bromomethane	6.24	4.799		ug/L		77	70 - 135
Carbon disulfide	5.00	4.971		ug/L		99	65 - 160
4-Methyl-2-pentanone	20.0	19.65	J	ug/L		98	55 - 135
Carbon tetrachloride	5.00	5.157		ug/L		103	75 - 140
Chlorobenzene	5.00	4.900		ug/L		98	80 - 120
Chloroethane	6.25	4.994		ug/L		80	75 - 140
Chloroform	5.00	4.531		ug/L		91	80 - 130
Chloromethane	6.26	4.606		ug/L		74	50 - 140
cis-1,2-Dichloroethene	5.00	4.998		ug/L		100	80 - 130
cis-1,3-Dichloropropene	5.00	5.443		ug/L		109	70 - 120
Dibromochloromethane	5.00	5.756		ug/L		115	70 - 120
Dibromomethane	5.00	5.685		ug/L		114	80 - 130
Dichlorodifluoromethane	6.24	3.354		ug/L		54	30 - 180
Ethylbenzene	5.00	4.976		ug/L		100	80 - 125
Hexachlorobutadiene	5.00	5.953		ug/L		119	75 - 135
Iodomethane	5.00	5.364		ug/L		107	60 - 160
Isopropylbenzene	5.00	5.442		ug/L		109	75 - 120
Methyl tert-butyl ether	5.00	5.332		ug/L		107	75 - 120
1,1,1,2-Tetrachloroethane	5.00	5.417		ug/L		108	75 - 125
Methylene Chloride	5.00	4.693		ug/L		94	60 - 145
1,1,2,2-Tetrachloroethane	5.01	4.552		ug/L		91	75 - 125
m-Xylene & p-Xylene	5.00	5.232		ug/L		105	80 - 130
Naphthalene	5.00	5.514		ug/L		110	45 - 130
n-Butylbenzene	5.00	5.480		ug/L		110	75 - 125
n-Hexane	5.00	4.822		ug/L		96	60 - 140
N-Propylbenzene	5.00	5.087		ug/L		102	80 - 120
o-Xylene	5.00	5.296		ug/L		106	80 - 120

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-198252/6
Matrix: Water
Analysis Batch: 198252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
p-Isopropyltoluene	5.00	5.104		ug/L		102	80 - 120
1,2,3-Trichlorobenzene	5.00	5.317		ug/L		106	60 - 125
sec-Butylbenzene	5.00	5.410		ug/L		108	80 - 125
1,2,4-Trichlorobenzene	5.00	5.556		ug/L		111	60 - 125
Styrene	5.00	5.823		ug/L		116	75 - 130
1,3,5-Trichlorobenzene	5.00	5.398		ug/L		108	75 - 120
1,1,1-Trichloroethane	5.00	5.008		ug/L		100	80 - 140
1,1,2-Trichloroethane	5.00	5.002		ug/L		100	80 - 130
tert-Butylbenzene	5.00	5.694		ug/L		114	80 - 130
Tetrachloroethene	5.00	5.263		ug/L		105	40 - 180
Toluene	5.00	4.993		ug/L		100	80 - 120
1,2,3-Trichloropropane	5.00	4.923		ug/L		98	75 - 120
trans-1,2-Dichloroethene	5.00	5.213		ug/L		104	80 - 140
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.265		ug/L		105	65 - 120
trans-1,3-Dichloropropene	5.00	5.278		ug/L		105	60 - 140
trans-1,4-Dichloro-2-butene	5.01	4.392		ug/L		88	40 - 140
1,2,4-Trimethylbenzene	5.00	5.431		ug/L		109	80 - 125
Trichloroethene	5.00	5.467		ug/L		109	80 - 130
1,3,5-Trimethylbenzene	5.00	5.487		ug/L		110	80 - 125
Trichlorofluoromethane	6.26	4.176		ug/L		67	30 - 180
Vinyl acetate	12.5	13.98		ug/L		112	30 - 200

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		75 - 120
Dibromofluoromethane (Surr)	86		85 - 115
1,2-Dichloroethane-d4 (Surr)	72		70 - 128
Toluene-d8 (Surr)	99		75 - 125
Trifluorotoluene (Surr)	101		80 - 127

Lab Sample ID: LCSD 580-198252/7
Matrix: Water
Analysis Batch: 198252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	5.00	5.657		ug/L		113	55 - 120	3	20
1,2-Dibromoethane	5.00	5.166		ug/L		103	70 - 130	2	20
1,2-Dichlorobenzene	5.00	5.274		ug/L		105	80 - 130	3	20
1,3-Dichlorobenzene	5.00	5.158		ug/L		103	80 - 120	1	20
1,1-Dichloroethane	5.01	4.791		ug/L		96	75 - 135	5	20
1,2-Dichloroethane	5.00	4.646		ug/L		93	80 - 140	3	20
1,4-Dichlorobenzene	5.00	4.976		ug/L		100	80 - 120	2	20
1,2-Dichloropropane	5.00	4.469		ug/L		89	80 - 120	1	20
2-Butanone	20.0	18.95	J	ug/L		95	20 - 200	2	20
1,3-Dichloropropane	5.00	4.527		ug/L		91	80 - 130	2	20
2-Chlorotoluene	5.00	5.332		ug/L		107	75 - 130	0	20
2,2-Dichloropropane	5.00	5.647		ug/L		113	60 - 150	12	20
1,1-Dichloropropene	5.00	5.594		ug/L		112	80 - 130	5	20

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-198252/7

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 198252

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chlorotoluene	5.00	5.453		ug/L		109	75 - 130	1	20
Acetone	20.0	10.02	J	ug/L		50	30 - 200	2	20
Benzene	5.00	4.981		ug/L		100	80 - 120	2	20
Bromobenzene	5.00	5.301		ug/L		106	80 - 130	2	20
2-Hexanone	20.0	19.77	J	ug/L		99	52 - 160	1	20
Bromochloromethane	5.00	5.870		ug/L		117	80 - 125	5	20
Bromodichloromethane	5.00	4.951		ug/L		99	80 - 125	0	20
Bromoform	5.00	5.224		ug/L		104	65 - 130	4	20
Bromomethane	6.24	5.141		ug/L		82	70 - 135	7	20
Carbon disulfide	5.00	5.264		ug/L		105	65 - 160	6	20
4-Methyl-2-pentanone	20.0	20.10		ug/L		101	55 - 135	2	20
Carbon tetrachloride	5.00	5.479		ug/L		109	75 - 140	6	20
Chlorobenzene	5.00	5.033		ug/L		101	80 - 120	3	20
Chloroethane	6.25	4.754		ug/L		76	75 - 140	5	20
Chloroform	5.00	4.810		ug/L		96	80 - 130	6	20
Chloromethane	6.26	4.643		ug/L		74	50 - 140	1	20
cis-1,2-Dichloroethene	5.00	5.239		ug/L		105	80 - 130	5	20
cis-1,3-Dichloropropene	5.00	5.436		ug/L		109	70 - 120	0	20
Dibromochloromethane	5.00	5.877		ug/L		117	70 - 120	2	20
Dibromomethane	5.00	5.900		ug/L		118	80 - 130	4	20
Dichlorodifluoromethane	6.24	3.689		ug/L		59	30 - 180	10	20
Ethylbenzene	5.00	5.190		ug/L		104	80 - 125	4	20
Hexachlorobutadiene	5.00	6.416		ug/L		128	75 - 135	7	20
Iodomethane	5.00	5.596		ug/L		112	60 - 160	4	20
Isopropylbenzene	5.00	5.731		ug/L		115	75 - 120	5	20
Methyl tert-butyl ether	5.00	5.561		ug/L		111	75 - 120	4	20
1,1,1,2-Tetrachloroethane	5.00	5.729		ug/L		115	75 - 125	6	20
Methylene Chloride	5.00	4.818		ug/L		96	60 - 145	3	20
1,1,2,2-Tetrachloroethane	5.01	4.584		ug/L		92	75 - 125	1	20
m-Xylene & p-Xylene	5.00	5.461		ug/L		109	80 - 130	4	20
Naphthalene	5.00	6.056		ug/L		121	45 - 130	9	20
n-Butylbenzene	5.00	5.629		ug/L		113	75 - 125	3	20
n-Hexane	5.00	5.005		ug/L		100	60 - 140	4	20
N-Propylbenzene	5.00	5.198		ug/L		104	80 - 120	2	20
o-Xylene	5.00	5.456		ug/L		109	80 - 120	3	20
p-Isopropyltoluene	5.00	5.152		ug/L		103	80 - 120	1	20
1,2,3-Trichlorobenzene	5.00	5.622		ug/L		112	60 - 125	6	20
sec-Butylbenzene	5.00	5.488		ug/L		110	80 - 125	1	20
1,2,4-Trichlorobenzene	5.00	5.907		ug/L		118	60 - 125	6	20
Styrene	5.00	5.871		ug/L		117	75 - 130	1	20
1,3,5-Trichlorobenzene	5.00	5.726		ug/L		114	75 - 120	6	20
1,1,1-Trichloroethane	5.00	5.345		ug/L		107	80 - 140	6	20
1,1,2-Trichloroethane	5.00	5.113		ug/L		102	80 - 130	2	20
tert-Butylbenzene	5.00	5.710		ug/L		114	80 - 130	0	20
Tetrachloroethene	5.00	5.282		ug/L		106	40 - 180	0	20
Toluene	5.00	5.099		ug/L		102	80 - 120	2	20
1,2,3-Trichloropropane	5.00	5.094		ug/L		102	75 - 120	3	20
trans-1,2-Dichloroethene	5.00	5.436		ug/L		109	80 - 140	4	20

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-198252/7
Matrix: Water
Analysis Batch: 198252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.615		ug/L		112	65 - 120	6	20
trans-1,3-Dichloropropene	5.00	5.309		ug/L		106	60 - 140	1	20
trans-1,4-Dichloro-2-butene	5.01	4.461		ug/L		89	40 - 140	2	20
1,2,4-Trimethylbenzene	5.00	5.524		ug/L		110	80 - 125	2	20
Trichloroethene	5.00	5.765		ug/L		115	80 - 130	5	20
1,3,5-Trimethylbenzene	5.00	5.599		ug/L		112	80 - 125	2	20
Trichlorofluoromethane	6.26	4.653		ug/L		74	30 - 180	11	20
Vinyl acetate	12.5	13.94		ug/L		111	30 - 200	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	98		75 - 120
Dibromofluoromethane (Surr)	87		85 - 115
1,2-Dichloroethane-d4 (Surr)	72		70 - 128
Toluene-d8 (Surr)	98		75 - 125
Trifluorotoluene (Surr)	97		80 - 127

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-199204/13-A
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 199204

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400	mg/L		08/27/15 13:05	08/28/15 04:36	1
Manganese	ND		0.00200	mg/L		08/27/15 13:05	08/28/15 04:36	1

Lab Sample ID: LCS 580-199204/14-A
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 199204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	22.0	22.01		mg/L		100	80 - 120
Manganese	1.00	0.9931		mg/L		99	80 - 120

Lab Sample ID: LCSD 580-199204/15-A
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 199204

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	22.0	22.22		mg/L		101	80 - 120	1	20
Manganese	1.00	0.9912		mg/L		99	80 - 120	0	20

Lab Sample ID: MB 580-200357/21-A
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 200357

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.200	mg/L		09/09/15 19:20	09/10/15 19:23	5

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-200357/21-A
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 200357

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.0100	mg/L		09/09/15 19:20	09/10/15 19:23	5

Lab Sample ID: LCS 580-200357/22-A
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 200357

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	22.0	22.28		mg/L		101	80 - 120
Manganese	1.00	1.017		mg/L		102	80 - 120

Lab Sample ID: LCSD 580-200357/23-A
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 200357

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	22.0	23.21		mg/L		106	80 - 120	4	20
Manganese	1.00	1.028		mg/L		103	80 - 120	1	20

Lab Sample ID: 580-52358-1 MS
Matrix: Water
Analysis Batch: 199268

Client Sample ID: LB-081115-02
Prep Type: Dissolved
Prep Batch: 199204

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		22.0	22.37		mg/L		102	80 - 120
Manganese	ND		1.00	1.012		mg/L		101	80 - 120

Lab Sample ID: 580-52358-1 MSD
Matrix: Water
Analysis Batch: 199268

Client Sample ID: LB-081115-02
Prep Type: Dissolved
Prep Batch: 199204

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	ND		22.0	22.42		mg/L		102	80 - 120	0	20
Manganese	ND		1.00	1.004		mg/L		100	80 - 120	1	20

Lab Sample ID: 580-52358-1 DU
Matrix: Water
Analysis Batch: 199268

Client Sample ID: LB-081115-02
Prep Type: Dissolved
Prep Batch: 199204

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	ND		ND		mg/L		NC	20
Manganese	ND		ND		mg/L		NC	20

Lab Sample ID: 580-52974-D-3-C MS
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 200357

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		22.0	22.61		mg/L		103	80 - 120
Manganese	0.0727		1.00	1.099		mg/L		103	80 - 120

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-52974-D-3-D MSD
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 200357

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Iron	ND		22.0	22.73		mg/L		103	80 - 120	1	20
Manganese	0.0727		1.00	1.112		mg/L		104	80 - 120	1	20

Lab Sample ID: 580-52974-D-3-B DU
Matrix: Water
Analysis Batch: 200483

Client Sample ID: Duplicate
Prep Type: Dissolved
Prep Batch: 200357

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Iron	ND		ND		mg/L		NC	20
Manganese	0.0727		0.06699		mg/L		8	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 580-197832/1
Matrix: Water
Analysis Batch: 197832

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0	mg/L			08/13/15 13:07	1

Lab Sample ID: LCS 580-197832/2
Matrix: Water
Analysis Batch: 197832

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	1000	1006		mg/L		101	80 - 120

Lab Sample ID: 580-52384-A-1 DU
Matrix: Water
Analysis Batch: 197832

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	ND		10.00		mg/L		NC	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-197910/3
Matrix: Water
Analysis Batch: 197910

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	ND		0.200	mg/L			08/13/15 08:14	1

Lab Sample ID: LCS 580-197910/4
Matrix: Water
Analysis Batch: 197910

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Nitrogen, Nitrate	5.00	5.080		mg/L		102	90 - 110

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Lab Sample ID: LCSD 580-197910/5
Matrix: Water
Analysis Batch: 197910

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrogen, Nitrate	5.00	5.080		mg/L		102	90 - 110	0	15

Lab Sample ID: 580-52358-5 MS
Matrix: Water
Analysis Batch: 197910

Client Sample ID: LB-081115-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrate	4.10		5.00	9.020		mg/L		98	90 - 110

Lab Sample ID: 580-52358-5 DU
Matrix: Water
Analysis Batch: 197910

Client Sample ID: LB-081115-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrogen, Nitrate	4.10		4.090		mg/L		0.2	10

Lab Sample ID: MB 580-197911/3
Matrix: Water
Analysis Batch: 197911

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.0400	mg/L			08/13/15 08:14	1

Lab Sample ID: LCS 580-197911/4
Matrix: Water
Analysis Batch: 197911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.86		mg/L		102	90 - 110

Lab Sample ID: LCSD 580-197911/5
Matrix: Water
Analysis Batch: 197911

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	50.88		mg/L		102	90 - 110	0	15

Lab Sample ID: 580-52358-5 MS
Matrix: Water
Analysis Batch: 197911

Client Sample ID: LB-081115-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.12		50.0	59.69		mg/L		103	90 - 110

Lab Sample ID: 580-52358-5 DU
Matrix: Water
Analysis Batch: 197911

Client Sample ID: LB-081115-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	8.12		8.120		mg/L		0	10

TestAmerica Seattle

Lab Chronicle

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-02

Date Collected: 08/11/15 10:15

Date Received: 08/11/15 15:20

Lab Sample ID: 580-52358-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	197966	08/14/15 19:15	K1K	TAL SEA
Dissolved	Prep	3005A			199204	08/27/15 13:05	MKN	TAL SEA
Dissolved	Analysis	6020		1	199268	08/28/15 04:55	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197832	08/13/15 13:07	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197910	08/13/15 09:00	RSB	TAL SEA
Total/NA	Analysis	300.0		1	197911	08/13/15 09:00	RSB	TAL SEA

Client Sample ID: LB-081115-03

Date Collected: 08/11/15 11:20

Date Received: 08/11/15 15:20

Lab Sample ID: 580-52358-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	197966	08/14/15 20:07	K1K	TAL SEA
Dissolved	Prep	3005A			199204	08/27/15 13:05	MKN	TAL SEA
Dissolved	Analysis	6020		1	199268	08/28/15 05:27	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197832	08/13/15 13:07	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197910	08/13/15 09:14	RSB	TAL SEA
Total/NA	Analysis	300.0		1	197911	08/13/15 09:14	RSB	TAL SEA

Client Sample ID: LB-081115-04

Date Collected: 08/11/15 11:15

Date Received: 08/11/15 15:20

Lab Sample ID: 580-52358-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	197966	08/14/15 20:34	K1K	TAL SEA
Dissolved	Prep	3005A			200357	09/09/15 19:20	PAB	TAL SEA
Dissolved	Analysis	6020		1	200483	09/10/15 20:54	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197832	08/13/15 13:07	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197910	08/13/15 09:29	RSB	TAL SEA
Total/NA	Analysis	300.0		1	197911	08/13/15 09:29	RSB	TAL SEA

Client Sample ID: LB-081115-05

Date Collected: 08/11/15 12:25

Date Received: 08/11/15 15:20

Lab Sample ID: 580-52358-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	197966	08/14/15 21:00	K1K	TAL SEA
Dissolved	Prep	3005A			199204	08/27/15 13:05	MKN	TAL SEA
Dissolved	Analysis	6020		1	199268	08/28/15 05:36	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197832	08/13/15 13:07	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197910	08/13/15 09:43	RSB	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Client Sample ID: LB-081115-05

Date Collected: 08/11/15 12:25

Date Received: 08/11/15 15:20

Lab Sample ID: 580-52358-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	197911	08/13/15 09:43	RSB	TAL SEA

Client Sample ID: LB-081115-06

Date Collected: 08/11/15 13:20

Date Received: 08/11/15 15:20

Lab Sample ID: 580-52358-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	198252	08/18/15 22:14	D1R	TAL SEA
Dissolved	Prep	3005A			199204	08/27/15 13:05	MKN	TAL SEA
Dissolved	Analysis	6020		1	199268	08/28/15 05:40	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197832	08/13/15 13:07	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197910	08/13/15 09:57	RSB	TAL SEA
Total/NA	Analysis	300.0		1	197911	08/13/15 09:57	RSB	TAL SEA

Client Sample ID: Trip Blank

Date Collected: 08/11/15 10:00

Date Received: 08/11/15 15:20

Lab Sample ID: 580-52358-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	197966	08/14/15 21:53	K1K	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

Sample Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52358-3
SDG: 04215030.01/16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-52358-1	LB-081115-02	Water	08/11/15 10:15	08/11/15 15:20
580-52358-2	LB-081115-03	Water	08/11/15 11:20	08/11/15 15:20
580-52358-3	LB-081115-04	Water	08/11/15 11:15	08/11/15 15:20
580-52358-4	LB-081115-05	Water	08/11/15 12:25	08/11/15 15:20
580-52358-5	LB-081115-06	Water	08/11/15 13:20	08/11/15 15:20
580-52358-6	Trip Blank	Water	08/11/15 10:00	08/11/15 15:20

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580-52358 Chain of Custody

THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

JES RCRA Other:

Company Name: SOS Engineers Address: 1945 SW 52nd Ave, Beaverton, OR 97008 City/State/Zip: Portland, OR 97224 Phone: 503.639.9548 Fax:		Client Contact Project Name: Leather Landfill Site: 04215030.0116 P.O.#		Project Manager: Jason Davidson Tel/Fax: 503.639.9548 Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Site Contact: BMcMullen Date: 8/11/15 Lab Contact: Sarah Murphy Carrier:		COC No: _____ of _____ COCs Sampler: BMcMullen For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:					
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	8260 VOAs	Dissolved Metals (Fe and Mn)	TDS	Chloride	Nitrate	Sample Specific Notes:
LB-081115-02	8/11/15	1015	G	W	7	X	X	X	X	X	X	X	
LB-081115-03	8/11/15	1130	G	W	7	X	X	X	X	X	X	X	
LB-081115-04	8/11/15	1115	G	W	7	X	X	X	X	X	X	X	
LB-081115-05	8/11/15	1235	G	W	7	X	X	X	X	X	X	X	
LB-081115-06	8/11/15	1320	G	W	7	X	X	X	X	X	X	X	
Trip Blank	8/11/15	1000	-	V	1	X	X	X	X	X	X	X	

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other
 Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown
 Return to Client Disposal by Lab Archive for _____ Months
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Special Instructions/QC Requirements & Comments:
 Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____
 Custody Seal No.: _____
 Relinquished by: **BMcMullen** Date/Time: **8/11/15 15:00**
 Relinquished by: **SOS** Date/Time: **8/11/15 15:00**
 Received by: **AP** Date/Time: **8/11/15 15:00**
 Received by: _____ Date/Time: _____
 Received in Laboratory by: _____ Date/Time: _____





Beaverton, OR 97008
Phone: 503.906.9200 Fax:

580-52358 Chain of Custody

DES RCRA Other:

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0719)

Client Contact

Project Manager: Jason Day

Site Contact: B. McMillin

Date: 8/11/15

COC No. 1 of 1 COCs

Company Name: SES Engineers
Address: 1445 SW Seaside Pkwy Siskiyou
City/State/Zip: Beaverton, OR 97004

Tel/Fax: 503.639.9548
Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS

Lab Contact: Sarah Murphy

Carrier:

Sampler: B. McMillin
For Lab Use Only:
Walk-In Client:
Lab Sampling:

Phone: 503.639.9548
Fax:

TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Filtered Sample (Y/N)
Perform MS/MSD (Y/N)
8260 VOAs

Dissolved metals
(Fe and Mn)

TDS
Chloride
Nitrate

Project Name: Lecher Lmnd #11
Site: 0415030.01/16

Job / SDG No.:

Sample Specific Notes:

Sample ID No.:

Therm ID No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grav)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Dissolved metals (Fe and Mn)	TDS	Chloride	Nitrate
LB-081115-03	8/11/15	1015	G	W	7	X	X	X	X	X	X
LB-081115-04	8/11/15	1130	G	W	7	X	X	X	X	X	X
LB-081115-05	8/11/15	1115	G	W	7	X	X	X	X	X	X
LB-081115-06	8/11/15	1225	G	W	7	X	X	X	X	X	X
Trip Blank	8/11/15	1320	G	W	7	X	X	X	X	X	X
	8/11/15	1000	-	V	1	X	X	X	X	X	X

Preservation Used: 1=Ice 2=HCl 3=H2SO4 4=HNO3 5=NaOH 6=Other

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Cooler Temp. (°C): Obsd.: _____ Corrd.: _____ Therm ID No.: _____

Custody Seals Intact: Yes No
Relinquished by: B. McMillin
Company: SES
Date/Time: 8/11/15 1320

Relinquished by: [Signature]
Company: AT
Date/Time: 8/11/15 1320

ICF#2 70.6/-1.1

0.7 R/P-2

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 580-52358-1
SDG Number: 04215030.01/16

Login Number: 52358
List Number: 1
Creator: Lehman, Clarissa A

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-52384-2

TestAmerica Sample Delivery Group: 04215030.01/16
Client Project/Site: Leichner Landfill
Revision: 2

For:

SCS Engineers
14945 SW Sequoia Parkway
Suite 180
Portland, Oregon 97224

Attn: Mr. Jason Davendonis



Authorized for release by:

9/3/2015 2:24:31 PM

Sarah Murphy, Project Manager I
(253)922-2310
sarah.murphy@testamericainc.com

LINKS

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Job ID: 580-52384-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-52384-1

Comments

Report revised 08/20/2015 to report only to RLs.
Report revised 09/03/2015 to report metals results w/out dilution.

Receipt

The samples were received on 8/12/2015 2:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6° C.

GC/MS VOA

Method(s) 8260B: The method blank for batch 198252 contained multi analytes above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: LB-081215-07

Lab Sample ID: 580-52384-1

Date Collected: 08/12/15 10:00

Matrix: Water

Date Received: 08/12/15 14:26

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 20:54	1
1,1,1-Trichloroethane	ND		0.500		ug/L			08/18/15 20:54	1
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 20:54	1
1,1,2-Trichloroethane	ND		0.500		ug/L			08/18/15 20:54	1
1,1-Dichloroethane	ND		0.500		ug/L			08/18/15 20:54	1
1,1-Dichloropropene	ND		0.500		ug/L			08/18/15 20:54	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			08/18/15 20:54	1
1,2,3-Trichloropropane	ND		0.500		ug/L			08/18/15 20:54	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			08/18/15 20:54	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			08/18/15 20:54	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			08/18/15 20:54	1
1,2-Dibromoethane	ND		2.00		ug/L			08/18/15 20:54	1
1,2-Dichlorobenzene	ND		0.500		ug/L			08/18/15 20:54	1
1,2-Dichloroethane	ND		0.500		ug/L			08/18/15 20:54	1
1,2-Dichloropropane	ND		0.500		ug/L			08/18/15 20:54	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			08/18/15 20:54	1
1,3-Dichlorobenzene	ND		0.500		ug/L			08/18/15 20:54	1
1,3-Dichloropropane	ND		0.500		ug/L			08/18/15 20:54	1
1,4-Dichlorobenzene	ND		0.500		ug/L			08/18/15 20:54	1
2,2-Dichloropropane	ND		0.500		ug/L			08/18/15 20:54	1
2-Butanone	ND		20.0		ug/L			08/18/15 20:54	1
2-Chlorotoluene	ND		2.00		ug/L			08/18/15 20:54	1
2-Hexanone	ND		20.0		ug/L			08/18/15 20:54	1
4-Chlorotoluene	ND		2.00		ug/L			08/18/15 20:54	1
4-Methyl-2-pentanone	ND		20.0		ug/L			08/18/15 20:54	1
Acetone	ND		20.0		ug/L			08/18/15 20:54	1
Benzene	ND		0.500		ug/L			08/18/15 20:54	1
Bromobenzene	ND		2.00		ug/L			08/18/15 20:54	1
Bromochloromethane	ND		0.500		ug/L			08/18/15 20:54	1
Bromodichloromethane	ND		0.500		ug/L			08/18/15 20:54	1
Bromoform	ND		0.500		ug/L			08/18/15 20:54	1
Bromomethane	ND		1.00		ug/L			08/18/15 20:54	1
Carbon disulfide	ND		0.500		ug/L			08/18/15 20:54	1
Carbon tetrachloride	ND		0.500		ug/L			08/18/15 20:54	1
Chlorobenzene	ND		0.500		ug/L			08/18/15 20:54	1
Chloroethane	ND		0.500		ug/L			08/18/15 20:54	1
Chloroform	ND		0.500		ug/L			08/18/15 20:54	1
Chloromethane	ND		0.500		ug/L			08/18/15 20:54	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 20:54	1
cis-1,3-Dichloropropane	ND		0.500		ug/L			08/18/15 20:54	1
Dibromochloromethane	ND		0.500		ug/L			08/18/15 20:54	1
Dibromomethane	ND		0.500		ug/L			08/18/15 20:54	1
Dichlorodifluoromethane	ND		0.500		ug/L			08/18/15 20:54	1
Ethylbenzene	ND		0.500		ug/L			08/18/15 20:54	1
Hexachlorobutadiene	ND		2.00		ug/L			08/18/15 20:54	1
Isopropylbenzene	ND		2.00		ug/L			08/18/15 20:54	1
Methyl tert-butyl ether	ND		1.00		ug/L			08/18/15 20:54	1
Methylene Chloride	ND		2.00		ug/L			08/18/15 20:54	1
m-Xylene & p-Xylene	ND		0.500		ug/L			08/18/15 20:54	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: LB-081215-07

Lab Sample ID: 580-52384-1

Date Collected: 08/12/15 10:00

Matrix: Water

Date Received: 08/12/15 14:26

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00		ug/L			08/18/15 20:54	1
n-Butylbenzene	ND		2.00		ug/L			08/18/15 20:54	1
N-Propylbenzene	ND		2.00		ug/L			08/18/15 20:54	1
o-Xylene	ND		0.500		ug/L			08/18/15 20:54	1
p-Isopropyltoluene	ND		2.00		ug/L			08/18/15 20:54	1
sec-Butylbenzene	ND		2.00		ug/L			08/18/15 20:54	1
Styrene	ND		0.500		ug/L			08/18/15 20:54	1
tert-Butylbenzene	ND		2.00		ug/L			08/18/15 20:54	1
Tetrachloroethene	ND		0.500		ug/L			08/18/15 20:54	1
Toluene	ND		0.500		ug/L			08/18/15 20:54	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 20:54	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			08/18/15 20:54	1
Trichloroethene	ND		0.500		ug/L			08/18/15 20:54	1
Trichlorofluoromethane	ND		0.500		ug/L			08/18/15 20:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		75 - 120		08/18/15 20:54	1
Dibromofluoromethane (Surr)	85		85 - 115		08/18/15 20:54	1
1,2-Dichloroethane-d4 (Surr)	73		70 - 128		08/18/15 20:54	1
Toluene-d8 (Surr)	101		75 - 125		08/18/15 20:54	1
Trifluorotoluene (Surr)	100		80 - 127		08/18/15 20:54	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400		mg/L		08/27/15 13:05	08/28/15 05:45	1
Manganese	ND		0.00200		mg/L		08/27/15 13:05	08/28/15 05:45	1

General Chemistry

Analyte	Result	Qualifier	MDL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.0400		mg/L			08/13/15 11:09	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	ND		0.200		mg/L			08/13/15 11:09	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0		mg/L			08/13/15 13:07	1

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: LB-081215-08

Lab Sample ID: 580-52384-2

Date Collected: 08/12/15 10:40

Matrix: Water

Date Received: 08/12/15 14:26

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 21:21	1
1,1,1-Trichloroethane	ND		0.500		ug/L			08/18/15 21:21	1
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 21:21	1
1,1,2-Trichloroethane	ND		0.500		ug/L			08/18/15 21:21	1
1,1-Dichloroethane	ND		0.500		ug/L			08/18/15 21:21	1
1,1-Dichloropropene	ND		0.500		ug/L			08/18/15 21:21	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			08/18/15 21:21	1
1,2,3-Trichloropropane	ND		0.500		ug/L			08/18/15 21:21	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			08/18/15 21:21	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			08/18/15 21:21	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			08/18/15 21:21	1
1,2-Dibromoethane	ND		2.00		ug/L			08/18/15 21:21	1
1,2-Dichlorobenzene	ND		0.500		ug/L			08/18/15 21:21	1
1,2-Dichloroethane	ND		0.500		ug/L			08/18/15 21:21	1
1,2-Dichloropropane	ND		0.500		ug/L			08/18/15 21:21	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			08/18/15 21:21	1
1,3-Dichlorobenzene	ND		0.500		ug/L			08/18/15 21:21	1
1,3-Dichloropropane	ND		0.500		ug/L			08/18/15 21:21	1
1,4-Dichlorobenzene	ND		0.500		ug/L			08/18/15 21:21	1
2,2-Dichloropropane	ND		0.500		ug/L			08/18/15 21:21	1
2-Butanone	ND		20.0		ug/L			08/18/15 21:21	1
2-Chlorotoluene	ND		2.00		ug/L			08/18/15 21:21	1
2-Hexanone	ND		20.0		ug/L			08/18/15 21:21	1
4-Chlorotoluene	ND		2.00		ug/L			08/18/15 21:21	1
4-Methyl-2-pentanone	ND		20.0		ug/L			08/18/15 21:21	1
Acetone	ND		20.0		ug/L			08/18/15 21:21	1
Benzene	ND		0.500		ug/L			08/18/15 21:21	1
Bromobenzene	ND		2.00		ug/L			08/18/15 21:21	1
Bromochloromethane	ND		0.500		ug/L			08/18/15 21:21	1
Bromodichloromethane	ND		0.500		ug/L			08/18/15 21:21	1
Bromoform	ND		0.500		ug/L			08/18/15 21:21	1
Bromomethane	ND		1.00		ug/L			08/18/15 21:21	1
Carbon disulfide	ND		0.500		ug/L			08/18/15 21:21	1
Carbon tetrachloride	ND		0.500		ug/L			08/18/15 21:21	1
Chlorobenzene	ND		0.500		ug/L			08/18/15 21:21	1
Chloroethane	ND		0.500		ug/L			08/18/15 21:21	1
Chloroform	ND		0.500		ug/L			08/18/15 21:21	1
Chloromethane	ND		0.500		ug/L			08/18/15 21:21	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 21:21	1
cis-1,3-Dichloropropane	ND		0.500		ug/L			08/18/15 21:21	1
Dibromochloromethane	ND		0.500		ug/L			08/18/15 21:21	1
Dibromomethane	ND		0.500		ug/L			08/18/15 21:21	1
Dichlorodifluoromethane	ND		0.500		ug/L			08/18/15 21:21	1
Ethylbenzene	ND		0.500		ug/L			08/18/15 21:21	1
Hexachlorobutadiene	ND		2.00		ug/L			08/18/15 21:21	1
Isopropylbenzene	ND		2.00		ug/L			08/18/15 21:21	1
Methyl tert-butyl ether	ND		1.00		ug/L			08/18/15 21:21	1
Methylene Chloride	ND		2.00		ug/L			08/18/15 21:21	1
m-Xylene & p-Xylene	ND		0.500		ug/L			08/18/15 21:21	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: LB-081215-08

Lab Sample ID: 580-52384-2

Date Collected: 08/12/15 10:40

Matrix: Water

Date Received: 08/12/15 14:26

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00		ug/L			08/18/15 21:21	1
n-Butylbenzene	ND		2.00		ug/L			08/18/15 21:21	1
N-Propylbenzene	ND		2.00		ug/L			08/18/15 21:21	1
o-Xylene	ND		0.500		ug/L			08/18/15 21:21	1
p-Isopropyltoluene	ND		2.00		ug/L			08/18/15 21:21	1
sec-Butylbenzene	ND		2.00		ug/L			08/18/15 21:21	1
Styrene	ND		0.500		ug/L			08/18/15 21:21	1
tert-Butylbenzene	ND		2.00		ug/L			08/18/15 21:21	1
Tetrachloroethene	ND		0.500		ug/L			08/18/15 21:21	1
Toluene	ND		0.500		ug/L			08/18/15 21:21	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 21:21	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			08/18/15 21:21	1
Trichloroethene	ND		0.500		ug/L			08/18/15 21:21	1
Trichlorofluoromethane	ND		0.500		ug/L			08/18/15 21:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		75 - 120		08/18/15 21:21	1
Dibromofluoromethane (Surr)	86		85 - 115		08/18/15 21:21	1
1,2-Dichloroethane-d4 (Surr)	73		70 - 128		08/18/15 21:21	1
Toluene-d8 (Surr)	100		75 - 125		08/18/15 21:21	1
Trifluorotoluene (Surr)	99		80 - 127		08/18/15 21:21	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400		mg/L		08/27/15 13:05	08/28/15 05:49	1
Manganese	ND		0.00200		mg/L		08/27/15 13:05	08/28/15 05:49	1

General Chemistry

Analyte	Result	Qualifier	MDL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.35		0.0400		mg/L			08/13/15 11:24	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	4.38		0.200		mg/L			08/13/15 11:24	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	179		10.0		mg/L			08/13/15 13:07	1

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: LB-081215-09

Lab Sample ID: 580-52384-3

Date Collected: 08/12/15 11:50

Matrix: Water

Date Received: 08/12/15 14:26

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 21:47	1
1,1,1-Trichloroethane	ND		0.500		ug/L			08/18/15 21:47	1
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 21:47	1
1,1,2-Trichloroethane	ND		0.500		ug/L			08/18/15 21:47	1
1,1-Dichloroethane	ND		0.500		ug/L			08/18/15 21:47	1
1,1-Dichloropropene	ND		0.500		ug/L			08/18/15 21:47	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			08/18/15 21:47	1
1,2,3-Trichloropropane	ND		0.500		ug/L			08/18/15 21:47	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			08/18/15 21:47	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			08/18/15 21:47	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			08/18/15 21:47	1
1,2-Dibromoethane	ND		2.00		ug/L			08/18/15 21:47	1
1,2-Dichlorobenzene	ND		0.500		ug/L			08/18/15 21:47	1
1,2-Dichloroethane	ND		0.500		ug/L			08/18/15 21:47	1
1,2-Dichloropropane	ND		0.500		ug/L			08/18/15 21:47	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			08/18/15 21:47	1
1,3-Dichlorobenzene	ND		0.500		ug/L			08/18/15 21:47	1
1,3-Dichloropropane	ND		0.500		ug/L			08/18/15 21:47	1
1,4-Dichlorobenzene	ND		0.500		ug/L			08/18/15 21:47	1
2,2-Dichloropropane	ND		0.500		ug/L			08/18/15 21:47	1
2-Butanone	ND		20.0		ug/L			08/18/15 21:47	1
2-Chlorotoluene	ND		2.00		ug/L			08/18/15 21:47	1
2-Hexanone	ND		20.0		ug/L			08/18/15 21:47	1
4-Chlorotoluene	ND		2.00		ug/L			08/18/15 21:47	1
4-Methyl-2-pentanone	ND		20.0		ug/L			08/18/15 21:47	1
Acetone	ND		20.0		ug/L			08/18/15 21:47	1
Benzene	ND		0.500		ug/L			08/18/15 21:47	1
Bromobenzene	ND		2.00		ug/L			08/18/15 21:47	1
Bromochloromethane	ND		0.500		ug/L			08/18/15 21:47	1
Bromodichloromethane	ND		0.500		ug/L			08/18/15 21:47	1
Bromoform	ND		0.500		ug/L			08/18/15 21:47	1
Bromomethane	ND		1.00		ug/L			08/18/15 21:47	1
Carbon disulfide	ND		0.500		ug/L			08/18/15 21:47	1
Carbon tetrachloride	ND		0.500		ug/L			08/18/15 21:47	1
Chlorobenzene	ND		0.500		ug/L			08/18/15 21:47	1
Chloroethane	ND		0.500		ug/L			08/18/15 21:47	1
Chloroform	ND		0.500		ug/L			08/18/15 21:47	1
Chloromethane	ND		0.500		ug/L			08/18/15 21:47	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 21:47	1
cis-1,3-Dichloropropane	ND		0.500		ug/L			08/18/15 21:47	1
Dibromochloromethane	ND		0.500		ug/L			08/18/15 21:47	1
Dibromomethane	ND		0.500		ug/L			08/18/15 21:47	1
Dichlorodifluoromethane	ND		0.500		ug/L			08/18/15 21:47	1
Ethylbenzene	ND		0.500		ug/L			08/18/15 21:47	1
Hexachlorobutadiene	ND		2.00		ug/L			08/18/15 21:47	1
Isopropylbenzene	ND		2.00		ug/L			08/18/15 21:47	1
Methyl tert-butyl ether	ND		1.00		ug/L			08/18/15 21:47	1
Methylene Chloride	ND		2.00		ug/L			08/18/15 21:47	1
m-Xylene & p-Xylene	ND		0.500		ug/L			08/18/15 21:47	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: LB-081215-09

Lab Sample ID: 580-52384-3

Date Collected: 08/12/15 11:50

Matrix: Water

Date Received: 08/12/15 14:26

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.00		ug/L			08/18/15 21:47	1
n-Butylbenzene	ND		2.00		ug/L			08/18/15 21:47	1
N-Propylbenzene	ND		2.00		ug/L			08/18/15 21:47	1
o-Xylene	ND		0.500		ug/L			08/18/15 21:47	1
p-Isopropyltoluene	ND		2.00		ug/L			08/18/15 21:47	1
sec-Butylbenzene	ND		2.00		ug/L			08/18/15 21:47	1
Styrene	ND		0.500		ug/L			08/18/15 21:47	1
tert-Butylbenzene	ND		2.00		ug/L			08/18/15 21:47	1
Tetrachloroethene	ND		0.500		ug/L			08/18/15 21:47	1
Toluene	ND		0.500		ug/L			08/18/15 21:47	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 21:47	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			08/18/15 21:47	1
Trichloroethene	ND		0.500		ug/L			08/18/15 21:47	1
Trichlorofluoromethane	ND		0.500		ug/L			08/18/15 21:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		75 - 120		08/18/15 21:47	1
Dibromofluoromethane (Surr)	86		85 - 115		08/18/15 21:47	1
1,2-Dichloroethane-d4 (Surr)	73		70 - 128		08/18/15 21:47	1
Toluene-d8 (Surr)	99		75 - 125		08/18/15 21:47	1
Trifluorotoluene (Surr)	101		80 - 127		08/18/15 21:47	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400		mg/L		08/27/15 13:05	08/28/15 05:54	1
Manganese	0.328		0.00200		mg/L		08/27/15 13:05	08/28/15 05:54	1

General Chemistry

Analyte	Result	Qualifier	MDL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.1		0.0400		mg/L			08/13/15 11:38	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate	ND		0.200		mg/L			08/13/15 11:38	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	352		10.0		mg/L			08/13/15 13:07	1

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: Trip Blank

Date Collected: 08/12/15 09:40

Date Received: 08/12/15 14:26

Lab Sample ID: 580-52384-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20.0		ug/L			08/18/15 20:28	1
Benzene	ND		0.500		ug/L			08/18/15 20:28	1
Bromobenzene	ND		2.00		ug/L			08/18/15 20:28	1
Bromochloromethane	ND		0.500		ug/L			08/18/15 20:28	1
Bromoform	ND		0.500		ug/L			08/18/15 20:28	1
Bromomethane	ND		1.00		ug/L			08/18/15 20:28	1
2-Butanone	ND		20.0		ug/L			08/18/15 20:28	1
Carbon disulfide	ND		0.500		ug/L			08/18/15 20:28	1
Carbon tetrachloride	ND		0.500		ug/L			08/18/15 20:28	1
Chlorobenzene	ND		0.500		ug/L			08/18/15 20:28	1
Chloroethane	ND		0.500		ug/L			08/18/15 20:28	1
Chloroform	ND		0.500		ug/L			08/18/15 20:28	1
Chloromethane	ND		0.500		ug/L			08/18/15 20:28	1
2-Chlorotoluene	ND		2.00		ug/L			08/18/15 20:28	1
4-Chlorotoluene	ND		2.00		ug/L			08/18/15 20:28	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 20:28	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			08/18/15 20:28	1
Dibromochloromethane	ND		0.500		ug/L			08/18/15 20:28	1
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			08/18/15 20:28	1
1,2-Dibromoethane	ND		2.00		ug/L			08/18/15 20:28	1
Dibromomethane	ND		0.500		ug/L			08/18/15 20:28	1
1,2-Dichlorobenzene	ND		0.500		ug/L			08/18/15 20:28	1
1,3-Dichlorobenzene	ND		0.500		ug/L			08/18/15 20:28	1
1,4-Dichlorobenzene	ND		0.500		ug/L			08/18/15 20:28	1
Bromodichloromethane	ND		0.500		ug/L			08/18/15 20:28	1
Dichlorodifluoromethane	ND		0.500		ug/L			08/18/15 20:28	1
1,1-Dichloroethane	ND		0.500		ug/L			08/18/15 20:28	1
1,2-Dichloroethane	ND		0.500		ug/L			08/18/15 20:28	1
1,2-Dichloropropane	ND		0.500		ug/L			08/18/15 20:28	1
1,3-Dichloropropane	ND		0.500		ug/L			08/18/15 20:28	1
2,2-Dichloropropane	ND		0.500		ug/L			08/18/15 20:28	1
1,1-Dichloropropene	ND		0.500		ug/L			08/18/15 20:28	1
Ethylbenzene	ND		0.500		ug/L			08/18/15 20:28	1
Hexachlorobutadiene	ND		2.00		ug/L			08/18/15 20:28	1
2-Hexanone	ND		20.0		ug/L			08/18/15 20:28	1
Iodomethane	ND		0.500		ug/L			08/18/15 20:28	1
Isopropylbenzene	ND		2.00		ug/L			08/18/15 20:28	1
4-Isopropyltoluene	ND		2.00		ug/L			08/18/15 20:28	1
Methylene Chloride	ND		2.00		ug/L			08/18/15 20:28	1
4-Methyl-2-pentanone	ND		20.0		ug/L			08/18/15 20:28	1
2-Methyl-2-propanol	ND		10.0		ug/L			08/18/15 20:28	1
Methyl tert-butyl ether	ND		1.00		ug/L			08/18/15 20:28	1
m-Xylene & p-Xylene	ND		0.500		ug/L			08/18/15 20:28	1
Naphthalene	ND		2.00		ug/L			08/18/15 20:28	1
n-Butylbenzene	ND		2.00		ug/L			08/18/15 20:28	1
n-Hexane	ND		0.200		ug/L			08/18/15 20:28	1
N-Propylbenzene	ND		2.00		ug/L			08/18/15 20:28	1
o-Xylene	ND		0.500		ug/L			08/18/15 20:28	1
sec-Butylbenzene	ND		2.00		ug/L			08/18/15 20:28	1

TestAmerica Seattle

Client Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: Trip Blank

Lab Sample ID: 580-52384-6

Date Collected: 08/12/15 09:40

Matrix: Water

Date Received: 08/12/15 14:26

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.500		ug/L			08/18/15 20:28	1
Tert-amyl methyl ether	ND		0.500		ug/L			08/18/15 20:28	1
tert-Butylbenzene	ND		2.00		ug/L			08/18/15 20:28	1
Tert-butyl ethyl ether	ND		0.500		ug/L			08/18/15 20:28	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 20:28	1
1,1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 20:28	1
Tetrachloroethene	ND		0.500		ug/L			08/18/15 20:28	1
Toluene	ND		0.500		ug/L			08/18/15 20:28	1
trans-1,4-Dichloro-2-butene	ND		2.00		ug/L			08/18/15 20:28	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 20:28	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			08/18/15 20:28	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			08/18/15 20:28	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			08/18/15 20:28	1
1,3,5-Trichlorobenzene	ND		0.500		ug/L			08/18/15 20:28	1
1,1,1-Trichloroethane	ND		0.500		ug/L			08/18/15 20:28	1
1,1,2-Trichloroethane	ND		0.500		ug/L			08/18/15 20:28	1
Trichloroethene	ND		0.500		ug/L			08/18/15 20:28	1
Trichlorofluoromethane	ND		0.500		ug/L			08/18/15 20:28	1
1,2,3-Trichloropropane	ND		0.500		ug/L			08/18/15 20:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.500		ug/L			08/18/15 20:28	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			08/18/15 20:28	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			08/18/15 20:28	1
Vinyl acetate	ND		1.00		ug/L			08/18/15 20:28	1
Xylenes, Total	ND		0.500		ug/L			08/18/15 20:28	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Bromoethane TIC	ND		ug/L			74-96-4		08/18/15 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		75 - 120		08/18/15 20:28	1
Dibromofluoromethane (Surr)	86		85 - 115		08/18/15 20:28	1
1,2-Dichloroethane-d4 (Surr)	72		70 - 128		08/18/15 20:28	1
Toluene-d8 (Surr)	100		75 - 125		08/18/15 20:28	1
Trifluorotoluene (Surr)	99		80 - 127		08/18/15 20:28	1

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-198252/5

Matrix: Water

Analysis Batch: 198252

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		2.00		ug/L			08/18/15 15:17	1
1,2-Dibromoethane	ND		2.00		ug/L			08/18/15 15:17	1
1,2-Dichlorobenzene	ND		0.500		ug/L			08/18/15 15:17	1
1,1-Dichloroethane	ND		0.500		ug/L			08/18/15 15:17	1
1,3-Dichlorobenzene	ND		0.500		ug/L			08/18/15 15:17	1
1,2-Dichloroethane	ND		0.500		ug/L			08/18/15 15:17	1
1,4-Dichlorobenzene	ND		0.500		ug/L			08/18/15 15:17	1
1,2-Dichloropropane	ND		0.500		ug/L			08/18/15 15:17	1
1,3-Dichloropropane	ND		0.500		ug/L			08/18/15 15:17	1
2-Butanone	ND		20.0		ug/L			08/18/15 15:17	1
2,2-Dichloropropane	ND		0.500		ug/L			08/18/15 15:17	1
2-Chlorotoluene	ND		2.00		ug/L			08/18/15 15:17	1
1,1-Dichloropropene	ND		0.500		ug/L			08/18/15 15:17	1
4-Chlorotoluene	ND		2.00		ug/L			08/18/15 15:17	1
Acetone	ND		20.0		ug/L			08/18/15 15:17	1
Benzene	ND		0.500		ug/L			08/18/15 15:17	1
2-Hexanone	ND		20.0		ug/L			08/18/15 15:17	1
Bromobenzene	ND		2.00		ug/L			08/18/15 15:17	1
Bromochloromethane	ND		0.500		ug/L			08/18/15 15:17	1
Bromodichloromethane	ND		0.500		ug/L			08/18/15 15:17	1
Bromoform	ND		0.500		ug/L			08/18/15 15:17	1
Bromomethane	ND		1.00		ug/L			08/18/15 15:17	1
4-Methyl-2-pentanone	ND		20.0		ug/L			08/18/15 15:17	1
Carbon disulfide	ND		0.500		ug/L			08/18/15 15:17	1
2-Methyl-2-propanol	ND		10.0		ug/L			08/18/15 15:17	1
Carbon tetrachloride	ND		0.500		ug/L			08/18/15 15:17	1
Chlorobenzene	ND		0.500		ug/L			08/18/15 15:17	1
Chloroethane	ND		0.500		ug/L			08/18/15 15:17	1
Chloroform	ND		0.500		ug/L			08/18/15 15:17	1
Chloromethane	ND		0.500		ug/L			08/18/15 15:17	1
cis-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 15:17	1
cis-1,3-Dichloropropene	ND		0.500		ug/L			08/18/15 15:17	1
Dibromochloromethane	ND		0.500		ug/L			08/18/15 15:17	1
Dibromomethane	ND		0.500		ug/L			08/18/15 15:17	1
Dichlorodifluoromethane	ND		0.500		ug/L			08/18/15 15:17	1
Ethylbenzene	ND		0.500		ug/L			08/18/15 15:17	1
Hexachlorobutadiene	ND		2.00		ug/L			08/18/15 15:17	1
Tert-amyl methyl ether	ND		0.500		ug/L			08/18/15 15:17	1
Iodomethane	ND		0.500		ug/L			08/18/15 15:17	1
Isopropylbenzene	ND		2.00		ug/L			08/18/15 15:17	1
Tert-butyl ethyl ether	ND		0.500		ug/L			08/18/15 15:17	1
1,1,1,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 15:17	1
Methyl tert-butyl ether	ND		1.00		ug/L			08/18/15 15:17	1
1,1,2,2-Tetrachloroethane	ND		0.500		ug/L			08/18/15 15:17	1
Methylene Chloride	ND		2.00		ug/L			08/18/15 15:17	1
m-Xylene & p-Xylene	ND		0.500		ug/L			08/18/15 15:17	1
Naphthalene	ND		2.00		ug/L			08/18/15 15:17	1
n-Butylbenzene	ND		2.00		ug/L			08/18/15 15:17	1

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-198252/5
Matrix: Water
Analysis Batch: 198252

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Hexane	ND		0.200		ug/L			08/18/15 15:17	1
N-Propylbenzene	ND		2.00		ug/L			08/18/15 15:17	1
o-Xylene	ND		0.500		ug/L			08/18/15 15:17	1
1,2,3-Trichlorobenzene	ND		2.00		ug/L			08/18/15 15:17	1
4-Isopropyltoluene	ND		2.00		ug/L			08/18/15 15:17	1
p-Isopropyltoluene	ND		2.00		ug/L			08/18/15 15:17	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			08/18/15 15:17	1
sec-Butylbenzene	ND		2.00		ug/L			08/18/15 15:17	1
1,3,5-Trichlorobenzene	ND		0.500		ug/L			08/18/15 15:17	1
Styrene	ND		0.500		ug/L			08/18/15 15:17	1
1,1,1-Trichloroethane	ND		0.500		ug/L			08/18/15 15:17	1
1,1,2-Trichloroethane	ND		0.500		ug/L			08/18/15 15:17	1
tert-Butylbenzene	ND		2.00		ug/L			08/18/15 15:17	1
Tetrachloroethene	ND		0.500		ug/L			08/18/15 15:17	1
1,2,3-Trichloropropane	ND		0.500		ug/L			08/18/15 15:17	1
Toluene	ND		0.500		ug/L			08/18/15 15:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.500		ug/L			08/18/15 15:17	1
trans-1,2-Dichloroethene	ND		0.500		ug/L			08/18/15 15:17	1
trans-1,3-Dichloropropene	ND		0.500		ug/L			08/18/15 15:17	1
1,2,4-Trimethylbenzene	ND		2.00		ug/L			08/18/15 15:17	1
trans-1,4-Dichloro-2-butene	ND		2.00		ug/L			08/18/15 15:17	1
1,3,5-Trimethylbenzene	ND		2.00		ug/L			08/18/15 15:17	1
Trichloroethene	ND		0.500		ug/L			08/18/15 15:17	1
Trichlorofluoromethane	ND		0.500		ug/L			08/18/15 15:17	1
Vinyl acetate	ND		1.00		ug/L			08/18/15 15:17	1
Xylenes, Total	ND		0.500		ug/L			08/18/15 15:17	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Bromoethane TIC	ND		ug/L			74-96-4		08/18/15 15:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		75 - 120		08/18/15 15:17	1
Dibromofluoromethane (Surr)	86		85 - 115		08/18/15 15:17	1
1,2-Dichloroethane-d4 (Surr)	72		70 - 128		08/18/15 15:17	1
Toluene-d8 (Surr)	99		75 - 125		08/18/15 15:17	1
Trifluorotoluene (Surr)	98		80 - 127		08/18/15 15:17	1

Lab Sample ID: LCS 580-198252/6
Matrix: Water
Analysis Batch: 198252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	5.00	5.499		ug/L		110	55 - 120
1,2-Dibromoethane	5.00	5.044		ug/L		101	70 - 130
1,2-Dichlorobenzene	5.00	5.116		ug/L		102	80 - 130
1,1-Dichloroethane	5.01	4.538		ug/L		91	75 - 135
1,3-Dichlorobenzene	5.00	5.191		ug/L		104	80 - 120

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-198252/6

Matrix: Water

Analysis Batch: 198252

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	5.00	4.504		ug/L		90	80 - 140
1,4-Dichlorobenzene	5.00	4.886		ug/L		98	80 - 120
1,2-Dichloropropane	5.00	4.527		ug/L		91	80 - 120
1,3-Dichloropropane	5.00	4.621		ug/L		92	80 - 130
2-Butanone	20.0	19.26	J	ug/L		96	20 - 200
2,2-Dichloropropane	5.00	5.017		ug/L		100	60 - 150
2-Chlorotoluene	5.00	5.317		ug/L		106	75 - 130
1,1-Dichloropropene	5.00	5.335		ug/L		107	80 - 130
4-Chlorotoluene	5.00	5.402		ug/L		108	75 - 130
Acetone	20.0	9.844	J	ug/L		49	30 - 200
Benzene	5.00	4.903		ug/L		98	80 - 120
2-Hexanone	20.0	19.48	J	ug/L		97	52 - 160
Bromobenzene	5.00	5.427		ug/L		108	80 - 130
Bromochloromethane	5.00	5.556		ug/L		111	80 - 125
Bromodichloromethane	5.00	4.975		ug/L		99	80 - 125
Bromoform	5.00	5.012		ug/L		100	65 - 130
Bromomethane	6.24	4.799		ug/L		77	70 - 135
4-Methyl-2-pentanone	20.0	19.65	J	ug/L		98	55 - 135
Carbon disulfide	5.00	4.971		ug/L		99	65 - 160
Carbon tetrachloride	5.00	5.157		ug/L		103	75 - 140
Chlorobenzene	5.00	4.900		ug/L		98	80 - 120
Chloroethane	6.25	4.994		ug/L		80	75 - 140
Chloroform	5.00	4.531		ug/L		91	80 - 130
Chloromethane	6.26	4.606		ug/L		74	50 - 140
cis-1,2-Dichloroethene	5.00	4.998		ug/L		100	80 - 130
cis-1,3-Dichloropropene	5.00	5.443		ug/L		109	70 - 120
Dibromochloromethane	5.00	5.756		ug/L		115	70 - 120
Dibromomethane	5.00	5.685		ug/L		114	80 - 130
Dichlorodifluoromethane	6.24	3.354		ug/L		54	30 - 180
Ethylbenzene	5.00	4.976		ug/L		100	80 - 125
Hexachlorobutadiene	5.00	5.953		ug/L		119	75 - 135
Iodomethane	5.00	5.364		ug/L		107	60 - 160
Isopropylbenzene	5.00	5.442		ug/L		109	75 - 120
1,1,1,2-Tetrachloroethane	5.00	5.417		ug/L		108	75 - 125
Methyl tert-butyl ether	5.00	5.332		ug/L		107	75 - 120
1,1,2,2-Tetrachloroethane	5.01	4.552		ug/L		91	75 - 125
Methylene Chloride	5.00	4.693		ug/L		94	60 - 145
m-Xylene & p-Xylene	5.00	5.232		ug/L		105	80 - 130
Naphthalene	5.00	5.514		ug/L		110	45 - 130
n-Butylbenzene	5.00	5.480		ug/L		110	75 - 125
n-Hexane	5.00	4.822		ug/L		96	60 - 140
N-Propylbenzene	5.00	5.087		ug/L		102	80 - 120
o-Xylene	5.00	5.296		ug/L		106	80 - 120
1,2,3-Trichlorobenzene	5.00	5.317		ug/L		106	60 - 125
4-Isopropyltoluene	5.00	5.104		ug/L		102	80 - 120
p-Isopropyltoluene	5.00	5.104		ug/L		102	80 - 120
1,2,4-Trichlorobenzene	5.00	5.556		ug/L		111	60 - 125
sec-Butylbenzene	5.00	5.410		ug/L		108	80 - 125

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-198252/6

Matrix: Water

Analysis Batch: 198252

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trichlorobenzene	5.00	5.398		ug/L		108	75 - 120
Styrene	5.00	5.823		ug/L		116	75 - 130
1,1,1-Trichloroethane	5.00	5.008		ug/L		100	80 - 140
1,1,2-Trichloroethane	5.00	5.002		ug/L		100	80 - 130
tert-Butylbenzene	5.00	5.694		ug/L		114	80 - 130
Tetrachloroethene	5.00	5.263		ug/L		105	40 - 180
1,2,3-Trichloropropane	5.00	4.923		ug/L		98	75 - 120
Toluene	5.00	4.993		ug/L		100	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.265		ug/L		105	65 - 120
trans-1,2-Dichloroethene	5.00	5.213		ug/L		104	80 - 140
trans-1,3-Dichloropropene	5.00	5.278		ug/L		105	60 - 140
1,2,4-Trimethylbenzene	5.00	5.431		ug/L		109	80 - 125
trans-1,4-Dichloro-2-butene	5.01	4.392		ug/L		88	40 - 140
1,3,5-Trimethylbenzene	5.00	5.487		ug/L		110	80 - 125
Trichloroethene	5.00	5.467		ug/L		109	80 - 130
Trichlorofluoromethane	6.26	4.176		ug/L		67	30 - 180
Vinyl acetate	12.5	13.98		ug/L		112	30 - 200

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		75 - 120
Dibromofluoromethane (Surr)	86		85 - 115
1,2-Dichloroethane-d4 (Surr)	72		70 - 128
Toluene-d8 (Surr)	99		75 - 125
Trifluorotoluene (Surr)	101		80 - 127

Lab Sample ID: LCSD 580-198252/7

Matrix: Water

Analysis Batch: 198252

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	5.00	5.657		ug/L		113	55 - 120	3	20
1,2-Dibromoethane	5.00	5.166		ug/L		103	70 - 130	2	20
1,2-Dichlorobenzene	5.00	5.274		ug/L		105	80 - 130	3	20
1,1-Dichloroethane	5.01	4.791		ug/L		96	75 - 135	5	20
1,3-Dichlorobenzene	5.00	5.158		ug/L		103	80 - 120	1	20
1,2-Dichloroethane	5.00	4.646		ug/L		93	80 - 140	3	20
1,4-Dichlorobenzene	5.00	4.976		ug/L		100	80 - 120	2	20
1,2-Dichloropropane	5.00	4.469		ug/L		89	80 - 120	1	20
1,3-Dichloropropane	5.00	4.527		ug/L		91	80 - 130	2	20
2-Butanone	20.0	18.95	J	ug/L		95	20 - 200	2	20
2,2-Dichloropropane	5.00	5.647		ug/L		113	60 - 150	12	20
2-Chlorotoluene	5.00	5.332		ug/L		107	75 - 130	0	20
1,1-Dichloropropene	5.00	5.594		ug/L		112	80 - 130	5	20
4-Chlorotoluene	5.00	5.453		ug/L		109	75 - 130	1	20
Acetone	20.0	10.02	J	ug/L		50	30 - 200	2	20
Benzene	5.00	4.981		ug/L		100	80 - 120	2	20
2-Hexanone	20.0	19.77	J	ug/L		99	52 - 160	1	20

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-198252/7

Matrix: Water

Analysis Batch: 198252

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromobenzene	5.00	5.301		ug/L		106	80 - 130	2	20
Bromochloromethane	5.00	5.870		ug/L		117	80 - 125	5	20
Bromodichloromethane	5.00	4.951		ug/L		99	80 - 125	0	20
Bromoform	5.00	5.224		ug/L		104	65 - 130	4	20
Bromomethane	6.24	5.141		ug/L		82	70 - 135	7	20
4-Methyl-2-pentanone	20.0	20.10		ug/L		101	55 - 135	2	20
Carbon disulfide	5.00	5.264		ug/L		105	65 - 160	6	20
Carbon tetrachloride	5.00	5.479		ug/L		109	75 - 140	6	20
Chlorobenzene	5.00	5.033		ug/L		101	80 - 120	3	20
Chloroethane	6.25	4.754		ug/L		76	75 - 140	5	20
Chloroform	5.00	4.810		ug/L		96	80 - 130	6	20
Chloromethane	6.26	4.643		ug/L		74	50 - 140	1	20
cis-1,2-Dichloroethene	5.00	5.239		ug/L		105	80 - 130	5	20
cis-1,3-Dichloropropene	5.00	5.436		ug/L		109	70 - 120	0	20
Dibromochloromethane	5.00	5.877		ug/L		117	70 - 120	2	20
Dibromomethane	5.00	5.900		ug/L		118	80 - 130	4	20
Dichlorodifluoromethane	6.24	3.689		ug/L		59	30 - 180	10	20
Ethylbenzene	5.00	5.190		ug/L		104	80 - 125	4	20
Hexachlorobutadiene	5.00	6.416		ug/L		128	75 - 135	7	20
Iodomethane	5.00	5.596		ug/L		112	60 - 160	4	20
Isopropylbenzene	5.00	5.731		ug/L		115	75 - 120	5	20
1,1,1,2-Tetrachloroethane	5.00	5.729		ug/L		115	75 - 125	6	20
Methyl tert-butyl ether	5.00	5.561		ug/L		111	75 - 120	4	20
1,1,2,2-Tetrachloroethane	5.01	4.584		ug/L		92	75 - 125	1	20
Methylene Chloride	5.00	4.818		ug/L		96	60 - 145	3	20
m-Xylene & p-Xylene	5.00	5.461		ug/L		109	80 - 130	4	20
Naphthalene	5.00	6.056		ug/L		121	45 - 130	9	20
n-Butylbenzene	5.00	5.629		ug/L		113	75 - 125	3	20
n-Hexane	5.00	5.005		ug/L		100	60 - 140	4	20
N-Propylbenzene	5.00	5.198		ug/L		104	80 - 120	2	20
o-Xylene	5.00	5.456		ug/L		109	80 - 120	3	20
1,2,3-Trichlorobenzene	5.00	5.622		ug/L		112	60 - 125	6	20
4-Isopropyltoluene	5.00	5.152		ug/L		103	80 - 120	1	20
p-Isopropyltoluene	5.00	5.152		ug/L		103	80 - 120	1	20
1,2,4-Trichlorobenzene	5.00	5.907		ug/L		118	60 - 125	6	20
sec-Butylbenzene	5.00	5.488		ug/L		110	80 - 125	1	20
1,3,5-Trichlorobenzene	5.00	5.726		ug/L		114	75 - 120	6	20
Styrene	5.00	5.871		ug/L		117	75 - 130	1	20
1,1,1-Trichloroethane	5.00	5.345		ug/L		107	80 - 140	6	20
1,1,2-Trichloroethane	5.00	5.113		ug/L		102	80 - 130	2	20
tert-Butylbenzene	5.00	5.710		ug/L		114	80 - 130	0	20
Tetrachloroethene	5.00	5.282		ug/L		106	40 - 180	0	20
1,2,3-Trichloropropane	5.00	5.094		ug/L		102	75 - 120	3	20
Toluene	5.00	5.099		ug/L		102	80 - 120	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.615		ug/L		112	65 - 120	6	20
trans-1,2-Dichloroethene	5.00	5.436		ug/L		109	80 - 140	4	20
trans-1,3-Dichloropropene	5.00	5.309		ug/L		106	60 - 140	1	20

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-198252/7
Matrix: Water
Analysis Batch: 198252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trimethylbenzene	5.00	5.524		ug/L		110	80 - 125	2	20
trans-1,4-Dichloro-2-butene	5.01	4.461		ug/L		89	40 - 140	2	20
1,3,5-Trimethylbenzene	5.00	5.599		ug/L		112	80 - 125	2	20
Trichloroethene	5.00	5.765		ug/L		115	80 - 130	5	20
Trichlorofluoromethane	6.26	4.653		ug/L		74	30 - 180	11	20
Vinyl acetate	12.5	13.94		ug/L		111	30 - 200	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	98		75 - 120
Dibromofluoromethane (Surr)	87		85 - 115
1,2-Dichloroethane-d4 (Surr)	72		70 - 128
Toluene-d8 (Surr)	98		75 - 125
Trifluorotoluene (Surr)	97		80 - 127

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-199204/13-A
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 199204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.0400		mg/L		08/27/15 13:05	08/28/15 04:36	1
Manganese	ND		0.00200		mg/L		08/27/15 13:05	08/28/15 04:36	1

Lab Sample ID: LCS 580-199204/14-A
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 199204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	22.0	22.01		mg/L		100	80 - 120
Manganese	1.00	0.9931		mg/L		99	80 - 120

Lab Sample ID: LCSD 580-199204/15-A
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 199204

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	22.0	22.22		mg/L		101	80 - 120	1	20
Manganese	1.00	0.9912		mg/L		99	80 - 120	0	20

Lab Sample ID: 580-52358-D-1-D MS
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 199204

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		22.0	22.37		mg/L		102	80 - 120
Manganese	ND		1.00	1.012		mg/L		101	80 - 120

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-52358-D-1-E MSD
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 199204

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Iron	ND		22.0	22.42		mg/L		102	80 - 120	0	20	
Manganese	ND		1.00	1.004		mg/L		100	80 - 120	1	20	

Lab Sample ID: 580-52358-D-1-C DU
Matrix: Water
Analysis Batch: 199268

Client Sample ID: Duplicate
Prep Type: Dissolved
Prep Batch: 199204

Analyte	Sample Result	Sample Qualifier	DU		Unit	D	RPD	Limit
			Result	Qualifier				
Iron	ND		ND		mg/L		NC	20
Manganese	ND		ND		mg/L		NC	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 580-197832/1
Matrix: Water
Analysis Batch: 197832

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB		RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	ND		10.0		mg/L			08/13/15 13:07	1

Lab Sample ID: LCS 580-197832/2
Matrix: Water
Analysis Batch: 197832

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Total Dissolved Solids	1000	1006		mg/L		101	80 - 120	

Lab Sample ID: 580-52384-1 DU
Matrix: Water
Analysis Batch: 197832

Client Sample ID: LB-081215-07
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU		Unit	D	RPD	Limit
			Result	Qualifier				
Total Dissolved Solids	ND		10.00		mg/L		NC	20

Lab Sample ID: 580-52384-3 DU
Matrix: Water
Analysis Batch: 197832

Client Sample ID: LB-081215-09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU		Unit	D	RPD	Limit
			Result	Qualifier				
Total Dissolved Solids	352		361.0		mg/L		3	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-197910/3
Matrix: Water
Analysis Batch: 197910

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrogen, Nitrate	ND		0.200		mg/L			08/13/15 08:14	1

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Lab Sample ID: LCS 580-197910/4
Matrix: Water
Analysis Batch: 197910

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrate	5.00	5.080		mg/L		102	90 - 110

Lab Sample ID: LCSD 580-197910/5
Matrix: Water
Analysis Batch: 197910

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrogen, Nitrate	5.00	5.080		mg/L		102	90 - 110	0	15

Lab Sample ID: 580-52358-B-5 MS
Matrix: Water
Analysis Batch: 197910

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrate	4.10		5.00	9.020		mg/L		98	90 - 110

Lab Sample ID: 580-52358-B-5 DU
Matrix: Water
Analysis Batch: 197910

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrogen, Nitrate	4.10		4.090		mg/L		0.2	10

Lab Sample ID: MB 580-197911/3
Matrix: Water
Analysis Batch: 197911

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MDL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.0400		mg/L			08/13/15 08:14	1

Lab Sample ID: LCS 580-197911/4
Matrix: Water
Analysis Batch: 197911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.86		mg/L		102	90 - 110

Lab Sample ID: LCSD 580-197911/5
Matrix: Water
Analysis Batch: 197911

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	50.88		mg/L		102	90 - 110	0	15

Lab Sample ID: 580-52358-B-5 MS
Matrix: Water
Analysis Batch: 197911

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.12		50.0	59.69		mg/L		103	90 - 110

TestAmerica Seattle

QC Sample Results

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-52358-B-5 DU
Matrix: Water
Analysis Batch: 197911

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	8.12		8.120		mg/L		0	10

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Lab Chronicle

Client: SCS Engineers
Project/Site: Lechner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Client Sample ID: LB-081215-07

Date Collected: 08/12/15 10:00

Date Received: 08/12/15 14:26

Lab Sample ID: 580-52384-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	198252	08/18/15 20:54	D1R	TAL SEA
Dissolved	Prep	3005A			199204	08/27/15 13:05	MKN	TAL SEA
Dissolved	Analysis	6020		1	199268	08/28/15 05:45	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197832	08/13/15 13:07	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197910	08/13/15 11:09	RSB	TAL SEA
Total/NA	Analysis	300.0		1	197911	08/13/15 11:09	RSB	TAL SEA

Client Sample ID: LB-081215-08

Date Collected: 08/12/15 10:40

Date Received: 08/12/15 14:26

Lab Sample ID: 580-52384-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	198252	08/18/15 21:21	D1R	TAL SEA
Dissolved	Prep	3005A			199204	08/27/15 13:05	MKN	TAL SEA
Dissolved	Analysis	6020		1	199268	08/28/15 05:49	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197832	08/13/15 13:07	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197910	08/13/15 11:24	RSB	TAL SEA
Total/NA	Analysis	300.0		1	197911	08/13/15 11:24	RSB	TAL SEA

