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# First Quarter 2011 Progress Report
## Consent Decree 96-2-03081-7
## Facility ID No. 1017

## Closed Leichner Brothers Landfill
## Vancouver, Washington

Prepared for:

Clark County
Environmental Services
1300 Franklin Street
Vancouver, WA 98666

Prepared by:

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June 8, 2011
File No. 04211030.06/.18

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June 8, 2011
File No. 04211030.06/.18

Mr. Mohsen Kourehdar, P.E.
Washington State Department of Ecology
Southwest Regional Office
Toxics Cleanup Program
300 Desmond Drive
Lacey, Washington 98503

**Subject: First Quarter 2011 Progress Report for the Closed Leichner Brothers Landfill, Vancouver, Washington, Consent Decree 96-2-03081-7, Facility ID No. 1017**

Dear Mr. Kourehdars:

This letter presents the first quarter 2011 progress report for the closed Leichner Brothers Landfill (LBLF) located in Vancouver, Washington. This progress report was prepared by SCS Engineers, Inc. (SCS), on behalf of Clark County (County) and the Leichner Landfill Oversight Committee (LLOC), whose members include the City of Vancouver and Leichner Brothers Land Reclamation Corporation (LBLRC). The report is being submitted in accordance with reporting requirements specified in the July 1996 Consent Decree issued to the LBLRC by the Washington State Department of Ecology (Ecology). Beginning with the first quarter 2011, SCS began managing and providing environmental, engineering, and operations and maintenance (O&M) services for the LBLF pursuant to a signed agreement among the County, City, LBLRC, and SCS executed in December 2010. In a letter dated March 23, 2011, LBLRC notified Ecology that SCS would be taking over responsibility for performing all maintenance and monitoring services pursuant of the Consent Decree.

Compliance monitoring of groundwater, surface water (i.e., stormwater), and landfill gas (LFG) was implemented to fulfill certain requirements of the 1996 Consent Decree and associated Cleanup Action Plan (CAP), as well as to concurrently fulfill the requirements of LBLF's post-closure monitoring under Minimum Functional Standards (MFS), Chapter 173-304 WAC. Compliance monitoring was performed in accordance with the methods and procedures described in the site's compliance monitoring plan (CMP; EMCON, 2005[1]), and subsequent recent modifications to the groundwater analytical program stemming from Ecology's recently completed Draft Periodic Review[2] of the LBLF, as discussed in more detail in this report.

[1] EMCON. 2005. Compliance Monitoring Plan, Leichner Landfill, Clark County, Washington. Prepared by EMCON/OWT, Inc., Portland, Oregon, for the Leichner Brothers Land Reclamation Corp. April.

[2] Ecology. 2010. Draft Periodic Review, Leichner Brothers Landfill: 1017, 9411 Northeast 94th Avenue, Vancouver, Washington, 98666. Prepared by Ecology, Southwest Region Office, Toxics Cleanup Program. December.

This progress report summarizes field activities performed during the first quarter 2011 at LBLF, and presents results of groundwater, LFG, and stormwater compliance monitoring, and the monitoring and maintenance of the facility's landfill gas collection and control system (GCCS). The GCCS includes a LFG extraction well field, condensate collection system, and a LFG flare and blower station. This progress report also describes other pertinent, non-routine activities performed during the first quarter 2011.

## FIRST QUARTER 2011 MAJOR ACTIVITIES

The following major activities were performed during the first quarter 2011 period and are described in more detail in subsequent sections of this report.

- Coordinated transition activities related to changeover of the LBLF project management from Shaw Environmental, Inc. (Shaw) to SCS.
- Conducted first quarter 2011 (annual) groundwater monitoring in March 2011.
- Conducted first quarter 2011 stormwater monitoring in March 2011 and monthly stormwater inspections in accordance with LBLF's General Stormwater Permit (Permit No. WAR005572B) issued by Ecology in October 2009.
- Conducted monthly compliance monitoring of the LFG compliance monitoring probes.
- Conducted monitoring and balancing of the LFG extraction well field at least semimonthly (twice a month).
- Monitored and maintained the performance and operation of the GCCS.
- Upgraded the GCCS by installing a new double-wall, 2,500-gallon condensate tank.
- Repaired two of the three surface water pumps in the North Detention Pond, and installed new pump controllers and starters.

## PROJECT TRANSITION ACTIVITIES

The following transition activities were performed by SCS in December 2010 and during the first quarter 2011 period as part of the transition of managing the site operations and maintenance services from Shaw to SCS.

- Prepared for and participated in a project kickoff meeting with the County's Project Manager (Mike Davis) on December 2, 2010. The meeting was attending by SCS's Project Director (Greg Helland) and Project Manager (Louis Caruso) for the LBLR project.
- Prepared for and participated in a project transition meeting on December 2, 2010, with the County, Clark County Public Health Department, and Shaw.

- Participated in two days of on-site meetings with Shaw to obtain overview briefings of the site conditions and operational systems (i.e., GCCS, condensate collection system, and storm water collection system).

- Obtained and reviewed the Operations and Maintenance Manual (for the flare and components) and Air Operating Permit in preparation for assessing set-up criteria for the Yokogawa flare data monitor.

- Conducted an independent site visit to establish designations for the LFG extraction wells for programming the GEM-2000, and to set up SCS's Data Services database for storing and evaluating the GCCS and flare monitoring data. SCS Field Services managers also conducted an independent audit of the GCCS and site conditions.

- Developed and began utilizing (beginning in January 2011) (1) the site-specific Data Services database for managing LFG compliance and GCCS monitoring performance data and (2) electronic field sheets for use with the Personal Data Assistant (PDA) system.

- Prepared a site-specific health and safety plan (HASP) integrating health and safety requirements for O&M, monitoring, and engineering activities.

- Obtained an external hard drive from the County containing electronic projects files, along with a set of oversized hard copy drawings. The County received the hard drive and the drawings from Shaw on March 31, 2011.

## ECOLOGY'S DECEMBER 2010 DRAFT PERIODIC REVIEW

Ecology prepared and submitted for public comment a Draft Periodic Review (DPR) document dated December 2010[2]. The DPR was prepared to satisfy WAC 173-340-420(2) requiring Ecology to conduct a periodic review of sites undergoing cleanup under the Model Toxics Control Act (MTCA) or under an order, agreed order or consent decree. As stated in DPR, the purpose of Ecology's periodic review was to determine whether the cleanup remedy at the closed LBLF continues to be protective of human health and the environment. The DPR summarized site conditions (including historical background of the site operations, regulatory framework, and environmental conditions), assessed the effectiveness of cleanup actions at meeting remedial action objections (i.e., cleanup levels), and presented conclusions.

A primary conclusion stated in the DPR was that the remedial actions implemented at LBLR can be considered protective of human health and the environment with respect to refuse encapsulation, LFG control, surface water quality, and groundwater quality protection. The DPR indicated, however, that future monitoring at LBLR should include field testing of specific conductivity. The DPR further indicated that laboratory analyses for two volatile organic compounds (VOCs: vinyl chloride [VC] and 1,1-dichloroethene [1,1-DCE]) much be achieved with a lower method reporting limit (MRL) of 0.1 micrograms per liter (µg/L) that meets the compliance cleanup levels for these two VOCs specified in the 1996 Consent Decree/CAP. Since 2000, VOC analyses of groundwater samples by the standard U.S. Environmental Protection

Agency (EPA) Method 8260B achieved MRLs (typically 0.5 µg/L) above the compliance level. These requested modifications to the groundwater analytical testing program were implemented during the first quarter 2011 annual monitoring event, as further discussed in this report.

As a follow-up to the DPR and in response to SCS's review comments of the DPR documented in a technical memorandum submitted to Ecology on March 30, 2011, Ecology issued a letter dated April 27, 2011, to the County that outlined specific modifications to the environmental monitoring program to be implemented at LBLF based on the DPR[3]. The modifications requested by Ecology and proposed to be implemented at LBLF are discussed in a subsequent section of this report.

# FIRST QUARTER 2011 PROJECT ACTIVITIES AND RESULTS

## Project Management, Meetings, and Correspondence

Correspondence conducted during the first quarter 2011 period included the following:

- Submitted the January, February, and March 2011 invoice packages to the County and LLOC members.
- Submitted the January, February, and March 2011 monthly updates to County and LLOC members.
- As previously, noted, SCS submitted a technical memorandum dated March 30, 2011, to Ecology providing review comments of its December 2010 DPR document. SCS and the County also conducted follow-up communications (emails and phone calls) with Ecology to discuss and come to resolution on the issues raised in SCS's technical memorandum.

## First Quarter 2011 Groundwater Monitoring Event

### Groundwater Monitoring Network and Schedule

The current groundwater monitoring network consists of 20 monitoring wells screened in the alluvium (alluvial water-bearing zone [WBZ]) or the Troutdale Formation aquifer. The monitoring well locations are shown in Figure 1. The following describes the monitoring 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).

[3] Ecology. 2011. Periodic Review Under Model Toxics Control Act (MTCA), Leichner Brothers Landfill. Prepared by Ecology, Southwest Region Office, Toxics Cleanup Program. April 27.

- 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 groundwater monitoring network wells are monitored annually or semiannually in accordance with the schedule specified in the 2005 CMP (EMCON, 2005[1]). During the annual event, typically performed during the first quarterly monitoring period in late winter-early spring (usually in March), groundwater samples are collected from the following 20 monitoring wells: LB-1S, LB-1D, LB-3S, LB-3D, LB-4SR, LB-4D, 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. During the semiannual monitoring event, typically performed during the third quarterly period in late summer-early fall (usually September), groundwater samples are collected from the following 7 monitoring wells: LB-1S, LB-5S, LB-6S, LB-10SR, LB-13I, LB-26I, and LB–27I.

The annual (first quarter 2011) groundwater monitoring event was performed from March 21 through March 29, 2011.

## Field Procedures and Laboratory Methods

Before collecting groundwater samples, groundwater levels in all site monitoring wells were measured and recorded with an electronic water level meter.

Groundwater sampling and measurement of field parameters were performed consistent with the procedures described in the 2005 CMP. The annual groundwater monitoring network wells identified above were each purged using the standard purge method (i.e., minimum of three casing volumes removed). The groundwater wells were purged using new, disposable bailers, and field water-quality parameters, including pH, specific conductance, and temperature were measured after each casing volume was removed. A summary of the field water-quality parameter measurements is provided in Table 1. Once three casing volumes were removed and/or field parameters stabilized, groundwater samples were collected into appropriately preserved, laboratory-supplied sample containers. The samples were stored and transported in coolers chilled with ice, and chain-of-custody (COC) documentation accompanied the samples during their storage and transport to the laboratory.

The groundwater samples were submitted to TestAmerica Laboratories (TAL)[4] in Beaverton, Oregon, for analyses of the following list of long-term monitoring parameters approved by Ecology and specified in the 2005 CMP: inorganic leachate indicator parameters (nitrate [as nitrogen], total dissolved solids [TDS], chloride [Cl], dissolved iron [Fe], dissolved manganese [Mn]) and VOCs. The analytical test methods were consistent with those described in the 2005 CMP, except that a low-level procedure for VOCs analysis by EPA Method 8260B was used in order to meet the MRL requirements for VC and 1,1-DCE requested by Ecology in its DPR. The MRLs reported by TAL were 0.02 µg/L for VC and 0.1 µg/L for 1,1-DCE.

[4] Groundwater analytical testing was previously (prior to 2011) performed by Columbia Analytical Services (CAS) in Kelso, Washington. The contract laboratory was changed concurrent with the change in project management of the LBLF contract from Shaw to SCS. Future groundwater analytical testing is planned to be performed by TAL.

## Quality Assurance and Quality Control Methods and Results

Field quality assurance/quality control (QA/QC) procedures used for the first quarter 2011 monitoring event included collecting and submitting field duplicate samples collected at wells LB-6S and LB-10SR, one field blank, and one trip blank. 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 analytical reports provided by TAL (see Attachment 1). TAL incorporated its laboratory data quality review comments in the QA/QC narrative of the laboratory reports. Copies of the laboratory analytical reports (along with copies of the COC forms) are provided in Attachment 1.

Laboratory data and QA/QC procedures were also reviewed by SCS to determine whether the data met EPA QC guidance criteria. The results of SCS's QA/QC reviews of the laboratory data and results are provided in Attachment 2. SCS's QA/QC review identified one issue attributed to laboratory error: analysis of TDS for samples collected from wells LB-4SR, LB-4D, LB-6S (and duplicate), LB-17I, and LB-17D was performed past the recommended 7-day hold time. This hold time exceedance was considered a non-critical laboratory error that did not affect the quality or interpretation of the data. The QA/QC reviews indicated that the data were acceptable for their intended use.

## First Quarter 2011 Groundwater Monitoring Results

Groundwater levels measured in the site monitoring wells in March 2011, and corresponding groundwater elevations are summarized in Table 2. The groundwater elevations are consistent with historical groundwater elevation data. Groundwater potentiometric surface contour maps for the first quarter (March) 2011 annual monitoring event are provided in Figures 2 and 3 for the alluvial WBZ and Troutdale Formation aquifer, respectively. Consistent with previous interpretations, groundwater in the alluvial WBZ flows towards the west to southwest, and groundwater in the Troutdale Formation aquifer flows towards the south to southeast.

The first quarter 2011 laboratory analytical data are summarized in Table 3 for inorganic parameters (Cl, nitrate, TDS, and specific conductivity) and dissolved metals (Fe and Mn), and Table 4 for VOCs. The groundwater analytical results for inorganic parameters and dissolved metals are generally consistent with results obtained from the last five years of groundwater monitoring. Laboratory specific conductivity testing has not been performed since 2000; however, it was performed for samples collected in March 2011 for informational purposes. The laboratory specific conductivity concentrations in groundwater samples collected in March 2011 were within the range of field-measured specific conductivity values from the last five years, except for well LB-20S. The laboratory-specific conductivity value for the sample collected from well LB-20S (544 microSiemens per centimeter [µS/cm]), as well as the field-measured value of 586 µS/cm, were slightly above the field-measured range of 246 to 504 µS/cm over the last 5 years. However, the March 2011 specific conductivity values are generally consistent with historical results collected during the last 10 years, and are likely reflective of naturally-occurring fluctuations.

The first quarter 2011 concentrations of inorganic parameters and dissolved metals did not exceed compliance levels specified in the 1996 Consent Decree for LBLF (provided in Table 3), except for the dissolved Fe concentrations in samples from wells LB-17I and LB-20S (8.95 and 0.368 milligrams per liter [mg/L], respectively) and dissolved Mn concentrations in wells LB-17I, LB-17D, LB-20S, and LB-27I (1.55, 3.38, 2.20, and 0.191 mg/L, respectively). The compliance levels for dissolved Fe and Mn are 0.3 and 0.05 mg/L, respectively. The March 2011 dissolved Fe and Mn concentrations for these select wells, however, are generally consistent with historical results from the last five years, and are likely attributed in part to natural groundwater conditions, as previously reported to Ecology. Historical data indicate that background levels for Fe and Mn exhibit natural variability and fluctuations above and below the compliance levels at several well locations, including upgradient well LB-4SR and crossgradient well LB-3S.

As previously mentioned, VOCs were analyzed using a low-level procedure for EPA Method 8260B so that the MRL could meet the compliance level of 0.1 µg/L specifically for VC and 1,1-DCE. The MRLs reported by TAL were 0.02 µg/L for VC and 0.1 µg/L for 1,1-DCE. VC and 1,1-DCE were not detected above their respective MRLs; however, low levels of some VOCs were detected that have not been previously detected for at least the last five years of monitoring (see Table 5) due solely to the lower reporting limits, as follows:

- 1,1,1-trichloroethane (1,1,1-TCA) was detected at a concentration of 0.28 µg/L in the sample from well LB-1D.

- 1,1-dichloroethane (1,1-DCA) was detected at a concentration of 0.18 µg/L in the sample from well LB-10DR.

- 1,4-dichlorobenzene (1,4-DCB) was detected at concentrations of 0.26 and 0.25 µg/L in the samples from wells LB-17I and LB-20S, respectively.

- Cis-1,2-dichloroethene (cis-1,2-DCE) was detected at a concentration of 0.27 µg/L in the sample from well LB-17I.

- Trichloroethene (TCE) was detected at concentrations of 0.15 µg/L in the duplicate sample only from well LB-10SR, and 0.81 µg/L in the sample from well LB-17I.

The concentrations of these VOCs in the groundwater samples are considered to be very low and are significantly below regulatory compliance and cleanup levels. Of the VOCs for which compliance levels have been established for LBLF (i.e., 1,4-DCB, 1,1-DCE, tetrachloroethene (PCE), TCE, and VC), only 1,4-DCB and TCE were detected at or above their MRLs; however the detected concentrations were significantly below their compliance levels of 1.8 and 5.0 µg/L, respectively. The concentrations of the other detected VOCs were also considerably below (by at least two orders of magnitude) regulatory guidance levels of 200 µg/L for 1,1,1-TCA (MTCA Method A cleanup level for groundwater), and 73,000 µg/L, 120 µg/L, and 730 µg/L for 1,1,1-TCA, 1,1-DCA, and cis-1,2-DCE, respectively (December 2010 regional screening levels for tap water ingestion, EPA Region 9).

The first quarter 2011 VOC analytical data demonstrate that the post-closure, remedial action measures implemented at LBLF (i.e., maintenance of the engineered landfill cap, operation of the GCCS, and surface water controls) continue to be effective at maintaining VOC concentrations substantially below compliance levels.

## First Quarter 2011 Stormwater Monitoring and Results

The first quarter 2011 stormwater monitoring event was performed on February 28, 2011. A first quarter 2011 discharge monitoring report (DMR) describing the stormwater analytical results was submitted to Ecology on May 12, 2011, consistent with requirements of LBLF's Industrial Stormwater General Permit issued in October 2009. Additionally, the 2010 Annual Report Form summarizing stormwater activities and analytical results from 2010 stormwater monitoring was also submitted to Ecology on May 12, 2011.

## Landfill Gas System Monitoring and Results

### Compliance LFG Migration Monitoring

The compliance LFG monitoring probes were monitored monthly on January 7, February 7, and March 1, 2011. The monitoring probe locations are shown in Figure 4. A summary of the first quarter 2011 compliance LFG monitoring probe data is provided in Attachment 3.

Methane concentrations were below the MFS compliance level of 5 percent methane by volume in all LFG probes on the days monitored, except for the methane concentrations measured in probe GP-08 on January 7 and March 1, 2011 (12.4 and 13.1 percent methane, respectively). Probe GP-08 is not located along the LBLF's point of compliance (i.e., the property boundary); rather, it is located in the northwest closure area (Module 1) near or within the waste limits. Methane concentrations in this probe have historically been periodically above the compliance level due to its proximity to the waste limits. Adjustments made to the GCCS during the first quarter 2011, including balancing of the LFG extraction wells in the vicinity of this probe, were successful at reducing the elevated methane concentrations in GP-08 to below the compliance level by the end of the month.

As reported in the 2010 annual report for LBLF[5] and observed by SCS in 2011, positive static pressures were not measured at probe GP-8 or in nearby LFG extraction wells during instances when the methane concentrations exceeded 5 percent by volume. The lack of positive static gas pressures when higher methane concentrations are observed in GP-08 is indicative of a very low rate of biological decomposition near this probe location, which is consistent with other municipal solid waste landfills of similar age as LBLF. This lack of positive pressure, combined with the apparent efficiency of the GCCS at capturing and collecting LFG, indicates the subsurface methane plume is likely not migrating laterally over any sizable distance from the edge of the waste limits.

[5] Shaw. 2011. 2010 Fourth Quarter and Annual Report, Groundwater, Stormwater, and Landfill Gas Monitoring, Closed Leichner Brothers Landfill, Vancouver, Washington. March 7.

## LFG Extraction System

The LFG extraction wells (north and south LFG extraction wells; shown on Figure 4) were monitored semi-monthly (twice a month) during the first quarter 2011 on the following days:

- January 4, 5, 6, and 26, 2011.
- February 10 and 18, 2011.
- March 9 and 30, 2011.

There were no problems noted during monitoring of the LFG extraction system in the first quarter 2011.

## Greenhouse Gas Monitoring

Weekly greenhouse gas (GHG) monitoring was performed in accordance with the EPA Mandatory GHG Reporting Rule.

SCS is currently conducting a GHG applicability evaluation to determine if LBLF is subject to the EPA Mandatory GHG Rule. The purpose of the evaluation is to determine if the emissions generated by LBLF trigger the Mandatory Reporting rule by generating 25,000 metric tons of carbon dioxide equivalent (MTCO2e) per year, or more, and if required, provide a written procedure for any new monitoring requirements for LBLF. If LBLF is subject to the EPA Mandatory GHG rule, weekly greenhouse gas data will be submitted to the EPA in accordance with its required schedule through the electronic GHG reporting tool (e-GGRT). A report presenting the results and conclusions of the applicability evaluation is planned to be submitted to the County and LLOC in the second quarter 2011 period.

## GCCS Operations and Maintenance

Routine operations, maintenance, and repair of the GCCS performed during the first quarter 2011 generally included the following:

- Maintenance and repair (as needed) of the LFG extraction wells and piping.
- Maintenance and repair (as needed) of the flare system, condensate collection system, including the condensate sumps, airlines, discharge lines, and compressors.
- Repair (as needed) of minor leaks in the GCCS conveyance lines due to loosely attached flex hoses or fittings.

Other non-routine maintenance and repair activities performed during the first quarter 2011 are described below.

*January 2011*

- Checked condensate levels in Tanks 1 and 2, transferred condensate liquids from Tank 1 to Tank 2 as needed, and contracted Emerald Services, Inc. (Emerald) for pumping and offsite disposal of the liquids from the tanks on January 19.

- Repaired hoses at NW-11, NW-30, NW-28, NW-35, NW-36, and NW-37.

- Made programming adjustments to Yokogawa flare monitoring system.

- Confirmed sumps N7 and N8 are functional as they may impact perimeter LFG monitoring probe GP-08.

- Performed evaluation of operational status of condensate sumps, drained and assessed sump pumping system controllers, and conducted communications with Shaw to determine status of controller repairs.

- Performed troubleshooting of the burner control, and identified that a new fuse was needed or the programmable logic control unit needs to be reconfigured.

*February 2011*

- Checked operation status of air compressor and topped off oil level when necessary.

- Performed troubleshooting of flare startup and performance.

- Repaired condensate sump C2-N2.

- Placed "NO SMOKING" placards inside of air compression shed and labeled blowers.

- Identified GCCS components that needed minor repairs (i.e., SE-23 valve, N-1 and S-7 condensate trap tees, SE-22 expansion hose, SE-5 header) and performed the repairs.

*March 2011*

- Replaced the compact flash card in the Yokogawa.

- Replaced the controller in sump CS-S1.

- Installed differential pressure ports on the flare arrestor and knock out pot.

- Met with pump vendors who visited the site for repair or replacement of the North Detention Pond pumps and controller systems (detailed information provided in the following section).

- Met with EC Electric to troubleshoot problems with Blower No. 2 that was inoperable. Repairs were made to fix the Blower No. 2, and the belt was switched from Blower No. 1 to Blower No. 2. A new belt was installed in Blower No. 1 in April 2011. Both blowers

are currently operating. Also checked fluid in the drain ports on each blower (no fluid present).

- Checked UV sensor (no blockage).

- Performed troubleshooting of flare startup and performance.

During routine monitoring of the LFG flare system, SCS identified several problems or deficiencies that appear to be affecting the overall efficiency and running time of the GCCS. The issues primarily relate to how the thermocouples, Yokogawa flare monitoring system, and programmable logic control (PLC) system are integrated. SCS performed additional field monitoring activities in an attempt to better understanding and address these issues. SCS conducted discussions with LGF Specialties (the flare manufacturer) to (1) assess the nature and likely cause(s) of the problem, (2) coordinate having LFG Specialties visit the site to reprogram the controller, and (3) provide estimated costs for performing the work. This work is anticipated to be completed during the second quarter 2011 period.

## REPLACEMENT/RENOVATION ACTIVITIES

The following replacement and renovation activities were performed during the first quarter 2011:

- In February 2011, Shaw completed replacement of the two condensate storage tanks with a single, larger capacity (2,500 gallon), double-wall tank. The new storage tank is now being used for temporary condensate storage. The condensate is periodically disposed offsite by a subcontractor (i.e., Emerald).

- During routine monitoring of the storm water system, SCS identified some problems that appeared to be affecting the overall efficiency and performance of the storm water pumping systems. Most notably were the inoperable condition of two of the three pumps (Pumps 1 and 2) in the North Detention Pond, and the generally poor condition of the electrical control panels for both the North and West Pond pumping systems. In March 2011, Grundfos CBS, Inc. in Tualatin, Oregon, repaired and reinstalled Pumps 1 and 2, and installed new pump controllers and starters (for all three pumps in the North Detention Pond).

- SCS is obtaining bids for repair or replacement, as needed, for the South Pond electrical control panel. This work is anticipated to be performed during the second quarter 2011 operational period.

## MODIFICATIONS TO ENVIRONMENTAL MONITORING PROGRAM

The following modifications to the environmental (compliance) monitoring program will be implemented, as approved by Ecology in its April 27, 2011, letter to the County.[3]

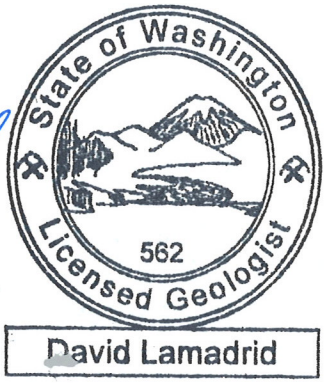
- The schedule for performing LFG compliance monitoring of the perimeter LFG probes will be changed from monthly to quarterly beginning in the third quarter 2011 period.

- Field-measurement of specific conductivity in groundwater samples collected from the site monitoring wells will be performed during all future monitoring events.

- Consistent with VOC analytical method used for the first quarter 2011 groundwater monitoring event, VC and 1,1-DCE will be tested using the low-level Method 8260B in order to meet the compliance level (i.e., 0.1 µg/L) for these two VOCs established in the 1996 Consent Decree/CAP. If after two years of testing (i.e., three additional monitoring events), the results show that VC and 1,1-DCE are not detected above a MRL of 0.1 µg/L, then the testing for these two VOCs will be discontinued.

If you have any questions or comments regarding this report, please contact Mr. Louis Caruso at (503) 639-9208 or by email at lcaruso@scsengineers.com.