Client Sample ID: LB-081215-09

Date Collected: 08/12/15 11:50

Date Received: 08/12/15 14:26

Lab Sample ID: 580-52384-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	198252	08/18/15 21:47	D1R	TAL SEA
Dissolved	Prep	3005A			199204	08/27/15 13:05	MKN	TAL SEA
Dissolved	Analysis	6020		1	199268	08/28/15 05:54	FCW	TAL SEA
Total/NA	Analysis	160.1		1	197832	08/13/15 13:07	JSM	TAL SEA
Total/NA	Analysis	300.0		1	197910	08/13/15 11:38	RSB	TAL SEA
Total/NA	Analysis	300.0		1	197911	08/13/15 11:38	RSB	TAL SEA

Client Sample ID: Trip Blank

Date Collected: 08/12/15 09:40

Date Received: 08/12/15 14:26

Lab Sample ID: 580-52384-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	198252	08/18/15 20:28	D1R	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

Sample Summary

Client: SCS Engineers
Project/Site: Leichner Landfill

TestAmerica Job ID: 580-52384-2
SDG: 04215030.01/16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-52384-1	LB-081215-07	Water	08/12/15 10:00	08/12/15 14:26
580-52384-2	LB-081215-08	Water	08/12/15 10:40	08/12/15 14:26
580-52384-3	LB-081215-09	Water	08/12/15 11:50	08/12/15 14:26
580-52384-6	Trip Blank	Water	08/12/15 09:40	08/12/15 14:26

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580-52384 Chain of Custody

Regulatory Program: DW NPDES RCRA Other:

Project Manager: Jason Dwyer
Tel/Fax: 503 639 9548
Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
TAT if different from Below: _____
 2 weeks 1 week 2 days 1 day

Client Contact
Your Company Name here: SCS Engineers
Address: 19445 SW Sawyer Park, Suite 180
City/State/Zip: Portland, OR, 97224
(xxx) xxx-xxxx Phone: 503 639 9548
(xxx) xxx-xxxx FAX
Project Name: Lechner Landfill
Site: 0415030.01/16
P O #

Site Contact: R. McMullen Date: 8/12/15
Lab Contact: Sarah Murphy Carrier: _____
COC# No: 7 of 1 COCs

For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:
Sampler: R. McMullen
Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	8060 VOA's	Disolved Metals (Fe and Mn)	TDS	Chloride	Nitrate
LB-081215-07	8/15	1000	G	W	7	X	X	X	X	X	X	X
LB-081215-08	8/15	1040	G	W	7	X	X	X	X	X	X	X
LB-081215-09	8/15	1150	G	W	7	X	X	X	X	X	X	X
Trip Blank	8/15	0940	-	W	1	X	X	X	X	X	X	X

Preservation Used: Ice, HC1, H2SO4, HNO3, NaOH, Other: _____

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard Flammable Skin Irritant Poison B Unknown

Return to Client Disposal by Lab Archive for _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Special Instructions/QC Requirements & Comments: 0.6 R/P-L

Custody Seals Intact: Yes No

Relinquished by: R. McMullen
Relinquished by: _____
Relinquished by: _____

Received by: _____
Received by: _____
Received by: _____

Company: SCS
Company: SCS
Company: _____

Date/Time: 8/15/15
Date/Time: 8/15/15
Date/Time: 8/15/15

Cooler Temp. (°C): Obs'd: _____
Therm ID No.: _____

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 580-52384-1
SDG Number: 04215030.01/16

Login Number: 52384
List Number: 1
Creator: Gonzales, Steve

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

APPENDIX D

2015 Groundwater Elevation Data And Groundwater Elevation Hydrographs

Table D-1
2015 Groundwater Elevation Data
Leichner Landfill

Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-R2	2/17/2015	222.27	47.15	175.12
LB-R2	8/10/2015	222.27	48.51	173.76
LB-1S	2/17/2015	210.12	34.94	175.18
LB-1S	8/10/2015	210.12	36.22	173.90
LB-1D	2/17/2015	209.74	37.13	172.61
LB-1D	8/10/2015	209.74	39.28	170.46
LB-3S	2/17/2015	218.25	40.38	177.87
LB-3S	8/10/2015	218.25	41.62	176.63
LB-3D	2/17/2015	219.29	41.35	177.94
LB-3D	8/10/2015	219.29	42.60	176.69
LB-5S	2/17/2015	206.89	16.18	190.71
LB-5S	8/10/2015	206.89	16.95	189.94
LB-5C	2/17/2015	206.70	34.41	172.29
LB-5C	8/10/2015	206.70	35.96	170.74
LB-5D	2/17/2015	207.56	38.79	168.77
LB-5D	8/10/2015	207.56	40.62	166.94
LB-6S	2/17/2015	202.80	28.67	174.13
LB-6S	8/10/2015	202.80	30.01	172.79
LB-9S(R)	2/17/2015	217.94	37.08	180.86
LB-9S(R)	8/10/2015	217.94	30.48	187.46
LB-10SR	2/17/2015	204.04	32.55	171.49
LB-10SR	8/10/2015	204.04	34.16	169.88
LB-10CR	2/17/2015	203.05	31.44	171.61
LB-10CR	8/10/2015	203.05	33.05	170.00
LB-10DR	2/17/2015	203.36	44.00	159.36
LB-10DR	8/10/2015	203.36	47.97	155.39
LB-13I	2/17/2015	202.36	29.28	173.08
LB-13I	8/10/2015	202.36	30.66	171.70
LB-13C	2/17/2015	202.68	29.70	172.98
LB-13C	8/10/2015	202.68	31.10	171.58
LB-13D	2/17/2015	202.96	30.07	172.89
LB-13D	8/10/2015	202.96	31.50	171.46

**Table D-1
2015 Groundwater Elevation Data
Leichner Landfill**

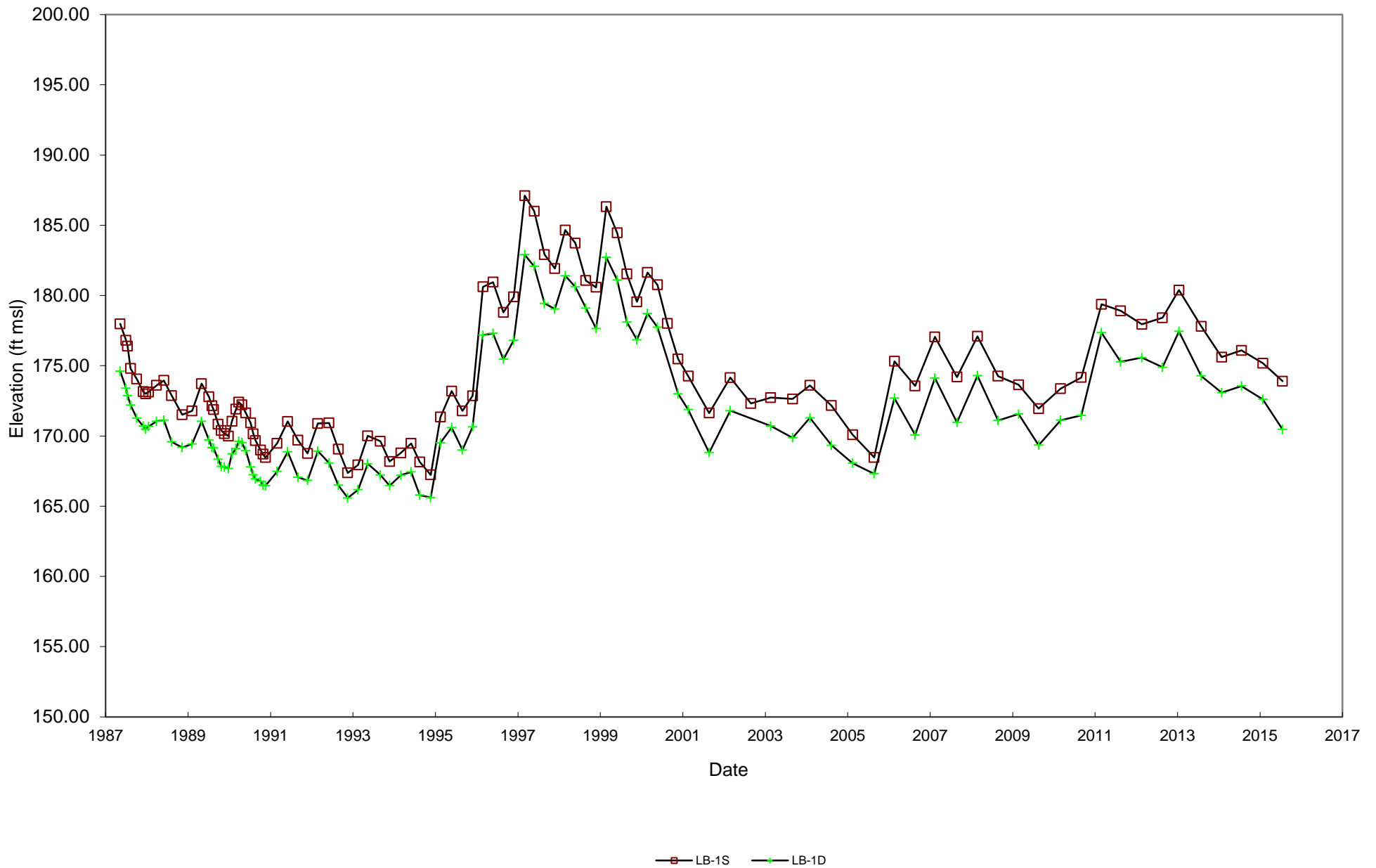
Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
LB-17S	2/17/2015	208.18	32.91	175.27
LB-17S	8/10/2015	208.18	34.31	173.87
LB-17I	2/17/2015	213.14	38.04	175.10
LB-17I	8/10/2015	213.14	39.41	173.73
LB-17C	2/17/2015	206.55	31.70	174.85
LB-17C	8/10/2015	206.55	33.06	173.49
LB-17D	2/17/2015	213.17	38.87	174.30
LB-17D	8/10/2015	213.17	40.27	172.90
LB-20S	2/17/2015	218.62	41.75	176.87
LB-20S	8/10/2015	218.62	42.85	175.77
LB-21S	2/17/2015	223.35	39.05	184.30
LB-21S	8/10/2015	223.35	40.40	182.95
LB-21C	2/17/2015	223.32	39.48	183.84
LB-21C	8/10/2015	223.32	40.81	182.51
LB-21D	2/17/2015	223.63	42.22	181.41
LB-21D	8/10/2015	223.63	43.90	179.73
LB-22S	2/17/2015	208.42	7.90	200.52
LB-22S	8/10/2015	208.42	6.23	202.19
LB-23S	2/17/2015	229.19	32.41	196.78
LB-23S	8/10/2015	229.19	33.29	195.90
LB-24S	2/17/2015	235.13	39.86	195.27
LB-24S	8/10/2015	235.13	40.62	194.51
LB-26I	2/17/2015	200.22	26.69	173.53
LB-26I	8/10/2015	200.22	28.03	172.19
LB-26D	2/17/2015	200.75	26.51	174.24
LB-26D	8/10/2015	200.75	27.86	172.89
LB-27I	2/17/2015	205.35	32.62	172.73
LB-27I	8/10/2015	205.35	34.07	171.28
LB-27D	2/17/2015	204.63	38.74	165.89
LB-27D	8/10/2015	204.63	40.76	163.87
MW-1 N	2/17/2015	216.58	Dry	NA
MW-1 N	8/10/2015	216.58	Dry	NA

Table D-1
2015 Groundwater Elevation Data
Leichner Landfill

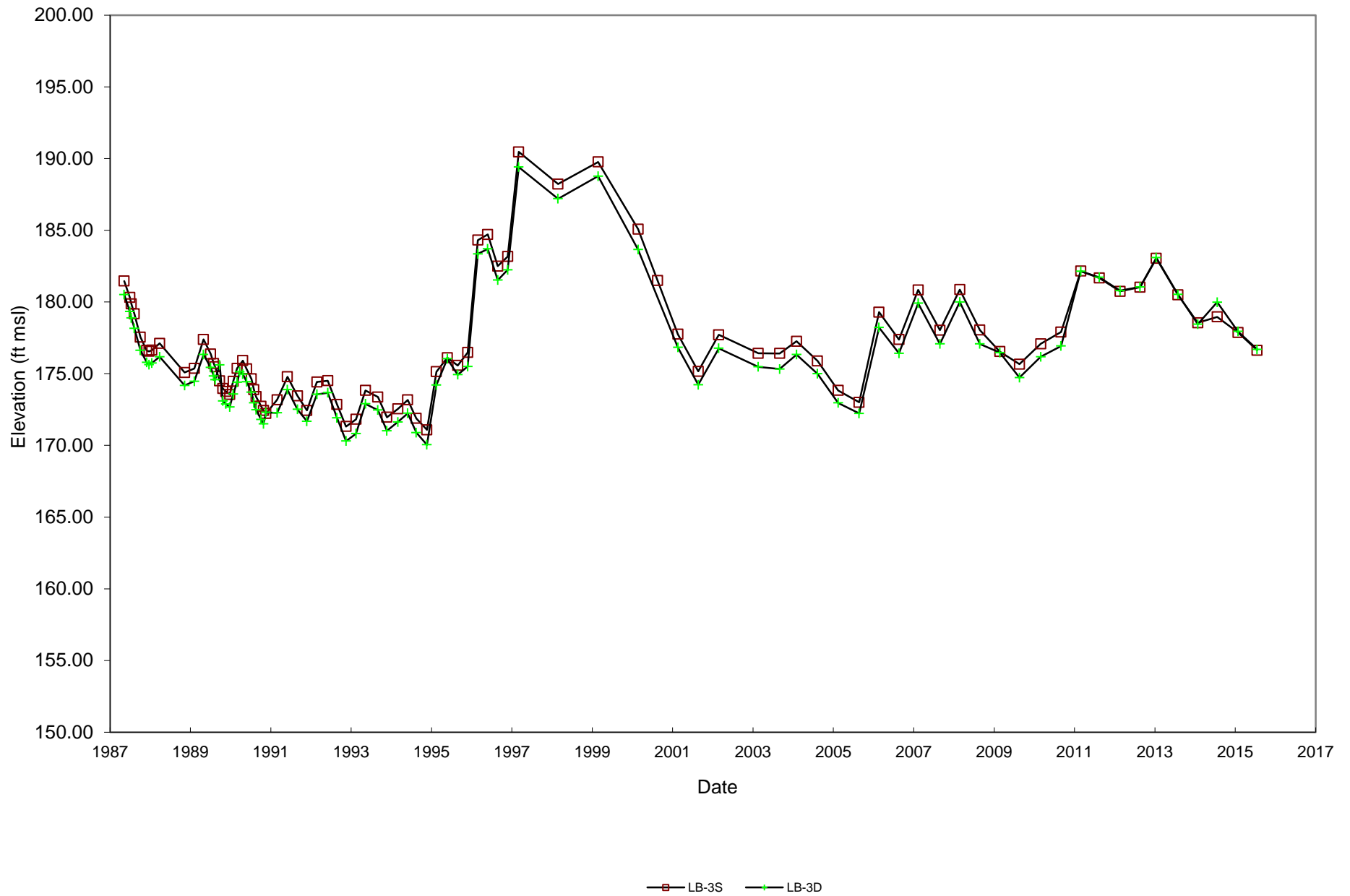
Monitoring Well	Date	Reference Elevation (feet, AMSL)	Depth to Groundwater (feet, BTOC)	Groundwater Elevation (feet, AMSL)
MW-1 S	2/17/2015	216.13	39.35	176.78
MW-1 S	8/10/2015	216.13	40.58	175.55
MW-1 E	2/17/2015	216.45	Dry	NA
MW-1 E	8/10/2015	216.45	Dry	NA
MW-NE	2/17/2015	220.06	15.60	204.46
MW-NE	8/10/2015	220.06	16.99	203.07

Notes:
 AMSL = above mean sea level; BTOC = below top of casing; NA = not applicable.

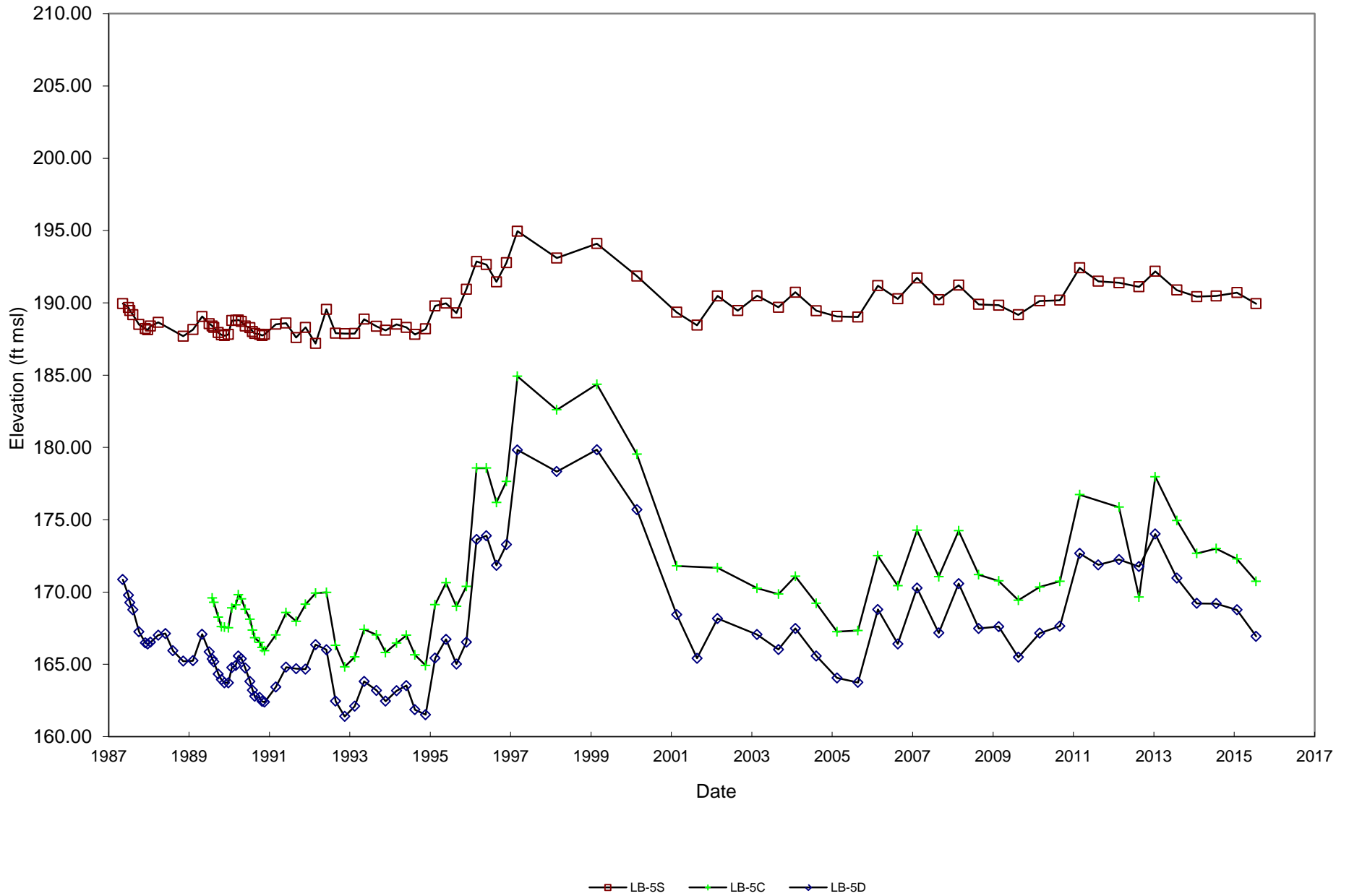
LB-1S and LB-1D Hydrographs Leichner Landfill



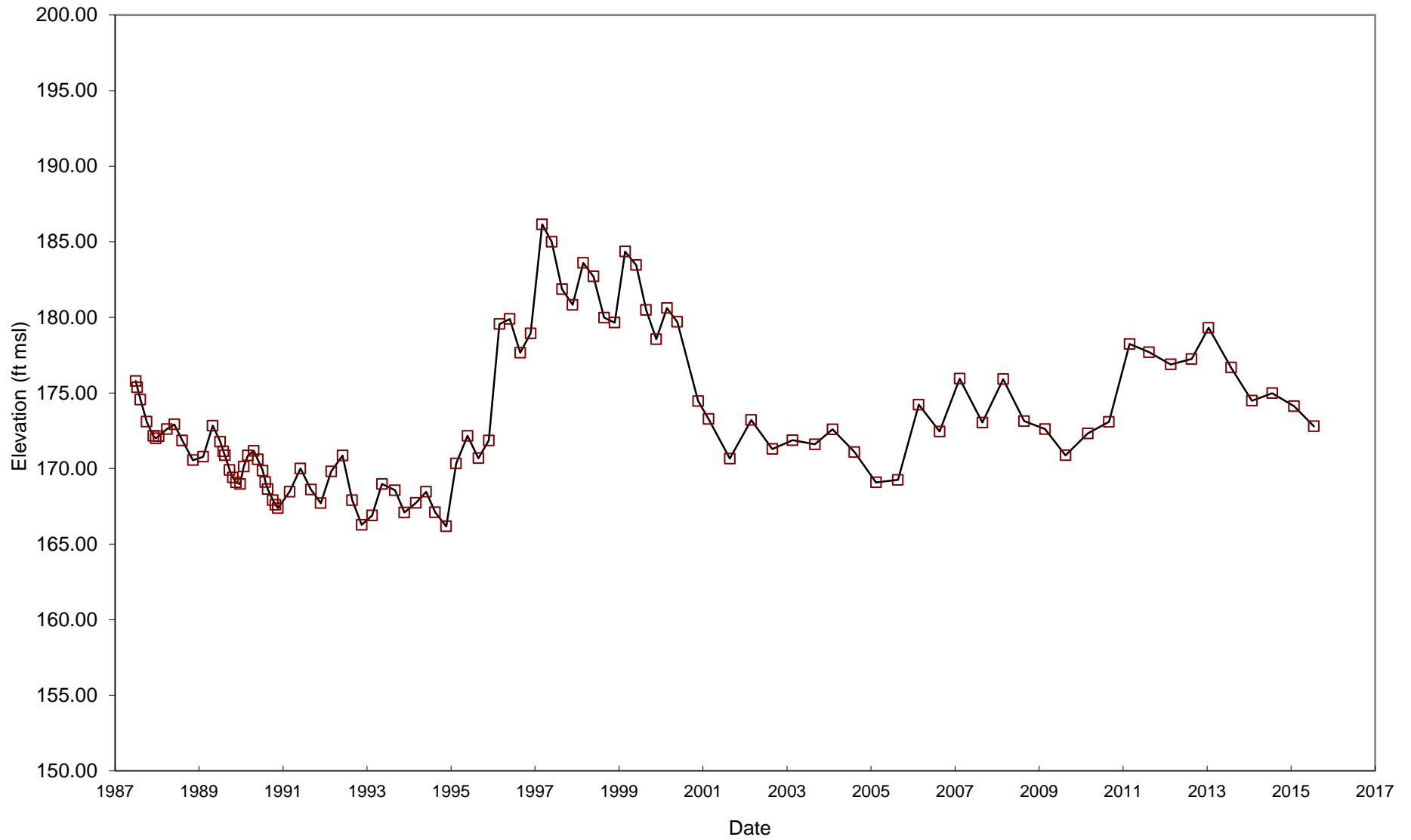
LB-3S and LB-3D Hydrographs Leichner Landfill



LB 5S, LB-5C, and LB-5D Hydrographs Leichner Landfill

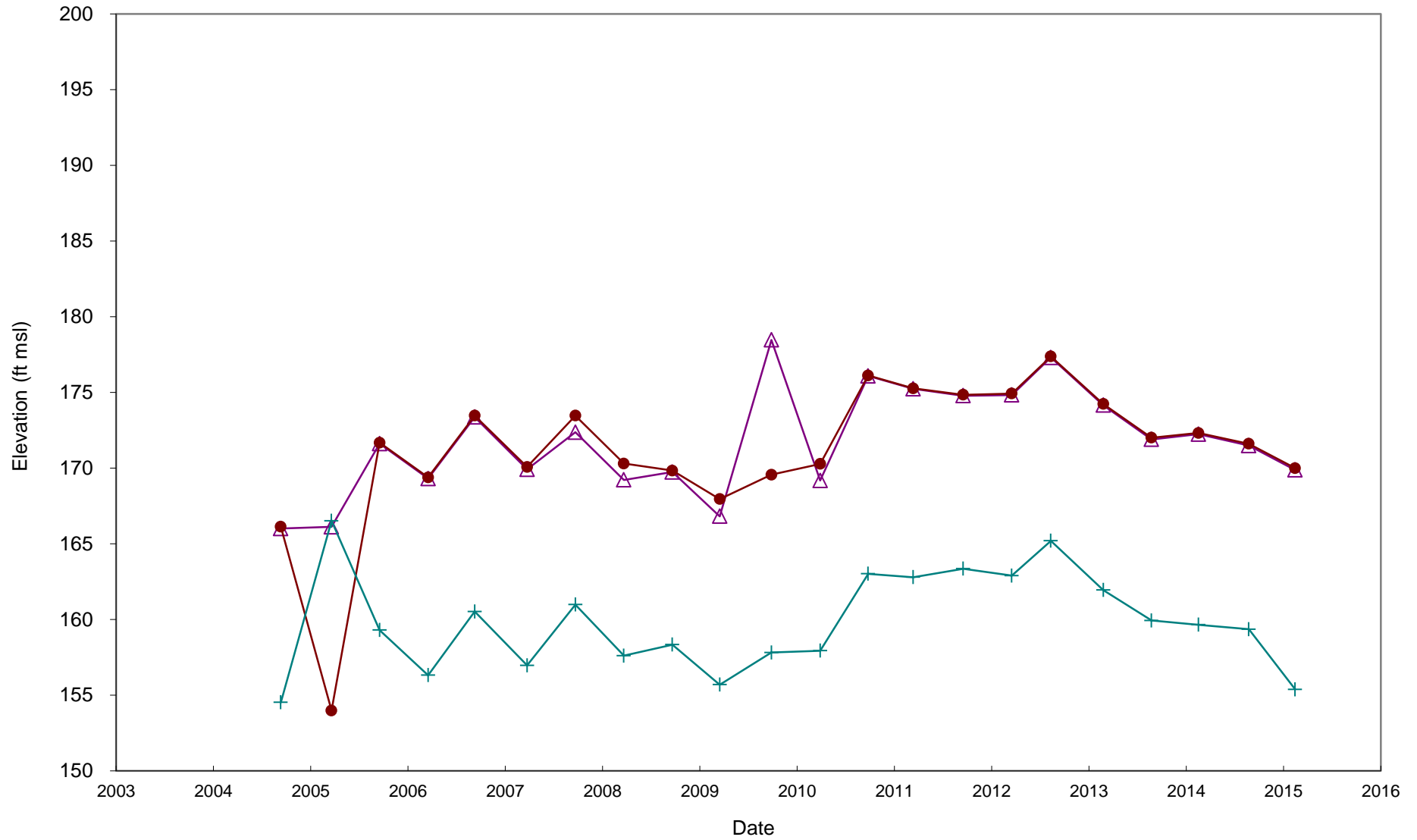


LB-6S Hydrograph Leichner Landfill



—■— LB-6S

LB-10SR, LB-10CR, and LB-10DR Hydrographs Leichner Landfill

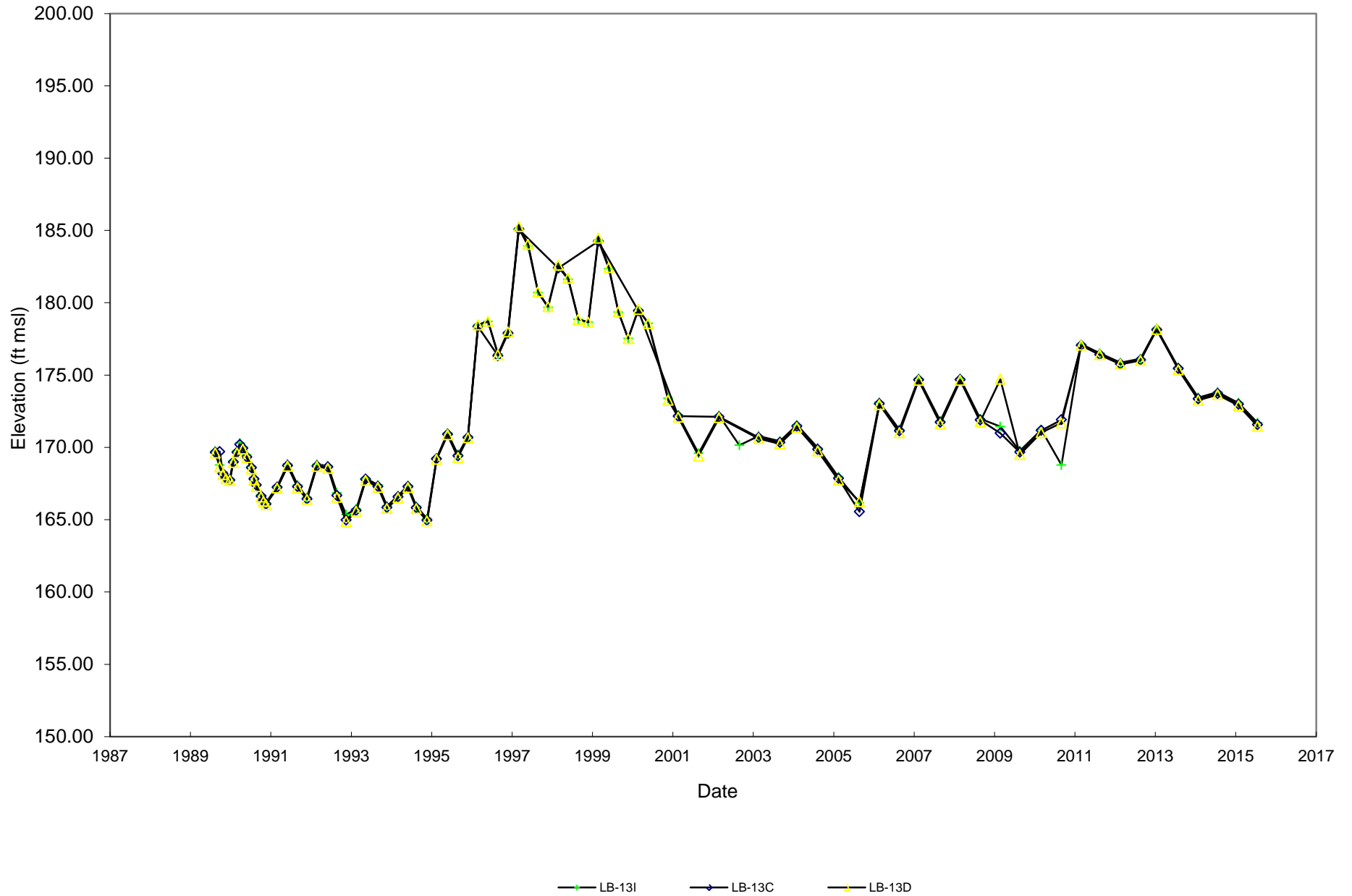


—▲— LB-10SR

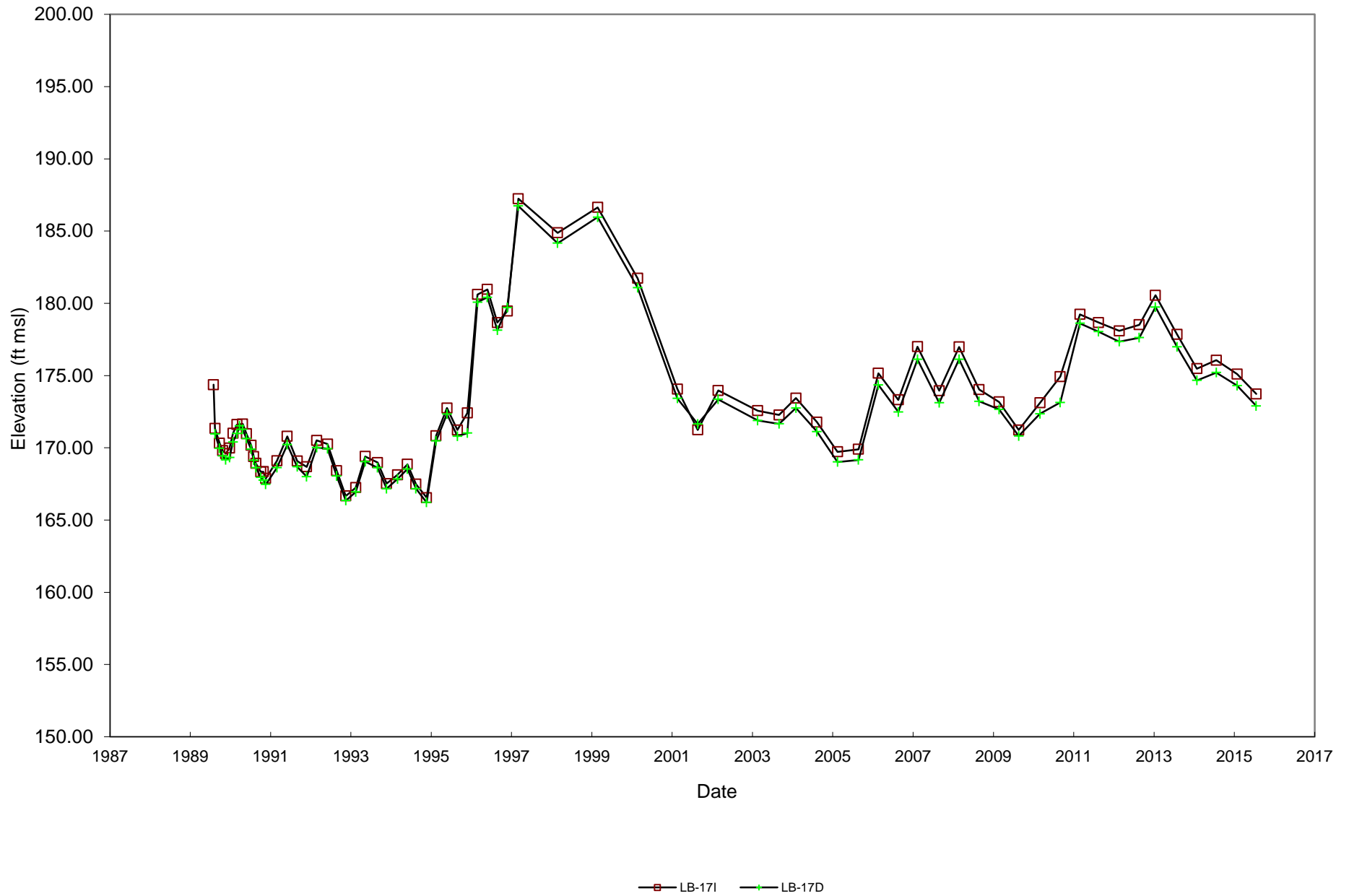
—●— LB-10CR

—+— LB-10DR

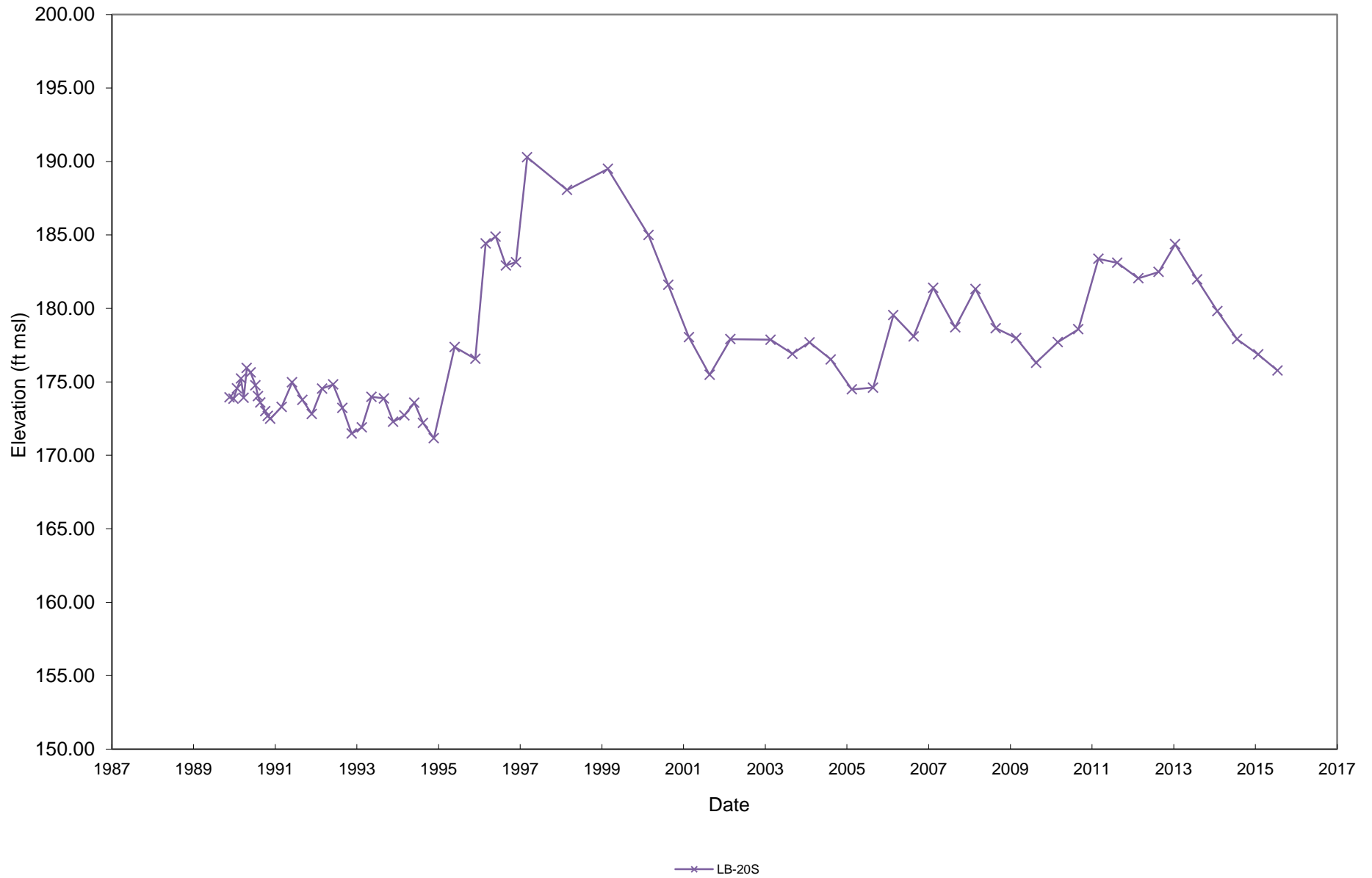
LB-13I, LB-13C, and LB-13D Hydrographs Leichner Landfill



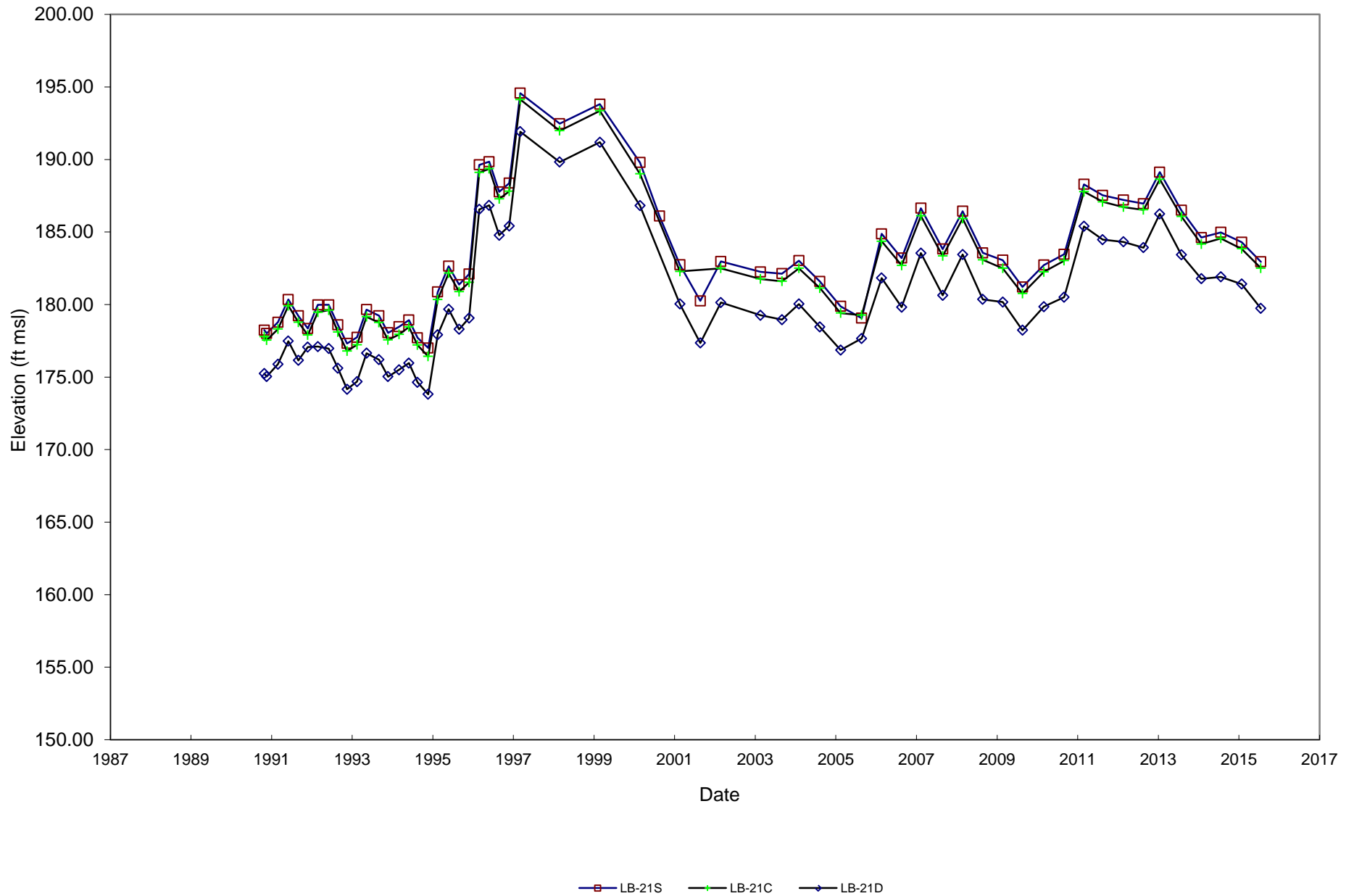
LB-17I and LB-17D Hydrographs Leichner Landfill



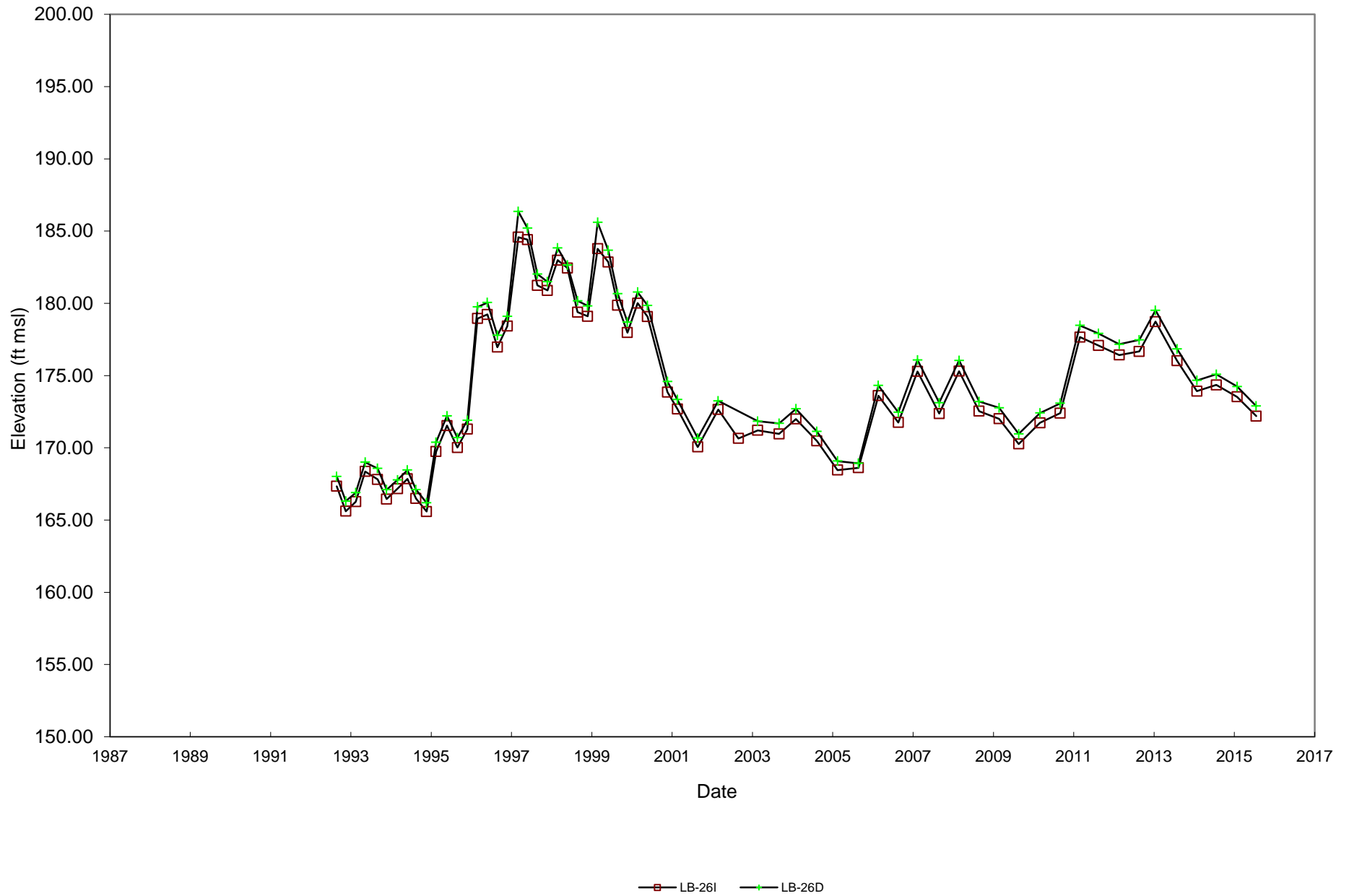
LB-20S Hydrograph Leichner Landfill



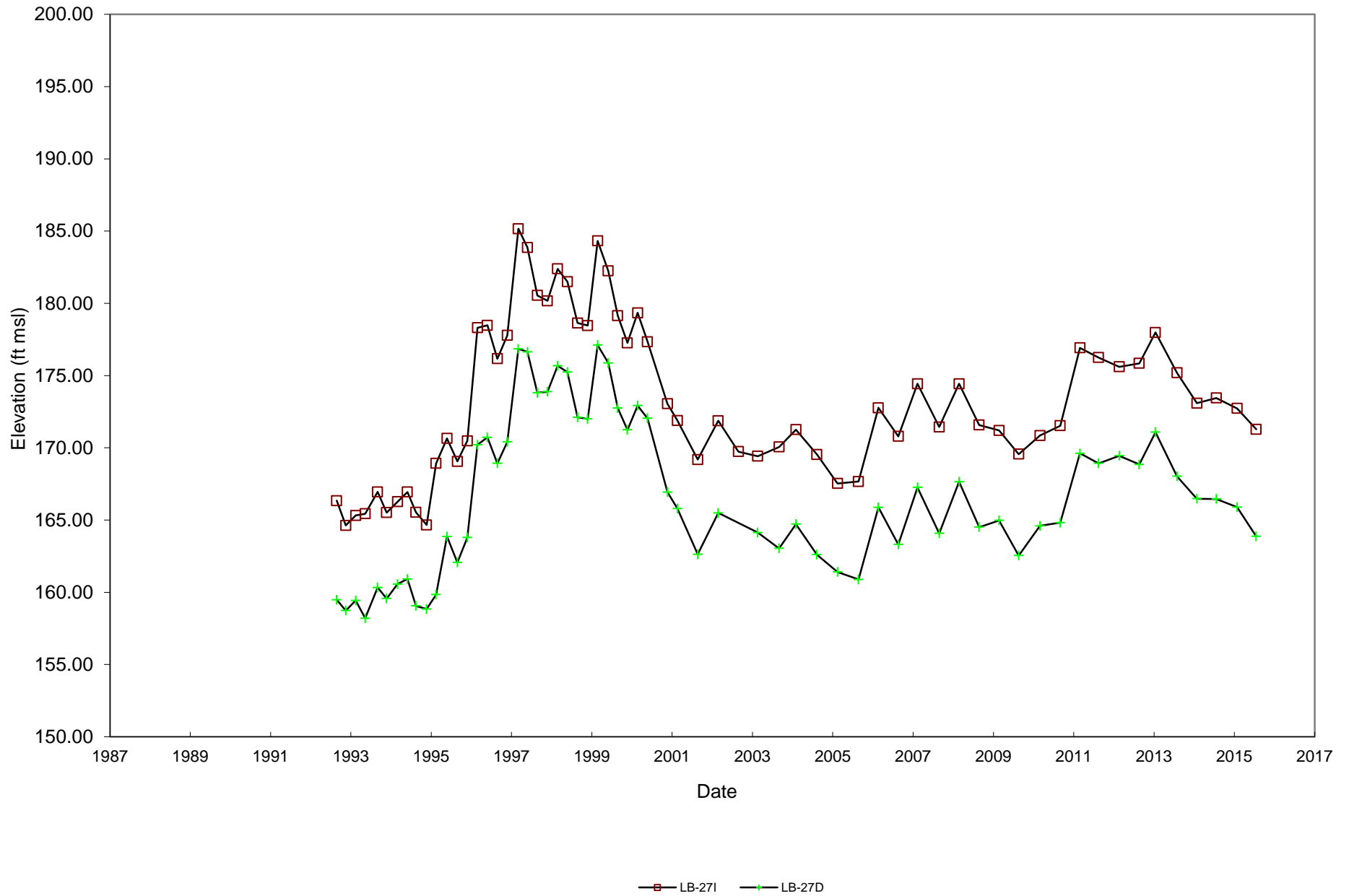
LB-21S, LB-21C, and LB-21D Hydrographs Leichner Landfill



LB-26I and LB-26D Hydrographs Leichner Landfill



LB-27I and LB-27D Hydrographs Leichner Landfill



APPENDIX E

Quality Assurance/Quality Control Reviews of 2015 Laboratory Analytical Data

First Quarter (February) 2015 QA/QC Reviews

**SCS Engineers QA/QC Review
Groundwater - 1Q 2015 Groundwater Monitoring Event
Leichner Brothers Landfill
Test America-Beaverton Report No. 250-24580-1**

Samples: LB-021715-01 (LB-5D), LB-021715-02 (LB-27D), LB-021715-03 (LB-13D), LB-021715-04 (LB-26D), LB-021715-05 (LB-17D), LB-021715-06 (LB-17D/DUP1), LB-021715-07 (LB-3D), LB-021715-08 (LB-3D/FB1).

Sample Date: 02/17/2015
Laboratory Sample Received Date: 02/18/2015
Sample Receipt Temperature: 4.1°C
Laboratory Data Received Date: 03/03/2015
QA/QC Review Date: 04/21/2015 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries and surrogates were within QC limits except for benzene in batch 580-182888 (* Flag). This is noted and qualified in the case narrative.
LCSD	All relative percent differences (RPDs) were within QC limits except for trans-1,3-dichloropropene and 1,2,3-trichlorobenzene in batch 580-183438 (* Flags). These are noted and qualified in the case narrative.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All project-specific reporting limits were met.

Field QA/QC

Field/Equipment Blank

An equipment blank sample (LB-021815-08) was collected near monitoring well LB-3D on 02/17/2015 using lab supplied deionized water. All analytes were reported as non-detect.

Field Duplicate

A field duplicate sample LB-021715-06 (DUP1) was collected at monitoring well LB-17D (LB-021715-05) on 02/17/2015. All calculated RPDs were within 20%.

Trip Blank

A laboratory supplied trip blank was carried into the field on 02/17/2015 with all samples collected on the same date and returned to the lab for volatile organic compound (VOC) analysis. The trip blank had headspace when returned to the lab and therefore was not analyzed.

Notes

The continuing calibration verification (CCV) associated with batch 580-182888 recovered above the upper control limit for 2,2-dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Data Validation

Upon final review of lab report 250-24580-1 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/21/2015; TMA).

**SCS Engineers QA/QC Review
Groundwater - 1Q 2015 Groundwater Monitoring Event
Leichner Brothers Landfill
Test America-Beaverton Report No. 250-24604-1**

Samples: LB-021815-09 (LB-5S), LB-021815-10 (LB-27I), LB-021815-11 (LB-13I), LB-021815-12 (LB-26I), LB-021815-13 (LB-6S/DUP2), LB-021815-14 (LB-6S), LB-021815-15 (LB-17I), and trip blanks.

Sample Date: 02/18/2015
Laboratory Sample Received Date: 02/19/2015
Sample Receipt Temperature: 5.0°C
Laboratory Data Received Date: 03/03/2015
QA/QC Review Date: 04/21/2015 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries and surrogates were within QC limits except for benzene in batch 580-182888 (* Flag). This is noted and qualified in the case narrative.
LCSD	All relative percent differences (RPDs) were within QC limits except for trans-1,3-dichloropropene and 1,2,3-trichlorobenzene in batch 580-183438 (* Flags). These are noted and qualified in the case narrative.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All project-specific reporting limits were met.

Field QA/QC

Field Duplicate

A field duplicate sample LB-021815-13 (DUP2) was collected at monitoring well LB-6S (LB-021815-14) on 02/18/2015. All calculated RPDs were within 20%.

Trip Blank

A laboratory supplied trip blank was carried into the field on 02/18/2015 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, and all surrogate recoveries were within control limits.

Notes

The continuing calibration verification (CCV) associated with batch 580-182888 recovered above the upper control limit for 2,2-dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Data Validation

Upon final review of lab report 250-24604-1 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/21/2015; TMA).

**SCS Engineers QA/QC Review
Groundwater - 1Q 2015 Groundwater Monitoring Event
Leichner Brothers Landfill
Test America-Beaverton Report No. 250-24623-1**

Samples: LB-021915-16 (LB-1S), LB-021915-17 (LB-1D), LB-021915-18 (LB-20S), LB-021915-19 (LB-3S), LB-021915-20 (LB-10DR), LB-021915-21 (LB-10SR), and trip blanks.

Sample Date: 02/19/2015
Laboratory Sample Received Date: 02/20/2015
Sample Receipt Temperature: 1.4°C
Laboratory Data Received Date: 03/03/2015
QA/QC Review Date: 04/21/2015 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries and surrogates were within QC limits.
LCS D	All relative percent differences (RPDs) were within QC limits except for trans-1,3-dichloropropene and 1,2,3-trichlorobenzene in batch 580-183438 (* Flags). These are noted and qualified in the case narrative.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All project-specific reporting limits were met.

Field QA/QC

Trip Blank

A laboratory supplied trip blank was carried into the field on 02/19/2015 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, and all surrogate recoveries were within control limits.

Notes

The continuing calibration verification (CCV) analyzed in batch 580-182955 was outside the method criteria for bromoform. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

The continuing calibration verification (CCV) associated with batch 580-182955 recovered above the upper control limit for vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Data Validation

Upon final review of lab report 250-245623-1 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (04/21/2015; TMA).

Third Quarter (August) QA/QC Reviews

**SCS Engineers QA/QC Review
Groundwater - 3Q 2015 Groundwater Monitoring Event
Leichner Brothers Landfill
Test America-Beaverton Report No. 580-52310-1**

Samples: LB-081015-01 (LB-10SR) and trip blanks.

Sample Date: 08/10/2015

Laboratory Sample Received Date: 08/10/2015

Sample Receipt Temperature: 2.3°C

Laboratory Data Received Date: 08/24/2015

QA/QC Review Date: 08/24/2015 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries and surrogates were within QC limits.
LCSD	All relative percent differences (RPDs) were within QC limits except for acetone in batch 580-197966 (* Flag). This is noted and qualified in the case narrative.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All project-specific reporting limits were met.

Field QA/QC

Field Duplicate

Trip Blank

A laboratory supplied trip blank was carried into the field on 08/10/2015 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, and all surrogate recoveries were within control limits.

Notes

The continuing calibration verification (CCV) associated with batch 580-197966 recovered above the upper control limit for 2-methyl-2-propanol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Data Validation

Upon final review of lab report 580-52310-1 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (08/24/2015; TMA).

**SCS Engineers QA/QC Review
Groundwater - 3Q 2015 Groundwater Monitoring Event
Leichner Brothers Landfill
Test America-Beaverton Report No. 580-52358-1**

Samples: LB-081115-02 (LB-1S), LB-081115-03 (LB-6S), LB-081115-04 (LB-6S/DUP1), LB-081115-05 (LB-13I), LB-081115-06 (LB-26I), and trip blank.

Sample Date: 08/11/2015

Laboratory Sample Received Date: 08/11/2015

Sample Receipt Temperature: 1.1°C

Laboratory Data Received Date: 08/24/2015

QA/QC Review Date: 08/25/2015 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect. It should be noted that method blank 580-198252 contained multiple analytes above the method detection limit. The target analyte concentrations were less than the reporting limit; therefore, re-extraction and reanalysis of the sample was not performed.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries and surrogates were within QC limits.
LCSD	All relative percent differences (RPDs) were within QC limits except for acetone in batch 580-197966 (* Flag). This is noted and qualified in the case narrative.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All project-specific reporting limits were met.

Field QA/QC

Field Duplicate

A field duplicate sample LB-081115-04 (DUP1) was collected at monitoring well LB-6S (LB-0081115-03) on 08/11/2015. All calculated RPDs were within 20% except for dissolved iron (90.41%). It should be noted that the concentrations of dissolved iron detected in the LB-6S and DUP1 samples were less than 5 times the reporting limit value; consequently, these results are not controlled by RPDs..

Trip Blank

A laboratory supplied trip blank was carried into the field on 08/11/2015 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, and all surrogate recoveries were within control limits.

Notes

The continuing calibration verification (CCV) associated with batch 580-197966 recovered above the upper control limit for 2-methyl-2-propanol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Data Validation

Upon final review of lab report 580-52358-1 for Leichner Landfill, SCS Engineers finds the data are valid for their intended use (08/25/2015; TMA).

**SCS Engineers QA/QC Review
Groundwater - 3Q 2015 Groundwater Monitoring Event
Leichner Brothers Landfill
Test America-Beaverton Report No. 580-52384-1**

Samples: LB-0081215-08 (LB-5S), LB-081215-07 (LB-5S/FB1), LB-081215-09 (LB-27I), and trip blank.

Sample Date: 08/12/2015

Laboratory Sample Received Date: 08/12/2015

Sample Receipt Temperature: 0.6°C

Laboratory Data Received Date: 08/24/2015

QA/QC Review Date: 08/25/2015 (TMA)

VOCs

Method Blanks	All analytes were reported as non-detect. It should be noted that method blank 580-198252 contained multiple analytes above the method detection limit. The target analyte concentrations were less than the reporting limit; therefore, re-extraction and reanalysis of the sample was not performed.
Surrogates	All sample surrogates were within QC limits.
LCS	All % recoveries and surrogates were within QC limits.
LCSD	All relative percent differences (RPDs) were within QC limits.

Dissolved Metals

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries were within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.

General Chemistry

Method Blanks	All analytes were reported as non-detect.
LCS	All % recoveries within control limits.
Matrix Spikes	All % recoveries were within QC limits.
MSD	All RPDs were within QC limits.
Duplicates	All RPDs were within QC limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All project-specific reporting limits were met.

Field QA/QC

Field/Equipment Blank

An equipment blank sample (LB-081215-07) was collected near monitoring well LB-5S on 08/12/2015 using lab supplied deionized water. All analytes were reported as non-detect.

Trip Blank

A laboratory supplied trip blank was carried into the field on 08/12/2015 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, and all surrogate recoveries were within control limits.

Notes

None.

Data Validation

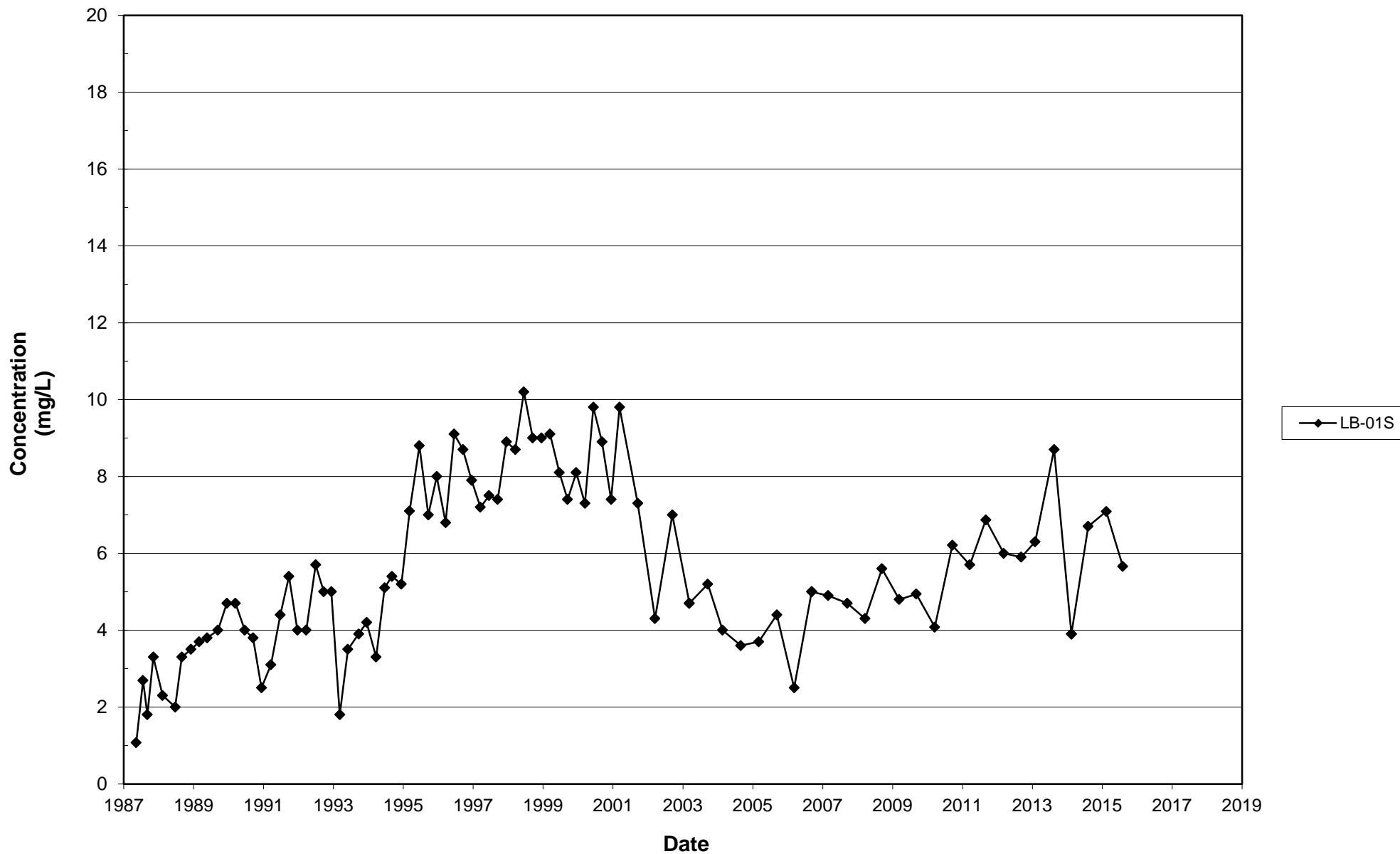
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APPENDIX F

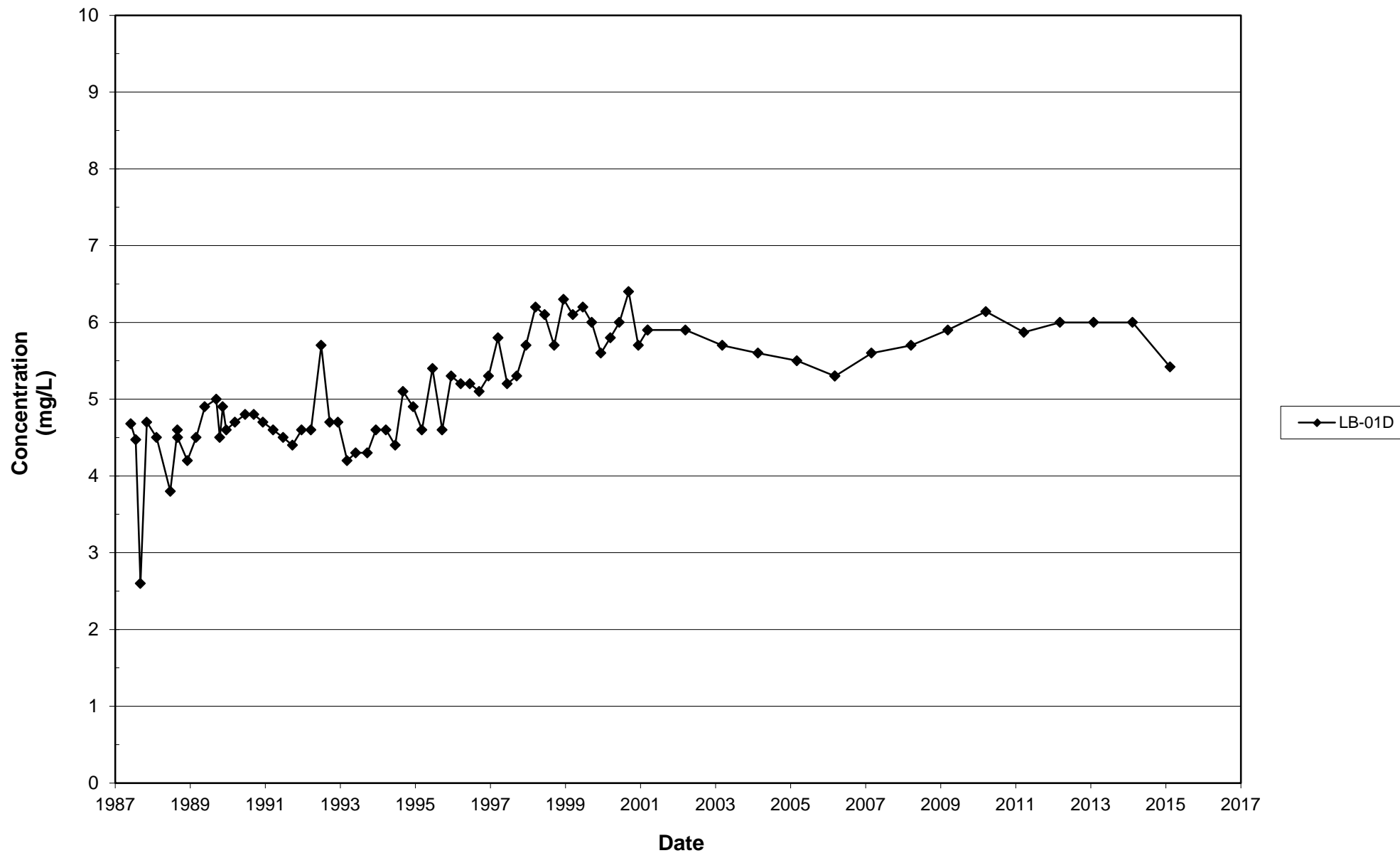
Groundwater Time-Concentration Graphs

Nitrate

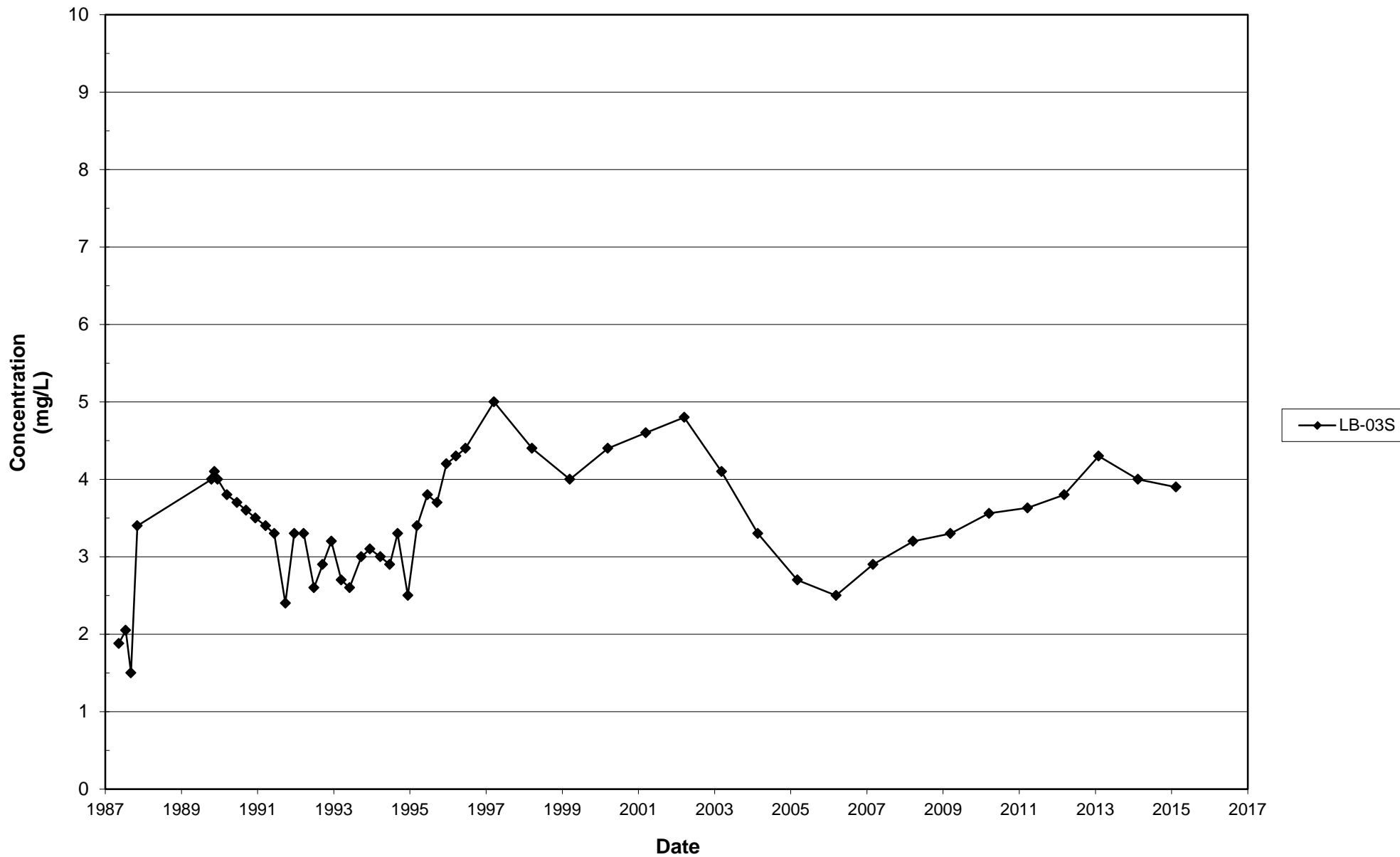
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Nitrate, LB-01S
1987 - 2015



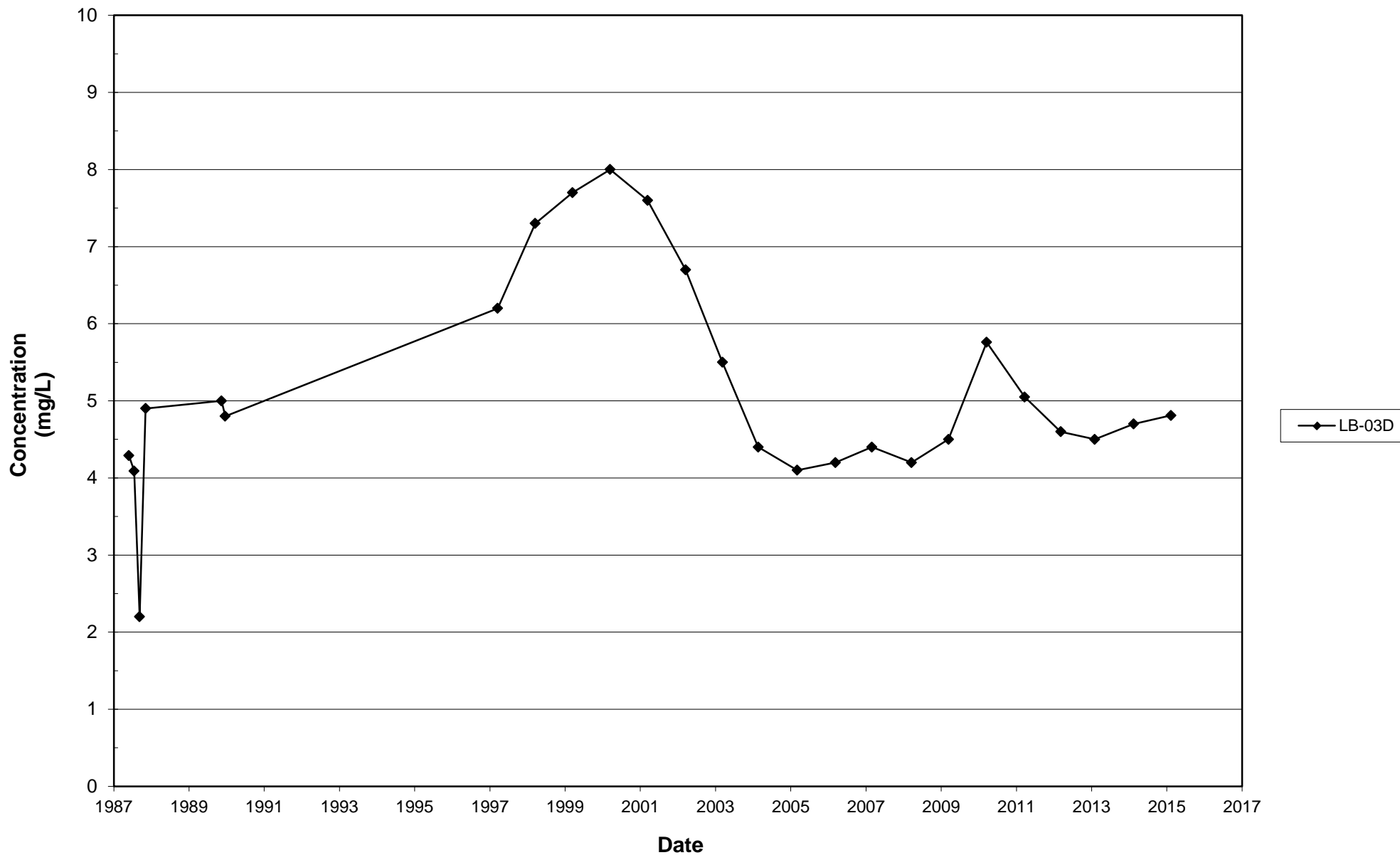
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1987 - 2015



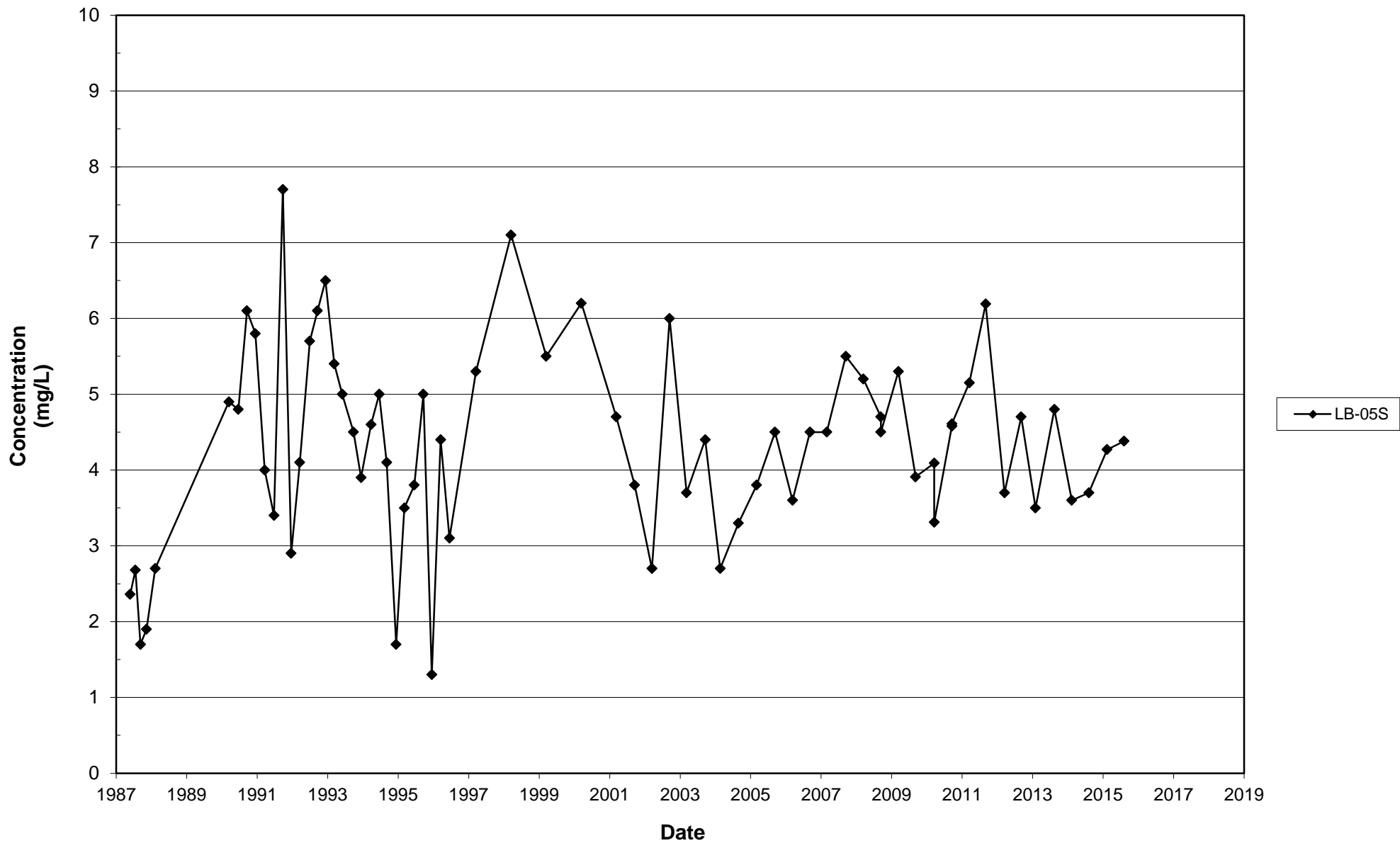
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1987 - 2015



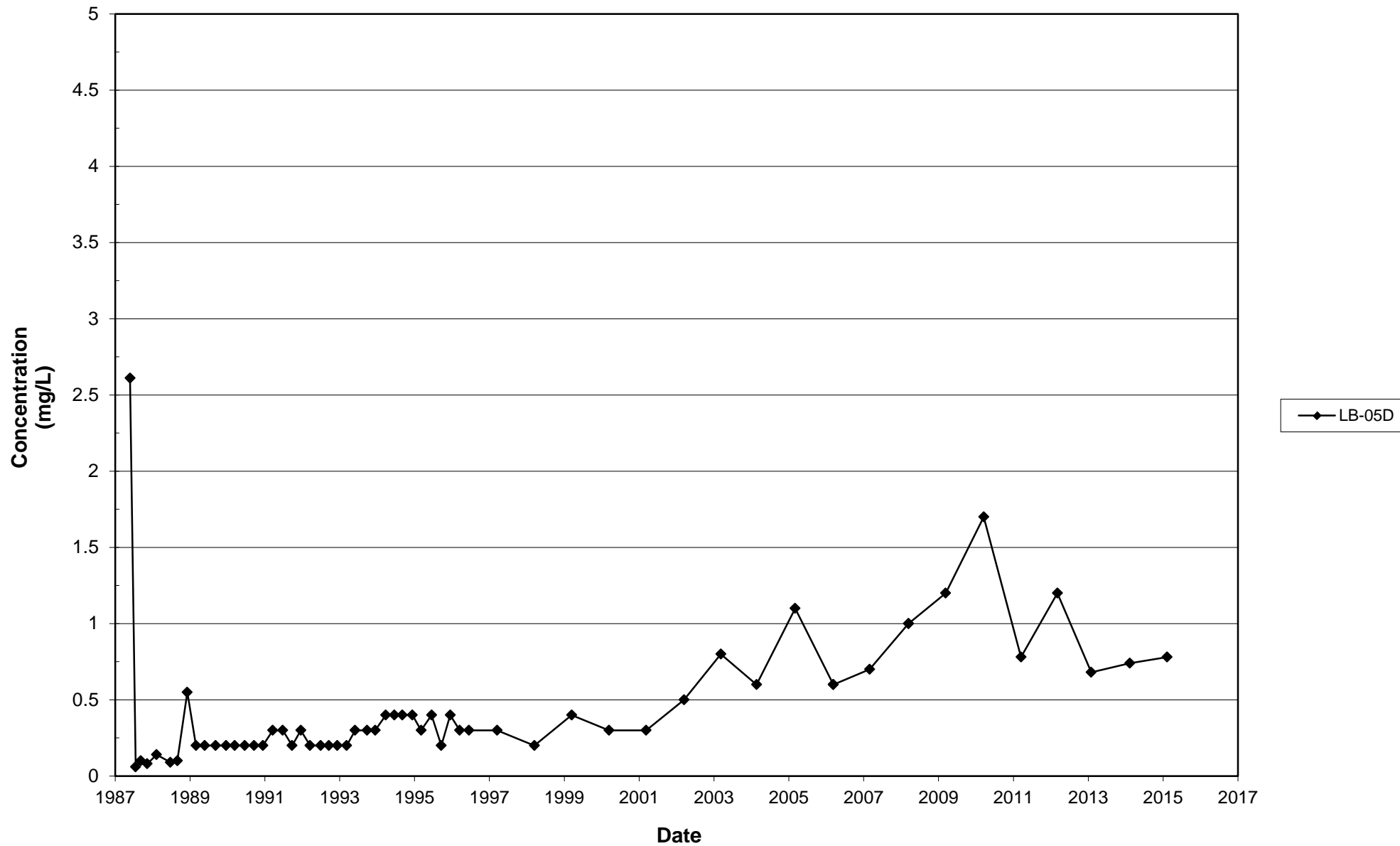
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1987 - 2015



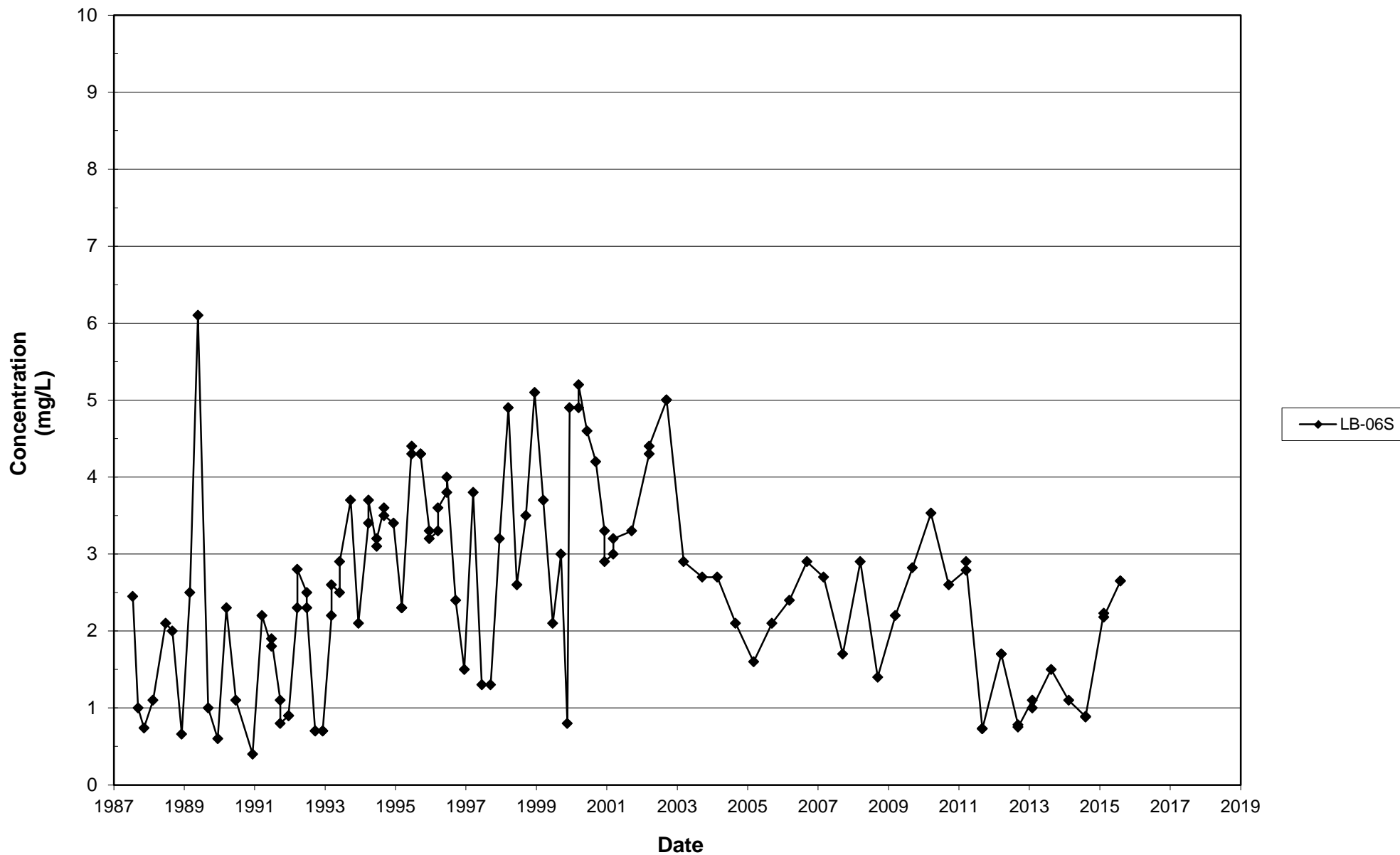
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1987 - 2015



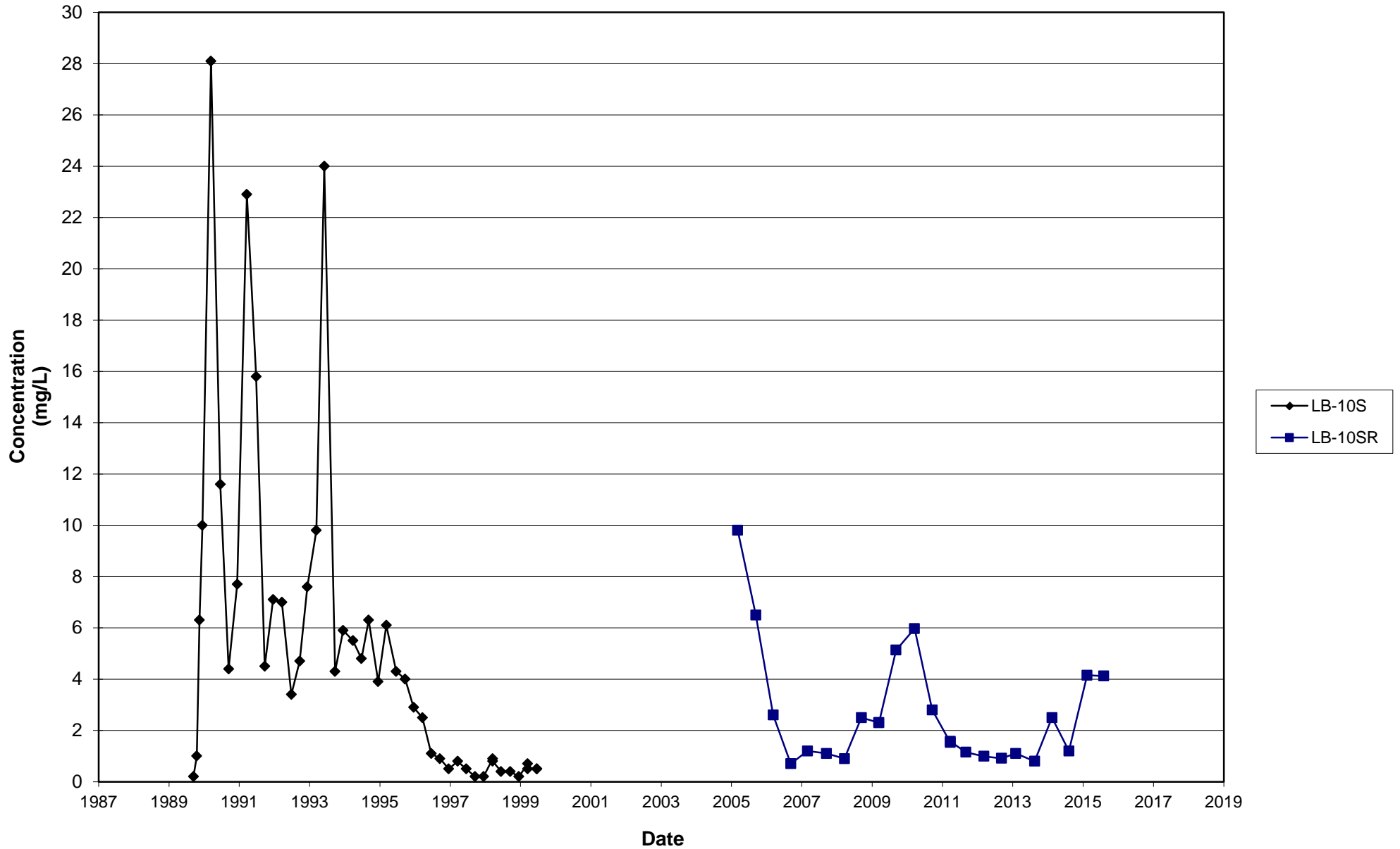
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1987 - 2015



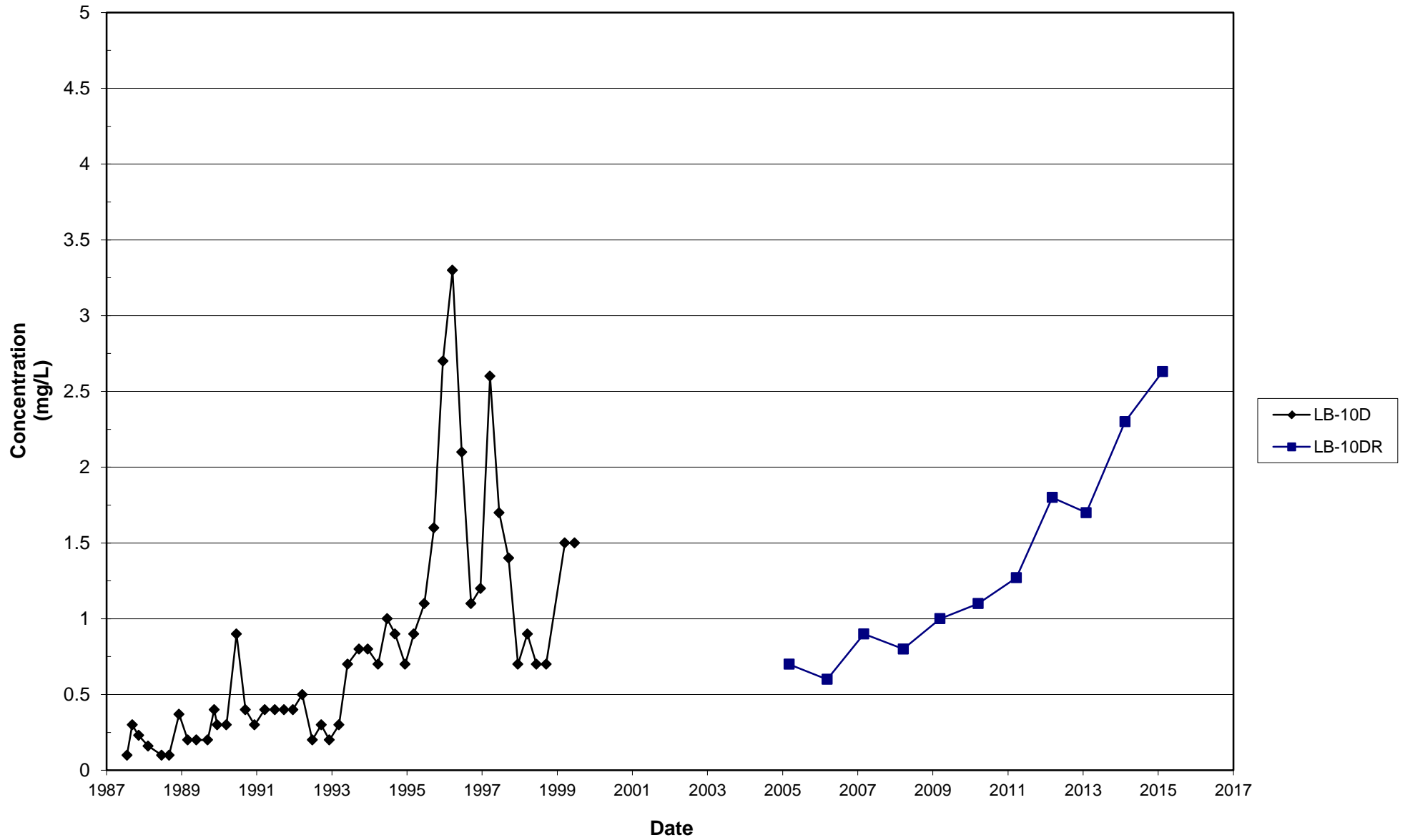
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Nitrate, LB-06S
1987 - 2015



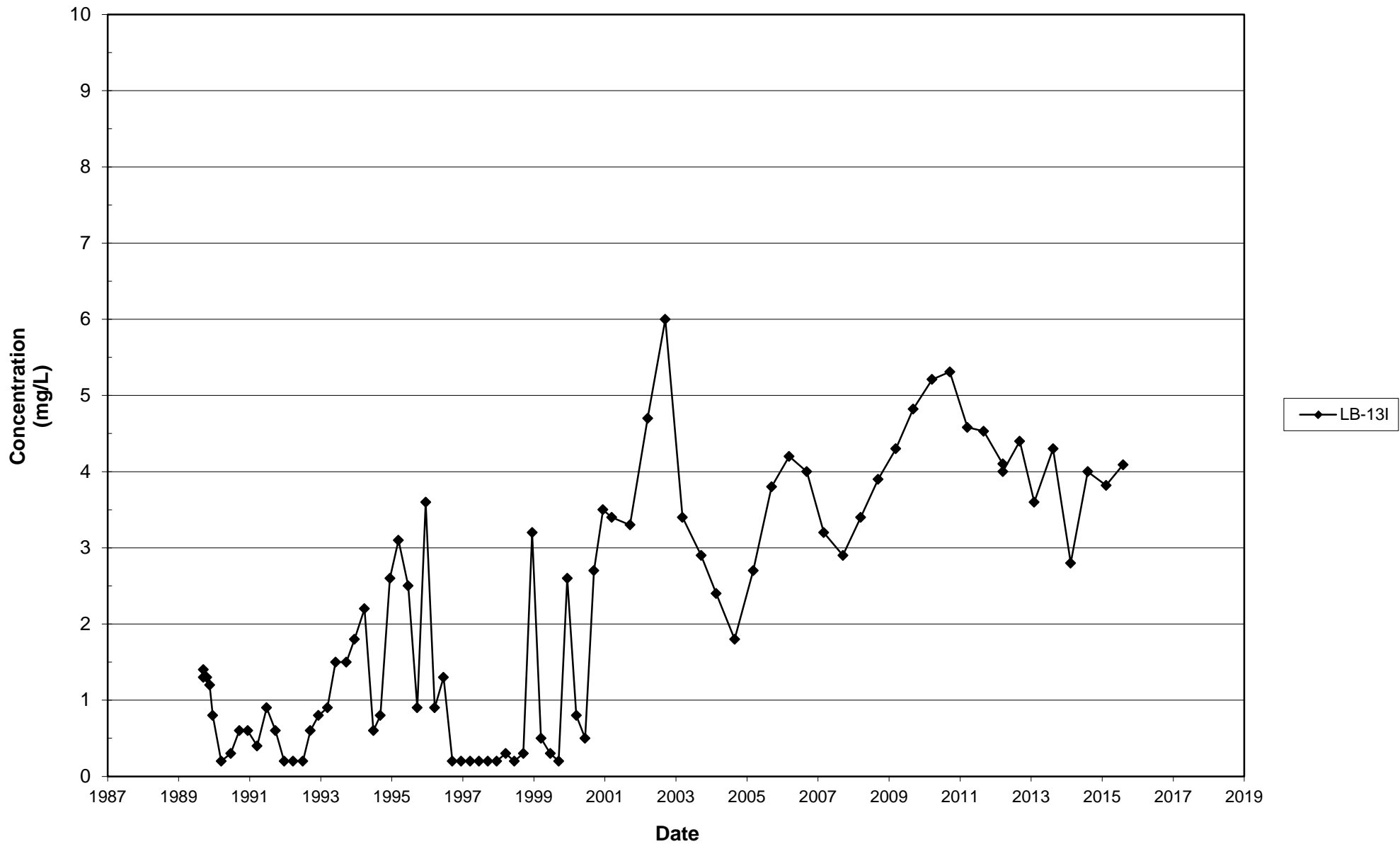
Leichner Landfill
Nitrate, LB-10S and LB-10SR
1987 - 2015



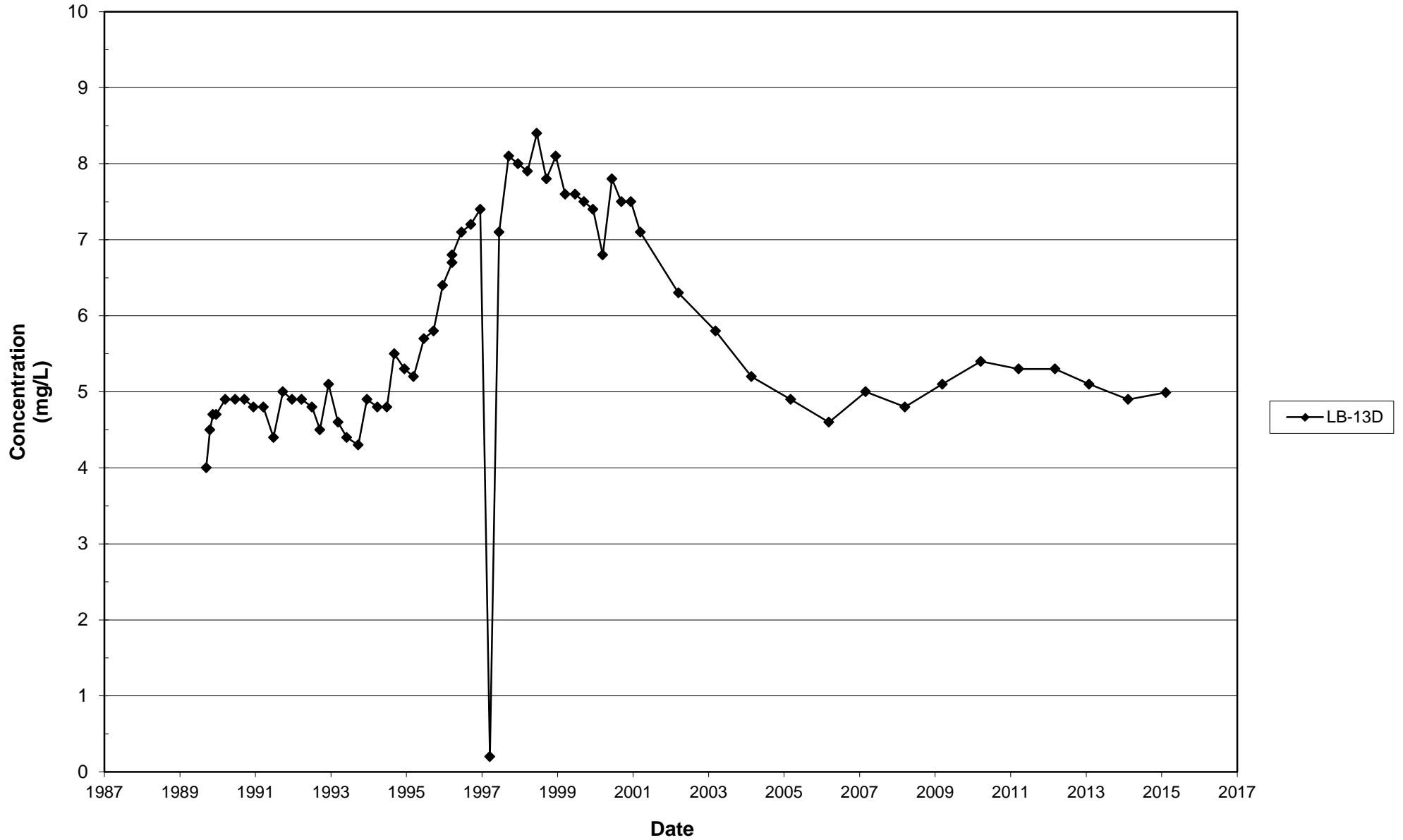
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1987 - 2015



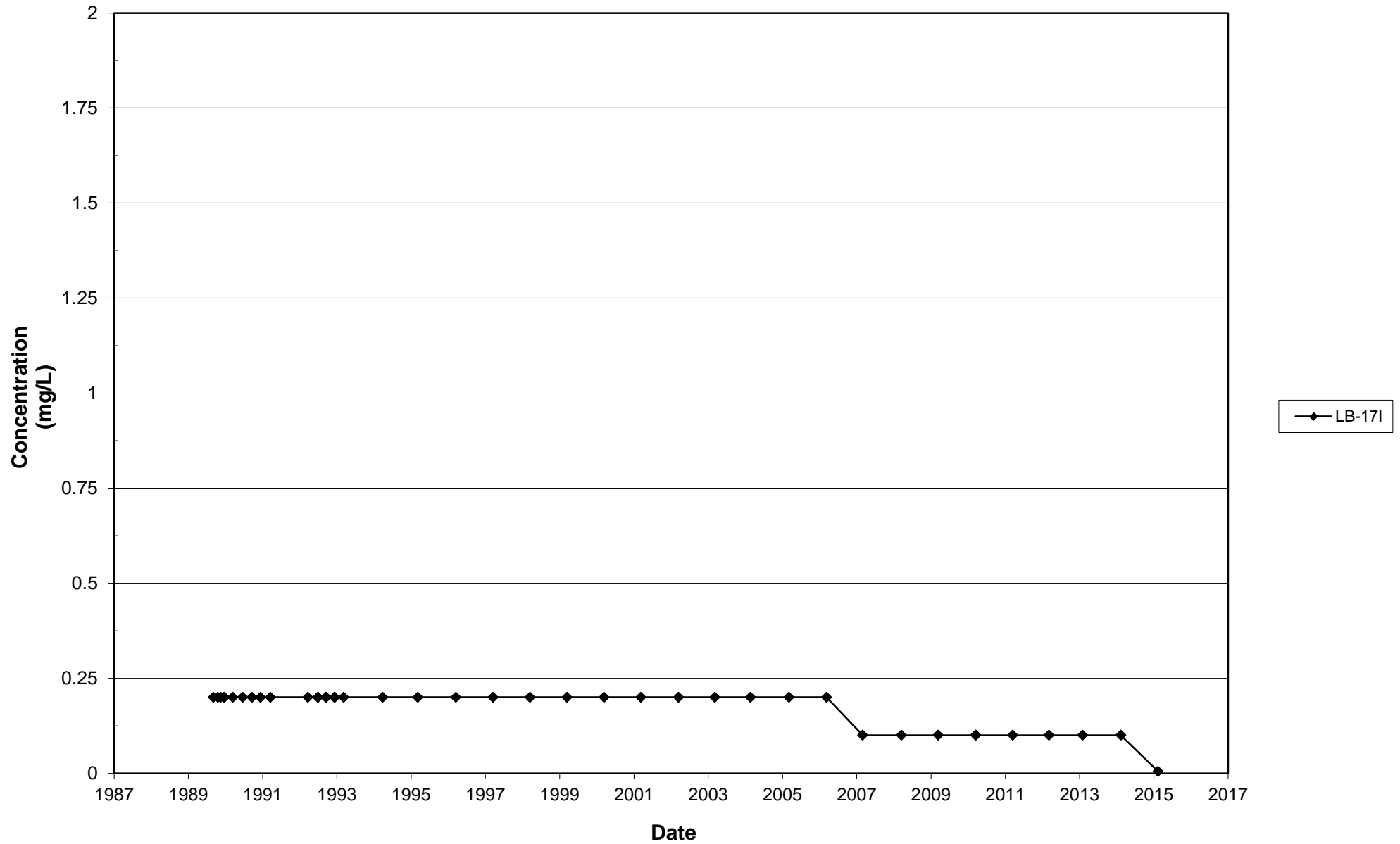
Leichner Landfill
Nitrate, LB-13I
1987 - 2015



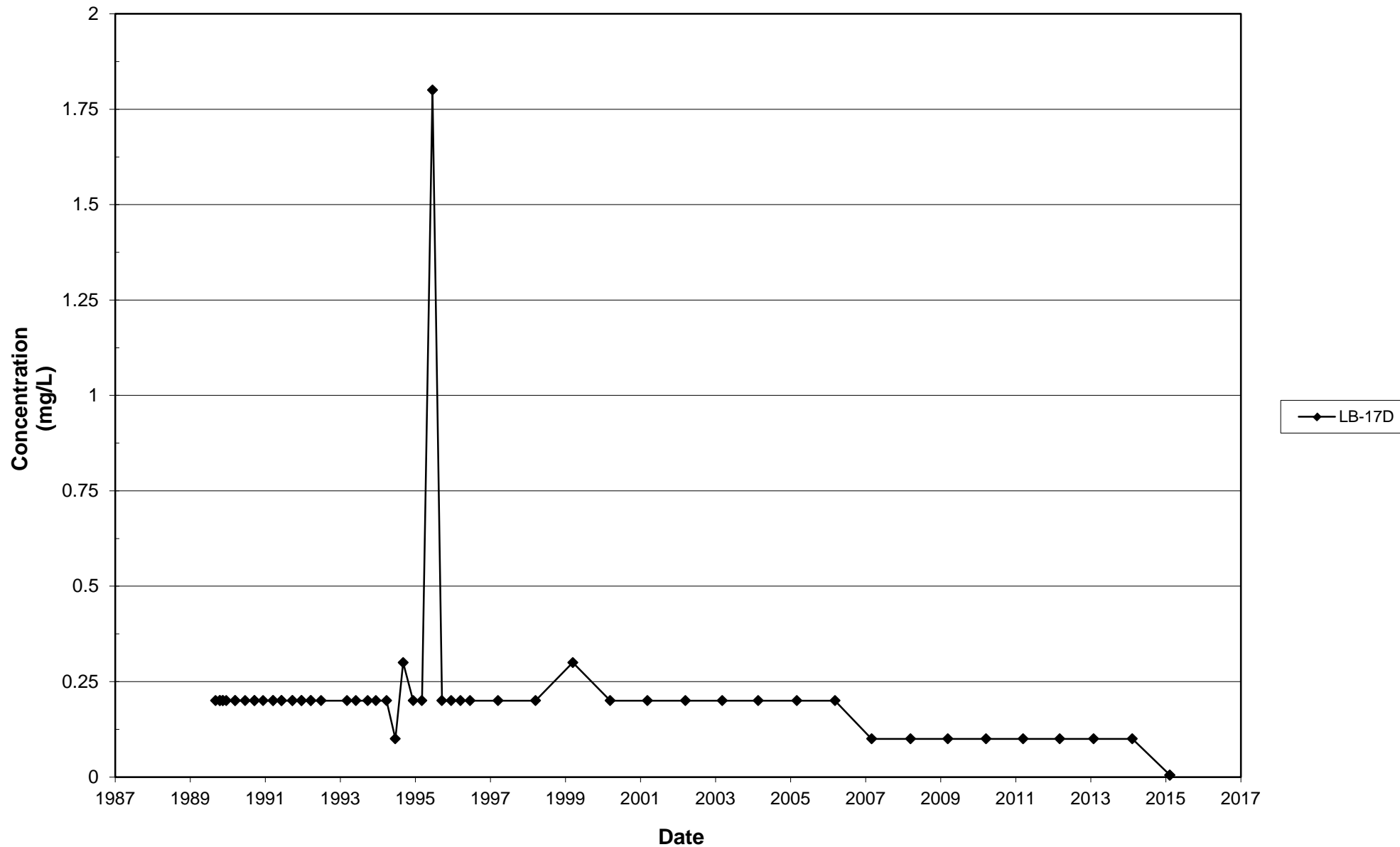
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1987 - 2015



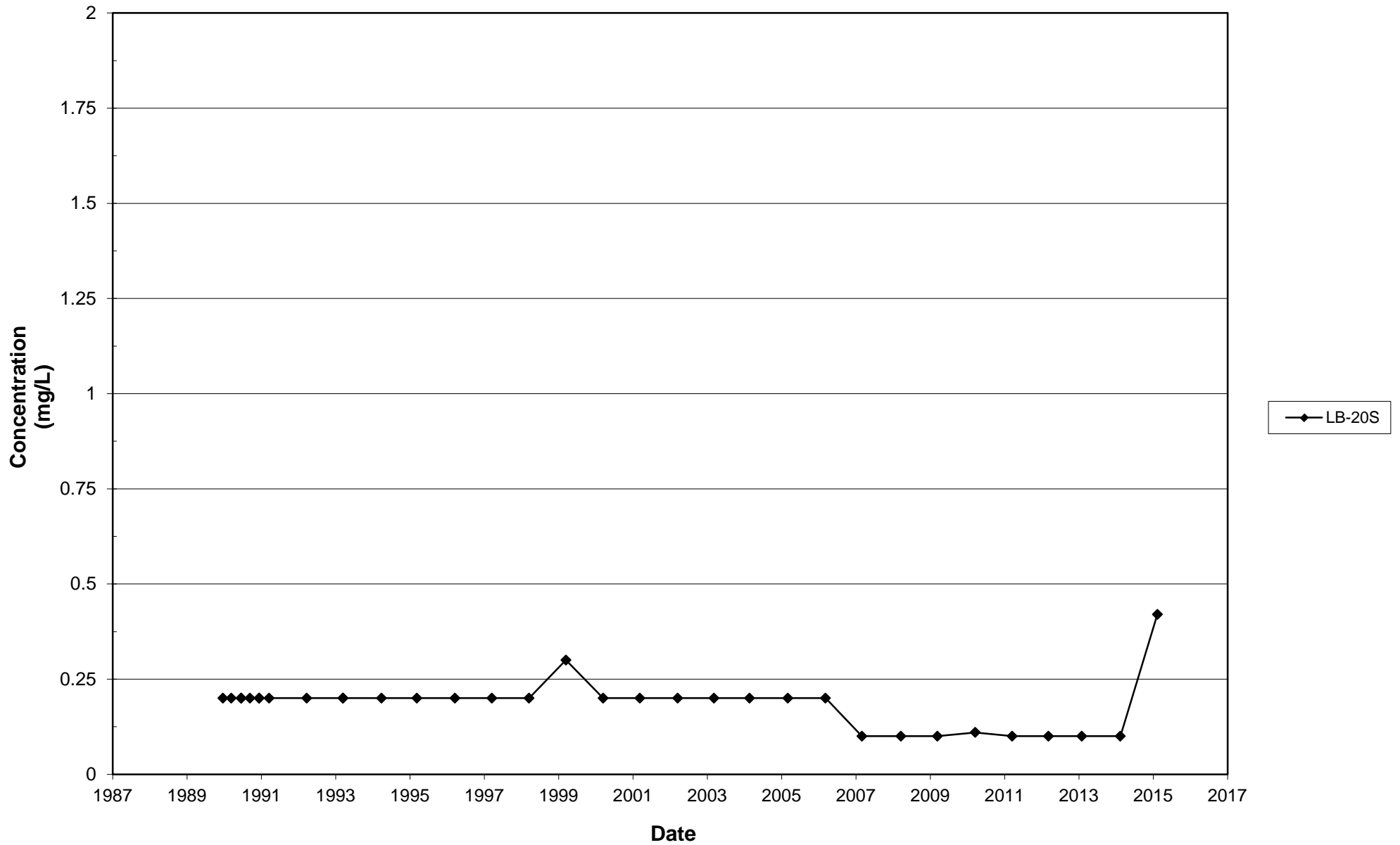
**Leichner Landfill
Nitrate, LB-17I
1987 - 2015**



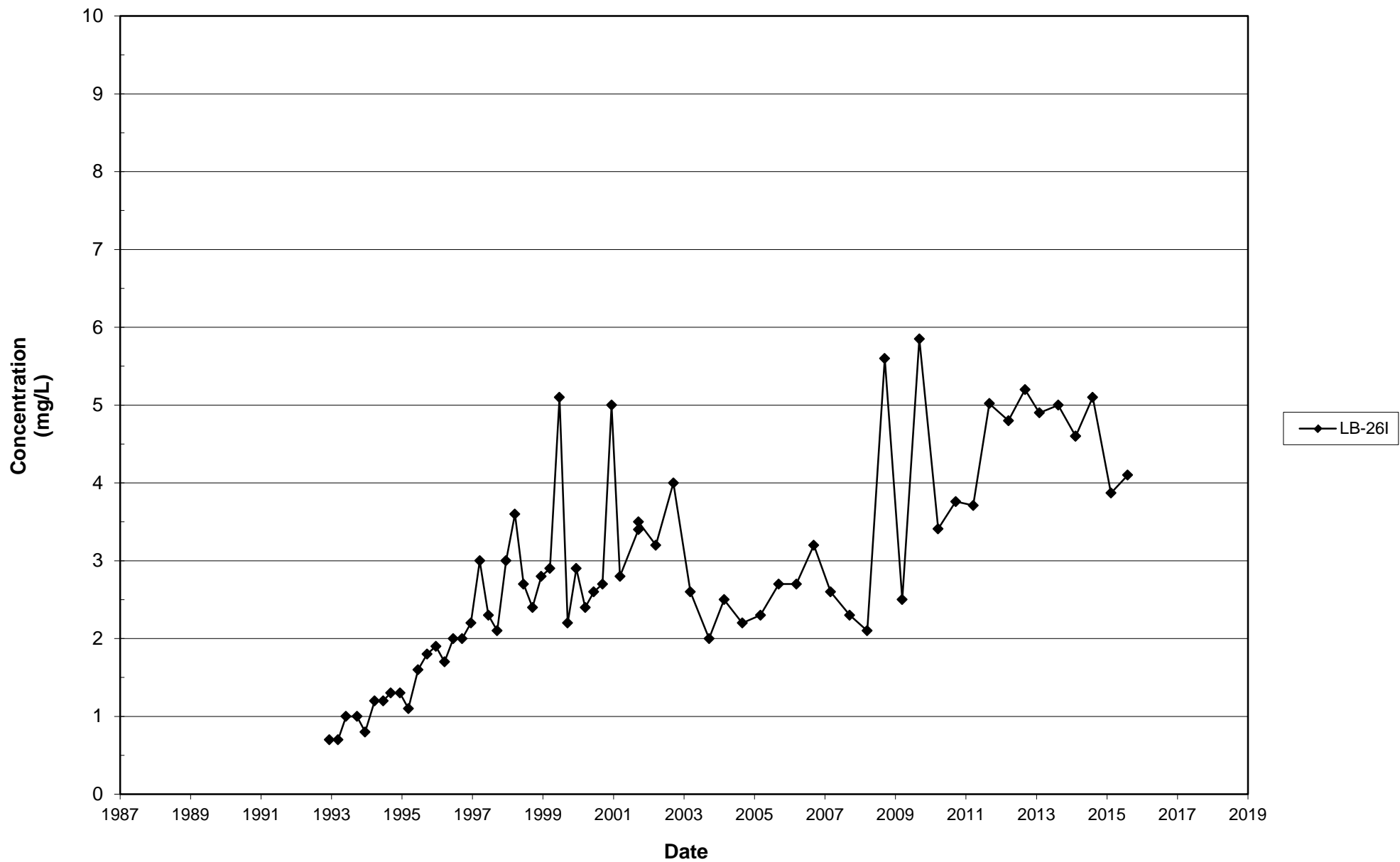
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Nitrate, LB-17D
1987 - 2015



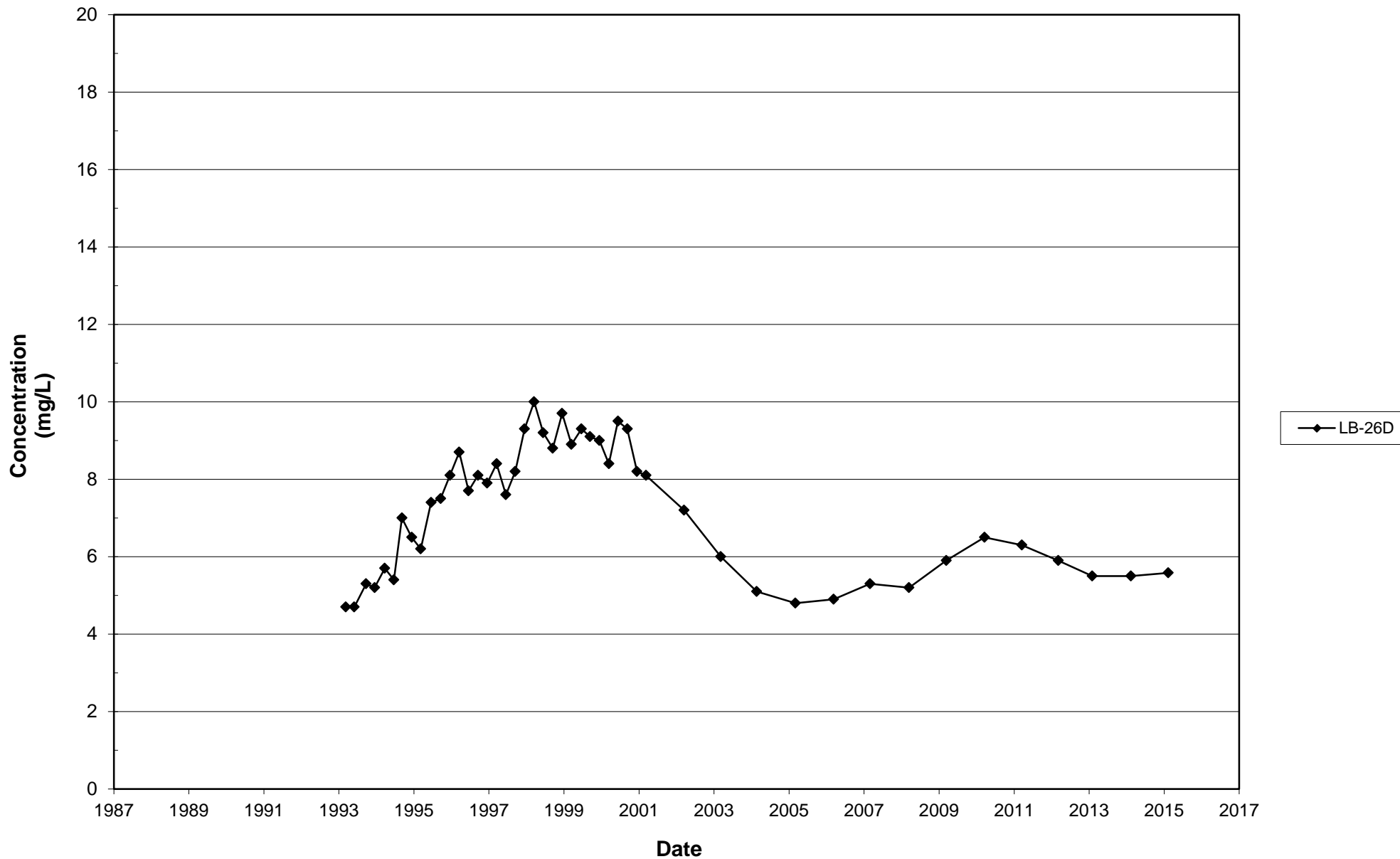
Leichner Landfill
Nitrate, LB-20S
1987 - 2015



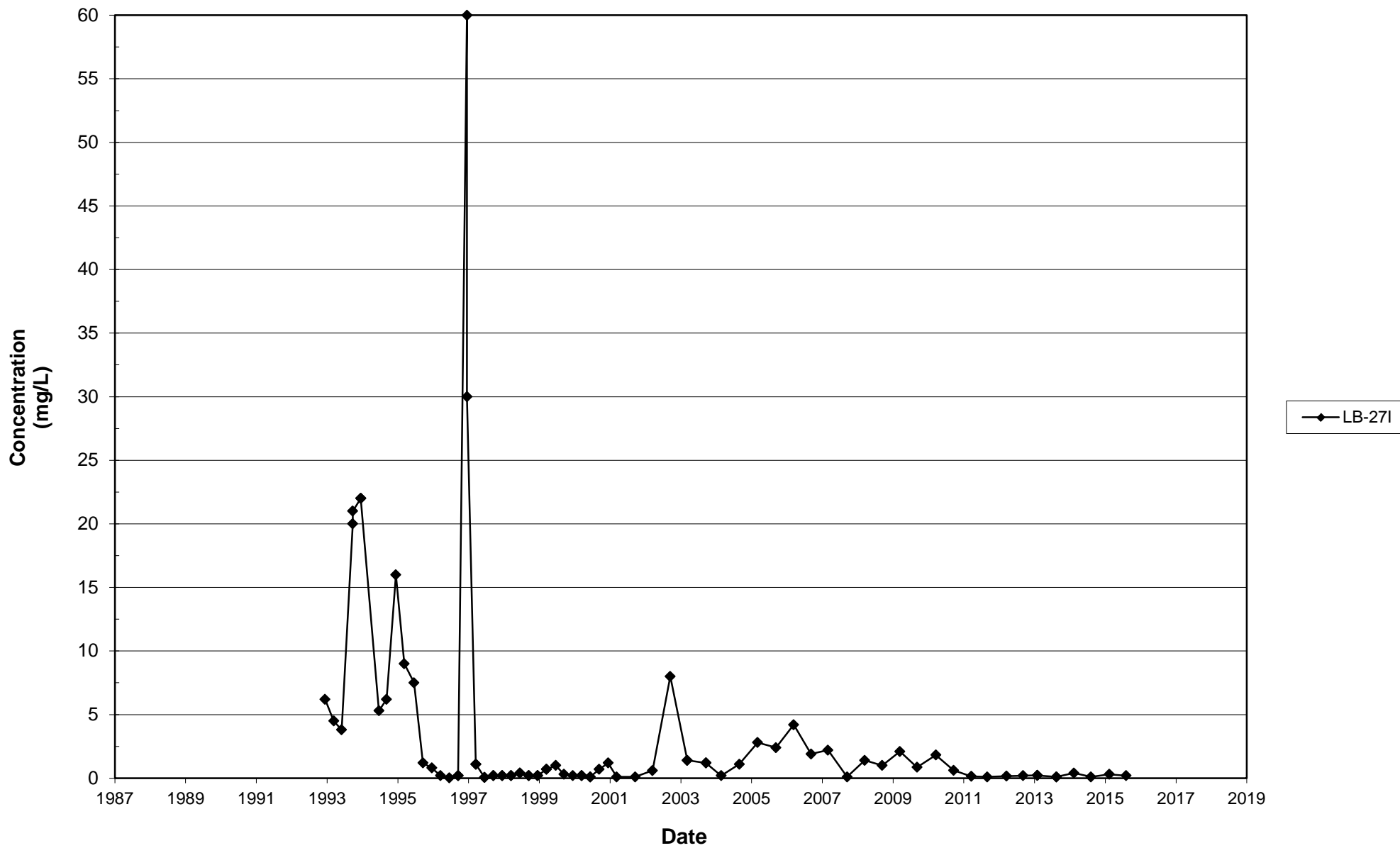
Leichner Landfill
Nitrate, LB-26I
1987 - 2015



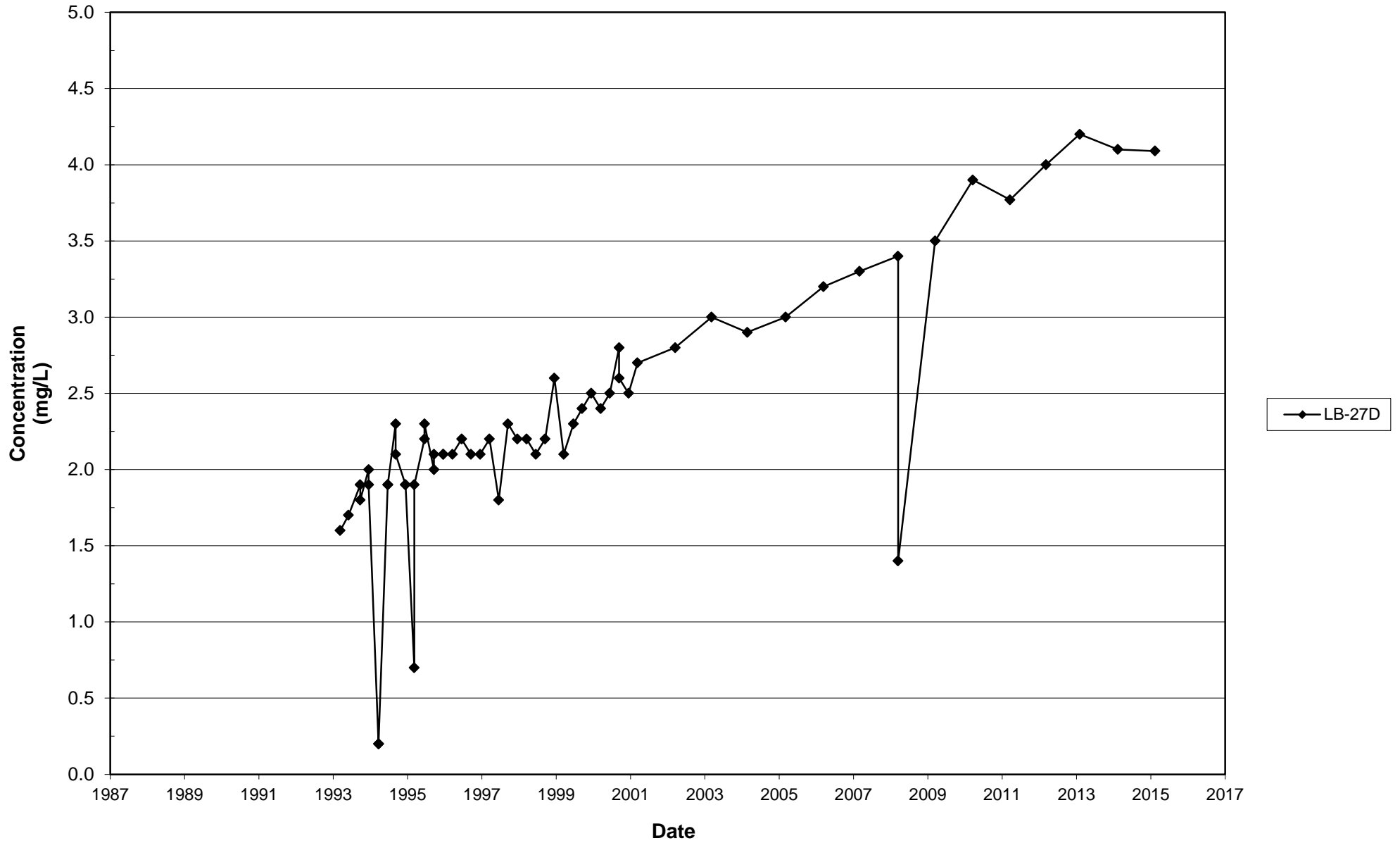
Leichner Landfill
Nitrate, LB-26D
1987 - 2015



Leichner Landfill
Nitrate, LB-27I
1987 - 2015

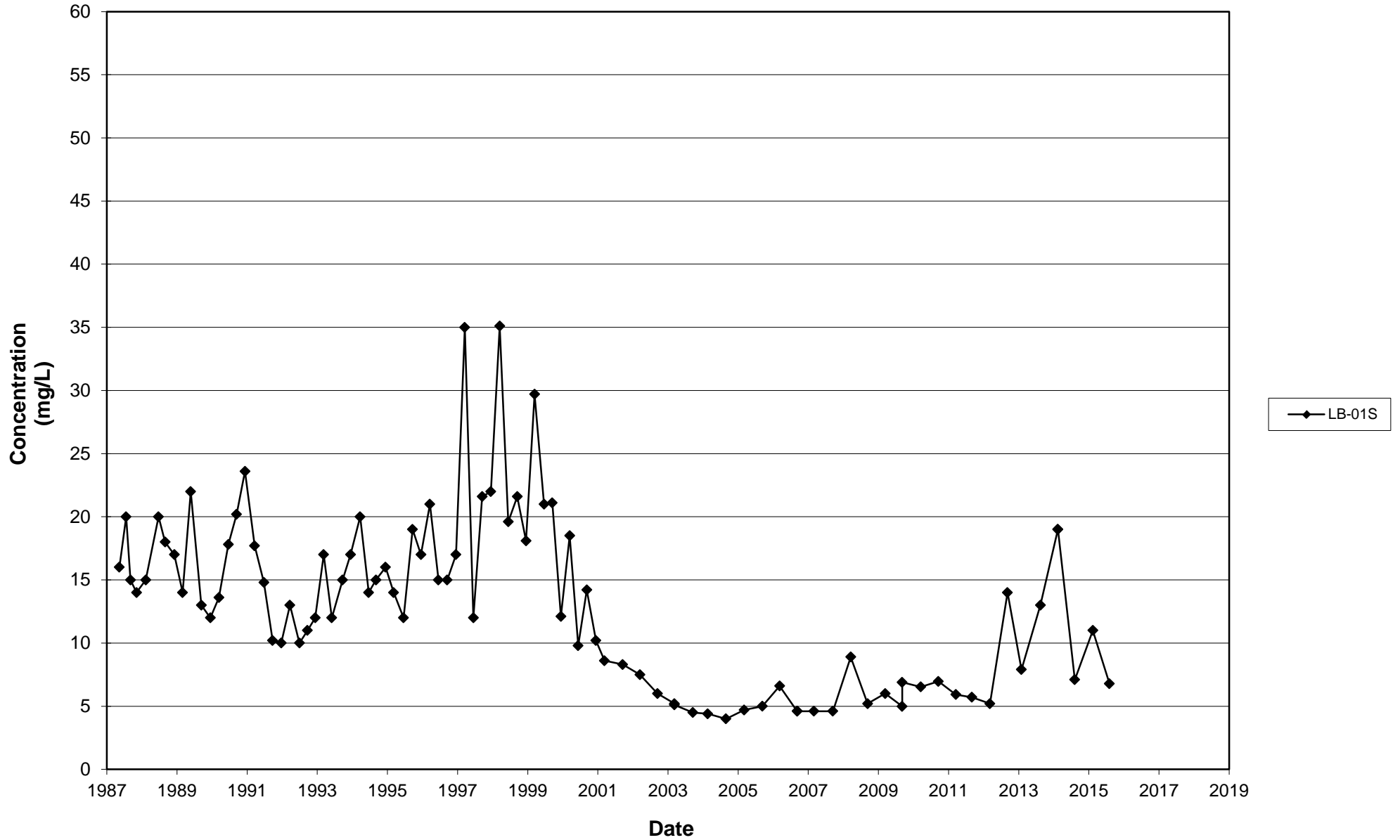


Leichner Landfill
Nitrate, LB-27D
1987 - 2015

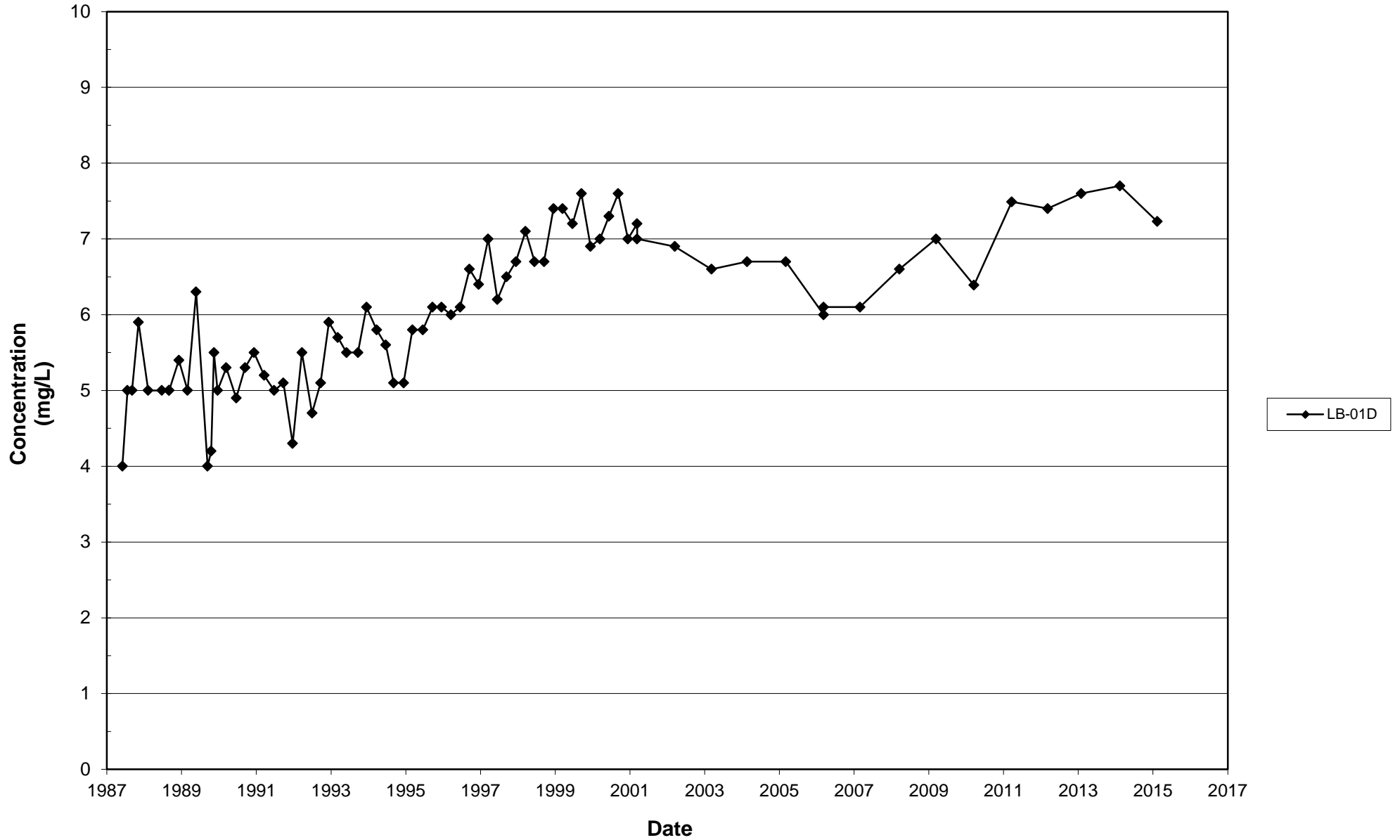


Chloride

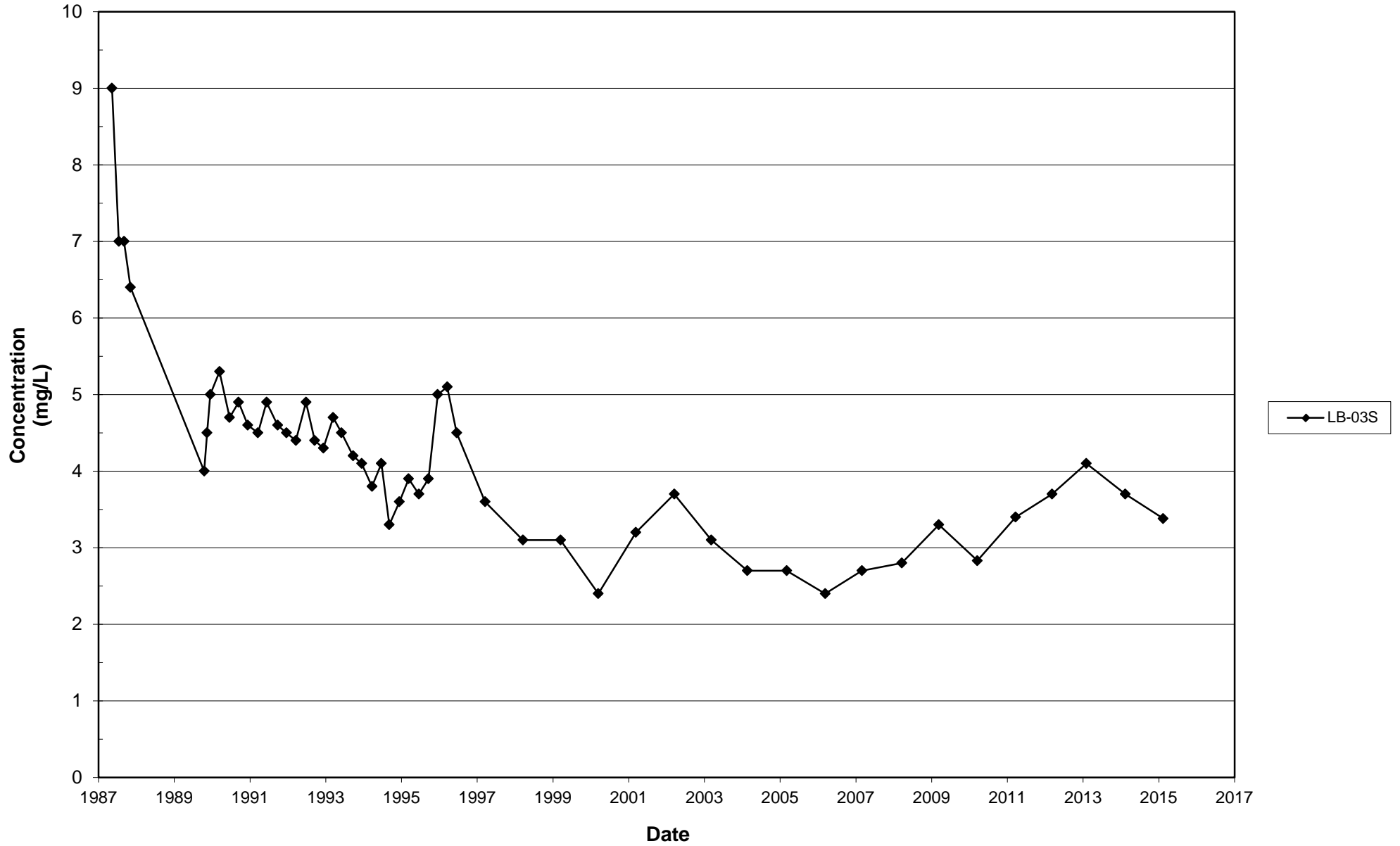
Leichner Landfill
Chloride, LB-01S
1987 - 2015



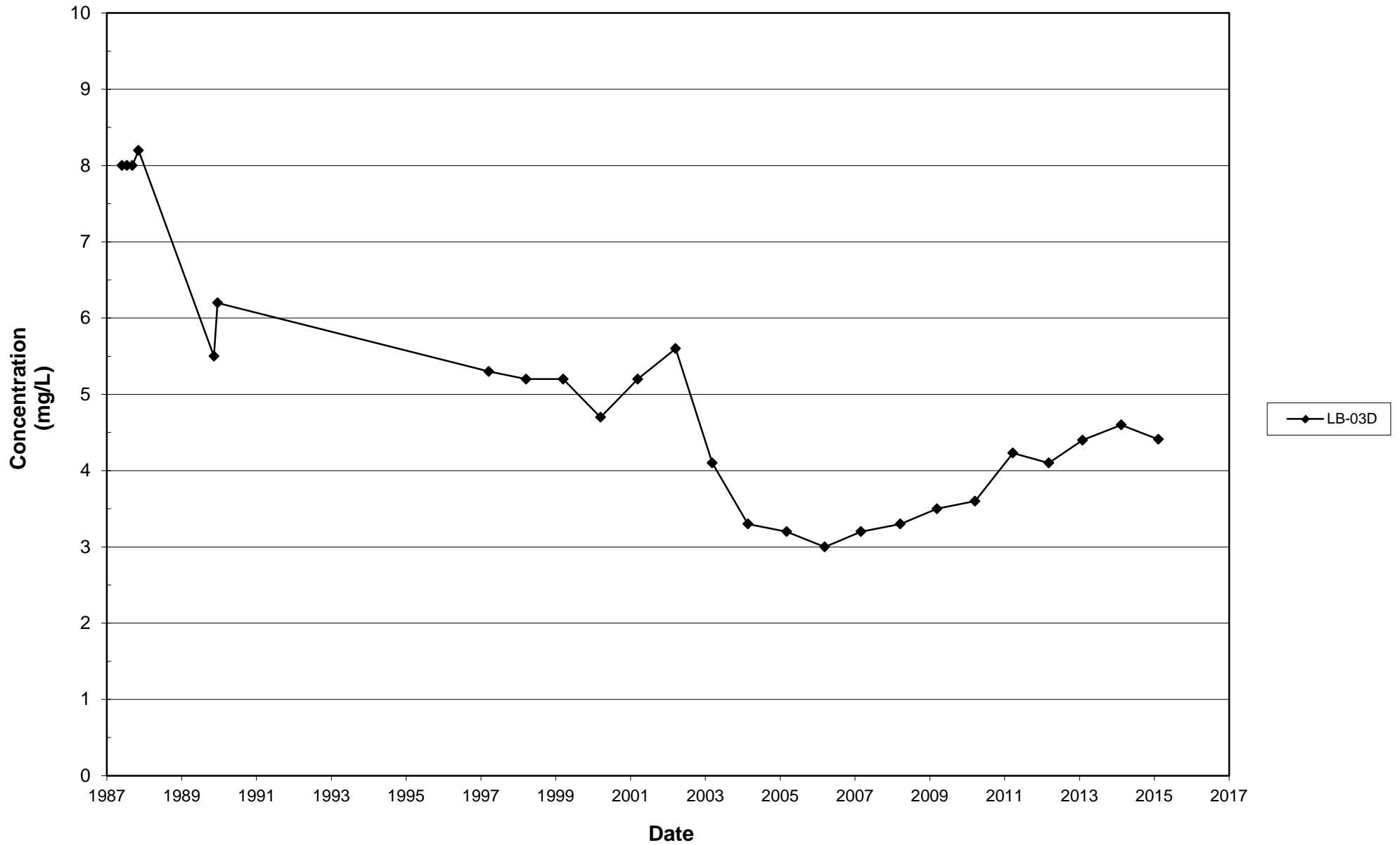
Leichner Landfill
Chloride, LB-01D
1987 - 2015