Sincerely,




David Lamadrid, LG
Project Geologist
**SCS ENGINEERS**

Louis Caruso, LG, LHG
Project Manager
**SCS ENGINEERS**

Attachments: Table 1 – Summary of Field Water Quality Parameter Measurements (March 2011)
Table 2 – Groundwater Elevations on March 21, 2011
Table 3 – Summary of Inorganic Parameter Concentrations (March 2011)
Table 4 – Summary of Volatile Organic Compounds Results (March 2011)
Figure 1 – Groundwater Monitoring Locations
Figure 2 – Groundwater Potentiometric Surface Contours, Alluvial Water Bearing Zone (March 21, 2011)
Figure 3 – Groundwater Potentiometric Surface Contours, Troutdale Formation Aquifer (March 21, 2011)
Figure 4 – Landfill Gas Probe and Extraction Well Locations
Attachment 1 – First Quarter 2011 Laboratory Analytical Reports
Attachment 2 – Results of Laboratory QA/QC Review
Attachment 3 – First Quarter 2011 Compliance Landfill Gas Monitoring Probe Data

cc: Mike Davis; Clark County Environmental Services
Gary Bickett and Melissa Sutton; Clark County Public Health
Brian Carlson; City of Vancouver
Steve Horenstein; Miller Nash
Craig Leichner; LBLRC
SCS Leichner Project File

# Table 1
# Summary of Field Water Quality Parameter Measurements
# March 2011 Groundwater Monitoring Event
# Leichner Brothers Landfill

| Monitoring Well | Sample Date | Depth to Groundwter[a] (feet, BTOC) | Casing Volumes Removed | Volume Purged (gallons) | pH (S.U.) | Specific Conductance (µS/cm) | Temperature ( °C ) |
|---|---|---|---|---|---|---|---|
| **Regulatory Limit or Compliance Level** | | | | | **6.5 - 8.5 [b]** | **700 [c]** | **NA** |
| LB-1S | 3/24/2011 | 30.68 | 3 | 7.60 | 6.75 | 271 | 12.29 |
| LB-1D | 3/28/2011 | 33.31 | 3 | 51.00 | 7.45 | 355 | 11.92 |
| LB-3S | 3/28/2011 | 35.91 | 3 | 9.00 | 7.29 | 352 | 11.56 |
| LB-3D | 3/28/2011 | 36.95 | 3 | 39.30 | 7.37 | 336 | 11.76 |
| LB-4S(R) | 3/22/2011 | 20.31 | 3 | 9.65 | 6.82 | 220 | 12.09 |
| LB-4D | 3/22/2011 | 52.15 | 3 | 40.80 | 8.46 | 173 | 11.19 |
| LB-5S | 3/23/2011 | 14.41 | 3 | 8.20 | 6.89 | 228 | 11.77 |
| LB-5D | 3/23/2011 | 34.78 | 3 | 43.60 | 7.69 | 338 | 12.75 |
| LB-6S [d] | 3/22/2011 | 24.65 | 3 | 7.50 | 7.58 | 241 | 12.19 |
| LB-10SR [d] | 3/29/2011 | 27.63 | 3 | 7.50 | 6.01 | 360 | 12.48 |
| LB-10DR | 3/29/2011 | 40.22 | 3 | 40.00 | 6.33 | 491 | 11.77 |
| LB-13I | 3/23/2011 | 25.12 | 3 | 15.45 | 7.91 | 276 | 12.08 |
| LB-13D | 3/25/2011 | 25.72 | 3 | 31.50 | 6.99 | 216 | 11.62 |
| LB-17I | 3/22/2011 | 33.80 | 3 | 9.25 | 7.74 | 528 | 14.00 |
| LB-17D | 3/22/2011 | 34.54 | 3 | 33.00 | 7.45 | 278 | 13.76 |
| LB-20S | 3/24/2011 | 37.68 | 3 | 12.55 | 6.81 | 586 | 12.08 |
| LB-26I | 3/23/2011 | 22.47 | 3 | 18.15 | 7.75 | 300 | 12.09 |
| LB-26D | 3/23/2011 | 22.21 | 3 | 39.60 | 7.60 | 230 | 12.27 |
| LB-27I | 3/25/2011 | 28.28 | 3 | 15.00 | 7.39 | 523 | 11.56 |
| LB-27D | 3/25/2011 | 35.77 | 3 | 40.00 | 7.43 | 317 | 11.29 |

Notes:

°C = degrees celsius

µS = microSiemens per centimeter (equivalent to micro mho per centimeter [µmho/cm])

BTOC = below top of casing

NA = regulatory limit or compliance level for temperature is not available

S.U. = standard units

[a] Depth to groundwater (in feet below top of casing) recorded at time of sampling. Depths to water may vary from the water levels measured for the groundwater elevation survey conducted on March 21, 2011 (see Table 1).

[b] Regulatory limit specified inWashington Administrative Code, secondary maximum contaminant level (SMCL).

[c] Compliance level specified in the 1996 Consent Decree and accompanying Cleanup Action Plan.

[d] Duplicate groundwater sample also collected at well indicated.

# Table 2
# Groundwater Elevation Data
# March 2011 Groundwater Monitoring Event
# Leichner Brothers Landfill

| Monitoring Well | Reference Elevation (feet, AMSL) | Depth to Groundwater (feet, BTOC) | Groundwater Elevation (feet, AMSL) |
|---|---|---|---|
| LB-R2 | 219.09 | 42.78 | 176.31 |
| LB-1S | 210.11 | 30.84 | 179.27 |
| LB-1D | 209.71 | 32.45 | 177.26 |
| LB-3S | 219.19 | 36.22 | 182.97 |
| LB-3D | 219.27 | 37.25 | 182.02 |
| LB-4S(R) | 226.47 | 20.61 | 205.86 |
| LB-4C | 227.58 | 44.07 | 183.51 |
| LB-4D | 227.27 | 52.15 | 175.12 |
| LB-5S | 206.85 | 14.42 | 192.43 |
| LB-5C | 206.64 | 29.95 | 176.69 |
| LB-5D | 207.60 | 34.86 | 172.74 |
| LB-6S | 202.86 | 24.65 | 178.21 |
| LB-9S(R) | 218.44 | 32.67 | 185.77 |
| LB-10SR | 202.96 | 27.95 | 175.01 |
| LB-10CR | 202.97 | 26.89 | 176.08 |
| LB-10DR | 203.24 | 40.32 | 162.92 |
| LB-13I | 202.30 | 25.21 | 177.09 |
| LB-13C | 202.63 | 25.63 | 177.00 |
| LB-13D | 202.90 | 25.91 | 176.99 |
| LB-17S | 207.92 | 28.53 | 179.39 |
| LB-17I | 213.20 | 33.80 | 179.40 |
| LB-17C | 214.10 | 27.34 | 186.76 |
| LB-17D | 213.11 | 34.54 | 178.57 |
| LB-20S | 221.22 | 37.88 | 183.34 |
| LB-21S | 223.43 | 35.00 | 188.43 |
| LB-21C | 223.38 | 35.47 | 187.91 |
| LB-21D | 223.69 | 38.21 | 185.48 |
| LB-22S | 208.46 | 4.09 | 204.37 |
| LB-23S | 229.27 | 29.08 | 200.19 |
| LB-24S | 235.21 | 37.00 | 198.21 |
| LB-26I | 200.17 | 22.58 | 177.59 |
| LB-26D | 200.70 | 22.33 | 178.37 |
| LB-27I | 205.28 | 28.48 | 176.80 |
| LB-27D | 204.61 | 35.00 | 169.61 |
| MW-1 N | 216.52 | Dry | NA |
| MW-1 S | 216.07 | 35.24 | 180.83 |
| MW-1 E | 216.38 | Dry | NA |
| MW-NE | 219.80 | 11.36 | 208.44 |

Notes:
AMSL = above mean sea level; BTOC = below top of casing; NA = not applicable; NM = not measured

# Table 3
## Summary of Inorganic Parameters and Dissolved Metals Concentrations
## March 2011 Groundwater Monitoring Event
## Leichner Brothers Landfill

| Location Identification | Unit Screened | Sample Date | Chloride (mg/L) | Nitrate as Nitrogen (mg/L) | Total Dissolved Solids (mg/L) | Specific Conductivity (µS/cm) | Iron (mg/L) | Manganese (mg/L) |
|---|---|---|---|---|---|---|---|---|
| **Compliance Level (mg/L) [a]** | | | **250** | **10** | **500** | **700** | **0.3** | **0.05** |
| LB-1S | Alluvium | 03/24/11 | 5.92 | 5.70 | 220 | 248 | 0.025 U | 0.00200 U |
| LB-1D | Troutdale | 03/28/11 | 7.49 | 5.87 | 195 | 220 | 0.025 U | 0.00200 U |
| LB-3S | Troutdale | 03/28/11 | 3.40 | 3.63 | 188 | 214 | 0.025 U | 0.00200 U |
| LB-3D | Troudale | 03/28/11 | 4.23 | 5.05 | 201 | 210 | 0.025 U | 0.00200 U |
| LB-4S(R) | Alluvium | 03/22/11 | 5.36 | 4.89 | 191 H | 224 | 0.025 U | 0.00200 U |
| LB-4D | Troutdale | 03/22/11 | 3.23 | 6.20 | 169 H | 180 | 0.025 U | 0.00200 U |
| LB-5S | Alluvium | 03/23/11 | 5.07 | 5.15 | 184 | 222 | 0.025 U | 0.00200 U |
| LB-5D | Troutdale | 03/23/11 | 10.8 | 0.78 | 238 | 328 | 0.025 U | 0.00200 U |
| LB-6S | Alluvium | 03/22/11 | 6.29 | 2.79 | 218 H | 248 | 0.025 U | 0.00218 |
| LB-6S (Dup.) | Alluvium | 03/22/11 | 7.05 | 2.90 | 229 H | 266 | 0.025 U | 0.00200 U |
| LB-10SR | Alluvium | 03/29/11 | 15.3 | 1.53 | 270 | 341 | 0.025 U | 0.00200 U |
| LB-10SR (Dup.) | Troutdale | 03/29/11 | 15.3 | 1.57 | 270 | 341 | 0.025 U | 0.00200 U |
| LB-10DR | Troutdale | 03/29/11 | 26.0 | 1.27 | 329 | 479 | 0.025 U | 0.00696 |
| LB-13I | Alluvium | 03/23/11 | 5.56 | 4.58 | 202 | 270 | 0.025 U | 0.00296 |
| LB-13D | Troutdale | 03/25/11 | 4.36 | 5.30 | 193 | 214 | 0.025 U | 0.00200 U |
| LB-17I | Alluvium | 03/22/11 | 27.4 | 0.10 U | 306 H | 498 | **8.95** | **1.55** |
| LB-17D | Troutdale | 03/22/11 | 7.97 | 0.10 U | 209 H | 277 | 0.0623 | **3.38** |
| LB-20S | Alluvium | 03/24/11 | 22.1 | 0.10 U | 361 | 544 | **0.368** | **2.20** |
| LB-26I | Alluvium | 03/23/11 | 7.97 | 3.71 | 207 | 226 | 0.025 U | 0.00743 |
| LB-26D | Troutdale | 03/23/11 | 4.97 | 6.30 | 196 | 224 | 0.025 U | 0.00200 U |
| LB-27I | Alluvium | 03/25/11 | 20.1 | 0.14 | 335 | 512 | 0.025 U | **0.191** |
| LB-27D | Troutdale | 03/25/11 | 10.4 | 3.77 | 245 | 307 | 0.025 U | 0.00200 U |
| Field Blank | NA | 03/23/11 | 0.50 U | 0.10 U | 10 U | 10 U | 0.025 U | 0.00200 U |

Notes:
µS = microSiemens per centimeter (equivalent to micro mho per centimeter [µmho/cm])
mg/L = milligrams per liter
Dup. = duplicate sample
H = due to laboratory error, sample was extracted and analyzed past the recommended 7-day hold time
U = not detected at or above the laboratory method reporting limit indicated
**Bold** = concentration exceeds the compliance level

[a] Compliance level specified in the 1996 Consent Decree and accompanying Cleanup Action Plan.

**Table 4**
**Summary of Volatile Organic Compunds**
**March 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**

| Location Identification | Unit Screened | Sample Date | 1,1,1,2-Tetrachloroethane | 1,1,1-Trichloroethane | 1,1,2,2-Tetrachloroethane | 1,1,2-Trichloroethane | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,1-Dichloropropene | 1,2,3-Trichlorobenzene | 1,2,3-Trichloropropane | 1,2,4-Trichlorobenzene | 1,2,4-Trimethylbenzene | 1,2-Dibromo-3-chloropropane | 1,2-Dibromoethane | 1,2-Dichlorobenzene | 1,2-Dichloroethane | 1,2-Dichloropropane | 1,3,5-Trichlorobenzene | 1,3,5-Trimethylbenzene | 1,3-Dichlorobenzene | 1,3-Dichloropropane | 1,4-Dichlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| **Compliance Level** [a] | | | NA | NA | NA | NA | NA | **0.1** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **1.8** |
| LB-1S | Alluvium | 03/24/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-1D | Troutdale | 03/28/11 | 0.1 U | **0.28** | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-3S | Troutdale | 03/28/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-3D | Troudale | 03/28/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-4S(R) | Alluvium | 03/22/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-4D | Troutdale | 03/22/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-5S | Alluvium | 03/23/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-5D | Troutdale | 03/23/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-6S | Alluvium | 03/22/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-6S (Dup.) | Alluvium | 03/22/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-10SR | Alluvium | 03/29/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-10SR (Dup.) | Troutdale | 03/29/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-10DR | Troutdale | 03/29/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | **0.18** | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-13I | Alluvium | 03/23/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-13D | Troutdale | 03/25/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-17I | Alluvium | 03/22/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | **0.26** |
| LB-17D | Troutdale | 03/22/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-20S | Alluvium | 03/24/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | **0.25** |
| LB-26I | Alluvium | 03/23/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-26D | Troutdale | 03/23/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-27I | Alluvium | 03/25/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| LB-27D | Troutdale | 03/25/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| Trip Blank | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |
| Field Blank | NA | 03/23/11 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.4 U | 0.2 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U | 0.1 U | 0.2 U |

Notes:
ug/L = micrograms per liter
Dup. = duplicate sample
B = compound was detected in the associated laboratory QC blank sample
J = Estimated concentration detected above the below the method reporting limit but above the method detection limit
NA = not applicable or compliance level is not available
U = not detected at or above the method reporting limit indicated
**Bold** = detected concentration

[a] Compliance level specified in the 1996 Consent Decree and accompanying Cleanup Action Plan.

**Table 4**
**Summary of Volatile Organic Compunds**
**March 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**

| Location Identification | Unit Screened | Sample Date | 2,2-Dichloropropane | 2-Butanone (MEK) | 2-Chlorotoluene | 2-Hexanone | 4-Chlorotoluene | 4-Isopropyltoluene | 4-Methyl-2-pentanone (MIBK) | Acetone | Benzene | Bromobenzene | Bromoform | Bromomethane | Carton disulfide | Carbon tetrachloride | Chlorobenzene | Chlorobromomethane | Chlorodibromomethane | Chloroethane | Chloroform | Chloromethane | cis-1,2-Dichloroethene | cis-1,3-Dichloropropene | Dibromomethane | Dichlorobromomethane |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| | | **Compliance Level** [a] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| LB-1S | Alluvium | 03/24/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-1D | Troutdale | 03/28/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-3S | Troutdale | 03/28/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-3D | Troudale | 03/28/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-4S(R) | Alluvium | 03/22/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-4D | Troutdale | 03/22/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-5S | Alluvium | 03/23/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-5D | Troutdale | 03/23/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-6S | Alluvium | 03/22/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-6S (Dup.) | Alluvium | 03/22/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-10SR | Alluvium | 03/29/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-10SR (Dup.) | Troutdale | 03/29/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-10DR | Troutdale | 03/29/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-13I | Alluvium | 03/23/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-13D | Troutdale | 03/25/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-17I | Alluvium | 03/22/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | **0.27** | 0.1 U | 0.1 U | 0.1 U |
| LB-17D | Troutdale | 03/22/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-20S | Alluvium | 03/24/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-26I | Alluvium | 03/23/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-26D | Troutdale | 03/23/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-27I | Alluvium | 03/25/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| LB-27D | Troutdale | 03/25/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Trip Blank | NA | NA | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | 2.0 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Field Blank | NA | 03/23/11 | 0.1 U | 2.0 U | 0.1 U | 1.0 U | 0.2 U | 0.2 U | 0.5 U | **11 B** | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.25 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |

Notes:
ug/L = micrograms per liter.
Dup. = duplicate sample
B = compound was detected in the associated laboratory QC blank sample
J = Estimated concentration detected above the below the method reporting limit but above the method detection limit
NA = not applicable or compliance level is not available
U = not detected at or above the method reporting limit indicated
**Bold** = detected concentration

[a] Compliance level specified in the 1996 Consent Decree and accompanying Cleanup Action Plan.

**Table 4**
**Summary of Volatile Organic Compunds**
**March 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**

| Location Identification | Unit Screened | Sample Date | Dichlorodifluoromethane | Ethylbenzene | Hexachlorobutadiene | Isopropylbenzene | Methyl tert-butyl ether | Methylene chloride | m,p-Xylene (Sum of Isomers) | Naphthalene | n-Butylbenzene | n-Propylbenzene | o-Xylene | sec-Butylbenzene | Styrene | tert-Butylbenzene | Tetrachloroethene | Toluene | trans-1,2-Dichloroethene | trans-1,3-Dichloropropene | Trichloroethene | Trichlorofluoromethane | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| **Compliance Level** [a] | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **5.0** | NA | NA | NA | **5.0** | NA | **0.1** |
| LB-1S | Alluvium | 03/24/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-1D | Troutdale | 03/28/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-3S | Troutdale | 03/28/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-3D | Troudale | 03/28/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-4S(R) | Alluvium | 03/22/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-4D | Troutdale | 03/22/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-5S | Alluvium | 03/23/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-5D | Troutdale | 03/23/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-6S | Alluvium | 03/22/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-6S (Dup.) | Alluvium | 03/22/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-10SR | Alluvium | 03/29/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-10SR (Dup.) | Troutdale | 03/29/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | **0.15** | 0.1 U | 0.02 U |
| LB-10DR | Troutdale | 03/29/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-13I | Alluvium | 03/23/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-13D | Troutdale | 03/25/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-17I | Alluvium | 03/22/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | **0.81** | 0.1 U | 0.02 U |
| LB-17D | Troutdale | 03/22/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-20S | Alluvium | 03/24/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-26I | Alluvium | 03/23/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-26D | Troutdale | 03/23/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-27I | Alluvium | 03/25/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| LB-27D | Troutdale | 03/25/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| Trip Blank | NA | NA | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | 0.1 U | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |
| Field Blank | NA | 03/23/11 | 0.4 U | 0.1 U | 0.2 U | 0.1 U | 0.1 U | **0.25 B** | 0.2 U | 0.4 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.02 U |

Notes:
ug/L = micrograms per liter.
Dup. = duplicate sample
B = compound was detected in the associated laboratory QC blank sample
J = Estimated concentration detected above the below the method reporting limit but above the method detection limit
NA = not applicable or compliance level is not available
U = not detected at or above the method reporting limit indicated
**Bold** = detected concentration

[a] Compliance level specified in the 1996 Consent Decree and accompanying Cleanup Action Plan.


**LEGEND:**

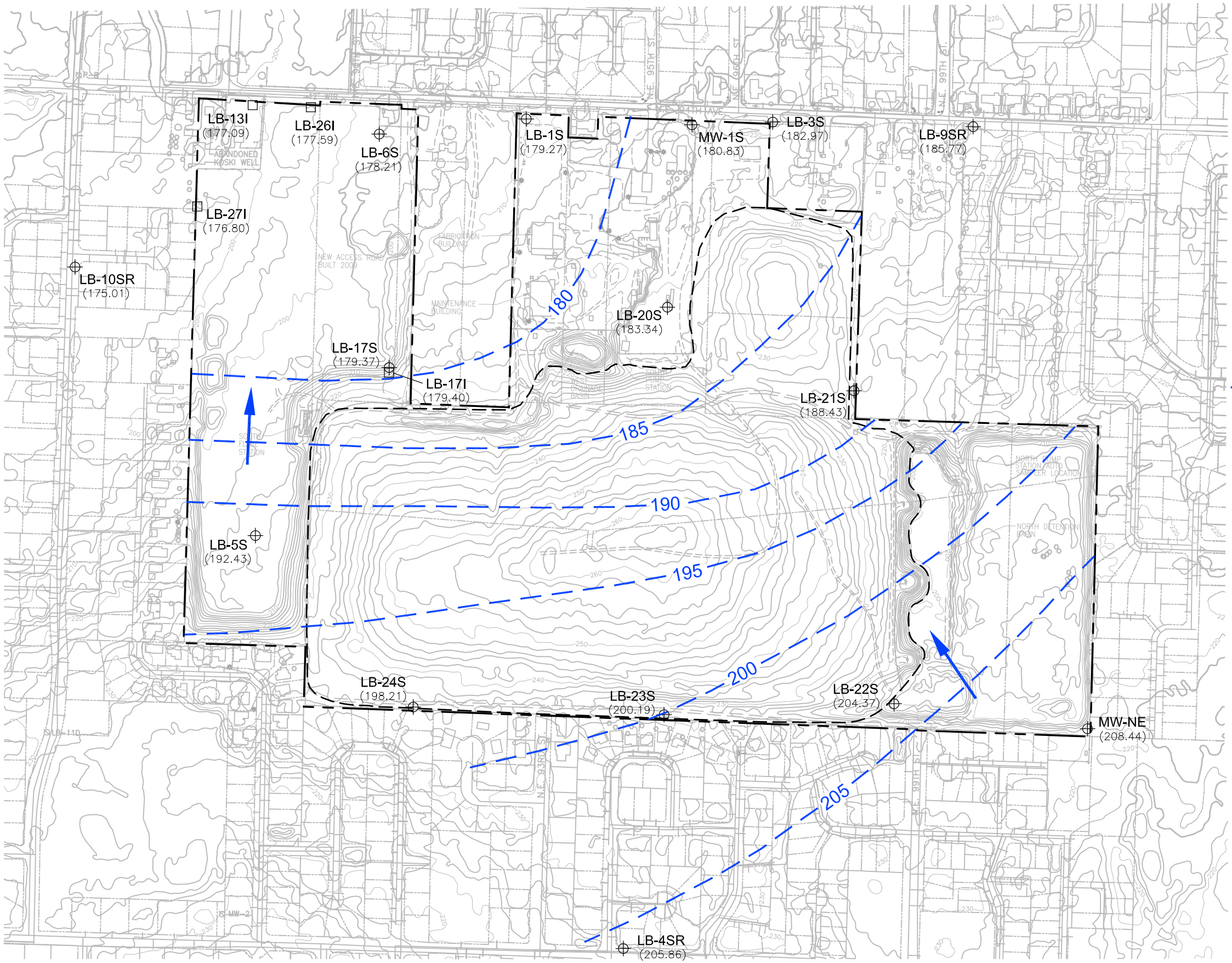
| | |
|---|---|
| LB-4SR ⊕ | Well Location, Alluvial Water–bearing Zone |
| LB-4D ⊗ | Well Location, Troutdale Aquifer |
| LB-17I □ | Well at Base of Alluvium/Top of Troutdale Formation |
| ——— | Property Boundary |
| – – – – – | Limit of Landfill Cover and Approximate Edge of Waste |

NOTE:
Topography Taken From Clark County GIS, December 2008

SCALE
0 400 800 FEET


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


| | | | |
|---|---|---|---|
| PROJECT NO. 04211030.06/.18 | DES BY D.L. | GROUNDWATER MONITORING LOCATIONS | DATE JUNE 2011 |
| SCALE AS SHOWN | CHK BY D.L. | LEICHNER BROTHERS LANDFILL CLARK COUNTY, WASHINGTON | FIGURE 1 |
| CAD FILE FIGURE 1 | APP BY L.C. | | |

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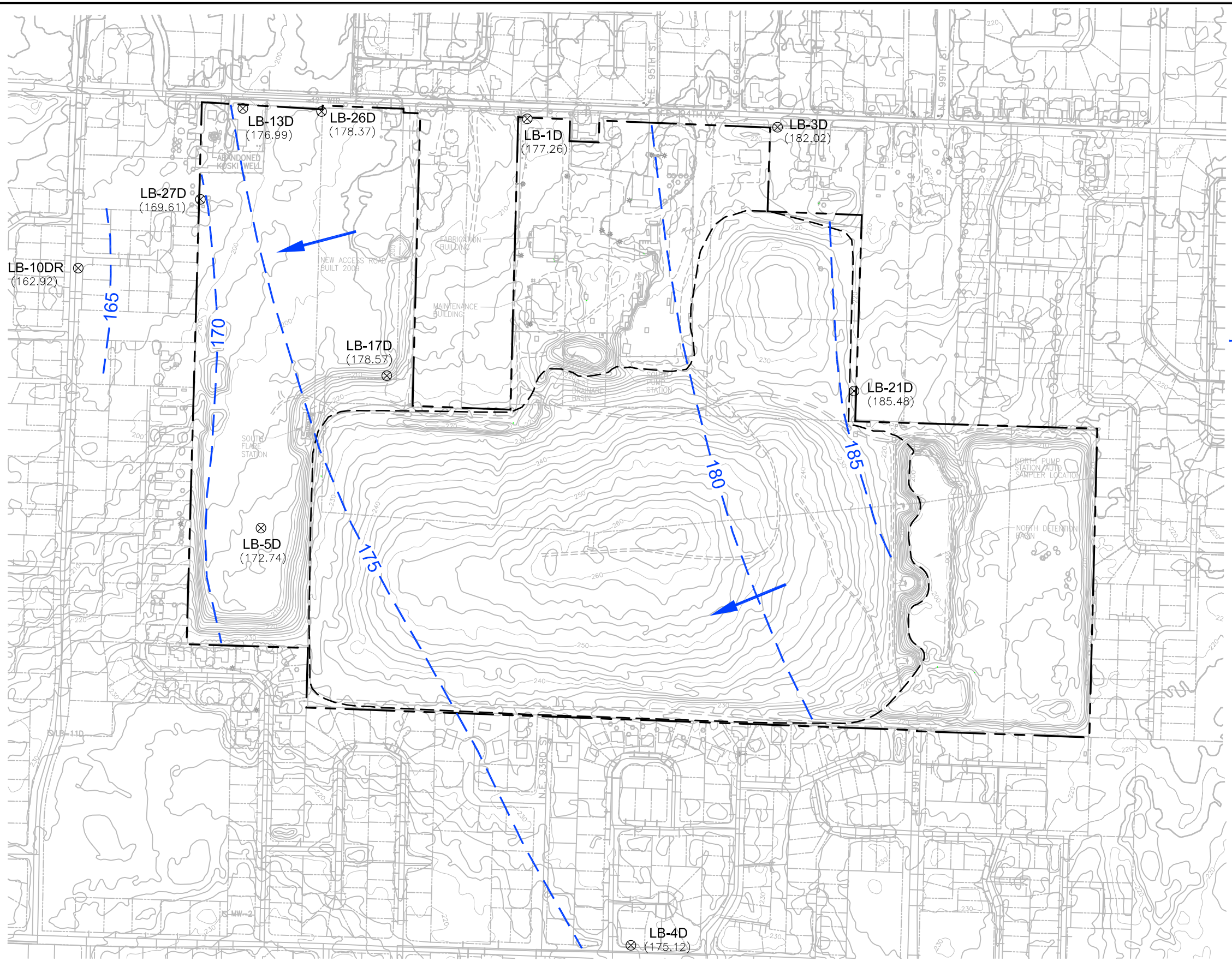
| | | | |
|---|---|---|---|
| PROJECT NO. 04211030.06/.18 | DES BY D.L. | GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS<br>ALLUVIAL WATER BEARING ZONE<br>MARCH 21, 2011<br>LEICHNER BROTHERS LANDFILL<br>CLARK COUNTY, WASHINGTON | DATE JUNE 2011 |
| SCALE AS SHOWN | CHK BY D.L. | | FIGURE 2 |
| CAD FILE FIGURE 2 | APP BY L.C. | | |




**LEGEND:**

| | |
|---|---|
| LB-4D | Well Location, Troutdale Aquifer |
| — — — — | Property Boundary |
| – – – – – | Limit of Landfill Cover and Approximate Edge of Waste |
| – –185– – | Groundwater Potentiometric Surface Contour |
| (185.48) | Groundwater Elevation Measured on March 21, 2011 |
| → | Inferred Groundwater Flow Direction |

NOTE:
Topography Taken From Clark County GIS, December 2008

SCALE
0 400 800 FEET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Portland, Oregon 97224
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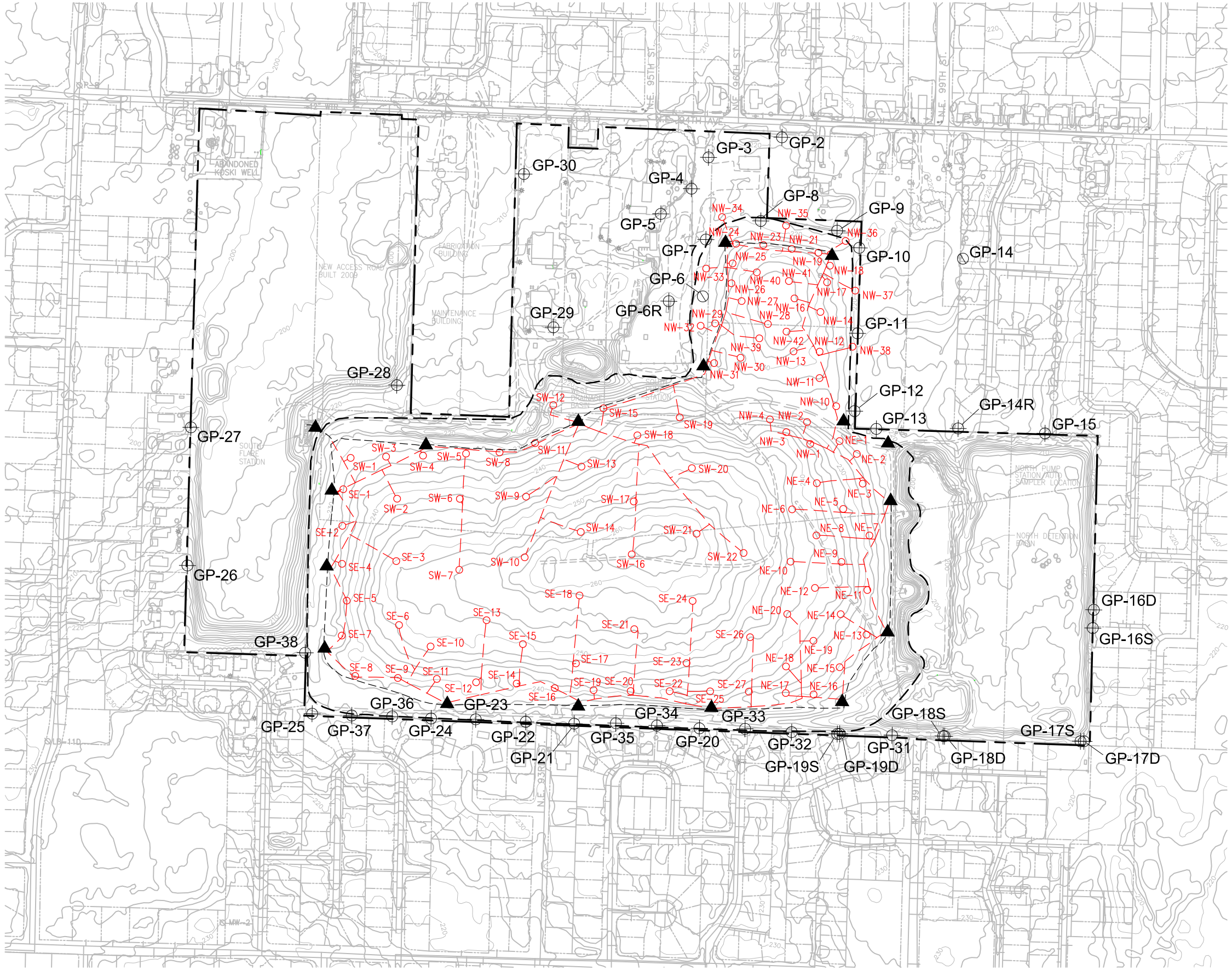
| | | | |
|---|---|---|---|
| PROJECT NO. 04211030.06/.18 | DES BY D.L. | GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS TROUTDALE FORMATION AQUIFER MARCH 21, 2011 LEICHNER BROTHERS LANDFILL CLARK COUNTY, WASHINGTON | DATE JUNE 2011 |
| SCALE AS SHOWN | CHK BY D.L. | | FIGURE 3 |
| CAD FILE FIGURE 3 | APP BY L.C. | | |




**LEGEND:**

- GP-30 — Compliance Landfill Gas Monitoring Probe Location
- GP-6 — Decommissioned Gas Probe Location
- SW-2 — Vertical Landfill Gas Extraction Well
- 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

SCALE
0 400 800 FEET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| | | | |
|---|---|---|---|
| PROJECT NO. 04211030.06/.18 | DES BY D.L. | LANDFILL GAS PROBE AND EXTRACTION WELL LOCATIONS | DATE JUNE 2011 |
| SCALE AS SHOWN | CHK BY D.L. | LEICHNER BROTHERS LANDFILL CLARK COUNTY, WASHINGTON | FIGURE 4 |
| CAD FILE FIGURE 4 | APP BY L.C. | | |

# ATTACHMENT 1

## First Quarter 2011
## Laboratory Analytical 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: PUC0755
Client Project/Site: 04211030.011.17
Client Project Description: Leichner Landfill 2011
Revision: 1

For:
SCS Engineers - Portland
14945 SW Sequoia Pkwy  Suite 180
Portland, OR 97224

Attn: David LaMadrid

*Authorized for release by:*
*05/27/2011 09:48:48 AM*

Darrell Auvil
Project Manager
darrell.auvil@testamericainc.com

# Table of Contents

# Sample Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| PUC0755-01 | LB-4SR | Water | 03/22/11 13:55 | 03/23/11 11:37 |
| PUC0755-02 | LB-4D | Water | 03/22/11 12:55 | 03/23/11 11:37 |
| PUC0755-03 | LB-6S | Water | 03/22/11 15:55 | 03/23/11 11:37 |
| PUC0755-04 | DUP1 | Water | 03/22/11 16:00 | 03/23/11 11:37 |
| PUC0755-05 | LB-17I | Water | 03/22/11 09:25 | 03/23/11 11:37 |
| PUC0755-06 | LB-17D | Water | 03/22/11 11:00 | 03/23/11 11:37 |
| PUC0755-07 | Trip Blank | Water | 03/22/11 00:00 | 03/23/11 11:37 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

## Job ID: PUC0755

### Laboratory: TestAmerica Portland

**Narrative**

Six water samples were submitted for total dissolved solids, (TDS) by EPA method 160.1. The seven day hold time was missed due to laboratory error. Samples were extracted and analyzed past the recommended hold time.

Amended report issued on May 27, 2011 to reflect addtional VOC compounds reported.

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

## Qualifiers

### Wet Chem

| Qualifier | Qualifier Description |
|---|---|
| H | Sample analysis performed past method-specified holding time. |
| M8 | The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS). |
| N1 | See case narrative. |

## 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. |
| EPA | United States Environmental Protection Agency |
| ND | Not Detected above the reporting level. |
| MDL | Method Detection Limit |
| RL | Reporting Limit |
| RE, RE1 (etc.) | Indicates a Re-extraction or Reanalysis of the sample. |
| %R | Percent Recovery |
| RPD | Relative Percent Difference, a measure of the relative difference between two points. |

**Client Sample ID: LB-4SR**
**Date Collected: 03/22/11 13:55**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-01**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 18:01 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 19:52 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 224 | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 191 | H N1 | 10.0 | | mg/l | | 04/07/11 12:15 | 04/07/11 18:53 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5.36 | | 0.500 | | mg/l | | 03/23/11 13:29 | 03/23/11 17:24 | 1.00 |
| Nitrate-Nitrogen | 4.89 | | 0.100 | | mg/l | | 03/23/11 13:29 | 03/23/11 17:24 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: LB-4SR**
**Date Collected: 03/22/11 13:55**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-01**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 13:37 | 04/04/11 13:37 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *95* | | *75 - 120* | *04/04/11 13:37* | *04/04/11 13:37* | *1* |
| *Ethylbenzene-d10* | *100* | | *75 - 125* | *04/04/11 13:37* | *04/04/11 13:37* | *1* |
| *Fluorobenzene (Surr)* | *96* | | *70 - 130* | *04/04/11 13:37* | *04/04/11 13:37* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 125* | *04/04/11 13:37* | *04/04/11 13:37* | *1* |
| *Trifluorotoluene (Surr)* | *98* | | *80 - 125* | *04/04/11 13:37* | *04/04/11 13:37* | *1* |

**Client Sample ID: LB-4D**
**Date Collected: 03/22/11 12:55**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-02**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:12 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:12 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 180 | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 169 | H N1 | 10.0 | | mg/l | | 04/07/11 12:15 | 04/07/11 18:53 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3.23 | | 0.500 | | mg/l | | 03/23/11 13:29 | 03/23/11 17:40 | 1.00 |
| Nitrate-Nitrogen | 6.20 | | 0.100 | | mg/l | | 03/23/11 13:29 | 03/23/11 17:40 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: LB-4D**
**Date Collected: 03/22/11 12:55**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-02**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 14:03 | 04/04/11 14:03 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *86* | | *75 - 120* | *04/04/11 14:03* | *04/04/11 14:03* | *1* |
| *Ethylbenzene-d10* | *90* | | *75 - 125* | *04/04/11 14:03* | *04/04/11 14:03* | *1* |
| *Fluorobenzene (Surr)* | *93* | | *70 - 130* | *04/04/11 14:03* | *04/04/11 14:03* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 125* | *04/04/11 14:03* | *04/04/11 14:03* | *1* |
| *Trifluorotoluene (Surr)* | *90* | | *80 - 125* | *04/04/11 14:03* | *04/04/11 14:03* | *1* |

**Client Sample ID: LB-6S**
**Date Collected: 03/22/11 15:55**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-03**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:16 | 1.00 |
| **Manganese** | **0.00218** | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:16 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **248** | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **218** | **H N1** | 10.0 | | mg/l | | 04/07/11 12:15 | 04/07/11 18:53 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **6.29** | | 0.500 | | mg/l | | 03/23/11 13:29 | 03/23/11 17:56 | 1.00 |
| **Nitrate-Nitrogen** | **2.79** | | 0.100 | | mg/l | | 03/23/11 13:29 | 03/23/11 17:56 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: LB-6S**
**Date Collected: 03/22/11 15:55**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-03**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 14:28 | 04/04/11 14:28 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *75 - 120* | *04/04/11 14:28* | *04/04/11 14:28* | *1* |
| *Ethylbenzene-d10* | *101* | | *75 - 125* | *04/04/11 14:28* | *04/04/11 14:28* | *1* |
| *Fluorobenzene (Surr)* | *94* | | *70 - 130* | *04/04/11 14:28* | *04/04/11 14:28* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 125* | *04/04/11 14:28* | *04/04/11 14:28* | *1* |
| *Trifluorotoluene (Surr)* | *96* | | *80 - 125* | *04/04/11 14:28* | *04/04/11 14:28* | *1* |

**Client Sample ID: DUP1**
**Date Collected: 03/22/11 16:00**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-04**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:20 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:20 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 266 | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 229 | H N1 | 10.0 | | mg/l | | 04/07/11 12:15 | 04/07/11 18:53 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 7.05 | | 0.500 | | mg/l | | 03/23/11 13:29 | 03/23/11 18:11 | 1.00 |
| Nitrate-Nitrogen | 2.90 | | 0.100 | | mg/l | | 03/23/11 13:29 | 03/23/11 18:11 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: DUP1**
**Date Collected: 03/22/11 16:00**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-04**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 14:56 | 04/04/11 14:56 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *83* | | *75 - 120* | *04/04/11 14:56* | *04/04/11 14:56* | *1* |
| *Ethylbenzene-d10* | *94* | | *75 - 125* | *04/04/11 14:56* | *04/04/11 14:56* | *1* |
| *Fluorobenzene (Surr)* | *96* | | *70 - 130* | *04/04/11 14:56* | *04/04/11 14:56* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 125* | *04/04/11 14:56* | *04/04/11 14:56* | *1* |
| *Trifluorotoluene (Surr)* | *91* | | *80 - 125* | *04/04/11 14:56* | *04/04/11 14:56* | *1* |

**Client Sample ID: LB-17I**
**Date Collected: 03/22/11 09:25**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-05**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Iron** | **8.95** | | 0.0500 | | mg/l | | 03/24/11 11:41 | 03/28/11 18:06 | 2.00 |
| **Manganese** | **1.55** | | 0.00400 | | mg/l | | 03/24/11 11:41 | 03/28/11 18:06 | 2.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **498** | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **306** | **H N1** | 10.0 | | mg/l | | 04/07/11 12:15 | 04/07/11 18:53 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **27.4** | | 0.500 | | mg/l | | 03/23/11 13:29 | 03/23/11 18:27 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/23/11 13:29 | 03/23/11 18:27 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| **1,4-Dichlorobenzene** | **0.26** | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: LB-17I**
**Date Collected: 03/22/11 09:25**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-05**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| **cis-1,2-Dichloroethene** | **0.27** | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| **Trichloroethene** | **0.81** | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 15:21 | 04/04/11 15:21 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *75 - 120* | *04/04/11 15:21* | *04/04/11 15:21* | *1* |
| *Ethylbenzene-d10* | *99* | | *75 - 125* | *04/04/11 15:21* | *04/04/11 15:21* | *1* |
| *Fluorobenzene (Surr)* | *95* | | *70 - 130* | *04/04/11 15:21* | *04/04/11 15:21* | *1* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 125* | *04/04/11 15:21* | *04/04/11 15:21* | *1* |
| *Trifluorotoluene (Surr)* | *98* | | *80 - 125* | *04/04/11 15:21* | *04/04/11 15:21* | *1* |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: LB-17D**
**Date Collected: 03/22/11 11:00**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-06**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.0623 | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:29 | 1.00 |
| Manganese | 3.38 | | 0.0100 | | mg/l | | 03/24/11 11:41 | 03/28/11 18:10 | 5.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 277 | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 209 | H N1 | 10.0 | | mg/l | | 04/07/11 12:15 | 04/07/11 18:53 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 7.97 | | 0.500 | | mg/l | | 03/23/11 13:29 | 03/23/11 18:42 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/23/11 13:29 | 03/23/11 18:42 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: LB-17D**
**Date Collected: 03/22/11 11:00**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-06**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 15:48 | 04/04/11 15:48 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *75 - 120* | *04/04/11 15:48* | *04/04/11 15:48* | *1* |
| *Ethylbenzene-d10* | *102* | | *75 - 125* | *04/04/11 15:48* | *04/04/11 15:48* | *1* |
| *Fluorobenzene (Surr)* | *95* | | *70 - 130* | *04/04/11 15:48* | *04/04/11 15:48* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 125* | *04/04/11 15:48* | *04/04/11 15:48* | *1* |
| *Trifluorotoluene (Surr)* | *93* | | *80 - 125* | *04/04/11 15:48* | *04/04/11 15:48* | *1* |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: Trip Blank**
**Date Collected: 03/22/11 00:00**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-07**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

**Client Sample ID: Trip Blank**
**Date Collected: 03/22/11 00:00**
**Date Received: 03/23/11 11:37**

**Lab Sample ID: PUC0755-07**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 12:40 | 04/04/11 12:40 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *75 - 120* | *04/04/11 12:40* | *04/04/11 12:40* | *1* |
| *Ethylbenzene-d10* | *93* | | *75 - 125* | *04/04/11 12:40* | *04/04/11 12:40* | *1* |
| *Fluorobenzene (Surr)* | *97* | | *70 - 130* | *04/04/11 12:40* | *04/04/11 12:40* | *1* |
| *Toluene-d8 (Surr)* | *90* | | *75 - 125* | *04/04/11 12:40* | *04/04/11 12:40* | *1* |
| *Trifluorotoluene (Surr)* | *93* | | *80 - 125* | *04/04/11 12:40* | *04/04/11 12:40* | *1* |

## Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods

**Lab Sample ID: 11C0705-BLK1** — **Client Sample ID: 11C0705-BLK1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 17:15 | 1.00 |

**Lab Sample ID: 11C0705-BLK1** — **Client Sample ID: 11C0705-BLK1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 19:18 | 1.00 |

**Lab Sample ID: 11C0705-BS1** — **Client Sample ID: 11C0705-BS1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Iron | 2.00 | 1.85 | | mg/l | | 92.6 | 80 - 120 |

**Lab Sample ID: 11C0705-BS1** — **Client Sample ID: 11C0705-BS1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Manganese | 0.100 | 0.0994 | | mg/l | | 99.4 | 80 - 120 |

**Lab Sample ID: 11C0705-MS1** — **Client Sample ID: PUC0729-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.132 | | 2.00 | 1.98 | | mg/l | | 92.4 | 75 - 125 |

**Lab Sample ID: 11C0705-MS1** — **Client Sample ID: PUC0729-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 0.0536 | | 0.100 | 0.154 | | mg/l | | 101 | 75 - 125 |

**Lab Sample ID: 11C0705-MS2** — **Client Sample ID: PUC0791-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 2.00 | 1.84 | | mg/l | | 91.8 | 75 - 125 |

**Lab Sample ID: 11C0705-MS2** — **Client Sample ID: PUC0791-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 0.00186 | | 0.100 | 0.100 | | mg/l | | 98.4 | 75 - 125 |

## Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods (Continued)

**Lab Sample ID: 11C0705-DUP1** — **Client Sample ID: PUC0729-01**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Iron | 0.128 | | 0.127 | | mg/l | | 1.02 | 20 |

**Lab Sample ID: 11C0705-DUP1** — **Client Sample ID: PUC0729-01**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Manganese | 0.137 | | 0.134 | | mg/l | | 1.77 | 20 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11C0783-BLK1** — **Client Sample ID: 11C0783-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0783** — **Prep Batch: 11C0783_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | ND | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

**Lab Sample ID: 11C0783-BS1** — **Client Sample ID: 11C0783-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0783** — **Prep Batch: 11C0783_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductivity | 1410 | 1390 | | uS/cm | | 98.4 | 85 - 115 |

**Lab Sample ID: 11C0783-DUP1** — **Client Sample ID: LB-4SR**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0783** — **Prep Batch: 11C0783_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 224 | | 224 | | uS/cm | | 0.00 | 20 |

## Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11D0185-BLK1** — **Client Sample ID: 11D0185-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0185** — **Prep Batch: 11D0185_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | | 10.0 | | mg/l | | 04/07/11 12:15 | 04/07/11 18:53 | 1.00 |

**Lab Sample ID: 11D0185-BS1** — **Client Sample ID: 11D0185-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0185** — **Prep Batch: 11D0185_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 100 | 110 | | mg/l | | 110 | 80 - 120 |

## Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods (Continued)

**Lab Sample ID: 11D0185-DUP1** — **Client Sample ID: PUC1071-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0185** — **Prep Batch: 11D0185_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 80.0 | | 83.0 | | mg/l | | 3.68 | 20 |

## Method: EPA 300.0 - Anions per EPA Method 300.0

**Lab Sample ID: 11C0653-BLK1** — **Client Sample ID: 11C0653-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000791** — **Prep Batch: 11C0653_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.500 | | mg/l | | 03/23/11 08:12 | 03/23/11 12:44 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/23/11 08:12 | 03/23/11 12:44 | 1.00 |

**Lab Sample ID: 11C0653-BS1** — **Client Sample ID: 11C0653-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000791** — **Prep Batch: 11C0653_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 10.1 | | mg/l | | 101 | 90 - 110 |
| Nitrate-Nitrogen | 5.00 | 4.94 | | mg/l | | 98.8 | 90 - 110 |

**Lab Sample ID: 11C0653-MS1** — **Client Sample ID: PUC0741-02**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000791** — **Prep Batch: 11C0653_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 7.68 | | 2.00 | 9.02 | M8 | mg/l | | 67.0 | 80 - 120 |
| Nitrate-Nitrogen | ND | | 2.00 | 2.01 | | mg/l | | 100 | 80 - 120 |

**Lab Sample ID: 11C0653-MS2** — **Client Sample ID: LB-17D**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000791** — **Prep Batch: 11C0653_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 7.97 | | 2.00 | 9.20 | M8 | mg/l | | 61.5 | 80 - 120 |
| Nitrate-Nitrogen | ND | | 2.00 | 2.03 | | mg/l | | 102 | 80 - 120 |

**Lab Sample ID: 11C0653-MSD1** — **Client Sample ID: PUC0741-02**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000791** — **Prep Batch: 11C0653_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Dup Result | Matrix Spike Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 7.68 | | 2.00 | 9.00 | M8 | mg/l | | 66.0 | 80 - 120 | 0.222 | 20 |
| Nitrate-Nitrogen | ND | | 2.00 | 2.01 | | mg/l | | 100 | 80 - 120 | 0.00 | 20 |

**Lab Sample ID: 11C0653-DUP1** — **Client Sample ID: PUC0741-02**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000791** — **Prep Batch: 11C0653_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Chloride | 7.68 | | 7.72 | | mg/l | | 0.519 | 20 |
| Nitrate-Nitrogen | ND | | ND | | mg/l | | | 20 |

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

**Lab Sample ID: 83336-5**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 83336-5**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |

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

**Lab Sample ID: 83336-5**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 83336-5**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |

| *Surrogate* | *Blank % Recovery* | *Blank Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *85* | | *75 - 120* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |
| *Ethylbenzene-d10* | *94* | | *75 - 125* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |
| *Fluorobenzene (Surr)* | *97* | | *70 - 130* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |
| *Toluene-d8 (Surr)* | *90* | | *75 - 125* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |
| *Trifluorotoluene (Surr)* | *97* | | *80 - 125* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |

**Lab Sample ID: 83336-6**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 83336-6**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 5.81 | 5.51 | | ug/L | | 95 | 78 - 151 |
| Benzene | 5.81 | 4.98 | | ug/L | | 86 | 75 - 142 |
| Chlorobenzene | 5.81 | 5.33 | | ug/L | | 92 | 71 - 140 |
| Toluene | 5.81 | 5.31 | | ug/L | | 91 | 80 - 126 |
| Trichloroethene | 5.81 | 5.00 | | ug/L | | 86 | 79 - 131 |

| *Surrogate* | *LCS % Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *75 - 120* |
| *Ethylbenzene-d10* | *111* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *101* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *101* | | *80 - 125* |

**Lab Sample ID: 83336-24**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 580-83336-23**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.94 | | ug/L | | 119 | 78 - 151 |

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

**Lab Sample ID: 83336-24**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 580-83336-23**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 5.00 | 5.05 | | ug/L | | 101 | 75 - 142 |
| Chlorobenzene | | | 5.00 | 5.24 | | ug/L | | 105 | 71 - 140 |
| Toluene | | | 5.00 | 5.26 | | ug/L | | 105 | 80 - 126 |
| Trichloroethene | | | 5.00 | 4.94 | | ug/L | | 99 | 79 - 131 |

| *Surrogate* | *Matrix Spike % Recovery* | *Matrix Spike Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *83* | | *75 - 120* |
| *Ethylbenzene-d10* | *98* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *98* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *96* | | *80 - 125* |

**Lab Sample ID: 83336-25**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 580-83336-23**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Dup Result | Matrix Spike Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.95 | | ug/L | | 119 | 78 - 151 | 0 | 30 |
| Benzene | | | 5.00 | 5.17 | | ug/L | | 103 | 75 - 142 | 2 | 30 |
| Chlorobenzene | | | 5.00 | 5.22 | | ug/L | | 104 | 71 - 140 | 0 | 30 |
| Toluene | | | 5.00 | 5.30 | | ug/L | | 106 | 80 - 126 | 1 | 30 |
| Trichloroethene | | | 5.00 | 5.06 | | ug/L | | 101 | 79 - 131 | 2 | 30 |

| *Surrogate* | *Matrix Spike Dup % Recovery* | *Matrix Spike Dup Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *82* | | *75 - 120* |
| *Ethylbenzene-d10* | *95* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *97* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *90* | | *80 - 125* |

# Certification Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0755

| Laboratory | Authority | Program | EPA Region | Certification ID |
|---|---|---|---|---|
| TestAmerica Portland | | USDA | | P330-11-00092 |
| TestAmerica Portland | Alaska | Alaska UST | 10 | UST-012 |
| TestAmerica Portland | Alaska | State Program | 10 | OR00040 |
| TestAmerica Portland | California | State Program | 9 | 2597 |
| TestAmerica Portland | Oregon | NELAC | 10 | OR100021 |
| TestAmerica Portland | Washington | State Program | 10 | C586 |
| TestAmerica Seattle | | USDA | | P330-11-00222 |
| TestAmerica Seattle | Alaska | Alaska UST | 10 | UST-022 |
| TestAmerica Seattle | California | NELAC | 9 | 1115CA |
| TestAmerica Seattle | Florida | NELAC | 4 | E871074 |
| TestAmerica Seattle | L-A-B | DoD ELAP | 0 | L2236 |
| TestAmerica Seattle | L-A-B | ISO/IEC 17025 | 0 | L2236 |
| TestAmerica Seattle | Louisiana | NELAC | 6 | 05016 |
| TestAmerica Seattle | Montana | MT DEQ UST | 8 | N/A |
| TestAmerica Seattle | Oregon | NELAC | 10 | WA100007 |
| TestAmerica Seattle | Washington | State Program | 10 | C553 |

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING


11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210
11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave,Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 [X]
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210


# CHAIN OF CUSTODY REPORT

**Work Order #:** RUC0755

CLIENT: SCS Engineers

REPORT TO: David Lamadrid
ADDRESS: 14945 SW Sequoia Pkwy, Ste 180 Portland, OR 97224
PHONE: 503 639-9315 FAX:

INVOICE TO: SCS Engineers Portland Office

P.O. NUMBER:

PROJECT NAME: Leichner Brothers Landfill
PROJECT NUMBER: 04211030.01/.17
SAMPLED BY: T LaVague

**TURNAROUND REQUEST** in Business Days *

Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl | HNO3

REQUESTED ANALYSES: 8260 VOA | Dis Metals (Fe, Mn) | Cl, TDS, Cond, Alkalinity | Nitrate

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | MATRIX (W, S, O) | # OF CONT. | LOCATION/ COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|
| 1 | LB-45R | 3/22/11 @ 1355 | W | 5 | low level VOCs | |
| 2 | LB-4D | 3/22/11 @ 1255 | W | 5 | | |
| 3 | LB-6S | 3/22/11 @ 1555 | W | 5 | | |
| 4 | DUP1 | 3/22/11 @ 1600 | W | 5 | | |
| 5 | LB-17I | 3/22/11 @ 925 | W | 5 | | |
| 6 | LB-17D | 3/22/11 @ 1100 | W | 5 | | |
| 7 | Trip Blank | 3/1/11 — | W | 1 | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |

RELEASED BY: JDW — PRINT NAME: T LaVague — FIRM: SCS — DATE: 3/23/11 — TIME: 10:35

RECEIVED BY: Bob F — PRINT NAME: Bob F — FIRM: TAP — DATE: 3/23/11 — TIME: 10:35

RELEASED BY: Bob F — PRINT NAME: Bob F — FIRM: TAP — DATE: 3/23/11 — TIME: 11:37

RECEIVED BY: KAREN WILSON — PRINT NAME: KAREN WILSON — FIRM: TAP — DATE: 3-23-11 — TIME: 1137

ADDRESS: tlavague@scsengineers.com / DLamadrid@scsengineers.com

ADDITIONAL REMARKS: low level VOCs

TEMP: 0.5°C

PAGE OF

TAL-1000(0408)

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# Portland Sample Control Checklist

**Work Order #:** PWC0755 **Date/Time Received:** 3-23-11 1137
**Client Name:** SCS Engineers
**Project Name:** LEICHNER LANDFILL
Time Zone:
☐EDT/EST ☐CDT/CST ☐MDT/MST ☒PDT/PST ☐AK ☐HI ☐OTHER

**Unpacking Checks:**
**Cooler (s):** 1
**Temperature (s):** 0.5°C
**Digi #1** ☐ **Digi #2** ☐ **IR Gun** ☒ (☐Plastic ☒Glass)
**Raytek** ☐ (☐Plastic ☐Glass)
**Ice used: (circle one)** GEL LOOSE BLUE NONE OTHER: _____ **Initials:** K

**Temperature out of Range:**
__Not enough or No Ice
__Ice Melted
__W/in 4 Hrs of collection
__Ice Not Needed
__ Other:_____

| N/A | Yes | No | |
|---|---|---|---|
| ☒ | ☐ | ☐ | 1. If ESI client, were temp blanks received? If no, document on NOD. |
| ☒ | ☐ | ☐ | 2. Cooler Seals intact? (N/A if hand delivered) if no and ESI client, document on NOD. |
| | ☑ | ☐ | 3. Chain of Custody present? If no, document on NOD. Along with "received by" & "relinquished by" signatures with date & time? |
| | ☒ | ☐ | 4. Bottles received intact? If no, document on NOD. |
| | ☒ | ☐ | 5. Sample is not multiphasic? If no, document on NOD. |
| | ☒ | ☐ | 6. Sampler name/signature documented on COC? |
| | ☒ | ☐ | 7. Proper Container and preservatives used? If no, document on NOD. |
| ☐ | ☑ | ☐ | 8. pH of all samples checked and meet requirements? If no, document on NOD. |
| ☒ | ☐ | ☐ | 9. Cyanide samples checked for sulfides and meet requirements? If no, notify PM. |
| ☒ | ☐ | ☐ | 10. HF Dilution required? |
| | ☒ | ☐ | 11. Sufficient volume provided for all analysis and requested MS/MSD? If no, document on NOD and consult PM before proceeding. |
| | ☑ | ☐ | 12. Did chain of custody agree with samples received? If no, document on NOD. |
| ☐ | ☒ | ☐ | 13. Were VOA samples received without headspace? |
| | ☐ | ☒ | 14. Did samples require preservation with sodium thiosulfate? |
| ☒ | ☐ | ☐ | 15. If yes to #14, was the residual chlorine test negative? If no, document on NOD. |
| K ☒ | ☒ | ☐ | 16. Are dissolved/field filtered metals bottles sediment-free? If no, document on NOD. |
| ☐ | ☒ | ☐ | 17. Are analyses with short holding times received in hold? |
| ☐ | ☐ | ☐ | 18. Were special log- in instructions read and followed? |

**Checklist Reviewed:** **Log-in initials:** K **Labeler initials:** K

TestAmerica

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# ANALYTICAL REPORT

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

TestAmerica Job ID: PUC0791
Client Project/Site: 04211030.011.17
Client Project Description: Leichner Landfill 2011
Revision: 1

For:
SCS Engineers - Portland
14945 SW Sequoia Pkwy  Suite 180
Portland, OR 97224

Attn: David LaMadrid

*Authorized for release by:*
*05/27/2011 09:22:24 AM*

Darrell Auvil
Project Manager
darrell.auvil@testamericainc.com

# Table of Contents

# Sample Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| PUC0791-01 | LB-5S | Water | 03/23/11 10:35 | 03/24/11 10:40 |
| PUC0791-02 | LB-5D | Water | 03/23/11 09:50 | 03/24/11 10:40 |
| PUC0791-03 | LB-13I | Water | 03/23/11 16:30 | 03/24/11 10:40 |
| PUC0791-04 | LB-26I | Water | 03/23/11 14:45 | 03/24/11 10:40 |
| PUC0791-05 | FB1 | Water | 03/23/11 14:30 | 03/24/11 10:40 |
| PUC0791-06 | LB-26D | Water | 03/23/11 13:35 | 03/24/11 10:40 |
| PUC0791-07 | Trip Blank | Water | 03/23/11 00:00 | 03/24/11 10:40 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

## Job ID: PUC0791

### Laboratory: TestAmerica Portland

**Narrative**

Amended report to reflect reporting additional 8260B VOC compounds.