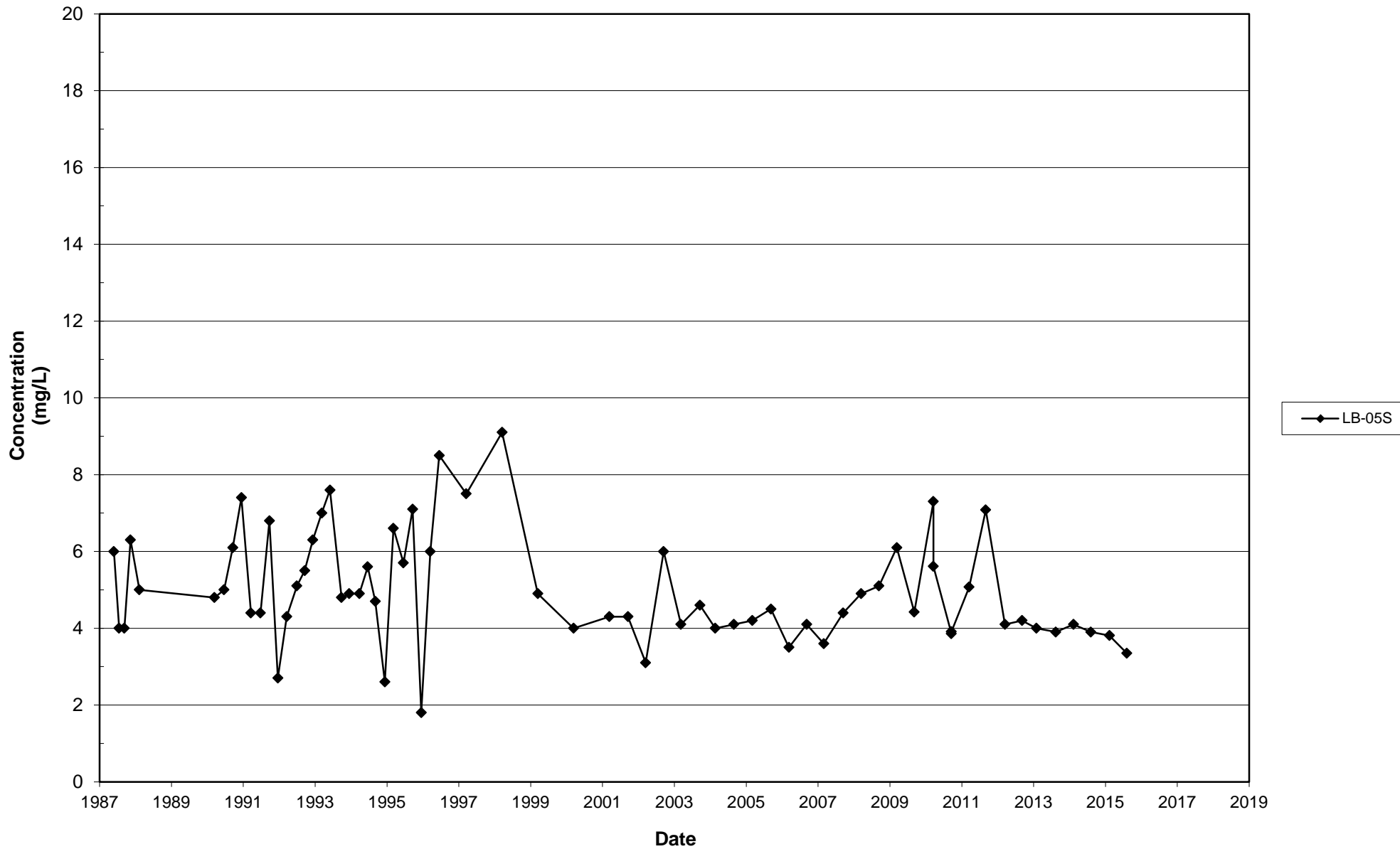
Leichner Landfill
Chloride, LB-03S
1987 - 2015



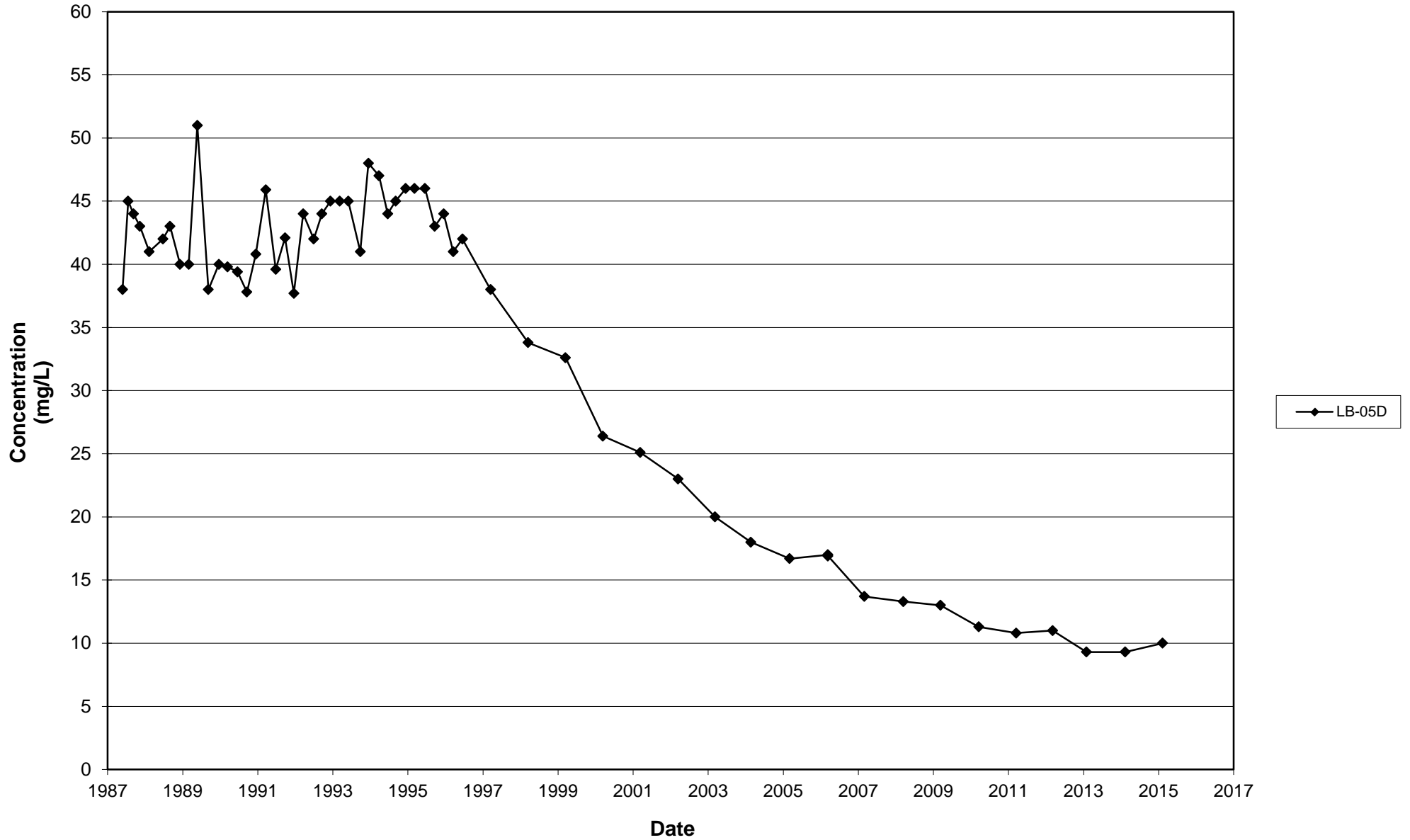
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Chloride, LB-03D
1987 - 2015



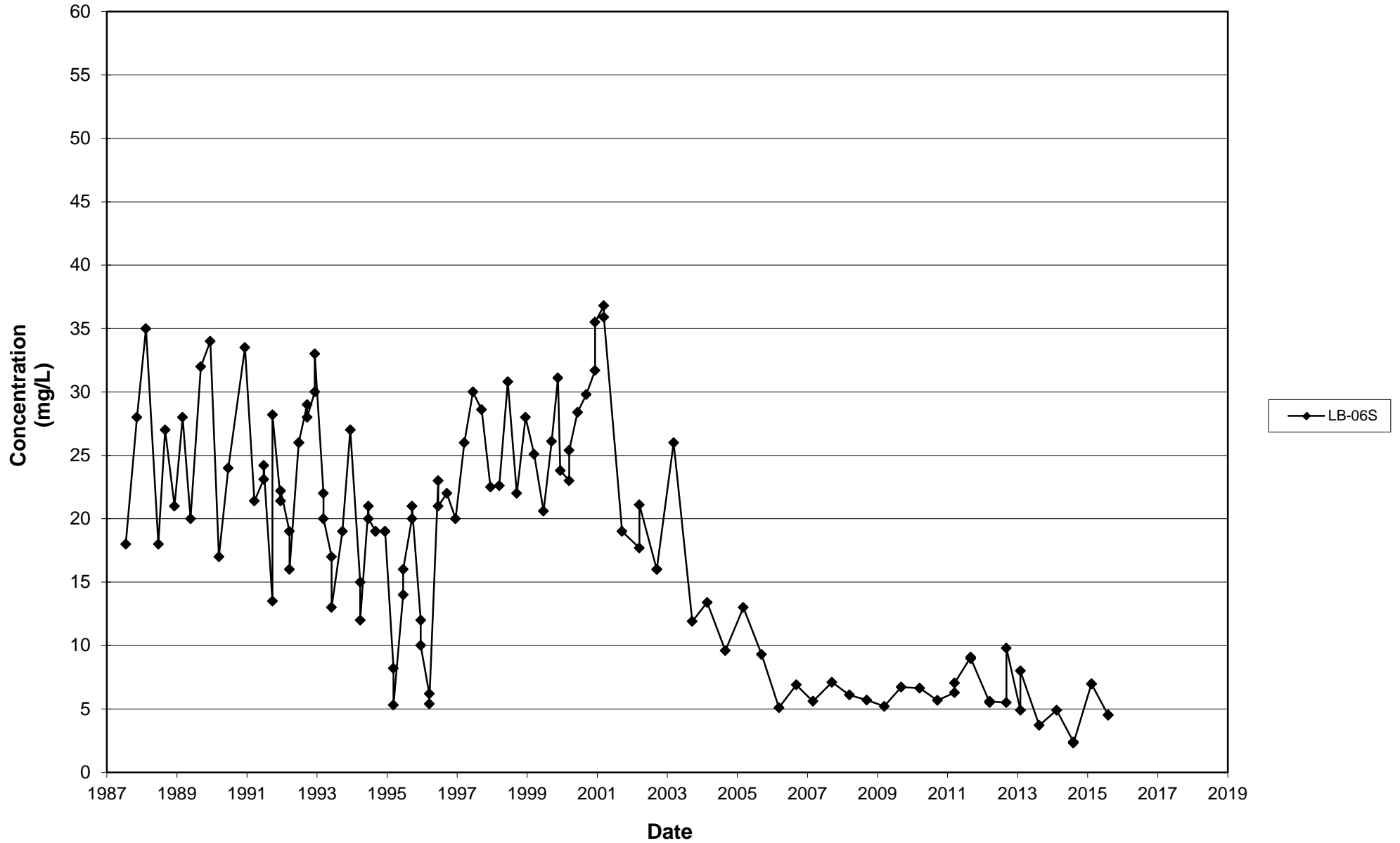
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1987 - 2015



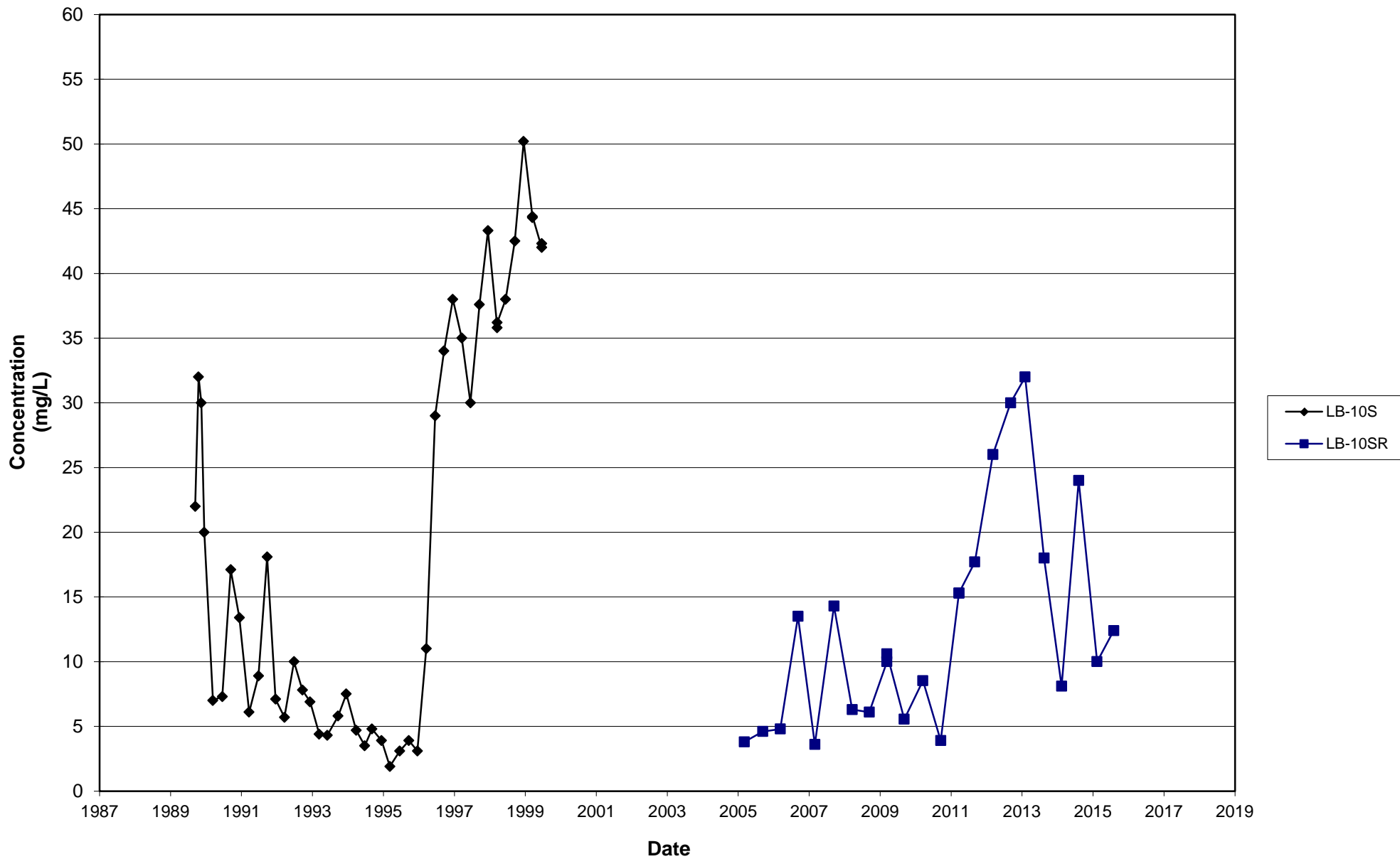
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1987 - 2015



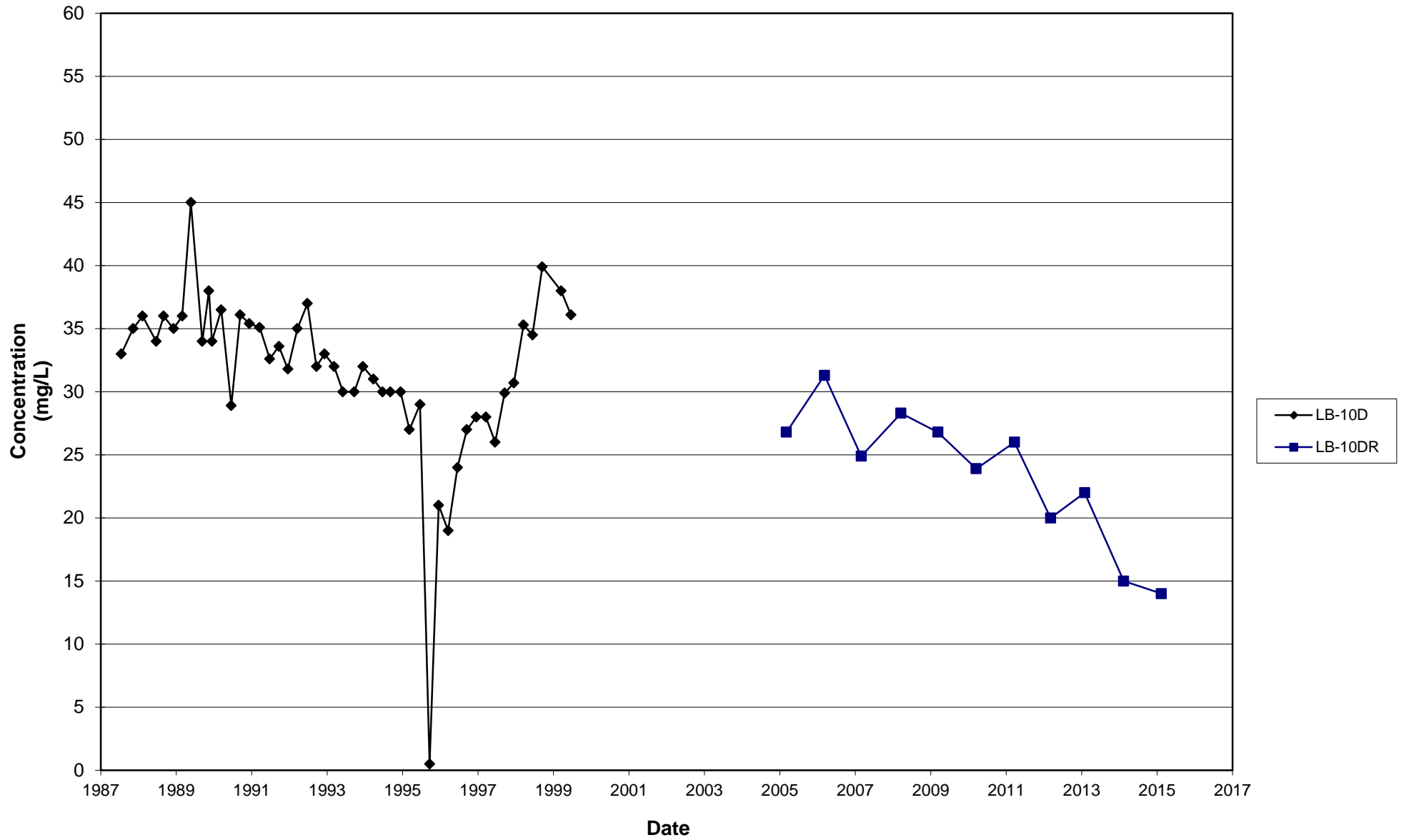
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Chloride, LB-06S
1987 - 2015



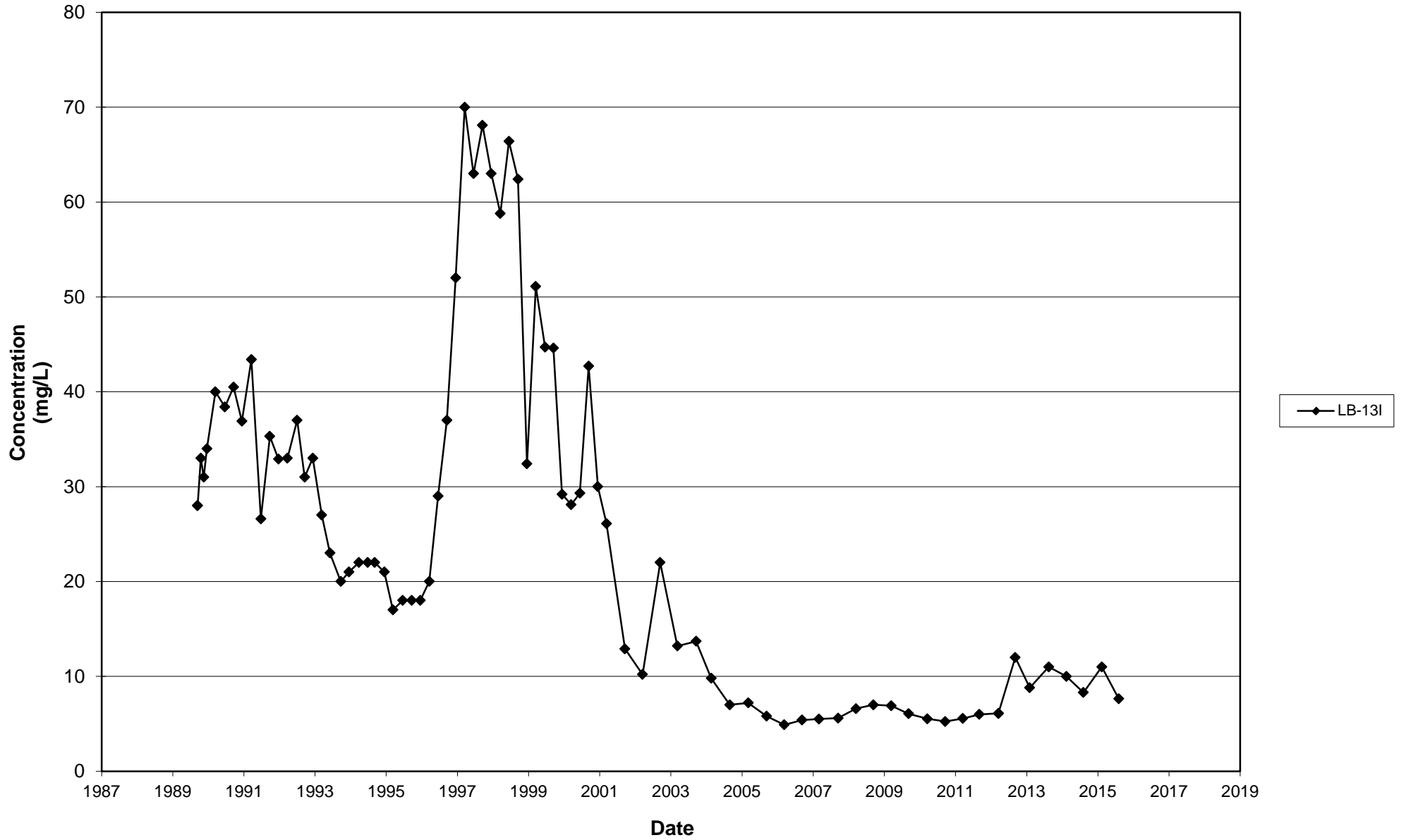
Leichner Landfill
Chloride, LB-10S and LB-10SR
1987 - 2015



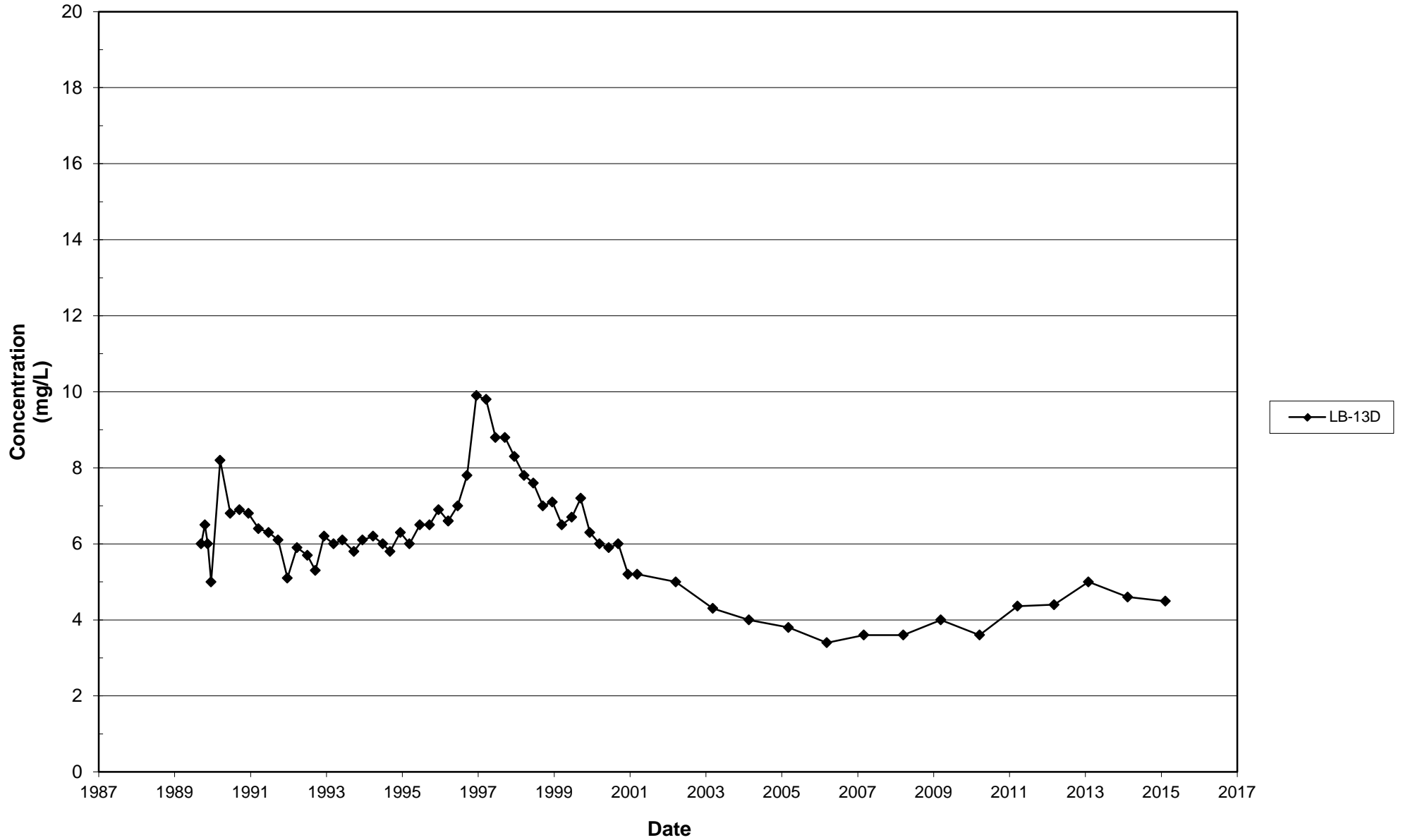
Leichner Landfill
Chloride, LB-10D and LB-10DR
1987 - 2015



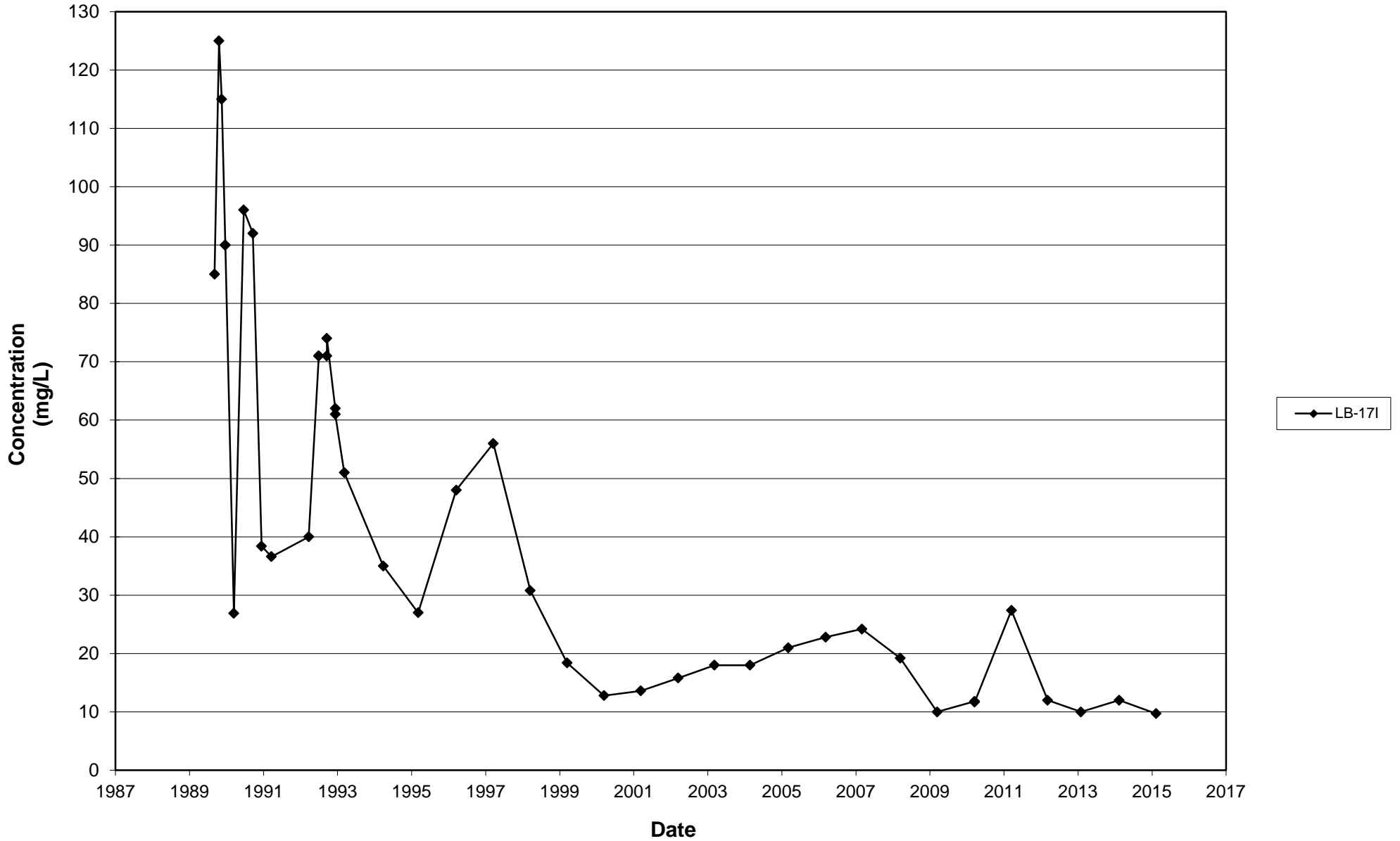
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Chloride, LB-13I
1987 - 2015



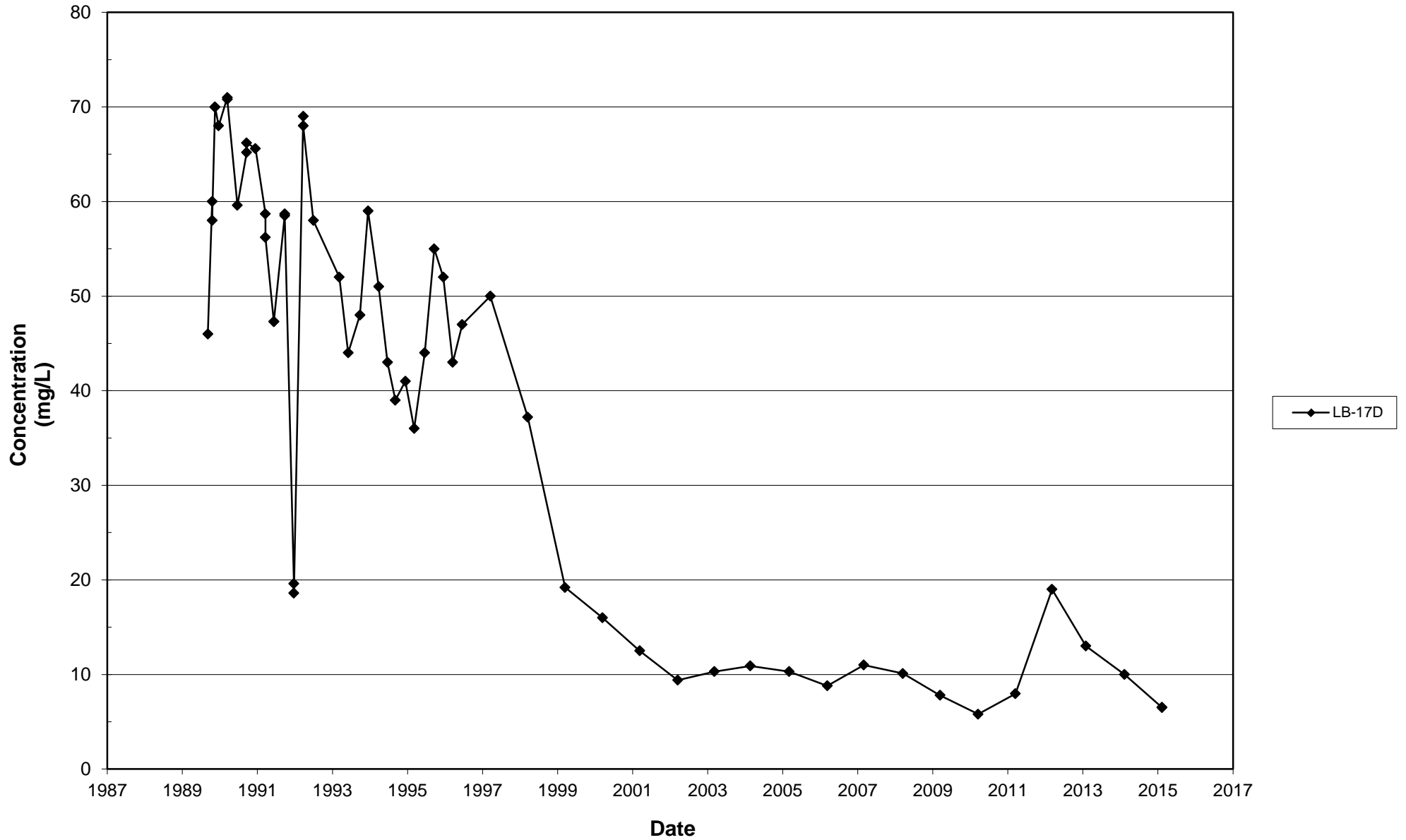
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Chloride, LB-13D
1987 - 2015



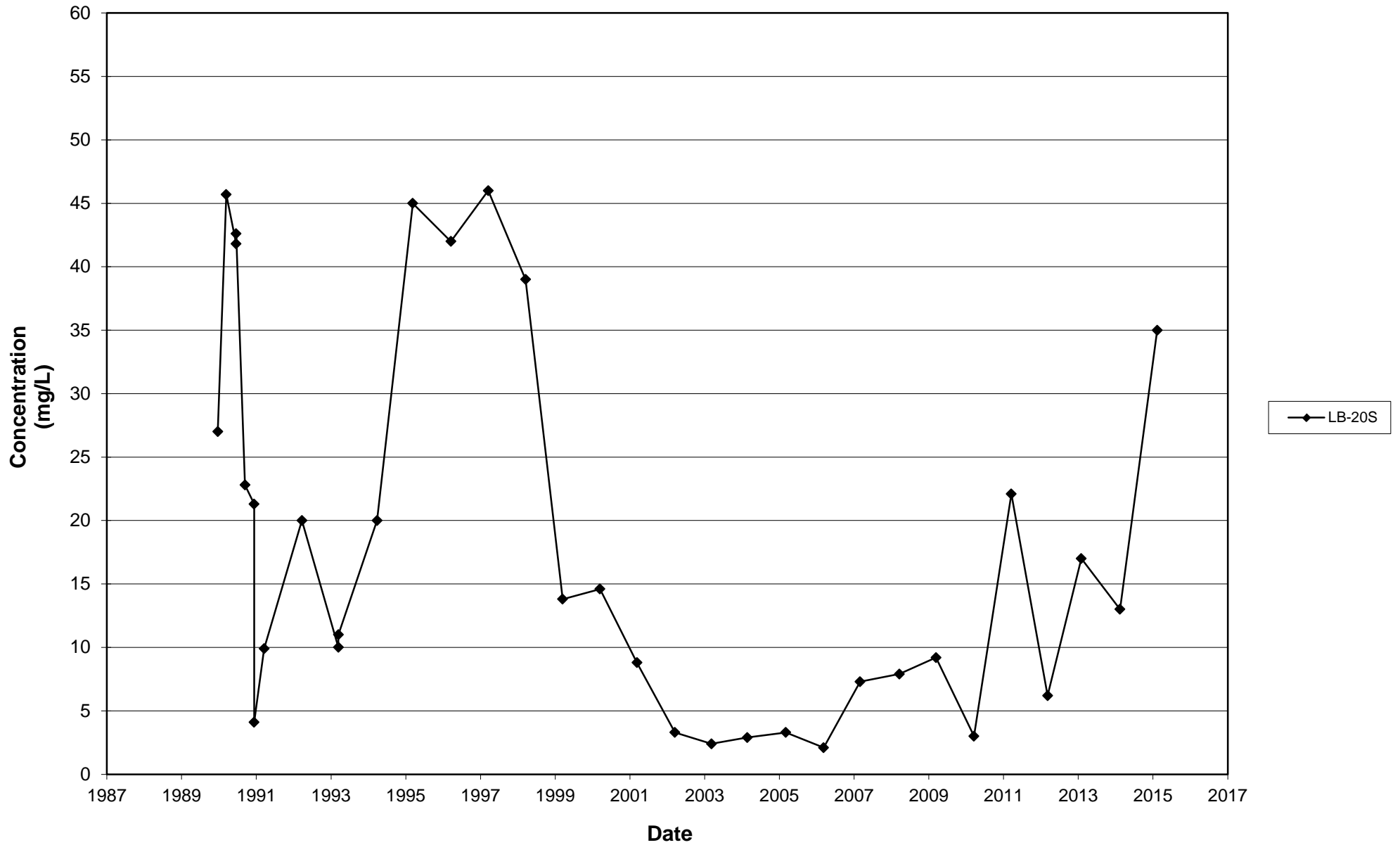
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Chloride, LB-17I
1987 - 2015



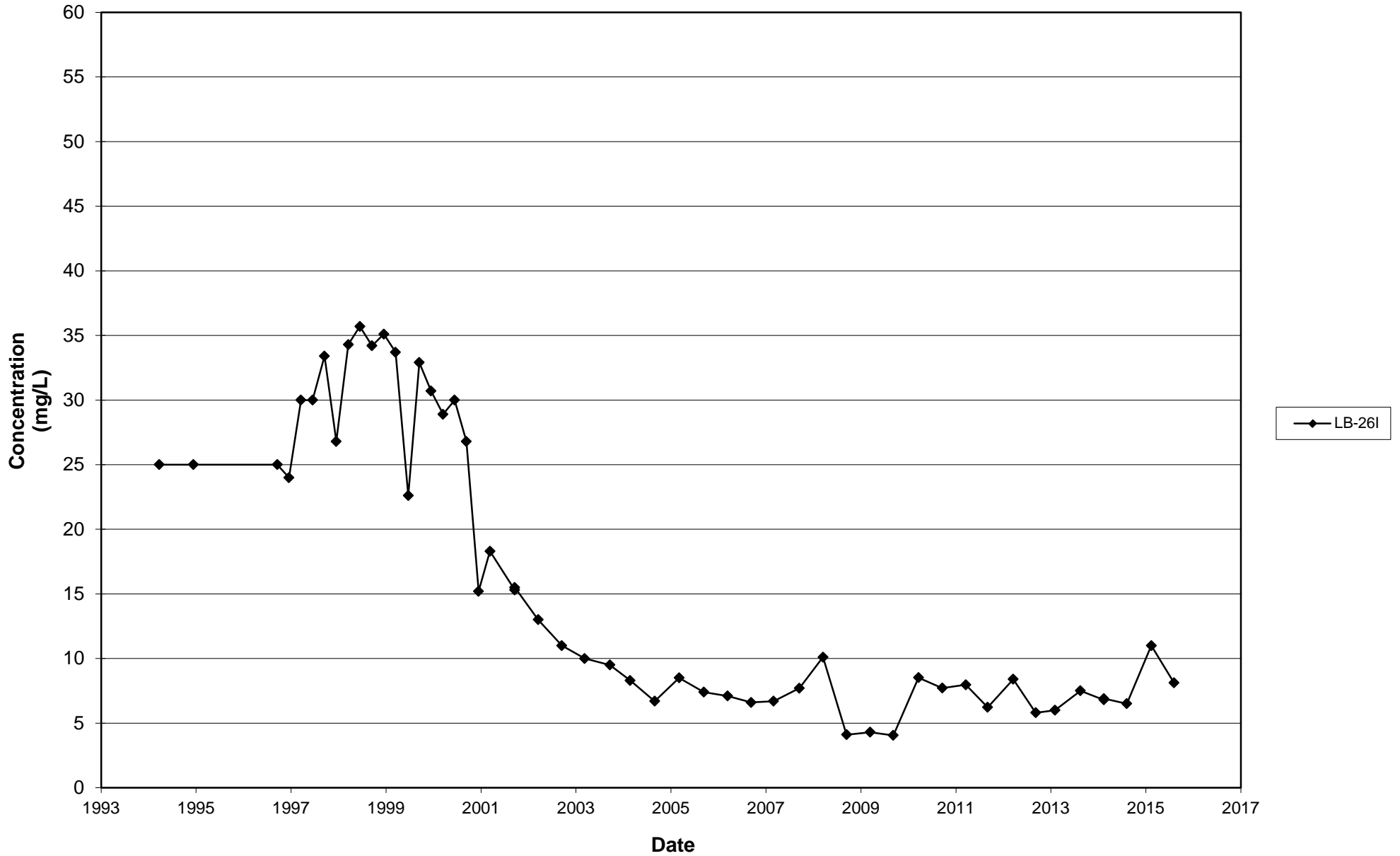
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Chloride, LB-17D
1987 - 2015



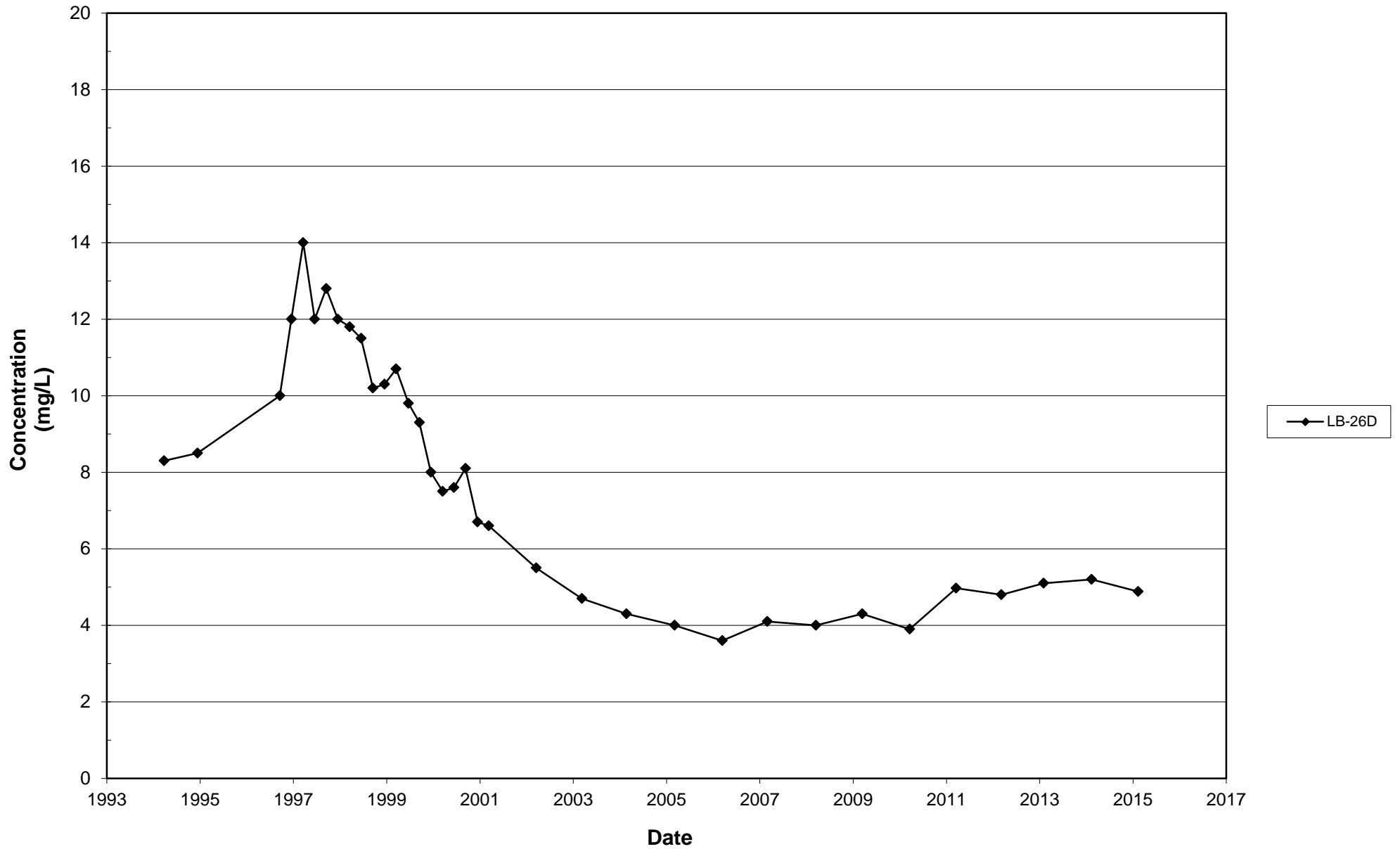
Leichner Landfill
Chloride, LB-20S
1987 - 2015



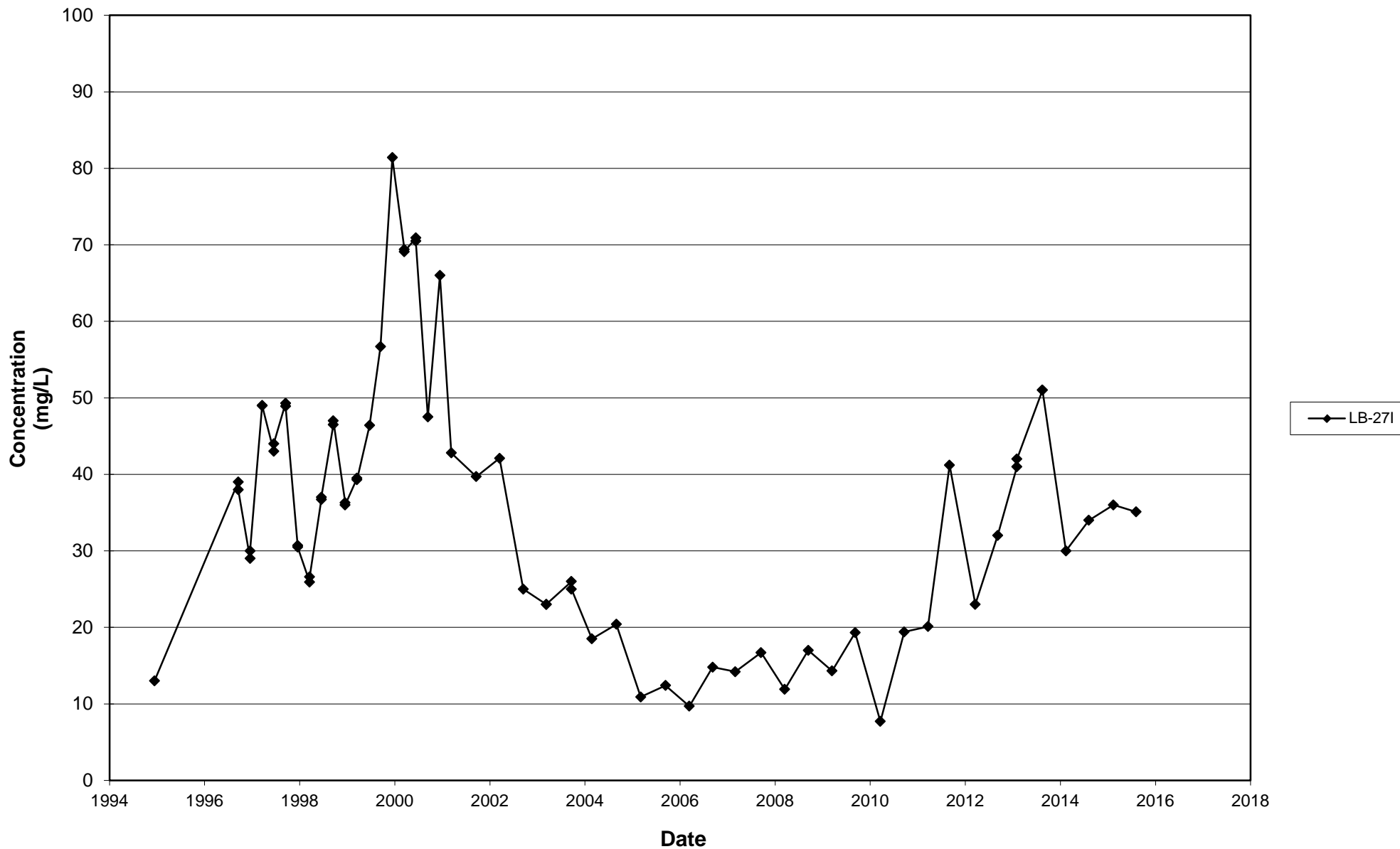
Leichner Landfill
Chloride, LB-26I
1987 - 2015



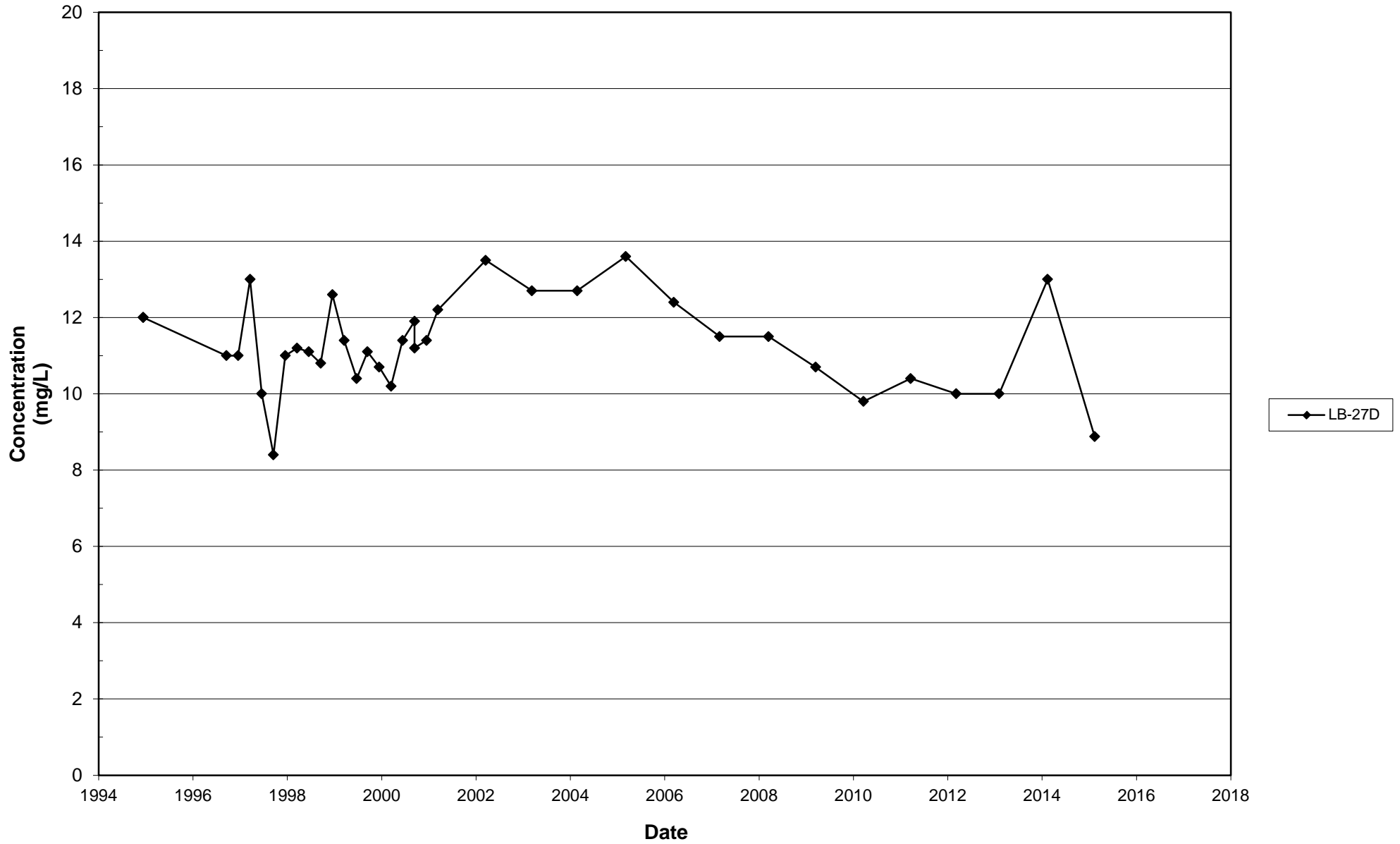
Leichner Landfill
Chloride, LB-26D
1987 - 2015



Leichner Landfill
Chloride, LB-27I
1994 - 2015

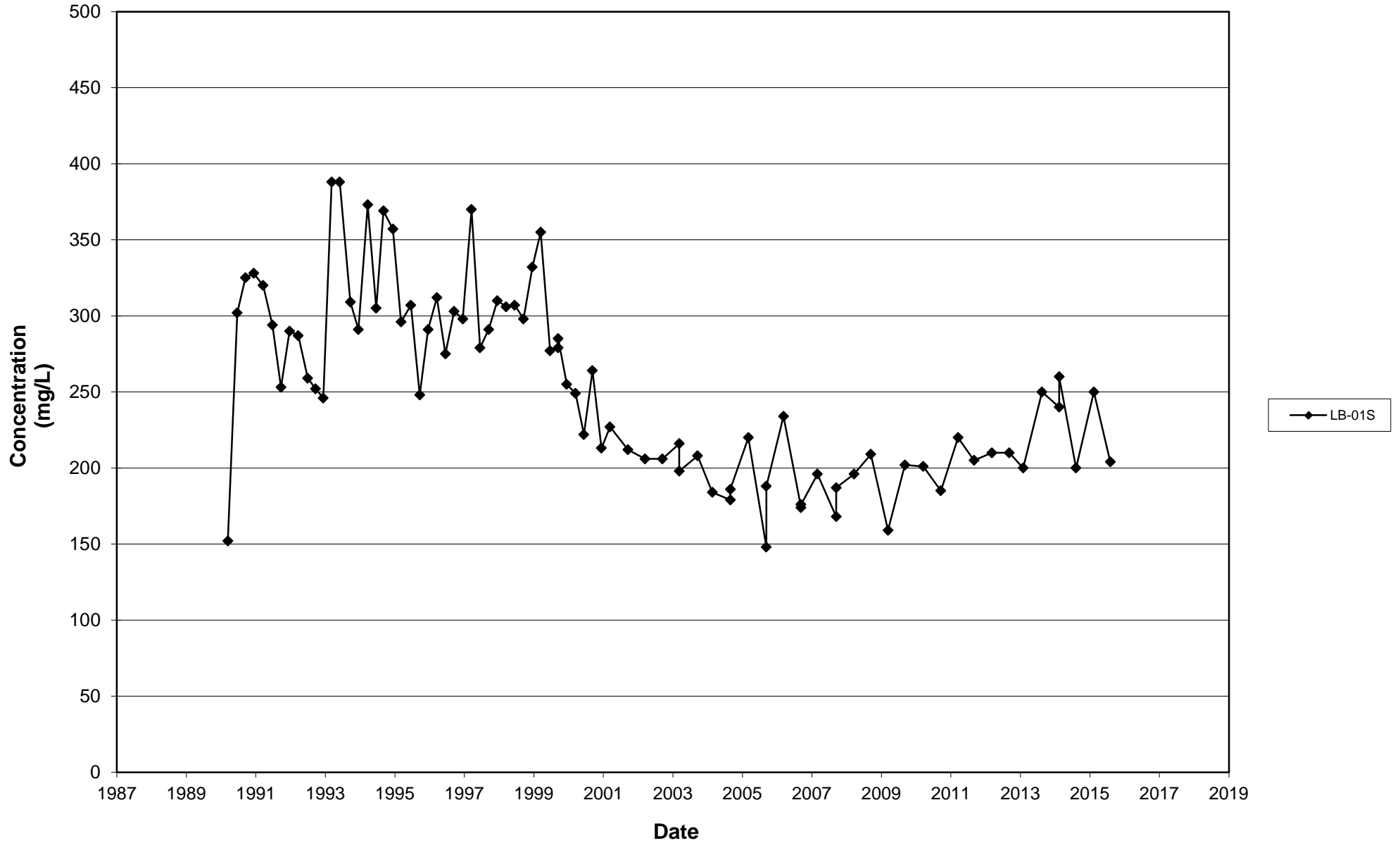


Leichner Landfill
Chloride, LB-27D
1994 - 2015

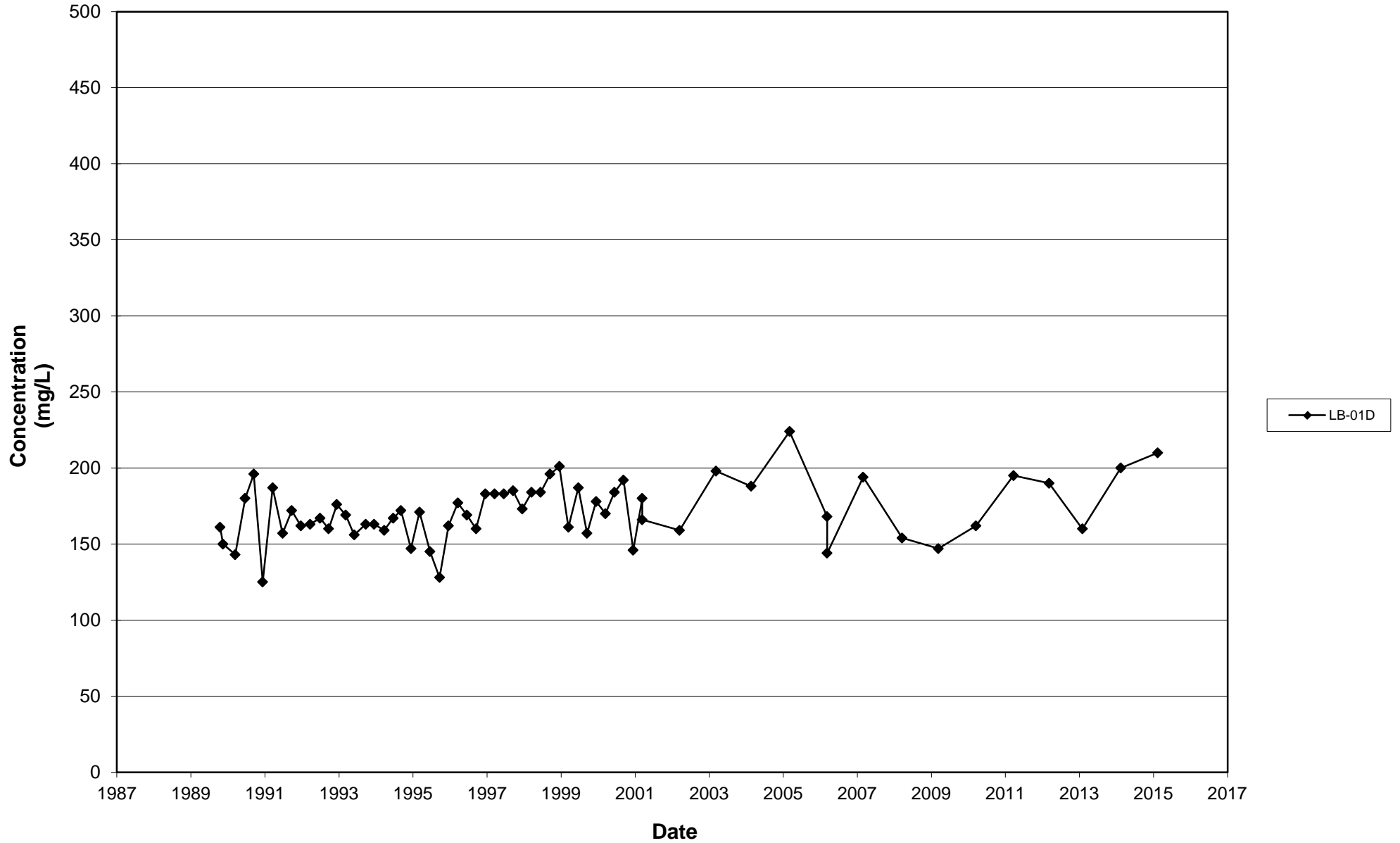


Total Dissolved Solids

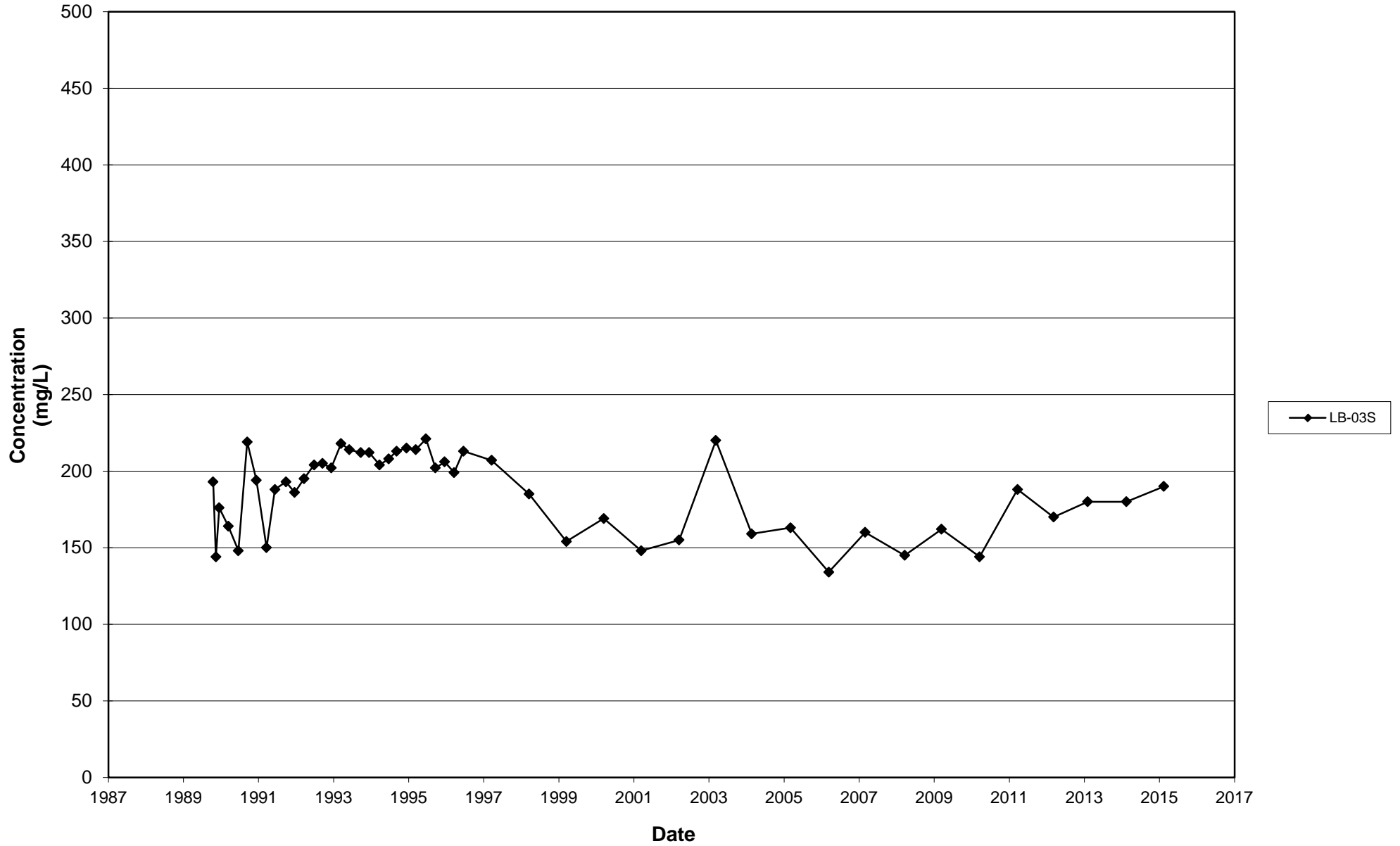
Leichner Landfill
Total Dissolved Solids, LB-01S
1987 - 2015



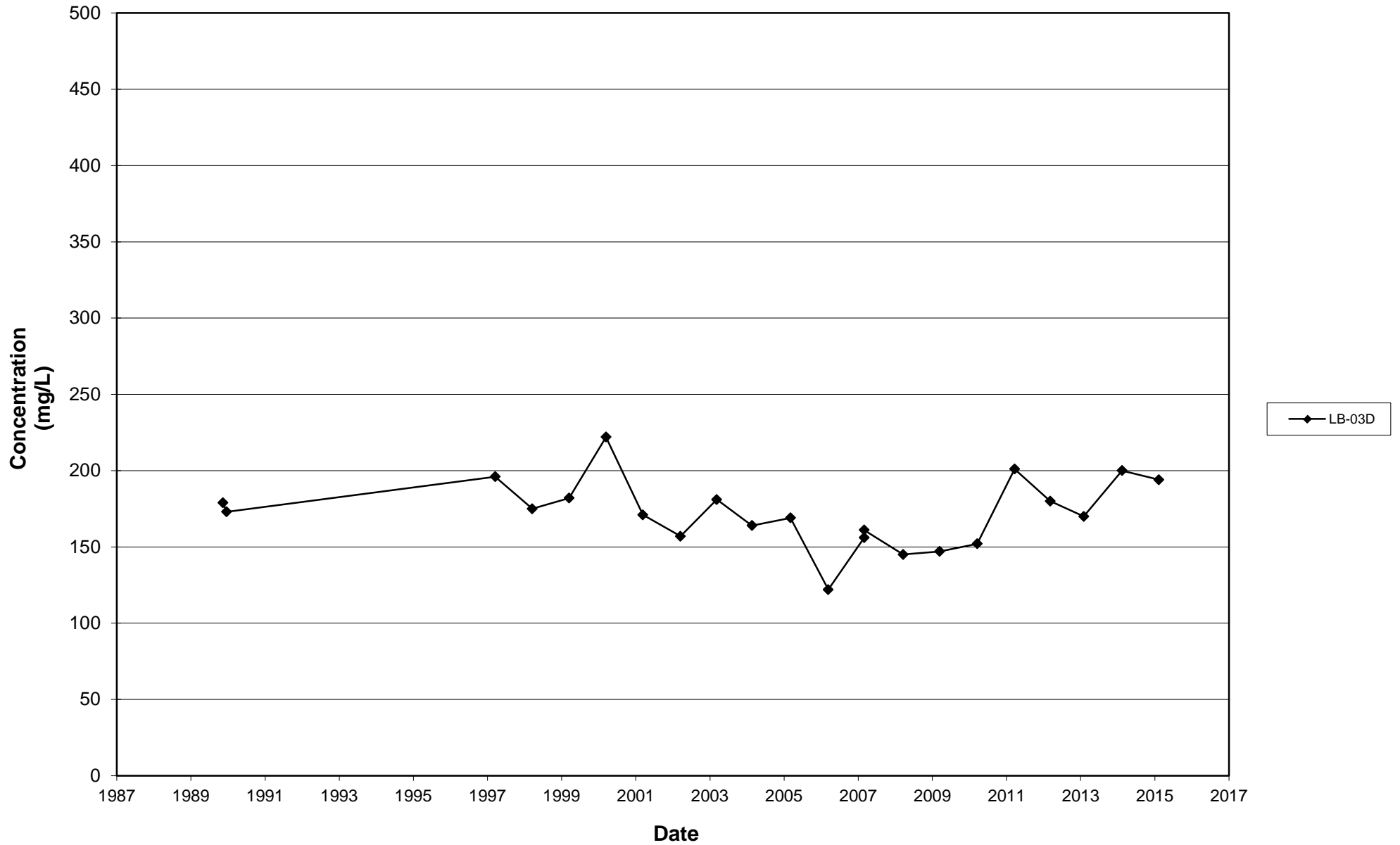
Leichner Landfill
Total Dissolved Solids, LB-01D
1987 - 2015



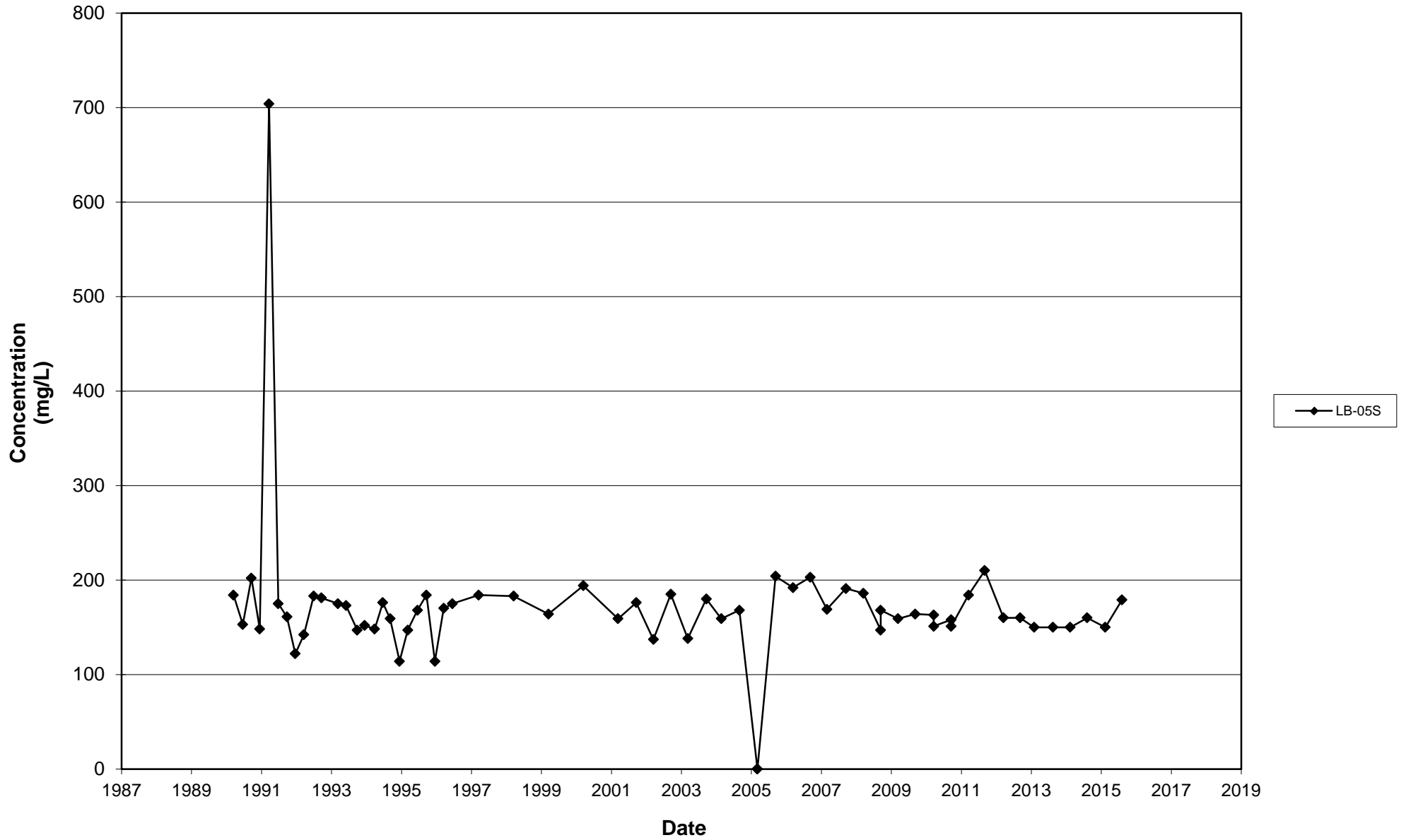
Leichner Landfill
Total Dissolved Solids, LB-03S
1987 - 2015



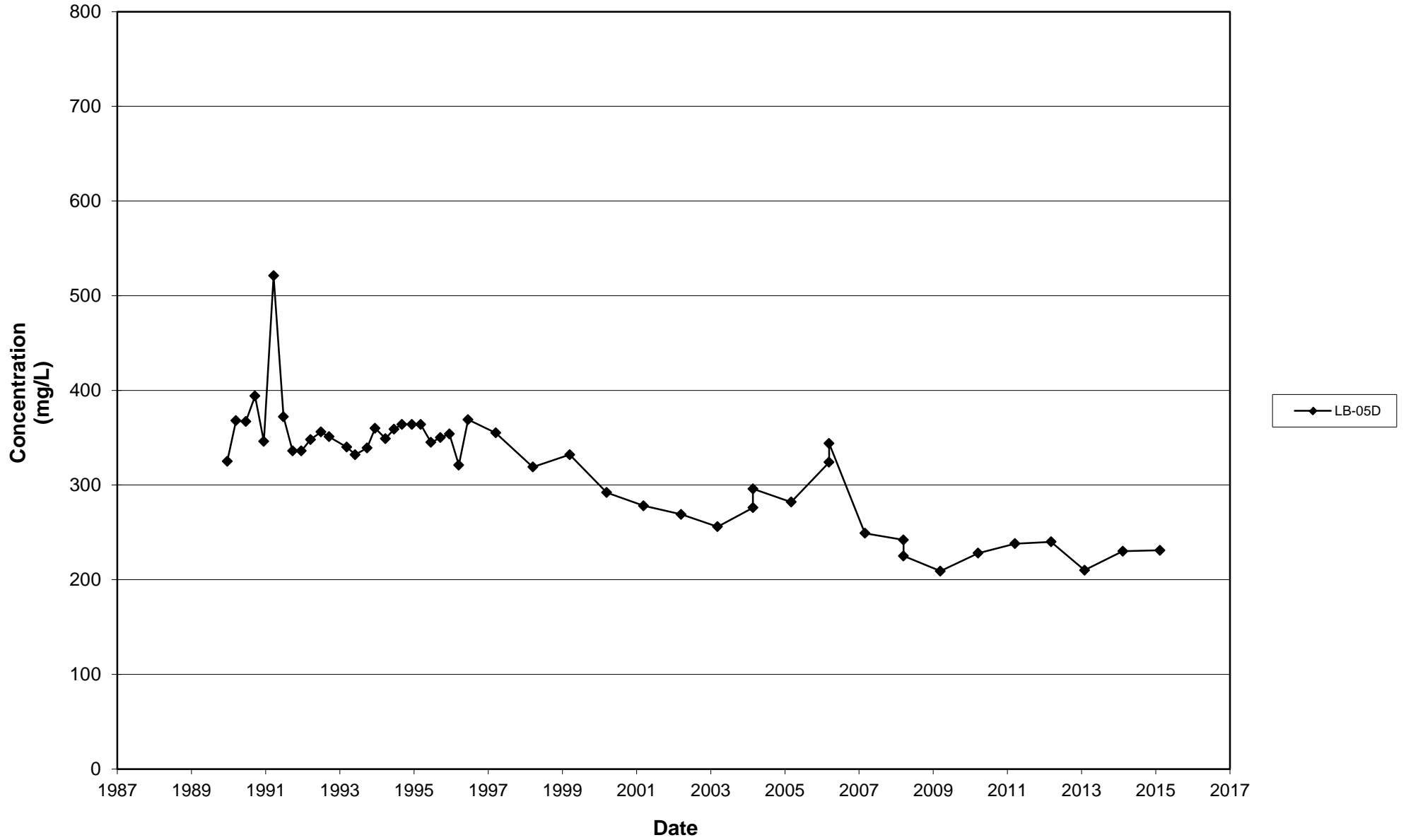
Leichner Landfill
Total Dissolved Solids, LB-03D
1987 - 2015



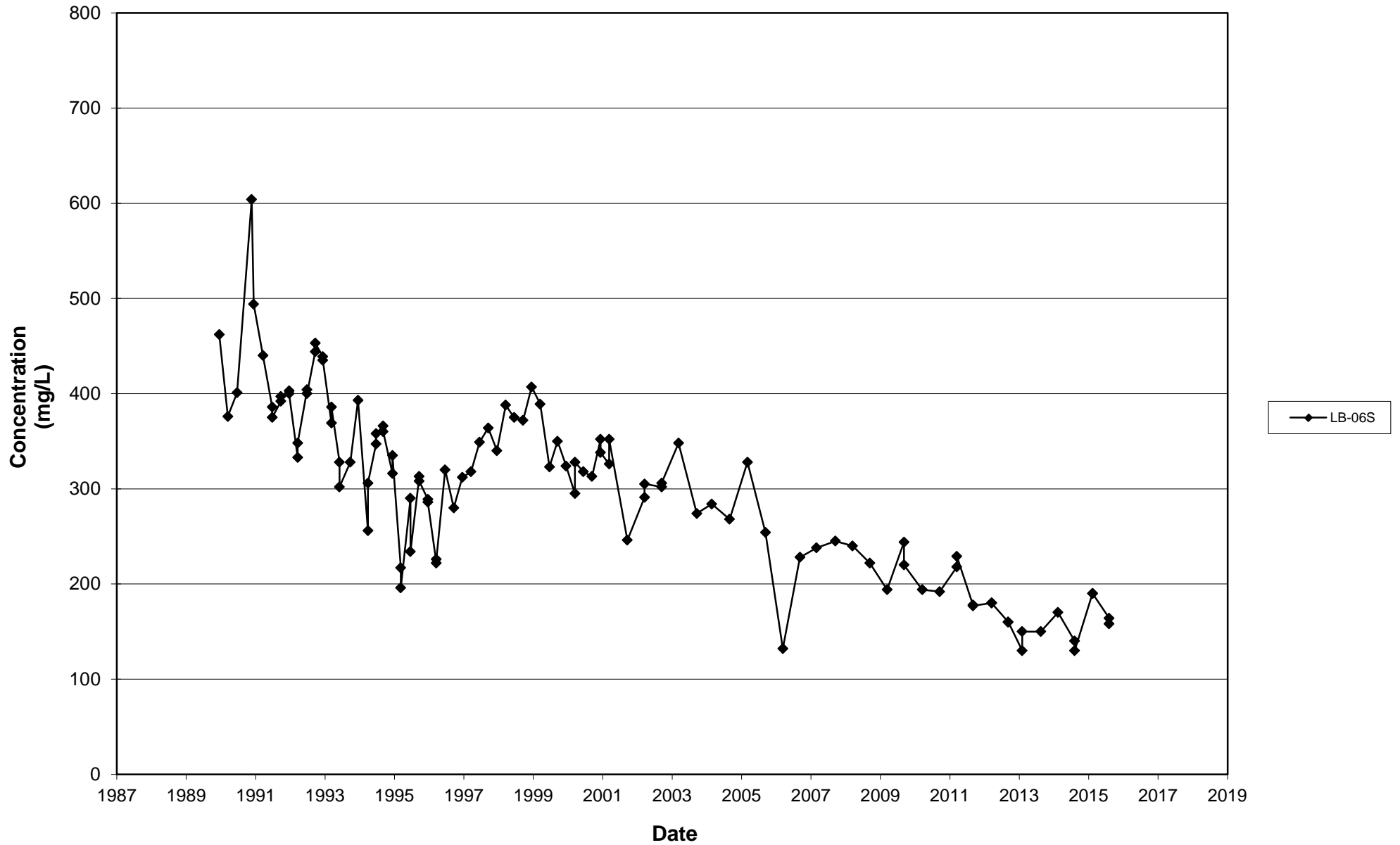
Leichner Landfill
Total Dissolved Solids, LB-05S
1987 - 2015



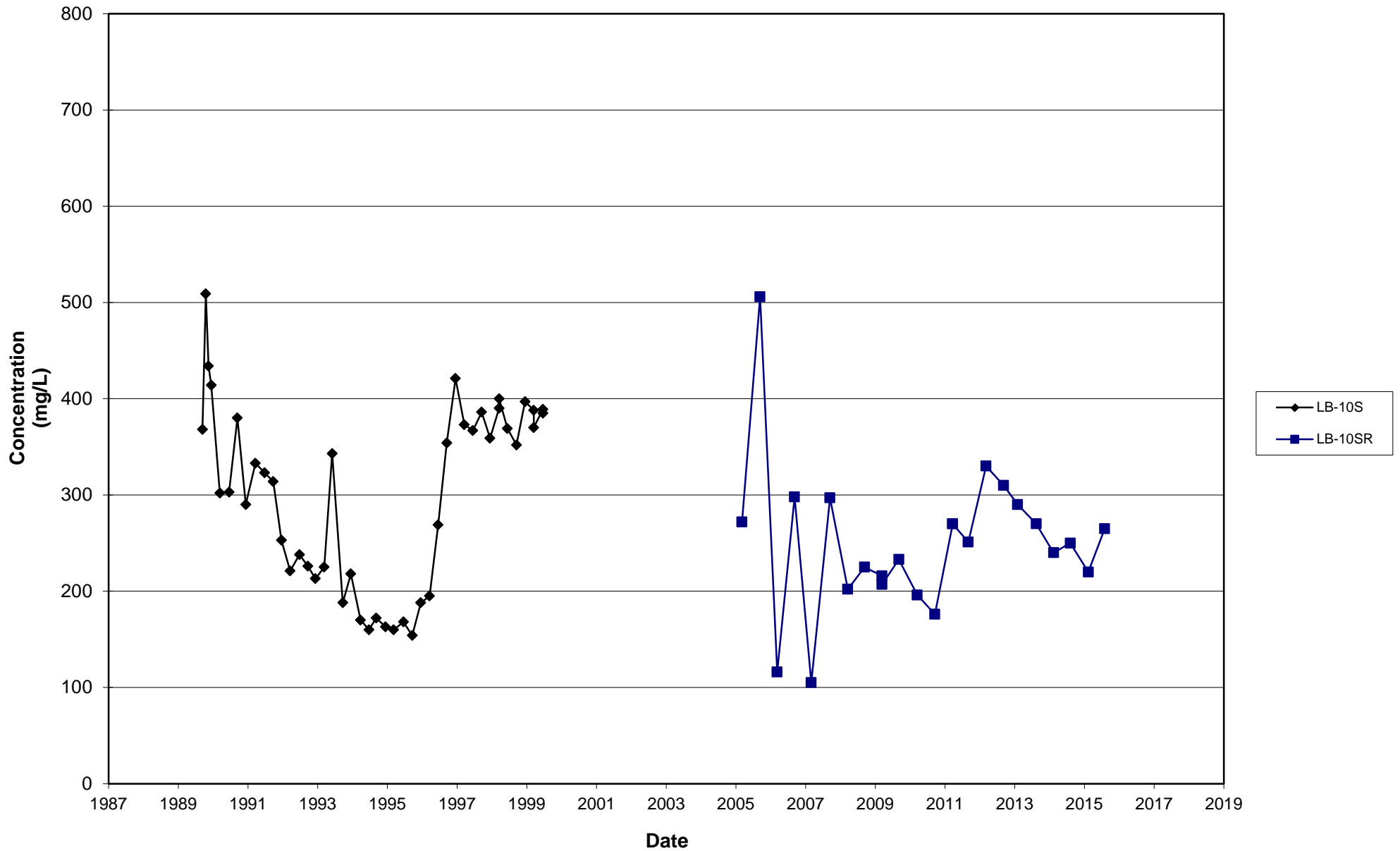
Leichner Landfill
Total Dissolved Solids, LB-05D
1987 - 2015



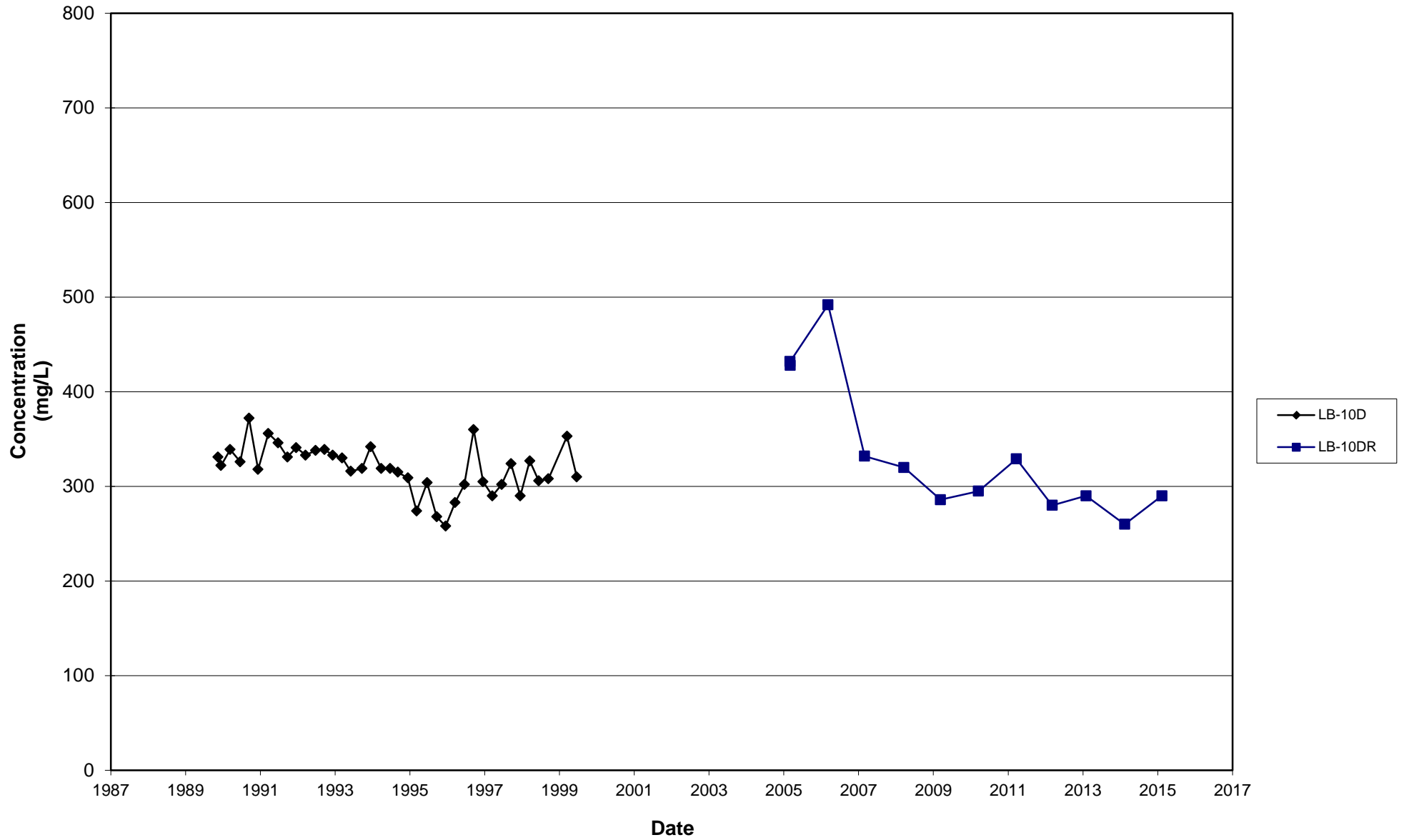
Leichner Landfill
Total Dissolved Solids, LB-06S
1987 - 2015



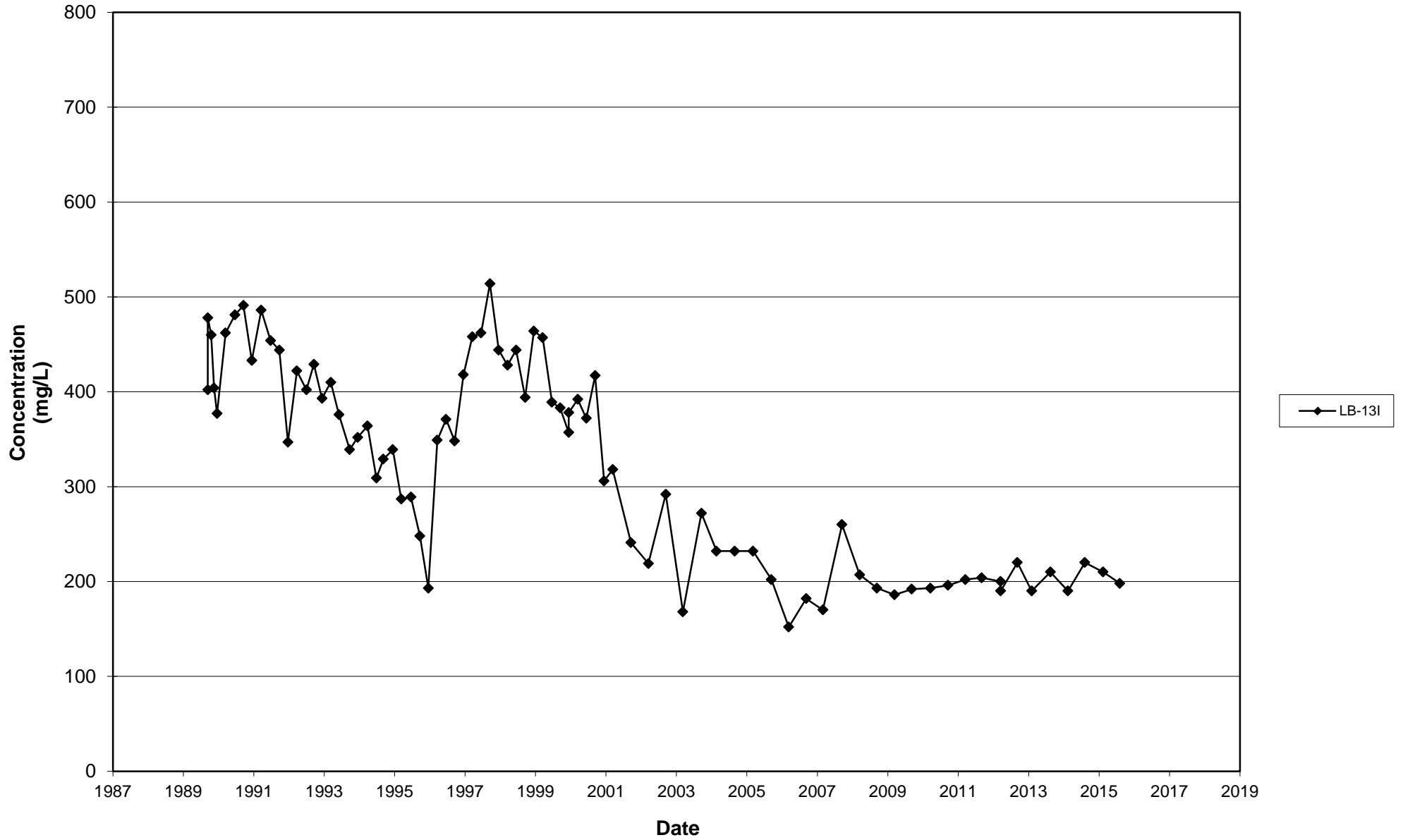
Leichner Landfill
Total Dissolved Solids, LB-10S and LB-10SR
1987 - 2015



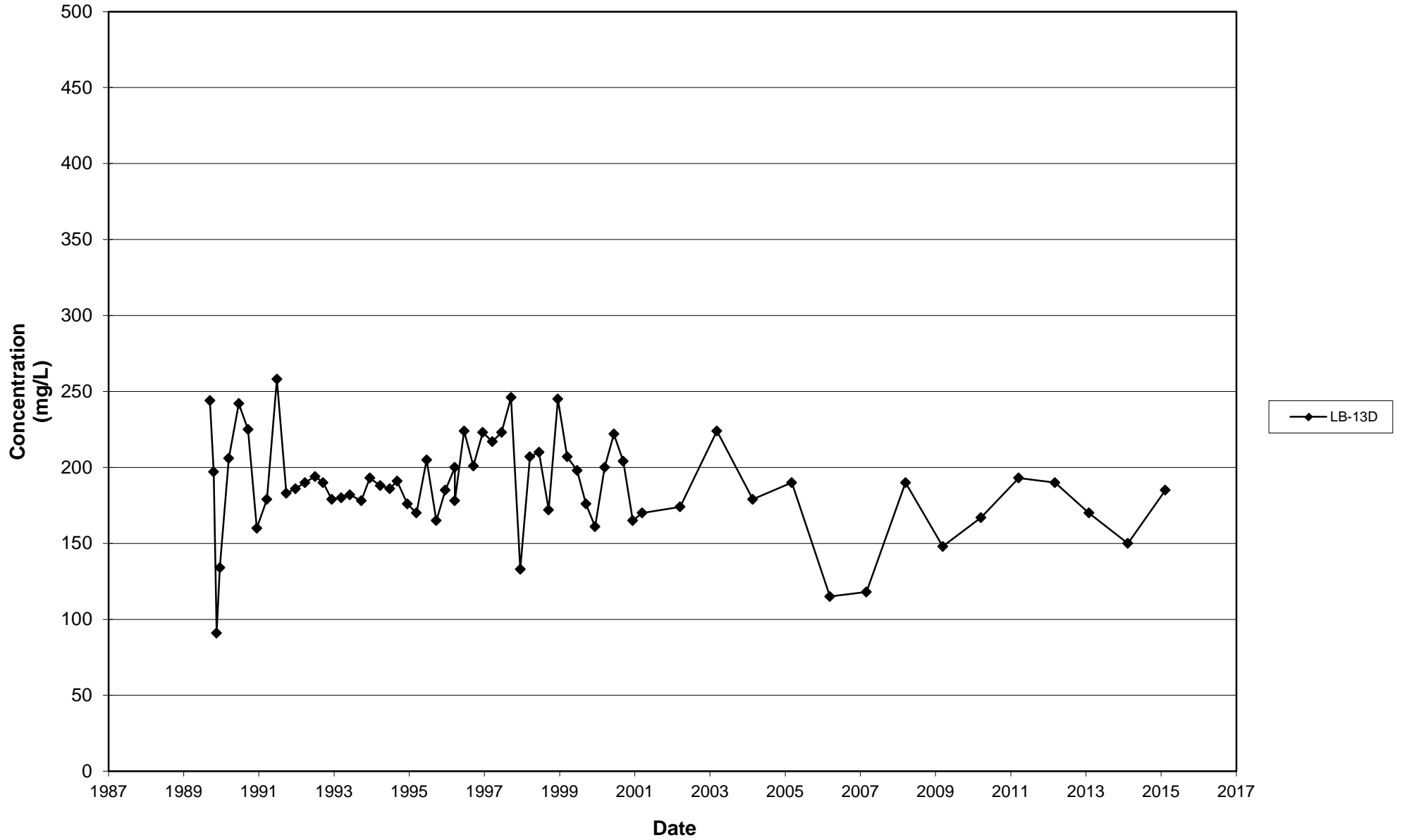
Leichner Landfill
Total Dissolved Solids, LB-10D and LB-10DR
1987 - 2015



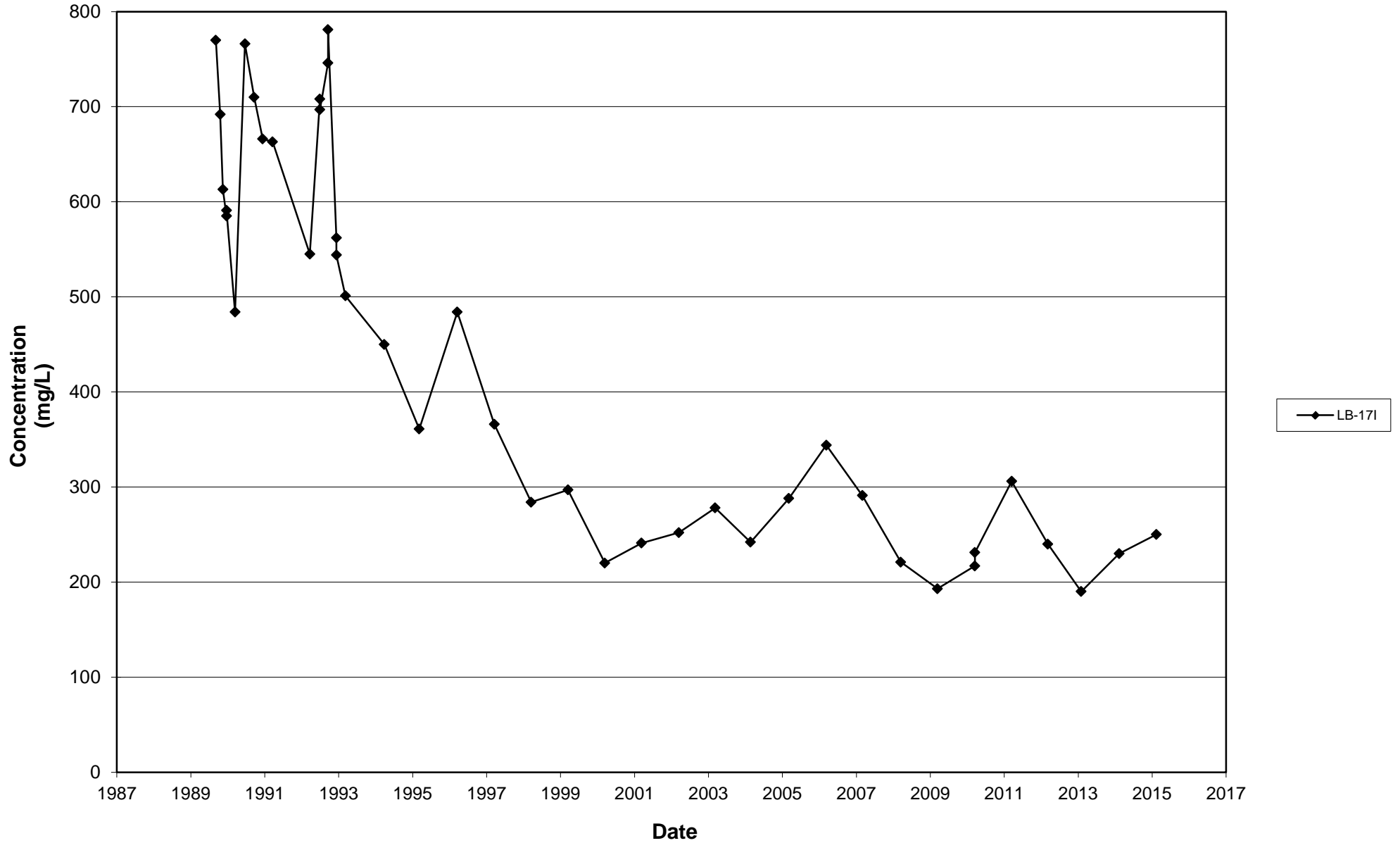
Leichner Landfill
Total Dissolved Solids, LB-13I
1987 - 2015



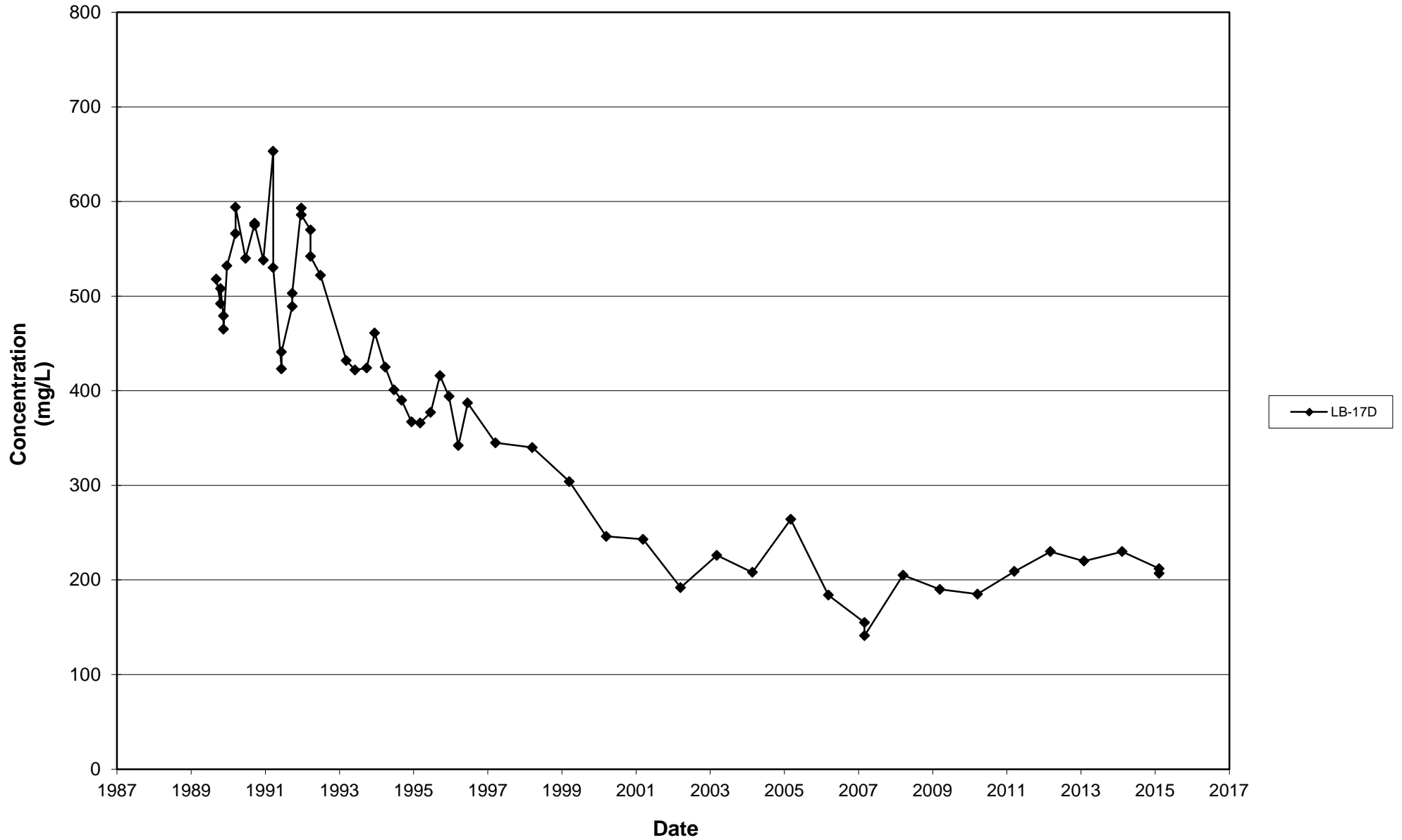
Leichner Landfill
Total Dissolved Solids, LB-13D
1987 - 2015



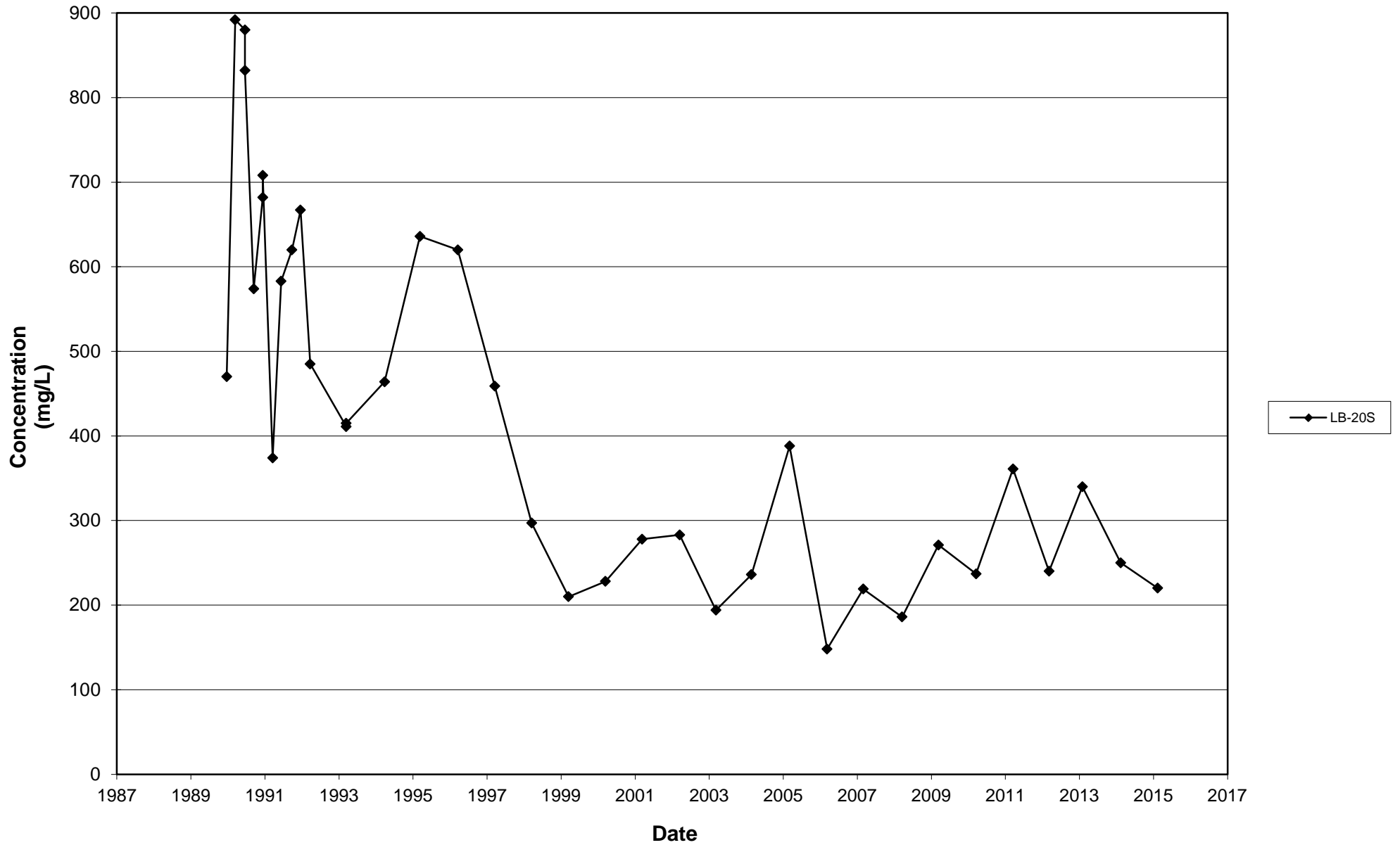
Leichner Landfill
Total Dissolved Solids, LB-17I
1987 - 2015



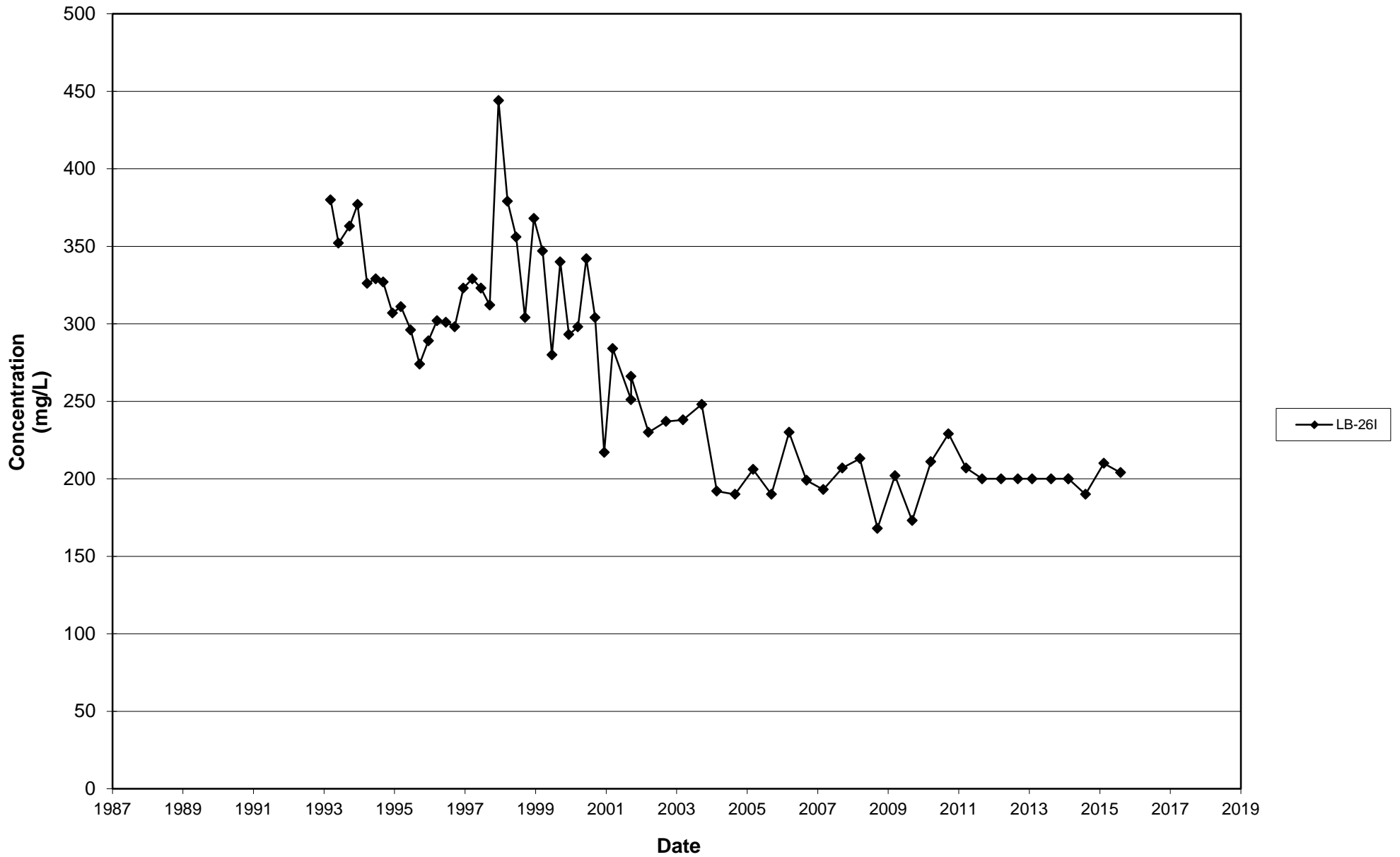
**Leichner Landfill
Total Dissolved Solids, LB-17D
1987 - 2015**



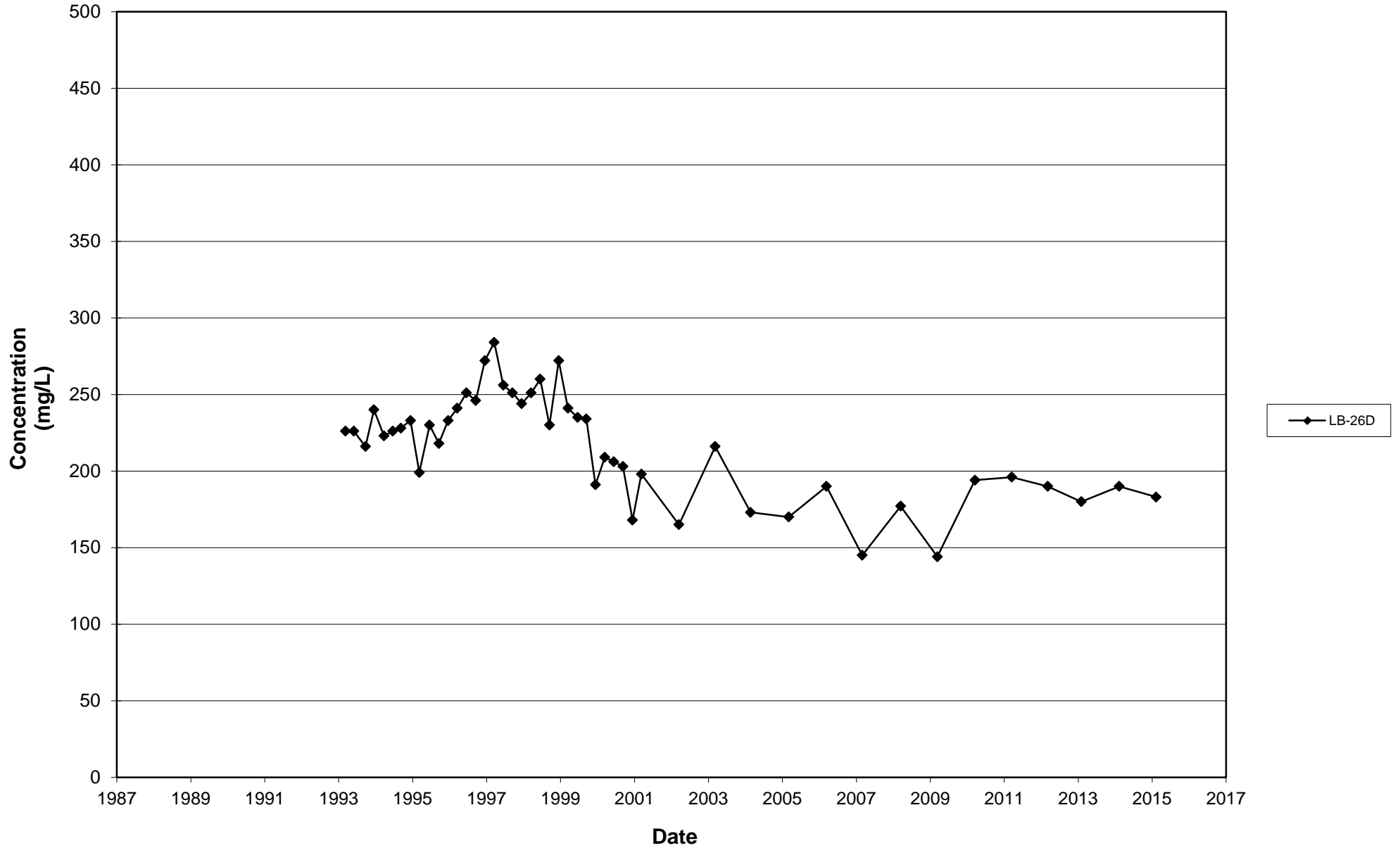
Leichner Landfill
Total Dissolved Solids, LB-20S
1987 - 2015



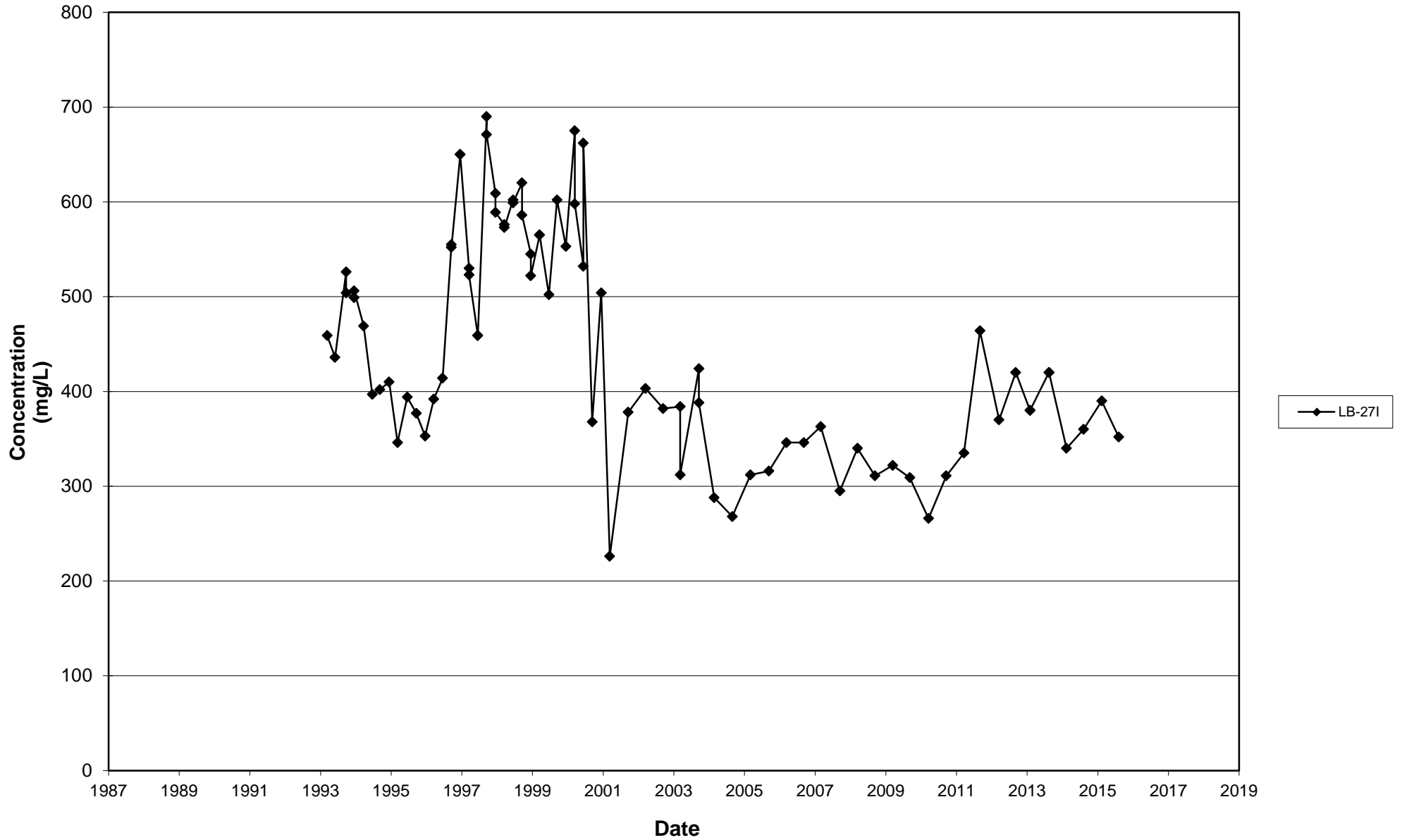
Leichner Landfill
Total Dissolved Solids, LB-26I
1987 - 2015



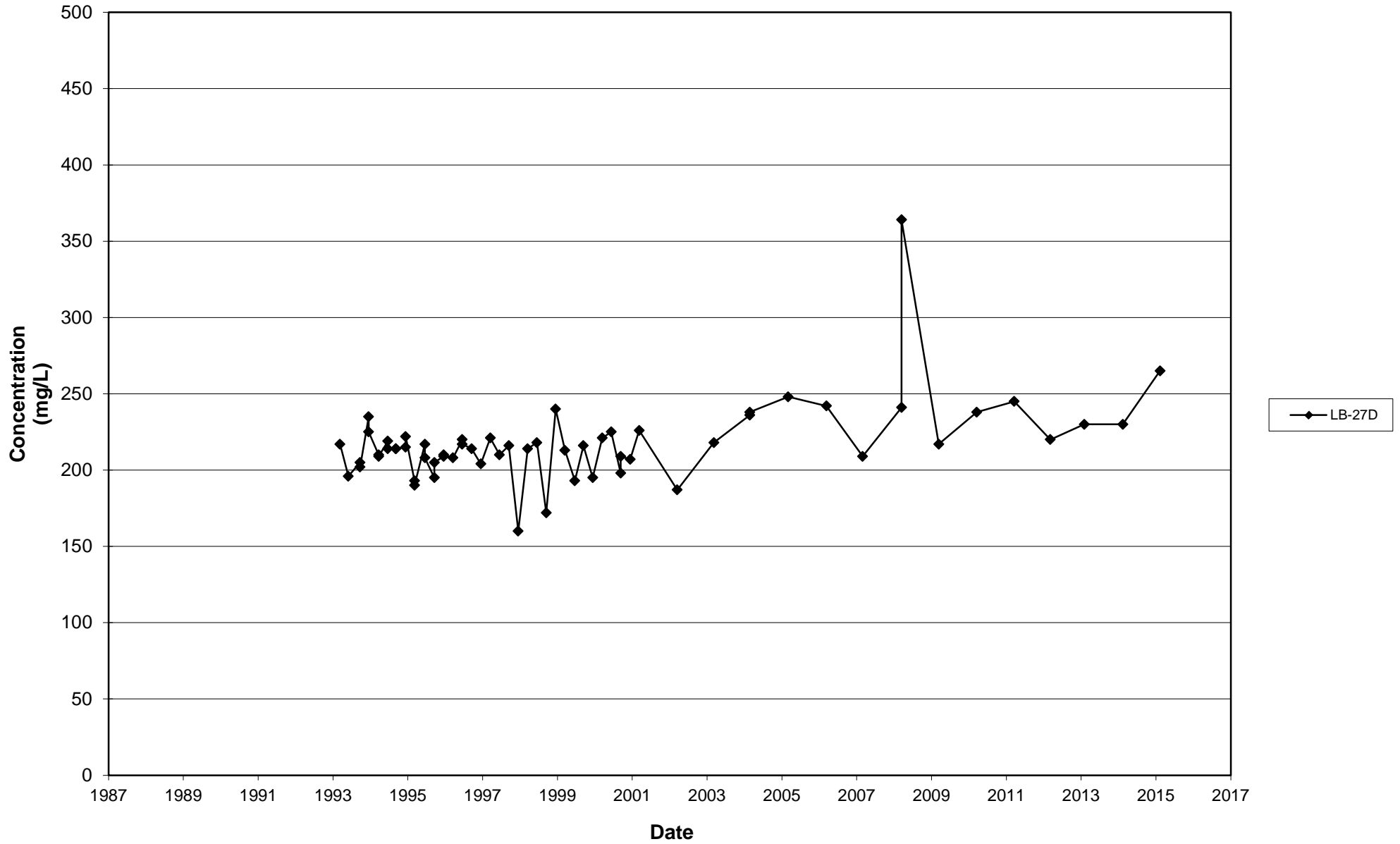
Leichner Landfill
Total Dissolved Solids, LB-26D
1987 - 2015



Leichner Landfill
Total Dissolved Solids, LB-27I
1987 - 2015

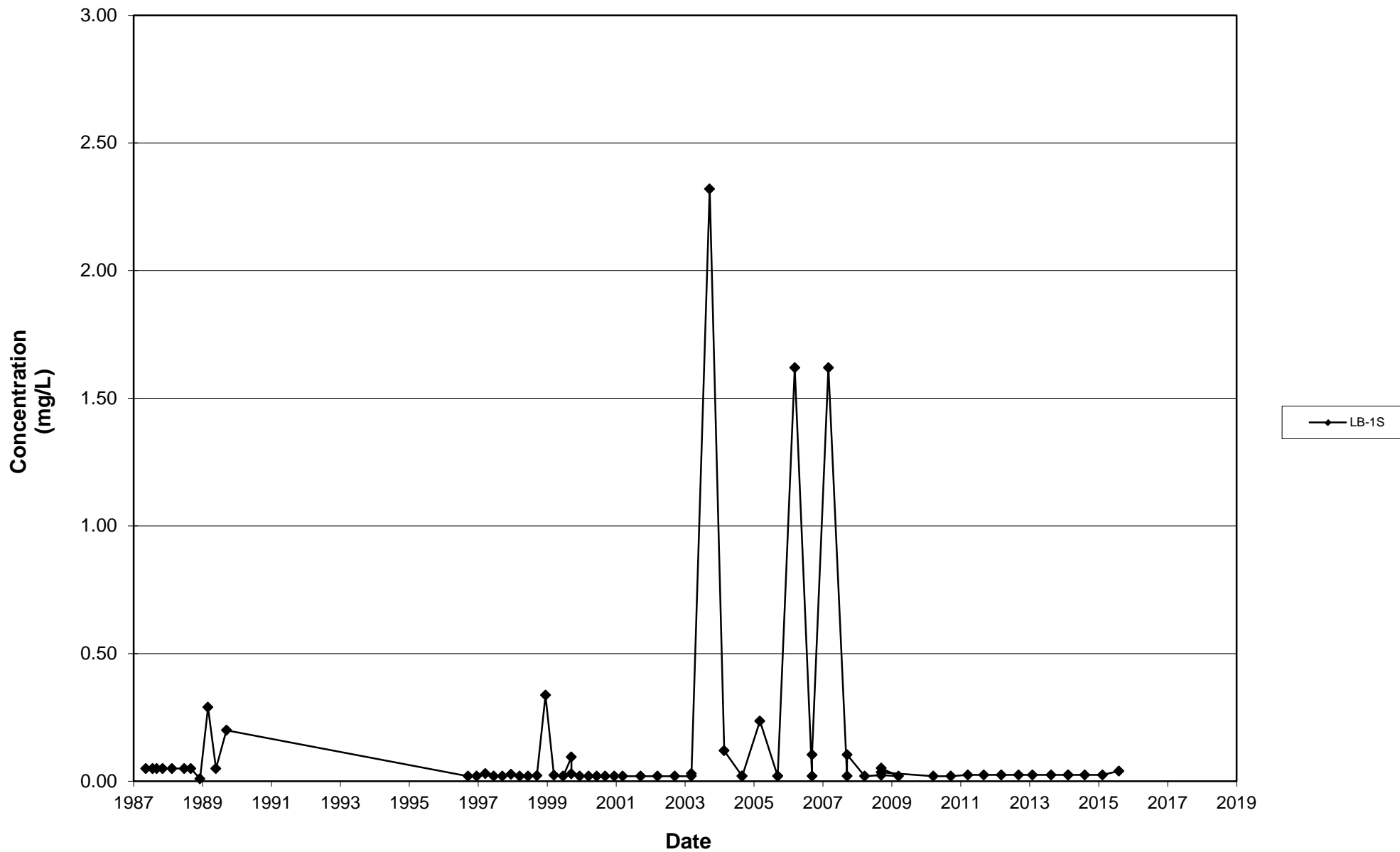


Leichner Landfill
Total Dissolved Solids, LB-27D
1987 - 2015

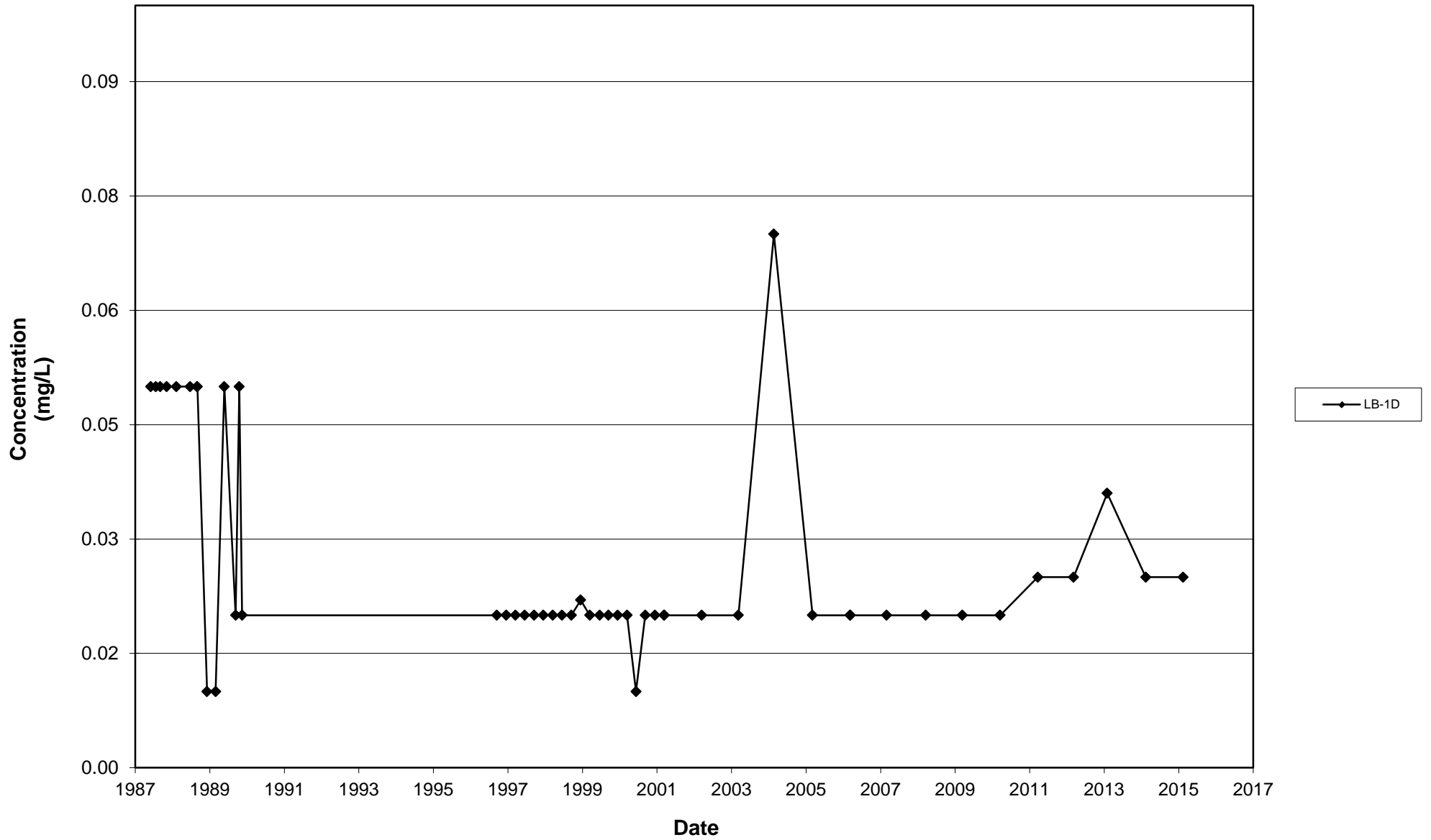


Dissolved Iron

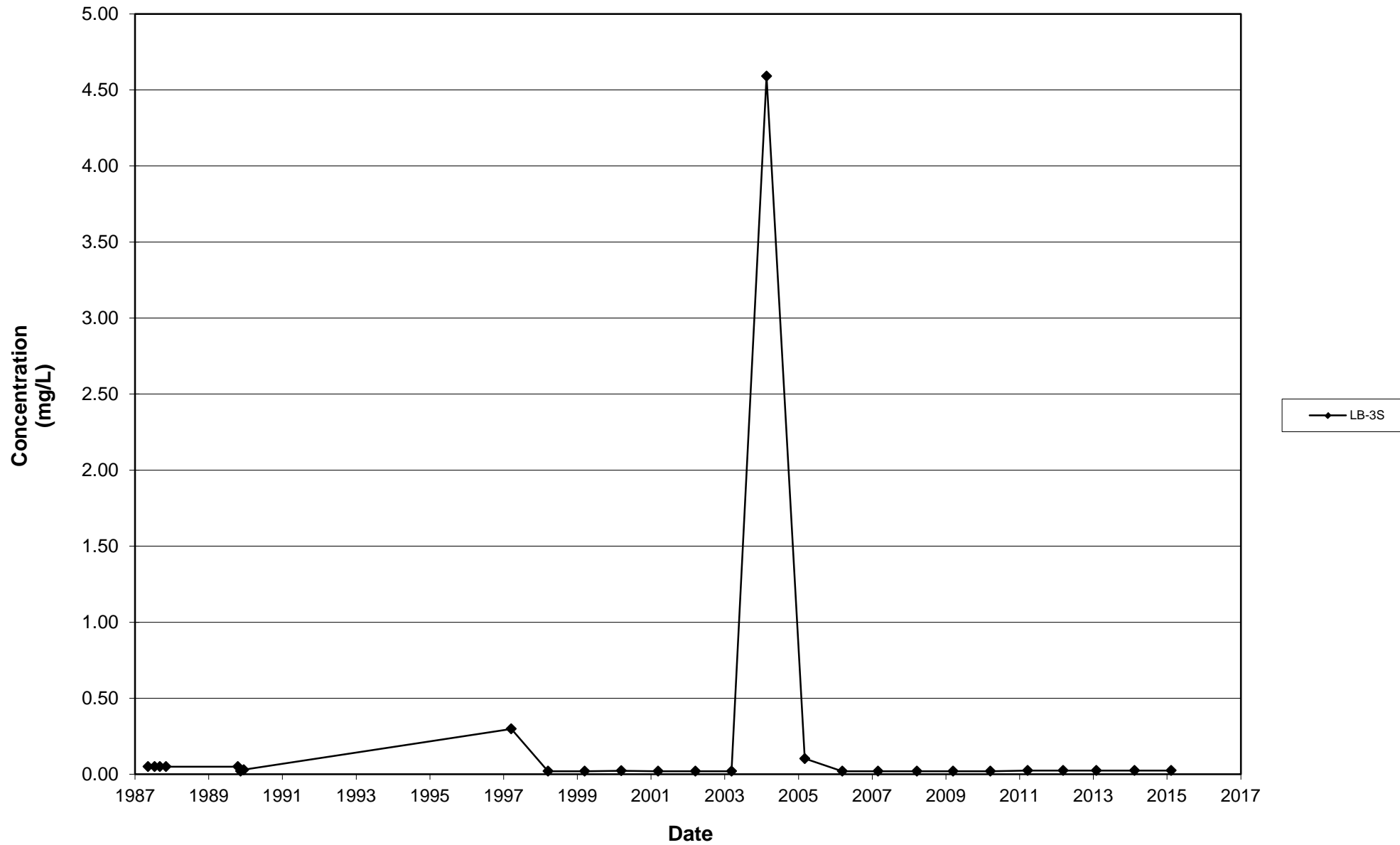
Leichner Landfill
Dissolved Iron, LB-01S
1987 - 2015



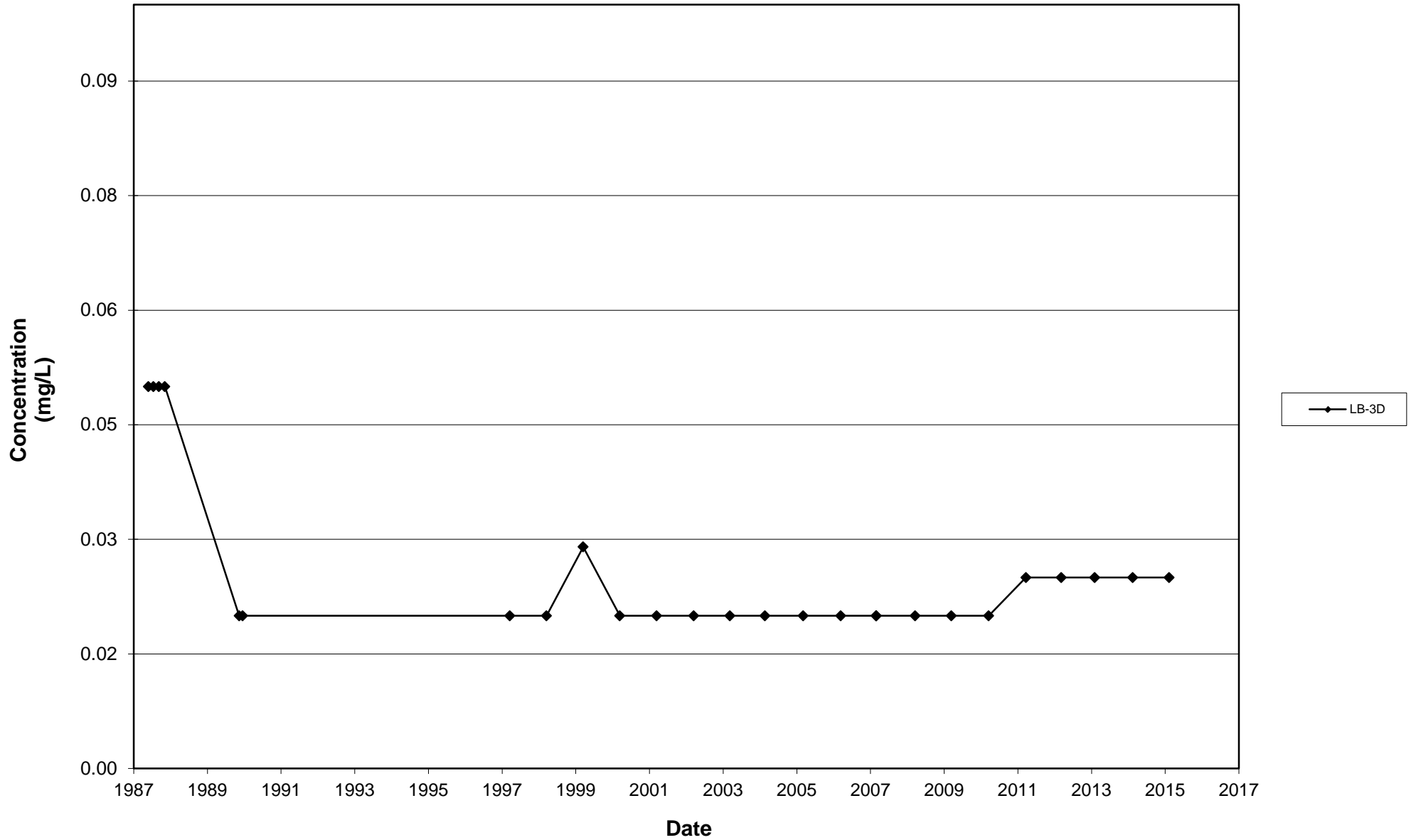
Leichner Landfill
Dissolved Iron, LB-01D
1987 - 2015



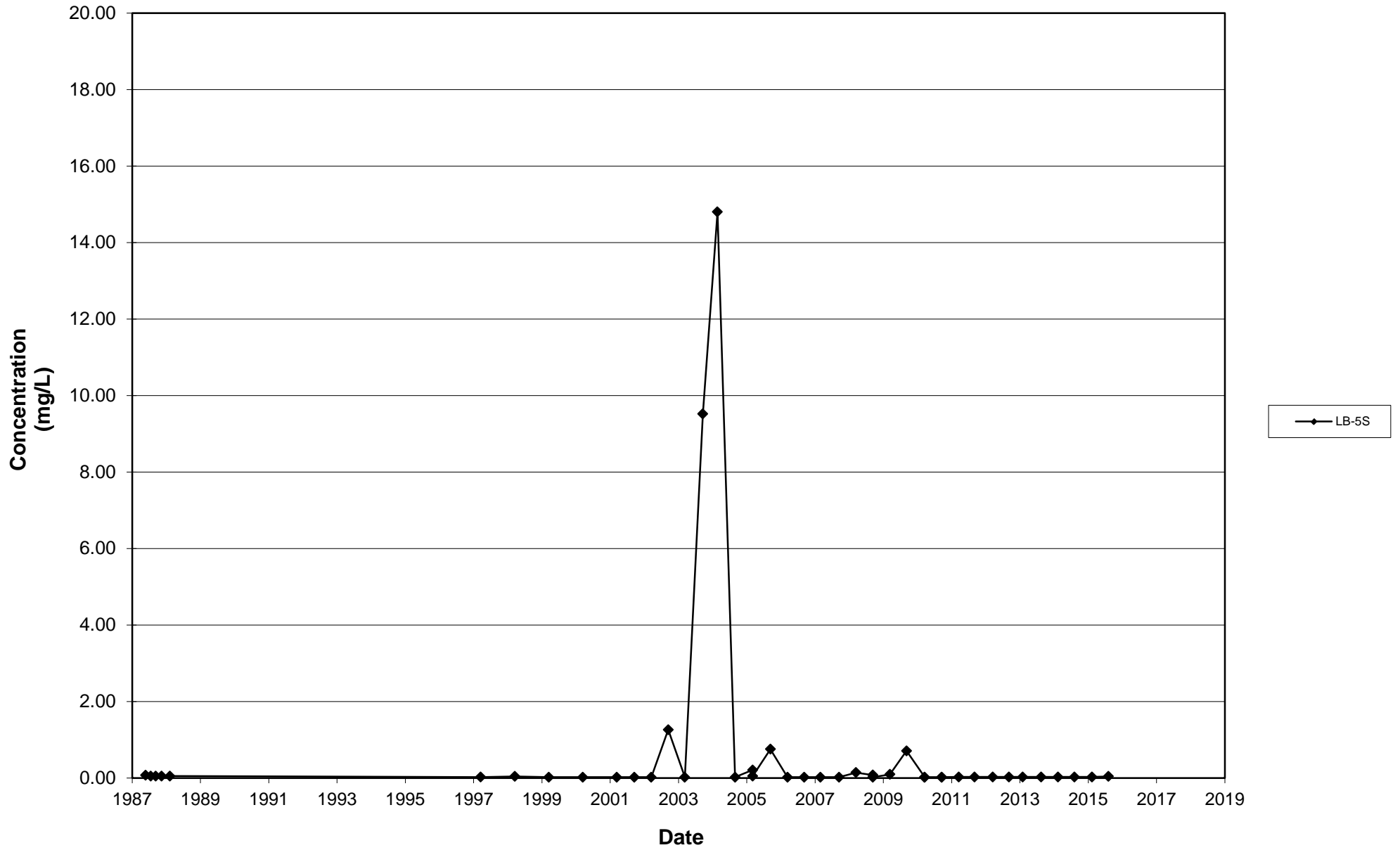
Leichner Landfill
Dissolved Iron, LB-03S
1987 - 2015