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

## Qualifiers

### Wet Chem

| Qualifier | Qualifier Description |
|---|---|
| M8 | The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS). |

### TSEA

| Qualifier | Qualifier Description |
|---|---|
| B | Compound was found in the blank and sample. |

## 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. |
| EPA | United States Environmental Protection Agency |
| ND | Not Detected above the reporting level. |
| MDL | Method Detection Limit |
| RL | Reporting Limit |
| RE, RE1 (etc.) | Indicates a Re-extraction or Reanalysis of the sample. |
| %R | Percent Recovery |
| RPD | Relative Percent Difference, a measure of the relative difference between two points. |

**Client Sample ID: LB-5S**
**Date Collected: 03/23/11 10:35**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-01**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:33 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:33 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 222 | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 184 | | 10.0 | | mg/l | | 03/30/11 10:24 | 03/30/11 18:42 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5.07 | | 0.500 | | mg/l | | 03/24/11 09:24 | 03/24/11 16:04 | 1.00 |
| Nitrate-Nitrogen | 5.15 | | 0.100 | | mg/l | | 03/24/11 09:24 | 03/24/11 16:04 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

**Client Sample ID: LB-5S**
**Date Collected: 03/23/11 10:35**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-01**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 16:42 | 04/04/11 16:42 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *75 - 120* | *04/04/11 16:42* | *04/04/11 16:42* | *1* |
| *Ethylbenzene-d10* | *97* | | *75 - 125* | *04/04/11 16:42* | *04/04/11 16:42* | *1* |
| *Fluorobenzene (Surr)* | *97* | | *70 - 130* | *04/04/11 16:42* | *04/04/11 16:42* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 125* | *04/04/11 16:42* | *04/04/11 16:42* | *1* |
| *Trifluorotoluene (Surr)* | *100* | | *80 - 125* | *04/04/11 16:42* | *04/04/11 16:42* | *1* |

**Client Sample ID: LB-5D**
**Date Collected: 03/23/11 09:50**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-02**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 18:05 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 19:56 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 328 | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 238 | | 10.0 | | mg/l | | 03/30/11 10:24 | 03/30/11 18:42 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10.8 | | 0.500 | | mg/l | | 03/24/11 09:24 | 03/24/11 16:35 | 1.00 |
| Nitrate-Nitrogen | 0.780 | | 0.100 | | mg/l | | 03/24/11 09:24 | 03/24/11 16:35 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

**Client Sample ID: LB-5D**
**Date Collected: 03/23/11 09:50**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-02**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 17:09 | 04/04/11 17:09 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *83* | | *75 - 120* | *04/04/11 17:09* | *04/04/11 17:09* | *1* |
| *Ethylbenzene-d10* | *89* | | *75 - 125* | *04/04/11 17:09* | *04/04/11 17:09* | *1* |
| *Fluorobenzene (Surr)* | *95* | | *70 - 130* | *04/04/11 17:09* | *04/04/11 17:09* | *1* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 125* | *04/04/11 17:09* | *04/04/11 17:09* | *1* |
| *Trifluorotoluene (Surr)* | *91* | | *80 - 125* | *04/04/11 17:09* | *04/04/11 17:09* | *1* |

**Client Sample ID: LB-13I**
**Date Collected: 03/23/11 16:30**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-03**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:37 | 1.00 |
| **Manganese** | **0.00296** | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:37 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **270** | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **202** | | 10.0 | | mg/l | | 03/30/11 10:24 | 03/30/11 18:42 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **5.56** | | 0.500 | | mg/l | | 03/24/11 09:24 | 03/24/11 16:51 | 1.00 |
| **Nitrate-Nitrogen** | **4.58** | | 0.100 | | mg/l | | 03/24/11 09:24 | 03/24/11 16:51 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

**Client Sample ID: LB-13I**
**Date Collected: 03/23/11 16:30**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-03**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 17:36 | 04/04/11 17:36 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *75 - 120* | *04/04/11 17:36* | *04/04/11 17:36* | *1* |
| *Ethylbenzene-d10* | *101* | | *75 - 125* | *04/04/11 17:36* | *04/04/11 17:36* | *1* |
| *Fluorobenzene (Surr)* | *97* | | *70 - 130* | *04/04/11 17:36* | *04/04/11 17:36* | *1* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 125* | *04/04/11 17:36* | *04/04/11 17:36* | *1* |
| *Trifluorotoluene (Surr)* | *90* | | *80 - 125* | *04/04/11 17:36* | *04/04/11 17:36* | *1* |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

**Client Sample ID: LB-26I**
**Date Collected: 03/23/11 14:45**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-04**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:41 | 1.00 |
| **Manganese** | **0.00743** | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:41 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **296** | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **207** | | 10.0 | | mg/l | | 03/30/11 10:24 | 03/30/11 18:42 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **7.97** | | 0.500 | | mg/l | | 03/24/11 09:24 | 03/24/11 17:07 | 1.00 |
| **Nitrate-Nitrogen** | **3.71** | | 0.100 | | mg/l | | 03/24/11 09:24 | 03/24/11 17:07 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

**Client Sample ID: LB-26I**
**Date Collected: 03/23/11 14:45**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-04**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 18:04 | 04/04/11 18:04 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *89* | | *75 - 120* | *04/04/11 18:04* | *04/04/11 18:04* | *1* |
| *Ethylbenzene-d10* | *96* | | *75 - 125* | *04/04/11 18:04* | *04/04/11 18:04* | *1* |
| *Fluorobenzene (Surr)* | *96* | | *70 - 130* | *04/04/11 18:04* | *04/04/11 18:04* | *1* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 125* | *04/04/11 18:04* | *04/04/11 18:04* | *1* |
| *Trifluorotoluene (Surr)* | *93* | | *80 - 125* | *04/04/11 18:04* | *04/04/11 18:04* | *1* |

**Client Sample ID: FB1**
**Date Collected: 03/23/11 14:30**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-05**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:45 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:45 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | ND | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | | 10.0 | | mg/l | | 03/30/11 10:24 | 03/30/11 18:42 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.500 | | mg/l | | 03/24/11 09:24 | 03/24/11 17:22 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/24/11 09:24 | 03/24/11 17:22 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| **Acetone** | **11** | **B** | 2.0 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

**Client Sample ID: FB1**
**Date Collected: 03/23/11 14:30**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-05**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| **Methylene Chloride** | **0.25** | **B** | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 18:31 | 04/04/11 18:31 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *75 - 120* | *04/04/11 18:31* | *04/04/11 18:31* | *1* |
| *Ethylbenzene-d10* | *97* | | *75 - 125* | *04/04/11 18:31* | *04/04/11 18:31* | *1* |
| *Fluorobenzene (Surr)* | *99* | | *70 - 130* | *04/04/11 18:31* | *04/04/11 18:31* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 125* | *04/04/11 18:31* | *04/04/11 18:31* | *1* |
| *Trifluorotoluene (Surr)* | *94* | | *80 - 125* | *04/04/11 18:31* | *04/04/11 18:31* | *1* |

**Client Sample ID: LB-26D**
**Date Collected: 03/23/11 13:35**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-06**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:57 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 20:57 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **224** | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **196** | | 10.0 | | mg/l | | 03/30/11 10:24 | 03/30/11 18:42 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4.97** | | 0.500 | | mg/l | | 03/24/11 09:24 | 03/24/11 17:38 | 1.00 |
| **Nitrate-Nitrogen** | **6.30** | | 0.100 | | mg/l | | 03/24/11 09:24 | 03/24/11 17:38 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

**Client Sample ID: LB-26D**
**Date Collected: 03/23/11 13:35**
**Date Received: 03/24/11 10:40**

**Lab Sample ID: PUC0791-06**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 18:59 | 04/04/11 18:59 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *83* | | *75 - 120* | *04/04/11 18:59* | *04/04/11 18:59* | *1* |
| *Ethylbenzene-d10* | *99* | | *75 - 125* | *04/04/11 18:59* | *04/04/11 18:59* | *1* |
| *Fluorobenzene (Surr)* | *96* | | *70 - 130* | *04/04/11 18:59* | *04/04/11 18:59* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 125* | *04/04/11 18:59* | *04/04/11 18:59* | *1* |
| *Trifluorotoluene (Surr)* | *94* | | *80 - 125* | *04/04/11 18:59* | *04/04/11 18:59* | *1* |

## Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods

**Lab Sample ID: 11C0705-BLK1** — **Client Sample ID: 11C0705-BLK1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/24/11 11:41 | 03/24/11 17:15 | 1.00 |

**Lab Sample ID: 11C0705-BLK1** — **Client Sample ID: 11C0705-BLK1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | | 0.00200 | | mg/l | | 03/24/11 11:41 | 03/24/11 19:18 | 1.00 |

**Lab Sample ID: 11C0705-BS1** — **Client Sample ID: 11C0705-BS1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Iron | 2.00 | 1.85 | | mg/l | | 92.6 | 80 - 120 |

**Lab Sample ID: 11C0705-BS1** — **Client Sample ID: 11C0705-BS1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Manganese | 0.100 | 0.0994 | | mg/l | | 99.4 | 80 - 120 |

**Lab Sample ID: 11C0705-MS1** — **Client Sample ID: PUC0729-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.132 | | 2.00 | 1.98 | | mg/l | | 92.4 | 75 - 125 |

**Lab Sample ID: 11C0705-MS1** — **Client Sample ID: PUC0729-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 0.0536 | | 0.100 | 0.154 | | mg/l | | 101 | 75 - 125 |

**Lab Sample ID: 11C0705-MS2** — **Client Sample ID: LB-5D**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 2.00 | 1.84 | | mg/l | | 91.8 | 75 - 125 |

**Lab Sample ID: 11C0705-MS2** — **Client Sample ID: LB-5D**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | | 0.100 | 0.100 | | mg/l | | 98.4 | 75 - 125 |

## Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods (Continued)

**Lab Sample ID: 11C0705-DUP1** — **Client Sample ID: PUC0729-01**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Iron | 0.128 | | 0.127 | | mg/l | | 1.02 | 20 |

**Lab Sample ID: 11C0705-DUP1** — **Client Sample ID: PUC0729-01**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0705** — **Prep Batch: 11C0705_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Manganese | 0.137 | | 0.134 | | mg/l | | 1.77 | 20 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11C0783-BLK1** — **Client Sample ID: 11C0783-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0783** — **Prep Batch: 11C0783_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | ND | | 10.0 | | uS/cm | | 03/26/11 08:04 | 03/26/11 10:20 | 1.00 |

**Lab Sample ID: 11C0783-BS1** — **Client Sample ID: 11C0783-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0783** — **Prep Batch: 11C0783_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductivity | 1410 | 1390 | | uS/cm | | 98.4 | 85 - 115 |

**Lab Sample ID: 11C0783-DUP1** — **Client Sample ID: PUC0755-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0783** — **Prep Batch: 11C0783_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 224 | | 224 | | uS/cm | | 0.00 | 20 |

## Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11C0875-BLK1** — **Client Sample ID: 11C0875-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0875** — **Prep Batch: 11C0875_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | | 10.0 | | mg/l | | 03/30/11 10:24 | 03/30/11 18:42 | 1.00 |

**Lab Sample ID: 11C0875-BS1** — **Client Sample ID: 11C0875-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0875** — **Prep Batch: 11C0875_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 100 | 101 | | mg/l | | 101 | 80 - 120 |

## Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods (Continued)

**Lab Sample ID: 11C0875-DUP1** — **Client Sample ID: LB-5S**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0875** — **Prep Batch: 11C0875_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 184 | | 184 | | mg/l | | 0.00 | 20 |

## Method: EPA 300.0 - Anions per EPA Method 300.0

**Lab Sample ID: 11C0699-BLK1** — **Client Sample ID: 11C0699-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000813** — **Prep Batch: 11C0699_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.500 | | mg/l | | 03/24/11 09:24 | 03/24/11 12:26 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/24/11 09:24 | 03/24/11 12:26 | 1.00 |

**Lab Sample ID: 11C0699-BS1** — **Client Sample ID: 11C0699-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000813** — **Prep Batch: 11C0699_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 10.3 | | mg/l | | 103 | 90 - 110 |
| Nitrate-Nitrogen | 5.00 | 5.01 | | mg/l | | 100 | 90 - 110 |

**Lab Sample ID: 11C0699-MS1** — **Client Sample ID: PUC0783-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000813** — **Prep Batch: 11C0699_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10.6 | | 2.00 | 11.5 | M8 | mg/l | | 44.5 | 80 - 120 |
| Nitrate-Nitrogen | 6.22 | | 2.00 | 7.64 | M8 | mg/l | | 71.0 | 80 - 120 |

**Lab Sample ID: 11C0699-MS2** — **Client Sample ID: LB-5S**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000813** — **Prep Batch: 11C0699_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5.07 | | 2.00 | 6.53 | M8 | mg/l | | 73.0 | 80 - 120 |
| Nitrate-Nitrogen | 5.15 | | 2.00 | 6.75 | | mg/l | | 80.0 | 80 - 120 |

**Lab Sample ID: 11C0699-MSD1** — **Client Sample ID: PUC0783-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000813** — **Prep Batch: 11C0699_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Dup Result | Matrix Spike Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10.6 | | 2.00 | 11.6 | M8 | mg/l | | 48.5 | 80 - 120 | 0.694 | 20 |
| Nitrate-Nitrogen | 6.22 | | 2.00 | 7.68 | M8 | mg/l | | 73.0 | 80 - 120 | 0.522 | 20 |

**Lab Sample ID: 11C0699-DUP1** — **Client Sample ID: PUC0783-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000813** — **Prep Batch: 11C0699_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Chloride | 10.6 | | 10.5 | | mg/l | | 1.14 | 20 |

## Method: EPA 300.0 - Anions per EPA Method 300.0 (Continued)

**Lab Sample ID: 11C0699-DUP1**
**Matrix: Water**
**Analysis Batch: U000813**

**Client Sample ID: PUC0783-01**
**Prep Type: Total**
**Prep Batch: 11C0699_P**

| Analyte | Sample Result | Sample Qualifier | | Duplicate Result | Duplicate Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate-Nitrogen | 6.22 | | | 6.15 | | mg/l | | | | 1.13 | 20 |

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

**Lab Sample ID: 83336-5**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 83336-5**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |

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

**Lab Sample ID: 83336-5**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 83336-5**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/04/11 11:32 | 04/04/11 11:32 | 1 |

| *Surrogate* | *Blank % Recovery* | *Blank Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *85* | | *75 - 120* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |
| *Ethylbenzene-d10* | *94* | | *75 - 125* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |
| *Fluorobenzene (Surr)* | *97* | | *70 - 130* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |
| *Toluene-d8 (Surr)* | *90* | | *75 - 125* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |
| *Trifluorotoluene (Surr)* | *97* | | *80 - 125* | *04/04/11 11:32* | *04/04/11 11:32* | *1* |

**Lab Sample ID: 83336-6**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 83336-6**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 5.81 | 5.51 | | ug/L | | 95 | 78 - 151 |
| Benzene | 5.81 | 4.98 | | ug/L | | 86 | 75 - 142 |
| Chlorobenzene | 5.81 | 5.33 | | ug/L | | 92 | 71 - 140 |
| Toluene | 5.81 | 5.31 | | ug/L | | 91 | 80 - 126 |
| Trichloroethene | 5.81 | 5.00 | | ug/L | | 86 | 79 - 131 |

| *Surrogate* | *LCS % Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *75 - 120* |
| *Ethylbenzene-d10* | *111* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *101* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 125* |

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

**Lab Sample ID: 83336-6**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 83336-6**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Surrogate | LCS % Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *Trifluorotoluene (Surr)* | *101* | | *80 - 125* |

**Lab Sample ID: 83336-24**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 580-83336-23**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.94 | | ug/L | | 119 | 78 - 151 |
| Benzene | | | 5.00 | 5.05 | | ug/L | | 101 | 75 - 142 |
| Chlorobenzene | | | 5.00 | 5.24 | | ug/L | | 105 | 71 - 140 |
| Toluene | | | 5.00 | 5.26 | | ug/L | | 105 | 80 - 126 |
| Trichloroethene | | | 5.00 | 4.94 | | ug/L | | 99 | 79 - 131 |

| Surrogate | Matrix Spike % Recovery | Matrix Spike Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *83* | | *75 - 120* |
| *Ethylbenzene-d10* | *98* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *98* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *96* | | *80 - 125* |

**Lab Sample ID: 83336-25**
**Matrix: Water**
**Analysis Batch: 83336**

**Client Sample ID: 580-83336-23**
**Prep Type: Total**
**Prep Batch: 83336_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Dup Result | Matrix Spike Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.95 | | ug/L | | 119 | 78 - 151 | 0 | 30 |
| Benzene | | | 5.00 | 5.17 | | ug/L | | 103 | 75 - 142 | 2 | 30 |
| Chlorobenzene | | | 5.00 | 5.22 | | ug/L | | 104 | 71 - 140 | 0 | 30 |
| Toluene | | | 5.00 | 5.30 | | ug/L | | 106 | 80 - 126 | 1 | 30 |
| Trichloroethene | | | 5.00 | 5.06 | | ug/L | | 101 | 79 - 131 | 2 | 30 |

| Surrogate | Matrix Spike Dup % Recovery | Matrix Spike Dup Qualifier | Limits |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *82* | | *75 - 120* |
| *Ethylbenzene-d10* | *95* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *97* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *90* | | *80 - 125* |

# Certification Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0791

| Laboratory | Authority | Program | EPA Region | Certification ID |
|---|---|---|---|---|
| TestAmerica Portland | | USDA | | P330-11-00092 |
| TestAmerica Portland | Alaska | Alaska UST | 10 | UST-012 |
| TestAmerica Portland | Alaska | State Program | 10 | OR00040 |
| TestAmerica Portland | California | State Program | 9 | 2597 |
| TestAmerica Portland | Oregon | NELAC | 10 | OR100021 |
| TestAmerica Portland | Washington | State Program | 10 | C586 |
| TestAmerica Seattle | | USDA | | P330-11-00222 |
| TestAmerica Seattle | Alaska | Alaska UST | 10 | UST-022 |
| TestAmerica Seattle | California | NELAC | 9 | 1115CA |
| TestAmerica Seattle | Florida | NELAC | 4 | E871074 |
| TestAmerica Seattle | L-A-B | DoD ELAP | 0 | L2236 |
| TestAmerica Seattle | L-A-B | ISO/IEC 17025 | 0 | L2236 |
| TestAmerica Seattle | Louisiana | NELAC | 6 | 05016 |
| TestAmerica Seattle | Montana | MT DEQ UST | 8 | N/A |
| TestAmerica Seattle | Oregon | NELAC | 10 | WA100007 |
| TestAmerica Seattle | Washington | State Program | 10 | C553 |

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING


11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210 ☐
11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290 ☐
9405 SW Nimbus Ave,Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 ☒
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 ☐


# CHAIN OF CUSTODY REPORT

**Work Order #:** PUC0791

CLIENT: SCS Engineers

REPORT TO: David Lamadrid
ADDRESS: 14945 SW Sequoia Pkwy, Ste 180 Portland, OR 97224
PHONE: 503 639-9315 FAX:

INVOICE TO: SCS Engineers Portland, OR

P.O. NUMBER:

PROJECT NAME: Leichner Brothers Landfill
PROJECT NUMBER: 04211030.01/.17
SAMPLED BY: T LaVague

**TURNAROUND REQUEST** in Business Days *

Organic & Inorganic Analyses: ~~10~~ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE: HCl | PRESERVATIVE: $HNO_3$ | REQUESTED ANALYSES: Low level VOC 8260 | REQUESTED ANALYSES: Diss metals (Fe, Mn) | REQUESTED ANALYSES: Cond, TDS, Cl, Nitrate | MATRIX (W, S, O) | # OF CONT. | LOCATION/ COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LB-5S | 3/23/11 @ 1035 | X | | X | X | X | W | 5 | Low Level VOCs | |
| 2 | LB-5D | 3/23/11 @ 950 | X | | X | X | X | W | 5 | | |
| 3 | LB-13I | 3/23/11 @ 1630 | X | | X | X | X | W | 5 | | |
| 4 | LB-26I | 3/23/11 @ 1445 | X | | X | X | X | W | 5 | | |
| 5 | FB1 | 3/23/11 @ 1430 | X | | X | X | X | W | 5 | | |
| 6 | LB-26D | 3/23/11 @ 1335 | X | | X | X | X | W | 5 | | |
| 7 | Trip Blank | 3/1/11 - | X | | | | | W | 1 | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RELEASED BY: | JM 10 pm | DATE: 3/24/11 | RECEIVED BY: | Bob Fates | DATE: 3/24/11 |
| PRINT NAME: | T LaVague | FIRM: SCS | PRINT NAME: | Bob FC | FIRM: TAP | TIME: 10:26 |
| RELEASED BY: | Bob Fates | DATE: 3/24/11 | RECEIVED BY: | Jessica Nyn | DATE: 3/24/11 |
| PRINT NAME: | Bob FC | FIRM: TAP | TIME: 10:40 | PRINT NAME: | FIRM: TAP | TIME: 1040 |

ADDITIONAL REMARKS: Low Level VOCs DLamadrid@scsengineers.com, TLaVague@scsengineers.com

TEMP: 2.1 PAGE 1 OF 1

TAL-1000(0408)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

# Portland Sample Control Checklist

**Work Order #:** PUC0791 **Date/Time Received:** 3/24/11 1040
**Client Name:** SCS
**Project Name:** LBL
Time Zone:
☐EDT/EST ☐CDT/CST ☐MDT/MST ☒PDT/PST ☐AK ☐HI ☐OTHER

**Unpacking Checks:**
Cooler (s): 1
Temperature (s): 2.1
Digi #1 ☐ Digi #2 ☐ IR Gun ☒ (☒Plastic ☐Glass)
Raytek ☐ (☐Plastic ☐Glass)
Ice used: (circle one) GEL LOOSE BLUE NONE OTHER: _____ Initials: JM

**Temperature out of Range:**
__Not enough or No Ice
__Ice Melted
__W/in 4 Hrs of collection
__Ice Not Needed
__ Other: _____

| N/A | Yes | No | |
|---|---|---|---|
| ☒ | ☐ | ☐ | 1. If ESI client, were temp blanks received? If no, document on NOD. |
| ☐ | ☒ | ☐ | 2. Cooler Seals intact? (N/A if hand delivered) if no and ESI client, document on NOD. |
| | ☒ | ☐ | 3. Chain of Custody present? If no, document on NOD. Along with "received by" & "relinquished by" signatures with date & time? |
| | ☒ | ☐ | 4. Bottles received intact? If no, document on NOD. |
| | ☒ | ☐ | 5. Sample is not multiphasic? If no, document on NOD. |
| | ☒ | ☐ | 6. Sampler name/signature documented on COC? |
| | ☒ | ☐ | 7. Proper Container and preservatives used? If no, document on NOD. |
| ☐ | ☒ | ☐ | 8. pH of all samples checked and meet requirements? If no, document on NOD. |
| ☒ | ☐ | ☐ | 9. Cyanide samples checked for sulfides and meet requirements? If no, notify PM. |
| ☒ | ☐ | ☐ | 10. HF Dilution required? |
| | ☒ | ☐ | 11. Sufficient volume provided for all analysis and requested MS/MSD? If no, document on NOD and consult PM before proceeding. |
| | ☒ | ☐ | 12. Did chain of custody agree with samples received? If no, document on NOD. |
| ☐ | ☒ | ☐ | 13. Were VOA samples received without headspace? |
| JM | ☒ | ☒ | 14. Did samples require preservation with sodium thiosulfate? |
| ☒ | ☐ | ☐ | 15. If yes to #14, was the residual chlorine test negative? If no, document on NOD. |
| ☒ | ☒ | ☐ | 16. Are dissolved/field filtered metals bottles sediment-free? If no, document on NOD. |
| JM ☐ | ☒ | ☐ | 17. Are analyses with short holding times received in hold? |
| ☐ | ☒ | ☐ | 18. Were special log- in instructions read and followed? |

**Checklist Reviewed:** **Log-in initials:** JM **Labeler initials:** JM

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: PUC0854
Client Project/Site: 04211030.011.17
Client Project Description: Leichner Landfill 2011
Revision: 1

For:
SCS Engineers - Portland
14945 SW Sequoia Pkwy  Suite 180
Portland, OR 97224

Attn: David LaMadrid

*Authorized for release by:*
*05/27/2011 09:18:12 AM*

Darrell Auvil
Project Manager
darrell.auvil@testamericainc.com

# Table of Contents

# Sample Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0854

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| PUC0854-01 | LB-1S | Water | 03/24/11 10:15 | 03/25/11 13:45 |
| PUC0854-02 | LB-20S | Water | 03/24/11 11:10 | 03/25/11 13:45 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0854

## Job ID: PUC0854

### Laboratory: TestAmerica Portland

**Narrative**

Amended report to reflect reporting additional 8260B VOC compounds.