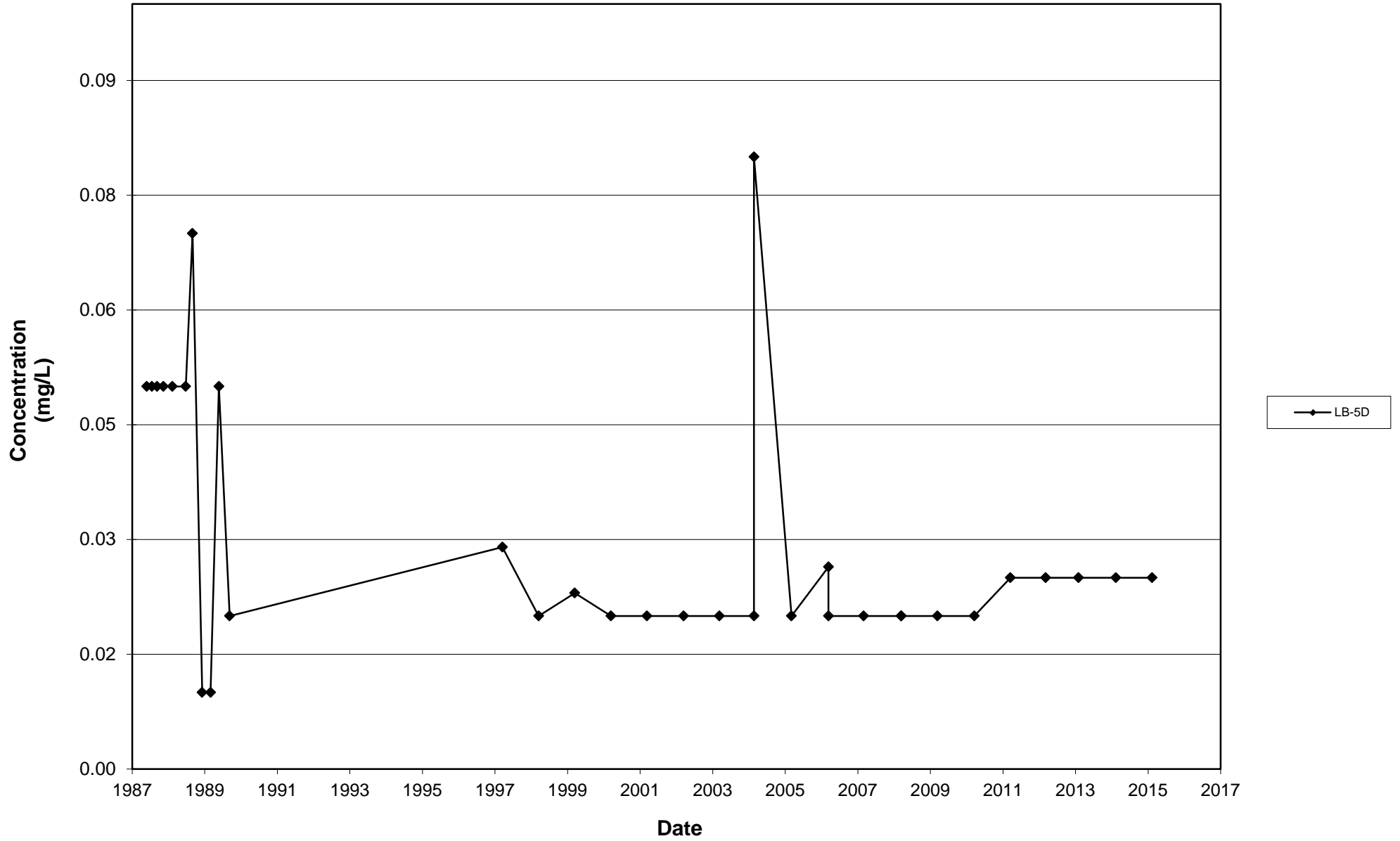
Leichner Landfill
Dissolved Iron, LB-03D
1987 - 2015



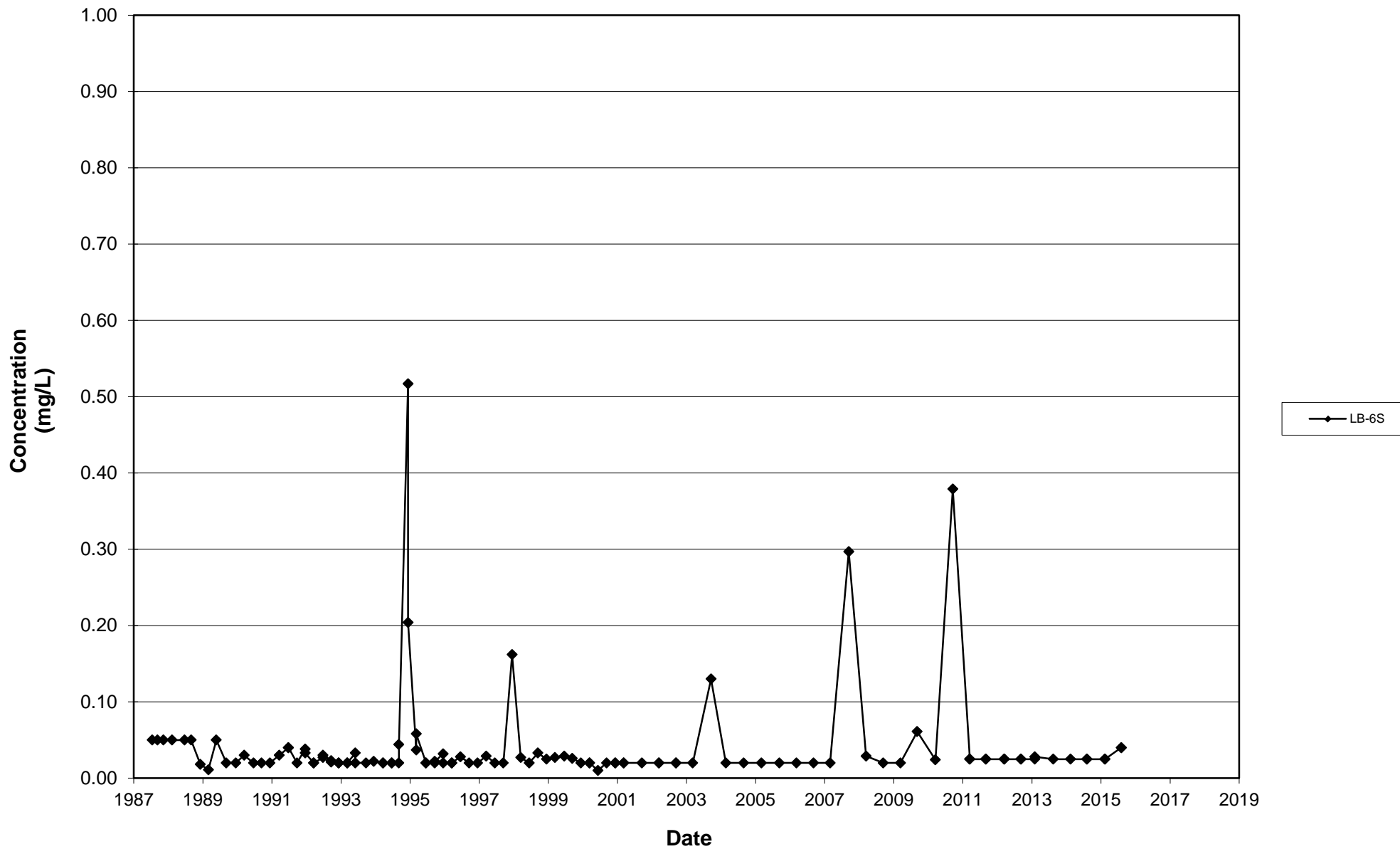
**Leichner Landfill
Dissolved Iron, LB-05S
1987 - 2015**



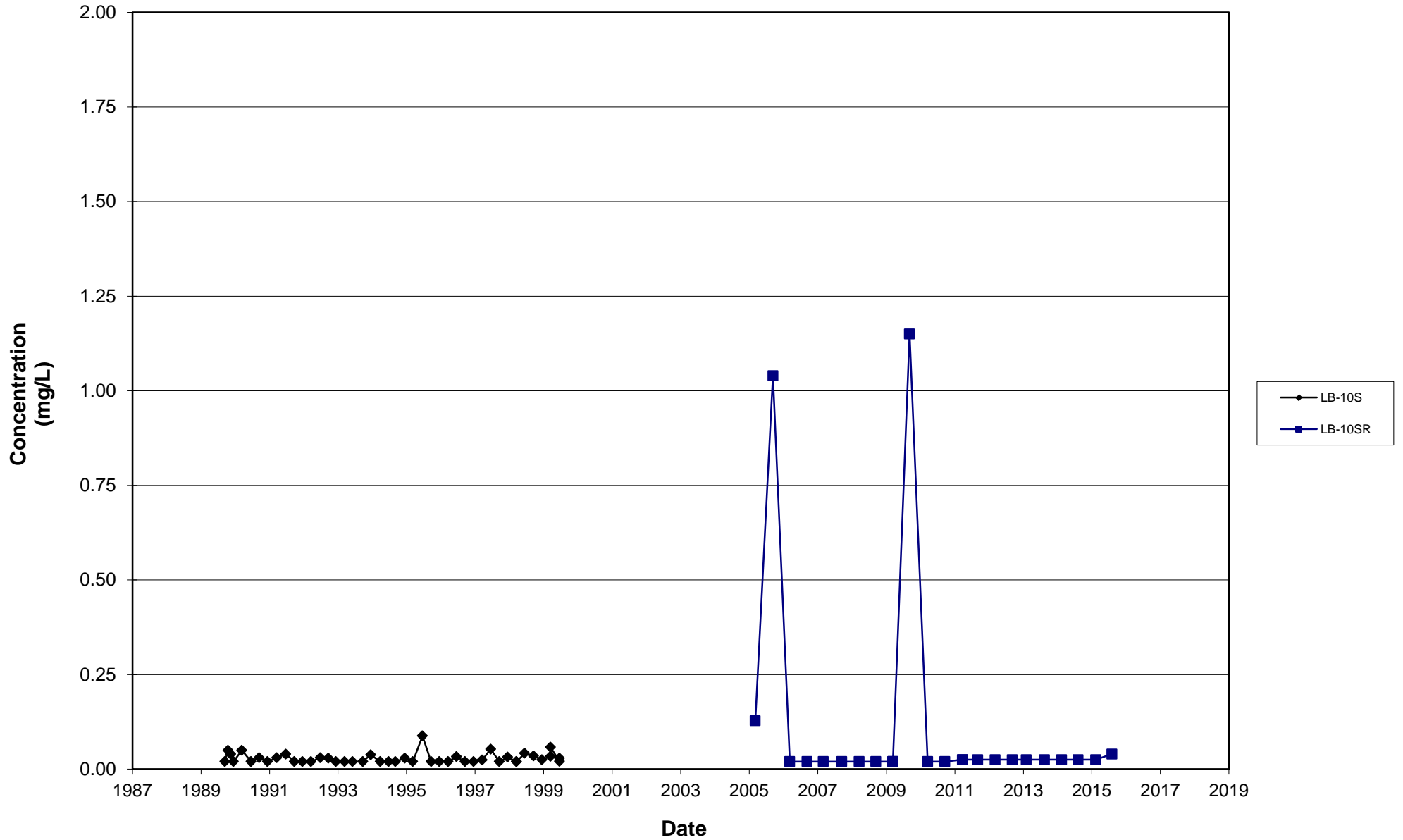
Leichner Landfill
Dissolved Iron, LB-05D
1987 - 2015



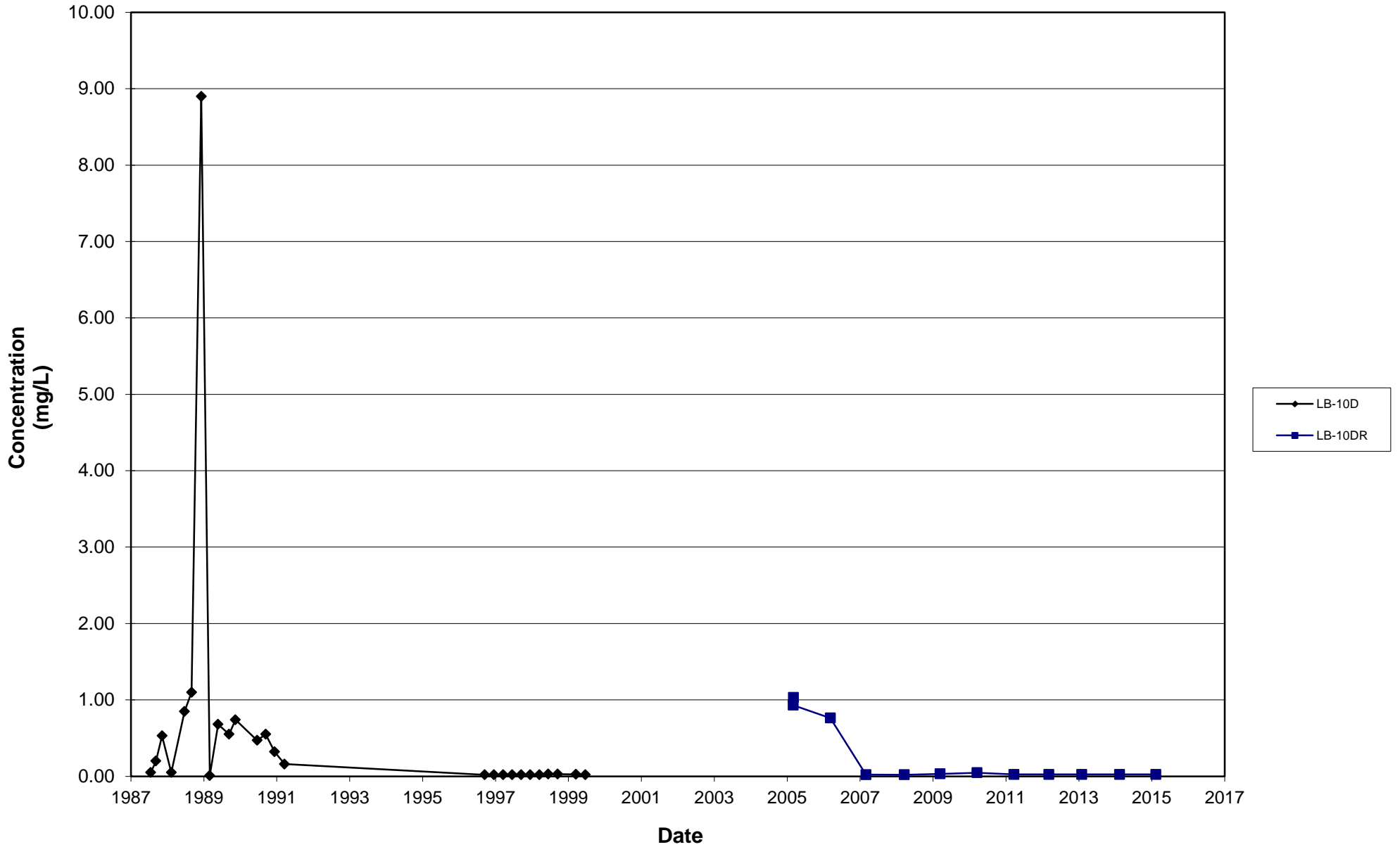
Leichner Landfill
Dissolved Iron, LB-06S
1987 - 2015



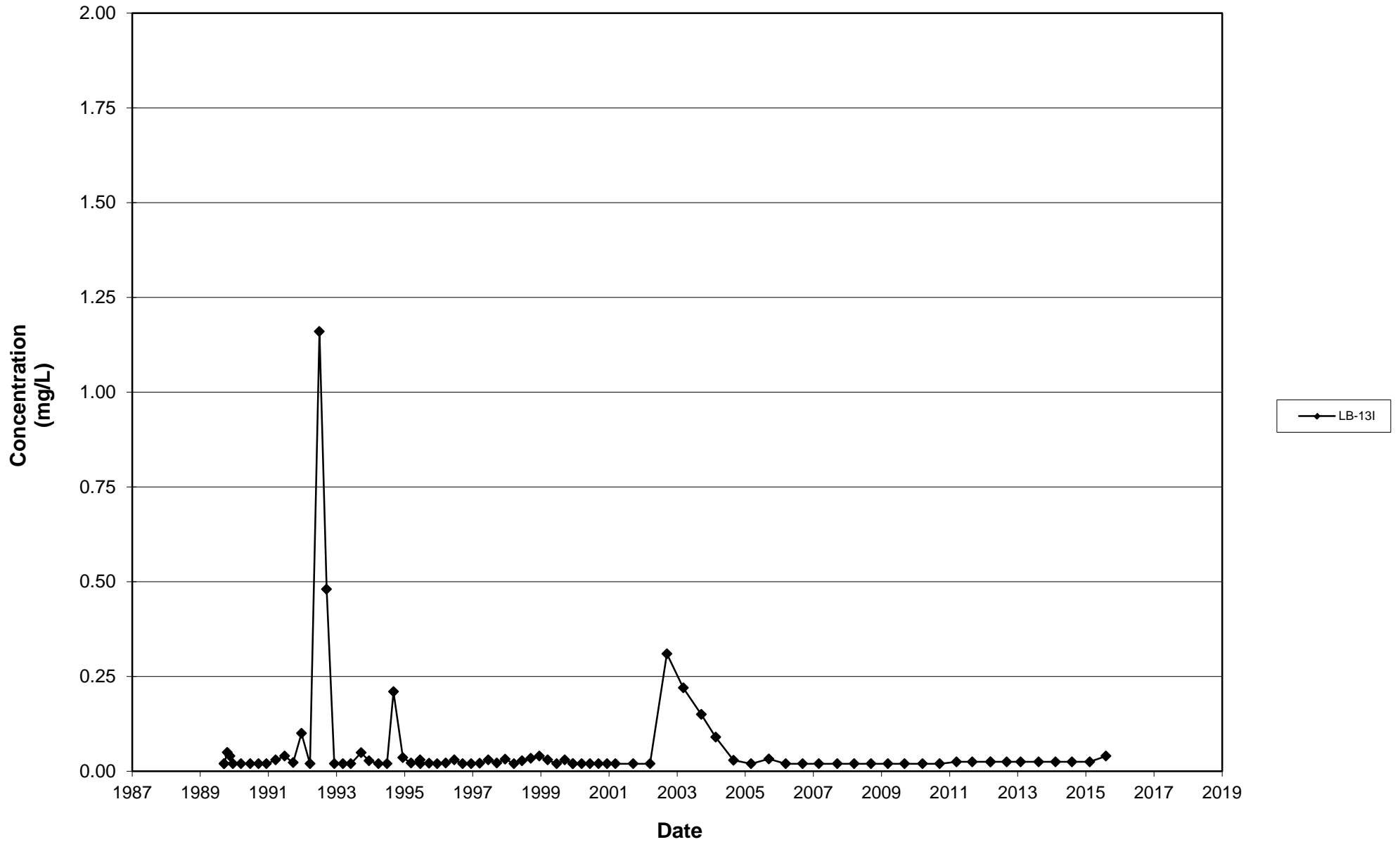
Leichner Landfill
Dissolved Iron, LB-10S and LB-10SR
1987 - 2015



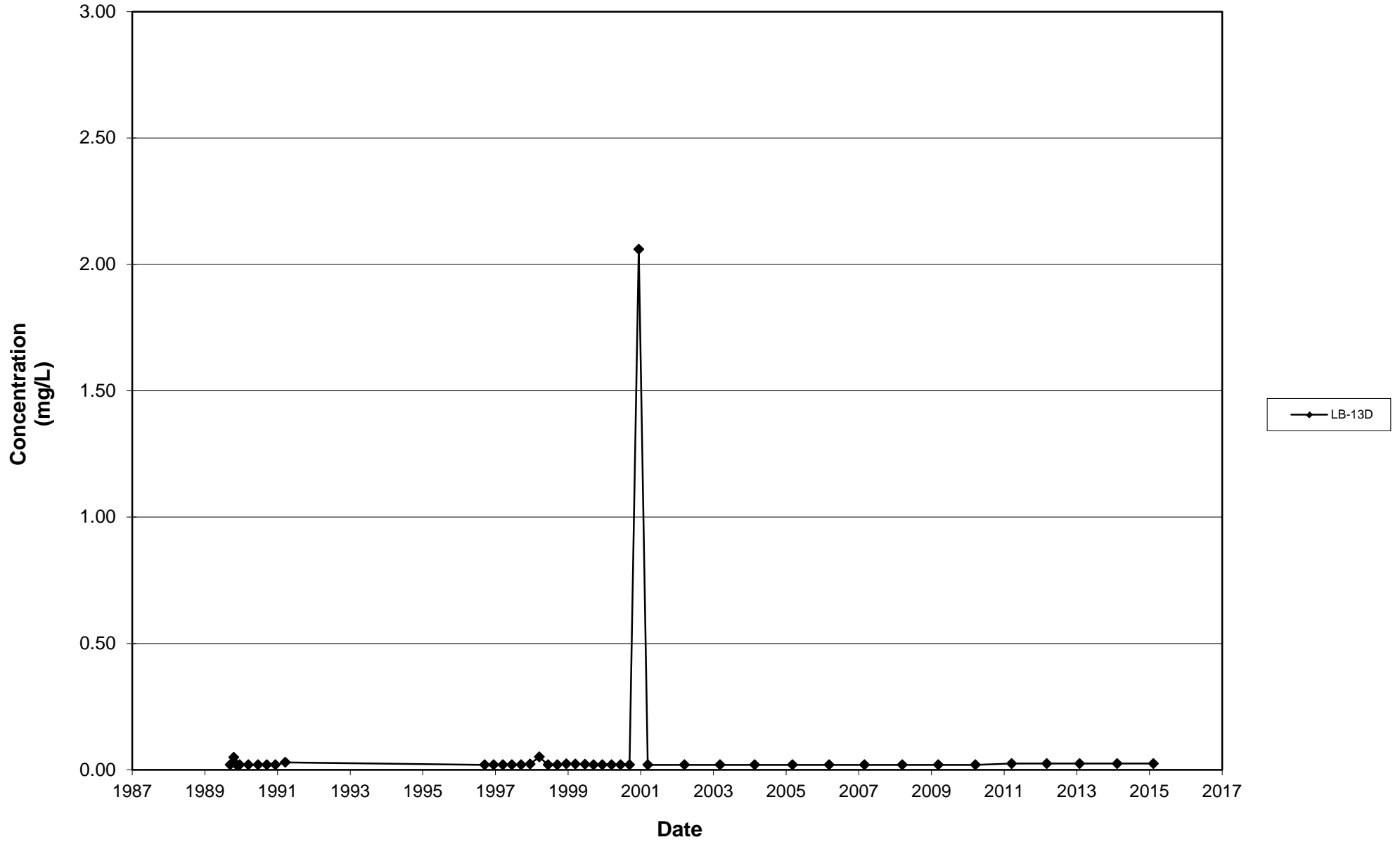
Leichner Landfill
Dissolved Iron, LB-10D and LB-10DR
1987 - 2015



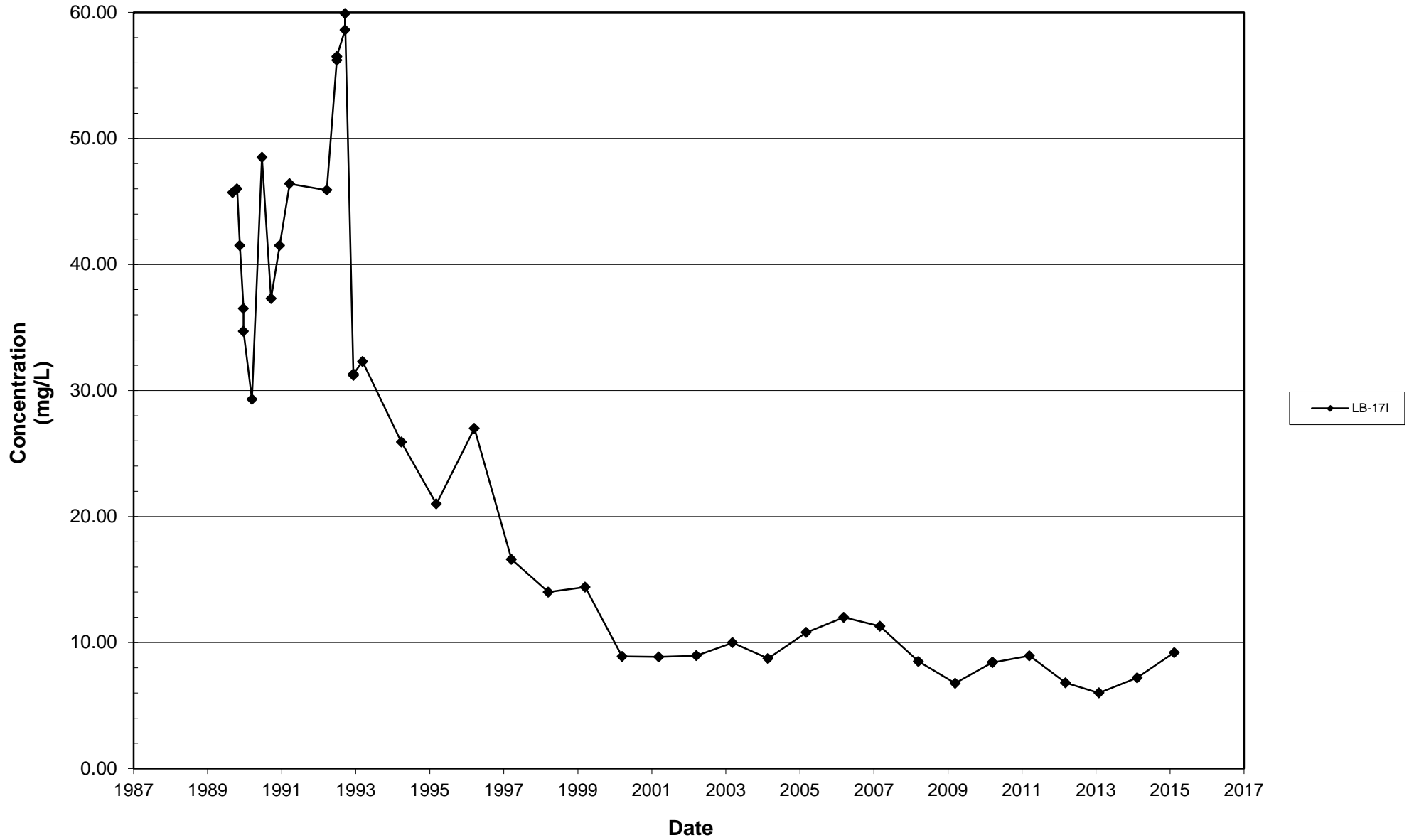
Leichner Landfill
Dissolved Iron, LB-13I
1987 - 2015



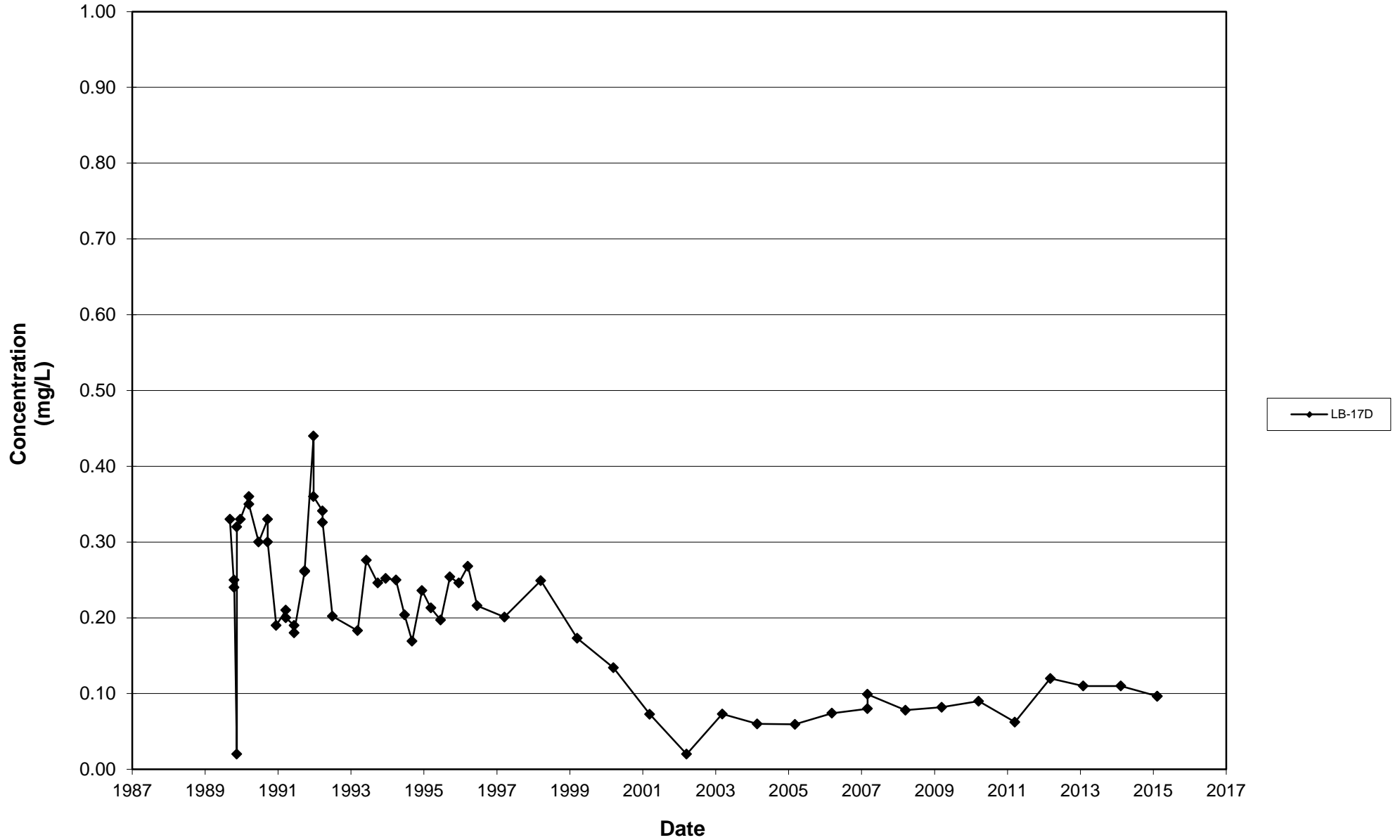
Leichner Landfill
Dissolved Iron, LB-13D
1987 - 2015



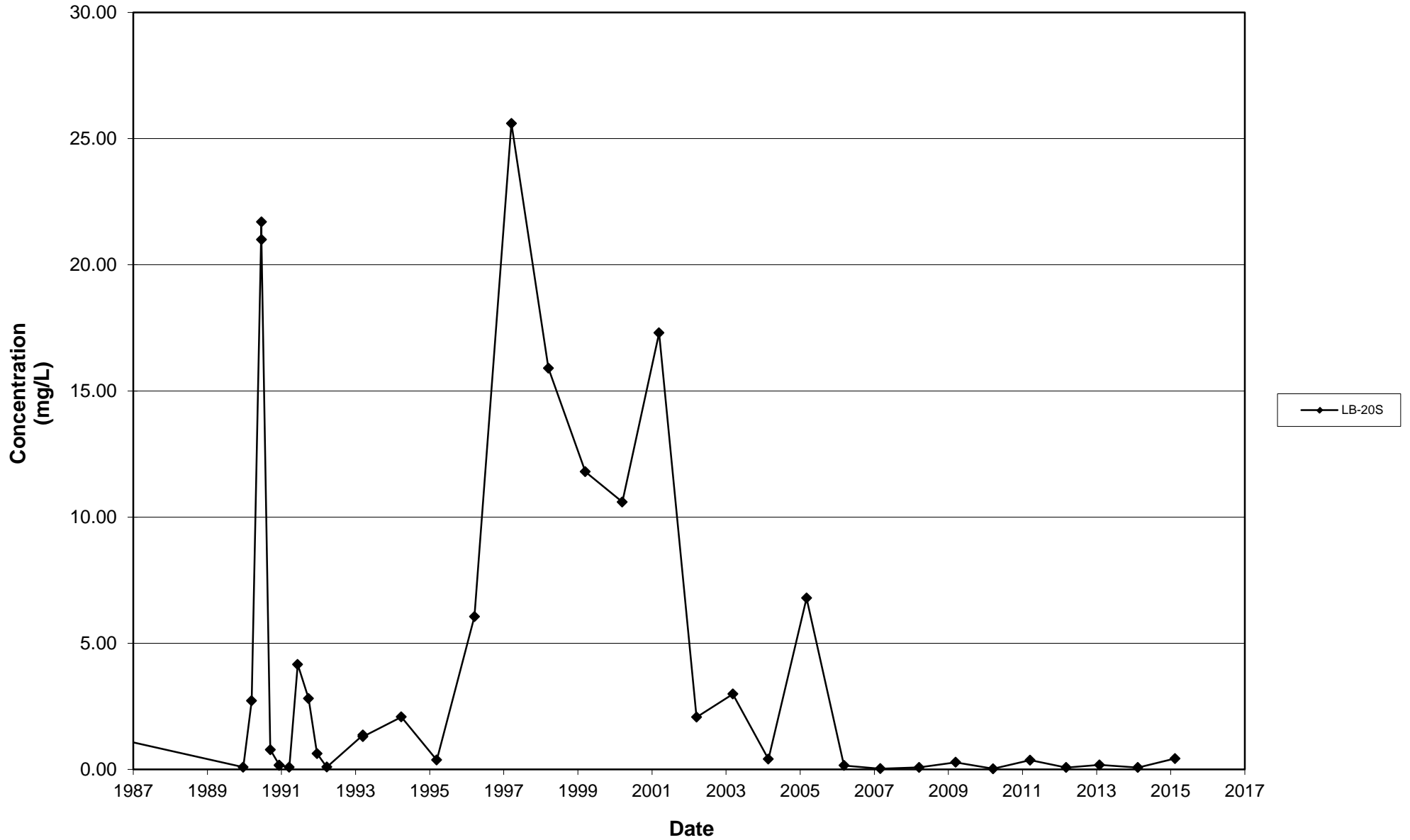
Leichner Landfill
Dissolved Iron, LB-17I
1987 - 2015



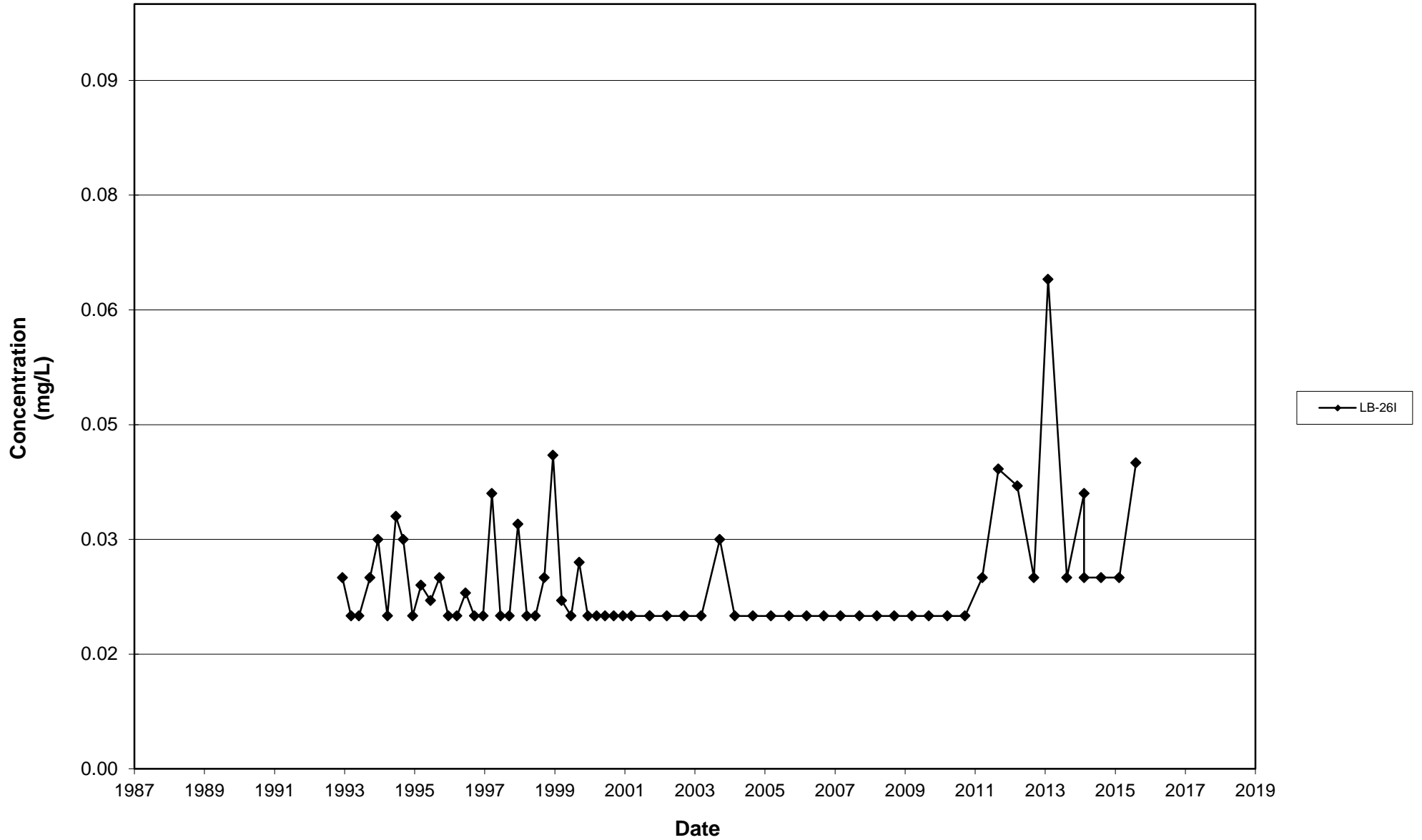
Leichner Landfill
Dissolved Iron, LB-17D
1987 - 2015



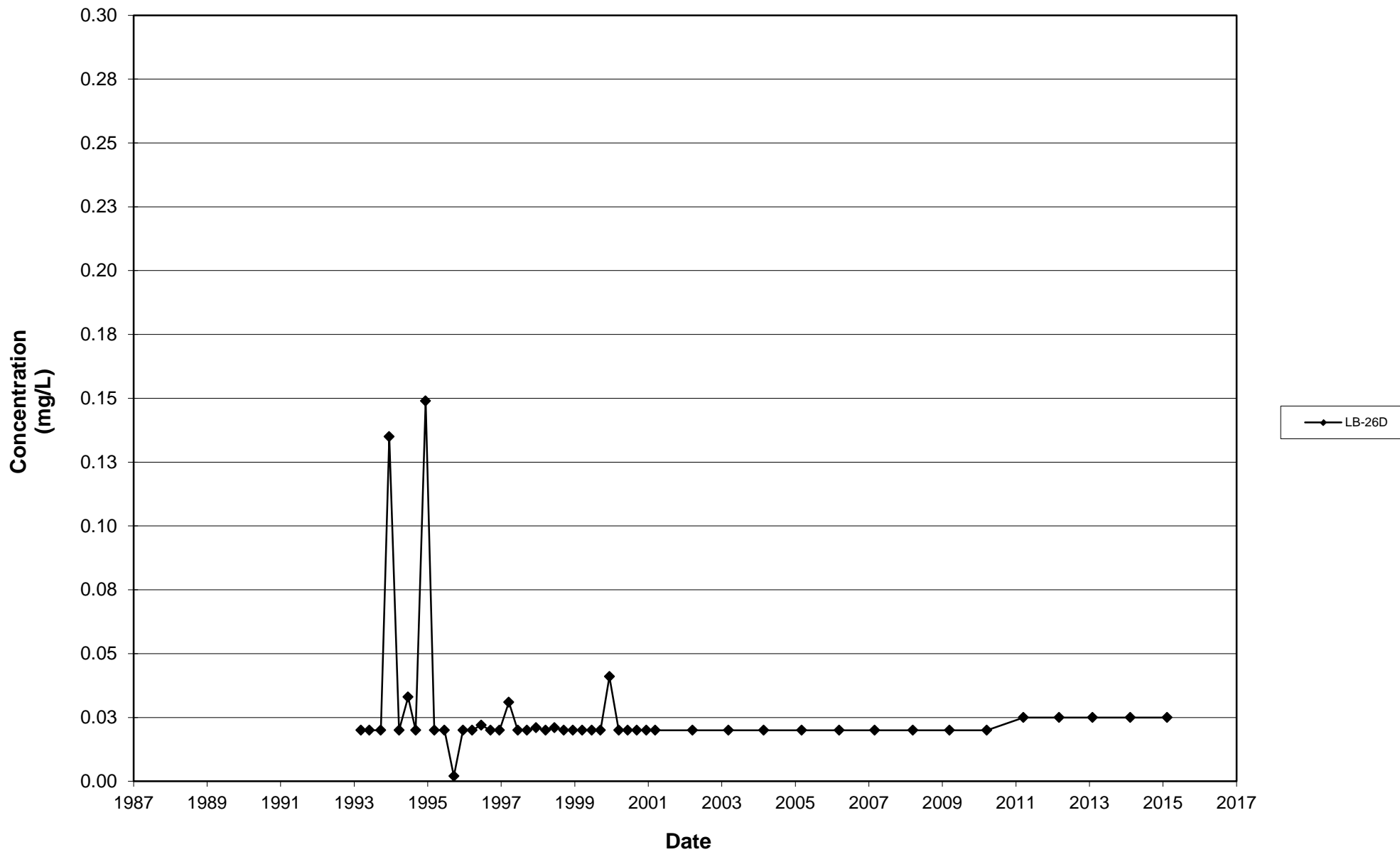
Leichner Landfill
Dissolved Iron, LB-20S
1987 - 2015



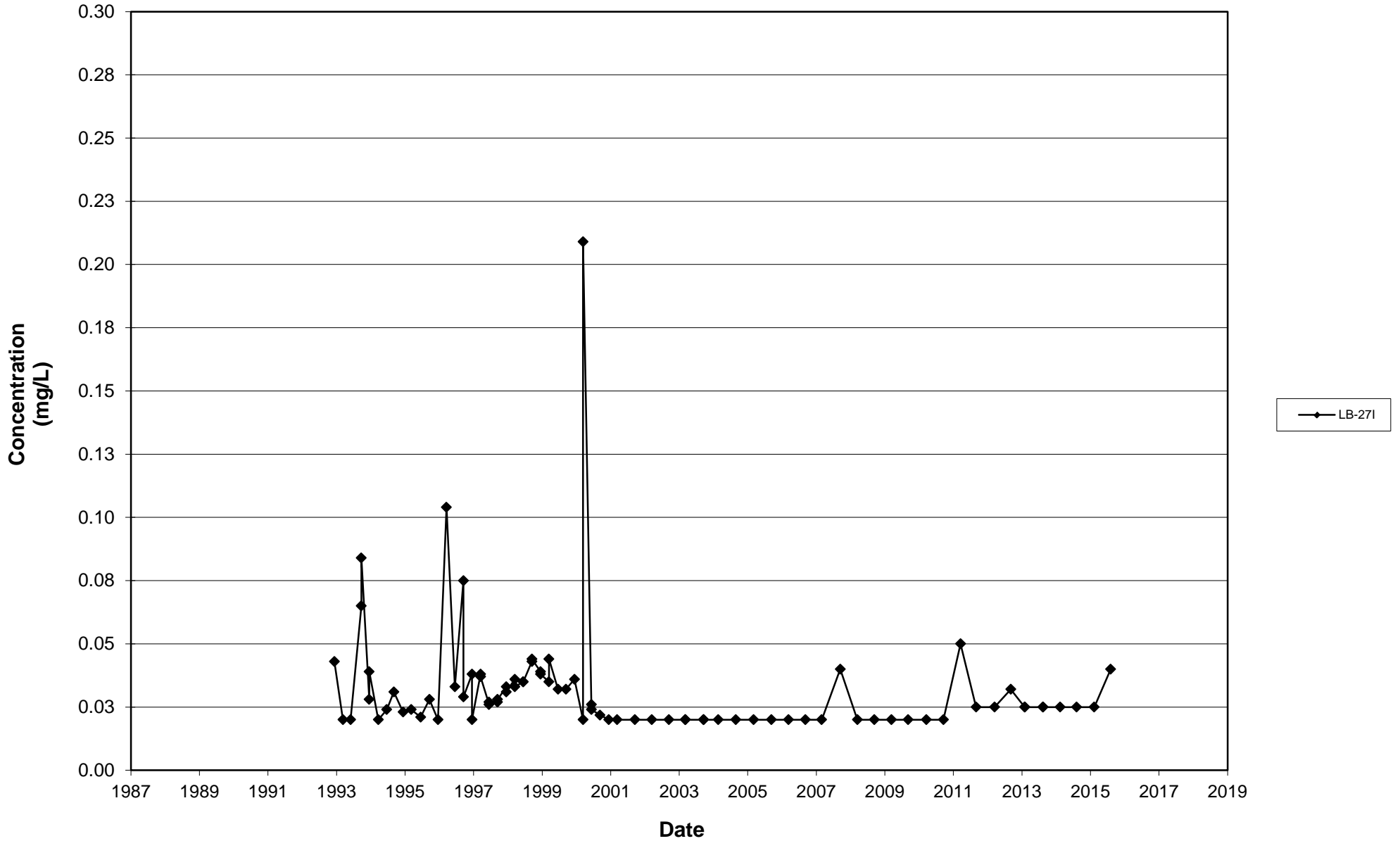
Leichner Landfill
Dissolved Iron, LB-26I
1987 - 2015



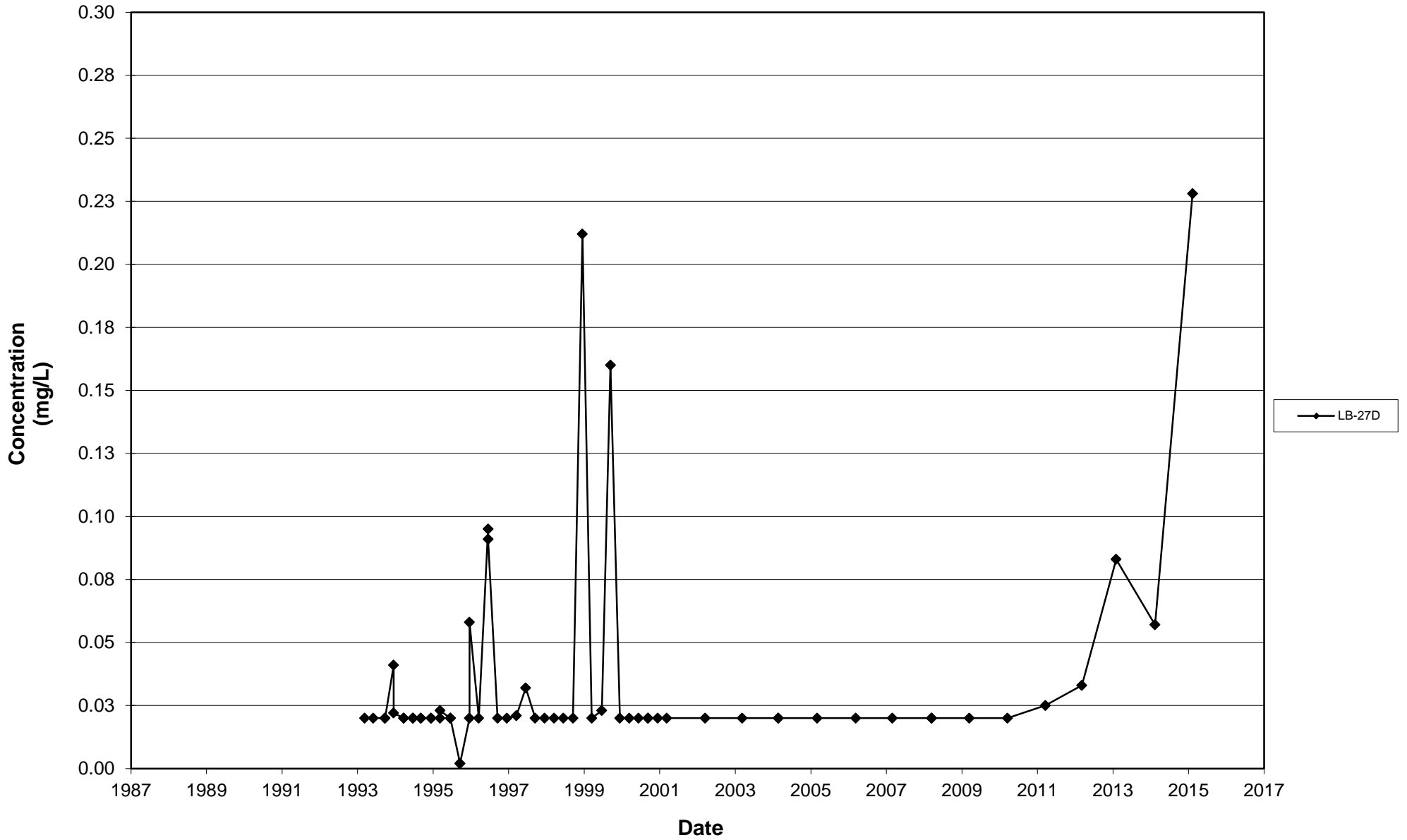
Leichner Landfill
Dissolved Iron, LB-26D
1987 - 2015



Leichner Landfill
Dissolved Iron, LB-27I
1987 - 2015

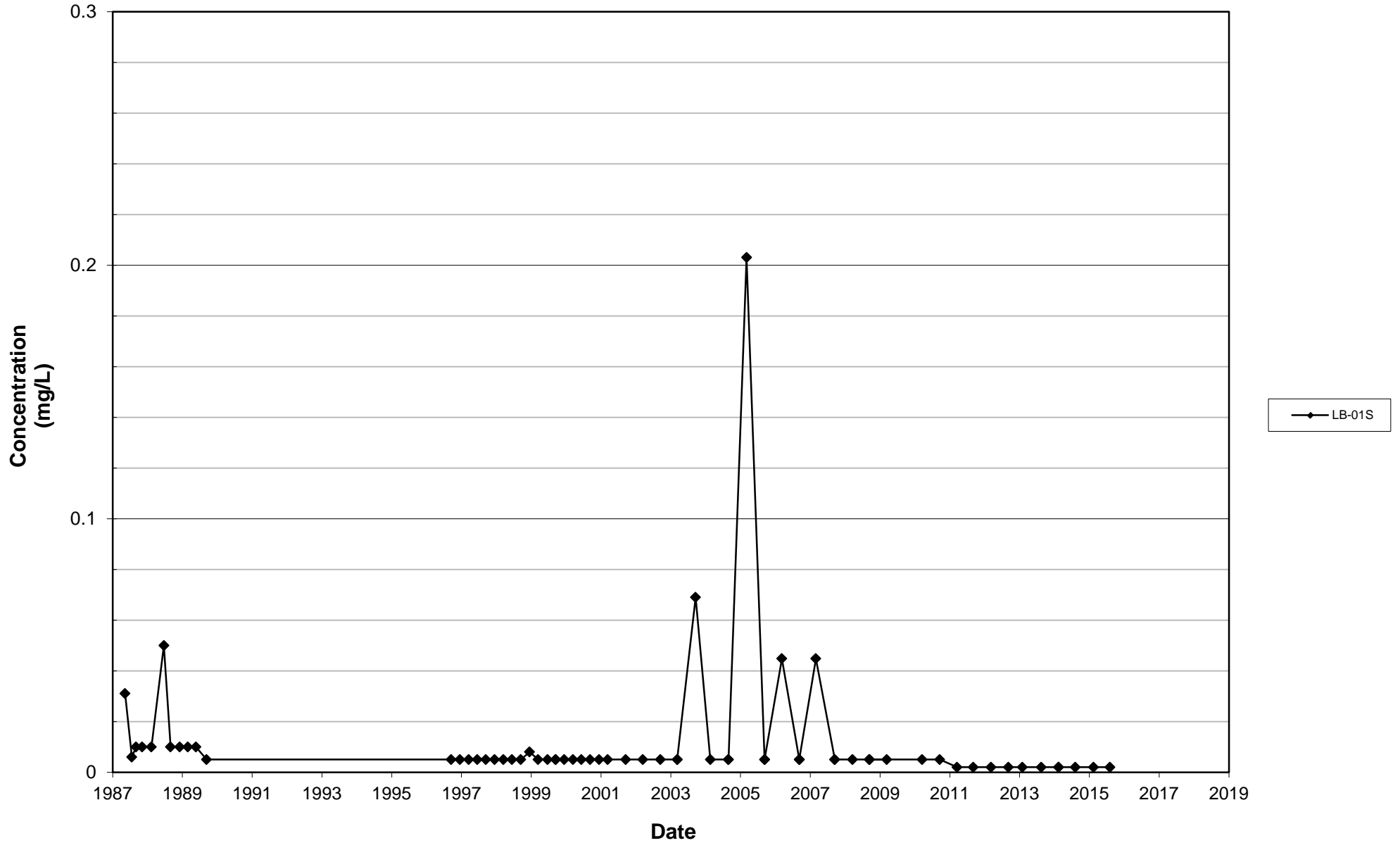


Leichner Landfill
Dissolved Iron, LB-27D
1987 - 2015

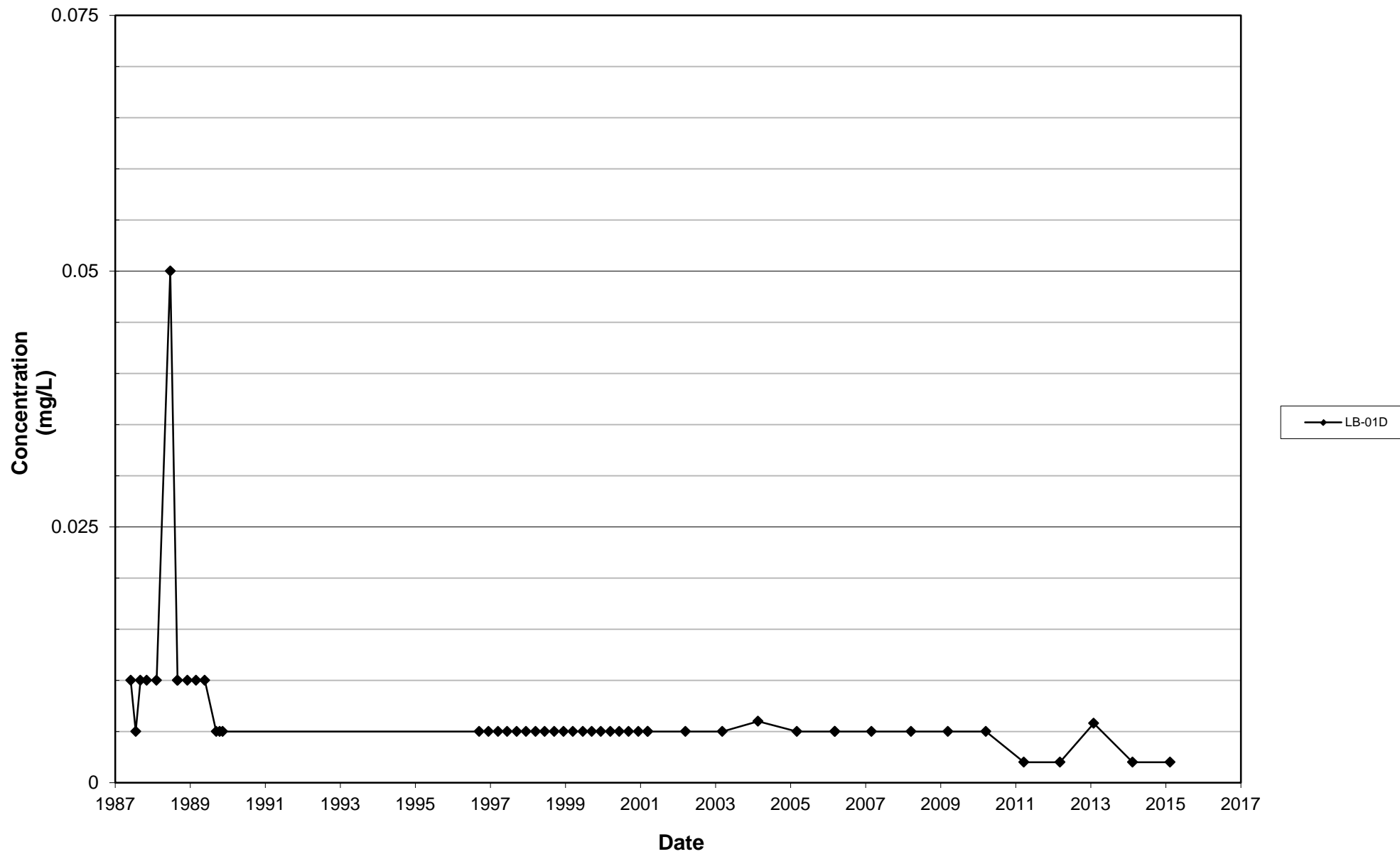


Dissolved Manganese

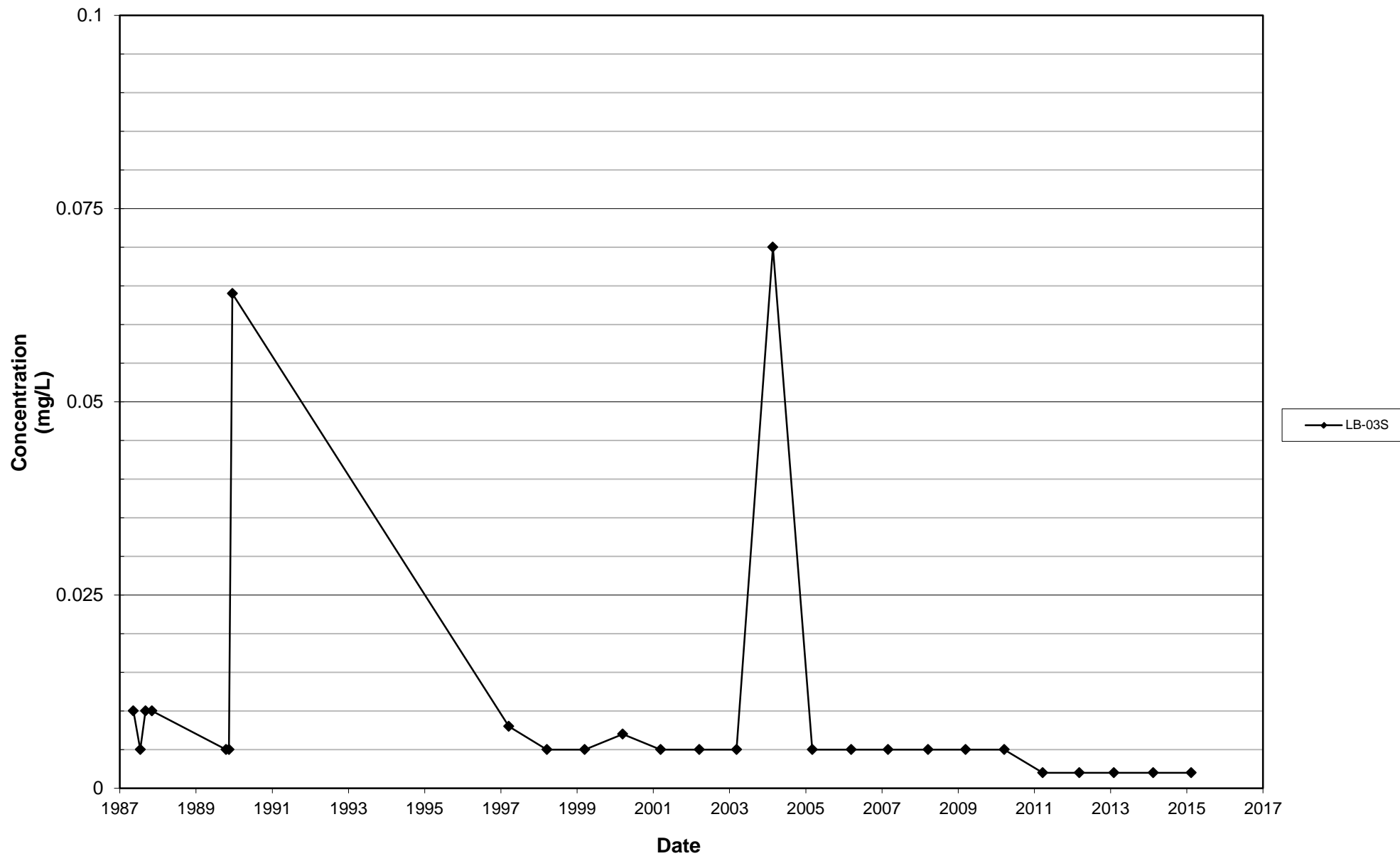
Leichner Landfill
Dissolved Manganese, LB-01S
1987 - 2015



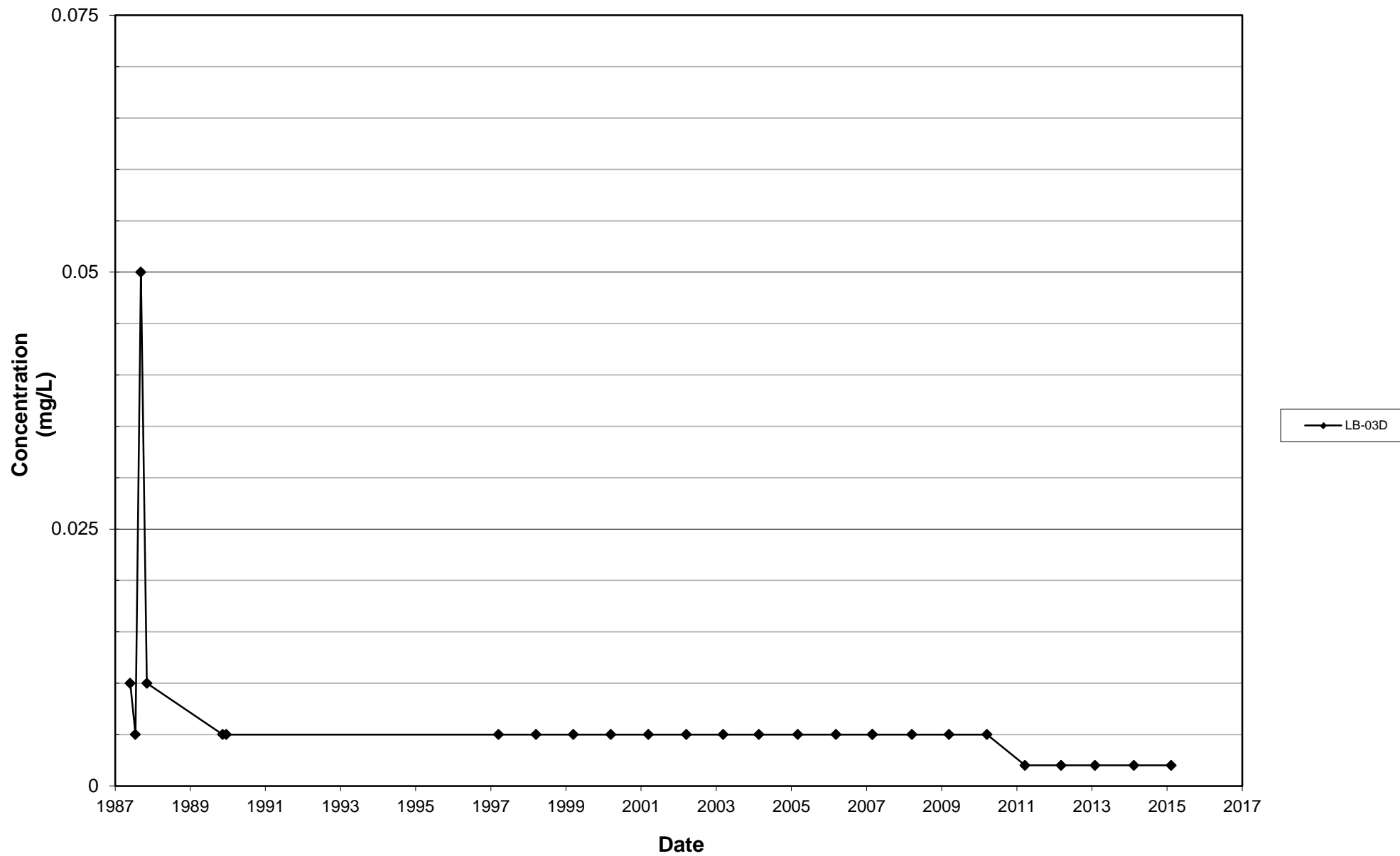
Leichner Landfill
Dissolved Manganese, LB-01D
1987 - 2015



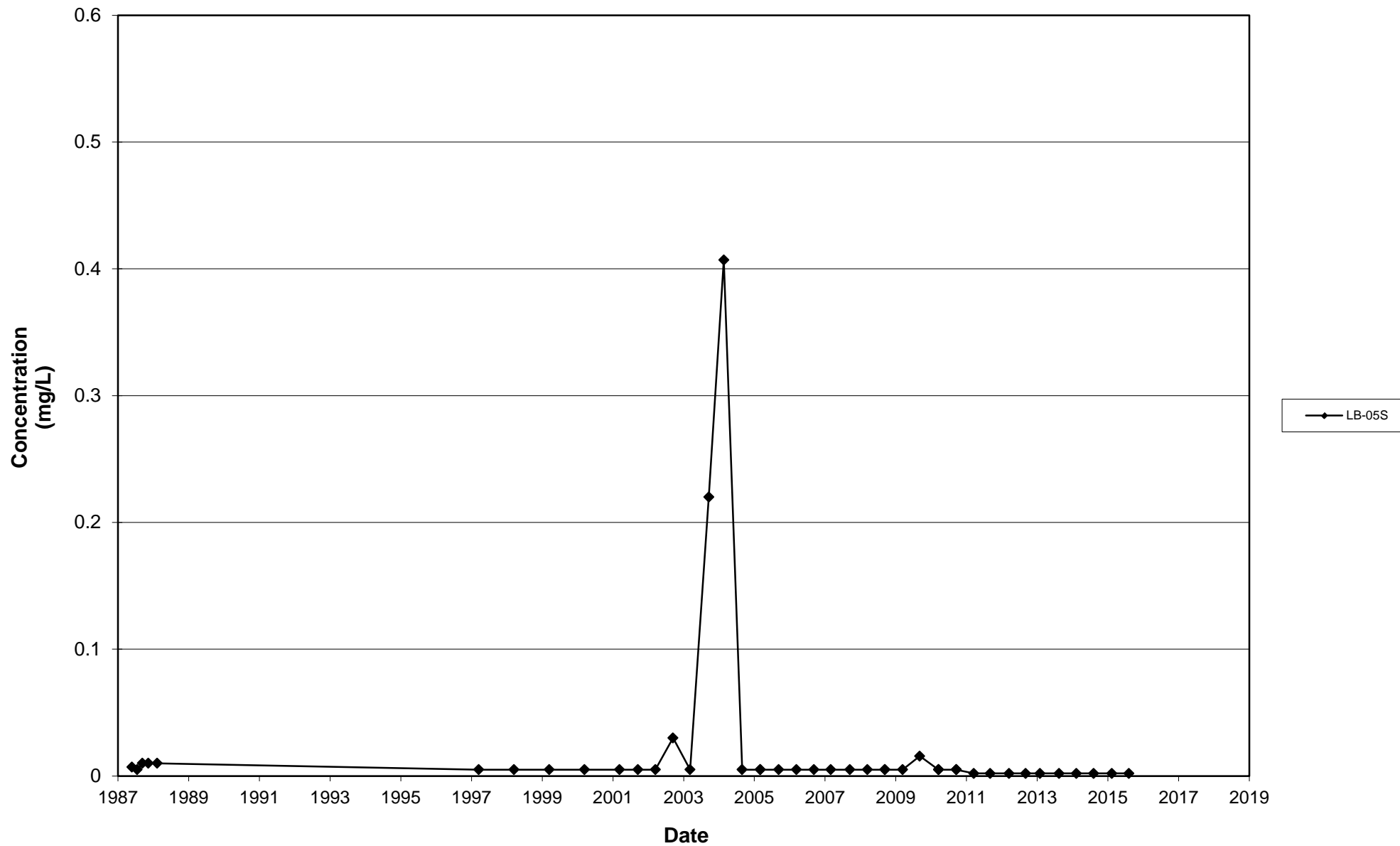
Leichner Landfill
Dissolved Manganese, LB-03S
1987 - 2015



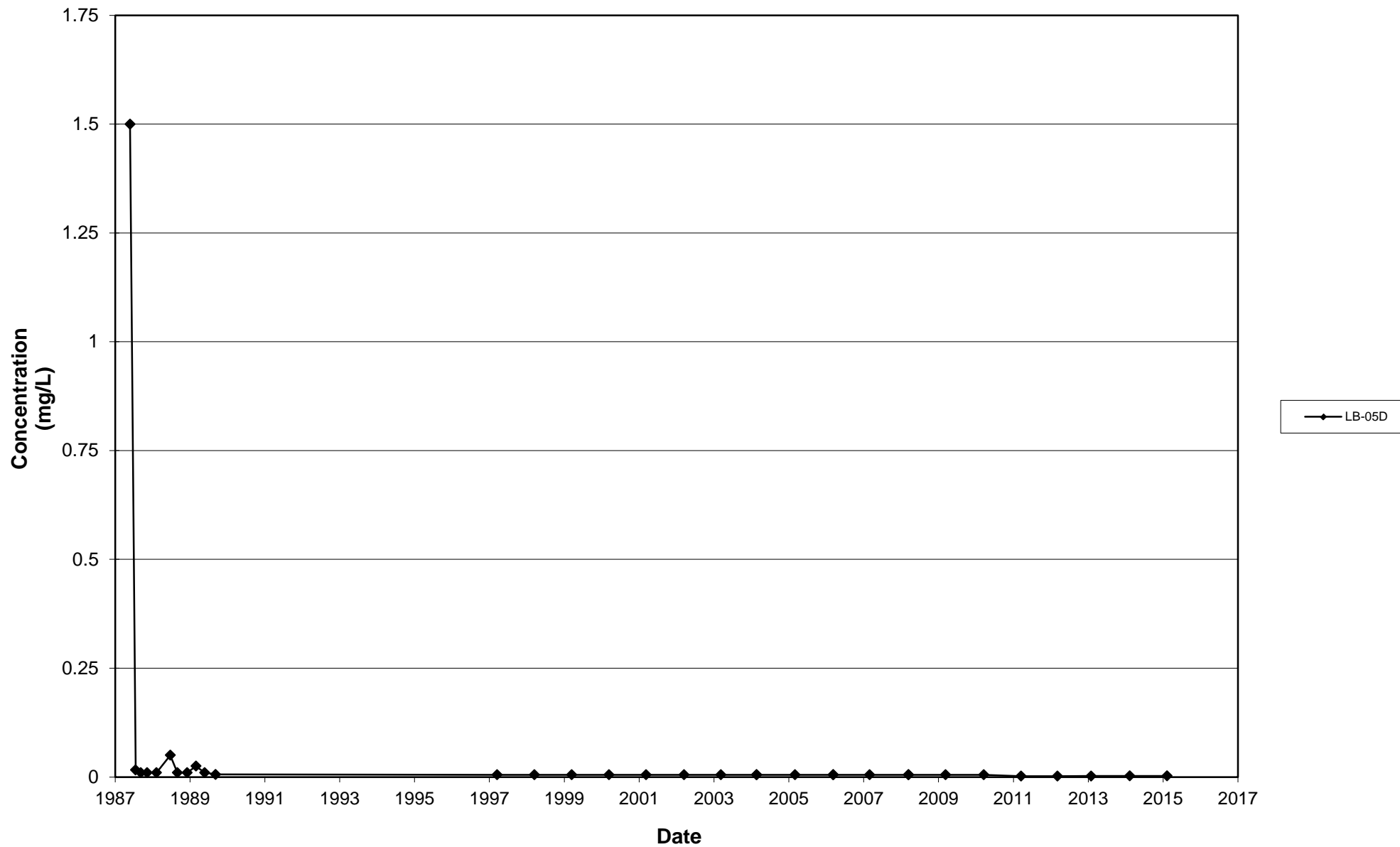
Leichner Landfill
Dissolved Manganese, LB-03D
1987 - 2015