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0854

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| MHA | Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS). |

### Wet Chem

| Qualifier | Qualifier Description |
|---|---|
| M8 | The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS). |

## 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. |
| EPA | United States Environmental Protection Agency |
| ND | Not Detected above the reporting level. |
| MDL | Method Detection Limit |
| RL | Reporting Limit |
| RE, RE1 (etc.) | Indicates a Re-extraction or Reanalysis of the sample. |
| %R | Percent Recovery |
| RPD | Relative Percent Difference, a measure of the relative difference between two points. |

**Client Sample ID: LB-1S**
**Date Collected: 03/24/11 10:15**
**Date Received: 03/25/11 13:45**

**Lab Sample ID: PUC0854-01**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/25/11 21:13 | 03/31/11 17:43 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/25/11 21:13 | 03/31/11 17:43 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 248 | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 220 | | 10.0 | | mg/l | | 03/28/11 10:42 | 03/28/11 17:09 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5.92 | | 0.500 | | mg/l | | 03/25/11 15:40 | 03/25/11 17:03 | 1.00 |
| Nitrate-Nitrogen | 5.70 | | 0.100 | | mg/l | | 03/25/11 15:40 | 03/25/11 17:03 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0854

**Client Sample ID: LB-1S**
**Date Collected: 03/24/11 10:15**
**Date Received: 03/25/11 13:45**

**Lab Sample ID: PUC0854-01**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 18:16 | 04/06/11 18:16 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *75 - 120* | *04/06/11 18:16* | *04/06/11 18:16* | *1* |
| *Ethylbenzene-d10* | *100* | | *75 - 125* | *04/06/11 18:16* | *04/06/11 18:16* | *1* |
| *Fluorobenzene (Surr)* | *101* | | *70 - 130* | *04/06/11 18:16* | *04/06/11 18:16* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 125* | *04/06/11 18:16* | *04/06/11 18:16* | *1* |
| *Trifluorotoluene (Surr)* | *107* | | *80 - 125* | *04/06/11 18:16* | *04/06/11 18:16* | *1* |

**Client Sample ID: LB-20S**
**Date Collected: 03/24/11 11:10**
**Date Received: 03/25/11 13:45**

**Lab Sample ID: PUC0854-02**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Iron** | **0.368** | | 0.0250 | | mg/l | | 03/25/11 21:13 | 03/31/11 17:51 | 1.00 |
| **Manganese** | **2.20** | | 0.0100 | | mg/l | | 03/25/11 21:13 | 03/31/11 23:11 | 5.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **544** | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **361** | | 10.0 | | mg/l | | 03/28/11 10:42 | 03/28/11 17:09 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **22.1** | | 0.500 | | mg/l | | 03/25/11 15:40 | 03/25/11 17:34 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/25/11 15:40 | 03/25/11 17:34 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| **1,4-Dichlorobenzene** | **0.25** | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0854

**Client Sample ID: LB-20S**
**Date Collected: 03/24/11 11:10**
**Date Received: 03/25/11 13:45**

**Lab Sample ID: PUC0854-02**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 18:41 | 04/06/11 18:41 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *75 - 120* | *04/06/11 18:41* | *04/06/11 18:41* | *1* |
| *Ethylbenzene-d10* | *90* | | *75 - 125* | *04/06/11 18:41* | *04/06/11 18:41* | *1* |
| *Fluorobenzene (Surr)* | *97* | | *70 - 130* | *04/06/11 18:41* | *04/06/11 18:41* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *75 - 125* | *04/06/11 18:41* | *04/06/11 18:41* | *1* |
| *Trifluorotoluene (Surr)* | *113* | | *80 - 125* | *04/06/11 18:41* | *04/06/11 18:41* | *1* |

## Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods

**Lab Sample ID: 11C0778-BLK1** — **Client Sample ID: 11C0778-BLK1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/25/11 21:13 | 03/31/11 17:28 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/25/11 21:13 | 03/31/11 17:28 | 1.00 |

**Lab Sample ID: 11C0778-BS1** — **Client Sample ID: 11C0778-BS1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Iron | 2.00 | 1.94 | | mg/l | | 97.0 | 80 - 120 |
| Manganese | 0.100 | 0.0986 | | mg/l | | 98.6 | 80 - 120 |

**Lab Sample ID: 11C0778-MS1** — **Client Sample ID: LB-20S**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.368 | | 2.00 | 2.30 | | mg/l | | 96.7 | 75 - 125 |

**Lab Sample ID: 11C0778-MS1** — **Client Sample ID: LB-20S**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2.20 | | 0.100 | 2.12 | MHA | mg/l | | -79.0 | 75 - 125 |

**Lab Sample ID: 11C0778-MS2** — **Client Sample ID: PUC0877-06**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 18.5 | | 2.00 | 20.1 | | mg/l | | 80.0 | 75 - 125 |
| Manganese | 2.36 | | 0.100 | 2.41 | MHA | mg/l | | 59.0 | 75 - 125 |

**Lab Sample ID: 11C0778-DUP1** — **Client Sample ID: LB-1S**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Iron | ND | | ND | | mg/l | | | 20 |
| Manganese | ND | | ND | | mg/l | | | 20 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11C0920-BLK1** — **Client Sample ID: 11C0920-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | ND | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods (Continued)

**Lab Sample ID: 11C0920-BS1** — **Client Sample ID: 11C0920-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductivity | 1410 | 1410 | | uS/cm | | 99.8 | 85 - 115 |

**Lab Sample ID: 11C0920-DUP1** — **Client Sample ID: LB-1S**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 248 | | 248 | | uS/cm | | 0.00 | 20 |

## Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11C0802-BLK1** — **Client Sample ID: 11C0802-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0802** — **Prep Batch: 11C0802_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | | 10.0 | | mg/l | | 03/28/11 10:42 | 03/28/11 17:09 | 1.00 |

**Lab Sample ID: 11C0802-BS1** — **Client Sample ID: 11C0802-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0802** — **Prep Batch: 11C0802_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 100 | 108 | | mg/l | | 108 | 80 - 120 |

**Lab Sample ID: 11C0802-DUP1** — **Client Sample ID: PUC0783-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0802** — **Prep Batch: 11C0802_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 85.0 | | 83.0 | | mg/l | | 2.38 | 20 |

## Method: EPA 300.0 - Anions per EPA Method 300.0

**Lab Sample ID: 11C0748-BLK1** — **Client Sample ID: 11C0748-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.500 | | mg/l | | 03/25/11 09:38 | 03/25/11 13:09 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/25/11 09:38 | 03/25/11 13:09 | 1.00 |

**Lab Sample ID: 11C0748-BS1** — **Client Sample ID: 11C0748-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 10.2 | | mg/l | | 102 | 90 - 110 |
| Nitrate-Nitrogen | 5.00 | 4.99 | | mg/l | | 99.8 | 90 - 110 |

## Method: EPA 300.0 - Anions per EPA Method 300.0 (Continued)

**Lab Sample ID: 11C0748-MS1** — **Client Sample ID: PUC0829-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 12.3 | | 2.00 | 13.0 | M8 | mg/l | | 33.5 | 80 - 120 |
| Nitrate-Nitrogen | 0.110 | | 2.00 | 2.06 | | mg/l | | 97.5 | 80 - 120 |

**Lab Sample ID: 11C0748-MS2** — **Client Sample ID: PUC0871-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 20.1 | | 2.00 | 19.8 | M8 | mg/l | | -16.0 | 80 - 120 |
| Nitrate-Nitrogen | 0.140 | | 2.00 | 2.10 | | mg/l | | 98.0 | 80 - 120 |

**Lab Sample ID: 11C0748-MSD1** — **Client Sample ID: PUC0829-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Dup Result | Matrix Spike Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 12.3 | | 2.00 | 13.0 | M8 | mg/l | | 34.5 | 80 - 120 | 0.154 | 20 |
| Nitrate-Nitrogen | 0.110 | | 2.00 | 2.07 | | mg/l | | 98.0 | 80 - 120 | 0.484 | 20 |

**Lab Sample ID: 11C0748-DUP1** — **Client Sample ID: PUC0829-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Chloride | 12.3 | | 12.2 | | mg/l | | 0.814 | 20 |
| Nitrate-Nitrogen | 0.110 | | 0.110 | | mg/l | | 0.00 | 20 |

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

**Lab Sample ID: 83464-16** — **Client Sample ID: 83464-16**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 83464** — **Prep Batch: 83464_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

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

**Lab Sample ID: 83464-16**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-16**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

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

**Lab Sample ID: 83464-16**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-16**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Surrogate | Blank % Recovery | Blank Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 103 | | 75 - 120 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Ethylbenzene-d10 | 98 | | 75 - 125 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Fluorobenzene (Surr) | 102 | | 70 - 130 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Toluene-d8 (Surr) | 101 | | 75 - 125 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trifluorotoluene (Surr) | 106 | | 80 - 125 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

**Lab Sample ID: 83464-17**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-17**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.62 | | ug/L | | 112 | 78 - 151 | | |
| Benzene | | | 5.00 | 5.07 | | ug/L | | 101 | 75 - 142 | | |
| Chlorobenzene | | | 5.00 | 5.38 | | ug/L | | 108 | 71 - 140 | | |
| Toluene | | | 5.00 | 5.21 | | ug/L | | 104 | 80 - 126 | | |
| Trichloroethene | | | 5.00 | 5.19 | | ug/L | | 104 | 79 - 131 | | |

| Surrogate | LCS % Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 101 | | 75 - 120 |
| Ethylbenzene-d10 | 103 | | 75 - 125 |
| Fluorobenzene (Surr) | 100 | | 70 - 130 |
| Toluene-d8 (Surr) | 100 | | 75 - 125 |
| Trifluorotoluene (Surr) | 107 | | 80 - 125 |

**Lab Sample ID: 83464-18**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-18**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | | | Spike Added | LCS Dup Result | LCS Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.95 | | ug/L | | 119 | 78 - 151 | 6 | 20 |
| Benzene | | | 5.00 | 4.88 | | ug/L | | 98 | 75 - 142 | 4 | 20 |
| Chlorobenzene | | | 5.00 | 5.17 | | ug/L | | 103 | 71 - 140 | 4 | 20 |
| Toluene | | | 5.00 | 5.04 | | ug/L | | 101 | 80 - 126 | 3 | 20 |
| Trichloroethene | | | 5.00 | 5.12 | | ug/L | | 102 | 79 - 131 | 1 | 20 |

| Surrogate | LCS Dup % Recovery | LCS Dup Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 100 | | 75 - 120 |
| Ethylbenzene-d10 | 97 | | 75 - 125 |
| Fluorobenzene (Surr) | 99 | | 70 - 130 |
| Toluene-d8 (Surr) | 100 | | 75 - 125 |
| Trifluorotoluene (Surr) | 103 | | 80 - 125 |

# Certification Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0854

| Laboratory | Authority | Program | EPA Region | Certification ID |
|---|---|---|---|---|
| TestAmerica Portland | | USDA | | P330-11-00092 |
| TestAmerica Portland | Alaska | Alaska UST | 10 | UST-012 |
| TestAmerica Portland | Alaska | State Program | 10 | OR00040 |
| TestAmerica Portland | California | State Program | 9 | 2597 |
| TestAmerica Portland | Oregon | NELAC | 10 | OR100021 |
| TestAmerica Portland | Washington | State Program | 10 | C586 |
| TestAmerica Seattle | | USDA | | P330-11-00222 |
| TestAmerica Seattle | Alaska | Alaska UST | 10 | UST-022 |
| TestAmerica Seattle | California | NELAC | 9 | 1115CA |
| TestAmerica Seattle | Florida | NELAC | 4 | E871074 |
| TestAmerica Seattle | L-A-B | DoD ELAP | 0 | L2236 |
| TestAmerica Seattle | L-A-B | ISO/IEC 17025 | 0 | L2236 |
| TestAmerica Seattle | Louisiana | NELAC | 6 | 05016 |
| TestAmerica Seattle | Montana | MT DEQ UST | 8 | N/A |
| TestAmerica Seattle | Oregon | NELAC | 10 | WA100007 |
| TestAmerica Seattle | Washington | State Program | 10 | C553 |

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210
11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave,Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 X
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

# CHAIN OF CUSTODY REPORT

Work Order #: PUC0854

CLIENT: SCS Engineers
REPORT TO: David Lamadrid
ADDRESS:
PHONE: 503 639-9315 FAX:
PROJECT NAME: Leichner Brothers Landfill
PROJECT NUMBER: 04211030.01/.17
SAMPLED BY: T LaVague/

INVOICE TO: SCS Engineers Portland OR
P.O. NUMBER:

**TURNAROUND REQUEST** in Business Days *
Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl | $HNO_3$

REQUESTED ANALYSES: 8260 VOCs | Diss Metals (Fe, Mn) | Cond, Cl | TDS, Nitrate

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | 8260 VOCs | Diss Metals (Fe, Mn) | Cond, Cl | TDS, Nitrate | MATRIX (W, S, O) | # OF CONT. | LOCATION/ COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LB-1S | 3/24/11 @ 1015 | X | X | X | | W | 5 | Low Level VOCs /FF | |
| 2 | LB-20S | 3/24/11 @ 1110 | X | X | X | | W | 5 | /FF | |
| 3 | ~~Trip Blank~~ | 3/1/11 | X | | | | W | 1 | | |
| 4 | D.2. 3/24/11 | | | | | | | | DO NOT Analyze Trip blank | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |

RELEASED BY: T LaVague — DATE: 3/25/11 TIME: 1345 — RECEIVED BY: D Aurel — FIRM: TA-PDX — DATE: 3/25/11 TIME: 13:45
PRINT NAME: T LaVague — FIRM: SCS — PRINT NAME: D Aurel
RELEASED BY: — DATE: — RECEIVED BY: — DATE:
PRINT NAME: — FIRM: — TIME: — PRINT NAME: — FIRM: — TIME:

ADDITIONAL REMARKS: All Dissolved samples were field filtered

TEMP: 1.2C — PAGE OF

TAL-1000(0408)

Ray Tek

TestAmerica
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# Portland Sample Control Checklist

Work Order #: PVC0854 Date/Time Received: 3/25/11 1345
Client Name: SCS
Project Name: LBL
Time Zone:
☐EDT/EST ☐CDT/CST ☐MDT/MST ☑PDT/PST ☐AK ☐HI ☐OTHER

**Unpacking Checks:**
Cooler (s): 1
Temperature (s): 1.2
Digi #1 ☐ Digi #2 ☐ IR Gun ☐ (☐Plastic ☐Glass)
Raytek ☑ (☐Plastic ☐Glass)

**Temperature out of Range:**
__Not enough or No Ice
__Ice Melted
__W/in 4 Hrs of collection
__Ice Not Needed
__ Other:_____

Ice used: (circle one) GEL ~~LOOSE~~ BLUE NONE OTHER: _____ Initials: JM

| N/A | Yes | No | |
|---|---|---|---|
| ☑ | ☐ | ☐ | 1. If ESI client, were temp blanks received? If no, document on NOD. |
| ☑ | ☑ | ☐ | 2. Cooler Seals intact? (N/A if hand delivered) if no and ESI client, document on NOD. |
| JM | ☑ | ☐ | 3. Chain of Custody present? If no, document on NOD. Along with "received by" & "relinquished by" signatures with date & time? |
| | ☑ | ☐ | 4. Bottles received intact? If no, document on NOD. |
| | ☑ | ☐ | 5. Sample is not multiphasic? If no, document on NOD. |
| | ☑ | ☐ | 6. Sampler name/signature documented on COC? |
| | ☑ | ☐ | 7. Proper Container and preservatives used? If no, document on NOD. |
| ☐ | ☑ | ☐ | 8. pH of all samples checked and meet requirements? If no, document on NOD. |
| ☑ | ☐ | ☐ | 9. Cyanide samples checked for sulfides and meet requirements? If no, notify PM. |
| ☑ | ☐ | ☐ | 10. HF Dilution required? |
| | ☑ | ☐ | 11. Sufficient volume provided for all analysis and requested MS/MSD? If no, document on NOD and consult PM before proceeding. |
| | ☑ | ☐ | 12. Did chain of custody agree with samples received? If no, document on NOD. |
| ☐ | ☑ | ☐ | 13. Were VOA samples received without headspace? |
| | ☐ | ☑ | 14. Did samples require preservation with sodium thiosulfate? |
| ☑ | ☐ | ☐ | 15. If yes to #14, was the residual chlorine test negative? If no, document on NOD. |
| ☐ | ☑ | ☐ | 16. Are dissolved/field filtered metals bottles sediment-free? If no, document on NOD. |
| ☐ | ☑ | ☐ | 17. Are analyses with short holding times received in hold? |
| ☐ | ☑ | ☐ | 18. Were special log- in instructions read and followed? |

Checklist Reviewed: Log-in initials: JM Labeler initials: JM

9405 SW Nimbus Ave, Beaverton OR 97008 tel 503.906.9200 fax 503.906.9210 www.testamericainc.com

TestAmerica

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# ANALYTICAL REPORT

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

TestAmerica Job ID: PUC0871
Client Project/Site: 04211030.011.17
Client Project Description: Leichner Landfill 2011
Revision: 1

For:
SCS Engineers - Portland
14945 SW Sequoia Pkwy  Suite 180
Portland, OR 97224

Attn: David LaMadrid

*Authorized for release by:*
*05/27/2011 08:40:57 AM*

Darrell Auvil
Project Manager
darrell.auvil@testamericainc.com

# Table of Contents

# Sample Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| PUC0871-01 | LB-27I | Water | 03/25/11 12:15 | 03/25/11 16:12 |
| PUC0871-02 | LB-27D | Water | 03/25/11 12:40 | 03/25/11 16:12 |
| PUC0871-03 | LB-13D | Water | 03/25/11 14:45 | 03/25/11 16:12 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

## Job ID: PUC0871

**Laboratory: TestAmerica Portland**

**Narrative**

Amended report to reflect reporting additional 8260B VOC compounds.

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| MHA | Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS). |

### Wet Chem

| Qualifier | Qualifier Description |
|---|---|
| M8 | The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS). |

### TSEA

| Qualifier | Qualifier Description |
|---|---|
| X | Surrogate is outside 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. |
| EPA | United States Environmental Protection Agency |
| ND | Not Detected above the reporting level. |
| MDL | Method Detection Limit |
| RL | Reporting Limit |
| RE, RE1 (etc.) | Indicates a Re-extraction or Reanalysis of the sample. |
| %R | Percent Recovery |
| RPD | Relative Percent Difference, a measure of the relative difference between two points. |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

**Client Sample ID: LB-27I**
**Date Collected: 03/25/11 12:15**
**Date Received: 03/25/11 16:12**

**Lab Sample ID: PUC0871-01**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/25/11 21:13 | 03/31/11 18:03 | 1.00 |
| **Manganese** | **0.191** | | 0.00200 | | mg/l | | 03/25/11 21:13 | 03/31/11 18:03 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **512** | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **335** | | 10.0 | | mg/l | | 04/01/11 10:38 | 04/01/11 15:24 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **20.1** | | 0.500 | | mg/l | | 03/25/11 15:40 | 03/25/11 19:07 | 1.00 |
| **Nitrate-Nitrogen** | **0.140** | | 0.100 | | mg/l | | 03/25/11 15:40 | 03/25/11 19:07 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

**Client Sample ID: LB-27I**
**Date Collected: 03/25/11 12:15**
**Date Received: 03/25/11 16:12**

**Lab Sample ID: PUC0871-01**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 16:57 | 04/06/11 16:57 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *75 - 120* | *04/06/11 16:57* | *04/06/11 16:57* | *1* |
| *Ethylbenzene-d10* | *99* | | *75 - 125* | *04/06/11 16:57* | *04/06/11 16:57* | *1* |
| *Fluorobenzene (Surr)* | *101* | | *70 - 130* | *04/06/11 16:57* | *04/06/11 16:57* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 125* | *04/06/11 16:57* | *04/06/11 16:57* | *1* |
| *Trifluorotoluene (Surr)* | *108* | | *80 - 125* | *04/06/11 16:57* | *04/06/11 16:57* | *1* |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

**Client Sample ID: LB-27D**
**Date Collected: 03/25/11 12:40**
**Date Received: 03/25/11 16:12**

**Lab Sample ID: PUC0871-02**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/25/11 21:13 | 03/31/11 18:15 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/25/11 21:13 | 03/31/11 18:15 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 307 | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 245 | | 10.0 | | mg/l | | 04/01/11 10:38 | 04/01/11 15:24 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10.4 | | 0.500 | | mg/l | | 03/25/11 15:40 | 03/25/11 19:39 | 1.00 |
| Nitrate-Nitrogen | 3.77 | | 0.100 | | mg/l | | 03/25/11 15:40 | 03/25/11 19:39 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

**Client Sample ID: LB-27D**
**Date Collected: 03/25/11 12:40**
**Date Received: 03/25/11 16:12**

**Lab Sample ID: PUC0871-02**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 17:23 | 04/06/11 17:23 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *75 - 120* | *04/06/11 17:23* | *04/06/11 17:23* | *1* |
| *Ethylbenzene-d10* | *100* | | *75 - 125* | *04/06/11 17:23* | *04/06/11 17:23* | *1* |
| *Fluorobenzene (Surr)* | *101* | | *70 - 130* | *04/06/11 17:23* | *04/06/11 17:23* | *1* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 125* | *04/06/11 17:23* | *04/06/11 17:23* | *1* |
| *Trifluorotoluene (Surr)* | *131* | *X* | *80 - 125* | *04/06/11 17:23* | *04/06/11 17:23* | *1* |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

**Client Sample ID: LB-13D**
**Date Collected: 03/25/11 14:45**
**Date Received: 03/25/11 16:12**

**Lab Sample ID: PUC0871-03**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/25/11 21:13 | 03/31/11 18:19 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/25/11 21:13 | 03/31/11 18:19 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **214** | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **193** | | 10.0 | | mg/l | | 04/01/11 10:38 | 04/01/11 15:24 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4.36** | | 0.500 | | mg/l | | 03/25/11 15:40 | 03/25/11 20:10 | 1.00 |
| **Nitrate-Nitrogen** | **5.30** | | 0.100 | | mg/l | | 03/25/11 15:40 | 03/25/11 20:10 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |

**Client Sample ID: LB-13D**
**Date Collected: 03/25/11 14:45**
**Date Received: 03/25/11 16:12**

**Lab Sample ID: PUC0871-03**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 17:49 | 04/06/11 17:49 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *75 - 120* | *04/06/11 17:49* | *04/06/11 17:49* | *1* |
| *Ethylbenzene-d10* | *100* | | *75 - 125* | *04/06/11 17:49* | *04/06/11 17:49* | *1* |
| *Fluorobenzene (Surr)* | *98* | | *70 - 130* | *04/06/11 17:49* | *04/06/11 17:49* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 125* | *04/06/11 17:49* | *04/06/11 17:49* | *1* |
| *Trifluorotoluene (Surr)* | *101* | | *80 - 125* | *04/06/11 17:49* | *04/06/11 17:49* | *1* |

## Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods

**Lab Sample ID: 11C0778-BLK1** — **Client Sample ID: 11C0778-BLK1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/25/11 21:13 | 03/31/11 17:28 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/25/11 21:13 | 03/31/11 17:28 | 1.00 |

**Lab Sample ID: 11C0778-BS1** — **Client Sample ID: 11C0778-BS1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Iron | 2.00 | 1.94 | | mg/l | | 97.0 | 80 - 120 |
| Manganese | 0.100 | 0.0986 | | mg/l | | 98.6 | 80 - 120 |

**Lab Sample ID: 11C0778-MS1** — **Client Sample ID: PUC0854-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.368 | | 2.00 | 2.30 | | mg/l | | 96.7 | 75 - 125 |

**Lab Sample ID: 11C0778-MS1** — **Client Sample ID: PUC0854-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2.20 | | 0.100 | 2.12 | MHA | mg/l | | -79.0 | 75 - 125 |

**Lab Sample ID: 11C0778-MS2** — **Client Sample ID: PUC0877-06**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 18.5 | | 2.00 | 20.1 | | mg/l | | 80.0 | 75 - 125 |
| Manganese | 2.36 | | 0.100 | 2.41 | MHA | mg/l | | 59.0 | 75 - 125 |

**Lab Sample ID: 11C0778-DUP1** — **Client Sample ID: PUC0854-01**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0778** — **Prep Batch: 11C0778_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Iron | ND | | ND | | mg/l | | | 20 |
| Manganese | ND | | ND | | mg/l | | | 20 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11C0920-BLK1** — **Client Sample ID: 11C0920-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | ND | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods (Continued)

**Lab Sample ID: 11C0920-BS1** — **Client Sample ID: 11C0920-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductivity | 1410 | 1410 | | uS/cm | | 99.8 | 85 - 115 |

**Lab Sample ID: 11C0920-DUP1** — **Client Sample ID: PUC0854-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 248 | | 248 | | uS/cm | | 0.00 | 20 |

## Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11D0012-BLK1** — **Client Sample ID: 11D0012-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0012** — **Prep Batch: 11D0012_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | | 10.0 | | mg/l | | 04/01/11 10:38 | 04/01/11 15:24 | 1.00 |

**Lab Sample ID: 11D0012-BS1** — **Client Sample ID: 11D0012-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0012** — **Prep Batch: 11D0012_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 100 | 98.0 | | mg/l | | 98.0 | 80 - 120 |

**Lab Sample ID: 11D0012-DUP1** — **Client Sample ID: PUC0903-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0012** — **Prep Batch: 11D0012_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 30.0 | | 33.0 | | mg/l | | 9.52 | 20 |

## Method: EPA 300.0 - Anions per EPA Method 300.0

**Lab Sample ID: 11C0748-BLK1** — **Client Sample ID: 11C0748-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.500 | | mg/l | | 03/25/11 09:38 | 03/25/11 13:09 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/25/11 09:38 | 03/25/11 13:09 | 1.00 |

**Lab Sample ID: 11C0748-BS1** — **Client Sample ID: 11C0748-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 10.2 | | mg/l | | 102 | 90 - 110 |
| Nitrate-Nitrogen | 5.00 | 4.99 | | mg/l | | 99.8 | 90 - 110 |

## Method: EPA 300.0 - Anions per EPA Method 300.0 (Continued)

**Lab Sample ID: 11C0748-MS1** — **Client Sample ID: PUC0829-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 12.3 | | 2.00 | 13.0 | M8 | mg/l | | 33.5 | 80 - 120 |
| Nitrate-Nitrogen | 0.110 | | 2.00 | 2.06 | | mg/l | | 97.5 | 80 - 120 |

**Lab Sample ID: 11C0748-MS2** — **Client Sample ID: LB-27I**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 20.1 | | 2.00 | 19.8 | M8 | mg/l | | -16.0 | 80 - 120 |
| Nitrate-Nitrogen | 0.140 | | 2.00 | 2.10 | | mg/l | | 98.0 | 80 - 120 |

**Lab Sample ID: 11C0748-MSD1** — **Client Sample ID: PUC0829-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Dup Result | Matrix Spike Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 12.3 | | 2.00 | 13.0 | M8 | mg/l | | 34.5 | 80 - 120 | 0.154 | 20 |
| Nitrate-Nitrogen | 0.110 | | 2.00 | 2.07 | | mg/l | | 98.0 | 80 - 120 | 0.484 | 20 |

**Lab Sample ID: 11C0748-DUP1** — **Client Sample ID: PUC0829-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0748** — **Prep Batch: 11C0748_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Chloride | 12.3 | | 12.2 | | mg/l | | 0.814 | 20 |
| Nitrate-Nitrogen | 0.110 | | 0.110 | | mg/l | | 0.00 | 20 |

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

**Lab Sample ID: 83464-16** — **Client Sample ID: 83464-16**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 83464** — **Prep Batch: 83464_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

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

**Lab Sample ID: 83464-16**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-16**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

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

**Lab Sample ID: 83464-16**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-16**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Surrogate | Blank % Recovery | Blank Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 103 | | 75 - 120 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Ethylbenzene-d10 | 98 | | 75 - 125 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Fluorobenzene (Surr) | 102 | | 70 - 130 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Toluene-d8 (Surr) | 101 | | 75 - 125 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trifluorotoluene (Surr) | 106 | | 80 - 125 | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