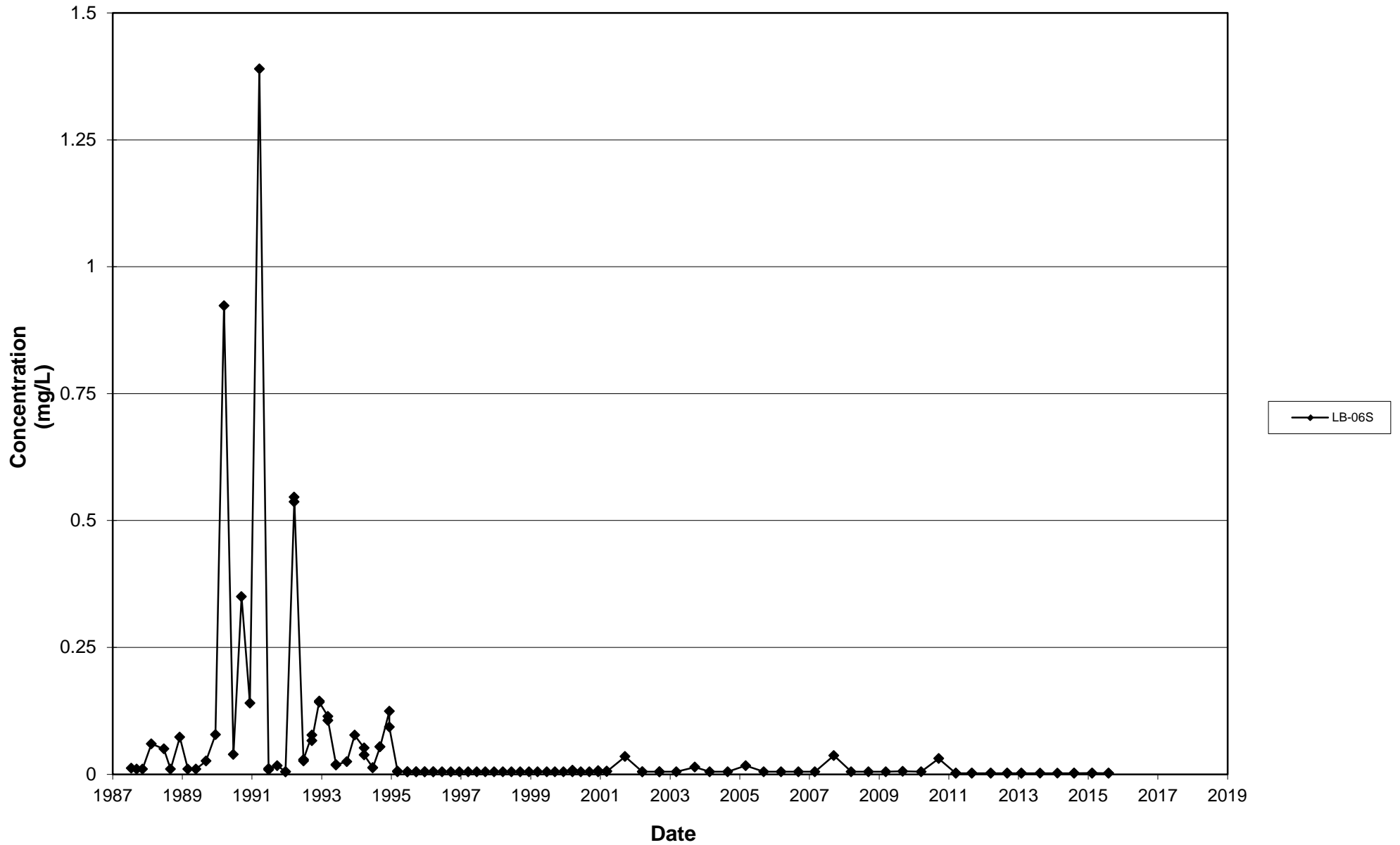
Leichner Landfill
Dissolved Manganese, LB-05S
1987 - 2015



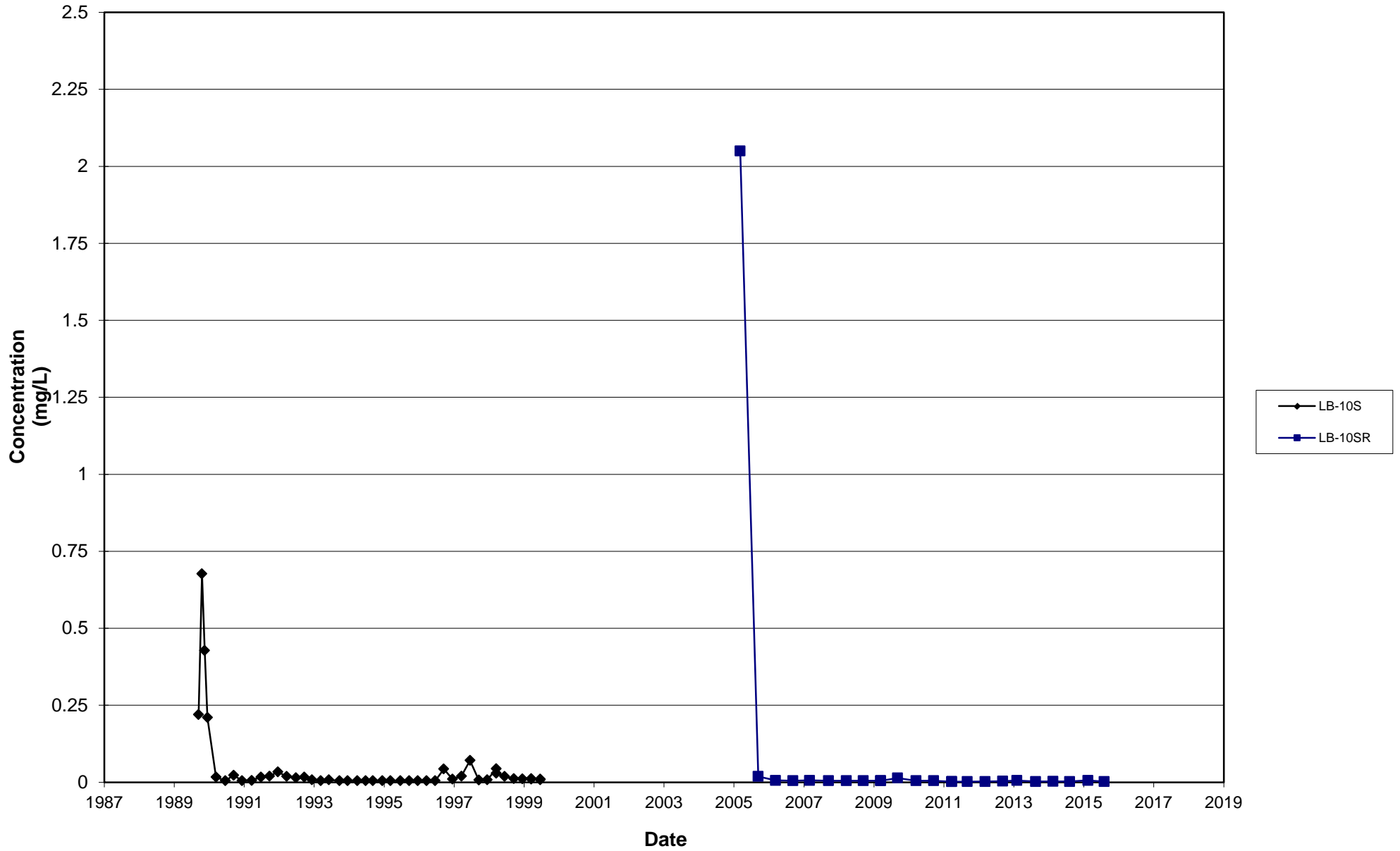
Leichner Landfill
Dissolved Manganese, LB-05D
1987 - 2015



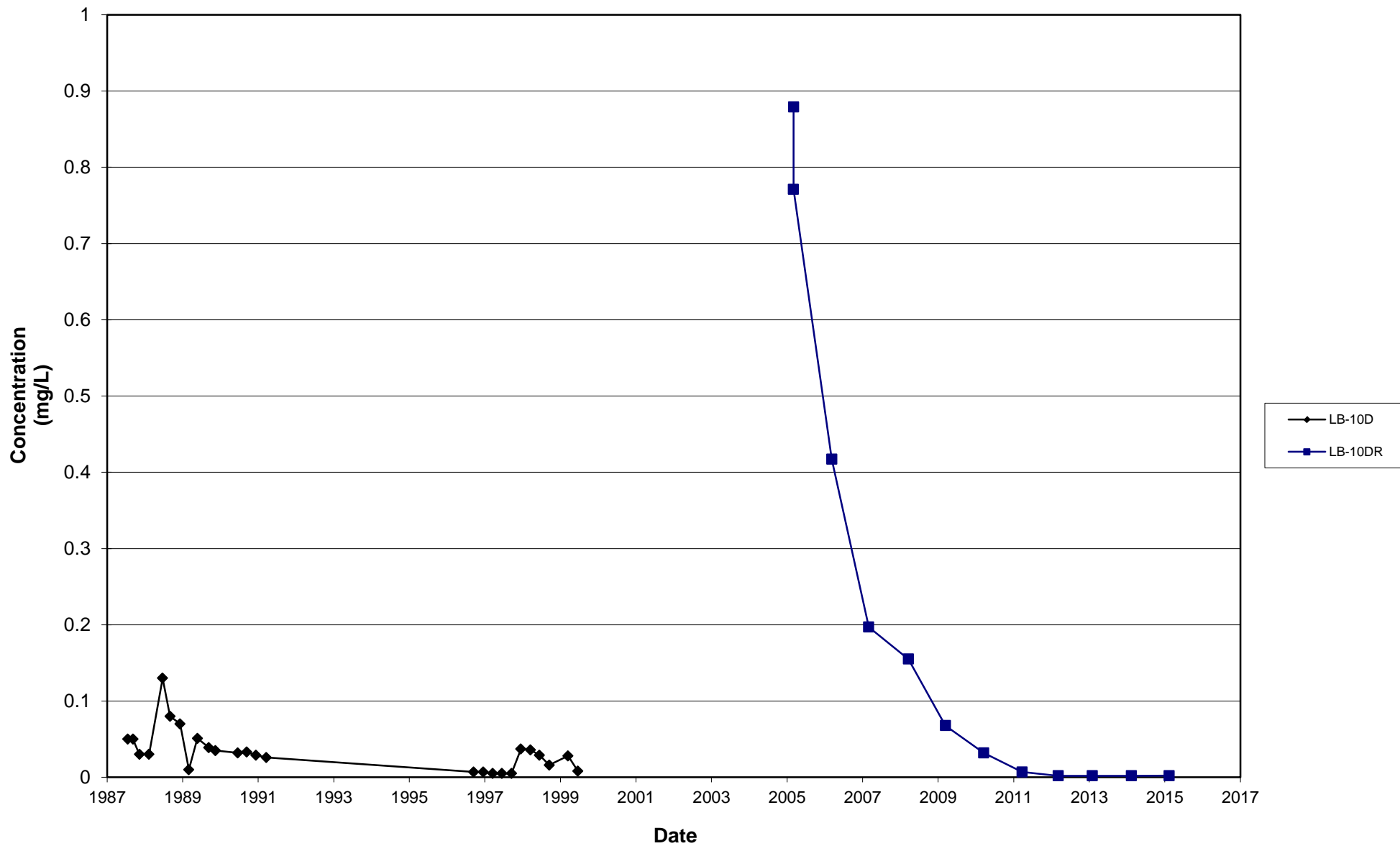
Leichner Landfill
Dissolved Manganese, LB-06S
1987 - 2015



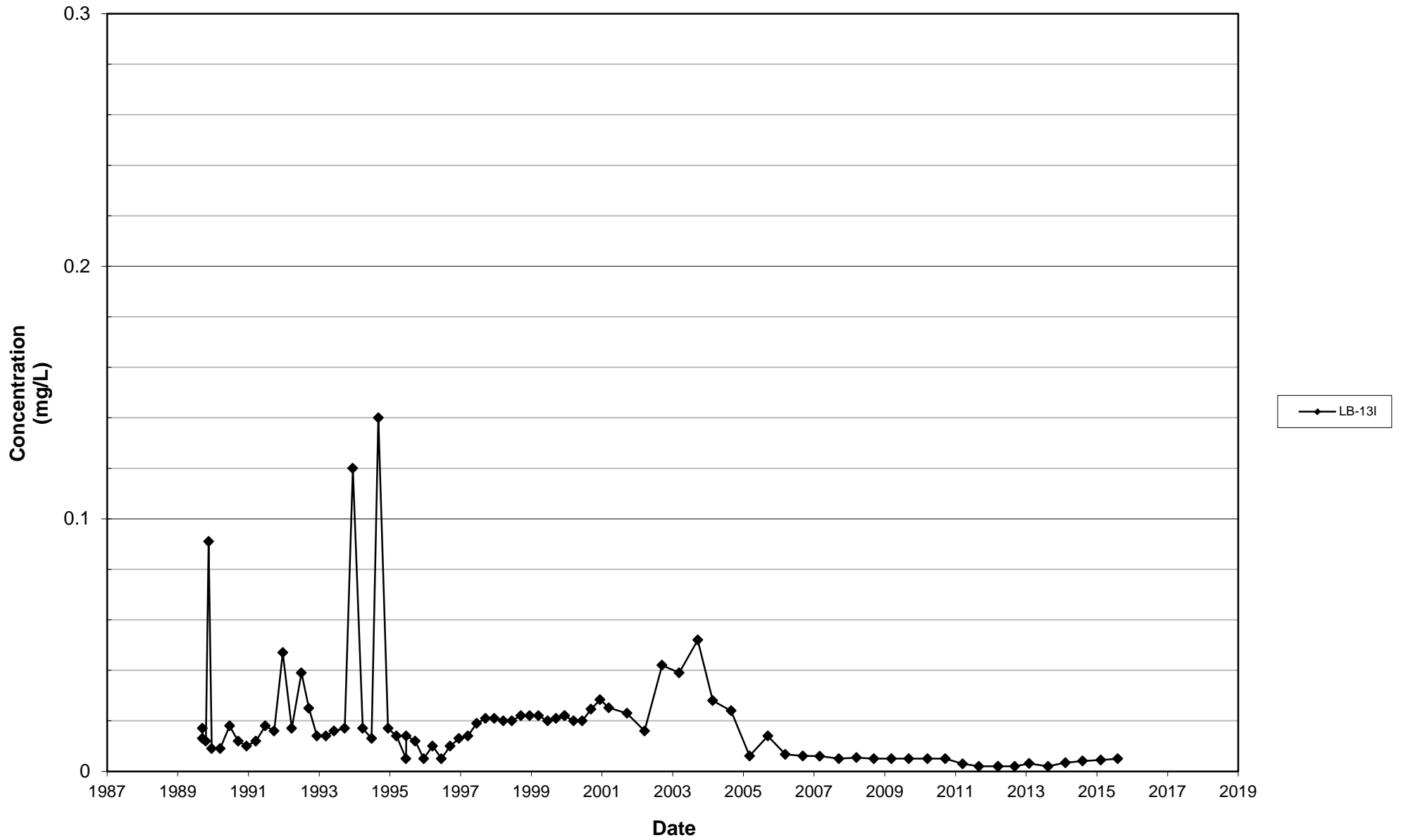
Leichner Landfill
Dissolved Manganese, LB-10S and LB-10SR
1987 - 2015



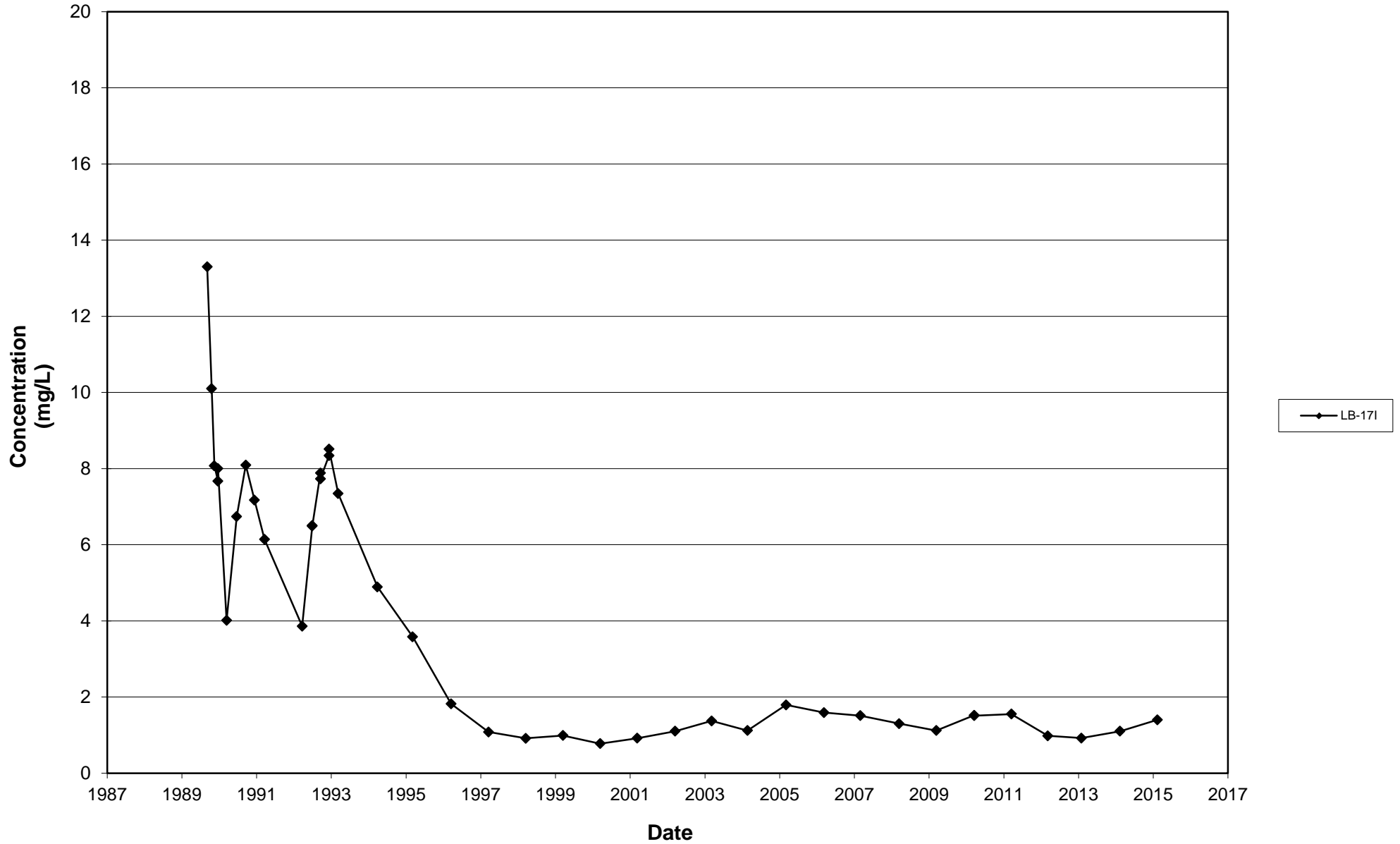
Leichner Landfill
Dissolved Manganese, LB-10D and LB-10DR
1987 - 2015



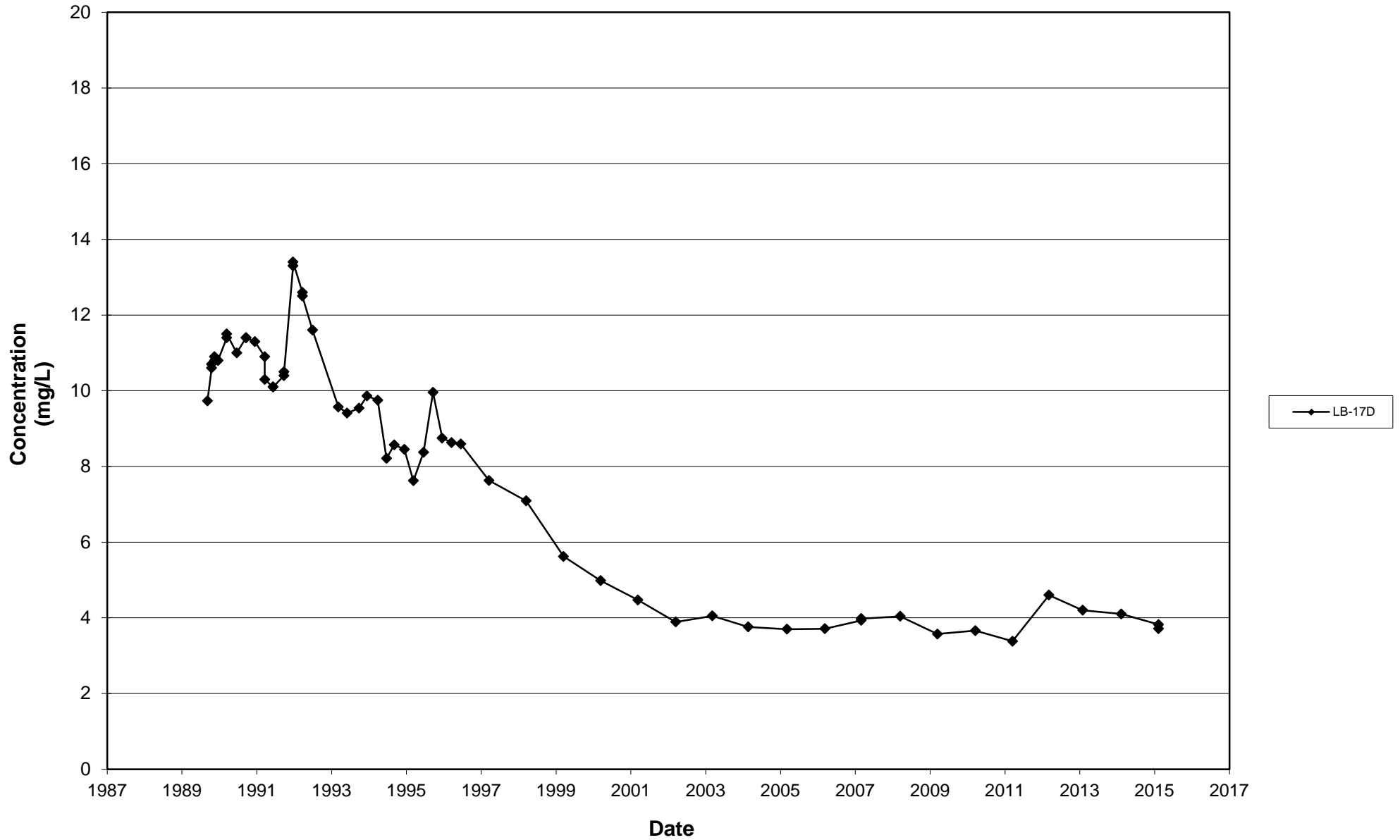
Leichner Landfill
Dissolved Manganese, LB-13I
1987 - 2015



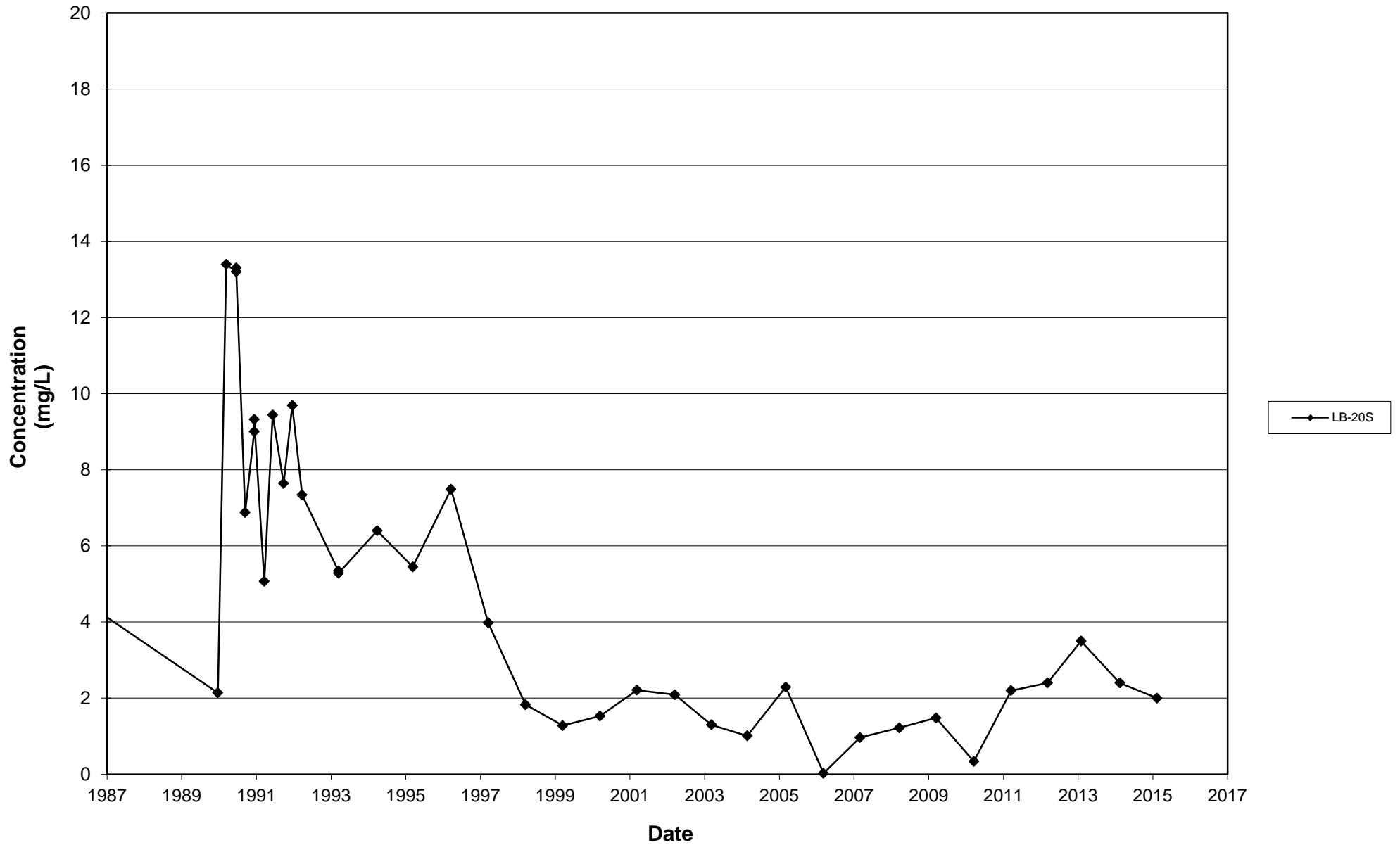
Leichner Landfill
Dissolved Manganese, LB-17I
1987 - 2015



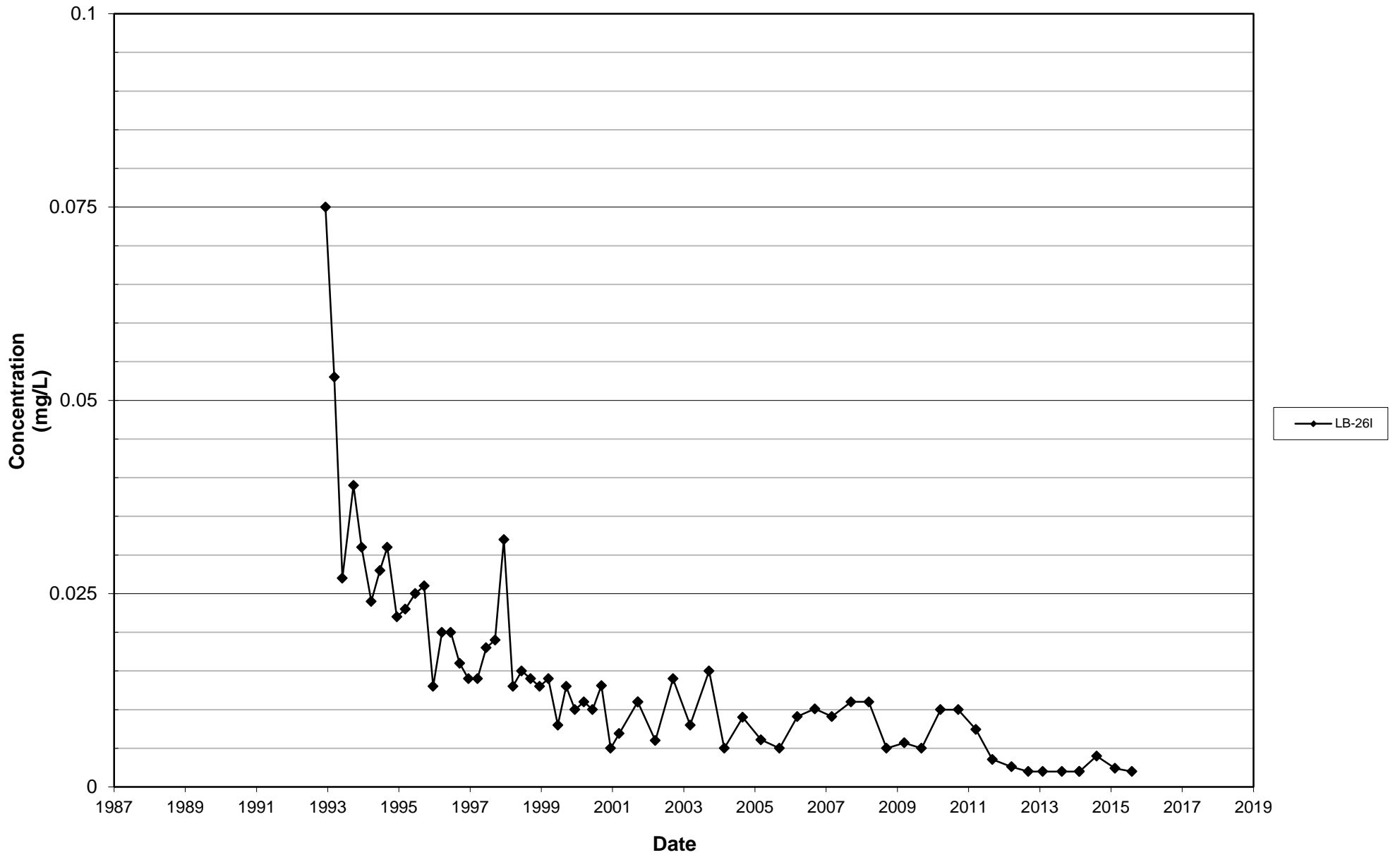
Leichner Landfill
Dissolved Manganese, LB-17D
1987 - 2015



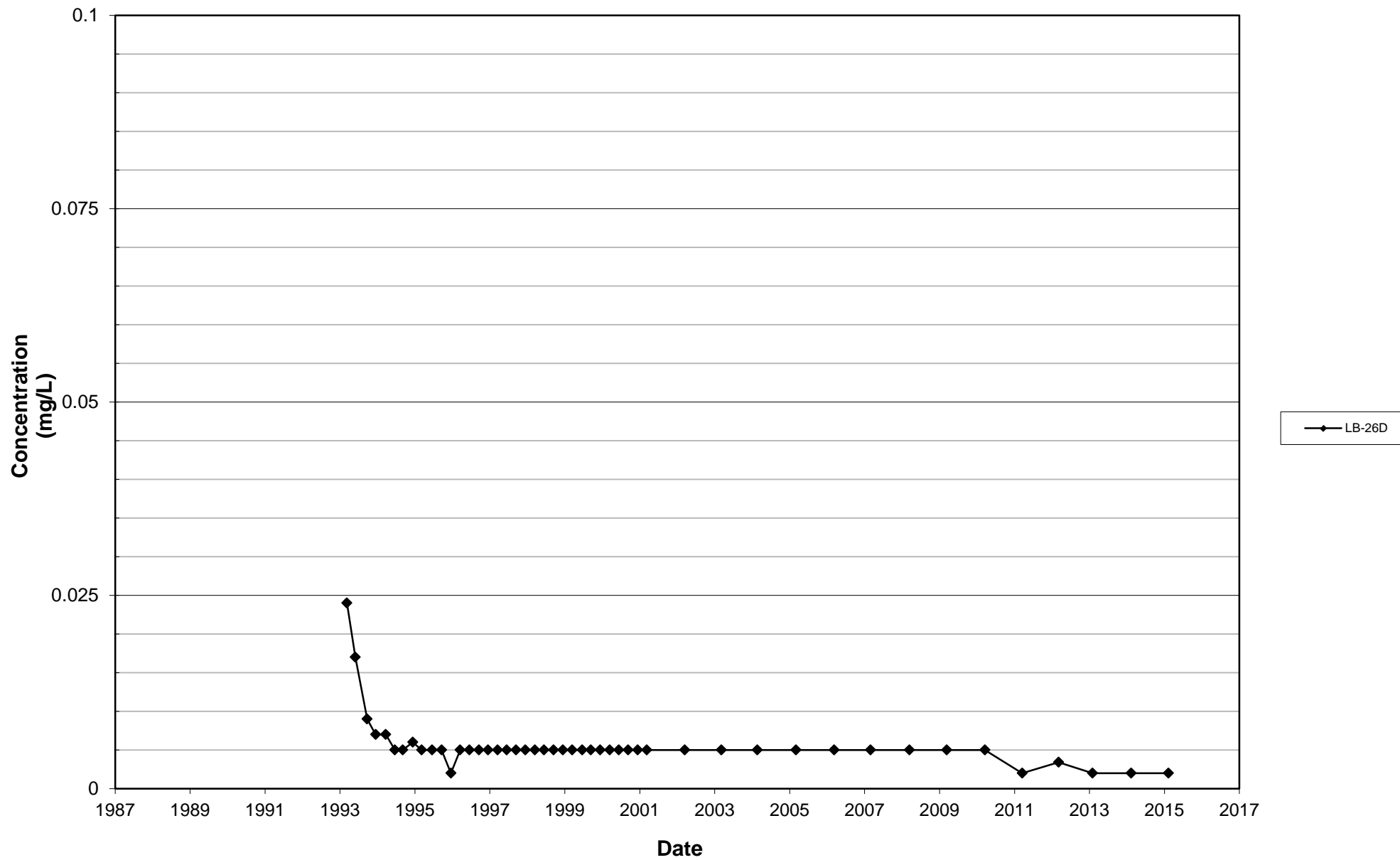
Leichner Landfill
Dissolved Manganese, LB-20S
1987 - 2015



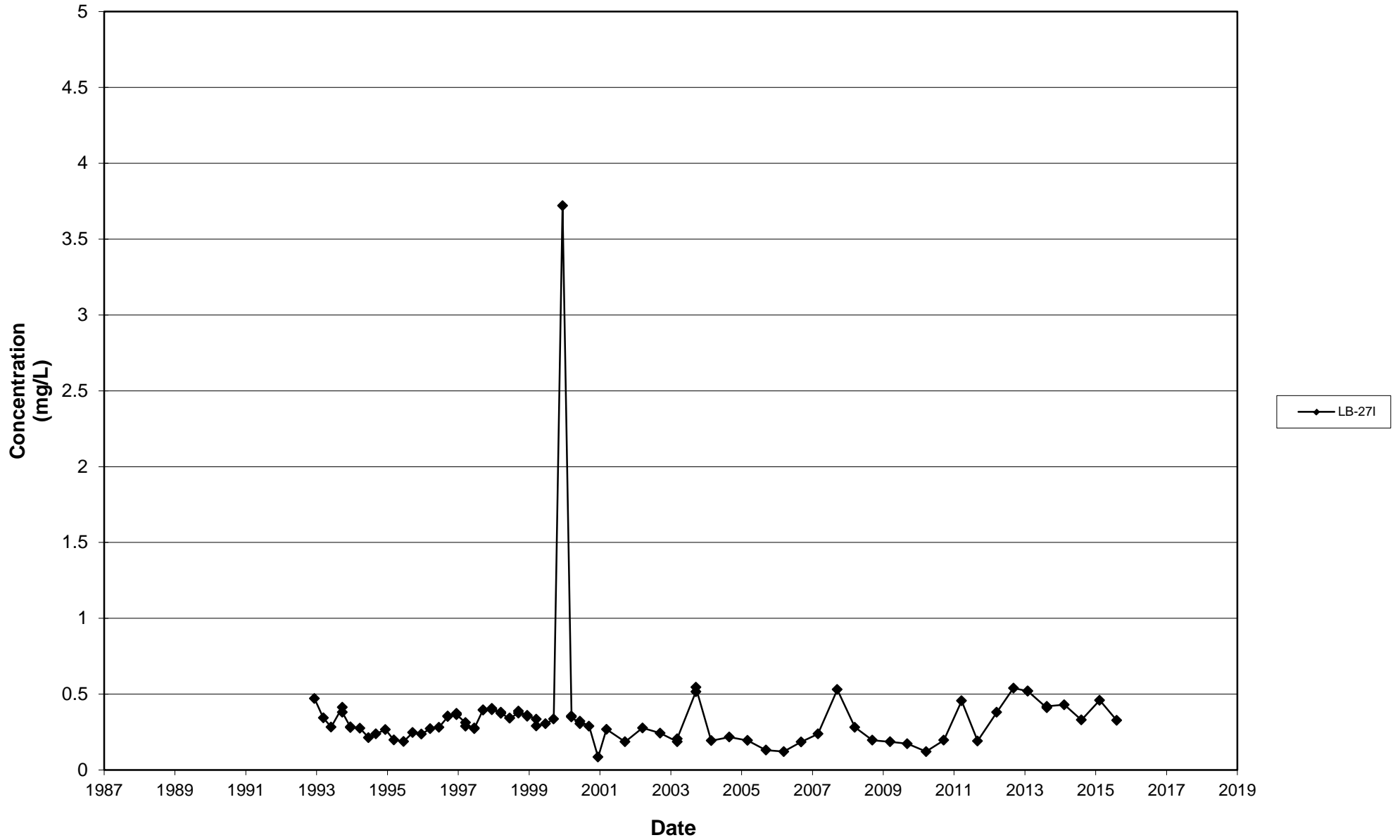
Leichner Landfill
Dissolved Manganese, LB-26I
1987 - 2015



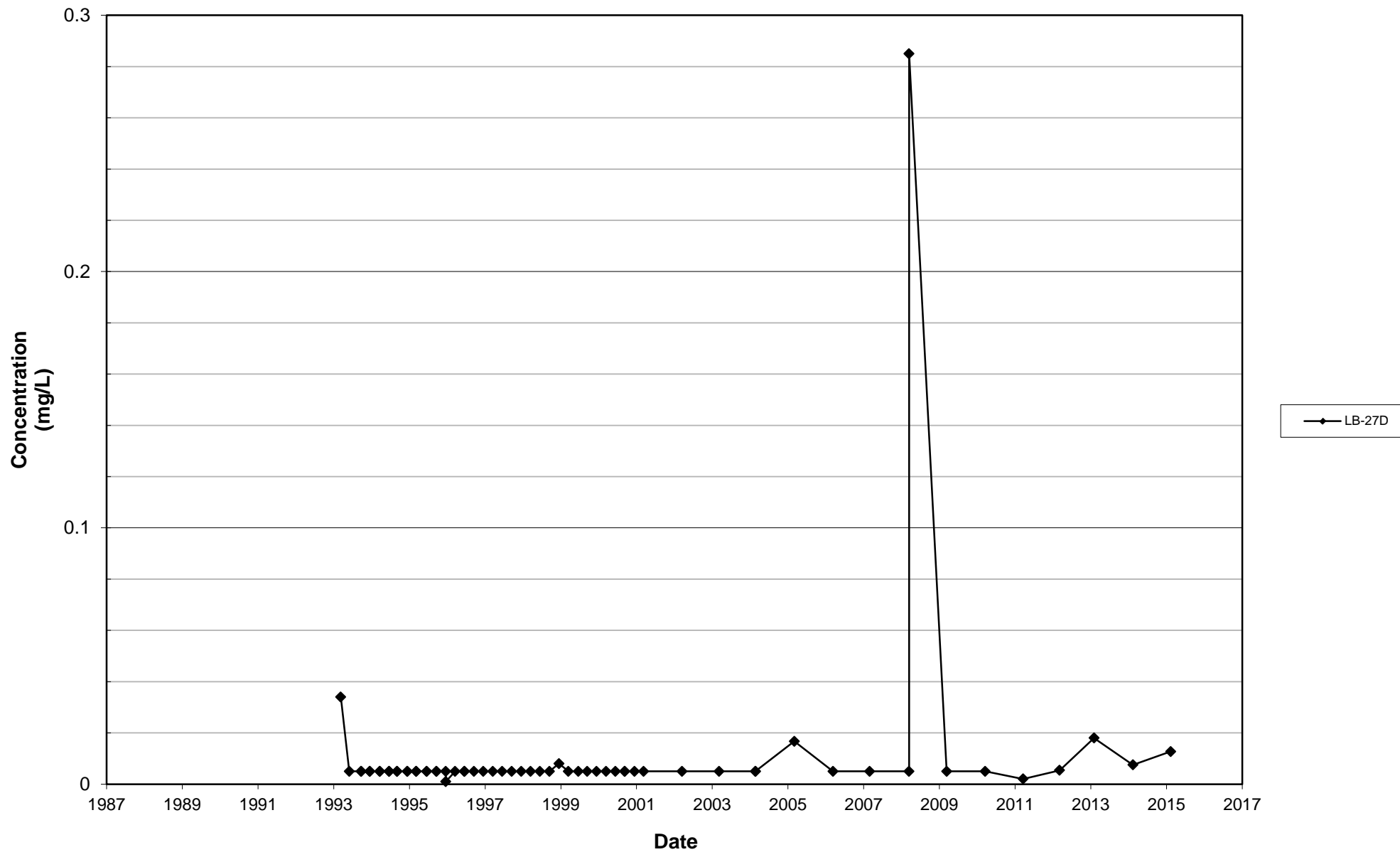
Leichner Landfill
Dissolved Manganese, LB-26D
1987 - 2015



Leichner Landfill
Dissolved Manganese, LB-27I
1987 - 2015



Leichner Landfill
Dissolved Manganese, LB-27D
1987 - 2015



APPENDIX G

Summary of 2015 Groundwater Statistical Calculations

Leichner Landfill
Groundwater Statistics - 2011 through 2015 Data
95 Percent Upper Confidence Limits on the Mean

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)	11	11	Non	10.08	M(19)	5	5	Lognormal	7.48	7.66
Nitrate (mg/L)	11	11	Normal	6.07	6.81	5	5	Non	6.19	M(7.09)
TDS (mg/L)	11	11	Non	219	M(260)	5	5	Lognormal	191	212.53
Metals (mg/L)										
Iron (dissolved)	11	0	NC	NC	M(0.04)	5	1	NC	0.036	M(0.036)
Manganese (dissolved)	11	1	NC	0.002	M(0.002)	5	1	NC	0.0058	M(0.0058)
VOCs (µg/L)										
1,4-Dichlorobenzene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND

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	Non	3.66	M(4.10)	5	5	Lognormal	4.35	4.53
Nitrate (mg/L)	5	5	Lognormal	3.93	4.17	5	5	Lognormal	4.73	4.94
TDS (mg/L)	5	5	Lognormal	181.6	189.57	5	5	Normal	189.00	201.89
Metals (mg/L)										
Iron (dissolved)	5	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	5	0	NC	NC	All ND	5	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	5	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	5	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	5	0	NC	NC	All ND	5	0	NC	NC	All ND

Leichner Landfill
Groundwater Statistics - 2011 through 2015 Data
95 Percent Upper Confidence Limits on the Mean

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	Non	4.35	M(7.08)	5	5	Non	10.08	M(11.0)
Nitrate (mg/L)	10	10	Lognormal	4.40	4.93	5	5	NC	0.84	M(1.2)
TDS (mg/L)	10	10	Non	165.30	M(210)	5	5	Non	229.80	M(240)
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	3	3	NC	0.0025	M(0.0026)
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)	18	18	Lognormal	5.94	7.30	5	5	Lognormal	18.66	60.10
Nitrate (mg/L)	18	18	Lognormal	1.56	2.04	5	1	NC	0.42	M(0.42)
TDS (mg/L)	18	18	Lognormal	169.67	181.40	5	5	Non	276.20	M(361)
Metals (mg/L)										
Iron (dissolved)	18	1	NC	0.028	M(0.028)	5	5	Non	0.23	M(0.43)
Manganese (dissolved)	18	1	NC	0.00218	M(0.00218)	5	5	Non	2.50	M(3.50)
VOCs (µg/L)										
1,4-Dichlorobenzene	18	0	NC	NC	All ND	5	3	NC	0.230	M(0.50)
Tetrachloroethene	18	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	18	0	NC	NC	All ND	5	0	NC	NC	All ND

* MTCASat 97 indicated lognormal distribution; however, the UCL 95 cannot be determined because more than 50 percent of the data are censored (i.e., non-detect).

Leichner Landfill
Groundwater Statistics - 2011 through 2015 Data
95 Percent Upper Confidence Limits on the Mean

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)	11	11	Lognormal	18.98	25.85	5	5	Lognormal	19.40	26.43
Nitrate (mg/L)	11	11	Lognormal	1.89	2.83	5	5	Lognormal	1.94	2.73
TDS (mg/L)	11	11	Lognormal	269.64	287.94	5	5	Lognormal	289.80	315.92
Metals (mg/L)										
Iron (dissolved)	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	11	9	Non	0.0032	M(0.0059)	5	1	NC	0.007	M(0.007)
VOCs (µg/L)										
1,4-Dichlorobenzene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	11	1	NC	0.15	M(0.15)	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)	11	11	Lognormal	8.41	10.02	5	5	Non	4.57	M(5.0)
Nitrate (mg/L)	11	11	Non	4.02	M(4.58)	5	5	Lognormal	5.12	5.29
TDS (mg/L)	11	11	Lognormal	203.09	209.30	5	5	Non	177.60	M(193)
Metals (mg/L)										
Iron (dissolved)	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Manganese (dissolved)	11	6	Lognormal	0.0039	0.0043	5	0	NC	NC	All ND
VOCs (µg/L)										
1,4-Dichlorobenzene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND

Leichner Landfill
Groundwater Statistics - 2011 through 2015 Data
95 Percent Upper Confidence Limits on the Mean

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	NC	14.22	M(27.4)	6	6	Lognormal	10.50	16.92
Nitrate (mg/L)	5	0	NC	NC	All ND	6	0	NC	NC	All ND
TDS (mg/L)	5	5	Lognormal	243.20	293.17	6	6	Non	218.00	M(230.0)
Metals (mg/L)										
Iron (dissolved)	5	5	Lognormal	7.63	9.33	6	6	Non	0.100	M (0.12)
Manganese (dissolved)	5	5	Lognormal	1.19	1.54	6	6	Lognormal	3.97	4.36
VOCs (µg/L)										
1,4-Dichlorobenzene	5	1	NC	0.26	M(0.26)	6	0	NC	NC	All ND
Tetrachloroethene	5	0	NC	NC	All ND	6	0	NC	NC	All ND
Trichloroethene	5	1	NC	0.81	M(0.81)	6	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)	11	11	Lognormal	7.38	8.23	5	5	Lognormal	4.99	5.14
Nitrate (mg/L)	11	11	Non	4.63	M(5.2)	5	5	Non	5.76	M(6.30)
TDS (mg/L)	11	11	NC	202.73	226.00	5	5	Lognormal	187.80	194.03
Metals (mg/L)										
Iron (dissolved)	11	4	NC	0.044	M(0.064)	5	0	NC	NC	All ND
Manganese (dissolved)	11	6	Lognormal	0.004	0.0040	5	1	NC	0.0034	M(0.0034)
VOCs (µg/L)										
1,4-Dichlorobenzene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	11	0	NC	NC	All ND	5	0	NC	NC	All ND

**Leichner Landfill
Groundwater Statistics - 2011 through 2015 Data
95 Percent Upper Confidence Limits on the Mean**

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)	12	12	Lognormal	36.37	43.06	5	5	Non	10.46	M(13.0)
Nitrate (mg/L)	12	6	Lognormal	0.25	0.25	5	5	Non	4.03	4.20
TDS (mg/L)	12	12	Lognormal	385.92	406.96	5	5	Lognormal	238.00	255.86
Metals (mg/L)										
Iron (dissolved)	12	1	NC	0.032	M(0.032)	5	4	NC	0.10	M(0.228)
Manganese (dissolved)	12	12	Normal	0.42	0.46	5	4	Lognormal	0.01	0.11
VOCs (µg/L)										
1,4-Dichlorobenzene	12	0	NC	NC	All ND	5	0	NC	NC	All ND
Tetrachloroethene	12	0	NC	NC	All ND	5	0	NC	NC	All ND
Trichloroethene	12	0	NC	NC	All ND	5	0	NC	NC	All ND
Notes:										
mg/L = milligrams per liter; µg/L = micrograms per liter; NC = not calculated, more than 50% samples were non-detect; Non = neither normal nor lognormal distribution;										
M = default to maximum value per Statistical Guidance for Ecology Site Managers										
for the following scenarios: (a) more than 50% non-detect values, (b) both normal and lognormal distributions were rejected by MTCASat,										
and (c) UCL calculated using MTCASat was higher than the maximum value of the data set.										
^a Distribution was determined using MTCASat 97 program and Statistical Guidance for Ecology Site Managers.										
^b UCL 95 was calculated using MTCASat 97 program and Statistical Guidance for Ecology Site Managers.										

APPENDIX H

2015 Landfill Gas Probe Monitoring Data

**2015 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date and Time	Methane (Percent by Volume)	Carbon Dioxide (Percent by Volume)	Oxygen (Percent by Volume)	Balance (Percent by Volume)
GP-1A	3/13/2015 11:40	0	2.2	17.8	80
GP-1A	6/5/2015 9:10	0	3.3	18.3	78.4
GP-1A	9/8/2015 9:33	0	2.9	19.2	77.9
GP-1A	11/30/2015 12:04	0.1	4.6	19.7	75.6
GP-1B	3/13/2015 11:42	0	2.2	17.8	80
GP-1B	6/5/2015 9:11	0	2.7	18.5	78.8
GP-1B	9/8/2015 9:34	0	2.5	19.3	78.2
GP-1B	11/30/2015 12:05	0	2.5	20.2	77.3
GP-02	3/13/2015 11:46	0	2.9	17.2	79.9
GP-02	6/5/2015 9:13	0	3.1	17.3	79.6
GP-02	9/8/2015 9:36	0	2.8	18.5	78.7
GP-02	11/30/2015 12:11	0	2.6	19	78.4
GP-03	3/13/2015 11:30	0	2.7	16.5	80.8
GP-03	6/5/2015 8:50	0	3.4	17	79.6
GP-03	9/8/2015 8:52	0	4	16.7	79.3
GP-03	11/30/2015 11:30	0	2.7	18.2	79.1
GP-4A	3/13/2015 11:23	0	3.1	14.9	82
GP-4A	6/5/2015 8:47	0	3.6	16.8	79.6
GP-4A	9/8/2015 8:48	0	4.1	16.8	79.1
GP-4A	11/30/2015 11:26	0	3.5	16.7	79.8
GP-4B	3/13/2015 11:27	0	4.9	8.6	86.5
GP-4B	6/5/2015 8:48	0	3.5	16.2	80.3
GP-4B	9/8/2015 8:48	0	4.1	16	79.9
GP-4B	11/30/2015 11:28	0	3.9	16.7	79.4
GP-05	3/13/2015 11:20	0	3.7	15.8	80.5
GP-05	6/5/2015 8:45	0	4.6	16.1	79.3
GP-05	9/8/2015 8:46	0	5.1	15.3	79.6
GP-05	11/30/2015 11:24	0	2.9	16.2	80.9
GP-06	3/13/2015 10:29	0	5	14.2	80.8
GP-06	6/5/2015 9:04	0	4.9	14.4	80.7
GP-06	9/8/2015 9:12	0	5.8	14.1	80.1
GP-06	11/30/2015 11:41	0	5.9	14.1	80
GP-07	3/13/2015 10:22	4.3	10.9	0	84.8
GP-07	6/5/2015 9:00	8.9	15.7	0	75.4
GP-07	6/8/2015 13:23	11	15	0	74
GP-07	6/10/2015 8:43	0	0.5	20.5	79



**2015 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date and Time	Methane (Percent by Volume)	Carbon Dioxide (Percent by Volume)	Oxygen (Percent by Volume)	Balance (Percent by Volume)
GP-07	9/8/2015 9:06	9.2	20.2	0	70.6
GP-07	9/10/2015 9:37	9.7	19	0	71.3
GP-07	9/14/2015 9:26	9.8	20.5	0	69.7
GP-07	9/15/2015 10:11	0	0.3	20.6	79.1
GP-07	11/30/2015 11:37	8.5	13.8	0	77.7
GP-07	12/2/2015 10:24	6.1	11.2	1.8	80.9
GP-07	12/3/2015 9:56	9.8	8.2	0.8	81.2
GP-07	12/4/2015 8:09	7.8	9.9	0	82.3
GP-07	12/8/2015 11:02	0	8.9	2.2	88.9
GP-8R	3/13/2015 11:33	0	2	17.5	80.5
GP-8R	6/5/2015 8:52	0	1.8	19.2	79
GP-8R	9/8/2015 8:54	0	3.4	19.5	77.1
GP-8R	11/30/2015 11:32	0	2.4	20.1	77.5
GP-9A	3/13/2015 10:40	0	15	2	83
GP-9A	6/5/2015 9:23	5.5	21	0	73.5
GP-9A	6/8/2015 13:01	7.5	20.2	0	72.3
GP-9A	6/10/2015 8:47	0	0.5	20	79.5
GP-9A	9/8/2015 9:17	8.7	19	0	72.3
GP-9A	9/10/2015 9:42	9.2	20.5	0	70.3
GP-9A	9/14/2015 9:31	7	21.3	0	71.7
GP-9A	9/15/2015 10:18	0	0.3	20.8	78.9
GP-9A	11/30/2015 11:51	0.3	5.4	8.8	85.5
GP-9B	3/13/2015 10:49	1.8	16.5	0	81.7
GP-9B	6/5/2015 9:25	2.1	16.4	0.1	81.4
GP-9B	9/8/2015 9:19	0.6	16.7	0	82.7
GP-9B	11/30/2015 11:52	0.8	18.1	0	81.1
GP-10A	3/13/2015 10:55	0	9	8.1	82.9
GP-10A	6/5/2015 9:27	0	7.2	10.9	81.9
GP-10A	9/8/2015 9:20	0	12	11.2	76.8
GP-10A	11/30/2015 11:54	0	9.2	11.6	79.2
GP-10B	3/13/2015 10:58	0	2.2	17.3	80.5
GP-10B	6/5/2015 9:28	0	3.4	17.4	79.2
GP-10B	9/8/2015 9:22	0	4.3	17.7	78
GP-10B	11/30/2015 11:56	0	4.8	18.4	76.8
GP-11	3/13/2015 11:04	0	1.6	17.5	80.9
GP-11	6/5/2015 9:43	0.1	2.2	17.2	80.5
GP-11	9/8/2015 9:24	0	3.3	17.8	78.9
GP-11	11/30/2015 12:25	0	2.4	20.9	76.7



**2015 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date and Time	Methane (Percent by Volume)	Carbon Dioxide (Percent by Volume)	Oxygen (Percent by Volume)	Balance (Percent by Volume)
GP-12	3/13/2015 11:08	0	0.3	19.9	79.8
GP-12	6/5/2015 9:41	0.1	1.9	19.8	78.2
GP-12	9/8/2015 9:49	0	1.4	19.8	78.8
GP-12	11/30/2015 12:23	0	4	20.3	75.7
GP-13	3/13/2015 11:11	0	1.9	17.8	80.3
GP-13	6/5/2015 9:52	0	2.1	17.9	80
GP-13	9/8/2015 9:50	0	1.8	18.5	79.7
GP-13	11/30/2015 12:32	0	1.4	18.9	79.7
GP-14	3/13/2015 12:25	0	0.7	19.9	79.4
GP-14	6/5/2015 9:56	0	0.9	20.1	79
GP-14	9/8/2015 9:59	0	1.3	20.2	78.5
GP-14	11/30/2015 12:35	0	1.4	20.5	78.1
GP-15	3/13/2015 12:28	0	1.7	19.1	79.2
GP-15	6/5/2015 9:59	0	1.2	18.8	80
GP-15	9/8/2015 10:01	0	1.6	19.1	79.3
GP-15	11/30/2015 12:37	0	1.3	20.2	78.5
GP-16D	3/13/2015 12:38	0	2.6	17.9	79.5
GP-16D	6/5/2015 10:10	0	2.7	17.4	79.9
GP-16D	9/8/2015 10:13	0	2.5	17.5	80
GP-16D	11/30/2015 12:44	0	1.4	19.7	78.9
GP-16S	3/13/2015 12:41	0	1.2	19.2	79.6
GP-16S	6/5/2015 10:12	0	2.1	19	78.9
GP-16S	9/8/2015 10:14	0	2.3	19.3	78.4
GP-16S	11/30/2015 12:47	0	1.8	20.4	77.8
GP-17D	3/13/2015 12:45	0	7.4	13.8	78.8
GP-17D	6/5/2015 10:15	0	5.4	15.8	78.8
GP-17D	9/8/2015 10:20	0	3.4	17.3	79.3
GP-17D	11/30/2015 12:50	0	1.9	17.4	80.7
GP-17S	3/13/2015 12:52	0	4.1	16.6	79.3
GP-17S	6/5/2015 10:16	0	4.8	17.4	77.8
GP-17S	9/8/2015 10:21	0	2.6	18.2	79.2
GP-17S	11/30/2015 12:50	0	3.5	17.7	78.8
GP-18D	3/13/2015 12:56	0	2.3	17.8	79.9
GP-18D	6/5/2015 10:23	0	3.2	18.1	78.7
GP-18D	9/8/2015 10:33	0	2.6	18.8	78.6
GP-18D	11/30/2015 12:58	0	3.8	18.5	77.7



**2015 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date and Time	Methane (Percent by Volume)	Carbon Dioxide (Percent by Volume)	Oxygen (Percent by Volume)	Balance (Percent by Volume)
GP-18S	3/13/2015 12:59	0	1.2	18.9	79.9
GP-18S	6/5/2015 10:24	0	2.2	19.1	78.7
GP-18S	9/8/2015 10:33	0	2.3	19.1	78.6
GP-18S	11/30/2015 12:59	0	3.6	19.7	76.7
GP-19D	3/13/2015 13:06	0	2.8	17.5	79.7
GP-19D	6/5/2015 10:30	0	1.9	18.1	80
GP-19D	9/8/2015 10:40	0	2.6	17.7	79.7
GP-19D	11/30/2015 13:05	0	2.6	17.8	79.6
GP-19S	3/13/2015 13:10	0	1.8	18.5	79.7
GP-19S	6/5/2015 10:31	0	1.4	19.7	78.9
GP-19S	9/8/2015 10:41	0	1.6	19.2	79.2
GP-19S	11/30/2015 13:05	0	2.9	18.6	78.5
GP-20	3/13/2015 13:17	0	9.2	8.2	82.6
GP-20	6/5/2015 13:55	0	8.1	8.3	83.6
GP-20	9/8/2015 10:48	0	8.5	9	82.5
GP-20	11/30/2015 13:14	0	7.8	7.4	84.8
GP-21A	3/13/2015 13:25	0	0.7	19.5	79.8
GP-21A	6/5/2015 10:49	0	2	19.5	78.5
GP-21A	9/8/2015 10:54	0	3.1	19.2	77.7
GP-21A	11/30/2015 13:24	0	3.8	19.9	76.3
GP-21B	3/13/2015 13:28	0	1.4	18.7	79.9
GP-21B	6/5/2015 10:49	0	1.6	19	79.4
GP-21B	9/8/2015 10:55	0	2.3	18.6	79.1
GP-21B	11/30/2015 13:25	0	2.3	18.3	79.4
GP-22	3/13/2015 13:31	0	1	19.4	79.6
GP-22	6/5/2015 10:51	0	1	19.8	79.2
GP-22	9/8/2015 10:57	0	1.4	20.1	78.5
GP-22	11/30/2015 13:30	0	2.2	20.6	77.2
GP-23	3/13/2015 13:36	0	1.7	18.9	79.4
GP-23	6/5/2015 10:54	0	1.2	19.6	79.2
GP-23	9/8/2015 11:00	0	1.3	20	78.7
GP-23	11/30/2015 13:34	0	1.8	20.4	77.8
GP-24A	3/13/2015 13:41	0	1	19.4	79.6
GP-24A	6/5/2015 11:07	0	1	19.9	79.1
GP-24A	9/8/2015 11:03	0	0.8	20.4	78.8
GP-24A	11/30/2015 13:37	0	1.6	20.9	77.5



**2015 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date and Time	Methane (Percent by Volume)	Carbon Dioxide (Percent by Volume)	Oxygen (Percent by Volume)	Balance (Percent by Volume)
GP-24B	3/13/2015 13:43	0	1.1	19.4	79.5
GP-24B	6/5/2015 11:08	0	0.8	20.1	79.1
GP-24B	9/8/2015 11:05	0	0.6	20.5	78.9
GP-24B	11/30/2015 13:38	0	1.2	20.9	77.9
GP-25A	3/13/2015 13:49	0	2.9	17.8	79.3
GP-25A	6/5/2015 11:15	0	2.3	18.5	79.2
GP-25A	9/8/2015 11:11	0	1.2	19.6	79.2
GP-25A	11/30/2015 13:48	0	1.6	20.2	78.2
GP-25B	3/13/2015 13:51	0	3.7	16.9	79.4
GP-25B	6/5/2015 11:16	0	2.9	17.3	79.8
GP-25B	9/8/2015 11:12	0	2.3	17.2	80.5
GP-25B	11/30/2015 13:49	0	1.9	19	79.1
GP-26	3/13/2015 13:58	0	0.3	20.1	79.6
GP-26	6/5/2015 11:22	0	1.4	20.2	78.4
GP-26	9/8/2015 11:16	0	1.2	20.6	78.2
GP-26	11/30/2015 13:58	0	0.7	20.8	78.5
GP-27	3/13/2015 14:01	0	0.5	19.8	79.7
GP-27	6/5/2015 11:26	0	1	20	79
GP-27	9/8/2015 11:18	0	1.2	20.4	78.4
GP-27	11/30/2015 14:01	0	0.5	20.4	79.1
GP-28	3/13/2015 9:41	0	5.1	13.6	81.3
GP-28	6/5/2015 8:31	0	5.5	11.7	82.8
GP-28	9/8/2015 8:32	0	2.1	16.6	81.3
GP-28	11/30/2015 10:36	0	3.7	15	81.3
GP-29	3/13/2015 9:48	0	7	8.3	84.7
GP-29	6/5/2015 8:42	0	7.2	8.1	84.7
GP-29	9/8/2015 8:42	0	5	10.8	84.2
GP-29	11/30/2015 11:00	0	5.4	10.5	84.1
GP-30A	3/13/2015 10:01	0	5.5	14.2	80.3
GP-30A	6/5/2015 8:37	0	5.4	14.6	80
GP-30A	9/8/2015 8:37	0	3.7	16.2	80.1
GP-30A	11/30/2015 11:20	0	3.8	17.6	78.6
GP-30B	3/13/2015 10:05	0	4.2	15.4	80.4
GP-30B	6/5/2015 8:38	0	5.1	15.3	79.6
GP-30B	9/8/2015 8:38	0	4	16.2	79.8
GP-30B	11/30/2015 11:20	0	3.4	18.1	78.5



**2015 Compliance Landfill Gas Monitoring Probe Data
Leichner Landfill**

Probe	Date and Time	Methane (Percent by Volume)	Carbon Dioxide (Percent by Volume)	Oxygen (Percent by Volume)	Balance (Percent by Volume)
GP-31	3/13/2015 13:03	0	1.2	19.1	79.7
GP-31	6/5/2015 13:59	0	1.6	18.8	79.6
GP-31	9/8/2015 10:35	0	2.1	19.9	78
GP-31	11/30/2015 13:03	0	3.1	20	76.9
GP-32	3/13/2015 13:13	0	2.3	17.7	80
GP-32	6/5/2015 10:35	0	1.6	18.7	79.7
GP-32	9/8/2015 10:44	0	1.9	17.3	80.8
GP-32	11/30/2015 13:09	0	2.8	18.4	78.8
GP-33	3/13/2015 13:15	0	3.6	16.7	79.7
GP-33	6/5/2015 10:37	0	2.6	16.1	81.3
GP-33	9/8/2015 10:45	0	3.6	10.9	85.5
GP-33	11/30/2015 13:11	0	4.5	11	84.5
GP-34	3/13/2015 13:20	0	3.9	15.3	80.8
GP-34	6/5/2015 10:42	0	3.6	14.9	81.5
GP-34	9/8/2015 10:50	0	6.6	13.3	80.1
GP-34	11/30/2015 13:17	0	8.3	13.3	78.4
GP-35	3/13/2015 13:22	0	2.6	16.4	81
GP-35	6/5/2015 10:44	0	3.1	16.6	80.3
GP-35	9/8/2015 10:52	0	4.9	16.4	78.7
GP-35	11/30/2015 13:21	0	4.4	16	79.6
GP-36	3/13/2015 13:45	0	1.8	18.1	80.1
GP-36	6/5/2015 11:10	0	1	19.6	79.4
GP-36	9/8/2015 11:07	0	1.1	18.9	80
GP-36	11/30/2015 13:43	0	1.1	20	78.9
GP-37	3/13/2015 13:47	0	3.1	17.1	79.8
GP-37	6/5/2015 11:12	0	1.7	18.7	79.6
GP-37	9/8/2015 11:09	0	1.1	19.6	79.3
GP-37	11/30/2015 13:44	0	1.2	20	78.8
GP-38	3/13/2015 13:54	0	0.9	19.4	79.7
GP-38	6/5/2015 11:18	0	2.4	19.2	78.4
GP-38	9/8/2015 11:13	0	1.3	20.1	78.6
GP-38	11/30/2015 13:52	0	2.5	20.4	77.1



APPENDIX I

Key Reports Prepared in 2015

**Report: Geotechnical Data Review and Geologic Site
Reconnaissance of Koski Property (PBS, June 2015)**



June 17, 2015

Clark County Department of Environmental Services
Attn: Mr. Mike Davis, Leichner Landfill Project Manager
1300 Franklin Street
Vancouver, Washington 98660-9810

Re: Geotechnical Data Review and Geologic Site Reconnaissance – Phase 1_Updated
Leichner Campus Development – Koski Property
8713 Northeast 94th Avenue, Vancouver, Washington
PBS Project No. 72971.006

INTRODUCTION AND BACKGROUND

PBS Engineering and Environmental Inc. (PBS) is pleased to provide this letter report for geotechnical engineering services in support of a feasibility/due diligence review for the approximately 25-acre Leichner Campus Development Koski Property (project site) located along Northeast 88th Street in Clark County, Washington (Figure 1, Vicinity Map). The geotechnical services are being performed in two phases and this report provides our Phase 1 Geotechnical Data Review.

PBS understands Clark County (County) is currently planning to develop the approximately 25-acre project site that may be split into six 3- to 6-acre lots for commercial and/or light industrial development (Figure 2, Site Plan). The project site is part of the larger and adjacent closed Leichner Landfill property located at 9411 94th Avenue. A majority of the Leichner Landfill property, including the project site, was purchased by the County in December 2012, and the County has begun the master planning process to guide decisions about the future use of the site. The Leichner Campus Development–Koski Property is planned to be sold or developed by the County separately from other portions of the overall Leichner Landfill property.

PREVIOUS WORK SUMMARY

Due to its historical uses, the Leichner Landfill area, of which the proposed Leichner Campus Development–Koski Property is part, has been thoroughly studied for potential environmental impacts since the 1980s. These studies have included environmental-related research, borings, and remediation for Environmental Site Assessment (ESA) Phases I, II, and III. Where appropriate, the previous environmental work was used to provide preliminary geotechnical information for the Leichner Campus Development–Koski Property.

The project site has had several uses, with the most recent activities connected with maintaining and closing the Leichner Landfill. Current and historical uses have included the following:

- The approximately 25-acre project site is currently undeveloped except for a residence (McPerhson residence) located in the northeast corner.
- Historical residential (former Koski residence), livestock grazing, and agricultural uses.
- Soil borrow source for clean fill soil used at the adjacent Leichner Landfill.
- Historical (1940s) refuse burning and landfilling along the project site's northern boundary.
- Historical (from at least 1981 to 1990) stormwater retention pond for the Leichner Landfill located in the north-central portion of the project site.

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The primary data sources used for this letter-report were prepared by other consultants working with the Leichner Landfill site, and included those shown below. Additional sources are referenced as footnotes.

- SCS Engineers, September 29, 2014, Phase I Environmental Site Assessment, Koski Property, 8713 NE 94th Avenue, Vancouver, Washington 98662.
- Shaw Environmental, Inc., July 22, 2010, Two-Foot Contour Topographic Map, Leichner Brothers landfill, Clark County, Washington, 1: 1 800.
- Berger, August 6, 2014, Leichner Property Conceptual Planning Option 2, Industrial Subdivision – 88th Street Access.
- Environmental Borings within the Leichner Campus Development – Koski Property:¹

<u>Boring No.</u>	<u>Consulting Firm</u>	<u>Date Drilled</u>	<u>Total Depth (ft bgs)</u>
LB-5C	Sweet-Edwards/EMCON	August 1989	94.5
LB-5D	Sweet, Edwards & Associates, Inc.	May 1987	135.7
LB-5S	Sweet, Edwards & Associates, Inc.	April 1987	93.5
LB-6S	Sweet, Edwards & Associates, Inc.	July 1987	44.5
LB-13C	Sweet-Edwards/EMCON	August 1989	201.5
LC-13D	Sweet-Edwards/EMCON	August 1989	96.0
LB-13I	Sweet-Edwards/EMCON	August 1989	54.3
LB-17C	Sweet-Edwards/EMCON	August 1989	81.1
LC-17D	Sweet-Edwards/EMCON	August 1989	105.3
LB-17I	Sweet-Edwards/EMCON	August 1989	60.5
LB-17S	Sweet-Edwards/EMCON	August 1989	213.9
LC-26D	EMCON Northwest, Inc.	August 1992	102.5
LB-26I	EMCON Northwest, Inc.	August 1992	56.0
LC-27D	EMCON Northwest, Inc.	August 1992	116.0
LB-27I	EMCON Northwest, Inc.	August 1992	56.0

¹ – Presented on Figure 3, Previous Borings with Site Annotations

HISTORICAL AERIAL PHOTOGRAPH AND TOPOGRAPHIC REVIEW

Aerial photographs were reviewed from those included in the SCS Engineers 2014 report, Google Earth images between 1990 and 2014, and Clark County’s MapsOnline viewer. Detailed site changes from the aerial images reviewed by SCS were described in their 2014 report.

In addition, U.S. Geological Survey (USGS) historical topographic maps between 1961 and 2011 were reviewed. However, the contours shown on these maps are all similar and the site was used as a borrow source for the adjacent landfill. Therefore, we have used the Light Detection and Ranging (LiDAR) imagery contours provided in 2010 by the U.S. Army Corp of Engineers (USACE) to make an assessment of grading modifications. These data appear to be sourced from Clark County (2001) though this could not be confirmed.