**Lab Sample ID: 83464-17**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-17**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.62 | | ug/L | | 112 | 78 - 151 | | |
| Benzene | | | 5.00 | 5.07 | | ug/L | | 101 | 75 - 142 | | |
| Chlorobenzene | | | 5.00 | 5.38 | | ug/L | | 108 | 71 - 140 | | |
| Toluene | | | 5.00 | 5.21 | | ug/L | | 104 | 80 - 126 | | |
| Trichloroethene | | | 5.00 | 5.19 | | ug/L | | 104 | 79 - 131 | | |

| Surrogate | LCS % Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 101 | | 75 - 120 |
| Ethylbenzene-d10 | 103 | | 75 - 125 |
| Fluorobenzene (Surr) | 100 | | 70 - 130 |
| Toluene-d8 (Surr) | 100 | | 75 - 125 |
| Trifluorotoluene (Surr) | 107 | | 80 - 125 |

**Lab Sample ID: 83464-18**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-18**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | | | Spike Added | LCS Dup Result | LCS Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.95 | | ug/L | | 119 | 78 - 151 | 6 | 20 |
| Benzene | | | 5.00 | 4.88 | | ug/L | | 98 | 75 - 142 | 4 | 20 |
| Chlorobenzene | | | 5.00 | 5.17 | | ug/L | | 103 | 71 - 140 | 4 | 20 |
| Toluene | | | 5.00 | 5.04 | | ug/L | | 101 | 80 - 126 | 3 | 20 |
| Trichloroethene | | | 5.00 | 5.12 | | ug/L | | 102 | 79 - 131 | 1 | 20 |

| Surrogate | LCS Dup % Recovery | LCS Dup Qualifier | Limits |
|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 100 | | 75 - 120 |
| Ethylbenzene-d10 | 97 | | 75 - 125 |
| Fluorobenzene (Surr) | 99 | | 70 - 130 |
| Toluene-d8 (Surr) | 100 | | 75 - 125 |
| Trifluorotoluene (Surr) | 103 | | 80 - 125 |

# Certification Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0871

| Laboratory | Authority | Program | EPA Region | Certification ID |
|---|---|---|---|---|
| TestAmerica Portland | | USDA | | P330-11-00092 |
| TestAmerica Portland | Alaska | Alaska UST | 10 | UST-012 |
| TestAmerica Portland | Alaska | State Program | 10 | OR00040 |
| TestAmerica Portland | California | State Program | 9 | 2597 |
| TestAmerica Portland | Oregon | NELAC | 10 | OR100021 |
| TestAmerica Portland | Washington | State Program | 10 | C586 |
| TestAmerica Seattle | | USDA | | P330-11-00222 |
| TestAmerica Seattle | Alaska | Alaska UST | 10 | UST-022 |
| TestAmerica Seattle | California | NELAC | 9 | 1115CA |
| TestAmerica Seattle | Florida | NELAC | 4 | E871074 |
| TestAmerica Seattle | L-A-B | DoD ELAP | 0 | L2236 |
| TestAmerica Seattle | L-A-B | ISO/IEC 17025 | 0 | L2236 |
| TestAmerica Seattle | Louisiana | NELAC | 6 | 05016 |
| TestAmerica Seattle | Montana | MT DEQ UST | 8 | N/A |
| TestAmerica Seattle | Oregon | NELAC | 10 | WA100007 |
| TestAmerica Seattle | Washington | State Program | 10 | C553 |

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING


11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210
11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave,Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210


# CHAIN OF CUSTODY REPORT

Work Order #: PUC0871

CLIENT: SCS Engineers

REPORT TO: David Lamadrid
ADDRESS: 14945 SW Sequoia Pkwy, Ste 180
Portland, OR 97224
PHONE: (503) 639-9315 FAX:

INVOICE TO: SCS Engineers
Portland, OR office

P.O. NUMBER:

PROJECT NAME: Leichner Brothers Landfill
PROJECT NUMBER: 04211030.01/0.17
SAMPLED BY: David Lamadrid

**TURNAROUND REQUEST** in Business Days *

Organic & Inorganic Analyses: ~~10~~ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE: HCl | PRESERVATIVE: HNO3 | PRESERVATIVE: — | PRESERVATIVE: — | PRESERVATIVE: — | PRESERVATIVE: — | MATRIX (W, S, O) | # OF CONT. | LOCATION/ COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | REQUESTED ANALYSES: VOCs 8260 low level | Dissolved Mn, Fe (6020) | Conductivity (9050A) | TDS (160.1) | Chloride (300.0) | Nitrate (300.0) | | | | |
| 1 | LB-27I | 3/25/11 1215 | X | X | X | X | X | X | W | 3 | low level VOCs | |
| 2 | LB-27D | 3/25/11 1240 | X | X | X | X | X | X | W | 1 | ↓ | |
| 3 | LB-13D | 3/25/11 1445 | X | X | X | X | X | X | W | 1 | ↓ | |
| 4 | | | | | | | | | | | Samples were | |
| 5 | | | | | | | | | | | field filtered | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |

RELEASED BY: [signature] SCS
PRINT NAME: David Lamadrid FIRM: SCS Engineers DATE: 3/25/11 TIME: 1612

RECEIVED BY: [signature] PRINT NAME: FIRM: TAP DATE: 3/25/11 TIME: 1612

RELEASED BY: PRINT NAME: FIRM: DATE: TIME:

RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

TEMP: 3.1

PAGE OF

TAL-1000(0408)

TestAmerica
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# Portland Sample Control Checklist

Work Order #: PUC0871 Date/Time Received: 3/25/11 1612

Client Name: SCS

Project Name: LBL

Time Zone:
☐EDT/EST ☐CDT/CST ☐MDT/MST ☑PDT/PST ☐AK ☐HI ☐OTHER

**Unpacking Checks:**

Cooler (s): 1

Temperature (s): 3.1

Digi #1 ☐ Digi #2 ☐ IR Gun ☑ (☑Plastic ☐Glass)

Raytek ☐ (☐Plastic ☐Glass)

**Temperature out of Range:**
__Not enough or No Ice
__Ice Melted
__W/in 4 Hrs of collection
__Ice Not Needed
__ Other:_____

Ice used: (circle one) GEL (LOOSE) BLUE NONE OTHER: _____ Initials: JM

| N/A | Yes | No | |
|---|---|---|---|
| ☑ | ☐ | ☐ | 1. If ESI client, were temp blanks received? If no, document on NOD. |
| ☑ | ☐ | ☐ | 2. Cooler Seals intact? (N/A if hand delivered) if no and ESI client, document on NOD. |
| | ☑ | ☐ | 3. Chain of Custody present? If no, document on NOD. Along with "received by" & "relinquished by" signatures with date & time? |
| | ☑ | ☐ | 4. Bottles received intact? If no, document on NOD. |
| | ☑ | ☐ | 5. Sample is not multiphasic? If no, document on NOD. |
| | ☑ | ☐ | 6. Sampler name/signature documented on COC? |
| | ☑ | ☐ | 7. Proper Container and preservatives used? If no, document on NOD. |
| ☐ | ☑ | ☐ | 8. pH of all samples checked and meet requirements? If no, document on NOD. |
| ☑ | ☐ | ☐ | 9. Cyanide samples checked for sulfides and meet requirements? If no, notify PM. |
| ☑ | ☐ | ☐ | 10. HF Dilution required? |
| | ☑ | ☐ | 11. Sufficient volume provided for all analysis and requested MS/MSD? If no, document on NOD and consult PM before proceeding. |
| | ☑ | ☐ | 12. Did chain of custody agree with samples received? If no, document on NOD. |
| ☐ | ☑ | ☐ | 13. Were VOA samples received without headspace? |
| | ☐ | ☑ | 14. Did samples require preservation with sodium thiosulfate? |
| ☑ | ☐ | ☐ | 15. If yes to #14, was the residual chlorine test negative? If no, document on NOD. |
| ☐ | ☑ | ☐ | 16. Are dissolved/field filtered metals bottles sediment-free? If no, document on NOD. |
| ☐ | ☑ | ☐ | 17. Are analyses with short holding times received in hold? |
| ☐ | ☑ | ☐ | 18. Were special log- in instructions read and followed? |

#of cont. reads 1 for #2 and #3, recvd 5 each sample.

Checklist Reviewed: Log-in initials: JM Labeler initials: JM

9405 SW Nimbus Ave, Beaverton OR 97008 tel 503.906.9200 fax 503.906.9210 www.testamericainc.com

TestAmerica

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# ANALYTICAL REPORT

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

TestAmerica Job ID: PUC0929
Client Project/Site: 04211030.011.17
Client Project Description: Leichner Landfill 2011
Revision: 1

For:
SCS Engineers - Portland
14945 SW Sequoia Pkwy  Suite 180
Portland, OR 97224

Attn: David LaMadrid

*Authorized for release by:*
*05/27/2011 09:09:22 AM*

Darrell Auvil
Project Manager
darrell.auvil@testamericainc.com

# Table of Contents

# Sample Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0929

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| PUC0929-01 | LB-1D | Water | 03/28/11 12:10 | 03/29/11 09:57 |
| PUC0929-02 | LB-3S | Water | 03/28/11 13:25 | 03/29/11 09:57 |
| PUC0929-03 | LB-3D | Water | 03/28/11 16:15 | 03/29/11 09:57 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0929

## Job ID: PUC0929

### Laboratory: TestAmerica Portland

**Narrative**

Amended report to reflect reporting additional 8260B VOC compounds.

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0929

## Qualifiers

### Wet Chem

| Qualifier | Qualifier Description |
|---|---|
| M8 | The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS). |

## 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. |
| EPA | United States Environmental Protection Agency |
| ND | Not Detected above the reporting level. |
| MDL | Method Detection Limit |
| RL | Reporting Limit |
| RE, RE1 (etc.) | Indicates a Re-extraction or Reanalysis of the sample. |
| %R | Percent Recovery |
| RPD | Relative Percent Difference, a measure of the relative difference between two points. |

# Detection Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0929

## Client Sample ID: LB-1D — Lab Sample ID: PUC0929-01

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 220 | | 10.0 | | uS/cm | 1.00 | | 120.1/ 9050 | Total |
| Total Dissolved Solids | 195 | | 10.0 | | mg/l | 1.00 | | EPA 160.1 | Total |
| Chloride | 7.49 | | 0.500 | | mg/l | 1.00 | | EPA 300.0 | Total |
| Nitrate-Nitrogen | 5.87 | | 0.100 | | mg/l | 1.00 | | EPA 300.0 | Total |
| 1,1,1-Trichloroethane | 0.28 | | 0.10 | | ug/L | 1 | | 8260B STD | Total |

## Client Sample ID: LB-3S — Lab Sample ID: PUC0929-02

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 214 | | 10.0 | | uS/cm | 1.00 | | 120.1/ 9050 | Total |
| Total Dissolved Solids | 188 | | 10.0 | | mg/l | 1.00 | | EPA 160.1 | Total |
| Chloride | 3.40 | | 0.500 | | mg/l | 1.00 | | EPA 300.0 | Total |
| Nitrate-Nitrogen | 3.63 | | 0.100 | | mg/l | 1.00 | | EPA 300.0 | Total |

## Client Sample ID: LB-3D — Lab Sample ID: PUC0929-03

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 210 | | 10.0 | | uS/cm | 1.00 | | 120.1/ 9050 | Total |
| Total Dissolved Solids | 201 | | 10.0 | | mg/l | 1.00 | | EPA 160.1 | Total |
| Chloride | 4.23 | | 0.500 | | mg/l | 1.00 | | EPA 300.0 | Total |
| Nitrate-Nitrogen | 5.05 | | 0.100 | | mg/l | 1.00 | | EPA 300.0 | Total |

**Client Sample ID: LB-1D**
**Date Collected: 03/28/11 12:10**
**Date Received: 03/29/11 09:57**

**Lab Sample ID: PUC0929-01**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/31/11 19:10 | 04/02/11 03:54 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/31/11 19:10 | 04/02/11 03:54 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **220** | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **195** | | 10.0 | | mg/l | | 04/01/11 10:38 | 04/01/11 15:24 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **7.49** | | 0.500 | | mg/l | | 03/29/11 10:40 | 03/29/11 20:05 | 1.00 |
| **Nitrate-Nitrogen** | **5.87** | | 0.100 | | mg/l | | 03/29/11 10:40 | 03/29/11 20:05 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| **1,1,1-Trichloroethane** | **0.28** | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0929

**Client Sample ID: LB-1D**
**Date Collected: 03/28/11 12:10**
**Date Received: 03/29/11 09:57**

**Lab Sample ID: PUC0929-01**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 19:06 | 04/06/11 19:06 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *75 - 120* | *04/06/11 19:06* | *04/06/11 19:06* | *1* |
| *Ethylbenzene-d10* | *96* | | *75 - 125* | *04/06/11 19:06* | *04/06/11 19:06* | *1* |
| *Fluorobenzene (Surr)* | *99* | | *70 - 130* | *04/06/11 19:06* | *04/06/11 19:06* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 125* | *04/06/11 19:06* | *04/06/11 19:06* | *1* |
| *Trifluorotoluene (Surr)* | *117* | | *80 - 125* | *04/06/11 19:06* | *04/06/11 19:06* | *1* |

**Client Sample ID: LB-3S**
**Date Collected: 03/28/11 13:25**
**Date Received: 03/29/11 09:57**

**Lab Sample ID: PUC0929-02**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:02 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:02 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 214 | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 188 | | 10.0 | | mg/l | | 04/01/11 10:38 | 04/01/11 15:24 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3.40 | | 0.500 | | mg/l | | 03/29/11 10:40 | 03/29/11 20:36 | 1.00 |
| Nitrate-Nitrogen | 3.63 | | 0.100 | | mg/l | | 03/29/11 10:40 | 03/29/11 20:36 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0929

**Client Sample ID: LB-3S**
**Date Collected: 03/28/11 13:25**
**Date Received: 03/29/11 09:57**

**Lab Sample ID: PUC0929-02**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 19:42 | 04/06/11 19:42 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *75 - 120* | *04/06/11 19:42* | *04/06/11 19:42* | *1* |
| *Ethylbenzene-d10* | *100* | | *75 - 125* | *04/06/11 19:42* | *04/06/11 19:42* | *1* |
| *Fluorobenzene (Surr)* | *103* | | *70 - 130* | *04/06/11 19:42* | *04/06/11 19:42* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 125* | *04/06/11 19:42* | *04/06/11 19:42* | *1* |
| *Trifluorotoluene (Surr)* | *96* | | *80 - 125* | *04/06/11 19:42* | *04/06/11 19:42* | *1* |

**Client Sample ID: LB-3D**
**Date Collected: 03/28/11 16:15**
**Date Received: 03/29/11 09:57**

**Lab Sample ID: PUC0929-03**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:14 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:14 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 210 | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 201 | | 10.0 | | mg/l | | 04/01/11 10:38 | 04/01/11 15:24 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.23 | | 0.500 | | mg/l | | 03/29/11 10:40 | 03/29/11 21:07 | 1.00 |
| Nitrate-Nitrogen | 5.05 | | 0.100 | | mg/l | | 03/29/11 10:40 | 03/29/11 21:07 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0929

**Client Sample ID: LB-3D**
**Date Collected: 03/28/11 16:15**
**Date Received: 03/29/11 09:57**

**Lab Sample ID: PUC0929-03**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 20:07 | 04/06/11 20:07 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *75 - 120* | *04/06/11 20:07* | *04/06/11 20:07* | *1* |
| *Ethylbenzene-d10* | *101* | | *75 - 125* | *04/06/11 20:07* | *04/06/11 20:07* | *1* |
| *Fluorobenzene (Surr)* | *98* | | *70 - 130* | *04/06/11 20:07* | *04/06/11 20:07* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 125* | *04/06/11 20:07* | *04/06/11 20:07* | *1* |
| *Trifluorotoluene (Surr)* | *101* | | *80 - 125* | *04/06/11 20:07* | *04/06/11 20:07* | *1* |

## Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods

**Lab Sample ID: 11C0957-BLK1** — **Client Sample ID: 11C0957-BLK1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/31/11 19:10 | 04/02/11 03:47 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/31/11 19:10 | 04/02/11 03:47 | 1.00 |

**Lab Sample ID: 11C0957-BS1** — **Client Sample ID: 11C0957-BS1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Iron | 2.00 | 2.07 | | mg/l | | 104 | 80 - 120 |
| Manganese | 0.100 | 0.103 | | mg/l | | 103 | 80 - 120 |

**Lab Sample ID: 11C0957-MS1** — **Client Sample ID: LB-3S**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 2.00 | 2.04 | | mg/l | | 102 | 75 - 125 |
| Manganese | ND | | 0.100 | 0.101 | | mg/l | | 101 | 75 - 125 |

**Lab Sample ID: 11C0957-MS2** — **Client Sample ID: PUC0996-01**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.0248 | | 2.00 | 2.02 | | mg/l | | 99.6 | 75 - 125 |
| Manganese | 0.0404 | | 0.100 | 0.139 | | mg/l | | 98.7 | 75 - 125 |

**Lab Sample ID: 11C0957-DUP1** — **Client Sample ID: LB-1D**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Iron | ND | | ND | | mg/l | | | 20 |
| Manganese | ND | | ND | | mg/l | | | 20 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11C0920-BLK1** — **Client Sample ID: 11C0920-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | ND | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

**Lab Sample ID: 11C0920-BS1** — **Client Sample ID: 11C0920-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductivity | 1410 | 1410 | | uS/cm | | 99.8 | 85 - 115 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods (Continued)

**Lab Sample ID: 11C0920-DUP1** — **Client Sample ID: PUC0854-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 248 | | 248 | | uS/cm | | 0.00 | 20 |

## Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11D0012-BLK1** — **Client Sample ID: 11D0012-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0012** — **Prep Batch: 11D0012_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | | 10.0 | | mg/l | | 04/01/11 10:38 | 04/01/11 15:24 | 1.00 |

**Lab Sample ID: 11D0012-BS1** — **Client Sample ID: 11D0012-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0012** — **Prep Batch: 11D0012_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 100 | 98.0 | | mg/l | | 98.0 | 80 - 120 |

**Lab Sample ID: 11D0012-DUP1** — **Client Sample ID: PUC0903-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0012** — **Prep Batch: 11D0012_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 30.0 | | 33.0 | | mg/l | | 9.52 | 20 |

## Method: EPA 300.0 - Anions per EPA Method 300.0

**Lab Sample ID: 11C0833-BLK1** — **Client Sample ID: 11C0833-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.500 | | mg/l | | 03/29/11 10:40 | 03/29/11 13:35 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/29/11 10:40 | 03/29/11 13:35 | 1.00 |

**Lab Sample ID: 11C0833-BS1** — **Client Sample ID: 11C0833-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 10.3 | | mg/l | | 103 | 90 - 110 |
| Nitrate-Nitrogen | 5.00 | 5.02 | | mg/l | | 100 | 90 - 110 |

**Lab Sample ID: 11C0833-MS1** — **Client Sample ID: PUC0900-09**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.0800 | | 2.00 | 2.08 | | mg/l | | 100 | 80 - 120 |
| Nitrate-Nitrogen | ND | | 2.00 | 2.02 | | mg/l | | 101 | 80 - 120 |

## Method: EPA 300.0 - Anions per EPA Method 300.0 (Continued)

**Lab Sample ID: 11C0833-MS2** — **Client Sample ID: PUC0941-03**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 18.1 | | 2.00 | 17.8 | M8 | mg/l | | -15.0 | 80 - 120 |
| Nitrate-Nitrogen | 0.0700 | | 2.00 | 1.97 | | mg/l | | 95.0 | 80 - 120 |

**Lab Sample ID: 11C0833-MSD1** — **Client Sample ID: PUC0900-09**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Dup Result | Matrix Spike Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.0800 | | 2.00 | 2.08 | | mg/l | | 100 | 80 - 120 | 0.00 | 20 |
| Nitrate-Nitrogen | ND | | 2.00 | 2.02 | | mg/l | | 101 | 80 - 120 | 0.00 | 20 |

**Lab Sample ID: 11C0833-DUP1** — **Client Sample ID: PUC0900-09**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Chloride | 0.0800 | | 0.0800 | | mg/l | | 0.00 | 20 |
| Nitrate-Nitrogen | ND | | ND | | mg/l | | | 20 |

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

**Lab Sample ID: 83464-16** — **Client Sample ID: 83464-16**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 83464** — **Prep Batch: 83464_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

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

**Lab Sample ID: 83464-16**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-16**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorodibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dichlorobromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

| *Surrogate* | *Blank % Recovery* | *Blank Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *75 - 120* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |
| *Ethylbenzene-d10* | *98* | | *75 - 125* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |
| *Fluorobenzene (Surr)* | *102* | | *70 - 130* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *75 - 125* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |
| *Trifluorotoluene (Surr)* | *106* | | *80 - 125* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |

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

**Lab Sample ID: 83464-17**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-17**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.62 | | ug/L | | 112 | 78 - 151 | | |
| Benzene | | | 5.00 | 5.07 | | ug/L | | 101 | 75 - 142 | | |
| Chlorobenzene | | | 5.00 | 5.38 | | ug/L | | 108 | 71 - 140 | | |
| Toluene | | | 5.00 | 5.21 | | ug/L | | 104 | 80 - 126 | | |
| Trichloroethene | | | 5.00 | 5.19 | | ug/L | | 104 | 79 - 131 | | |

| *Surrogate* | *LCS % Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *75 - 120* |
| *Ethylbenzene-d10* | *103* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *100* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *107* | | *80 - 125* |

**Lab Sample ID: 83464-18**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 83464-18**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | | | Spike Added | LCS Dup Result | LCS Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | | | 5.00 | 5.95 | | ug/L | | 119 | 78 - 151 | 6 | 20 |
| Benzene | | | 5.00 | 4.88 | | ug/L | | 98 | 75 - 142 | 4 | 20 |
| Chlorobenzene | | | 5.00 | 5.17 | | ug/L | | 103 | 71 - 140 | 4 | 20 |
| Toluene | | | 5.00 | 5.04 | | ug/L | | 101 | 80 - 126 | 3 | 20 |
| Trichloroethene | | | 5.00 | 5.12 | | ug/L | | 102 | 79 - 131 | 1 | 20 |

| *Surrogate* | *LCS Dup % Recovery* | *LCS Dup Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *75 - 120* |
| *Ethylbenzene-d10* | *97* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *99* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *103* | | *80 - 125* |

# Certification Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0929

| Laboratory | Authority | Program | EPA Region | Certification ID |
|---|---|---|---|---|
| TestAmerica Portland | | USDA | | P330-11-00092 |
| TestAmerica Portland | Alaska | Alaska UST | 10 | UST-012 |
| TestAmerica Portland | Alaska | State Program | 10 | OR00040 |
| TestAmerica Portland | California | State Program | 9 | 2597 |
| TestAmerica Portland | Oregon | NELAC | 10 | OR100021 |
| TestAmerica Portland | Washington | State Program | 10 | C586 |
| TestAmerica Seattle | | USDA | | P330-11-00222 |
| TestAmerica Seattle | Alaska | Alaska UST | 10 | UST-022 |
| TestAmerica Seattle | California | NELAC | 9 | 1115CA |
| TestAmerica Seattle | Florida | NELAC | 4 | E871074 |
| TestAmerica Seattle | L-A-B | DoD ELAP | 0 | L2236 |
| TestAmerica Seattle | L-A-B | ISO/IEC 17025 | 0 | L2236 |
| TestAmerica Seattle | Louisiana | NELAC | 6 | 05016 |
| TestAmerica Seattle | Montana | MT DEQ UST | 8 | N/A |
| TestAmerica Seattle | Oregon | NELAC | 10 | WA100007 |
| TestAmerica Seattle | Washington | State Program | 10 | C553 |

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING


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2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 [ ]


# CHAIN OF CUSTODY REPORT

Work Order #: PVC0929

CLIENT: SCS Engineers

REPORT TO: David Lamadrid
ADDRESS: 14945 SW Sequoia Pkwy, Ste 180
Portland, OR 97224
PHONE: (503)603-9315 FAX:

INVOICE TO: David Lamadrid
SCS Engineers
Portland, OR

P.O. NUMBER:

PROJECT NAME: Leichner Brothers Landfill
PROJECT NUMBER: 04211030.01/.17
SAMPLED BY: David Lamadrid

**TURNAROUND REQUEST**
in Business Days *
Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl | HNO3 | — | — | — | —

REQUESTED ANALYSES

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | VOCs (8260) low level | Dissolved Fe, Mn (6020) | Cond. (9050A) | TDS (160.1) | Chloride (300.0) | Nitrate (300.0) | MATRIX (W, S, O) | # OF CONT. | LOCATION/ COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LB-1D | 3/28/11 1210 | X | X | X | X | X | X | W | 5 | low level VOCs | |
| 2 | LB-3S | 3/28/11 1325 | X | X | X | X | X | X | W | 5 | ↓ | |
| 3 | LB-3D | 3/28/11 1615 | X | X | X | X | X | X | W | 5 | ↓ | |
| 4 | | | | | | | | | | | All samples were field filtered | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |

RELEASED BY: David Lamadrid DATE: 3/29/11
PRINT NAME: David Lamadrid FIRM: SCS Engineers TIME: 0800
RECEIVED BY: Bob K DATE: 3/29/11
PRINT NAME: Bob K FIRM: TAP TIME: 9:45

RELEASED BY: Bob K DATE: 3/29/11
PRINT NAME: Bob K FIRM: TAP TIME: 9:57
RECEIVED BY: Jessica Nyn DATE: 3/29/11
PRINT NAME: Jessica Nyn FIRM: TAP TIME: 0957

ADDITIONAL REMARKS:

TEMP: 0.4 PAGE OF

TAL-1000(0408)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

# Portland Sample Control Checklist

**Work Order #:** PVC0929 **Date/Time Received:** 3/29/11 0957
**Client Name:** SCS
**Project Name:** LBL
Time Zone:
☐EDT/EST ☐CDT/CST ☐MDT/MST ☑PDT/PST ☐AK ☐HI ☐OTHER

**Unpacking Checks:**
**Cooler (s):** 1
**Temperature (s):** 0-4

| Digi #1 | Digi #2 | IR Gun |
|---|---|---|
| ☐ | ☐ | ☑ (☐Plastic ☐Glass) |

**Raytek** ☑ (☑Plastic ☐Glass)

**Ice used: (circle one)** GEL LOOSE BLUE NONE OTHER: _____ **Initials:** JM

**Temperature out of Range:**
__Not enough or No Ice
__Ice Melted
__W/in 4 Hrs of collection
__Ice Not Needed
__ Other:_____

| N/A | Yes | No | |
|---|---|---|---|
| ☑ | ☐ | ☐ | 1. If ESI client, were temp blanks received? If no, document on NOD. |
| ☐ | ☑ | ☐ | 2. Cooler Seals intact? (N/A if hand delivered) if no and ESI client, document on NOD. |
| | ☑ | ☐ | 3. Chain of Custody present? If no, document on NOD. Along with "received by" & "relinquished by" signatures with date & time? |
| | ☑ | ☐ | 4. Bottles received intact? If no, document on NOD. |
| | ☑ | ☐ | 5. Sample is not multiphasic? If no, document on NOD. |
| | ☑ | ☐ | 6. Sampler name/signature documented on COC? |
| | ☑ | ☐ | 7. Proper Container and preservatives used? If no, document on NOD. |
| ☐ | ☑ | ☐ | 8. pH of all samples checked and meet requirements? If no, document on NOD. |
| ☑ | ☐ | ☐ | 9. Cyanide samples checked for sulfides and meet requirements? If no, notify PM. |
| ☑ | ☐ | ☐ | 10. HF Dilution required? |
| | ☑ | ☐ | 11. Sufficient volume provided for all analysis and requested MS/MSD? If no, document on NOD and consult PM before proceeding. |
| | ☑ | ☐ | 12. Did chain of custody agree with samples received? If no, document on NOD. |
| ☐ | ☑ | ☐ | 13. Were VOA samples received without headspace? |
| | ☐ | ☑ | 14. Did samples require preservation with sodium thiosulfate? |
| ☑ | ☐ | ☐ | 15. If yes to #14, was the residual chlorine test negative? If no, document on NOD. |
| ☑ | ☐ | ☐ | 16. Are dissolved/field filtered metals bottles sediment-free? If no, document on NOD. |
| ☐ | ☑ | ☐ | 17. Are analyses with short holding times received in hold? |
| ☐ | ☐ | ☑ | 18. Were special log- in instructions read and followed? |

**Checklist Reviewed:** **Log-in initials:** JM **Labeler initials:** JM

9405 SW Nimbus Ave, Beaverton OR 97008 tel 503.906.9200 fax 503.906.9210 www.testamericainc.com

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: PUC0969
Client Project/Site: 04211030.011.17
Client Project Description: Leichner Landfill 2011
Revision: 1

For:
SCS Engineers - Portland
14945 SW Sequoia Pkwy  Suite 180
Portland, OR 97224

Attn: David LaMadrid

*Authorized for release by:*
*05/27/2011 08:30:56 AM*

Darrell Auvil
Project Manager
darrell.auvil@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

# Table of Contents

# Sample Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0969

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| PUC0969-01 | LB-10DR | Water | 03/29/11 11:50 | 03/29/11 15:51 |
| PUC0969-02 | LB-10SR | Water | 03/29/11 12:50 | 03/29/11 15:51 |
| PUC0969-03 | Dup2 | Water | 03/29/11 00:00 | 03/29/11 15:51 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0969

## Job ID: PUC0969

**Laboratory: TestAmerica Portland**

**Narrative**

Amended report to reflect addtional 8260B VOC compounds reported.

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0969

## Qualifiers

### Wet Chem

| Qualifier | Qualifier Description |
|---|---|
| M8 | The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS). |

## 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. |
| EPA | United States Environmental Protection Agency |
| ND | Not Detected above the reporting level. |
| MDL | Method Detection Limit |
| RL | Reporting Limit |
| RE, RE1 (etc.) | Indicates a Re-extraction or Reanalysis of the sample. |
| %R | Percent Recovery |
| RPD | Relative Percent Difference, a measure of the relative difference between two points. |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0969

**Client Sample ID: LB-10DR**
**Date Collected: 03/29/11 11:50**
**Date Received: 03/29/11 15:51**

**Lab Sample ID: PUC0969-01**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:18 | 1.00 |
| **Manganese** | **0.00696** | | 0.00200 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:18 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Specific Conductivity** | **479** | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **329** | | 10.0 | | mg/l | | 04/05/11 10:09 | 04/05/11 15:48 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **26.0** | | 0.500 | | mg/l | | 03/29/11 16:00 | 03/29/11 23:27 | 1.00 |
| **Nitrate-Nitrogen** | **1.27** | | 0.100 | | mg/l | | 03/29/11 16:00 | 03/29/11 23:27 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| **1,1-Dichloroethane** | **0.18** | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Bromochloromethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Bromodichloromethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0969

**Client Sample ID: LB-10DR**
**Date Collected: 03/29/11 11:50**
**Date Received: 03/29/11 15:51**

**Lab Sample ID: PUC0969-01**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Dibromochloromethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 20:32 | 04/06/11 20:32 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *75 - 120* | *04/06/11 20:32* | *04/06/11 20:32* | *1* |
| *Ethylbenzene-d10* | *99* | | *75 - 125* | *04/06/11 20:32* | *04/06/11 20:32* | *1* |
| *Fluorobenzene (Surr)* | *101* | | *70 - 130* | *04/06/11 20:32* | *04/06/11 20:32* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 125* | *04/06/11 20:32* | *04/06/11 20:32* | *1* |
| *Trifluorotoluene (Surr)* | *102* | | *80 - 125* | *04/06/11 20:32* | *04/06/11 20:32* | *1* |

**Client Sample ID: LB-10SR**
**Date Collected: 03/29/11 12:50**
**Date Received: 03/29/11 15:51**

**Lab Sample ID: PUC0969-02**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:21 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:21 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 341 | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 270 | | 10.0 | | mg/l | | 04/05/11 10:09 | 04/05/11 15:48 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15.3 | | 0.500 | | mg/l | | 03/29/11 16:00 | 03/29/11 23:59 | 1.00 |
| Nitrate-Nitrogen | 1.53 | | 0.100 | | mg/l | | 03/29/11 16:00 | 03/29/11 23:59 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Bromochloromethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Bromodichloromethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0969

**Client Sample ID: LB-10SR**
**Date Collected: 03/29/11 12:50**
**Date Received: 03/29/11 15:51**

**Lab Sample ID: PUC0969-02**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Dibromochloromethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/08/11 13:17 | 04/08/11 13:17 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *98* | | *75 - 120* | *04/08/11 13:17* | *04/08/11 13:17* | *1* |
| *Ethylbenzene-d10* | *95* | | *75 - 125* | *04/08/11 13:17* | *04/08/11 13:17* | *1* |
| *Fluorobenzene (Surr)* | *100* | | *70 - 130* | *04/08/11 13:17* | *04/08/11 13:17* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 125* | *04/08/11 13:17* | *04/08/11 13:17* | *1* |
| *Trifluorotoluene (Surr)* | *103* | | *80 - 125* | *04/08/11 13:17* | *04/08/11 13:17* | *1* |

**Client Sample ID: Dup2**
**Date Collected: 03/29/11 00:00**
**Date Received: 03/29/11 15:51**

**Lab Sample ID: PUC0969-03**
**Matrix: Water**

### Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:33 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/31/11 19:10 | 04/02/11 04:33 | 1.00 |

### Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 341 | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

### Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 270 | | 10.0 | | mg/l | | 04/05/11 10:09 | 04/05/11 15:48 | 1.00 |

### Method: EPA 300.0 - Anions per EPA Method 300.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15.3 | | 0.500 | | mg/l | | 03/29/11 16:00 | 03/30/11 00:30 | 1.00 |
| Nitrate-Nitrogen | 1.57 | | 0.100 | | mg/l | | 03/29/11 16:00 | 03/30/11 00:30 | 1.00 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Bromochloromethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Bromodichloromethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0969

**Client Sample ID: Dup2**
**Date Collected: 03/29/11 00:00**
**Date Received: 03/29/11 15:51**

**Lab Sample ID: PUC0969-03**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Dibromochloromethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| **Trichloroethene** | **0.15** | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/08/11 12:51 | 04/08/11 12:51 | 1 |

| *Surrogate* | *% Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *75 - 120* | *04/08/11 12:51* | *04/08/11 12:51* | *1* |
| *Ethylbenzene-d10* | *90* | | *75 - 125* | *04/08/11 12:51* | *04/08/11 12:51* | *1* |
| *Fluorobenzene (Surr)* | *96* | | *70 - 130* | *04/08/11 12:51* | *04/08/11 12:51* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 125* | *04/08/11 12:51* | *04/08/11 12:51* | *1* |
| *Trifluorotoluene (Surr)* | *102* | | *80 - 125* | *04/08/11 12:51* | *04/08/11 12:51* | *1* |

## Method: EPA 6020 - Dissolved Metals per EPA 6000/7000 Series Methods

**Lab Sample ID: 11C0957-BLK1** — **Client Sample ID: 11C0957-BLK1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.0250 | | mg/l | | 03/31/11 19:10 | 04/02/11 03:47 | 1.00 |
| Manganese | ND | | 0.00200 | | mg/l | | 03/31/11 19:10 | 04/02/11 03:47 | 1.00 |

**Lab Sample ID: 11C0957-BS1** — **Client Sample ID: 11C0957-BS1**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Iron | 2.00 | 2.07 | | mg/l | | 104 | 80 - 120 |
| Manganese | 0.100 | 0.103 | | mg/l | | 103 | 80 - 120 |

**Lab Sample ID: 11C0957-MS1** — **Client Sample ID: PUC0929-02**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 2.00 | 2.04 | | mg/l | | 102 | 75 - 125 |
| Manganese | ND | | 0.100 | 0.101 | | mg/l | | 101 | 75 - 125 |

**Lab Sample ID: 11C0957-MS2** — **Client Sample ID: PUC0996-01**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.0248 | | 2.00 | 2.02 | | mg/l | | 99.6 | 75 - 125 |
| Manganese | 0.0404 | | 0.100 | 0.139 | | mg/l | | 98.7 | 75 - 125 |

**Lab Sample ID: 11C0957-DUP1** — **Client Sample ID: PUC0929-01**
**Matrix: Water** — **Prep Type: Dissolved**
**Analysis Batch: 11C0957** — **Prep Batch: 11C0957_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Iron | ND | | ND | | mg/l | | | 20 |
| Manganese | ND | | ND | | mg/l | | | 20 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11C0920-BLK1** — **Client Sample ID: 11C0920-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | ND | | 10.0 | | uS/cm | | 03/31/11 11:00 | 03/31/11 14:10 | 1.00 |

**Lab Sample ID: 11C0920-BS1** — **Client Sample ID: 11C0920-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductivity | 1410 | 1410 | | uS/cm | | 99.8 | 85 - 115 |

## Method: 120.1/ 9050 - Conventional Chemistry Parameters per APHA/EPA Methods (Continued)

**Lab Sample ID: 11C0920-DUP1** — **Client Sample ID: PUC0854-01**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11C0920** — **Prep Batch: 11C0920_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductivity | 248 | | 248 | | uS/cm | | 0.00 | 20 |

## Method: EPA 160.1 - Conventional Chemistry Parameters per APHA/EPA Methods

**Lab Sample ID: 11D0100-BLK1** — **Client Sample ID: 11D0100-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0100** — **Prep Batch: 11D0100_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | | 10.0 | | mg/l | | 04/05/11 10:09 | 04/05/11 15:48 | 1.00 |

**Lab Sample ID: 11D0100-BS1** — **Client Sample ID: 11D0100-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0100** — **Prep Batch: 11D0100_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 100 | 107 | | mg/l | | 107 | 80 - 120 |

**Lab Sample ID: 11D0100-DUP1** — **Client Sample ID: LB-10DR**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 11D0100** — **Prep Batch: 11D0100_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 329 | | 327 | | mg/l | | 0.610 | 20 |

## Method: EPA 300.0 - Anions per EPA Method 300.0

**Lab Sample ID: 11C0833-BLK1** — **Client Sample ID: 11C0833-BLK1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | | 0.500 | | mg/l | | 03/29/11 10:40 | 03/29/11 13:35 | 1.00 |
| Nitrate-Nitrogen | ND | | 0.100 | | mg/l | | 03/29/11 10:40 | 03/29/11 13:35 | 1.00 |

**Lab Sample ID: 11C0833-BS1** — **Client Sample ID: 11C0833-BS1**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 10.3 | | mg/l | | 103 | 90 - 110 |
| Nitrate-Nitrogen | 5.00 | 5.02 | | mg/l | | 100 | 90 - 110 |

**Lab Sample ID: 11C0833-MS1** — **Client Sample ID: PUC0900-09**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.0800 | | 2.00 | 2.08 | | mg/l | | 100 | 80 - 120 |
| Nitrate-Nitrogen | ND | | 2.00 | 2.02 | | mg/l | | 101 | 80 - 120 |

## Method: EPA 300.0 - Anions per EPA Method 300.0 (Continued)

**Lab Sample ID: 11C0833-MS2** — **Client Sample ID: PUC0941-03**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Result | Matrix Spike Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 18.1 | | 2.00 | 17.8 | M8 | mg/l | | -15.0 | 80 - 120 |
| Nitrate-Nitrogen | 0.0700 | | 2.00 | 1.97 | | mg/l | | 95.0 | 80 - 120 |

**Lab Sample ID: 11C0833-MSD1** — **Client Sample ID: PUC0900-09**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Sample Result | Sample Qualifier | Spike Added | Matrix Spike Dup Result | Matrix Spike Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.0800 | | 2.00 | 2.08 | | mg/l | | 100 | 80 - 120 | 0.00 | 20 |
| Nitrate-Nitrogen | ND | | 2.00 | 2.02 | | mg/l | | 101 | 80 - 120 | 0.00 | 20 |

**Lab Sample ID: 11C0833-DUP1** — **Client Sample ID: PUC0900-09**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: U000867** — **Prep Batch: 11C0833_P**

| Analyte | Sample Result | Sample Qualifier | Duplicate Result | Duplicate Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Chloride | 0.0800 | | 0.0800 | | mg/l | | 0.00 | 20 |
| Nitrate-Nitrogen | ND | | ND | | mg/l | | | 20 |

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

**Lab Sample ID: 580-83464-16** — **Client Sample ID: 580-83464-16**
**Matrix: Water** — **Prep Type: Total**
**Analysis Batch: 83464** — **Prep Batch: 83464_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

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

**Lab Sample ID: 580-83464-16**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 580-83464-16**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromochloromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromodichloromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dibromochloromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/06/11 14:51 | 04/06/11 14:51 | 1 |

| *Surrogate* | *Blank % Recovery* | *Blank Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *75 - 120* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |
| *Ethylbenzene-d10* | *98* | | *75 - 125* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |
| *Fluorobenzene (Surr)* | *102* | | *70 - 130* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *75 - 125* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |
| *Trifluorotoluene (Surr)* | *106* | | *80 - 125* | *04/06/11 14:51* | *04/06/11 14:51* | *1* |

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

**Lab Sample ID: 580-83464-17**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 580-83464-17**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 5.00 | 5.62 | | ug/L | | 112 | 78 - 151 |
| Benzene | 5.00 | 5.07 | | ug/L | | 101 | 75 - 142 |
| Chlorobenzene | 5.00 | 5.38 | | ug/L | | 108 | 71 - 140 |
| Toluene | 5.00 | 5.21 | | ug/L | | 104 | 80 - 126 |
| Trichloroethene | 5.00 | 5.19 | | ug/L | | 104 | 79 - 131 |

| *Surrogate* | *LCS % Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *101* | | *75 - 120* |
| *Ethylbenzene-d10* | *103* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *100* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *107* | | *80 - 125* |

**Lab Sample ID: 580-83464-18**
**Matrix: Water**
**Analysis Batch: 83464**

**Client Sample ID: 580-83464-18**
**Prep Type: Total**
**Prep Batch: 83464_P**

| Analyte | Spike Added | LCS Dup Result | LCS Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 5.00 | 5.95 | | ug/L | | 119 | 78 - 151 | 6 | 20 |
| Benzene | 5.00 | 4.88 | | ug/L | | 98 | 75 - 142 | 4 | 20 |
| Chlorobenzene | 5.00 | 5.17 | | ug/L | | 103 | 71 - 140 | 4 | 20 |
| Toluene | 5.00 | 5.04 | | ug/L | | 101 | 80 - 126 | 3 | 20 |
| Trichloroethene | 5.00 | 5.12 | | ug/L | | 102 | 79 - 131 | 1 | 20 |

| *Surrogate* | *LCS Dup % Recovery* | *LCS Dup Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *100* | | *75 - 120* |
| *Ethylbenzene-d10* | *97* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *99* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *103* | | *80 - 125* |

**Lab Sample ID: 580-83648-4**
**Matrix: Water**
**Analysis Batch: 83648**

**Client Sample ID: 580-83648-4**
**Prep Type: Total**
**Prep Batch: 83648_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.40 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,2-Dibromoethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |

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

**Lab Sample ID: 580-83648-4**
**Matrix: Water**
**Analysis Batch: 83648**

**Client Sample ID: 580-83648-4**
**Prep Type: Total**
**Prep Batch: 83648_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,2-Dichloroethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,3,5-Trichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,3-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 2,2-Dichloropropane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 2-Butanone (MEK) | ND | | 2.0 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 2-Chlorotoluene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 2-Hexanone | ND | | 1.0 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 4-Chlorotoluene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 4-Isopropyltoluene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Acetone | ND | | 2.0 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Benzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Bromobenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Bromochloromethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Bromodichloromethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Bromoform | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Bromomethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Carbon disulfide | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Carbon tetrachloride | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Chlorobenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Chloroethane | ND | | 0.25 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Chloroform | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Chloromethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Dibromochloromethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Dibromomethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Dichlorodifluoromethane | ND | | 0.40 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Isopropylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Methyl tert-butyl ether | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Methylene Chloride | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| m-Xylene & p-Xylene | ND | | 0.20 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Naphthalene | ND | | 0.40 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| n-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| N-Propylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| o-Xylene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| sec-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Styrene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| tert-Butylbenzene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Tetrachloroethene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Toluene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |

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

**Lab Sample ID: 580-83648-4**
**Matrix: Water**
**Analysis Batch: 83648**

**Client Sample ID: 580-83648-4**
**Prep Type: Total**
**Prep Batch: 83648_P**

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Trichlorofluoromethane | ND | | 0.10 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |
| Vinyl chloride | ND | | 0.020 | | ug/L | | 04/08/11 10:44 | 04/08/11 10:44 | 1 |

| *Surrogate* | *Blank % Recovery* | *Blank Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *99* | | *75 - 120* | *04/08/11 10:44* | *04/08/11 10:44* | *1* |
| *Ethylbenzene-d10* | *96* | | *75 - 125* | *04/08/11 10:44* | *04/08/11 10:44* | *1* |
| *Fluorobenzene (Surr)* | *99* | | *70 - 130* | *04/08/11 10:44* | *04/08/11 10:44* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 125* | *04/08/11 10:44* | *04/08/11 10:44* | *1* |
| *Trifluorotoluene (Surr)* | *102* | | *80 - 125* | *04/08/11 10:44* | *04/08/11 10:44* | *1* |

**Lab Sample ID: 580-83648-5**
**Matrix: Water**
**Analysis Batch: 83648**

**Client Sample ID: 580-83648-5**
**Prep Type: Total**
**Prep Batch: 83648_P**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | % Rec | % Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 5.00 | 5.98 | | ug/L | | 120 | 78 - 151 |
| Benzene | 5.00 | 5.04 | | ug/L | | 101 | 75 - 142 |
| Chlorobenzene | 5.00 | 5.06 | | ug/L | | 101 | 71 - 140 |
| Toluene | 5.00 | 4.93 | | ug/L | | 99 | 80 - 126 |
| Trichloroethene | 5.00 | 5.08 | | ug/L | | 102 | 79 - 131 |

| *Surrogate* | *LCS % Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *97* | | *75 - 120* |
| *Ethylbenzene-d10* | *96* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *101* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *103* | | *80 - 125* |

**Lab Sample ID: 580-83648-6**
**Matrix: Water**
**Analysis Batch: 83648**

**Client Sample ID: 580-83648-6**
**Prep Type: Total**
**Prep Batch: 83648_P**

| Analyte | Spike Added | LCS Dup Result | LCS Dup Qualifier | Unit | D | % Rec | % Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 5.00 | 5.90 | | ug/L | | 118 | 78 - 151 | 1 | 20 |
| Benzene | 5.00 | 4.75 | | ug/L | | 95 | 75 - 142 | 6 | 20 |
| Chlorobenzene | 5.00 | 4.50 | | ug/L | | 90 | 71 - 140 | 12 | 20 |
| Toluene | 5.00 | 4.51 | | ug/L | | 90 | 80 - 126 | 9 | 20 |
| Trichloroethene | 5.00 | 5.01 | | ug/L | | 100 | 79 - 131 | 1 | 20 |

| *Surrogate* | *LCS Dup % Recovery* | *LCS Dup Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *95* | | *75 - 120* |
| *Ethylbenzene-d10* | *89* | | *75 - 125* |
| *Fluorobenzene (Surr)* | *98* | | *70 - 130* |
| *Toluene-d8 (Surr)* | *92* | | *75 - 125* |
| *Trifluorotoluene (Surr)* | *95* | | *80 - 125* |

# Certification Summary

Client: SCS Engineers - Portland
Project/Site: 04211030.011.17

TestAmerica Job ID: PUC0969

| Laboratory | Authority | Program | EPA Region | Certification ID |
|---|---|---|---|---|
| TestAmerica Portland | | USDA | | P330-11-00092 |
| TestAmerica Portland | Alaska | Alaska UST | 10 | UST-012 |
| TestAmerica Portland | Alaska | State Program | 10 | OR00040 |
| TestAmerica Portland | California | State Program | 9 | 2597 |
| TestAmerica Portland | Oregon | NELAC | 10 | OR100021 |
| TestAmerica Portland | Washington | State Program | 10 | C586 |
| TestAmerica Seattle | | USDA | | P330-11-00222 |
| TestAmerica Seattle | Alaska | Alaska UST | 10 | UST-022 |
| TestAmerica Seattle | California | NELAC | 9 | 1115CA |
| TestAmerica Seattle | Florida | NELAC | 4 | E871074 |
| TestAmerica Seattle | L-A-B | DoD ELAP | 0 | L2236 |
| TestAmerica Seattle | L-A-B | ISO/IEC 17025 | 0 | L2236 |
| TestAmerica Seattle | Louisiana | NELAC | 6 | 05016 |
| TestAmerica Seattle | Montana | MT DEQ UST | 8 | N/A |
| TestAmerica Seattle | Oregon | NELAC | 10 | WA100007 |
| TestAmerica Seattle | Washington | State Program | 10 | C553 |

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING


11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210 [X]
11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290 [ ]
9405 SW Nimbus Ave,Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 [ ]
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 [ ]


# CHAIN OF CUSTODY REPORT

**Work Order #:** PVC0969

CLIENT: SCS Engineers

REPORT TO: David Lamadrid
ADDRESS: 14945 SW Sequoia Pkwy, Ste 180
Portland, OR 97224
PHONE (503) 639-9315 FAX:

INVOICE TO: SCS Engineers
Portland, OR

P.O. NUMBER:

PROJECT NAME: Leichner Brothers Landfill
PROJECT NUMBER: 04211030.01.17
SAMPLED BY: David Lamadrid

**TURNAROUND REQUEST** in Business Days *

Organic & Inorganic Analyses: [10 STD.] [7] [5] [4] [3] [2] [1] [<1]
Petroleum Hydrocarbon Analyses: [5 STD.] [4] [3] [2] [1] [<1]
[OTHER] Specify:

* Turnaround Requests less than standard may incur Rush Charges.

| CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE: HCl | HNO3 | — | — | — | — | REQUESTED ANALYSES: VOCs (8260) low level | Dissolved Fe, mn (6020) | Cond. (9050A) | TDS (160.1) | chloride (300.0) | nitrate (300.0) | MATRIX (W, S, O) | # OF CONT. | LOCATION/ COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 LB-10DR | 3/29/11 1150 | | | | | | | X | X | X | X | X | X | W | 5 | low level VOCs | |
| 2 LB-10SR | 3/29/11 1250 | | | | | | | X | X | X | X | X | X | W | 5 | ↓ | |
| 3 DUP 2 | 3/29/11 00:00 | | | | | | | X | X | X | X | X | X | W | 5 | ↓ | |
| 4 | | | | | | | | | | | | | | | | Samples are Field Filtered | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

RELEASED BY: [signature] DATE: 3/29/11
PRINT NAME: David Lamadrid FIRM: SCS Engineers TIME: 1551

RECEIVED BY: [signature] FIRM: TAP DATE: 3/29/11
PRINT NAME: Jessica Nye TIME: 1851

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

TEMP: 4.2

PAGE OF

TAL-1000(0408)

TestAmerica
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# Portland Sample Control Checklist

**Work Order #:** PVC0969 **Date/Time Received:** 3/29/11 1551
**Client Name:** SCS
**Project Name:** LBL
Time Zone:
☐EDT/EST ☐CDT/CST ☐MDT/MST ☑PDT/PST ☐AK ☐HI ☐OTHER

**Unpacking Checks:**
Cooler (s): 1
Temperature (s): 4 2
Digi #1 ☐ Digi #2 ☐ IR Gun ☑ (☑Plastic ☐Glass)
Raytek ☐ (☐Plastic ☐Glass)

**Temperature out of Range:**
__Not enough or No Ice
__Ice Melted
__W/in 4 Hrs of collection
__Ice Not Needed
__ Other:_____

**Ice used: (circle one)** GEL LOOSE BLUE NONE OTHER: _____ **Initials** JM

| N/A | Yes | No | |
|---|---|---|---|
| ☑ | ☐ | ☐ | 1. If ESI client, were temp blanks received? If no, document on NOD. |
| ☑ | ☐ | ☐ | 2. Cooler Seals intact? (N/A if hand delivered) if no and ESI client, document on NOD. |
| | ☑ | ☐ | 3. Chain of Custody present? If no, document on NOD. Along with "received by" & "relinquished by" signatures with date & time? |
| | ☑ | ☐ | 4. Bottles received intact? If no, document on NOD. |
| | ☑ | ☐ | 5. Sample is not multiphasic? If no, document on NOD. |
| | ☑ | ☐ | 6. Sampler name/signature documented on COC? |
| | ☑ | ☐ | 7. Proper Container and preservatives used? If no, document on NOD. TB not on COC. |
| ☐ | ☑ | ☐ | 8. pH of all samples checked and meet requirements? If no, document on NOD. |
| ☑ | ☐ | ☐ | 9. Cyanide samples checked for sulfides and meet requirements? If no, notify PM. JM |
| ☑ | ☐ | ☐ | 10. HF Dilution required? |
| | ☑ | ☐ | 11. Sufficient volume provided for all analysis and requested MS/MSD? If no, document on NOD and consult PM before proceeding. |
| | ☑ | ☐ | 12. Did chain of custody agree with samples received? If no, document on NOD. |
| ☐ | ☑ | ☐ | 13. Were VOA samples received without headspace? |
| | ☐ | ☑ | 14. Did samples require preservation with sodium thiosulfate? |
| ☑ | ☐ | ☐ | 15. If yes to #14, was the residual chlorine test negative? If no, document on NOD. |
| ☑ | ☐ | ☐ | 16. Are dissolved/field filtered metals bottles sediment-free? If no, document on NOD. |
| ☐ | ☑ | ☐ | 17. Are analyses with short holding times received in hold? |
| ☐ | ☑ | ☐ | 18. Were special log- in instructions read and followed? |

**Checklist Reviewed:** **Log-in initials:** JM **Labeler initials:** JM

9405 SW Nimbus Ave, Beaverton OR 97008 **tel** 503.906.9200 **fax** 503.906.9210 **www.testamericainc.com**

# ATTACHMENT 2

## Results of Laboratory QA/QC Review

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**TestAmerica-Denver Report # PUC0755**

Samples: LB-4SR, LB-4D, LB-6S, DUP1 (LB-6S), LB-17I, LB-17D, and trip blank.

Sample Date: 03/22/2011
Laboratory Sample Received Date: 03/23/2011
Sample Receipt Temperature = 0.5°C
Laboratory Data Received Date: 04/07/2011
QA/QC Review Date: 04/19/2011 (TML)

**VOCs**

| | |
|---|---|
| Surrogates | All sample surrogates are within QC limits. |
| Method Blanks | All ND. |
| LCS | All % recoveries were within QC limits, and all surrogates within limits. |
| Matrix Spikes | All % recoveries within QC limits, and all surrogates within QC limits. |
| MSD | All RPDs within control limits. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were ND. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries within QC limits. |
| MSD | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All blanks were non-detect. |
| LCS | All % recoveries within control limits. |
| Matrix Spikes | All % recoveries were within QC limits except for chloride (M8 flags). M8 flags denote that the MS was below the acceptable limits. |
| MSD | All RPDs within QC limits. |
| Duplicates | All RPDs within QC limits. |

**Hold Times**
All analytical hold times were met except for total dissolved solids (TDS). This is noted and qualified in the case narrative.

**Reporting Limit Exceedances**
All laboratory addendum reporting limits were met.

**Field QA/QC**
Field Duplicate
A field duplicate (DUP1) was collected on 03/22/2011 at LB-6S. All RPDs were within 20 percent.

Trip Blank
Laboratory supplied trip blanks were carried into the field on 03/22/2011 with all samples and returned to the lab for VOC analysis. All analytes were reported as ND.

**Notes**
None.

**Data Validation**
*Upon final review of lab report PUC0755 for Leichner Brothers Landfill, SCS Engineers finds the data are valid for their intended use (04/19/2011; TML).*

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**TestAmerica-Portland, OR, Report # PUC0791**

Samples: LB-5S, LB-5D, LB-13I, LB-26I, FB1 (LB-26I), and LB-26D.