Only pertinent aerial and topographic modifications that could affect future geotechnical engineering recommendations are summarized in Table 1. In addition to PBS’ observations, information from SCS Engineers (2014) was also used (see Figure 3).

Table 1: Summary of Aerial Photograph and Topography Review

Year	Property
Up to 1981	Primarily used for agricultural purposes, but was otherwise predominantly undeveloped, except for the the Koski residence (two or three structures) located in the southwest corner and the McPerhson residence on the northwest corner of the property. A small area at the north-central boundary (where the northern boundary has a dogleg bend) appeared to be graded adjacent to the landfill. This is the location of a former stormwater retention pond. There are two areas along the northern portion of the subject property that have distinctive, semi-circular grass patterns and correlate with the approximate locations of the two former trash burn areas
1980 to 1990	Conditions were generally the same in the 1981 photograph, except that the site did not appear to be used for agriculture. In the 1990 photograph, a small dirt road was present that extended into the property at the approximate location of the former burn areas.
1990 to 2000	Conditions were generally the same in the 1990 photograph, including the Koski residence and McPerhson residence structures. One exception is a small area with a different grass appearance than the surrounding area. This feature was semicircular in shape and seems to correspond with the western former burn area. The stormwater retention pond was absent, presumably removed at the time the adjacent former burn areas were excavated. There appeared to be a depression within the semicircular grass area where an existing depression is located. The 1994 ^a aerial image clearly shows the excavation of the eastern portion of the property as a borrow source area for the clean fill.
2000 to 2014	Conditions on the Subject Property and adjacent properties were generally the same as currently exists. The Koski residence structures were absent in the 2009 photograph.

^a – 1994 Ortho, Clark County, Washington, <http://gis.clark.wa.gov/mapsonline/?site=AerialPhotography&ext=1>

LIDAR IMAGERY

LiDAR imagery was obtained from USACE covering the site. LiDAR is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the earth. The elevation contours derived from the LiDAR data are presented on Figure 3 and a hillshade image on Figure 4. These light pulses, combined with other data recorded by an airborne system, generate precise three-dimensional information about the shape of the earth and its surface characteristics.

Figure 4 shows the borrow source area and the associated slopes on the eastern portion of the property as well as three other excavations along the southern boundary. Linear lines and structure-related grading are discernible along the western boundary. Other visible undulations in the site topography may be indications of past cut-and-fill areas and correlate with observations from the aerial photograph review.

SITE RECONNAISSANCE

A Licensed Engineering Geologist (LEG) from PBS completed a walking reconnaissance of the project site on April 10, 2015, which was performed by traversing the property to observe the current conditions and compare these with the data review findings. Observed features were marked on the 1994 ortho aerial obtained from Clark County’s MapsOnline. The site was photo-documented and select pictures are presented in Attachment B.

The general topography of the site is flat with slopes along the eastern perimeter descending toward the property from the landfill on the north and residential developments on the east and south. These

slopes were graded and for the most part appear to be about 2H:1V (horizontal: vertical). Several depressions were also observed on the site. Three rectangular depressions are located along the south perimeter; these appear to be primarily for stormwater detention and are lined with large trees and shrubs. A north-south linear berm separates the eastern and western portions of the site. The former Koski and existing McPerhson residential structures are located in this portion. In the northern portion, the area is elevated about 3 to 6 feet above the rest of the property with a circular depression near the middle of its perimeter adjacent to the access road. The elevated area consists of two portions (see Figure 3): (1) a linear bench that extends from the east and adjacent to the access road to the circular depression, and (2) a roughly circular area that extends south and west away from the circular depression.

Vegetation consists primarily of small shrubs, grasses, and trees. In an effort to assist in determining areas of previous site grading, the types and condition of the vegetation growing on the property was closely observed. These included:

- Cut Areas – Sparse, dry vegetation could indicate areas of cuts since the soil would not have developed topsoil and primarily consist of sand and gravel that are exceedingly well drained based on the boring logs. These areas would also be flatter with vegetation growing in striations created by the grading equipment.
- Natural or Fill Areas – Well-established, green vegetation with thick grasses and small shrubs could indicate natural or fill areas since topsoil would not have been removed or would have been placed in piles. These areas would be more undulating or at a higher elevation than the surrounding area.

In general, the eastern half of the site has sparse vegetation and sandy/gravelly surface soils that extend to a berm near the west-center of the property; this likely indicates the area has been cut. A small area west of South Landfill Gas Plant south of the linear bench does have well-established grasses, which is due to water seepage from the storm drain system. The northern portion of the site is elevated above most of the property (with the exception of the circular depression discussed above), has established vegetative growth, and concrete debris was observed at the surface, suggesting this to be an area of fill. The western portion, with the exception of the former Koski residence pad, is lower in elevation but did have strong vegetative growth, indicating this is likely the natural, or at least the agricultural cultivated, surface. All of these observations generally coincide with the site disturbance and related dimensions observed in the 1994 aerial image (see Figure 3).

In general, the areas of the property with green grasses had dark brown, fine-grained soils exposed at the surface. Surface soils in areas of sparse and dry vegetation had sandier matrices and fine gravel. A few piles of fine to coarse, round gravel and round cobbles were observed in the eastern portion of the site.

No indications of slope instabilities along the perimeter or water ponding throughout the property were observed during the site visit.

GEOLOGIC SETTING

The site is located in the northeastern portion of the Willamette Lowland, a broad alluvial basin bordered on the west by Tertiary marine sedimentary and volcanic rocks of the Coast Ranges and on the east by Tertiary and Quaternary volcanic and volcaniclastic rocks of the Cascade Range. The northern boundary of the Willamette Lowland is generally recognized as the uplifted area north of the

Lewis River in southwestern Washington. The southern boundary is generally defined as the convergence of the Coast and Cascade Ranges just south of Eugene, Oregon.

Specifically, the project area is located in the Portland Basin, one of four separate basins within the Willamette Lowland. These basins include, from north to south: (1) the Portland Basin, (2) the Tualatin Basin northeast of the Chehalem Mountains and southwest of the Tualatin Mountains, (3) the central Willamette Valley between Salem and the Waldo Hills and the Chehalem Mountains, and (4) the southern Willamette Valley south of and including the Salem and Waldo Hills.¹ Basins within the Willamette Lowland and the tributary valleys are filled with over 1,600 feet of unconsolidated alluvial deposits derived from the surrounding uplands and the Columbia River Basin.² These deposits rest unconformably on a basement complex composed principally of the Columbia River Basalt Group. Fine-grained Miocene and Pliocene fluvial-lacustrine deposits occur near the bottom of the basin-fill deposits; coarse-grained fluvial deposits derived from the Cascade Range and the Missoula Floods generally comprise the upper 300 feet of the basin-fill deposits.

Widespread inundation of the lowland area occurred during the Missoula Floods, a series of more than 50 Pleistocene-age catastrophic floods believed to have originated at ancient Lake Missoula, Montana. These large-volume glacial outburst floods, originating approximately 12,000 to 15,000 years ago, deposited up to 250 feet of silt, sand, and gravel in the Portland Basin. Within the project area, these catastrophic flood deposits are mapped as Upper Pleistocene Outburst Deposits of Glacial Lake Missoula Flood Gravel (Qfg) coarse-grained unit of gravel with cobbles, boulders, and sand layers³ (Figure 3, Geology Map).

The site lies within a tectonically active area that has undergone multiple structural deformation events. Several potentially active Quaternary faults are located in the vicinity of the site that includes the Lacamas Lake, Portland Hills, and East Bank faults.⁴ The estimated age of the most recent events?faults? suggest possible offset on the Lacamas Lake fault probably occurred at least 15,000 years ago, while the Portland Hills and East Bank faults occurred within the last 15,000 years. In addition to the local crustal faults, the Cascadia Subduction Zone (CSZ), a major zone of plate convergence located offshore, is located approximately 100 miles west of the site. The CSZ extends from offshore northern California to southern British Columbia and may have generated at least seven great earthquakes (those of magnitude M8 or greater) in the last 3,500 years, suggesting a recurrence interval of approximately 300 to 600 years. Detailed tsunami records from Japan indicated the last significant CSZ earthquake occurred on January 26, 1700.⁵ Atwater and others (2005) estimated the earthquake had a magnitude of between M8.7 to 9.2

¹ Gannett, M. W. and Caldwell, R.R., 1998, Geologic Framework of the Willamette Lowlands and Aquifer System, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-BG, 82 p.

² O'Connor, J.E., Sarna-Wojcicki, A., Wozniak, K.C., Polette, D.J., and Fleck, R.J., 2001, Origin, Extent, and Thickness of Quaternary Geologic Units in the Willamette Valley, Oregon: U.S. Geological Survey Professional Paper 1620, 52 p.

³ Walsh, Timothy J., Korosec, Michael A., Phillips, William M., Logan, Robert L., Schasse, Henry W., Digital database by Meagher, Karen L., Haugerud, Ralph A., 1999, Geologic map of Washington - southwest quadrant (digital edition): U. S. Geological Survey Open-File Report 99-382, <http://pubs.usgs.gov/of/1999/0382/>.

⁴ Beeson, M. H., Tolan, T. L., and Madin, I. P., 1991, Geologic map of the Portland quadrangle, Multnomah and Washington counties, Oregon: Oregon Department of Geology and Mineral Industries Geologic Map Series GMS-75.

⁵ Atwater, B.F., Musumi-Rokkaku Satoko, M-R., Kenji, S., Yoshinobu, T., Kazue, U., Yamaguchi, D.K., 2005, The Orphan Tsunami of 1700—Japanese Clues to a Parent Earthquake in North America, U.S. Geological Survey, Professional Paper 1707.

NRCS SOIL DESCRIPTIONS

The Natural Resources Conservation Service (NRCS) provides information from local soil surveys through the U.S. Department of Agriculture (USDA) Web Soil Survey portal.⁶ The soil surveys provide the mapped shallow soil unit that includes soil type, soil profiles, soil quality, and soil engineering characteristics. In addition, the soil survey also has suitabilities and limitations for various land use purposes based on the mapped soil units. Please note the NRCS soil descriptions are generalizations of the soil characteristics and do not always provide site-specific information for features, such as the depth to groundwater, since the soil units may cover a larger area than that being studied.

Table 2 provides the soil units mapped at the site and other applicable information to assist in determining the suitability and limitations of development. In general, soils with **more than** 5 percent of the total area are included.

The NRCS uses a rating system that combines soil characteristics (soil type and slope) to determine the suitability or limitations of a soil unit. Definitions of the ratings and criteria for the soil characteristics, or suitability/limitations, are provided in Attachment A.

Table 2: Summary of Applicable Soil Information

Soil Unit	SvA - Sifton gravelly loam, 0 to 3 percent slopes
Parent Material	Gravelly alluvium
Typical Profile (inches)	0 to 5 inches: gravelly loam 5 to 16 inches: gravelly loam 16 to 60 inches: very gravelly coarse sand
Unified Soil Classification (Surface)	GM
AASHTO Group Classification (Surface)	A-4
Slope (percentage)	0 to 3
Depth to Restrictive Layer	Depth to restrictive feature: 8 to 20 inches to strongly contrasting textural stratification
Natural Drainage Class	Somewhat excessively drained
Capacity of Most Limiting Layer to transmit Water	Moderately high to high (0.57 to 1.98 in/hr)
Depth to Water Table	More than 80 inches
Frequency of Flooding	None
Frequency of Ponding	None
Linear Extensibility (Shrink-Swell)	1.5 percent
Hydrologic Soil Group	B
Corrosion to Steel	High
Corrosion to Concrete	High
Mechanical Site Preparation (Surface)	Well Suited
Mechanical Site Preparation (Deep)	Well Suited
Local Roads and Streets	Not limited

⁶ <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

SUBSURFACE CONDITIONS

Environmental Soil Boring Logs

Based on the available information, 15 environmental borings grouped into six clusters have been drilled at the project site between 1987 and 1992. Subsurface conditions encountered in the environmental borings were summarized in a remedial investigation (RI) amendment report dated October 7, 1991,⁷ that showed the site is underlain by two distinct geologic units:

1. *Pleistocene alluvium consisting of sand and sand with gravel that is locally silty or clayey from the ground surface to a depth of about 70 to 100 feet below ground surface (bgs).*

Where blow counts were recorded with 2- or 3-inch split spoon samplers (Standard Penetration Test N-values), the relative densities of the soil layers were variable. In general, the soil layers in the upper 30 to 35 feet contained gravel (gravelly sand, sand with gravel, sand with trace gravel, etc.) and were medium dense to very dense. Soil layers below these depths and above the underlying Troutdale Formation were generally loose to medium dense and did not contain gravel (silty sand, sand, etc.). The types of hammers and its efficiencies on the various drill rigs used to drill the borings were not provided on the available logs.

Based on our data review and site reconnaissance, fill containing rubble, debris, organics, and other deleterious materials may be present in the upper 10 feet in the northern portion of the project site. PBS understands burn materials were previously removed from the site^{8,9,10,11}.

The borings on the eastern portion (LB-5C, LB-5D, and LB-5S) were drilled prior to the area's use as a clean fill source for the adjacent landfill. Therefore, the upper 10 to 20 feet shown in the boring logs has been removed and the depth to groundwater will be shallower than those indicated.

2. *Pliocene Troutdale Formation predominantly consisting of gravel with a fine sand and silt matrix that is weakly to moderately cemented.*

Where the borings extended into the Troutdale Formation, relative densities were very dense with blow counts per foot typically being greater than 50 blows per 6 inches.

⁷ Sweet-Edwards/EMCON, Inc., 1991, Leichner Landfill, Remedial Investigation Amendment, Volume 1, Administrative Order DE 89-S119, prepared for the Leichner Brothers Land Reclamation Corporation, Vancouver, Washington, October 7.

⁸ EMCON Northwest, Inc., 1992a, Letter (Re: Burn Area Study, Leichner Landfill), prepared for Washington State Department of Ecology, Olympia, Washington, and Southwest Washington Health District, Vancouver, Washington, April 21, 1992.

⁹ EMCON Northwest, Inc., 1992b, Memorandum (Re: Leichner Landfill, Burn Area Excavation/Remediation), prepared Leichner Brothers Landfill Reclamation Corporation, Vancouver, Washington, June 8.

¹⁰ EMCON Northwest, Inc., 1992c, Letter (Re: June 1992 Progress Report for the Leichner Landfill Project), prepared for Washington State Department of Ecology, Olympia Washington, July 8.

¹¹ EMCON Northwest, Inc., 1992d, Letter (Re: August 1992 Progress Report for the Leichner Landfill Project), prepared for Washington State Department of Ecology, Olympia Washington, September 14.

Table 3. Depth to Troutdale Formation in the Borings Located on the Leichner Campus Development – Koski Property

Boring Number	Depth to Troutdale Formation (ft bgs)
LB-5C	94
LB-5D	87
LB-5S	87
LB-13D	70
LB-17C	80
LB-17D	80
LB-26D	68
LB-27D	82

Groundwater

The hydrostratigraphy at the site consists of an approximately 35-foot-thick unsaturated zone of sand and gravel, an unconfined to semi-confined zone about 35 to 55 feet thick, and a semi-confined to confined aquifer in the Troutdale Formation. However, historical groundwater data collected as part of the Leichner Landfill post-closure monitoring program indicate groundwater occurs beneath the property between depths ranging from 12 to 19 feet bgs in the eastern portion and 17 to 37 feet bgs in the western portion with flow generally toward the west-southwest (SCS, 2014).

GEOLOGIC AND SEISMIC HAZARDS

Geologic and seismic hazards are defined as those conditions associated with the geologic and seismic environment that could influence existing and/or proposed improvements. In general, the geologic and seismic hazards most commonly associated with the physical and chemical characteristics of near-surface soil, rock, and groundwater include:

Geologic Hazards:

- Slope stability
- Subsurface voids
- Erosion and sedimentation
- **Hazardous minerals and gases**
- Adverse soils
- **Hydrology and drainage**
- Permafrost and freeze-thaw
- Land subsidence
- Volcanic hazards
- Hydrogeology and groundwater

Seismic Hazards:

- **Liquefaction**
- Fault ground rupture
- **Earthquake-induced landslides**
- **Lateral spreading**
- Tsunami and Seiches
- **Ground shaking**
- Seismically-Induced Settlement

Those shown in **bold** above are geologic and seismic hazards that could affect the study areas' development and should be considered in the planning process. Specific hazards are presented below in Table 4. The "Level of Concern" is a qualitative assessment based on our engineering geology and engineering judgment. Where noted with footnotes, the terminology is taken from a specific source (i.e. HazVu).

Table 4: Summary of Potential Geologic and Seismic Hazards

Geologic and Seismic Hazard	Examples	Level of Concern
Adverse Soils	Artificial Fill Expansive Soil Compressible Soil Organic-Rich Soil Sensitive Clay	High Low Low to Moderate Low to Moderate None
Hydrology and Drainage	Flooding ^a Seiches or Standing Water Dam Inundation	Not mapped within a flood zone, unknown impacts in the eastern portion None Unknown
Hazardous Minerals and Gases	Methane gases	To be Considered
Seismic Hazards	Earthquake Hazard - NEHRP ^b Local Fault Rupture Liquefaction and Lateral Spread ^b Seismically-Induced Settlement Seismically-Induced Slope Instability Tsunami	Site Class C Very Low Very Low Low None None

^a – FEMA Map Number 53011C0387D, effective on 09/05/2012.

^b – Clark County MapsOnline, <http://gis.clark.wa.gov/mapsonline/?site=GeoHazards&ext=1>

The primary geologic hazard to consider in the site’s planning and development, in our current opinion, is the presence of variable and undocumented fill. These materials may consist of backfill and general undocumented fill throughout the area.

The primary seismic hazards are most likely ground shaking and susceptibility to liquefaction (mapped as “very low”). The soils and soft sedimentary rocks near the surface can modify bedrock ground shaking caused by an earthquake. This modification can increase (or decrease) the strength of shaking or change the frequency of the shaking. The nature of the modifications is determined by the thickness of the geologic materials and their physical properties, such as stiffness or relative density.

The IBC-2012 methodology defines six soil categories that are based on average shear-wave velocity in the upper 100 feet (30 meters) of the soil column. The shear-wave velocity is the speed with which a particular type of ground vibration travels through a material, and can be measured directly by several techniques. The six soil categories are Hard Rock (A), Rock (B), Very Dense Soil and Soft Rock (C), Stiff Soil (D), Soft Soil (E), and Special Soils (F). Based on Clark County MapsOnline, the site is shown as a Site Class C. Additional seismic considerations are presented in the Preliminary Conclusions and Recommendations Section below.

Liquefaction is a phenomenon in which shaking of a saturated soil causes its material properties to change so that it behaves as a liquid. Soils that liquefy tend to be young, loose, granular soils that are saturated with water.¹² Unsaturated soils will not liquefy, but they may settle. Typical displacements can range from inches to feet. Thus, if the soil at a site liquefies, the damage resulting from an earthquake can be dramatically increased over what shaking alone might have caused. Although the area is

¹² National Research Council (U.S.), 1985, Liquefaction of soils during earthquakes, Committee on Earthquake Engineering Research, National Science Foundation (U.S.), Washington, D.C. : National Academy Press

mapped as “very low” liquefaction susceptibility, a more detailed analysis will be performed during Phase 2 per State of Washington code.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Based on our research and reference information and documents, the site conditions, in our current opinion, are suitable for the proposed Leichner Campus Development–Koski Property but will require further specific geotechnical explorations and analyses during design and construction. The geotechnical-related considerations include:

- The site uses of the property throughout its history have resulted in variable, deleterious fill materials that will impact excavations and foundation performance. Potential areas of fill should be investigated and over-excavation and replacement may be required prior to or during construction (see Figure 3).
- Subsurface conditions on the eastern portion of the property will be 10 to 20 feet shallower than those represented on the boring logs because of apparent site cuts.
- The site is mapped as “very low” liquefaction susceptibility. However, liquefaction will need to be further evaluated based on the conditions encountered in additional geotechnical borings.
- Ground shaking will occur at the site during an earthquake and the site is mapped by Clark County as Site Class C. Actual site class will need to be further evaluated based on the actual conditions encountered in the geotechnical borings.

Seismic Considerations: New buildings will be designed in accordance with the requirements of the 2012 International Building Code (IBC) with Washington-specific amendments, or subsequent editions. The 2012 IBC requires buildings be designed to consider ground motions from the risk-targeted maximum considered earthquake (MCE_R), defined by the IBC as an earthquake with a 2,500-year return interval (probability of exceedance of 2 percent in 50 years). The IBC recommends that the effects of site conditions on building response be determined using site factors, F_a , and F_v , based on site classification defined as follows:

SITE CLASS A, HARD ROCK – a profile with rock characterized by a shear-wave velocity greater than 5,000 feet per second (ft/s).

SITE CLASS B, ROCK – a profile with rock characterized by a shear-wave velocity of 2,500 to 5,000 ft/s.

SITE CLASS C, VERY DENSE SOIL AND SOFT ROCK – a profile characterized by: average soil shear-wave velocity from 1,200 to 2,500 ft/s; average Standard Penetration Resistance, N , greater than 50 blows/ft; and average soil undrained shear strength, S_u , greater than 2,000 pounds per square foot (psf).

SITE CLASS D, STIFF SOIL – a profile characterized by: average soil shear-wave velocity less than 600 ft/s; average Standard Penetration Resistance, N , less than 15 blows/ft; average soil undrained shear strength, S_u , from 1,000 to 2,000 psf.

SITE CLASS E, SOIL – a profile characterized by: average soil shear-wave velocity from 600 to 1,200 ft/s; average Standard Penetration Resistance, N , of 15 to 50 blows/ft; and average soil undrained shear strength, S_u , less than 1,000 psf, or any profile with more than 10 feet of soft

clay defined as soil with plasticity index, PI, greater than 20, water content greater than 40 percent and undrained shear strength, Su, less than 500 psf.

SITE CLASS F – a profile for any soils requiring site-specific evaluation, such as: more than 10 feet of peat or highly organic clays; more than 25 feet of very high plasticity clay with plasticity index, PI, greater than 75; or more than 120 feet of soft/ medium stiff clay.

Foundations Considerations: Our current understanding of the planned site development is that it will be for light industrial and commercial use. Depending on the building height and anticipated subsurface soils, we anticipate the foundation type most likely will be spread footings. Typical column loads and the estimated allowable soil bearing pressures for these conditions is provided in Table 5.

Table 5: Potential Foundation Type

Foundation Type	Column Load (kips)	Estimated Allowable Soil Bearing Pressure (psf)
Shallow Foundation – Spread Footing	Less than 200	2000 to 3000

Construction Considerations: In general, all vegetation, topsoil and existing structural elements (slabs, footings, etc.) should be removed from new building and pavement areas. Construction of the proposed new buildings may require areas of over-excavation.

Due to the presence of fine-grained silt and clay in the near-surface materials in some areas of the site, construction equipment may have difficulty operating on the near-surface soils when above the optimum moisture required for compaction. Construction of granular haul roads placed over geo-textile stabilization fabric may help reduce disturbance of site soils. The thickness of the granular material for haul roads and staging areas will depend on the amount and type of construction traffic.

All excavations should be made in accordance with applicable Occupational Safety and Health Administration (OSHA) and state regulations. The contractor is responsible for adherence to the OSHA requirements. Trench cuts may stand relatively vertical to a depth of approximately 4 feet, provided no groundwater seepage is present in the trench walls. Open excavation techniques may be used provided the excavation is configured in accordance with the OSHA requirements, groundwater seepage is not present, and with the understanding that some sloughing may occur. The trench walls should be flattened if sloughing (i.e., the raveling or breaking off of material from any sloped or vertical face) occurs or seepage is present. The use of a trench shield or other similar temporary shoring is not recommended for cuts that extend below the groundwater table or if vertical walls are desired for cuts deeper than 4 feet bgs without appropriate groundwater control.

A wide range of material may be used as structural fill; however, all material used should be free of organic matter or other unsuitable materials, and should meet the specifications provided in the 2014 Standard Specifications for Road, Bridge, and Municipal Construction, Washington State Department of Transportation (WSDOT), SS 2014, depending on the application

The silt/clay fraction of site soils is moisture sensitive and during wet weather, may become unworkable due to excess moisture content. In order to reduce moisture content, some aerating and drying of native or imported silty soils may be required. If moisture content of silty/clayey soils cannot be reduced by air drying, it may be necessary to grade the site with granular soils that do not contain more than five

percent passing the No. 200 Sieve (wet sieve analysis). We recommend that fills intended to support structures or pavement sections be placed in horizontal lifts not exceeding about eight inches in loose thickness and be compacted to at least 92 percent of the maximum dry density as determined by the standard proctor test method (ASTM D 1557).

Fill placed on slopes steeper than 5H:1V must be keyed/benched into the existing slopes and installed in horizontal lifts. Vertical steps between benches should be approximately 2 feet.

PHASE 2 SCOPE OF SERVICES

A typical Phase 2 scope that should be performed in order to provide geotechnical engineering recommendations for site development follows:

1. **Subsurface Exploration:** The proposed explorations should consist of test pits and/or borings in the area of the proposed new development. In addition, test pits should be performed to locate a potential High Density Polyethylene (HDPE) liner under rubble area. A member of the PBS engineering staff should log the test pits and borings and collect samples for laboratory testing.
2. **Soils Testing:** All samples should be returned to our PBS laboratory and classified in general accordance with the Unified Soil Classification, Visual-Manual Procedure. Laboratory tests should include natural moisture contents, grain-size analysis, and Atterberg limits, as appropriate.
3. **Geotechnical Engineering Analysis:** All data collected during the subsurface exploration, literature research, and testing should be evaluated and used to develop geotechnical design and construction recommendations.
4. **Deliverable:** A Phase 2 Geotechnical Engineering Report should be prepared summarizing the results of our explorations and analyses, including information relating to the following:
 - Exploration logs and site plan with exploration locations
 - Laboratory test results
 - Earthwork and grading, cut, and fill recommendations:
 - building pad preparation
 - utility trench backfill
 - structural fill materials and preparation
 - wet and cold weather conditions considerations
 - Shallow foundation design recommendations:
 - minimum embedment
 - allowable bearing pressure
 - estimated settlement
 - sliding coefficient
 - Groundwater consideration

- Seismic design criteria in accordance with the 2012 International Building Code (IBC) with State of Washington amendments
- Slab and pavement subgrade preparation
- Pavement section recommendations

LIMITATIONS

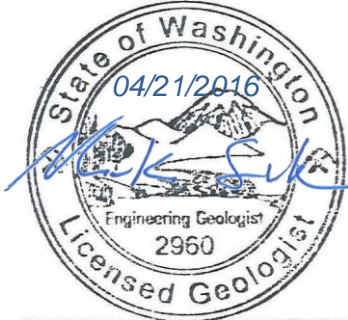
Our evaluations and recommendations are based upon limited review of the referenced documents. No subsurface explorations were completed during this work to verify the type and depth of fill, soil, bedrock, or depth of groundwater at the site. We should be contacted to review the proposed site development plan to evaluate their possible affect on the site property. A geotechnical engineering report that includes site-specific explorations and infiltration testing will be required prior to design.

The information provided in this letter report is only for your information, for use in feasibility planning associated with the site and that you will not hold PBS liable in any regard for decisions related to due diligence, purchase, or design and construction estimating. Site-specific exploration and engineering is required in order to refine the very general discussion of subsurface conditions (based on previous work by others) provided in this letter-report.

CLOSING

We trust this feasibility report meets your current needs. If you have any questions or wish to further discuss our observations, conclusions, and recommendations, please contact Mark Swank at 503.417.7738 or Ryan White at 503.417.7608.

Sincerely,
PBS Engineering and Environmental Inc.



Mark Swank

Mark Swank, LG, LEG
Senior Engineering Geologist

Ryan White, PE, GE
Geotechnical Discipline Lead

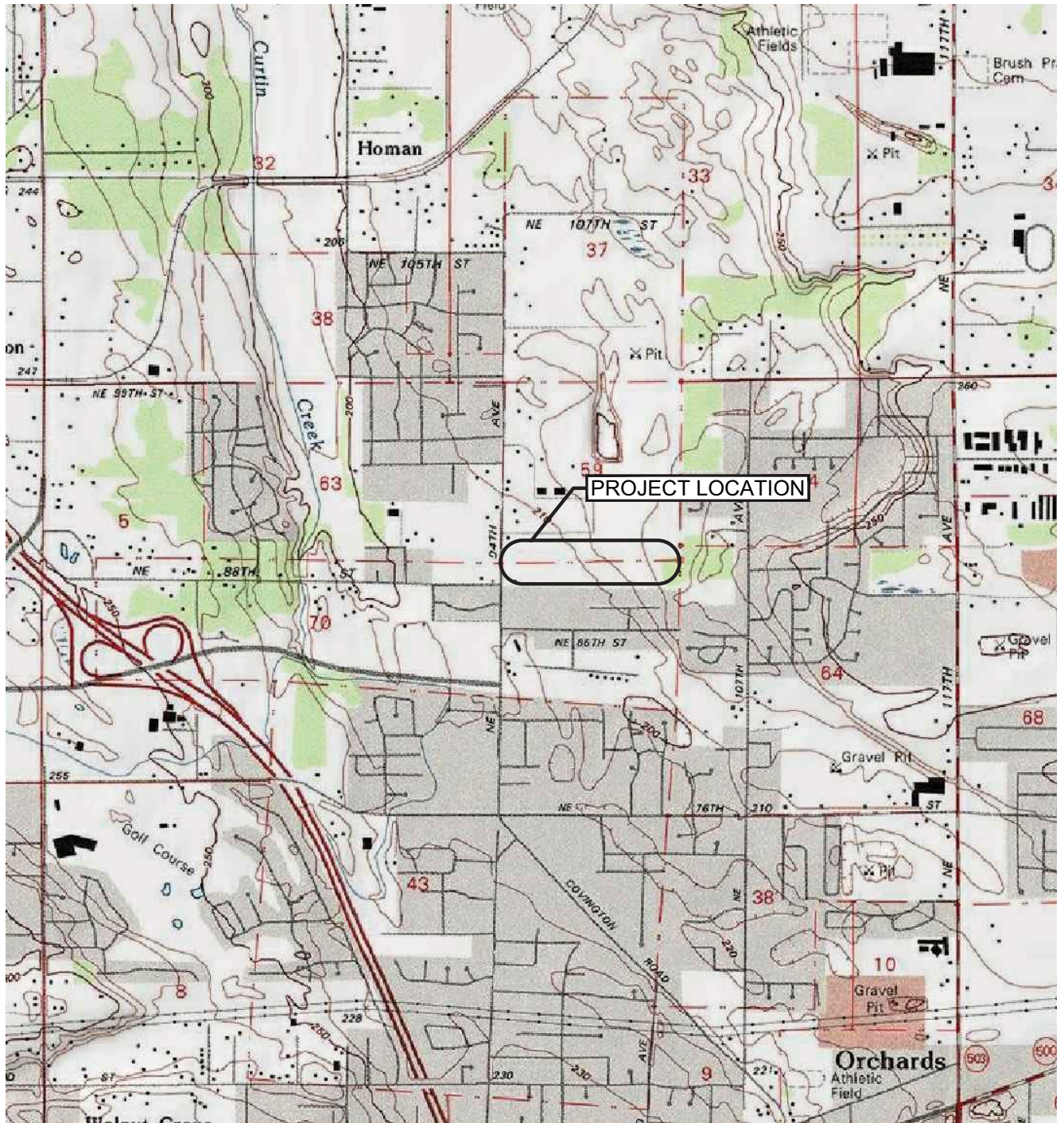
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Figures: Figure 1 – Vicinity Map
 Figure 2 – Site Plan
 Figure 3 – Environmental Borings with Site Annotations
 Figure 4 – LiDAR Hillshade Image

Attachment: A – Soil Classification Descriptions
 B – Site Photographs

FIGURES

L:\Projects\72000\72900-72999\72971_Clarke County\72971.006_LeichnerProp\DWG\72971.006 FIGURES 1-2.dwg Apr 09, 2015 10:19am jmb



SOURCE: USGS ORCHARDS WA QUADRANGLE 1990.



WASHINGTON



SCALE: 1" = 2,000'

PREPARED FOR: CLARK COUNTY



PROJECT #
72971.006

DATE
APRIL 2015

VICINITY MAP
LEICHER CAMPUS DEVELOPMENT - KOSKI PROPERTY
VANCOUVER, WASHINGTON

FIGURE

1



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LEICHNER CAMPUS DEVELOPMENT

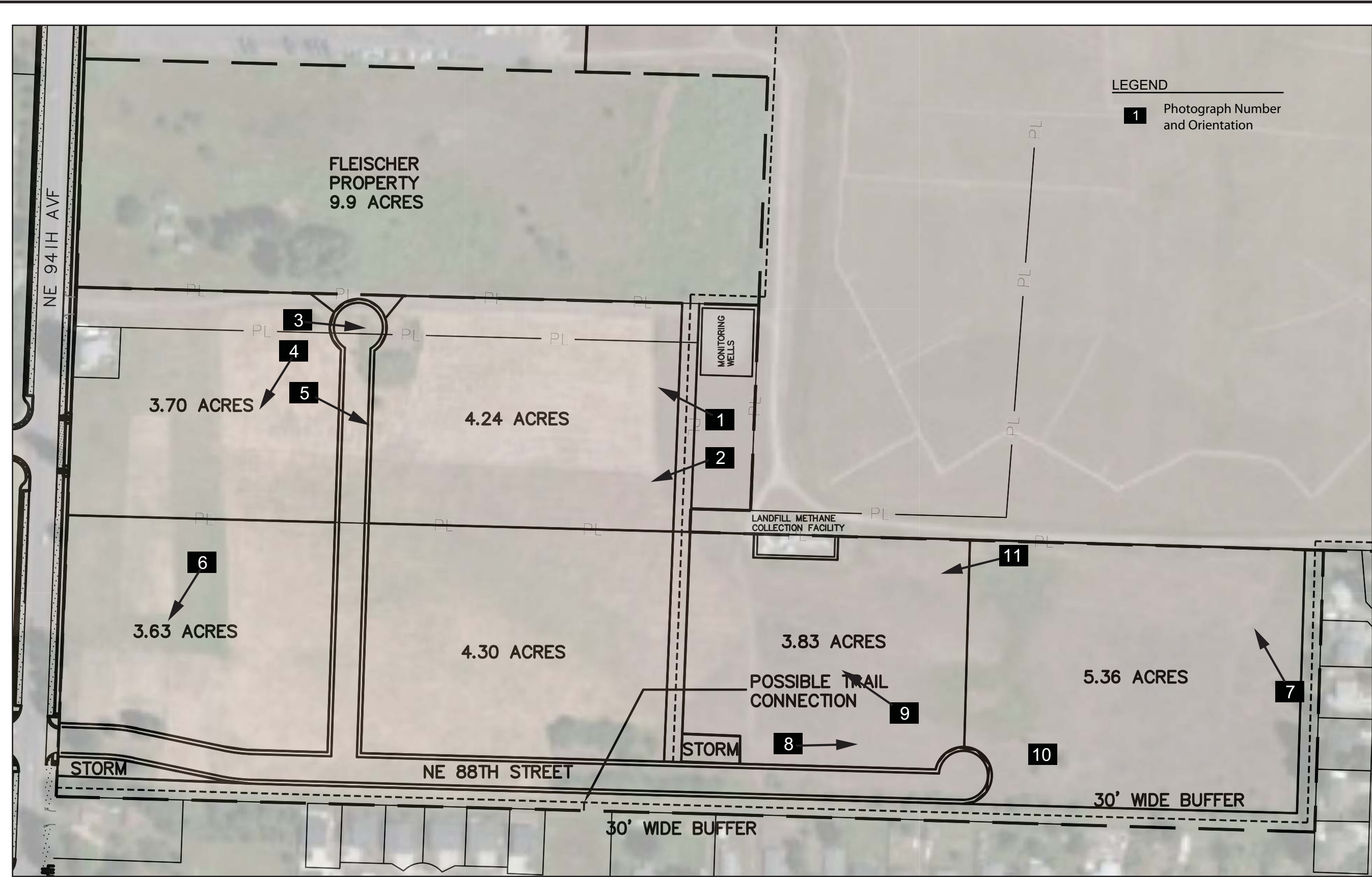
KOSKI PROPERTY
8713 NORTHEAST 94TH AVENUE
VANCOUVER, WASHINGTON

PROJECT 72971.006

DATE APR 2015

FIGURE

2

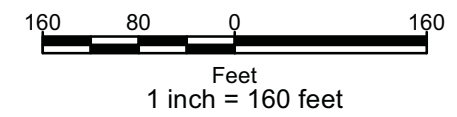


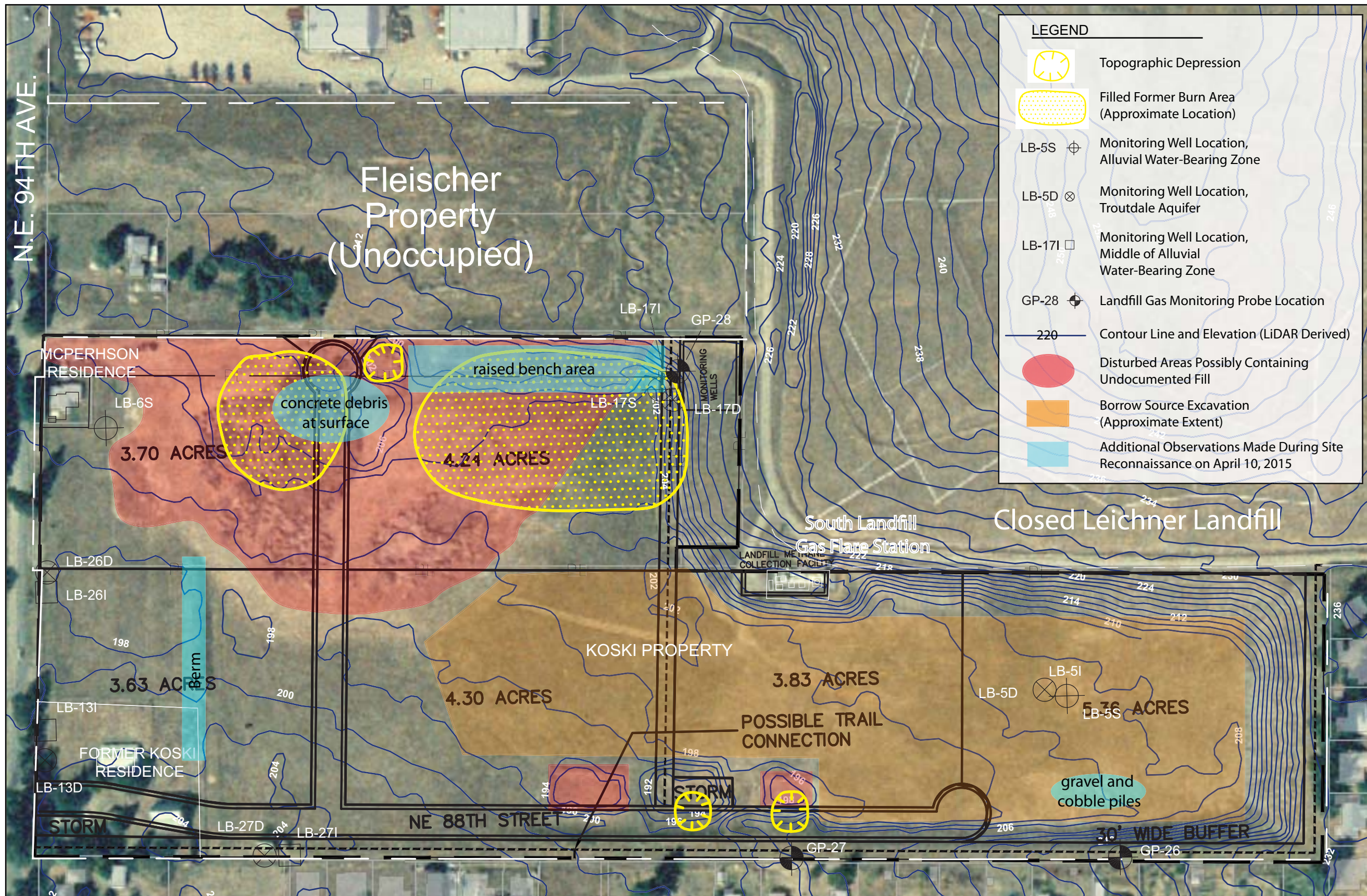
LEGEND
1 Photograph Number and Orientation

SOURCES: Berger (August 6, 2014)

PREPARED FOR: Clark County

SITE PLAN





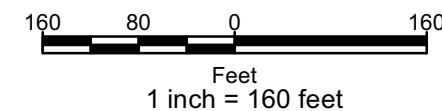
LEGEND

- Topographic Depression
- Filled Former Burn Area (Approximate Location)
- LB-5S Monitoring Well Location, Alluvial Water-Bearing Zone
- LB-5D Monitoring Well Location, Troutdale Aquifer
- LB-171 Monitoring Well Location, Middle of Alluvial Water-Bearing Zone
- GP-28 Landfill Gas Monitoring Probe Location
- 220 Contour Line and Elevation (LiDAR Derived)
- Disturbed Areas Possibly Containing Undocumented Fill
- Borrow Source Excavation (Approximate Extent)
- Additional Observations Made During Site Reconnaissance on April 10, 2015

SOURCES: WGS_1984_Web_Mercator_Auxiliary_Sphere
 Clark County, WA. GIS - <http://gis.clark.wa.gov>
 This map was generated by Clark County's "MapsOnline" website using the 1994 Ortho
 SCS Engineers (2014)
 Berger (August 6, 2014)
 Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP,
 and the GIS User Community
 USACE (2010)

PREPARED FOR: Clark County

ENVIRONMENTAL BORINGS WITH SITE ANNOTATIONS



LEICHER CAMPUS DEVELOPMENT
KOSKI PROPERTY
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PROJECT 72971.006

DATE APR 2015

FIGURE

3

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!:\Projects\72000\72900-72999\72971 Clark County\72971.006_LeichnerProp\GIS\Leichner_LiDAR.mxd

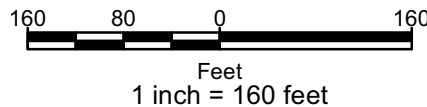


Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

PREPARED FOR: Clark County

LEGEND
taxlots

HILLSHADE DERIVED FROM USACE LIDAR



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PROJECT 72971.006

DATE APR 2015

FIGURE

4

ATTACHMENT A

Soil Classification Descriptions

ATTACHMENT A – SOIL CLASSIFICATION DESCRIPTIONS

AASHTO Group Classification

AASHTO group classification is a system that classifies soils specifically for geotechnical engineering purposes that are related to highway and airfield construction. It is based on particle-size distribution and Atterberg limits, such as liquid limit and plasticity index. This classification system is covered in AASHTO Standard No. M 145-82. The classification is based on that portion of the soil that is smaller than 3 inches in diameter.

The AASHTO classification system has two general classifications: (i) granular materials having 35 percent or less, by weight, particles smaller than 0.074 mm in diameter and (ii) silt-clay materials having more than 35 percent, by weight, particles smaller than 0.074 mm in diameter. These two divisions are further subdivided into seven main group classifications, plus eight subgroups, for a total of fifteen for mineral soils. Another class for organic soils is used.

For each soil horizon in the database one or more AASHTO Group Classifications may be listed. One is marked as the representative or most commonly occurring. The representative classification is shown here for the surface layer of the soil.

Depth to Restrictive Layer

A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "> 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Natural Drainage Class

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Capacity of Most Limiting Layer to transmit Water

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Frequency of Flooding

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent.

"None" means that flooding is not probable. The chance of flooding is nearly 0 percent in any year. Flooding occurs less than once in 500 years.

"Very rare" means that flooding is very unlikely but possible under extremely unusual weather conditions. The chance of flooding is less than 1 percent in any year.

"Rare" means that flooding is unlikely but possible under unusual weather conditions. The chance of flooding is 1 to 5 percent in any year.

"Occasional" means that flooding occurs infrequently under normal weather conditions. The chance of flooding is 5 to 50 percent in any year.

"Frequent" means that flooding is likely to occur often under normal weather conditions. The chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year.

"Very frequent" means that flooding is likely to occur very often under normal weather conditions. The chance of flooding is more than 50 percent in all months of any year.

Frequency of Ponding

Ponding is standing water in a closed depression. The water is removed only by deep percolation, transpiration, or evaporation or by a combination of these processes. Ponding

frequency classes are based on the number of times that ponding occurs over a given period. Frequency is expressed as none, rare, occasional, and frequent.

"None" means that ponding is not probable. The chance of ponding is nearly 0 percent in any year.

"Rare" means that ponding is unlikely but possible under unusual weather conditions. The chance of ponding is nearly 0 percent to 5 percent in any year.

"Occasional" means that ponding occurs, on the average, once or less in 2 years. The chance of ponding is 5 to 50 percent in any year.

"Frequent" means that ponding occurs, on the average, more than once in 2 years. The chance of ponding is more than 50 percent in any year.

Linear Extensibility (Shrink/Swell) (Figure 12)

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Corrosion of Steel

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Corrosion of Concrete

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to

corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Mechanical Site Preparation (Surface)

The ratings in this interpretation indicate the suitability for use of surface-altering soil tillage equipment during site preparation in forested areas. The ratings are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

The ratings are both verbal and numerical. Rating class terms indicate the degree to which the soils are suited to this aspect of forestland management. The soils are described as "well suited," "poorly suited," or "unsuited" to this management activity. "Well suited" indicates that the soil has features that are favorable for the specified kind of site preparation and has no limitations. Good performance can be expected, and little or no maintenance is needed. "Poorly suited" indicates that the soil has one or more properties that are unfavorable for the specified kind of site preparation. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. "Unsuited" indicates that the expected performance of the soil is unacceptable for the specified kind of site preparation or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Mechanical Site Preparation (Deep)

The ratings in this interpretation indicate the suitability for the use of deep soil tillage equipment during site preparation in forested areas. The ratings are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

The ratings are both verbal and numerical. Rating class terms indicate the degree to which the soils are suited to this aspect of forestland management. The soils are described as "well suited," "poorly suited," or "unsuited" to this management activity. "Well suited" indicates that

the soil has features that are favorable for the specified kind of site preparation and has no limitations. Good performance can be expected, and little or no maintenance is needed. "Poorly suited" indicates that the soil has one or more properties that are unfavorable for the specified kind of site preparation. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. "Unsuited" indicates that the expected performance of the soil is unacceptable for the specified kind of site preparation or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Local Roads and Streets

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

ATTACHMENT B

Site Photographs



Photo 1. Looking west from upper slope



Photo 2. Looking southwest showing vegetation transition



Photo 3. Circular depression along northern perimeter



Photo 4. Elevated area in northern portion



Photo 5. Panoramic view looking east



Photo 6. Looking southwest at Koski building pad



Photo 7. General slope grade on eastern perimeter



Photo 8. Depression in eastern portion looking east



Photo 9. Sparse vegetation looking west



Photo 10. Gravel and cobble pile in eastern portion



Photo 11. Looking southwest showing vegetation transition

**Report: HDPE Liner Investigation: Phase 2
of Koski Property (PBS, October 2015)**



October 20, 2015

Clark County Department of Environmental Services
Attn: Mr. Mike Davis, Leichner Landfill Project Manager
1300 Franklin Street
Vancouver, Washington 98660-9810

Re: HDPE Liner Investigation – Phase 2
Leichner Campus Development – Koski Property
8713 Northeast 94th Avenue, Vancouver, Washington
PBS Project No. 72971.006

INTRODUCTION AND BACKGROUND

PBS Engineering and Environmental Inc. (PBS) is pleased to provide this letter report for geotechnical engineering services in support of a feasibility/due diligence review for the approximately 25-acre Leichner Campus Development–Koski Property (project site) located along Northeast 88th Street in Clark County, Washington. PBS understands Clark County (County) is currently planning to develop the approximately 25-acre project site that may be split into six 3- to 6-acre lots for commercial and/or light industrial development. The project site is part of the larger and adjacent, closed Leichner Landfill located at 9411 94th Avenue. A majority of the Leichner Landfill property, including the project site, was purchased by the County in December 2012, and the County has begun the master planning process to guide decisions about the future use of the site. The Leichner Campus Development–Koski Property is planned to be sold or developed by the County separately from other portions of the Leichner Landfill property.

Phase 1 of our geotechnical engineering services was completed and provided in our June 17, 2015 report that included a detailed data review and walking site reconnaissance. During the site reconnaissance, concrete debris was observed at the surface in the northern portion of the property that was previously identified as the former burn areas. The burn materials were reportedly excavated, relocated to the Leichner Landfill, and a High-Density Polyethylene (HDPE) liner placed over the base of the excavation to prevent leaching of any residual contamination into the groundwater. Four progress reports by Emcon (1992a, 1992b, 1992c, and 1992d) detailed the investigation, findings, and site alterations. At some point, undocumented fill was placed in this area and currently forms mounds approximately 3 to 6 feet topographically above the majority of the property to the south. The fill source was unknown at the time of our reconnaissance, but we were later informed that it came from off-site and was placed by Clark County. We recommended test pit explorations be completed to document the content of the fill mounds, determine its potential re-use as structural fill or whether it should be removed, and the depth and presence of the HDPE liner.

SUBSURFACE CONDITIONS

A geotechnical engineer from PBS documented subsurface conditions at the site by observing excavation of 15 test pits (designated TP-1 through TP-15) to depths up to approximately 9 feet below the existing ground surface (bgs), Figure 1, Field Exploration Map. The test pits were completed on September 2, 2015, by SCS Engineers, Inc., of Portland, Oregon, using a Deere 50G excavator equipped with a toothed-bucket. The terminology used to describe the soils is provided in Table A-1 in Attachment A.

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888.248.1939 Toll-Free
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The soil conditions observed during the subsurface exploration in each test pit are summarized in Table 1 below.

Table 1: Summary of Test Pit Soil Conditions

Test Pit	Soil Type (ft. bgs)	Debris
TP-1 TD = 7	<u>FILL: 0 to 2.5 feet:</u> Brown SILT (ML) with sand; non-plastic; fine to coarse sand; fine to coarse, angular gravel; dry	Bricks, glass, concrete
	<u>NATIVE 2.5 to 4.5 feet:</u> Brown silty GRAVEL (GM) with sand and cobbles; non-plastic; fine to coarse sand, fine to coarse, rounded gravel, round cobbles, moist	Debris not observed
	<u>4.5 to 7 feet:</u> Brown poorly graded GRAVEL (GP-GM) with silt, sand, and cobbles; non-plastic; fine to coarse sand, fine to coarse, rounded gravel, round cobbles, moist	Debris not observed
TP-2 TD = 6.5	<u>FILL: 0 to 2 feet:</u> Brown SILT (ML) with sand; non-plastic; fine to coarse sand; fine, angular gravel; dry	Debris not observed
	<u>NATIVE 2 to 4.5 feet:</u> Dark brown SILT (ML) with sand; non-plastic; fine to coarse sand; fine, angular gravel; moist	
	<u>4.5 to 6.5 feet:</u> Brown poorly graded GRAVEL (GP-GM) with silt, sand, and cobbles; non-plastic; fine to coarse sand, fine to coarse, rounded gravel, round cobbles, moist	
TP-3 TD = 8	<u>FILL: 0 to 2.5 feet:</u> Light brown SILT (ML) with sand; non-plastic; fine to coarse sand; fine, angular gravel; dry	Concrete
	<u>NATIVE 2.5 to 4.5 feet:</u> Dark brown SILT (ML) with sand; non-plastic; fine to coarse sand; fine, angular gravel; moist	Debris not observed
	<u>4.5 to 8 feet:</u> Brown silty GRAVEL (GM) with sand and cobbles; non-plastic; fine to coarse sand, fine to coarse, rounded gravel, round cobbles, moist	Debris not observed
TP-4 TD = 8	<u>FILL: 0 to 2.5 feet:</u> Light brown SILT (ML); non-plastic; dry	Bricks and concrete (approx. 15%)
	<u>2.5 to 8 feet:</u> Black SILT (ML); non-plastic; fine, rounded gravel; organics; moist	Wood (approx. 25%)

Test Pit	Soil Type (ft. bgs)	Debris
TP-5 TD = 8.5	<u>FILL: 0 to 4.5 feet:</u> Brown SILT (ML) with sand; non-plastic; fine to coarse sand; dry	Bricks, glass, concrete
	<u>4.5 to 8.5 feet:</u> Black ORGANIC SILT (OL); medium plasticity; fine, rounded gravel; organics; moist	Wood (approx. 25%)
TP-6 TD = 9	<u>FILL: 0 to 2.5 feet:</u> Light brown SILT (ML) with sand; non-plastic; fine to coarse sand; fine, angular gravel; dry	Debris not observed
	<u>2.5 to 4.5 feet:</u> Gray SILT (ML) with sand; non-plastic; fine to coarse sand; fine to coarse, angular gravel; moist	Concrete (3.5-foot diameter)
	<u>4.5 to 9 feet:</u> Black ORGANIC SILT (OL); medium plasticity; fine, rounded gravel; organics; moist	Wood (approx. 25%)
TP-7 TD = 7	<u>FILL: 0 to 3.5 feet:</u> Light brown SILT (ML); non-plastic; dry	Bricks, glass, concrete
	<u>3.5 to 7 feet:</u> Gray ORGANIC SILT (OL); medium plasticity; fine, rounded gravel; organics; moist	Concrete (3.5-foot diameter)
TP-8 TD = 9	<u>FILL: 0 to 5 feet:</u> Brown SILT (ML) with sand; non-plastic; fine to coarse sand; dry	Bricks, glass, concrete, metal
	<u>5 to 9 feet:</u> Dark brown ORGANIC SILT (OL); medium plasticity; fine, rounded gravel; organics; moist	Wood
TP-9 TD = 8	<u>FILL: 0 to 2.5 feet:</u> Brown SILT (ML) with sand; non-plastic; fine to coarse sand; dry	Bricks, glass, concrete, asphalt (approx. 10%)
	<u>2.5 to 8 feet:</u> Brown silty SAND (SM) with gravel; non-plastic; fine to coarse sand; fine to coarse, rounded gravel; moist	Debris not observed
TP-10 TD = 7	<u>FILL: 0 to 2 feet:</u> Brown SILT (ML) with sand; non-plastic; fine to coarse sand; dry	Glass and metal (approx. 10%)
	<u>2 to 7 feet:</u> Brown silty SAND (SM) with gravel and cobbles; non-plastic; fine to coarse sand; fine to coarse, rounded gravel; rounded cobbles; moist	Debris not observed
TP-11 TD = 7	<u>FILL: 0 to 7 feet:</u> Brown silty SAND (SM) with gravel and cobbles; non-plastic; fine to coarse sand; fine to coarse, rounded gravel; rounded cobbles; dry to moist	Debris not observed

Test Pit	Soil Type (ft. bgs)	Debris
TP-12 TD = 6	<u>FILL: 0 to 6 feet:</u> Brown silty GRAVEL (GM) with sand and cobbles; non-plastic; fine to coarse sand; fine to coarse, rounded gravel; rounded cobbles; dry to moist	Debris not observed
TP-13 TD = 8	<u>FILL: 0 to 7.5 feet:</u> Brown sandy SILT (ML) with gravel; non-plastic; fine to coarse sand; fine to coarse, rounded gravel; dry	Plastic, metal, carpet
	<u>7.5 to 8 feet:</u> Brown silty GRAVEL (GM) with sand and cobbles; non-plastic; fine to coarse sand; fine to coarse, rounded gravel; rounded cobbles; dry to moist	Debris not observed
TP-14 TD = 6	<u>FILL: 0 to 6 feet:</u> Brown silty GRAVEL (GM) with sand and cobbles; non-plastic; fine to coarse sand; fine to coarse, rounded gravel; rounded cobbles; dry to moist	Debris not observed
TP-15 TD = 7	<u>FILL: 0 to 6 feet:</u> Brown silty GRAVEL (GM) with sand and cobbles; non-plastic; fine to coarse sand; fine to coarse, rounded gravel; rounded cobbles; dry to moist	Concrete, asphalt, metal

Groundwater

Groundwater was not encountered in any of our explorations except for a possible perched zone at 7.5 feet bgs in TP-9. We expect seasonal fluctuations in groundwater could occur during extended periods of rainfall or during wet conditions.

The hydrostratigraphy at the site consists of an approximately 35-foot-thick unsaturated zone of sand and gravel, an unconfined to semi-confined zone about 35 to 55 feet thick, and a semi-confined to confined aquifer in the Troutdale Formation. However, historical groundwater data collected as part of the Leichner Landfill post-closure monitoring program indicate groundwater occurs beneath the property between depths ranging from 12 to 19 feet bgs in the eastern portion and 17 to 37 feet bgs in the western portion with flow generally toward the west-southwest (SCS, 2014).

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Based on field explorations and observations of 15 test pits excavated in the northern portion of the property, the mounds contain a variety of deleterious material. The observations included:

- Debris that included concrete, bricks, plastic, glass, mostly burned wood, carpet, and metal was encountered in the majority of the test pits and within both the areas previously delineated as burn areas. The debris types observed in the test pits excavated on September 2, 2015 are similar to those described in the April 21, 1992 report.
- The debris depth is in excess of 9 feet bgs in the western area. Concrete blocks were up to 3.5-feet in the longest dimension, and the debris may also be mixed in with the on-site gravelly soil similar to that stripped and/or exposed at the ground surface south of the mounds.
- The debris was generally observed in the upper 2.5 feet or not at all in the eastern area and consisted of bricks, glass, concrete, and asphalt.

- The burned wood debris was encountered in the western burn area and comprises up to 25 percent of the soil matrix mixed with black silt or organic silt soil.
- The HDPE liner was not observed in any of the test pits.
- The burned wood materials may be related to the past work activities. Environmental testing and characterization may be necessary prior to removal from the site.

The materials observed in the western area in test pits (TP-1 through TP-8 and TP-13) are not suitable for re-use as structural fill due to the variability in constituent size and content. The fill would require the removal of materials larger than 4-inches in nominal diameter and the deleterious materials including plastic, glass, carpet, and metal, and the burned wood and organics/organic soil for it to be considered suitable for re-use. The materials observed in the eastern area in test pits TP 9, -10, and -11 are likely suitable for re-use as structural fill elsewhere on the property provided the upper approximately 2.5 feet that contain debris are stripped and set aside.

RESEARCH SOURCES

The primary data sources used for this letter-report were prepared by other consultants who have completed work at the Leichner Landfill site and included:

- EMCON Northwest, Inc., 1992a, Letter (Re: Burn Area Study, Leichner Landfill), prepared for Washington State Department of Ecology, Olympia, Washington, and Southwest Washington Health District, Vancouver, Washington, April 21, 1992.
- EMCON Northwest, Inc., 1992b, Memorandum (Re: Leichner Landfill, Burn Area Excavation/Remediation), prepared Leichner Brothers Landfill Reclamation Corporation, Vancouver, Washington, June 8.
- EMCON Northwest, Inc., 1992c, Letter (Re: June 1992 Progress Report for the Leichner Landfill Project), prepared for Washington State Department of Ecology, Olympia Washington, July 8.
- EMCON Northwest, Inc., 1992d, Letter (Re: August 1992 Progress Report for the Leichner Landfill Project), prepared for Washington State Department of Ecology, Olympia Washington, September 14.
- SCS Engineers, September 29, 2014, Phase I Environmental Site Assessment, Koski Property, 8713 NE 94th Avenue, Vancouver, Washington 98662.
- PBS Engineering & Environmental, June 17, 2015, Geotechnical Data Review and Geologic Site Reconnaissance – Phase 1_Updated, Leichner Campus Development – Koski Property, 8713 Northeast 94th Avenue, Vancouver, Washington, PBS Project No. 72971.006

LIMITATIONS

This report has been prepared for the exclusive use of the addressee, and their architects and engineers, for aiding in the design and construction of the proposed development and is not to be relied upon by other parties. It is not to be photographed, photocopied, or similarly reproduced, in total or in part, without express written consent of the Client and PBS. It is the addressee's responsibility to provide this report to the appropriate design professionals, building officials, and contractors to ensure correct implementation of the recommendations.

The opinions, comments, and conclusions presented in this report are based upon information derived from our literature review and field explorations. Conditions between, or beyond, our explorations may vary from those encountered. It is possible that soil, rock, or groundwater conditions could vary between or beyond the points explored. If soil, rock, or groundwater conditions are encountered during

construction that differ from those described herein, the Client is responsible for ensuring that PBS is notified immediately so that we may reevaluate the recommendations of this report.

The scope of services for this subsurface exploration and geotechnical report did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site.

If there is a substantial lapse of time between the submission of this report and the start of work at the site, if conditions have changed due to natural causes or construction operations at or adjacent to the site, or if the basic project scheme is significantly modified from that assumed, this report should be reviewed to determine the applicability of the conclusions and recommendations presented herein. Land use, site conditions (both on- and off-site), or other factors may change over time and could materially affect our findings. Therefore, this report should not be relied upon after three years from its issue, or in the event that the site conditions change.

CLOSING

We trust this report meets your current needs. If you have any questions or wish to further discuss our observations, conclusions, and recommendations, please contact Mark Swank at 503.417.7738 or Ryan White at 503.417.7608.

Sincerely,
PBS Engineering and Environmental Inc.



Mark Swank

Mark Swank, LG, LEG
Senior Engineering Geologist

A handwritten signature in black ink, appearing to read "Ryan White".

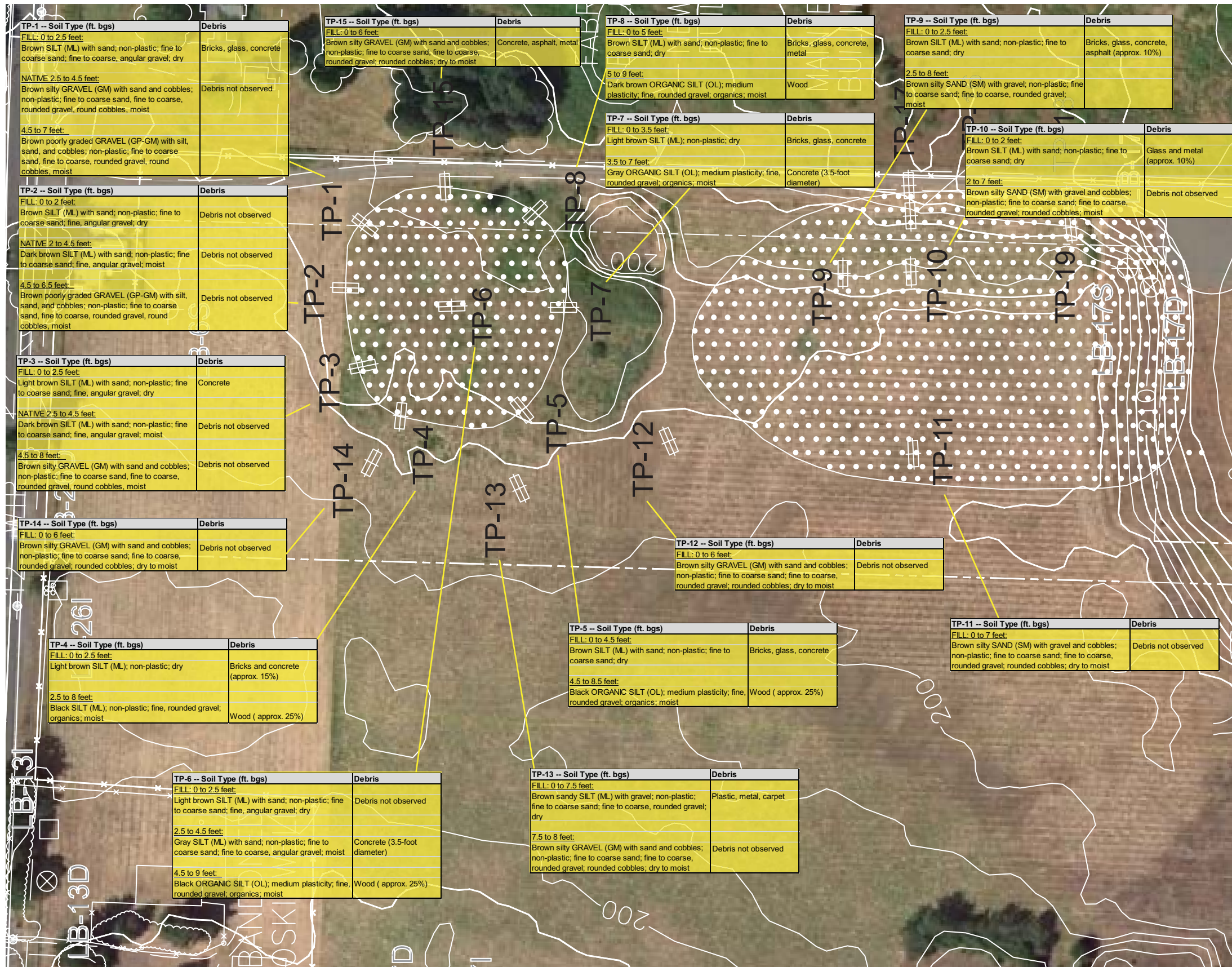
Ryan White, PE, GE
Geotechnical Discipline Lead

MS/RW

Figures: Figure 1 – Field Exploration Map

Attachment: Table A-1, Terminology Used to Describe Soil

FIGURES



LEGEND:

- LB-5S ⊕ Monitoring Well Location, Alluvial Water-Bearing Zone
- LB-5D ⊗ Monitoring Well Location, Troutdale Aquifer
- LB-171 □ Monitoring Well Location, Middle of Alluvial Water-Bearing Zone
- Property Boundary
- - - Limit of Landfill Cover and Approximate Edge of Waste
- TP-19 ⊞ Test Pit
- ⊞ Approximate Extent of Area Burn Waste was Excavated.

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LEICHER CAMPUS DEVELOPMENT
KOSKI PROPERTY
 8713 NORTHEAST 94TH AVENUE
 VANCOUVER, WASHINGTON

FIELD EXPLORATION MAP

PROJECT: 72971.006 PH 2
 DATE: OCTOBER 2015
 FIGURE: **1**

SOURCE: **SCS ENGINEERS**
 Environmental Consultants and Contractors
 14945 SW Sequoia Parkway, Suite 180
 Portland, Oregon 97224
 (503) 639-9201 FAX: (503) 684-6948

NOTES:

1. Topography taken from Clark County GIS, December 2008.

SCALE: 1" = 100'
 PREPARED FOR: CLARK COUNTY

ATTACHMENT A

Soil Descriptions

Soils exist in mixtures with varying proportions of components. The predominant soil, i.e., greater than 50 percent based upon total dry weight, is the primary soil type and is capitalized in our log descriptions, e.g., SAND, GRAVEL, SILT or CLAY. Lesser percentages of other constituents in the soil mixture are indicated by use of modifier words in general accordance with the Visual-Manual Procedure (ASTM D2488-06). "General Accordance" means that certain local and common descriptive practices have been followed. In accordance with ASTM D2488-06, group symbols (such as GP or CH) are applied on that portion of the soil passing the 3-inch (75mm) sieve based upon visual examination. The following describes the use of soil names and modifying terms used to describe fine- and coarse-grained soils.

Fine - Grained Soils (More than 50% fines passing 0.075 mm, #200 sieve)

The primary soil type, i.e. SILT or CLAY is designated through visual – manual procedures to evaluate soil toughness, dilatency, dry strength, and plasticity. The following describes the terminology used to describe fine - grained soils, and varies from ASTM 2488 terminology in the use of some common terms.

Primary soil NAME, adjective and symbols			Plasticity Description	Plasticity Index (PI)
SILT ML & MH	CLAY CL & CH	ORGANIC SILT & CLAY OL & OH		
SILT		Organic SILT	Non-plastic	0 - 3
SILT		Organic SILT	Low plasticity	4 - 10
SILT / Elastic SILT	Lean CLAY	Organic clayey SILT	Medium Plasticity	10 – 20
Elastic SILT	Lean/Fat CLAY	Organic silty CLAY	High Plasticity	20 – 40
Elastic SILT	Fat CLAY	Organic CLAY	Very Plastic	>40

Modifying terms describing secondary constituents, estimated to 5 percent increments, are applied as follows:

Description	% Composition
With sand; with gravel (combined total greater than 15% but less than 30%, modifier is whichever is greater)	15% to 30%
Sandy; or gravelly (combined total greater than 30% but less than 50%, modifier is whichever is greater)	30% to 50%

Borderline Symbols, for example CH/MH, are used where soils are not distinctly in one category or where variable soil units contain more than one soil type. **Dual Symbols**, for example CL-ML, are used where two symbols are required in accordance with ASTM D2488.

Soil Consistency. Consistency terms are applied to fine-grained, plastic soils (i.e., $PI \geq 7$). Descriptive terms are based on direct measure or correlation to the Standard Penetration Test N-value as determined by ASTM D1586-84, as follows. Note, SILT soils with low to non-plastic behavior (i.e. $PI < 7$) are classified using relative density.

Consistency Term	SPT N-value	Unconfined Compressive Strength	
		tsf	kPa
Very soft	Less than 2	Less than 0.25	Less than 24
Soft	2 – 4	0.25 - 0.5	24 - 48
Medium stiff	5 – 8	0.5 - 1.0	48 – 96
Stiff	9 – 15	1.0 - 2.0	96 – 192
Very stiff	16 – 30	2.0 - 4.0	192 – 383
Hard	Over 30	Over 4.0	Over 383

Soil Descriptions

Coarse - Grained Soils (less than 50% fines)

Coarse-grained soil descriptions, i.e., SAND or GRAVEL, are based on that portion of materials passing a 3-inch (75mm) sieve. Coarse-grained soil group symbols are applied in accordance with ASTM D2488-06 based upon the degree of grading, or distribution of grain sizes of the soil. For example, well graded sand containing a wide range of grain sizes is designated SW; poorly graded gravel, GP, contains high percentages of only certain grain sizes. Terms applied to grain sizes follow.

Material	Particle Diameter	
	Inches	Millimeters
Sand (S)	0.003 - 0.19	0.075 - 4.8
Gravel (G)	0.19 - 3.0	4.8 - 75
	Additional Constituents	
Cobble	3.0 - 12	75 - 300
Boulder	12 - 120	300 - 3050

The primary soil type is capitalized, and the amount of fines in the soil are described as indicated by the following examples. Other soil mixtures will provide similar descriptive names.

Example: Coarse-Grained Soil Descriptions with Fines

5% to less than 15% fines (Dual Symbols)	15% to less than 50% fines
GRAVEL with silt, GW-GM	Silty GRAVEL: GM
SAND with clay, SP-SC	Silty SAND: SM

Additional descriptive terminology applied to coarse-grained soils follow.

Example: Coarse-Grained Soil Descriptions with Other Coarse-Grained Constituents

Coarse-Grained Soil Containing Secondary Constituents	
With sand or with gravel	> 15% sand or gravel
With cobbles; with boulders	Any amount of cobbles or boulders.

Cobble and boulder deposits may include a description of the matrix soils, as defined above.

Relative Density terms are applied to granular, non-plastic soils based on direct measure or correlation to the Standard Penetration Test N-value as determined by ASTM D1586-84.

Relative Density Term	SPT N-value
Very loose	0 - 4
Loose	5 - 10
Medium dense	11 - 30
Dense	31 - 50
Very dense	> 50