Sample Date: 03/23/2011
Laboratory Sample Received Date: 03/24/2011
Sample Receipt Temperature = 2.1°C
Laboratory Data Received Date: 04/8/2011
QA/QC Review Date: 04/19/2011 (TML)

**VOCs**

| | |
|---|---|
| Surrogates | All sample surrogates are within QC limits. |
| Method Blanks | All ND. |
| LCS | All % recoveries were within QC limits, and all surrogates within limits. |
| Matrix Spikes | All % recoveries within QC limits, and all surrogates within QC limits. |
| MSD | All RPDs within control limits. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were ND. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries within QC limits. |
| MSD | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All blanks were non-detect. |
| LCS | All % recoveries within control limits. |
| Matrix Spikes | All % recoveries were within QC limits except for chloride and nitrate-nitrite in batch U000813 (M8 Flags). M8 Flags denote that the MS was below the acceptable limits. |
| MSD | All RPDs within QC limits. |
| Duplicates | All RPDs within QC limits. |

**Hold Times**
All analytical hold times were met.

**Field QA/QC**
Field Blank
A field blank (FB1) was collected on 03/23/2011 near LB-26I using laboratory supplied deionized water. All analytes for FB1 were reported as ND except for acetone (11 µg/L; RL = 2.0µg/L) and methylene chloride (0.25 µg/L; RL = 0.10µg/L).

**Notes**
None.

**Data Validation**
*Upon final review of lab report PUC0791 for Leichner Brothers Landfill, SCS Engineers finds the data are valid for their intended use (04/19/2011; TML).*

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**TestAmerica-Portland, OR, Report # PUC0854**

Samples: LB-1S and MW-20S.

Sample Date: 03/24/2011
Laboratory Sample Received Date: 03/25/2011
Sample Receipt Temperature = 1.2°C
Laboratory Data Received Date: 04/11/2011
QA/QC Review Date: 04/20/2011 (TML)

**VOCs**

| | |
|---|---|
| Surrogates | All sample surrogates are within QC limits. |
| Method Blanks | All ND. |
| LCS | All % recoveries were within QC limits, and all surrogates within limits. |
| Matrix Spikes | All % recoveries within QC limits, and all surrogates within QC limits. |
| MSD | All RPDs within control limits. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were ND. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries within QC limits except for manganese in batch 11C0778 (MHA flags). |
| MSD | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All blanks were non-detect. |
| LCS | All % recoveries within control limits. |
| Matrix Spikes | All % recoveries were within QC limits except for chloride (M8 flags). M8 flags denote that the MS was below the acceptable limits. |
| MSD | All RPDs within QC limits. |
| Duplicates | All RPDs within QC limits. |

**Hold Times**
All analytical hold times were met.

**Reporting Limit Exceedances**
All laboratory addendum reporting limits were met.

**Notes**
None.

**Data Validation**
*Upon final review of lab report PUC0854 for Leichner Brothers Landfill, SCS Engineers finds the data are valid for their intended use (04/20/2011; TML).*

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**TestAmerica-Portland, OR, Report # PUC0871**

Samples: LB-13D, LB-27I, and LB-27D.

Sample Date: 03/25/2011
Laboratory Sample Received Date: 03/25/2011
Sample Receipt Temperature = 3.1°C
Laboratory Data Received Date: 04/08/2011
QA/QC Review Date: 04/20/2011 (TML)

**VOCs**

| | |
|---|---|
| Surrogates | All sample surrogates are within QC limits except for trifluorotoluene for sample LB-27D (X flag). |
| Method Blanks | All ND. |
| LCS | All % recoveries were within QC limits, and all surrogates within limits. |
| Matrix Spikes | All % recoveries within QC limits, and all surrogates within QC limits. |
| MSD | All RPDs within control limits. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were ND. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries within QC limits except for manganese in batch 11C0778 (MHA flags). |
| MSD | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All blanks were non-detect. |
| LCS | All % recoveries within control limits. |
| Matrix Spikes | All % recoveries were within QC limits except for chloride (M8 flags). M8 flags denote that the MS was below the acceptable limits. |
| MSD | All RPDs within QC limits. |
| Duplicates | All RPDs within QC limits. |

**Hold Times**
All analytical hold times were met.

**Reporting Limit Exceedances**
All laboratory addendum reporting limits were met.

**Notes**
None.

**Data Validation**
*Upon final review of lab report PUC0871 for Leichner Brothers Landfill, SCS Engineers finds the data are valid for their intended use (04/20/2011; TML).*

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**TestAmerica-Portand, OR, Report # PUC0929**

Samples: LB-1D, LB-3S, and LB-3D.

Sample Date: 03/28/2011
Laboratory Sample Received Date: 03/29/2011
Sample Receipt Temperature = 0.4°C
Laboratory Data Received Date: 04/12/2011
QA/QC Review Date: 04/20/2011 (TML)

**VOCs**

| | |
|---|---|
| Surrogates | All sample surrogates are within QC limits. |
| Method Blanks | All ND. |
| LCS | All % recoveries were within QC limits, and all surrogates within limits. |
| Matrix Spikes | All % recoveries within QC limits, and all surrogates within QC limits. |
| MSD | All RPDs within control limits. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were ND. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries within QC limits. |
| MSD | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All blanks were non-detect. |
| LCS | All % recoveries within control limits. |
| Matrix Spikes | All % recoveries were within QC limits except for chloride (M8 flags). M8 flags denote that the MS was below the acceptable limits. |
| MSD | All RPDs within QC limits. |
| Duplicates | All RPDs within QC limits. |

**Hold Times**
All analytical hold times were met.

**Reporting Limit Exceedances**
All laboratory addendum reporting limits were met.

**Notes**
None.

**Data Validation**
*Upon final review of lab report PUC0929 for Leichner Brothers Landfill, SCS Engineers finds the data are valid for their intended use (04/20/2011; TML).*

**SCS Engineers QA/QC Review**
**Groundwater - 1Q 2011 Groundwater Monitoring Event**
**Leichner Brothers Landfill**
**TestAmerica-Portland, OR, Report # PUC0969**

Samples: LB-10SR, LB-10DR, and DUP2.

Sample Date: 03/29/2011
Laboratory Sample Received Date: 03/29/2011
Sample Receipt Temperature = 4.2°C
Laboratory Data Received Date: 04/12/2011
QA/QC Review Date: 04/20/2011 (TML)

**VOCs**

| | |
|---|---|
| Surrogates | All sample surrogates are within QC limits. |
| Method Blanks | All ND. |
| LCS | All % recoveries were within QC limits, and all surrogates within limits. |
| Matrix Spikes | All % recoveries within QC limits, and all surrogates within QC limits. |
| MSD | All RPDs within control limits. |

**Dissolved Metals**

| | |
|---|---|
| Method Blanks | All analytes were ND. |
| LCS | All % recoveries were within control limits. |
| Matrix Spikes | All % recoveries within QC limits. |
| MSD | All RPDs were within QC limits. |

**General Chemistry**

| | |
|---|---|
| Method Blanks | All blanks were non-detect. |
| LCS | All % recoveries within control limits. |
| Matrix Spikes | All % recoveries were within QC limits except for chloride (M8 flags). M8 flags denote that the MS was below the acceptable limits. |
| MSD | All RPDs within QC limits. |
| Duplicates | All RPDs within QC limits. |

**Hold Times**
All analytical hold times were met.

**Reporting Limit Exceedances**
All laboratory addendum reporting limits were met.

**Field QA/QC**
Field Duplicate
A field duplicate (DUP2) was collected on 03/29/2011 at LB-10SR. All RPDs were within 20 percent. Trichloroethene was detected in the duplicate sample (0.15 µg/L) but was not detected in the sample LB-10SR above the reporting limit of 0.1 µg/L. It should be noted that the trichloroethene concentration in the duplicate sample is less than 4 times the reporting limit and consequently not controlled by RPDs.

**Notes**
None.

**Data Validation**
*Upon final review of lab report PUC0969 for Leichner Brothers Landfill, SCS Engineers finds the data are valid for their intended use (04/20/2011; TML).*

# ATTACHMENT 3

## First Quarter 2011
## Compliance Landfill Gas Monitoring Probe Data

**Compliance Landfill Gas Monitoring Probe Data**
**January 2011**
**Leichner Brothers Landfill**

| Probe | Date / Time | Methane (% by vol) | Carbon Dioxide (% by vol) | O2 (% by vol) | Balance (% by vol) | Rel Press (H2O inch) |
|---|---|---|---|---|---|---|
| LBLFGP02 | 1/7/2011 8:39 | 0 | 3.7 | 18 | 78.3 | 0 |
| LBLFGP03 | 1/7/2011 8:35 | 0 | 2.8 | 17.4 | 79.8 | 0 |
| LBLFGP05 | 1/7/2011 8:24 | 0 | 3.9 | 15.2 | 80.9 | 0 |
| LBLFGP06 | 1/7/2011 8:56 | 0.1 | 4.6 | 14.1 | 81.2 | 0 |
| LBLFGP07 | 1/7/2011 8:51 | 2.2 | 8.1 | 0.1 | 89.6 | 0 |
| LBLFGP08 | 1/7/2011 9:06 | 12.4 | 11.6 | 0 | 76 | -0.07 |
| LBLFGP08 (recheck) | 1/31/2011 13:50 | 0 | 5.1 | 15.7 | 79.2 | 0 |
| LBLFGP11 | 1/7/2011 9:22 | 0.1 | 1.5 | 18.9 | 79.5 | -0.08 |
| LBLFGP12 | 1/7/2011 9:25 | 0.1 | 0.9 | 20.6 | 78.4 | -0.08 |
| LBLFGP13 | 1/7/2011 9:28 | 0 | 1.3 | 18.3 | 80.4 | -0.09 |
| LBLFGP14 | 1/7/2011 9:33 | 0 | 0.9 | 20.3 | 78.8 | -0.09 |
| LBLFGP15 | 1/7/2011 9:36 | 0 | 1.5 | 20.1 | 78.4 | -0.09 |
| LBLFGP1A | 1/7/2011 8:43 | 0 | 2.2 | 19.7 | 78.1 | -0.01 |
| LBLFGP1B | 1/7/2011 8:44 | 0 | 2.3 | 19.4 | 78.3 | -0.02 |
| LBLFGP20 | 1/7/2011 10:18 | 0 | 6.9 | 10.2 | 82.9 | 0.02 |
| LBLFGP22 | 1/7/2011 10:33 | 0 | 0.8 | 20.4 | 78.8 | 0.03 |
| LBLFGP23 | 1/7/2011 10:36 | 0 | 1.5 | 19.9 | 78.6 | 0.04 |
| LBLFGP26 | 1/7/2011 10:59 | 0 | 0.6 | 20.8 | 78.6 | 0.03 |
| LBLFGP27 | 1/7/2011 11:02 | 0 | 1 | 20.5 | 78.5 | 0.03 |
| LBLFGP28 | 1/7/2011 7:55 | 0.1 | 4.8 | 14.9 | 80.2 | -0.01 |
| LBLFGP29 | 1/7/2011 8:19 | 0 | 6 | 8 | 86 | 0 |
| LBLFGP31 | 1/7/2011 10:04 | 0 | 2.1 | 19.2 | 78.7 | 0 |
| LBLFGP32 | 1/7/2011 10:12 | 0 | 2.5 | 18.3 | 79.2 | 0.01 |
| LBLFGP33 | 1/7/2011 10:15 | 0 | 2.2 | 18.8 | 79 | 0.02 |
| LBLFGP34 | 1/7/2011 10:21 | 0 | 3.3 | 17.1 | 79.6 | 0.02 |
| LBLFGP35 | 1/7/2011 10:25 | 0 | 2.2 | 18.5 | 79.3 | 0.03 |
| LBLFGP36 | 1/7/2011 10:43 | 0 | 1.7 | 19.4 | 78.9 | 0.04 |
| LBLFGP37 | 1/7/2011 10:47 | 0 | 2.6 | 18.5 | 78.9 | 0.03 |
| LBLFGP38 | 1/7/2011 10:55 | 0 | 1.4 | 20.3 | 78.3 | 0.02 |
| LBLFGP4A | 1/7/2011 8:29 | 0.1 | 2.8 | 15 | 82.1 | -0.02 |
| LBLFGP4B | 1/7/2011 8:31 | 0 | 3.3 | 12.6 | 84.1 | -0.02 |
| LBLFGP9A | 1/7/2011 9:14 | 3.4 | 9.9 | 0 | 86.7 | -0.1 |
| LBLFGP9B | 1/7/2011 9:15 | 0.7 | 10 | 5.4 | 83.9 | -0.11 |
| LBLGP10A | 1/7/2011 9:17 | 0.1 | 7.2 | 11.5 | 81.2 | -0.11 |
| LBLGP10B | 1/7/2011 9:19 | 0.1 | 2.5 | 17.5 | 79.9 | -0.1 |
| LBLGP16D | 1/7/2011 9:43 | 0.1 | 2.7 | 18.9 | 78.3 | -0.11 |
| LBLGP16S | 1/7/2011 9:46 | 0 | 1.9 | 20 | 78.1 | 0 |
| LBLGP17D | 1/7/2011 9:49 | 0 | 2.6 | 18.4 | 79 | 0.13 |
| LBLGP17S | 1/7/2011 9:51 | 0 | 4 | 17.5 | 78.5 | 0 |
| LBLGP18D | 1/7/2011 9:59 | 0 | 4 | 17.1 | 78.9 | 0 |
| LBLGP18S | 1/7/2011 10:01 | 0 | 2.2 | 19.5 | 78.3 | 0 |
| LBLGP19D | 1/7/2011 10:07 | 0 | 3.4 | 17.9 | 78.7 | 0 |
| LBLGP19S | 1/7/2011 10:09 | 0 | 2.2 | 19.2 | 78.6 | 0 |
| LBLGP21A | 1/7/2011 10:27 | 0 | 1.1 | 20.5 | 78.4 | 0.02 |
| LBLGP21B | 1/7/2011 10:29 | 0 | 1.1 | 20.3 | 78.6 | 0.02 |
| LBLGP24A | 1/7/2011 10:39 | 0 | 1.3 | 20.2 | 78.5 | 0.03 |
| LBLGP24B | 1/7/2011 10:41 | 0 | 1.2 | 20.1 | 78.7 | 0.03 |
| LBLGP25A | 1/7/2011 10:50 | 0 | 2.6 | 18.7 | 78.7 | 0.03 |
| LBLGP25B | 1/7/2011 10:52 | 0 | 3.7 | 17.8 | 78.5 | 0.02 |
| LBLGP30A | 1/7/2011 8:07 | 0.1 | 5.2 | 14.8 | 79.9 | -1.76 |
| LBLGP30B | 1/7/2011 8:10 | 0 | 4.5 | 16.2 | 79.3 | -1.76 |


**Compliance Landfill Gas Monitoring Probe Data**
**February 2011**
**Leichner Brothers Landfill**

| Name | Date Time | Methane (% by vol) | Carbon Dioxide (% by vol) | O2 (% by vol) | Balance (% by vol) | Rel Press (H2O inch) |
|---|---|---|---|---|---|---|
| LBLFGP02 | 2/7/2011 12:03 | 0 | 3.3 | 18.5 | 78.2 | 0 |
| LBLFGP03 | 2/7/2011 11:59 | 0 | 2.9 | 17.2 | 79.9 | 0 |
| LBLFGP05 | 2/7/2011 11:42 | 0.1 | 3.6 | 16.2 | 80.1 | 0.02 |
| LBLFGP06 | 2/7/2011 11:48 | 0.1 | 4.5 | 15.3 | 80.1 | 0.04 |
| LBLFGP07 | 2/7/2011 11:45 | 0 | 7.7 | 7.1 | 85.2 | 0 |
| LBLFGP08 | 2/7/2011 10:31 | 1.5 | 10.7 | 5.6 | 82.2 | 0 |
| LBLFGP11 | 2/7/2011 10:46 | 0.1 | 1.1 | 20.5 | 78.3 | 0.01 |
| LBLFGP12 | 2/7/2011 10:50 | 0.1 | 0.7 | 20.8 | 78.4 | 0.01 |
| LBLFGP13 | 2/7/2011 10:55 | 0.1 | 1.2 | 20.1 | 78.6 | 0 |
| LBLFGP14 | 2/7/2011 10:59 | 0.1 | 0.8 | 20.8 | 78.3 | 0 |
| LBLFGP15 | 2/7/2011 11:03 | 0.1 | 1.7 | 20.6 | 77.6 | 0 |
| LBLFGP1A | 2/7/2011 12:07 | 0 | 2.3 | 19.6 | 78.1 | 0.01 |
| LBLFGP1B | 2/7/2011 12:08 | 0 | 2.1 | 19.5 | 78.4 | 0.01 |
| LBLFGP20 | 2/7/2011 12:48 | 0 | 6.4 | 8.5 | 85.1 | 0.1 |
| LBLFGP22 | 2/7/2011 13:02 | 0 | 0.9 | 20.8 | 78.3 | 0 |
| LBLFGP23 | 2/7/2011 13:05 | 0 | 1.5 | 20.8 | 77.7 | 0 |
| LBLFGP26 | 2/7/2011 12:21 | 0 | 0.6 | 20.7 | 78.7 | 0.04 |
| LBLFGP27 | 2/7/2011 12:25 | 0 | 0.6 | 20.8 | 78.6 | 0.05 |
| LBLFGP28 | 2/7/2011 10:24 | 0.3 | 5.9 | 15.2 | 78.6 | 0 |
| LBLFGP29 | 2/7/2011 11:38 | 0 | 5.7 | 7.7 | 86.6 | 0.01 |
| LBLFGP31 | 2/7/2011 12:35 | 0 | 1.7 | 20 | 78.3 | 0.07 |
| LBLFGP32 | 2/7/2011 12:42 | 0 | 2 | 19 | 79 | 0.06 |
| LBLFGP33 | 2/7/2011 12:45 | 0 | 1.9 | 19.2 | 78.9 | 0.06 |
| LBLFGP34 | 2/7/2011 12:51 | 0 | 3 | 16.2 | 80.8 | 0.01 |
| LBLFGP35 | 2/7/2011 12:54 | 0 | 2 | 18.2 | 79.8 | 0.02 |
| LBLFGP36 | 2/7/2011 13:13 | 0 | 1.6 | 20.1 | 78.3 | 0 |
| LBLFGP37 | 2/7/2011 13:16 | 0 | 2.5 | 19.3 | 78.2 | -0.01 |
| LBLFGP38 | 2/7/2011 12:17 | 0 | 0.9 | 20.6 | 78.5 | 0.03 |
| LBLFGP4A | 2/7/2011 11:54 | 0 | 2.7 | 16.4 | 80.9 | -0.6 |
| LBLFGP4B | 2/7/2011 11:56 | 0 | 2.9 | 13.2 | 83.9 | -0.44 |
| LBLFGP9A | 2/7/2011 10:35 | 0.1 | 5.8 | 12.9 | 81.2 | 0 |
| LBLFGP9B | 2/7/2011 10:38 | 0.1 | 12 | 0 | 87.9 | 0 |
| LBLGP10A | 2/7/2011 10:41 | 0.1 | 7 | 12.7 | 80.2 | 0 |
| LBLGP10B | 2/7/2011 10:42 | 0.1 | 2.8 | 18.3 | 78.8 | 0.02 |
| LBLGP16D | 2/7/2011 11:12 | 0.1 | 2.9 | 19.3 | 77.7 | -0.01 |
| LBLGP16S | 2/7/2011 11:14 | 0.1 | 1.6 | 20.7 | 77.6 | 0.02 |
| LBLGP17D | 2/7/2011 11:18 | 0.1 | 1.9 | 20.2 | 77.8 | -0.12 |
| LBLGP17S | 2/7/2011 11:20 | 0.1 | 3.6 | 18.4 | 77.9 | 0 |
| LBLGP18D | 2/7/2011 12:31 | 0 | 3.2 | 18.3 | 78.5 | 0.03 |
| LBLGP18S | 2/7/2011 12:33 | 0 | 2 | 19.8 | 78.2 | 0.04 |
| LBLGP19D | 2/7/2011 12:38 | 0 | 3.1 | 18.7 | 78.2 | 0.05 |
| LBLGP19S | 2/7/2011 12:40 | 0 | 2 | 20.1 | 77.9 | 0.06 |
| LBLGP21A | 2/7/2011 12:56 | 0 | 1.2 | 20.9 | 77.9 | 0 |
| LBLGP21B | 2/7/2011 12:58 | 0 | 0.9 | 20.6 | 78.5 | 0 |
| LBLGP24A | 2/7/2011 13:08 | 0 | 0.5 | 20.8 | 78.7 | -0.02 |
| LBLGP24B | 2/7/2011 13:10 | 0 | 0.5 | 20.8 | 78.7 | -0.01 |
| LBLGP25A | 2/7/2011 13:19 | 0 | 2.3 | 19.7 | 78 | 0.11 |
| LBLGP25B | 2/7/2011 13:20 | 0 | 3.2 | 18.5 | 78.3 | -0.04 |
| LBLGP30A | 2/7/2011 11:32 | 0 | 4 | 15.9 | 80.1 | -0.02 |
| LBLGP30B | 2/7/2011 11:33 | 0 | 4.5 | 15.9 | 79.6 | -0.52 |


**Compliance Landfill Gas Monitoring Probe Data**
**March 2011**
**Leichner Brothers Landfill**

| Name | Date Time | Methane (% by vol) | Carbon Dioxide (% by vol) | O2 (% by vol) | Balance (% by vol) | Rel Press (H2O inch) |
|---|---|---|---|---|---|---|
| LBLFGP02 | 3/1/2011 10:50 | 0 | 2.8 | 18.7 | 78.5 | 0.2 |
| LBLFGP03 | 3/1/2011 10:59 | 0 | 2.3 | 18.1 | 79.6 | 0.04 |
| LBLFGP05 | 3/1/2011 10:39 | 0 | 4.4 | 15.3 | 80.3 | -0.05 |
| LBLFGP06 | 3/1/2011 11:08 | 0 | 3.9 | 14.7 | 81.4 | 0.36 |
| LBLFGP07 | 3/1/2011 11:06 | 0 | 4.2 | 8.1 | 87.7 | -0.16 |
| LBLFGP08 | 3/1/2011 13:05 | 13.1 | 11.8 | 0.1 | 75 | -0.19 |
| LBLFGP08 (recheck) | 3/30/2011 12:40 | 0 | 2.5 | 19.4 | 78.1 | -0.12 |
| LBLFGP11 | 3/1/2011 12:56 | 0 | 0.6 | 21.5 | 77.9 | 0.16 |
| LBLFGP12 | 3/1/2011 12:54 | 0 | 0.7 | 22.2 | 77.1 | 0.12 |
| LBLFGP13 | 3/1/2011 12:51 | 0 | 1.2 | 21.5 | 77.3 | 0.22 |
| LBLFGP14 | 3/1/2011 12:42 | 0 | 1.6 | 21.2 | 77.2 | 0.05 |
| LBLFGP15 | 3/1/2011 12:47 | 0 | 1.4 | 21.3 | 77.3 | 0.17 |
| LBLFGP1A | 3/1/2011 10:55 | 0 | 2.2 | 20.2 | 77.6 | -0.06 |
| LBLFGP1B | 3/1/2011 10:54 | 0 | 2.8 | 20.1 | 77.1 | 0.03 |
| LBLFGP20 | 3/1/2011 12:03 | 0 | 6.6 | 9.4 | 84 | -0.08 |
| LBLFGP22 | 3/1/2011 11:52 | 0 | 1.3 | 21.5 | 77.2 | 0.16 |
| LBLFGP23 | 3/1/2011 11:49 | 0 | 1.4 | 21.1 | 77.5 | 0.16 |
| LBLFGP26 | 3/1/2011 10:13 | 0 | 1.1 | 21.2 | 77.7 | 0.04 |
| LBLFGP27 | 3/1/2011 10:10 | 0 | 3.3 | 20.1 | 76.6 | -15.7 |
| LBLFGP28 | 3/1/2011 11:30 | 0 | 4.1 | 15.5 | 80.4 | -0.15 |
| LBLFGP29 | 3/1/2011 10:33 | 0 | 4.2 | 10.6 | 85.2 | 0.3 |
| LBLFGP31 | 3/1/2011 12:19 | 0 | 1.6 | 21 | 77.4 | 0.06 |
| LBLFGP32 | 3/1/2011 12:08 | 0 | 2.3 | 20 | 77.7 | 0.01 |
| LBLFGP33 | 3/1/2011 12:05 | 0 | 3.5 | 19.5 | 77 | 0.07 |
| LBLFGP34 | 3/1/2011 12:00 | 0 | 2.3 | 17.8 | 79.9 | 0.08 |
| LBLFGP35 | 3/1/2011 11:58 | 0 | 1.2 | 19.7 | 79.1 | 0.16 |
| LBLFGP36 | 3/1/2011 11:43 | 0 | 2.1 | 20.2 | 77.7 | 0.01 |
| LBLFGP37 | 3/1/2011 11:41 | 0 | 2.8 | 19.5 | 77.7 | 0.03 |
| LBLFGP38 | 3/1/2011 10:16 | 0 | 0.7 | 21.1 | 78.2 | 0.1 |
| LBLFGP4A | 3/1/2011 10:43 | 0 | 2.9 | 13.2 | 83.9 | -0.39 |
| LBLFGP4B | 3/1/2011 10:42 | 0 | 3.6 | 15.4 | 81 | -0.19 |
| LBLFGP9A | 3/1/2011 13:03 | 0 | 6.5 | 4.5 | 89 | -0.09 |
| LBLFGP9B | 3/1/2011 13:01 | 0 | 8.2 | 7.5 | 84.3 | 0.15 |
| LBLGP10A | 3/1/2011 13:00 | 0 | 5.4 | 14.7 | 79.9 | -0.04 |
| LBLGP10B | 3/1/2011 12:58 | 0 | 1.6 | 19 | 79.4 | 0.01 |
| LBLGP16D | 3/1/2011 12:32 | 0 | 2.4 | 20 | 77.6 | 0.28 |
| LBLGP16S | 3/1/2011 12:30 | 0 | 1.4 | 21.6 | 77 | 0.1 |
| LBLGP17D | 3/1/2011 12:27 | 0 | 2.4 | 21.2 | 76.4 | 0.15 |
| LBLGP17S | 3/1/2011 12:26 | 0 | 3.1 | 19 | 77.9 | 0.04 |
| LBLGP18D | 3/1/2011 12:21 | 0 | 2.2 | 19.9 | 77.9 | 0.15 |
| LBLGP18S | 3/1/2011 12:23 | 0 | 1.6 | 21.2 | 77.2 | 0.06 |
| LBLGP19D | 3/1/2011 12:12 | 0 | 2.8 | 19.7 | 77.5 | 0.04 |
| LBLGP19S | 3/1/2011 12:14 | 0 | 1.8 | 20.8 | 77.4 | -0.01 |
| LBLGP21A | 3/1/2011 11:56 | 0 | 0.8 | 22.1 | 77.1 | 0.3 |
| LBLGP21B | 3/1/2011 11:54 | 0 | 1.1 | 21.4 | 77.5 | 0.21 |
| LBLGP24A | 3/1/2011 11:47 | 0 | 1.3 | 21.3 | 77.4 | 0.11 |
| LBLGP24B | 3/1/2011 11:45 | 0 | 1.4 | 21 | 77.6 | 0.13 |
| LBLGP25A | 3/1/2011 11:38 | 0 | 3 | 19.4 | 77.6 | -0.17 |
| LBLGP25B | 3/1/2011 11:37 | 0 | 3.8 | 18.4 | 77.8 | -0.16 |
| LBLGP30A | 3/1/2011 10:29 | 0 | 3.2 | 16.6 | 80.2 | -0.08 |
| LBLGP30B | 3/1/2011 10:28 | 0 | 1.3 | 17.5 | 81.2 | -0.04 |